THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
STACK JACK™
FLASHINGS

TABLE OF CONTENTS

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ROOF SPECIALTIES
**STACK JACK™
FLASHINGS**

WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is incumbent upon specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler STACK JACK™ flashing products have a number of Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE
COMPETITION

THALER VALUE
ADDED FEATURES

[X] ✓ **EPDM Triple Pressure Grommet Seal;** EPDM "memory" in the seal provides constant pressure to outside of vent pipe to prevent leaks. See Thaler EPDM Flashing Seals literature.

[X] ✓ **EPDM Base Seal;** EPDM "memory" in the seal provides constant pressure to outside of vent pipe to prevent condensation build-up. See Thaler EPDM Flashing Seals literature.

[X] ✓ **Incorporates air barrier principles;** meets the requirements for air leakage control better than any vent stack flashing on the market today. See Thaler EPDM Flashing Seals literature.

[X] ✓ **EPDM Triple Pressure Grommet Seal and Base Seal sizes;** available for 2", 3", 4", 5" and 6" (51, 76, 102, 127 and 152 mm) diameter vent stacks.

[X] ✓ **Injection molded urethane insulation (where applicable);** adheres to inner side of sleeve without air pockets.

[X] ✓ **One piece, spun aluminum flashing sizes;** supplied in a variety of diameters and heights for plastic, steel, stainless, copper or cast iron vent pipes e.g. 2", 3", 4", 5" and 6" (51, 76, 102, 127 and 152 mm) diameters, and 7", 13" and 19" (178, 330 and 483 mm) standard heights. Other sizes available upon request.

[X] ✓ **Treated deck flange;** can be PVC/TPO coated for proper adhesion of PVC/TPO membrane or bituminous painted for BUR or ModBit membrane.

[X] ✓ **Material options and thickness;** available in .064" (1.6 mm) mill finish 1000-0T alloy aluminum, .032" (0.831 mm) 24 oz. copper or .031" (0.79 mm) 22 ga. Type 304 stainless steel.

[X] ✓ **CSA Approved;** All Thaler STACK JACK flashings conform to CSA B272-93 - Prefabricated Self-Sealing Roof Vent Flashings.

[X] ✓ **20 year Warranty;** guaranteed against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

[X] ✓ **Maintenance-Free;** never needs caulking (any caulking at any time will invalidate 20 year warranty)

[X] ✓ **Written "Installation Instructions";** provided with every Thaler product.

ROOF SPECIALTIES
SJ-34 / SJ-35 / SJ-36
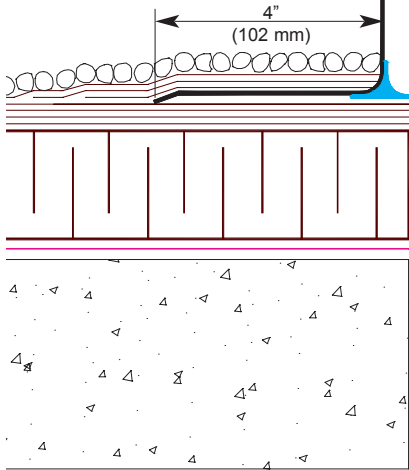## NEW-STANDARD STACK JACK™ FLASHINGS
(Uninsulated)

TRADE SIZES
2" (51 mm)
3" (76 mm)
4" (102 mm)
5" (127 mm)
6" (152 mm)

VENT PIPE

MODEL	HEIGHT
SJ-34	7" (178 mm) high
SJ-35	13" (330 mm) high
SJ-36	19" (483 mm) high

THALER NEW-STANDARD STACK JACK™ FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

EPDM TRIPLE PRESSURE GROMMET SEAL

13" or 19" (330 or 483 mm)

INVERTED ROOFING ILLUSTRATED

7" (178 mm)

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

CONCRETE DECK
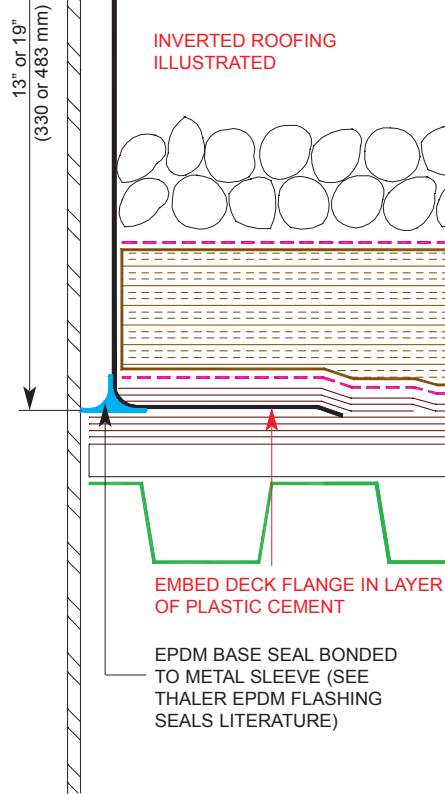
STEEL DECK

NEW-STANDARD STACK JACK™ FLASHING (Uninsulated)
PATENTED

DESCRIPTION:
Thaler New-Standard STACK JACK Flashings consist of a metal flashing sleeve with integral flange, and EPDM Triple Pressure Grommet Seal and EPDM Base Seal. Available in aluminum, copper, stainless steel.

Diameter: 2" (51 mm), 3" (76 mm), 4" (102mm), 5" (127mm), and 6"(152mm).
Height: Model No. SJ-34 is 7" (179 mm) high; SJ-35 is 13" (330 mm) high, and SJ-36 is 19" (483 mm) high. Add suffix -A for Aluminum, -C for Copper, and -S for Stainless Steel to model no. e.g. SJ-34-A, etc. as required.

PROMINENT FEATURES:
Condensation free. Never needs caulking. See Thaler EPDM Flashing Seals literature.

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Vandal proof stainless steel cap (SJ-33). Split flashing (SPJ-2) is available as an alternative if sleeve cannot fit over vent stack.

RECOMMENDED USE:
Suitable for plastic, steel, stainless, copper or cast iron vent pipes.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated self-Sealing Roof Vent Flashings). Note: in addition to the CSA tests, Thaler in-house testing was performed with the EPDM Triple Pressure Grommet Seal submerged in 8" (203 mm) of water for 3 months with no leakage.

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Vent stack flashing: Thaler [SJ-34, 7" (178mm) high] [SJ-35, 13" (330 mm) high] [SJ-36, 19" (483 mm) high] New-Standard STACK JACK Flashing (Uninsulated); [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831mm) 24 oz copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127mm)] [6" (152 mm)] diameter; to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal; [PVC coated deck flange] [bituminous painted deck flange]; [s.s. vandal proof cap]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler STACK JACK Flashings are installed by placing the flashing over the vent stack and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. SJ-34-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify material required by adding appropriate suffix to model number e.g. SJ-34-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ROOF SPECIALTIES
SJ-37 / SJ-38 / SJ-39
NEW-STANDARD STACK JACK™ FLASHINGS
(Insulated)

TRADE SIZES
2" (51 mm)
3" (76 mm)
4" (102 mm)
5" (127 mm)
6" (152 mm)

MODEL	HEIGHT
SJ-37	7" (178 mm) high
SJ-38	13" (330 mm) high
SJ-39	19" (483 mm) high

TRIPLE PRESSURE GROMMET SEAL

VENT PIPE

THALER NEW-STANDARD STACK JACK FLASHING (ALUMINUM, COPPER AND STAINLESS STEEL)

URETHANE INSULATION PREMOULDED TO INNER SIDE OF SLEEVE

INVERTED ROOFING ILLUSTRATED

13" or 19" (330 or 483 mm)

7" (178 mm)

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

EPDM BASE SEAL BONDED TO METAL SLEEVE

CONCRETE DECK

STEEL DECK

PATENTED

NEW-STANDARD STACK JACK™ FLASHING (Insulated)
PATENTED

DESCRIPTION:
Thaler New-Standard STACK JACK Flashings (Insulated) consist of a metal flashing sleeve with integral flange, pre-molded urethane insulation liner, EPDM Triple Pressure Grommet Seal and EPDM Base Seal. Available in aluminum, copper, stainless steel.

Diameter: 2" (51 mm), 3" (76 mm), 4" (102 mm), 5" (127 mm), and 6" (152 mm).
Height: Model No. SJ-37 is 7" (179 mm) high; SJ-38 is 13" (330 mm) high, and SJ-39 is 19" (483 mm) high. Add suffix -A for Aluminum, -C for Copper, and -S for Stainless Steel to model no. e.g. SJ-37-A, etc. as required.

PROMINENT FEATURES:
Condensation free. Never needs caulking. See Thaler EPDM Flashing Seals literature.

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Vandal proof stainless steel cap (SJ-33). Split flashing (SPJ-2) is available as an alternative if sleeve does not fit over vent stack.

RECOMMENDED USE:
Suitable for plastic, steel, stainless steel, copper or cast iron vent pipes.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings). Note: in addition to the CSA tests, Thaler in-house testing was performed with the EPDM Triple Pressure Grommet Seal submerged in 8" (200 mm) of water for 3 months with no leakage.

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Vent stack flashing: Thaler [SJ-37, 7" (178 mm) high] [SJ-38, 13" (330 mm) high] [SJ-39, 19" (483 mm) high] New-Standard STACK JACK Flashing (Insulated); [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031"(0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] diameter; to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal; pre-molded urethane insulation liner; [PVC coated deck flange] [Bituminous painted deck flange]; [s.s. vandal proof cap]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.
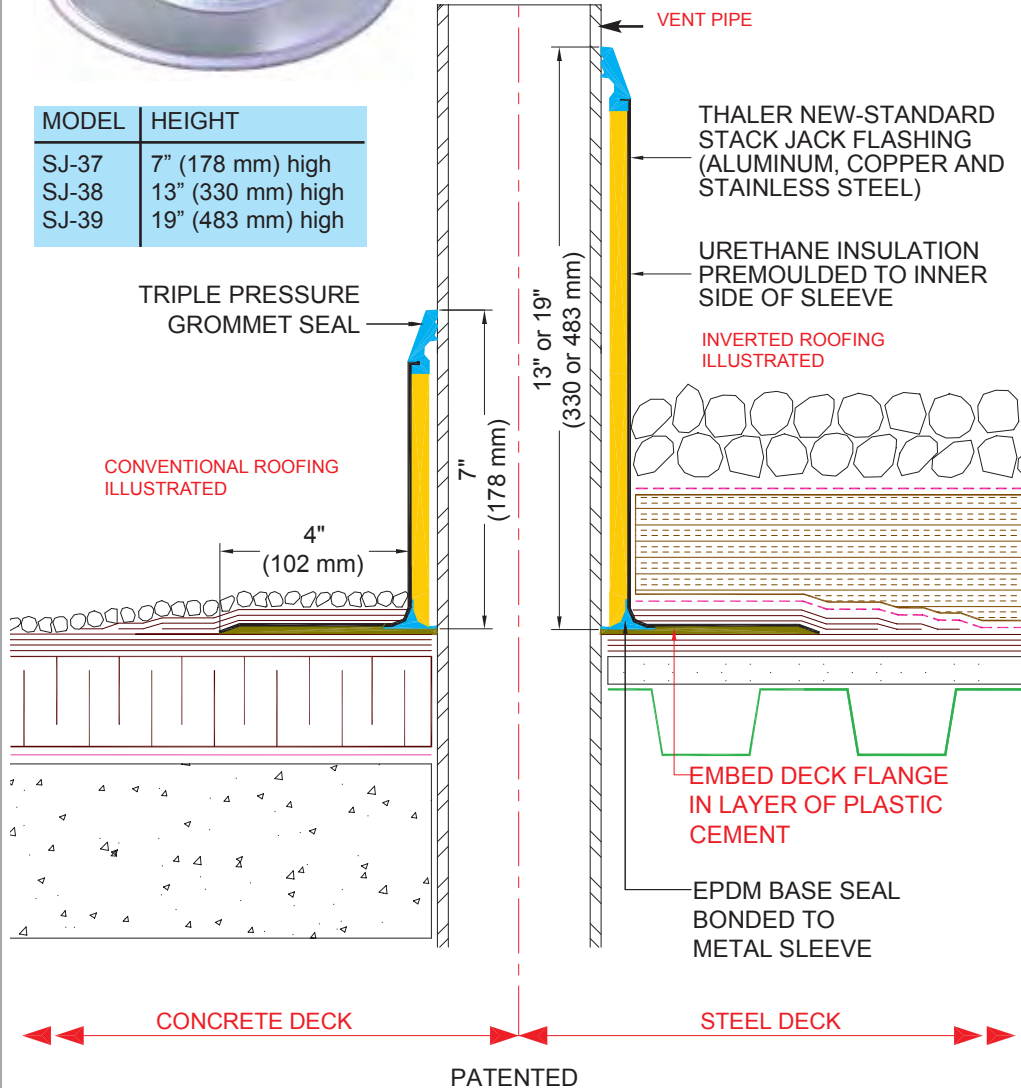
INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler STACK JACK Flashings are installed by placing the flashing over the vent stack and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. SJ-37-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify material required by adding appropriate suffix to model number e.g. SJ-37-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available form stock.
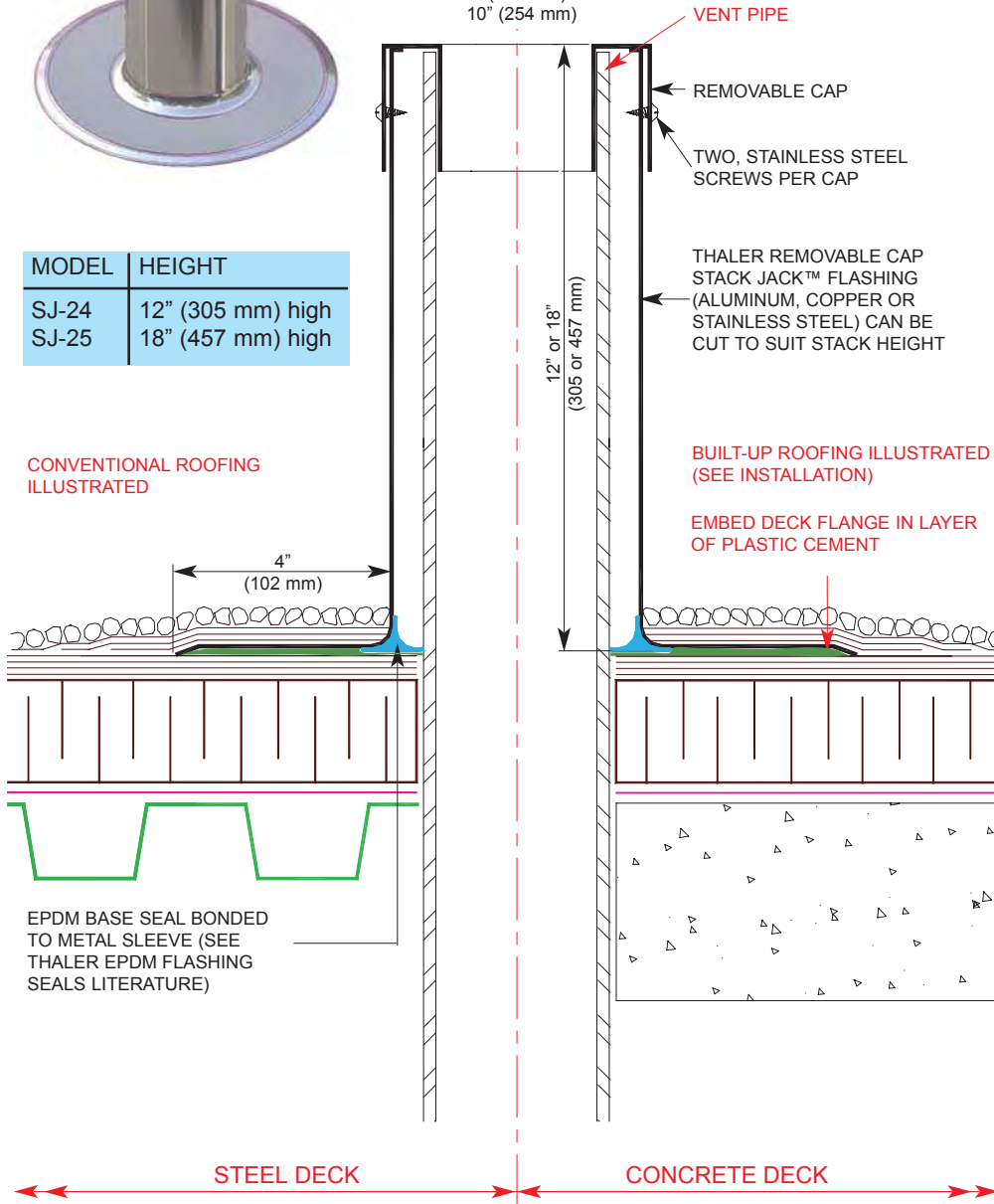
TRADE SIZES
2" (51 mm)
3" (76 mm)
4" (102 mm)
5" (127 mm)
6" (152 mm)
7" (178 mm)
8" (203 mm)
10" (254 mm)

VENT PIPE

REMOVABLE CAP

TWO, STAINLESS STEEL SCREWS PER CAP

THALER REMOVABLE CAP STACK JACK™ FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL) CAN BE CUT TO SUIT STACK HEIGHT

MODEL	HEIGHT
SJ-24	12" (305 mm) high
SJ-25	18" (457 mm) high

12" or 18" (305 or 457 mm)

CONVENTIONAL ROOFING ILLUSTRATED

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

4" (102 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

STEEL DECK

CONCRETE DECK

REMOVABLE CAP STACK JACK™ FLASHING (Insulated)
PATENTED

DESCRIPTION:
Thaler Removable Cap STACK JACK Flashngs consist of a metal flashing sleeve with integral flange, matching removable cap (screw fastened), and EPDM Base Seal. Available in aluminum, copper, and stainless steel.

Diameter: 2" (51 mm), 3" (76 mm), 4" (102 mm), 5" (127 mm), 6" (152 mm), 7" (178 mm), 8" (203 mm), and 10" (254 mm).
Height: Model No. SJ-24 is 12" (305 mm) high; SJ-25 is 18" (457 mm) high. Add suffix -A for Aluminum, -C for Copper, and -S for Stainless Steel to model no. e.g. SJ-24-A, etc. as required.

PROMINENT FEATURES:
Condensation free. Can be cut to suit vent pipe height. Gases accumulating inside flashing sleeve cannot penetrate ceiling space below due to integrity of EPDM Base Seal (see Thaler EPDM Flashing Seals literature).

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Vandal proof stainless steel cap (SJ-33). Split flashing (SPJ-2) is available as an alternative if sleeve cannot fit over vent stack.

RECOMMENDED USE:
Suitable for plastic, steel, stainless steel, copper or cast iron vent pipes.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings).

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Vent stack flashing: Thaler [SJ-24, 12" (305 mm) high] [SJ-25, 18" (457 mm) high] Removable Cap STACK JACK Flashing (Uninsulated); [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] [7" (178 mm)] [8" (203 mm)] [10" (254 mm)] diameter; to CSA B272-93; with removable cap and EPDM Base Seal; [PVC coated deck flange][bituminous painted deck flange]; [s.s. vandal proof cap]; manufactured by Thaler Metal Industries,1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler STACK JACK Flashings are installed by placing the flashing over the vent stack and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. SJ-24-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify material required by adding appropriate suffix to model number e.g. SJ-24-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ROOF SPECIALTIES
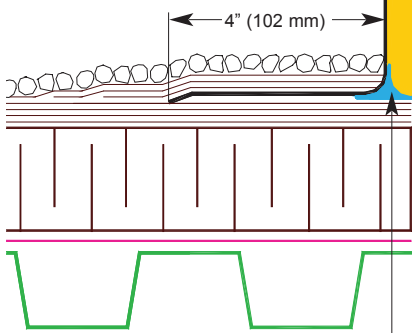## SJ-26 / SJ-27
REMOVABLE CAP
STACK JACK™
FLASHINGS
(Insulated)

TRADE SIZES
2" (51 mm)
3" (76 mm)
4" (102 mm)
5" (127 mm)
6" (152 mm)
7" (178 mm)
8" (203 mm)
10" (254 mm)

2" (51 mm)

VENT PIPE

REMOVABLE CAP

TWO, STAINLESS STEEL
SCREWS PER CAP

Model	Height
SJ-26	12" (305 mm) high
SJ-27	18" (457 mm) high

THALER REMOVABLE CAP
STACK JACK™ FLASHING
(ALUMINUM, COPPER OR
STAINLESS STEEL). CAN BE
CUT TO SUIT STACK HEIGHT

URETHANE INSULATION
PRE-MOLDED TO INNER
SIDE OF SLEEVE

12" or 18"
(305 or 457 mm)

CONVENTIONAL ROOFING
ILLUSTRATED

CONVENTIONAL ROOFING
ILLUSTRATED

4" (102 mm)

EMBED DECK FLANGE IN LAYER
OF PLASTIC CEMENT

EPDM BASE SEAL BONDED
TO METAL SLEEVE (SEE
THALER EPDM FLASHING
SEALS LITERATURE)

STEEL DECK   CONCRETE DECK

REMOVABLE CAP STACK JACK™ FLASHING (Insulated)
PATENTED

DESCRIPTION:
Thaler Removable Cap STACK JACK Flashings (Insulated) consist of a metal flashing sleeve with integral flange, matching removable cap (screw fastened), pre-molded urethane insulation liner ,and EPDM Base Seal. Available in aluminum, copper, and stainless steel.

Diameter: 2" (51 mm), 3" (76 mm), 4" (102 mm), 5" (127 mm), 6" (152 mm), 7" (178 mm), 8" (203 mm), and 10" (254 mm).
Height: Model No. SJ-26 is 12" (305 mm) high; SJ-27 is 18" (457 mm) high. Add suffix -A for Aluminum, -C for Copper, and -S for Stainless Steel to model no. e.g. SJ-26-A, etc. as required.

PROMINENT FEATURES:
Condensation free. Can be cut to suit vent pipe height. Gases accumulating inside flashing sleeve cannot penetrate ceiling space below due to integrity of EPDM Base Seal (see Thaler EPDM Flashing Seals literature).

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Vandal proof stainless steel cap (SJ-33). Split flashing (SPJ-2) is available as an alternative if sleeve does not fit over vent stack.

RECOMMENDED USE:
Suitable for plastic, steel, stainless steel, copper or cast iron vent pipes.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings).

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Vent stack flashing: Thaler [SJ-26, 12" (305 mm) high] [SJ-27, 18" (457 mm) high] Removable Cap STACK JACK Flashing (Insulated); [.064" (1.6 mm) mill finish 1100-0T aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] [7" (178 mm)] [8" (203 mm)] [10" (254 mm)] diameter; to CSA B272-93; with removable cap, pre-molded urethane insulation liner, and EPDM Base Seal; [PVC coated deck flange]; [bituminous painted deck flange]; [s.s. vandal proof cap]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler STACK JACK Flashings are installed by placing the flashing over the vent stack and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. SJ-26-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify material required by adding appropriate suffix to model number e.g. SJ-24-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ROOF SPECIALTIES
NEW-STANDARD
SJ-44 / SJ-45
SLOPED ROOF STACK JACK™ FLASHINGS (Insulated)

TRADE SIZES
2" (51 mm)
3" (76 mm)
4" (102 mm)
5" (127 mm)
6" (152 mm)

MODEL	HEIGHT
SJ-44	7" (178 mm) high
SJ-45	12" (305 mm) high

VENT PIPE

EPDM TRIPLE PRESSURE GROMMET SEAL

THALER NEW-STANDARD SLOPED ROOF STACK JACK™ FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

7" or 12" (178 or 305 mm)

MIN. 8" (203 mm) OF ROOF FINISH OVER DECK FLANGE

SHINGLE, BUR OR ANY OTHER TYPE SLOPED ROOFING. FOR SHINGLE ROOF (ILLUSTRATED) ENSURE DECK FLANGE IS PLACED OVER SHINGLES ON DOWN SLOPE SIDE OF FLASHING AND UNDER ROOF FINISH ON UP SLOPE SIDE

4" (102 mm)

FOR BUR, EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

20" X 20" (508 X 508 mm) SQUARE METAL DECK FLANGE

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

WOOD ROOF DECK

NOTE: SPECIFY SLOPE (ROOF PITCH) WHEN ORDERING

?

12" (305 mm)

DESCRIPTION:
Thaler New-Standard Sloped Roof STACK JACK Flashings consist of a metal flashing sleeve with a sloped integral deck flange, and EPDM Triple Pressure Grommet Seal and EPDM Base Seal. Available in aluminum, copper, and stainless steel.

Diameter: 2" (51 mm), 3" (76 mm), 4" (102 mm), 5" (127 mm), and 6" (152 mm).

Height: Model No. SJ-44 is 7" (178 mm) high; SJ-45 is 12" (305 mm) high. Add suffix -A for Aluminum, -C for Copper, and -S for Stainless Steel to model no. e.g. SJ-44-A, etc. as required.

PROMINENT FEATURES:
Condensation free. Never needs caulking. See Thaler EPDM Flashing Seals literature.

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Vandal proof stainless steel cap (SJ-33). Split flashing (SPJ-2) is available as an alternative, if sleeve does not fit over vent stack.

RECOMMENDED USE:
Suitable for plastic, steel, stainless steel, copper or cast iron vent pipes.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings). Note: in addition to the CSA tests, Thaler in-house testing was performed with the EPDM Triple Pressure Grommet Seal submerged in 8" (203 mm) ofwater for 3 months with no leakage.

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Vent stack flashing: Thaler [SJ-44, 7" (178 mm) high] [SJ-45, 12" (305 mm) high] New-Standard Sloped Roof STACK JACK Flashing; [.064" (1.6 mm) aluminum] [.032" (0.831 mm) copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127mm)] [6" (152 mm)] diameter; to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal; [PVC coated deck flange] [bituminous painted deck flange]; [s.s. vandal proof cap]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

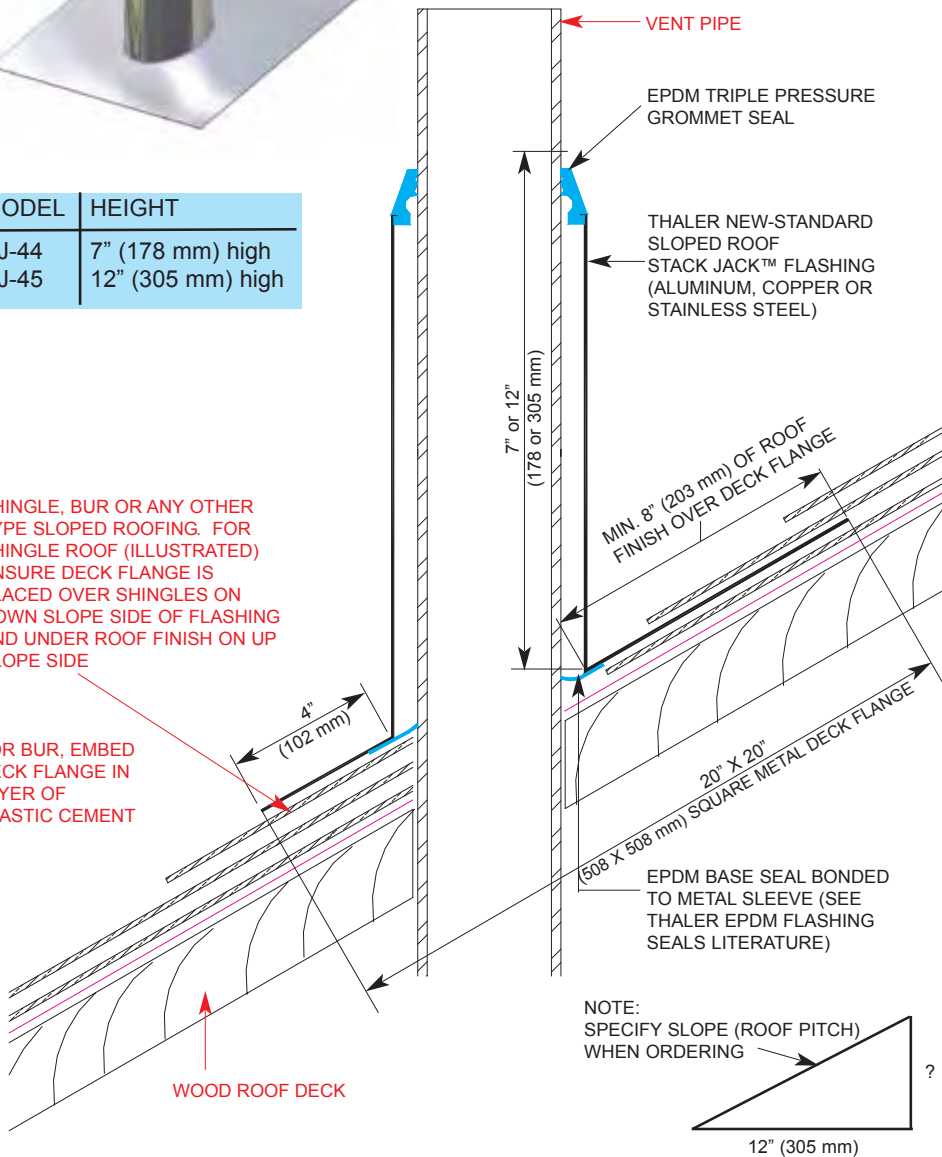# NEW-STANDARD SLOPED ROOF STACK JACK™ FLASHING (Insulated)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler STACK JACK Flashings are installed by placing the flashing over the vent stack and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. SJ-44-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify material required by adding appropriate suffix to model number e.g. SJ-44-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

VENT STACK DIAMETER	SLEEVE DIAMETER	TOTAL VENT AREA	INSULATION THICKNESS
2" (51 mm)	8.5" (216 mm)	16.6 sq. in (107 cm²)	3" (76 mm)
3" (76 mm)	8.5" (216 mm)	16.6 sq. in (107 cm²)	2.5" (64 mm)
4" (102 mm)	8.5" (216 mm)	16.6 sq. in (107 cm²)	2" (51 mm)
5" (127 mm)	9.5" (241 mm)	38.8 sq. in (250 cm²)	2" (51 mm)
6" (152 mm)	9.5" (241 mm)	38.8 sq. in (250 cm²)	1.5" (38 mm)

TRADE SIZES
2" (51 mm)
3" (76 mm)
4" (102 mm)
6" (152 mm)

CSA®

0.064" (1.6 mm) ALUMINUM HOOD AND PERFORATED COLLAR

30°

CHERRY RIVETS HAVING 8274 kPa (1200 psl) SHEARING STRENGTH

1/4" (6 mm) VENT HOLES

VENT PIPE

3-1/4" (83 mm)

STAINLESS STEEL SCREWS (TWO TOTAL)

.064" (1.6 mm) ALUMINUM SLEEVE

PRE-MOLDED URETHANE INSULATION ON INNER SIDE OF SLEEVE PREVENTS FORMATION OF CONDENSATION AS WELL AS ADDED STRENGTH FOR PROTECTION AGAINST VANDALISM

14" (356 mm)

INVERTED ROOFING ILLUSTRATED

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

FOR BUR, EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

STEEL DECK

CONCRETE DECK

SJ-31 VANDAL PROOF STACK JACK™ FLASHING
PATENTED

ROOF SPECIALTIES
SJ-31
VANDAL PROOF STACK JACK™ FLASHINGS

DESCRIPTION:
Thaler SJ-31 Vandal proof STACK JACK Flashing consists of a metal flashing sleeve with integral flange, matching aluminum hood and perforated collar, thick premolded urethane insulation liner and EPDM Base Seal. Available in aluminum only.

Diameter: 2" (51 mm), 3" (76 mm), 4" (102 mm), 5" (127 mm), and 6" (152 mm).
Height: 18" (457 mm) is standard.

PROMINENT FEATURES:
Condensation free. Large, thickly insulated flashing sleeve provides added strength, rigidity and excellent resistance to damage by vandals. Gases cannot accumulate inside flashing sleeve nor penetrate ceiling space below due to insulation and integrity of EPDM Base Seal (see Thaler EPDM Flashing Seals literature). Can be cut to suit vent pipe height. Prevents vandals from pouring rooftop gravel into vent stacks and plugging up expensive-to-repair plumbing systems.

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Split flashing (SPJ-2) is available as an alternative if sleeve does not fit over vent stack.

RECOMMENDED USE:
Ideal for school roofs or other type buildings subject to vandalism. Suitable for plastic, steel, stainless steel, copper or cast iron vent pipes.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings).

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Vent stack flashing: Thaler SJ-31, 18" (457 mm) high Vandal proof STACK JACK Flashing; .064" (1.6 mm) mill finish 1100-0T alloy aluminum; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] diameter; to CSA B272-93; with aluminum hood and perforated collar, thick premolded urethane insulation liner and EPDM Base Seal; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler STACK JACK Flashings are installed by placing the flashing over the vent stack and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. SJ-31-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.
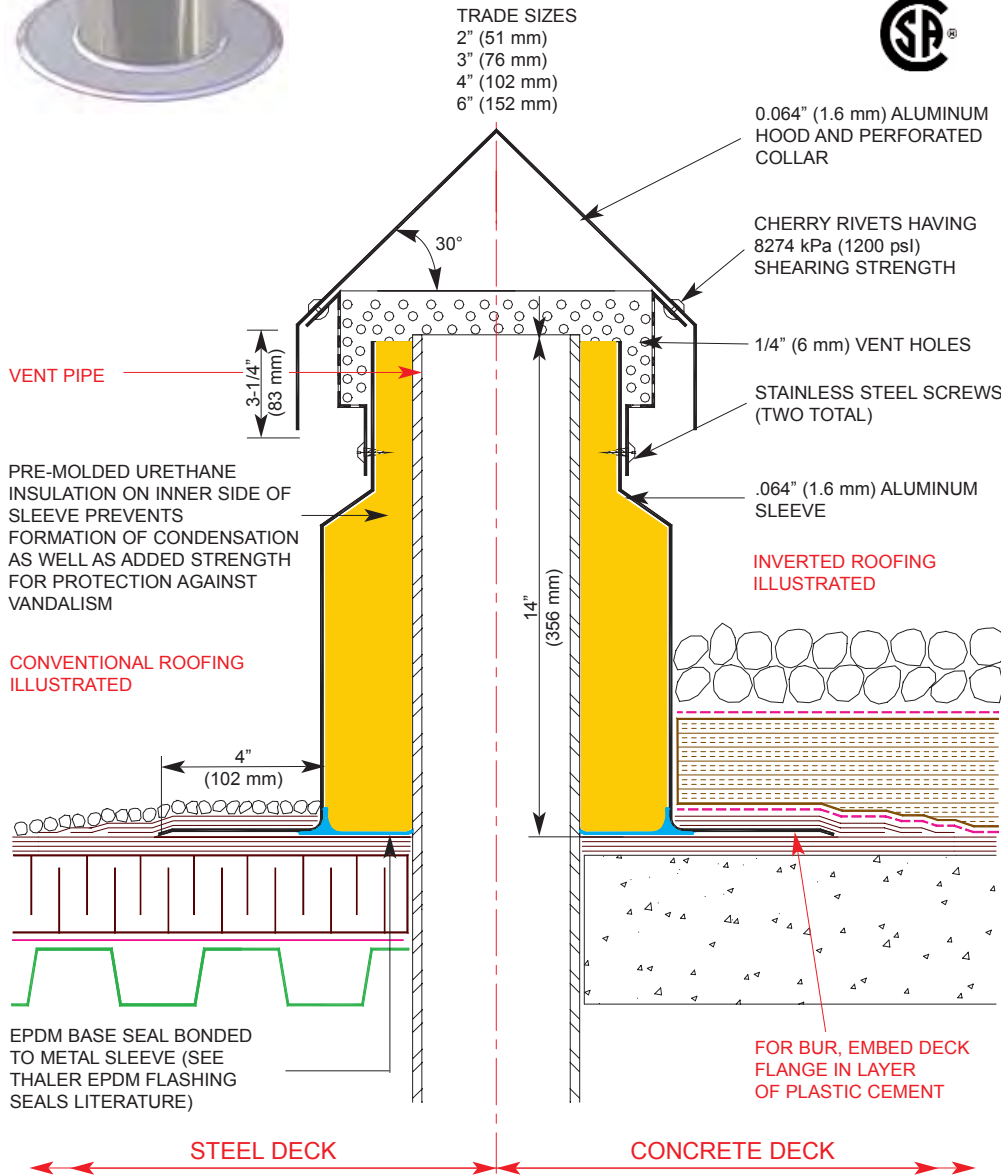
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

VENT STACK DIAMETER	TOTAL PERFORATIONS	TOTAL VENTING AREA
2" (51 mm)	5	5.06 sq. in (32.68 cm²)
3" (76 mm)	10	10.13 sq. in (65.35 cm²)
4" (102 mm)	17	17.22 sq. in (111.10 cm²)
5" (127 mm)	26	26.33 sq. in (169.92 cm²)
6" (152 mm)	37	37.48 sq. in (241.81cm²)

HOOD AND COLLAR

30°

3/4" X 1-1/2" OB-ROUND VENT HOLES

STAINLESS STEEL SCREWS (TWO TOTAL)

VENT PIPE

INVERTED ROOFING ILLUSTRATED

12" (305 mm)

THALER SJ-VPC VANDALPROOF STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

FOR BUR, EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

CONCRETE DECK

STEEL DECK

SJ-VPC VANDAL PROOF STACK JACK™ FLASHING
PATENTED

DESCRIPTION:
Thaler SJ-VPC Vandal proof STACK JACK Flashings consist of aluminum or stainless steel hood and flashing sleeve with integral deck flange, and EPDM Base Seal. The underside of the hood is perforated with ob-round vent holes that provide excellent venting, while keeping birds or rodents from entering from the exterior.

Diameter: 2" (51 mm), 3" (76 mm), 4" (102 mm), 5" (127 mm), and 6" (152 mm).
Height: 12" (305 mm) high is standard.

PROMINENT FEATURES:
Condensation free. Never needs caulking (see Thaler EPDM Flashing Seals literature). One of the most economical vandal proof flashings on the market. Prevents vandals from pouring rooftop gravel into vent stacks and plugging up expensive-to-repair plumbing systems. Ob-round vent holes aid in preventing the entry or nesting of birds, etc.

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. For a more heavy duty vandal proof product, see Thaler SJ-31 Vandal proof STACK JACK Flashing. Split flashing (SPJ-2) is available as an alternative if sleeve does not fit over vent stack.

RECOMMENDED USE:
Ideal for school roofs or other type buildings subject to vandalism. Suitable for plastic, steel, stainless steel, copper or cast iron vent pipes.

APPROVALS:
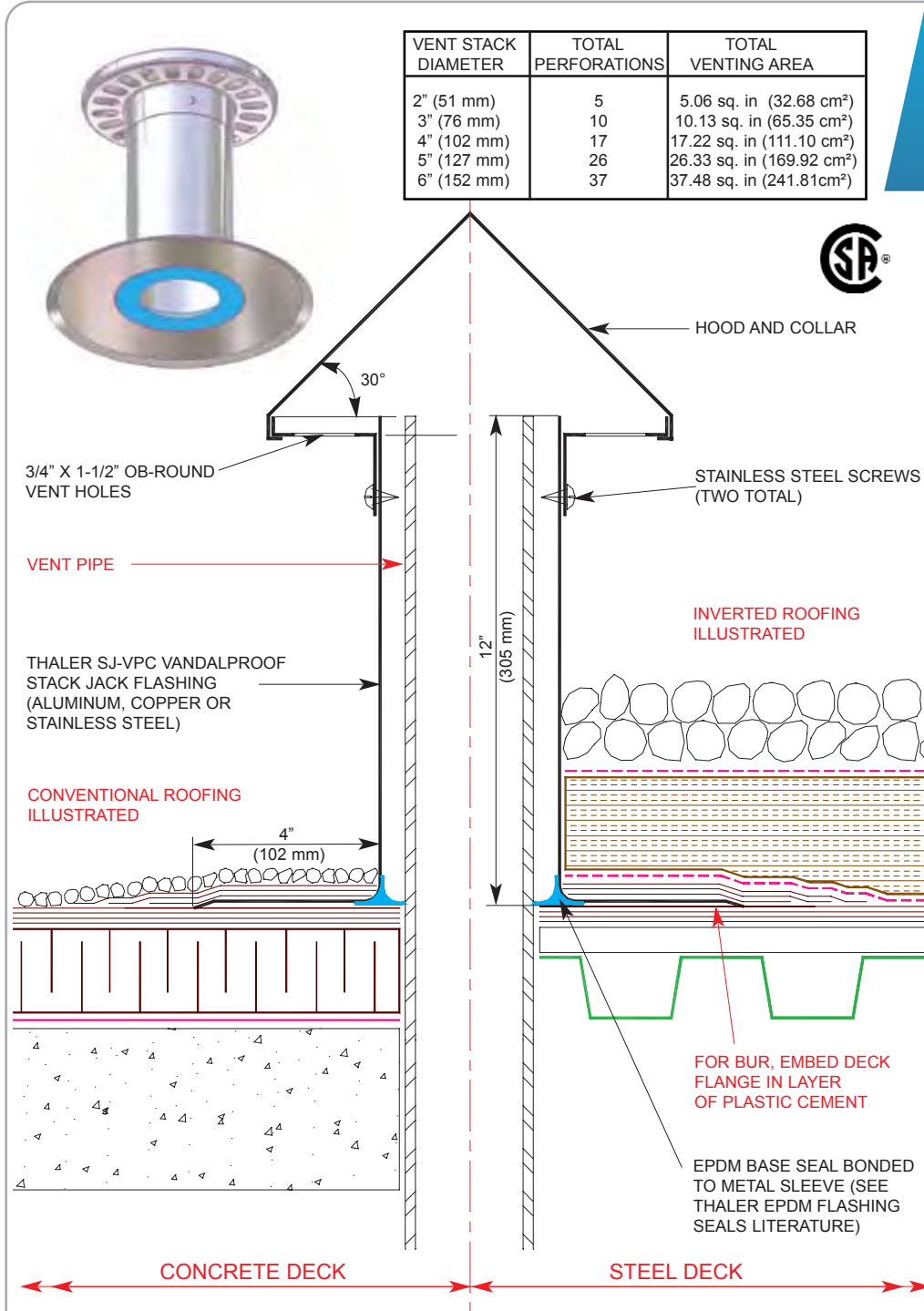CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings).

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Vent stack flashing: Thaler SJ-VPC, 12" (305 mm) high Vandal proof STACK JACK Flashing; [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [0.032" (0.831 mm) 24 oz. copper] [.031 (0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] diameter; to CSA B272-93; with ob-round perforations in aluminum hood, and EPDM Base Seal; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler STACK JACK Flashings are installed by placing the flashing over the vent stack and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
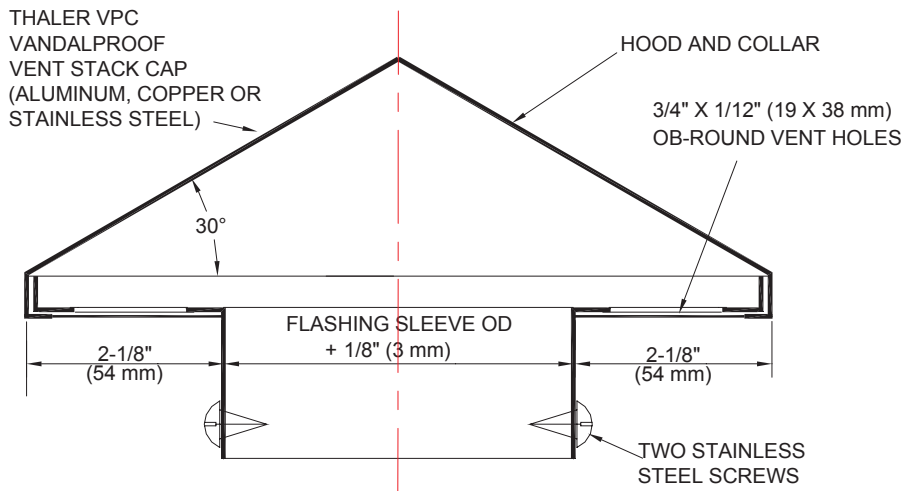
ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. SJ-VPC-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler VPC Vandal proof Vent Stack Cap is an aluminum or stainless steel cap supplied with two stainless steel mounting screws. The underside of the cap is perforated with specially shaped "ob-round" vent holes. Designed as a retrofit item for vandal prone roofs. The overall size of the cap is shown in chart with drawing.

Diameter: 2" (51 mm), 3" (76 mm), 4" (102 mm), 5" (127 mm), and 6" (152 mm).

PROMINENT FEATURES:
Economical aluminum product. Prevents vandals from pouring roof top gravel into vent stacks and plugging up expensive-to-repair plumbing systems. Ob-round vent holes aid in preventing the entry or nesting of birds, etc.

OPTIONS:
For a stainless steel vandal proof cap, see Thaler SJ-33 Vandal proof Vent Stack Cap. For complete aluminum economy vent stack flashing see Thaler SJ-VPC Vandal proof STACK JACK Flashing. For a complete heavy duty vandal proof product, see Thaler SJ-31 Vandal proof STACK JACK Flashing.

RECOMMENDED USE:
Ideal for school roofs or other type buildings subject to vandalism. Suitable for plastic, steel, stainless steel, copper or cast iron vent pipes.

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Vent stack flashing: Thaler VPC, Vandal proof Vent Stack Cap, [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [0.032" (0.831 mm 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; sized to suit vent pipe, complete with obround perforations and stainless steel mounting screws; manufactured by Thaler Metal Industries,1-800-387-7217 Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

THALER VPC VANDALPROOF VENT STACK CAP (ALUMINUM, COPPER OR STAINLESS STEEL)

HOOD AND COLLAR

3/4" X 1/12" (19 X 38 mm) OB-ROUND VENT HOLES

30°

FLASHING SLEEVE OD + 1/8" (3 mm)

2-1/8" (54 mm)

2-1/8" (54 mm)

TWO STAINLESS STEEL SCREWS

VENT STACK DIAMETER	TOTAL PERFORATIONS	TOTAL VENTING AREA
2" (51 mm)	5	5.06 sq. in (32.68 cm²)
3" (76 mm)	10	10.13 sq. in (65.35 cm²)
4" (102 mm)	17	17.22 sq. in (111.10 cm²)
5" (127 mm)	26	26.33 sq. in (169.92 cm²)
6" (152 mm)	37	37.48 sq. in (241.81cm²)

VPC VANDAL PROOF STACK CAP
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler VPC Vandal proof Vent Stack Cap is installed by simply securing the cap using the two stainless steel self-tapping screws 2" (51 mm) down from the top of the stack.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

8"
(203 mm)

18 GA. (1.2 mm)
STAINLESS STEEL

3/8" (10 mm) DIA.
STAINLESS STEEL BOLT

TWO, 1/2" (13 mm)
DIA. PLASTIC
SPACERS

4"
(102 mm)

1"
(25 mm)

STAINLESS STEEL
LOCK NUT

← VENT PIPE →

TRADE
SIZES
2" (51 mm)
3" (76 mm)
4" (102 mm)
5" (127 mm)
6" (152 mm)

DESCRIPTION:
Thaler SJ-33 Vandal proof Vent Stack Cap is a stainless steel cap supplied complete with rugged mounting hardware. The cap can be specified for use with Thaler STACK JACK Flashings or as a retrofit item for vandal prone areas. The overall size of the cap is 8" (203 mm) wide x 4" (102 mm) high.

Diameter: Fits 2" (51 mm), 3" (76 mm), 4" (102 mm), 5" (127 mm), and 6" (152 mm) vent stacks.

PROMINENT FEATURES:
Prevents vandals from pouring rooftop gravel into vent stacks and plugging up expensive-torepair plumbing systems. Never rusts.

OPTIONS:
For a more heavy duty vandal proof product, see Thaler SJ-31 Vandal proof STACK JACK Flashing.

RECOMMENDED USE:
Ideal for school roofs or other type buildings subject to vandalism. Suitable for plastic, steel, stainless, copper or cast iron vent pipes.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Vandal proof vent stack caps: Thaler SJ-33 Vandal proof Cap; 18 ga. (1.2 mm) Type 304 stainless steel; for [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] diameter vent pipe; complete with mounting hardware; manufactured by Thaler Metal Industries,1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.
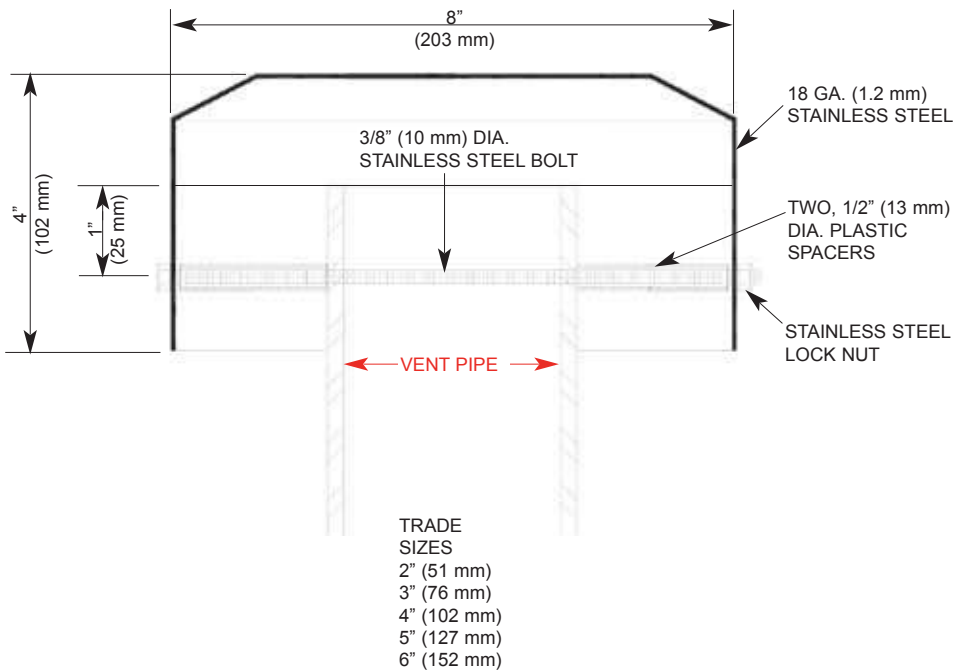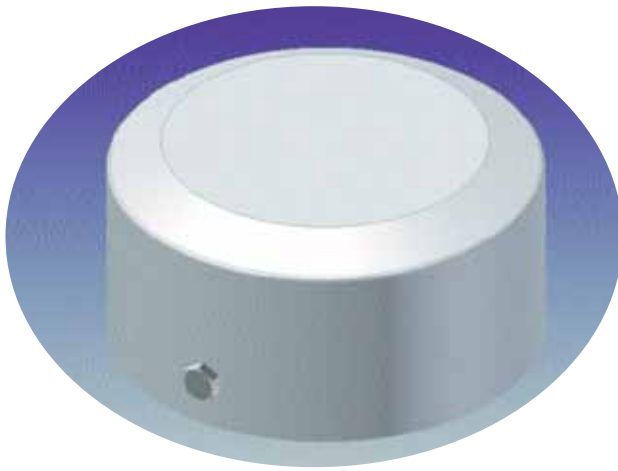
SJ-33 VANDAL PROOF STACK CAP

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the vandal proof cap is installed by drilling a 1/2" (13 mm) diameter hole in the vent stack 1" (25 mm) down from the top of the stack and then bolting the cap to the stack.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
STACK JACK™
FLASHINGS
SPECIFICATION

Note: This flashing specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part of a roofing specification.

PART 1: GENERAL

1.01   SECTION INCLUDES

A. Supply and installation of roof accessories, including:
   1. Preformed metal flashings.

1.02   RELATED SECTIONS

A. Section 06100 - Rough Carpentry

B. Section 07200 - Thermal Protection

C. Section 07500 - Membrane Roofing

D. Section 07900 - Joint Sealers

E. Section 15800 - Air Distribution

1.03   REFERENCES

[A. CSA B272-93 - Prefabricated Self-Sealing Roof Vent Flashings]

Note: CSA standard is applicable only to those Thaler products supplied with EPDM Triple Pressure Grommet Seal and/or EPDM Base Seal.

[B. CRCA (Canadian Roofing Contractor's Association)]

[C. NRCA (National Roofing Contractor's Association)]

[D. SPRI (Single Ply Roofing Institute)]

[E. CUFCA (Canadian Urethane Foam Contractor's Association)and CGSB-51-GP 46MP Manual for "Installers of Spray Polyurethane Foam Thermal Insulation" and ASTM C1029-90 "Spray Applied Rigid Cellular Polyurethane Thermal Insulation"]

1.04   SUBMITTALS

A. Manufacturer's descriptive literature for each product, including section or other type details.

B. Manufacturer's written installation instructions.

C. Shop drawings and samples, when required, in accordance with Section [01300].

1.05   QUALITY ASSURANCE

A. Roof accessories manufacturer to have minimum 5 years documented experience in the design and fabrication of roofing specialties and accessories.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
STACK JACK™
FLASHINGS
SPECIFICATION

1.06   SPECIAL WARRANTY

A. Warrant products installed under this section of work to be free of leaks, condensation and defects in materials and/or manufacture for a period of 20 years when installed in accordance with the manufacturer's written instructions.

PART 2: PRODUCTS

2.01   MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:
1. 20 year warranty against leaks, condensation and defects in materials and/or manufacture, as applicable;
2. compliance with CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings)
3. air barrier design using EPDM seals only;
4. maintenance free design;
5. materials and sizes options, and thickness;
6. injection molded urethane insulation to CGSB-51-GP 46MP and ASTM C1029-90, as applicable;
7. treated deck flange, as applicable;
8. written installation instructions.

2.02   MANUFACTURED UNITS

Note: Delete clauses not applicable.

New-Standard STACK JACK Flashing (Uninsulated)
Vent stack flashing: Thaler [SJ-34, 7" (178 mm) high] [SJ-35, 13" (330 mm) high] [SJ-36, 19" (483 mm high] New-Standard STACK JACK Flashing (Uninsulated); [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] .032"(0.831 mm) 24. oz copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127mm)] [6" (152 mm)] diameter; to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal; [PVC coated deck flange] [bituminous painted deck flange]; [s.s. vandal proof cap].

New-Standard STACK JACK Flashing (Insulated)
Vent stack flashing: Thaler [SJ-37, 7" (178 mm) high] [SJ-38, 13" (330 mm) high] [SJ-39, 19" (483 mm) high] New-Standard STACK JACK Flashing (Insulated); [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] diameter; to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal; pre-molded urethane insulation liner; [PVC coated deck flange] [bitumi-nous painted deck flange]; [s.s. vandal proof cap].

Removable Cap STACK JACK Flashing (Uninsulated)
Vent stack flashing: Thaler [SJ-24, 12" (305 mm) high] [SJ-25, 18" (457 mm) high] Removable Cap STACK JACK Flashing (Uninsulated); [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 o. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] [7" (178 mm)] [8" (203 mm)] [10" (254 mm)] diameter; to CSA B272-93; with removable cap and EPDM Base Seal; [PVC coated deck flange] [bituminous painted deck flange]; [s.s. vandal proof cap].

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**STACK JACK™
FLASHINGS**
SPECIFICATION

Removable Cap STACK JACK Flashing (Insulated)
Vent stack flashing: Thaler [SJ-26, 12" (305 mm) high] [SJ-27, 18" (457 mm) high] Removable Cap STACK JACK Flashing (Insulated); [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.32" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" 127 mm)] [6" (152 mm)] [7" (178 mm)] [8" (203 mm)] [10" (254 mm)] diameter; to CSA B272-93; with removable cap, pre-molded urethane insulation liner, and EPDM Base Seal; [PVC coated deck flange]; [bitumi-nous painted deck flange]; [s.s. vandal proof cap].

New-Standard Sloped Roof STACK JACK Flashing
Vent stack flashing: Thaler [SJ-44, 7" (178 mm) high] [SJ-45, 12" (305 mm) high] New-Standard Sloped Roof STACK JACK Flashing; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.0232" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127mm)] [6" (152 mm)] diameter; to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal; [PVC coated deck flange] [bituminous painted deck flange]; [s.s. vandalproof cap].

Vandal proof STACK JACK Flashing
Vent stack flashing: Thaler SJ-31, 18" (457 mm) high Vandal proof STACK JACK Flashing; .064" (1.6 mm) mill finish 1100-0T alloy aluminum; [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] diameter; to CSA B272-93; with aluminum hood and perforated collar, thick pre-molded urethane insulation liner and EPDM Base Seal; [PVC coated deck flange] [bituminous painted deck flange].

Vandal proof STACK JACK Flashing
Vent stack flashing: Thaler SJ-VPC, 12" (305 mm) high Vandal proof Economy STACK JACK Flashing; .064" (1.6 mm) mill finish 1100-0T alloy aluminum; [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel];[2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] diameter; to CSA B272-93; with ob-round perforations in aluminum hood, and EPDM Base Seal; [PVC coated deck flange] [bituminous painted deck flange].

Vandal proof Vent Stack Cap
Vandal proof vent stack cap: Thaler VPC, Vandal proof Vent Stack Cap with perforated collar, .064" (1.6mm) mill finish 1100-0T alloy aluminum; [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; sized to suit vent pipe; complete with ob-round perforation in collar and stainless steel mounting screws.

Vandal proof Vent Stack Cap
Vandal proof vent stack cap: Thaler SJ-33 Vandal proof Cap; 18 ga. (1.2 mm) Type 304 stainless steel; for [2" (51 mm)] [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] diameter vent pipe; complete with stain less steel mounting hardware.

PART 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
STACK JACK™
FLASHINGS
SPECIFICATION

3.02 INSTALLATION

Note: Delete clauses not applicable.

A. Install flashing in accordance with manufacturer's printed instructions.

BUR
B. Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

Modified Bitumen
C. Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply
D. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing.

Note: For PVC membrane, specify PVC coated flashing by adding suffix P to end of Thaler model number, e.g. SJ-24-A-P; weld roofing to deck flange using PVC torch.

PVC Single Ply
E. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Weld roofing to deck flange using PVC torch.

Shingle Roof
A. Set deck flange in layer of plastic cement, ensuring that flange is placed over shingles on down slope side of flashing and under shingles on up slope side.

3.03 FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

3.04 ADJUSTING

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

3.05 CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleaners or techniques which could impair performance of the roofing system.

End Of Section

DRYER EXHAUST VENT FLASHINGS

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**DRYER EXHAUST
VENT FLASHINGS**

TABLE OF CONTENTS

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.
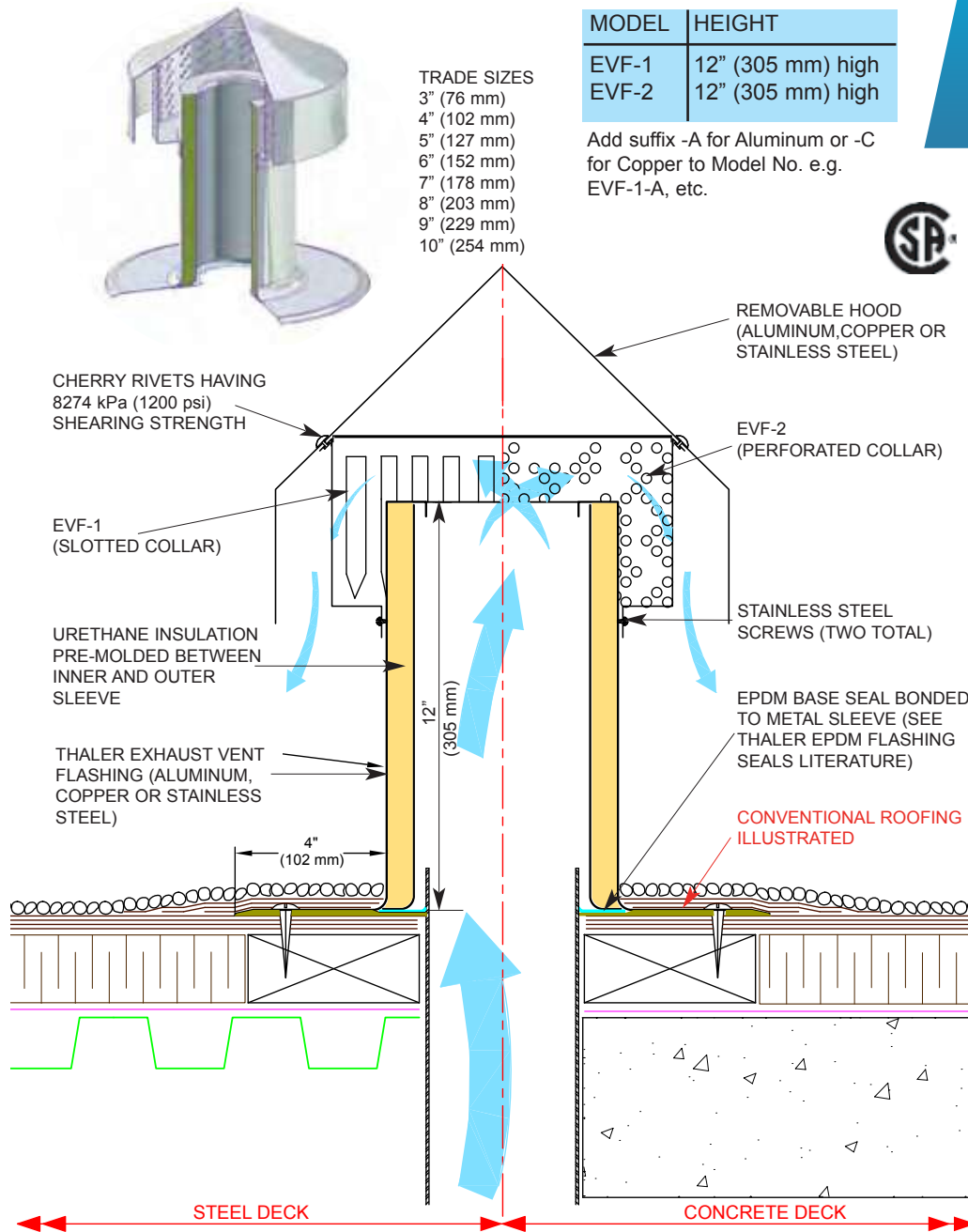
WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is incumbent upon specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler Exhaust Vent Flashing products have a number of Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE
COMPETITION

THALER VALUE
ADDED FEATURES

[X] ✓ **EPDM Base Seal;** EPDM "memory' in the seal provides constant pressure to outside of vent pipe to prevent condensation build-up. See Thaler EPDM Flashing Seals literature.

[X] ✓ **EPDM Base Seal sizes;** available in any diameter from 3" (76 mm) to 10" (254 mm) vent pipe sizes.

[X] ✓ **Condensation Free;** the cone-shaped hood is designed to re-direct any wintertime condensation to the exterior rather than back into the vent space.

[X] ✓ **Slotted or Perforated Collar;** designed to suit specific application e.g. dryer exhaust or washroom exhaust.

[X] ✓ **Flat or sloped roof;** models available for any roof application.

[X] ✓ **Injection molded urethane insulation;** adhered between sleeves without air pockets.

[X] ✓ **Treated deck flange;** can be PVC coated for proper adhesion of PVC membrane or bituminous painted for BUR or ModBit membrane.

[X] ✓ **Material options and thickness;** available in .064" (1.6 mm) mill finish 1100-0T alloy aluminum or .032" (0.831 mm) 24 oz. copper.

[X] ✓ **20 year Warranty;** guaranteed against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

[X] ✓ **Virtually Maintenance-Free;** slotted collar allows lint to vent directly to exterior for dryer exhaust but should be checked and/or cleaned periodically if necessary. Never needs caulking (any caulking at any time will invalidate 20 year warranty)

[X] ✓ **Written "Installation Instructions";** provided with every Thaler product.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

TRADE SIZES
3" (76 mm)
4" (102 mm)
5" (127 mm)
6" (152 mm)
7" (178 mm)
8" (203 mm)
9" (229 mm)
10" (254 mm)

MODEL	HEIGHT
EVF-1	12" (305 mm) high
EVF-2	12" (305 mm) high

Add suffix -A for Aluminum or -C for Copper to Model No. e.g. EVF-1-A, etc.

REMOVABLE HOOD (ALUMINUM,COPPER OR STAINLESS STEEL)

CHERRY RIVETS HAVING 8274 kPa (1200 psi) SHEARING STRENGTH

EVF-2 (PERFORATED COLLAR)

EVF-1 (SLOTTED COLLAR)

URETHANE INSULATION PRE-MOLDED BETWEEN INNER AND OUTER SLEEVE

STAINLESS STEEL SCREWS (TWO TOTAL)

THALER EXHAUST VENT FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

CONVENTIONAL ROOFING ILLUSTRATED

12" (305 mm)

4" (102 mm)

STEEL DECK

CONCRETE DECK

EXHAUST VENT FLASHINGS
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler EVF Flashings are installed by placing the flashing over the vent stack and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to EVF Flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. EVF-1-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum EVF Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane. Ensure each exhaust fan is equipped with a damper to facilitate proper flashing function by preventing ice build up in winter.

Ordering and Availability: Specify material required by adding appropriate suffix to model number e.g. EVF-1-A, for aluminum, etc.. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler EVF Exhaust Vent Flashings consist of a double wall metal flashing sleeve with integral deck flange, matching removable hood (screw fastened), slotted collar (EVF-1) or perforated collar (EVF-2), pre-molded urethane insulation liner, and EPDM Base Seal. Available in aluminum or copper.

Diameter: 3" (76 mm), 4" (102 mm), 5" (127mm), 6" (152 mm), 7" (178 mm), 8" (203 mm), 9" (229 mm) and 10" (254 mm).
Height: 12" (305 mm) is standard.

PROMINENT FEATURES:
Condensation free. Moisture cannot penetrate ceiling space below due to integrity of EPDM Base Seal (see Thaler EPDM Flashing Seals literature). Also the cone-shaped hood is designed to re-direct any winter time condensation to the exterior rather than back into the vent space.

OPTIONS:
Slotted collar (for dryer exhaust) or perforated collar (for washroom exhaust). PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Angled deck flange for sloped roofs (see EVF-3 and EVF-4).

RECOMMENDED USE:
Primarily for dryer exhaust vent (with slotted collar) but may also be used for washroom vent with perforated collar. Suitable for plastic, steel, stainless, copper or cast iron vents. See Installation (Precautions).

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings).

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
Slotted collar allows any lint to vent directly to exterior for dryer exhaust but should be checked and/or cleaned periodically. Hood is removable for cleaning if necessary. Otherwise EVF flashings are maintenance free.

SPECIFICATION (SHORT FORM):
Dryer [and washroom] exhaust vent flashing:
Thaler [EVF-1] [EVF-2] standard 12" (305 mm) high Dryer Exhaust Vent Flashing; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [0.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [3" (76 mm)] [4" (102 mm)] [5"(127mm)] [6" (152 mm)] [7" (178 mm)] [8" (203 mm)] [9" (229 mm)] [10" (254 mm)] diameter; to CSA B272-93; with EPDM Base Seal, pre-molded urethane insulation liner, hood and [slotted collar] [perforated collar]; [PVC coated deck flange] [bituminous painted deck flange];manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Brunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture. 1-800- 387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

THALER

B-1

TRADE SIZES
3" (76 mm)
4" (102 mm)
5" (127 mm)
6" (152 mm)
7" (178 mm)
8" (203 mm)
9" (229 mm)
10" (254 mm)

MODEL	HEIGHT
EVF-3	12" (305 mm) high
EVF-4	12" (305 mm) high

Add suffix -A for Aluminum or -C for Copper to Model No. e.g. EVF-3-A, etc.

REMOVABLE HOOD (ALUMINUM,COPPER OR STAINLESS STEEL)

EVF-4 (PERFORATED COLLAR)

CHERRY RIVETS HAVING 8274 kPa (1200 psi) SHEARING STRENGTH

EVF-3 (SLOTTED COLLAR)

STAINLESS STEEL SCREWS (TWO TOTAL)

URETHANE INSULATION PRE-MOLDED BETWEEN INNER AND OUTER SLEEVE

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

THALER EXHAUST VENT FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

12" (305 mm)

MIN 8" (203 mm)

SHINGLE ROOF ILLUSTRATED. EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

MIN 4" (102 mm)

MIN. 20" x 20" SQUARE BASE (508 mm x 508 mm)

NOTE: SPECIFY SLOPE (ROOF PITCH) WHEN ORDERING

12" (305 mm)

EXHAUST VENT

EVF-3 (Slotted Collar)   **EVF-4 (Perforated Collar)**

EXHAUST VENT FLASHING
PATENTED

DESCRIPTION:
Thaler EVF Dryer Exhaust Vent Flashings for sloped roofs consist of a double wall metal flashing sleeve with integral deck flange, matching removable hood (screw fastened), slotted collar (EVF-3) or perforated collar (EVF-4, pre-molded urethane insulation liner, and EPDM Base Seal. Available in aluminum or copper.

Diameter: 3" (76 mm), 4" (102 mm), 5" (127mm), 6" (152 mm), 7" (178 mm), 8" (203 mm), 9" (229 mm) and 10" (254 mm).
Height: 12" (305 mm) is standard.

PROMINENT FEATURES:
Condensation free. Moisture cannot penetrate ceiling space below due to integrity of EPDM Base Seal (see Thaler EPDM Flashing Seals literature). Also the cone-shaped hood is designed to re-direct any winter time condensation to the exterior rather than back into the vent space.

OPTIONS:
Slotted collar (for dryer exhaust) or perforated collar (for washroom exhaust). PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Primarily for dryer exhaust vent (with slotted collar) but may also be used for washroom vent (with perforated collar). Suitable for plastic, steel, stainless, copper or cast iron vents. See Installation (Precautions).

APPROVALS:
CSA Approved to CSA B272-93 (Prefabrica-ted Self-Sealing Roof Vent Flashings).

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
Slotted collar allows any lint to vent directly to exterior for dryer exhaust but should be checked and/or cleaned periodically. Hood is removable for cleaning if necessary. Otherwise EVF flashings are maintenance free.

SPECIFICATION (SHORT FORM):
Dryer [and washroom] exhaust vent flashing:
Thaler [EVF-3] [EVF-4] standard 12" (305 mm) high Dryer Exhaust Vent Flashing; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper][0.031" (0.79 mm) 22 ga. Type 304 stainless steel; [3" (76 mm)] [4" (102 mm)] [5" (127mm)] [6" (152 mm)] [7" (178 mm)] [8" (203 mm)] [9" (229 mm)] [10" (254 mm)] diameter; to CSA B272-93; with EPDM Base Seal, pre-molded urethane insulation liner, hood and [slotted collar] [perforated collar];[PVC coated deck flange][bituminous painted deck flange] ;manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler EVF Flashings are installed by placing the flashing over the vent stack and as follows:

SHINGLE ROOFS: Set deck flange in layer of plastic cement, ensuring that flange is placed over shingles on down slope side of flashing and under shingles on up slope side.

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to EVF Flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. EVF-3-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum EVF Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane. Ensure each exhaust fan is equipped with a damper to facilitate proper flashing function by preventing ice build up in winter.

Ordering and Availability: Specify material required by adding appropriate suffix to model number e.g. EVF-1-A, for aluminum, etc.. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
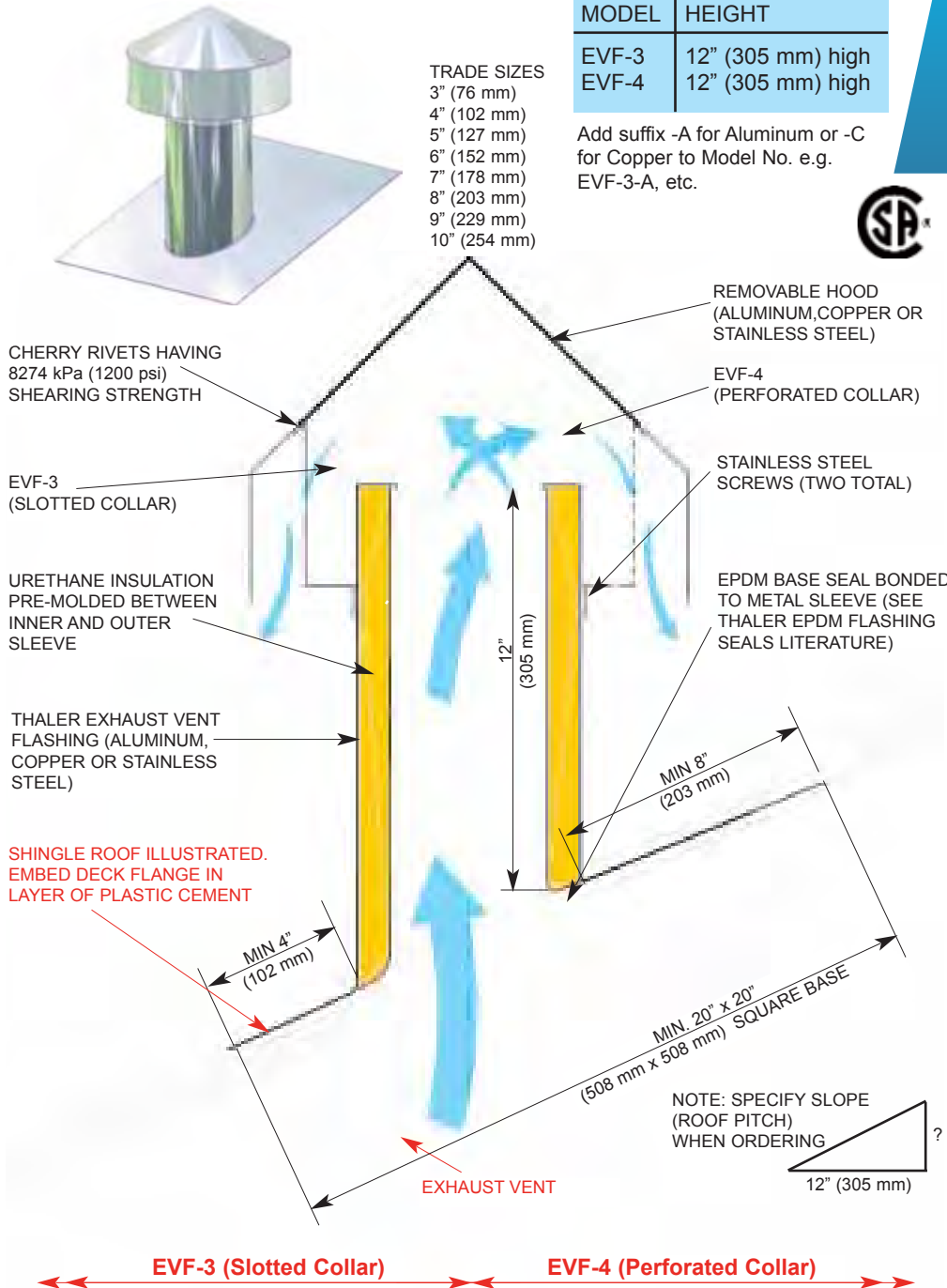
Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**EXHAUST VENT
FLASHINGS**
SPECIFICATION

Note: This flashing specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part of a roofing specification.

PART 1: GENERAL

1.01   SECTION INCLUDES

A. Supply and installation of roof accessories, including:
    1. Preformed metal flashings.

1.02   RELATED SECTIONS

A. Section 06100 - Rough Carpentry

B. Section 07200 - Thermal Protection

C. Section 07500 - Membrane Roofing

D. Section 07900 - Joint Sealers

E. Section 15800 - Air Distribution

1.03   REFERENCES

[A. CSA B272-93 - Prefabricated Self-Sealing Roof Vent Flashings]

Note: CSA standard is applicable only to those Thaler products supplied with EPDM Base

[B. CRCA (Canadian Roofing Contractor's Association)]

[C. NRCA (National Roofing Contractor's Association)]

[D. SPRI (Single Ply Roofing Institute)]

[E. CUFCA (Canadian Urethane Foam Contractor's Association)and CGSB-51-GP 46MP Manual for "Installers of Spray Polyurethane Foam Thermal Insulation" and ASTM C1029-90 "Spray Applied Rigid Cellular Polyurethane Thermal Insulation"]

1.04   SUBMITTALS

A. Manufacturer's descriptive literature for each product, including section or other type details.

B. Manufacturer's written installation instructions.

C. Shop drawings and samples, when required, in accordance with Section [01300].

1.05   QUALITY ASSURANCE

A. Roof accessories manufacturer to have minimum 5 years documented experience in the design and fabrication of roofing specialties and accessories.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
STACK JACK™
FLASHINGS
SPECIFICATION

1.06   SPECIAL WARRANTY

A. Warrant products installed under this section of work to be free of leaks, condensation and defects in materials and/or manufacture for a period of 20 years when installed in accordance with the manufacturer's written instructions.

PART 2: PRODUCTS

2.01   MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:
  1. 20 year warranty against leaks, condensation and defects in materials and/or manufacture, as applicable;
  2. compliance with CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings)
  3. air barrier design using EPDM seals only;
  4. maintenance free design;
  5. materials and sizes options, and thickness;
  6. injection molded urethane insulation to CGSB-51-GP 46MP and ASTM C1029-90, as applicable;
  7. treated deck flange, as applicable;
  8. written installation instructions.

2.02   MANUFACTURED UNITS

Note: Delete clauses not applicable.

Note: Ensure each exhaust fan is equipped with a damper to facilitate proper flashing function by preventing ice build up in the winter.

Dryer Exhaust Vent Flashing (Flat/Low Slope Roofs)
Dryer [and washroom] exhaust vent flashing: Thaler [EVF-1] [EVF-2] standard 12" (305 mm) high Dryer Exhaust Vent Flashing; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz copper]; [3" (76 mm)] [4" (102 mm)] [6" (152 mm)] [7" (176 mm)] [8" (203 mm)] [9" (229 mm)] [10" (254 mm)] diameter; to CSA B272-93; with EPDM Base Seal, pre molded urethane insulation iner, hood and [slotted collar] [perforated collar]; [PVC coated deck flange] [bituminous painted deck flange].

Dryer Exhaust Vent Flashing (Sloped Roofs)
Dryer [and washroom] exhaust vent flashing: Thaler [EVF-3] [EVF-4]standard 12" (305 mm) high Dryer Exhaust Vent Flashing; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz copper]; [3" (76 mm)] [4" (102 mm)] [6" (152 mm)] [7" (176 mm)] [8" (203 mm)] [9" (229 mm)] [10" (254 mm)] diameter; to CSA B272-93; with EPDM Base Seal, pre molded urethane insulation iner, hood and [slotted collar] [perforated collar]; [PVC coated deck flange] [bituminous painted deck flange].

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
STACK JACK™
FLASHINGS
SPECIFICATION

B-5

PART 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

3.02   INSTALLATION

Note: Delete clauses not applicable.

A. Install flashing in accordance with manufacturer's printed instructions.

BUR
B. Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

Modified Bitumen
C. Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply
D. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing.

Note: For PVC membrane, specify PVC coated flashing by adding suffix P to end of Thaler model number, e.g. EVF-1-A-P; weld roofing to deck flange using PVC torch.

PVC Single Ply
E. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Weld roofing to deck flange using PVC torch.

Shingle Roof
A. Set deck flange in layer of plastic cement, ensuring that flange is placed over shingles on down slope side of flashing and under shingles on up slope side.

3.03   FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

3.04   ADJUSTING

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

3.05   CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleaners or techniques which could impair performance of the roofing system.

End Of Section

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
STACK JACK™ FLASHINGS

TABLE OF CONTENTS

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**MECHANICAL &
ELECTRICAL
FLASHINGS**

WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is incumbent upon specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler Mechanical and Electrical Flashing products have a number of Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE
COMPETITION

THALER VALUE
ADDED FEATURES

[X] ✓ **EPDM Triple Pressure Grommet Seal;** EPDM "memory" in the seal provides constant pressure to outside of vent pipe to prevent leaks. See Thaler EPDM Flashing Seals literature.

[X] ✓ **EPDM Base Seal;** EPDM "memory" in the seal provides constant pressure to outside of conduit vent pipe, etc. to prevent condensation build-up. See Thaler EPDM Flashing Seals literature.

[X] ✓ **Incorporates air barrier principles;** meets the requirements for air leakage control better than any mechanical and/or electrical flashing on the market today. See Thaler EPDM Flashing Seals literature.

[X] ✓ **EPDM Triple Pressure Grommet Seal and Base Seal sizes;** available for any size diameter conduit, vent pipe, etc.

[X] ✓ **Injection molded urethane insulation (where applicable);** adheres to inner side of sleeve without air pockets.

[X] ✓ **One piece, spun aluminum flashing sizes;** supplied whenever possible for use with single, double or multiple conduit in virtually any diameter.

[X] ✓ **Treated deck flange;** can be PVC coated for proper adhesion of PVC membrane or bituminous painted for BUR or ModBit membrane.

[X] ✓ **Material options and thickness;** most products available in .064" (1.6 mm) mill finish 1100-0T alloy aluminum, .032" (0.831 mm) 24 oz. copper or .031" (0.79 mm) 22 ga. Type 304 stainless steel.

[X] ✓ **CSA Approved;** Most Thaler Mechanical and Electrical Flashings conform to CSA B272-93 - Prefabricated Self-Sealing Roof Vent Flashings.

[X] ✓ **20 year Warranty;** guaranteed against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

[X] ✓ **Maintenance-Free;** never needs caulking (any caulking at any time will invalidate 20 year warranty)

[X] ✓ **Written "Installation Instructions";** provided with every Thaler product.

[X] ✓ **Aluminum Base Plate and S.S. Fastening Screws;** supplied with the MEF-2A product line. Oversized base plate acts as a counterweight to provide greater stability. Screws provided to prevent improper installation.

CAP FOR 2 PIECE
FLASHING SHOWN

AVAILABLE CAPS AND SEALS
(See Reverse Side Of Page For Details)

EPDM Triple
Pressure
Grommet Seal
(Extruded)

EPDM Triple Pressure
Grommet Seal
(Injection Molded)

Caulking
(By Others for
conduit less than
1/2" diameter)

EPDM TRIPLE PRESSURE
GROMMET SEAL

When ordering, add -12, or
-18 to the end of model
number to specify a 12" or 18"
high flashing (e.g. MEF-1-A-12)

THALER MEF-1 RIGID
CONDUIT FLASHING.
AVAILABLE IN ALUMINUM,
COPPER OR STAINLESS STEEL

CONVENTIONAL ROOFING
ILLUSTRATED

4"
(102 mm)

CONCRETE DECK

AVAILABLE TO SUIT RIGID CONDUIT
FROM .84" (21 mm) TO 6.625" (168 mm)

2-1/2"
(64 mm)

12" or 18"
(305 or 457 mm)

CSA®

TWO PIECE FLASHING FOR
FRACTIONAL SIZE CONDUIT
(CAP FASTENED USING TWO
STAINLESS STEEL SCREWS)

EPDM BASE SEAL BONDED
TO METAL SLEEVE (SEE
THALER EPDM FLASHING
SEALS LITERATURE)

EMBED DECK FLANGE IN
LAYER OF PLASTIC CEMENT

CONVENTIONAL ROOFING
ILLUSTRATED

MECHANICAL OR ELECTRICAL
SERVICE CONDUIT (WIRING,
GASES, PROCESS PIPING,
FLUIDS, OR SIMILAR
(BY OTHERS)

STEEL DECK

MEF-1 RIGID CONDUIT FLASHING
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler MEF-1 Flashing is installed by placing the flashing over the conduit or alternatively feeding the conduit through after the flashing has been placed. In either case, install flashing as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to MEF-1 Flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. MEF-1-A-P; weld roofing to deck flange using PVC torch.
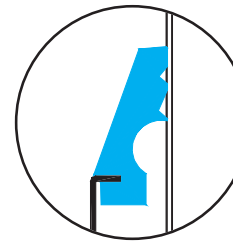
Precautions: Apply an asphaltic or other type protective coating to aluminum MEF-1 Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify material required by adding appropriate suffix to model number e.g. MEF-1-A, for aluminum, etc.. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
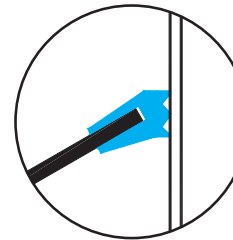
DESCRIPTION:
Thaler MEF-1 Rigid Conduit Flashing consists of a metal flashing sleeve with integral deck flange, EPDM Base Seal, removable cap, and a choice of grommet seals depending on the size of the rigid conduit being employed. Available aluminum, copper, and stainless steel.

Diameter: Sleeve diameter ranges from 3-1/8" (79 mm) to 7-1/2" (191 mm) depending on conduit size. Conduit diameters that can be accommodated range from 1/4" (6 mm) to 6" (152 mm) O.D. See Sizes Chart on reverse side of page.
Height: 12" (305 mm) or 18" (457 mm) high.

PROMINENT FEATURES:
Condensation free. EPDM seals will not allow moisture to penetrate flashing (see Thaler EPDM Flashing Seals literature). Note: exception to this feature is the caulked cap for 1/4" (6 mm and 10 mm) diameter conduit whlch are not supplied with an EPDM Triple Pressure Grommet Seal; however should moisture be able to penetrate the caulking (in the event the caulking is not maintained) the EPDM Base Seal would prevent any accumulated moisture from penetrating the ceiling space below.

OPTIONS:
See Sizes Chart on page C-9. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Split flashing (SPJ-2) is available as an alternative if sleeve cannot fit over conduit.

RECOMMENDED USE:
For rigid conduit penetrating the roof.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings).

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid for caulked cap or where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications (stainless steel only is recommended for these installations).

MAINTENANCE:
No maintenance required (maintenance free), however conduit employing a caulking bead top seal for the cap should be inspected semi-annually to ensure caulking remains intact. All flashings employing an EPDM Triple Pressure Grommet Seal never need caulking.

SPECIFICATION (SHORT FORM):
Rigid Conduit flashing: Thaler MEF-1 [12" (305 mm)] [18" (457 mm)] high flashing; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; to CSA B272-93; with EPDM Triple Pressure Grommet Seal for conduit 1/2" (13 mm) and larger, and caulking (by others) for conduit 3/8" (10 mm) dia. and smaller; EPDM Base Seal; [PVC coated deck flange][bituminous painted deck flange]; manufactured by Thaler Metal Indusies, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (Buffalo, NY), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture. **Continued on reverse...**

Sizes Chart

This chart illustrates the different EPDM Grommet Seals and Base Seals which will be used for each size conduit, vent pipe, etc.

Trade Size	Actual Size (inches)	Actual Size (millimeters)	Grommet Supplied
1/2"	.84"	(21 mm)	B
3/4"	1.05"	(27 mm)	B
1"	1.315"	(33 mm)	B
1-1/4"	1.66"	(42 mm)	B
1-1/2"	1.9"	(48 mm)	A
2"	2.375"	(60 mm)	A
2-1/2"	2.875"	(73 mm)	B
3"	3.5"	(89 mm)	A
3-1/2"	4"	(102 mm)	A
4"	4.5"	(114 mm)	A
5"	5.563"	(141 mm)	A
6"	6.625	(168 mm)	A

Type A

EPDM Triple Pressure Grommet Seal (Injection Molded)

Type B

EPDM Triple Pressure Grommet Seal (Extruded)

THALER

Model	Conduit Size	Bend Radius	Pipe I.D.	Pipe O.D.	Base Plate
MEF-2A	.25" to 1.32"	7.5" (191 mm)	2.125" (55 mm)	2.375" (60 mm)	.1875 x 10 x 12" (5 x 254 x 305 mm)
MEF-2A1	1.32" to 2"	12" (305 mm)	3.260" (83 mm)	3.5" (89 mm)	.25 x 12 x 17" (6 x 305 x 432 mm)
MEF-2A2	2" to 4"	20" (508 mm)	6.357" (161 mm)	6.625" (168 mm)	.375 x 14 x 27" (6 x 356 x 686 mm)

SEE REVERSE SIDE OF PAGE FOR DETAILS.

3D-VIEW SHOWING MEF-2A1 MODEL

THALER MEF-2A LIQUID TIGHT FLEXIBLE CONDUIT FLASHING

EPDM BASE SEAL, BONDED TO METAL BASE (SEE THALER EPDM FLASHING SEALS LITERATURE)

#14 x 2", COUNTERSUNK STAINLESS STEEL SCREWS (QUANTITY DIFFERS BETWEEN MODELS).
4" (102 mm)

WOOD BLOCKING TO MATCH DECK FLANGE WIDTH, LENGTH AND INSULATION THICKNESS (BY OTHERS)

EPDM END CAP SEAL, FRICTION FIT TO METAL PIPE (SEE THALER EPDM FLASHING SEALS LITERATURE)

LIQUID TIGHT FLEXIBLE CONDUIT (BY OTHERS)

CONVENTIONAL ROOFING ILLUSTRATED

SEE REVERSE SIDE OF PAGE FOR HEIGHT DATA

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

STEEL DECK   **CONCRETE DECK**

MEF-2A/MEF-2A1/MEF-2A2 LIQUID TIGHT FLEXIBLE CONDUIT FLASHING
PATENTED

DESCRIPTION:
Thaler MEF-2A, MEF-2A1 and MEF-2A2 Liquid Tight Flexible Conduit Flashings consist of a gooseneck shaped aluminum flashing pipe sleeve with integral deck flange, EPDM End Cap Seal and EPDM Base Seal. Each seal is provided with one or more holes, for liquid tight flexible steel conduit or for a small diameter auxiliary wire for air handling units (optional).

Diameter: Flexible conduit from 1/4"" (6 mm) up to 4" (102 mm) nominal size can be accommodated. See Sizes Chart on reverse side of page.
Height: 12" (305 mm) for MEF-2A and MEF-2A1; 20" (508 mm) for MEF-2A2.

PROMINENT FEATURES:
Condensation free. Never needs caulking (see Thaler EPDM Flashing Seals literature).

OPTIONS:
Thaler flashing for inverted roofs e.g. 6" (152 mm) or more additional height. Auxiliary wire hole in both EPDM End Cap Seal and Base Seal, (see Thaler EPDM Flashing Seals literature). PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Split flashing (SPJ-2) is available as an alternative if sleeve cannot fit over conduit.

RECOMMENDED USE:
For liquid tight flexible steel conduit penetrating the roof for electrical services.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings).
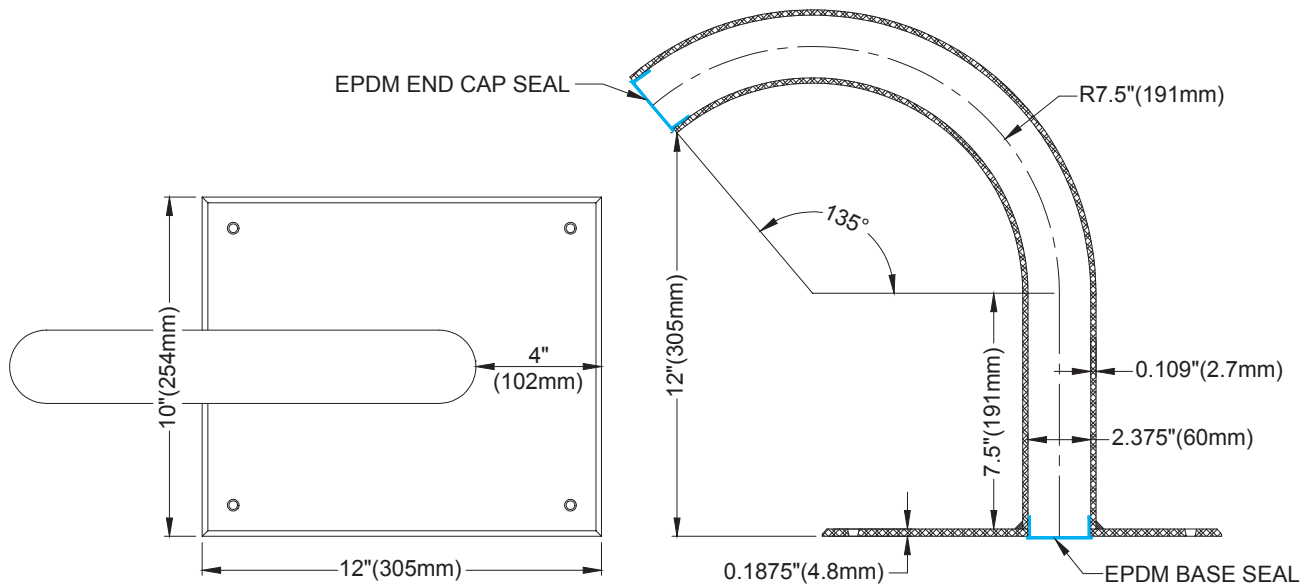
WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.
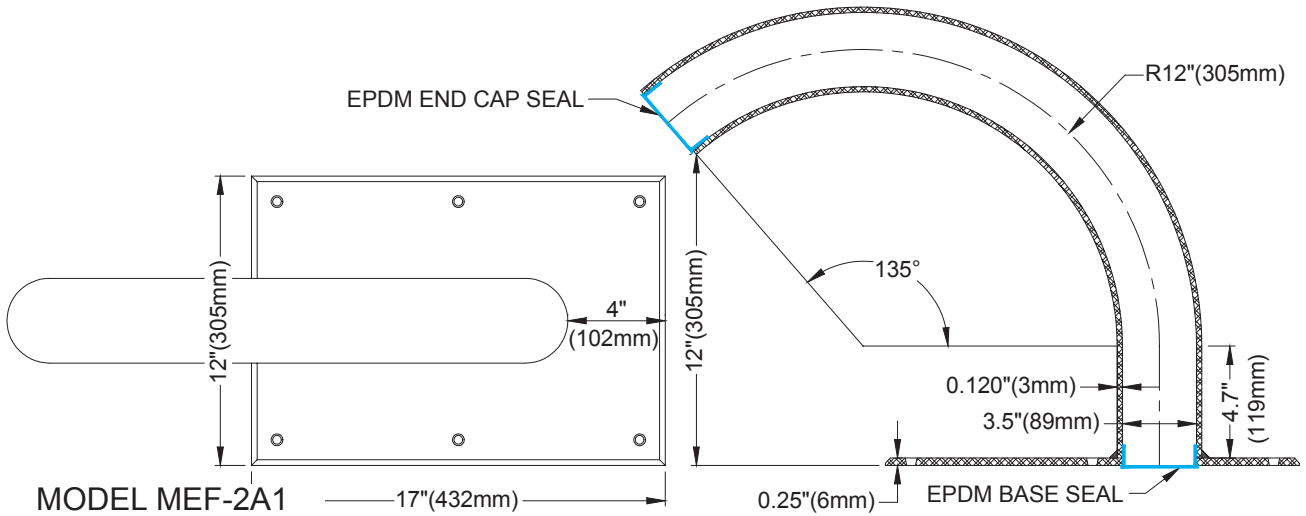
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Flexible Conduit flashing: Thaler [MEF-2A standard 12" (305 mm)] [MEF-2A1 standard 12" (305 mm)] [MEF-2A2 standard 20" (508 mm)] high flashing; 6061-T4 aluminum with mill finish; to CSA B272-93; with EPDM End Cap Seal and Base Seal; EPDM Seals with hole to suit _____ dia. liquid tight flexible conduit [and air handling unit auxiliary wire hole to suit _____ dia. wire]; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against lecondensation and defects in materials and/or manufacture. **Continued on reverse...**
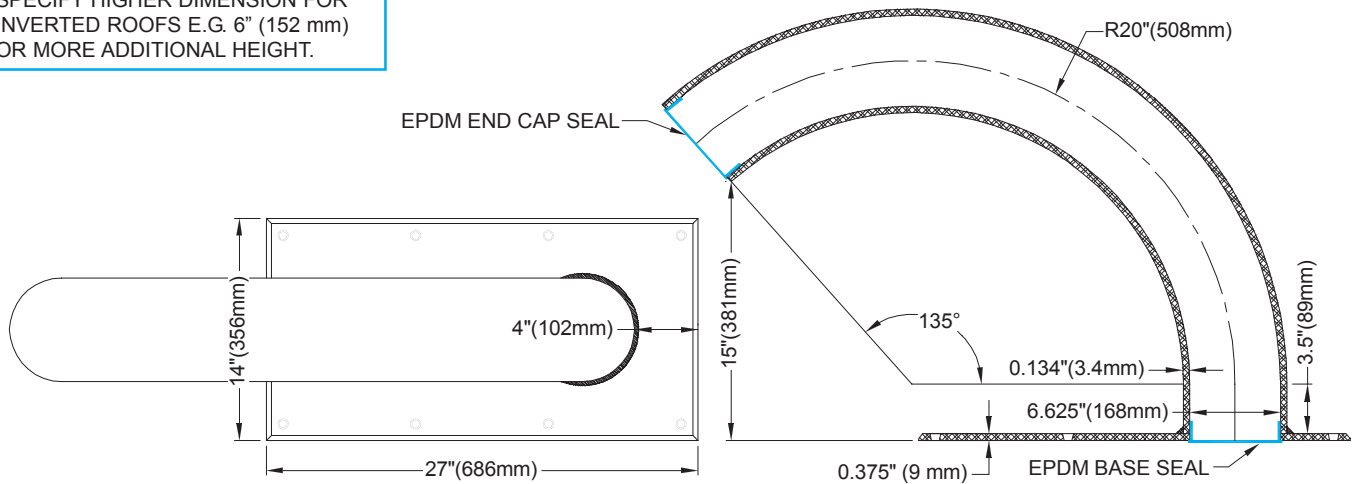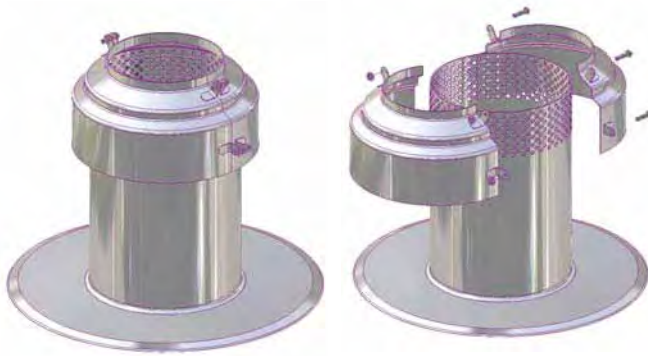
INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler flexible conduit flashings are installed by placing the flashing over the conduit or alternatively feeding the conduit through after the flashing has been placed. In either case, install flashing as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. MEF-2A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

EPDM END CAP SEAL

R7.5"(191mm)

135°

12"(305mm)

7.5"(191mm)

0.109"(2.7mm)

2.375"(60mm)

10"(254mm)

4"
(102mm)

12"(305mm)

0.1875"(4.8mm)

EPDM BASE SEAL

MODEL MEF-2A

EPDM END CAP SEAL

R12"(305mm)

135°

12"(305mm)

12"(305mm)

0.120"(3mm)

3.5"(89mm)

4.7"
(119mm)

4"
(102mm)

17"(432mm)

0.25"(6mm)

EPDM BASE SEAL

MODEL MEF-2A1

NOTE:
SPECIFY HIGHER DIMENSION FOR
INVERTED ROOFS E.G. 6" (152 mm)
OR MORE ADDITIONAL HEIGHT.

EPDM END CAP SEAL

R20"(508mm)

135°

15"(381mm)

3.5"(89mm)

0.134"(3.4mm)

6.625"(168mm)

14"(356mm)

4"(102mm)

27"(686mm)

0.375" (9 mm)

EPDM BASE SEAL

MODEL MEF-2A2

THALER

AVAILABLE TO SUIT
HOT PIPES FROM
3" (76 mm) UP TO
43" (1092 mm) DIA.

DESCRIPTION:
Thaler MEF-3A Hot Pipe Flashing consists of a metal flashing sleeve with integral deck flange, and matching two piece, friction fit collar. The flashing sleeve is typically supplied 4" (102 mm) larger than the hot pipe diameter to accommodate 2" (51 mm) of mineral wool insulation (by others). The sleeve is also perforated at the top with 1/4" (6 mm) diameter holes for a height of 3" (76 mm). Available in aluminum, copper or stainless steel.

Diameter: Sleeve diameter ranges from 6" (152 mm) to 43" (1092 mm) depending on hot pipe size.
Height: Available 12" (305 mm) or 18" (457 mm) high.

PROMINENT FEATURES:
Maintenance free.

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Split flashing (SPJ-2) is available as an alternative if sleeve cannot fit over hot pipe.

RECOMMENDED USE:
For hot pipes used in connection with diesel generators, steam heating, chimney pipes and similar applications.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings).

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Hot pipe flashing: Thaler MEF-3A Hot Pipe Flashing [12" (305 mm)] [18" (457 mm)] high with 1/4" (6 mm) dia. perforations at top of flashing, integral deck flange and matching two piece collar; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum][24 oz. 0.032" (0.831 mm) copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; diameter to suit hot pipe; galvanized steel sleeve deck protection; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Brunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

6" (152 mm TO 43" (1092 mm)
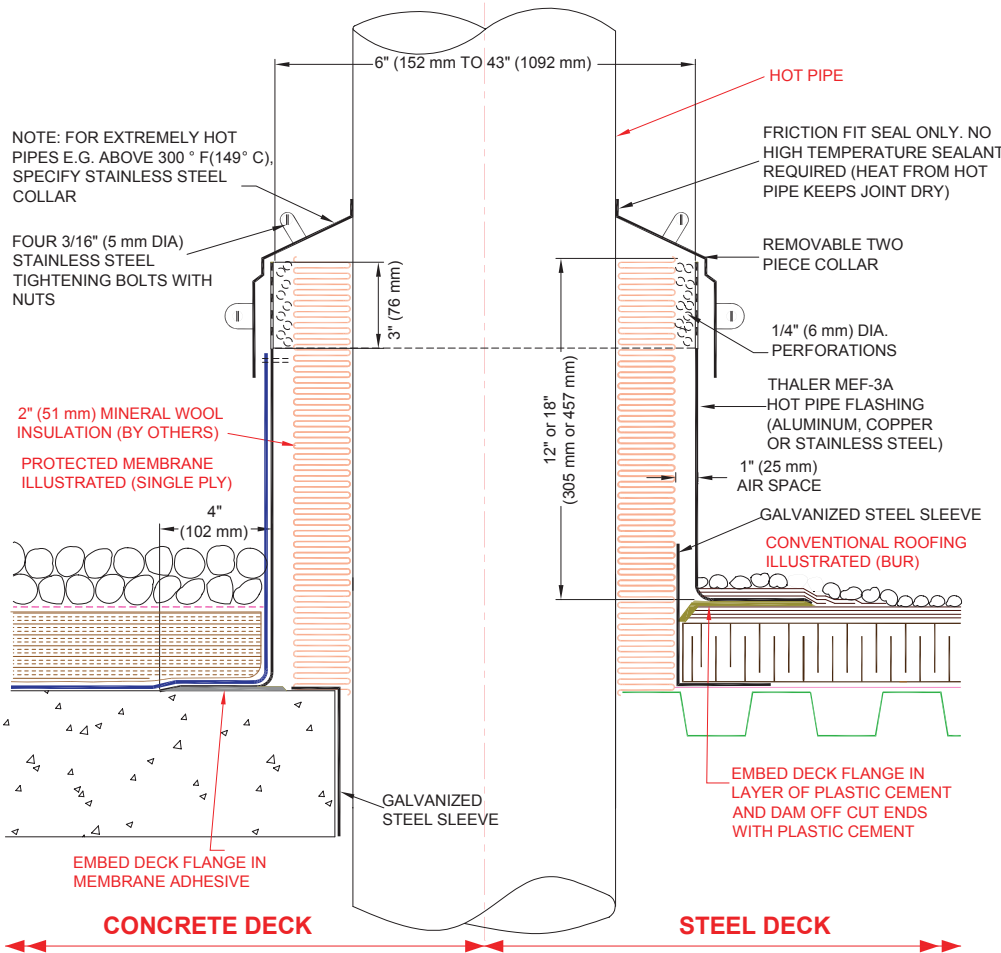
HOT PIPE

NOTE: FOR EXTREMELY HOT PIPES E.G. ABOVE 300 ° F(149° C), SPECIFY STAINLESS STEEL COLLAR

FRICTION FIT SEAL ONLY. NO HIGH TEMPERATURE SEALANT REQUIRED (HEAT FROM HOT PIPE KEEPS JOINT DRY)

FOUR 3/16" (5 mm DIA) STAINLESS STEEL TIGHTENING BOLTS WITH NUTS

REMOVABLE TWO PIECE COLLAR

3" (76 mm)

1/4" (6 mm) DIA. PERFORATIONS

THALER MEF-3A HOT PIPE FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

2" (51 mm) MINERAL WOOL INSULATION (BY OTHERS)

PROTECTED MEMBRANE ILLUSTRATED (SINGLE PLY)

12" or 18" (305 mm & 457 mm)

1" (25 mm) AIR SPACE

GALVANIZED STEEL SLEEVE

4" (102 mm)

CONVENTIONAL ROOFING ILLUSTRATED (BUR)

GALVANIZED STEEL SLEEVE

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT AND DAM OFF CUT ENDS WITH PLASTIC CEMENT

EMBED DECK FLANGE IN MEMBRANE ADHESIVE

CONCRETE DECK　　**STEEL DECK**

MEF-3A HOT PIPE FLASHING

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler MEF-3A Hot Pipe Flashings are installed by placing deck protection sleeve, wrapping the hot pipe with mineral wool insulation (by others), placing the flashing over the hot pipe, and as follows:

BUR: Set deck flange in layer of plastic cement while damming off cut ends of membrane with plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to Hot Pipe Flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. MEF-3A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.
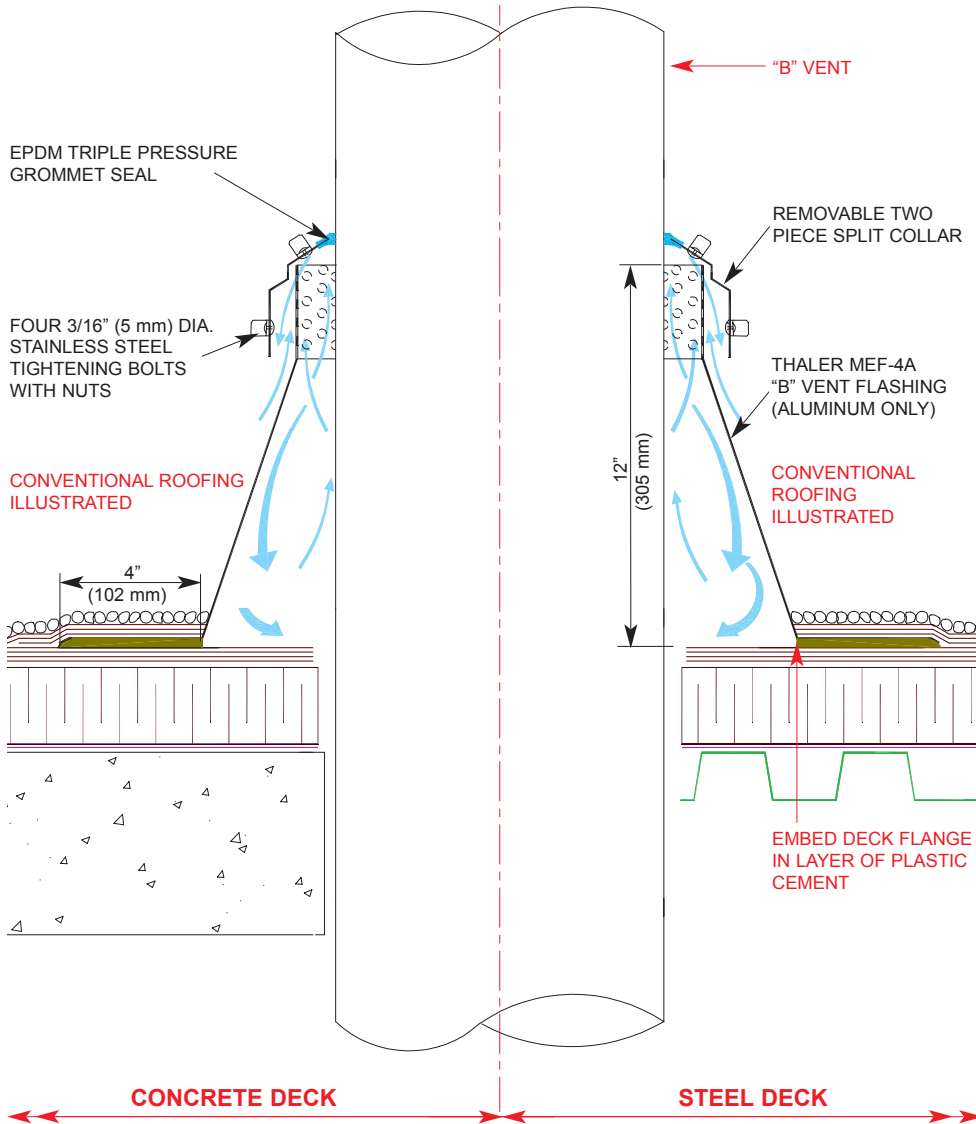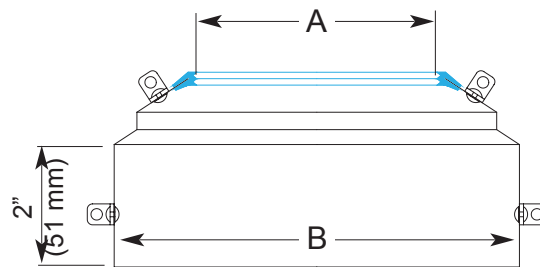
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

AVAILABLE TO SUIT "B" VENTS FROM 3" (76 mm) UP TO 17" (432 mm) DIA.

"B" VENT

EPDM TRIPLE PRESSURE GROMMET SEAL

REMOVABLE TWO PIECE SPLIT COLLAR

FOUR 3/16" (5 mm) DIA. STAINLESS STEEL TIGHTENING BOLTS WITH NUTS

THALER MEF-4A "B" VENT FLASHING (ALUMINUM ONLY)

12" (305 mm)

CONVENTIONAL ROOFING ILLUSTRATED

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

CONCRETE DECK

STEEL DECK

MEF-4A "B" VENT FLASHING
PATENTED

DESCRIPTION:
Thaler MEF-4A "B" Vent Flashing consists of an aluminum flashing sleeve with integral deck flange, matching two piece collar, EPDM Triple Pressure Grommet Seal. Available in aluminum only.

Diameter: Sleeve diameter ranges from 5-1/2" (140 mm) to 13-1/2"" (343 mm) depending on "B" Vent size. Available also up to 17" (432 mm) vent diameter size. See MEF-4A Sizes Chart on reverse side of page.

Height: 12" (305 mm) is standard.

PROMINENT FEATURES:
Maintenance Free. Never needs caulking (see Thaler EPDM Flashing Seals literature).

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Split flashing (SPJ-2) is available as an alternative if sleeve cannot fit over vent stack.

RECOMMENDED USE:
For "B" Vents used in connection with gas heaters. Not intended for "hot pipes" (see Thaler Hot Pipe Flashing literature).

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
"B" Vent flashing: Thaler MEF-4A "B" Vent flashing, 12" (305 mm) high with integral deck flange and matching two piece collar with EPDM Triple Pressure Grommet Seal ;.064" (1.6 mm) mill finish 1100-0T alloy aluminum; diameter to suit "B" Vent diameter; [PVC coated deck flange][bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler MEF-4A "B" Vent Flashings are installed by placing the flashing over the vent stack and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. MEF-4A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
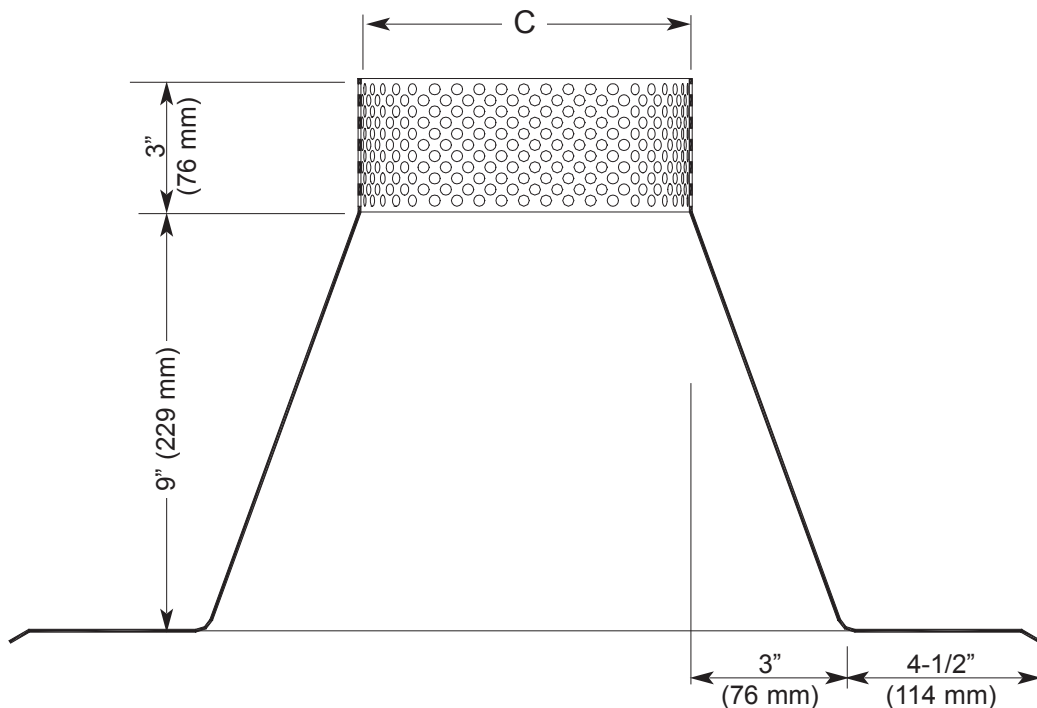
M-4A SIZES CHART

The size of the collar and base is determined by the size of the "B" Vent. In the chart below, dimension "A" represents the outside diameter of the "B" Vent. Dimensions "B" and "C" are the corresponding collar and base sizes.

"B" Vent Diameter (A)	Collar Diameter (B)	Base Diameter (C)
From 3" (76 mm) up to 5" (127 mm)	6-1/2" (165 mm)	5-1/2" (140 mm)
From 5-1/8" (130 mm) up to 7" (178 mm)	8-1/2" (216 mm)	7-1/2" (191 mm)
From 7-1/8" (181 mm) up to 8" (203 mm)	9-1/2" (241 mm)	8-1/2" (216 mm)
From 8-1/8" (206 mm) up to 9" (229 mm)	10-1/2" (267 mm)	9-1/2" (241 mm)
From 9-1/8" (232 mm) up to 11" (279 mm)	12-1/2" (318 mm)	11-1/2" (292 mm)
From 11-1/8" (283 mm) up to 13" (432 mm)	14-1/2" (368 mm)	13-1/2" (343 mm)
From 13-1/8" (333 mm) up to 15" (381 mm)	16-1/2" (419 mm)	15-1/2" (394 mm)
From 15-1/8" (384 mm) up to 17" (432 mm)	18-1/2" (470 mm)	17-1/2" (445 mm)

COLLAR

BASE

THALER

CAP FOR 2 PIECE FLASHING SHOWN

AVAILABLE CAPS AND SEALS
(See Reverse Side Of Page For Details)

EPDM Triple Pressure Grommet Seal (Extruded)

EPDM Triple Pressure Grommet Seal (Injection Molded)

Caulking (By Others for conduit less than 1/2" diameter)

AVAILABLE TO SUIT RIGID CONDUIT FROM .84" (21 mm) TO 6.625" (168 mm)

EPDM TRIPLE PRESSURE GROMMET SEAL

When ordering, add -12, or -18 to the end of model number to specify a 12" or 18" high flashing (e.g. MEF-1-A-12)

THALER MEF-AE1 RIGID CONDUIT FLASHING. AVAILABLE IN ALUMINUM, COPPER OR STAINLESS STEEL

URETHANE INSULATION PRE-MOLDED TO INNER SIDE OF SLEEVE

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

2-1/2" (64 mm)

12" or 18" (305 or 457 mm)

TWO PIECE FLASHING FOR FRACTIONAL SIZE CONDUIT (CAP FASTENED USING TWO STAINLESS STEEL SCREWS)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

CONVENTIONAL ROOFING ILLUSTRATED

MECHANICAL OR ELECTRICAL SERVICE CONDUIT (WIRING, GASES, PROCESS PIPING, FLUIDS, OR SIMILAR (BY OTHERS)

CONCRETE DECK

STEEL DECK

MEF-AE1 RIGID CONDUIT FLASHING
PATENT PENDING

DESCRIPTION:
Thaler MEF-AE1 Rigid Conduit Flashing consists of a metal flashing sleeve with integral deck flange, pre-molded urethane insulation liner, EPDM Triple Pressure Grommet Seal, and EPDM Base Seal. A one piece flashing will be supplied for full size diameters (e.g. 2" (51 mm), 3" (76 mm)), etc. and for fractional sizes, a flashing and screw fastened removable cap will be supplied. Available in aluminum, copper, and stainless steel.

Diameter: Suitable for conduit diameters from 7/64" (2.5 mm) up to 6" (152 mm). See Sizes Chart on reverse side of page.

Height: Available 12" (305 mm) or 18" (457 mm) high.

PROMINENT FEATURES:
Maintenance free. Never needs caulking. See Thaler EPDM Flashing Seals literature.

OPTIONS:
See Sizes Chart on reverse side of page. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Split flashing (SPJ-2) is available as an alternative if sleeve cannot fit over vent stack.

RECOMMENDED USE:
For rigid mechanical or electrical conduit penetrating the roof.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings).

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Rigid conduit flashing: Thaler MEF-AE1, [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing sleeve with integral deck flange, [12" (305 mm)] [18" (457 mm)] high; with pre-molded urethane insulation liner, EPDM Triple Pressure Grommet Seal, and EPDM Base Seal; diameter to suit rigid conduit; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga,Ontario, Canada) or -800- 576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler MEF-AE1 Flashings are installed by placing the flashing over the conduit or alternatively feeding the conduit through after the flashing has been placed. In either case, install flashing as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to Hot Pipe Flashing.. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. MEF-AG1-P; weld roofing to deck flange using PVC torch.
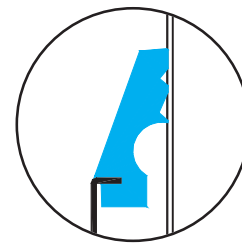
Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify material required by adding appropriate prefix to model number e.g. MEF-AE1-A for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
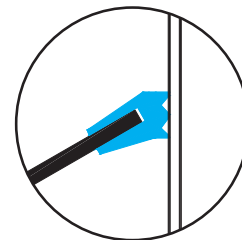
Sizes Chart

This chart illustrates the different EPDM Grommet Seals and Base Seals which will be used for each size conduit, vent pipe, etc.

Trade Size	Actual Size (inches)	Actual Size (millimeters)	Grommet Supplied
1/2"	.84"	(21 mm)	B
3/4"	1.05"	(27 mm)	B
1"	1.315"	(33 mm)	B
1-1/4"	1.66"	(42 mm)	B
1-1/2"	1.9"	(48 mm)	A
2"	2.375"	(60 mm)	A
2-1/2"	2.875"	(73 mm)	B
3"	3.5"	(89 mm)	A
3-1/2"	4"	(102 mm)	A
4"	4.5"	(114 mm)	A
5"	5.563"	(141 mm)	A
6"	6.625	(168 mm)	A

Type A

EPDM Triple Pressure Grommet Seal (Injection Molded)

Type B

EPDM Triple Pressure Grommet Seal (Extruded)

LIQUID -TIGHT FLEXIBLE CONDUIT (BY OTHERS)

LIQUID-TIGHT FLEXIBLE CONDUIT CONNECTOR (BY OTHERS)

GALVANIZED COUPLING

GALVANIZED STEEL CONDUIT

EPDM TRIPLE PRESSURE GROMMET SEALS (SEE SIZES CHART ON REVERSE)

ALUMINUM THALER MEF-AE2 FLEXIBLE CONDUIT FLASHING

PRE-MOLDED URETHANE INSULATION

3" (76 mm)

MIN. 1" (25 mm)

STIFFENERS TACK WELDED TO CONDUIT FITTINGS PRIOR TO INJECTION OF URETHANE INSULATION

12" (305 mm)

CONVENTIONAL ROOFING ILLUSTRATED

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

12" (305 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

ALUMINUM BASE ENCLOSURE

CONCRETE DECK   **STEEL DECK**

MEF-AE2 DOUBLE FLEXIBLE CONDUIT FLASHING

DESCRIPTION:
Thaler MEF-AE2 Double Flexible Conduit Flashing consists of a metal flashing sleeve with integral deck flange, pre-molded urethane insulation liner, molded in place galvanized steel conduit fittings with metal stiffeners, EPDM Triple Pressure Grommet Seals, and aluminum base enclosure. Available in .064" (1.6 mm) aluminum only.

Diameter: Suitable for liquid tight flexible conduit ranging from 1/2" (12 mm) to 4" (102 mm) diameter. See Sizes Chart on reverse side of page.
Height: 12" (305 mm) is standard.

PROMINENT FEATURES:
Condensation free. EPDM seals will not allow moisture to penetrate flashing (see Thaler EPDM Flashing Seals literature). Molded in place galvanized steel conduit fittings with couplings for easy connection.

OPTIONS:
See Sizes Chart on reverse side of page with detail drawing. Temporary steel conduit plugs. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Split flashing (SPJ-2) is available as an alternative if sleeve does not fit over conduit.

RECOMMENDED USE:
For double Liquid Tight flexible steel conduit penetrating the roof for electrical services.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings). Note: in addition to the CSA tests, Thaler in-house testing was performed with the EPDM Triple Pressure Grommet Seal submerged in 8" (203 mm) of water for 3 months with no leakage.

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Double flexible conduit flashing: Thaler MEF-AE2 standard 12" (305 mm) high flashing; .064" (1.6 mm) mill finish 1100-0T alloy aluminum; diameter and seals to suit conduit; to CSA B272-93; with EPDM Triple Pressure Grommet Seals; molded in place galvanized steel conduit fittings; aluminum base enclosure; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler MEF-AE2 Flashing is installed by removing the temporary steel conduit plugs (optional) and feeding the conduit through after the flashing has been placed, and fastening the Liquid Tight flexible conduit connector to the galvanized coupling, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to MEF-AE2 Flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. MEF-AE2-P; weld roofing to deck flange using PVC torch.
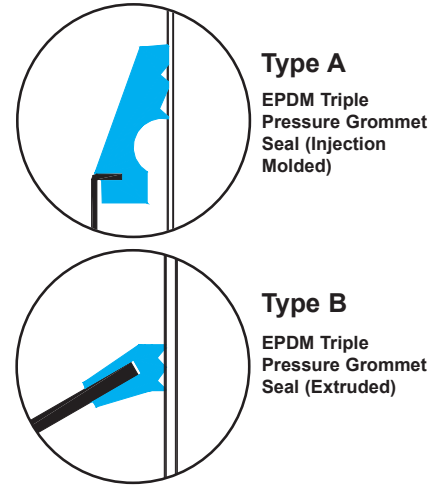
Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify conduit sizes to be accommodated. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

THALER

Sizes Chart

This chart illustrates the different EPDM Grommet Seals and Base Seals which will be used for each size conduit, vent pipe, etc.

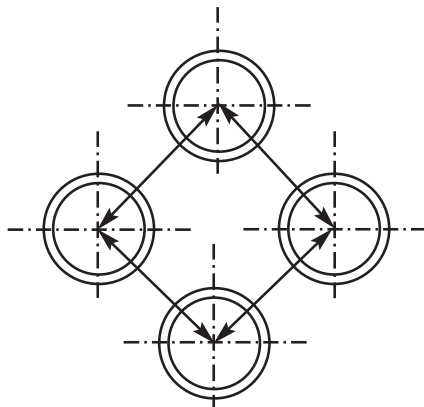| Trade Size	Actual Size (inches)	Actual Size (millimeters)	Grommet Supplied
1/2"	.84"	(21 mm)	B
3/4"	1.05"	(27 mm)	B
1"	1.315"	(33 mm)	B
1-1/4"	1.66"	(42 mm)	B
1-1/2"	1.9"	(48 mm)	A
2"	2.375"	(60 mm)	A
2-1/2"	2.875"	(73 mm)	B
3"	3.5"	(89 mm)	A
3-1/2"	4"	(102 mm)	A
4"	4.5"	(114 mm)	A
5"	5.563"	(141 mm)	A
6"	6.625	(168 mm)	A

Type A

EPDM Triple Pressure Grommet Seal (Injection Molded)

Type B

EPDM Triple Pressure Grommet Seal (Extruded)

Conduit Spacing Chart

This chart illustrates the minimum spacing o/c for conduit entering a flashing sleeve.

Conduit Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"
1/2"	1-1/2	1-5/8	1-13/16	2-1/16	2-3/16	2-1/2	2-3/4	3	3-5/16	3-5/8
3/4"	1-5/8	1-3/4	1-15/16	2-3/16	2-5/16	2-5/8	2-7/8	3-1/8	3-7/16	3-3/4
1"	1-13/16	1-15/16	2-1/8	2-3/8	2-1/2	2-13/16	3-1/16	3-5/16	3-5/8	3-15/16
1-1/4"	2-1/16	2-3/16	2-3/8	2-5/8	2-3/4	3-1/16	3-5/16	3-9/16	3-7/8	4-3/16
1-1/2"	2-5/16	2-5/16	2-1/2	2-3/4	2-7/8	3-3/16	3-7/16	3-11/16	4	4-5/16
2"	2-1/2	2-5/8	2-13/16	3-1/16	3-3/16	3-1/2	3-3/4	4	4-5/16	4-5/8
2-1/2"	2-3/4	2-7/8	3-1/16	3-5/16	3-7/16	3-3/4	4	4-1/4	4-9/16	4-7/8
3"	3	3-1/8	3-5/16	3-9/16	3-11/16	4	4-1/4	4-1/2	4-13/16	5-1/8
3-1/2"	3-5/16	3-7/16	3-5/8	3-7/8	4	4-3/16	4-9/16	4-13/16	5-1/8	5-7/16
4"	3-5/8	3-3/4	3-15/16	4-3/16	4-5/16	4-5/8	4-7/8	5-1/8	5-7/16	5-3/4

Minimum spacing guidelines shown in the above Conduit Spacing Chart must be followed when using 2, or more conduit.

THALER

LIQUID -TIGHT FLEXIBLE CONDUIT (BY OTHERS)

LIQUID-TIGHT FLEXIBLE CONDUIT CONNECTOR (BY OTHERS)

GALVANIZED COUPLING

GALVANIZED STEEL CONDUIT

EPDM TRIPLE PRESSURE GROMMET SEALS (SEE SIZES CHART PAGE C-9)

THALER MEF-AG4 FLEXIBLE CONDUIT FLASHING (ALUMINUM)

STIFFENERS TACK WELDED TO STEEL CONDUIT PRIOR TO INJECTION OF URETHANE

PRE-MOLDED URETHANE INSULATION

4" (102 mm)

3" (76 mm)

MIN. 1" (25 mm)

12" (305 mm)

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

12" (305 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

4" (102 mm)

CONVENTIONAL ROOFING ILLUSTRATED

ALUMINUM BASE ENCLOSURE

CONCRETE DECK   **STEEL DECK**

MEF-AE4 MULTIPLE FLEXIBLE CONDUIT FLASHING

DESCRIPTION:
Thaler MEF-AE4 Multiple Flexible Conduit Flashing consists of a metal flashing sleeve with integral deck flange, pre-molded urethane insulation liner, molded in place galvanized steel conduit fittings with metal stiffeners, EPDM Triple Pressure Grommet Seals, and aluminum base enclosure. Available in aluminum only.

Diameter: Suitable for Liquid Tight flexible conduit ranging from 1/2" (12 mm) to 4" (102 mm) diameter. See Sizes Chart on reverse side of page. Sizes Chart on reverse side of page.

Height: 12" (305 mm) is standard.

PROMINENT FEATURES:
Condensation free. EPDM seals will not allow moisture to penetrate flashing (see Thaler EPDM Flashing Seals literature). Molded in place galvanized steel conduit fittings with couplings for easy connection.

OPTIONS:
See Sizes Chart on reverse side of page. Temporary steel conduit plugs. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Split flashing (SPJ-2) is available as an alternative if sleeve cannot fit over vent stack.

RECOMMENDED USE:
For multiple Liquid Tight flexible steel conduit penetrating the roof for electrical services..

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings). Note: in addition to the CSA tests, Thaler in-house testing was performed with the EPDM Triple Pressure Grommet Seal submerged in 8" (203 mm) of water for 3 months with no leakage.

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Multiple flexible conduit flashings:
Thaler MEF-AE4 standard 12" (305 mm) high flashing; .064" (1.6 mm) mill finish 1100-0T alloy aluminum; diameter and seals to suit conduit; to CSA B272-93; with EPDM Triple Pressure Grommet Seals; molded in place galvanized steel conduit fittings; aluminum base enclosure; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

Continued on reverse...

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler MEF-AE4 Flashing is installed by removing the temporary steel conduit plugs (optional) feeding the conduit through after the flashing has been placed , and then fastening the Liquid Tight flexible conduit connector to the galvanized coupling, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to MEF-AE4 Flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. MEF-AE4-P; weld roofing to deck flange using PVC torch.
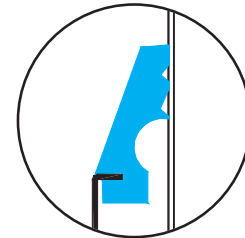
Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify conduit sizes to be accommodated.. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
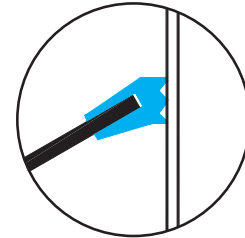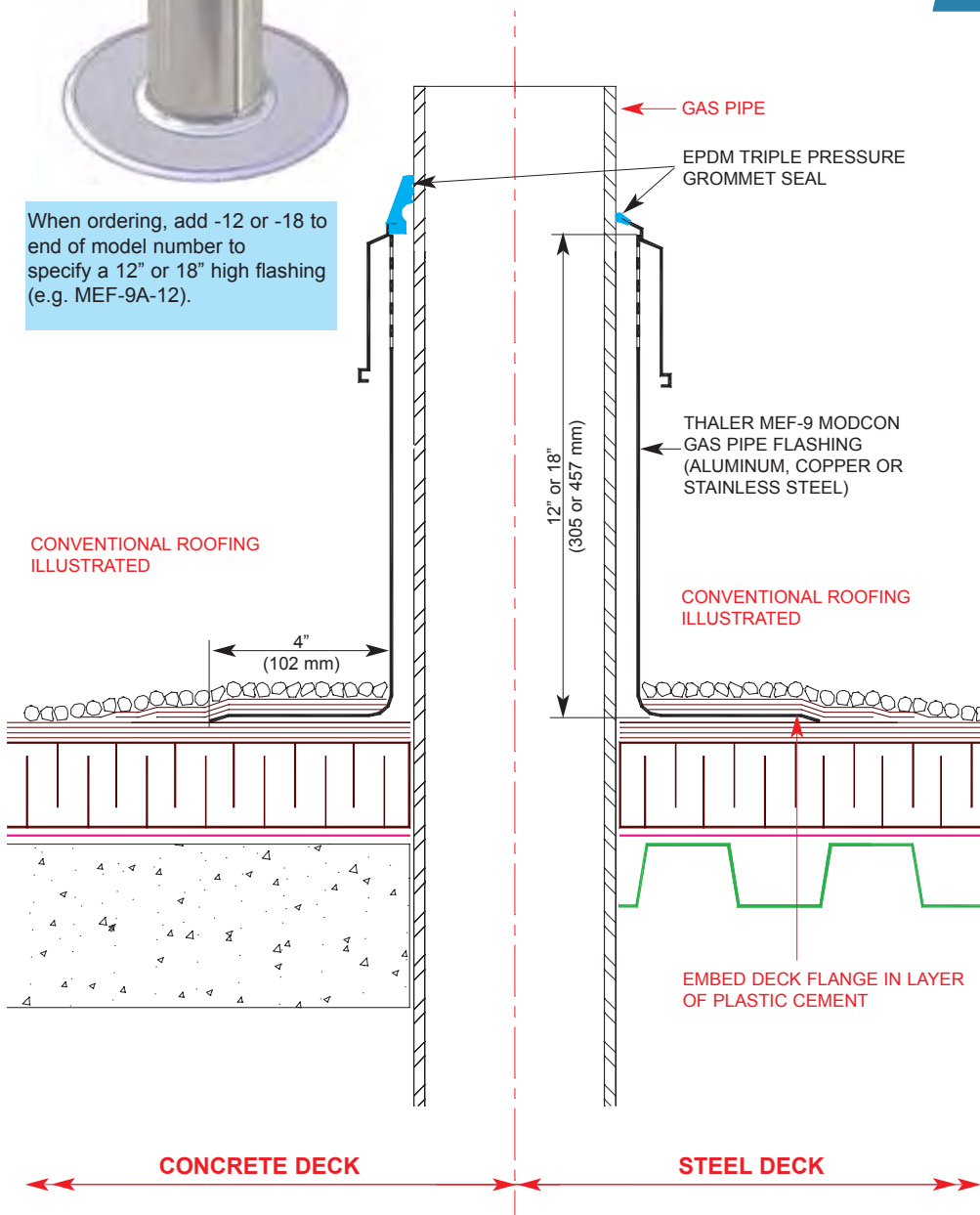
THALER

Sizes Chart

This chart illustrates the different EPDM Grommet Seals and Base Seals which will be used for each size conduit, vent pipe, etc.

Trade Size	Actual Size (inches)	Actual Size (millimeters)	Grommet Supplied
1/2"	.84"	(21 mm)	B
3/4"	1.05"	(27 mm)	B
1"	1.315"	(33 mm)	B
1-1/4"	1.66"	(42 mm)	B
1-1/2"	1.9"	(48 mm)	A
2"	2.375"	(60 mm)	A
2-1/2"	2.875"	(73 mm)	B
3"	3.5"	(89 mm)	A
3-1/2"	4"	(102 mm)	A
4"	4.5"	(114 mm)	A
5"	5.563"	(141 mm)	A
6"	6.625	(168 mm)	A

Type A

EPDM Triple Pressure Grommet Seal (Injection Molded)

Type B

EPDM Triple Pressure Grommet Seal (Extruded)

Conduit Spacing Chart

This chart illustrates the minimum spacing o/c for conduit entering a flashing sleeve.

Conduit Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"
1/2"	1-1/2	1-5/8	1-13/16	2-1/16	2-3/16	2-1/2	2-3/4	3	3-5/16	3-5/8
3/4"	1-5/8	1-3/4	1-15/16	2-3/16	2-5/16	2-5/8	2-7/8	3-1/8	3-7/16	3-3/4
1"	1-13/16	1-15/16	2-1/8	2-3/8	2-1/2	2-13/16	3-1/16	3-5/16	3-5/8	3-15/16
1-1/4"	2-1/16	2-3/16	2-3/8	2-5/8	2-3/4	3-1/16	3-5/16	3-9/16	3-7/8	4-3/16
1-1/2"	2-5/16	2-5/16	2-1/2	2-3/4	2-7/8	3-3/16	3-7/16	3-11/16	4	4-5/16
2"	2-1/2	2-5/8	2-13/16	3-1/16	3-3/16	3-1/2	3-3/4	4	4-5/16	4-5/8
2-1/2"	2-3/4	2-7/8	3-1/16	3-5/16	3-7/16	3-3/4	4	4-1/4	4-9/16	4-7/8
3"	3	3-1/8	3-5/16	3-9/16	3-11/16	4	4-1/4	4-1/2	4-13/16	5-1/8
3-1/2"	3-5/16	3-7/16	3-5/8	3-7/8	4	4-3/16	4-9/16	4-13/16	5-1/8	5-7/16
4"	3-5/8	3-3/4	3-15/16	4-3/16	4-5/16	4-5/8	4-7/8	5-1/8	5-7/16	5-3/4

Minimum spacing guidelines shown in the above Conduit Spacing Chart must be followed when using 2, or more conduit.

SUITABLE FOR UP TO
8" (203 mm) DIAMETER
GAS PIPE

When ordering, add -12 or -18 to end of model number to specify a 12" or 18" high flashing (e.g. MEF-9A-12).

GAS PIPE

EPDM TRIPLE PRESSURE GROMMET SEAL

THALER MEF-9 MODCON GAS PIPE FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

12" or 18"
(305 or 457 mm)

CONVENTIONAL ROOFING ILLUSTRATED

CONVENTIONAL ROOFING ILLUSTRATED

4"
(102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

CONCRETE DECK

STEEL DECK

MEF-9 MODCON GAS PIPE FLASHING

DESCRIPTION:
Thaler MEF-9 Modcon Gas Pipe Flashings consist of a metal flashing sleeve with perforated collar and integral deck flange, and removable collar with EPDM Triple Pressure Grommet Seal. Available in aluminum, copper, and stainless steel.

Diameter: Suitable for up to 8" (203 mm) gas pipe.
Height: 12" (305 mm) is standard. 18" (457 mm) is available.

PROMINENT FEATURES:
Perforated collar allows escaped gas to vent to the exterior of the building.

OPTIONS:
See Size Chart on reverse side of page. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. Split flashing (SPJ-2) is available as an alternative if sleeve cannot fit over vent stack.

RECOMMENDED USE:
Suitable for gas pipe and similar applications.

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where metal components are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications. Stainless steel only is recommended for these installations.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Gas pipe flashings: Thaler MEF-9 Modcon Gas Pipe Flashing [12" (305 mm)] [18" (457 mm)] high flashing with perforated neck; removable cap with EPDM Triple Pressure Grommet Seal; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler MEF-9 Modcon Gas Pipe Flashings are installed by placing the flashing over the gas pipe, installing the removable collar, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to Flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. MEF-9-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify material required by adding appropriate suffix to model number e.g. MEF-9-A for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
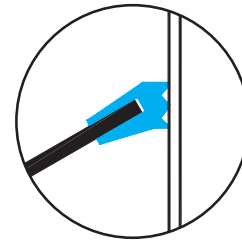
Sizes Chart

This chart illustrates the different EPDM Grommet Seals and Base Seals which will be used for each size conduit, vent pipe, etc.

Trade Size	Actual Size (inches)	Actual Size (millimeters)	Grommet Supplied
1/2"	.84"	(21 mm)	B
3/4"	1.05"	(27 mm)	B
1"	1.315"	(33 mm)	B
1-1/4"	1.66"	(42 mm)	B
1-1/2"	1.9"	(48 mm)	A
2"	2.375"	(60 mm)	A
2-1/2"	2.875"	(73 mm)	B
3"	3.5"	(89 mm)	A
3-1/2"	4"	(102 mm)	A
4"	4.5"	(114 mm)	A
5"	5.563"	(141 mm)	A
6"	6.625	(168 mm)	A

Type A

EPDM Triple Pressure Grommet Seal (Injection Molded)

Type B

EPDM Triple Pressure Grommet Seal (Extruded)

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**MECHANICAL &
ELECTRICAL
FLASHINGS**
SPECIFICATION

C-9

Note: This flashing specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part of a roofing specification.

PART 1: GENERAL

1.01   SECTION INCLUDES

A. Supply and installation of roof accessories, including:
   1. Preformed metal flashings.

1.02   RELATED SECTIONS

A. Section 06100 - Rough Carpentry

B. Section 07200 - Thermal Protection

C. Section 07500 - Membrane Roofing

D. Section 07900 - Joint Sealers

E. Section 15800 - Air Distribution

1.03   REFERENCES

[A. CSA B272-93 - Prefabricated Self-Sealing Roof Vent Flashings]

Note: CSA standard is applicable only to those Thaler products supplied with EPDM Triple Pressure Grommet Seal and/or EPDM Base Seal.

[B. CRCA (Canadian Roofing Contractor's Association)]

[C. NRCA (National Roofing Contractor's Association)]

[D. SPRI (Single Ply Roofing Institute)]

[E. CUFCA (Canadian Urethane Foam Contractor's Association)and CGSB-51-GP 46MP Manual for "Installers of Spray Polyurethane Foam Thermal Insulation" and ASTM C1029-90 "Spray Applied Rigid Cellular Polyurethane Thermal Insulation"]

1.04   SUBMITTALS

A. Manufacturer's descriptive literature for each product, including section or other type details.

B. Manufacturer's written installation instructions.

C. Shop drawings and samples, when required, in accordance with Section [01300].

1.05   QUALITY ASSURANCE

A. Roof accessories manufacturer to have minimum 5 years documented experience in the design and fabrication of roofing specialties and accessories.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**MECHANICAL &
ELECTRICAL
FLASHINGS**
SPECIFICATION

1.06 SPECIAL WARRANTY

A. Warrant products installed under this section of work to be free of leaks, condensation and defects in materials and/or manufacture for a period of 20 years when installed in accordance with the manufacturer's written instructions.

PART 2: PRODUCTS

2.01 MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:
   1. 20 year warranty against leaks, condensation and defects in materials and/or manufacture, as applicable;
   2. compliance with CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings)
   3. air barrier design using EPDM seals only;
   4. maintenance free design;
   5. materials and sizes options, and thickness;
   6. injection molded urethane insulation to CGSB-51-GP 46MP and ASTM C1029-90, as applicable;
   7. treated deck flange, as applicable;
   8. written installation instructions.

2.02 MANUFACTURED UNITS

Note: Delete clauses not applicable.

MEF-1 Rigid Conduit Flashing
Rigid conduit flashing: Thaler MEF-1 standard 12" (305 mm) high flashing; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; to CSA B272-93; with EPDM Triple Pressure Grommet Seal for conduit 1/2" (12 mm) and larger, and caulking (by others) for conduit 3/8" (10 mm) dia. and smaller; EPDM Base Seal; [PVC coated deck flange] [bituminous painted deck flange].

MEF-2A / MEF-2A1 / MEF-2A2 Liquid Tight Flexible Conduit
Flexible conduit flashing: Thaler [MEF-2A] [MEF-2A1] [standard 12" (305 mm)] [MEF-2A2 standard 20" (508mm)] high flashing; 6061-T4 aluminum with mill finish; to CSA B272-93; with EPDM Seals; EPDM Cap Seals with hole to suit [_____] dia. Liquid Tight flexible conduit [and air handling unit auxiliary wire hole to suit [_____] dia. wire]; [PVC coated deck flange] [bituminous painted deck flange].

MEF-3A Hot Pipe Flashing
"B" Vent flashing: Thaler MEF-4A "B" Vent flashing 12" (305 mm) high with integral deck flange and matching two piece collar; .064" (1.6 mm) mill finish 1100-0T alloy aluminum; diameter to suit "B" Vent diameter;[PVC coated deck flange] [bituminous painted deck flange].

MEF-AE1 Rigid Conduit Flashing
Rigid conduit flashing: Thaler MEF-AE1 [12" (305 mm)] [18" (457 mm)] high flashing sleeve with integral deck flange; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [0.32" (0.831 mm) 24 oz copper] [.31" (0.79 mm) 22 ga. Type 304 stainless steel]; with pre-molded urethane insulation liner, EPDM Triple Pressure Grommet Seal, and EPDM Base Seal; diameter to suit rigid conduit; [PVC coated deck flange] [bituminous painted deck flange].

MEF-AE2 Double Flexible Conduit Flashing
Double flexible conduit flashings: Thaler MEF-AE2 standard 12" (305 mm) high flashing; .064" (1.6 mm) mill finish 1100-0T alloy aluminum; diameter and seals to suit conduit; to CSA B272-93; with EPDM Triple Pressure Grommet Seals; molded in place galvanized steel conduit fittings; aluminum base enclosure; [PVC coated deck flange] [bituminous painted deck flange].

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**MECHANICAL &
ELECTRICAL
FLASHINGS**
SPECIFICATION

MEF-AE4 Multiple Flexible Conduit Flashing

Multiple flexible conduit flashings: Thaler MEF-AE4 standard 12" (305 mm) high flashing; .064" (1.6 mm) mill finish 1100-0T alloy aluminum; diameter and seals to suit conduit; to CSA B272-93; with EPDM Triple Pressure Grommet Seals; molded in place galvanized steel conduit fittings; aluminum base enclosure; [PVC coated deck flange] [bituminous painted deck flange].

MEF-9 ModCon Gas Pipe Flashing

Gas Pipe Flashings: Thaler Modcon Gas Pipe Flashing standard 12" (305 mm) high flashing with perforated collar; removable cap with EPDM Triple Pressure Grommet Seal; [.064" (1.6 mm) mill finish1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel]; [PVC coated deck flange] [bituminous painted deck flange].

PART 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

3.02   INSTALLATION

Note: Delete clauses not applicable.

A. Install flashing in accordance with manufacturer's printed instructions.

BUR
B. Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

Modified Bitumen
C. Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply
D. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing.

Note: For PVC membrane, specify PVC coated flashing by adding suffix P to end of Thaler model number, e.g. SJ-24-A-P; weld roofing to deck flange using PVC torch.

PVC Single Ply
E. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Weld roofing to deck flange using PVC torch.

Shingle Roof
A. Set deck flange in layer of plastic cement, ensuring that flange is placed over shingles on down slope side of flashing and under shingles on up slope side.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**MECHANICAL &
ELECTRICAL
FLASHINGS**
SPECIFICATION

3.03   FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

3.04   ADJUSTING

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

3.05   CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleaners or techniques which could impair performance of the roofing system.

End Of Section

ARCHITECTURAL ROOF SUPPORTS

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
ARCHITECTURAL ROOF SUPPORTS

TABLE OF CONTENTS

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
ARCHITECTURAL ROOF SUPPORTS

WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is the responsibility of specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler Architectural Roof Support products have a number of Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE
COMPETITION

THALER VALUE
ADDED FEATURES

[X] ✓ **Adjustable Height;** threaded leg assembly provides up to 4" (102 mm) vertical adjustment.

[X] ✓ **Light Weight;** "strong-as-steel" 6061-T6 aluminum is easy to transport and handle as well as user friendly.

[X] ✓ **Condensation Free;** support is filled with injection molded urethane insulation which adheres to inner walls without air pockets.Provides corrosion protection while adding to product durability.

[X] ✓ **Incorporates air barrier principles;** supports employing through deck installation, such as steel deck over OWSJ, are protected against air leakage by the EPDM flashing seals; see Thaler EPDM Flashing Seals literature.

[X] ✓ **Aesthetically pleasing;** arguably the best looking architectural support products available on the market today. Clean assembly without messy caulking seals.

[X] ✓ **Complete materials disclosure;** all material thicknesses, dimensions, grades, finishes and other relevant product information is indicated on data sheets and in specifications.

[X] ✓ **100% Re-useable;** can be completely dismantled and re-used when re- roofing.

[X] ✓ **Maintenance-Free;** supports are equipped with Thaler pre-formed metal flashings that never need caulking (CSA B272-93). EPDM seals with "memory" provide constant pressure to outside of support to prevent leaks and condensation build-up; see Thaler EPDM Flashing Seals literature and STACK JACK Flashings literature.

[X] ✓ **20 year Warranty;** guaranteed against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions

[X] ✓ **"Written "Installation Instructions";** provided with every Thaler product.

View Showing How Channel Planks Are Secured to Support Beams

DESCRIPTION:
Thaler ARS-100A Floating Walkway Roof Support consists of a round, hollow section mill finish aluminum railing with post mounting plates, and consisting of a 42" (1066 mm) high, 1-1/2" (38 mm) diameter Schedule 40 6061-T6 alloy aluminum pipe rail (optional), walkway safety channel planks fastened to support beams using specially designed bolts and seat washers, and a STACK JACK flashing which is available in aluminum, copper and stainless steel.

PROMINENT FEATURES:
Available in any width up to 72" (1830 mm) in a single span. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seal literature.

OPTIONS:
Railing both sides, one side or no railing. Chain link fence for fire route applications. See section A of manual for STACK JACK Flashing options. Can be combined with Thaler ARS-510 and ARS-520 Metal Stairs Supports.

RECOMMENDED USE:
Suitable for all flat roofs to provide access for maintenance, fire route, etc. as well as protect roof surface from traffic.

APPROVALS:
Thaler flashing employing EPDM Triple Pressure Grommet Seal is CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings). Railings conform to safety height and strength requirements.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request
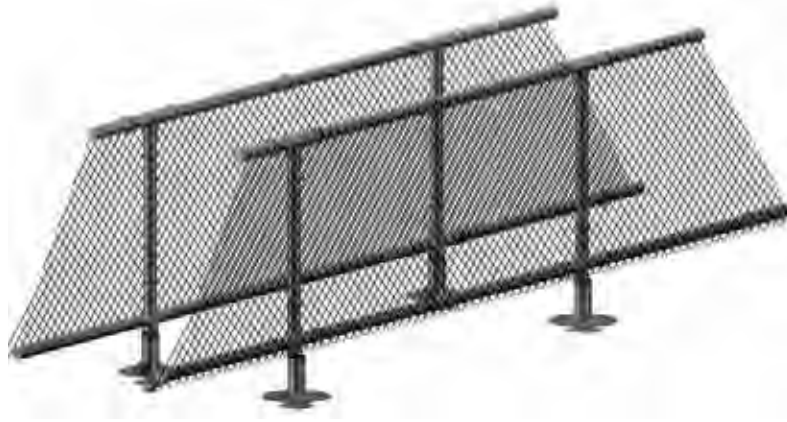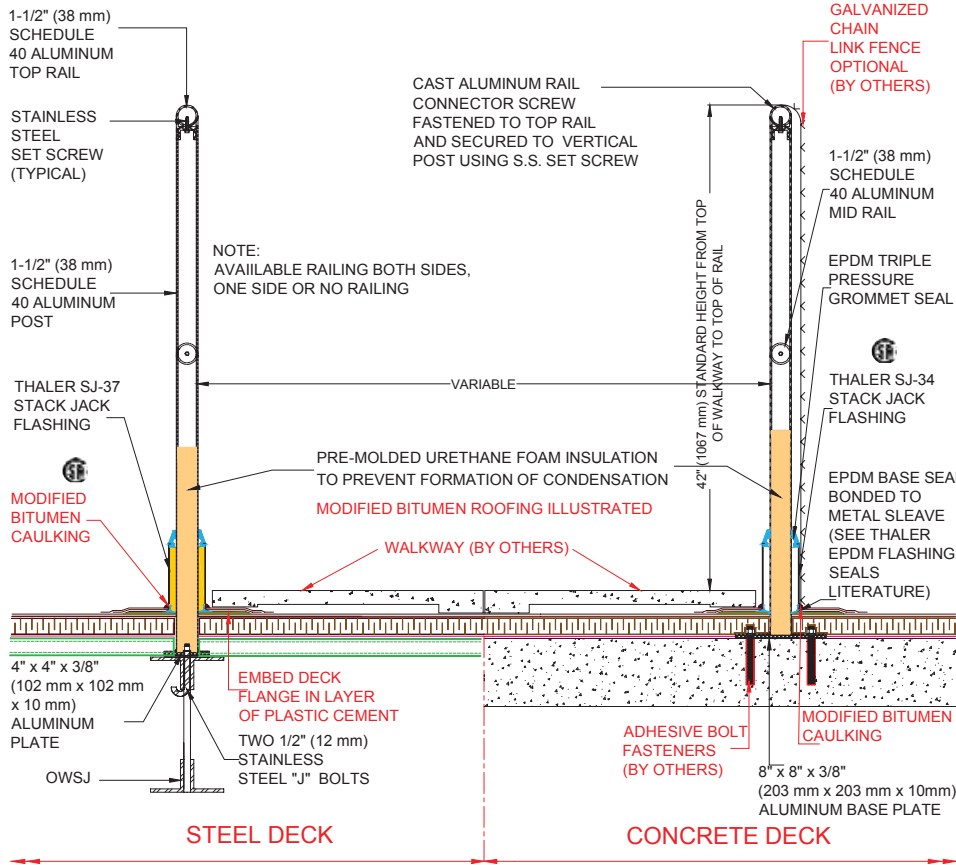
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Floating walkway roof supports: Thaler ARS-100A, aluminum walkway of standard 44" (1118 mm) width [rail one side only]; 1-1/2" (38 mm) dia. post and rails including [4" x 4" x 3/8" (102 mm x 102 mm x 9 mm) [8" x 8" X 3/8" (203 mm x 203 mm x 9 mm)] post base plates, post height to suit with standard 42" (1066 mm) safety rail height from top of walkway to top of rail; 2-1/2" x 2-1/2" x 1/8" (64 mm x 64 mm x 3 mm) aluminum support beams [with EPDM end caps]; aluminum walkway anti-slip channel planks, two 18 " (457 mm) wide and 5" (127 mm) wide centre plank; [hot dipped galvanized chain link fence 2" (51 mm) x 9 ga. by others;] and [SJ-34 uninsulated][SJ-37 insulated], 7" (178 mm) high New-Standard STACK JACK flashing consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.031" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange]; manufactured by Thaler Metal Industries,1-800-387-7217(Mississauga, Ontario,Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

1-1/2"(38 mm) SCHEDULE 40 ALUMINUM TOP RAIL

1-1/2" (38 mm) SCHEDULE 40 ALUMINUM MID RAIL

3/8" (9 mm) STAINLESS STEEL SCREW (TYPICAL)

THALER SJ-37 STACK JACK FLASHING

MODBIT CAULKING

4" x 4" x 3/8" (102 mm x 102 mm x 9 mm) ALUMINUM BASE PLATE

TWO 1/2" (13 mm) STAINLESS STEEL "J" BOLTS

CAST ALUMINUM RAIL CONNECTORS SCREW FASTENED TO TOP RAIL AND SECURED TO VERTICAL POST USING S.S. SET SCREW

NOTE:
AVAILABLE RAILING BOTH SIDES, ONE SIDE OR NO RAILING

44" (1118 mm) IS STANDARD. OTHER WIDTHS AVAVAILABLE

WALKWAY (SAFETY PLANKS) FASTENED TO ALUMINUM SUPPORT BEAM USING SPECIALLY DESIGNED BOLTS AND SEAT WASHERS

42" (1067 mm) STANDAARD HEIGHT FROM TOP OF WALKWAY TO THE TOP OF RAIL

1-1/2" (38 mm) DIA. SCHEDULE 40 ALUMINUM TOP RAIL

1-1/2" (38 mm) DIA. SCHEDULE 40 ALUMINUM POSTS

1-1/2" (38 mm) SCHEDULE 40 ALUMINUM MID RAIL

EPDM END CAP

EPDM TRIPLE PRESSURE GROMMET SEAL

THALER SJ-34 STACK JACK FLASHING

MODBIT CAULKING

5" (127 mm)

18" (457 mm)   18" (457 mm)

2-1/2" x 2-1/2" x 1/8" (64 mm X 64 mm x 3 mm) ALUMINUM SUPPORT BEAM

8" (203 mm) MINIMUM

MODIFIED BITUMEN ROOFING ILLUSTRATED

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

OWSJ

ADHESIVE BOLT FASTENERS (BY OTHERS)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

STEEL DECK   **CONCRETE DECK**

ARS-100A FLOATING WALKWAY ROOF SUPPORT
PATENTED

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-100A Roof Support is installed at maximum 8'-0" (2440 mm) centres parallel to the walkway and by fastening the aluminum mounting plate to the structural roof deck, placing the STACK JACK flashing over the support and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.
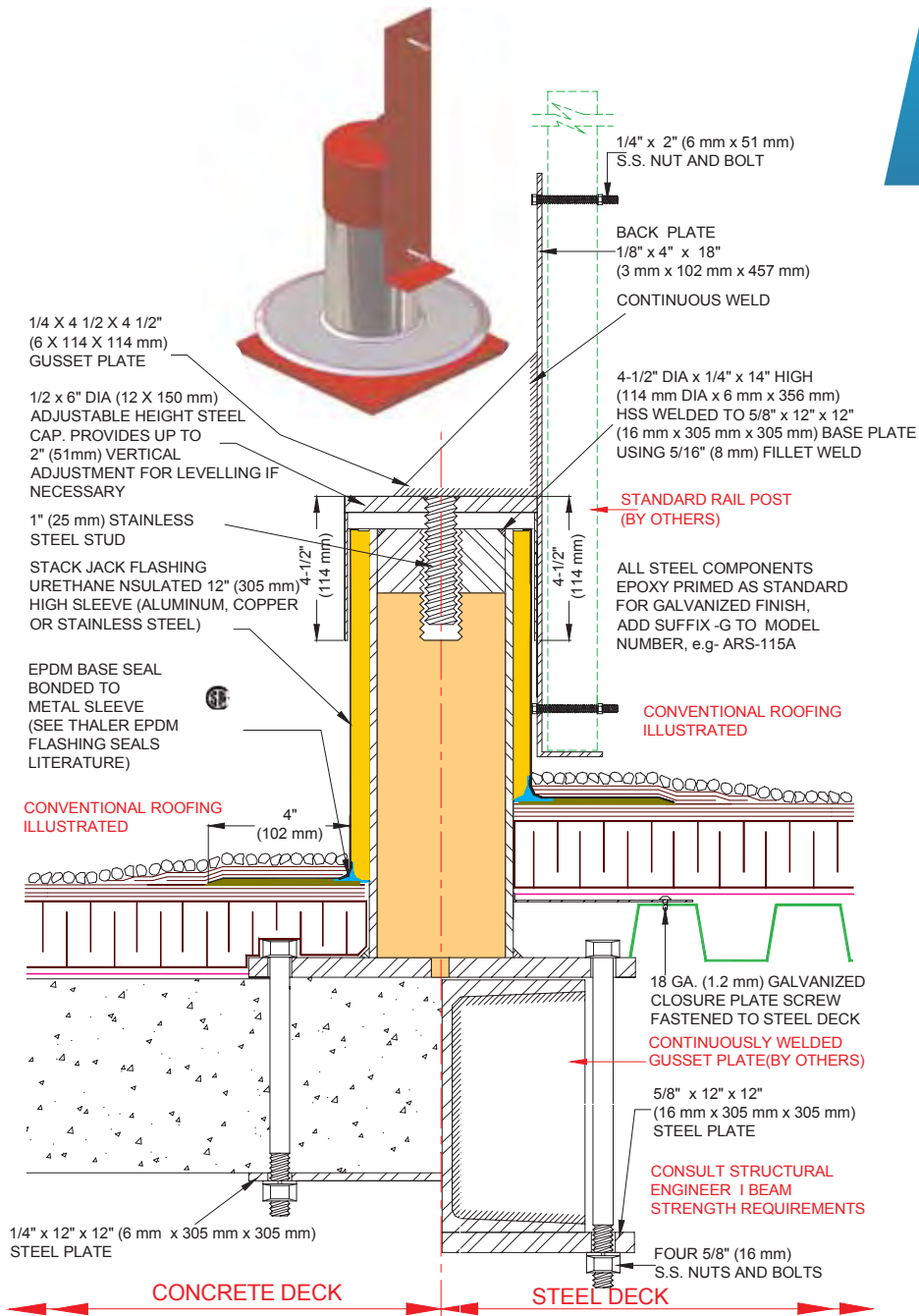
Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to end of model number e.g. ARS-100A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Walkway/Rail Components: Install post components and flashing, then fit support beams over posts and bolt beams to posts. Install planks using specially designed bolts and seat washers.

Ordering: Indicate distance required from bottom of walkway support beam to roof. Specify flashing material required by adding appropriate suffix to model number e.g. ARS-100A-P, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are available from stock.

THALER   E-1

ARS-102A FIRE ROUTE WALKWAY ROOF SUPPORT
PATENTED

Diagram labels:

- 1-1/2" (38 mm) SCHEDULE 40 ALUMINUM TOP RAIL
- STAINLESS STEEL SET SCREW (TYPICAL)
- 1-1/2" (38 mm) SCHEDULE 40 ALUMINUM POST
- THALER SJ-37 STACK JACK FLASHING
- MODIFIED BITUMEN CAULKING
- 4" x 4" x 3/8" (102 mm x 102 mm x 10 mm) ALUMINUM PLATE
- OWSJ
- TWO 1/2" (12 mm) STAINLESS STEEL "J" BOLTS
- EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT
- CAST ALUMINUM RAIL CONNECTOR SCREW FASTENED TO TOP RAIL AND SECURED TO VERTICAL POST USING S.S. SET SCREW
- NOTE: AVAIILABLE RAILING BOTH SIDES, ONE SIDE OR NO RAILING
- VARIABLE
- PRE-MOLDED URETHANE FOAM INSULATION TO PREVENT FORMATION OF CONDENSATION
- MODIFIED BITUMEN ROOFING ILLUSTRATED
- WALKWAY (BY OTHERS)
- GALVANIZED CHAIN LINK FENCE OPTIONAL (BY OTHERS)
- 1-1/2" (38 mm) SCHEDULE 40 ALUMINUM MID RAIL
- EPDM TRIPLE PRESSURE GROMMET SEAL
- THALER SJ-34 STACK JACK FLASHING
- EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)
- 42" (1067 mm) STANDARD HEIGHT FROM TOP OF WALKWAY TO TOP OF RAIL
- ADHESIVE BOLT FASTENERS (BY OTHERS)
- MODIFIED BITUMEN CAULKING
- 8" x 8" x 3/8" (203 mm x 203 mm x 10mm) ALUMINUM BASE PLATE
- STEEL DECK
- CONCRETE DECK

DESCRIPTION:
Thaler ARS-102A Fire Route Walkway Roof Support consists of a round, hollow section mill finish aluminum support and mounting plate, 2" (51mm) x 9 gauge chain link fence (optional) fastened (by others) up to 42"(1066 mm) high, 1-1/2' (38 mm) diameter mill finish 6061-T6 alloy aluminum pipe rail and STACK JACK flashing which is available in aluminum, copper or stainless steel. Paving slab walk surface is by others.

PROMINENT FEATURES:
Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
Urethane insulated support leg, Higher railings. Access gates (with manufacturer's standard hardware) from anywhere on walkway to main roof area. Can be combined with Thaler ARS-510 and ARS-520 Metal Stair Support.

RECOMMENDED USE:
Suitable for all flat roofs to indicate safe escape route, or access for maintenance, etc.

APPROVALS:
Thaler flashing employing EPDM Triple Pressure Grommet Seal is CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings). Railings conform to safety height and strength requirements.
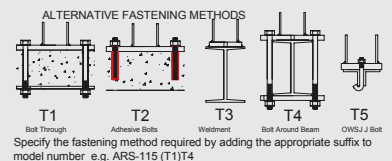
WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request
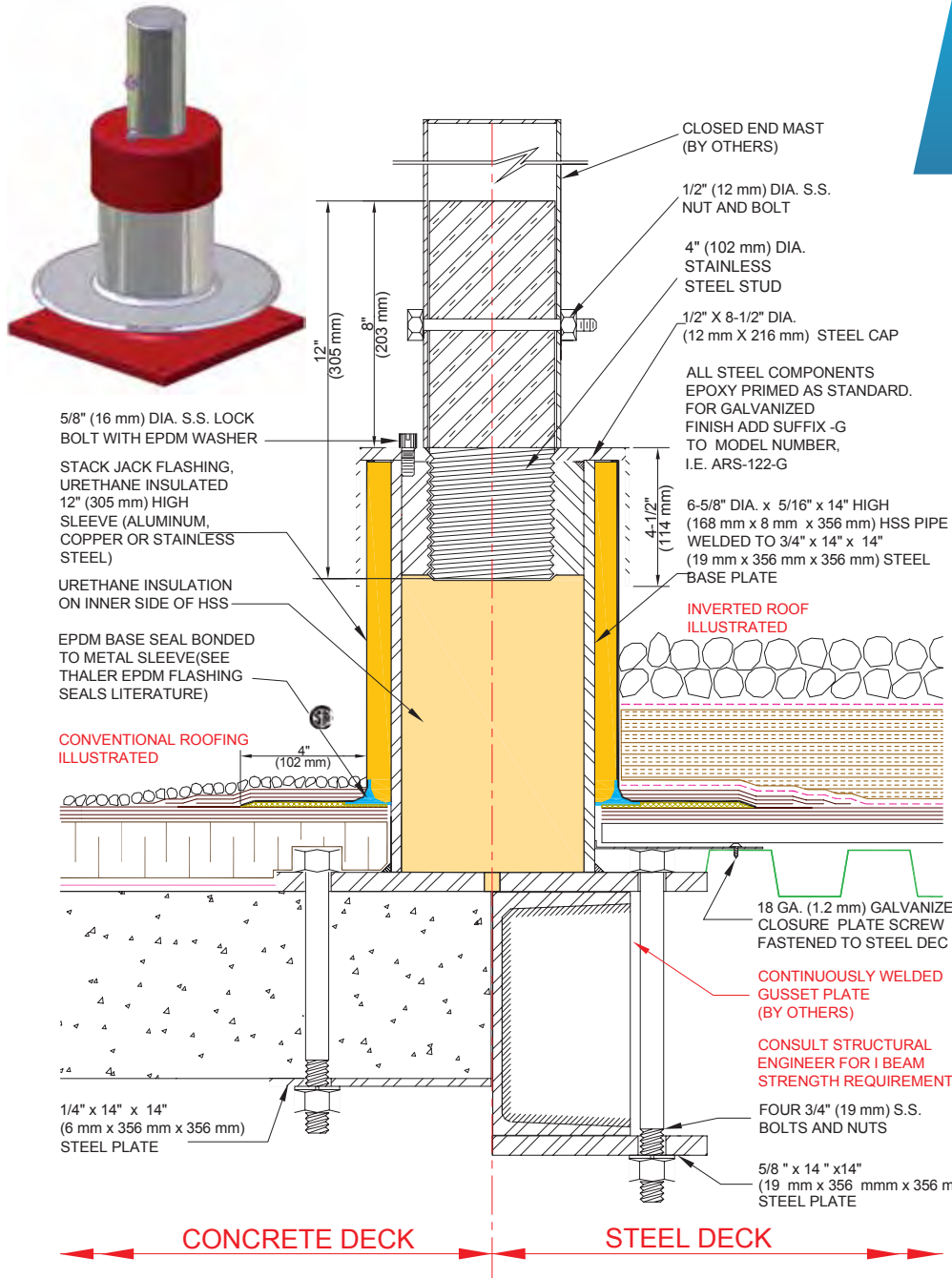
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Fire route walkway support: Thaler ARS-102A mill finish 1-1/2" (38 mm) dia. aluminum supports, [urethane insulated]; with standard 42" (1066mm) high 1-1/2" (38 mm) dia. mill finish Schedule 40 6061-T6 alloy aluminum pipe rail; access gates with manufacturer's standard hardware; hot dipped galvanized chain link fence, 2" (51mm) x 9 ga.; [SJ-34, 7" (178 mm) high New-Standard STACK JACK flashing (Uninsulated)] [SJ-37 Insulated] consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange][bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217, Mississauga, Ontario, Canada or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-102A Roof Support is installed at maximum 8'-0" (2440 mm) centers parallel to the walkway and by fastening the aluminum mounting plate to the structural roof deck, placing the STACK JACK Flashing over the support and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to end of model number e.g. ARS-102A-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Walkway/Rail Components: Thread hollow aluminum upper support onto lower support leg, mechanically attach walkway surface(by others).

Ordering: Indicate distance required from top of walkway support beam to roof. Specify flashing material required by adding appropriate suffix to model number e.g. ARS-102A-A for aluminum, etc. Available throughout North America Contact Thaler for list of distributors and current cost information. Most products are available from stock.

1/4" x 2" (6 mm x 51 mm)
S.S. NUT AND BOLT

BACK PLATE
1/8" x 4" x 18"
(3 mm x 102 mm x 457 mm)
CONTINUOUS WELD

1/4 X 4 1/2 X 4 1/2"
(6 X 114 X 114 mm)
GUSSET PLATE

4-1/2" DIA x 1/4" x 14" HIGH
(114 mm DIA x 6 mm x 356 mm)
HSS WELDED TO 5/8" x 12" x 12"
(16 mm x 305 mm x 305 mm) BASE PLATE
USING 5/16" (8 mm) FILLET WELD

1/2 x 6" DIA (12 X 150 mm)
ADJUSTABLE HEIGHT STEEL
CAP. PROVIDES UP TO
2" (51mm) VERTICAL
ADJUSTMENT FOR LEVELLING IF
NECESSARY

STANDARD RAIL POST
(BY OTHERS)

1" (25 mm) STAINLESS
STEEL STUD

ALL STEEL COMPONENTS
EPOXY PRIMED AS STANDARD
FOR GALVANIZED FINISH,
ADD SUFFIX -G TO MODEL
NUMBER, e.g- ARS-115A

STACK JACK FLASHING
URETHANE INSULATED 12" (305 mm)
HIGH SLEEVE (ALUMINUM, COPPER
OR STAINLESS STEEL)

CONVENTIONAL ROOFING
ILLUSTRATED

EPDM BASE SEAL
BONDED TO
METAL SLEEVE
(SEE THALER EPDM
FLASHING SEALS
LITERATURE)

CONVENTIONAL ROOFING
ILLUSTRATED

4"
(102 mm)

18 GA. (1.2 mm) GALVANIZED
CLOSURE PLATE SCREW
FASTENED TO STEEL DECK

CONTINUOUSLY WELDED
GUSSET PLATE(BY OTHERS)

5/8" x 12" x 12"
(16 mm x 305 mm x 305 mm)
STEEL PLATE

CONSULT STRUCTURAL
ENGINEER I BEAM
STRENGTH REQUIREMENTS

1/4" x 12" x 12" (6 mm x 305 mm x 305 mm)
STEEL PLATE

FOUR 5/8" (16 mm)
S.S. NUTS AND BOLTS

CONCRETE DECK   STEEL DECK

ARS-115 RAIL POST ROOF SUPPORT
PATENTED

DESCRIPTION:
Thaler ARS-115 Rail Post Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, adjustable height steel cap and rail post base designed to receive a square 1-1/2" x 1-1/2" (38 mm x 38 mm) rail post (by others). A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking). Threaded leg assembly provides up to 2" (51 mm) vertical adjustment for levelling if necessary.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See Thaler ARS-100A for floating walkway rail roof support. See Thaler ARS-102A for fire route walkway rail roof support. Can be combined with Thaler ARS-510 and ARS-520 Metal Stair Roof Supports.

RECOMMENDED USE:
Suitable for all flat roofs as a guard rail support at low parapets and other critical areas to protect workers from falls, or to facilitate access for maintenance.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request
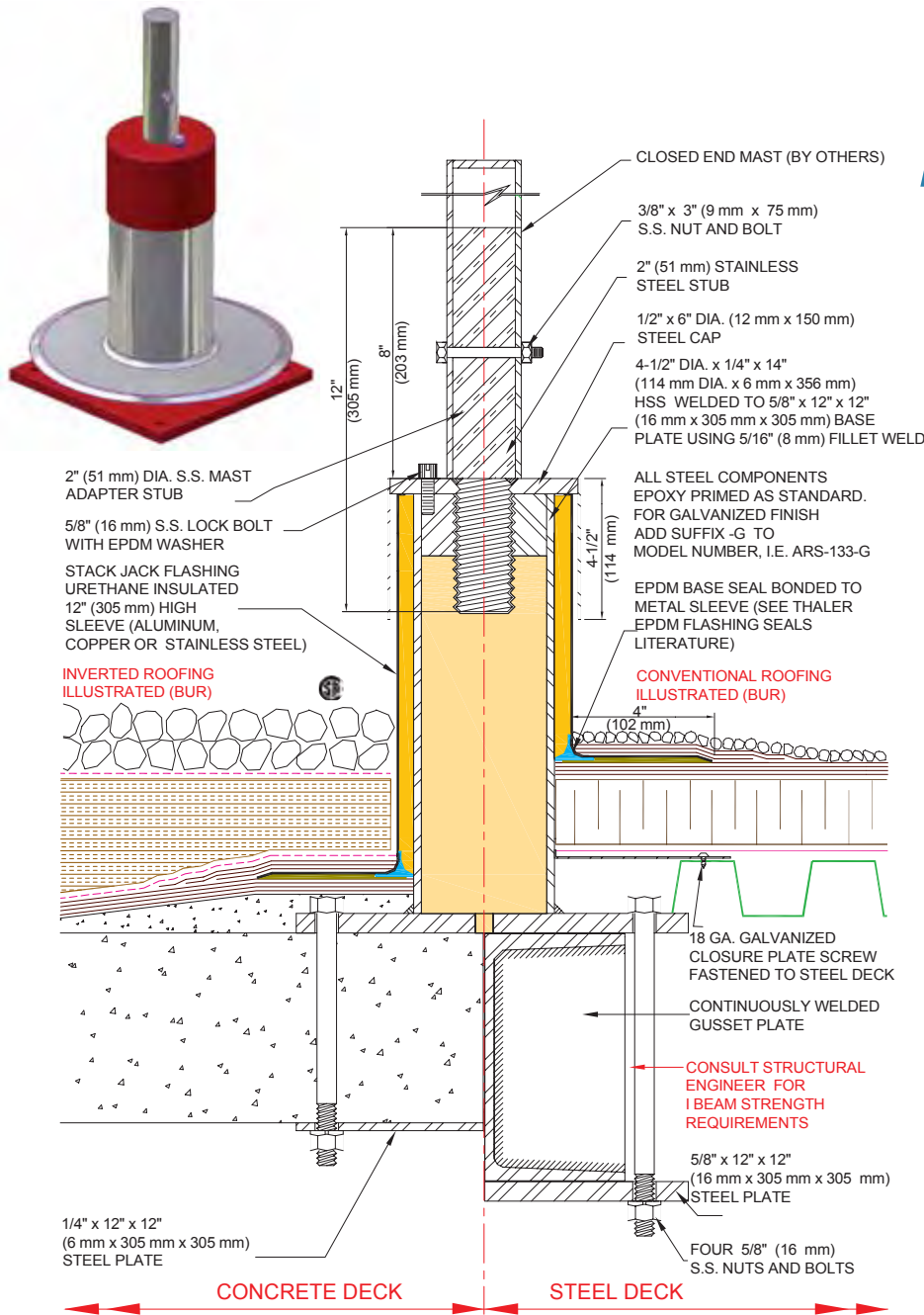
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Rail post roof supports: Thaler ARS-115 standard 14" (356 mm) high, epoxy coated, urethane insulated hollow steel supports, including appropriate fastening to structural roof deck (adhesive type by others) and steel cap [galvanized to CSA G164-M1992] and designed for affixing 1-1/2" x 1-1/2" (38 mm x 38 mm) rail posts (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031"(0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario,Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-115 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/post support, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top metal flashing and than screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number. e.g. ARS-115-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Rail Components: Thread upper portion of support (with rail post base) onto lower support leg, mechanically attach rail posts (by others), and finally walkway surface (by others) if required.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-115-A. for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are available from stock.

ALTERNATIVE FASTENING METHODS

T1 Bolt Through   T2 Adhesive Bolts   T3 Weldment   T4 Bolt Around Beam   T5 OWSJ J Bolt

Specify the fastening method required by adding the appropriate suffix to model number e.g. ARS-115 (T1)T4

Diagram labels (right side):
- CLOSED END MAST (BY OTHERS)
- 1/2" (12 mm) DIA. S.S. NUT AND BOLT
- 4" (102 mm) DIA. STAINLESS STEEL STUD
- 1/2" X 8-1/2" DIA. (12 mm X 216 mm) STEEL CAP
- ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH ADD SUFFIX -G TO MODEL NUMBER, I.E. ARS-122-G
- 6-5/8" DIA. x 5/16" x 14" HIGH (168 mm x 8 mm x 356 mm) HSS PIPE WELDED TO 3/4" x 14" x 14" (19 mm x 356 mm x 356 mm) STEEL BASE PLATE
- INVERTED ROOF ILLUSTRATED
- 4-1/2" (114 mm)

Diagram labels (left side):
- 12" (305 mm)
- 8" (203 mm)
- 5/8" (16 mm) DIA. S.S. LOCK BOLT WITH EPDM WASHER
- STACK JACK FLASHING, URETHANE INSULATED 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)
- URETHANE INSULATION ON INNER SIDE OF HSS
- EPDM BASE SEAL BONDED TO METAL SLEEVE(SEE THALER EPDM FLASHING SEALS LITERATURE)
- CONVENTIONAL ROOFING ILLUSTRATED
- 4" (102 mm)
- 1/4" x 14" x 14" (6 mm x 356 mm x 356 mm) STEEL PLATE

Diagram labels (bottom right):
- 18 GA. (1.2 mm) GALVANIZE CLOSURE PLATE SCREW FASTENED TO STEEL DEC
- CONTINUOUSLY WELDED GUSSET PLATE (BY OTHERS)
- CONSULT STRUCTURAL ENGINEER FOR I BEAM STRENGTH REQUIREMENT
- FOUR 3/4" (19 mm) S.S. BOLTS AND NUTS
- 5/8 " x 14 " x14" (19 mm x 356 mmm x 356 m STEEL PLATE

CONCRETE DECK   STEEL DECK

ARS-122 SATELLITE DISH ROOF SUPPORT
PATENTED

DESCRIPTION:
Thaler ARS-122 Satellite Dish Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, threaded steel cap with 4" (102 mm) diameter stainless steel mast adapter stub and 8'-0" (1220 mm) long closed end galvanized steel mast for mounting a satellite dish (by others). A weatherproof lock-bolt prevents the adjustable cap including adapter and dish, from counter-rotating during windy conditions. A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking).

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See Thaler ARS-133 for antenna roof support.

RECOMMENDED USE:
Suitable for all flat roofs as a satellite dish roof support, maximum 8'-0" (1220 mm) dish diameter.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request
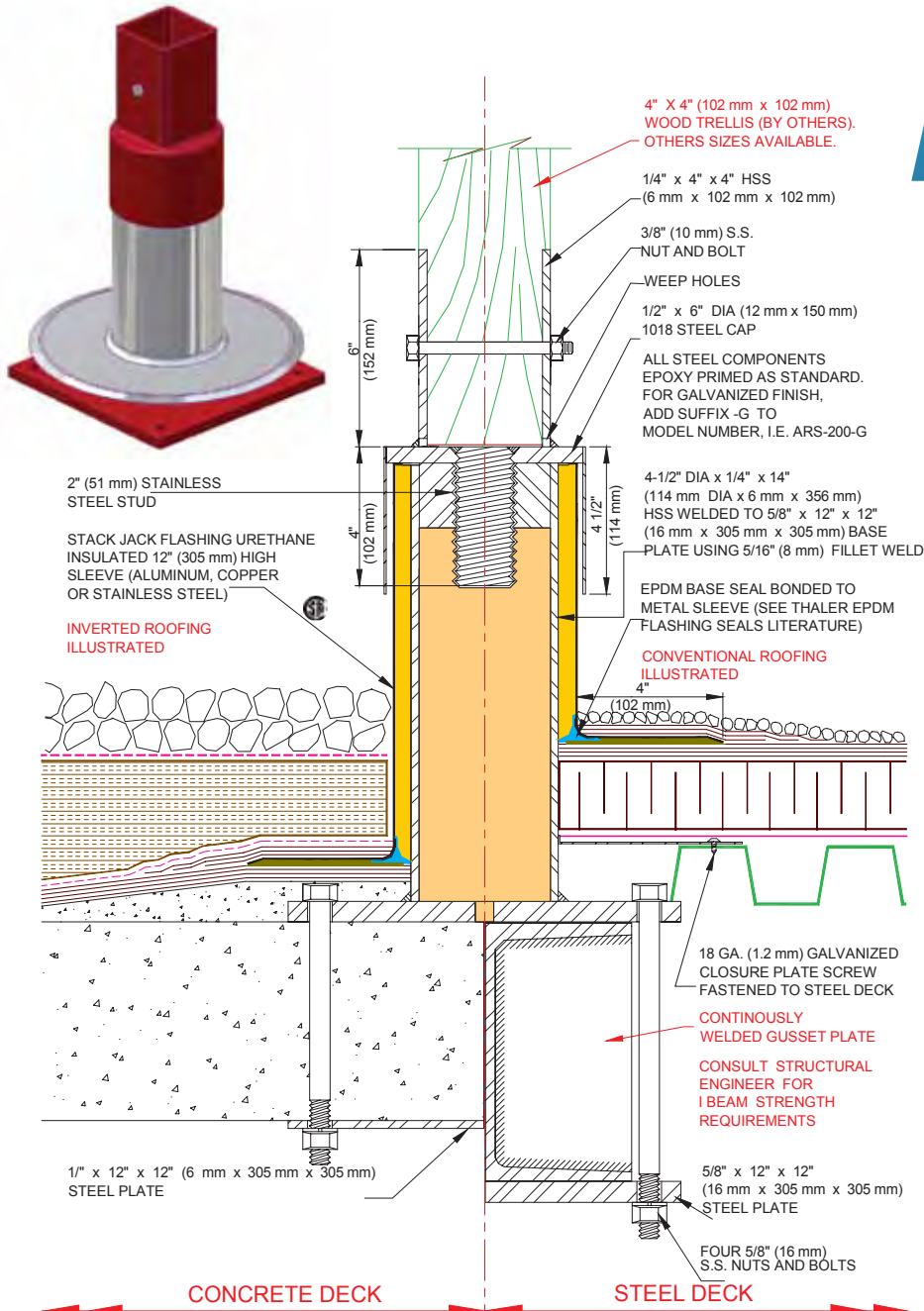
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Satellite dish roof supports: Thaler ARS-122 standard 14" (356 mm) high epoxy coated, urethane insulated hollow steel support including appropriate mounting hardware for fastening to structural roof deck (adhesive type by others); threaded steel cap with 4" (102 mm) dia. s.s. mast adapter stub; 1/2" (12 mm) s.s. retaining bolt; galvanized to CSA G164-M1992 weatherproof 5/8" (16 mm) lock-bolt with EPDM seal to prevent counter-rotation of support and dish; manufacturer's standard urethane insulated [.064 "(1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and][PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada)or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-122 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/mast adapter stub, attaching the mast, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated flashing aluminum, etc. deck flange by adding suffix P to end of model number. e.g. ARS-122-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Mast and Dish Components: Thread upper portion of support (with mast adapter stub) onto lower support leg, mechanically attach mast, and finally dish (by others).

Ordering: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-122-A. for aluminum,etc. Available throughout North America . Contact Thaler for list of distributors and current cost information. Most products are available from stock.

CLOSED END MAST (BY OTHERS)

3/8" x 3" (9 mm x 75 mm) S.S. NUT AND BOLT

2" (51 mm) STAINLESS STEEL STUB

1/2" x 6" DIA. (12 mm x 150 mm) STEEL CAP

4-1/2" DIA. x 1/4" x 14" (114 mm DIA. x 6 mm x 356 mm) HSS WELDED TO 5/8" x 12" x 12" (16 mm x 305 mm x 305 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH ADD SUFFIX -G TO MODEL NUMBER, I.E. ARS-133-G

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

CONVENTIONAL ROOFING ILLUSTRATED (BUR)

8" (203 mm)

12" (305 mm)

4-1/2" (114 mm)

4" (102 mm)

2" (51 mm) DIA. S.S. MAST ADAPTER STUB

5/8" (16 mm) S.S. LOCK BOLT WITH EPDM WASHER

STACK JACK FLASHING URETHANE INSULATED 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOFING ILLUSTRATED (BUR)

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

CONTINUOUSLY WELDED GUSSET PLATE

CONSULT STRUCTURAL ENGINEER FOR I BEAM STRENGTH REQUIREMENTS

5/8" x 12" x 12" (16 mm x 305 mm x 305 mm) STEEL PLATE

1/4" x 12" x 12" (6 mm x 305 mm x 305 mm) STEEL PLATE

FOUR 5/8" (16 mm) S.S. NUTS AND BOLTS

CONCRETE DECK   STEEL DECK

ARS-133 ANTENNA ROOF SUPPORT
PATENTED

DESCRIPTION:
Thaler ARS-133 Antenna Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, galvanized (optional) threaded steel cap with 2" (51 mm) diameter stainless steel antenna mast adapter stub, and 8'-0" (1220 mm) long closed end galvanized steel mast for mounting an antenna (by others). A weatherproof lock-bolt prevents the adjustable cap including adapter and antenna, from counter-rotating during windy conditions. A urethane insulated flashing available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking).

OPTIONS:
Galvanized finish PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See Thaler ARS-575 for triangular antenna roof support, and ARS-122 for satellite dish roof support.

RECOMMENDED USE:
Suitable for all flat roofs as an antenna roof support.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request
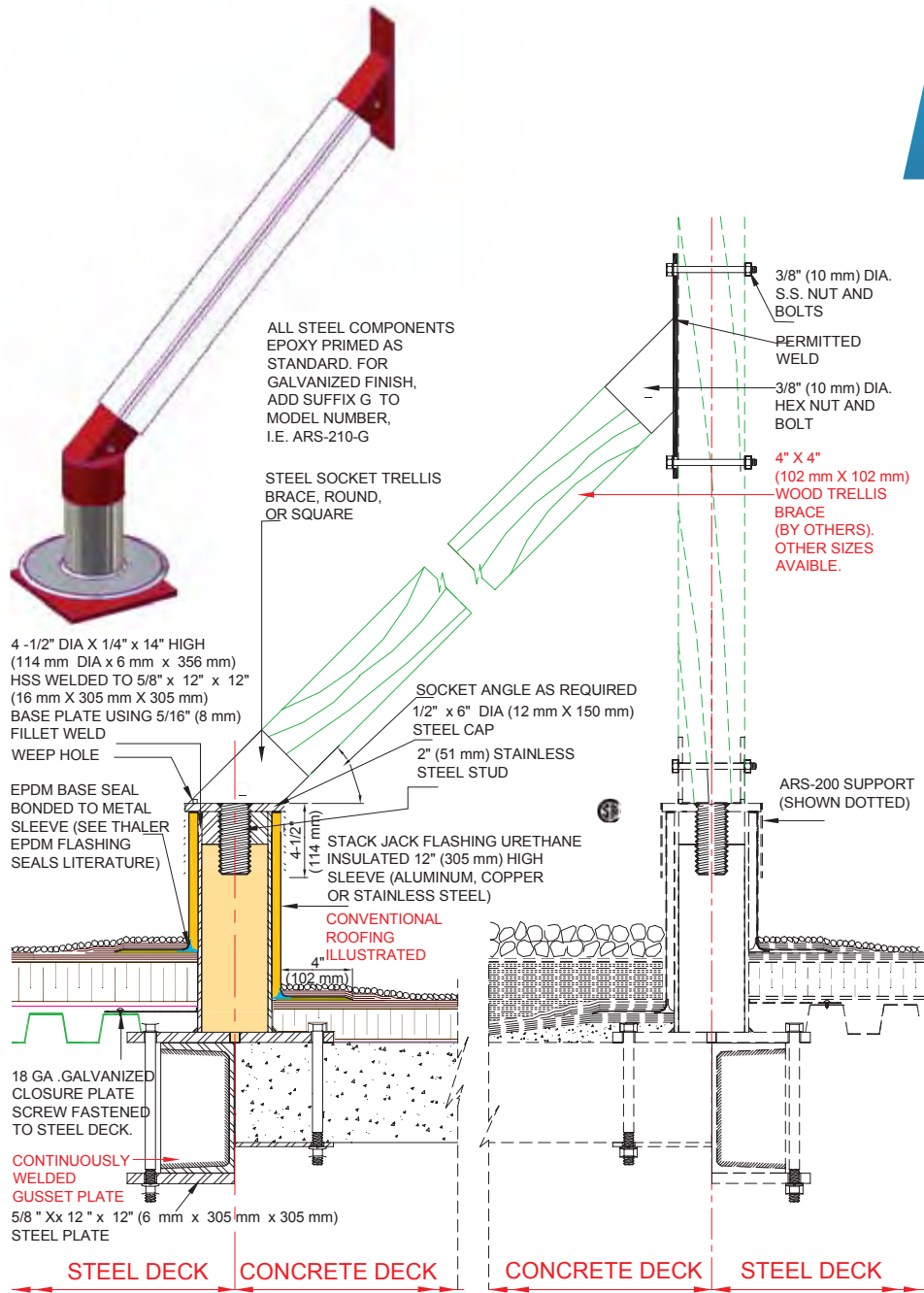
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Antenna roof supports: Thaler ARS-133 standard 14" (356 mm) high epoxy coated, urethane insulated hollow steel support including appropriate fastening to structural roof deck (adhesive type by others); threaded steel cap with 2" (51 mm) dia s.s. mast adapter stub; 3/8" (10 mm) s.s. retaining bolt; galvanizing to CSA 164-M1992; weatherproof 5/8" (16 mm) lock-bolt with EPDM seal to prevent counter-rotation of support; manufacturer's standard urethane insulated [.064" (1.6 mm)] mill finish 1100-0T alloy aluminum] [032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing and EPDM Base Seal [and] [PVC coated deck flange][bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-133 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/mast adapter stub, attaching the mast, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number. e.g. ARS-133-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Mast and Antenna Components: Thread upper portion of support (with mast adapter stub) onto lower support leg, mechanically attach mast, and finally antenna (by others).

Ordering: Specify flashing material required by adding appropriate suffix to model member e.g. ARS-133-A. for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

4" X 4" (102 mm x 102 mm)
WOOD TRELLIS (BY OTHERS).
OTHERS SIZES AVAILABLE.

1/4" x 4" x 4" HSS
(6 mm x 102 mm x 102 mm)

3/8" (10 mm) S.S.
NUT AND BOLT

WEEP HOLES

1/2" x 6" DIA (12 mm x 150 mm)
1018 STEEL CAP

ALL STEEL COMPONENTS
EPOXY PRIMED AS STANDARD.
FOR GALVANIZED FINISH,
ADD SUFFIX -G TO
MODEL NUMBER, I.E. ARS-200-G.

4-1/2" DIA x 1/4" x 14"
(114 mm DIA x 6 mm x 356 mm)
HSS WELDED TO 5/8" x 12" x 12"
(16 mm x 305 mm x 305 mm) BASE
PLATE USING 5/16" (8 mm) FILLET WELD

EPDM BASE SEAL BONDED TO
METAL SLEEVE (SEE THALER EPDM
FLASHING SEALS LITERATURE)

CONVENTIONAL ROOFING
ILLUSTRATED

4"
(102 mm)

2" (51 mm) STAINLESS
STEEL STUD

STACK JACK FLASHING URETHANE
INSULATED 12" (305 mm) HIGH
SLEEVE (ALUMINUM, COPPER
OR STAINLESS STEEL)

INVERTED ROOFING
ILLUSTRATED

6"
(152 mm)

4"
(102 mm)

4 1/2"
(114 mm)

18 GA. (1.2 mm) GALVANIZED
CLOSURE PLATE SCREW
FASTENED TO STEEL DECK

CONTINOUSLY
WELDED GUSSET PLATE

CONSULT STRUCTURAL
ENGINEER FOR
I BEAM STRENGTH
REQUIREMENTS

1/" x 12" x 12" (6 mm x 305 mm x 305 mm)
STEEL PLATE

5/8" x 12" x 12"
(16 mm x 305 mm x 305 mm)
STEEL PLATE

FOUR 5/8" (16 mm)
S.S. NUTS AND BOLTS

CONCRETE DECK   STEEL DECK

ARS-200 TRELLIS SUPPORT
PATENTED

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-200 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap / post support, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-200-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Post Socket and Post Components: Thread upper portion of support (with socket) onto lower support leg, mechanically attach posts, brace sockets (if specified), and finally trellis work.

Ordering: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-200-A. for aluminum, etc . Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler ARS-200 Trellis Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, adjustable height galvanized (optional) steel cap and trellis post socket designed to receive a square, wooden 4" x 4" (102 mm x 102 mm) trellis post (by others). A urethane insulated flashing, available in aluminum, copper or stainless steel, with EPDM Base Seal, completes the assembly. Note: Unless the trellis has some type of cross support spanning across the top from one trellis to another trellis e. g. arbor or pergola design, an ARS-210 Trellis Brace Roof Support will be required to buttress the trellis at post locations. Post/brace centres in both trellis and buttress direction to be determined by trellis designer.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking). Threaded leg assembly provides up to 2" (51 mm) vertical adjustment for levelling if necessary.

OPTIONS:
See ARS-210 Trellis Brace Support. PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Suitable for all flat roofs as a trellis, lattice, arbor, pergola, or screen fence support.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request
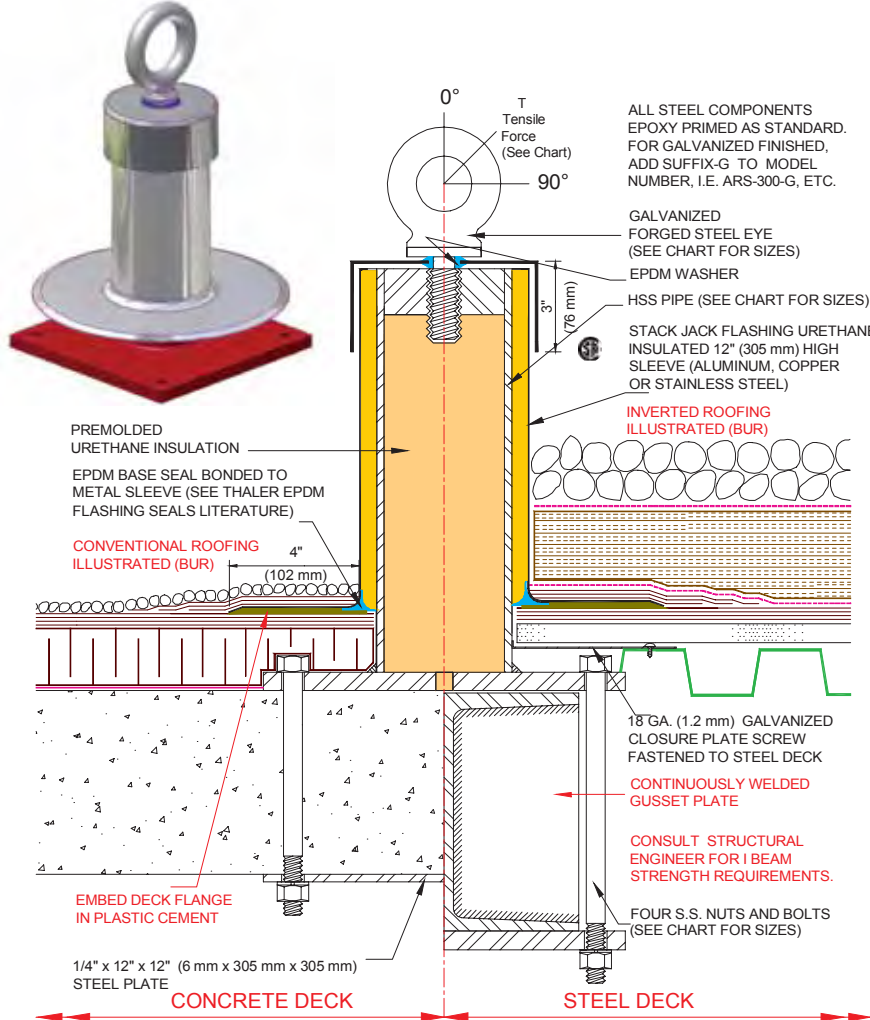
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Trellis post roof supports: Thaler ARS-200 standard 14" (356 mm) high adjustable height, epoxy coated, urethane insulated hollow steel support, including appropriate fastening to structural roof deck (adhesive type by others), and galvanized (optional) steel cap and post socket (galvanized to CSA G164-M1992) and designed for affixing 4" x 4" (102 mm x 102 mm) wood trellis posts (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz.copper] [.031"(.079 mm) Type 22 ga. 304 stainless steel] flashing and EPDM Base Seal [and] [PVC coated deck flange][bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

DESCRIPTION:
Thaler ARS-200 and ARS-210 Trellis Roof Supports consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, adjustable height galvanized (optional) steel cap and trellis post socket designed to receive a square, wooden 4" x 4" (102 mm x 102 mm) trellis post (by others). A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly. Note:Unless the trellis has some type of cross support spanning across the top from one trellis to another trellis e. g. arbor or pergola design, an ARS-210 Trellis Brace Roof Support will be required to buttress the trellis at post locations. Post / brace centres in both trellis and buttress direction to be determined by trellis designer.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking). Threaded leg assembly provides up to 2" (51 mm) vertical adjustment for levelling if necessary.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. ARS-210 Trellis Brace sockets can be supplied/fabricated to any desired angle. Unless specified otherwise, 45º angle will be provided.

RECOMMENDED USE:
Suitable for all flat roofs as a trellis, lattice, arbor, pergola, or screen fence support.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Trellis post roof supports: Thaler ARS-200 standard 14" (356 mm) high [and ARS-210] adjustable height, epoxy coated, urethane insulated hollow steel support, including appropriate fastening to structural roof deck (adhesive type by others), and galvanized (optional) steel cap and post socket (galvanized to CSA G164-M1992) and designed for affixing 4" x 4" (102 mm x 102 mm) wood trellis posts (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-72 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defect in materials and/or manufacture.

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH, ADD SUFFIX G TO MODEL NUMBER, I.E. ARS-210-G

STEEL SOCKET TRELLIS BRACE, ROUND, OR SQUARE

4 -1/2" DIA X 1/4" x 14" HIGH (114 mm DIA x 6 mm x 356 mm) HSS WELDED TO 5/8" x 12" x 12" (16 mm X 305 mm X 305 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD WEEP HOLE

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

18 GA .GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK.

CONTINUOUSLY WELDED GUSSET PLATE

5/8 " X x 12 " x 12" (6 mm x 305 mm x 305 mm) STEEL PLATE

SOCKET ANGLE AS REQUIRED 1/2" x 6" DIA (12 mm X 150 mm) STEEL CAP

2" (51 mm) STAINLESS STEEL STUD

STACK JACK FLASHING URETHANE INSULATED 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

CONVENTIONAL ROOFING ILLUSTRATED

4-1/2" (114 mm)

4" (102 mm)

3/8" (10 mm) DIA. S.S. NUT AND BOLTS

PERMITTED WELD

3/8" (10 mm) DIA. HEX NUT AND BOLT

4" X 4" (102 mm X 102 mm) WOOD TRELLIS BRACE (BY OTHERS). OTHER SIZES AVAIBLE.

ARS-200 SUPPORT (SHOWN DOTTED)

STEEL DECK | CONCRETE DECK | CONCRETE DECK | STEEL DECK

ARS-210 TRELLIS SUPPORT
PATENTED

ARS-200 TRELLIS SUPPORT
PATENTED

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-200 or ARS-210 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap / post support, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-200-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Post Socket and Post Components: Thread upper portion of support (with socket) onto lower support leg, mechanically attach posts, brace sockets (if specified), and finally trellis work.

Ordering: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-200-A. for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information.Most products are readily available from stock.
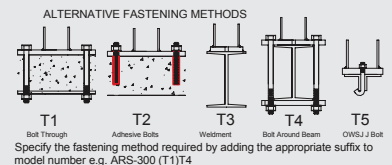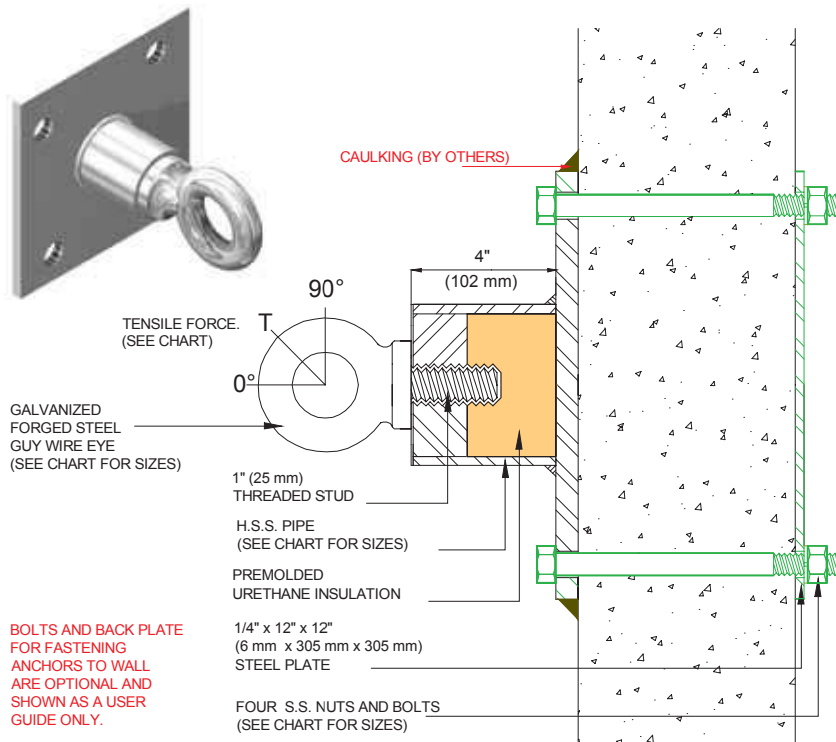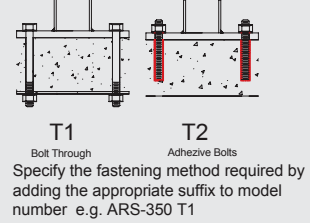
Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

MODEL NUMBER	HSS SUPPORT PIPE			EYE BOLT			BASE PLATE		FASTENING BOLT Ø	MAXIMUM ALLOWABLE TENSILE FORCE LBS. (kN)				
	Height	Outside Ø	Thickness	Inside Ø	Outside Ø	Thread Ø	Bolt Securement	Weld Securement		0°	30°	45°	60°	90°
ARS-300	14" (356 mm)	2-3/8" (60 mm)	1/4" (6 mm)	1" (25 mm)	2-1/4" (57 mm)	1/2" (12 mm)	1/4" X 12" X 12" (6 X 305 X 305 mm)	3/8 "X 4 "X 4" (9 X 102 X 102 mm)	3/8" (10 mm)	2200 (9.8)	0850 (3.8)	0660 (2.9)	0600 (2.7)	0550 (2.5)
ARS-301	14" (356 mm)	3-1/2" (87 mm)	1/4" (6 mm)	1-1/2" (38 mm)	3" (76 mm)	3/4" (19 mm)	3/8" X 12" X 12" (10 X 305 X 305 mm)	3/8 "X 4" X 4" (9 X 102 X 102 mm)	1/2" (12 mm)	5200 (23.1)	2200 (9.8)	1560 (6.9)	1456 (6.5)	1300 (5.8)
ARS-302	14" (356 mm)	4-1/2" (113 mm)	1/4" (6 mm)	2" (50 mm)	3-3/4" (95 mm)	1" (25 mm)	1/2" X 12" X 12" (12 X 305 X 305 mm)	1/2 "X 6" X 6" (12 X 152X 152 mm)	5/8" (16 mm)	10000 (44.5)	3900 (17.4)	3000 (13.3)	2800 (12.5)	2500 (11.2)
ARS-303	14" (356 mm)	4-1/2" (113 mm)	1/4" (6 mm)	3" (76 mm)	5-1/4" (133 mm)	1-1/2" (38 mm)	3/4" X 12" X 12" (19 X 305 X 305 mm)	5/8 "X 8 "X 8" (16 X 203 X 203 mm)	3/4" (19 mm)	21000 (93.5)	7200 (32)	5300 (23.5)	4500 (20)	4000 (17.8)
ARS-304	14" (356 mm)	6-5/8" (166 mm)	5/16" (8 mm)	4" (102 mm)	7" (178 mm)	2" (51 mm)	1 "X 12" X 12" (25 X 305 X 305 mm)	3/4 "X 8 "X 8" (19 X 203 X 203 mm)	3/4" (19 mm)	38000 (169)	16000 (71.2)	11400 (50.7)	10900 (48.5)	9700 (43.2)

0°
T Tensile Force (See Chart)
90°

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISHED, ADD SUFFIX-G TO MODEL NUMBER, I.E. ARS-300-G, ETC.

GALVANIZED FORGED STEEL EYE (SEE CHART FOR SIZES)

EPDM WASHER

HSS PIPE (SEE CHART FOR SIZES)

STACK JACK FLASHING URETHANE INSULATED 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

T Tensile Force (See Chart)

3" (76 mm)

INVERTED ROOFING ILLUSTRATED (BUR)

PREMOLDED URETHANE INSULATION

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

CONVENTIONAL ROOFING ILLUSTRATED (BUR)

4" (102 mm)

EMBED DECK FLANGE IN PLASTIC CEMENT

1/4" x 12" x 12" (6 mm x 305 mm x 305 mm) STEEL PLATE

18 GA. (1.2 mm) GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

CONTINUOUSLY WELDED GUSSET PLATE

CONSULT STRUCTURAL ENGINEER FOR I BEAM STRENGTH REQUIREMENTS.

FOUR S.S. NUTS AND BOLTS (SEE CHART FOR SIZES)

CONCRETE DECK   STEEL DECK

DESCRIPTION:
Thaler ARS-300 selection of Guy Wire Supports consist of urethane insulated, epoxy primed, hollow steel support, mounting plate, and galvanized guy wire ring. A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly. Five different models are available to suit a range of structural requirements.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking).

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See Thaler ARS-350 selection of wall mounted guy wire supports.

RECOMMENDED USE:
Suitable for all flat roofs as a support for chimney stacks, high antennas and similar rooftop items requiring guy wire stabilization.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Guy wire roof supports: Thaler [ARS-300] [ARS-301] [ARS-302] [ARS-303] [ARS-304] epoxy coated, urethane insulated hollow steel support, including appropriate fastening to structural roof deck (adhesive type by others), and steel ring with galvanized eye and stainless steel cap for affixing guy wire (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz.copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty agai-nst leaks, condensation and defects in materials and/or manufacture.
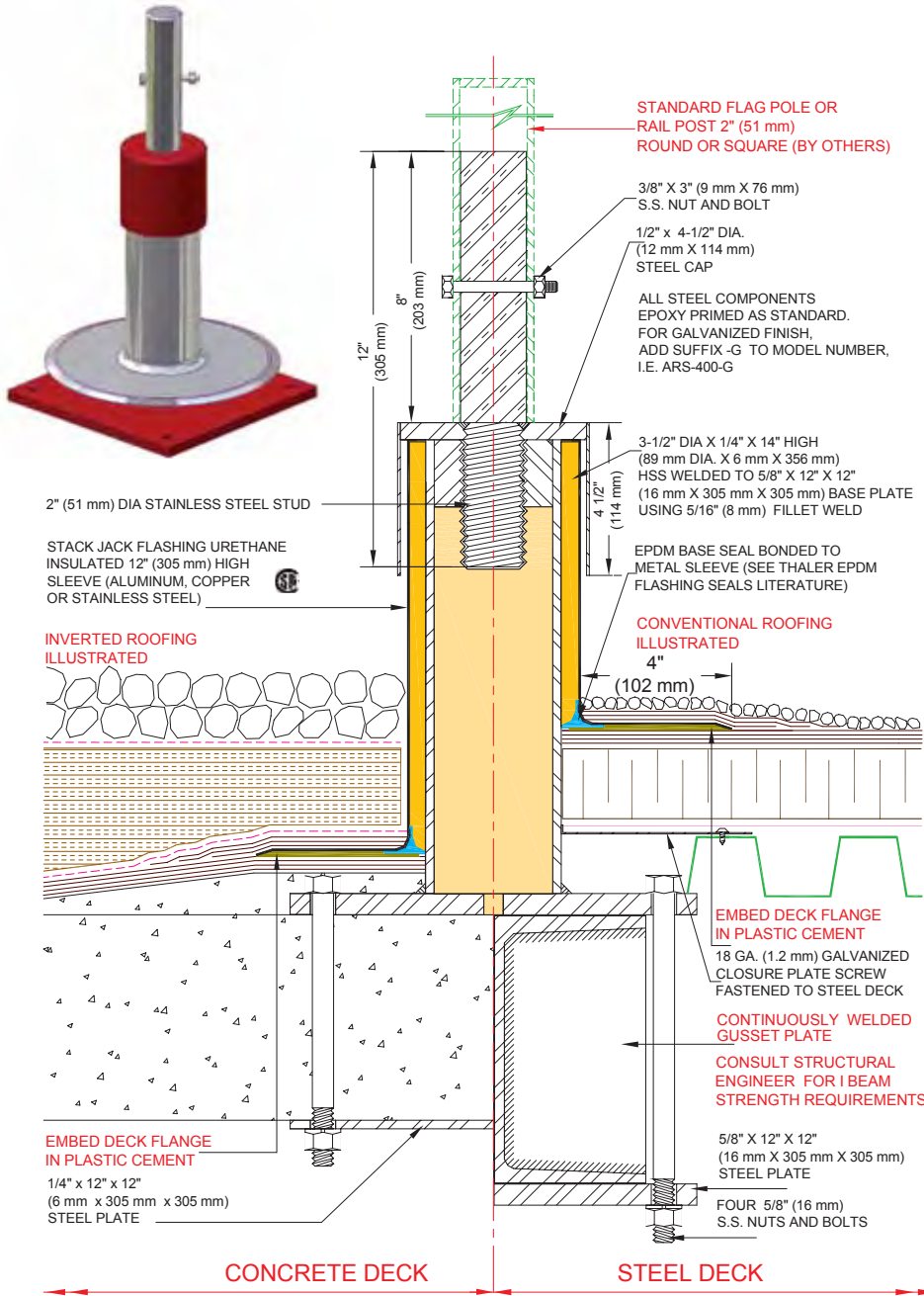
ARS-300, 301, 302, 303, AND 304 GUY WIRE ROOF SUPPORTS
PATENTED

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-300 selection of Roof Supports are installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/guy wire ring. and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
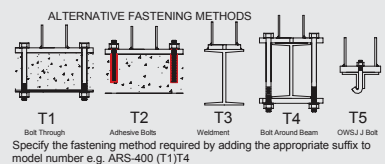
ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-300-A-P; weld roofing to deck flange using PVC torch.
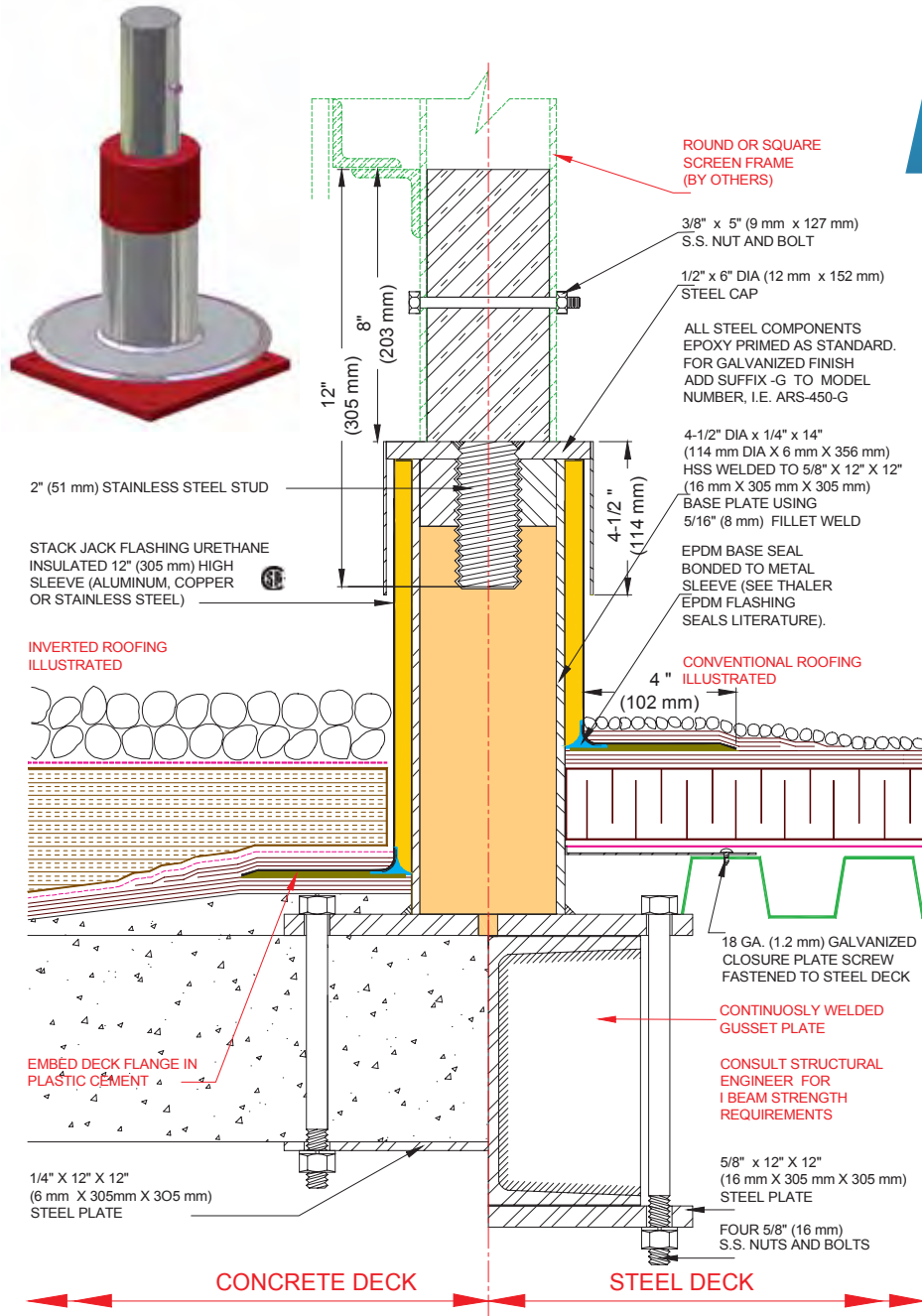
Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Guy Wire Ring: Thread upper portion of support (with ring) onto lower support leg and attach guy wire (by others).

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-300-A. for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ALTERNATIVE FASTENING METHODS

T1 Bolt Through
T2 Adhesive Bolts
T3 Weldment
T4 Bolt Around Beam
T5 OWSJ J Bolt

Specify the fastening method required by adding the appropriate suffix to model number e.g. ARS-300 (T1)T4

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

PLATE YIELD STRESS 44.000 psi. (303,600 kPa.) HSS YIELD STRESS 50,000 psi.(345,000 kPa.)

MODEL NUMBER	HSS SUPPORT PIPE			EYE BOLT			BASE PLATE		FASTENING BOLT Ø
	Height	Outside Ø	Thickness	Inside Ø	Outside Ø	Thread Ø	Bolt Securement	Weld Securement	
ARS-350	4" (102 mm)	2-3/8" (60 mm)	1/4" (6 mm)	1" (25 mm)	2-1/4" (57 mm)	1/2" (12 mm)	5/16" X 8" X 8" (8 X 203 x 203 mm)	5/16" X 4" X 4" (8 X 102 x 102 mm)	1/4" (6 mm)
ARS-350-1	4" (102 mm)	3-1/2" (87 mm)	1/4" (6 mm)	1-1/2" (38 mm)	3" (76 mm)	3/4" (19 mm)	1/2" X 8" X 8" (12 x 203 x 203 mm)	7/16" X 4" X 4" (11 X 102 X 102 mm)	5/16" (8 mm)
ARS-350-2	4" (102 mm)	4-1/2" (113 mm)	1/4" (6 mm)	2" (51mm)	3-3/4" (95 mm)	1" (25 mm)	5/8" X 9" X 9" (16 x 230 x 230 mm)	5/8" X 5" X 5" (18 X 127 X 127 mm)	3/8" (10 mm)
ARS-350-3	4" (102 mm)	4-1/2" (113 mm)	1/4" (6 mm)	3" (76 mm)	5-1/4" 133 mm)	1-1/2" (38 mm)	7/8" X 9" X 9" (22 X 230 x 230 mm)	7/8" X 8" X 8" (22 X 127 X 127 mm)	5/8" (16 mm)
ARS-350-4	4" (102 mm)	6-5/8" (166 mm)	5/16" (8 mm)	3-1/2" (89 mm)	7" 178 mm)	2" (51 mm)	1"X 12" X 12" (25 x 230 x 230 mm)	1" x 7-1/2" x 7-1/2" (25 X 190 X 190 mm)	3/4" (19 mm)

MAXIMUM ALLOWABLE TENSILE FORCE lbs. (kN)				
0°	30°	45°	60°	90°
2600 (11.50)	1080 (4.80)	780 (3.40)	750 (3.30)	650 (2.90)
7200 (32.00)	3000 (13.35)	2160 (9.60)	2000 (9.00)	1800 (8.00)
13300 (59.00)	5500 (24.5)	3900 (17.35)	3800 (17.00)	3300 (14.70)
24000 (106.80)	10000 (44.50)	7200 (32.00)	6900 (30.50)	6000 (26.70)
38800 (172.00)	15800 (70.00)	11400 (50.70)	10900 (48.50)	9500 (42.25)

CAULKING (BY OTHERS)

4" (102 mm)

TENSILE FORCE. (SEE CHART) T

90°

0°

GALVANIZED FORGED STEEL GUY WIRE EYE (SEE CHART FOR SIZES)

1" (25 mm) THREADED STUD

H.S.S. PIPE (SEE CHART FOR SIZES)

PREMOLDED URETHANE INSULATION

BOLTS AND BACK PLATE FOR FASTENING ANCHORS TO WALL ARE OPTIONAL AND SHOWN AS A USER GUIDE ONLY.

1/4" x 12" x 12" (6 mm x 305 mm x 305 mm) STEEL PLATE

FOUR S.S. NUTS AND BOLTS (SEE CHART FOR SIZES)

ARS-350, 350-1, 350-2, 350-3, AND 350-4 GUY WIRE WALL SUPPORT
PATENTED

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-350 selection of Guy Wire Wall Supports are installed by fastening the support base to a structural wall, or structural component behind the wall, threading the guy wire ring onto the support, and attaching the guy wire (by others).

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler ARS-350 selection of Guy Wire Wall Supports consist of urethane insulated,galvanized hollow steel support, guy wire ring and mounting plate. Five different models are available to suit a range of structural requirements.

PROMINENT FEATURES:
Condensation free. Maintenance free.

OPTIONS:
See Thaler ARS-300 selection of roof mounted guy wire supports.

RECOMMENDED USE:
Suitable for attachment to all roof walls having structural sufficiency for anchoring supports, for chimney stacks, high antennas and similar roof items requiring guy wire stabilization.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Guy wire wall supports: Thaler[ARS-350-1] [ARS-350-2] [ARS-350-3] [ARS-350-4], urethane insulated galvanized hollow steel supports, including appropriate fastening to wall structure (adhesive type by others), and galvanized steel ring (hot dipped galvanized to CSA G164-M1992) for affixing guy wire (by others); manufactured by Thaler Metal Industries, 1-800-387-7217(Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

ALTERNATIVE FASTENING METHODS

T1
Bolt Through

T2
Adhezive Bolts

Specify the fastening method required by adding the appropriate suffix to model number e.g. ARS-350 T1

STANDARD FLAG POLE OR
RAIL POST 2" (51 mm)
ROUND OR SQUARE (BY OTHERS)

3/8" X 3" (9 mm X 76 mm)
S.S. NUT AND BOLT

1/2" x 4-1/2" DIA.
(12 mm X 114 mm)
STEEL CAP

ALL STEEL COMPONENTS
EPOXY PRIMED AS STANDARD.
FOR GALVANIZED FINISH,
ADD SUFFIX -G TO MODEL NUMBER,
I.E. ARS-400-G

3-1/2" DIA X 1/4" X 14" HIGH
(89 mm DIA. X 6 mm X 356 mm)
HSS WELDED TO 5/8" X 12" X 12"
(16 mm X 305 mm X 305 mm) BASE PLATE
USING 5/16" (8 mm) FILLET WELD

EPDM BASE SEAL BONDED TO
METAL SLEEVE (SEE THALER EPDM
FLASHING SEALS LITERATURE)

2" (51 mm) DIA STAINLESS STEEL STUD

STACK JACK FLASHING URETHANE
INSULATED 12" (305 mm) HIGH
SLEEVE (ALUMINUM, COPPER
OR STAINLESS STEEL)

INVERTED ROOFING
ILLUSTRATED

CONVENTIONAL ROOFING
ILLUSTRATED
4"
(102 mm)

8" (203 mm)
12" (305 mm)
4 1/2" (114 mm)

EMBED DECK FLANGE
IN PLASTIC CEMENT
18 GA. (1.2 mm) GALVANIZED
CLOSURE PLATE SCREW
FASTENED TO STEEL DECK

CONTINUOUSLY WELDED
GUSSET PLATE

CONSULT STRUCTURAL
ENGINEER FOR I BEAM
STRENGTH REQUIREMENTS

5/8" X 12" X 12"
(16 mm X 305 mm X 305 mm)
STEEL PLATE

FOUR 5/8" (16 mm)
S.S. NUTS AND BOLTS

EMBED DECK FLANGE
IN PLASTIC CEMENT
1/4" x 12" x 12"
(6 mm x 305 mm x 305 mm)
STEEL PLATE

CONCRETE DECK   STEEL DECK

ARS-400 FLAG POLE OR RAIL ROOF SUPPORT
PATENTED

DESCRIPTION:
Thaler ARS-400 Flag Pole or Rail Support consists of a urethane insulated, epoxy primed, hollow steel support and deck mounting plate threaded steel cap with 2" (51 mm) diameter stainless steel flag pole/rail adapter stub. A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking).

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See Thaler ARS-115 for alternative rail support.

RECOMMENDED USE:
Suitable for all flat roofs as a flag pole or rail roof support.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
[Flag Pole] [Rail] roof supports: Thaler ARS-400 epoxy coated, urethane insulated hollow steel support, including appropriate fastening to structural roof deck (adhesive type by others), and threaded steel cap with [2" (51 mm) dia. s.s. adapter stub] [s.s. stub machined or tapered to receive I. D. flag pole] and 3/8" (9 mm) s.s. retaining bolt; galvanizing to CSA G164-M1992; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (.079 mm) 22 ga. Type 304 stainless steel] flashing and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-400 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/flag pole or rail adapter, attaching the flag pole or rail (by others) and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
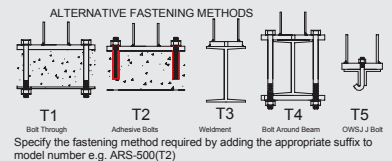
ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-400-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Flag Pole or Rail Components: Thread cap/stainless steel adapter stub onto lower support leg and mechanically attach flag pole or rail (by others).

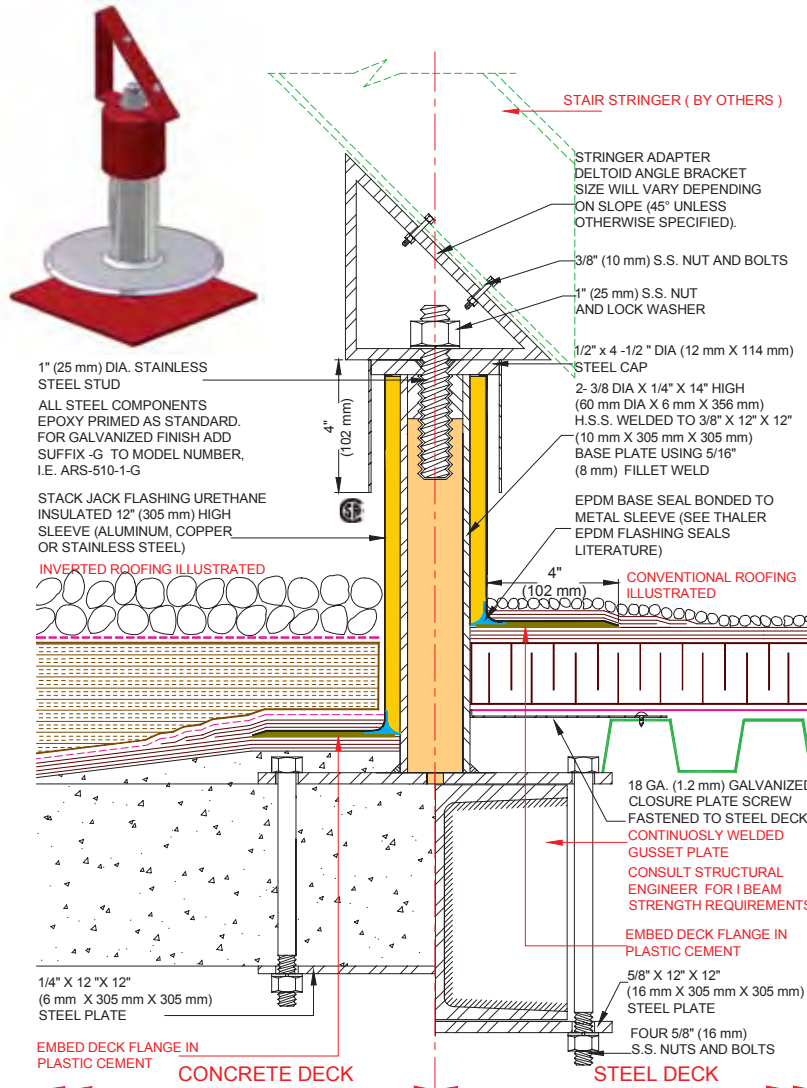**Ordering:** Specify flashing material required by adding appropriate suffix to model number e.g. ARS-400-A., for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information.Most products are readily available from stock.

ALTERNATIVE FASTENING METHODS

T1   T2   T3   T4   T5
Bolt Through Adhesive Bolts Weldment Bolt Around Beam OWSJ J Bolt
Specify the fastening method required by adding the appropriate suffix to model number e.g. ARS-400 (T1)T4

THALER   E-10

ROUND OR SQUARE
SCREEN FRAME
(BY OTHERS)

3/8" x 5" (9 mm x 127 mm)
S.S. NUT AND BOLT

1/2" x 6" DIA (12 mm x 152 mm)
STEEL CAP

ALL STEEL COMPONENTS
EPOXY PRIMED AS STANDARD.
FOR GALVANIZED FINISH
ADD SUFFIX -G TO MODEL
NUMBER, I.E. ARS-450-G

4-1/2" DIA x 1/4" x 14"
(114 mm DIA X 6 mm X 356 mm)
HSS WELDED TO 5/8" X 12" X 12"
(16 mm X 305 mm X 305 mm)
BASE PLATE USING
5/16" (8 mm) FILLET WELD

EPDM BASE SEAL
BONDED TO METAL
SLEEVE (SEE THALER
EPDM FLASHING
SEALS LITERATURE).

8" (203 mm)

12" (305 mm)

4-1/2" (114 mm)

2" (51 mm) STAINLESS STEEL STUD

STACK JACK FLASHING URETHANE
INSULATED 12" (305 mm) HIGH
SLEEVE (ALUMINUM, COPPER
OR STAINLESS STEEL)

INVERTED ROOFING
ILLUSTRATED

CONVENTIONAL ROOFING
ILLUSTRATED

4" (102 mm)

18 GA. (1.2 mm) GALVANIZED
CLOSURE PLATE SCREW
FASTENED TO STEEL DECK

CONTINUOSLY WELDED
GUSSET PLATE

EMBED DECK FLANGE IN
PLASTIC CEMENT

CONSULT STRUCTURAL
ENGINEER FOR
I BEAM STRENGTH
REQUIREMENTS

1/4" X 12" X 12"
(6 mm X 305mm X 3O5 mm)
STEEL PLATE

5/8" x 12" X 12"
(16 mm X 305 mm X 305 mm)
STEEL PLATE

FOUR 5/8" (16 mm)
S.S. NUTS AND BOLTS

CONCRETE DECK STEEL DECK

ARS-450 A/C UNIT SCREEN ROOF SUPPORT
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler ARS-450 Roof support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/screen frame adapter, attaching the screen framing (by others), and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange and add suffix P to end of model number e.g. ARS-450-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.
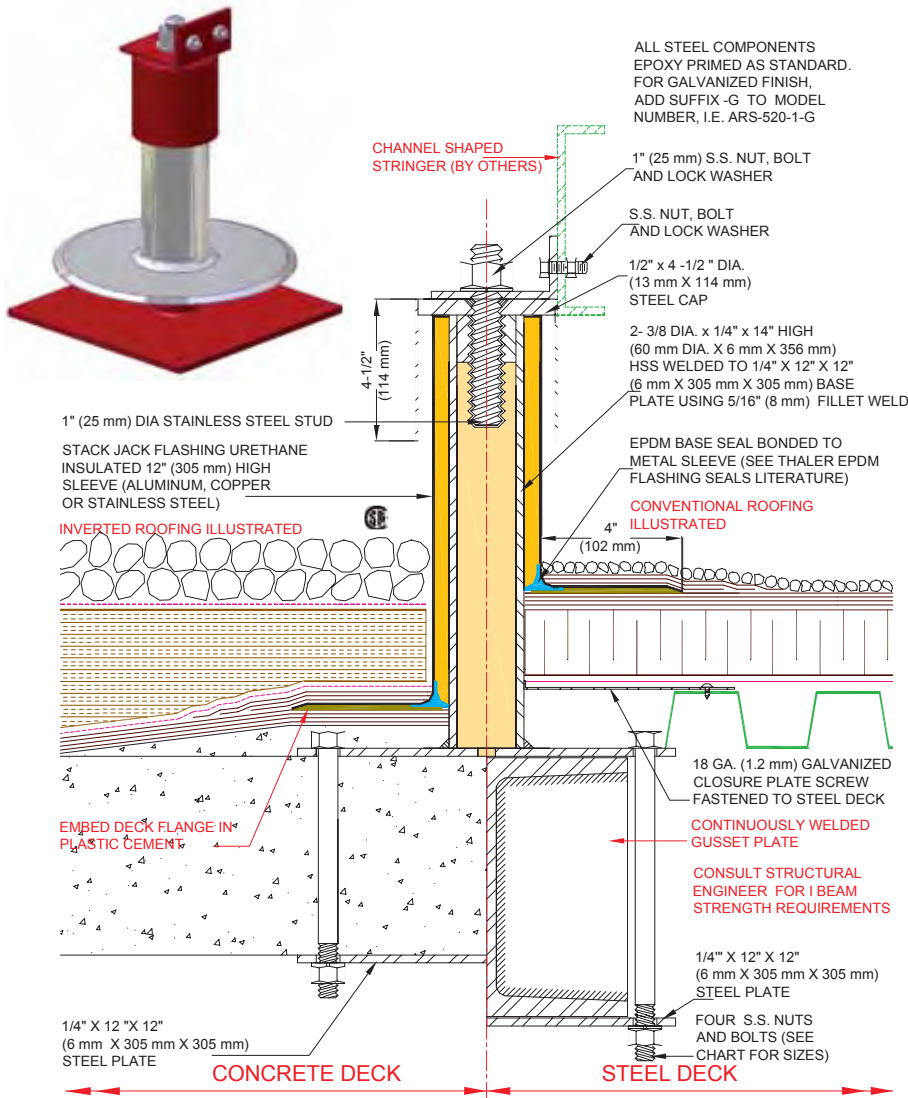
Screen Frame Components: Thread cap/stainless steel adapter stub onto lower support leg, place screen frame posts (by others) over adapter, bolt into place, and install screen (by others).

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-450-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler ARS-450 A/C Unit Screen Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, and threaded steel cap with 4" (102 mm) diameter or 4" (102 mm) square stainless steel screen frame adapter stub (screen frame by others). A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking).

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. Adapter stub is available round or square.

RECOMMENDED USE:
Suitable for all flat roofs as an A/C unit screen roof support.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
A/C unit screen roof supports: Thaler ARS-450 epoxy coated urethane insulated, hollow steel support including appropriate fastening to structural roof deck (adhesive type by others); threaded steel cap with 4" (102 mm) [dia.] [square] stainless steel screen frame adapter stub and 3/8" (9 mm) s.s. retaining bolt; galvanized to CSA 164-M1992; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

ALTERNATIVE FASTENING METHODS

T1	T2	T3	T4	T5
Bolt Through	Adhesive Bolts	Weldment	Bolt Around Beam	OWSJ J Bolt

Specify the fastening method required by adding the appropriate suffix to model number e.g. ARS-450 (T1) T4

METAL ACCESS LADDER (BY OTHERS)

1/4" X 2" X 2-1/2" (6 mm X 51 mm X 64 mm) STEEL PLATE LADDER LUGS

3/8" X 3" (9 mm X 75 mm) S.S. NUT AND BOLT

1/2" x 6" DIA. (12 mm X 150 mm) STEEL CAP

3/4" (19 mm) STAINLESS STEEL STUD

2 -3/8" DIA. X 1/4" X 14" (60 mm DIA. X 6 mm X 356 mm) HSS WELDED TO 1/4" X 12" X 12" (6 mm X 305 mm X 305 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD

STACK JACK FLASHING URETHANE INSULATED 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH, ADD SUFFIX -G TO MODEL NUMBER, I.E. ARS-500-G

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

INVERTED ROOFING ILLUSTRATED

INVERTED ROOFING ILLUSTRATED

4" (102 mm)

2" (51 mm)

6" (152 mm)

4-1/2" (114 mm)

FOUR 5/8" (16 mm) S.S NUTS AND BOLTS

1/4" X 12" X 12" (6 mm X 305 mm X 305 mm) STEEL PLATE

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

3/16" X 2" X 2" (5 mm X 51 mm X 51 mm) ANGLE ACROSS TWO STEEL DECK FLUTES, BOLTED (OPTIONAL)

CONCRETE DECK   STEEL DECK

ARS-500 ACCESS LADDER ROOF SUPPORTS
PATENTED

DESCRIPTION:
Thaler ARS-500 Access Ladder Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, adapter lugs for mounting a vertical metal ladder (by others). A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking).

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Suitable for all flat roofs as an access ladder roof support.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
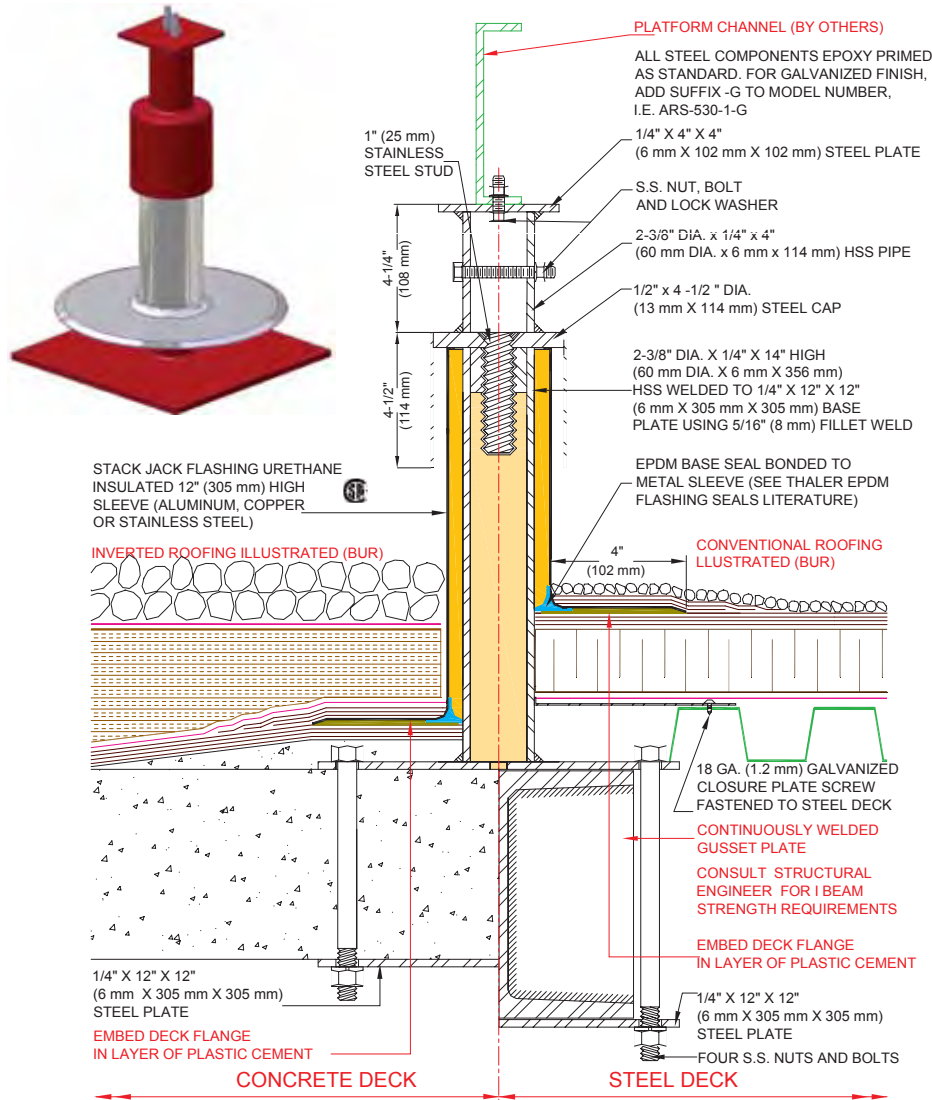No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Access ladder roof support: Thaler ARS-500 epoxy coated, urethane insulated hollow steel support including appropriate fastening to structural roof deck (adhesive type by others); threaded steel cap with ladder lugs suitable for receiving 1/2" (13 mm) thickness steel ladder side rails; 3/8" (9 mm) s.s. retaining bolts; galvanizing to CSA G164-M1992; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing and EPDM Base Seal [and] [PVC coat deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braun- fels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler ARS-500 Roof support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/adapter lugs, mechanically attaching the metal ladder, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-500-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Access Ladder Components: Thread upper portion of support (with lug) onto lower support leg and mechanically attach ladder by bolting into place.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to order number e.g. ARS-500-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ALTERNATIVE FASTENING METHODS

T1 Bolt Through   T2 Adhesive Bolts   T3 Weldment   T4 Bolt Around Beam   T5 OWSJ J Bolt

Specify the fastening method required by adding the appropriate suffix to model number e.g. ARS-500(T2)

MODEL NUMBER	HSS SUPPORT			THREAD Ø	DELTOID ANGLE DIMENSIONS	BASE PLATE		FASTENING BOLT Ø
	Height	Outside Ø	Thickness			Bolt Securement	Weld Securement	
ARS-510	14" (356 mm)	2-3/8" (60 mm)	1/4" (6 mm)	1" (25 mm)	1/4" X 1-1/2" (6 mm X 38 mm)	3/8" X 12 " X 12" (10 mm X 305 mm X 305 mm)	3/8" X 4" X 4" (10 mm X 102 mm X 102 mm)	3/8" (10 mm)
ARS-510-1	14" (356 mm)	4-1/2" (114 mm)	1/4" (6 mm)	2" (51 mm)	3/8" X 1 -/2" (10 mm X 38 mm)	1/2" X 12" X 12" (13 mm X 305 mm X 305 mm)	1/2" X 6" X 6" (13 mm X 152 mm X 152 mm)	1/2" (12 mm)
ARS-510-2	14" (356 mm)	6-5/8" (168 mm)	1/4" (6 mm)	2" (51 mm)	1/2" X 2" (13 mm X 51 mm)	5/8" X 14" X 14" (16 mm X 356 mm X 356 mm)	5/8" X 8" X 8" (16 mmX 203 mmX 203 mm)	5/8" (16 mm)

FOR SUPPORTS OTHER THAN STANDARD 14" (356 mm) HEIGHT, ADD SUFFIX "NS" TO MODEL NUMBER I.E. ARS-510-2/NS

STAIR STRINGER (BY OTHERS)

STRINGER ADAPTER DELTOID ANGLE BRACKET SIZE WILL VARY DEPENDING ON SLOPE (45° UNLESS OTHERWISE SPECIFIED).

3/8" (10 mm) S.S. NUT AND BOLTS

1" (25 mm) S.S. NUT AND LOCK WASHER

1" (25 mm) DIA. STAINLESS STEEL STUD

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH ADD SUFFIX -G TO MODEL NUMBER, I.E. ARS-510-1-G

1/2" x 4 -1/2 " DIA (12 mm X 114 mm) STEEL CAP

2- 3/8 DIA X 1/4" X 14" HIGH (60 mm DIA X 6 mm X 356 mm) H.S.S. WELDED TO 3/8" X 12" X 12" (10 mm X 305 mm X 305 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD

STACK JACK FLASHING URETHANE INSULATED 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

INVERTED ROOFING ILLUSTRATED

4" (102 mm)

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

18 GA. (1.2 mm) GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

CONTINUOUSLY WELDED GUSSET PLATE

CONSULT STRUCTURAL ENGINEER FOR I BEAM STRENGTH REQUIREMENTS

EMBED DECK FLANGE IN PLASTIC CEMENT

1/4" X 12 "X 12" (6 mm X 305 mm X 305 mm) STEEL PLATE

EMBED DECK FLANGE IN PLASTIC CEMENT

CONCRETE DECK

5/8" X 12" X 12" (16 mm X 305 mm X 305 mm) STEEL PLATE

FOUR 5/8" (16 mm) S.S. NUTS AND BOLTS

STEEL DECK

ARS- 510, 510-1, 510-2 METAL STAIR SUPPORT (Standard Stringer)
PATENTED

DESCRIPTION:
Thaler ARS-510 Series of Metal Stair Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, (adhesive fasteners supplied by others), adjustable height (galvanized optional) steel cap and stringer adapter deltoid bracket designed to receive a standard, metal stair stringer (by others). Unless otherwise specified or noted on drawings, stringer adapter bracket will be provided for 45º stringer. A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly. Three models are available to suit different structural and/or size requirements.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking). Threaded leg assembly provides up to 2" (51 mm) vertical adjustment for levelling if necessary.

OPTIONS:
Stringer adapter deltoid bracket angle as desired (note:unless specified otherwise, a 45º angle will be provided). PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. Can be combined for use with ARS-100A floating walkway rail roof support or ARS-102A fire route walkway rail roof support.

RECOMMENDED USE:
Suitable for all flat roofs as a metal stair roof support at changes in roof level or other areas to facilitate access for maintenance, fire route or similar applications.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
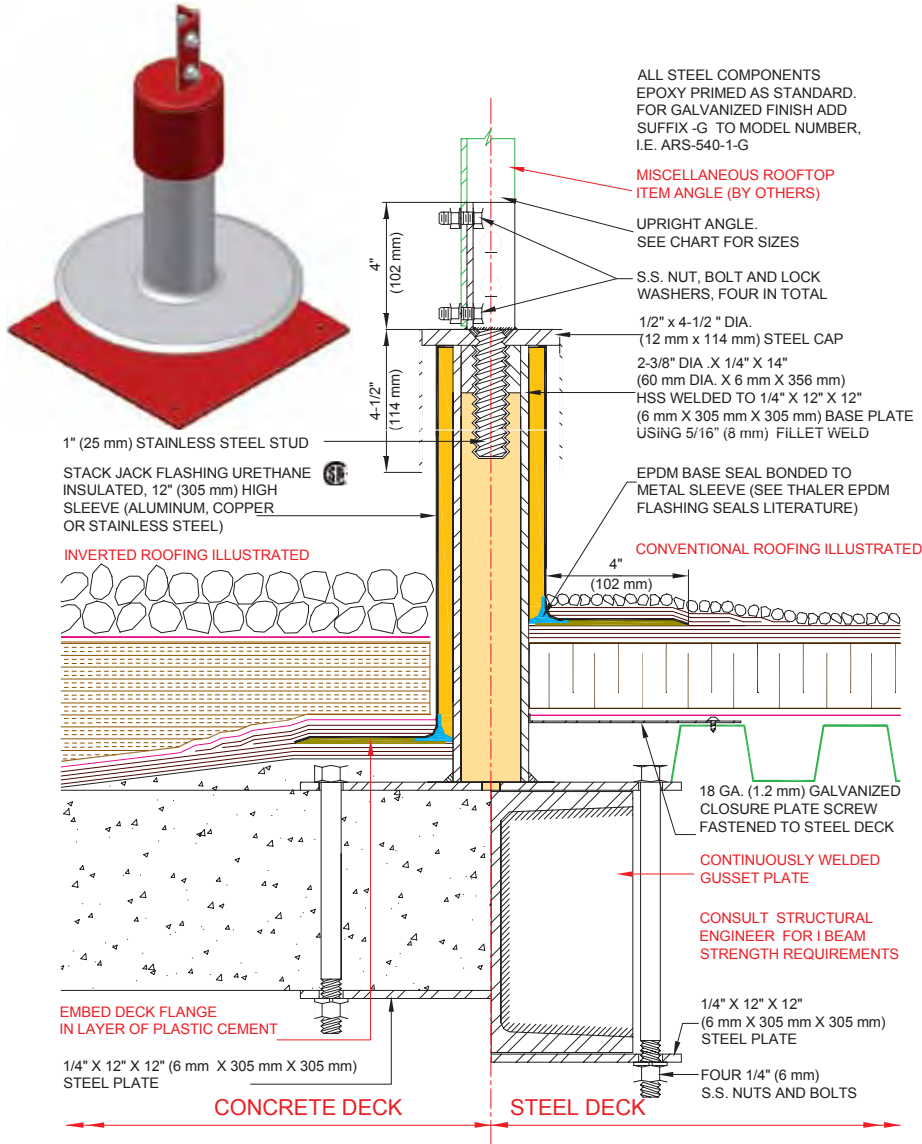No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Metal stair roof supports: Thaler [ARS-510] [ARS-510-1] [ARS-510-2] adjustable height, epoxy coated, urethane insulated hollow steel supports including appropriate hardware (adhesive fasteners supplied by others) for fastening to structural roof deck and (galvanized optional) steel cap (galvanized to CSA G164-M1992) and designed for affixing steel stair (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper][.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler ARS-510 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/stringer adapter deltoid bracket, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-510-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Stringer Components: Thread upper portion of support (with stringer adapter deltoid bracket) onto lower support leg and mechanically attach stringer (by others) using the 1/2" (12 mm) stainless steel bolts provided.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-510-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

MODEL NUMBER	HSS SUPPORT PIPE			THREAD Ø	BASE PLATE		CONNECTOR ANGLE VERTICAL LEG DIMENSIONS	FASTENING BOLT Ø
	Height	Outside Ø	Thickness		Bolt Securement	Weld Securement		
ARS-520	14" (356 mm)	2 -3/8" (60 mm)	1/4" (6 mm)	1" (25 mm)	1/4" X 12" X 12" (6 mm x 305 mm x 305 mm)	3/8" X 4 "X 4" (10 mm x102 mm x 102 mm)	1/4" X 4 " X 4" (6 mm x 102 mm x 102 mm)	1/4" (6 mm)
ARS-520-1	14" (356 mm)	3 -1/2" (89 mm)	1/4" (6 mm)	2" (51 mm)	3/8" X 12" X 12" (10 mm x 305 mm x 305 mm)	1/2" X 6" X 6" (13 mm x152 mm x 152 mm)	3/8"X 4 "X 4" (10 mm x 102 mm x 102 mm)	3/8" (10 mm)
ARS-520-2	14" (356 mm)	4 -1/2" (114 mm)	1/4" (6 mm)	2" (51 mm)	5/8" X 12 "X 12" (16 mm x 305 mm x 305 mm)	5/8" X 8 "X 8" (16 mm x 203 mm x 203 mm)	5/8 "X 5 "X 5" (16 mm x 127 mm x 127 mm)	5/8" (16 mm)

FOR SUPPORTS OTHER THAN STANDARD 14" (356 mm) HEIGHT, ADD SUFFIX "NS" TO MODEL NUMBER I.E. ARS-520-2/NS

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH, ADD SUFFIX -G TO MODEL NUMBER, I.E. ARS-520-1-G

CHANNEL SHAPED STRINGER (BY OTHERS)

1" (25 mm) S.S. NUT, BOLT AND LOCK WASHER

S.S. NUT, BOLT AND LOCK WASHER

1/2" x 4 -1/2 " DIA. (13 mm X 114 mm) STEEL CAP

2- 3/8 DIA. x 1/4" x 14" HIGH (60 mm DIA. X 6 mm X 356 mm) HSS WELDED TO 1/4" X 12" X 12" (6 mm X 305 mm X 305 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

1" (25 mm) DIA STAINLESS STEEL STUD

STACK JACK FLASHING URETHANE INSULATED 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOFING ILLUSTRATED

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

4-1/2" (114 mm)

EMBED DECK FLANGE IN PLASTIC CEMENT

18 GA. (1.2 mm) GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

CONTINUOUSLY WELDED GUSSET PLATE

CONSULT STRUCTURAL ENGINEER FOR I BEAM STRENGTH REQUIREMENTS

1/4'" X 12" X 12" (6 mm x 305 mm X 305 mm) STEEL PLATE

FOUR S.S. NUTS AND BOLTS (SEE CHART FOR SIZES)

1/4" X 12 "X 12" (6 mm X 305 mm X 305 mm) STEEL PLATE

CONCRETE DECK

STEEL DECK

ARS-520, 520-1, 520-2 METAL STAIR ROOF SUPPORT (Offset Stringer)
PATENTED

DESCRIPTION:
Thaler ARS-520 selection of Metal Stair Roof Supports consist of a urethane insulated, epoxy primed, hollow steel support and mounting plate, mounting hardware (adhesive fasteners supplied by others) adjustable height steel cap and stainless steel stringer connector angle designed to receive an offset, channel shaped stringer (by others). A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly. Three models are available to suit different structural and/or size requirements.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking). Threaded leg assembly provides up to 2" (51 mm) vertical adjustment for leveling if necessary.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. Can be combined for use with ARS-102A floating walkway rail roof support or ARS-102A fire route walkway rail roof support. See ARS-510 for alternative metal stair support (Standard Stringer).

RECOMMENDED USE:
Suitable for all flat roofs as a metal stair roof support at changes in roof level or other areas to facilitate access for maintenance.
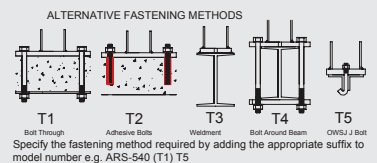
WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).
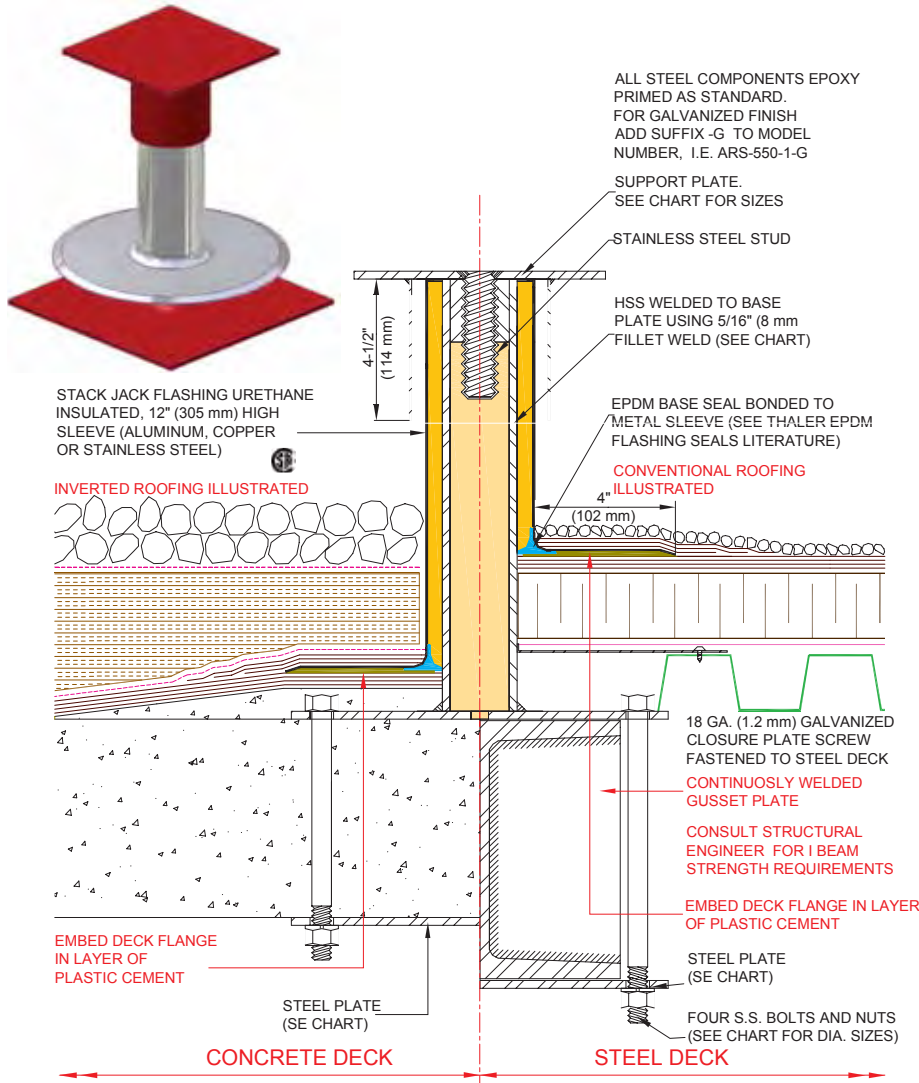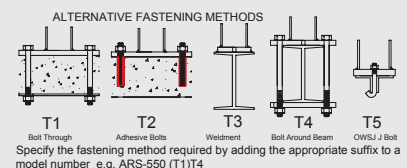
SPECIFICATION (SHORT FORM):
Metal stair roof supports (offset stringer): Thaler [ARS-520] [ARS-520-1] [ARS-520-2] adjustable height, epoxy coated, urethane insulated hollow steel supports including appropriate hardware (adhesive fasetners supplied by others) for fastening to structural roof deck and steel cap/s.s. connector angle designed for affixing steel stair (by others) using s.s. bolts provided; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler ARS-520 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/stringer connector angle, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-520-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Stringer Components: Thread upper portion of support (with stringer connector angle) onto lower support leg and mechanically attach stringer (by others), using 3/8(10 mm) stainless steel bolts provided.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-520-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

MODEL NUMBER	HSS SUPPORT PIPE			THREAD Ø	BASE PLATE		FASTENING BOLT Ø
	Height	Outside Ø	Thickness		Bolt Securement	Weld Securement	
ARS-530	14" (356 mm)	2-3/8" (60 mm)	1/4" (6 mm)	1" (25 mm)	1/4" X 12" X 12" (6 mm x 305 mm x 305 mm)	3/8" X 4 "X 4" (10 mm x102 mm x 102 mm)	1/4" (6 mm)
ARS-530-1	14" (356 mm)	3-1/2" (89 mm)	1/4" (6 mm)	2" (51 mm)	3/8" X 12" X 12" (10 mm x 305 mm x 305 mm)	1/2" X 6" X 6" (13 mm x152 mm x 152 mm)	3/8" (10 mm)
ARS-530-2	14" (356 mm)	4-1/2" (114 mm)	1/4" (6 mm)	2" (51 mm)	5/8" X 12 "X 12" (16 mm x 305 mm x 305 mm)	5/8" X 8 "X 8" (16 mm x 203 mm x 203 mm)	5/8" (16 mm)

FOR SUPPORTS OTHER THAN STANDARD 14" (356 mm) HEIGHT, ADD SUFFIX "NS" TO MODEL NUMBER I.E. ARS-530-2/NS

PLATFORM CHANNEL (BY OTHERS)

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH, ADD SUFFIX -G TO MODEL NUMBER, I.E. ARS-530-1-G

1" (25 mm) STAINLESS STEEL STUD

1/4" X 4" X 4" (6 mm X 102 mm X 102 mm) STEEL PLATE

S.S. NUT, BOLT AND LOCK WASHER

2-3/8" DIA. x 1/4" x 4" (60 mm DIA. x 6 mm x 114 mm) HSS PIPE

1/2" x 4 -1/2 " DIA. (13 mm X 114 mm) STEEL CAP

2-3/8" DIA. X 1/4" X 14" HIGH (60 mm DIA. X 6 mm X 356 mm) HSS WELDED TO 1/4" X 12" X 12" (6 mm X 305 mm X 305 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD

4-1/4" (108 mm)

4-1/2" (114 mm)

STACK JACK FLASHING URETHANE INSULATED 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

INVERTED ROOFING ILLUSTRATED (BUR)

4" (102 mm)

CONVENTIONAL ROOFING ILLUSTRATED (BUR)

18 GA. (1.2 mm) GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

CONTINUOUSLY WELDED GUSSET PLATE

CONSULT STRUCTURAL ENGINEER FOR I BEAM STRENGTH REQUIREMENTS

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

1/4" X 12" X 12" (6 mm X 305 mm X 305 mm) STEEL PLATE

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

1/4" X 12" X 12" (6 mm X 305 mm X 305 mm) STEEL PLATE

FOUR S.S. NUTS AND BOLTS

CONCRETE DECK

STEEL DECK

ARS-530, 530-1, 530-2 STAIR PLATFORM ROOF SUPPORT
PATENTED

DESCRIPTION:
Thaler ARS-530 selection of Metal Stair Roof Support consist of a urethane insulated, epoxy primed hollow steel support adjustable height steel cap and platform adapter plate designed to receive a steel channel and platform grate (by others). A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly. Three models are available to suit different structural and/or size requirements.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking). Threaded leg assembly provides up to 2" (51 mm) vertical adjustment for leveling if necessary.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. Can be combined for use with ARS-100A floating walkway rail roof support ARS-102A fire route walkway rail roof support. ARS-510 (Standard Stringer) and ARS-520 (Offset Stringer) roof support.

RECOMMENDED USE:
Suitable for all flat roofs as a stair platform support and other areas to facilitate access for maintenance.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request
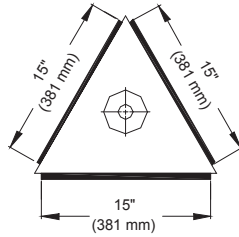
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Stair platform roof supports: Thaler[ARS-530] [ARS-530-1] [ARS-530-2] adjustable height epoxy coated, urethane insulated hollow steel supports including appropriate hardware (adhesive fasteners supplied by others) for fastening to structural roof deck and cap/platform adapter plate designed for affixing steel platform channel and grate (by others) using 1/2" (12 mm) s.s. bolts provided; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.
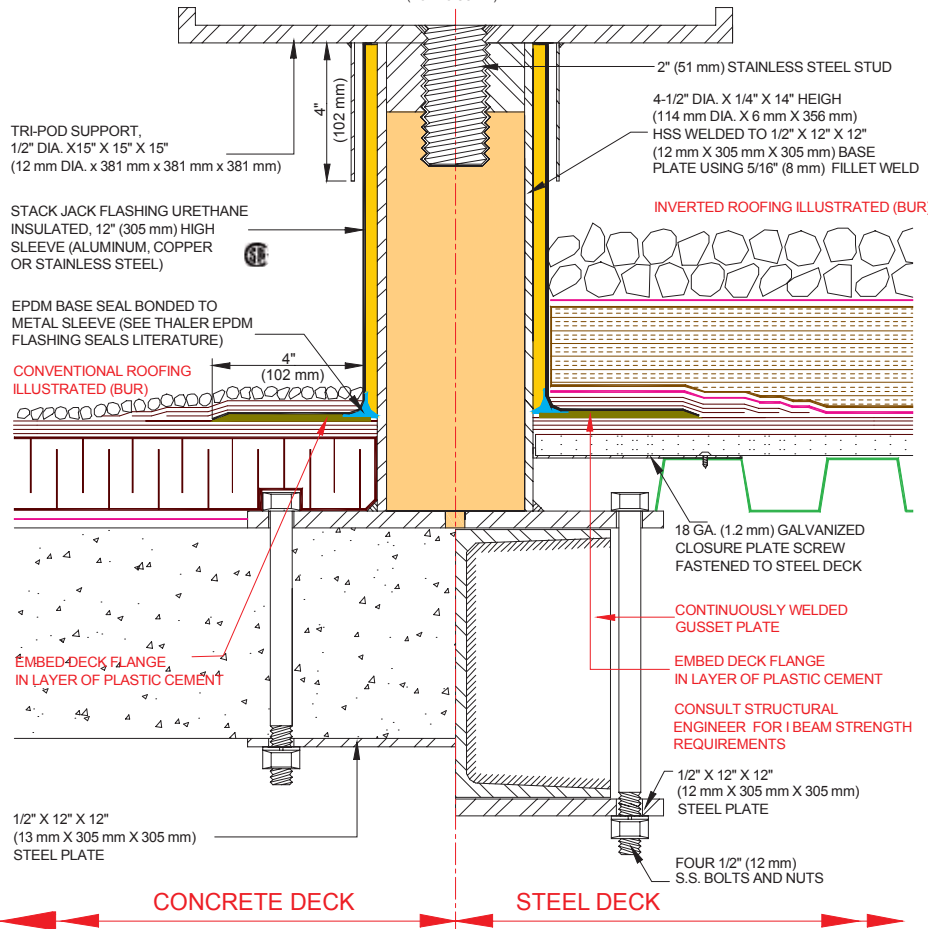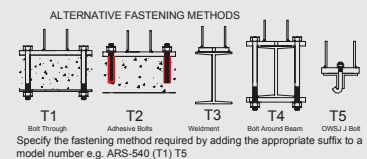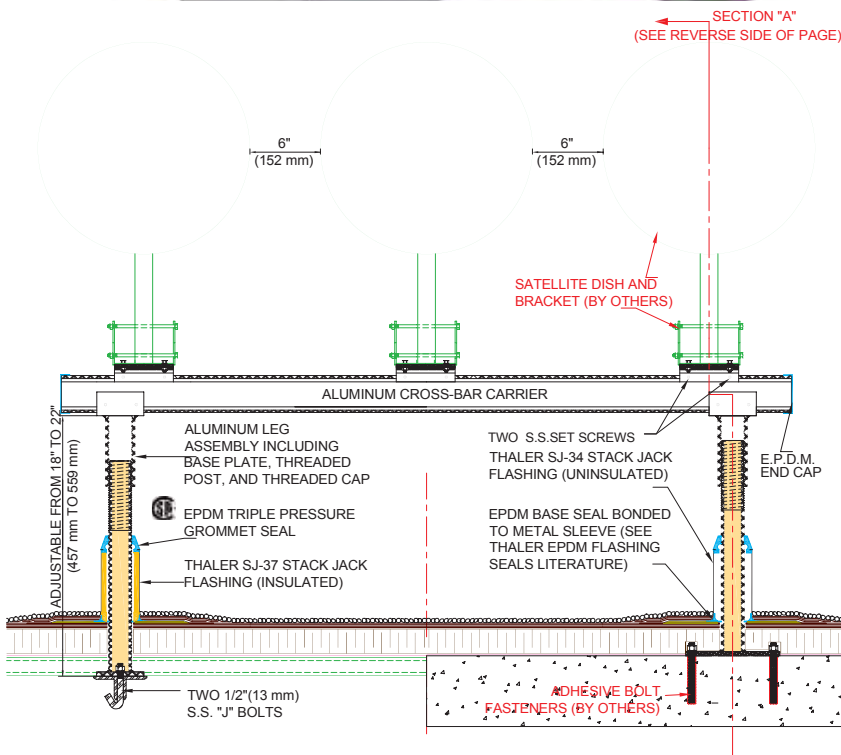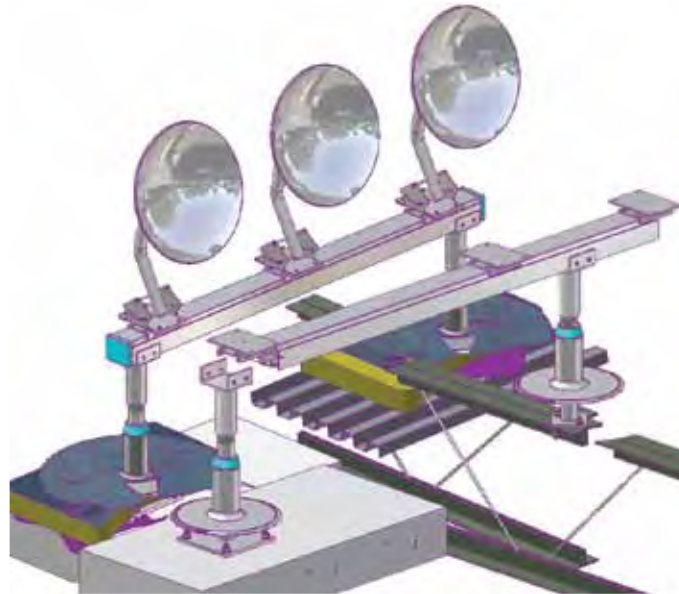
INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-530 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/platform adapter plate, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-530-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Platform Components: Thread upper portion of support (with platform adapter plate) onto lower support leg and mechanically attach platform channels and metal grate (by others), using 1/2"(12 mm) stainless steel bolts provided.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-530-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

MODEL NUMBER	HSS SUPPORT PIPE			THREAD Ø	BASE PLATE		ANGLE DIMENSIONS	FASTENING BOLT Ø
	Height	Outside Ø	Thickness		Bolt Securement	Weld Securement		
ARS-540	14" (356 mm)	2-3/8" (60 mm)	1/4" (6 mm)	1" (25 mm)	1/4" X 12" X 12" (6 mm x 305 mm x 305 mm)	3/8" X 4 "X 4" (10 mm x102 mm x 102 mm)	3/16" x 1-1/2" x 1-1/2" (5 mm x 38 mm x 38 mm)	1/4" (6 mm)
ARS-540-1	14" (356 mm)	3-1/2" (89 mm)	1/4" (6 mm)	2" (51 mm)	3/8" X 12" X 12" (10 mm x 305 mm x 305 mm)	1/2" X 6" X 6" (13 mm x152 mm x 152 mm)	1/4 " x 2" x 2" (6 mm x 51 mm x 51 mm)	3/8" (10 mm)
ARS-540-2	14" (356 mm)	4-1/2" (114 mm)	1/4" (6 mm)	2" (51 mm)	5/8" X 12 "X 12" (16 mm x 305 mm x 305 mm)	5/8" X 8 "X 8" (16 mm x 203 mm x 203 mm)	3/8" x 4" x 4" (10 mmx102 mmx102 mm)	5/8" (16 mm)

FOR SUPPORTS OTHER THAN STANDARD 14" (356 mm) HEIGHT, ADD SUFFIX "NS" TO MODEL NUMBER I.E. ARS-540-2/NS

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH ADD SUFFIX -G TO MODEL NUMBER, I.E. ARS-540-1-G

MISCELLANEOUS ROOFTOP ITEM ANGLE (BY OTHERS)

UPRIGHT ANGLE. SEE CHART FOR SIZES

S.S. NUT, BOLT AND LOCK WASHERS, FOUR IN TOTAL

1/2" x 4-1/2 " DIA. (12 mm x 114 mm) STEEL CAP

2-3/8" DIA .X 1/4" X 14" (60 mm DIA. X 6 mm X 356 mm) HSS WELDED TO 1/4" X 12" X 12" (6 mm X 305 mm X 305 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD

1" (25 mm) STAINLESS STEEL STUD

STACK JACK FLASHING URETHANE INSULATED, 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOFING ILLUSTRATED

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

18 GA. (1.2 mm) GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

CONTINUOUSLY WELDED GUSSET PLATE

CONSULT STRUCTURAL ENGINEER FOR I BEAM STRENGTH REQUIREMENTS

1/4" X 12" X 12" (6 mm X 305 mm X 305 mm) STEEL PLATE

FOUR 1/4" (6 mm) S.S. NUTS AND BOLTS

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

1/4" X 12" X 12" (6 mm X 305 mm X 305 mm) STEEL PLATE

CONCRETE DECK   STEEL DECK

ARS-540, 540-1, 540-2 UPRIGHT ANGLE ROOF SUPPORT
PATENTED

DESCRIPTION:
The Thaler selection of ARS-540 Upright Angle Roof Supports consist of a urethane insulated, epoxy primed, hollow steel support and mounting plate, mounting hardware (adhesive fasteners supplied by others) ,adjustable height steel cap and steel connector angle designed to receive any one of a number of miscellaneous rooftop items (by others). A urethane insulated flashing, available in aluminum, copper or stainless steel, with EPDM Base Seal, completes the assembly. Three models are available to suit different structural and/or size requirements.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking). Threaded leg assembly provides up to 2" (51 mm) vertical adjustment for leveling if necessary.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Suitable for all flat roofs as a roof support for platforms, pipes and duct supports, and any one of a host of miscellaneous rooftop items.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
[Platform] roof supports: Thaler [ARS-540] [ARS-540-1] [ARS-540-2] adjustable height, epoxy coated, urethane insulated hollow steel supports, including appropriate hardware (adhesive fasteners supplied by others) for fastening to structural roof deck and cap/angle connector designed for affixing equipment or items (by others) shown on drawings; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-540 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/connector angle support, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to model number e.g. ARS-540-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Angle/Equipment Components: Thread upper portion of support (with angle connector) onto lower support leg, mechanically attach steel cross rails or other devices (by others) as desired using 1/2" (12 mm) stainless steel bolts provided.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-540-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ALTERNATIVE FASTENING METHODS

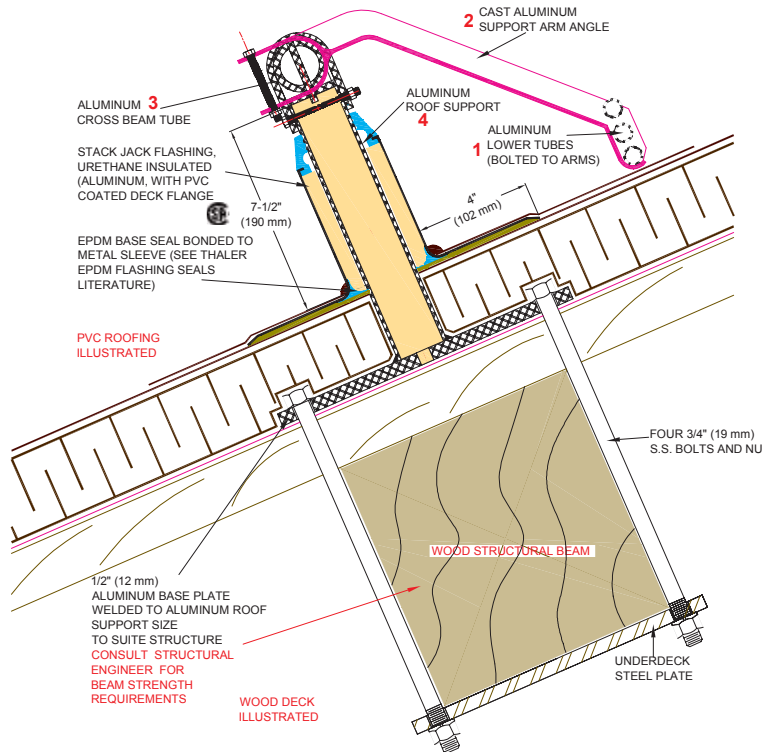| T1	T2	T3	T4	T5
Bolt Through	Adhesive Bolts	Weldment	Bolt Around Beam	OWSJ J Bolt

Specify the fastening method required by adding the appropriate suffix to model number e.g. ARS-540 (T1) T5

MODEL NUMBER	HSS SUPPORT PIPE			THREAD Ø	BASE PLATE		SUPPORT PLATE	FASTENING BOLT Ø
	Height	Outside Ø	Thickness		Bolt Securement	Weld Securement		
ARS-550	14" (356 mm)	2-3/8" (60 mm)	1/4" (6 mm)	1" (25 mm)	1/4" X 12" X 12" (6 mm x 305 mm x 305 mm)	3/8" X 4 "X 4" (10 mm x102 mm x 102 mm)	1/4" X 8" X 8" (6 mm x 203 mm x203 mm)	1/4" (6 mm)
ARS-550-1	14" (356 mm)	3-1/2" (89 mm)	1/4" (6 mm)	2" (51 mm)	3/8" X 12" X 12" (10 mm x 305 mm x 305 mm)	1/2" X 6" X 6" (13 mm x152 mm x 152 mm)	1/2" X 12" X 12" (12 mm x305 mmx 305 mm)	3/8" (10 mm)
ARS-550-2	14" (356 mm)	4-1/2" (114 mm)	1/4" (6 mm)	2" (51 mm)	3/4" X 12" X 12" (19 mm x 305 mm x 305 mm)	5/8" X 8 "X 8" (16 mm x 203 mm x 203 mm)	3/4" X 12" x 12" (19 mm x 305 mm x 305 mm)	5/8" (16 mm)

FOR SUPPORTS OTHER THAN STANDARD 14" (356 mm) HEIGHT, ADD SUFFIX "NS" TO MODEL NUMBER I.E. ARS-550-2/NS

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH ADD SUFFIX -G TO MODEL NUMBER, I.E. ARS-550-1-G

SUPPORT PLATE. SEE CHART FOR SIZES

STAINLESS STEEL STUD

HSS WELDED TO BASE PLATE USING 5/16" (8 mm) FILLET WELD (SEE CHART)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

4-1/2" (114 mm)

STACK JACK FLASHING URETHANE INSULATED, 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOFING ILLUSTRATED

CONVENTIONAL ROOFING ILLUSTRATED

4" (102 mm)

18 GA. (1.2 mm) GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

CONTINUOUSLY WELDED GUSSET PLATE

CONSULT STRUCTURAL ENGINEER FOR I BEAM STRENGTH REQUIREMENTS

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

STEEL PLATE (SE CHART)

STEEL PLATE (SE CHART)

FOUR S.S. BOLTS AND NUTS (SEE CHART FOR DIA. SIZES)

CONCRETE DECK

STEEL DECK

ARS-550, 550-1, 550-2 MISCELLANEOUS ROOF SUPPORT
PATENTED

DESCRIPTION:
Thaler ARS-550 Miscellaneous Plate Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, mounting hardware (adhesive fasteners supplied by others), adjustable height (galvanized optional) steel cap and epoxy primed steel plate designed to receive any one of a number of miscellaneous rooftop items (by others). A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly. Three models are available to suit different structural and/or size requirements.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking). Threaded leg assembly provides up to 2" (51 mm) vertical adjustment for levelling if necessary.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Suitable for all flat roofs as a support for heavy rooftop equipment e.g.: chiller, A/C unit or similar applications.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
[Chiller] roof supports: Thaler [ARS-550] [ARS-550-1] [ARS-550-2] adjustable height, epoxy coated, urethane insulated hollow steel supports including appropriate hardware (adhesive fasteners supplied by others) for fastening to structural roof deck, and cap / plate assembly designed for affixing equipment or items (by others) shown on drawings; manufacturer's standard urethane insulated [.064"(1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.
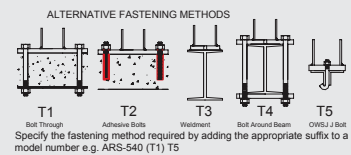
INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-550 selection of supports are installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/plate support, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.
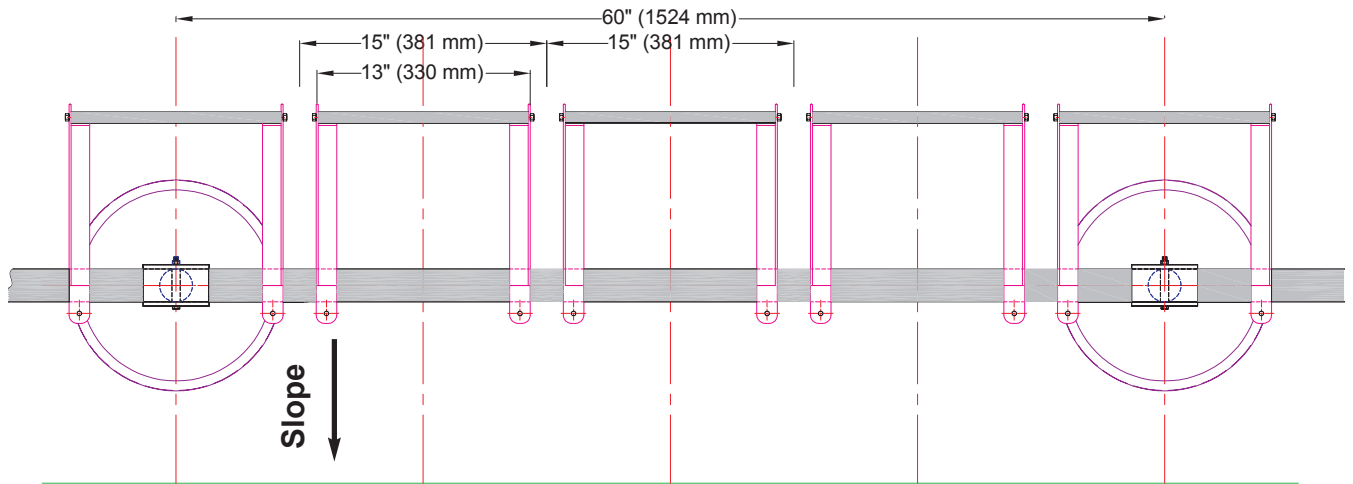
Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-550-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.
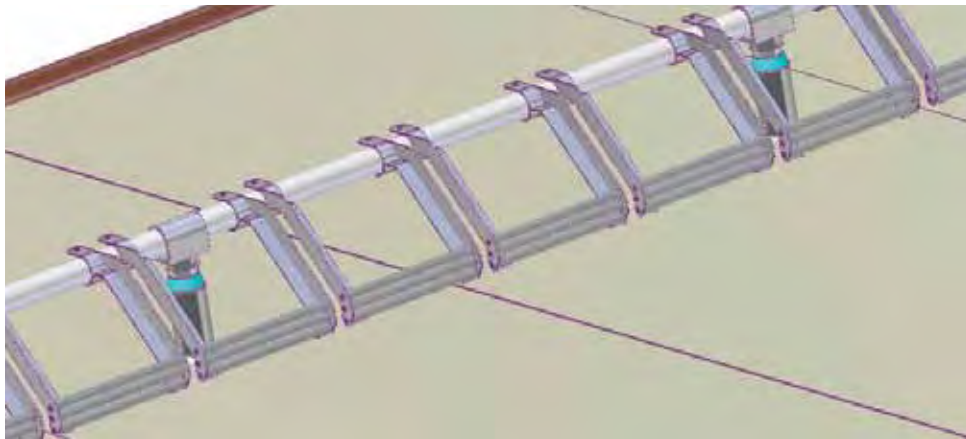
Plate/Equipment Components: Thread upper portion of support (with plate) onto lower support leg and secure equipment to plate as desired (by others).

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-550-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
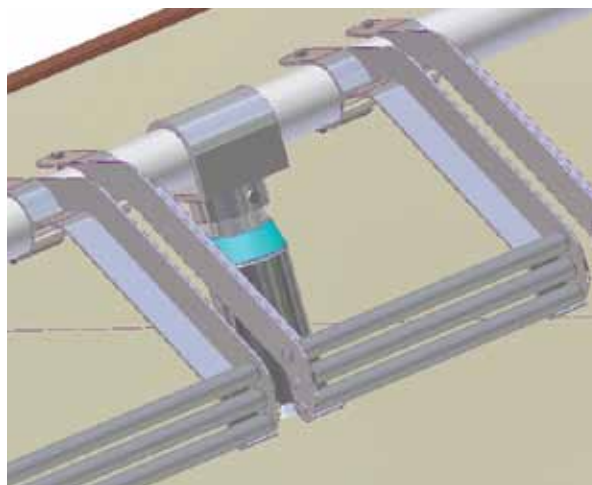
ALTERNATIVE FASTENING METHODS

T1 Bolt Through
T2 Adhesive Bolts
T3 Weldment
T4 Bolt Around Beam
T5 OWSJ J Bolt

Specify the fastening method required by adding the appropriate suffix to a model number e.g. ARS-550 (T1)T4

NOTE:
FOR SUPPORTS OTHER THAN STANDARD 14" (102 mm) HEIGHT ADD SUFFIX "NS" TO MODEL NUMBER. I.E. ARS-575/NS

15" (381 mm)
15" (381 mm)
15" (381 mm)

PLAN VIEW OF TRI-POD SUPPORT
(NOT TO SCALE)

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH, ADD SUFFIX -G TO MODEL NUMBER, I.E. ARS-575-1-G

2" (51 mm) STAINLESS STEEL STUD

4-1/2" DIA. X 1/4" X 14" HEIGH (114 mm DIA. X 6 mm X 356 mm) HSS WELDED TO 1/2" X 12" X 12" (12 mm X 305 mm X 305 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD

4" (102 mm)

TRI-POD SUPPORT, 1/2" DIA. X15" X 15" X 15" (12 mm DIA. x 381 mm x 381 mm x 381 mm)

STACK JACK FLASHING URETHANE INSULATED, 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOFING ILLUSTRATED (BUR)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

4" (102 mm)

CONVENTIONAL ROOFING ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

18 GA. (1.2 mm) GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

CONTINUOUSLY WELDED GUSSET PLATE

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

CONSULT STRUCTURAL ENGINEER FOR I BEAM STRENGTH REQUIREMENTS

1/2" X 12" X 12" (12 mm X 305 mm X 305 mm) STEEL PLATE

1/2" X 12" X 12" (13 mm X 305 mm X 305 mm) STEEL PLATE

FOUR 1/2" (12 mm) S.S. BOLTS AND NUTS

CONCRETE DECK | **STEEL DECK**

ARS-575 TRIANGULAR ANTENNA ROOF SUPPORT
PATENTED

DESCRIPTION:
Thaler ARS-575 Triangular Antenna Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, mounting hardware (adhesive fasteners supplied by others), adjustable height (galvanized optional) steel cap and epoxy primed antenna base designed to receive a standard 15" (381 mm) size triangular antenna (by others). A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking). Threaded leg assembly provides up to 2" (51 mm) vertical adjustment for levelling if necessary.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. Can be combined for use with Thaler ARS-300 and ARS-350 Guy Wire Roof Supports.

RECOMMENDED USE:
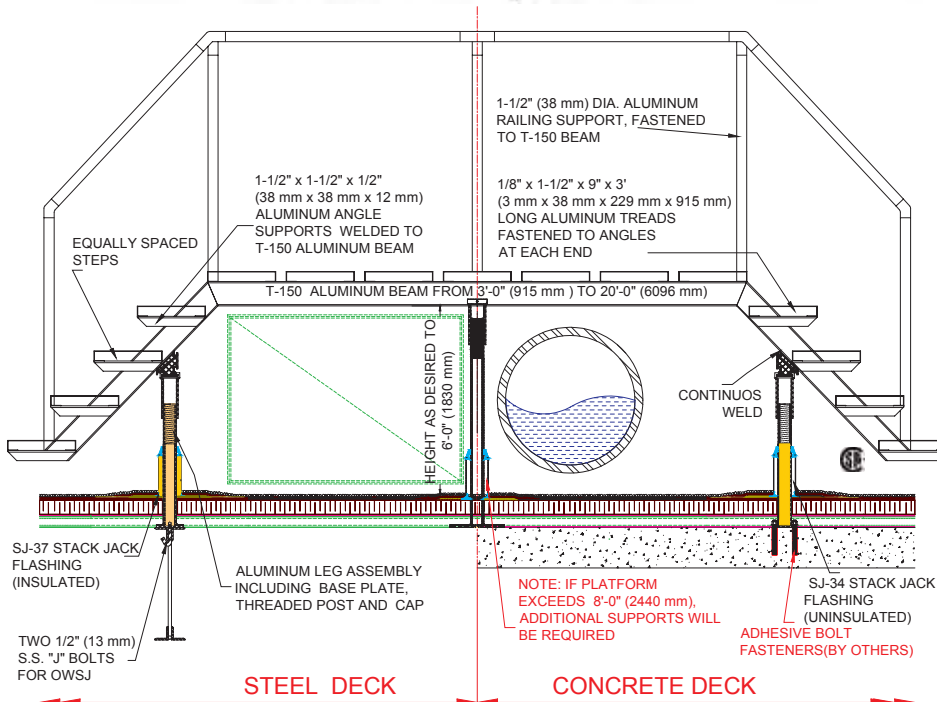Suitable for all flat roofs as a triangular antenna support.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Triangular antenna roof support: Thaler [ARS-575] adjustable height, epoxy coated, urethane insulated hollow steel supports, including appropriate hardware (adhesive fasteners supplied by others) to structural roof deck and (galvanized optional) steel cap/antenna base (galvanized to CSA G164-M1992) designed for affixing antenna (by others); manufacturer's standard urethane insulated [.064"(1.6 mm) mill finish 1100-0T alloy aluminum] [.032"(0.831mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries 1-800-387-7217(Mississ- uga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation instructions" are provided with every Thaler product. Essentially, the Thaler ARS-575 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/antenna base, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-575-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Base/Antenna Components: Thread upper portion of support (with triangular base) onto lower support leg, mechanically attach antenna (by others) and brace with guy wires.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-575-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ALTERNATIVE FASTENING METHODS

T1 | T2 | T3 | T4 | T5
Bolt Through | Adhesive Bolts | Weldment | Bolt Around Beam | OWSJ J Bolt

Specify the fastening method required by adding the appropriate suffix to a model number e.g. ARS-540 (T1) T5

SECTION "A"
(SEE REVERSE SIDE OF PAGE)

6"
(152 mm)

6"
(152 mm)

SATELLITE DISH AND
BRACKET (BY OTHERS)

ALUMINUM CROSS-BAR CARRIER

ALUMINUM LEG
ASSEMBLY INCLUDING
BASE PLATE, THREADED
POST, AND THREADED CAP

TWO S.S.SET SCREWS
THALER SJ-34 STACK JACK
FLASHING (UNINSULATED)

E.P.D.M.
END CAP

ADJUSTABLE FROM 18" TO 22"
(457 mm TO 559 mm)

EPDM TRIPLE PRESSURE
GROMMET SEAL

THALER SJ-37 STACK JACK
FLASHING (INSULATED)

EPDM BASE SEAL BONDED
TO METAL SLEEVE (SEE
THALER EPDM FLASHING
SEALS LITERATURE)

TWO 1/2"(13 mm)
S.S. "J" BOLTS

ADHESIVE BOLT
FASTENERS (BY OTHERS)

ARS-590 MULTIPLE SATELLITE DISH SUPPORT
PATENTED

INSTALLATION:
"Installation Instructions"are provided with every Thaler product. Essentially, the Thaler ARS-590 Satellite Dish Roof Supports are installed at required centres by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the cross-bar carrier assembly, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to model number, e.g. ARS-590-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Cross-Bar Carrier Assembly: Thread hollow aluminum upper supports onto lower support legs, install cross-bar carrier and anchor plate assemblies, place satellite dishes onto plate assemblies and secure using dish fastening brackets (by others).

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-590-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most product are readily available from stock.

DESCRIPTION:
Thaler ARS-590 Multiple Satellite Dish Supports consist of a pair of round, urethane insulated, hollow section 6061-T6 aluminum supports with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive fasteners supplied by others), cross- bar carrier with EPDM end caps, and any multiple of satellite dish anchor plate assemblies. Urethane insulated STACK JACK flashings available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, complete the supports.

SUPPORT SPACING:
To be determined by structural engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashing options. See ARS-122 Satellite Dish Roof Supports for single satellite dish support.

RECOMMENDED USE:
Suitable for all flat roofs as a multiple satellite dish support (two or more dishes). Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Multiple satellite dish roof supports: Thaler ARS-590 adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive fasteners by others) for fastening to structural roof deck, aluminum cross-bar carrier with EPDM end caps, aluminum anchor plates; [SJ-34, 7" (178 mm)] high New-Standard STACK JACK flashing, urethane insulated, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario,Cana- da) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.
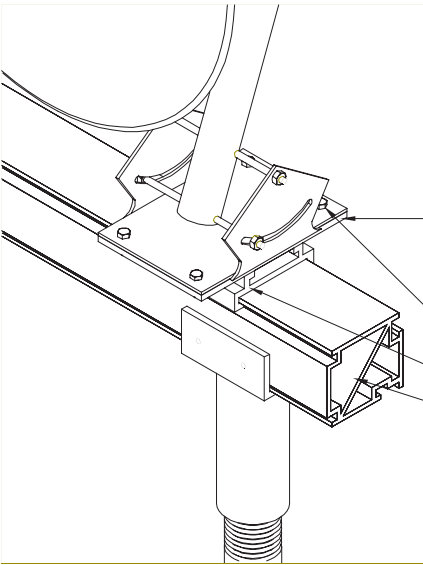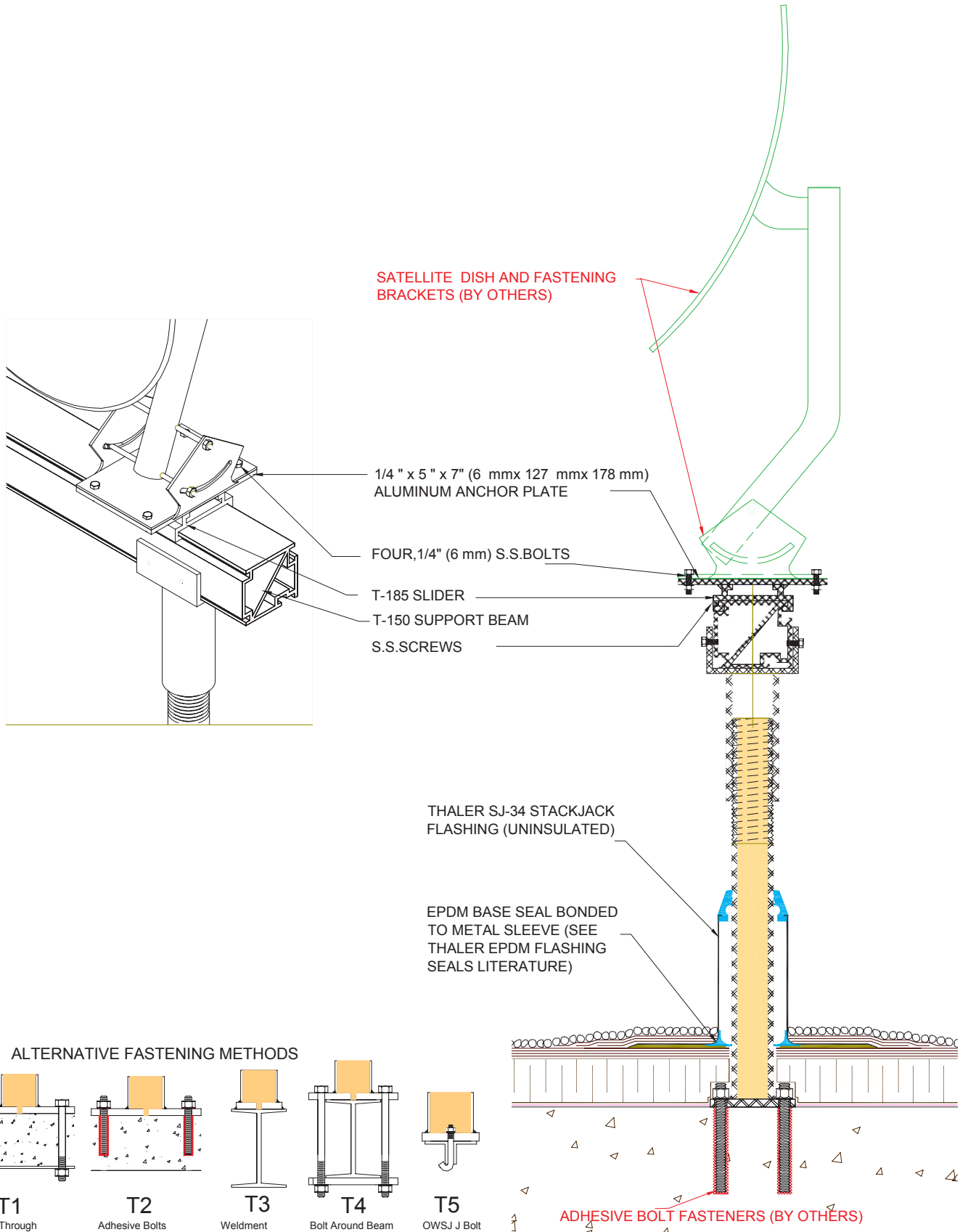
SATELLITE DISH AND FASTENING
BRACKETS (BY OTHERS)

1/4 " x 5 " x 7" (6 mmx 127 mmx 178 mm)
ALUMINUM ANCHOR PLATE

FOUR,1/4" (6 mm) S.S.BOLTS

T-185 SLIDER

T-150 SUPPORT BEAM

S.S.SCREWS

THALER SJ-34 STACKJACK
FLASHING (UNINSULATED)

EPDM BASE SEAL BONDED
TO METAL SLEEVE (SEE
THALER EPDM FLASHING
SEALS LITERATURE)

ALTERNATIVE FASTENING METHODS
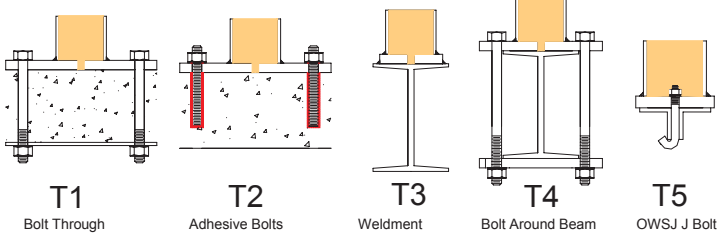
T1	T2	T3	T4	T5
Bolt Through	Adhesive Bolts	Weldment	Bolt Around Beam	OWSJ J Bolt

Specify the fastening method required by adding the appropriate suffix to
model number e.g. ARS-590 (T1) T5

ADHESIVE BOLT FASTENERS (BY OTHERS)

ARS-590 MULTIPLE SATELLITE DISH SUPPORT (SECTION "A")

THALER

E-19A

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

Labels in diagram:
- 2 CAST ALUMINUM SUPPORT ARM ANGLE
- 3 ALUMINUM CROSS BEAM TUBE
- ALUMINUM ROOF SUPPORT
- 4
- 1 ALUMINUM LOWER TUBES (BOLTED TO ARMS)
- STACK JACK FLASHING, URETHANE INSULATED (ALUMINUM, WITH PVC COATED DECK FLANGE
- 7-1/2" (190 mm)
- 4" (102 mm)
- EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)
- PVC ROOFING ILLUSTRATED
- FOUR 3/4" (19 mm) S.S. BOLTS AND NU
- WOOD STRUCTURAL BEAM
- 1/2" (12 mm) ALUMINUM BASE PLATE WELDED TO ALUMINUM ROOF SUPPORT SIZE TO SUITE STRUCTURE CONSULT STRUCTURAL ENGINEER FOR BEAM STRENGTH REQUIREMENTS
- WOOD DECK ILLUSTRATED
- UNDERDECK STEEL PLATE

DESCRIPTION:
The Thaler ARS-600 Snow Guard consists of a series of aluminum posts mounted to main structure, aluminum cross beam tube, cast aluminum support arms and aluminum lower tubes bolted to arms. A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

RECOMMENDED SPACING:
Posts - 60" (1525 mm) o.c. Distance from outside wall or eave to be determined by architect or structural engineer.

PROMINENT FEATURES:
Patented Thaler STACK JACK flashing with Base Seal eliminates condensation and condensation build-up from below, and the EPDM Triple Pressure Grommet Seal eliminates flashing leaks from above (seals never, ever need caulking). Aesthetically pleasing. Ensures structural sufficiency. Maintenance free.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. Can also be manufactured to suit metal roof panels with D-100 Thaler EPDM Flexible flashing employed in lieu of STACK JACK flashing.

RECOMMENDED USE:
Suitable for all sloped roofs to protect against falling snow.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Snow Guard roof supports: Thaler [ARS-600] urethane insulated hollow aluminum supports including appropriate hardware (adhesive fasteners supplied by others) for fastening to structural roof deck, aluminum cross beam tube locked into post holders, cast aluminum support arms, aluminum lower tubes bolted to arms; manufacturer's standard urethane insulated [.064"(1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

SIZES DATA FOR SNOW GUARD ASSEMBLY

Ground Snow Load			Roof Slope		1 Aluminum Lower Tubes 13" (330 mm) long		2 Cast Aluminum Support Arm Angle	3 Aluminum Cross Beam Tube 5'-0" (1524 mm) long		4 Aluminum Roof Support 10-1/2" (267 mm) high	
Severity	kN/m2	psf									
LOW	0.0 TO 1.9	0.0 TO 40.0	4:12	18.4 DEG.	O.D.= 0.75" (19 mm)	T= 0.085" (2 mm)	1" x 1" x 1/8" (25 mm x 25 mm x 3 mm)	O.D.= 2" (51 mm)	T= 0.25" (6 mm)	O.D.= 2" (51 mm)	T= 0.125" (3 mm)
			8:12	33.7 DEG.	O.D.= 0.75" (19 mm)	T= 0.112" (2.8 mm)	1-1/4" x 1-1/4" x 1/8" (32 mm x 32 mm x 3 mm)	O.D.= 2" (51 mm)	T= 0.3" (7.6 mm)	O.D.= 2" (51 mm)	T= 0.25" (6 mm)
			12:12	45 DEG.	O.D.= 0.75" (19 mm)	T= 0.115" (2.9 mm)	1-1/2" x 1-1/2" x 1/8" (38 mm x 38 mm x 3 mm)	O.D.= 2" (51 mm)	T= 0.36" (9 mm)	O.D.= 2" (51 mm)	T= 0.3" (7.6 mm)
MEDIUM	1.9 TO 3.0	40.0 TO 63.0	4:12	18.4 DEG.	O.D.= 0.75" (19 mm)	T= 0.112" (2.8 mm)	1-1/4" x 1-1/4" x 1/8" (32 mm x 32 mm x 3 mm)	O.D.= 2" (51 mm)	T= 0.3" (7.6 mm)	O.D.= 2" (51 mm)	T= 0.25" (6 mm)
			8:12	33.7 DEG.	O.D.= 0.75" (19 mm)	T= 0.115" (2.9 mm)	1-1/2" x 1-1/2" x 1/8" (38 mm x 38 mm x 3 mm)	O.D.= 2" (51 mm)	T= 0.36" (9 mm)	O.D.= 2" (51 mm)	T= 0.3" (7.6 mm)
			12:12	45 DEG.	O.D.= 0.75" (19 mm)	T= 0.125" (3 mm)	1-3/4" x 1-3/4" x 3/16" (44 mm x 44 mm x 5 mm)	O.D.= 2" (51 mm)	T= 0.5" (13 mm)	O.D.=2" (51 mm)	T=0.36" (9 mm)
HIGH	3.0 & OVER	63.0 & OVER	4:12	18.4 DEG.	O.D.= 0.75" (19 mm)	T= 0.115" (2.9 mm)	1-1/2" x 1-1/2" x 1/8" (38 mm x 38 mm x 3 mm)	O.D.= 2" (51 mm)	T= 0.36" (9 mm)	O.D.= 2" (51 mm)	T= 0.3" (7.6 mm)
			8:12	33.7 DEG.	O.D.= 0.75" (19 mm)	T= 0.125" (3 mm)	1-3/4" x 1-3/4" x 3/16" (44 mm x 44 mm x 5 mm)	O.D.= 2" (51 mm)	T= 0.375" (10 mm)	O.D.= 2" (51 mm)	T= 0.36" (9 mm)
			12:12	45 DEG.	O.D.= 0.75" (19 mm)	T= 0.188" (5 mm)	1-3/4" x 1-3/4" x 1/4" (44 mm x 44 mm x 6 mm)	O.D.= 2" (51 mm)	T= 0.5" (12 mm)	O.D.= 2" (51 mm)	T= 0.375" (10 mm)

ARS-600 SNOW GUARD ROOF SUPPORT
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler ARS-600 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, and assembling the arm/cross tube sections. The large cross beam tubes at the top of the snow guards are notched for locking into the post head holders to prevent the snow guard from lifting under load. The lower tube arm assemblies simply rest on the roof without any additional securement.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to end of model number e.g. ARS-600-A-P; weld roofing to deck flange using PVC torch.
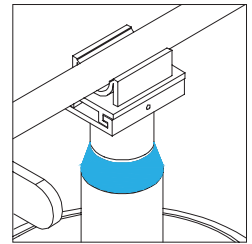
Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Location of Snow Guards: The distance from the eave or outside wall to snow guards is to be determined by the project architect or structural engineer, based upon roof slope and snow loads.
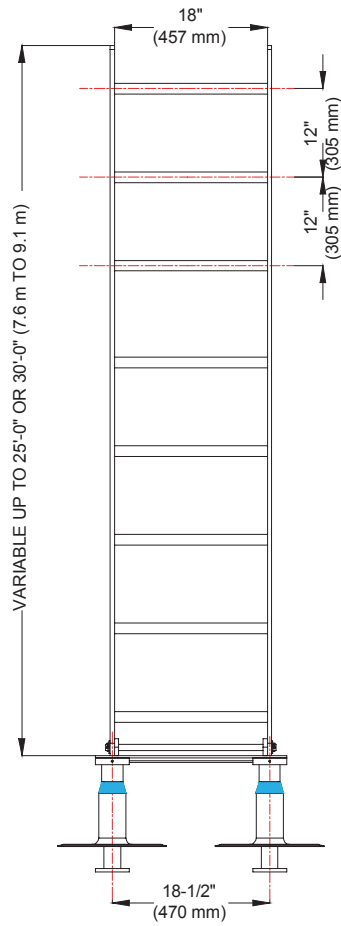
Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-600-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
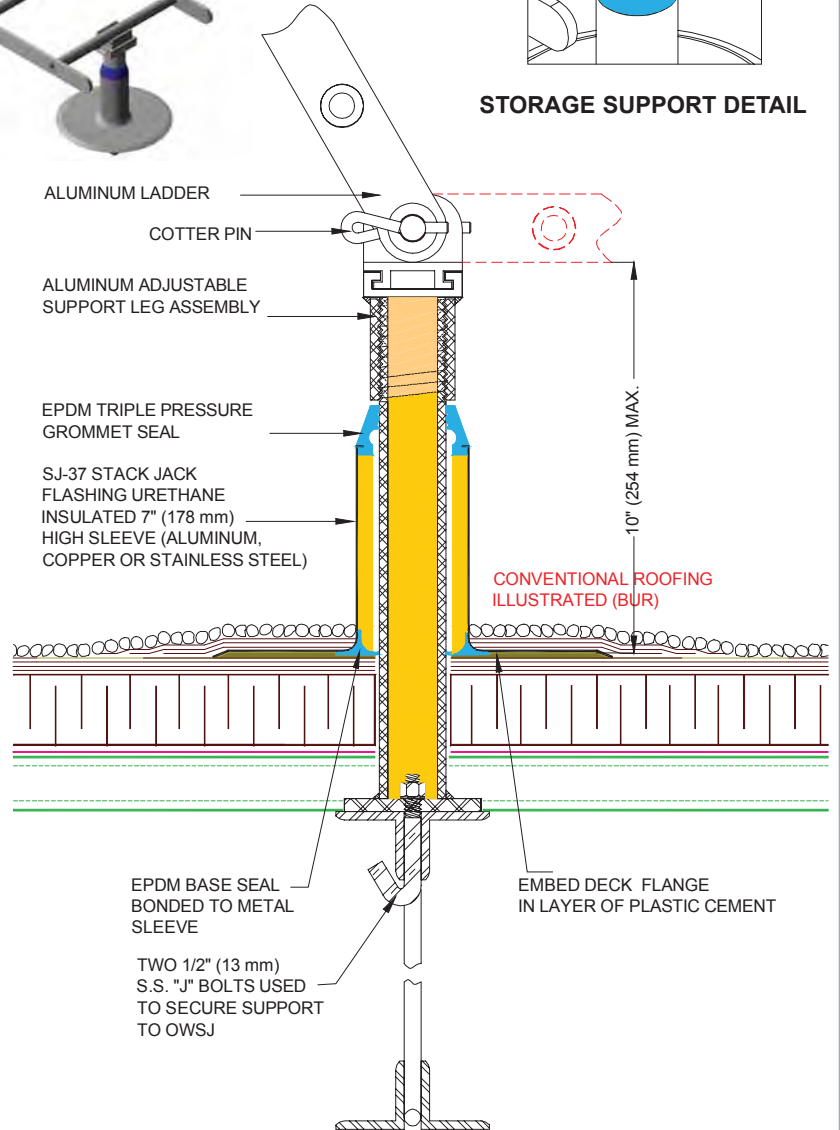
ALTERNATIVE FASTENING METHODS

T1	T2	T3	T4	T5
Bolt Through	Adhesive Bolts	Weldment	Bolt Around Beam	OWSJ J Bolt

Specify the fastening method required by adding the appropriate suffix to a model number e.g. ARS-540 (T1) T5

60" (1524 mm)

15" (381 mm)   15" (381 mm)

13" (330 mm)

Slope

PLAN VIEW OF SNOW GUARD

Long View of
Snow Guard

Close-Up View of
Assembled Post Support

ARS-680 CROSS-OVER STAIR & ROOF SUPPORTS
PATENTED

DESCRIPTION:
Thaler ARS-680 Cross-Over Stair & Roof Supports consist of an all-aluminum stair, walkway platform and safety rail system supported on urethane insulated adjustable aluminum legs. A urethane insulated flashing available in aluminum, copper or stainless steel, with EPDM Base Seal, completes the assembly.

HEIGHT, LENGTH AND WIDTH:
Walkway platform height is available up to 6'-0" (1830 mm) height; consult Thaler if higher platform is required. Standard platform length ranges from 3'-0" to 20'-0" (915 mm to 6096 mm) in any increment, and width is 40" (1016 mm) from centre to centre of the aluminum stringers.

PROMINENT FEATURES:
Supplied as complete product for easy site assembly. Skidproof treads and walkway. Insulated supports are condensation free (no corrosion). Maintenance free (flashings never need caulking). Threaded leg assembly provides up to 4" (102 mm) vertical adjustment for levelling if necessary.

OPTIONS:
Flashing material (see Thaler STACK JACK Flashing literature). PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. Can be combined with ARS-100A Floating Walkway Roof Supports, ARS-102A Fire Route Walkway Roof Supports, and ARS-115 Rail Post Roof Supports.

RECOMMENDED USE:
Suitable for all flat roofs for safely crossing over large pathway obstructions such as ductwork or other mechanical equipment, changes in roof level, skylights, roof walls, penthouse enclosures, and similar impediments.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Cross-Over stair and roof supports: Thaler ARS-680 all 6061-T6 mill finish aluminum cross-over stair of size shown on drawings, with adjustable height hollow aluminum, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware for fastening to structural roof deck (adhesive fasteners by others), 3-3/4" x 3-3/4" x 1/4" (95 mm x 95 mm x 6 mm) alum. stringers/platform support beams; 1/8" x 1-1/2" x 9" x 3'-0" (3 mm x 38 mm x 229 mm x 915 mm) alum. treads [screwed] [welded] to 1-1/2" x 1-1/2" x 1/2" (38 mm x 38 mm x 12 mm) alum. stringer angle supports and platform support beams; 1-1/2" (38 mm) dia., Schedule 40 pipe rail; [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz copper] [.031" (0.79 mm) 22 ga. Type 304 s.s.], [SJ-34, uninsulated] [SJ-37, insulated] flashing to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange][bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler ARS-680 Cross-Over Stair is installed by fastening the roof supports to the structural roof deck, placing the flashing sleeve over the supports, securing the stringer/platform support beams to the roof supports, attaching the stair and walkway treads using the screws provided (Note: factory welded treads are optional), mechanically assembling the railings, and as follows:

Bur: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to the end of model number, e.g. ARS-680-A-P; weld roofing to deck flange using PVC torch.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-680-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

STANDARD TREAD
WIDTH IS 9" (229 mm)

TYPICAL RISER DIMENSION
IS 7" TO 9" (178 mm TO 229 mm)

A

A
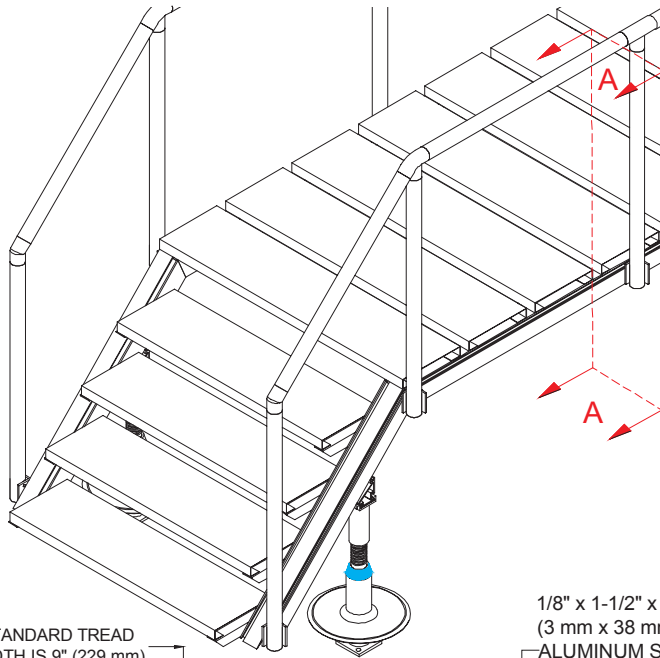
1/8" x 1-1/2" x 9" x 3'-0"
(3 mm x 38 mm x 229 mm x 915 mm)
ALUMINUM STAIR

1-1/2" (38 mm) DIA.
ALUMINUM RAILING

T-150 BEAM (ALUMINUM)

T-150 ALUMINUM
(DELTOID ANGLE)

1-1/2" x 1-1/2" x 1/2"
(38 mm x 38 mm x 12 mm)
ALUMINUM SUPPORT
ANGLE

RAIL HEIGHT 36" (915 mm)

ALUMINUM ADJUSTABLE
SUPPORT LEG ASSEMBLY

EPDM TRIPLE PRESSURE
GROMMET SEAL

SJ-37 STACK JACK FLASHING
URETHANE INSULATED 7"
(178 mm) HIGH SLEEVE
(ALUMINUM, COPPER
OR STAINLESS STEEL)

CONVENTIONAL ROOFING
ILLUSTRATED

EPDM BASE SEAL BONDED
TO METAL SLEEVE

EMBED DECK FLANGE
IN LAYER OF PLASTIC CEMENT

SECTION DETAIL AT "A"

SECTION DETAIL AT STAIR SUPPORT

ALTERNATIVE FASTENING METHODS

T1	T2	T3	T4	T5
Bolt Through Slab	Adhesive Bolts	Weldment	Bolt Around Beam	OWSJ J Bolt

Specify fastening method required by adding appropriate suffix to
model number (e.g. MERS-680-A-T1)

ROOF SPECIALTIES
ARS-685
TILT-UP ACCESS LADDER & ROOF SUPPORTS

PENTHOUSE ROOF OR SIMILAR

24" (61. mm)

HINGE SUPPORT DETAIL
1-1/4" DIA. x 1/4" (32 mm x 6 mm) ALUMINUM RUNGS

3" x 1" x 1/8" (76 mm x 25 mm x 3 mm) ALUMINUM RECTANGLE SIDE RAILS

3/4" (19 mm) WASHER

3/16" (5 mm) COTTER PIN

ALUMINUM EXTRUSIONS

(T-175 SLIDER)
(T-165 SLIDER)

3/4" (19 mm) STAINLESS STEEL HINGE PIN 20" (508 mm) LONG

ALUMINUM ADAPTER LUGS WELDED TO ALUMINUM EXTRUSIONS

DOTED SHOWS LADDER IN HORIZONTAL STORAGE POSITION

SJ-37 STACK JACK FLASHING (INSULATED)

10" MAX. (254 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE

TWO 1/2" (12 mm) S.S. "J" BOLTS FOR OWSJ FASTENING

SEE REVERSE SIDE OF PAGE FOR LARGE SCALE DETAIL OF SUPPORTS

ARS-685 TILT-UP ACCESS LADDER & ROOF SUPPORT
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler ARS-685 Tilt-Up Ladder & Roof Supports are installed at the required location(s) by fastening each of the three roof support mounting plates to the structural roof deck, placing the flashing sleeve over the support and roof membrane, attaching the ladder using the stainless steel hinge pin and cotter pins, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding the suffix P to model number, e.g. ARS-685-A-P; weld roofing deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ladder Position: Locate the two ladder roof supports so that a roughly 60° angle is created between the bottom of the ladder and the top portion of the ladder resting against the penthouse eave or other terminal point. Ensure adequate ladder length to provide 24" (610 mm) of ladder above the resting point i.e. eave, for safely getting off and on the top of the ladder Locate third roof support to co-inside with top rung of ladder when in the horizontal storage position.

Ordering: Specify flashing material required by adding appropriate suffix to model number e.g. ARS-685-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler ARS-685 Tilt-Up Ladder & Roof Supports consists of a bottom hinged aluminum ladder supported on two adjustable aluminum roof supports when in the upright 60° position, and on a third roof support in the horizontal storage position. A urethane insulated flashing available in aluminum, copper or stainless steel, with EPDM Base Seal, completes the assembly.

LADDER HEIGHT AND WIDTH:
Height is variable to any specified dimensions up to 25'-0" or 30'-0' (7.6 m to 9.1m) approximately. Standard rung width is 18" (457 mm).

PROMINENT FEATURES:
Super-easy to use; tilts up into service position using stainless steel hinge pin with top of ladder resting against wall or other surface and tilts down into horizontal storage position "hidden" from view. Non-corrosive, durable fabrication including insulated supports which are condensation free. Maintenance free (flashing never needs caulking). Threaded support leg assemblies provide up to 4" (102 mm) vertical adjustment for leveling if necessary. Ladder is easily separated from roof supports by removing the two cotter pins, for re-roofing, etc. if desired.

OPTIONS:
Flashing material (see Thaler STACK JACK Flashing literature). PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Suitable for all flat roofs for access to penthouse and mechanical room roofs, the top of saw tooth roofs, high catwalks, chimneys, cooling towers and similar applications wherever occasional access is required for maintenance.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Tilt-Up access ladder and roof supports: Thaler ARS-685 mill finish 6061-T6 aluminum ladder[ ] long] [of length as shown on the drawings], with 3" x 1" x 1/8" (76 mm x 25 mm x 3 mm) aluminum rectangle side rails, 1-1/4" (32 mm) dia tubular rungs 18" (457 mm) long of 1/4" (6 mm) wall thickness welded to side rails, and 3/4" (19 mm) dia. x 20" (508 mm) long s.s. hinge pin secured using two cotter pins; adjustable height hollow alum., urethane insulated supports with side rail adapter lugs, 2-1/2" (64 mm) dia., and with appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck; [.064" (1.6 mm) mill finish 1100-0T aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 s.s.] [SJ-34, uninsulated] [SJ-37, insulated] flashing to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions.

END RUNG RESTS
IN ALUMINUM CRADLE WHEN
IN STORAGE POSITION

STORAGE SUPPORT DETAIL

18"
(457 mm)

12"
(305 mm)

12"
(305 mm)

VARIABLE UP TO 25'-0" OR 30'-0" (7.6 m TO 9.1 m)

18-1/2"
(470 mm)

ELEVATION

ALUMINUM LADDER

COTTER PIN

ALUMINUM ADJUSTABLE
SUPPORT LEG ASSEMBLY

EPDM TRIPLE PRESSURE
GROMMET SEAL

SJ-37 STACK JACK
FLASHING URETHANE
INSULATED 7" (178 mm)
HIGH SLEEVE (ALUMINUM,
COPPER OR STAINLESS STEEL)

10" (254 mm) MAX.

CONVENTIONAL ROOFING
ILLUSTRATED (BUR)

EPDM BASE SEAL
BONDED TO METAL
SLEEVE

EMBED DECK FLANGE
IN LAYER OF PLASTIC CEMENT

TWO 1/2" (13 mm)
S.S. "J" BOLTS USED
TO SECURE SUPPORT
TO OWSJ

ALTERNATIVE FASTENING METHODS

T1	T2	T3	T4	T5
Bolt Through Slab	Adhesive Bolts	Weldment	Bolt Around Beam	OWSJ J Bolt

Specify fastening method required by adding appropriate suffix to model number (e.g. MERS-685-A-T5)

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**ARCHITECTURAL
ROOF SUPPORTS**
SPECIFICATION

Note: This architectural roof support specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part of a roofing specification.

PART 1: GENERAL

1.01 SECTION INCLUDES

A. Supply and installation of roof accessories, including:
1. Architectural roof supports
2. Performed metal flashings

1.02 RELATED SECTIONS

A. Section 03300 - Cast-in-place Concrete

B. Section 05210 - Steel Joists

C. Section 05300 - Metal Deck

D. Section 06100 - Rough Carpentry

E. Section 07200 - Thermal Protection

F. Section 07500 - Membrane Roofing

G. Section 07900 - Joint Sealers

1.03 REFERENCES

A. The work of this Section to conform to:

Canadian

Note: CSA standard is applicable only to those Thaler products supplied with EPDM Triple Pressure Grommet Seal and/or EPDM Base Seal.

1. CSA B272-93 - Prefabricated Self-Sealing Roof Vent Flashings.

2. CRCA (Canadian Roofing Contractor's Association).

3. SPRI (Single Ply Roofing Institute).

4. CUFCA (Canadian Urethane Foam Contractor's Association)and CGSB-51-GP- 46MP, Manual for "Installers of Spray Polyurethane Foam Thermal Insulation".

5. CSA G40.21-M1987 M350W and M300W (Structural Quality Steels).

6. CSA W47.1-1983 (Certification of Companies for Fusion Welding of Structural Steel).

7. CSA W59-M1989 (Welded Steel Construction - Metal Arc Welding).

8. CSA G164-M1981 (Hot Dip Galvanizing of Irregularly Shaped Articles).

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ROOF SPECIALTIES
**ARCHITECTURAL
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U.S.

B. The work of this Section to conform to:

1. NRCA (National Roofing Contractor's Association).

2. ASTM C1029-90 "Spray Applied Rigid Cellular Polyurethane Thermal Insulation".

3. ASTM D 3963/M-87 (Structural Specifications for Epoxy Coated Reinforcing Steel).

4. ASTM A36 (Non-Exposed Structural Components).

5. ASTM A123 Standard Specification for Zinc Coating (Hot Dip Galvanizing) of Iron and Steel Products.

6. ASTM Z235 (Bolts, Nuts and Washers) or Type 304 stainless steel.

1.04   SUBMITTALS

A. Manufacturer's descriptive literature for each product, including section or other type details.

B. Manufacturer's written installation instructions.

C. Shop drawings and samples, when required, in accordance with Section [01300].

1.05   QUALITY ASSURANCE

A. Roof accessories manufactures to have minimum 5 years documented experience in the design and fabrication of roofing specialities and accessories.

1.06   SPECIAL WARRANTY

A. Warrant products installed under this section of work to be free of leaks, condensation and defects in materials and/or manufacture for a period of 20 years when installed in accordance with the manufacturer's written instructions.

PART 2: PRODUCTS

2.01   MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX) or provide equal products by another manufacturer approved   in advance by the [Architect], based upon:
1. 20 year warranty against leaks, condensation and defects in materials and/or manufacture, as applicable;
2. compliance with CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings);
3. air barrier design using EPDM seals only;
4. maintenance free design;
5. materials and sizes options, and thickness;
6. injection molded urethane insulation to CGSB-51-GP 46MP and ASTM C1029-90, as applicable;
7. treated flashing deck flange, as applicable;
8. written installation instructions.

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ROOF SPECIALTIES
**ARCHITECTURAL
ROOF SUPPORTS**
SPECIFICATION

2.02   MANUFACTURED UNITS

Note: Delete clauses not applicable.

Floating Walkway Roof Supports
Rigid conduit flashing: Thaler ARS-100A adjustable height aluminum, mill finish, urethane insulated supports, 2" (51 mm) dia. including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck; [with standard 42" (1066 mm) high 1-1/2" (38 mm) dia. mill finish Schedule 40 6061-T6 alloy aluminum rail] [two sides] [one side] [without rail]; [optional hot dipped galvanized chain link fence, 2" (51 mm) x 9 ga.]; aluminum support beams for walkway surface (walkway   by others); [SJ-34, 7" (178 mm)] high New-Standard STACK JACK flashing (Uninsulated) consisting of [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93 with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Fire Route Walkway Roof Supports
Fire Route Walkway Roof Supports: Thaler ARS-102A mill finish 2" (51 mm) dia. aluminum supports [urethane insulated] including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck; with standard 42" (1066 mm) high 1-1/2" (38 mm) dia. mill finish Schedule 40 6061-T6 alloy aluminum pipe rail; access gates with manufacturer's standard hardware; optional hot dipped galvanized chain link fence, 2" (51 mm) x 9 ga.; [SJ-34, 7" (178 mm)] high New-Standard STACK JACK flashing (Uninsulated) consisting of [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93 with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Rail Post Roof Supports
Rail Post Roof Supports: Thaler ARS-115 standard 14" (356 mm) high adjustable height, epoxy coated, urethane insulated hollow steel supports, including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck and galvanized steel cap to CSA G164-M1992 and designed for affixing 1-1/2" x 1-1/2" (38 mm x 38 mm) rail posts (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Satellite Dish Roof Supports
Satellite Dish Roof Supports: Thaler ARS-122 standard 14" (356 mm) high epoxy coated, urethane insulated hollow steel support including appropriate mounting hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck; epoxy coated threaded steel cap with 4" (102 mm) dia. s.s. mast adapter stub (by others); 8'-0" (1220 mm) long x 4" (102 mm) I.D. closed end, hot dipped galvanized steel mast with 1/2" (12 mm) s.s. retaining bolt; galvanized to CSA G164-M1992; weatherproof 1/2" (12 mm) lock-bolt with EPDM seal to prevent counter-rotation of support and dish; manufacturer's standard urethane insulated [.064" (1.6 mm) mil finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Antenna Roof Supports
Antenna Roof Supports: Thaler ARS-133 standard 14" (356 mm) high epoxy coated, urethane insulated hollow steel support including appropriate mounting hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck; galvanized threaded steel cap with 2" (51 mm) dia. s.s. mast adapter stub and 8'-0" (1220 mm) long x 2" (51 mm) I.D. closed end, hot dipped galvanized steel mast (by others) with 1/2" (12 mm) lock-bolt with EPDM seal to prevent counter-rotation of support; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

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ROOF SPECIALTIES
ARCHITECTURAL ROOF SUPPORTS
SPECIFICATION

Trellis Roof Support

Trellis Roof Support: Thaler ARS-200 standard 14" (356 mm) high adjustable height, epoxy coated, urethane insulated hollow steel supports, including appropriate hardware (adhesive type fastener supplied by others) for fastening to structural roof deck, and galvanized (optional) steel cap and post socket galvanized to CSA G164-M1992 and designed for affixing 4" x 4" (102 mm x 102 mm) wood trellis posts (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Trellis & Brace Roof Supports

Trellis & Brace Roof Supports: Thaler ARS-200 and ARS-210 standard 14" (356 mm) high adjustable height, epoxy coated, urethane insulated hollow steel supports, including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck, and galvanized (optional) steel cap and post socket galvanized to CSA G164-M1992 and designed for affixing 4" x 4" (102 mm x 102 mm) wood trellis posts (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Guy Wire Roof Supports

Guy Wire Roof Supports: Thaler [ARS-300] [ARS-301] [ARS-302] [ARS-303] [ARS-304] standard 14" (356mm) high epoxy coated, urethane insulated hollow steel supports including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck, and s.s. steel cap with galvanized eye for affixing guy wire (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Guy Wire Wall Supports

Guy Wire Wall Supports: Thaler [ARS-350] [ARS-350-1] [ARS-350-2] [ARS-350-3] [ARS-350-4], urethane insulated, galvanized hollow steel supports including appropriate hardware (adhesive type fasteners supplied by others) for fastening to wall structure and galvanized steel eye hot dipped galvanized to CSA G164-M1992 for affixing guy wire (by others).

Flag Pole or Rail Roof Supports

Flag pole or Rail Roof Supports: Thaler ARS-400 epoxy coated, urethane insulated hollow steel support, including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck; epoxy coated threaded steel cap with [2" (51 mm) dia. s.s. adapter stub] [with s.s. stub machined or tapered to receive_____I.D. flag pole] and 3/8" (9 mm) s.s. retaining bolt; galvanizing to CSA G164-M1992; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [Pvc coated deck flange] [bituminous painted deck flange].

A/C Unit Screen Roof Supports

A/C Unit Screen Roof Supports: Thaler ARS-450 epoxy coated, urethane insulated hollow steel support including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck; epoxy coated threaded steel cap with [4" (102 mm) dia.] [4" (102 mm) square] stainless steel screen frame adapter stub and 3/8" (9 mm) s.s. retaining bolt; galvanizing to CSA G164-M1992; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Access Ladder Roof Supports

Access Ladder Roof Supports: Thaler ARS-500 epoxy coated, urethane insulated hollow steel support including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck; epoxy coated threaded steel cap with ladder lugs suitable for receiving a 1/2" (13 mm) thickness steel ladder side rails; 3/8" (10 mm) s.s. retaining bolts; galvanizing to CSA G164-M1992; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. cop per] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**ARCHITECTURAL
ROOF SUPPORTS**
SPECIFICATION

Metal Stair Roof Supports
Metal Stair Roof Supports (Standard Stringer): Thaler [ARS-510] [ARS-510-1] [ARS-510-2] adjustable height, epoxy coated, urethane insulated hollow steel supports including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck and epoxy coated (galvanized optional) steel cap to CSA G164-M1992 and designed for affixing steel stair (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Metal Stair Roof Supports
Metal Stair Roof Supports (Offset Stringer): Thaler [ARS-520] [ARS-520-1] [ARS-520-2] adjustable height, epoxy coated, urethane insulated hollow steel supports including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck and steel cap/s.s. connector angle designed for affixing steel stair (by others) using 1/2" (12 mm) s.s. bolts provided; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painteddeck flange].

Stair Platform Roof Supports
Stair Platform Roof Supports: Thaler [ARS-530] [ARS-530-1] [ARS-530-2] adjustable height, epoxy coated, urethane insulated hollow steel supports including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck and cap/platform adapter plate designed for affixing steel platform channel and grate (by others) using 1/2" (12 mm) s.s. bolts provided; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Upright Angle Roof Supports
Upright Angle Roof Supports: Thaler [ARS-540] [ARS-540-1] [ARS-540-2] adjustable height, epoxy coated, urethane insulated hollow steel supports, including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck and cap/angle connector designed for affixing equipment or items (by others) shown on drawings; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Miscellaneous Plat Roof Supports
Miscellaneous Plate Roof Supports: Thaler [ARS-550] [ARS-550-1] [ARS-550-2] adjustable height, epoxy coated, urethane insulated hollow steel supports, including appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck and cap/plate assembly designed for affixing equipment or items (by others) shown on drawings; manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Triangular Antenna Roof Supports
Triangular Antenna Roof Supports: Thaler [ARS-575] adjustable height, epoxy coated, urethane insulated hollow steel supports, including appropriate hardware(adhesive type fasteners supplied by others) for fastening to structural roof deck and epoxy coated steel cap/antenna base galvanized to CSA G164-M1992 designed for affixing antenna (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

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ROOF SPECIALTIES
**ARCHITECTURAL
ROOF SUPPORTS**
SPECIFICATION

Multiple Satellite Dish Roof Supports

Multiple Satellite Dish Roof Supports: Thaler ARS-590 adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck, aluminum cross-bar carrier with EPDM end caps, dish aluminum anchor plates; [SJ-34, 7" (178 mm)] high New-Standard STACK JACK flashing, urethane insulated, consisting of [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Snow Guard Roof Supports (Galvanized)

Snow Guard Roof Supports (Galvanized): Thaler [ARS-600] urethane insulated hollow aluminum supports including appropriate hardware (adhesive fasteners supplied by others) for fastening to structural roof deck, aluminum cross beam tube locked into post holders, cast aluminum support arms, aluminum lower tubes bolted to arms; manufacturer's standard urethane insulated [.064"(1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal [and] [PVC coated deck flange]

Cross-Over Stair & Roof Supports

Cross-Over Stair & Roof Supports: Thaler ARS-680 all 6061-T6 mill finish aluminum cross-over stair of size shown on drawings, with: adjust able height hollow alum., urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type fasteners supplied by others) for fastening to structural roof deck, 3" x 3" x 1/4" (76 mm x 76 mm x 6 mm) alum. beam frame [screwed] [welded] to angle supports. beams; aluminum planks fastened to aluminum support beam using specially designed bolts and seat washers; 1-1/2" (38 mm) dia. Schedule 40 pipe rail; [.064" (1.6 mm) mill finish 1100-OT alum.] [.032" (0.831 mm) 24oz. copper][.031" (0.79 mm) 22 ga. Type 304 s.s.], [SJ-34, uninsulated] [SJ-37, insulated] flashing to CSA B272-93 with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

Tilt-Up Access Ladder & Roof Supports

Tilt-Up Access Ladder & Roof Supports: Thaler Ars-685 mill finish 6061-T6 aluminum ladder [_____long] [of length as shown on drawings], with 1/2" x 2" (12 mm x 51 mm) side rails, 1-1/4" (32 mm) dia. tubular rungs 18" (457 mm) long of 1/4" (6 mm) wall thickness welded to side rails, and 3/4" (19 mm) dia. x 20" (508 mm) long s.s. hinge pin secured using two cotter pins; adjustable height hollow alum., urethane insulated supports with side rail adapter lugs, 2-1/2" (64 mm) dia., and with appropriate hardware (adhesive type fasteners sup-plied by others) for fastening to structural roof deck; [.064" (1.6 mm) mill finish 1100-OT alum.] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 s.s.] [SJ-34,uninsulated] [SJ-37, insulaed] flashing to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange].

PART 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

3.02   PREPARATION

Note: The Following clauses apply to retrofit installations only.

A. For retrofit work, remove existing roof assembly as necessary to allow for installation of supports.

B. In the event of structural deficiencies, deck corrosion or deterioration, ensure that a structural engineer has assessed and approved all surfaces upon which the work of this Section depends. Institute repairs and/or reinforcement where necessary.

C. If necessary, protect building interior and contents against ingression of water, dust, debris or other deleterious material.

3.03 INSTALLATION

Note: Delete clauses not applicable.

A. Roof Supports

1. Install supports in accordance with manufacturer's printed instructions, shop drawings and as specified.

2. Ensure supports are installed under the direct supervision of a Professional Engineer and Roofing Consultant.

3. Where necessary, provide protection against deterioration due to contact of dissimilar materials.

4. Ensure work is inspected prior to application of roofing.

B. Flashing

1. Install roof support flashing in accordance with manufacturer's printed instructions.

BUR
2. Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

Modified Bitumen
3. Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply
4. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing.

Note: For PVC membrane, specify PVC coated flashing; weld roofing to deck flange using PVC torch.

PVC Single Ply
5. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Weld roofing to deck flange using PVC torch.

3.04 FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

3.05 ADJUSTING

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

3.06 CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleanersor techniques which could impair performance of the roofing system.

End Of Section

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**MECHANICAL &
ELECTRICAL
ROOF SUPPORTS**

TABLE OF CONTENTS

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
MECHANICAL & ELECTRICAL ROOF SUPPORTS

WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is the responsibility of specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler Mechanical & Electrical Roof Support products have a number of Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE COMPETITION   THALER VALUE **ADDED** FEATURES

Adjustable Height; threaded leg assembly provides up to 4" (102 mm) vertical adjustment.

Light Weight; "strong-as-steel" 6061-T6 aluminum is easy to transport and handle as well as user friendly.

Condensation Free; support is filled with injection molded urethane insulation which adheres to inner walls without air pockets. Provides corrosion protection while adding to product durability.

Incorporates air barrier principles; supports employing through deck installation, such as steel deck over OWSJ, are protected against air leakage by the EPDM flashing seals; see Thaler EPDM Flashing Seals literature.

Eliminates worker error; specially, designed pipe retaining strap prevents workers from clamping strap to pipe thereby restricting thermal movement of pipe.

Eliminates gouging of membrane; stainless steel roller assemblies with clearance strap allows unrestricted expansion and contraction of pipes thereby eliminating shearing or tearing of membrane which can result from inferior support products.

Aesthetically pleasing; arguably the best looking mechanical and electrical roof support products available on the market today. Clean assembly without messy caulking seals.

Complete materials disclosure; all material thickness, dimensions, grades, finishes and other relevant product information is indicated on data sheets and in specifications.

100% Re-useable; can be completely dismantled and re-used when re-roofing.

Maintenance-Free; supports are equipped with Thaler pre-formed metal flashings that never need caulking (CSA B272-93). EPDM seals with "memory" provide constant pressure to outside of support to prevent leaks and condensation build-up; see Thaler EPDM Flashing Seals literature and STACK JACK Flashings literature.

20 year Warranty; guaranteed against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions

"Written "Installation Instructions"; provided with every Thaler product.

ACCOMMODATES PIPE SIZES FROM 2" (51 mm) TO 10" (254 mm) DIA.

STAINLESS STEEL RETAINING STRAP

STAINLESS STEEL ROLLER

STAINLESS STEEL BOLT

EXTRUDED ALUMINUM CARRIER ASSEMBLY WELDED TO THREADED PIPE

T-300 ALUMINUM PIPE, LEG, URETHANE INSULATED

EPDM TRIPLE PRESSURE GROMMET SEAL

SJ-37 STACK JACK (INSULATED) OR SJ-34 (NON-INSULATED) AVAILABLE ALUMINUM, COPPER OR STAINLESS STEEL

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

AVAILABLE 11" TO 22" (279 mm TO 559 mm). SEE NOTE BELOW

1" (51 mm) (25 mm) 2" (51 mm)

4" (102 mm)

3/8" x 4" x 4" (9 mm x 102 mm x 102 mm) ALUMINUM BASE PLATE

EPDM BASE SEAL BONDED TO METAL SLEEVE

TWO 1/2" (12 mm) S.S. "J" BOLTS

FASTENING METHODS

F2   F3   F5

F7

Specify the fastening method required by adding the appropriate suffix to a model number (e.g. MERS-600A-F5).

OWSJ

NOTE:
AVAILABLE SIZES 11" TO 22" (279 mm TO 559 mm) IN 1" INCREMENTS. SIZES 11" TO 17" (279 mm TO 432 mm) PROVIDE UP TO 1" (25 mm) ADJUSTMENT. SIZES 18" UP TO 22" (457 mm TO 559 mm) PROVIDE UP TO 4" (102 mm) ADJUSTMENT

DESCRIPTION:
Thaler MERS-600A Pipe Support consists of a round, urethane insulated, hollow section 6061-T6 aluminum support with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type fasteners, supplied by others), and single stainless steel pipe roller assembly. A urethane insulated STACK JACK flashing available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, completes the support.

SUPPORT SPACING:
As per CAN1-B149.1-M86 for natural gas and propane. Spacing for pipes other than gas to be determined by mechanical or electrical engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non-corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashing options.

RECOMMENDED USE:
Suitable for all flat roofs as a single, plain (uninsulated) pipe support for pipe sizes from 2" (51 mm) to 10" (254 mm) diameter. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
20 year warranty against l**eaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Pipe supports (single plain pipe): Thaler MERS-600A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware for fastening to structural roof deck, and Type 304 stainless steel pipe roller assembly sized to suit [____] actual O.D. pipe; [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37, pre-insulated New-Standard STACK JACK flashing for steel deck], 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries,1-800-387-7217 Mississ- sauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

MERS-600A ALUMINUM PIPE SUPPORT (Single, Plain Pipe)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-600A Pipe Support is installed at required centres by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the pipe roller assembly, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.
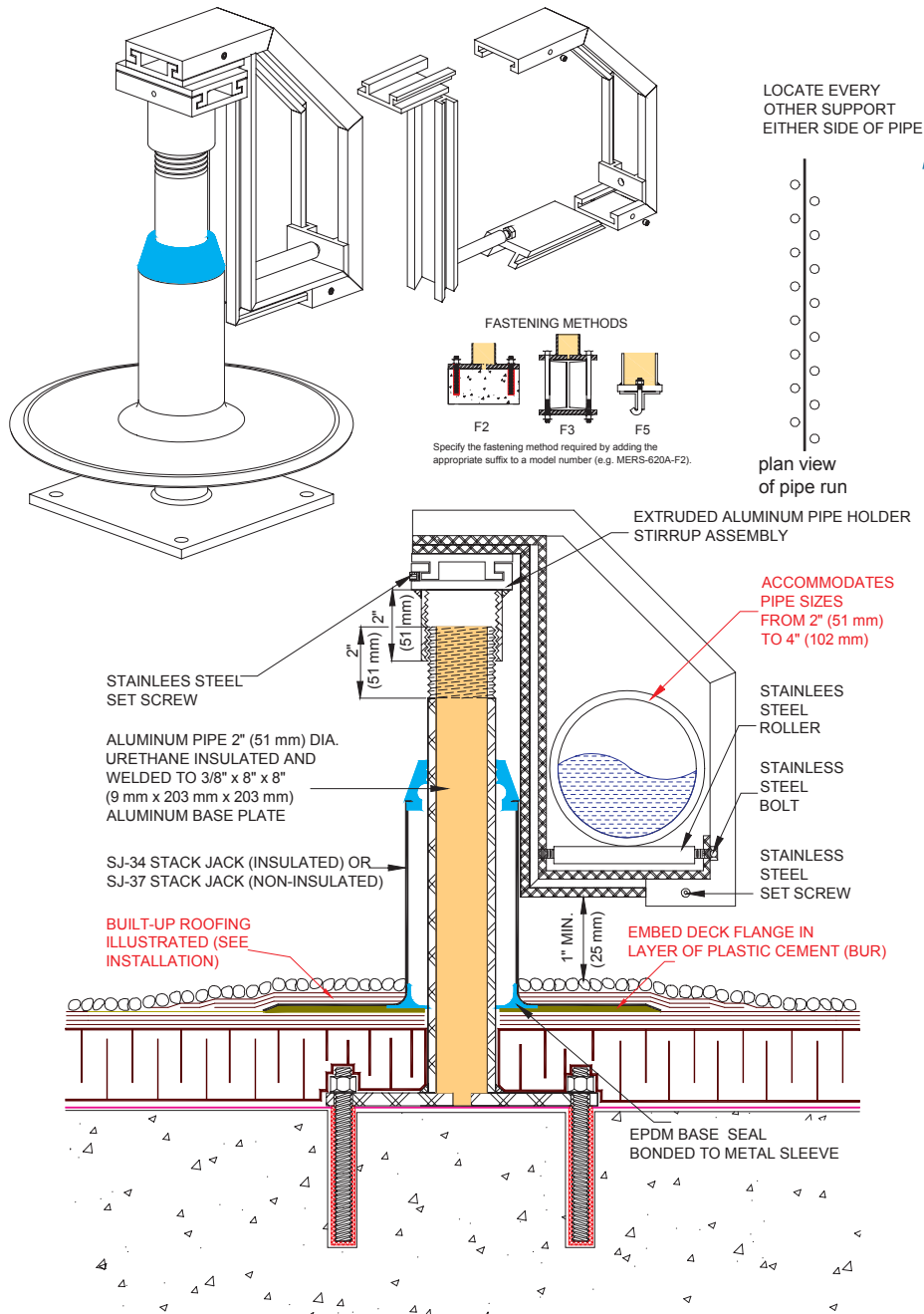
Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to end of model number, e.g. MERS-600-A-A-P; weld roofing deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Pipe Roller Assembly: Thread hollow aluminum upper support onto lower support leg, place pipe onto roller assembly and install stainless steel retaining strap over pipe allowing for clearance between pipe and strap.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-600A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

STAINLESS STEEL STRAP

ACCOMMODATES PIPE SIZES FROM 2" TO 8" (51 mm TO 203 mm)

STAINLESS STEEL BOLT

EXTRUDED ALUMINUM CARRIER ASSEMBLY (T-165, T-175)

S.S. SET SCREW

STAINLESS STEEL ROLLER
T-175 SLIDER

EPDM TRIPLE PRESSURE GROMMET SEAL

SJ-34 STACK JACK (NON-INSULATED)
SJ-37 STACK JACK (INSULATED) AVAILABLE ALUMINUM, COPPER OR STAINLESS STEEL

T-300 ALUMINUM PIPE 2" (51 mm) DIA. URETHANE INSULATED WELDED TO 3/8" x 8" x 8" (9 mm x 204 mm x 204 mm) ALUMINUM PLATE

2" (51 mm)

2" (51 mm)

AVAILABLE 11" TO 22" (279 mm TO 559 mm) SEE NOTE

NOTE: AVAILABLE SIZES 11" TO 22" (279 mm TO 559 mm) IN 1" INCREMENTS. SIZES 11" TO 17" (279 mm TO 432 mm) PROVIDE UP TO 1" (25 mm) ADJUSTMENT. SIZES 18" UP TO 22" (457 mm TO 559 mm) PROVIDE UP TO 4" (102 mm) ADJUSTMENT.

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

4" (102)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

EPDM BASE SEAL BONDED TO METAL SLEEVE

FASTENING METHODS

F2   F3   F5   F7
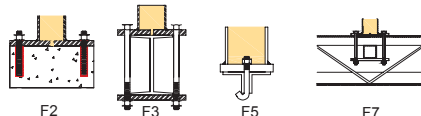
Specify the fastening method required by adding the appropriate suffix to a model number (e.g. MERS-605A-F2).

MERS-605A ALUMINUM PIPE SUPPORT (Double Plain Pipe)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-605A Pipe Support is installed at required centres by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the pipe roller assembly, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.
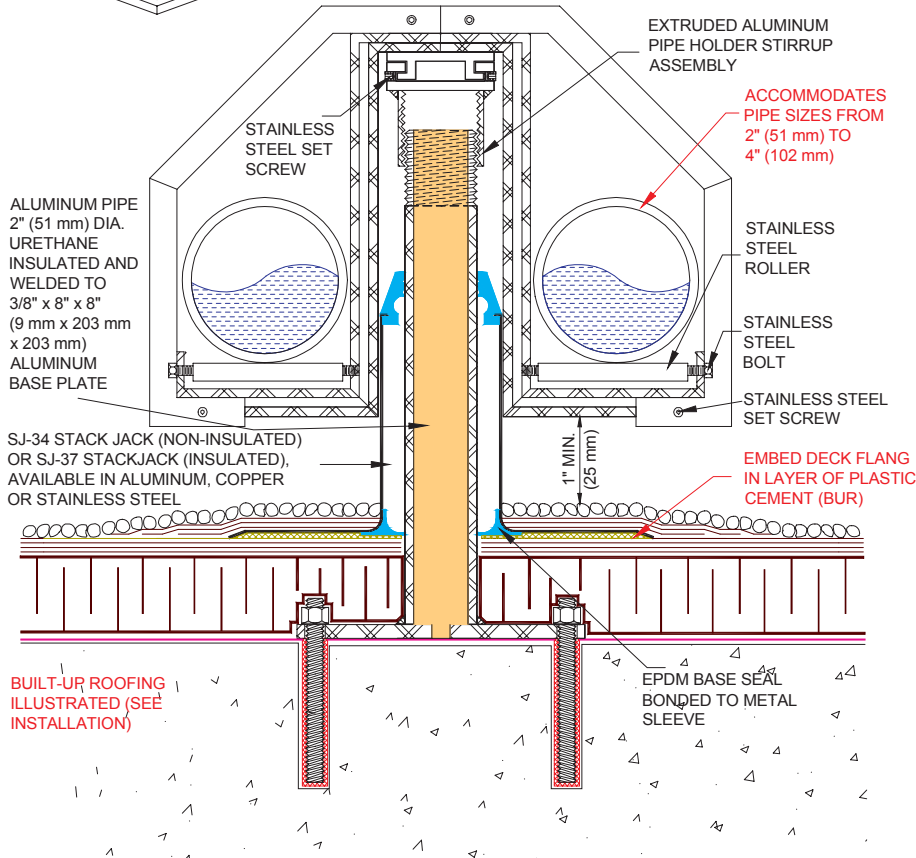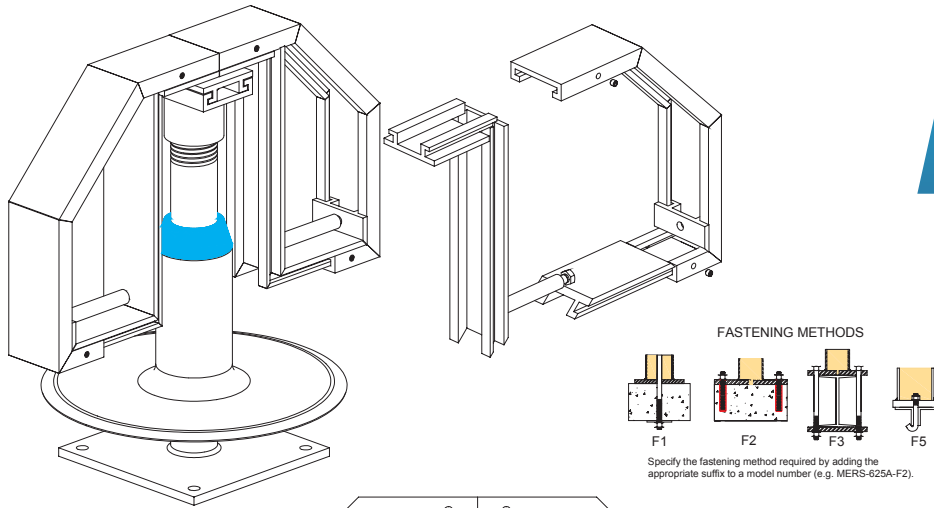
Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to end of model number, e.g. MERS-605A-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Pipe Roller Assemblies: Thread hollow aluminum upper support onto lower support leg, place pipes onto roller assembly and install stainless steel retaining straps over pipes allowing for clearance between pipe and strap.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-605A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION
Thaler MERS-605A Pipe Support consists of a round, urethane insulated, hollow section 6061-T6 aluminum support with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type fasteners supplied by others), and two stainless steel pipe roller assemblies. A urethane insulated STACK JACK flashing available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, completes the support.

SUPPORT SPACING:
As per CAN1-B149.1-M86 for natural gas and propane. Spacing for pipes other than gas to be determined by mechanical or electrical engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non-corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashing options.

RECOMMENDED USE:
Suitable for all flat roofs as a double, plain (uninsulated) pipe support for pipe sizes from 2" (51 mm) to 8" (203 mm) diameter. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
20 year warranty against l**eaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Pipe supports (double plain pipe): Thaler MERS-605A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others), for fastening to structural roof deck, and Type 304 stainless steel pipe roller assemblies sized to suit [____] actual O.D. pipe; [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) Type 304 22 ga. stainless steel], 2" (51mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries,1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfelss, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

THALER

ROOF SPECIALTIES
MERS-610A ALUMINUM PIPE SUPPORT
(Single, Insulated Pipe)

NOTE: AVAILABLE SIZES 11" TO 22"
(279 mm TO 559 mm) IN 1" INCREMENTS
SIZES 11" TO 17" (279 mm TO 432 mm)
PROVIDE UP TO 1" (25 mm) ADJUSTMENT
SIZES 18" UP TO 22" (457 mm TO 559 mm)
PROVIDE UP TO 4" (102 mm) ADJUSTMENT

STAINLESS STEEL STRAP

STAINLESS STEEL BOLT

S.S. CRADLE AND EXTRUDED ALUMINUM PIPE SUPPORT IS HALF HEIGHT OF PIPE x 12" (305 mm) LONG.

STAINLESS STEEL SET SCREW

EXTRUDED ALUMINUM CARRIER ASEMBLY

26 GA. x 12" LONG (0.8 mm x 305 mm) STAINLESS STEEL CRADLE

SJ-37 STACK JACK (INSULATED) OR SJ-34 (NON-INSULATED) AVAILABLE ALUMINUM, COPPER OR SSTAINLESS STEEL

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

4" (102 mm)

AVAILABLE 11" TO 22" (279 mm TO 559 mm) SEE NOTE

2" (51mm)

2" (51 mm)

T-300 ALUMINUM PIPE 2" (51 mm) DIA URETHANE INSULATED WELDED TO 3/8" x 8" x 8" (9 mm x 204 mm x 204 mm) ALUMINUM PLATE

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

EPDM BASE SEAL BONDED TO METAL SLEEVE

ALTERNATIVE FASTENING METHODS

T2 Adhesive Bolts

T5 OWSJ J Bolt

Specify the fastening method required by adding the appropriate suffix to model number (e.g. MERS-630-1-T2,T5)

MERS-610A ALUMINUM PIPE SUPPORT (Single, Insulated Pipe)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-610A Pipe Support is installed at required centers by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the pipe cradle assembly, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to end of model number, e.g. MERS-610A-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Pipe Roller Assemblies: Thread hollow aluminum upper support onto lower support leg, place pipe onto cradle assembly and install stainless steel retaining strap over pipe allowing for clearance between pipe and strap.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-610A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler MERS-610A Pipe Support consists of a round, urethane insulated, hollow section 6061-T6 aluminum support with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type fasteners supplied by others), and single stainless steel pipe cradle assembly. A urethane insulated STACK JACK flashing available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, completes the support.

SUPPORT SPACING:
As per CAN1-B149.1-M86 for natural gas and propane. Spacing for pipes other than gas to be determined by mechanical or electrical engineer for safe loading. Prominent Features: Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non-corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashing options.

RECOMMENDED USE:
Suitable for all flat roofs as a single, insulated pipe support for pipe sizes from 2" (51 mm) to 10" (254 mm) diameter. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.
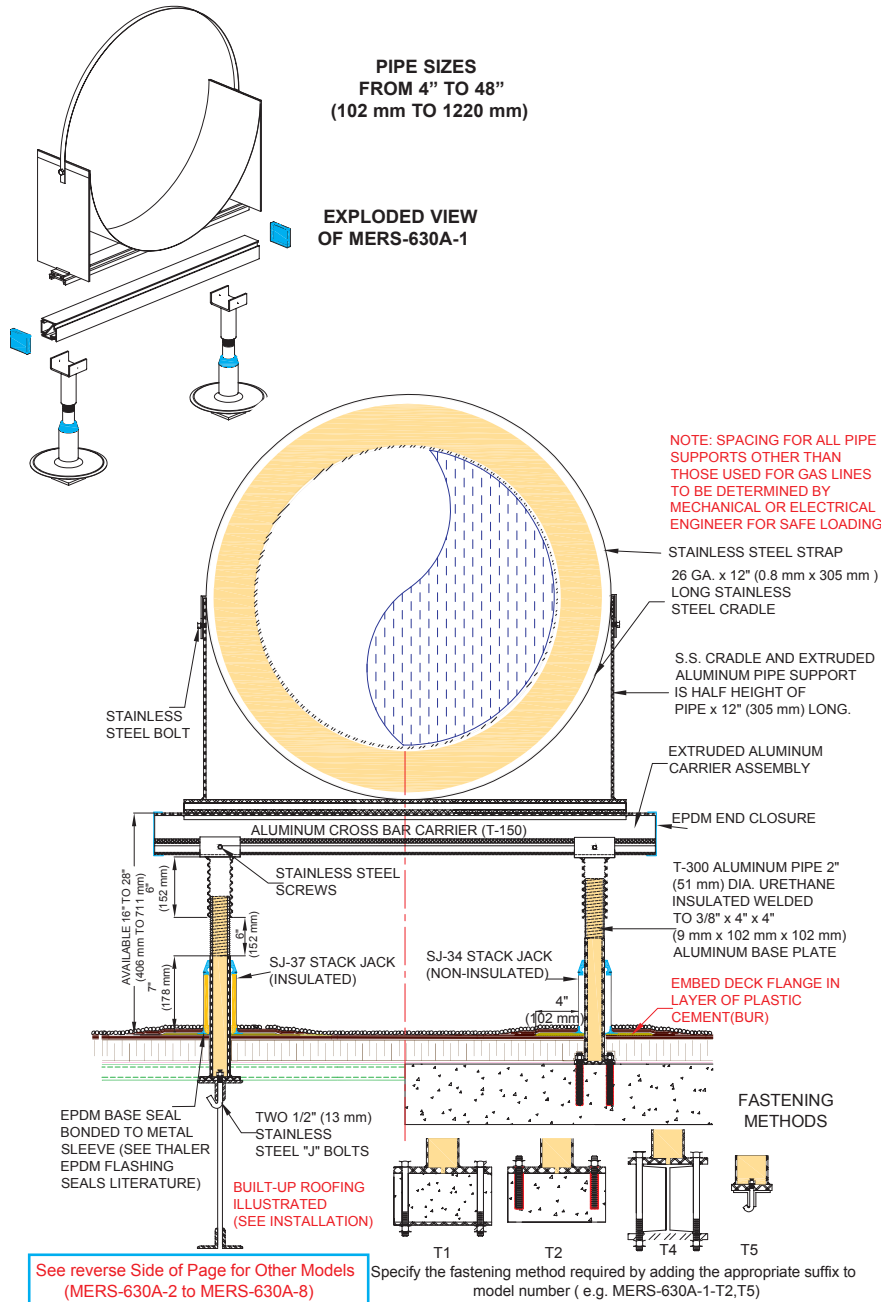
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Pipe supports (single, insulated pipe): Thaler MERS-610A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others), for fastening to structural roof deck, and Type 304 stainless steel pipe cradle assembly sized to suit [___] actual O.D. pipe; [SJ-34, non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm), high consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries,1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions.Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

ACCOMMODATES PIPE SIZES FROM 2' TO 8" (51 mm TO 203 mm)

STAINLESS STEEL STRAP

STAINLESS STEEL BOLT

EXTRUDED ALUMINUM CARRIER ASSEMBLY (T-165, T-175)

STAINLESS STEEL SET SCREW

EPDM TRIPLE PRESSURE GROMMET SEAL

SJ-34 STACK JACK (NON-INSULATED) SJ-37 STACK JACK (INSULATED) AVAILABLE ALUMINUM, COPPER OR STAINLESS STEEL

T-300 ALUMINUM PIPE 2" (51 mm) DIA. URETHANE INSULATED WELDED TO 3/8" x 8" x 8" (9 mm x 204 mm x 204 mm) ALUMINUM PLATE

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

4" (102mm)

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

AVAILABLE 11" TO 22' (279 mm TO 559 mm) SEE NOTE BELOW

2" (51mm)

2" (51mm)

NOTE:
AVAILABLE SIZES 11" TO 22" (270 mm TO 559 mm) IN 1" INCREMENTS SIZES 11"TO 17" (279 TO 432 mm) PROVIDE UP TO 1" (25 mm) ADJUSTMENT SIZES 18" UP TO 22" (457 mm TO 559 mm) PROVIDE UP TO 4" (102 mm) ADJUSTMENT

EPDM BASE SEAL BONDED TO METAL SLEEVE

FASTENING METHODS

F2   F3   F5   F7

Specify the fastening method required by adding the appropriate suffix to a model number (e.g. MERS-615A-F2).

MERS-615A ALUMINUM PIPE SUPPORT (Double Insulated Pipe)
PATENTED

DESCRIPTION:
Thaler MERS-615A Pipe Support consists of a round, urethane insulated, hollow section 6061-T6 aluminum support with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adh- esive type fasteners supplied by others), and two stainless steel pipe cradle assemblies. A urethane insulated STACK JACK flashing available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, completes the support.

SUPPORT SPACING:
As per CAN1-B149.1-M86 for natural gas and propane. Spacing for pipes other than gas to be determined by mechanical or electrical engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashing options.

RECOMMENDED USE:
Suitable for all flat roofs as a double, insulated pipe support for pipe sizes from 2" (51 mm) to 8" (203 mm) diameter. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Pipe supports (double insulated pipe): Thaler MERS-615A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, and Type 304 stainless steel pipe cradle assemblies sized to suit [____] actual O.D. pipe; [SJ-34 non-insulated New Standard STACK JACK flashing for concrete deck,] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck,] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93;with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-615A Pipe Support is installed at required centers by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the pipe cradle assembly, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in a layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing.. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding the suffix P to the end of model number, e.g. MERS-615A-A-P; weld roofing to deck flange using PVC torch.
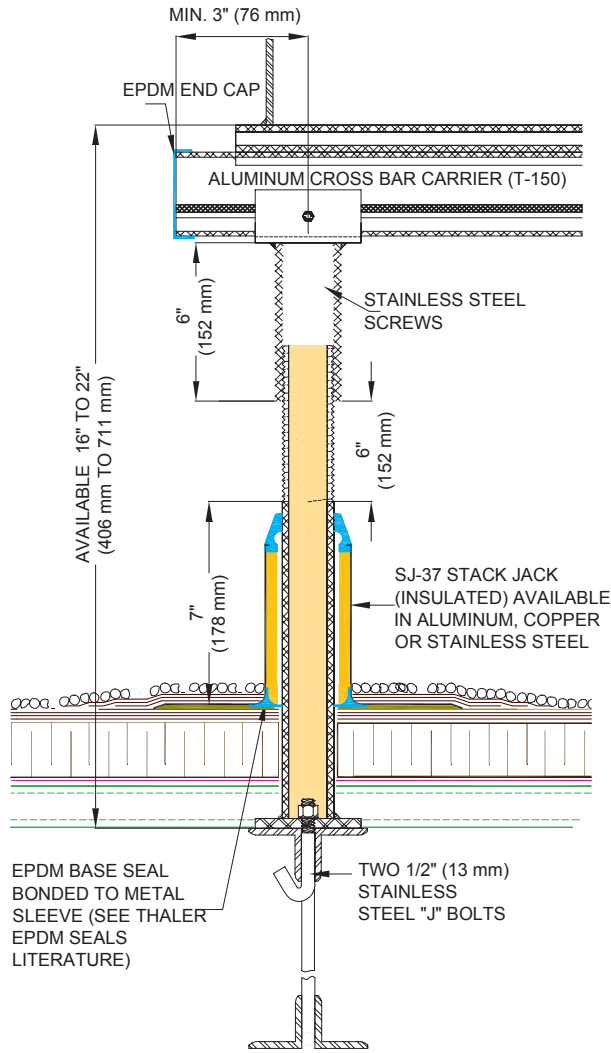
Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Pipe Roller Assemblies: Thread hollow aluminum upper support onto lower support leg, place pipe onto cradle assembly and install stainless steel retaining strap over pipe allowing for clearance between pipe and strap.
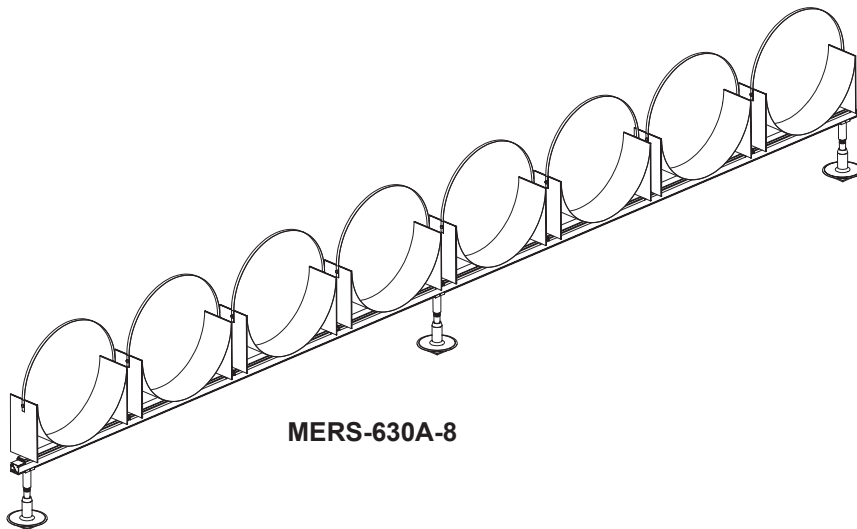
Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-615A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

FASTENING METHODS

F2   F3   F5

Specify the fastening method required by adding the appropriate suffix to a model number (e.g. MERS-620A-F2).

LOCATE EVERY OTHER SUPPORT EITHER SIDE OF PIPE

plan view of pipe run

EXTRUDED ALUMINUM PIPE HOLDER STIRRUP ASSEMBLY

ACCOMMODATES PIPE SIZES FROM 2" (51 mm) TO 4" (102 mm)

2" (51 mm)

2" (51 mm)

STAINLEES STEEL SET SCREW

STAINLEES STEEL ROLLER

ALUMINUM PIPE 2" (51 mm) DIA. URETHANE INSULATED AND WELDED TO 3/8" x 8" x 8" (9 mm x 203 mm x 203 mm) ALUMINUM BASE PLATE

STAINLESS STEEL BOLT

SJ-34 STACK JACK (INSULATED) OR SJ-37 STACK JACK (NON-INSULATED)

STAINLESS STEEL SET SCREW

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

1" MIN. (25 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

EPDM BASE SEAL BONDED TO METAL SLEEVE

MERS-620A RE-ROOFING ALUMINUM PIPE SUPPORT (Single Plain Pipe)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-620A Pipe Support is installed at required centers by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the stirrup-type pipe holder assembly, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
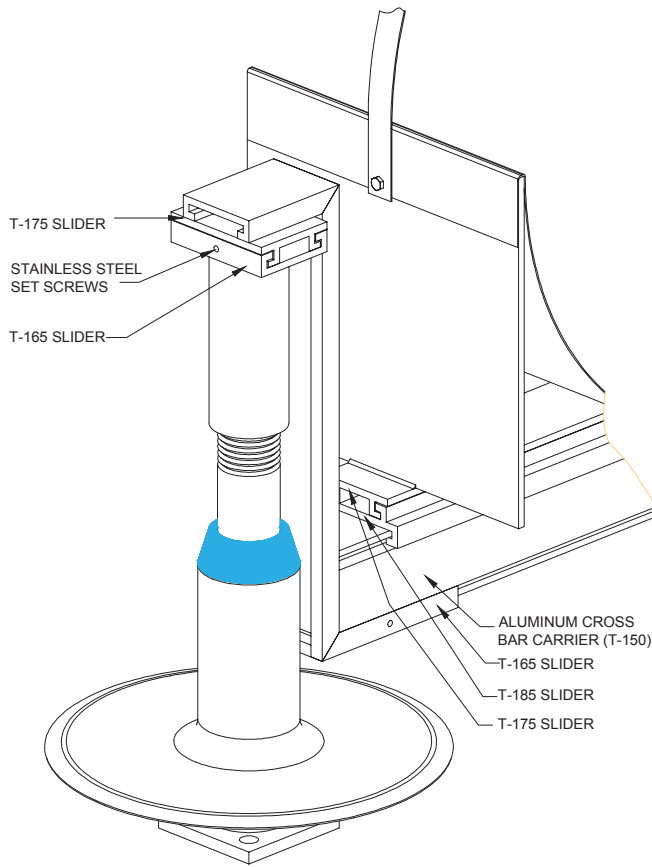
ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to end of model number, e.g. MERS-620A-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Pipe Roller Assemblies: Thread hollow aluminum upper support onto lower support leg, place pipe onto cradle assembly and install stainless steel retaining strap over pipe allowing for clearance between pipe and strap.
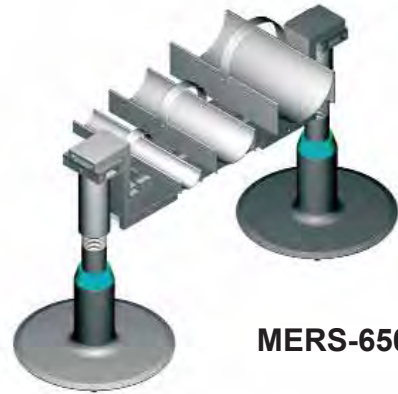
Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-620A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
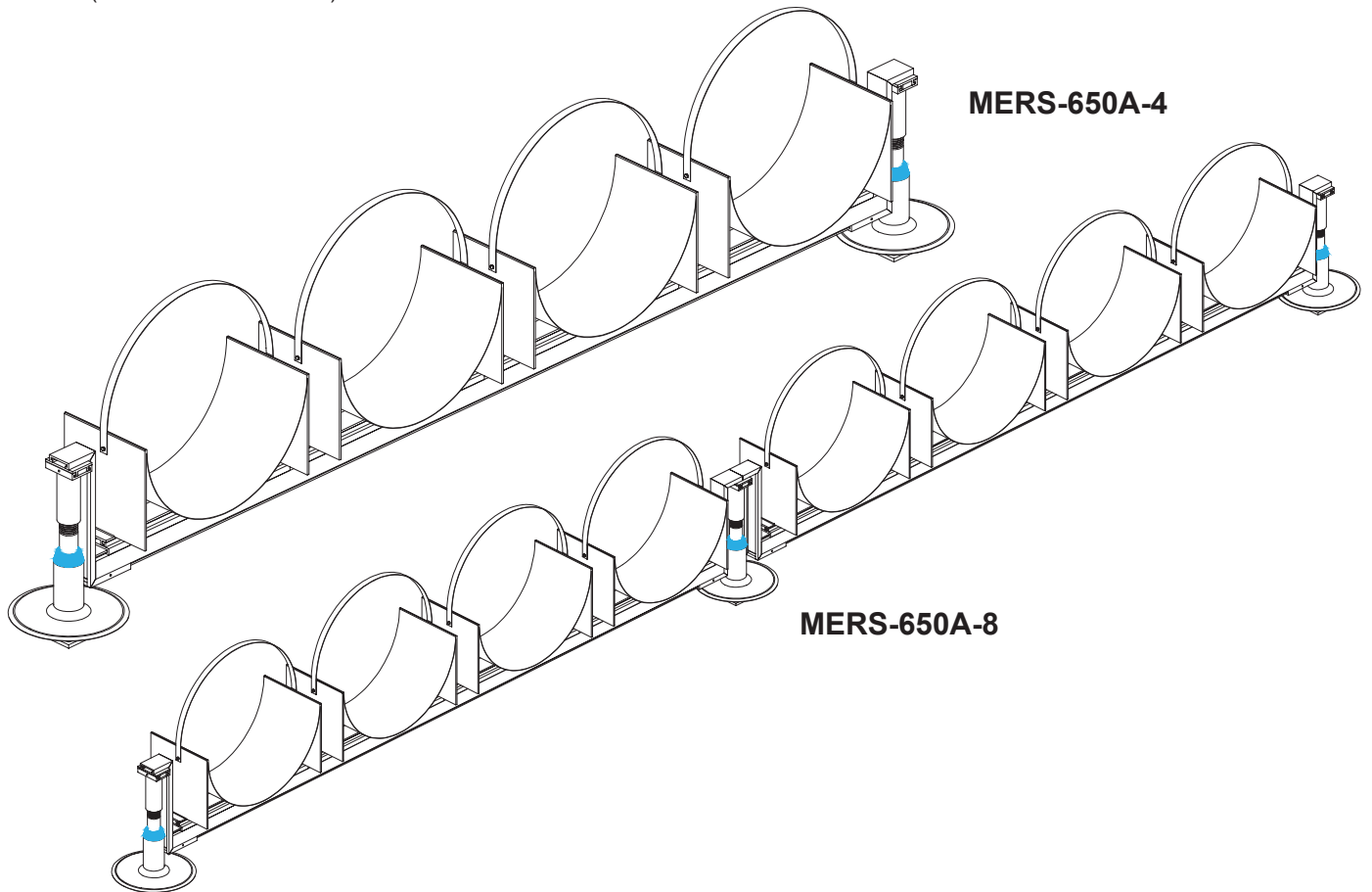
DESCRIPTION:
Thaler MERS-620A Pipe Support consists of a round, urethane insulated, hollow section 6061-T6 aluminum support with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type fasteners supplied by others), stirrup-type pipe holder, and stainless steel pipe roller assembly. A urethane insulated STACK JACK flashing available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, completes the support.

SUPPORT SPACING:
As per CAN1-B149.1-M86 for natural gas and propane. Spacing for pipes other than gas to be determined by mechanical or electrical engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non-corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashing options.

RECOMMENDED USE:
For re-roofing. Suitable for all flat roofs as a single, plain (uninsulated) pipe support for existing pipe sizes from 2" (51 mm) to 4" (102 mm) diameter. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
20 year warranty against l**eaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Re-roofing pipe supports (single plain pipe): Thaler MERS-620A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, stirrup-type pipe holder, and Type 304 stainless steel pipe roller assembly sized to suit [____] actual O.D. pipe; [SJ-34 non-insulated New Standard STACK JACK Flashing for concrete deck,] [SJ-37 pre-insulated New standard STACK JACK Flashing for steel deck,] 7" (178 mm) high, consisting of [.064"(1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

THALER

FASTENING METHODS

F1 F2 F3 F5

Specify the fastening method required by adding the appropriate suffix to a model number (e.g. MERS-625A-F2).

EXTRUDED ALUMINUM PIPE HOLDER STIRRUP ASSEMBLY

STAINLESS STEEL SET SCREW

ACCOMMODATES PIPE SIZES FROM 2" (51 mm) TO 4" (102 mm)

ALUMINUM PIPE 2" (51 mm) DIA. URETHANE INSULATED AND WELDED TO 3/8" x 8" x 8" (9 mm x 203 mm x 203 mm) ALUMINUM BASE PLATE

STAINLESS STEEL ROLLER

STAINLESS STEEL BOLT

STAINLESS STEEL SET SCREW

SJ-34 STACK JACK (NON-INSULATED) OR SJ-37 STACKJACK (INSULATED), AVAILABLE IN ALUMINUM, COPPER OR STAINLESS STEEL

EMBED DECK FLANG IN LAYER OF PLASTIC CEMENT (BUR)

1" MIN. (25 mm)

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

EPDM BASE SEAL BONDED TO METAL SLEEVE

MERS-625A RE-ROOFING ALUMINUM PIPE SUPPORT (Double Plain Pipe)
PATENTED

DESCRIPTION:
Thaler MERS-625A Pipe Support consists of a round, urethane insulated, hollow section 6061-T6 aluminum support with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type fasteners supplied by others), stirrup-type pipe holder, and stainless steel pipe roller assemblies. A urethane insulated STACK JACK flashing available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, completes the support.

SUPPORT SPACING:
As per CAN1-B149.1-M86 for natural gas and propane. Spacing for pipes other than gas to be determined by mechanical or electrical engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non-corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashings options.

RECOMMENDED USE:
Suitable for all flat roofs as a double, plain (uninsulated) pipe support for pipe sizes from 2" (51 mm) to 4" (102 mm) diameter. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.
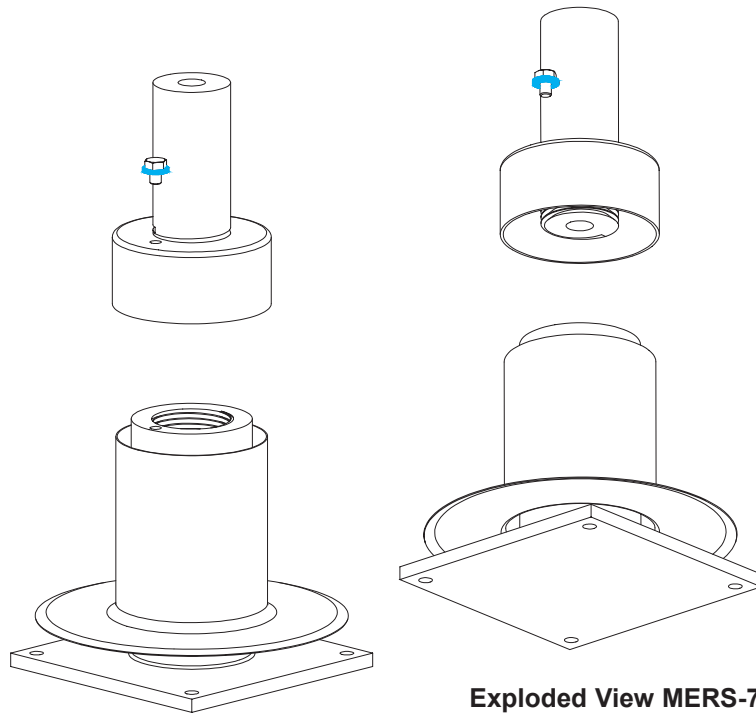
WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.
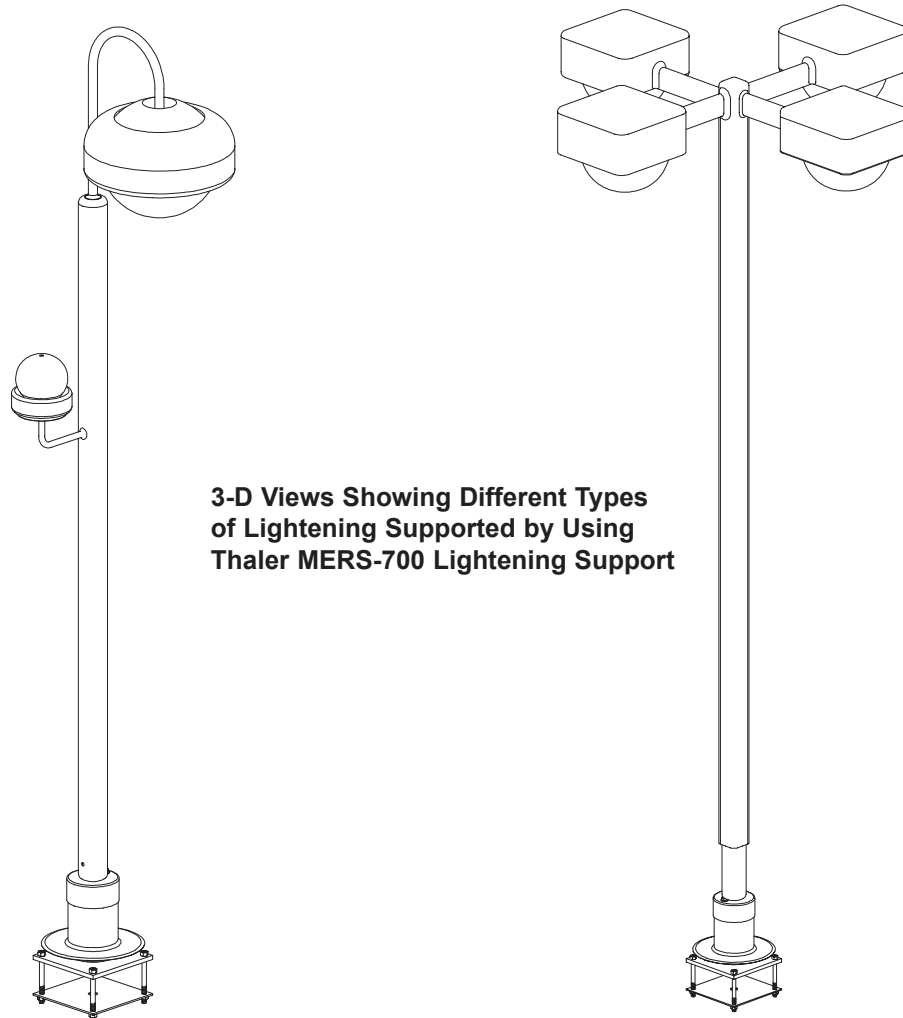
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Re-roofing pipe supports (double plain pipe): Thaler MERS-625A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others), for fastening to structural roof deck, stirrup-type pipe holders, and Type 304 stainless steel pipe roller assemblies sized to suit [___] actual O.D. pipe; [SJ-34 non-insulated New Standard STACK JACK flashing for concrete deck,] [SJ-37 pre-insulated New Standard STACK JACK flashing for steel deck,] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries,1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-625A Pipe Support is installed at required centres by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the stirrup-type pipe holder assemblies, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding the suffix P to the end of the model number, e.g. MERS-625A-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Pipe Roller Assemblies: Thread hollow aluminum upper support onto lower support leg, place pipe onto cradle assembly and install stainless steel retaining strap over pipe allowing for clearance between pipe and strap.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-625A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ROOF SPECIALTIES
MERS-630A-1 TO 630A-8 ALUMINUM PIPE SUPPORT
(Single, Double, Triple, Multiple, Large, Insulated Pipe)

PIPE SIZES
FROM 4" TO 48"
(102 mm TO 1220 mm)

EXPLODED VIEW
OF MERS-630A-1

NOTE: SPACING FOR ALL PIPE SUPPORTS OTHER THAN THOSE USED FOR GAS LINES TO BE DETERMINED BY MECHANICAL OR ELECTRICAL ENGINEER FOR SAFE LOADING

STAINLESS STEEL STRAP
26 GA. x 12" (0.8 mm x 305 mm) LONG STAINLESS STEEL CRADLE

S.S. CRADLE AND EXTRUDED ALUMINUM PIPE SUPPORT IS HALF HEIGHT OF PIPE x 12" (305 mm) LONG.

STAINLESS STEEL BOLT

EXTRUDED ALUMINUM CARRIER ASSEMBLY

EPDM END CLOSURE

ALUMINUM CROSS BAR CARRIER (T-150)

STAINLESS STEEL SCREWS

T-300 ALUMINUM PIPE 2" (51 mm) DIA. URETHANE INSULATED WELDED TO 3/8" x 4" x 4" (9 mm x 102 mm x 102 mm) ALUMINUM BASE PLATE

SJ-37 STACK JACK (INSULATED)

SJ-34 STACK JACK (NON-INSULATED)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT(BUR)

AVAILABLE 16" TO 28" (406 mm TO 711 mm)
6" (152 mm)
6" (152 mm)
7" (178 mm)
4" (102 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

TWO 1/2" (13 mm) STAINLESS STEEL "J" BOLTS

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

See reverse Side of Page for Other Models (MERS-630A-2 to MERS-630A-8)

FASTENING METHODS

T1   T2   T4   T5

Specify the fastening method required by adding the appropriate suffix to model number (e.g. MERS-630A-1-T2,T5)

MERS-630A-1 TO 630-A-8 PIPE SUPPORT
(Single, Double, Triple, Multiple, Large, Insulated Pipe)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-630A-1 to MERS-630A-8 Pipe Support are installed at required centres by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the pipe carrier assemblies, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding the suffix P to the end of the model number, e.g. MERS-630A-1-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Pipe Roller Assemblies: Thread hollow aluminum upper support onto lower support leg, place pipe onto cradle assembly and install stainless steel retaining strap over pipe allowing for clearance between pipe and strap.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-630A-1-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler MERS-630A-1 to MERS-A-8 Pipe Support consists of a pair of round, urethane insulated, hollow section 6061-T6 aluminum support with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type supplied by others), cross-bar carrier with EPDM end caps, and single or (double, triple) multiple stainless steel pipe cradle assemblies. Urethane insulated STACK JACK flashing available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, completes the support.

SUPPORT SPACING:
As per CAN1-B149.1-M86 for natural gas and propane. Spacing for pipes other than gas to be determined by mechanical or electrical engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashings options.

RECOMMENDED USE:
Suitable for all flat roofs as a single (double, triple) or multiple pipe support for pipe sizes from 4" (102 mm) to 48" (1220 mm) diameter. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
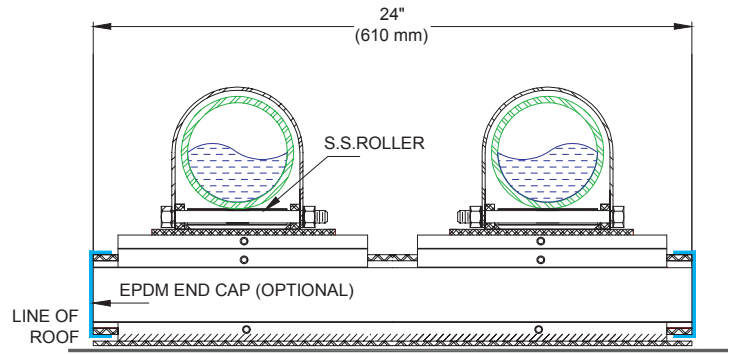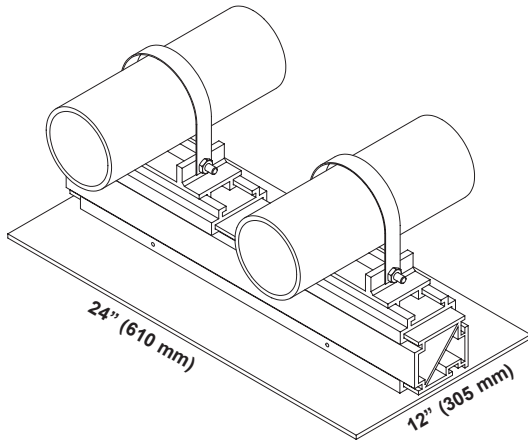20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.
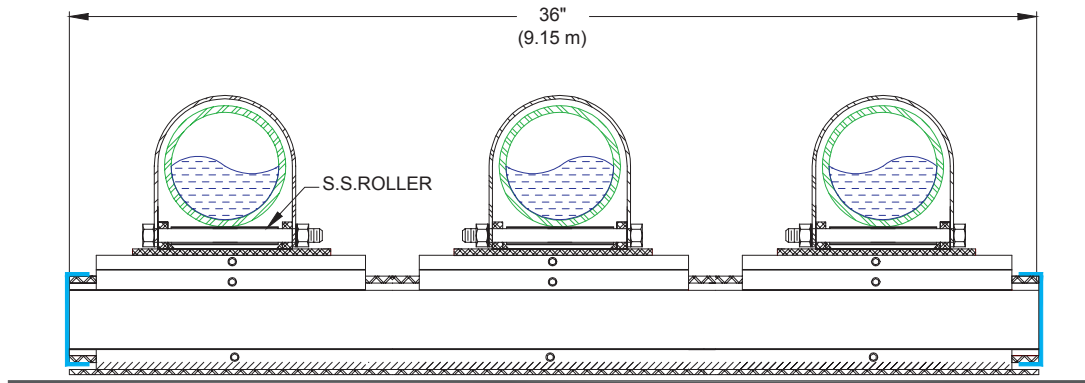
MAINTENANCE:
No maintenance required (maintenance free).
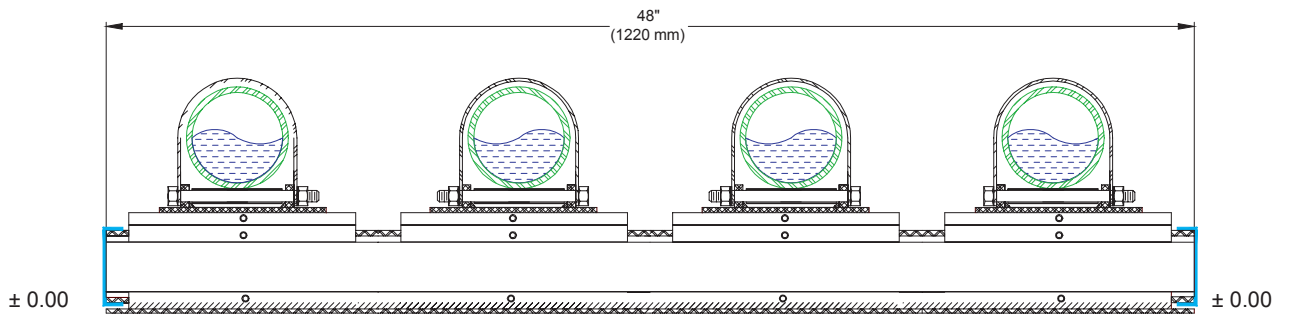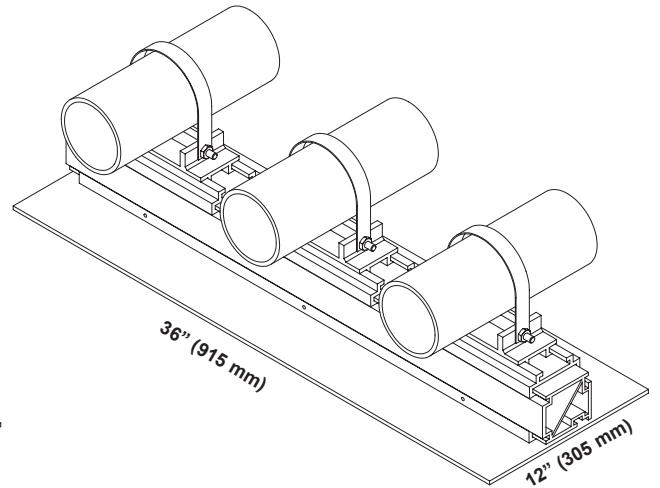
SPECIFICATION (SHORT FORM):
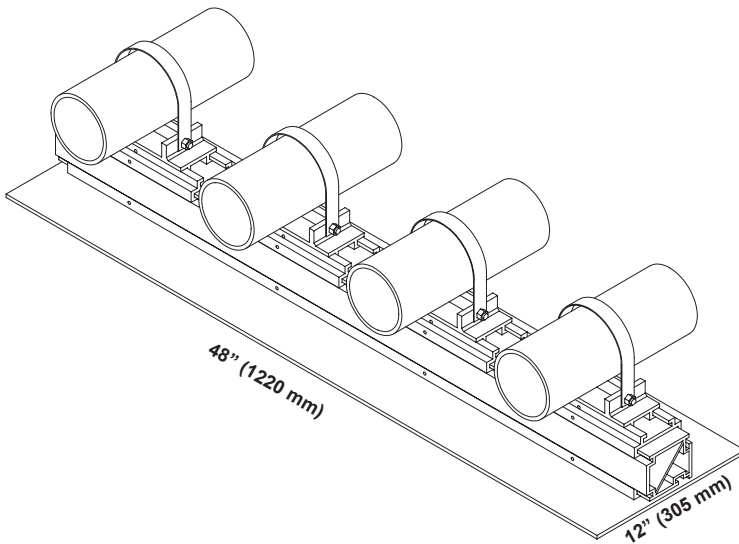**Pipe supports (single, double, triple or multiple, large, insulated pipe):** Thaler MERS-630A-1 to MERS-630A-8 adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type fasteners supplied by others), for fastening to structural roof deck, cross-bar carrier with EPDM end caps, and Type 304 stainless steel pipe cradle assemblies sized to suit [___] actual O.D. pipe; [SJ-34 non-insulated New Standard STACK JACK flashing for concrete deck,] [SJ-37 pre-insulated New Standard STACK JACK flashing for steel deck,] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braubfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

Note: The following table indicates the allowable uniformly working loads for T-150 (aluminum cross bar carrier) beam. The beam extends a minimum of 3" (76 mm) beyond the center line of support.

Span	Maximum Uniformly Distributed Load	Total Load
3' (914 mm)	900 plf (13 kN/m)	2700 lbs (12.15 kN)
4' (1219 mm)	675 plf (9.8 kN/m)	2700 lbs (12.15 kN)
5' (1524 mm)	540 plf (7.9 kN/m)	2700 lbs (12.15 kN)
6' (1829 mm)	450 plf (6.6 kN/m)	2700 lbs (12.15 kN)
7' (2133 mm)	330 plf (4.8 kN/m)	2310 lbs (10.39 kN)
8' (2438 mm)	250 plf (3.6 kN/m)	2000 lbs (9kN)
9' (2743 mm)	200 plf (2.9 kN/m)	1800 lbs (8.1 kN)
10' (3048 mm)	160 plf (2.3 kN/m)	1600 lbs (7.2 kN)

MIN. 3" (76 mm)

EPDM END CAP

ALUMINUM CROSS BAR CARRIER (T-150)

STAINLESS STEEL SCREWS

6" (152 mm)

6" (152 mm)

AVAILABLE 16" TO 22" (406 mm TO 711 mm)

7" (178 mm)

SJ-37 STACK JACK (INSULATED) AVAILABLE IN ALUMINUM, COPPER OR STAINLESS STEEL

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM SEALS LITERATURE)

TWO 1/2" (13 mm) STAINLESS STEEL "J" BOLTS

TYPICAL MERS-630A ALUMINUM SUPPORT
(LARGE SCALE DETAIL)

MERS-630A-2

MERS-630A-3

MERS-630A-4

MERS-630A-8

THALER

MERS-650A-1

EXPLODED VIEW MERS-650A-1

26 GA. x 12" (0.8 mm x 305 mm) LONG STAINLESS STEEL CRADLE

S.S CRADLE AND EXTRUDED ALUMINUM PIPE SUPPORT IS HALF HEIGHT OF PIPE x 12" (305 mm) LONG

S.S. SET SCREW

NOTE: SPACING FOR ALL PIPE SUPPORT OTHER THAN THOSE USED FOR GAS LINES TO BE DETERMINED BY MECHANICAL OR ELECTRICAL ENGINEER FOR SAFE LOADING

PIPE SIZES FROM 4" TO 48" (102 mm TO 1220 mm)

STAINLESS STEEL STRAP

STAINLESS STEEL BOLTS

EXTRUDED ALUMINUM ASSEMBLY (T-165) WELDED TO (T-175)

EXTRUDED ALUMINUM (T-175) SLIDER

T-300 ALUMINUM PIPE 2" (51 mm) DIA. URETHANE INSULATED WELDED TO 3/8" x 8" x 8" (9 mm x 203 mm x 203 mm) BASE PLATE

EXTRUDED ALUMINUM CARRIER ASSEMBLY (T-150, T-175, T-185)

SJ-34 STACK JACK (NON-INSULATED) 4" (102 mm)

AVAILABLE 16" TO 23" (406 mm TO 584 mm)

VARIABLE 6" (152 mm)

S.S. SET SCREW

ALUMINUM CROSS-BAR CARRIER (T-150)

SJ-37 STACK JACK (INSULATED)

1" MIN (25 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

TWO 1/2" (13 mm) STAINLESS STEEL "J" BOLTS

See Reverse Side of Page for other Models (MERS-650A-2 to MERS-650A-8)

T1   T2   T3   T4   T5

FASTENING METHODS

Specify the fastening method required by adding the appropriate suffix to model number (e.g. MERS-650A-1-T2,T5)

MERS 650A-1 TO 650A-8 RE-ROOFING INSULATED PIPE ROOF SUPPORTS
PATENTED

INSTALLATION:

"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-650A-1 to 650A-8 Pipe Supports are installed at required centers by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and the roof membrane, installing the pipe carrier assembly, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to the end of model number, e.g. MERS-650A-1-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Pipe Roller Assemblies: Thread hollow aluminum upper support onto lower support leg, place pipe onto cradle assembly and install stainless steel retaining strap over pipe allowing for clearance between pipe and strap.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-650A-1-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:

Thaler MERS-650A selection of pipe support consists of a pair of round, urethane insulated, hollow section 6061-T6 aluminum supports with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type fasteners supplied by others), pipe support beam assembly, and stainless steel pipe cradle assembly. Urethane insulated STACK JACK flashings available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, complete the supports. The suffix at the end of the model number denotes the number of pipes. The support is required to accommodate, e.g. 650A-1 for a single pipe, 650A-2 for two pipes. etc.

SUPPORT SPACING:

As per CAN1-B149.1M86 for natural gas and propane. Spacing for pipes other than gas to be determined by mechanical or electrical engineer for safe loading.

PROMINENT FEATURES:

Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:

See Section A of manual for STACK JACK Flashing options.

RECOMMENDED USE:

Suitable for all flat roofs as a single, or multiple insulated pipe support for existing pipe sizes from 12" (305 mm) to 48" (1220 mm) diameter. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:

20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:

No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):

Re-roofing pipe supports: Thaler [MERS-650A-1] adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type fasteners supplied by others), for fastening to structural roof deck, cross-bar carrier, and Type 304 stainless steel pipe cradle [assemblies] sized to suit [___] actual O.D. pipes [sized to suit pipe sizes shown on the drawings]; [SJ-34 non-insulated New Standard STACK JACK flashing for concrete deck], [SJ-37 pre-insulated New Standard STACK JACK for steel deck], 7" (178 mm)] high flashing, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

THALER

F-8

T-175 SLIDER

STAINLESS STEEL
SET SCREWS

T-165 SLIDER

ALUMINUM CROSS
BAR CARRIER (T-150)

T-165 SLIDER

T-185 SLIDER

T-175 SLIDER

PERSPECTIVE VIEW OF CROSS-BAR CARRIER

TYPICAL MERS-650A ALUMINUM SUPPORT
(LARGE SCALE DETAIL)

MERS-650A-2

MERS-650A-3

MERS-650A-4

MERS-650A-8

THALER

LIGHTING POLE (BY OTHERS)

INSIDE DIAMETER REQUIRED

STAINLESS STEEL LIGHTING POLE ADAPTER STUB (DIAMETER TO SUIT) WITH THREADED END STANDARD 1-1/2" (38 mm) DIA. HOLE TO RECEIVE ELECTRICAL CONDUIT

DRILL 9/16" (14 mm) HOLE 2" (51 mm) UP FROM BOTTOM

2" (51 mm)

1/2" (13 mm) S.S. BOLT

STAINLESS STEEL CAP

6-5/8"DIA x 9/32" x 13-1/4" HIGH (168 mm x 7 mm x 337 mm) PIPE WELDED TO 3/4" x 14" x 14" (19 mm x 356 mm x 356 mm) STEEL PLATE

MANUFACTURER'S STANDARD STACK JACK (SJ-105) FLASHING AVAILABLE IN ALUMINUM, COPPER, OR STAINLESS STEEL

8" (203 mm)

14" (356 mm) OR 18" (457 mm)

4" (102 mm)

5/8" (16 mm) S.S. ALLEN KEY BOLT AND EPDM GASKET SEAL

BUR ILLUSTRATED

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

FOR INVERTED ROOF PROVIDE 1" (25 mm) MIN. CEMENT GROUT OVER BASE PLATE AND TAPER FOR RADIUS OF 36" (915 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE

FASTENING METHODS

1/4" x 14" x 14" (6 mm x 356 mm x 356 mm) UNDER DECK PLATE

T6   T7

Specify the fastening method required by adding the appropriate suffix to a model number e.g. MERS-700-T6

MERS-700 TERRACE LIGHTING ROOF SUPPORT
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-700 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/lighting pole adapter stub, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to the end of model number, e.g. MERS-700-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Pipe Roller Assemblies: Thread hollow aluminum upper support onto lower support leg, place pipe onto cradle assembly and install stainless steel retaining strap over pipe allowing for clearance between pipe and strap.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-700-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
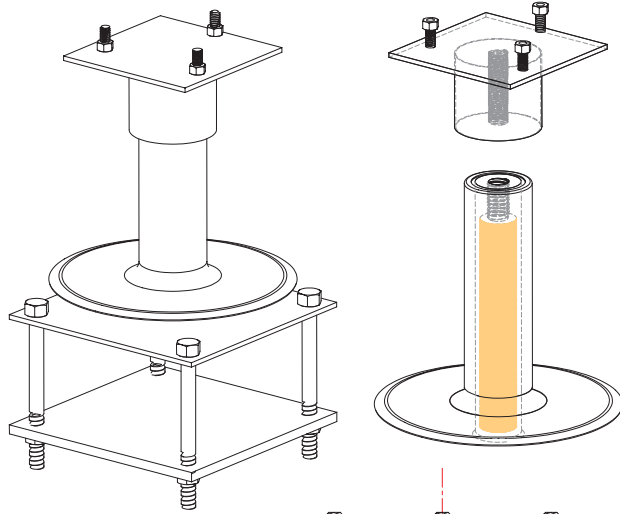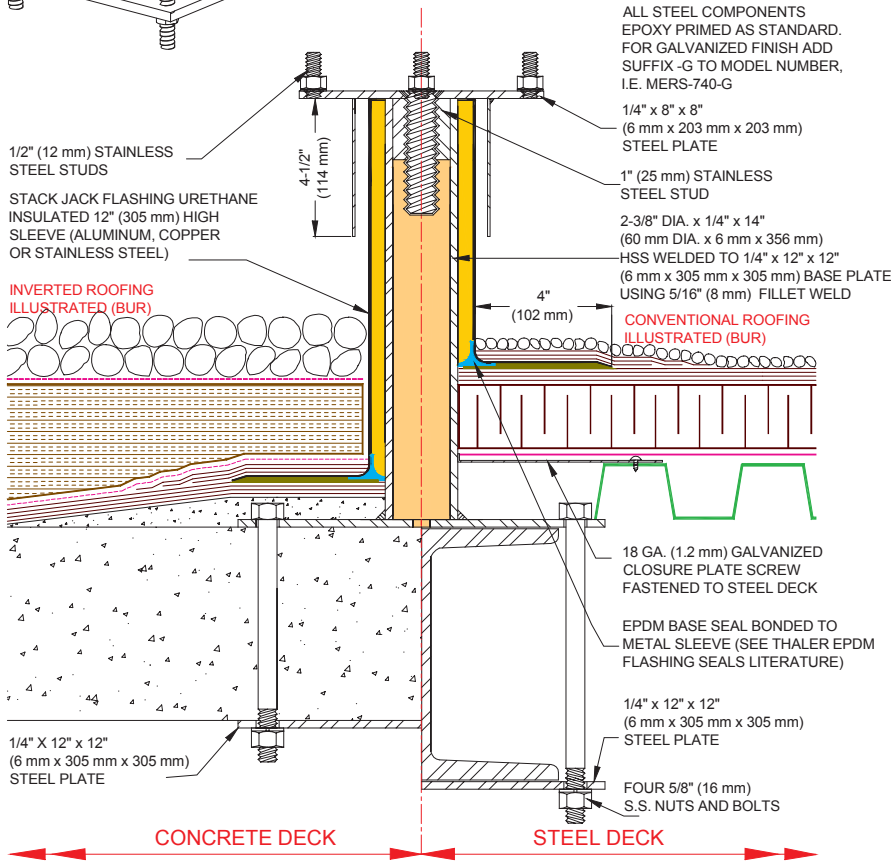
DESCRIPTION:
Thaler MERS-700 Terrace Lighting Roof Support consists of urethane insulated, epoxy primed, hollow steel support and mounting plate, mounting hardware(adhesive type supplied by others), galvanized threaded steel cap with round (diameter to suit) stainless steel lighting pole adapter stub. The centre of the support is provided with a 1-1/2" (38 mm) hole to accommodate an electrical conduit (lighting pole and conduit by others). Urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking).

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Suitable for all flat roofs as a terrace lighting roof support.
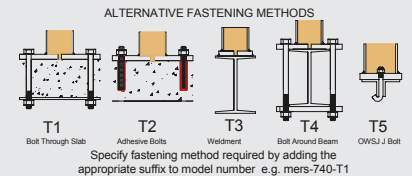
WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Terrace lighting roof supports: Thaler MERS-700, [14" (356 mm) high] [18" (457 mm) high] epoxy coated, urethane insulated hollow steel support including appropriate hardware (supplied by others) for fastening to structural roof deck; galvanized threaded cap with [___] dia. s.s. lighting pole adapter stub; weatherproof 5/8" (16 mm) lock-bolt with EPDM seal to prevent counter-rotation of support and lighting pole (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

**Exploded View MERS-700
Terrace Lightning Support**

**3-D Views Showing Different Types
of Lightening Supported by Using
Thaler MERS-700 Lightening Support**

SEE REVERSE SIDE OF PAGE FOR MERS-707-2, MERS-707-3 AND MERS-707-4 MODEL SUPPORTS

MERS-707-1

ROOF SPECIALTIES
MERS-707-1/-2/-3/-4 GAS LINE/CONDUIT ROOF SUPPORTS (All Metal)

DESCRIPTION:
The Thaler MERS-707 selection of gas line/conduit roof supports consist of an aluminum base and stainless steel pipe roller assembly. The support is designed to overcome the serious limitations of existing gas line/conduit roof supports that can cause damage to the roof membrane as a result of expansion and contraction of the pipe(s), and the unsightly, unworkable "home-made" supports often rigged on the roof at the contractor's discretion. The MERS-707 is available in four different size models (1, 2, 3 and 4 pipe).

PROMINENT FEATURES:
Roller assembly accommodates pipe expansion and contraction and eliminates "tipping" of support and shearing or gouging of roof membrane. Aesthetically pleasing (ensures proper finishing touch on roof). Durable design eliminates maintenance typically associated with deteriorating wood, styrofoam, masonry or other types of unreliable materials used for supports. Eliminates problem of wind-blown, missing styrofoam supports that typically result in pipe sag and stress at pipe joints.

PIPE SIZES AND SUPPORT SPACING:
Accommodates gas pipe/conduit dia. from 1" to 4" (25 mm to 102 mm).

OPTIONS:
EPDM end caps for extruded aluminum bases. For more economical gas line support wood base can be used.

RECOMMENDED USE:
Suitable for all flat roofs as a natural gas/propane pipe or conduit roof support.

APPROVALS:
Meets performance criteria of natural gas producers in both Canada and U.S. including the requirements of CAN1-B149-M86 (Installation Code for Natural Gas and Propane Burning Appliances and Equipment).

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.
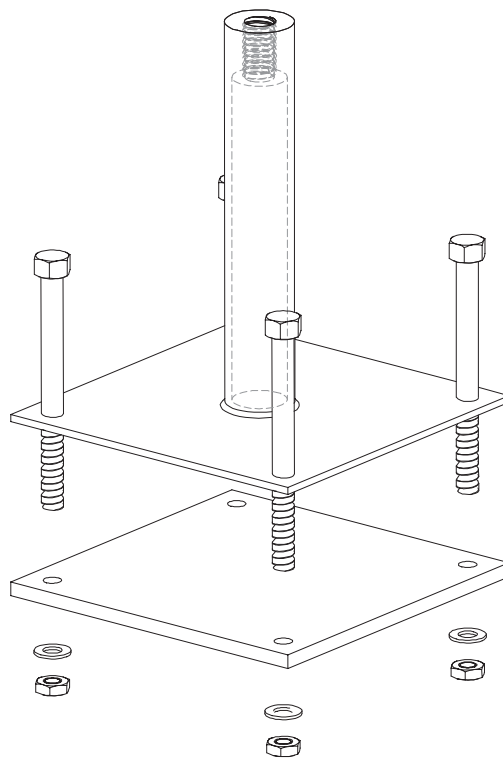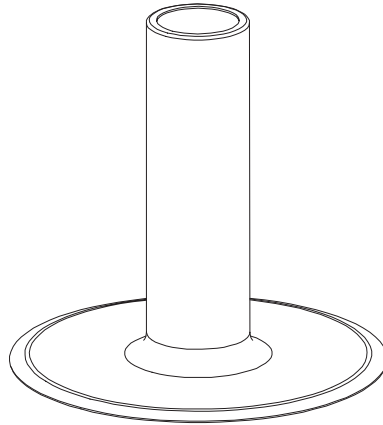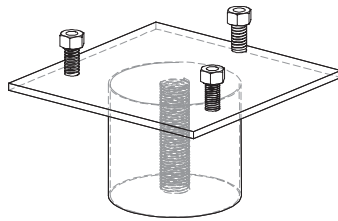
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
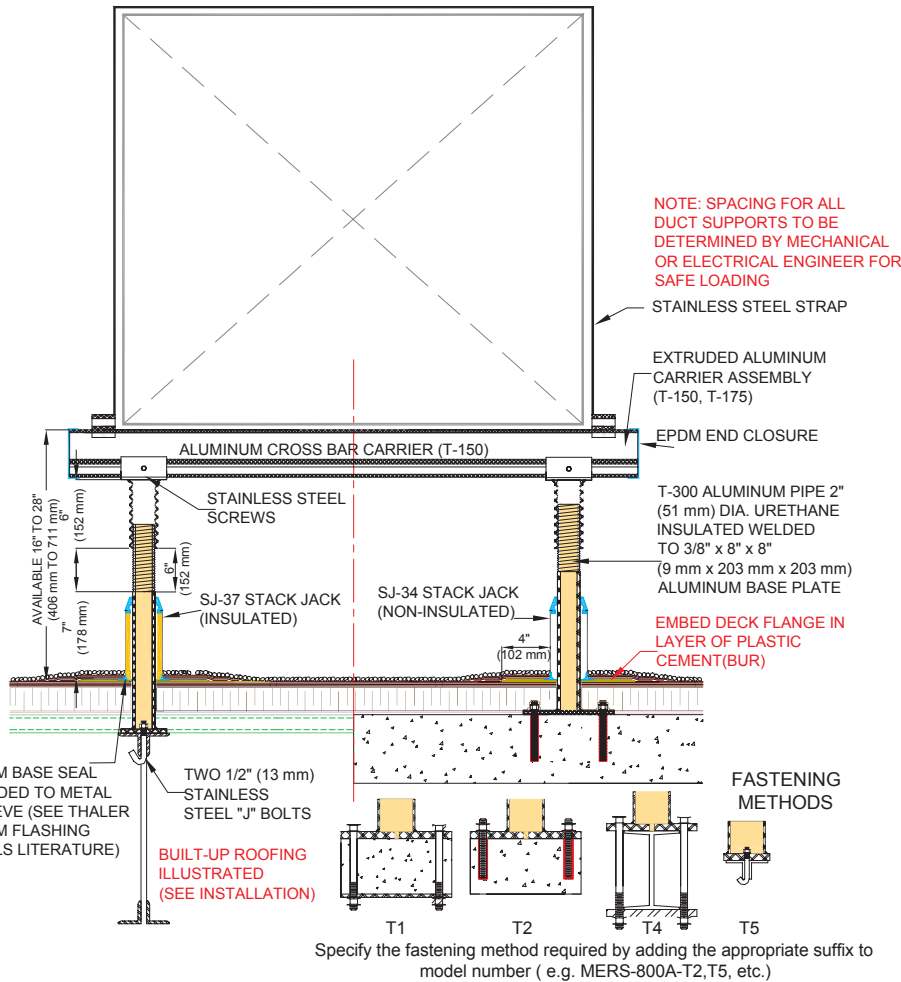**Gas line /conduit roof supports:** Thaler [MERS-707-1] [MERS-707-2] [MERS-707-3] [MERS-707-4] supports for [_____dia. pipe size(s)] [pipe sizes as shown on the drawings]; with: 6061-T6 alloy, mill finish, extruded aluminum base assembly and type 304 stainless steel roller and clearance Type retaining strap, all sized to suit pipe diameter(s) [and EPDM end caps] manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

ALUMINUM EXTRUSIONS

EXTRUDED ALUMINUM T-150 BEAM SECTION

EXPLODED VIEW DETAIL

12" (305 mm)

S.S. ROLLER

EPDM END CAP (OPTIONAL)

ALUMINUM EXTRUSIONS

5-3/8" (137 mm)

SECTION THROUGH PIPE

12" (305 mm)

S.S. SET SCREW
12" x 12" x 1/4" (305 mm x 305 mm x 6 mm) ALUMINUM PLATE WELDED TO EXTRUSION ABOVE (T-165)

S.S. RETAINING STRAP

S.S. BOLT

SECTION THROUGH SUPPORT

MERS-707-1 GAS LINE/CONDUIT ROOF SUPPORT (All Metal)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-707 selection of roof supports are installed by placing the pre-assembled supports loose over the asphalt flood coat or membrane on conventional roofs (BUR, ModBit or single ply) or over the water permeable fabric on ballasted roofs, at the required centres, and as follows:

BUR: Place pea gravel around support.

Ballasted Roofs: Place ballast around support.

Stainless Steel Retaining Strap: Secure strap after or prior to installing pipe (installer's option).

Precautions: Support is designed to ensure 1/4" (6 mm) clearance between pipe and s.s. retaining strap. It is imperative that this clearance be maintained, otherwise a strap inadvertently applied tight to the pipe will cause the support (any type support) to shift over time and possibly gouge the membrane during expansion and contraction (thermal movement) of the pipe. Locate supports near, but not under pipe joints if possible.

Ordering: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

24"
(610 mm)

S.S.ROLLER

EPDM END CAP (OPTIONAL)

LINE OF
ROOF

24" (610 mm)

12" (305 mm)

MERS-707-2 GAS LINE/CONDUIT ROOF SUPPORT

36"
(9.15 m)

S.S.ROLLER

MERS 707-3 GAS LINE/CONDUIT ROOF SUPPORT

48" (1220 mm)

12" (305 mm)

36" (915 mm)

12" (305 mm)

48"
(1220 mm)

± 0.00   ± 0.00

MERS 707-4 GAS LINE/CONDUIT ROOF SUPPORT

THALER
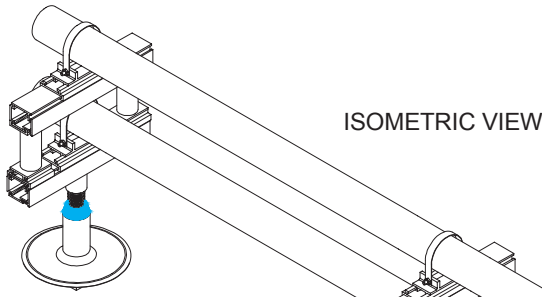
ISOMETRIC VIEW

**MERS-708
TWO TIER MODEL (One Pipe Per Tier)**
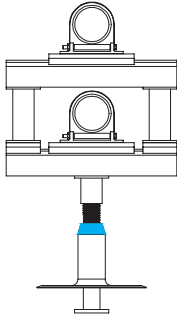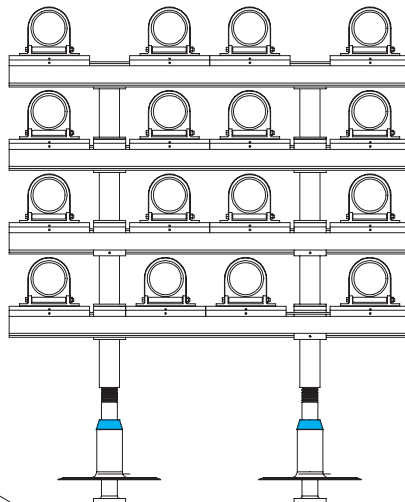
END VIEW

**MERS-708
FOUR TIER MODEL
(Four Pipes Per Tier)**

END VIEW
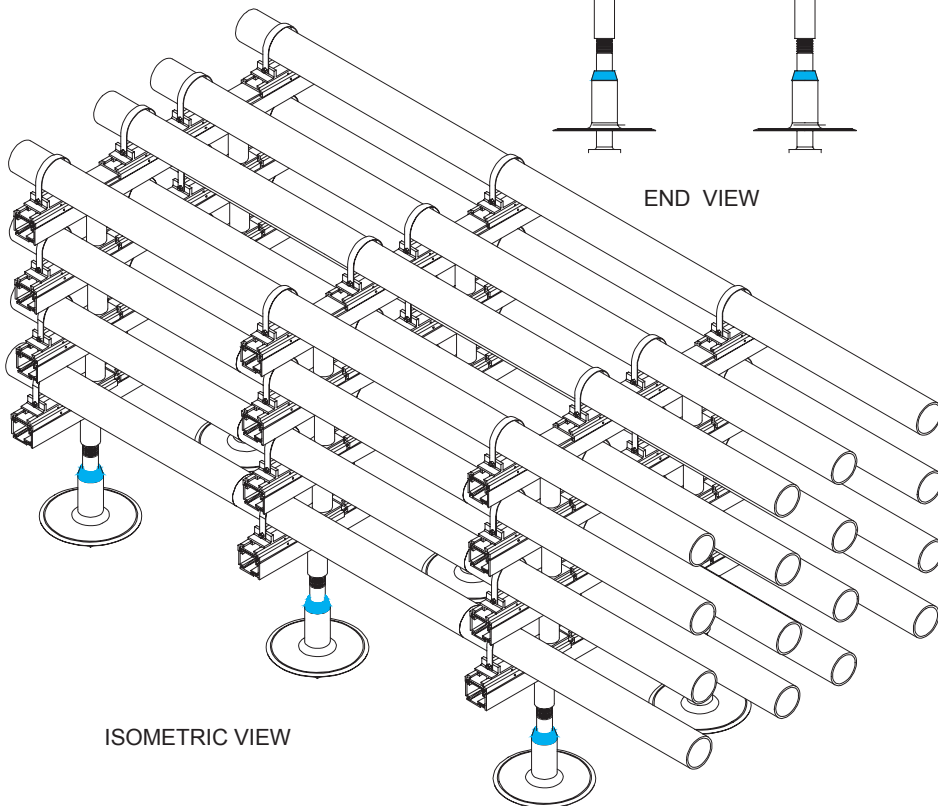
NOTE: FOR COMPLETE PRODUCT DATA, SEE MERS-630 AND MERS-S707 DATA SHEETS (PAGES F-7 AND F-10) AS TIERED MODEL IS AN ASSEMBLY OF PARTS OF THESE TWO MODELS.

SPECIFICATION (SHORT FORM):
Tiered gas line/conduit roof supports:
Thaler MERS-708 supports, tiered as indicated: with: 6061-T6 alloy mill finish, extruded aluminum cross-bar carrier assemblies, Type 304 stainless steel roller and clearance type retaining straps, all sized to suit pipe diameters [and EPDM end caps]; adjustable height 6061-T6 hollow aluminum, mill finish, urethane insulated vertical base supports, 2" (51 mm) dia. with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck and matching, fixed (non-adjustable) intermediate vertical supports; [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93 with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

ISOMETRIC VIEW

THALER   F-11

ISOMETRIC VIEW

MERS-709 COMBO PIPE SUPPORT & CROSS-OVER STAIR
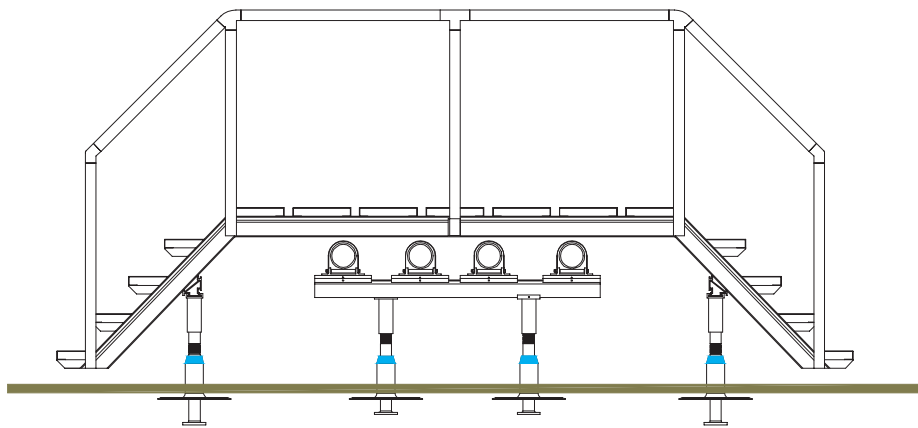
SIDE VIEW

NOTE: FOR COMPLETE PRODUCT DATA, SEE MERS-630, MERS-707 AND ARS-680 DATA SHEETS (PAGES F-7, F-10 AND E-21) AS THE COMBO IS AN ASSEMBLY OF PARTS OF THESE THREE MODELS.

SPECIFICATION (SHORT FORM):
Combination pipe supports and cross-over stair: Thaler MERS-709 Combo Pipe Supports and Cross-Over Stair, consisting of [single] [double] [triple] [quadruple] pipe supports with; 6061-T6 alloy, mill finish, extruded aluminum base assembly and Type 304 s.s. roller and clearance type retaining straps, all sized to suit pipe diameter(s) [and EPDM end caps]; 6061-T6 mill finish aluminum, cross-over stair (Thaler ARS-680 stair) of size shown on the drawings with 3-3/4" x 3-3/4" x1/4" (95 mm x 95 mm x 6 mm) aluminum stringer/platform support beams, 1/8" x 1-1/2" x 9" x 3'-0" (3 mm x 38 mm x 229 mm x 915 mm) alum. treads [screwed] [welded] to 1-1/2" x 1-1/2" x 1/2" (38 mm x 38 mm x 12 mm) alum. stringer angle supports and platform support beams, 1-1/2" (38 mm) dia. Schedule 40 pipe rail; adjustable height hollow aluminum, urethane insulated pipe and stair supports 2" (51 mm) dia. with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck and [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93 with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

ROOF SPECIALTIES
MERS-730
SECURITY LIGHTING
ROOF SUPPORT

SEE REVERSE PAGE FOR 3-D ILLUSTRATIONS

LIGHTING HEAD (BY OTHERS)

90° SWIVEL

2" (51 mm) DIA. CONDUIT HEAD

3/4" (19 mm) STAINLESS STEEL LOCK BOLTS WITH EPDM SEAL

6-5/8" DIA. x 13-1/4" HIGH, URETHANE INSULATED (168 mm x 7 mm x 337 mm) PIPE WELDED TO 3/4" x 14' x 14" (19 mm x 356 mm x 356 mm) STEEL PLATE

THREADED STEEL CAP

T-TYPE LOCKING HANDLES

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

MANUFACTURER'S STANDARD STACK JACK FLASHING AVAILABLE IN ALUMINUM, COPPER OR STAINLESS STEEL

EPDM BASE SEAL BONDED TO METAL SLEEVE

14" (356 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

MERS-730 SECURITY LIGHTING ROOF SUPPORT
PATENTED

DESCRIPTION:
Thaler MERS-730 Security Lighting Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, mounting hardware (adhesive type supplied by others), (galvanized optional) threaded steel cap with a conduit radius head and T-type locking handles. The centre of the support is provided with a 2" (51 mm) diameter hole to accommodate an electrical conduit (lighting head and conduit by others). A urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking).

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
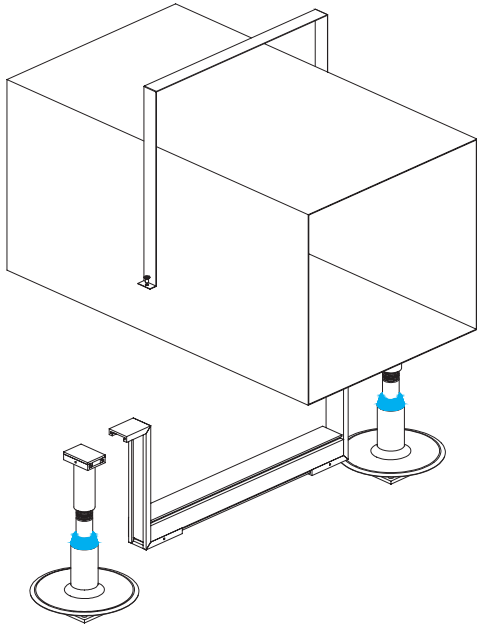Suitable for all flat roofs as a security lighting roof support.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.
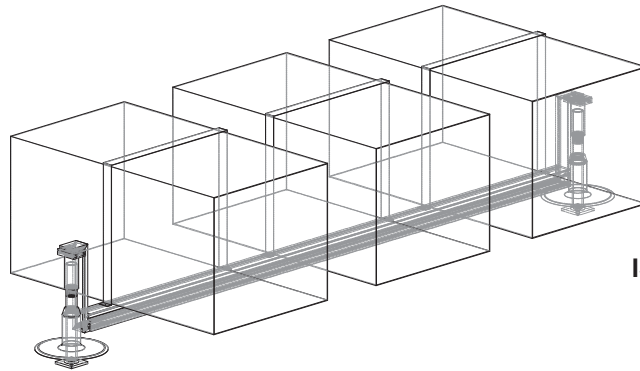
MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Security lighting roof supports: Thaler MERS-730 epoxy coated, urethane insulated hollow steel support including appropriate mounting hardware (adhesive type supplied by others) for fastening to structural roof deck; (galvanized optional) threaded steel cap with 2" (51 mm) dia. conduit head; weather proof 3/4" (19 mm) lock-bolts with EPDM seals to prevent counter-rotation of cap/conduit head; and manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.
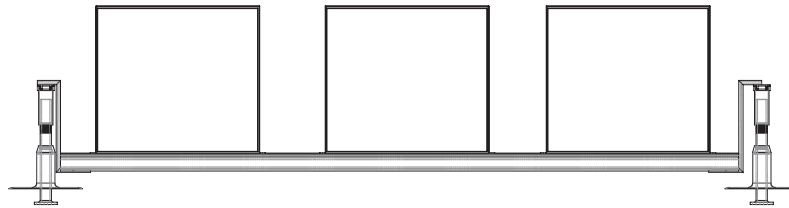
INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-730 Roof Support is installed by fastening the mounting plate to the structural roof deck with the conduit head facing in the proper direction placing the flashing sleeve over the support and roof membrane (after removing the conduit head), re-installing the steel cap/conduit head, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing. and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated flashing aluminum, etc. deck flange by adding suffix P to the end of model number, e.g. MERS-730-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Lighting and Support Components: Thread upper portion of support (with cap and conduit head) onto lower support leg, tighten T-Type locking handles, mechanically attach lighting head (by others) and secure cap with stopper bolts.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-730-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
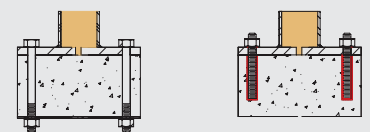
FASTENING METHODS

T6   T7

Specify the fastening method required by adding the appropriate suffix to a model number e.g. MERS-730-T6

THALER

SWIVEL 90°
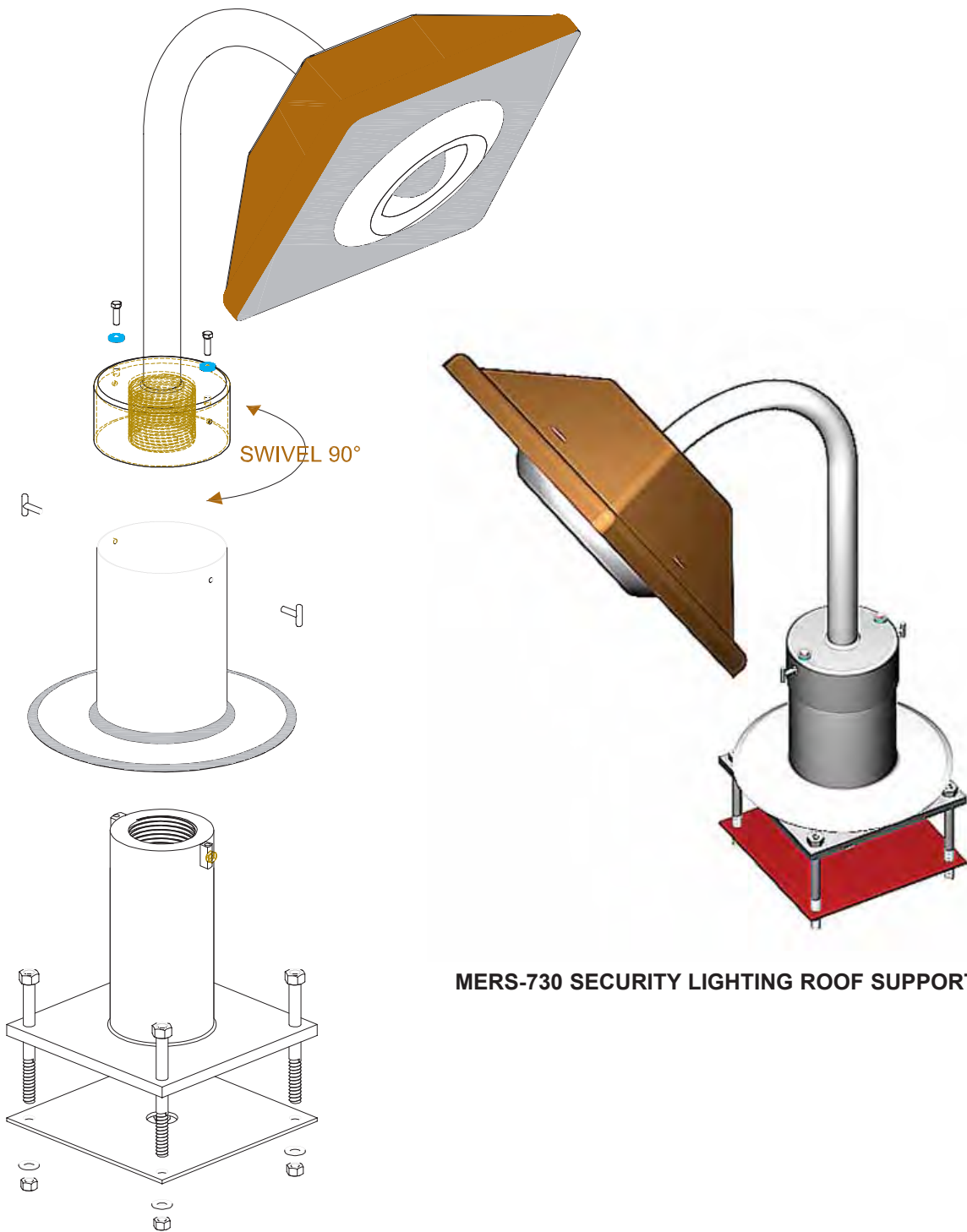
MERS-730 SECURITY LIGHTING ROOF SUPPORT

EXPLODED VIEW OF MERS-730 SECURITY LIGHTING ROOF SUPPORT

SEE REVERSE SIDE OF PAGE FOR MORE 3-D ILLUSTRATIONS

ALL STEEL COMPONENTS EPOXY PRIMED AS STANDARD. FOR GALVANIZED FINISH ADD SUFFIX -G TO MODEL NUMBER, I.E. MERS-740-G

1/4" x 8" x 8" (6 mm x 203 mm x 203 mm) STEEL PLATE

1" (25 mm) STAINLESS STEEL STUD

2-3/8" DIA. x 1/4" x 14" (60 mm DIA. x 6 mm x 356 mm) HSS WELDED TO 1/4" x 12" x 12" (6 mm x 305 mm x 305 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD

4" (102 mm)

1/2" (12 mm) STAINLESS STEEL STUDS

STACK JACK FLASHING URETHANE INSULATED 12" (305 mm) HIGH SLEEVE (ALUMINUM, COPPER OR STAINLESS STEEL)

4-1/2" (114 mm)

INVERTED ROOFING ILLUSTRATED (BUR)

CONVENTIONAL ROOFING ILLUSTRATED (BUR)

18 GA. (1.2 mm) GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

1/4" x 12" x 12" (6 mm x 305 mm x 305 mm) STEEL PLATE

1/4" X 12" x 12" (6 mm x 305 mm x 305 mm) STEEL PLATE

FOUR 5/8" (16 mm) S.S. NUTS AND BOLTS

CONCRETE DECK   STEEL DECK

MERS-740 MISCELLANEOUS LIGHTING ROOF SUPPORT
PATENTED

DESCRIPTION:
Thaler MERS-740 Miscellaneous Lighting Roof Support consists of a urethane insulated, epoxy primed, hollow steel support and mounting plate, mounting hardware (adhesive type supplied by others), adjustable height (galvanized optional) steel cap and epoxy primed steel plate designed to receive a lighting fixture (by others). An urethane insulated flashing, available in aluminum, copper, or stainless steel, with EPDM Base Seal, completes the assembly.

PROMINENT FEATURES:
Condensation free. Maintenance free (never needs caulking). Threaded leg assembly provides up to 2" (51 mm) vertical adjustment for levelling if necessary.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for Bur and ModBit roof membrane.

RECOMMENDED USE:
Suitable for all flat roofs as a support for any one of a number of miscellaneous rooftop lighting fixtures.
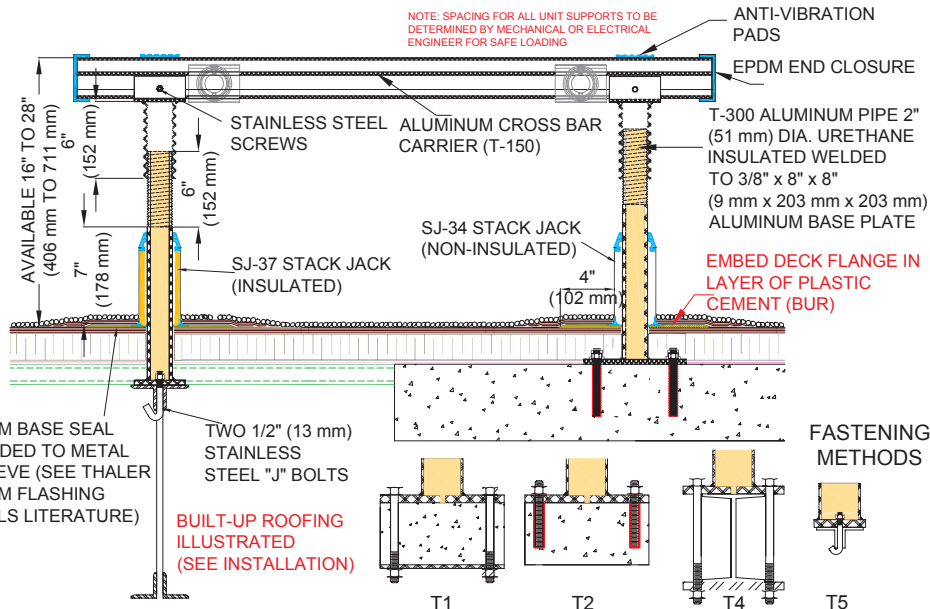
WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Lighting roof supports: Thaler MERS-740 adjustable height, epoxy coated, urethane insulated hollow steel supports, including appropriate hardware for fastening to structural roof deck, cap/plate assembly with three s.s. studs located to suit light fixture (by others), set screw to lock cap in place; and manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-740 Roof Support is installed by fastening the mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the steel cap/plate support, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
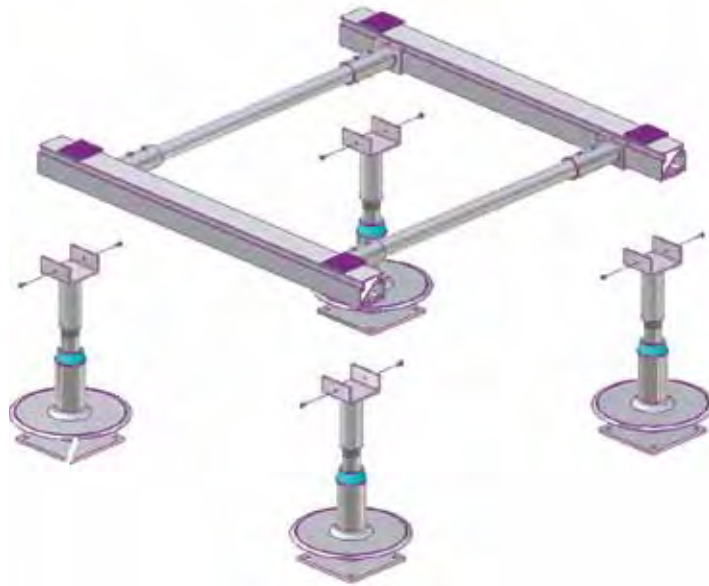
ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to top of metal flashing and then screw cap down over single ply. Note: for PVC membrane, specify PVC coated aluminum, etc. flashing deck flange by adding suffix P to the end of model number, e.g. MERS-740-A-P; weld roofing to deck flange using PVC torch.
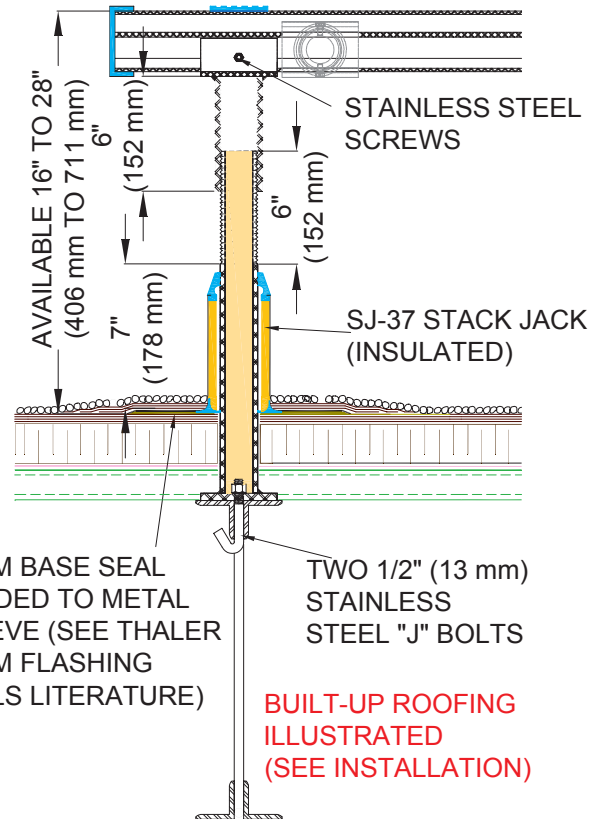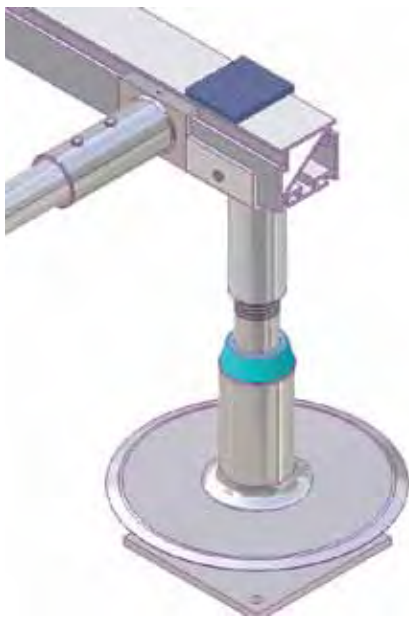
Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Plate/Lighting Components: Thread upper portion of support (with plate) onto lower support leg and secure lighting bracket, frame, box, etc. (by others) to plate as desired using the stainless steel studs and bolts provided.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-740-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ALTERNATIVE FASTENING METHODS

T1	T2	T3	T4	T5
Bolt Through Slab	Adhesive Bolts	Weldment	Bolt Around Beam	OWSJ J Bolt

Specify fastening method required by adding the appropriate suffix to model number e.g. mers-740-T1

**Exploded View MERS-740 Miscellaneous
Lightening Roof Support**
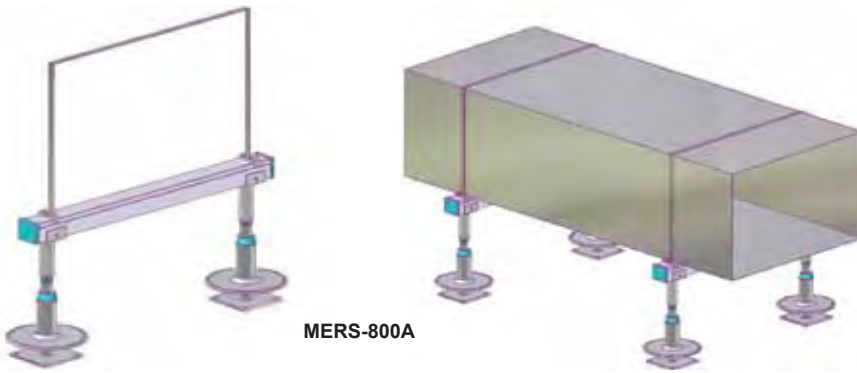
MERS-800A

DESCRIPTION:
Thaler MERS-800A Duct Support consists of a pair of round, urethane insulated, hollow section 6061-T6 aluminum supports with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type supplied by others), and cross-bar carrier with EPDM end caps. Urethane insulated STACK JACK flashings available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, complete the supports.

SUPPORT SPACING:
To be determined by mechanical engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashing options.

RECOMMENDED USE:
Suitable for all flat roofs as a duct support. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Duct supports: Thaler MERS-800A, adjustab- le height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck and cross-bar carrier assembly of length to suit application with EPDM end caps; [SJ-34, non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

NOTE: SPACING FOR ALL DUCT SUPPORTS TO BE DETERMINED BY MECHANICAL OR ELECTRICAL ENGINEER FOR SAFE LOADING

STAINLESS STEEL STRAP

EXTRUDED ALUMINUM CARRIER ASSEMBLY (T-150, T-175)

EPDM END CLOSURE

ALUMINUM CROSS BAR CARRIER (T-150)

STAINLESS STEEL SCREWS

T-300 ALUMINUM PIPE 2" (51 mm) DIA. URETHANE INSULATED WELDED TO 3/8" x 8" x 8" (9 mm x 203 mm x 203 mm) ALUMINUM BASE PLATE

SJ-37 STACK JACK (INSULATED)

SJ-34 STACK JACK (NON-INSULATED)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT(BUR)

AVAILABLE 16" TO 28" (406 mm TO 711 mm)
6" (152 mm)
6" (152 mm)
7" (178 mm)
4" (102 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

TWO 1/2" (13 mm) STAINLESS STEEL "J" BOLTS

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

FASTENING METHODS

T1   T2   T4   T5

Specify the fastening method required by adding the appropriate suffix to model number (e.g. MERS-800A-T2,T5, etc.)

MERS-800A DUCT SUPPORT
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-800A Duct Support is installed at required centres by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the cross-bar carrier, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to the end of model number, e.g. MERS-800A-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Duct Cross-Bar Carrier: Thread hollow aluminum upper support onto lower support leg, install cross-bar carrier, and place duct (by others) on carrier.
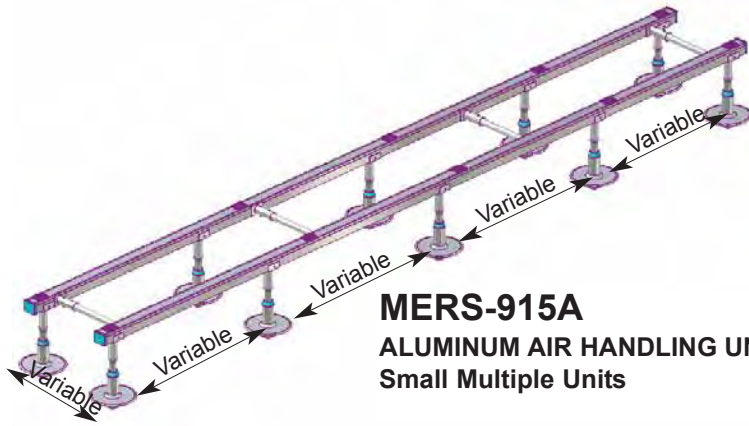
Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-800A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
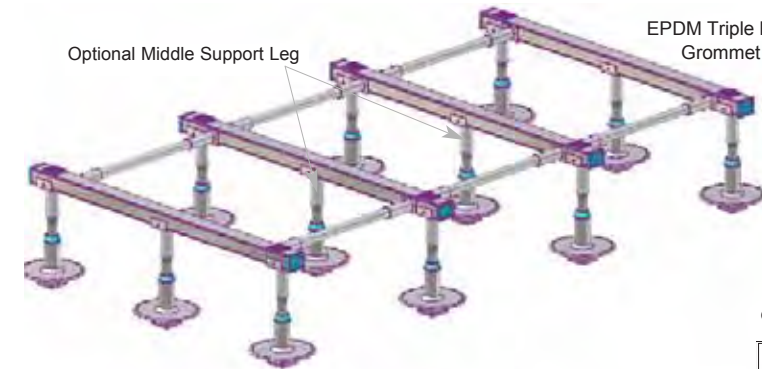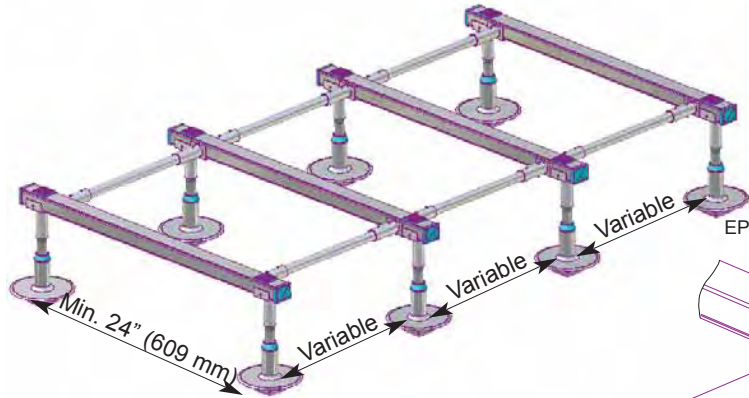
**MERS-800A
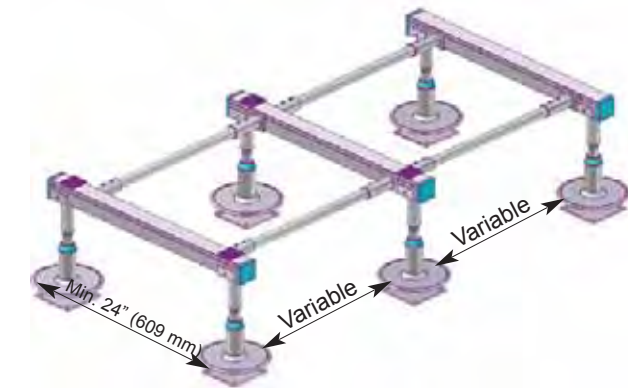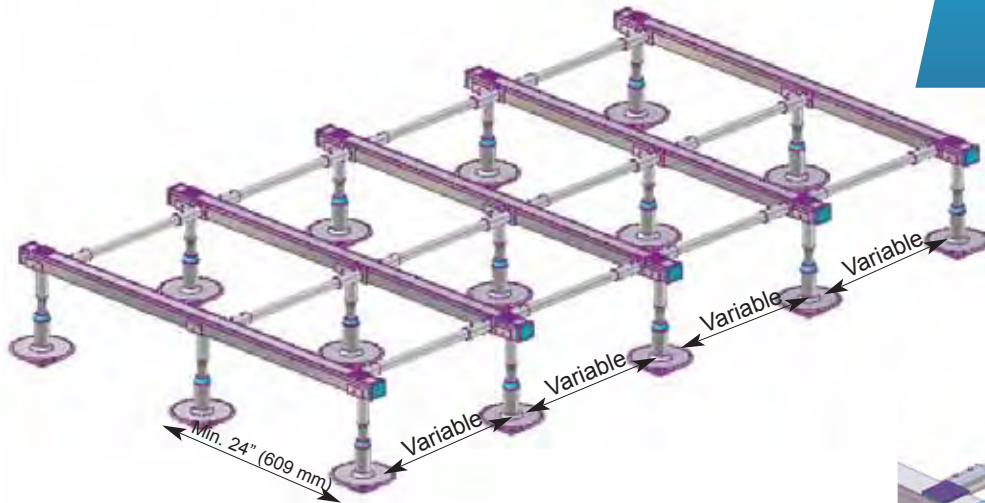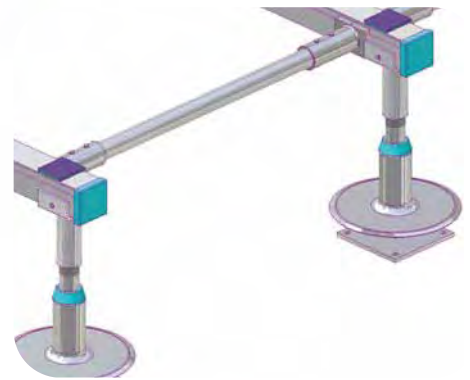DUCT SUPPORT**
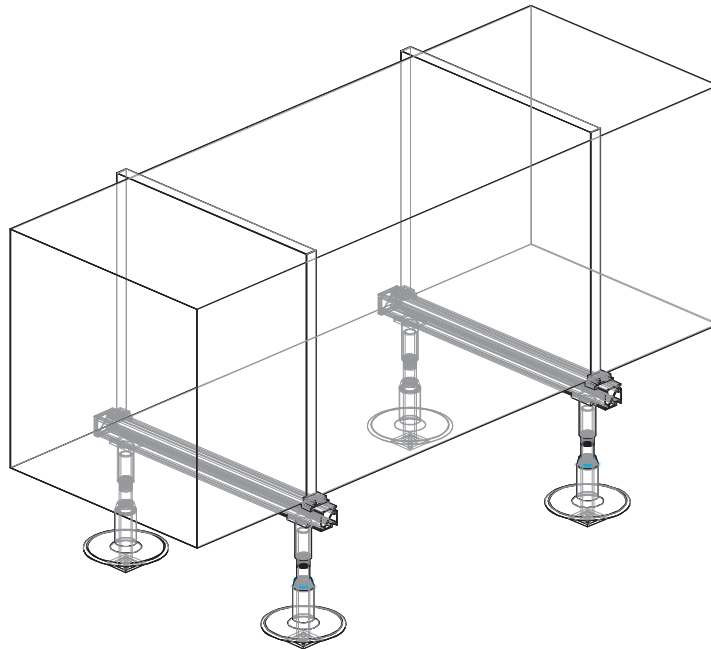
Note: The following table indicates the allowable uniform working loads for aluminum cross bar carrier beam T-150. The beam extends a minimum of 3" (76 mm) beyond the center line of support.

Span	Maximum Uniformly Distributed Load	Total Load
3'-0" (914 mm)	900 plf (13 kN/m)	2700 lbs (12.15 kN)
4'-0" (1219 mm)	675 plf (9.8 kN/m)	2700 lbs (12.15 kN)
5'-0" (1524 mm)	540 plf (7.9 kN/m)	2700 lbs (12.15 kN)
6'-0" (1829 mm)	450 plf (6.6 kN/m)	2700 lbs (12.15 kN)
7'-0" (2133 mm)	330 plf (4.8 kN/m)	2310 lbs (10.39 kN)
8'-0" (2438 mm)	250 plf (3.6 kN/m)	2000 lbs (9kN)
9'-0" (2743 mm)	200 plf (2.9 kN/m)	1800 lbs (8.1 kN)
10'-0" (3048 mm)	160 plf (2.3 kN/m)	1600 lbs (7.2 kN)

**MERS-800A MULTIPLE
DUCT SUPPORT**

THALER

F-15A

NOTE: SPACING FOR ALL DUCT SUPPORT TO BE DETERMINED BY MECHANICAL OR ELECTRICAL ENGINEER FOR SAFE LOADING

S.S. SET SCREW

6" (152 mm) VARIABLE

AVAILABLE 16" TO 23" (406 mm TO 584 mm)

STAINLESS STEEL STRAP 1/8" x 1" (3 mm x 25 mm)
EXTRUDED ALUMINUM ASSEMBLY (T-165) WELDED TO (T-175)
EXTRUDED ALUMINUM (T-175) SLIDER
T-300 ALUMINUM PIPE 2" (51 mm) DIA. URETHANE INSULATED WELDED TO 3/8" x 8" x 8" (9 mm x 203 mm x 203 mm) BASE PLATE
EXTRUDED ALUMINUM CARRIER ASSEMBLY (T-150, T-175, T-185)
SJ-34 STACK JACK (NON-INSULATED) 4" (102 mm)

S.S. SET SCREW
S.S. SELF TAPING SCREW
ALUMINUM CROSS-BAR CARRIER (T-150)
SJ-37 STACK JACK (INSULATED)
1" MIN. (25 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)
TWO 1/2" (13 mm) STAINLESS STEEL "J" BOLTS
BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

T1   T2   T4   T5
FASTENING METHODS
Specify the fastening method required by adding the appropriate suffix to a model number e.g. MERS-850A-T2,T5

MERS-850A RE-ROOFING DUCT SUPPORT
PATENTED

DESCRIPTION:
Thaler MERS-850A Re-Roofing Duct Support consists of a pair of round, urethane insulated, hollow section 6061-T6 aluminum supports with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type supplied by others), and cross-bar carrier assembly. Urethane insulated STACK JACK flashings available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, complete the supports.

SUPPORT SPACING:
To be determined by mechanical engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashing options.

RECOMMENDED USE:
Suitable for all flat roofs as a duct support for existing ducts. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Re-roofing duct supports: Thaler MERS-850A, 16" to 23" (405 mm to 584) high adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51" mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, and cross-bar carrier assembly of length to suit application; [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm)] high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-850A Duct Support is installed at required centres by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the cross-bar carrier assembly, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
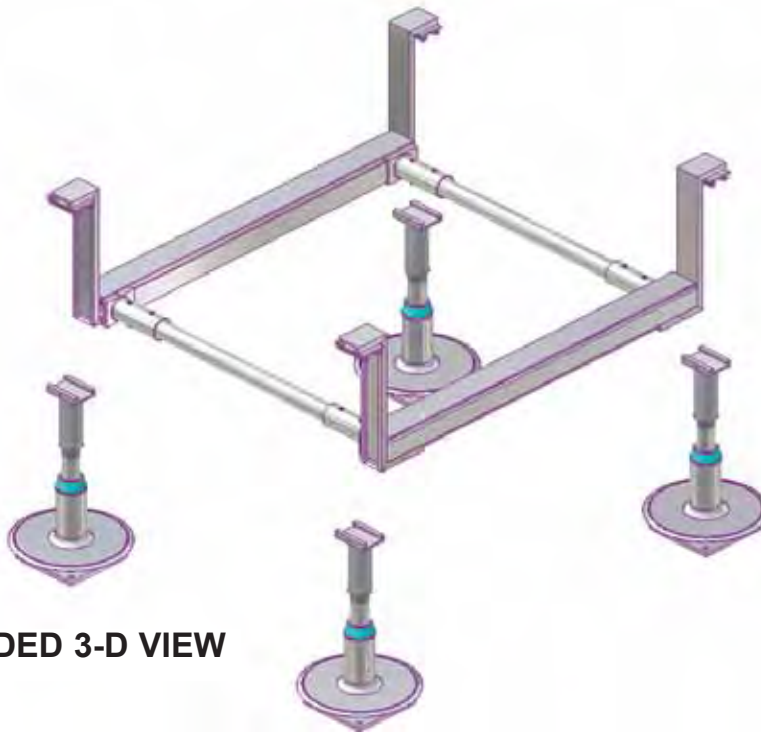
ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to the end of model number, e.g. MERS-850A-A-P; weld roofing to deck flange using PVC torch.
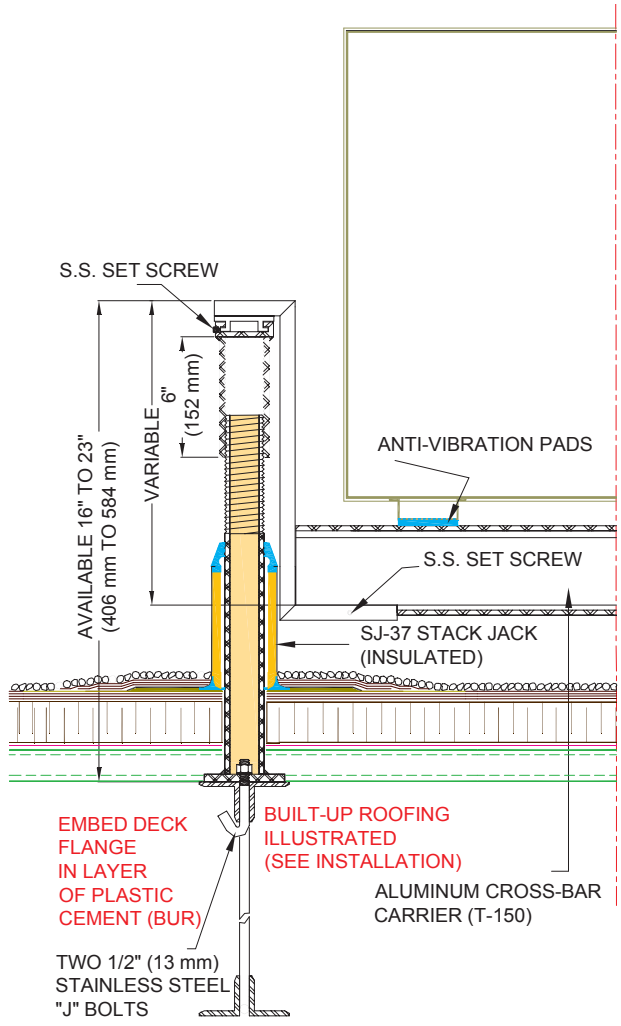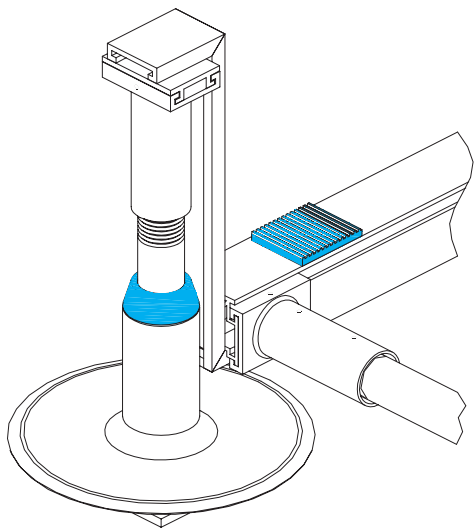
Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Duct Cross-Bar Carrier Assembly: Thread hollow aluminum upper supports onto lower support legs to exact elevation required, install cross-bar carrier assembly, and duct (by others).

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-850A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
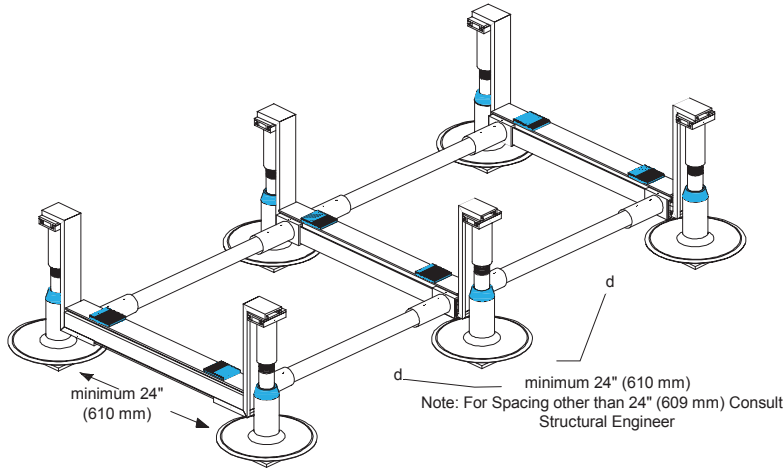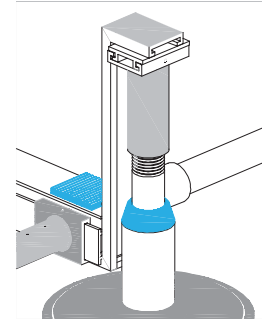
**MERS-850A
RE-ROOFING DUCT SUPPORT**

**MERS-850A
RE-ROOFING MULTIPLE
DUCT SUPPORT**

ISOMETRIC VIEW

FRONT VIEW

ISOMETRIC VIEW
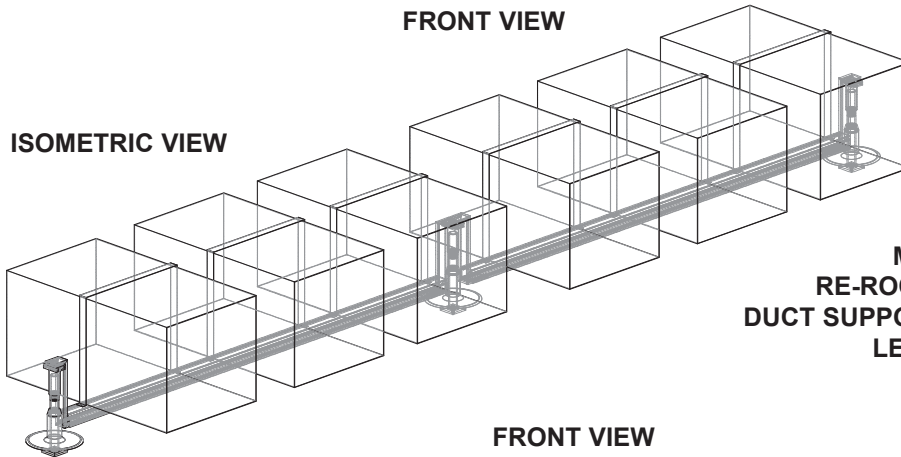
**MERS-850A
RE-ROOFING MULTIPLE
DUCT SUPPORT WITH ADDITIONAL
LEG SUPPORT**

FRONT VIEW

THALER

F-16A
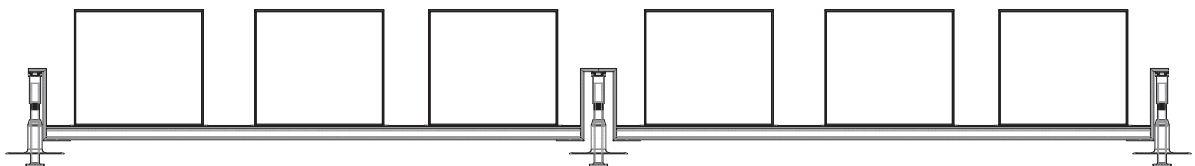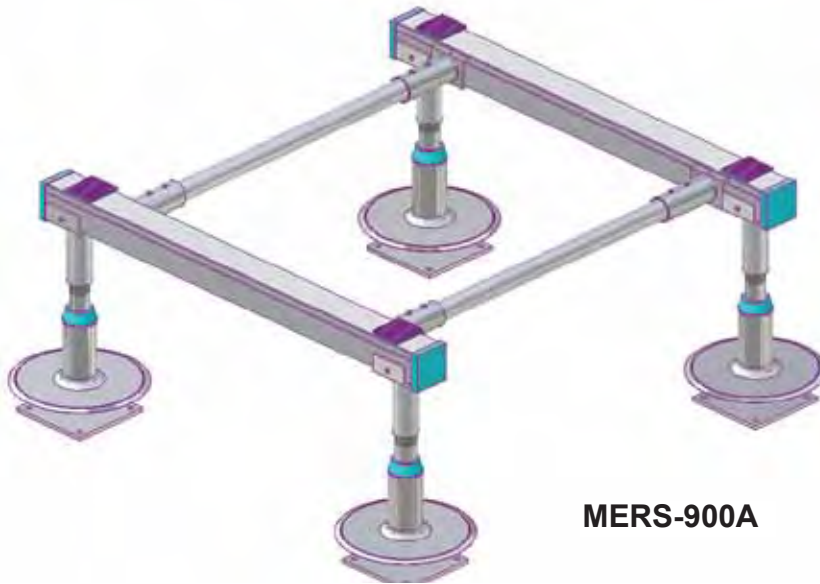
MERS-900A

DESCRIPTION:
Thaler MERS-900A Air Handling Unit Support consists of two pairs of round, urethane insulated, hollow section 6061-T6 aluminum supports with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type supplied by others), and cross-bar carrier with EPDM end caps and EPDM anti-vibration pads. Two 1-1/2" (38 mm) diameter pipe sections tie the two pairs of supports together for added strength. Urethane insulated STACK JACK flashings available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, complete the supports.

SUPPORT SPACING:
To be determined by mechanical or electrical engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashing options.

RECOMMENDED USE:
Suitable for all flat roofs as an air handling unit support. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Air handling unit supports: Thaler MERS-900A, 16" to 28" (406 mm to 711 mm) high adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, and cross-bar carrier of length to suit application with EPDM end caps, EPDM anti-vibration pads and 1-1/2" (38 mm) dia. pipe section reinforcing ties; [SJ-34, non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated, New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93 with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

NOTE: SPACING FOR ALL UNIT SUPPORTS TO BE DETERMINED BY MECHANICAL OR ELECTRICAL ENGINEER FOR SAFE LOADING

ANTI-VIBRATION PADS

EPDM END CLOSURE

AVAILABLE 16" TO 28" (406 mm TO 711 mm)

6" (152 mm)

6" (152 mm)

7" (178 mm)

STAINLESS STEEL SCREWS

ALUMINUM CROSS BAR CARRIER (T-150)

T-300 ALUMINUM PIPE 2" (51 mm) DIA. URETHANE INSULATED WELDED TO 3/8" x 8" x 8" (9 mm x 203 mm x 203 mm) ALUMINUM BASE PLATE

SJ-37 STACK JACK (INSULATED)

SJ-34 STACK JACK (NON-INSULATED)

4" (102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

TWO 1/2" (13 mm) STAINLESS STEEL "J" BOLTS

FASTENING METHODS

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

T1   T2   T4   T5

SEE REVERSE SIDE OF PAGE FOR 3-D ILLUSTRATIONS

Specify the fastening method required by adding the appropriate suffix to a model number e.g. MERS-900A-T2,T5

MERS-900A AIR HANDLING UNIT SUPPORT (Small Units)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-900A Duct Support is installed at required centres by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the cross-bar carrier and pipe section reinforcing ties, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to the end of model number, e.g. MERS-900A-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Cross-Bar Carrier Assembly: Thread hollow aluminum upper supports onto lower support legs, install cross-bar carriers and pipe section reinforcing ties, and place air handling unit (by others) on carriers.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-900A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

EXPLODED VIEW

AVAILABLE 16" TO 28"
(406 mm TO 711 mm)

6"
(152 mm)

6"
(152 mm)

7"
(178 mm)

STAINLESS STEEL
SCREWS

SJ-37 STACK JACK
(INSULATED)

EPDM BASE SEAL
BONDED TO METAL
SLEEVE (SEE THALER
EPDM FLASHING
SEALS LITERATURE)

TWO 1/2" (13 mm)
STAINLESS
STEEL "J" BOLTS

BUILT-UP ROOFING
ILLUSTRATED
(SEE INSTALLATION)

TYPICAL MERS-900 ALUMINUM A/C UNIT SUPPORT (LARGE SCALE DETAIL)

THALER F-17A

MERS-915A
ALUMINUM AIR HANDLING UNIT SUPPORT
Small Multiple Units

Aluminum Cross-Bar
Carrier (T-150)

EPDM Anti-Vibration
Pads

EPDM
End Cap

1-1/2" (38 mm) Diameter
Pipe Section Cross Tie

STACK JACK Flashing Available
in Aluminum. Copper, or
Stainless Steel

EPDM Triple Pressure
Grommet Seal

TYPICAL VIEW OF SUPPORT LEGS

Optional Middle Support Leg

MERS-925A
**ALUMINUM AIR HANDLING UNIT
SUPPORT**

Note: The following table indicates the allowable uniform working
loads for the aluminum cross-bar carrier (T-150). The carrier
extends a minimum of 3" (76 mm) beyond the centre line of support.

Span	Maximum Uniformly Distributed Load	Total Load
3'-0" (914 mm)	900 plf (13 kN/m)	2700 lbs (12.15 kN)
4'-0" (1219 mm)	675 plf (9.8 kN/m)	2700 lbs (12.15 kN)
5'-0" (1524 mm)	540 plf (7.9 kN/m)	2700 lbs (12.15 kN)
6'-0" (1829 mm)	450 plf (6.6 kN/m)	2700 lbs (12.15 kN)
7'-0" (2133 mm)	330 plf (4.8 kN/m)	2310 lbs (10.39 kN)
8'-0" (2438 mm)	250 plf (3.6 kN/m)	2000 lbs (9kN)
9'-0" (2743 mm)	200 plf (2.9 kN/m)	1800 lbs (8.1 kN)
10'-0" (3048 mm)	160 plf (2.3 kN/m)	1600 lbs (7.2 kN)

MERS-926A
ALUMINUM AIR HANDLING UNIT SUPPORT

For Complete Product Data, See
MERS-900A Data Sheet (Page F-17):
For Short Form Specification Change
MERS-900A Model Number to
MERS-915A, MERS-925A
OR MERS-926

THALER

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MERS-920A
ALUMINUM AIR HANDLING UNIT SUPPORT
(Large Unit)

SIDE VIEW

Note: The following table indicates the allowable uniform working loads for the aluminum cross-bar carrier (T-150). The carrier extends a minimum of 3" (76 mm) beyond the centre line of support.

Span	Maximum Uniformly Distributed Load	Total Load
3'-0" (914 mm)	900 plf (13 kN/m)	2700 lbs (12.15 kN)
4'-0" (1219 mm)	675 plf (9.8 kN/m)	2700 lbs (12.15 kN)
5'-0" (1524 mm)	540 plf (7.9 kN/m)	2700 lbs (12.15 kN)
6'-0" (1829 mm)	450 plf (6.6 kN/m)	2700 lbs (12.15 kN)
7'-0" (2133 mm)	330 plf (4.8 kN/m)	2310 lbs (10.39 kN)
8'-0" (2438 mm)	250 plf (3.6 kN/m)	2000 lbs (9kN)
9'-0" (2743 mm)	200 plf (2.9 kN/m)	1800 lbs (8.1 kN)
10'-0" (3048 mm)	160 plf (2.3 kN/m)	1600 lbs (7.2 kN)

Aluminum Cross-Bar Carrier (T-150)

EPDM Anti-Vibration Pads

EPDM End Cap

1-1/2" (38 mm) Diameter Pipe Section Cross Tie

EPDM Triple Pressure Grommet Seal

STACK JACK Flashing Available in Aluminum. Copper, or Stainless Steel

TYPICAL VIEW OF SUPPORT LEGS

For Complete Product Data, See MERS-900A Data Sheet (Page F-17): For Short Form Specification Change MERS-900A Model Number to MERS-920A

MERS-910A RE-ROOFING AIR HANDLING UNIT SUPPORT

SEE REVERSE SIDE OF PAGE FOR 3D-ILLUSTRATION

FOR MULTIPLE UNIT SUPPORTS SEE MERS-910A MULTIPLE RE-ROOFING AIR HANDLING UNIT SUPPORT

NOTE: SPACING FOR ALL SUPPORTS TO BE DETERMINED BY MECHANICAL OR ELECTRICAL ENGINEER FOR SAFE LOADING

S.S. SET SCREW

VARIABLE 6" (152 mm)

AVAILABLE 16" TO 23" (406 mm TO 584 mm)

EXTRUDED ALUMINUM ASSEMBLY (T-165) WELDED TO (T-175)

EXTRUDED ALUMINUM (T-175) SLIDER

T-300 ALUMINUM PIPE 2" (51 mm) DIA. URETHANE INSULATED WELDED TO 3/8" x 8" x 8" (9 mm x 203 mm x 203 mm) BASE PLATE

EXTRUDED ALUMINUM CARRIER ASSEMBLY (T-150, T-175, T-185)

ANTI-VIBRATION PADS

S.S. SET SCREW

ALUMINUM CROSS-BAR CARRIER (T-150)

SJ-37 STACK JACK (INSULATED)

SJ-34 STACK JACK (NON-INSULATED)

1" MIN. (25 mm)

4" (102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

TWO 1/2" (13 mm) STAINLESS STEEL "J" BOLTS

FASTENING METHODS

T1   T2   T4   T5

Specify the fastening method required by adding the appropriate suffix to a model number e.g. MERS-910A-T2,T5

MERS-910A RE-ROOFING AIR HANDLING UNIT SUPPORT (SMALL UNITS)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler MERS-910A Duct Support is installed at required centers by fastening the aluminum mounting plate to the structural roof deck, placing the flashing sleeve over the support and roof membrane, installing the cross-bar carrier and pipe section reinforcing ties, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated aluminum, etc. STACK JACK by adding suffix P to the end of model number, e.g. MERS-910A-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Cross-Bar Carrier Assembly: Thread hollow aluminum upper supports onto lower support legs, install cross-bar carriers and pipe section reinforcing ties, and place air handling unit (by others) on carriers.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. MERS-910A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler MERS-910A Re-Roofing Air Handling Unit Support consists of two pairs of round, urethane insulated, hollow section 6061-T6 aluminum supports with threaded leg assembly for vertical adjustment and mounting plate, mounting hardware (adhesive type supplied by others), and cross-bar carrier with EPDM anti-vibration pads. Two 1-1/2" (38 mm) diameter pipe sections tie the two pairs of supports together for added strength. Urethane insulated STACK JACK flashings available in aluminum, copper, or stainless steel, with EPDM Triple Pressure Grommet Seal at the top of the flashing and EPDM Base Seal, complete the supports.

SUPPORT SPACING:
To be determined by mechanical engineer for safe loading.

PROMINENT FEATURES:
Threaded leg assembly provides up to 4" (102 mm) vertical adjustment. Light weight, strong-as-steel and non corrosive. Maintenance free (EPDM flashing seals never need caulking. See Thaler EPDM Flashing Seals literature).

OPTIONS:
See Section A of manual for STACK JACK Flashing options.

RECOMMENDED USE:
Suitable for all flat roofs as an air handling unit support for re-roofing. Ultimate bearing load is 7350 lbs. (3334 kg) per leg; apply appropriate safety factor.

WARRANTY:
20 year warranty against **leaks, condensation and defects** in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Re-roofing air handling unit supports: Thaler MERS-910A, 16" to 23" (406 mm to 584 mm)) high adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck and cross-bar carrier of length to suit application with EPDM anti-vibration pads, and 1-1/2" (38 mm) dia. pipe section reinforcing ties; [SJ-34, non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated, New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.032" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia. to CSA B272-93 with EPDM Triple Pressure Grommet Seal and EPDM Base Seal [and] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

EXPLODED 3-D VIEW

S.S. SET SCREW

VARIABLE 6" (152 mm)

AVAILABLE 16" TO 23" (406 mm TO 584 mm)

ANTI-VIBRATION PADS

S.S. SET SCREW

SJ-37 STACK JACK (INSULATED)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

BUILT-UP ROOFING ILLUSTRATED (SEE INSTALLATION)

ALUMINUM CROSS-BAR CARRIER (T-150)

TWO 1/2" (13 mm) STAINLESS STEEL "J" BOLTS

TYPICAL MERS-910A ALUMINUM ROOF SUPPORT
(Large Scale Detail)

THALER

F-20A

d

d

minimum 24" (610 mm)

minimum 24" (610 mm)
Note: For Spacing other than 24" (609 mm) Consult Structural Engineer

TYPICAL VIEW OF SUPPORT LEG

MERS-930A RE-ROOFING
AIR HANDLING UNIT SUPPORT
(MEDIUM UNITS)

Distance **(d)**

Distance **(d)**

Distance **(d)**

Distance **(d)**

minimum 24" (609 mm)
Note: For Spacing other than 24" (609 mm) Consult Structural Engineer
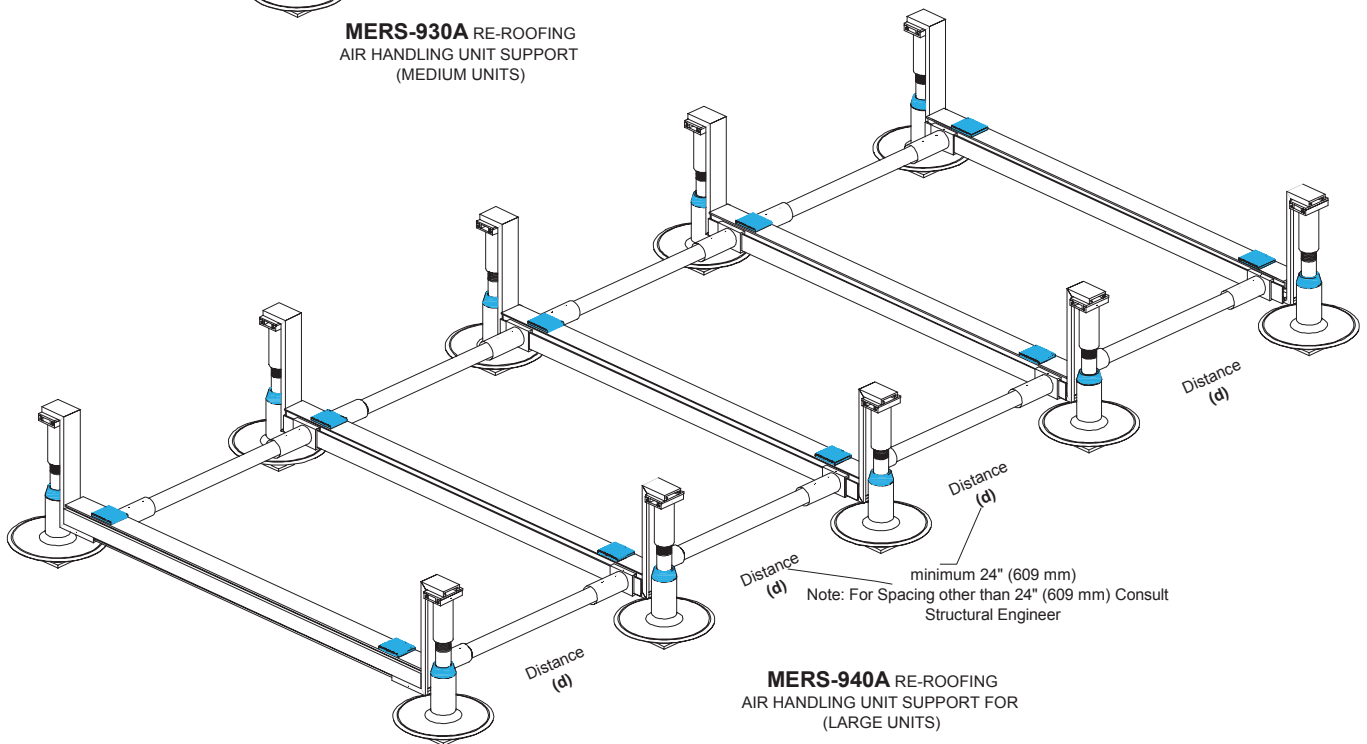
MERS-940A RE-ROOFING
AIR HANDLING UNIT SUPPORT FOR
(LARGE UNITS)

FOR COMPLETE PRODUCT DATA, SEE
MERS-910A (PAGE 20). NOTE: FOR SHORT
FORM SPECIFICATION, CHANGE MERS-910A
MODEL NUMBER TO MERS-930A, MERS-935A
OR MERS-940A

**MERS-930A, MERS-935A,
MERS-940A
RE-ROOFING AIR
HANDLING UNIT SUPPORT**
(Medium & Large Units)

Distance **(d)**

minimum 24"
(610 mm)

Distance **(d)**

minimum 24" (610 mm)
Note: For Spacing other than 24" (610 mm) Consult Structural Engineer

MERS-935A RE-ROOFING
AIR HANDLING UNIT SUPPORT
(MEDIUM UNITS)

THALER

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Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
MECHANICAL & ELECTRICAL ROOF SUPPORTS
SPECIFICATION

Note: This mechanical and electrical roof support specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part of a roofing specification.

PART 1: GENERAL

1.01   SECTION INCLUDES

A. Supply and installation of roof accessories, including:
1. Architectural roof supports
2. Performed metal flashings

1.02   RELATED SECTIONS

A. Section 03300 - Cast-in-place Concrete

B. Section 05210 - Steel Joists

C. Section 05300 - Metal Deck

D. Section 06100 - Rough Carpentry

E. Section 07200 - Thermal Protection

F. Section 07500 - Membrane Roofing

G. Section 07900 - Joint Sealers

1.03   REFERENCES

A. The work of this Section to conform to:

Canadian

Note: CSA standard is applicable only to those Thaler products supplied with EPDM Triple Pressure Grommet Seal and/or EPDM Base Seal.

1. CSA B272-93 - Prefabricated Self-Sealing Roof Vent Flashings.

2. CRCA (Canadian Roofing Contractor's Association).

3. SPRI (Single Ply Roofing Institute).

4. CUFCA (Canadian Urethane Foam Contractor's Association)and CGSB-51-GP- 46MP, Manual for "Installers of Spray Polyurethane Foam Thermal Insulation".

5. CSA G40.21-M1987 M350W and M300W (Structural Quality Steels).

6. CSA W47.1-1983 (Certification of Companies for Fusion Welding of Structural Steel).

7. CSA W59-M1989 (Welded Steel Construction - Metal Arc Welding).

8. CSA G164-M1981 (Hot Dip Galvanizing of Irregularly Shaped Articles).

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
MECHANICAL & ELECTRICAL ROOF SUPPORTS
SPECIFICATION

U.S.

B. The work of this Section to conform to:

1. NRCA (National Roofing Contractor's Association)

2. ASTM C1029-90 "Spray Applied Rigid Cellular Polyurethane Thermal Insulation".

3. AA 5AS-30 (Specifications for Aluminum Structures)

4. ASTM D3963/D M-87 (Structural Specification for Epoxy Coated Reinforced Steel).

5. ASTM A36 (Non Exposed Structural Components).

6. ASTM A123 (Standard Specification for Zinc Coating (Hot Dip Galvanizing) of Iron and Steel Products.

7. ASTM Z325 (Bolts, Nuts and Washers) or Type 304 stainless steel.

8. AWS D1.1 (Structural Welding Code-Steel)

9. AWS D1.2 (Structural Welding Code-Aluminum)

1.04   SUBMITTALS

A. Manufacturer's descriptive literature for each product, including section or other type details.

B. Manufacturer's written installation instructions.

C. Shop drawings and samples, when required, in accordance with Section [01300].

1.05   QUALITY ASSURANCE

A. Roof accessories manufactures to have minimum 5 years documented experience in the design and fabrication of roofing specialities and accessories.

1.06   SPECIAL WARRANTY

A. Warrant products installed under this section of work to be free of leaks, condensation and defects in materials and/or manufacture for a period of 20 years when installed in accordance with the manufacturer's written instructions.

PART 2: PRODUCTS

2.01   MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:
1. 20 year warranty against leaks, condensation and defects in materials and/or manufacture, as applicable;
2. compliance with CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings);
3. air barrier design using EPDM seals only;
4. maintenance free design;
5. materials and sizes options, and thickness;
6. injection molded urethane insulation to CGSB-51-GP 46MP and ASTM C1029-90, as applicable;
7. treated flashing deck flange, as applicable;
8. written installation instructions.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**MECHANICAL & ELECTRICAL
ROOF SUPPORT**
SPECIFICATION

2.02   MANUFACTURED UNITS

Note: Delete clauses not applicable.

MERS-600A Aluminum Pipe Support (Single, Plain Pipe)
B. Pipe supports (single plain pipe): Thaler MERS-600A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, and type 304 stainless steel pipe roller assembly sized to suit [____] actual O.D. pipe: [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-605A Aluminum Pipe Support (Double, Plain Pipe)
C. Pipe supports (double plain pipe): Thaler MERS-605A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, and type 304 stainless steel pipe roller assemblies sized to suit [____] actual O.D. pipe: [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 preinsulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-610A Aluminum Pipe Support (Single, Insulated Pipe)
D. Pipe supports (single insulated pipe): Thaler MERS-610A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, and type 304 stainless steel pipe cradle assembly sized to suit [____] actual O.D. pipe: [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-615A Aluminum Pipe Support (Double, Insulated Pipe)
D. Pipe supports (double insulated pipe): Thaler MERS-615A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, and Type 304 stainless steel pipe cradle assemblies sized to suit [____] actual O.D. pipe: [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 finish 1100-0T alloy aluminum] [.0321" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
MECHANICAL & ELECTRICAL ROOF SUPPORT
SPECIFICATION

MERS-620A Aluminum Re-Roofing Pipe Support (Single, Plain Pipe)

F. Pipe supports (double insulated pipe): Thaler MERS-620A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, stirrup-type pipe holder, and Type 304 stainless steel pipe roller assembly sized to suit [___] actual O.D. pipe: [SJ-34 non-insulated New-Standard STACK JACK flashing for concretedeck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-625A Aluminum Re-Roofing Pipe Support (Double, Plain Pipe)

G. Pipe supports (double insulated pipe): Thaler MERS-625A adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, stirrup-type pipe holders, and Type 304 stainless steel pipe roller assemblies sized to suit [___] actual O.D. pipe: [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-630A-1 to 630A-8 Aluminum Pipe Support (Single, Double, Triple, Multiple, Large Insulated Pipe)

H. Pipe supports (single,double, triple or multiple, large insulated pipe): Thaler MERS-630A-1 to MERS-630A-8 adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, cross-bar carrier with EPDM end caps, and Type 304 stainless steel pipe cradle assemblies sized to suit [___] actual O.D. pipes: [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-650A-1 to 650A-8 Re-Roofing Aluminum Pipe Supports (Single, Double, Triple, Multiple, Insulated Pipe)

I. Pipe supports (single,double, triple or multiple, insulated pipe): Thaler MERS-650A-1 to MERS-650A-8 adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck, cross-bar carrier, and Type 304 stainless steel pipe cradle assemblies sized to suit [___] actual O.D. pipes: [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.53 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

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ROOF SPECIALTIES
MECHANICAL & ELECTRICAL ROOF SUPPORT
SPECIFICATION

MERS-700 Terrace Lighting Roof Support

J. Terrace lighting roof supports: Thaler MERS-700, [14" (356 mm) high] [18" (457 mm) high] epoxy coated, urethane insulated hollow structural steel including appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck; threaded cap with [____] dia. s.s. lighting pole adapter stub; weatherproof 5/8" (16 mm) lock bolt with EPDM seal to prevent counter-rotation of support and lighting pole (by others); manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], flashing with EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-707-1/-2/-3/-4/ Gas Line/Conduit Roof Supports (All Metal)

K. Gas line/conduit roof supports: Thaler [MERS-707-1] [MERS-70702] [MERS-707-3] [MERS-707-4] supports for [____] dia. pipe size(s) [pipe sizes as shown on the drawings]; with; 6061-T6 alloy, mill finish, extruded aluminum base assembly and Type 304 stainless steel roller and clearance type retaining strap, all sized to suit pipe diameter(s) [and EPDM end caps].

MERS-708 Tiered Gas Line/Conduit Roof Supports

L. Tiered gas line/conduit roof supports: Thaler MERS-708 supports, tiered as indicated: with: 6061-T6 alloy mill finish, extruded aluminum cross-bar carrier assemblies, Type 304 stainless steel roller and clearance type retaining straps, all sized to suit pipe diameters [and EPDM end caps]; adjustable height 6061-T6 hollow aluminum, mill finish, urethane insulated vertical base supports, 2' (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck and matching, fixed (non-adjustable) intermediate vertical supports; [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New Standard STACK JACK flashing for steel deck], 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-709 Combo Pipe & Cross-Over Stair

M. Combination pipe supports and cross-over stair: Thaler MERS-709 Combo Pipe Supports and Cross-Over Stair, consisting of [single] [double] [triple] [quadruple] pipe supports with; 6061-T6 alloy mill finish, extruded aluminum base assembly and Type 304 stainless steel roller and clearance type retaining straps, all sized to suit pipe diameter(s) [and EPDM end caps]; 6061-T6 mill finish aluminum cross-over stair (Thaler ARS-680 Stair) of size shown on the drawings with 3-3/4" x 3-3/4" x 1/4" (95 mm x 95 mm x 6 mm) aluminum stringer/platform support beams, 1/8" x 1-1/2" x 9" x 3'-0" (3 mm x 38 mm x 229 mm 915 mm) alum. threads [screwed][welded] to 1-1/2" x 1-1/2" x 1/2' (38 mm x 38 mm x 12 mm) alum. stringer angle supports and platform support beams, 1-1/2" (38 mm) dia. Schedule 40 pipe rail; adjustable height hollow aluminum, urethane insulated pipe and stair supports urethane insulated vertical base supports, 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck and [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New Standard STACK JACK flashing for steel deck], 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-730 Security Lighting Roof Support

N. Security lighting roof supports: Thaler MERS-730 epoxy coated, urethane insulated hollow steel support including appropriate mounting hardware (adhesive type supplied by others) for fastening to structural roof deck (galvanized optional) threaded steel cap with 2" (51 mm) dia.conduit head: weather proof 3/4" (19 mm) lock-bolts with EPDM seals to prevent counter-rotation of cap/conduit head; and manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with with EPDM Base Seal [PVC coated deck flange] [bituminous painted deck flange].

MERS-740 Miscellaneous Lighting Roof Support

O. Miscellaneous lighting roof supports: Thaler MERS-740 adjustable height, epoxy coated, urethane insulated hollowstructural steel supports including appropriate mounting hardware (adhesive type supplied by others) for fastening to structural roof deck, cap/plate assembly with three s.s. studs located to suit light fixture (by others), set screw to lock cap in place; and manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with with EPDM Base Seal [PVC coated deck flange] [bituminous painted deck flange].

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ROOF SPECIALTIES
MECHANICAL & ELECTRICAL ROOF SUPPORT
SPECIFICATION

MERS-740 Miscellaneous Lighting Roof Support

O. Security lighting roof supports: Thaler MERS-740 adjustable height, epoxy coated, urethane insulated hollow structural steel supports including appropriate mounting hardware (adhesive type supplied by others) for fastening to structural roof deck, cap/plate assembly with three s.s. studs located to suit light fixture (by others), set screw to lock cap in place; and manufacturer's standard urethane insulated [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] flashing with with EPDM Base Seal [PVC coated deck flange] [bituminous painted deck flange].

MERS-800A Duct Support

P. Duct supports: Thaler MERS-800A, adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck and cross-bar carrier assembly of length to suit application with EPDM end caps; [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.46 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-850A Re-Roofing Duct Support

Q. Re-roofing duct supports: Thaler MERS-850A, 16" to 23" (405 mm to 584 mm) high adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck and cross-bar carrier assembly of length to suit application; [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-900A Air Handling Unit Support (Small Units)

R. Air handling unit supports: Thaler MERS-900A, 16" to 28" (406 mm to 711 mm) high adjustable height 6061- T6 hollow aluminum with mill finish, urethane insulated supports 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck and cross-bar carrier of length to suit application with EPDM end caps, anti-vibration pads and 1-1/2" (38 mm) dia. pipe section reinforcing ties; [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

MERS-915A and MERS-925A Air Handling Unit Support (Medium Units)

Note: For specification clauses, change MERS-900A model number to MERS-915A or MERS-925A model number as desired.

MERS-920A Air Handling Unit Support (Large Units)

Note: For specification clauses, change MERS-900A model number to MERS-920A.

MERS-910A Re-Roofing Air Handling Unit Support (Small Units)

S. Re-roofing air handling unit supports: Thaler MERS-910A, 16" to 23" (406 mm to 584 mm) high adjustable height 6061-T6 hollow aluminum with mill finish, urethane insulated supports 2" (51 mm) dia., with appropriate hardware (adhesive type supplied by others) for fastening to structural roof deck and cross-bar carrier of length to suit application with EPDM anti-vibration pads, and 1-1/2" (38 mm) dia. pipe section reinforcing ties; [SJ-34 non-insulated New-Standard STACK JACK flashing for concrete deck] [SJ-37 pre-insulated New-Standard STACK JACK flashing for steel deck] 7" (178 mm) high, consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel], 2" (51 mm) dia., to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

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ROOF SPECIALTIES
**MECHANICAL & ELECTRICAL
ROOF SUPPORT**
SPECIFICATION

MERS-930A and MERS-935A Re-Roofing Air Handling Unit Support (Medium Units)

Note: For specification clauses, change MERS-910A model number to MERS-930A or MERS-935A model number as desired.

MERS-940A Re-Roofing Air Handling Unit Support (Large Units)

Note: For specification clauses, change MERS-910A model number to MERS-940A.

PART 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

3.02   PREPARATION

Note: The Following clauses apply to retrofit installations only.

A. For retrofit work, remove existing roof assembly as necessary to allow for installation of supports.

B. In the event of structural deficiencies, deck corrosion or deterioration, ensure that a structural engineer has assessed and approved all surfaces upon which the work of this Section depends. Institute repairs and/or reinforcement where necessary.

C. If necessary, protect building interior and contents against ingression of water, dust, debris or other deleterious material.

3.03   INSTALLATION

Note: Delete clauses not applicable.

A. Roof Supports

1. Install supports in accordance with manufacturer's printed instructions, shop drawings and as specified.

2. Ensure supports are installed under the direct supervision of a Professional Engineer and Roofing Consultant.

3. Where necessary, provide protection against deterioration due to contact of dissimilar materials.

4. Ensure work is inspected prior to application of roofing.

B. Flashing

1. Install roof support flashing in accordance with manufacturer's printed instructions.

BUR
2. Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

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ROOF SPECIALTIES
MECHANICAL & ELECTRICAL ROOF SUPPORT
SPECIFICATION

Modified Bitumen

3. Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply

4. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing.

Note: For PVC membrane, specify PVC coated flashing; weld roofing to deck flange using PVC torch.

PVC Single Ply

5. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Weld roofing to deck flange using PVC torch.

3.04   FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

3.05   ADJUSTING

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

3.06   CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleanersor techniques which could impair performance of the roofing system.

End Of Section

THALER

TABLE OF CONTENTS

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
RELIEF VENTS

WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is the responsibility of specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler Relief Vents products have a number of Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE
COMPETITION

THALER VALUE
ADDED FEATURES

Injection molded urethane insulation (where applicable); adhered to inner side of sleeve without air pockets.

Treated deck flange; can be PVC coated for proper weld of PVC membrane, contact cement coated for EPDM, or bituminous painted for proper adhesion of BUR or ModBit membrane.

Material options and thicknesses; available in .064" (1.6 mm) mill finish 1100-0T Alloy aluminum, .032" (0.831 mm) 24 oz. copper, or .043" (1.09 mm) 32 oz. copper.

20 year Warranty; guaranteed against leaks and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

Specially shaped vent top; hood configuration facilitates draining of any condensation via the perimeter vent holes. Note: condensed or leaking water drops can pose a threat to built-up membranes, or to ceilings.

Effectively reduces blisters, buckles and splits; Thaler relief vents, specified over and over again for 30 years, relieve vapour pressure generated under heated roof surfaces with faulty or improperly installed vapour retarders (and even good retarders) or damp building materials (prevents sealing of moisture in roof).

Available with one-way vent; RV-3 relief vents are equipped with EPDM diaphragm which prevents exterior air from entering vent - for critical or sensitive environmental applications e.g. refrigerated interiors.

Ideal retrofit vent; in "wet" roofs if the source of wetting can be eliminated, and the insulation is not soaked and has not deteriorated, Thaler vents, offering easy installation, can achieve some drying. This is preferable to replacing the roof - and may be the only course of action for some process-type buildings where the owner does not wish to have the roof opened for replacement.

No moving parts; static-type insert accessory with mineral wool insulation facilitates escape of moisture trapped in roof. Metal upstand on insert holds back any water penetrating the membrane.

Virtually Maintenance-free; RV-1 models do not require any maintenance, however RV-2 models have removable hood for checking vent space condition.

Written "Installation Instructions"; provided with every Thaler product.

DESCRIPTION:
Thaler RV-1 Relief Vents consist of a metal vent with integral deck flange, and a specially designed insert accessory (filled with loose mineral wool insulation at factory) that aids in venting any moisture vapour accumulating in the roof assembly. Available in aluminum (RV-1A), and copper (RV-1C),

SPACING:
One vent per 1000 sq.ft. (92.9 m²) of roof is recommended.

PROMINENT FEATURES:
Helps prevent ridging, buckling and blistering of roof membrane by permitting the escape of moisture vapour, other gases and their resultant pressure to the ambient air. Hood configuration facilitates draining of any condensation via the perimeter vent holes. Upstand on insert accessory acts as a "dam" in the event exterior water is able to penetrate membrane/deck flange interface. Helps keep insulation dry.

RECOMMENDED USE:
Suitable for all flat/low slope roofs. Primarily designed for built up roofing (BUR) and modified bitumen roofing, or single ply roofs providing the deck flange has been treated for proper weld with the single ply e.g. PVC coated deck flange for PVC membrane or contact cement coated deck flange for EPDM membrane. Consult Thaler representative for other single plys.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Relief vents: Thaler [RV-1A] [RV-1C] relief vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [0.043" (1.09 mm) 32 oz. copper] with perimeter vent holes and .064 (1.6 mm) aluminum insulation insert accessory having loose mineral wool filler and lower half perforated with 1/4" (6 mm) dia. holes; 8-1/2" (216 mm) high; [bituminous painted deck flanges] [PVC coated deck flanges] [plain deck flanges]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

Diagram labels:
- PERIMETER VENT HOLES
- RELIEF VENT AVAILABLE IN .064" (1.6 mm) ALUMINUM OR 32 oz. (1.09 mm) COPPER
- BITUMINOUS PAINTED INSULATION INSERT ACCESSORY. LOWER HALF PERFORATED WITH 1/4" (6 mm) DIA. HOLES.
- 8-1/2" (216 mm)
- 7" (176 mm)
- 5-1/2" (140 mm)
- MINERAL WOOL INSULATION
- EMBED FLANGE IN LAYER OF PLASTIC CEMENT
- 12" (305 mm) DIA.

RV-1A ALUMINUM TWO WAY RELIEF VENT
RV-1C COPPER TWO WAY RELIEF VENT
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler Relief Vents are installed at recommended spacing by first cutting out the insulation to a depth of 1" (25 mm) x 3-1/2" (89 mm) diameter to accommodate the insert accessory. Then place the insert, dry, over an insulation joint (T joint is best). Note: if using a channel vent insulation, cut insulation right through to channel vent.

BUR: Install membrane over insert accessory deck flange. Then set relief vent deck flange in layer of plastic cement over membrane and flash in with 3 overlapping layers of felt flashing.

ModBit: Install membrane over insert accessory deck flange. Torch membrane until bitumen is fluid and set relief vent deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Install membrane over insert accessory deck flange and weld membrane to coated deck flange. Note: for PVC membrane, specify PVC coated deck flanges by adding suffix P to end of model number e.g. RV-1A-P ; weld roofing to deck flange using PVC torch. Set relief vent deck flange in layer of membrane adhesive and flash in with single ply as per membrane manufacturer's recommendations. Note: for EPDM, coat deck flanges on site with contact cement before torching membrane to both insert accessory and relief vent deck flanges.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. RV-1A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

REMOVABLE HOOD FOR
MOISTURE CHECKING

RIVETS

0.064" (1.6 mm) ALUMINUM,
24 oz. (0.831 mm)) COPPER
REMOVABLE CONICAL HOOD
FITTED WITH PERFORATED
COLLAR

STAINLESS STEEL SCREWS

0.064" (1.6 mm) ALUMINUM,
OR 24 oz. (0.831 mm) COPPER
SLEEVE URETHANE INSULATE

3-3/4" (86 mm)

12" (305 mm)

4" (102 mm)

BITUMINOUS PAINTED
INSULATION INSERT
ACCESSORY. LOWER
HALF PERFORATED WITH
1/4" (6 mm) DIA. HOLES.

4-1/2" (114 mm)

3-1/2" (89 mm)

12" (305 mm) DIA.

RV-2A ALUMINUM, RV-2C COPPER RELIEF VENT
PATENTED

DESCRIPTION:
Thaler RV-2 Relief Vents consist of a metal vent with integral deck flange, removable conical hood fitted with perforated collar, thick premolded urethane insulation, T-8 bitumen protection sleeve, mineral wool insulation that aids in venting any moisture vapour accumulating in the roof assembly. Available in aluminum (RV-2A), and copper (RV-2C).

SPACING:
One vent per 1000 sq.ft. (92.9 m²) of roof is recommended.

PROMINENT FEATURES:
Helps prevent ridging, buckling and blistering of roof membrane by permitting the escape of moisture vapour, other gases and their resultant pressure to the ambient air. Hood configuration facilitates draining of any condensation via the perimeter vent holes (note: insulated sleeve is superior to RV-1 vents with regard to preventing condensation). Upstand on insert accessory acts as a "dam" in the event exterior water is able to penetrate membrane/deck flange interface. Helps keep insulation dry. Hood is removable for checking vent space condition e.g. dryness of roof or presence of moisture. Perforated collar prevents the entry or nesting of birds etc.

RECOMMENDED USE:
Suitable for all flat/low slope roofs. Primarily designed for built up roofing (BUR) and modified bitumen roofing, or single ply roofs providing the deck flange has been treated for proper weld with the single ply. e.g. PVC coated deck flange for PVC membrane or contact cement coated deck flange for EPDM membrane. Consult Thaler representative for other single plys.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Relief vents: Thaler [RV-2A] [RV-2C] standard 12" (305 mm) high, 4" (102 mm) I.D., relief vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum][24 oz. 0.032" (0.831mm) copper] integral deck flange, removable conical hood fitted with perforated collar, thick premolded urethane insulation and .064 (1.6 mm) aluminum T-8 bitumen protection sleeve accessory; [bituminous painted deck flanges][PVC coated deck flanges][plain deck flanges]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braun -fels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler Relief Vents are installed at recommended spacing by first cutting out the insulation to a depth of vapour barrier x 3-1/2" (89 mm) diameter to accommodate the T-8 bitumen protection sleeve. Then place the T-8 bitumen protection sleeve, dry, over an insulation joint (T joint is best) and mineral wool insulation

BUR: Install membrane over T-8 bitumen protection deck flange. Set relief vent deck flange in layer of plastic cement over membrane and flash in with 3 overlapping layers of felt flashing.

ModBit: Install membrane over T-8 bitumen protection deck flange. Torch membrane until bitumen is fluid and set relief vent deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Install membrane over T-8 bitumen protection deck flange and weld membrane to coated deck flange. Note: for PVC membrane, specify PVC coated deck flanges by adding suffix P to end of model number e.g. RV-2A-P; weld roofing to deck flange using PVC torch. Set relief vent deck flange in layer of membrane adhesive and flash in with single ply as per membrane manufacturer's recommendations. Note: for EPDM, coat deck flanges on site with contact cement before torching membrane to both T-8 bitumen protection and relief vent deck flanges.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. RV-2A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
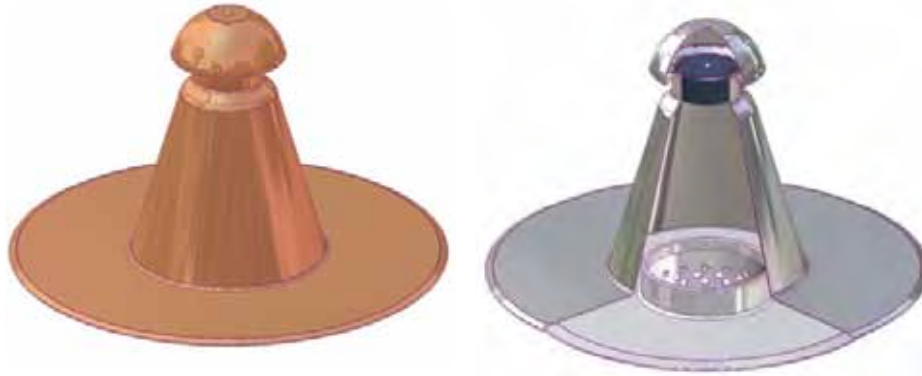
DESCRIPTION:
Thaler RV-3 Relief Vents consist of a metal vent with integral deck flange, PVC holder with EPDM diaphragm, and a specially designed insert accessory (filled with loose mineral wool insulation) that aids in venting any moisture vapour accumulating in the roof assembly. Available in aluminum (RV-3A), and copper (RV-3C),

SPACING:
One vent per 1000 sq.ft. (92.9 m²) of roof is recommended.

PROMINENT FEATURES:
Helps prevent ridging, buckling and blistering of roof membrane by permitting the escape of moisture vapour, other gases and their resultant pressure to the ambient air. Hood configuration facilitates draining of any condensation via the perimeter vent holes. Upstand on insert accessory acts as a "dam" in the event exterior water is able to penetrate membrane/deck flange interface. Helps keep insulation dry.

RECOMMENDED USE:
Suitable for all flat/low slope roofs. Primarily designed for built up roofing (BUR) and modified bitumen roofing, or single ply roofs providing the deck flange has been treated for proper weld with the single ply e.g. PVC coated deck flange for PVC membrane or contact cement coated deck flange for EPDM membrane. Consult Thaler representative for other single plys.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Inst- ructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Relief vents: Thaler [RV-3A] [RV-3C] relief vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [32 oz. 0.043" (1.09 mm) copper] with perimeter vent holes, EPDM diaphragm with PVC holder, and .064 (1.6 mm) aluminum insulation insert accessory having loose mineral wool filler and lower half perforated with 1/4" (6 mm) dia. holes; 8-1/2" (216 mm) high; [bituminous painted deck flanges] [PVC coated deck flanges] [plain deck flanges]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

PERIMETER VENT HOLES

EPDM DIAPHRAGM

PVC HOLDER

RELIEF VENT IN 0.064" (1.6 mm) ALUMINUM OR 32 oz. 0.043" (1.6 mm) COPPER

MINERAL WOOL INSULATION

8-1/2" (216 mm)

7" (176 mm)

5-1/2" (140 mm)

BITUMINOUS PAINTED INSULATION INSERT ACCESSORY. LOWER HALF PERFORATED WITH 1/4" (6 mm) DIA. HOLES

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

12" (305 mm) DIA.
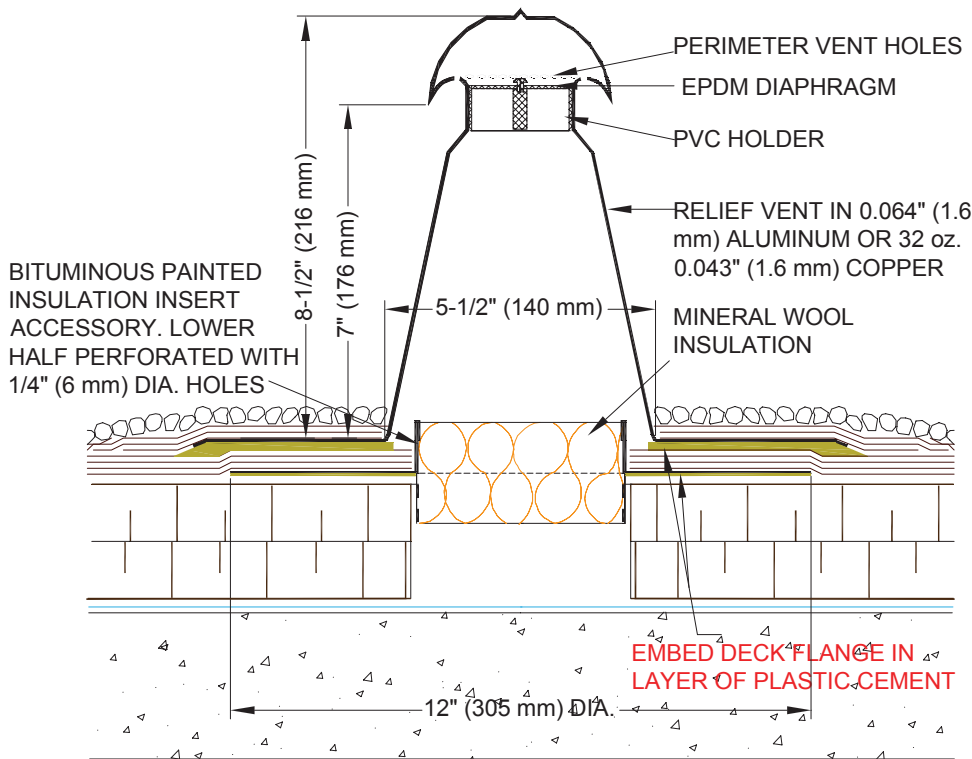
RV-3A ALUMINUM ONE WAY RELIEF VENT
RV-3C COPPER ONE WAY RELIEF VENT
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler Relief Vents are installed at recommended spacing by first cutting out the insulation to a depth of vapour barrier x 3-1/2" (89 mm) diameter to accommodate the insert accessory. Then place the insert, dry, over an insulation joint (T joint is best). Cut insulation center right through to channel vent.

BUR: Install membrane over insert accessory deck flange. Then set relief vent deck flange in layer of plastic cement over membrane and flash in with 3 overlapping layers of felt flashing.

ModBit: Install membrane over insert accessory deck flange. Torch membrane until bitumen is fluid and set relief vent deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Install membrane over insert accessory deck flange and weld membrane to coated deck flange. Note: for PVC membrane, specify PVC coated deck flanges by adding suffix P to end of model number e.g. RV-3A-P; weld roofing to deck flange using PVC torch. Set relief vent deck flange in layer of membrane adhesive and flash in with single ply as per membrane manufacturer's recommendations. Note: for EPDM, coat deck flanges on site with contact cement before torching membrane to both insert accessory and relief vent deck flanges.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. RV-1A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
RELIEF VENTS
SPECIFICATION

G-4

Note: This relief vents specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part of a roofing specification.

PART 1: GENERAL

1.01   SECTION INCLUDES

A. Supply and installation of roof accessories, including:
1. Relief vents.

1.02   RELATED SECTIONS

A. Section 06100 - Rough Carpentry

B. Section 07200 - Thermal Protection

C. Section 07500 - Membrane Roofing

D. Section 07900 - Joint Sealers

1.03   REFERENCES

[A. CRCA (Canadian Roofing Contractor's Association)]

[B. NRCA (National Roofing Contractor's Association)]

[C. SPRI (Single Ply Roofing Institute)]

Note: Paragraph 1.03.D is applicable to RV-2 vents only.

[D. CUFCA (Canadian Urethane Foam Contractor's Association) and CGSB-51-GP 46MP Manual for "Installers of Spray Polyurethane Foam Thermal Insulation" and ASTM C1029-90 "Spray Applied Rigid Cellular Polyurethane Thermal Insulation"]

1.04   SUBMITTALS

A. Manufacturer's descriptive literature for each product, including section or other type details.

B. Manufacturer's written installation instructions.

C. Shop drawings and samples, when required, in accordance with Section [01300].

1.05   QUALITY ASSURANCE

A. Roof accessories manufactures to have minimum 5 years documented experience in the design and fabrication of roofing specialities and accessories.

1.06   SPECIAL WARRANTY

Note: [and condensation] below is applicable to RV-2 vents only.

A. Warrant products installed under this section of work to be free of defects in materials and/or manufacture [and condensation] for a period of 20 years when installed in accordance with the manufacturer's written instructions.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
RELIEF VENTS
SPECIFICATION

G-5

PART 2: PRODUCTS

2.01   MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (Buffalo, NY) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:
1. 20 year warranty against defects in materials and/or manufacture, as applicable;
2. maintenance free design;
3. materials and sizes options, and thicknesses;
4. injection molded urethane insulation to CGSB-51-GP 46MP and ASTM C1029-90, as applicable;
5. treated deck flange, as applicable;
6. written installation instructions.

2.02   MANUFACTURED UNITS

RV-1 Relief Vent
A. Relief vents: Thaler [RV-1A] [RV-1C] relief vent consisting of [.064" (1.6 mm) mill finish alloy aluminum] [32 oz. (1.09 mm) copper] with perimeter vent holes and .051" (1.4 mm) aluminum insulation insert accessory having loose mineral wool filler and lower half perforated with 1/4" (6 mm) dia. holes; 8-1/2" (216 mm) high; [bituminous painted deck flanges][PVC coated deck flanges][plain deck flanges].

RV-2 Relief Vents (Removable Hood)
B. Relief vents: Thaler [RV-2A] [RV-2C] standard 12" (305 mm) high, 4" (102 mm) I.D. relief vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [24 oz. (0.831 mm) copper] with integral deck flange, removable conical hood fitted with perforated collar, thick premolded urethane insulation and .051" (1.4 mm) aluminum insulation insert accessory having loose mineral wool filler and lower half perforated with 1/4" (6 mm) dia. holes; [bituminous painted deck flanges][PVC coated deck flanges] [plain deck flanges].

RV-3 Relief Vents
C. Relief vents: Thaler [RV-3A] [RV-3C] standard 12" (305 mm) high, 4" (102 mm) I.D. relief vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [32 oz. 0.043" (1.09 mm) copper] integral deck flange with perimeter vent holes, EPDM diaphragm with PVC holder and .051" (1.4 mm) aluminum insulation insert accessory having loose mineral wool filler and lower half perforated with 1/4" (6 mm) dia. holes; [bituminous painted deck flanges][PVC coated deck flanges][plain deck flanges].

PART 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
RELIEF VENTS
SPECIFICATION

G-6

3.02   INSTALLATION

A. Install relief vents in accordance with manufacturer's printed instructions.

B. Install vents at the rate of one vent per 1000 sq.ft. (92.9 m2) of roof.

BUR
C. Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

Modified Bitumen
D. Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply
E. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to relief vent.

Note: For PVC membrane, specify PVC coated deck flange by adding suffix P to end of Thaler model number, e.g. RV-1A-P; weld roofing to deck flange using PVC torch.

PVC Single Ply
F. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to vent. Weld roofing to deck flange using PVC torch.

3.03   FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

3.04   ADJUSTING

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

3.05   CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleanersor techniques which could impair performance of the roofing system.

End Of Section

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
GRAVITY VENTS

TABLE OF CONTENTS

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
GRAVITY AIR VENTS

WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is the responsibility of specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler Gravity Vent products have a number of Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE
COMPETITION

THALER VALUE
ADDED FEATURES

Treated deck flange; can be PVC coated for proper weld of PVC membrane, contact cement coated for EPDM, or bituminous painted for proper adhesion of BUR or ModBit membrane.

Material options and thicknesses; available in .064" (1.6 mm) mill finish 1100-0T Alloy aluminum, .032" (0.831 mm) 24 oz. copper, or .031 (0.79 mm) 22 ga. Type 304 stainless steel.

20 year Warranty; guaranteed against leaks and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

Specially shaped vent top; hood configuration facilitates draining of any condensation via the perimeter vent holes. Note: condensed or leaking water drops can pose a threat to built-up membranes, or to ceilings.

Removable conical hood; permits inspection of vented spaces for determining plenum condition.

Venting area calculation provided; to control condensation in winter and limit heat build-up during summer, Thaler have provided guidance with regard to the amount and location of vents thereby enhancing building durability.

Insect screen protection; Thaler vents employ screens with optimum mesh spacing to eliminate blocking by dust accumulation, which reduces air intake.

Protects against bitumen leakage; T-8 bitumen protection cup accessory (optional) completely eliminates problems associated with bitumen drippage, a common occurrence with many other types of vent products.

Virtually Maintenance-free; GAV models do not require any maintenance, however the vents have removable hood for checking vent space condition.

Written "Installation Instructions"; provided with every Thaler product.

CALCULATING THE NUMBER OF GRAVITY AIR VENTS

144 Square inches (930 cm2) of free venting area is required to vent 300 square feet of roof area (1/300). A minimum of two vents are required to vent any individual roof area. Venting efficiency is increased in direct proportion to the number of vents used.

For example: Four vents each with 36 square inches (232 cm ^{2}) of free venting area on a 300 square foot (28 m ^{2}) roof is preferable to using two vents, each with 72 square inches (464 cm ^{2}) of free venting area. Increasing the number of vents, while maintain the required total amount of free venting area by decreasing the size of the individual vents allows air to drawn from the corners of the roof, thereby increasing overall venting efficiency, and avoiding condensation formation.

INSIDE DIAMETER OF VENT	FREE VENTING AREA (SQ. INCHES)
76mm (3")	7.06 (46 cm2)
1.2mm (4")	12.5664 (81 cm2)
127mm (5")	19.635 (127 cm2)
152mm (6")	2.2744 (1.2 cm2)
17.mm (7")	3.4 46 (24 cm2)
2.3mm (8")	5. 2656 (324 cm2)
229mm (9")	63.6174 (41. cm2)
254mm (1.")	7 54.. (5.7 cm2)

WHEN ORDERING, STATE INSIDE DIAMETER (ID) OF VENT PIPE

AVAILABLE DIAMETERS **"A"**

3" (75 mm)
4" (102 mm)
5" (127 mm)
6" (152 mm)
7" (178 mm)
8" (203 mm)
9" (229 mm)
10" (254 mm)

REMOVABLE CONICAL HOOD (FOR CLEANING) FITTED WITH THREE SUPPORT BRACKETS. 0.064" (1.6 mm) ALUMINUM, 24 oz. 0.032" (0.831) COPPER OR 22 ga. 0.031" (0.79 mm) STAINLESS STEEL.

INSECT SCREEN

STAINLESS STEEL SCREW

3" (75 mm)

STAINLESS STEEL SCREW

12" (305 mm)

"A"

SLEEVE WITH INTEGRAL DECK FLANGE 0.064" (1.6 mm) ALUMINUM, 24 oz. 0.032" (0.831 mm) COPPER OR 22 ga. 0.31" (0.79 mm) STAINLESS STEEL.

T-8 BITUMEN PROTECTION (OPTIONAL)

3 PLY FELT FLASHING OVER FLANGE AND 4" (102 mm), 6" (152 mm), AND 8" (203 mm) ONTO ROOF

4" (102 mm)

4.5" (114 mm)
3" (76 mm)

STAINLESS STEEL WOOD SCREW

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

GAV-1A, GAV-1C, GAV-1SS GRAVITY AIR VENTS (Small Size Vents)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler Gravity Air Vents are installed at recommended locations by first installing the roof membrane, then screwing the deck flange through to a wood blocking (by others) located under the membrane, and as follows:

BUR: Cut roof membrane back 1" (25 mm) from hole in deck before installing vent and fill space with plastic cement to prevent bitumen drippage at elevated roof temperatures. Set vent deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Cut roof membrane back 1" (25 mm) from hole in deck before installing vent and fill space with plastic cement to prevent bitumen drippage at elevated roof temperatures. Torch membrane until bitumen is fluid and set vent deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set vent deck flange in layer of membrane adhesive and extend single ply up vent sleeve to highest elevation possible and clamp membrane to sleeve. Note: for PVC membrane, specify PVC coated deck flange by adding suffix P to end of model number e.g. GAV-1A-P; weld roofing to deck flange using PVC torch. Note: for EPDM, coat deck flange on site with contact cement before torching membrane to deck flange.

Precautions: If coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. RV-2A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
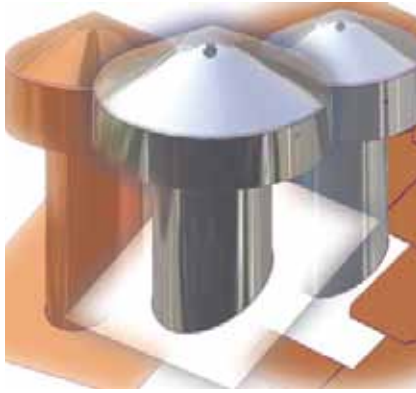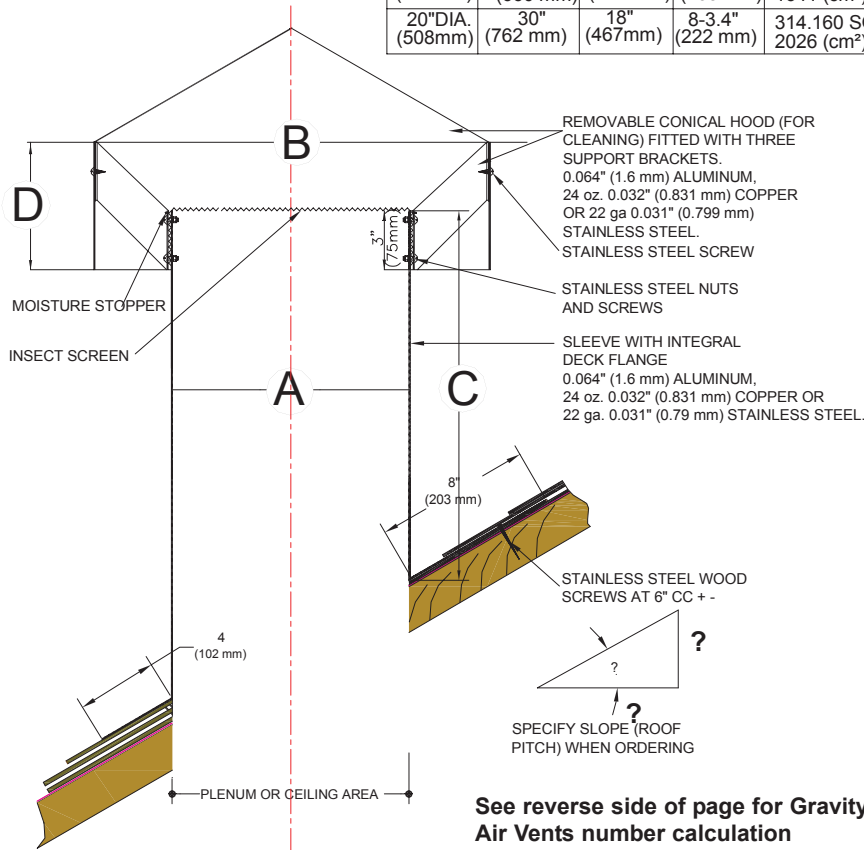Thaler GAV-1 Gravity Air Vents consist of a metal sleeve with integral deck flange, removable conical hood fitted with a three support brackets, and insect screen. Available in aluminum (GAV-1A), copper (GAV-1C), or stainless steel (GAV-1SS).

DIAMETER:
From 3" (76 mm) and 10" (254 mm).

NBC (NATIONAL BUILDING CODE) REQUIREMENT:
For "Low Slope Roofs" where insulation is placed below the roof sheathing in roofs having a slope of less than 1 in 6, or in roofs that are constructed with roof joists, the unobstructed vent area shall be not less than 1/150 of the insulated ceiling area. Vents shall be uniformly distributed to ventilate each roof space.

SPACING:
For any given roof, Thaler recommends a minimum 3" (76 mm) vent be located at each corner of the roof and a minimum of one vent in the middle of the roof. Venting efficiency is directly proportional to the number of vents employed e.g. 4 vents, each with 36 sq. in. (26 cm²) on a 300 sq.ft. (28 m²) roof is preferable to using 2 vents, each with a 72 sq. in. (54 cm2) of free venting area. Increasing the number of vents allows air to be drawn from the corners of the roof area thereby increasing overall venting efficiency while preventing the formation of condensation. Note: A minimum of two vents is required to vent any individual roof area.

OPTIONS:
T-8 bitumen protection.

RECOMMENDED USE:
Suitable for all flat/low slope roofs for venting of plenum spaces. Primarily designed for built up roofing (BUR) and modified bitumen roofing, or single ply roofs providing the deck flange has been treated for proper weld with the single ply. e.g. PVC coated deck flange for PVC membrane or contact cement coated deck flange for EPDM membrane. Consult Thaler representative for other single plys. See Thaler GAV-2 Gravity Air Vents for larger capacity vents.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Gravity air vents: Thaler [GAV-1A] [GAV-1C][GAV-1SS] standard 12" (305 mm) high, [3" (76 mm)][4" (102 mm)] diameter gravity air vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032 (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] with integral deck flange, removable conical hood fitted with three support brackets, and insect screen. [T-8 bitumen protection sleeve] [bituminous painted deck flange][PVC coated deck flange][plain deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

ROOF SPECIALTIES
GAV-2A/-GAV-2C/GAV-2SS GRAVITY AIR VENTS (Large Size Vents)

DESCRIPTION:
Thaler GAV-2 Gravity Air Vents consist of a metal sleeve with integral deck flange, removable conical hood fitted with a three support brackets, and insect screen. Available in aluminum (GAV-2A), copper (GAV-2C), or stainless steel (GAV-2SS).

DIAMETER:
From 12" (305 mm) to 20" (508 mm).

NBC (NATIONAL BUILDING CODE) REQUIREMENT:
For "Low Slope Roofs" where insulation is placed below the roof sheathing in roofs having a slope of less than 1 in 6, or in roofs that are constructed with roof joists, the unobstructed vent area shall be not less than 1/150 of the insulated ceiling area. Vents shall be uniformly distributed to ventilate each roof space. Spacing: For any given roof, Thaler recommends a minimum 3" (76 mm) vent be located at each corner of the roof and a minimum of one vent in the middle of the roof. Venting efficiency is directly proportional to the number of vents employed e.g. 4 vents, each with 36 sq. in. (26 cm2) on a 300 sq.ft. (28 m²) roof is preferable to using 2 vents, each with a 72 sq. in. (54 cm²) of free venting area. Increasing the number of vents allows air to be drawn from the corners of the roof area thereby increasing overall venting efficiency while preventing the formation of condensation. Note: A minimum of two vents is required to vent any individual roof area.

OPTIONS:
T-8 bitumen protection.

RECOMMENDED USE:
Suitable for all flat/low slope roofs for venting of plenum spaces. Primarily designed for built up roofing (BUR) and modified bitumen roofing, or single ply roofs providing the deck flange has been treated for proper weld with the single ply. e.g. PVC coated deck flange for PVC membrane or contact cement coated deck flange for EPDM membrane. Consult Thaler representative for other single plys. See Thaler GAV-2 Gravity Air Vents for larger capacity vents.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Gravity air vents: Thaler [GAV-1A] [GAV-1C][GAV-1SS] standard 12" (305 mm) high, [12" (305 mm)][20" (508 mm)] diameter gravity air vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032 (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] with integral deck flange, removable conical hood fitted with three support brackets, and insect screen. [T-8 bitumen protection sleeve] [bituminous painted deck flange][PVC coated deck flange][plain deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

CALCULATING THE NUMBER OF GRAVITY AIR VENTS

144 Square inches (930 cm²) of free venting area is required to vent 300 square feet of roof area (1/300). A minimum of two vents are required to vent any individual roof area. Venting efficiency is increased in direct proportion to the number of vents used.

For example: Four vents each with 36 square inches (232 cm²) of free venting area on a 300 square foot (28 m²) roof is preferable to using two vents, each with 72 square inches (464 cm²) of free venting area. Increasing the number of vents, while maintaining the required total amount of free venting area by decreasing the size of the individual vents allows air to be drawn from the corners of the roof, thereby increasing overall venting efficiency, and avoiding condensation formation.

A	B	C	D	Area Sq. Inches
12"DIA. (305mm)	20" (508 mm)	14" (356 mm)	6"-1/2" (165 mm)	113.098 SQ.INCHES 730 (cm²)
14"DIA. (356mm)	22" (559 mm)	14" (356 mm)	7" (178 mm)	153.938 SQ.INCHES 993 (cm²)
16"DIA. (406mm)	24" (609 mm)	15" (381mm)	7-1/2" (191mm)	209.96 SQ.INCHES 1297 (cm²)
18"DIA. (457mm)	26" (660 mm)	16" (356 mm)	8" (203 mm)	254.470 SQ.INCHES 1641 (cm²)
20"DIA. (508mm)	30" (762 mm)	18" (467 mm)	8-3/4" (222 mm)	314.160 SQ.INCHES 2026 (cm²)

REMOVABLE CONICAL HOOD (FOR CLEANING) FITTED WITH THREE SUPPORT BRACKETS. 0.064" (1.6 mm) ALUMINUM, 24 oz. (0.831 mm) COPPER OR 22 ga. 0.031" (0.79 mm) STAINLESS STEEL.

INSECT SCREEN

STAINLESS STEEL SCREW

3" (75 mm)

STAINLESS STEEL SCREW

B

D

MOISTURE STOPPER

T-8 BITUMEN PROTECTION (OPTIONAL)

SLEEVE WITH INTEGRAL DECK FLANGE 0.064" (1.6 mm) ALUMINUM, 24 oz. 0.032" (0.831 mm) COPPER OR 22 ga. 0.031" (0.79 mm) STAINLESS STEEL.

C

A

3 PLY FELT FLASHING OVER FLANGE AND 4" (102 mm), 6" (152 mm), AND 8" (203 mm) ONTO ROOF

4" (102 mm)

STAINLESS STEEL WOOD SCREW ON 6" (152 mm) APPROX. DISTANCE.

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

CONCRETE DECK

STEEL DECK

GAV-2A, GAV-2C, GAV-2SS GRAVITY AIR VENTS (Large Size Vents)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler Gravity Air Vents are installed at recommended locations by first installing the roof membrane, then screwing the deck flange through to a wood blocking (by others) located under the membrane, and as follows:

BUR: Cut roof membrane back 1" (25 mm) from hole in deck before installing vent and fill space with plastic cement to prevent bitumen drippage at elevated roof temperatures. Set vent deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Cut roof membrane back 1" (25 mm) from hole in deck before installing vent and fill space with plastic cement to prevent bitumen drippage at elevated roof temperatures. Torch membrane until bitumen is fluid and set vent deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set vent deck flange in layer of membrane adhesive and extend single ply up vent sleeve to highest elevation possible and clamp membrane to sleeve. Note: for PVC membrane, specify PVC coated deck flange by adding suffix P to end of model number e.g. GAV-1A-P ; weld roofing to deck flange using PVC torch.   Note: for EPDM, coat deck flange on site with contact cement before torching membrane to deck flange.

Precautions: If coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. GAV-1A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
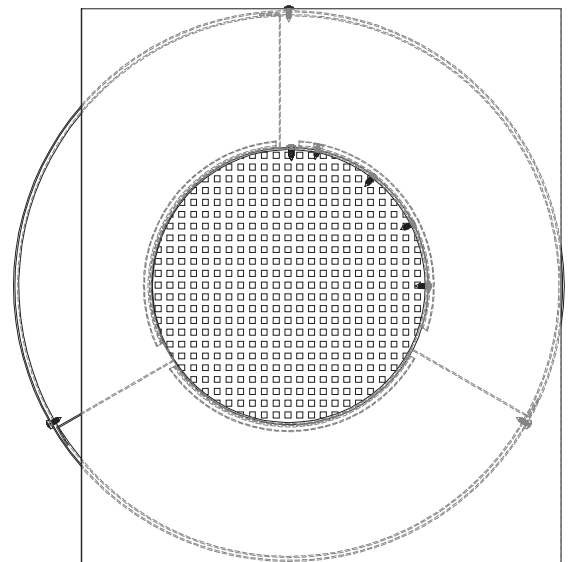
DESCRIPTION:
Thaler GAV-3 Gravity Air Vents for sloped roofs consist of a metal sleeve with integral deck flange, removable conical hood fitted to sleeve with a three support brackets, and insect screen. Available in aluminum (GAV-3A), copper (GAV-3C), or stainless steel GAV-3SS).

DIAMETER:
From 3" (76 mm) and 10" (254 mm).

NBC (NATIONAL BUILDING CODE) REQUIREMENT:
Vents in slope roofs 1 in 6 or greater shell be distributed so that approximately 50 per cent of the required vent area is located near the lower part of the roof and approximately 50 per cent of the required vent area is near the ridge.

SPACING:
For any given roof, Thaler recommends a minimum 3" (76 mm) vent be located at each corner of the roof and a minimum of one vent in the middle of the roof. Venting efficiency is directly proportional to the number of vents employed e.g. 4 vents, each with 36 sq. in. (26 cm²) on a 300 sq. ft. (28 m2) roof is preferable to using 2 vents, each with a 72 sq. in. (54 cm2) of free venting area. Increasing the number of vents allows air to be drawn from the corners of the roof area thereby increasing overall venting efficiency while preventing the formation of condensation. Note: A minimum of two vents is required to vent any individual roof area.

PROMINENT FEATURES:
Urethane insulated liner prevents formation of condensation. Note: without insulation, condensate freezing in winter can thaw in spring and show up as leaks in ceiling. Also, in wintertime, moisture-laden warm air rising in the vent freezes on the underside of the hood rather than in the lower part of the vent and runs down the slope of the hood and out the vent holes to the exterior during periods of thaw.

RECOMMENDED USE:
Suitable for all slope roofs for venting of plenum spaces. Primarily designed for built up roofing (BUR) and modified bitumen roofing, or single ply roofs providing the deck flange has been treated for proper weld with the single ply. e.g. PVC coated deck flange for PVC membrane or contact cement coated deck flange for EPDM membrane. Consult Thaler representative for other single plys. See Thaler GAV-4 Gravity Air Vents for larger capacity vents.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Gravity air vents: Thaler [GAV-3A] [GAV-3C][GAV-3SS] standard 12" (305 mm) high, [3" (76 mm)][4" (102 mm)] diameter gravity air vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032 (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] with integral deck flange, removable conical hood fitted to sleeve with three support brackets, insect screen and [bituminous painted deck flange][PVC coated deck flange] [plain deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

Diagram labels

STAINLESS STEEL SCREW

REMOVABLE CONICAL HOOD (FOR CLEANING) FITTED WITH THREE SUPPORT BRACKETS. 0.064" (1.6 mm) ALUMINUM, 24 oz. 0.032" (0.831 mm) COPPER OR 22 ga. 0.031" (0.79 mm) STAINLESS STEEL.

STAINLESS STEEL SCREWS AND NUTS

3" (75 mm)

INSECT SCREEN

MOISTURE STOPPER

SLEEVE WITH INTEGRAL DECK FLANGE 0.064" (1.6 mm) ALUMINUM, 24 oz. 0.032" (0.831 mm) COPPER OR 22 ga. (0.79 mm) STAINLESS STEEL.

A

A

12" (305 mm)

8" (203 mm)

STAINLESS STEEL WOOD SCREWS AT 6" (152 mm) CC + -

WHEN ORDERING, STATE INSIDE DIAMETER (ID) OF VENT PIPE

AVAILABLE DIAMETERS

3" (75 mm)
4" (102 mm)
5" (127 mm)
6" (152 mm)
7" (178 mm)
8" (203 mm)
9" (229 mm)
10" (254 mm)

4 (102 mm)

SPECIFY SLOPE (ROOF PITCH) WHEN ORDERING

PLANUM OR CEILING AREA

See reverse side of page for Gravity Air Vents number calculation

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GAV-3A, GAV-3C, GAV-3SS GRAVITY AIR VENTS
(Small Size Vents For Sloped Roofs)

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler Gravity Air Vents are installed at recommended locations by first installing the roof membrane, then screwing the deck flange through to a wood blocking (by others) located under the membrane, and as follows:

BUR: Cut roof membrane back 1" (25 mm) from hole in deck before installing vent and fill space with plastic cement to prevent bitumen drippage at elevated roof temperatures. Set vent deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Cut roof membrane back 1" (25 mm) from hole in deck before installing vent and fill space with plastic cement to prevent bitumen drippage at elevated roof temperatures. Torch membrane until bitumen is fluid and set vent deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set vent deck flange in layer of membrane adhesive and extend single ply up vent sleeve to highest elevation possible and clamp membrane to sleeve. Note: for PVC membrane, specify PVC coated deck flange by adding suffix P to end of model number e.g. GAV-3A-P ; weld roofing to deck flange using PVC torch. Note: for EPDM, coat deck flange on site with contact cement before torching membrane to deck flange.

Precautions: If coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. GAV-1A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
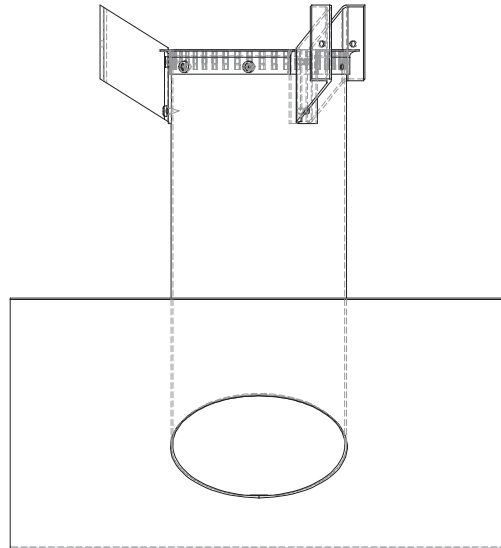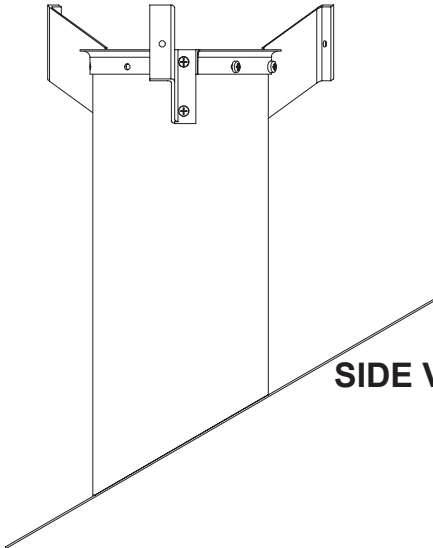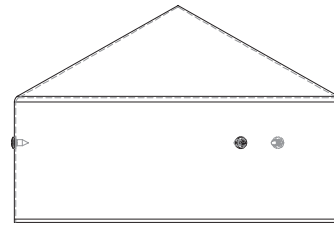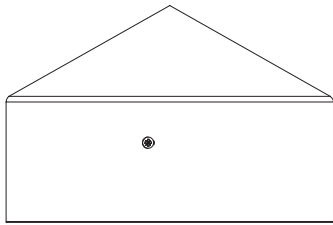
SIDE VIEWS
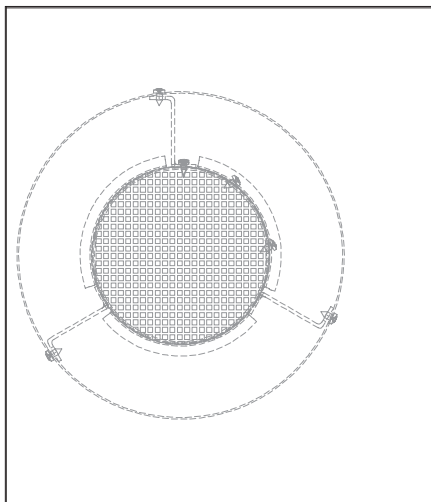
TOP VIEW

INSIDE DIAMETER (ID) VENT	FREE VENTING AREA (SQURE INCHES)
3" (76 mm)	7.07 (46 cm2)
4" (102 mm)	12.6 (81 cm2)
5" (127 mm)	19.63 (127 cm2)
6" (152 mm)	28.27 (182 cm2)
7" (178 mm)	38.48 (248 cm2)
8" (203 mm)	50.27 (324 cm2)
9" (229 mm)	63.62 (410 cm2)
10" (254 mm)	78.54 (507 cm2)

CALCULATING THE NUMBER OF GRAVITY AIR VENTS

144 Square inches (930 cm2) of free venting area is required to vent 300 square feet of roof area (1/300). A minimum of two vents are required to vent any individual roof area. Venting efficiency is increased in direct proportion to the number of vents used.

For example: Four vents each with 36 square inches (232 cm2) of free venting area on a 300 square foot (28 m2) roof is preferable to using two vents, each with 72 square inches (464 cm2) of free venting area. Increasing the number of vents, while maintain the required total amount of free venting area by decreasing the size of the individual vents allows air to drawn from the corners of the roof, thereby increasing overall venting efficiency, and avoiding condensation formation.

A	B	C	D	Area Sq.Inches
12"DIA. (305mm)	20" (508 mm)	14" (356 mm)	6"-1/2" (165 mm)	113.098 SQ.IN 730 (cm²)
14"DIA. (356mm)	22" (559 mm)	14" (356 mm)	7" (178 mm)	153.938 SQ.IN 993 (cm²)
16"DIA. (406mm)	24" (609 mm)	15" (381 mm)	7-1/2" (191 mm)	201.062 SQ.IN 1297 (cm²)
18"DIA. (457mm)	26" (660 mm)	16" (356 mm)	8" (203 mm)	254.470 SQ.IN 1641 (cm²)
20"DIA. (508mm)	30" (762 mm)	18" (467mm)	8-3.4" (222 mm)	314.160 SQ.IN 2026 (cm²)

B

D

3" (75mm)

REMOVABLE CONICAL HOOD (FOR CLEANING) FITTED WITH THREE SUPPORT BRACKETS. 0.064" (1.6 mm) ALUMINUM, 24 oz. 0.032" (0.831 mm) COPPER OR 22 ga 0.031" (0.799 mm) STAINLESS STEEL. STAINLESS STEEL SCREW

STAINLESS STEEL NUTS AND SCREWS

MOISTURE STOPPER

INSECT SCREEN

A

C

SLEEVE WITH INTEGRAL DECK FLANGE 0.064" (1.6 mm) ALUMINUM, 24 oz. 0.032" (0.831 mm) COPPER OR 22 ga. 0.031" (0.79 mm) STAINLESS STEEL.

8" (203 mm)

STAINLESS STEEL WOOD SCREWS AT 6" CC + -

4 (102 mm)

?

?

SPECIFY SLOPE (ROOF PITCH) WHEN ORDERING

PLENUM OR CEILING AREA

See reverse side of page for Gravity Air Vents number calculation

DESCRIPTION:
Thaler GAV-4 Gravity Air Vents for sloped roofs consist of a metal sleeve with integral deck flange, removable conical hood fitted to sleeve with a three support brackets, and insect screen. Available in aluminum (GAV-3A), copper (GAV-3C), or stainless steel (GAV-3SS).

DIAMETER:
From 12" (305 mm) and 20" (508 mm).

NBC (NATIONAL BUILDING CODE) REQUIREMENT:
Vents in slope roofs 1 in 6 or greater shell be distributed so that approximately 50 per cent of the required vent area is located near the lower part of the roof and approximately 50 per cent of the required vent area is near the ridge.

SPACING:
For any given roof, Thaler recommends a minimum 3" (76 mm) vent be located at each corner of the roof and a minimum of one vent in the middle of the roof. Venting efficiency is directly proportional to the number of vents employed e.g. 4 vents, each with 36 sq. in. (26 cm2) on a 300 sq. ft. (28 m2) roof is preferable to using 2 vents, each with a 72 sq. in. (54 cm2) of free venting area. Increasing the number of vents allows air to be drawn from the corners of the roof area thereby increasing overall venting efficiency while preventing the formation of condensation. Note: A minimum of two vents is required to vent any individual roof area.

RECOMMENDED USE:
Suitable for all slope roofs for venting of plenum spaces. Primarily designed for built up roofing (BUR) and modified bitumen roofing, or single ply roofs providing the deck flange has been treated for proper weld with the single ply. e.g. PVC coated deck flange for PVC membrane or contact cement coated deck flange for EPDM membrane. Consult Thaler representative for other single plys. See Thaler GAV-4 Gravity Air Vents for larger capacity vents.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Gravity air vents: Thaler [GAV-4A] [GAV-4C][GAV-4SS] [C high], [12" (305 mm)][14" (356 mm)] diameter gravity air vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel] with integral deck flange, removable conical hood fitted to sleeve with three support brackets, insect screen and [bituminous painted deck flange][PVC coated deck flange] [plain deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (Niagara Falls, NY), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

GAV-4A, GAV-4C, GAV-4SS GRAVITY AIR VENTS
(Large Size Vents For Sloped Roofs)

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler Gravity Air Vents are installed at recommended locations by first installing the roof membrane, then screwing the deck flange through to a wood blocking (by others) located under the membrane, and as follows:

BUR: Cut roof membrane back 1" (25 mm) from hole in deck before installing vent and fill space with plastic cement to prevent bitumen drippage at elevated roof temperatures. Set vent deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Cut roof membrane back 1" (25 mm) from hole in deck before installing vent and fill space with plastic cement to prevent bitumen drippage at elevated roof temperatures. Torch membrane until bitumen is fluid and set vent deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set vent deck flange in layer of membrane adhesive and extend single ply up vent sleeve to highest elevation possible and clamp membrane to sleeve. Note: for PVC membrane, specify PVC coated deck flange by adding suffix P to end of model number e.g. GAV-4A-P ; weld roofing to deck flange using PVC torch. Note: for EPDM, coat deck flange on site with contact cement before torching membrane to deck flange.

Precautions: If coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. GAV-1A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
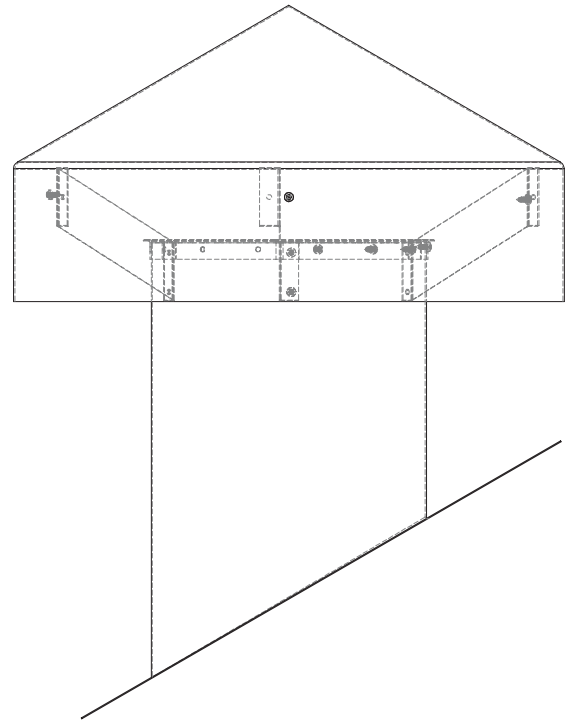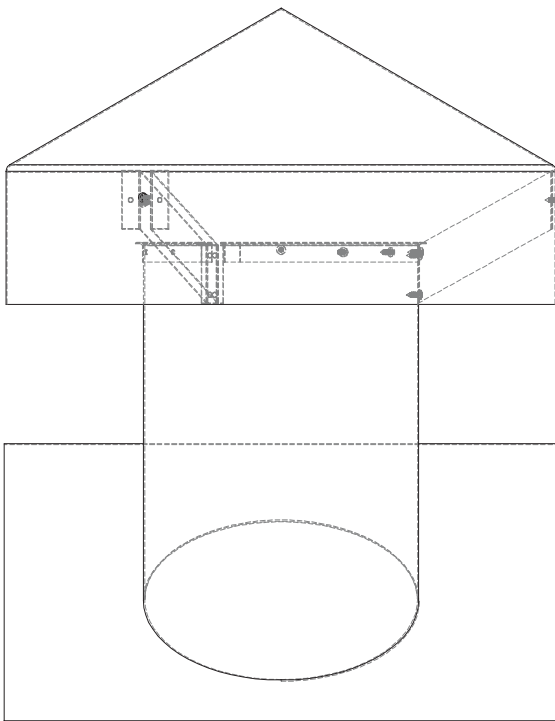
SIDE VIEWS

CALCULATING THE NUMBER OF GRAVITY AIR VENTS

144 Square inches (930 cm2) of free venting area is required to vent 300 square feet of roof area (1/300). A minimum of two vents are required to vent any individual roof area. Venting efficiency is increased in direct proportion to the number of vents used.

For example: Four vents each with 36 square inches (232 cm2) of free venting area on a 300 square foot (28 m2) roof is preferable to using two vents, each with 72 square inches (464 cm2) of free venting area. Increasing the number of vents, while maintain the required total amount of free venting area by decreasing the size of the individual vents allows air to drawn from the corners of the roof, thereby increasing overall venting efficiency, and avoiding condensation formation.

TOP VIEW

Note: This gravity air vent specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part roofing specification.

PART 1: GENERAL

1.01 SECTION INCLUDES

A. Supply and installation of roof accessories, including:
  1. Gravity air vents.

1.02 RELATED SECTIONS

A. Section 06100 - Rough Carpentry

B. Section 07200 - Thermal Protection

C. Section 07500 - Membrane Roofing

D. Section 07900 - Joint Sealers

1.03 REFERENCES

[A. CRCA (Canadian Roofing Contractor's Association)]

[B. NRCA (National Roofing Contractor's Association)]

[C. SPRI (Single Ply Roofing Institute)]

[D. CUFCA (Canadian Urethane Foam Contractor's Association) and CGSB-51-GP 46MP Manual for "Installers of Spray Polyurethane Foam Thermal Insulation" and ASTM C1029-90 "Spray Applied Rigid Cellular Polyurethane Thermal Insulation"]

1.04 SUBMITTALS

A. Manufacturer's descriptive literature for each product, including section or other type details.

B. Manufacturer's written installation instructions.

C. Shop drawings and samples, when required, in accordance with Section [01300].

1.05 QUALITY ASSURANCE

A. Roof accessories manufactures to have minimum 5 years documented experience in the design and fabrication of roofing specialities and accessories.

1.06 SPECIAL WARRANTY

A. Warrant products installed under this section of work to be free of defects in materials and/or manufacture [and condensation] for a period of 20 years when installed in accordance with the manufacturer's written instructions.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
GRAVITY VENTS
SPECIFICATION

PART 2: PRODUCTS

2.01   MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:
1. 20 year warranty against defects in materials and/or manufacture, as applicable;
2. maintenance free design;
3. materials and sizes options, and thicknesses;
4. injection molded urethane insulation to CGSB-51-GP 46MP and ASTM C1029-90, as applicable;
5. treated deck flange, as applicable;
6. written installation instructions.

2.02   MANUFACTURED UNITS

GAV-1 Gravity Air Vents-Small Size Vents
A. Gravity air vents: Thaler [GAV-1A] [GAV-1C][GAV-1SS] standard 12" (305 mm) high, [3" to 10" (76 mm) to (245 mm)] diameter gravity air vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [24 oz. (0.831mm) copper] [.031" 22 ga. Type 304 stainless steel] with integral deck flange, removable conical hood fitted with three support brackets, insect screen and [bituminous painted deck flange][PVC coated deck flange][plain deck flange].

GAV-2 Gravity Air Vents (Large Size Vents)
B. Gravity air vents: Thaler [GAV-2A] [GAV-2C][GAV-2SS] standard 12" (305 mm) high [12" (305 mm) and up] diameter gravity air vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [24 oz. (0.831 mm) copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] with integral deck flange, fixed conical hood fitted with insect screen and support brackets, and [bituminous painted deck flange][PVC coated deck flange][plain deck flange].

GAV-3 Gravity Air Vents-Small Size Vents Sloped Roofs
C. Gravity air vents: Thaler [GAV-3A] [GAV-3C][GAV-SS3] standard 12" and up (305 mm) high, [3" (76 mm)] to 10" (254 mm) diameter gravity air vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [24 oz. 0.032" (0.831 mm) copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel with integral deck flange, removable conical hood fitted with three support brackets, insect screen and [bituminous painted deck flange][PVC coated deck flange][plain deck flange].

GAV-4 Gravity Air Vents (Large Size Vents) Sloped Roofs
D. Gravity air vents: Thaler [GAV-4A] [GAV-4C][GAV-4SS] [_____] high, [12" (305 mm) and up] diameter gravity air vent consisting of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [24 oz. 0.032" (0.831 mm) copper] [.031" (0.79 mm) 22 ga.) Type 304 stainless steel] wit integral deck flange, fixed conical hood fitted with insect screen and support brackets, and [bituminous painted deck flange][PVC coated deck flange] [plain deck flange].

PART 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
GRAVITY VENTS
SPECIFICATION

3.02 INSTALLATION

A. Install flashing in accordance with manufacturer's printed instructions.

Note: Items B to F (regarding roof spaces) have been condensed from the 1995 National Building Code of Canada (NBC). Consult with authorities having jurisdiction for specific data.

B. Vent roof space or attic above an insulated ceiling with openings to the exterior to provide unobstructed vent area of not less than 1/300 of the insulated ceiling area.

C. Uniformly distribute vents on opposite sides of the building.

D. Design vents to prevent entry of rain, snow and insects.

E. Determine unobstructed vent area required in conformance with CAN3-A93, "Natural Airflow Ventilators for Buildings".

F. For low slope roofs where insulation is placed below roof sheathing in roofs having a slope of less than 1 in 6 or in roofs that are constructed with roof joists, the unobstructed vent area shall be not less than 1/150 of the insulated ceiling area.

BUR
G. Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

Modified Bitumen
H. Torch membrane until bitumen is fluid and set deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply
I. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to gravity air vent.

Note: For PVC membrane, specify PVC coated deck flange by adding suffix P to end of Thaler model number, e.g. GAV-1A-P; weld roofing to deck flange using PVC torch.

PVC Single Ply
J. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Weld roofing to deck flange using PVC torch.

3.03 FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

3.04 ADJUSTING

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

3.05 CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleanersor techniques which could impair performance of the roofing system.

End Of Section

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

TABLE OF CONTENTS

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

TABLE OF CONTENTS

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**FALL ARREST
ROOF ANCHORS, ETC**

WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is the responsibility of specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler Fall Arrest Roof Anchors (FARA) products have a number of Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE
COMPETITION

THALER VALUE
ADDED FEATURES

Strongest fall arrest anchors available; anchors are designed to resist without fracture pull-out force of 5400 lbs (24.03 kN), applied in the most adverse direction. Test reports available upon request.

Provides best roof penetration protection; roof anchors are supplied with CSA Approved flashings as tested to CSA B272-93. Flashings utilize Thaler patented EPDM seals which eliminate flashing maintenance. Note: Thaler have been manufacturing flashings, anchors, roof supports and roof drains for the roofing industry in North America for over 30 years.

Condensation free; Anchor post is filled with injection molded urethane insulation which adheres to inner walls without air pockets (CGSB 51-GP 46MP); provides corrosion protection while adding to product durability.

Versatile Design; roof anchors are available with more eye options, flashing options, fastening options and different levels of structural performance than any other anchor product available on the market today.

Non-Standard Anchors; Thaler provide elongated and "beefed-up" anchors to accommodate sloped insulation or lightweight concrete fill and/or custom applications.

$ 7,000,000.00 liability insurance; anchor integrity is backed by $ 3,000,000.00 Commercial General Liability and $ 4,000,000.00 Umbrella Liability.

Meets all applicable standards; conforms to all Canadian and United States standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations (including flashing standards).

Samples immediately upon request; supplied without charge to qualified prospects with the provision that they be returned upon completion of evaluation. Construction professionals and building owners are urged to examine samples before making a specifying/purchasing decision; Thaler quality always wins the day.

20 year warranty; guaranteed against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

Maintenance-Free (annual inspection excepted); roof anchors are equipped with Thaler pre-formed metal flashings that never need caulking (CSA B272-93). EPDM seals with "memory" provide constant pressure to outside of anchor posts to prevent leaks and condensation build-up; see Thaler EPDM Flashing Seals literature and STACK JACK Flashings literature.

Incorporates air barrier principles; roof anchors employing through deck installation, such as steel deck over OWSJ, are protected against air leakage by the EPDM flashing seals; see Thaler EPDM Flashing Seals literature. Aesthetically pleasing; arguably the best looking roof anchor products available on the market today. Clean assembly without messy caulking or flashing seals.

Complete material disclosure; all material thicknesses, dimensions, grades, finishes and other relevant product information is indicated on data sheets and in specifications.

100% Re-useable flashing; can be completely dismantled and re-used when re-roofing.

Competent sales and design approach; in the fall protection business Thaler proudly provides optimum, economical fall protection systems.

Written "Installation Instructions"; provided with every Thaler product.

FORGED EYE (FARA-1/-11)

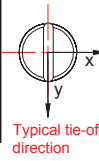**U BOLT EYE (FARA-11U)**

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.0 kN) was Released	
FARA-1	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)	ALL TESTING REPORTS AVAILABLE UPON REQUEST
		Parallel to the eye (y)	0.008" (0.203 mm)	
FARA-11	Forged Eye, Stainless Steel	Perpendicular to the eye (x)	0.046" (1.168 mm)	
		Parallel to the eye (y)	0.013" (0.330 mm)	
FARA-11U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.203" (5.156 mm)	
		Parallel to the eye (y)	0.019" (0.482 mm)	

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction (x).

Typical tie-off direction

All stainless steel anchor also available (FARA-11SS/-11USS) e.g. eye, HSS, base plates, fastening and flashing.

4-1/2" (114 mm)
3-1/4" (82 mm)

FORGED COMBINATION EYE AND BASE, WELDED TO HSS AND HOT DIP GALVANIZED

1" (25 mm) TYPE 304 S.S. BOLT, LOCK WASHER, NUT, AND EPDM SEAL

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

THALER SJ-34(9) NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOF ILLUSTRATED (BUR)

EPDM TRIPLE PRESSURE GROMMET SEAL

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

14" (356 mm)
12-5/8" (321 mm)

MINIMUM 6" (152 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

DEFORM THREADS TOP AND BOTTOM AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

1/4" x 4" x 4" (6 x 102 x 102 mm) STAINLESS STEEL PLATE, LOCK WASHER AND NUT

FARA-1/-11/-11U/ FALL ARREST ROOF ANCHORS (Bolt-Through)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-1/-11/-11U Fall Arrest Roof Anchors are installed by through-bolting the anchor to the structural concrete roof deck as per Thaler layout drawings, using a recommended tightening torque of 125 ft-lbf (169 Nm), deforming the exposed bolt threads at both ends, then placing the flashing sleeve over the anchor and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number e.g. FARA-1-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-1-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-11 stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the lower part of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.

DESCRIPTION:
Thaler FARA bolt-through anchors consist of a urethane insulated hollow steel post (HSS) with base plate, single stainless steel bolt for securing to concrete roof slab, and flashing sleeve. The top of the anchor is available with three different options:
1. With very high strength, galvanized forged eye (FARA-1). All stainless steel (FARA-11SS).
2. With very high strength, stainless steel forged eye (FARA-11). All stainless steel (FARA-11SS).
3. With high strength stainless steel U Bolt eye (FARA-11U). All stainless steel (FARA-11USS).

PROMINENT FEATURES:
Condensation free and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-34 New-Standard STACK JACK Flashing conforms to CSA B272-93. See separate Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
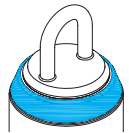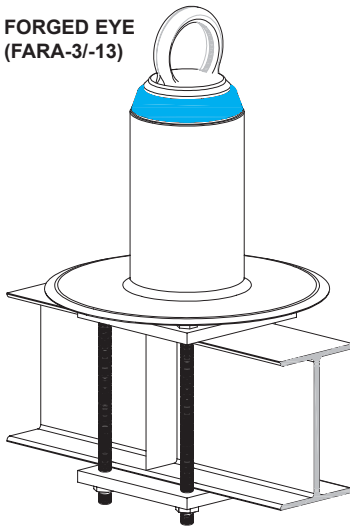
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA -1 with galvanized forged 1018 steel eye] [FARA-11 with Type 304 stainless steel forged eye] [FARA-11U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut and washer, and Type 304 s.s. 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) underdeck plate, lock washer and nut; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK Flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel) to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

**FORGED EYE
(FARA-2/-12)**

**U BOLT EYE
(FARA-12U)**

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released	
FARA-2	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)	ALL TESTING REPORTS AVAILABLE UPON REQUEST
		Parallel to the eye (y)	0.008" (0.203 mm)	
FARA-12	Forged Eye, Stainless Steel	Perpendicular to the eye (x)	0.046" (1.168 mm)	
		Parallel to the eye (y)	0.013" (0.330 mm)	
FARA-12U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.203" (5.156 mm)	
		Parallel to the eye (y)	0.019" (0.482 mm)	

Note: Anchors are designed to resist without fracture and/or pull-out force of 5400 lbs (24.03 kN), applied in the most adverse direction (x).

Typical tie-off direction

All stainless steel anchor also available (FARA-12SS/-12USS) e.g. eye, HSS, base plate, fastening and flashing.

4-1/2" (114 mm)
3-1/4" (82 mm)

FORGED COMBINATION EYE AND BASE, WELDED TO HSS PIPE AND HOT DIP GALVANIZED

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

THALER SJ-34(9) NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

14" (356 mm)
12-5/8" (321 mm)

EPDM TRIPLE PRESSURE GROMMET SEAL

INVERTED ROOF ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

MIN. 5" (127 mm)
MIN. 8" (203 mm)

FARA-2/-12/-12U FALL ARREST ROOF ANCHORS (Adhesive Bolt)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-2/-12/-12U anchors are installed by adhesive bolting (as per bolt manufacturer's instructions) the anchor to the structural concrete roof deck as per layout drawings, then placing the flashing sleeve over the anchor and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number e.g. FARA-2-A-P; weld roofing to deck flange using PVC torch.
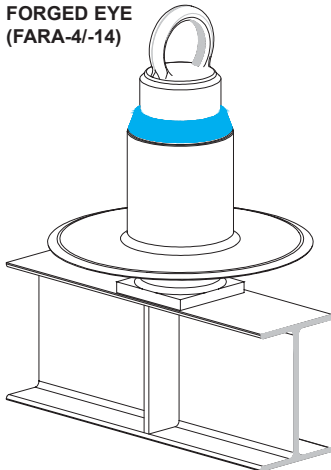
Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-2-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-12 stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the lower part of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.
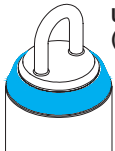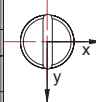
ROOF SPECIALTIES
**FARA-2/-12/-12U
"FIXED EYE"
FALL ARREST ROOF
ANCHORS (Adhesive Bolt)**

DESCRIPTION:
Thaler FARA adhesive bolt anchors consist of a urethane insulated hollow steel post (HSS) with base plate for securing to concrete roof slab using adhesive anchor bolts, and flashing sleeve. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-2). All stainless steel (FARA-12SS).
2. With very high strength stainless steel forged eye (FARA-12). All stainless steel (FARA-12SS).
3. With high strength stainless steel U Bolt (FARA-12U). All stainless steel (FARA-12USS).

PROMINENT FEATURES:
Condensation and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-34(9) New-Standard STACK JACK Flashing conforms to CSA B272-93. See separate Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA -2 with galvanized forged 1018 steel eye] [FARA-12 with Type 304 stainless steel forged eye] [FARA-12U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Brau-nfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

**FORGED EYE
(FARA-3/-13)**

FARA-3/-13/-13U "FIXED EYE" FALL ARREST ROOF ANCHORS (Bolt Around Beam)

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-3	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)
		Parallel to the eye (y)	0.008" (0.203 mm)
FARA-13	Forged Eye, Stainless Steel	Perpendicular to the eye (x)	0.046" (1.168 mm)
		Parallel to the eye (y)	0.013" (0.330 mm)
FARA-13U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.203" (5.156 mm)
		Parallel to the eye (y)	0.019" (0.482 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Typical tie-off direction

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction (x).

**U BOLT EYE
(FARA-13U)**

4-1/2" (114 mm)

3-1/4" (82 mm)

FORGED EYE AND BASE WELDED TO HSS PIPE AND HOT DIP GALVANIZED

1/4' x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x8" (16 mm x 203 x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION.

THALER SJ-37(9) NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOF ILLUSTRATED (BUR)

EPDM TRIPLE PRESSURE GROMMET SEAL

14" (356 mm)
12-5/8" (321 mm)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) PLATE

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

FOUR 5/8" (16 mm) S.S. BOLTS, LOCK WASHER AND NUTS

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE

All stainless steel anchor also available (FARA-13SS/-13USS) e.g. eye, HSS, base plates, fastening and flashing.

FARA-3/-13/-13U FALL ARREST ROOF ANCHORS (Bolt Around Beam)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-3/-13/-13U anchors are installed by bolting the anchor around a structural beam as per layout drawings, using a recommended tightening torque of 75 ft-lbf (100 Nm), then placing the flashing sleeve over the anchor and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACKJACK Flashing. Note: for PVC membrane, specify PVC coated STACKJACK by adding suffix P to end of model number e.g. FARA-3-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACKJACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-3-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-13 stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the lower part of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.

DESCRIPTION:
Thaler FARA bolt around beam anchors consist of a urethane insulated hollow steel post (HSS) with base plate, four stainless steel bolts and under-beam plate for securing to a steel beam, and flashing sleeve. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-3). All stainless steel (FARA-13SS).
2. With very high strength, stainless steel forged eye (FARA-13). All stainless steel (FARA-13SS).
3. With high strength, stainless steel U Bolt (FARA-13U). All stainless steel (FARA-13USS).

PROMINENT FEATURES:
Condensation free and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-37(9), New-Standard STACKJACK Flashing conforms to CSA B272-93. See separate Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
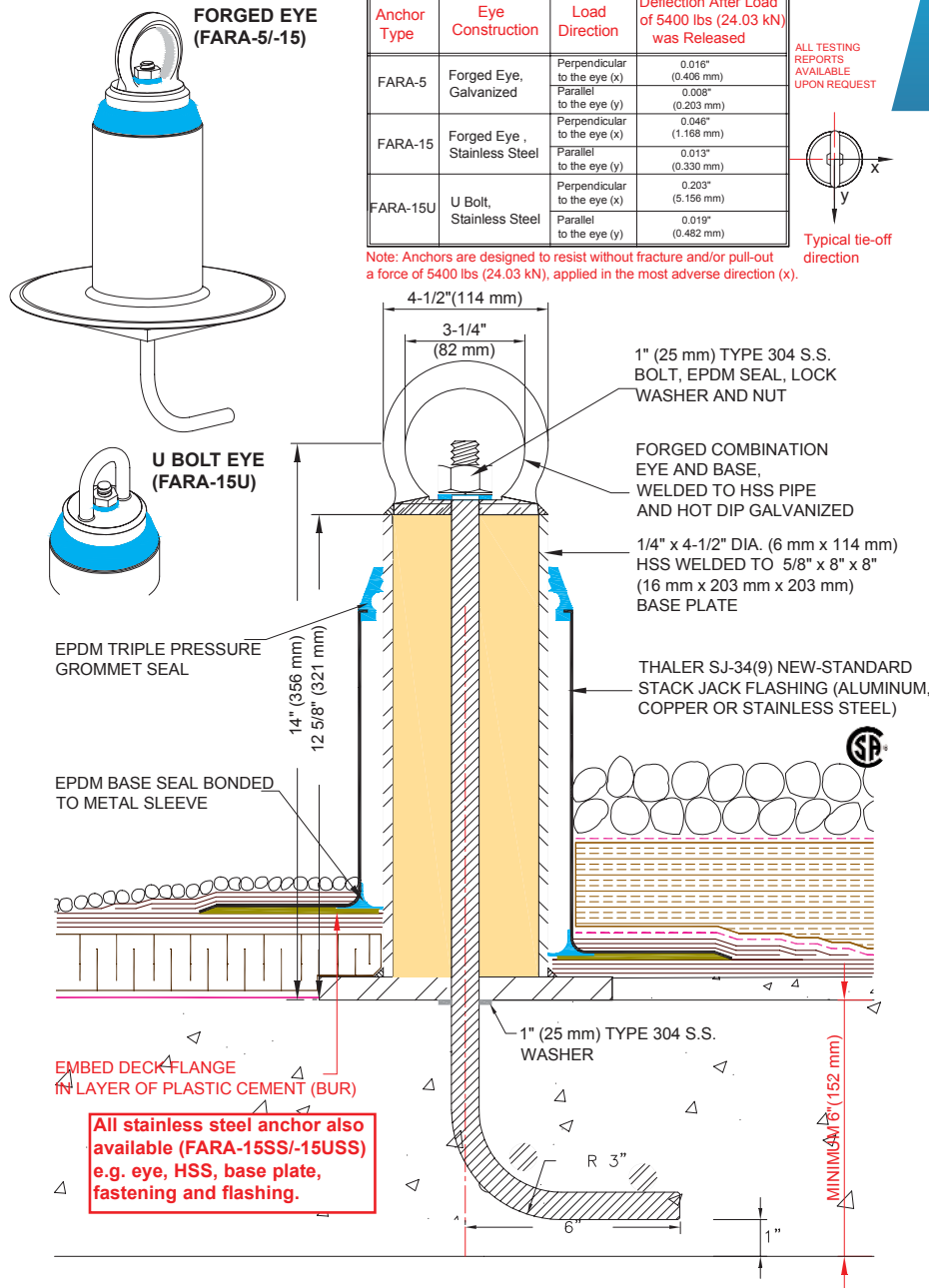
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-3 with galvanized forged 1018 steel eye] [FARA-13 with Type 304 stainless steel forged eye] [FARA-13U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; Four 5/8" (16 mm) Type 304 s.s. bolts and 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) under-beam plate, lock washers and nuts; SJ-37(9), 9" (229 mm) high New-Standard STACKJACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture

THALER

I-3

FORGED EYE (FARA-4/-14)

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-4	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)
		Parallel to the eye (y)	0.008" (0.203 mm)
FARA-14	Forged Eye, Stainless Steel	Perpendicular to the eye (x)	0.046" (1.168 mm)
		Parallel to the eye (y)	0.013" (0.330 mm)
FARA-14U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.203" (5.156 mm)
		Parallel to the eye (y)	0.019" (0.482 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction (x).

Typical tie-off direction

U BOLT EYE (FARA-14U)

FORGED COMBINATION EYE AND BASE, WELDED TO HSS PIPE AND HOT DIP GALVANIZED

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 5" x 5" (16 mm x 127 mm x 127 mm) BASE PLATE USING 5/16" (8 mm) WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION.

THALER SJ-37 NEW STANDARD STACK JACK FLASHING (ALLUMINUM, COPPER OR STAINLESS STEL) CSA

4-1/2"(114 mm)
3-1/4"(82 mm)

INVERTED ROOFING ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

CONVENTIONAL ROOFING ILLUSTRATED (BUR)

14" (356 mm)
12-5/8" (321 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

All stainless steel anchor also available (FARA-14SS/-14USS) e.g. eye, HSS, base plate, fastening and flashing.

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

FARA-4/-14/-14U FALL ARREST ROOF ANCHORS (Weldable)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

DESCRIPTION:
Thaler FARA weldable anchors consist of a urethane insulated hollow steel post (HSS) and base plate, and flashing sleeve. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-4). All stainless steel (FARA-14SS).
2. With very high strength, stainless steel forged eye (FARA-14). All stainless steel (FARA-14SS).
3. With very high strength, stainless steel U Bolt eye (FARA-14U). All stainless steel (FARA-14USS).

PROMINENT FEATURES:
Condensation and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-37 New-Standard STACK JACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-4 with galvanized forged 1018 steel eye] [FARA-14 with Type 304 stainless steel forged eye] [FARA-14U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 5" x 5" (16 mm x 127 mm x 127 mm) 44W base plate; SJ-37, 7" (178 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-4/-14/-14U anchors are installed by welding the anchor to a structural beam as per layout drawings, then placing the flashing sleeve over the anchor and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number e.g. FARA-4-A-P; weld roofing to deck flange using PVC torch.
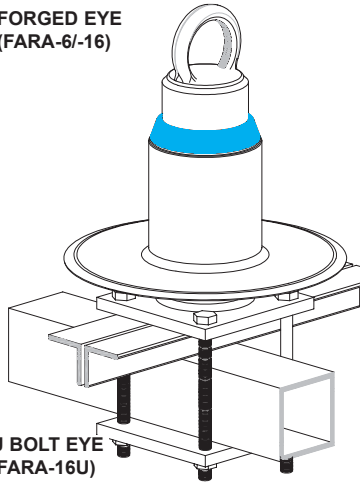
Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-4-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-14 stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the lower part of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.
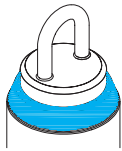
ROOF SPECIALTIES
FARA-5/-15/-15U
"FIXED EYE"
FALL ARREST ROOF ANCHORS (Cast-In-Place)

**FORGED EYE
(FARA-5/-15)**

**U BOLT EYE
(FARA-15U)**

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-5	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)
		Parallel to the eye (y)	0.008" (0.203 mm)
FARA-15	Forged Eye, Stainless Steel	Perpendicular to the eye (x)	0.046" (1.168 mm)
		Parallel to the eye (y)	0.013" (0.330 mm)
FARA-15U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.203" (5.156 mm)
		Parallel to the eye (y)	0.019" (0.482 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction (x).

Typical tie-off direction

1" (25 mm) TYPE 304 S.S. BOLT, EPDM SEAL, LOCK WASHER AND NUT

FORGED COMBINATION EYE AND BASE, WELDED TO HSS PIPE AND HOT DIP GALVANIZED

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE

THALER SJ-34(9) NEW-STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

EPDM TRIPLE PRESSURE GROMMET SEAL

EPDM BASE SEAL BONDED TO METAL SLEEVE

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

All stainless steel anchor also available (FARA-15SS/-15USS) e.g. eye, HSS, base plate, fastening and flashing.

4-1/2"(114 mm)
3-1/4" (82 mm)
14" (356 mm)
12 5/8" (321 mm)

1" (25 mm) TYPE 304 S.S. WASHER

MINIMUM 6" (152 mm)
R 3"
6"
1"

FARA-5/-15/-15U FALL ARREST ROOF ANCHORS (Cast-In-Place)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

DESCRIPTION:
Thaler FARA cast-in-place anchors consist of a urethane insulated hollow steel post (HSS) with base plate, single stainless steel bolt for securing to concrete roof slab, and flashing sleeve. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-5). All stainless steel (FARA-15SS).
2. With very high strength, stainless steel forged eye (FARA-15). All stainless steel (FARA-15SS).
3. With high strength, stainless steel U Bolt (FARA-15U). All stainless steel (FARA-15USS).

PROMINENT FEATURES:
Condensation free and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-34(9) New-Standard STACK JACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-5 with galvanized forged 1018 steel eye] [FARA-15 with Type 304 stainless steel forged eye] [FARA-15U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. anchor bolt with EPDM weather seal, top nut and washer; 1" (25 mm) s.s. washer; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-5/-15/-15U anchors are installed by casting the anchor into the structural concrete roof deck as per layout drawings, using a maximum torque of 125 ft.-lbf. (169 Nm), deforming the exposed bolt threads, then placing the flashing sleeve over the anchor and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number e.g. FARA-5-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-5-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-15 stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the lower part of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.

FORGED EYE (FARA-6/-16)

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-6	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)
		Parallel to the eye (y)	0.008" (0.203 mm)
FARA-16	Forged Eye, Stainless Steel	Perpendicular to the eye (x)	0.046" (1.168 mm)
		Parallel to the eye (y)	0.013" (0.330 mm)
FARA-16U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.203" (5.156 mm)
		Parallel to the eye (y)	0.019" (0.482 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction (x).

Typical tie-off direction

U BOLT EYE (FARA-16U)

All stainless steel anchor also available (FARA-16SS/-16USS) e.g. eye, HSS, base plates, fastening and flashing.

4-1/2"(114 mm)
3-1/4"(82 mm)

FORGED COMBINATION EYE AND BASE, WELDED TO HSS PIPE AND HOT DIP GALVANIZED

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLED WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

THALER SJ-37 NEW STANDARD STACK JACK FLASHING (ALUMINUM,COPPER OR STAINLESS STEEL)

INVERTED ROOFING ILLUSTRATED (BUR)

EPDM TRIPLE PRESSURE GROMMET SEAL

CONVENTIONAL ROOFING ILLUSTRATED (BUR)

14" (356 mm)
12-5/8" (321 mm)

TOP CHORD OF OWSJ

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

1/4" X 4" HSS (6 mm x 102 mm) BY OTHERS

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

FOUR 5/8"(16 mm) S.S. BOLTS, LOCK WASHER AND NUTS 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) STEEL PLATE

DEFORM THREADS AS PER CSA OR OSHA

FARA-6/-16/-16U FALL ARREST ROOF ANCHORS (Bolt Around OWSJ)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-6/-16/-16U anchors are installed by bolting the anchor to the top chord of the OWSJ as per layout drawings, using a recommended tightening torque of 75 ft-lbf (100Nm), reinforcing the base plates with a crosstube, then placing the flashing sleeve over the anchor and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.
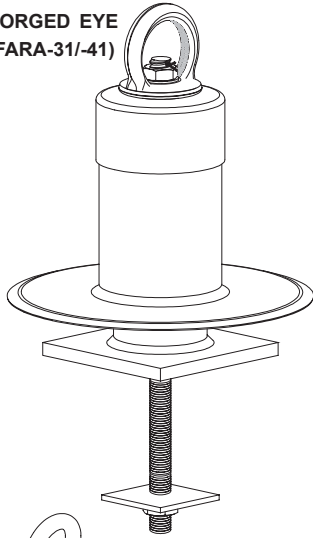
Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number e.g. FARA-6-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.
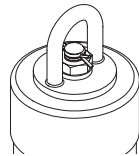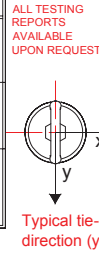
Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-6-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-16 stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the lower part of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.

DESCRIPTION:
Thaler FARA bolt around OWSJ anchors consist of a urethane insulated hollow steel post (HSS) with base plate, four stainless steel bolts and under-joist plate, and cross tube (supplied by others) for securing to an OWSJ, and flashing sleeve. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-6). All stainless steel (FARA-16SS).
2. With very high strength, stainless steel forged eye (FARA-16). All stainless steel (FARA-16SS).
3. With high strength, stainless steel U Bolt (FARA-16U). All stainless steel (FARA-16USS).

PROMINENT FEATURES:
Condensation free and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-37 New-Standard STACK JACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-6 with galvanized forged 1018 steel eye] [FARA-16 with Type 304 stainless steel forged eye] [FARA-16U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) under-joist plate, and 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) HSS cross tube (supplied by others); assembly; four 5/8" (16 mm) Type 304 s.s. bolts with lock washers and nuts; SJ-37, 7" (178 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

FORGED EYE (FARA-7/-17)

U BOLT EYE (FARA-17U)

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-7	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)
		Parallel to the eye (y)	0.008" (0.203 mm)
FARA-17	Forged Eye, Stainless Steel	Perpendicular to the eye (x)	0.046" (1.168 mm)
		Parallel to the eye (y)	0.013" (0.330 mm)
FARA-17U	U Bolt, Stainless Stell	Perpendicular to the eye (x)	0.203" (5.156 mm)
		Parallel to the eye (y)	0.019" (0.482 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Typical tie-off direction

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction (x).

4-1/2"(114 mm)
3-1/4" (82 mm)

FORGED COMBINATION EYE AND BASE, WELDED TO HSS PIPE AND HOT DIP GALVANIZED

1" (25 mm) TYPE 304 S.S. BOLT, EPDM SEAL, FLAT WASHER AND NUT

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 10" x 10" (16 mm x 254 mm x 254 mm)) BASE PLATE USING 5/16" (8 mm) WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

THALER SJ-34(9) NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

EPDM TRIPLE PRESSURE GROMMET SEAL

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

14" (356 mm)
12-5/8" (321 mm)
4" (102 mm)

INVERTED ROOFING ILLUSTRATED (BUR)

5/8" x 4" x 12" (16 mm x 102 mm x 305 mm) GALVANIZED PLATE, AND NUT WELDED TO BOLT

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

All stainless steel anchor also available (FARA-17SS/-17USS) e.g. eye, HSS, base plates, fastening and flashing.

FARA-7/-17/-17U FALL ARREST ROOF ANCHORS (Pre-Cast-Core-Bolt)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-7/-17/-17U anchors are installed by grouting the anchor bolt and core slab plate into the structural concrete core slab roof deck joints as per layout drawings, deforming the bolt threads at both ends, using a recommended tightening torque of 125 lbf (169 Nm), then placing the flashing sleeve over the anchor and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number e.g. FARA-7-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-7-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-17 stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the lower part of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.

ROOF SPECIALTIES
FARA-7/-17/-17U "FIXED EYE" FALL ARREST ROOF ANCHORS (Pre-Cast Core Bolt)
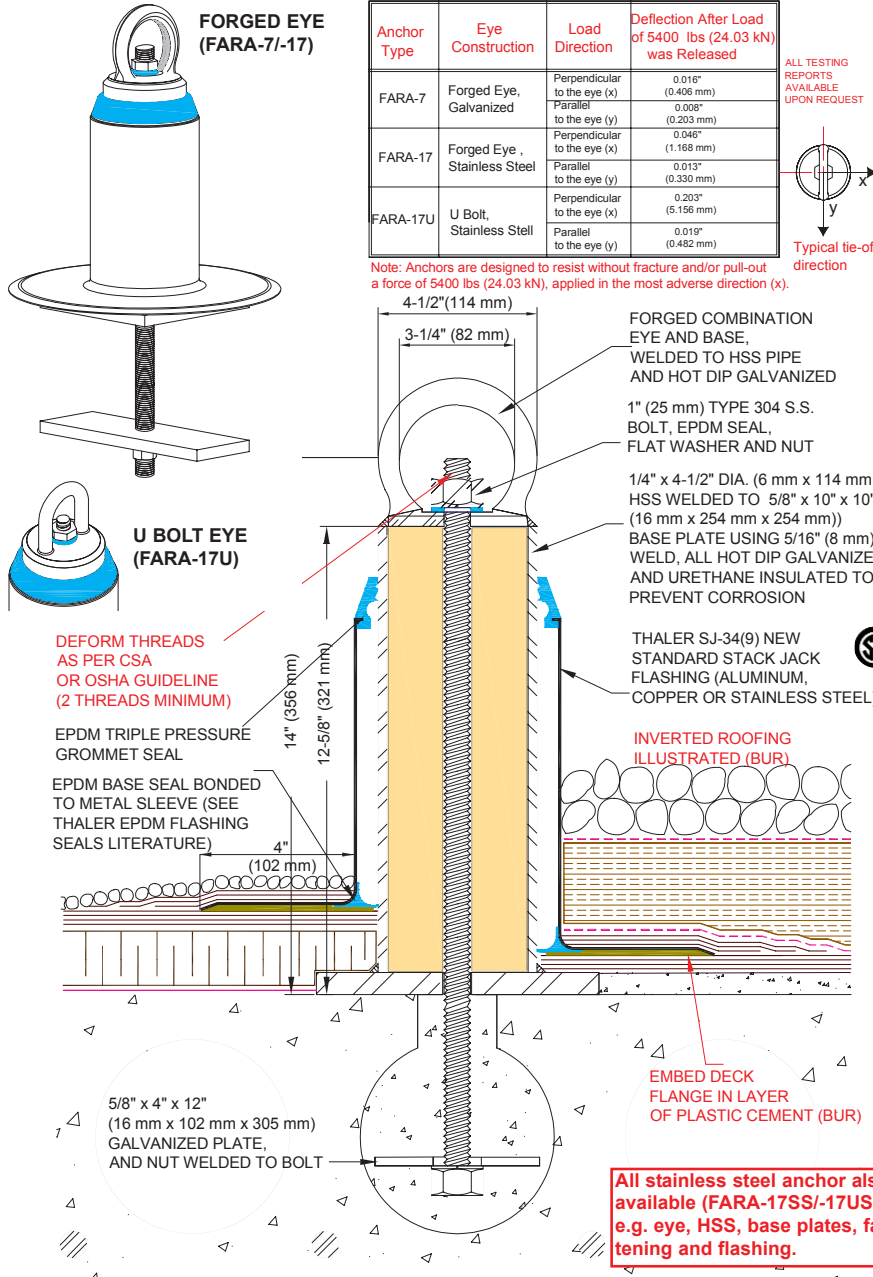
DESCRIPTION:
Thaler FARA pre-cast core bolt anchors consist of a urethane insulated hollow steel post (HSS) single stainless steel bolt and core plate for securing to pre-cast concrete roof slab, and flashing sleeve. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-7). All stainless steel (FARA-17SS).
2. With very high strength, stainless steel forged eye (FARA-17). All stainless steel (FARA-17SS).
3. With high strength, stainless steel U Bolt (FARA-17U). All stainless steel (FARA-17USS).

PROMINENT FEATURES:
Condensation free and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-34(9) New-Standard STACK JACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.
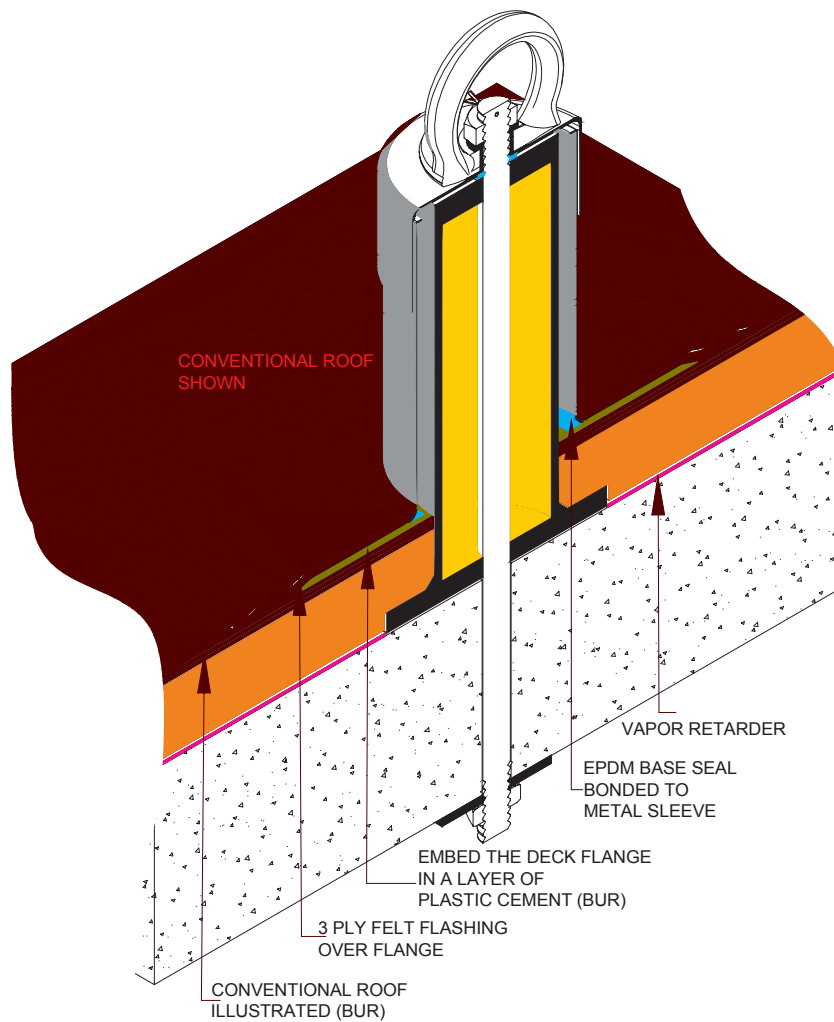
MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
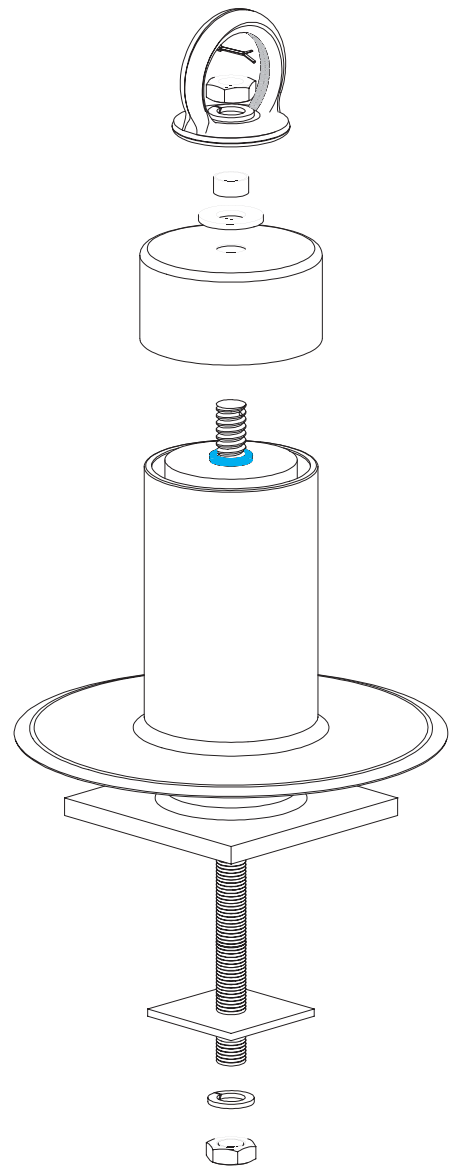
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-7 with galvanized forged 1018 steel eye] [FARA-17 with Type 304 stainless steel forged eye] [FARA-17U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 10" x 10" (16 mm x 254 mm x 254 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut and washer; galvanized 5/8" x 4" x 12" (16 mm x 102 mm x 305 mm) core slab plate, lock washer and nut; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

**FORGED EYE
(FARA-31/-41)**

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-31	Forged Eye, Galvanized	Parallel to the eye (y)	0.088" (2.235 mm)
FARA-41	Forged Eye, Stainless Steel	Parallel to the eye (y)	0.085" (2.159 mm)
FARA-41U	U Bolt, Stainless Steel	Parallel to the eye (y)	0.095" (2.413 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction.

Typical tie-off direction (y)

**U BOLT EYE
(FARA-41U)**

All stainless steel anchor also available (FARA-41SS/-41USS) e.g. eye, base plates, fastening and flashing.

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

CONVENTIONAL ROOF SHOWN (BUR)

4-1/2"(114 mm)
3-1/4"(82 mm)

FORGED COMBINATION EYE AND BASE, (ROTATES 360°)

1" (25 mm) TYPE 304 S.S. BOLT, SPLIT WASHER, NUT AND EPDM SEAL

STAINLESS STEEL COTTER PIN
STAINLESS STEEL SPACER
TYPE 304 STAINLESS STEEL CAP

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

THALER SJ-105 NEW-STANDARD STACK JACK FLASHING (ALUMINU COPPER, OR STAINLESS STEEL)

INVERTED ROOF SHOWN (BUR)

14" (356 mm)
12-5/8" (321 mm)

4" (102 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE

1/4" x 4" x 4" (6 mm x 100 mm x 100 mm) STAINLESS STEEL PLATE, LOCK WASHER AND NUT

MINIMUM 6" (152 mm)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE

FARA-31/-41/-41U FALL ARREST ROOF ANCHORS (Bolt Through)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

DESCRIPTION:
Thaler FARA bolt-through anchors consist of a urethane insulated hollow steel post (HSS) with base plate, single stainless steel bolt and under-deck plate for securing to concrete roof slab, flashing sleeve, and stainless steel cap assembly. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-31). All stainless steel (FARA-41SS).
2. With very high strength stainless steel forged eye (FARA-41). All stainless steel (FARA-41SS).
3. With high strength stainless steel U Bolt (FARA-41U). All stainless steel (FARA041USS).

PROMINENT FEATURES:
Condensation free and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair. Ideal for re-roofing.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler STACK JACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
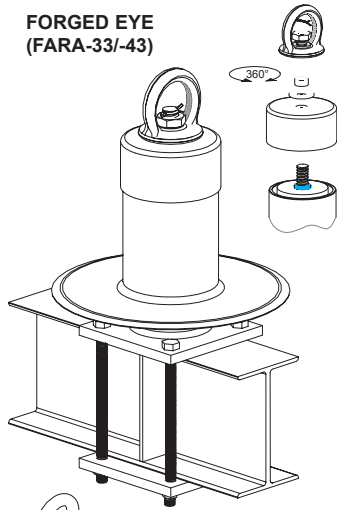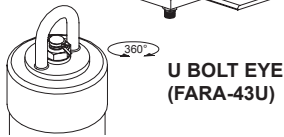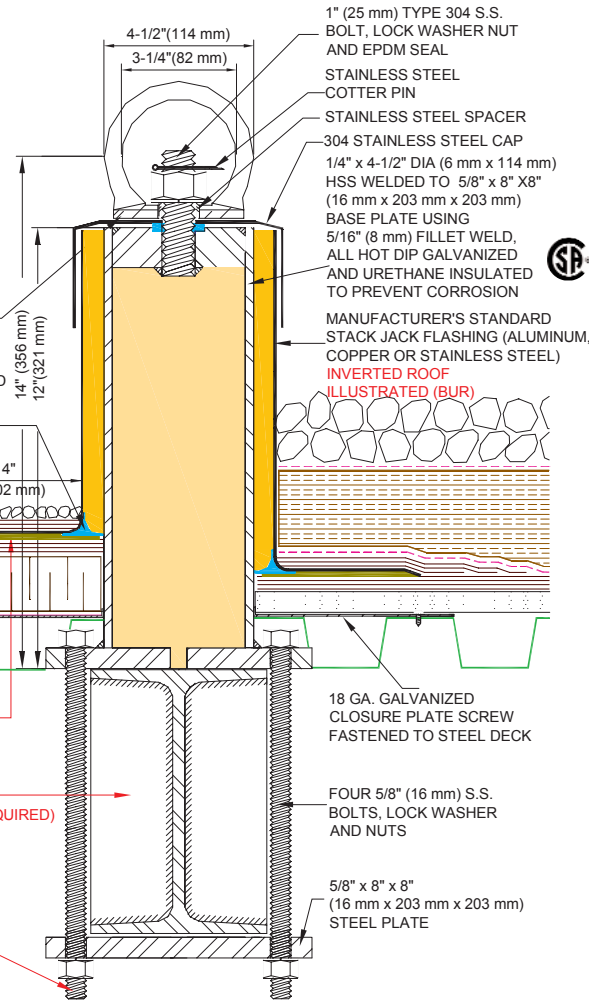
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-31 with galvanized forged 1018 steel eye] [FARA-41 with Type 304 stainless steel forged eye] [FARA-41U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut and washer, s.s. cotter pin; Type 304 s.s. 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) under- deck plate, lock washer and nut; manufacturer's standard flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel) to CSA B272-93, with Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-31/-41/-41U anchors are installed by through-bolting the anchor to the structural concrete roof deck as per layout drawings, using a recommended tightening torque of 125 ft-lbf (169 Nm), deforming the exposed lower bolt threads and installing a cotter pin through the upper exposed bolt threads, then placing the flashing sleeve over the anchor and roof membrane, installing the cap and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to top of anchor underneath the cap. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number e.g. FARA-3-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-31-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

CONVENTIONAL ROOF
SHOWN

VAPOR RETARDER

EPDM BASE SEAL
BONDED TO
METAL SLEEVE

EMBED THE DECK FLANGE
IN A LAYER OF
PLASTIC CEMENT (BUR)

3 PLY FELT FLASHING
OVER FLANGE

CONVENTIONAL ROOF
ILLUSTRATED (BUR)

**CUT AWAY SECTION OF ANCHOR
AND STRUCTURAL ROOF DECK**

**EXPLODED VIEW OF
FARA-31/-41 ANCHOR**

ROOF SPECIALTIES
FARA-32/-42/-42U
"SWIVEL EYE"
FALL ARREST
ROOF ANCHORS (Adhesive Bolt)

FORGED EYE
FARA-32/-42
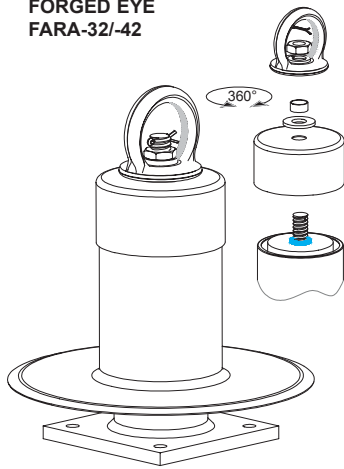
360°

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-32	Forged Eye, Galvnized	Parallel to the eye (y)	0.088" (2.235 mm)
FARA-42	Forged Eye, Stainless Steel	Parallel to the eye (y)	0.085" (2.159 mm)
FARA-42U	U Bolt, Stainless Steel	Parallel to the eye (y)	0.095" (2.413 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Note: Anchors are designed to resist without fracture and/or pull-out force of 5400 lbs (24.03 kN), applied in the most adverse direction.

x
y
Typical tie-off direction (y)

FORGED COMBINATION EYE AND BASE, (ROTATES 360°)

4-1/2" (114 mm)
3-1/4" (82 mm)

1" (25 mm) TYPE 304 S.S. BOLT, EPDM SEAL, LOCK WASHER AND NUT

STAINLESS STEEL COTTER PIN

STAINLESS STEEL SPACER

304 STAINLESS STEEL CAP

1/4" x 4-1/2" DIA. (6 mm x 114 mn HSS WELDED TO 5/8" x 8" x 8" (6 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION.

MANUFACTURER'S STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR OR STAINLESS STEEL)

INVERTED ROOF SHOWN (BUR

360°

U BOLT EYE
(FARA-42U)
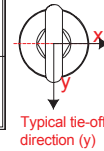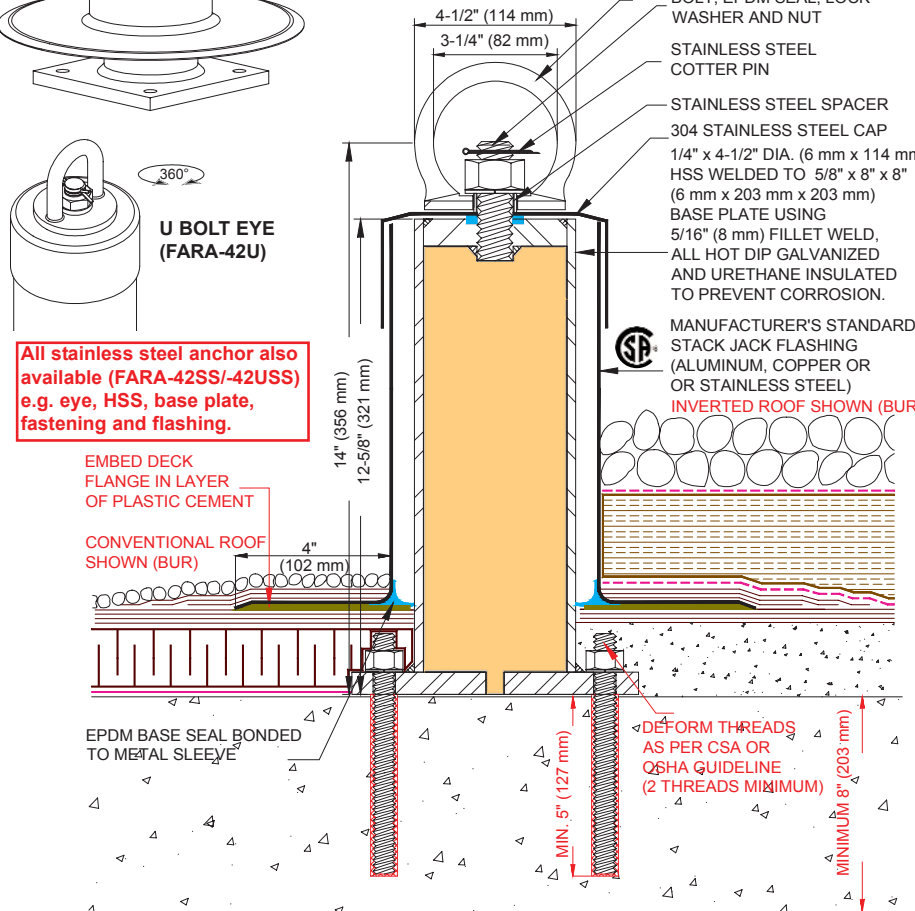
All stainless steel anchor also available (FARA-42SS/-42USS) e.g. eye, HSS, base plate, fastening and flashing.

14" (356 mm)
12-5/8" (321 mm)

CSA

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

CONVENTIONAL ROOF SHOWN (BUR)

4" (102 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE

MIN. 5" (127 mm)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

MINIMUM 8" (203 mm)

FARA-32/-42/-42U FALL ARREST ROOF ANCHORS (Adhesive Bolt)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-32/-42/-42U anchors are installed by adhesive bolting (as per bolt manufacturer's instruction) the anchor to the structural concrete roof deck as per layout drawings, then placing the flashing sleeve over the anchor and roof membrane, installing the cap and cotter pin, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to top of anchor underneath the cap. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number e.g. FARA-32-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to exposed aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-32-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler FARA adhesive bolt anchors consist of a urethane insulated hollow steel post (HSS) with base plate for securing to concrete roof slab using adhesive anchor bolts, flashing sleeve, and stainless steel cap assembly. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-32). All stainless steel (FARA-42SS).
2. With very high strength, stainless steel forged eye (FARA-42). All stainless steel (FARA-42SS).
3. With high strength stainless steel U Bolt (Fara-42U). All stainless steel (FARA-42USS).

PROMINENT FEATURES:
Condensation free and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair. Ideal for re-roofing.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformances include CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler STACK JACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
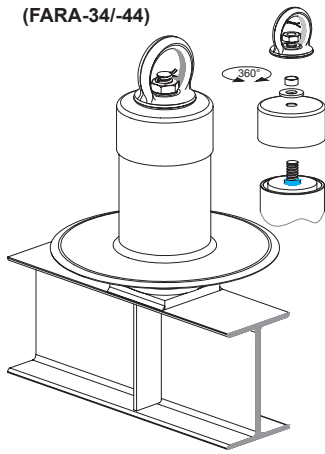
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-32 with galvanized forged 1018 steel eye] [FARA-42 with Type 304 stainless steel forged eye] [FARA-42U with Type 304 stainless steel U bolt] roof anchor with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); manufacturer's standard flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz.copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Base Seal [and] [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.
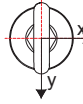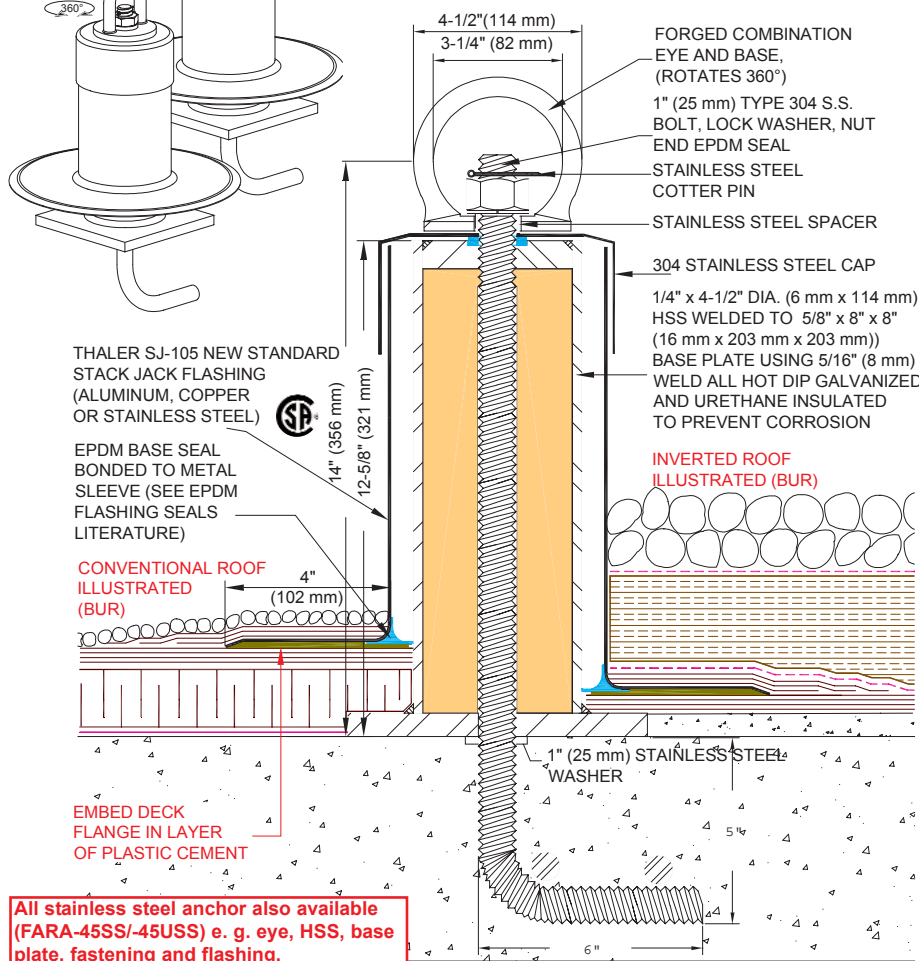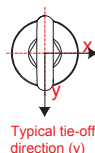
**FORGED EYE
(FARA-33/-43)**

360°

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-33	Forged Eye, Galvanized	Parallel to the eye (y)	0.088" (2.235 mm)
FARA-43	Fored Eye , Stainless Steel	Parallel to the eye (y)	0.085" (2.159 mm)
FARA-43U	U Bolt, Stainless Steel	Parallel to the eye (y)	0.095" (2.413 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Typical tie-off direction (y)

Note: Anchors are designed to resist without fracture and/or pull-out force of 5400 lbs (24.03 kN), applied in the most adverse direction.

**U BOLT EYE
(FARA-43U)**

360°

1" (25 mm) TYPE 304 S.S. BOLT, LOCK WASHER NUT AND EPDM SEAL

STAINLESS STEEL COTTER PIN

STAINLESS STEEL SPACER

304 STAINLESS STEEL CAP

1/4" x 4-1/2" DIA (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" X8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

MANUFACTURER'S STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOF ILLUSTRATED (BUR)

FORGED COMBINATION EYE AND BASE, (ROTATES 360°)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

4-1/2"(114 mm)
3-1/4"(82 mm)
14" (356 mm)
12"(321 mm)
4" (102 mm)
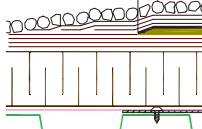
All stainless steel anchor also available (FARA-43SS/-43USS) e.g. eye, HSS, base plates, fastening and flashing.

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

DEFORM THREADS TOP AND BOTTOM AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

FOUR 5/8" (16 mm) S.S. BOLTS, LOCK WASHER AND NUTS

5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) STEEL PLATE

FARA-33/-43/-43U FALL ARREST ROOF ANCHORS (Bolt Around Beam)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-33/-43/-43U anchors are installed by bolting the anchor around a structural beam as per layout drawings, [bolt torque should not exceed 75 lbs-ft. (100 Nm) for 5/8" (16 mm) bolt and 125 lbf-ft. (169 Nm) for 1" (25 mm) bolt] then placing the flashing sleeve over the anchor and roof membrane, installing the cap and cotter pin, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to top pf anchor underneath the cap. Note: for PVC membrane, specify PVC coated STACKJACK by adding suffix P to end of model number e.g. FARA-33-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to exposed aluminum STACKJACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-33-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

FARA-33/-43/-43U
"SWIVEL EYE"
FALL ARREST ROOF ANCHORS
(Bolt Around Beam)

DESCRIPTION:
Thaler FARA bolt around beam anchors consist of a urethane insulated hollow steel post (HSS) with base plate, four stainless steel bolts and under-beam plate for securing to a steel beam, flashing sleeve, and stainless steel cap assembly. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-33). All stainless steel (FARA-43SS).
2. With very high strength, stainless steel forged eye (FARA-43). All stainless steel (FARA-43SS).
3. With high strength, stainless steel U Bolt (Fara-43U). All stainless steel (FARA-43USS).

PROMINENT FEATURES:
Swivel eye follows direction of line attachment. Re-usable. Condensation and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $5,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC AWS, and other references. Thaler STACKJACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-33 with galvanized forged 1018 steel eye] [FARA-43 with Type 304 stainless steel forged eye] [FARA-43U with Type 304 stainless steel U bolt] roof anchor with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; four 5/8" (16 mm) Type 304 s.s. bolts, 44W 5/8" x 8" x 8" (16 mm x 203 x 203) under-beam plate, lock washers, and nuts; manufacturer's standard flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

THALER

I-10

**FORGED EYE
(FARA-34/-44)**

360°

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-34	Forged Eye, Galvanized	Parallel to the eye (y)	0.088" (2.235 mm)
FARA-44	Forged Eye, Stainless Steel	Parallel to the eye (y)	0.085" (2.159 mm)
FARA-44U	U Bolt, Stainless Steel	Parallel to the eye (y)	0.095" (2.413 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction.

Typical tie-off direction (y)

**U BOLT EYE
(FARA-44U)**
360°

FORGED COMBINATION EYE AND BASE, (ROTATES 360°)

1" (25 mm) TYPE 304 S.S. BOLT, SPLIT WASHER, NUT AND EPDM SEAL

STAINLESS STEEL COTTER PIN

STAINLESS STEEL SPACER

304 STAINLESS STEEL CAP

1/4" x 4-1/2" DIA (6 mm x 114 mm) HSS WELDED TO 5/8" x 5" x 5" (16 mm x 127 mm x 127 mm) BASE PLATE USING 5/16" (8 mm) WELD ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

CSA

THALER SJ-205 NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOF ILLUSTRATED (BUR)

4-1/2"(114 mm)
3-1/4"(82 mm)

14" (356 mm)
12-5/8" (321 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE EPDM FLASHING SEALS LITERATURE)

CONVENTIONAL ROOF ILLUSTRATED (BUR)
4" (102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

18 ga. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

5/16" (8 mm) CONTINUOUS WELD

All stainless steel anchor also available (FARA-44SS/-44USS) e.g. eye, HSS, base plates, fastening and flashing.

FARA-34/-44/-44U FALL ARREST ROOF ANCHORS (Weldable)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

DESCRIPTION:
Thaler FARA weldable anchors consist of a urethane insulated hollow steel post (HSS) and base plate, flashing sleeve, and stainless steel cap assembly. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-43). All stainless steel (FARA-44SS).
2. With very high strength, stainless steel forged eye (FARA-44). All stainless steel (FARA-44SS).
3. With high strength, stainless steel U Bolt (Fara-44U). All stainless steel (FARA-44USS).

PROMINENT FEATURES:
Swivel eye follows direction of line attachment. Re-usable. Condensation and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair. Ideal for re-roofing.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler STACK JACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
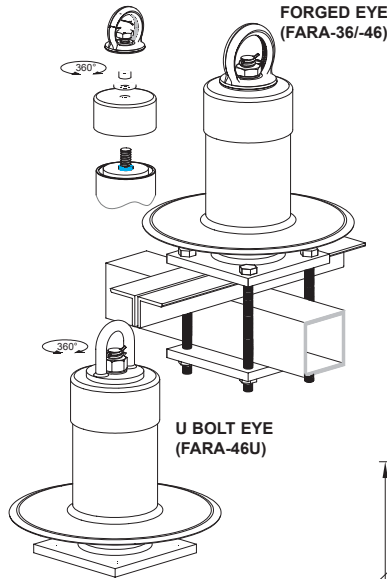
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).
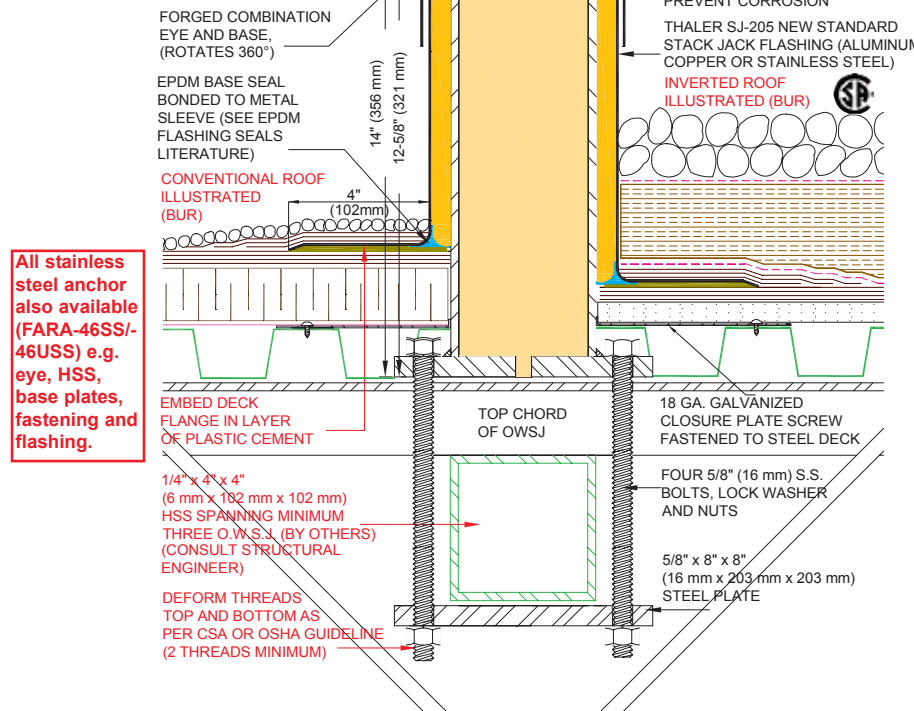
SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-34 with galvanized forged 1018 steel eye] [FARA-44 with Type 304 stainless steel forged eye] [FARA-44U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 5" x 5" (16 mm x 127 mm x 127 mm) 44W base plate; manufacturer's standard flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-34/-44/-44U anchors are installed by welding the anchor to a structural beam as per layout drawings, using a maximum torque of 125 lbf-ft. (169 Nm), then placing the flashing sleeve over the anchor and roof membrane, installing the cap and cotter pin, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to top of anchor underneath the cap. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number e.g. FARA-34-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to exposed aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-34-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

FORGED EYE
(FARA-35/-45)

U BOLT EYE
(FARA-45U)

360°

360°

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-35	Forged Eye, Galvanized	Parallel to the eye (y)	0.088" (2.235 mm)
FARA-45	Forged Eye, Stainless Steel	Parallel to the eye (y)	0.085" (2.159 mm)
FARA-45U	U Bolt, Stainless Steel	Parallel to the eye (y)	0.095" (2.413 mm)

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction.

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Typical tie-off direction (y)

4-1/2"(114 mm)
3-1/4" (82 mm)

FORGED COMBINATION EYE AND BASE, (ROTATES 360°)

1" (25 mm) TYPE 304 S.S. BOLT, LOCK WASHER, NUT END EPDM SEAL

STAINLESS STEEL COTTER PIN

STAINLESS STEEL SPACER

304 STAINLESS STEEL CAP

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm)) BASE PLATE USING 5/16" (8 mm) WELD ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

THALER SJ-105 NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

CSA

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE EPDM FLASHING SEALS LITERATURE)

INVERTED ROOF ILLUSTRATED (BUR)

14" (356 mm)
12-5/8" (321 mm)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

4" (102 mm)

1" (25 mm) STAINLESS STEEL WASHER

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

5"

6"

All stainless steel anchor also available (FARA-45SS/-45USS) e. g. eye, HSS, base plate, fastening and flashing.

FARA-35/-45/-45U FALL ARREST ROOF ANCHORS (Cast-In-Place)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-35/-45/-45U anchors are installed by casting the anchor into the structural concrete roof deck as per layout drawings, using a maximum torque of 125 lbf-ft. (169 Nm), then placing the flashing sleeve over the anchor and roof membrane, installing the cap, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to top of anchor underneath the cap. Note: for PVC membrane, specify PVC coated STACKJACK by adding suffix P to end of model number e.g. FARA-35-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to exposed aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-35-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler FARA cast-in-place anchors consist of a urethane insulated hollow steel post (HSS) and base plate, single stainless steel bolt for securing to concrete roof slab, flashing sleeve, and stainless steel cap assembly. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-35). All stainless steel (FARA-45SS).
2. With very high strength, stainless steel forged eye (FARA-45). All stainless steel (FAR-45SS).
3. With high strength, stainless steel U Bolt (Fara-45U). All stainless steel (FARA-45USS).

PROMINENT FEATURES:
Swivel eye follows direction of line attachment. Re-usable. Condensation and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is back by $7,000,000.00 liability insurance.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair. Ideal for re-roofing.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler STACKJACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
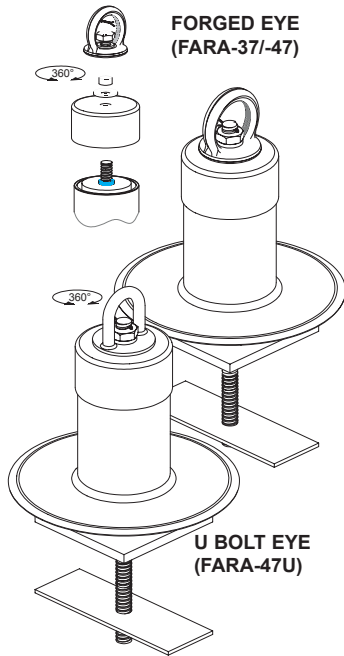
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).
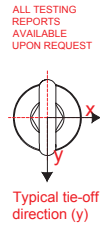
SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-35 with galvanized forged 1018 steel eye] [FARA-45 with Type 304 stainless steel forged eye] [FARA-45U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut and washer; 1" (25 mm) s.s. washer; manufacturer's standard flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

THALER

I-12

FORGED EYE
(FARA-36/-46)

360°

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-36	Forged Eye, Galvanized	Parallel to the eye (y)	0.088" (2.235 mm)
FARA-46	Forged Eye, Stainless Steel	Parallel to the eye (y)	0.085" (2.159 mm)
FARA-46U	U Bolt, Stainless Steel	Parallel to the eye (y)	0.095" (2.413 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction.

Typical tie-off direction (y)

U BOLT EYE
(FARA-46U)
360°

All stainless steel anchor also available (FARA-46SS/-46USS) e.g. eye, HSS, base plates, fastening and flashing.

1" (25 mm) TYPE 304 S.S. BOLT, LOCK WASHER, NUT AND EPDM SEAL

STAINLESS STEEL COTTER PIN

STAINLESS STEEL SPACER

304 STAINLESS STEEL CAP

4-1/2" (114 mm)
3-1/4" (82 mm)

1/4" x 4-1/2" DIA (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" X 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) WELD ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

FORGED COMBINATION EYE AND BASE, (ROTATES 360°)

THALER SJ-205 NEW STANDARD STACK JACK FLASHING (ALUMINUM COPPER OR STAINLESS STEEL)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE EPDM FLASHING SEALS LITERATURE)

14" (356 mm)
12-5/8" (321 mm)

INVERTED ROOF ILLUSTRATED (BUR)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

4" (102mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

TOP CHORD OF OWSJ

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

FOUR 5/8" (16 mm) S.S. BOLTS, LOCK WASHER AND NUTS

1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) HSS SPANNING MINIMUM THREE O.W.S.J. (BY OTHERS) (CONSULT STRUCTURAL ENGINEER)

5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) STEEL PLATE

DEFORM THREADS TOP AND BOTTOM AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

DESCRIPTION:
Thaler FARA bolt around OWSJ anchors consist of a urethane insulated hollow steel post (HSS) with base plate, four stainless steel bolts and under-joist plate, and cross tube (supplied by others) for securing to an OWSJ, flashing sleeve, and stainless steel cap assembly. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-36). All stainless steel (FARA-46SS).
2. With very high strength, stainless steel forged eye (FARA-46). All stainless steel (FARA-46SS).
3. With high strength, stainless steel U Bolt (Fara-46U). All stainless steel (FARA-46USS).

PROMINENT FEATURES:
Swivel eye flows direction of line attachment. Re-usable. Condensation and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability

OPTIONS:
All stainless steel anchor, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair. Ideal for re-roofing.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC AWS, and other references. Thaler STACK JACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
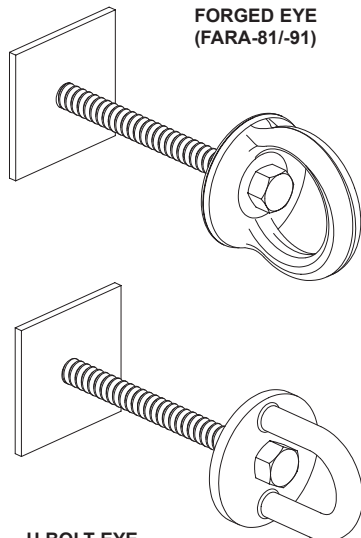
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).
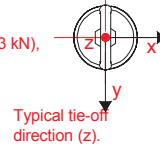
SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-36 with galvanized forged 1018 steel eye] [FARA-46 with Type 304 stainless steel forged eye] [FARA-46U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) under-joist plate and four 5/8" (16 mm) Type 304 s.s. bolts with lock washers and nuts; manufacturer's standard flashing of [.064" (1.6 mm) mill finish1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braubfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.
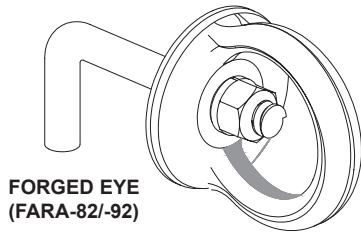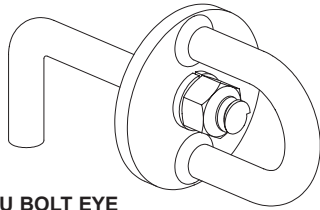
FARA-36/-46/-46U FALL ARREST ROOF ANCHORS (Bolt Around OWSJ)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-36/-46/-46U anchors are installed by bolting the anchor to the top chord of the OWSJ as per layout drawings, [using a maximum torque of 75 lbf-ft. (100 Nm) for 5/8" (16 mm) bolt and 235 lbf-ft. (319 Nm) for 1" (25 mm)], reinforcing the base plates with a cross tube, then placing the flashing sleeve over the anchor and roof membrane, installing the cap, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to top of anchor underneath the cap. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number e.g. FARA-36-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to exposed aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-36-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

FORGED EYE (FARA-37/-47)

U BOLT EYE (FARA-47U)

All stainless steel anchor also available (FARA-37SS/-37USS) e.g. eye, HSS, base plates, fastening and flashing.

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-37	Forged Eye, Galvanized	Parallel to the eye (y)	0.088" (2.235 mm)
FARA-47	Forged Eye, Stainless Steel	Parallel to the eye (y)	0.085" (2.159 mm)
FARA-47U	U Bolt, Stainless Steel	Parallel to the eye (y)	0.095" (2.413 mm)

ALL TESTING REPORTS AVAILABLE UPON REQUEST

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction.

Typical tie-off direction (y)

FORGED COMBINATION EYE AND BASE, (ROTATES 360°)

3/4" (19 mm) TYPE 304 S.S. BOLT, LOCK WASHER, NUT AND EPDM SEAL.

STAINLESS STEEL COTTER PIN

STAINLESS STEEL SPACER

304 STAINLESS STEEL CAP

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 10" x 10" (16 mm x 254 mm x 254 mm) BASE PLATE USING 5/16" (8 mm) WELD ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

THALER NEW SJ-105 STACKJACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOF ILLUSTRATED (BUR)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE EPDM FLASHING SEALS LITERATURE)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

4-1/2" (114 mm)
3-1/4" (82 mm)
14" (356 mm)
12-5/8" (321 mm)
4" (102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

5/8" x 4" x 12" (16 mm x 102 mm x 305 mm) STAINLESS STEEL PLATE, AND NUT (welded to bolt)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINES (2 THREADS MINIMUM)

FARA-37/-47 /-47U FALL ARREST ROOF ANCHORS (Pre-Cast-Core-Bolt)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-37/-47/-47U anchors are installed by grouting the anchor bolt and core slab plate into the structural concrete core slab roof deck joints as per drawings and deforming the exposed bolt threads, using a maximumum torque of 125 lbf-ft. (169 Nm), then placing the flashing sleeve over the anchor and roof membrane, installing the cap, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to top of anchor underneath cap. Note: for PVC membrane, specify PVC coated STACKJACK by adding suffix P to end of model number e.g. FARA-37-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to exposed aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-37-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

FARA-37/-47/-47U "SWIVEL EYE" FALL ARREST ROOF ANCHORS (Pre-Cast Core Bolt)

DESCRIPTION:
Thaler FARA pre-cast core bolt anchors consist of a urethane insulated hollow steel post (HSS) single stainless steel bolt and core plate for securing to pre-cast concrete roof slab, flashing sleeve, and stainless steel cap assembly. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-37). All stainless steel (FARA-47SS).
2. With very high strength stainless steel forged eye (FARA-47). All stainless steel (FARA-47SS).
3. With high strength stainless steel U Bolt (Fara-47U). All stainless steel (FARA-47USS).

PROMINENT FEATURES:
Swivel eye follows direction of line attachment. Re-usable. Condensation and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor, PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair. Ideal for re-roofing.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler STACKJACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
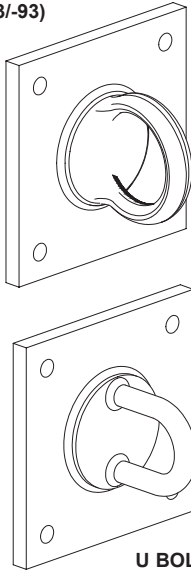
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).
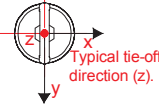
SPECIFICATION (SHORT FORM):
Fall arrest roof anchors: Thaler [FARA-37 with galvanized forged 1018 steel eye] [FARA-47 with Type 304 stainless steel forged eye] [FARA-47U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 10" x 10" (16 mm x 254 mm x 254 mm) 44W base plate; single 3/4" (19 mm) Type 304 s.s. bolt with EPDM weather seal, top nut, washer and s.s. cotter pin; galvanized 5/8" x 4" x 12" (16 mm x 102 mm x 305 mm) core slab plate, lock washer and nut; manufacturer's standard flashing of [.064" (1.6 mm) mill finish1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.
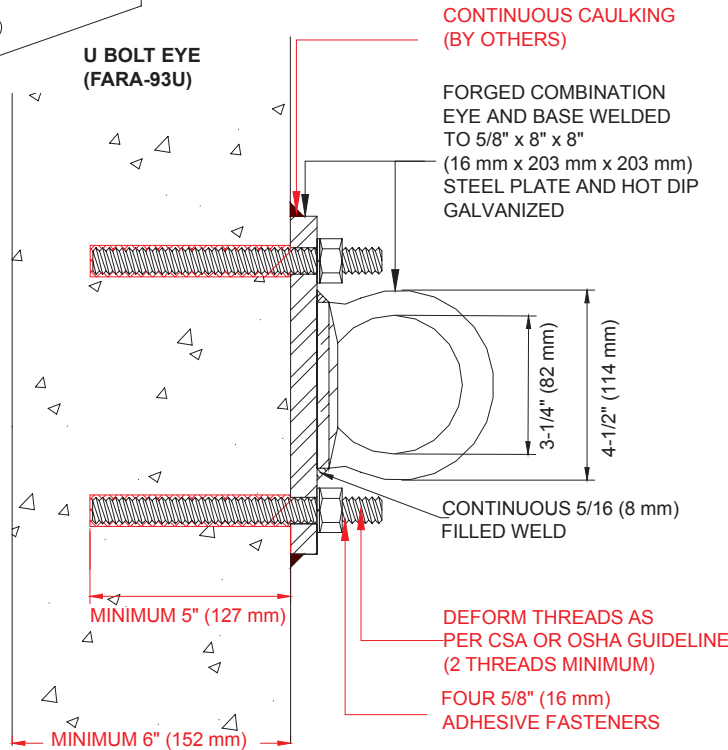
Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

FORGED EYE
(FARA-81/-91)

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-81	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)
FARA-91	Foreged Eye , Stainless Steel	Perpendicular to the eye (x)	0.065" (1.651 mm)
FARA-91U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.456" (11.582 mm)

Note: Anchors are designed to resist without fracture and/or pull-out force of 5400 lbs (24.03 kN), applied in the most adverse direction (x). All testing reports available upon request.

Typical tie-off direction (z).

U BOLT EYE
(FARA-91U)

CONTINUOUS CAULKING BY OTHERS

FORGED COMBINATION EYE AND BASE, ALL HOT DIP GALVANIZED

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

3/4" (19 mm) STAINLESS STEEL BOLT, LOCK WASHER AND NUT

1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) STAINLESS STEEL PLATE

3-1/4" (82 mm)

4-1/2" (114 mm)

MINIMUM 6" (152 mm)

FARA-81/-91/-91U FALL ARREST WALL ANCHORS (Bolt-Through)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

DESCRIPTION:
Thaler FARA bolt-through anchors consist of a single stainless steel bolt with an eye at one end and a backup plate at the other end. The anchor eye is available with three different options:
1. With very high strength, galvanized forged eye (FARA-81).
2. With very high strength, stainless steel forged eye (FARA-91).
3. With high strength, stainless steel U Bolt eye (FARA-91U).

PROMINENT FEATURES:
Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
See other Thaler FARA models for different securements.

RECOMMENDED USE:
For structurally adequate concrete walls as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformances include CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. See Thaler Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Also, the caulking bead around the eye base plate should be inspected periodically and maintained if necessary.

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest wall anchors: Thaler [FARA-81 with galvanized forged 1018 steel eye] [FARA-91 with Type 304 stainless steel forged eye] [FARA-91U with Type 304 stainless steel U bolt] wall anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with single 3/4" (19 mm) dia. s.s. bolt, lock washer, nut and 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) s.s. backup plate; manufactured by Thaler Metal Industries,1-800-387-7217 Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-81/-91/-91U wall anchors are installed by drilling a hole in the concrete wall, installing the anchor and applying a caulking bead (by others) around the eye wall plate. Bolt torque should not exceed 100 lbf-ft. (135 Nm).
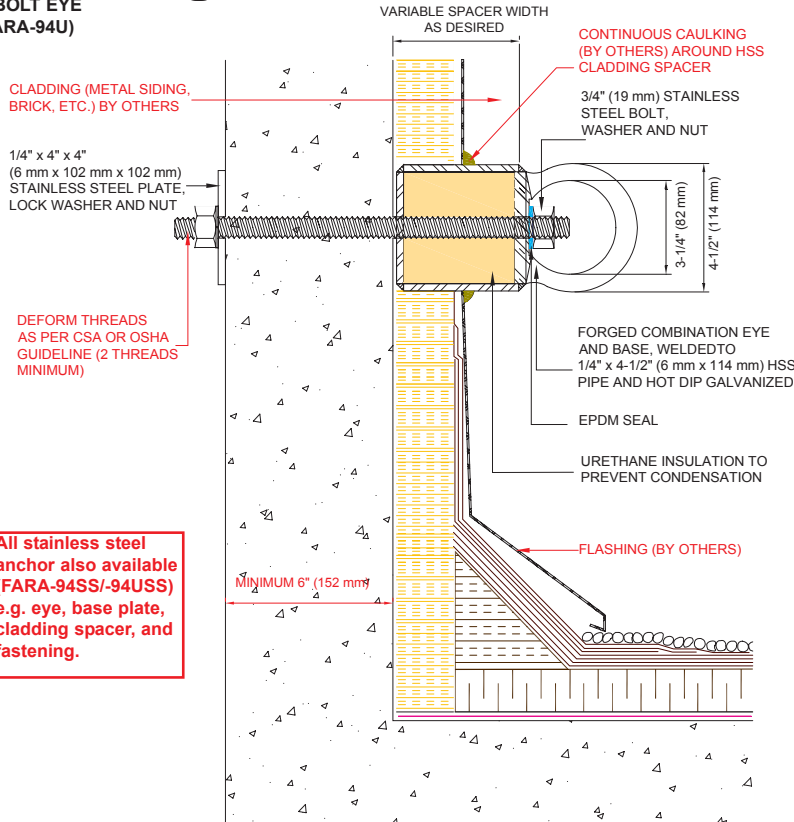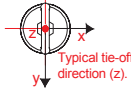
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

FORGED EYE (FARA-82/-92)

U BOLT EYE (FARA-92U)

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-82	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)
FARA-92	Forged Eye, Stainless Steel	Perpendicular to the eye (x)	0.065" (1.651 mm)
FARA-92U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.456" (11.582 mm)

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction (x). All testing reports available upon request.

Typical tie-off direction (z).

CONTINUOUS CAULKING BY OTHERS

FORGED COMBINATION EYE AND BASE, ALL HOT DIP GALVANIZED

3-1/4" (82 mm)
4-1/2" (114 mm)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

3/4" (19 mm) STAINLESS STEEL BOLT, LOCK WASHER AND NUT

MINIMUM 6" (152 mm)
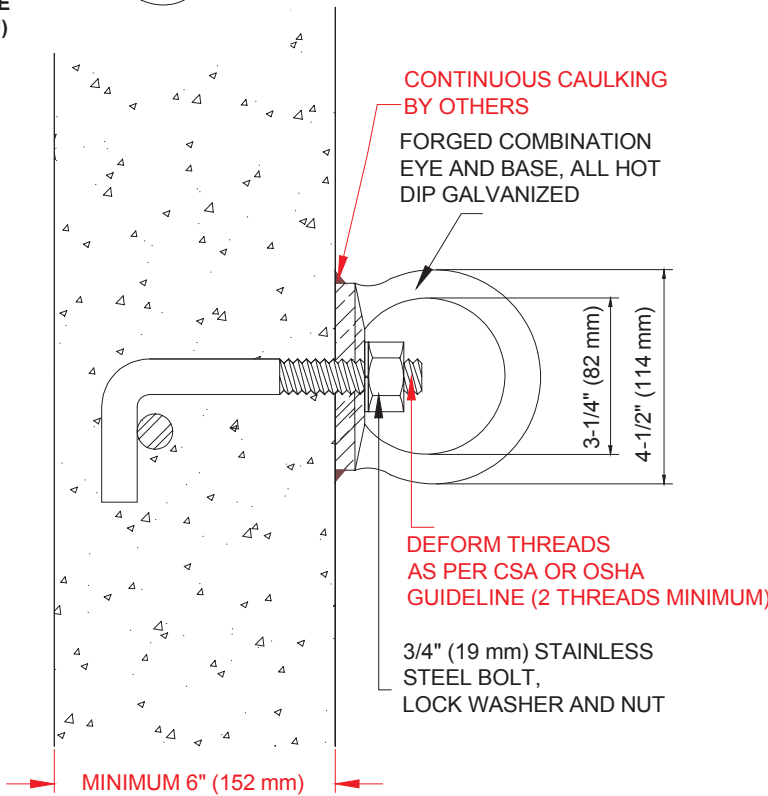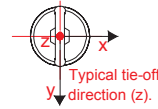
FARA-82/-92/-92U FALL ARREST WALL ANCHORS (Cast-In-Place)
PATENTED
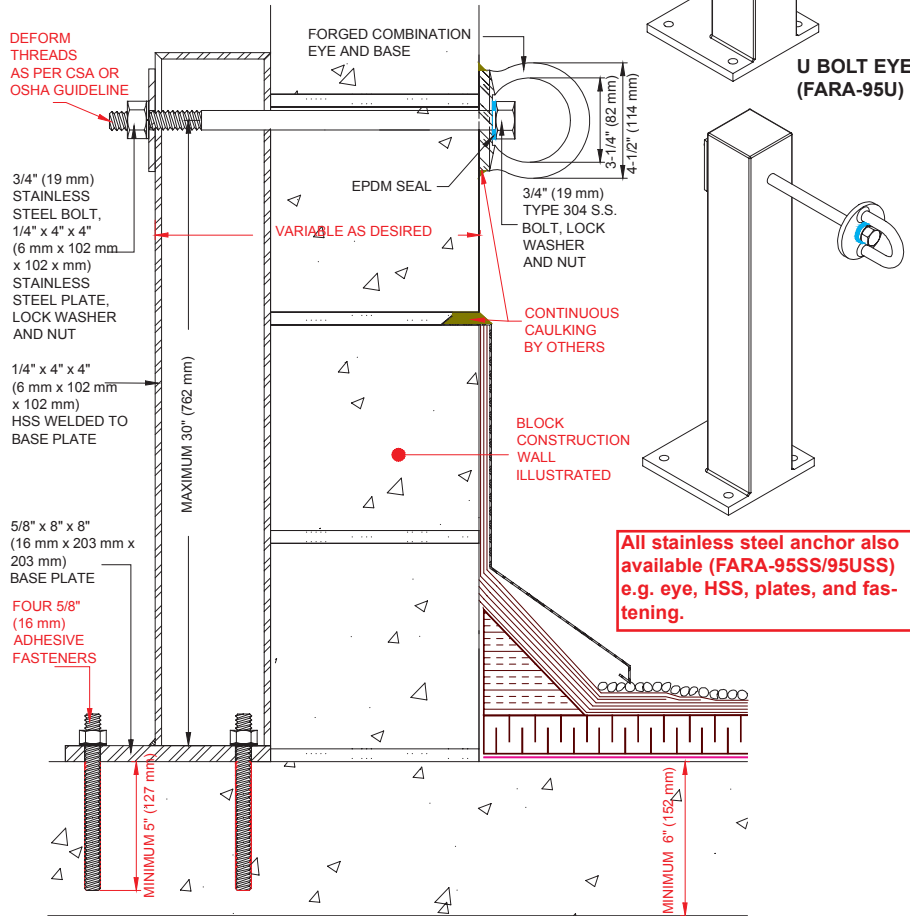**NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS**

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-82/-92/-92U wall anchors are installed by casting the anchor into the concrete wall, applying the washer and nut, and deforming the exposed threads of the anchor bolt. Bolt torque should not exceed 100 lbf-ft. (135 Nm).
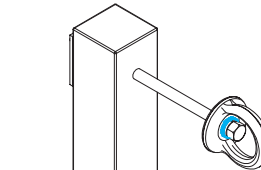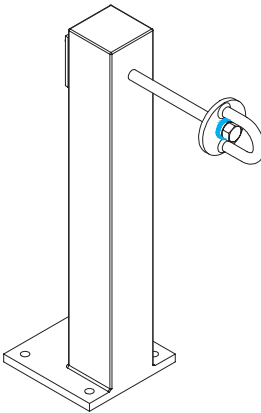
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ROOF SPECIALTIES
FARA-82/-92/-92U FALL ARREST WALL ANCHORS (Cast-In-Place)

DESCRIPTION:
Thaler FARA cast-in-place anchors consist of a single stainless steel bolt with an eye. The anchor eye is available with three different options:
1. With very high strength, galvanized forged eye (FARA-82).
2. With very high strength stainless steel forged eye (FARA-92).
3. With high strength stainless steel U Bolt (FARA-92U).

PROMINENT FEATURES:
Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
See other Thaler FARA models for different securements.

RECOMMENDED USE:
For structurally adequate concrete walls such as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and mater-ials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Also, the caulking bead around the eye base plate should be inspected periodically and maintained if necessary.

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest wall anchors: Thaler [FARA-82 with galvanized forged 1018 steel eye] [FARA-92 with Type 304 stainless steel forged eye] [FARA-92U with Type 304 stainless steel U bolt] wall anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with single 3/4" (19 mm) dia. cast-in-place s.s. anchor bolt with lock washer and nut; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

**FORGED EYE
(FARA-83/-93)**

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-83	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)
FARA-93	Forged Eye, Stainless Steel	Perpendicular to the eye (x)	0.065" (1.651 mm)
FARA-93U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.456" (11.582 mm)

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction (x). All testing reports available upon request.

Typical tie-off direction (z).

All stainless steel anchor also available (FARA-93SS/-93USS) e.g. eye and base plate.

**U BOLT EYE
(FARA-93U)**

CONTINUOUS CAULKING (BY OTHERS)

FORGED COMBINATION EYE AND BASE WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) STEEL PLATE AND HOT DIP GALVANIZED

3-1/4" (82 mm)

4-1/2" (114 mm)

CONTINUOUS 5/16 (8 mm) FILLED WELD

MINIMUM 5" (127 mm)

MINIMUM 6" (152 mm)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

FOUR 5/8" (16 mm) ADHESIVE FASTENERS

FARA-83/-93/-93U FALL ARREST WALL ANCHORS (Adhesive Bolt)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-83/-93/-93U wall anchors are installed by adhesive bolting (as per bolt manufacturer's instruction) the wall plate to the structural concrete wall as per layout drawings, deforming the exposed threads and applying a caulking bead (by others) around the eye wall plate.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-93 stainless steel forged eye has a galvanized finish on top of the stainless steel. The process of galvanizing the base plate of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about a product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.

DESCRIPTION:
Thaler FARA Adhesive bolt anchors consist of an anchor eye welded to a wall plate which has been prepared to receive adhesive anchor bolts. The anchor eye is available with three different options:
1. With very high strength, galvanized forged eye (FARA-83). All stainless steel (FARA-93SS).
2. With very high strength stainless steel forge eye (FARA-93). All stainless steel (FARA-93SS).
3. With high strength stainless steel U Bolt (FARA-93U). All stainless steel (FARA-93USS).

PROMINENT FEATURES:
Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
See other Thaler FARA models for different securements.

RECOMMENDED USE:
Retrofit product for structurally adequate concrete walls as a fall arrest anchor for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instruction". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Also, the caulking bead around the eye base plate should be inspected periodically and maintained if necessary.

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest wall anchors: Thaler [FARA-83 with galvanized forged 1018 steel eye] [FARA-93 with Type 304 stainless steel forged eye] [FARA-93U with Type 304 stainless steel U bolt] wall anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] welded to [5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W galvanized base plate] manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

ROOF SPECIALTIES
FARA-84/-94/-94U
FALL ARREST
WALL ANCHORS
(Cladding-Bolt)

FORGED EYE
(FARA-84/-94)

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-84	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)
FARA-94	Forged Eye , Stainless Steel	Perpendicular to the eye (x)	0.065" (1.651 mm)
FARA-94U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.456" (11.582 mm)

U BOLT EYE
(FARA-94U)

Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction (x). All testing reports available upon request.

Typical tie-off direction (z).

VARIABLE SPACER WIDTH AS DESIRED

CONTINUOUS CAULKING (BY OTHERS) AROUND HSS CLADDING SPACER

CLADDING (METAL SIDING, BRICK, ETC.) BY OTHERS

3/4" (19 mm) STAINLESS STEEL BOLT, WASHER AND NUT

1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) STAINLESS STEEL PLATE, LOCK WASHER AND NUT

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

3-1/4" (82 mm)
4-1/2" (114 mm)

FORGED COMBINATION EYE AND BASE, WELDEDTO 1/4" x 4-1/2" (6 mm x 114 mm) HSS PIPE AND HOT DIP GALVANIZED

EPDM SEAL

URETHANE INSULATION TO PREVENT CONDENSATION

All stainless steel anchor also available (FARA-94SS/-94USS) e.g. eye, base plate, cladding spacer, and fastening.

MINIMUM 6" (152 mm)

FLASHING (BY OTHERS)

FARA-84/-94/-94U FALL ARREST WALL ANCHORS (Cladding Bolt)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-84/-94/-94U wall anchors are installed by drilling a hole in the concrete wall, using a maximum torque of 100 lbf.-ft (135 Nm), installing the anchor and applying a caulking bead (supplied by others) around the cladding spacer after the cladding has been installed.

Ordering and Availability: Available throughout North America. Contact Thaler for a list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-94 stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the the the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.

DESCRIPTION:
Thaler FARA cladding-bolt anchors consist of an anchor eye welded to an HSS cladding spacer, and a single stainless steel bolt with a backup plate. The anchor eye is available with three different options:
1. With very high strength, galvanized forged eye (FARA-84). All stainless steel (FARA-94SS).
2. With very high strength stainless steel forged eye (FARA-94). All stainless steel (FARA-94SS).
3. With high strength stainless steel U Bolt (FARA-94U). All stainless steel (FARA-94USS).

PROMINENT FEATURES:
Condensation free. Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
See other Thaler FARA models for different securements.

RECOMMENDED USE:
For structurally adequate concrete walls with a cladding finish (metal siding, brick, etc.) as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and material standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformances includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instruction. Copy of Warranty Certificate available upon request.
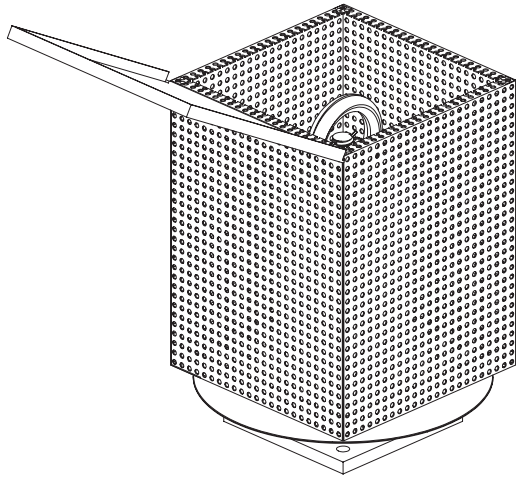
MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Also, the caulking bead around the eye base plate should be inspected periodically and maintained if necessary.
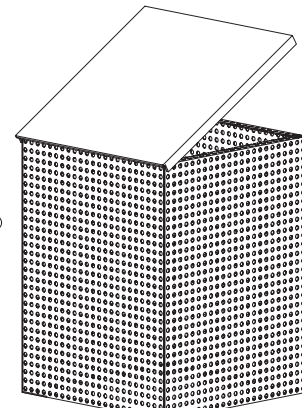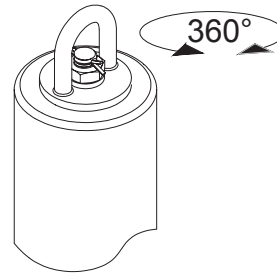
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).
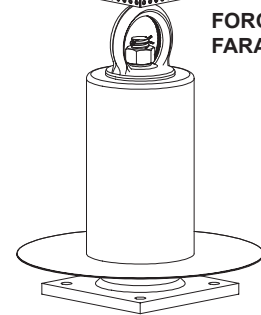
SPECIFICATION (SHORT FORM):
Fall arrest wall anchors: Thaler [FARA-84 with galvanized forged 1018 steel eye] [FARA-94 with Type 304 stainless steel forged eye] [FARA-94U with Type 304 stainless steel U bolt] wall anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with single 3/4" (19 mm) dia. s.s. bolt and EPDM washer seal, ASTM 500C HSS cladding spacer, 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) s.s. backup plate, lock washer and nut; manufactured by Thaler Metal Industries,1-800-387-7217 Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.
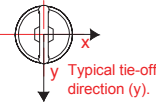
Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-85	Forged Eye, Galvanized	Perpendicular to the eye (x)	0.016" (0.406 mm)
FARA-95	Forged Eye, Stainless Steel	Perpendicular to the eye (x)	0.065" (1.651 mm)
FARA-95U	U Bolt, Stainless Steel	Perpendicular to the eye (x)	0.456" (11.582 mm)

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction (x). All testing reports available upon request.

FORGET EYE (FARA-85/-95)

U BOLT EYE (FARA-95U)

Z
X
y
Typical tie-off direction (z).

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE

FORGED COMBINATION EYE AND BASE

3/4" (19 mm) STAINLESS STEEL BOLT, 1/4" x 4" x 4" (6 mm x 102 mm x 102 x mm) STAINLESS STEEL PLATE, LOCK WASHER AND NUT

EPDM SEAL

VARIABLE AS DESIRED

3/4" (19 mm) TYPE 304 S.S. BOLT, LOCK WASHER AND NUT

1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) HSS WELDED TO BASE PLATE

CONTINUOUS CAULKING BY OTHERS

3-1/4" (82 mm)
4-1/2" (114 mm)

MAXIMUM 30" (762 mm)

BLOCK CONSTRUCTION WALL ILLUSTRATED

5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE

FOUR 5/8" (16 mm) ADHESIVE FASTENERS

MINIMUM 5" (127 mm)

MINIMUM 6" (152 mm)

All stainless steel anchor also available (FARA-95SS/95USS) e.g. eye, HSS, plates, and fastening.

FARA-85/-95/-95U FALL ARREST WALL ANCHORS (Pier Bolt)
PATENTED
NOTE: REFER TO PAGES I-34, I-35, I-36 FOR NON-STANDARD HEIGHT ANCHORS

DESCRIPTION:
Thaler FARA pier bolt anchors consist of an anchor eye and single steel bolt secured to a floor mounted steel pier located behind a non-structural wall. The anchor eye is available with three different options:
1. With very high strength, galvanized forged eye (FARA-85). All stainless steel (FARA-95SS).
2. With very high strength stainless steel forged eye (FARA-95). All stainless steel (FARA-95SS).
3. With high strength stainless steel U Bolt (FARA-95U). All stainless steel (FARA-95USS).

PROMINENT FEATURES:
Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor, or see other Thaler FARA models for different securements

RECOMMENDED USE:
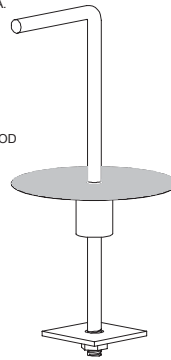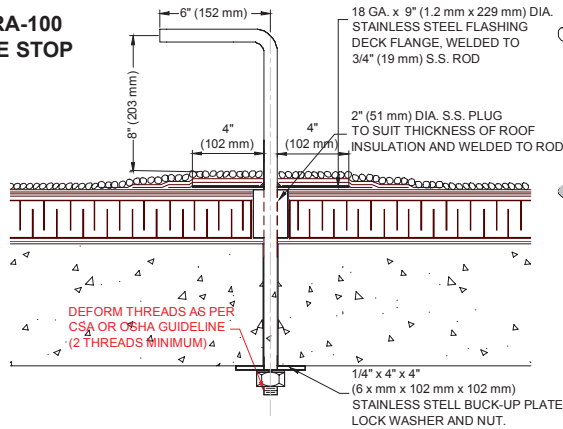For any type non-structural wall (mechanical room, penthouse, elevator room, etc.) as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair. Ideal for retrofit.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML,ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Also, the caulking bead around the eye base plate should be inspected periodically and maintained if necessary.

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest wall anchors: Thaler [FARA-85 with galvanized forged 1018 steel eye] [FARA-95 with Type 304 stainless steel forged eye] [FARA-95U with Type 304 stainless steel U bolt] wall anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with single 3/4" (19 mm) dia. s.s. bolt and s.s. 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) s.s. backup plate; 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) epoxy primed ASTM 500C HSS pier welded to a 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) epoxy primed 44W base plate prepared to receive four 5/8" (16 mm) anchor bolts (by others); manufactured by Thaler Metal Industries 1-800-387-721 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-85/-95/-95U wall anchor is installed by drilling a hole in the non structural wall, installing the anchor (using a maximum torque of 100 lbf-ft (135 Nm), in a structurally adequate concrete floor or roof slab, deforming the exposed threads of the pier anchor bolt, and applying a caulking bead (by others) around the eye wall plate. Adhesive bolts to be installed as per bolt manufacturer's instructions.

Ordering and Availability: Available throughout North America. Contact Thaler for a list of distributors and current cost information. Most products are readily available from stock.

A 22 GA. x 11-1/2" x 11-1/2" (0.76 mm x 292 mm x 292 mm) PERFORATED S.S. ENCLOSURE, HEIGHT TO SUIT PROMENADE DECK. IF HEIGHT ENCLOSURE IS GREATER THAN 6" (152 mm) USE FORGED EYE (FIXED OR SWIVEL) OR U BOLT EYE IN LIEU OF FLAT PLATE EYE. (SEE REVERSE SIDE OF PAGE)

B 1/8" x 12" x 12" (3 mm x 305 mm x 305 mm) STAINLESS STEEL COVER WIYH S.S. PIANO HINGE.

C ANCHOR HEIGHT ISAVAILABLE FROM 3-3/4" TO 14" (95 mm TO 356 mm) AS PER SITE REQUIREMENTS. (SEE REVERSE SIDE OF PAGE)

D 22 GA. x 17-1/2" DIA. (1.2 mm x 445 mm) 304 STAINLESS STEEL FLASHING

E ADHESIVE FASTENER BOLT. CUT 3/8" (9 mm) OR A MINIMUM OF THREE THREADS ABOVE NUT.

F GROUT, LEVELLED IN A 12" (305 mm) SQUARE AROUND AT ANCHOR AND TAPERING TO DECK 48"(1220 mm) RADIUS

G 3/4" (19 mm) S.S. BOLT, NUT, LOCK WASHER AND EPDM WASHER WITH 1/4" x 7-3/8" x 5" (6 mm x 187 mm x 127 mm) TYPE 304 STAINLESS STEEL SWIVEL PLATE.

H 1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD AND HOT DIP GALVANIZED.

I FOUR 5/8" (16 mm) ADHESIVE FASTENERS (BY OTHERS).

J STAINLESS STEEL SPACER

K STAINLESS STEEL COTTER PIN

All stainless steel anchor also available FARA-96SS e.g. swivel plate, base plate, HSS, perforated box, fastening, and flashing.

MINIMUM 5" (127 mm)

MINIMUM 6" (152 mm)
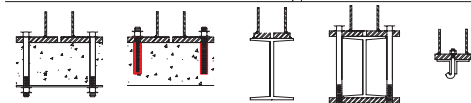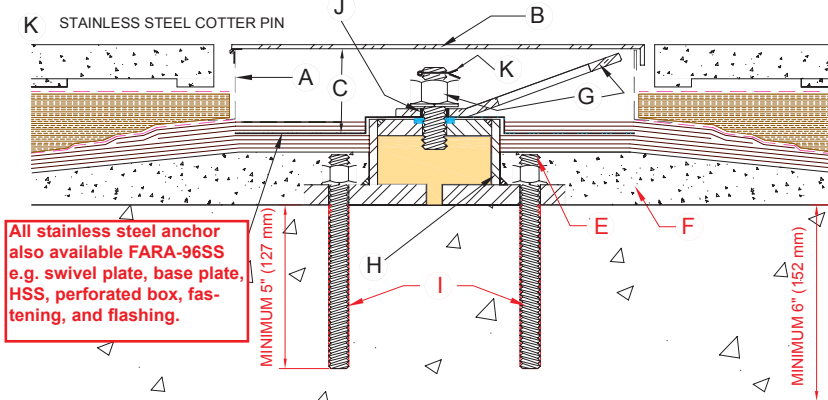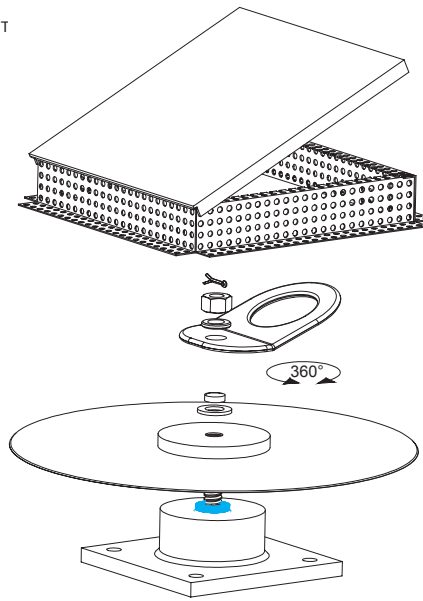
ALTERNATIVE FASTENING METHODS

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-96	STAINLESS STEEL SWIVEL PLATE	Parallel to the swivel plate(y)	0.088" (2.235 mm)

Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction. All testing reports available upon request.

y Typical tie-off direction (y).

FARA-96 FALL ARREST ANCHOR (Adhesive Bolt)
PATENTED
NOTE: REFER TO FOLLOWING PAGES FOR NON-STANDARD HEIGHT ANCHORS

DESCRIPTION:
The Thaler FARA-96 terrace anchor is a recessed roof anchor product, consisting of a special flat stainless steel swivel plate eye and galvanized base plate secured to a concrete structural deck using all types of fastening methods. The swivel plate is housed within a perforated, stainless steel box to help facilitate drainage and installation. A stainless steel cover plate, installed flush with the top of the terrace pavers, conceals the anchor when not in use.

PROMINENT FEATURES:
Anchor height is available from 3-3/4" to 14" (95 mm to 356 mm), as per site requirements. Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
If height of perforated stainless steel box is greater than 6" (152 mm), then a standard galvanized or stainless steel forged eye (fixed swivel) or a stainless steel U bolt eye, must be employed instead of the flat plate eye in order to meet strength requirements (see page I-20A).

RECOMMENDED USE:
Suitable for terrace, promenade, balcony, or podium type decks employing paver slab roofing surface as a fall arrest anchor for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair. Ideal for retrofit.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references.

20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Fall arrest terrace anchors: Thaler FARA-96 anchor with 1/4" (6 mm) Type 304 stainless steel swivel plate eye to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: hot dip galvanized, hollow, ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); EPDM washer seal; 22 ga. x 11-1/2" x 11-1/2" (0.76 mm x 292 mm x 292 mm) perforated Type s.s. enclosure box with solid 1/8" x 12" x 12" (3 mm x 305 mm x 305 mm) s.s. pan formed cover; 22 ga. x 17-1/2" (0.76 mm x 445 mm) dia. s.s. flashing disc; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-96 anchor is installed by adhesive bolting (as per bolt manufacturer's instructions) the anchor to the structural concrete roof deck as per layout drawings, using a maximum torque of 125 lbf-ft. (169Nm), cutting and grouting over the adhesive anchor bolt ends, applying the roof membrane and flashing, and then finally installing the swivel plate and perforated enclosure box.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

U BOLT EYE (FARA-106AU)

360°

FORGED EYE FARA-96A/-106A

Anchor Type	Eye Construction	Load Direction	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-96A	Forged Eye, Galvanized	Parallel to the eye(y)	0.088" (2.235 mm)
FARA-106A	Forged Eye , Stainless Steel	Parallel to the eye(y)	0.085" (2.159 mm)
FARA-106AU	U Bolt, Stainless Steel	Parallel to the eye(y)	0.095" (2.413 mm)

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24.03 kN), applied in the most adverse direction. All testing reports available upon request.

x
y Typical tie-off direction (y).

All Stainless Steel Anchor also available (FARA-106ASS/-106AUSS)

11-1/2" (292 mm) SQUARE

FROM 3-3/4" TO 14" (95 mm TO 356 mm)

MINIMUM 8" (203 mm)

MINIMUM 5" (127 mm)

DEFORM THREADS AS PER CSA OR OSHA GIDELINE (2 THREADS MINIMUM)

(5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) STEEL PLATE

FOUR 5/8" (16 mm) ADHESIVE FASTENERS (BY OTHERS)
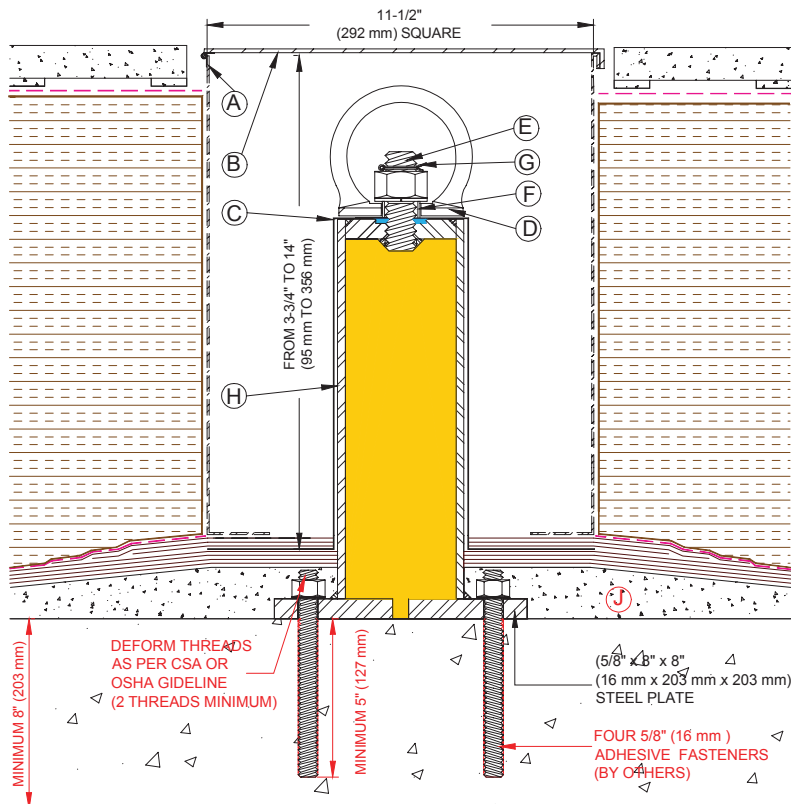
A) 22 GA. x 11-1/2" x 11-1/2" (0.76 mm x 292 mm x 292 mm) PERFORATED S.S., ENCLOSURE

B) 1/8" x 12" x 12" (3 mm x 305 mm x 305 mm) STAINLESS STEEL COVER WITH S.S. PIANO HINGE

C) 22 GA. x 17-1/2" DIA. (1.2 mm x 445 mm) 304 STAINLESS STEEL FLASHING.

D) COMBINATION FORGED EYE AND BASE (ROTATES 360°)

E) 1" (25 mm) TYPE 304 S.S. BOLT, LOCK WASHER, NUT, AND EPDM WASHER SEAL

F) STAINLESS STEEL SPACER

G) STAINLESS STEEL COTTER PIN

H) 1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLED WELD AND HOT DIP GALVANIZED

J) GROUT, LEVELLED 12" (305 mm) SQUARE AT ANCHOR AND TAPERING TO DECK FOR 48" (1220 mm) RADIUS

FARA-96A/-106A/-106AU HIGH "SWIVEL EYE" FALL ARREST TERRACE ANCHOR (Adhesive Bolt)

NOTE: SEE PAGE I-20 FOR ALTERNATIVE FASTENING METHODS
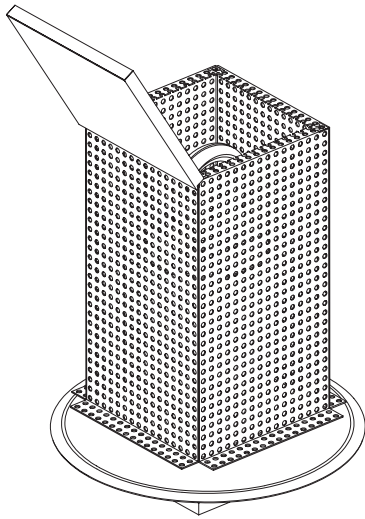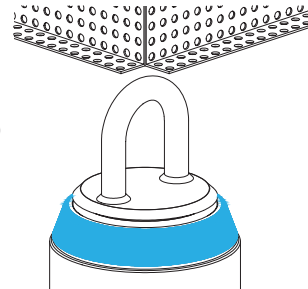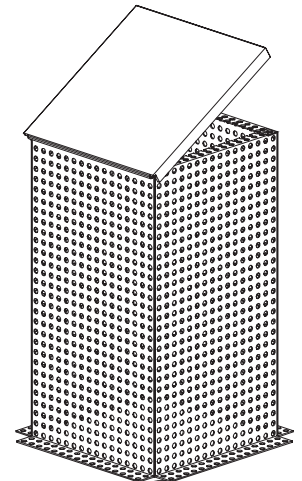
U BOLT EYE (FARA-106BU)
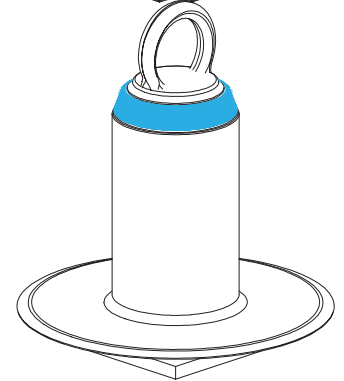
FORGED EYE FARA-96B/-106B

Anchor Type	Eye Construction	Eye Orientation	Deflection After Load of 5400 lbs (24.03 kN) was Released
FARA-96B	Forred Eye, Galvanized	Parallel to the eye(y)	0.088" (2.235 mm)
FARA-106B	Forged Eye , Stainless Steel	Parallel to the eye(y)	0.085" (2.159 mm)
FARA-106BU	U Bolt, Stainless Steel	Parallel to the eye(y)	0.095" (2.413 mm)
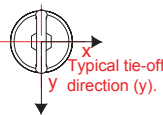
Typical tie-off direction (y).

Note: Anchors are designed to resist without fracture and/or pull-out A force of 5400 lbs (24.03 kN), applied in the most adverse direction (x). All testing reports available upon request.

8" x 8" (203 mm x 203 mm)

FROM 3-3/4" TO 14" (95 mm TO 356 mm)
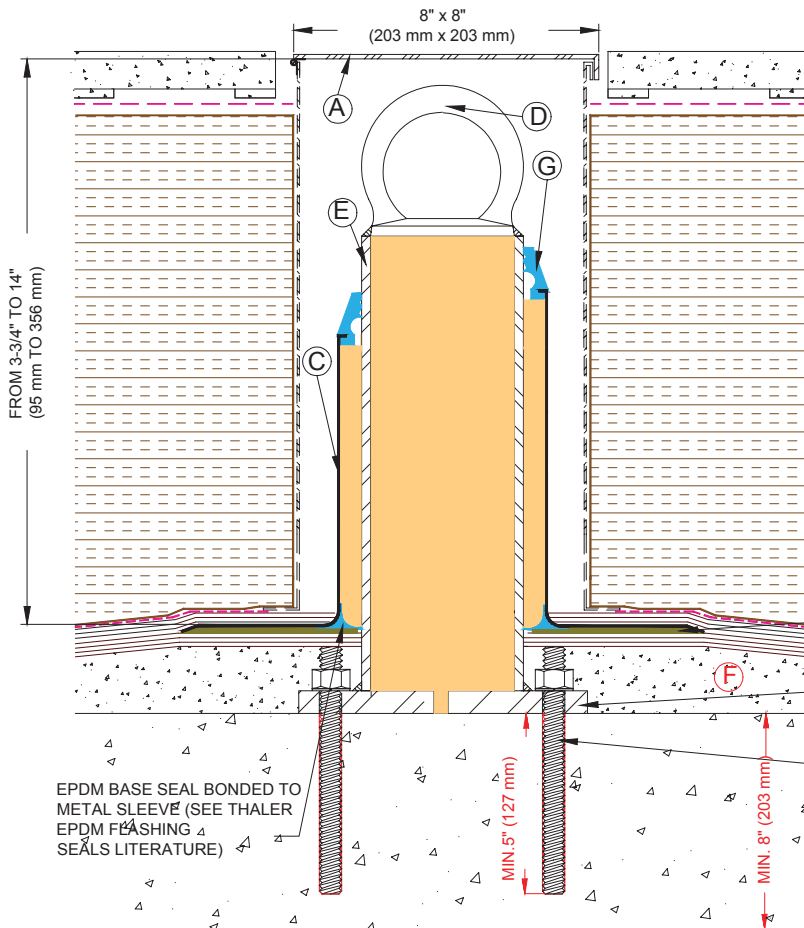
A 22 GA. x 8" x 8" (0.76 mm x 203 mm x 203 mm) PERFORATED S.S. ENCLOSURE

B 1/8" x 8-1/2" x 8-1/2" (3 mm x 305 mm x 305 mm) STAINLESS STEEL COVER WITH S.S. PIANO HINGE

C SJ-37, SJ-38 OR SJ-39, STACK JACK AVAILABLE IN ALUMINUM, COPPER OR STAINLESS STEEL FLASHING

D COMBINATION FORGED EYE AND BASE

E 1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLED WELD AND HOT DIP GALVANIZED

F GROUT, LEVELLED 12" (305 mm) SQUARE AT ANCHOR AND TAPERING TO DECK FOR 48" (1220 mm) RADIUS

G EPDM TRIPLE PRESSURE GROMMET SEAL

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

(5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) STEEL PLATE

FOUR 5/8" (16 mm) ADHESIVE FASTENERS (BY OTHERS)

DEFORM THREADS AS PER CSA OR OSHA GIDELINE (2 THREADS MINIMUM)

MIN. 5" (127 mm)

MIN. 8" (203 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

FARA-96B/-106B/-106BU HIGH "FIXED EYE" FALL ARREST TERRACE ANCHOR (Adhesive Bolt)
NOTE: SEE PAGE I-20 FOR ALTERNATIVE FASTENING METHODS

FARA-100 ROPE STOP

6" (152 mm)
8" (203 mm)
4" (102 mm)
4" (102 mm)

18 GA. x 9" (1.2 mm x 229 mm) DIA. STAINLESS STEEL FLASHING DECK FLANGE, WELDED TO 3/4" (19 mm) S.S. ROD

2" (51 mm) DIA. S.S. PLUG TO SUIT THICKNESS OF ROOF INSULATION AND WELDED TO ROD

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

1/4" x 4" x 4" (6 x mm x 102 mm x 102 mm) STAINLESS STELL BUCK-UP PLATE, LOCK WASHER AND NUT.

FARA-101 ROPE STOP

6" (152 mm)
8" (203 mm)
4" (102 mm)
4" (102 mm)

18 GA. x 9" (1.2 mm x 229 mm) DIA. STAINLESS STEEL FLASHING DECK FLANGE WELDED TO 3/4" (19 mm) S.S. ROD

2" (51 mm) DIA. S.S. PLUG TO SUIT THICKNESS OF ROOF INSULATION AND WELDED TO ROD

6-1/2" (170 mm)

HILTI HVA ADHESIVE BOLT OR SIMILAR

FARA-110 PARAPET ROPE STOP

6" (152 mm)
8" (203 mm)

3/4" (19 mm) DIA. STAINLESS STEEL ROD

2" DIA. x 1/16" (51 mm x 1.5 mm) STAINLESS STEEL WASHER WELDED TO S.S. ROD

HILTI HVA ADHESIVE BOLT OR SIMILAR

8-1/4" (210 mm)

FARA-100/-101/-110 FALL ARREST "ROPE STOP" ANCHORS
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-100/-101/-110 roof stop anchors are installed by drilling a hole in the concrete roof deck or concrete parapet wall, as per bolt manufacturer's instruction, and using a maximum torque of 100 lbf-ft. (135 Nm), installing the anchor and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.
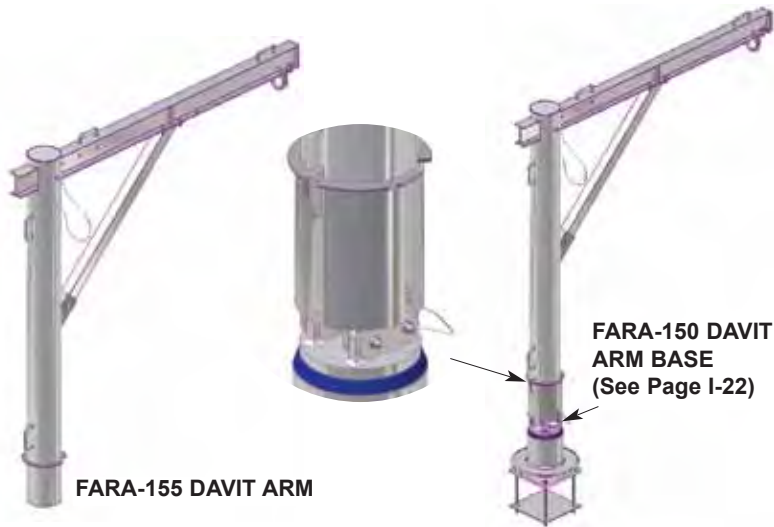
Single Ply: Set flashing deck flange in layer of membrane adhesive and adhere single ply to deck flange and seal as per membrane manufacturer's recommendations.

Parapet: Set anchors to depth of stop washer, apply metal parapet flashing and seal flashing to rope stop with caulking.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler FARA "Rope Stop" anchors are 3/4" (19 mm) diameter stainless steel anchor rods with a 90º bend at the top of the anchor. They are available in three different models:
1. Through bolt for flat roof (FARA-100)
2. Adhesive bolt for flat roof (FARA-101)
3. Adhesive bolt for the top of parapet wall (FARA-110)

PROMINENT FEATURES:
Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
See other Thaler FARA models for different securements.

RECOMMENDED USE:
For structurally adequate concrete roof decks or parapet walls to limit lifeline or boatswain chair suspension line movement and to reduce swing fall hazard (stop swing fall or going around a corner if a fall should happen). Employed at strategic locations such as building corners to counteract wind hazard.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL OSHA, AISC, AWS, and other references.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint).
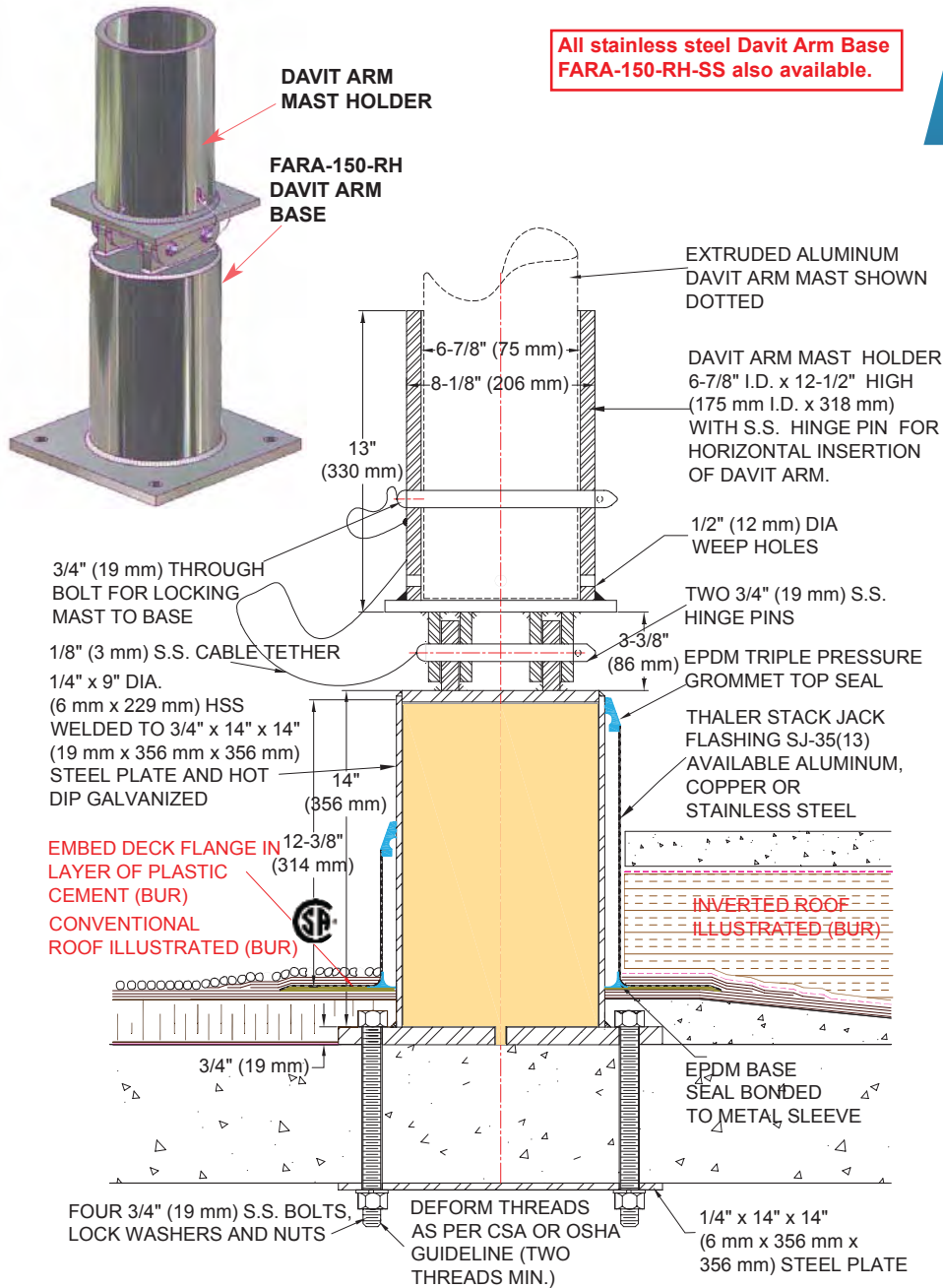
PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Rope stop roof anchor: Thaler FARA-100 through bolt 3/4" (19 mm) dia. s.s. rope stop anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] complete with 9" (229 mm) dia. x 18 ga. (1.2 mm) s.s. flashing deck flange welded to rope stop, 2" (51 mm) dia. s.s. stop plug to suit roof condition and 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) s.s. back up plate, lock washer and nut; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

Rope stop roof anchor: Thaler FARA-101 adhesive bolt 3/4" (19 mm) dia. s.s. rope stop anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F], complete with 9" (229 mm) dia. x 18 ga. (1.2 mm) s.s. flashing deck flange welded to rope stop, 2" (51 mm) dia. s.s. stop plug to suit roof condition; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

Rope stop roof anchor: Thaler FARA-110 adhesive bolt 3/4" (19 mm) dia. s.s. rope stop anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F], complete with 1/8" x 2" (3 mm x 51 mm) dia. s.s. stop washer welded to rope stop; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

All stainless steel Davit Arm Base also available (FARA-150SS) e.g. arm holder with hinge, HSS with hinge, plates, fastening and flashing.

EXTRUDED ALUMINUM DAVIT ARM MAST (SEE FARA-155)

DAVIT ARM STOPPER

DAVIT ARM HOLDER 8-7/8" I.D. x 11-1/2" HIGH (225 mm I.D. x 292 mm) ON STEEL HINGE FOR HORIZONTAL LOADING OF DAVIT ARM.

1/8" (3 mm) S.S. CABLE TETHER

THALER SJ-34 NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

1/2" (12 mm) DIA. WEEP HOLES

TWO 3/4" (19 mm) S.S. HINGE PINS

1/4" x 9" DIA. (6 mm x 229 mm) HSS WELDED TO 3/4" x 14" x 14" (19 mm x 356 mm x 356 mm) STEEL PLATE, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION.

EPDM TRIPLE PRESSURE GROMMET SEAL

INVERTED ROOF ILLUSTRATED (BUR)

CONCRETE PAVERS

GROUT

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

FOUR 3/4" (19 mm) S.S. BOLTS, LOCK WASHERS AND NUTS

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE

1/4" x 14" x 14" (6 mm x 356 mm x 356 mm) STEEL PLATE

FARA-150 DAVIT ARM BASE
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-150 Davit Arm Base is installed by through bolting the base to the structural concrete roof deck as per layout drawings, using a maximum torque of 100 lbf-ft. (135 Nm), grouting over the bolt heads, then placing the flashing sleeve over the base and membrane and deforming the anchor rod threads from beneath the deck, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. FARA-150-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to exposed aluminum STACK JACK Flashing to a height of 2" (51mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Davit arm: With the davit arm holder in the horizontal position, insert davit mast into the holder, manually raise the arm into position and secure using the two s.s. hinge pins. When not being used for maintenance, store arm in mechanical room or other location
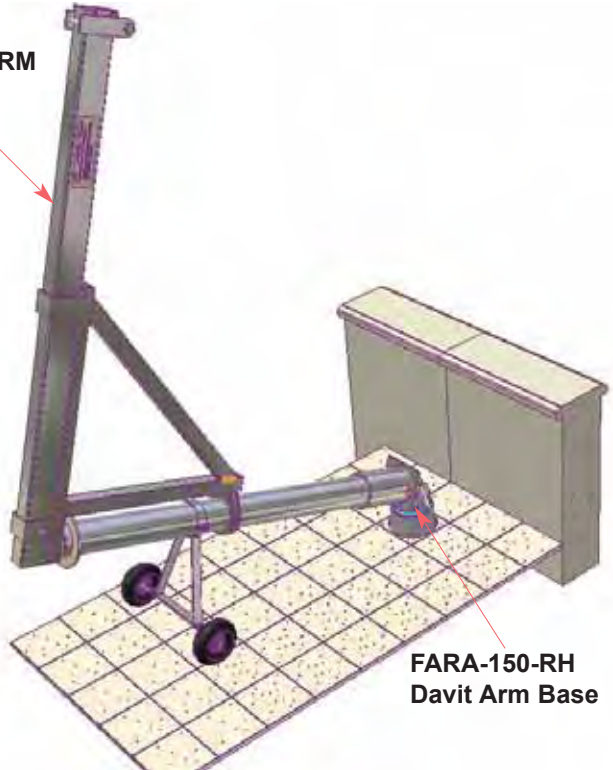
Ordering: Specify flashing material required by adding the appropriate suffix to model number e.g. FARA-150-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
The Thaler FARA-150 Davit Arm Base consists of a galvanized, urethane insulated, hollow section steel base with an galvnized davit arm holder, which is designed to receive a FARA-155 Davit Arm. A flashing sleeve that fits over base completes the assembly. See Thaler FARA-155 Davit Arm literature for davit arm data. A separate fall arrest roof anchor is required for attaching each worker's lifeline.

PROMINENT FEATURES:
Urethane insulated base prevents formation of condensation (corrosion protection). Maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Structural integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel Davit Arm Base. Other base securements available. PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See Thaler roof anchor literature for lifeline anchor options. See Thaler ARS-115 Rail Post Roof Support literature for roof edge guardrail protection.

RECOMMENDED USE:
Suitable for all flat roofs as a davit arm base used to suspend a platform or single point access equipment such as baskets (cages) and manually or power operated boatswain chairs.

APPLICABLE STANDARDS:
Thaler FARA Davit Bases conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-34 New-Standard STACK JACK Flashing conforms to CSA B272-93. See separate Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require davit bases to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler davit arm bases require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for davit bases and accompanying fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Davit arm bases: Thaler FARA-150 Davit Arm Base designed to receive a FARA -155 Davit Arm; to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with urethane filled, hot dipped galv ASTM 500C base 9" dia. x 1/4" (229 mm x 6 mm) welded to 3/4" x 14" x 14" (19 mm x 356 mm x 356 mm) ASTM 500C base plate and bolted to 1/4" x 14" x 14" (6 mm x 356 mm x 356 mm) under-deck plate using four 3/4" (19 mm) dia. s.s. bolts; davit arm holder 1/2" x 8-7/8" I.D. (12 mm x 225 mm) ASTM 500C with weep holes, connected to steel hinge using two 3/4" (19 mm) s.s. hinge pins tethered with 1/8" (3 mm) s.s. cable; SJ-34, 7" (178 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

FARA-150 DAVIT ARM BASE (See Page I-22)

FARA-155 DAVIT ARM

Diagram labels:
- MAXIMUM 96" (2438 mm)
- 1/8" (3 mm) S.S. CABLE TETHER ATTACHED TO BOLT AND DAVIT ARM
- 1" (25 mm) S.S. BOLT AND COTTER PIN
- 3/4" (19 mm) DIA. ALUMINUM HANDLES
- 1/4" (6 mm) GUSSET PLATE WELDED TO BEAM
- 6" (152 mm) / I BEAM ADJUSTMENT HOLES
- 3/8" (10 mm) THICKNESS SLIDING S.S. SUSPENSION LINE ATTACHMENT
- FOUR 1/2" (12 mm) S.S. BOLTS, LOCK WASHERS AND NUTS
- 6063-T6 ALUMINUM 3" x 3" x 1/4" (76 mm x 76 mm x 6 mm) BRACE SUPPORT
- MAXIMUM WORKING LOAD specified unfactored 1000 lbs (4.45 KN)
- 3/4" (19 mm) S.S. BOLT
- MAXIMUM 96" (2438 mm)
- EXTRUDED ALUMINUM DAVIT ARM MAST (5/16" x 8-5/8" O.D. DIA (8 mm x 220 mm)
- DAVIT ARM MAST LOCKING RING
- 3-1/2" (89 mm)
- 3/8" (9 mm)
- 6" (152 mm)

FARA-155 DAVIT ARM
PATENTED

INSTALLATION:

"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-155 Davit Arm is installed by friction fitting the davit arm into the davit arm base, and as follows:

Davit arm: With the davit arm holder (attached to the FARA-150 Davit Arm Base) in the horizontal position, insert davit mast into the holder, manually raise the arm into position and secure using the two s.s. hinge pins. When not being used for maintenance, store arm in mechanical room or other location

Ordering: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

ROOF SPECIALTIES
FARA-155 DAVIT ARM
For Window Cleaning or Exterior Building Maintenance (Fixed Head)

DESCRIPTION:
The Thaler FARA-155 Davit Arm consists of a round extruded aluminum mast, and an aluminum horizontal 360° rotating I-beam arm equipped with a sliding stainless steel suspension line attachment plate, and levelling devices. The davit arm requires a Thaler FARA-150 Davit Arm Base to complete the assembly (see separate literature). Also a separate fall arrest roof anchor is required for attaching each worker's lifeline.

PROMINENT FEATURES:
Structural integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
See Thaler roof anchor literature for lifeline anchor options. See Thaler ARS-115 Rail Post Roof Support literature for roof edge guardrail protection.

RECOMMENDED USE:
Suitable for all flat roofs for suspending a platform or single point access equipment such as baskets (cages) and manually or power operated boatswain chairs.

APPLICABLE STANDARDS:
Thaler FARA Davit Arms conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. See separate Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require davits to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
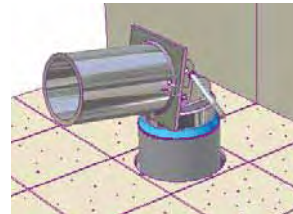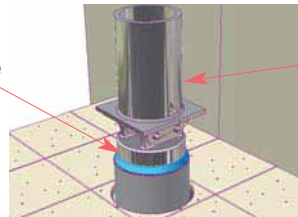
PLANNING SERVICE:
Thaler will provide layout drawings for davit bases, davit arms and fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Davit arms: Thaler Fara-155 complete davit arm assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] for use with Thaler FARA-150 Davit Arm Base, with: mast 5/16" x 8-5/8" O.D. (8 mm x 220 mm) 6061-T6 extruded alum. with handle grips; horizontal 6061-T6 alum. I beam 1/4" x 3-1/2" x 6" (6 mm x 89 mm x 152 mm) with 3/8" (10mm) thick sliding s.s. suspension line attachment plate and handle grips; strut reinforcing 1/4" x 3" x 3" (6 mm x 76 mm x 76 mm) with 1/4" (6 mm) connector plates, manufactured by Thaler Metal Industries,1-800-387-7217(Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

All stainless steel Davit Arm Base FARA-150-RH-SS also available.

DAVIT ARM MAST HOLDER

FARA-150-RH DAVIT ARM BASE

EXTRUDED ALUMINUM DAVIT ARM MAST SHOWN DOTTED

6-7/8" (75 mm)
8-1/8" (206 mm)

DAVIT ARM MAST HOLDER 6-7/8" I.D. x 12-1/2" HIGH (175 mm I.D. x 318 mm) WITH S.S. HINGE PIN FOR HORIZONTAL INSERTION OF DAVIT ARM.

13" (330 mm)

1/2" (12 mm) DIA WEEP HOLES

3/4" (19 mm) THROUGH BOLT FOR LOCKING MAST TO BASE

TWO 3/4" (19 mm) S.S. HINGE PINS

3-3/8" (86 mm)

EPDM TRIPLE PRESSURE GROMMET TOP SEAL

1/8" (3 mm) S.S. CABLE TETHER

1/4" x 9" DIA. (6 mm x 229 mm) HSS WELDED TO 3/4" x 14" x 14" (19 mm x 356 mm x 356 mm) STEEL PLATE AND HOT DIP GALVANIZED

THALER STACK JACK FLASHING SJ-35(13) AVAILABLE ALUMINUM, COPPER OR STAINLESS STEEL

14" (356 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR) CONVENTIONAL ROOF ILLUSTRATED (BUR)

12-3/8" (314 mm)

INVERTED ROOF ILLUSTRATED (BUR)

3/4" (19 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE

FOUR 3/4" (19 mm) S.S. BOLTS, LOCK WASHERS AND NUTS

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (TWO THREADS MIN.)

1/4" x 14" x 14" (6 mm x 356 mm x 356 mm) STEEL PLATE

FARA-150-RH DAVIT ARM BASE (Bolt Through)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-150-RH Davit Arm Base is installed by through bolting the base to the structural concrete roof deck as per layout drawings, using a maximum torque of 150 ft-lbf (203 Nm), grouting over the bolt heads (inverted roof only), then placing the flashing sleeve over the base and membrane, bolting and deforming the anchor rod threads from beneath the deck, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. FARA-150-RH-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to exposed aluminum STACK JACK Flashing to a height of 2" (51mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Davit arm: With the davit arm holder in the horizontal position, insert davit mast into the holder, insert the hinge pin, manually raise the arm into position and secure using the locking pin. When not being used for maintenance, store arm in mechanical room or other location, indoors preferably.

Ordering and Availability: Specify flashing material required by adding the appropriate suffix to model number e.g. FARA-150-RH-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
The Thaler FARA-150-RH Davit Arm Base consists of a galvanized, urethane insulated, hollow section steel base with an galvanized davit arm holder, which is designed to receive a FARA-155-RH rotating head Davit Arm. A flashing sleeve that fits over base completes the assembly. See Thaler FARA-155-RH Davit Arm literature for davit arm data. A separate fall arrest roof anchor is required for attaching each worker's lifeline.

PROMINENT FEATURES:
Urethane insulated base prevents formation of condensation (corrosion protection). Maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature. Structural integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel Davit Arm Base. Other base securements available. PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Suitable for all low slope/flat roofs as a davit arm base used to suspend a platform or single point access equipment such as baskets (cages) and manually or power operated boatswain chairs.

APPLICABLE STANDARDS:
Thaler FARA Davit Base conforms to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, AISC, AWS, and other references. Thaler SJ-34(7) and SJ-35(13) New-Standard STACK JACK Flashing conforms to CSA B272-93.

WARRANTY:
20 year warranty (lifetime on stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require davit bases to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler davit arm bases require no maintenance (maintenance free).

PLANNING SERVICE:
Without obligation, Thaler will provide layout drawings for davit bases and accompanying fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (SHORT FORM):
Davit arm bases: Thaler FARA-150-RH Davit Arm Base designed to receive a FARA-155-RH, rotating head Davit Arm; to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with urethane insulated, hot dipped galv. ASTM 500C base 9" dia. x 1/4" (229 mm x 6 mm) welded to 3/4" x 14" x 14" (19 mm x 356 mm x 356 mm) ASTM 500C base plate and bolted to 1/4" x 14" x 14" (6 mm x 356 mm x 356 mm) under-deck plate using four 3/4" (19 mm) dia. s.s. bolts; davit arm mast holder 5/8" x 6-7/8" I.D. (16 mm x 175 mm) ASTM 500C, with weep holes, connected to steel flanges using two 3/4" (19 mm) s.s. hinge and locking pins tethered with 1/8" (3 mm) s.s. cable; [SJ-34, 7" (178 mm)][SJ-35, 13" (330 mm)] high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, (continued on left)

FARA-155-RH DAVIT ARM

Davit Arm Mast Holder

Locking Pins

FARA-150-RH Davit Arm Base

Illustration Showing FARA-150-RH Davit Arm Base With Davit Arm Holder

STEP 1 (Pin Davit Arm Mast Holder to Base)

STEP 2 (Insert Mast Into Holder and Raise Arm Into Place)

ALTERNATIVE FASTENING METHODS

360°

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

3/4" (19 mm) S.S. BOLT CAGE ASSEMBLY C/W NUTS AND WASHERS

8" (204 mm)

1" (25 mm) MIN.

STEP 3 Finished Installation Ready for Use

Bolt Around Beam

Cast-In-Place

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

Welded

FARA-155-RH
Davit Arm

FARA-150-RH
Davit Arm Base
With Mast
Holder
Attachment

ROOF SPECIALTIES

FARA-155-RH
DAVIT ARM For Window Cleaning or Exterior Building Maintenance (Rotating Head)

DESCRIPTION:
The Thaler FARA-155-RH Davit Arm consists of a round extruded aluminum mast, and a rectangular aluminum horizontal 360º rotating HSS boom equipped with a sliding stainless steel suspension line attachment point and reinforcing and other devices. The davit arm requires a Thaler FARA Davit Arm Base to complete the assembly (see separate FARA-150-RH literature). Also a separate fall arrest roof anchor is required for attaching each worker's safety lifeline.

PROMINENT FEATURES:
Structural integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
See Thaler roof anchor literature for lifeline anchor options. See Thaler ARS-115 Rail Post Roof Support literature for roof edge guardrail protection, in lieu of horizontal lifeline.

RECOMMENDED USE:
Suitable for all low slope/flat roofs for suspending a platform or single point access equipment such as a basket (cage) and manually or power operated boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA Davit Arms conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, AISC, AWS, and other references. See separate Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require davits to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Whithout obligation, Thaler will provide layout drawings for davit bases, davit arms and fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (SHORT FORM):
Davit arms: Thaler FARA-155-RH complete davit arm assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] for use with Thaler FARA-150- RH Davit Arm Base, with: mast 5/16" x 6-5/8" O.D. (8 mm x 168 mm) 6061-T6 extruded alum.; horizontal 6061-T6 alum. HSS rotating boom 1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) with 1" (25 mm) dia. sliding s.s. suspension line attachment bolt and plates; strut reinforcing 1/4" x 3" x 3" (6 mm x 76 mm x 76 mm); solid rubber wheel assembly; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.


FARA-155-RH DAVIT ARM
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-155-RH Davit Arm is installed by inserting the davit arm into the davit arm base, and as follows:

Davit arm: With the davit arm holder (attached to the FARA-150-RH Davit Arm Base) in the horizontal position, insert davit mast into the holder with one s.s. hinge pin, and manually raise the arm into position and secure with other s.s. hinge pin. Rotate mast so that davit arm locking lug is in a position opposite of the working arm position (see reverse page for illustrations). When not being used for maintenance, store arm in mechanical room or other location, preferably indoors.

Ordering: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

Davit ArmBase

Davit Arm Mast Holder

FARA-155-RH Davit Arm

1. Place Davit Arm Holder over Davit Arm Base, while removeing parapet side locking pin

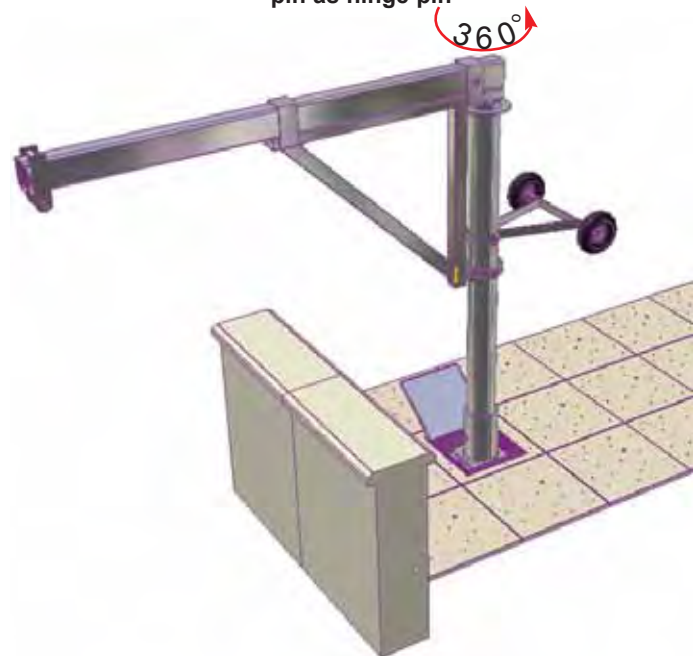**2.** Drop Davit Arm Holder down while using roof side locking pin as hinge pin
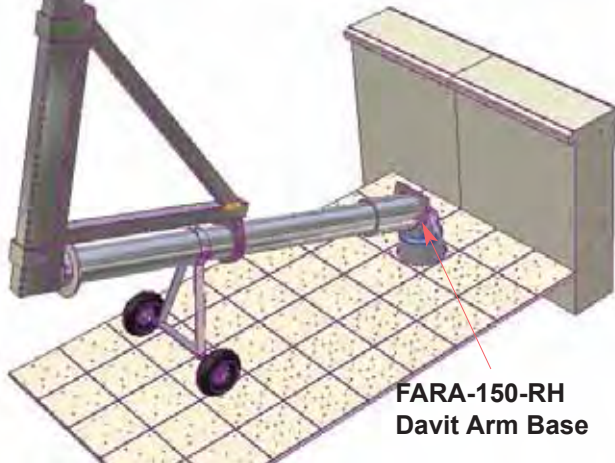
FARA-150-RH Davit Arm Base
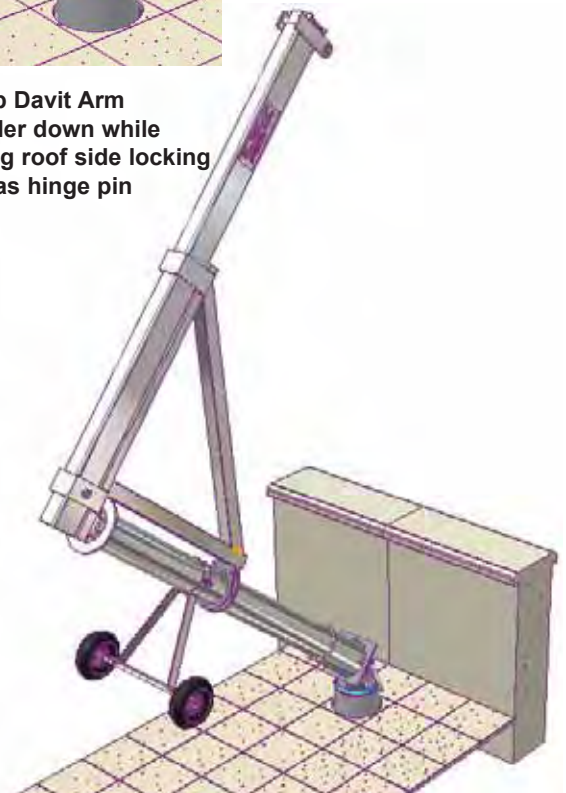
3. Roll Davit Arm into Davit Arm Base and lock mast into place.

4. Manually raise the arm using hinge pin. Once the arm is the vertical position, insert the second locking pin.

6-5/8" (168 mm)

3/8" (10 mm) SS BOLTS

1/4" x 2" (6 mm x 51 mm) ALUMINUM BAR

1" (25 mm)

3/8" (10 mm) SS BOLTS

1/4" x 2" (6 mm x 51 mm) ALUMINUM BAR

4" (102 mm)

3/4" (19 mm) DIA. ROD THREADED AT BOTH ENDS AND BOLTED TO TIRES

21" (532 mm)

18 " (457 mm)

10-12" (267 mm) DIAMETER SOLID RUBBER TIRES

14" (356 mm)

2" (51 mm)

18-1/2" (470 mm)

4" (102 mm)

25-1/2" (673 mm)
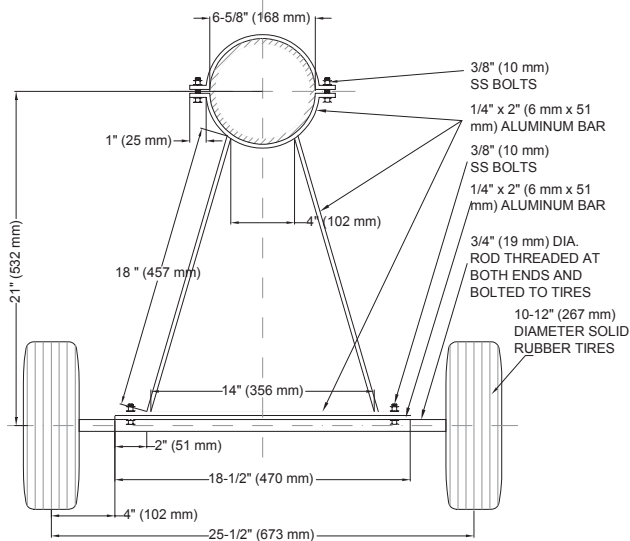
C-C WHEEL ASSEMBLY DETAIL

3/8" (10 mm) THICK

6-5/8" (168 mm)

10-5/8" (270 mm)
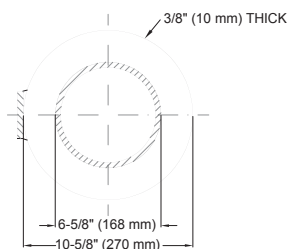
D-D UPPER ROTATIONAL SUPPORT DETAIL
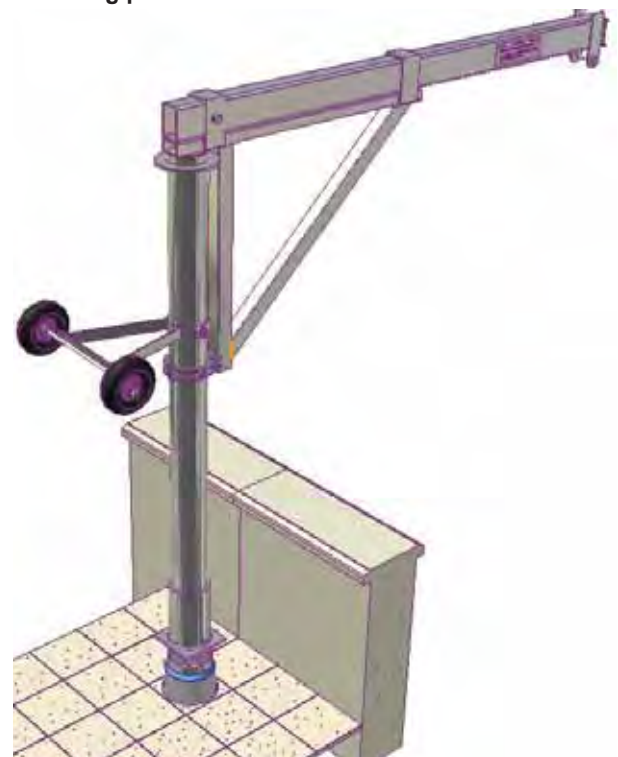
5. Completed davit arm installation ready for window cleaning or other exterior building maintenance.

THALER

I-25A

ROOF SPECIALTIES
FARA-160 RECESSED DAVIT ARM BASE
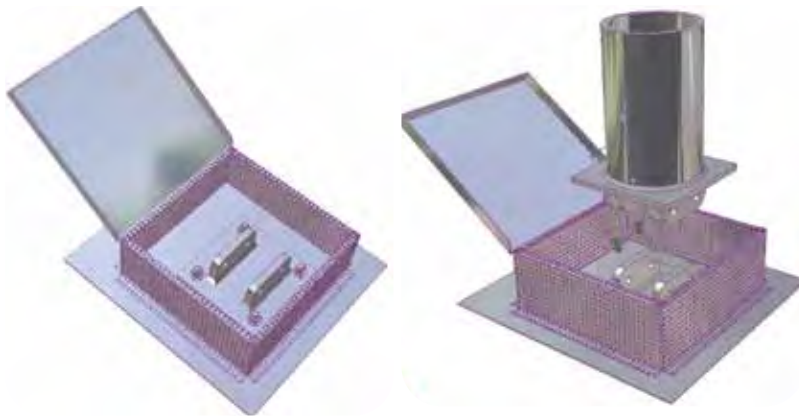
Reccessed Arm Base Without Mast Holder

Recessed Davit Arm Base With Mast Holder

NOTE: FOR SINGLE PLY APPLICATIONS MEMBRANE TO GO UNDER 1/8" (3 mm) S.S. PLATE. CHECK WITH SINGLE PLY MANUFACTURER FOR COMPATIBILITY WITH EMBED MATERIAL FOR S.S. PLATE.

EXTRUDED ALUMINUM DAVIT ARM MAST

DAVIT ARM HOLDER 6-7/8" I.D. x 12-1/2" HIGH (175 mm I.D. x 318 mm). TILTS DOWN ON STEEL HINGE PIN FOR HORIZONTAL LOADING OF DAVIT ARM.

6-7/8" (75 mm)
8-1/8" (206 mm)
13" (330 mm)

3/4" (19 mm) S.S. THROUGH-BOLT FOR LOCKING MAST TO BASE

1/8" (3 mm) S.S. CABLE TETHER

PERFORATED S.S. ENCLOSURE BOX WITH HINGED S.S. COVER

1/2" (12 mm) DIA WEEP HOLES

3/4" (19 mm) S.S. LOCKING PLATES

STAINLESS STEEL COTTER PIN TWO 3/4" (19 mm) S.S. LOCKING PINS

EPDM WASHER

5/8" x 10" x 10" (16 mm x 254 mm x 254 mm) S. S. PLATE

3-3/8" (86 mm)

BUR ILLUSTRATED WITH 3 PLY FELT FLASHING OVER S.S. PLATE

1/16" x 10" x 10" (1.59 mm x 254 mm x 254 mm) EPDM PLATE WITH 3/4"(19mm) HOLES

FOUR POINT S.S. 3/4" (19 mm) CAGE ASSEMBLY WITH WASHERS AND NUTS

1/8" x 22" x 24" (3 mm x 559 mm x 610 mm) STAINLESS STEEL PLATE EMBEDDED IN A LAYER OF PLASTIC CEMENT

1" (25 mm)
6-1/2" (165 mm)

FARA-160 RECESSED DAVIT ARM BASE (Cast-In-Place)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-160 Recessed Davit Arm Base with stainless steel enclosure box is installed by placing over cast-in-place cage assembly and bolting base to the structure using a maximum torque of 150 ft.-lbf. (203 Nm).

BUR: Set stainless steel under-base plate in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
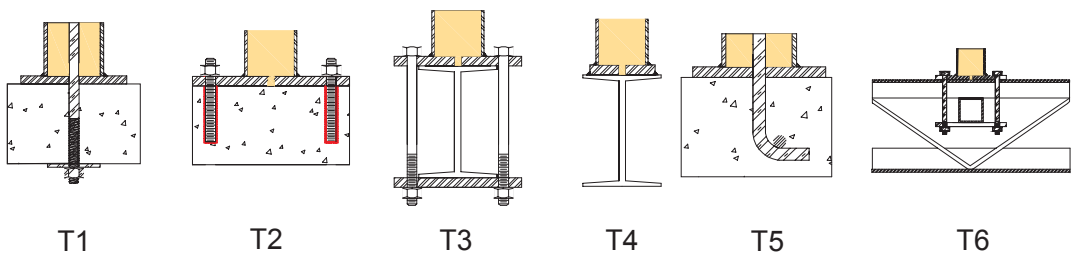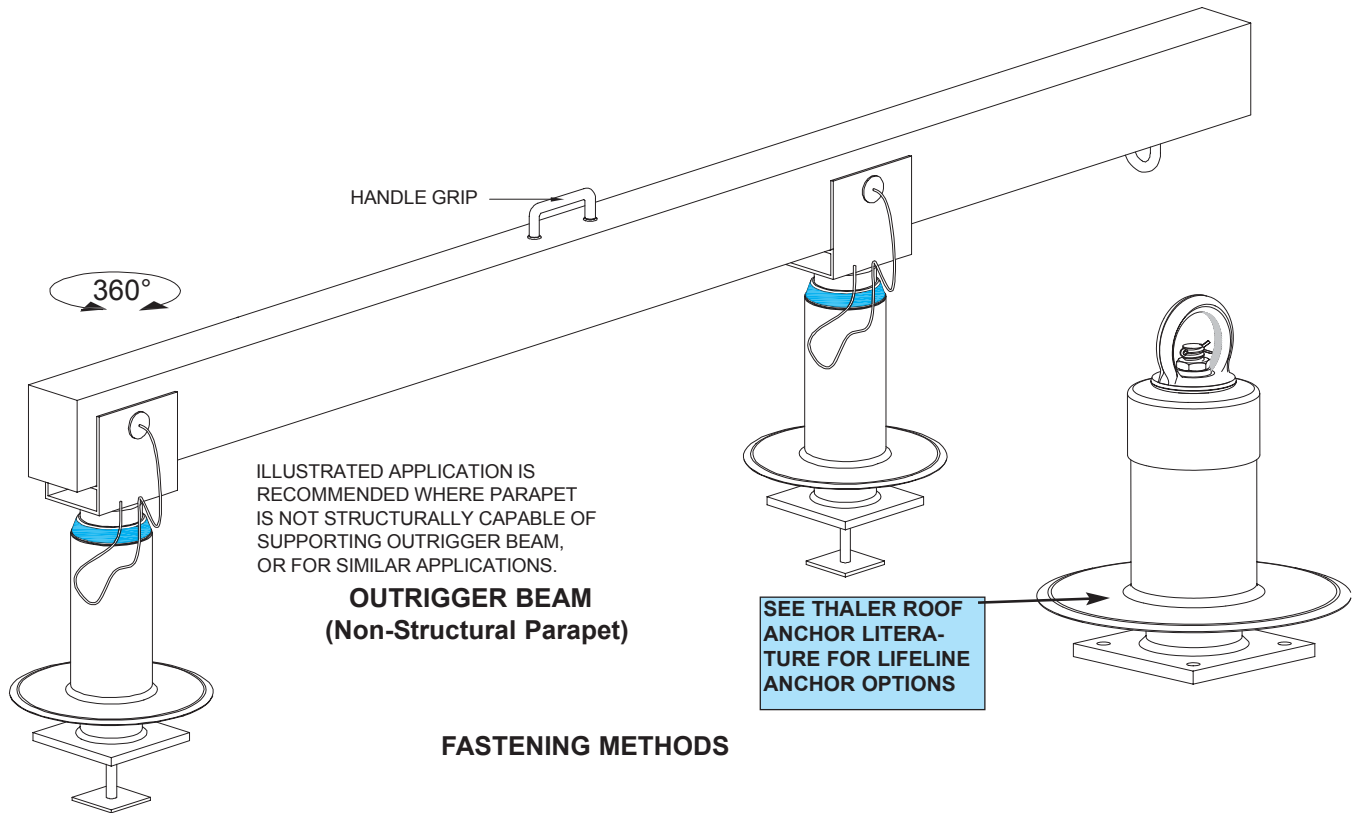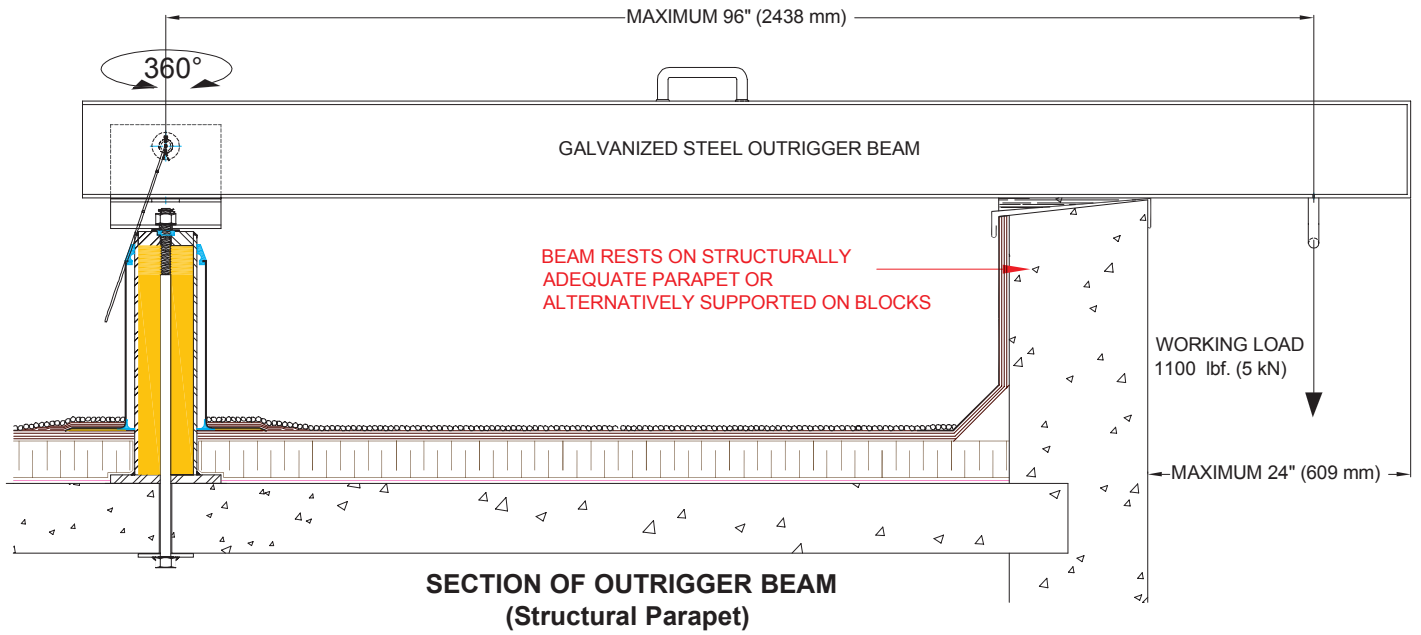
ModBit: Torch membrane until bitumen is fluid and set under-base plate into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set stainless steel under-plate onto single ply membrane in embed material recommended by single ply manufacturer.

Davit arm: With the davit arm holder in the horizontal position, insert davit mast into the holder, insert the hinge pin, manually raise the arm into position and secure using the locking pin. When not being used for maintenance, store arm in mechanical room or other location, indoors preferably.

DESCRIPTION:
The Thaler FARA-160 Recessed Davit Arm Base consists of a structural stainless steel base plate with two vertical locking plates welded to the base plate, large stainless steel under-base plate, EPDM divider, stainless steel enclosure box, steel davit arm holder, which is designed to receive a FARA-155-RH rotating head Davit Arm. See Thaler FARA-155-RH Davit Arm literature for davit arm data. A separate fall arrest roof anchor is required for attaching each worker's lifeline.

PROMINENT FEATURES:
EPDM divider and EPDM washer prevents leakege (corrosion protection). Maintenance free. Structural integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel Recessed Davit Arm Base.Other base securements available.

RECOMMENDED USE:
Suitable for all low slope/flat terrace roofs, as a davit arm base used for suspending a platform or single point access equipment such as baskets (cages) and manually or power operated boatswain chairs.

APPLICABLE STANDARDS:
Thaler FARA-160 Davit Base conforms to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, AISC, AWS, and other references.

WARRANTY:
20 year warranty (lifetime on stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require davit bases to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler davit arm bases require no maintenance (maintenance free).

PLANNING SERVICE:
Whithout obligation, Thaler will provide layout drawings for davit bases and accompanying fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes.
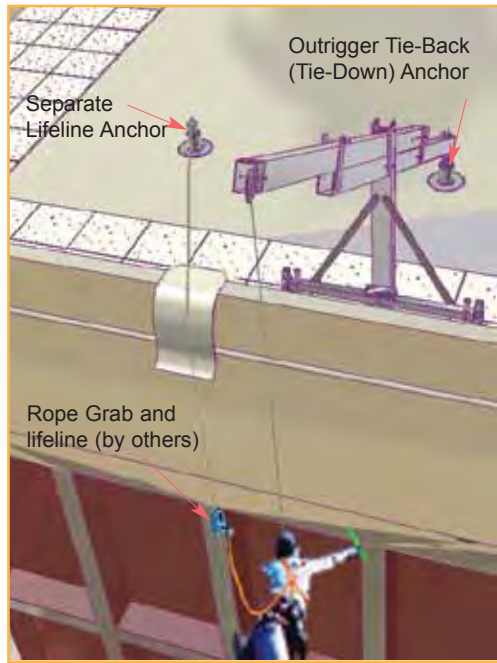
SPECIFICATION (SHORT FORM):
Recessed Davit arm base: Thaler FARA-160 Recessed Davit Arm Base designed to receive a FARA-155-RH, rotating head Davit Arm; to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with stainless steel 5/8" x 10" x 10" (16 mm x 254 mm x 254 mm) base plate and two s.s. 3/4" (19 mm) locking plates; 18 Ga. x 18-1/2" x 16-1/2" (1.27 mm x 457 mm x 406 mm) stainless steel enclosure box with s.s. cover; 1/8" x 22" x 24" (3 mm x 559 mm x 610 mm) s.s. under-base plate; 3/4" (19 mm) dia. s.s. cage assembly; galvanized davit arm holder 5/8" x 6-7/8" I.D. (16 mm x 175 mm) ASTM 500C, with weep holes, connected to steel flanges using two 3/4" (19 mm) s.s. hinge and locking pins tethered with 1/8" (3 mm) s.s. cable; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

THALER
I-26
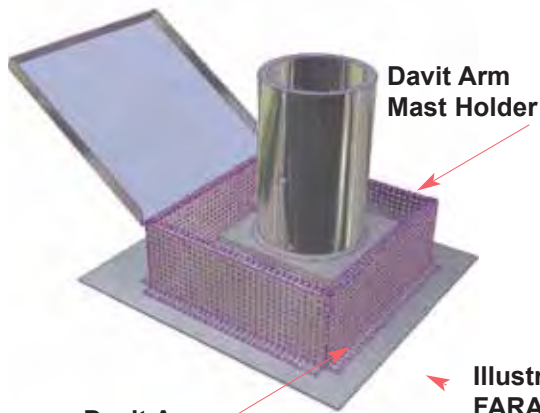
**Davit Arm
Mast Holder**
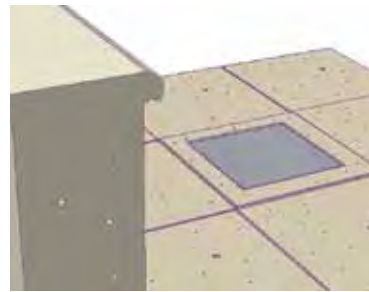
**Recessed Davit Base
Concealed When not in use**
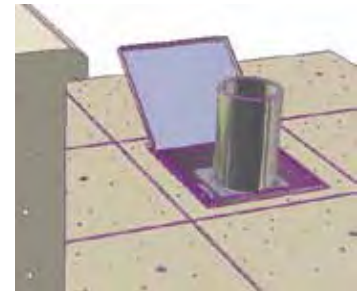
1. Place Davit Arm Holder over
Recessed Davit Arm Base,
while removing parapet side
locking pin

**Davit Arm
Recessed Base**

**Illustration Showing
FARA-160 Recessed
Davit Arm Base With
Davit Arm Holder**
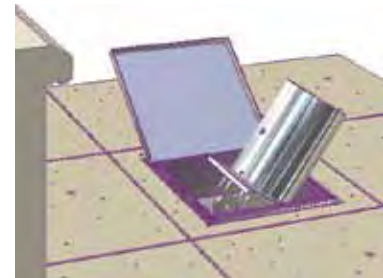
2. Drop Davit Arm Holder down
while using roof side locking
pin as hinge pin

360°

FARA-155-RH DAVIT ARM

**FARA-160
Recessed Davit
Arm Base**
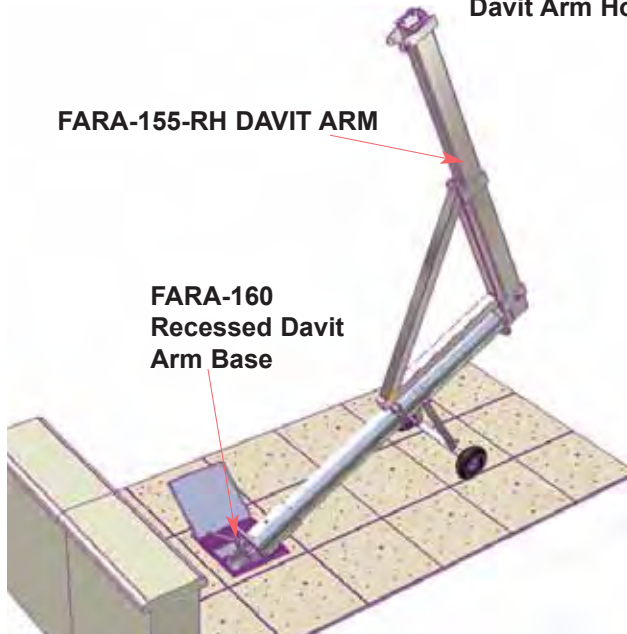
3. Roll Davit Arm into Recessed Davit Arm Base
and secure to Davit Arm Holder using locking bolt

5. Completed davit arm installation ready for window
cleaning or other exterior building maintenance.

**ALTERNATIVE
FASTENING
METHOD**

5/8" x 10" x 10"
(16 mm x 254 mm
x 254 mm)
S. S. PLATE

FOUR 3/4" (19 mm)
S.S. BOLTS,
LOCK WASHER
AND NUTS

1/4" x 10" x 10"
(6 mm x 254 mm x
254 mm) STEEL PLATE

4. Manually raise the arm using hinge pin. Once the
arm is the vertical position, insert the second locking pin.

Bolt Through

360°

5" x 7" x 1/4"
(127 mm x 178 mm x 6 mm)
GALVANIZED STEEL
OR ALUMINUM OUTRIGGER BEAM

1" (25 mm) S.S. PIN

S.S. FLAT WASHER

S.S. COTTER PIN

2"
(51 mm)

1" (25 mm) S.S. BOLT,
S.S. COTTER PIN,
S.S. LOCK WASHER
AND NUT

All stainless steel base also available e.g. HSS, base plate, fastening, and flashing.

5-1/2" x 7-1/2" x 1/4"
(140 mm x 190 mm x 6 mm)
STEEL OUTRIGGER
BEAM HOLDER

1/8" (3 mm) S.S. CABLE
WELDED TO OUTRIGGER
BEAM HOLDER AND PIN

2" (51 mm) FLAT WASHER

EPDM GROMMET SEAL

EPDM TRIPLE PRESSURE
GROMMET SEAL

1/4" x 4-1/2" DIA. (6 mm x 114 mm)
HSS WELDED
TO 5/8" x 8" x 8"
(16 mm x 203 mm x 203 mm)
BASE PLATE USING
5/16" (8 mm)
WELD AND HOT DIP
GALVANIZED

SJ-35 STACK JACK

PREMOLDED URETHANE
INSULATION ON INNER
SIDE OF HSS PIPE TO
PREVENT CONDENSATION

VARIABLE

CONVENTIONAL ROOF
ILLUSTRATED (BUR)

EPDM BASE SEAL BONDED TO
METAL SLEEVE

EMBED DECK FLANGE
IN LAYER OF PLASTIC
CEMENT (BUR)

See Reverse Side of Page for Alternative Fastening Methods

FARA-170 SWIVEL OUTRIGGER ARM AND BASE
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-170 outrigger is installed by through bolting the base to the structural roof deck as per layout drawings, using a maximum torque of 125 lbf-ft. (169 Nm), then placing the flashing sleeve over the base and membrane and as follows:

BUR: Set stainless steel under-base plate in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. FARA-170-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Outrigger arm: Place rear of arm into the holder and secure using the single s.s. pin. Rest front of arm on a structurally adequate parapet wall or support on blocks on the roof if the parapet wall is not structurally adequate. When not being used for maintenance, store arm in mechanical room or other location.

Ordering: Specify flashing material required by adding the appropriate suffix to model number e.g. FARA-170-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
The Thaler FARA-170 Outrigger consists of a galvanized, urethane insulated, hollow section steel base (bolted to roof slab) rectangular hollow section steel beam complete with handle grip and stainless steel suspension line U bolt attachment. A flashing sleeve for the base completes the assembly. A separate fall arrest roof anchor is required for attaching a worker's lifeline.

PROMINENT FEATURES:
Urethane insulated base prevents formation of condensation (corrosion protection). Maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Structural integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel outrigger base. Other base securements available. PVC coated flashing deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. See Thaler roof anchor literature for fall arrest lifeline anchor options.

RECOMMENDED USE:
Suitable for all flat roofs for suspending a platform or single point access equipment such as baskets (cages) and manually or power operated boatswain chairs.

APPLICABLE STANDARDS:
Thaler FARA Outriggers and Fall Arrest Roof Anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-34 New-Standard STACK JACK Flashing conforms to CSA B272-93. See separate Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.
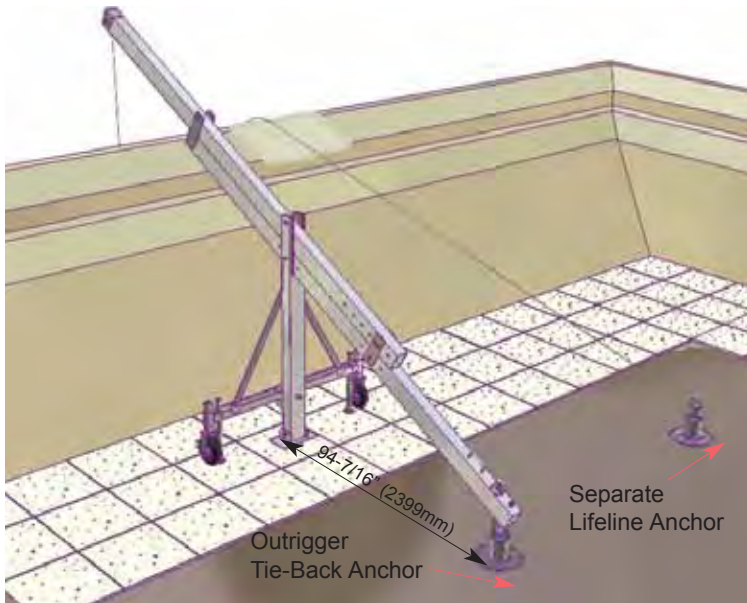
MAINTENANCE:
Regulatory authorities require outriggers and anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
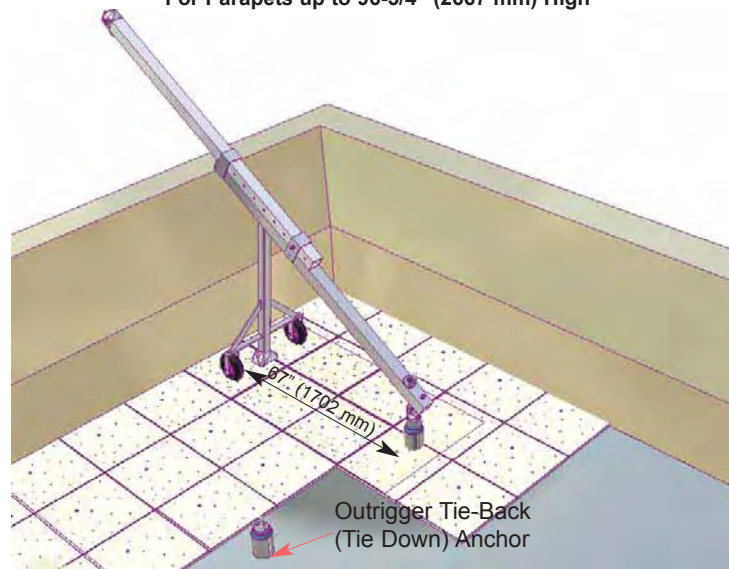
PLANNING SERVICE:
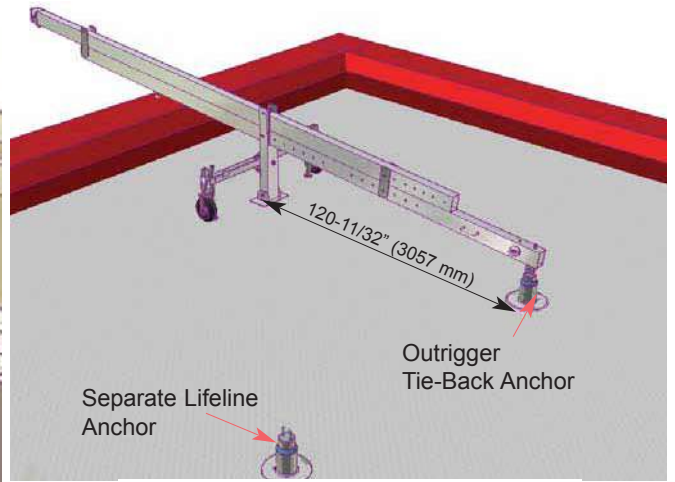Thaler will provide layout drawings for outriggers and fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Outrigger arm and base: Thaler FARA-170 complete outrigger assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with urethane filled, hot dipped galv. ASTM 500C base 4" dia. x 1/4" (102 mm x 6 mm) welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) ASTM 500C base plate and bolted through roof deck to 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) back up plate using a single 1" (25 mm) dia. s.s. bolt; beam holder 1/4" (6 mm) thick galv. 44W steel with 1" (25 mm) dia. s.s. pin tethered with 1/8" (3 mm) s.s. cable; outrigger beam 5" x 7" x1/4" (127 mm x 178 mm x 6 mm) galvanized HSS with handle grip and s.s. U bolt suspension line attachment; SJ-35, 13" (330 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange];manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.
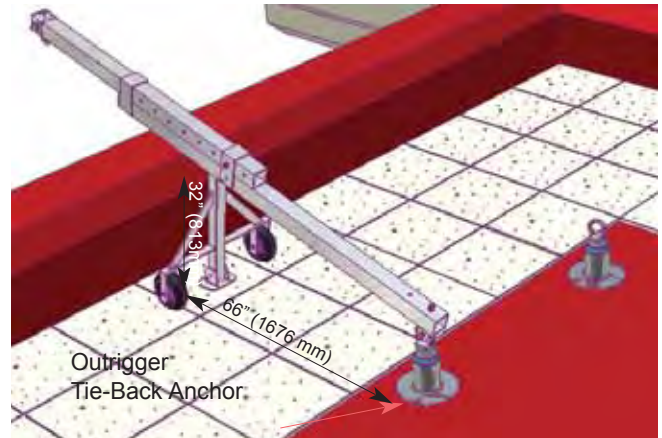
MAXIMUM 96" (2438 mm)

360°

GALVANIZED STEEL OUTRIGGER BEAM

BEAM RESTS ON STRUCTURALLY
ADEQUATE PARAPET OR
ALTERNATIVELY SUPPORTED ON BLOCKS

WORKING LOAD
1100 lbf. (5 kN)

MAXIMUM 24" (609 mm)

SECTION OF OUTRIGGER BEAM
(Structural Parapet)

HANDLE GRIP

360°

ILLUSTRATED APPLICATION IS
RECOMMENDED WHERE PARAPET
IS NOT STRUCTURALLY CAPABLE OF
SUPPORTING OUTRIGGER BEAM,
OR FOR SIMILAR APPLICATIONS.

OUTRIGGER BEAM
(Non-Structural Parapet)

SEE THALER ROOF
ANCHOR LITERA-
TURE FOR LIFELINE
ANCHOR OPTIONS

FASTENING METHODS

T1   T2   T3   T4   T5   T6

Specify the fastening method required by adding the appropriate suffix to model number (e.g. FARA-170-F1)

4" (102 mm)

127" (3226 mm)

6" (152 mm)

2" (51 mm)

60°

16-3/8" (416 mm)

22" (559 mm)

55" (1397 mm)

62-1/2" (1588 mm)

FRONT VIEW

Separate Lifeline Anchor

Outrigger Tie-Back (Tie-Down) Anchor

Rope Grab and lifeline (by others)

ROOF SPECIALTIES
FARA-170 SWIVEL OUTRIGGER BEAM AND BASE

DESCRIPTION:
The Thaler FARA-175 Series Portable Outrigger Beam consists of an aluminum hollow section extendable upper and lower beam, aluminum vertical support leg and beam holder to receive the beams, and transport wheel assembly. Outrigger beams require Thaler tie-back (tie down) anchors and separate worker lifeline anchors with Thaler STACK JACK flashing.

PROMINENT FEATURES:
Urethane insulated anchors prevent formation of condensation (corrosion protection). Maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Structural integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
Range of models to suit various parapet heights. Range of lifeline anchors for all roof types. PVC coated flashing deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Suitable for all low slope/flat roofs for suspending a platform or single point access equipment such as baskets (cages) and manually or power operated boatswain chairs, for window cleaning or other exterior building maintenance.

APPLICABLE STANDARDS:
Thaler FARA Outriggers and Fall Arrest Roof Anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL OSHA, AISC, AWS, and other references. Thaler SJ-34(7) and SJ-35(13) New-Standard STACK JACK Flashing conforms to CSA B272-93.

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request. Note: leaks and condensation refer to tie-back and lifeline anchors
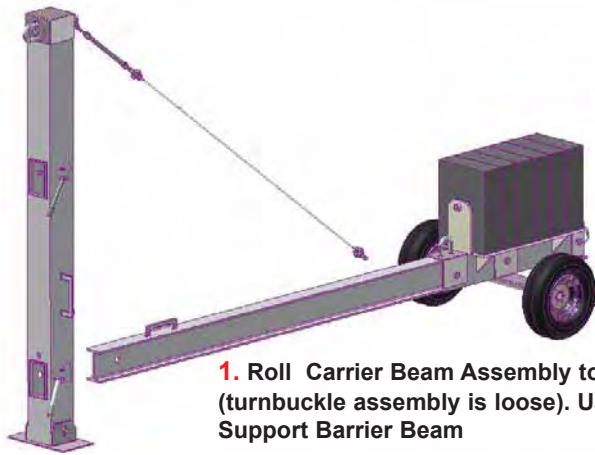
MAINTENANCE:
Regulatory authorities require outriggers and anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler outriggers beams require no maintenance (maintenance free).

PLANNING SERVICE:
Without obligation, Thaler will provide layout drawings for outriggers and fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes.

### SPECIFICATION (SHORT FORM):
Portable Outrigger beams: Thaler [FARA-175-A] [FARA-175-B] [FARA-175-C] [FARA-175-D] Portable Outrigger Beam to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with 1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) T-6061 aluminum upper and lower sliding beam; 1/4" x 4" x 6" (6 mm x 102 mm x 152 mm); pedestal to receive adjustable beam; 3/8" (10 mm) s.s. eye suspension line attachment rigging plate; aluminum T-6061 transport wheel frame; stainless steel anchor connectors; [galvanized] [stainless steel] urethane insulated tie-back (tie down) anchor and separate lifeline anchor both with [SJ-34, 7" (178 mm) high] [SJ-35,13" (330 mm) high] New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange];manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (Niagara Falls, NY), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

1/4" (6 mm)

3" (76 mm)

3" (76 mm)

2" (51 mm)

Side View   **Perspective View**
S.S. ANCHOR CONNECTOR

3" (76 mm)

168" (4267 mm)

1" (25 mm)

57" (1448 mm)

1-1/4" (44 mm)

168" (4267 mm)

MAXIMUM WORKING LOAD (SPECIFIED, UNFACTORED) 1,000 lbf (4.45 kN)

ALUMINUM BEAM HOLDER

2" (51 mm)

7" (178 mm)

S.S. 3/8" (10 mm) THICKNESS

3-1/2" (89 mm)

4" (102 mm)

123" (3124 mm)

104.1589

ALUMINUM MAST BEAM HOLDER

RIGGING PLATE FOR SUSPENSION LINE

168" (4267 mm)

1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) ALUMINUM UPPER BEAM

1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) ALUMINUM LOWER BEAM

6" (152 mm)

6" (152 mm)

64" (1625 mm)

1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) ALUMINUM PEDESTAL SUPPORT AND TRANSPORT WHEEL FRAME ASSEMBLY

13-3/16" (335 mm)

S.S. ANCHOR CONNECTOR

SNAP HOOK MSA 02Z5 AT CORNER ANCHORS IF NEEDED

THALER ANCHOR

SOLID RUBBER WHEELS

94-7/16" (2399 mm)

97-3/8" (2473 mm)

FARA-175-A PORTABLE OUTRIGGER BEAM

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-Series portable outrigger beam is installed by placing and bolting beams into position on the pedestal frame support, and pinning the tail of the beam to the tie-back (tie down) anchor. The STACK JACK flashing for the roof anchors is installed as follows:

BUR: Set stainless steel under-base plate in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. FARA-170-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering: Specify flashing material required by adding the appropriate suffix to model number e.g. FARA-175-A-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

FARA-175-A PORTABLE OUTRIGGER BEAM
For Parapets up to 96-3/4" (2667 mm) High

94-7/16 (2399mm)

Outrigger Tie-Back Anchor

Separate Lifeline Anchor

FARA-175-B PORTABLE OUTRIGGER BEAM
For Parapets up to 35" (889 mm) High

120-11/32 (3057 mm)

Outrigger Tie-Back Anchor

Separate Lifeline Anchor

FARA-175-C PORTABLE OUTRIGGER BEAM
For Parapets up to 60" (1524 mm) High

67" (1702 mm)

Outrigger Tie-Back (Tie Down) Anchor

FARA-175-D PORTABLE OUTRIGGER BEAM
For Parapets up to 40" (1016 mm) High

32" (813m)

66" (1676 mm)

Outrigger Tie-Back Anchor

Note: All Anchors are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction

3D Blow Up of A Frame For FARA-175-A and FARA-175-B Outriggers
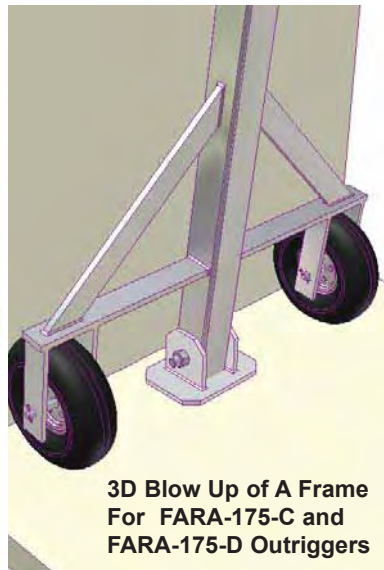
3D Blow Up of A Frame For FARA-175-C and FARA-175-D Outriggers

1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) ALUMINUM LOWER BEAM

U BOLT EYE AND BASE, WELDED TO HSS PIPE AND HOT DIP GALVANIZED

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

THALER SJ-34(7) NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

THALER SJ-35 (13) NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

EPDM TRIPLE PRESSURE GROMMET TOP SEAL

INVERTED ROOF ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

14" (356 mm)

12-5/8" (321 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

MIN 8" (203 mm)

SECTION THROUGH TIE-BACK ANCHOR
(Bolt Through Fastening Shown. See Alternative Fastenings Below)

Single Bolt Through | Bolt Around Beam | Welded | Cast-In-Place | Pre-Cast Core Bolt | OWSJ

THALER I-28A

Worker's Independent Lifeline Anchor

Tie-Back Wall Anchor

Rope Grab and Vertical Lifeline (by others) Note: For low parapets less than guardrail height, a horizontal lifeline is required to provide suitable fall protection at roof edge. See Thaler Horizontal Lifeline literature.

DESCRIPTION:
The Thaler FARA-155-P Portable Outrigger consists of a transportable aluminum framework with wheels, counterweights, outrigger beam, and tie-back eye. Tie-back and lifeline anchors are required somewhere farther back on the roof for tying back the outrigger. and for, workers lifeline. Also, if the parapet is less than guardrail height, 36" or 42" minimum (915 mm or 1067 mm) depending on jurisdiction, a horizontal lifeline cable will be required for safe access to the roof edge (see Thaler EASY SLIDER Horizontal Lifeline System literature).

PROMINENT FEATURES:
Easily assembled or disassembled for maintenance contractor convenience, or alternatively assembled and stored on the roof (outdoors or indoors) by the building owner. Can be easily moved around the roof from station to station using the wide, solid rubber transport wheels. Structural integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
Range of models to suit various parapet heights. Range of tie-back or lifeline anchors for all roof or wall types. See Secton I of manual for anchor selection.

RECOMMENDED USE:
Suitable for all low slope/flat roofs for suspending a ground rigged platform or single point access equipment such as baskets (cages) and manually or power operated boatswain chairs, for window cleaning or other exterior building maintenance.

APPLICABLE STANDARDS:
Thaler FARA Outriggers and FARA or TWA Fall Arrest Roof Anchors conform to all Canadian and U.S. standards, Provincial and State labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, AISC, AWS, and other references.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when assembled and used in accordance with Thaler "User Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require outriggers and safety tie-back anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler portable outriggers require no maintenance (maintenance free).

PLANNING SERVICE:
Without obligation, Thaler will provide layout drawings for positioning of outriggers and fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (SHORT FORM):
Portable Outrigger(s): Thaler FARA-155-P Portable Outrigger(s) to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] , 15'-9" (4.8 m) overall length with 1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) T-6061 aluminum pedestal support, suspension beam and carrier beam; 3/8" (10 mm) s.s. eye suspension line attachment rigging plate; transport wheel assembly; A frame assembly of 1/4" x 3" x 3" (6 mm 76 mm x 76 mm) aluminum tube and two 2" (51 mm) dia. alum. leg supports; s.s. turnbuckle assembly with 3/8" (10 mm) s.s. cable; s.s end caps with s.s. U-bolt turnbuckle and tie-back eyes; [galvanized] [stainless steel] tie-back anchor and separate lifeline anchor; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture

FRONT VIEW

2" dia. (51 mm)

6.50" (165 mm)

4" (102 mm)

End View

Side View

STAINLESS STEEL BEAM CAP

6.50" (165 mm)

4.75" (121 mm)

Side View

STAINLESS STEEL PEDESTAL CAP

5.2" (132 mm)

Side View

6.3" (160 mm)

1.5" dia. (38 mm)

SUSPENSION LINE RIGGING PLATE (FRONT VIEW)

TURNBUCKLE ASSEMBLY W 3/8" (10 mm) S.S. CABLE

3/8" (10 mm) S.S. CABLE

1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) ALUMINUM PEDESTAL SUPPORT

S.S. U-BOLT TIE-BACK EYE

COUNTERWEIGHTS

4" x 6" (102 mm x 152 mm) ALUMINUM CARRIER BEAM AND TRANSPORT WHEEL ASSEMBLY

6" (152 mm)

6" (152 mm)

6" (152 mm)

4" x 6" (102 mm x 152 mm) ALUMINUM SUSPENSION BEAM

MAXIMUM WORKING LOAD (SPECIFIED, UNFACTORED) 1,000 lbf (4.45 kN)

51" (1295 mm) OR AS DESIRED

PARAPET WALL

6'-0" (1829 mm)

8'-3" (2514 mm)

9'-9" (2972 mm)

FARA-155-P PORTABLE OUTRIGGER

INSTALLATION:
"User an/or Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-155-M Portable Outrigger is installed by placing and bolting transport wheel beam into position on the pedestal mast support, and then bolting the suspension beam to pedestal support, bolting A frame assembly to pedestal support, tensionnig the turnbuckle assemblies at both sides, tying the tail of the wheel/carrier beam back to an anchor.

Ordering: Available throughout North America. Contact Thaler for list of distributors and current cost information.

U-Bolt Eye For Tie-Back Anchor

1. Roll Carrier Beam Assembly to Mast and Bolt Through (turnbuckle assembly is loose). Use the Rear Jack to Support Barrier Beam
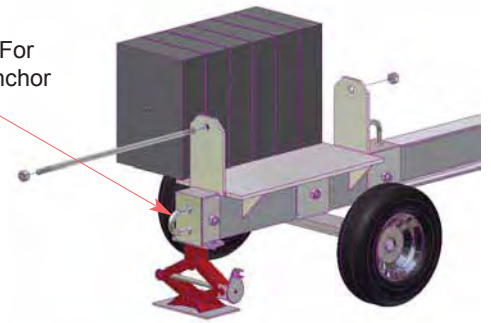
Blow-Up of Wheel and Counterweights Assembly

FARA-155-P PORTABLE OUTRIGGER INSTALLED IN FOUR EASY STEPS
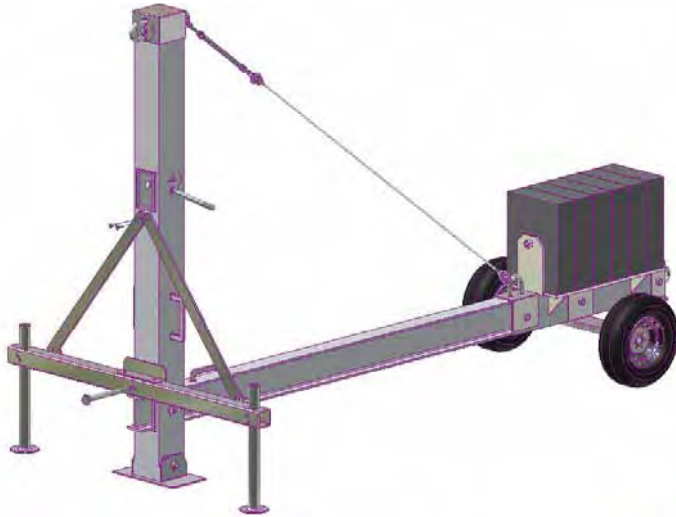
2. Bolt A-Frame Assembly to Pedestal. Turnbuckle Assembly is Still Loose but Attached to U-Bolt Eye.

Note: To protect roof membrane, specify use of concrete pavers around perimeter of roof where window cleaning operations, etc. are being performed. At the very least, Thaler User/Installation Instructions will require maintenance contractor to place temporary plywood or similar protection under outrigger supports during use.

3. Place the Outrigger Beam into Pedestal Hole and Bolt Together. Bolt Cap to End of Beam. Loosely Attach Turnbuckle Assembly on Outrigger to U-Bolt Eye.
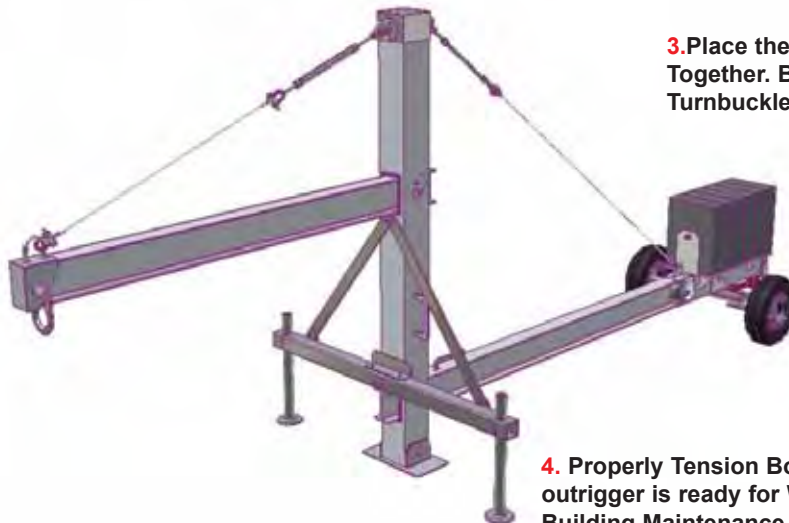
4. Properly Tension Both Turnbuckle Assemblies. Portable outrigger is ready for Window Cleaning or Other Exterior Building Maintenance

REMOVABLE STAINLESS STEEL 18 Ga. CAP

1" (25 mm) DIA. STAINLESS STEEL CROSS BAR WELDED TO HSS PIPE

EPDM TRIPLE PRESSURE GROMMET SEAL

1/4" x 6" DIA. (6 mm x 152 mm) HSS WELDED TO 5/8" x 12" x 12" (16 mm x 305 mm x 305 mm) BASE PLATE, ALL HOT DIP GALVANIZED

THALER SJ-34 NEW STANDARD STACK JACK FLASHING, AVAILABLE ALUMINUM, COPPER OR STAINLESS STEEL

3/8" (9 mm) STAINLESS STEEL SET SCREW

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

14" (356 mm)

6" DIA. (152 mm)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

VARIABLE AS REQUIRED

All stainless steel anchor also available (FARA-180SS) e.g. HSS, base plate, fastening, and flashing.

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

FINISHED CEILING

FARA-180 "ROPE DROP" ANCHOR
PATENTED

DESCRIPTION:
The Thaler FARA-180 "Rope Drop" anchor consists of a galvanized hollow section steel sleeve (HSS) with a removable cap and a flashing sleeve. Typically employed in pairs, the top interiors of the anchors are equipped with 1" (25 mm) diameter stainless steel cross bar that is used to secure platform suspension lines. A separate standard rooftop anchor is required to secure each worker's lifeline.

PROMINENT FEATURES:
Maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor and various other securements available.

RECOMMENDED USE:
Suitable for all flat roofs for attaching platform or single point suspension lines where davits, outriggers or standard anchors cannot be used, such as balconies, atriums, wide cornices or building projections and similar architectural features. Ideal for retrofit.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/
safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-34 New-Standard STACK JACK Flashing conforms to CSA B272-93. See separate Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Rope Drop anchors: Thaler FARA-180 adhesive bolt galvanized rope drop anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with 4" (102 mm dia. hollow ASTM 500C steel sleeve section (HSS) 1/4" (6 mm) wall thickness x 6" (152 mm) dia., length to suit application, welded to 1/2" x 12" x 12" (12 mm x 305 mm x 305 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); removable cap w/set screw; 1" (25 mm) s.s. cross bar; SJ-34, 7" (178 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
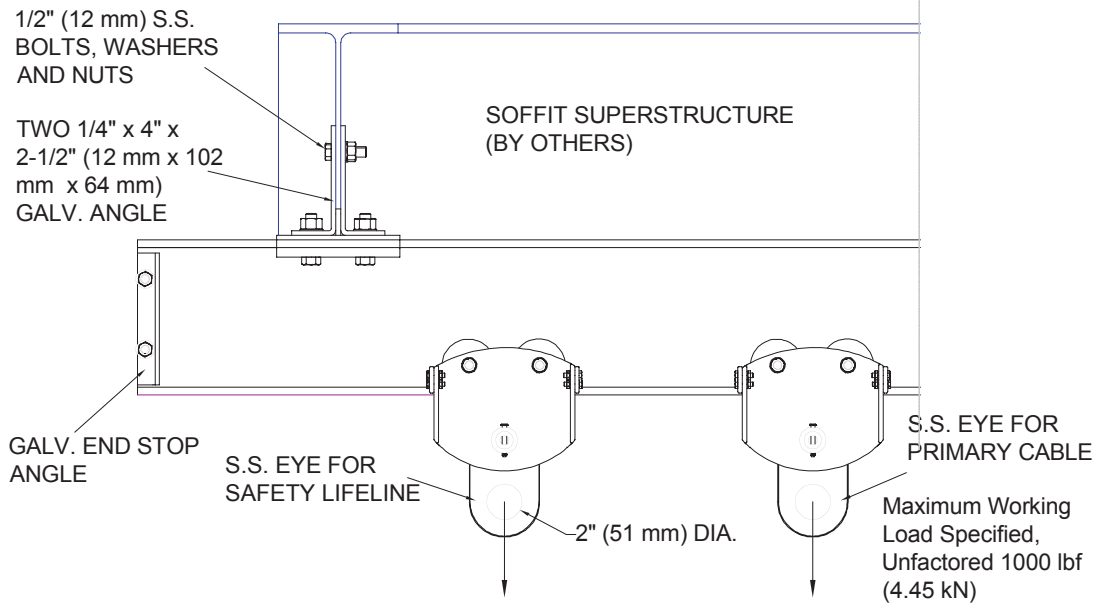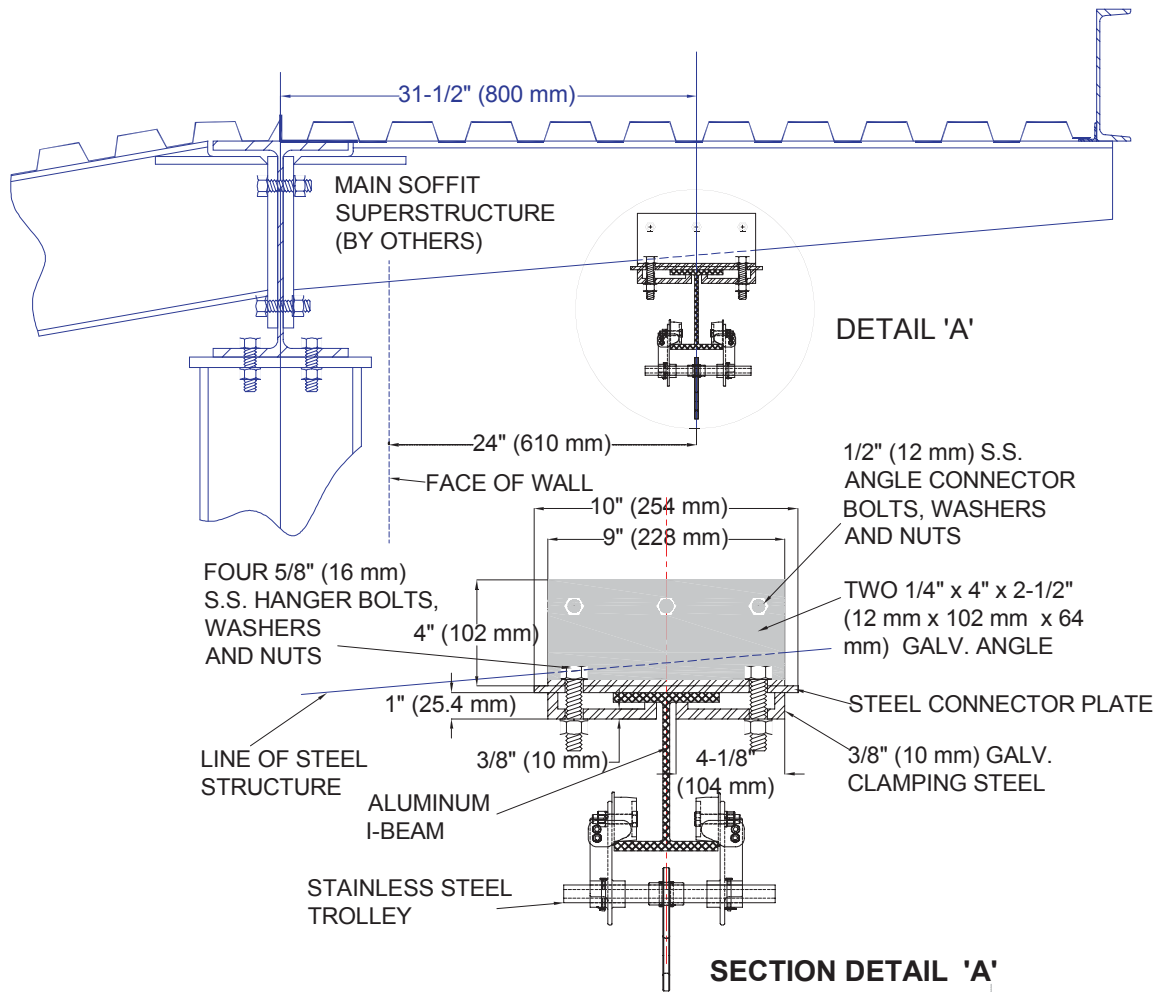"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-180 anchor is installed by adhesive bolting (as per bolt manufacturer's instructions) the anchor to the cored out structural concrete roof deck as per Thaler layout drawings, using a maximum torque of 75 lbf-ft. (100Nm), then placing the flashing sleeve over the anchor and membrane, and as follows:

BUR: Set stainless steel under-base plate in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. FARA-180-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to exposed aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

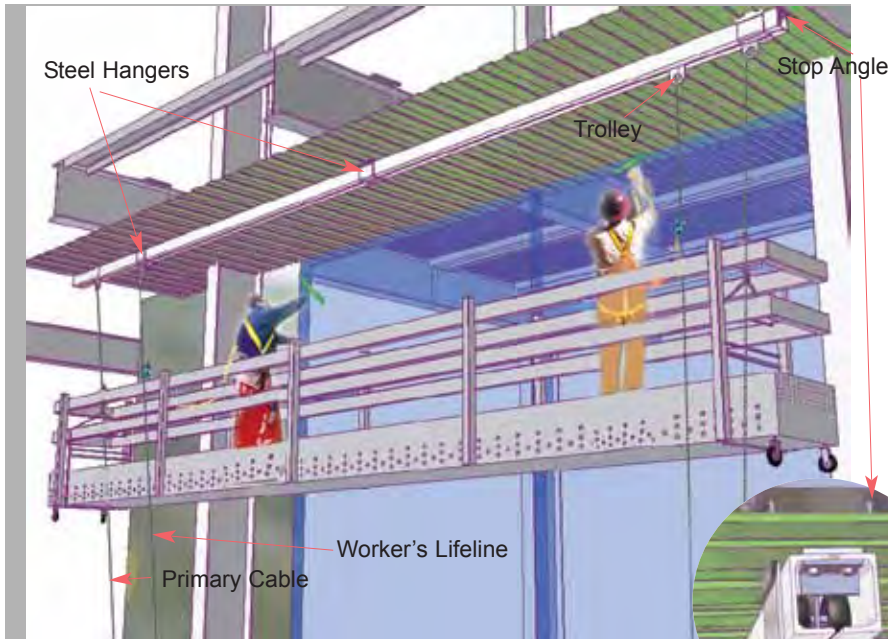**Ordering:** Specify flashing material required by adding the appropriate suffix to model number e.g. FARA-180-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
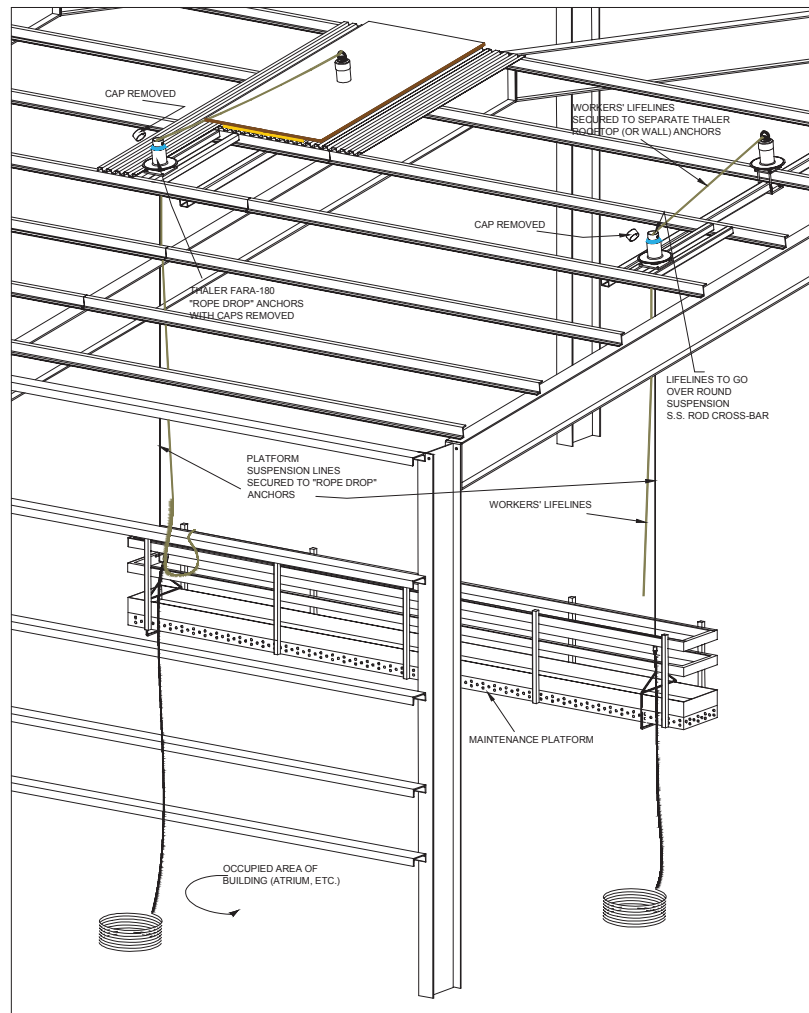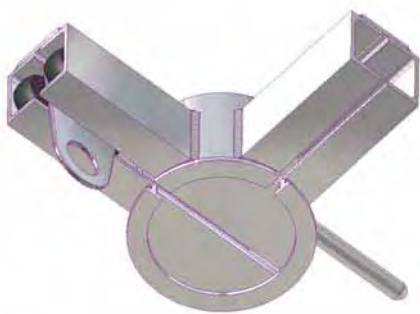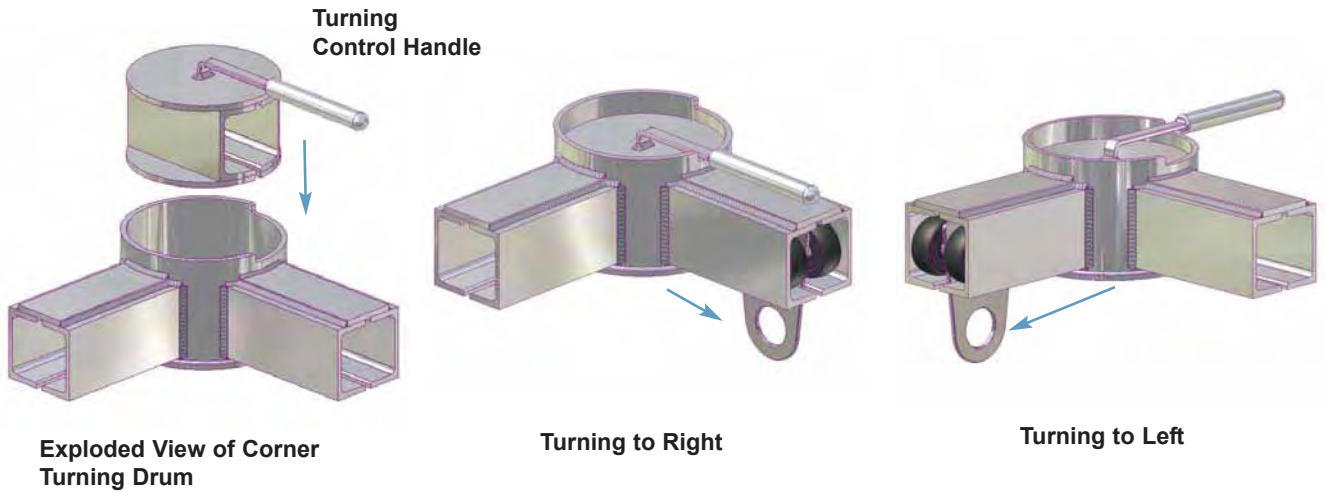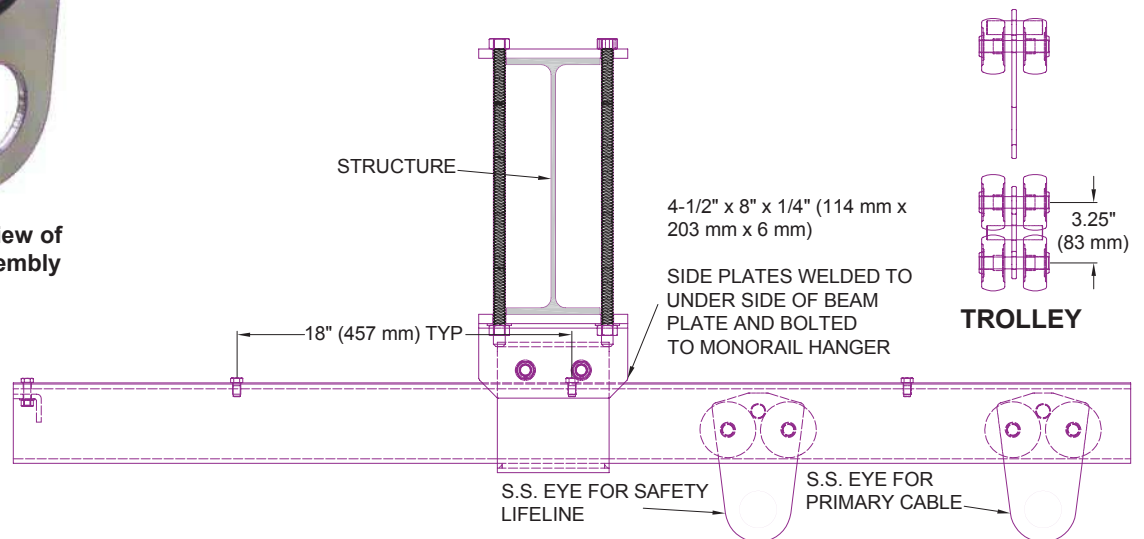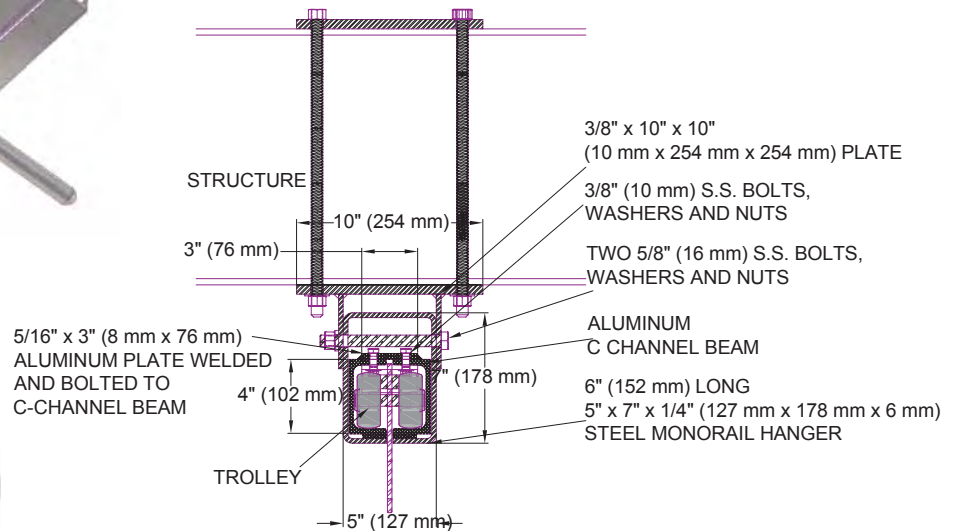
CUT-AWAY VIEW OF ROOF SHOWING ANCHOR ARRANGEMENT (Steel Deck)

Labels in figure:
- CAP REMOVED
- WORKERS' LIFELINES SECURED TO SEPARATE THALER ROOFTOP (OR WALL) ANCHORS
- CAP REMOVED
- THALER FARA-180 "ROPE DROP" ANCHORS WITH CAPS REMOVED
- LIFELINES TO GO OVER ROUND SUSPENSION S.S. ROD CROSS-BAR
- PLATFORM SUSPENSION LINES SECURED TO "ROPE DROP" ANCHORS
- WORKERS' LIFELINES
- MAINTENANCE PLATFORM
- OCCUPIED AREA OF BUILDING (ATRIUM, ETC.)
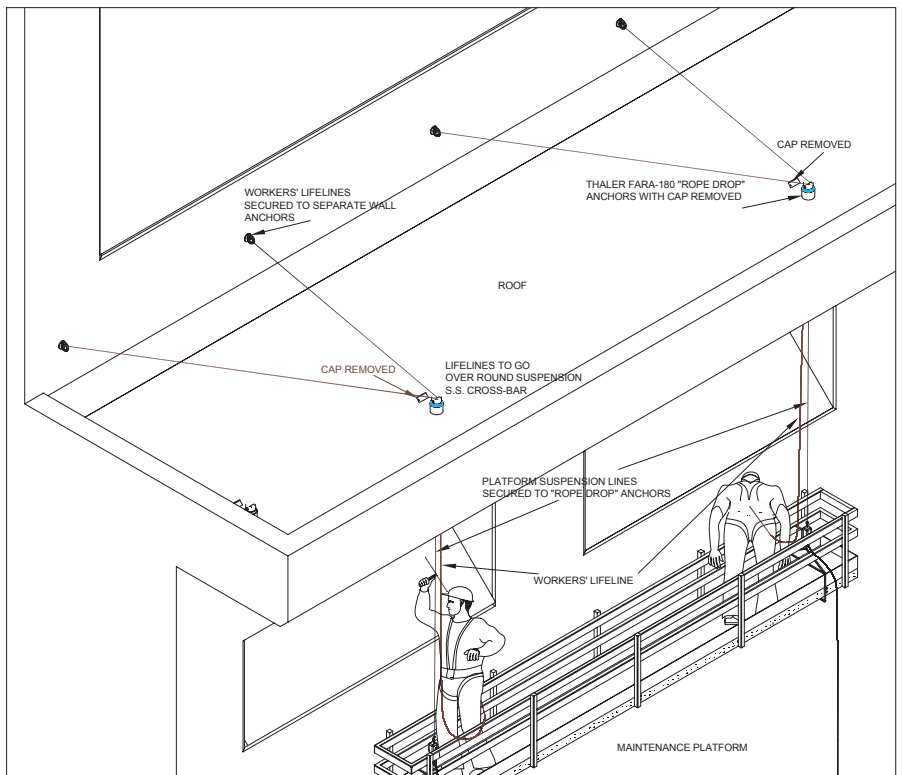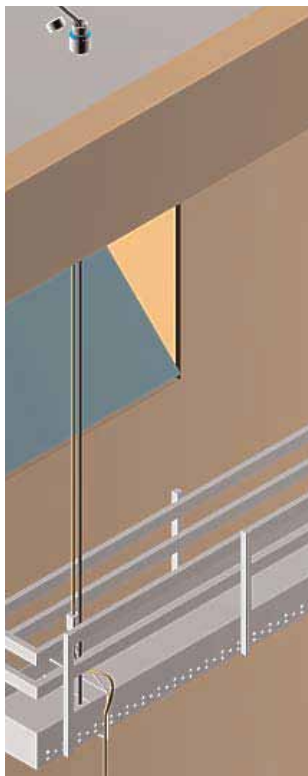
FARA-180 "ROPE DROP" ANCHOR VIEW OF ROOF SHOWING ANCHOR ARRANGEMENT (Concrete Deck)

Labels in figure:
- CAP REMOVED
- THALER FARA-180 "ROPE DROP" ANCHORS WITH CAP REMOVED
- WORKERS' LIFELINES SECURED TO SEPARATE WALL ANCHORS
- ROOF
- CAP REMOVED
- LIFELINES TO GO OVER ROUND SUSPENSION S.S. CROSS-BAR
- PLATFORM SUSPENSION LINES SECURED TO "ROPE DROP" ANCHORS
- WORKERS' LIFELINE
- MAINTENANCE PLATFORM

I-30A

THALER

Stainless Steel Trolley

Worker's Lifeline

Primary Cable
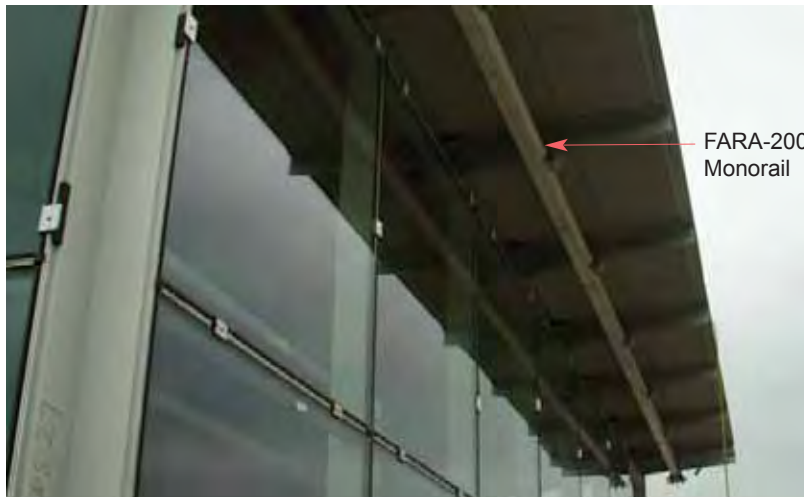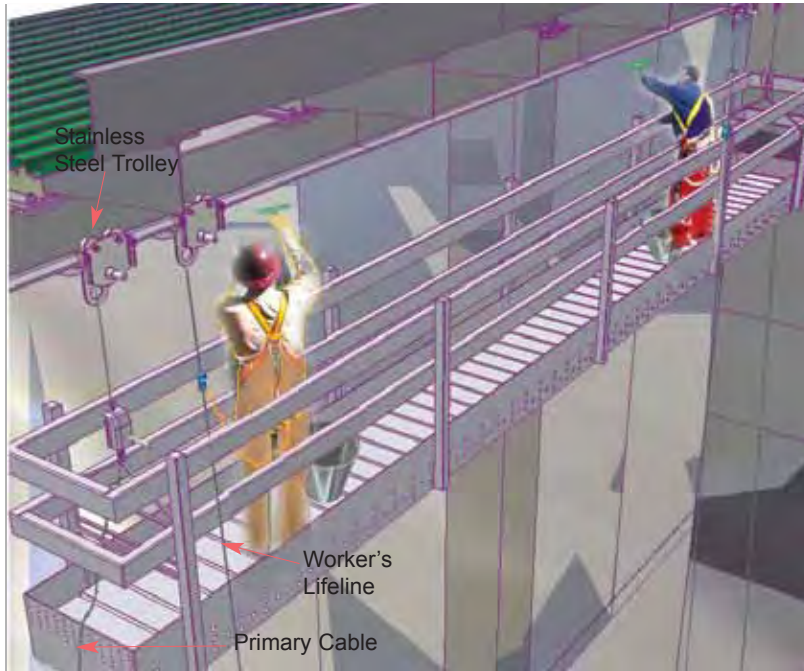
FARA-200 Monorail

Window Wall Showing FARA-200 Monorail Suspended Maintenance System Affixed to Soffit Structure.

S.S. Trolley as Required for Suspen Equipment and workers' Lifeline
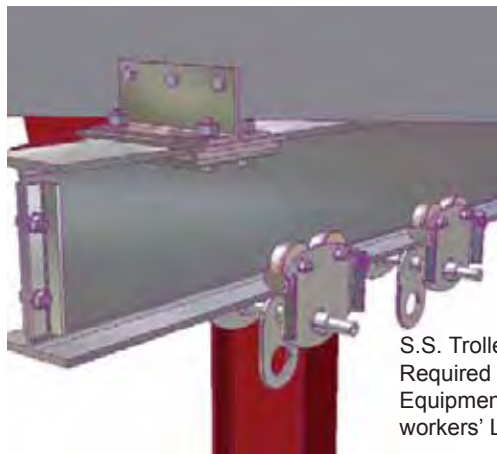
Stainless Steel Trolley With Stainless Steel Eye Mounted Onto I-Beam

Structure

Monorail I-Beam

Maximum Working Load Specified Unfactored 1000 lbf (4.45 kN)
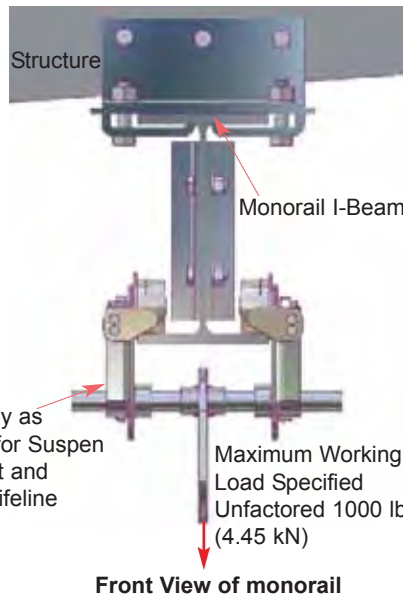
Front View of monorail

DESCRIPTION:
The Thaler FARA-200 Monorail consists of an aluminum section I-beam carrier with end stop angles, galvanized clamps, angles for attaching to structure, galvanized connector plate, stainless steel bolts, washers and nuts, and stainless steel trolleys with s.s. eyes (for safety lifeline and primary cable). Workers move along the monorail by pulling themselves foward or backward manually.

PROMINENT FEATURES:
Maintenance free. Structural integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
For more aesthetic applications see Concealed Trolley system, page I-32.

RECOMMENDED USE:
Suitable for all applications for suspending a platform or single point access equipment such as baskets (cages) and manually or power operated boatswain chairs, for window cleaning or other exterior/interior building maintenance.

APPLICABLE STANDARDS:
Thaler Monorail System conforms to all Canadian and U.S. standards, Provincial and State labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL OSHA, AISC, AWS, and other references.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require the monorail system be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations. Apart from this requirement, Thaler Monorail Suspended Maintenance System requires no maintenance (maintenance free).

PLANNING SERVICE:
Without obligation, Thaler will provide layout drawings for monorail systems in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (SHORT FORM):
Monorail Suspended Maintenance System: Thaler FARA-200 Monorail Suspended Maintenance System to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with T-6061 aluminum I beam to suit main structure; 1/4" x 4" x 4" (12 mm x 102 mm x 102 mm) steel angles for bolting I-beam to main structure; 3/8" (10 mm) galvanized clamps; 10" (254 mm) wide steel connector plates; s.s. hanger bolts, washers and nuts of sizes shown on drawings; s.s. trolleys with s.s. eyes; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-200 Monorail Suspended Maintenance System is installed by placing and bolting I-beam to main structure using angles, clamps and bolts and then installing the stainless steel trolleys over the bottom flange of the I-beam.

ORDERING:
Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

FARA-200 MONORAIL SUSPENDED MAINTENANCE SYSTEM

THALER

I-31

31-1/2" (800 mm)

MAIN SOFFIT
SUPERSTRUCTURE
(BY OTHERS)

DETAIL 'A'

24" (610 mm)

FACE OF WALL

1/2" (12 mm) S.S.
ANGLE CONNECTOR
BOLTS, WASHERS
AND NUTS

10" (254 mm)

9" (228 mm)

FOUR 5/8" (16 mm)
S.S. HANGER BOLTS,
WASHERS
AND NUTS

TWO 1/4" x 4" x 2-1/2"
(12 mm x 102 mm x 64
mm) GALV. ANGLE

4" (102 mm)

STEEL CONNECTOR PLATE

1" (25.4 mm)

LINE OF STEEL
STRUCTURE

3/8" (10 mm)

4-1/8"
(104 mm)

3/8" (10 mm) GALV.
CLAMPING STEEL

ALUMINUM
I-BEAM

STAINLESS STEEL
TROLLEY

SECTION DETAIL 'A'

1/2" (12 mm) S.S.
BOLTS, WASHERS
AND NUTS

TWO 1/4" x 4" x
2-1/2" (12 mm x 102
mm x 64 mm)
GALV. ANGLE

SOFFIT SUPERSTRUCTURE
(BY OTHERS)

GALV. END STOP
ANGLE

S.S. EYE FOR
SAFETY LIFELINE

2" (51 mm) DIA.

S.S. EYE FOR
PRIMARY CABLE

Maximum Working
Load Specified,
Unfactored 1000 lbf
(4.45 kN)

**SIDE VIEW OF THALER FARA-200 MONORAIL SUSPENDED ACCESS
MAINTENANCE SYSTEM (Exposed Beam)**

Steel Hangers

Stop Angle

Trolley

Worker's Lifeline

Primary Cable

FARA-201 Monorail Suspended Maintenance System Affixed to I Beam Structure (Bolt Around Beam).

FARA-201 Monorail

Structure

Steel Hanger

Monorail C Channel Beam

S.S. Trolley Assembly for Suspended Equipment and workers' Lifeline

Maximum Working Load Specified Unfactored 1000 lbf (4.45 kN)
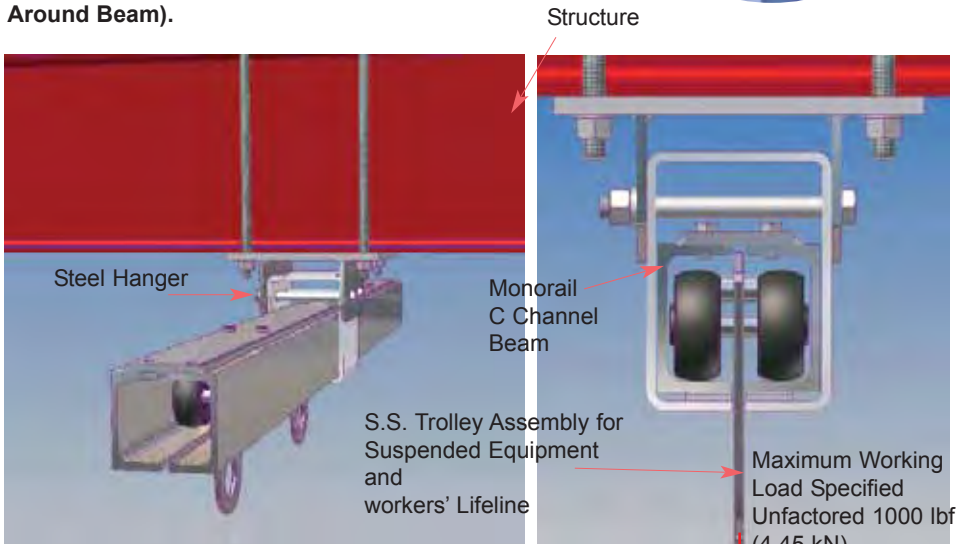
Trolley With Stainless Steel Eye Mounted Onto I-Beam Structure

Section Through Monorail

ROOF SPECIALTIES
FARA-201 MONORAIL SUSPENDED ACCESS MAINTENANCE SYSTEM (Bolt Around Beam)

DESCRIPTION:
The Thaler FARA-201 Monorail consists of an aluminum section C-channel beam carrier with end stop angle, galvanized plates, connector plates, and monorail holder, stainless steel bolts, washers and nuts, trolleys with s.s. eyes (for safety lifeline and primary cable). Workers move along the monorail by pulling themselves forward or backward manually.

PROMINENT FEATURES:
Maintenance free. Structural integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
For more aesthetic applications, see Con-cealed Trolley system, page I-31. Other methods of securing to main structure.

RECOMMENDED USE:
Suitable for all applications for suspending a platform or single point access equipment such as baskets (cages) and manually or power operated boatswain chairs, for window cleaning or other exterior/interior building maintenance.

APPLICABLE STANDARDS:
Thaler Monorail System conforms to all Canadian and U.S. standards, Provincial and State labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL OSHA, AISC, AWS, and other references.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require the monorail system be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations. Apart from this requirement, Thaler Monorail Suspended Maintenance System requires no maintenance (maintenance free).

PLANNING SERVICE:
Without obligation, Thaler will provide layout drawings for monorail systems in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (SHORT FORM):
Monorail Suspended Maintenance System: Thaler FARA-201 Monorail Suspended Maintenance System to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with T-6061 aluminum C channel beam to suit main structure; 1/4" x 5" x 7" (12 mm x 127 mm x 178 mm) galvanized hanger welded to 3/8" x 10" x 10" (10 mm x 254 mm x 254 mm) underbeam plate for bolting to main I-beam structure; 10" (254 mm) wide steel upper plate; s.s. hanger bolts, washers and nuts of sizes shown on drawings; trolleys with s.s. eyes; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-201 Monorail Suspended Maintenance System is installed by bolting C channel-beam to main structure using bolted hangers and then installing the trolleys.

ORDERING:
Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

FARA-201 MONORAIL SUSPENDED MAINTENANCE SYSTEM

Turning Control Handle

Exploded View of Corner Turning Drum

Turning to Right

Turning to Left

Bottom View of Corner Turning Drum

STRUCTURE

3/8" x 10" x 10"
(10 mm x 254 mm x 254 mm) PLATE

3/8" (10 mm) S.S. BOLTS,
WASHERS AND NUTS

10" (254 mm)

3" (76 mm)

TWO 5/8" (16 mm) S.S. BOLTS,
WASHERS AND NUTS

5/16" x 3" (8 mm x 76 mm)
ALUMINUM PLATE WELDED
AND BOLTED TO
C-CHANNEL BEAM

ALUMINUM
C CHANNEL BEAM

4" (102 mm)

7" (178 mm)

6" (152 mm) LONG
5" x 7" x 1/4" (127 mm x 178 mm x 6 mm)
STEEL MONORAIL HANGER

TROLLEY

5" (127 mm)

SECTION DETAIL A

Isometric View of Trolley Assembly

STRUCTURE

4-1/2" x 8" x 1/4" (114 mm x
203 mm x 6 mm)

SIDE PLATES WELDED TO
UNDER SIDE OF BEAM
PLATE AND BOLTED
TO MONORAIL HANGER

3.25"
(83 mm)

TROLLEY

18" (457 mm) TYP

S.S. EYE FOR SAFETY
LIFELINE

S.S. EYE FOR
PRIMARY CABLE

FARA-201 MONORAIL SUSPENDED MAINTENANCE SYSTEM

Anchor Type	Height	Base Thickness	Maximum Load	Deflection Under Load	Deflection Residual
FARA-710	18" (457 mm)	1/2" (12 mm)	1500 lbs (6.7 kN)	0.290" (7.36 mm)	0.006" (0.15 mm)
FARA-720	36" (915 mm)	5/8" (16 mm)	1500 lbs (6.7 kN)	1.864" (47 mm)	0.227" (5.7 mm)

Note: Anchors are designed to resist without fracture and/or pull-out a force of 1500 lbs (6.7 kN), applied in the most adverse direction (x). All testing reports available upon request.

x
y

Load Direction Parallel to the Eye.

MAXIMUM LOAD (See Chart)

1-1/2" DIA. (38 mm) FORGED STEEL EYE WELDED TO 2-3/8" (60 mm), DIA. HSS, ALL HOT DIP GALVANIZED

EPDM TRIPLE PRESSURE GROMMET SEAL

THALER, SJ-37, SJ-38, OR SJ-39 HEIGHT NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

18" (457 mm) OR 36" (915 mm) OR

7" (178 mm), 13" (330 mm) OR 19" (483 mm)

BUILT UP ROOFING ILLUSTRATED (SEE INSTALLATION)

4" (102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

1/2" x 5" x 5" (12 mm x 127 mm x 127 mm) STEEL BASE PLATE

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

TWO 1/2" (51 mm) S.S. "J" BOLTS

See reverse side of page for Alternative Fastening Methods

OWSJ

Note: Specify FARA-720 model where code authorities require 36" (915 mm) high anchor.

FARA-710/-720 TRAVEL RESTRAINT ROOF ANCHORS
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-710/-720 travel restraint anchors are installed by bolting the anchor to the top chord of the OWSJ as per layout drawings, using a maximum torque of 75 lbf (100 Nm), then placing the flashing sleeve over the anchor and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
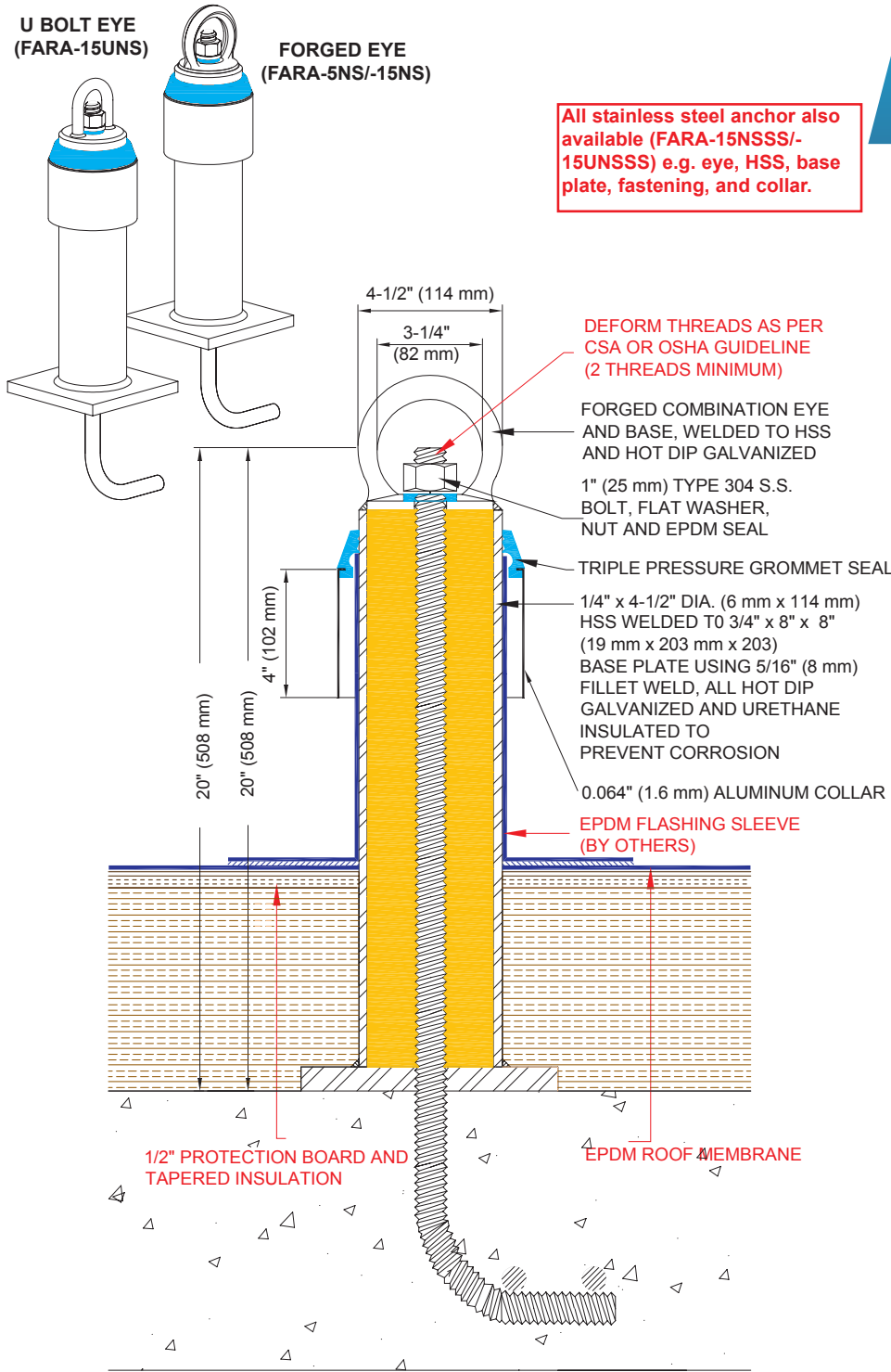
ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. FARA-710-A-P; weld roofing to deck flange using PVC torch.

Precautions: Apply an asphaltic or other type protective coating to exposed aluminum STACK JACK Flashing to a height of 2" (51 mm) above a limestone ballast to avoid corrosive reaction. Also, if coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering: Specify flashing material required by adding the appropriate suffix to model number e.g. FARA-710-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
Thaler FARA-710 (low model) and FARA-720 (high model) Travel Restraint Anchors consist of a urethane insulated, galvanized hollow steel post (HSS) welded to a mounting plate for securing to a structural roof deck, and an aluminum, copper or stainless steel flashing sleeve. The anchors are rated for a maximum applied force of 1500 lbs (6.7 kN). The top of the anchor is fitted with a very high strength, galvanized forged eye. Anchors are spaced maximum 30'-0" (9.1 m) on centers. A horizontal rope or cable is passed through the eyes and secured at terminal ends. Workers then hook their fall arrest lanyard onto the horizontal line. Travel restraint anchors are typically located minimum 6'-0" (2 m) back from the roof edge wherever there is a fall hazard e.g. low parapet or eaves, etc.

PROMINENT FEATURES:
Condensation free and maintenance free. Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. Other securements (see Fastening Methods at left).

RECOMMENDED USE:
Suitable for all flat roofs for securing workers' fall arrest lanyard thereby limiting their movement when working near a vertical drop e.g. roof eaves or low parapet. Specify high model when required by code. These anchors are not to be used to secure vertical lifelines and suspension lines.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-37 New-Standard STACK JACK Flashing conforms to CSA B272-93. See separate Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM):
Travel restraint roof anchors: Thaler [FARA-710] [FARA-720] anchors including appropriate mounting hardware for fastening to structural roof deck; to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: galvanized forged 1018 steel eye; urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post section (HSS) 1/4" (6 mm) wall thickness x 2-3/8" (60 mm) dia. x [18" (457 mm)] [36" (915 mm)] high welded to 44W base plate: [SJ-37, 7" (178 mm) high] New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.853 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

FARA-710
OR FARA-720
TRAVEL RESTRAINT
ANCHORS

30'-0" (9.1 m)
MAXIMUM CENTRES
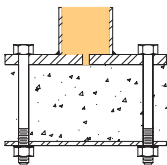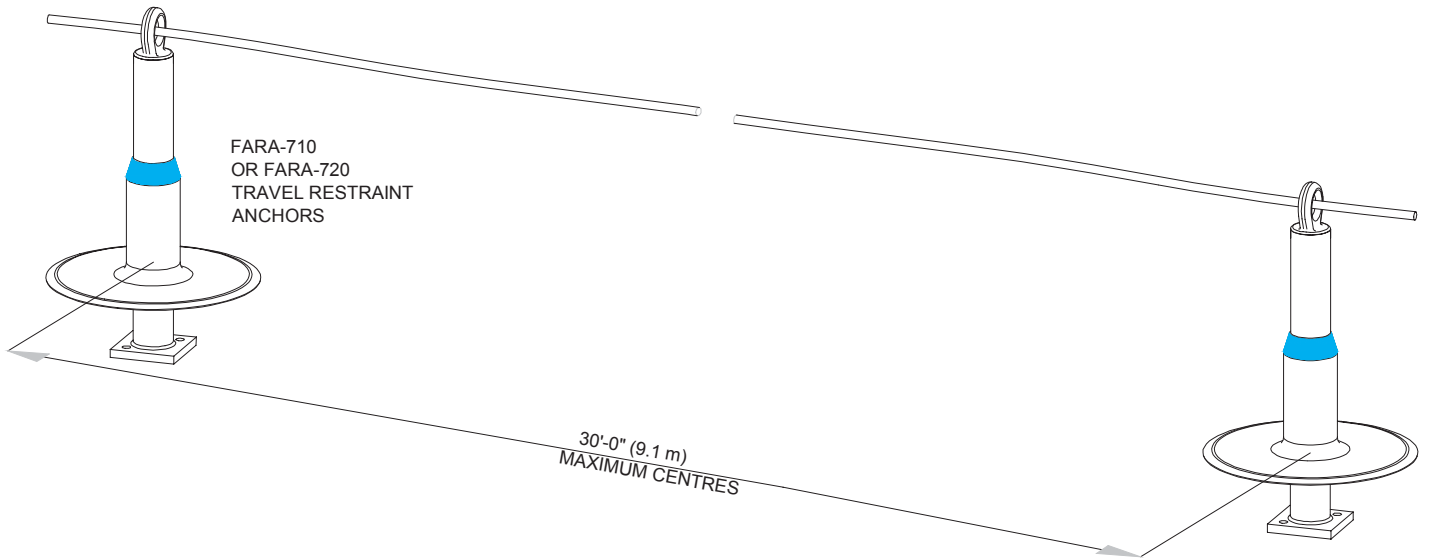
T1
Bolt Through Slab
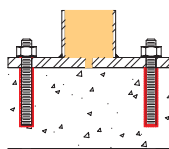
T2
Adhesive Bolts

T3
Weldable
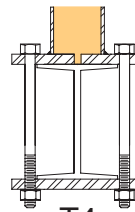
T4
Bolt Around Beam
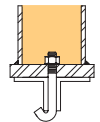
T5
OWSJ J Bolt

Specify fastening method required by adding the appropriate suffix to model number e.g. FARA-710-T5

ALTERNATIVE FASTENING METHODS

U BOLT EYE
(FARA-11UNS)

FORGED EYE
(FARA-1NS/-11NS)

All stainless steel anchor also available (FARA-11NSSS/-11UNSSS) e.g. eye, HSS, base plates, fastening and flashing.

4-1/2" (114 mm)

3-1/4" (82 mm)

FORGED COMBINATION EYE AND BASE, WELDED TO HSS AND HOT DIP GALVANIZED

1" (25 mm) TYPE 304 S.S. BOLT, LOCK WASHER, NUT AND EPDM SEAL

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED T0 3/4" x 8" x 8" (19 mm x 203 mm x 203) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

THALER SJ-34(9) NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

EPDM TRIPLE PRESSURE GROMMET SEAL

CONVENTIONAL ROOF ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

26" (660 mm)

24" (610 mm)

LIGHTWEIGHT CONCRETE FILL SLOPED TO DRAIN

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

CONCRETE STRUCTURAL SLAB

MINIMUM 6" (152 mm)

DEFORM THREADS TOP AND BOTTOM AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) STAINLESS STEEL PLATE, LOCK WASHER AND NUT

FARA-1NS/-11NS/-11UNS "FIXED EYE" FALL ARREST ROOF ANCHOR (Non-Standard Height)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-1NS/-11NS/-11UNS Fall Arrest Roof Anchors are installed by through-bolting the anchor to the structural concrete roof deck as per Thaler layout drawings, deforming the exposed bolt threads at both ends, using maximum torque of 125lbf-ft. (169Nm), then placing the flashing sleeve over the anchor and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

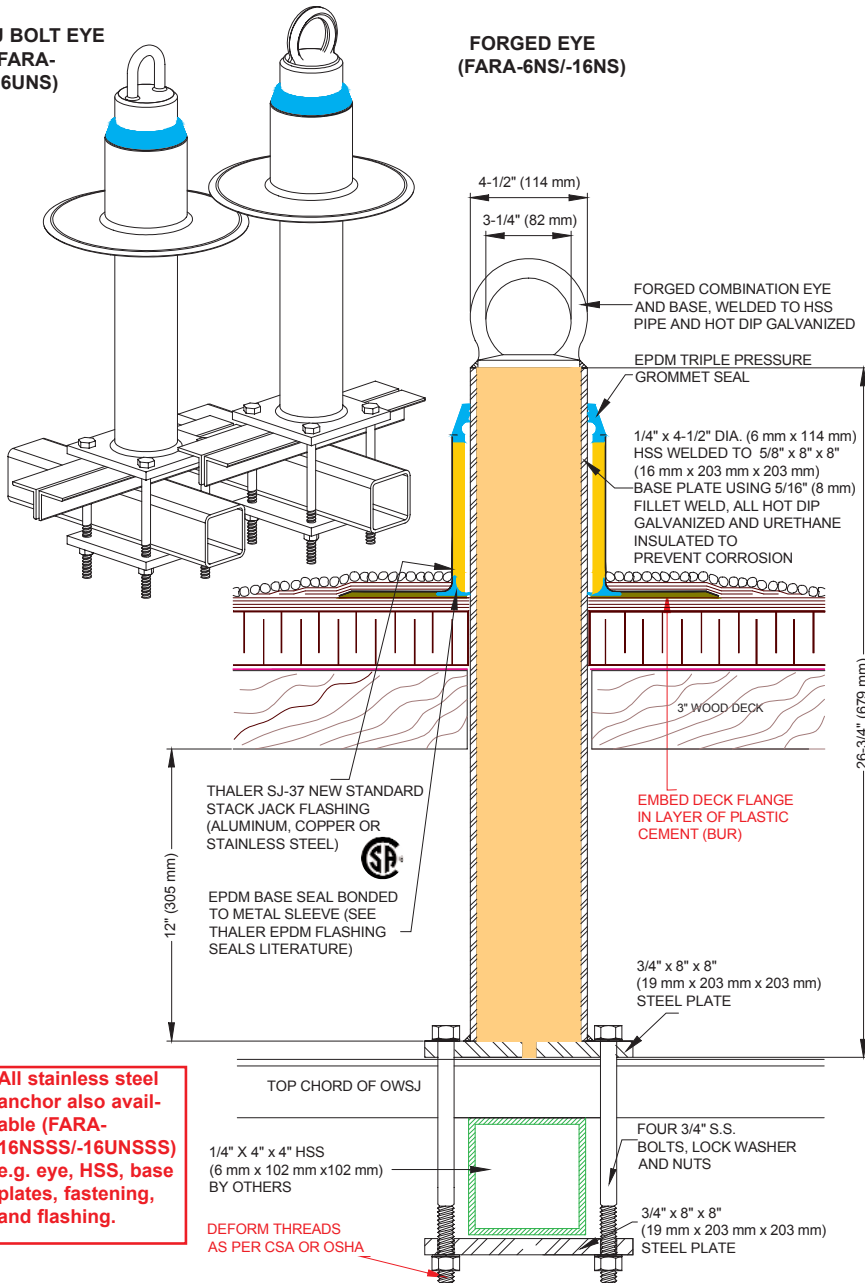**Single Ply:** Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing. Note: for PVC membrane, specify PVC coated STACK JACK by adding suffix P to end of model number, e.g. FARA-1NS-A-P; weld roofing to deck flange using PVC torch.

Precautions: If coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-1NS-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-11NS stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the lower part of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnettic.

DESCRIPTION:
Thaler FARA Non-Standard height bolt-through anchors consist of a urethane insulated hollow steel post (HSS) with base plate, single stainless steel bolt for securing to structural concrete roof slab, and flashing sleeve. The top of the anchor is available with three different options:
1. With very high strength, galvanized forged eye (FARA-1NS). All stainless steel (FARA-11NSSS).
2. With very high strength stainless steel forged eye (FARA-11NS). All stainless steel (FARA-11NSSS).
3. With high strength stainless steel U Bolt (FARA-11UNS). All stainless steel (FARA-11UNSSS).

PROMINENT FEATURES:
Extra long to accommodate lightweight concrete filled roofs. Condensation and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor. PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs employing lightweight concrete fill (crickets and saddles for roof drainage slopes) as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-34 New-Standard STACK JACK Flashing conforms to CSA B272-93. See separate Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in material and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM): Fall arrest roof anchors:
Thaler [FARA-1NS with galvanized forged 1018 steel eye] [FARA-11NS with Type 304 stainless steel forged eye] [FARA-11UNS with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 24" (610 mm) high welded to 3/4" x 8" x 8" (19 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut and washer, and Type 304 s.s. 1/4" x 4" x 4" (6 mm x 102 mm x102 mm) underdeck plate, lock washer and nut; SJ-34, 7" (178 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

U BOLT EYE
(FARA-15UNS)

FORGED EYE
(FARA-5NS/-15NS)

All stainless steel anchor also available (FARA-15NSSS/-15UNSSS) e.g. eye, HSS, base plate, fastening, and collar.

4-1/2" (114 mm)

3-1/4" (82 mm)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

FORGED COMBINATION EYE AND BASE, WELDED TO HSS AND HOT DIP GALVANIZED

1" (25 mm) TYPE 304 S.S. BOLT, FLAT WASHER, NUT AND EPDM SEAL

TRIPLE PRESSURE GROMMET SEAL

20" (508 mm)

20" (508 mm)

4" (102 mm)

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED T0 3/4" x 8" x 8" (19 mm x 203 mm x 203) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

0.064" (1.6 mm) ALUMINUM COLLAR

EPDM FLASHING SLEEVE (BY OTHERS)

1/2" PROTECTION BOARD AND TAPERED INSULATION

EPDM ROOF MEMBRANE

ROOF SPECIALTIES
FARA-5NS/-15NS/-15UNS EPDM ROOF "FIXED EYE" FALL ARREST ROOF ANCHORS (Non-Standard Height, For Tapered Insulation, Cast-In-Place)

DESCRIPTION:
Thaler FARA Non-Standard height cast-in-place anchors consist of a urethane insulated hollow steel post (HSS) with base plate, single stainless steel bolt for securing to structural concrete roof slab, and flashing sleeve. The top of the anchor is available with three different options:
1. With very high strength, galvanized forged eye (FARA-5NS). All stainless steel (FARA-15NSSS).
2. With very high strength stainless steel forged eye (FARA-15NS). All stainless steel (FARA-15NSSS).
3. With high strength stainless steel U Bolt (FARA-15UNS). All stainless steel (FARA-15UNSSS).

PROMINENT FEATURES:
Extra long to accommodate tapered roof insulation. Condensation free and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor. PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs employing EPDM membrane and tapered insulation (for roof drainage slopes) as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references.

WARRANTY:
20 year warranty (lifetime on stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM): Fall arrest roof anchors:
Thaler [FARA-5NS with galvanized forged 1018 steel eye] [FARA-15NS with Type 304 stainless steel forged eye] [FARA-15UNS with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 18" (457 mm) high welded to 3/4" x 8" x 8" (19 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut and washer; manufacturer's standard counterflashing of .064" (1.6 mm) mill finish 1100-0T alloy aluminum with EPDM Triple Pressure Grommet Seal; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials

FARA-5NS/-15NS/15UNS EPDM ROOF "FIXED EYE" FALL ARREST ROOF ANCHORS (Non-Standard Height, For Tapered Insulation, Cast-In-Place)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-5NS/-15NS/-15UNS Fall Arrest Roof Anchors are installed by through-bolting the anchor to the structural concrete roof deck as per Thaler layout drawings, using a maximum torque of 125 lbf-ft. (169 Nm), deforming the exposed bolt threads, then placing the counterflashing sleeve over the anchor, roof membrane, and EPDM flashing, and as follows:

EPDM: Set flashing deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible as per membrane manufacturer's recommendations.

Ordering: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-15NS stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the lower part of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.

U BOLT EYE (FARA-16UNS)

FORGED EYE (FARA-6NS/-16NS)

4-1/2" (114 mm)

3-1/4" (82 mm)

FORGED COMBINATION EYE AND BASE, WELDED TO HSS PIPE AND HOT DIP GALVANIZED

EPDM TRIPLE PRESSURE GROMMET SEAL

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

26-3/4" (679 mm)

3" WOOD DECK

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

THALER SJ-37 NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL) CSA

12" (305 mm)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

3/4" x 8" x 8" (19 mm x 203 mm x 203 mm) STEEL PLATE

All stainless steel anchor also available (FARA-16NSSS/-16UNSSS) e.g. eye, HSS, base plates, fastening, and flashing.

TOP CHORD OF OWSJ

1/4" X 4" x 4" HSS (6 mm x 102 mm x102 mm) BY OTHERS

FOUR 3/4" S.S. BOLTS, LOCK WASHER AND NUTS

3/4" x 8" x 8" (19 mm x 203 mm x 203 mm) STEEL PLATE

DEFORM THREADS AS PER CSA OR OSHA

FARA-6NS/-16NS/-16UNS WOOD DECK "FIXED EYE" FALL ARREST ROOF ANCHORS (Non-Standard Height, Bolt Around OWSJ)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler FARA-6NS/-16NS/-16UNS anchors are installed by bolting the anchor to the top chord of the OWSJ as per Thaler layout drawings, using a maximum torque of 75 lbf-ft. (100 Nm), reinforcing the base plates with a crosstube, then placing the flashing sleeve over the anchor and roof membrane, and as follows:

BUR: Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM base seal.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACKJACK Flashing. Note: for PVC membrane, specify PVC coated STACKJACK by adding suffix P to end of model number, e.g. FARA-6NS-A-P; weld roofing to deck flange using PVC torch.

Precautions: If coating deck flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering: Specify flashing material required by adding appropriate suffix to model number e.g. FARA-6NS-A, for aluminum, etc. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock. Note: The FARA-16NS stainless steel forged eye has a galvanized finish over top of the stainless steel. The process of galvanizing the lower part of the anchor requires the entire anchor to be dipped in the zinc bath, thereby covering the stainless steel eye. If there is any question about product received on site, the eye material may be checked with a magnet. Type 304 stainless steel is non-magnetic.

FARA-6NS/-16NS/-16UNS WOOD DECK "FIXED EYE" FALL ARREST ROOF ANCHORS Non-Standard Height, Bolt Around OWSJ

DESCRIPTION:
Thaler FARA Non-Standard height bolt around OWSJ anchors consist of a urethane insulated hollow steel post (HSS) with base plate, four stainless steel bolts and under-joist plate and cross tube for securing to an OWSJ, and flashing sleeve. The top of the anchor is available with three different eye options:
1. With very high strength, galvanized forged eye (FARA-6NS). All stainless steel (FARA-16NSSS).
2. With very high strength stainless steel forged eye (FARA-16NS). All stainless steel (FARA-16NSSS).
3. With high strength stainless steel U Bolt (FARA-16UNS). All stainless steel (FARA-16UNSSS).

PROMINENT FEATURES:
Extra long to accommodate wood decks with plenum space. Condensation and maintenance free (attractive, neat flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by $7,000,000.00 liability insurance.

OPTIONS:
All stainless steel anchor. PVC coated flashing deck flange for PVC roof membrane. Bituminous painted flashing deck flange for BUR and ModBit roof membrane. See other Thaler FARA models for different securements.

RECOMMENDED USE:
Suitable for all flat roofs employing wood deck and OWSJ as fall arrest anchors for securing workers' lifelines or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boatswain chair.

APPLICABLE STANDARDS:
Thaler FARA anchors conform to all Canadian and U.S. standards, provincial and state labour/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL, OSHA, AISC, AWS, and other references. Thaler SJ-37 New-Standard STACKJACK Flashing conforms to CSA B272-93. See Thaler FARA Systems Fall Protection literature for specific data.

WARRANTY:
20 year warranty (lifetime on stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
Regulatory authorities require anchors to be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and/or Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE:
Thaler will provide layout drawings for fall arrest anchors in compliance with all applicable standards, safety regulations and local building codes. A nominal, low-cost fee is charged for this service (refunded if Thaler secures the contract to supply the anchors).

SPECIFICATION (SHORT FORM) Fall arrest roof anchors:
Thaler [FARA-6NS with galvanized forged 1018 steel eye] [FARA-16NS with Type 304 stainless steel forged eye] [FARA-16UNS with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 26" (660 mm) high welded to 3/4" x 8" x 8" (19 mm x 203 mm x 203 mm) 44W base plate; 3/4" x 8" x 8" (19 mm x 203 mm x 203 mm) under-joist plate and 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) HSS crosstube assembly; four 3/4" (19 mm) Type 304 s.s. bolts with lock washers and nuts; SJ-37, 7" (178 mm) high New-Standard STACKJACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Brunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.   ture.(Niagara Falls, NY), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture.

Note:

1. Anchors conform with the requirements of authorities having jurisdiction.

1. A professional engineer shall verify that the supporting structure is capable of withstanding all the applicable loads.

INSTRUCTIONS FOR USAGE:

For anchors test results refer to Log Book.

APPLY only ONE load to each anchor at the time (life line, tie back or support line).

ALWAYS use TWO independent means of support (support line and life line).

REPORT all unsafe conditions encountered.
DO NOT use damaged or unsafe anchors.

READ Log Book before using anchors.

USE anchors only for anchorage. Do not produce shock loads.

THIS diagram forms part of, and is valid only with, the associated anchor test reports.

RIGGING is the responsibility of the users of the anchors system. The window cleaning contractor shall provide a written work plan showing how support lines and life lines are to be attached to the anchors.

● FARA-1	▲ FARA-84
○ FARA-180	⬤ FARA-110
▼ FARA-82	▲ FARA-81

– – – – – life line
——————— Primary suspension line or equipment tie-back line

Only ONE line shall be attached to any given anchor. Lifeline, suspension line and tie back lines SHALL NOT be fastened simultaneously to the same anchor.

max. 25°
max. 25°

ROOF ANCHORS
WALL ANCHORS

EL. 31'-2"
EL. 102'-0"
EL. 74'-9"

ENGINEER

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PROJECT
SAMPLE ROOF ANCHOR LAYOUT

FOR   CATALOG

DATE		SCALE NTS
DRAWN VT		CHECKED K. THALER
FILE # I-37		sheet 1 of 1

FARA-1 FALL ARREST ROOF ANCHOR
(Bolt Through)

4-1/2" (114 mm)
3-1/4" (82 mm)

FORGED COMBINATION EYE AND BASE, WELDED TO HSS AND HOT DIP GALVANIZED

3/4" (19 mm) TYPE 304 S.S. BOLT, LOCK WASHER, NUT, AND EPDM SEAL

1/4" x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

THALER SJ-34(9) NEW STANDARD STACKJACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

14" (356 mm)
12-5/8" (321 mm)

EPDM TRIPLE PRESSURE GROMMET SEAL

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

INVERTED ROOF ILLUSTRATED (BUR)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

MINIMUM 6" (152 mm)

DEFORM THREADS TOP AND BOTTOM AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

1/4" x 4" x 4" (6 x 102 x 102 mm) STAINLESS STEEL PLATE, LOCK WASHER AND NUT

FARA-180 "ROPE DROP" ANCHOR

REMOVABLE STAINLESS STEEL 18 Ga. CAP

1" (25 mm) DIA. STAINLESS STEEL CROSS BAR WELDED TO HSS PIPE

EPDM TRIPLE PRESSURE GROMMET SEAL

1/4" x 4" DIA. (6 mm x 102 mm) HSS WELDED TO 5/8" x 12" x 12" (16 mm x 305 mm x 305 mm) BASE PLATE, ALL HOT DIP GALVANIZED

THALER SJ-34 NEW STANDARD STACK JACK FLASHING, AVAILABLE ALUMINUM, COPPER OR STAINLESS STEEL

3/8" (9 mm) STAINLESS STEEL SET SCREW

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

14" (356 mm)

6" DIA. (152 mm)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

VARIABLE AS REQUIRED

FINISHED CEILING

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

CONTINUOUS CAULKING BY OTHERS

FORGED COMBINATION EYE AND BASE, ALL HOT DIP GALVANIZED

3-1/4" (82 mm)
4-1/2" (114 mm)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

3/4" (19 mm) STAINLESS STEEL BOLT, LOCK WASHER AND NUT

1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) STAINLESS STEEL PLATE

FARA-81 WALL ANCHOR (Bolt Through)

MINIMUM 6" (152 mm)

CONTINUOUS CAULKING BY OTHERS

FORGED COMBINATION EYE AND BASE, ALL HOT DIP GALVANIZED

3-1/4" (82 mm)
4-1/2" (114 mm)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

3/4" (19 mm) STAINLESS STEEL BOLT, LOCK WASHER AND NUT

FARA-82 WALL ANCHOR (Cast-In-Place)

MINIMUM 6" (152 mm)

6" (152 mm)

3/4" (19 mm) DIA. STAINLESS STEEL ROD

2" DIA. x 1/16" (51 mm x 1.5 mm) STAINLESS STEEL WASHER WELDED TO S.S. ROD

HILTI HVA ADHESIVE BOLT OR SIMILAR

8" (203 mm)
8-1/4" (210 mm)

FARA-110 "ROPE STOP" ANCHOR

VARIABLE SPACER WIDTH AS DESIRED

CLADDING (METAL SIDING, BRICK, ETC.) BY OTHERS

1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) STAINLESS STEEL PLATE, LOCK WASHER AND NUT

CONTINUOUS CAULKING (BY OTHERS) AROUND HSS CLADDING SPACER

3/4" (19 mm) STAINLESS STEEL BOLT, LOCK WASHER AND NUT

3-1/4" (82 mm)
4-1/2" (114 mm)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

FORGED COMBINATION EYE AND BASE, WELDED TO HSS PIPE AND HOT DIP GALVANIZED

EPDM SEAL

URETHANE INSULATION TO PREVENT CONDENSATION

FLASHING (BY OTHERS)

MINIMUM 6" (152 mm)

FARA-84 WALL ANCHOR (Bolt Through)

ROOF ANCHOR SPACING FOR WINDOW CLEANING, SWING STAGE OPERATIONS, AND SIMILAR

PRIMARY SUPPORT LINE
LIFE LINE
PRIMARY SUPPORT LINE
LIFE LINE

25°max.
25°max.
25°max.

min. 6'-6"
min. 6'-6"

PARAPET WALL

POINT OF SUSPENSION

5'
10' max.

EXAMPLE SHOWING RELATIONSHIP BETWEEN PRIMARY SUPPORT ANCHOR AND LIFELINE ANCHOR (Check with authority having jurisdiction for correct angle criteria)

INSTRUCTIONS FOR USAGE:

For anchors test results refer to Log Book.

APPLY only ONE load to each anchor at the time (life line, tie back or support line).

ALWAYS use TWO independent means of support (support line and life line).

REPORT all unsafe conditions encountered. DO NOT use damaged or unsafe anchors.

READ Log Book before using anchors.

USE anchors only for anchorage. Do not produce shock loads.

THIS diagram forms part of, and is valid only with, the associated anchor test reports.

RIGGING is the responsibility of the users of the anchors system. The window cleaning contractor shall provide a written work plan showing how support lines and life lines are to be attached to the anchors.

● FARA-1	▲ FARA-84
○ FARA-180	◆ FARA-110
▲ FARA-82	▲ FARA-81

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– – – – – life line

――――― Primary suspension line or equipment tie-back line

Only ONE line shall be attached to any given anchor. Lifeline, suspension line and tie back lines SHALL NOT be fastened simultaneously to the same anchor.

ENGINEER
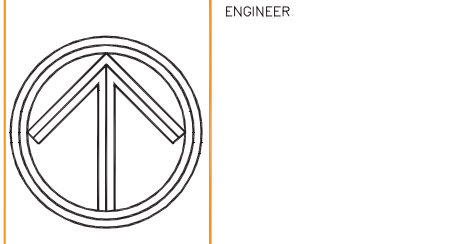
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PROJECT
SAMPLE ROOF ANCHOR LAYOUT (Section Details)

FOR
CATALOG

| DATE | SCALE NTS |
| DRAWN VT | CHECKED KEN THALER |

FILE # **I-37**   sheet 2 of 2

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THALER   I-38

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
CSA Z91-02 Health and Safety Code for Suspended Equipment Operations

This document contains extracts from the CSA Z91-02 Standard relating to fall protection anchorages. For complete data, refer to the actual standard.

As indicated by the title change, the scope of this edition of the Standard has been significantly expanded from the previous editions. The focus has broadened from one skilled trade group (window cleaners) to all persons whose profession demands that they work from equipment(for example, swing stages, bosun's chairs, and inspection cages) suspended from the side of buildings or large structures.

This Standard outlines the safe use of suspended equipment for the purposes of building maintenance, repairs, cleaning, renovation work, and inspections. It was prepared by knowledgeable and experienced persons employed in those areas and industries that are involved in building maintenance operations and construction trades.

The Standard is recommended for adoption by federal, provincial, and municipal authorities and by provincial safety associations. It is also recommended for use by architects, engineers, and contractors engaged in constructing commercial, industrial, residential, or multi-use buildings and by companies engaged in building maintenance operations.

PARAGRAPH REFERENCE	REQUIREMENT
Scope 1.1	This Standard includes requirements for the safe operation of various types of suspended equipment used to gain access to interior or exterior, or both, sides of buildings or structures. Much of the equipment referred to in this Standard is designed, installed, inspected, and tested in accordance with CAN/CSA-Z271. It does not include crane-suspended platforms or baskets (see CAN/CSAZ150), multi-point bridge platforms, or hanging scaffolds.
1.2	This Standard specifies the safety requirements for suspended equipment and rolling stages normally used for (but not limited to) window cleaning operations, general cleaning, repair, painting, maintenance, inspection, and construction operations and similar work. **Note:** This coverage of a wide range of professional trades is greatly expanded from the focus on window cleaning in previous editions of the Standard.
Fall Protection 4.9	Persons working on a surface within 2 m of an unprotected edge, where they may fall onto a hazardous substance or object, or at a height of 3 m or more above the ground, the adjacent roof level, or an acceptable landing without the protection of guardrails or other devices to guard against falls, shall wear a fall-arrest full body harness with lanyard. The fall protection system shall be attached to anchors, or to substantial members on the building, at all times.
Inspection and Maintenance Records 5.1	Before using any suspended equipment or permanently installed support systems, operators should verify that maintenance or inspection logs, or both, indicate that the system has been subjected to required maintenance or inspections, or both. If the inspection logs are not present or do not indicate that the required maintenance and inspection have been performed, the equipment should not be used until these requirements can be assured.
5.2.3	Suspension lines shall be in line with the point of suspension for their entire length unless the suspension system is designed specifically for angled line work.
5.2.4	Where the suspension height exceeds 90 m, mechanical winch equipment shall be used to raise or lower the lines.

PARAGRAPH REFERENCE	REQUIREMENT
Lifeline and Tie-back Anchors	
5.4.1	Tie-back and lifeline anchors shall be in accordance with CAN/CSA-Z271
5.4.2	Lifelines and suspension system tie-backs shall be secured to separate anchors except as noted in Clouse 5.4.3
5.4.3	Double-eye anchor system may be used to secure both a tie-back and a lifeline, provided that the anchor system has been designed for the application of dual loading (both in form and in strength).
5.4.4	Lifeline and tie-back anchors for portable outriggers should be located in line with the point of suspension whenever practical but shall not be offset more than 3 m measured horizontally from running at the right angle to the building face at the point of suspension. The angle created by the offset distance shall not exceed 25° (see Figure 1).
	Note: When the tie-back is not in line with the outrigger, additional lunes may be used to secure the outrigger.
5.4.5	The tie-back anchor elevation for a portable outrigger shall not be more than 1 m above the point of suspension.
5.4.6	Where the requirements of Clouse 5.4.4 cannot be met, line deflectors attached at the perimeter of the structure may be used where the offset angle of a lifeline exceeds 25°. Deflectors shall be engineered to resist all applied loading and shall support the line(s) in a manner that does not reduce the strength of the line or cause damage to the line.
	Note: the applied loading is considered to be derived from the 22.2 kN (5000 lbf) tie-back anchpr load requrement specified in CAN/CSA-Z271.

**Figure 1
Tie-Back Angles (Plan View)**
(see Clause 5.4.4.)

PARAGRAPH REFERENCE	REQUIREMENT
Support Systems	
5.5.1	Roof supports, hangers, and support systems components for suspended equipment shall conform to the requirements of CAN/CSA-Z271.
5.5.2	The supports shall be located so as to maintain the structural integrity and stability of the suspended equipment.
5.5.4	Where there is a risk of equipment falling over the edge of the roof during set-up, it shall be secured before installation.
5.5.5	During movement of unsecured portable equipment along the roof perimeter, the centre of gravity of the equipment shall be not higher than 1 m above the walking surface. During installation, the centre of gravity shall remain within the building or structure, and the equipment shall be secured by a safety cable prior to raising it above the 1 m level.
5.5.6	Unless protected by a parapet wall, or guardrail, not less than 1 m high, workers shall be secured by a fall-arrest system before moving within 2 m of the work surface edge.
5.5.7	Outrigger beams and parapet wall clamps shall be installed and tied back to the anchors in a secure manner. Tie-backs shall be 8 mm (5/16 in) wire rope or other lines of equivalent strength. Tie-backs shall be installed at right angles to the face of the building wherever possible.
5.5.8	Outrigger beams and other portable suspension supports shall not be made of wood and shall be counter-balanced or otherwise secured to support a mass no less than 4 times the static load, or 4 times the hoist capacity when using electrically powered hoists.
	Note: The static load for manually operated platforms is considered to be the total of the platform dead weight, including the hoists and accessories, divided by the number of suspension ropes plus the full-rated live load capacity of the platform.
5.5.9	Supports shall be labeled to indicate maximum capacity. Counterweighted systems shall be labeled to indicate counterweight requirements. The weight of each counterweight used shall be permanently marked on the body of the counterweight.
5.5.10	Where counterweights are used, they shall be securely attached to the outrigger beams and shall be made of solid, non-brittle material.
5.5.11	A parapet wall or other part of the building on which the support system is to be placed shall be verified and documented as being structurally adequate to support the suspension system loads by a professional engineer before rigging.

PARAGRAPH REFERENCE	REQUIREMENT
Suspended Working Units	
5.6.1	Suspended platforms shall be designed and constructed in accordance with CAN/CSA-Z271.
5.6.2	When equipment is used on suspension heights exceeding 45 m (148 ft), stabilization provisions in accordance with CAN/CSA-Z271 shall be used.
5.6.3	Descent control-supported bosun's chair systems shall not be used at suspension heights in excess of 46 m unless stabilization of the working unit is provided. If stabilization is provided, the suspension height shall not exceed 92 m. Workstation stabilizing devices such as suction cups are acceptable for this purpose.
5.6.4	Operating and maintenance instructions shall be provided with suspended working units. Operators shall read and understand operating instructions before using equipment.
Skylights	
6.1.1	Special safety precautions shall be followed when working on or under skylights.
6.1.2	The creation of a work plan, paying particular attention to the evaluation of the conditions, shall precede work on or under skylights.
6.1.3	Workers shall not walk on or place any significant loads on any overhead glass or frames, or both, in a skylight or atrium unless the glazing system has been engineered to safely permit this access method.
6.1.4	Complete fall protection shall be used whenever a worker is exposed to a fall of 3 m or more.
Woking from Operable Windows	
6.2.1	Reaching out of a window may be done if no more than the worker's upper body is extended out of the window and both feet are firmly on the floor.
6.2.2	The worker shall not place any body weight on the window or the window frame while reaching out.
6.2.3	Complete fall protection shall be used if the preceding conditions cannot be met.
Rigging from Sloped Roofs & from Multiple roof levels	
6.4	Complete fall protection shall be used whenever a worker is engaged in rigging or handling equipment on a sloped roof and is exposed to a fall of 3 m or more. Fall-arrest equipment shall be used when re-rigging equipment from drop to drop on sloped roofs.
Rigging over Gaurdrails	
6.5	When primary or secondary support lines are to be rigged over a guardrail (surface), the guardrail shall be engineered to support the applied loads.
Securing Equipment	
6.6	All items shall be tied back to an anchor when a falling danger exists.
Transfer Techniques	
6.7	Whenever a worker is moving from one working position to another (stage to stage, stage to balcony, chair to chair, equipment to ledge) and the worker is exposed to a fall of 3 m or more, complete fall protection shall be used.
Periodic Inspection and testing of permanently installed equipment	
7.2.1.1	All permanently installed systems shall be inspected and tested by a professional engineer, or a qualified person under the supervision of a professional engineer, prior to being placed in service to ensure compliance with this Standard, CAN/CSA-Z271, and the design drawings. See Clause 8.3.8.1 of CAN/CSA-Z271.
7.2.1.2	A similar inspection shall be performed following an alteration to an existing installation.

PARAGRAPH REFERENCE	REQUIREMENT
Visual Inspection Prior To Use	
7.2.2	A visual inspection of the equipment shall be performed by the user prior to assembly and use, and during use, of the equipment. Those components that have defects shall be withdrawn from service for corrective action.
7.2.3.1	Periodic inspection and/or testing of the equipment shall be in accordance with the recommendations of the manufacturer. The equipment manufacturer's recommendations shall be followed for testing, servicing, and inspection. Deficiencies shall be corrected before the equipment is put into service. See Clause 8.3.8.3.4 of CAN/CSA-Z271
Structural Components	
7.2.4.1	Structural components of the equipment and attachments to the structure shall be inspected or tested, or both, at intervals not exceeding 12 months unless more frequent inspections are required by the manufacturer of the system. See Clause 8.3.8.3.5 of CAN/CSA-Z271.
7.2.4.2	The inspection and testing shall be performed by professional engineer or a qualified person under the supervision of a professional engineer.
7.2.4.3	The inspection shall include, but not be limited to, a) a review of the design drawings to ensure compliance with current regulations, standards, and engineering standards; b) an inspection of the system to ensure compliance with the engineered drawings; and c) an inspection of all exposed, visible, and accessible components of the system for signs of distress.
Damaged Equipment	
7.2.5	Equipment involved in an accident or failure shall be inspected for damage by a qualified person. If damage or excessive wear is observed, the equipment shall be replaced.
Inspection and testing of new Anchor Systems	
7.3.1.1	All anchor systems shall be inspected and tested by a professional engineer, or a qualified person under the supervision of a professional engineer, prior to being placed in service to ensure compliance with this Standard, Clause 6.3 of CAN/CSA-Z271, and the design drawings.
7.3.1.2	A similar inspection shall be performed following an alteration to an existing installation.
Inspection and testing of existing Anchor Systems	
7.3.2.1	All anchor systems shall be inspected at intervals not exceeding 12 months.
7.3.2.2	The inspection shall include, but not be limited to, a) a review of the design drawings to ensure compliance with current regulations, standards and engineering standards; b) an assessment of the system to ensure compliance with the engineered drawings; c) an inspection of all exposed, visible, and accessible components of the system for signs of distress; and d) an inspection of all adhesive and expansion fasteners.
Special requirements for adhesive or expansive fastners	
7.3.3.1	Systems incorporating adhesive or expansion fasteners shall also have 100% of the anchors load tested at intervals not exceeding five years and in accordance with Clause 6.3.2. b) of CAN/CSA-Z271.
7.3.3.2	Load testing of adhesive or expansion fasteners shall be witnessed and documented by a professional engineer or a qualified person under the supervision of a professional engineer.

PARAGRAPH REFERENCE	REQUIREMENT
Inspection Reports	
7.4.1	The results of the inspection, testing, and servicing performed shall be documented and filed with the equipment log.
7.4.2	A professional engineer shall prepare a report on all inspections with findings and recommendations for repairs or alterations, or both.
7.4.3	A suspension system shall not be used until it has been repaired and documented.
7.4.4	A professional engineer shall provide the building/equipment owner with a signed and sealed inspection report upon satisfactory inspection of the system. This report shall also be filed in the equipment log.
Equipment Log	
8.1.1	An equipment log shall be kept by the owner of the equipment.

8.1.2	The equipment log shall contain, but not be limited to, the following information:
	
	a) a description and operating instructions (applied to permanently installed equipment only), including
	      i) system description
	      ii) intended usage
	      iii) operating instructions for the equipment; and
	      iv) rigging plans for permanently installed equipment:
	
	b) installation records (applied to permanently installed equipment only), including
	      i) the original installation date;
	      ii) the manufacturer of the equipment;
	      iii) the installer of the equipment;
	      iv) equipment drawings, including, but not limited to,
	            1) equipment/roof plan; and
	            2) equipment installation details; and
	      v) initial inspection report; and
	
	c) records of inspection and maintenance (applied to both temporary and permanently installed equipment), including
	      i) annual inspection report(s);
	      ii) modifications made to the equipment, including the date and nature of the modifications;
	      iii) the name of the company performing the modifications;
	      iv) maintenance requirements of the equipment ;and
	      v) maintenance records, including the date and nature of the modifications and the name of the company performing the maintenance.

Roof Plans	

8.2.1	A roof plan (see example in Figure 2) showing the location of all the permanently installed components and equipment shall be provided by the building owner. As a minimum, the plan shall include, but not be limited to,
	
	    a) a plan view showing essential structural members, including anchors;
	    b) details of the equipment and its installation;
	    c) the safe working loads of the equipment and any use restrictions on the equipment; and
	    d) all relevant obstructions and structures or other obstacles that impede the safe use or operation, or both, of the equipment.

8.2.2	The roof plan shall be signed and sealed by professional engineer to ensure compliance with this Standard and with CAN/CSA-Z271.
8.2.3	A legible copy of the roof plan shall be posted at every entrance to a roof level.

This document contains extracts from Ontario Regulation 527/88 (revised September 26, 1991.) relating to fall protection anchors. Refer also to Reg. 859 as amended by O. Reg. 523/92

This Regulation applies to employers, including contractors and sub-contractors, who supply window cleaning services, to workers who engage in window cleaning and to owners of buildings where a worker engaging in window cleaning may fall a vertical distance of three meters or more.

Before any worker begins window cleaning at a building for which a suspended scaffold, boatswain's chair or similar single-point suspension equipment is used, every employer, contractor and sub-contractor who proposes to carry out window cleaning at the building shall give notice of the proposed window cleaning by telephone to an inspector in the office of the Construction Health and Safety Branch of the Ministry that is nearest to the building.

PARAGRAPH REFERENCE	REQUIREMENT
Safety Precautions and Requirements	
10.1	If a worker who is not working from a ladder is exposed to the hazard of falling more than three meters, the worker shall use a fall arrest system that is adequately secured to a fixed support and arranged so that the worker cannot fall freely for a vertical distance of more than 1.5 meters.
10.2	The fixed support mentioned in subsection (1) shall be able to resist all arrest forces when a worker falls.
10.3	The fall arrest system mentioned in subsection (1), shall arrest any fall by the worker without applying a peak force to the worker greater than 8 a) kilonewtons; and

10.5	A lifeline used in a fall arrest system,
	    a) shall be used by only one worker at a time;
	    b) shall be free from the danger of being chaffed or cut;
	    c) shall be suspended separately and independently from any suspended scaffold, boatswain's
	    d) chair or similar single-point suspension equipment;

Scaffolds, Boatswain Chairs and Related Equipment	

22.1	Every scaffold,
	    a) shall be capable of supporting at least,
	        (i) two times the maximum load to which it is likely to be subjected without exceeding the allowable unit stresses for the materials of which it is constructed, and
	        (ii) four times the maximum load to which it is likely to be subjected without overturning;

25	Sections 26 to 30 apply in respect of every,
	    a) suspended scaffold that is permanently installed on a building or structure;
	    b) suspended scaffold that is transported in component form and is assembled for use at a work site; and
	    c) boatswain's chair or similar single-point suspension equipment intended for the support of one worker.

28	Every boatswain's chair,
	    d) shall not be used where the descent exceeds ninety meters;
	    e) shall only be used to clean windows within arm's reach of a worker who is freely suspended on the primary support line;

29.1	Every static or horizontal line that is rigged between anchor points and to which lifelines or primary support lines are directly attached shall be used as a professional engineer directs, and the professional engineer shall certify the maximum load to be applied to the static or horizontal line.
29.2	The support capability of an anchor point shall exceed the total breaking strength of all support lines attached to it.

30.1	Every outrigger beam, cornice hook and parapet wall hook that is used to support a primary support line,
	    a) shall be capable of supporting at least four times the maximum load to which it may be subjected,
	        (i) without overturning, and
	        (ii) without exceeding the allowable unit stress for the materials of which it is constructed;
	    b) shall be constructed of steel, aluminum or equivalent material; and
	    c) shall be tied back to a fixed support so as to prevent movement of the outrigger beam, cornice hook or parapet wall hook.

30.2	Every worker who is on, or is in the process of getting on or off a suspended scaffold or boatswan's chair or similar single-point suspension equipment shall be protected by a fall arrest system.

PARAGRAPH REFERENCE	REQUIREMENT
Duties of the Owner of a Building	
39.1	Every owner of a building where a suspended scaffold, boatswain's chair or similar single-point suspension equipment is to be used for window cleaning shall prepare a sketch or sketches showing all anchor points and related structures on the building that are suitable and adequate for the attachment of the suspended scaffold, boatswain's chair or similar single-point suspension equipment and the lifeline.
39.2	The building owner shall provide a copy of the sketch or sketches mentioned in subsection (1) to the person supplying the window cleaning services before the work is begun and no employer may permit a worker to engage in window cleaning using a suspended scaffold, boatswain's chair or similar single-point suspension equipment until the employer has received a copy of the sketches or sketches.
39.3	The building owner shall post a copy of the sketch or sketches mentioned in subsection (1) at the building near the entrance to the roof.
40.1	Every owner of a building where sill work is done shall prepare a sketch or sketches showing all anchor points and related structures on the building that are suitable and adequate for the attachment of a lifeline for a worker who performs the sill work.
40.2	The building owner shall provide a copy of the sketch or sketches mentioned in subsection (1) to the person supplying the window cleaning services before the sill work is begun and no employer may permit a worker to do sill work until the employer has received a copy of the sketches or sketches.
40.3	The building owner shall post a copy of the sketch or sketches mentioned in subsection (1) in a conspicuous place where the sketch or sketches are to come to the attention of any worker who does sill work.
41.1	The owner of a building mentioned in section 39 or 40 shall cause all anchor points and permanently-installed suspended scaffolds to be inspected by a competent person, a) before being used for the first time; b) thereafter as often as necessary but not less frequently than recommended by the manufacturer of the anchor points or the suspended scaffolds, as the case may be, and in any case, at least once a year; and c) when informed under section 43.
41.3	The competent person making the inspection required by subsection (1) shall immediately upon completion of the inspection report to the building owner any defects or hazardous conditions detected in the anchor points and any permanently-installed suspended scaffold.
41.4	A building owner shall ensure that any faulty anchor point is repaired and is suitable for use for window cleaning and sill work before being used.
41.5	A building owner shall keep a record of the inspections of any anchor points and any permanently installed scaffold at a building in a log book to be maintained and retained as long as the anchor points and suspended scaffold are used, showing, a) the date on which each inspection is made; b) the name and signature of the person making the inspection; and c) any modifications or repairs made to an anchor point or a suspended scaffold, including the date they are made and the name and signature of the person making the modifications or repairs.

PARAGRAPH REFERENCE	REQUIREMENT
Duties of Employers, Supervisors and Workers	
42.1	Every employer who proposes to carry out window cleaning using suspended scaffold, boatswain's chair or similar single-point suspension equipment or to carry out sill work shall prepare a work plan in writing, signed by the employer, indicating the manner in which any primary support lines and lifelines used are to be attached to the anchor points or related structures shown on any sketch mentioned in subsection 39(1) or 40(1), and setting such other information as may be required for the safety of workers.
42.2	The employer shall cause a copy of the work plan referred to in subsection (1) to be provided to each worker who engages in window cleaning or sill work at the building and shall retain a copy for examination by an inspector.
42.3	No worker shall begin window cleaning that requires the use of a suspended scaffold, boatswain's chair or similar single-point suspension equipment and no worker may begin doing sill work until the worker has received a copy of the work plan referred to in subsection (1).
43	If an employer, supervisor or worker believes that any anchor point or related structure that is used to support a suspended scaffold, suspended work platform, boatswain's chair, similar single-point suspension equipment or lifeline is defective or inadequate, the employer, supervisor or worker shall inform the building owner of this fact immediately.
44.1	Every employer of a worker who engages in window cleaning using a suspended scaffold, boatswain's chair or similar single-point suspension equipment and every contractor and sub-contractor who proposes to carry out window cleaning in that manner shall appoint a supervisor.
44.2	A supervisor appointed under subsection (1) shall visit the location of the window cleaning operation at least once daily.
45.1	A safety training program shall be established and maintained by every employer whose workers engage in window cleaning using suspended scaffolds, boatswain's chairs or similar single-point suspension equipment to train the workers in common core skills for the safe use of such scaffolds, boatswain's chairs and similar single-point suspension equipment.
45.2	The common core skills referred to in subsection (1) shall include, a) the proper rigging of support lines; b) the inspection for wear of primary support lines and lifelines; c) the safe use of descent control devices; d) the proper use of fall arrest body harnesses including accepted methods for attaching lifelines to buildings or structures; and e) the safe use of suspended scaffolds, boatswain's chairs or similar single-point suspension equipment.
45.3	No worker who has not successfully completed the training program referred to in subsection (1) shall be permitted to engage in window cleaning using a suspended scaffold, boatswain's chair or similar single-point suspension equipment.
45.4	Subsection (3) does not apply to a worker who, a) is being instructed in the safe use of window cleaning and fall arrest equipment; and b) is accompanied by a person who has successfully completed the training program referred to in subsection (1).
45.5	Every employer shall establish and maintain in writing a list of workers who have successfully completed the training program referred to in subsection (1). **Note:** A worker who has successfully completed the window cleaning safety course offered by the Construction Safety Association of Ontario will be deemed to have successfully completed the training program required by this section.

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ROOF SPECIALTIES
CAL OSHA
Title 8, Section 3291
Article 5, Window
Cleaning

This document contains extracts from the California Code of Regulations, Title 8, Section 3291 (Special Design Considerations - Permanent Roof Top Installations). The applicable section is Subchapter 7 (General Industry Safety Orders) Group 1 (General Physical Conditions and Structures Orders), Article 5 (Window Cleaning).

The extracts pertain to fall protection anchors, including "rope drop" sleeves, roof davit systems, outrigger beams, and roof tie-backs.

The CAL OSHA standard is one of several OSHA standards governing window cleaning and other suspended maintenance operations; the others are OSHA 1910.28, SubPart D (Walking-Working Surfaces), OSHA 1926.500, SubPart M (Fall Protection), and Department of Labor Memorandum to Regional Administrators for Descent Control Devices.

PARAGRAPH REFERENCE	REQUIREMENT
A) General	A Civil or Mechanical Engineer registered in the State of California shall prepare calculations and/or plans substantiating the structural integrity of all facets of the complete installation, including the eyebrow sleeves, roof davit systems, roof outrigger beams, and roof tie-backs. Such plans shall be available to the Division at the installation site. (Title 24, Part 2, Section 2-8505(a).)
B) Projecting Ledges or Eyebrows at Roof Level	(1) Those buildings so designed that projecting ledges or "eyebrows" at the roof or intervening levels prohibit the normal suspension of ropes supporting scaffolds, shall be provided with sleeves that extend through the ledge or eyebrow. The minimum inside diameter of the sleeve shall be 6 inches to permit the passage of shackles, sockets, clamps and other rigging devices. The centeron-center spacing of sleeves shall be consistent with the length of the suspended scaffold to be utilized, but in no case shall this spacing exceed 24 feet for transportable scaffolds. Sleeves shall not be used as a rigging point unless securely anchored to the structure and be capable of supporting the rated load with a minimum safety factor of four. In lieu of the use of sleeves, other means of scaffold support, such as soffit monorail systems, etc. that offer equivalent safety and are acceptable to the Division, may be provided. (2) Each sleeve assembly or each scaffold support system shall be provided with a securely affixed durable and readily visible metal plate bearing the rated load and installer's name in letters at least 1/4-inch in height. (Title 24, Part 2, Section 2-8505(b).)
C) Roof Davit Systems	Roof davit systems specifically shall comply with applicable provisions of Article 6 and the following: (1) Each davit shall be provided with a securely affixed, durable and readily visible metal plate bearing the following information in letters at least 1/4-inch in height: (A) The davit's rated load, based upon a safety factor of 4. (B) Manufacturer's name. (C) Precautionary warning message prohibiting use of the davit within 10 feet of high-voltage lines. (2) Provisions shall be made to easily rotate davits while on the scaffold platform or boatswain's chair unless the platform may be safely re-positioned inboard or outboard without the necessity for personnel to stand on unguarded roofs or ledges unless protected by an approved safety belt or the equivalent. (3) Portable davit systems shall comply with the applicable provisions of Article 6. (Title 24, Part 2, Section 2-8505(c).)

PARAGRAPH REFERENCE	REQUIREMENT
D) Outrigger Beams	(1) Outrigger beams shall not be employed on buildings exceeding 130 feet in height unless acceptable to the Division. All outrigger beams shall be designed to support the rated load imparted by the suspended scaffold or boatswain's chair with a safety factor of at least 4. Outrigger beams shall not extend more than 6 feet beyond the face of the building. Only steel or high strength alloy beams shall be used. The inboard end of outrigger beams, measured from the fulcrum point to the anchorage point, shall be not less than 1 1/2 times the outboard end length. The fulcrum point of the beam shall rest on leg(s) or equivalent supports securely attached to the beam and so arranged as to prevent lateral overturning of the beam. Bearing pads shall be securely affixed to each support and shall be of sufficient area to safely distribute imposed loads to the roof structure. The inboard ends of outrigger beams shall be securely anchored by means of tension members (tie-down) affixed to the structural frame of the roof in such a manner that applied forces are resisted within allowable limits affording a safety factor of at least 4. All tie-down fittings at the inboard end of the beam shall be of a type that vibration effects shall not produce accidental disengagement. Safety hooks for beam tie-down purposes shall not be used. The use of counterweights at the inboard end of mobile and fixed outrigger beams are prohibited.

(2) The use of counterweights on the inboard end of portable or transportable outrigger beams shall be permitted only when the following conditions have been met:

(A) The building on which the counterweight beam is to be used, was constructed prior to July 23, 1990.

(B) The building was not designed for other suspension systems.

(C) An Operating Procedures Outline Sheet (OPOS) shall be developed in accordance with Section 3282 (p) of these orders.

(D) The counterweights shall be secured to the inboard ends of beams and shall consist of non-flowable/solid materials (e.g. concrete, steel, etc.).

(E) The outrigger shall be secured with a tie-back to a verified anchorage on the building during the entire time of use. The anchorage shall be designed to have a safety factor of not less than four based on the rated capacity of the outrigger.

(F) The counterweight shall provide a stability factor of at least 4 against overturning or upsetting of the outrigger.

(G) Each outrigger shall be designed by a registered engineer to support a load of 4 times the rated hoist capacity or the total load whichever is greater. Outrigger beams shall have a minimum rated capacity of 1000 pounds.

(H) The outrigger beam shall be secured against horizontal movement when in use.

(I) Portable outriggers weighing more than 80 pounds shall be provided with a stable means for its transport (wheels or cart).

(J) Each outrigger shall be so located that the suspension wire ropes, for two point suspended working platforms, are hung parallel.

(K) The parts of sectional outrigger beam(s) (i.e. an outrigger beam(s) consisting of more than one piece) shall be identified (e.g. numbered, color-coded). Parts shall not be interchanged or substituted except with the approval of the manufacturer.

(3) Each outrigger beam shall be provided with a securely affixed, durable and readily visible metal plate bearing the following information in letters at least 1/4-inch in height:

(A) The beam's rated load.

(B) Manufacturer's name.

(C) Precautionary warning message prohibiting use of the beam within 10 feet of high-voltage lines. (Title 24, Part 2, Section 3105A.4.2) |

PARAGRAPH REFERENCE	REQUIREMENT
E) Portable Outrigger Beams	The use of portable outrigger beams shall comply with the applicable provisions of Article 6. (Title 24, Part 2, Section 2-8505(d).)

F) Roof Tie-Backs	(1) Every building constructed 3 stories or 36 feet or more in height, shall have eyebolts or other permanent devices installed at the roof level for the purpose of securing or tying back suspended scaffold hooks or clamps and safety lines.
	
	EXCEPTIONS:
	
	1. Roof tie-backs are not required on buildings employing other acceptable means of permanently installed roof top maintenance systems specified in this Article or Article 6.
	
	2. Eyebolts for roof tie-backs are not required on buildings constructed up to 4 stories or 48 feet in height when building maintenance can be accomplished using extension tools, ladders, approved ground equipment such as scaffolds, or aerial devices designed and used for positioning personnel.
	
	(2) Such devices should be spaced at approximately 12-foot intervals; however, the spacing shall depend primarily on the availability of roof structural framing members of sufficient strength to safely carry applied loads. Tie-backs may be installed in structural parapets that are of adequate strength to sustain applied loads, but placement shall be as close to the roof level as practicable. Design criteria for tie-backs shall be as follows:
	
	    (A) Drop-forged eyebolts or other component of equivalent strength having at least a 2-inch inside diameter closed "eye."
	
	    (B) Tie-back assembly to be hot dip galvanized or afforded equivalent corrosion resistance.
	
	    (C) Assembly and anchorage provisions adequate to sustain a 5400 pound (tensile) load applied in any direction.
	
	(3) Roof tie-backs or other devices shall not be installed in a wood framing system.
	
	    A) Suspended scaffolds shall not be permitted unless roof tie-backs or equivalent anchorages are provided. (Title 24, Part 2, Section 2-8505(e).3). Parapets of Excessive Height. Where building parapet heights exceed 42 inches, special provisions shall be employed to provide a safe means of access to the top of the parapet for rigging purposes if such access is nec essary to the safe performance of the work. If such support system as davit/sockets, parapet hooks or clamps, etc., are utilized at the top of parapets, a catwalk platform meeting the applicable sections of these orders, or other equivalent means of affording access for the safe performance of the work shall be provided. (Title 24, Part 2, Section 2-8505(f).)
	
	NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 18943(b), Health and Safety Code.

PARAGRAPH REFERENCE	REQUIREMENT
Appendix A. Operating Procedures Outline Sheet (OPOS)	An OPOS establishes safe window cleaning and exterior maintenance procedures for buildings and structures. An OPOS shall include all of the necessary elements in pictorial and written form, to instruct employees in the safe use of roof supported building maintenance equpment or window cleaning procedures not covered by these Orders. An OPOS shall contain at least the following elements: 1. Isometric or plan view drawing (pictorial drawing) of the building's roof, including the buildings's name, address, and the date the OPOS was prepared; and a. The drawing shall be legible and kept with the building's written assurance; and 2. Identification of drop zones, recommended drop sequences, scaffold configurations, and specific building maintenance procedures including the equipment to be used, e.g. permanent roof rigging platform, ground rigged scaffolding, davits, outrigger beams, boatswain's chair or seatboard, etc,; and 3. Identification of all anchorage points for personal fall arrest systems and building maintenance equipment; and 4. Identification of personal fall protection requirements and, if applicable, procedures for securing equipment; and 5. If applicable, identification of all dangerous areas on the roof by highlighting all of the "Danger Zone (s)" on the pictorial drawings(s); and 6. If applicable, description of the means and methods to be used to transfer equipment from drop location to drop location or between building levels; and 7. Identification of equipment limitations, load ratings, and special use conditions; and 8. Provisions for pre-operational, operation and maintenance inspections; and 9. Identification of the access and egress to the work locations and the storage area(s) for the permanent or transportable building maintenance equipment; and 10. If applicable, indication of the location and method of stabilization provided for the suspended equipment; and 11. Emergency and rescue procedures, and means of communications to be used during such procedures; and 12. Method(s) to be used to control employee exposure to falls while they are in the "Danger Zone".

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ROOF SPECIALTIES
**OSHA 1910.66, SubPart F
(Powered Platforms)**

This document contains extracts from OSHA Standard 1910.66 SubPart F (Powered platforms for building maintenance) relating to fall protection anchors.

The standard covers powered platform installations permanently dedicated to interior or exterior building maintenance of a specific structure or group of structures. This section does not apply to suspended scaffolds (swinging scaffolds) used to service buildings on a temporary basis and covered under subpart D of OSHA 1910.28, nor to suspended scaffolds used for construction work and covered under subpart L of 29 CFR part 1926. Building maintenance includes, but is not limited to, such tasks as window cleaning, caulking, metal polishing and reglazing.

SubPart F is one of several OSHA standards governing window cleaning and other suspended maintenance operations; the others are OSHA 1910.28, SubPart D (Walking-Working Surfaces), OSHA 1926.500, SubPart M (Fall Protection), CAL OSHA, Title 8, Section 3291 (f), Article 5, Window Cleaning (General Industry Safety Order, California Code of Regulations), and Department of Labor Memorandum to Regional Administrators for Descent Control Devices.

PARAGRAPH REFERENCE	REQUIREMENT
Assurance (c)(3)	Building owners of all installations, new and existing shall inform the employer in writing that the installation has been inspected, tested and maintained in compliance with the requirements of paragraphs (g) and (h) of this section and that all protection anchorages meet the requirements of paragraph (l) (c) (10) of appendix C.
Affected Parts of Buildings (e)(1)(i)	Structural supports, tie-downs, tie-in guides, anchoring devices and any affected parts of the building included in the installation shall be designed by or under the direction of a registered professional engineer experienced in such design;
(e)(7)	"Tie-down anchors." Imbedded tie-down anchors, fasteners, and affected structures shall be resistant to corrosion.
Equipment (f)(1)	"General requirements." The following requirements apply to equipment which are part of a powered platform installation, such as platforms, stabilizing components, carriages, outriggers, davits, hoisting machines, wire ropes and electrical components.
(f)(1)(i)	Equipment installations shall be designed by or under the direction of a registered professional engineer experienced in such design; "Suspension methods". Elevated building maintenance equipment shall be suspended by a carriage, outriggers, davits or an equivalent method.
Affected Parts of Buildings (f)(3)(2)	Transportable outriggers may be used as a method of suspension for ground rigged working platforms where the point of suspension does not exceed 300 feet (91.5 m) above a safe surface. Tie-in guide system(s) shall be provided which meet the requirements of paragraph (e) (2) of this section.
(f)(3)(ii)(C)	Each transportable outrigger shall be secured with a tie-down to a verified anchorage on the building during the entire period of its use. The anchorage shall be designed to have a stability factor of not less than four against overturning or upsetting of the outrigger.
(f)(3)(ii)(E)	Each transportable outrigger shall be designed for lateral stability to prevent roll-over in the event an accidental lateral load is applied to the outrigger. The accidental lateral load to be considered in this design shall be not less than 70 percent of the rated load of the hoist.
(f)(3)(ii)(E)	Each transportable outrigger shall be designed to support an ultimate load of not less than four times the rated load of the hoist.
(f)(3)(ii)(G)	Each transportable outrigger shall be so located that the suspension wire ropes for two point suspended working platforms are hung parallel.
(f)(3)(ii)(G)	A transportable outrigger shall be tied-back to a verified anchorage on the building with a rope equivalent in strength to the suspension rope.
(f)(3)(ii)(G)	The tie-back rope shall be installed parallel to the centerline of the outrigger.

PARAGRAPH REFERENCE	REQUIREMENT
Davits (f)(3)(iii)	Every davit installation, fixed or transportable, rotatable or non-rotatable shall be designed and installed to insure that it has a stability factor against overturning of not less than four.
Ground Rigged Davits System (f)(3)(iii)(c)(1) (f)(3)(iii)(D)	The point of suspension shall not exceed 300 feet (91.5 m) above a safe surface. Guide system(s) shall be provided which meet the requirements of paragraph (e) (2) of this section;
	A rotating davit shall not require a horizontal force in excess of 40 pounds (177.9 n) per person to initiate a rotating movement.
Transportable Davits (f)(3)(iii)(E)(1)	A davit or part of a davit weighing more than 80 pounds (36 kg) shall be provided with a means for its transport, which shall keep the center of gravity of the davit at or below 36 inches (914 mm) above the safe surface during transport:
(f)(3)(iii)(E)(2)	A davit shall be provided with a pivoting socket or with a base that will allow the insertion or removal of a davit at a position of not more than 35 degrees above the horizontal, with the complete davit inboard of the building face being serviced; and
(f)(3)(iii)(E)(3)	Means shall be provided to lock the davit to its socket or base before it is used to suspend the platform.
Two and Four-Point Suspended Working Platform (f)(3)(ii)(M)	A vertical lifeline shall be provided as part of a fall arrest system which meets the requirements of appendix C, for each employee on a working platform suspended by two or more wire ropes, if the failure of one wire rope or suspension attachment will cause the platform to upset. If a secondary wire rope suspension is used, vertical lifelines are not required for the fall arrest system, provided that each employee is attached to a horizontal lifeline anchored to the platform.
Single Point Suspended Working Platform (f)(5)(iii)	Each single point suspended working platform shall be provided with a secondary wire rope suspension system, which will prevent the working platform from falling should there be a failure of the primary means of support, or if the platform contains overhead structures which restrict the egress of the employees. A horizontal lifeline or a direct connection anchorage shall be provided, as part of a fall arrest system which meets the requirements of appendix C, for each employee on the platform.
Periodic Inspection & Tests (g)(2)(i) (g)(3)(ii)	Related building supporting structures shall undergo periodic inspection by a competent person at intervals not exceeding 12 months.
	The building owner shall keep a certification record of each inspection and test required under paragraphs (g) (2) (i) and (ii) of this section. The certification record shall include the date of the inspection, the signature of the person who performed the inspection, and the number, or other identifier, of the building support structure and equipment which was inspected. This certification record shall be kept readily available for review by the Assistant Secretary of Labor or the Assistant Secretary's representative and by the employer.
Maintenance (h)(1)	"General maintenance." All parts of the equipment affecting safe operation shall be maintained in proper working order so that they may perform the functions for which they were intended. The equipment shall be taken out of service when it is not in proper working order.
Personal Fall Protection (j)	"Personal fall protection." Employees on working platforms shall be protected by a personal fall arrest system meeting the requirements of appendix C, Section I, of this standard, and as otherwise provided by this standard.
	END

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ROOF SPECIALTIES
**OSHA 1910.66
Appendix C (Personal
Fall Arrest System:
Section I, II and III) Aug./00**

PARAGRAPH REFERENCE	REQUIREMENT (Section I - Mandatory)
C) Design for System Components	(9) Horizontal lifelines, where used, shall be designed, and installed as part of a complete personal fall arrest system, which maintains a safety factor of at least two, under the supervision of a qualified person. (10) Anchorages to which personal fall arrest equipment is attached shall be capable of supporting at least 5,000 pounds (22.2 kN) per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two, under the supervision of a qualified person.
E) Care and Use	(3) Personal fall arrest systems shall be rigged such that an employee can neither free fall more than six feet (1.8 m), nor contact any lower level. (7) Personal fall arrest systems or components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection unless inspected and determined by a competent person to be undamaged and suitable for reuse.
F) Inspections	(f) Personal fall arrest systems shall be inspected prior to each use for mildew, wear, damage and other deterioration, and defective components shall be removed from service if their strength or function may be adversely affected.
REFERENCE	REQUIREMENT (Section II - Non-Mandatory)
II Test Methods	(2) The anchorage should be rigid, and should not have a deflection greater than .04 inches (1 mm) when a force of 2,250 pounds (10 kN) is applied.
REFERENCE	REQUIREMENT (Section III - Additional Non-Mandatory Guidelines)
H) Tie-off Considerations	(1) One of the most important aspects of personal fall protection systems is fully planning the system "before" it is put into use. Probably the most overlooked component is planning for suitable anchorage points. Such planning should ideally be done before the structure or building is constructed so that anchorage points can be incorporated during construction for use later for window cleaning or other building maintenance. If properly planned, these anchorage points may be used "during" construction, as well as afterwards. (2) Employers and employees should at all times be aware that the strength of a personal fall arrest system is based on its being attached to an anchoring system which does not significantly reduce the strength of the system (such as a properly dimensioned eye-bolt/snap-hook anchorage). Therefore, if a means of attachment is used that will reduce the strength of the system, that component should be replaced by a stronger one, but one that will also maintain the appropriate maximum arrest force characteristics. (4) Tie-off of a rope lanyard or lifeline around an "H" or "I" beam or similar support can reduce its strength as much as 70 percent due to the cutting action of the beam edges. Therefore, use should be made of a webbing lanyard or wire core lifeline around the beam; or the lanyard or lifeline should be protected from the edge: or free fall distance should be greatly minimized. (6) Horizontal lifelines may, depending on their geometry and angle of sag, be subjected to greater loads than the impact load imposed by an attached component. When the angle of horizontal lifeline sag is less than 30 degrees, the impact force imparted to the lifeline by an attached lanyard is greatly amplified. For example, with a sag angle of 15 degrees, the force amplification is about 2:1 and at 5 degrees sag, it is about 6:1. Depending on the angle of sag, and the line's elasticity, the strength of the horizontal lifeline and the anchorages to which it is attached should be increased a number of times over that of the lanyard. Extreme care should be taken in considering a horizontal lifeline for multiple tie-offs. The reason for this is that in multiple tie-offs to a horizontal lifeline, if one employee falls, the movement of the falling employee and the horizontal lifeline during arrest of the fall may cause other employees to also fall. Horizontal lifeline and anchorage strength should be increased for each additional employee to be tied-off. For these and other reasons, the design of systems using horizontal lifelines must only be done by qualified persons. Testing of installed lifelines and anchors prior to use is recommended.

REFERENCE	REQUIREMENT (Section III - Additional Non-Mandatory Guidelines)
I) Vertical Lifeline Considerations	As required by the standard, each employee must have a separate lifeline when the lifeline is vertical. The reason for this is that in multiple tie-offs to a single lifeline, if one employee falls, the movement of the lifeline during the arrest of the fall may pull other employees' lanyards, causing them to fall as well.
K) Free-Fall Consideration	The employer and employee should at all times be aware that a system's maximum arresting force is evaluated under normal use conditions established by the manufacturer, and in no case using a free fall distance in excess of six feet (1.8 m). A few extra feet of free fall can significantly increase the arresting force on the employee, possibly to the point of causing injury. Because of this, the free fall distance should be kept at a minimum, and, as required by the standard, in no case greater than six feet (1-8 m). To help assure this, the tie-off attachment point to the lifeline or anchor should be located at or above the connection point of the fall arrest equipment to belt or harness. (Since otherwise additional free fall distance is added to the length of the connecting means (i.e. lanyard)). Attaching to the working surface will often result in a free fall greater than six feet (1.8 m). For instance, if a six foot (1.8 m) lanyard is used, the total free fall distance will be the distance from the working level to the body belt (or harness) attachment point plus the six feet (1.8 m) of lanyard length. Another important consideration is that the arresting force which the fall system must withstand also goes up with greater distances of free fall, possibly exceeding the strength of the system.
M) Obstruction Considerations	The location of the tie-off should also consider the hazard of obstructions in the potential fall path of the employee. Tie-offs which minimize the possibilities of exaggerated swinging should be considered. In addition, when a body belt is used, the employee's body will go through a horizontal position to a jack-knifed position during the arrest of all falls. Thus, obstructions which might interfere with this motion should be avoided or a severe injury could occur.
	END

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ROOF SPECIALTIES
**OSHA 1926.500,
SubPart M
(Fall Protection)**

This document contains extracts from OSHA Standard 1926.500 (Fall Protection) relating to fall protection anchors. This subpart sets forth requirements and criteria for fall protection in construction workplaces and directs the reader to other 500 series standards governing the requirements of employers to provide fall protection systems near the edges of roofs or other walking/working surfaces.

The standard is one of several OSHA standards governing window cleaning and other suspended maintenance operations; the others are OSHA 1910.28, SubPart D (Walking-Working Surfaces), OSHA 1910.66, SubPart F (Powered Platforms), CAL OSHA, Title 8, Section 3291 (f), Article 5. Window Cleaning (General Industry Safety Order, California Code of Regulations), and Department of Labor Memorandum to Regional Administrators for Descent Control Devices.

PARAGRAPH REFERENCE	REQUIREMENT
1926.501 **General** (b)(1) **Holes** (b)(4)(i) (b)(1)	"Unprotected sides and edges." Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level hall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems. Each employee on walking/working surfaces shall be protected from falling through holes (including skylights) more than 6 feet (1.8 m) above lower levels, by personal fall arrest systems, covers, or guardrail systems erected around such holes.
196.502 **Personal Fall Arrest systems** (d)(15)	Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds (22.2 kN) per employee attached, or shall be designed, installed, and used as follows: (d) (15) (i) as part of a complete personal fall arrest system which maintains a safety factor of at least two; and (d) (15) (ii) under the supervision of a qualified person. (d) (16) Personal fall arrest systems, when stopping a fall, shall: (d) (16) (i) limit maximum arresting force on an employee to 900 pounds (4 kN) when used with a body belt; (d) (16) (ii) limit maximum arresting force on an employee to 1,800 pounds (8 kN) when used with a body harness; (d) (16) (iii) be rigged such that an employee can neither free fall more than 6 feet (1.8 m), nor contact any lower level;
(d)(19)	Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.
(d)(21)	Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.

This document contains extracts from OSHA Standard 1926.500 (Fall Protection) relating to fall protection anchors. This subpart sets forth requirements and criteria for fall protection in construction workplaces and directs the reader to other 500 series standards governing the requirements of employers to provide fall protection systems near the edges of roofs or other walking/working surfaces.

The standard is one of several OSHA standards governing window cleaning and other suspended maintenance operations; the others are OSHA 1910.28, SubPart D (Walking-Working Surfaces), OSHA 1910.66, SubPart F (Powered Platforms), CAL OSHA, Title 8, Section 3291 (f), Article 5. Window Cleaning (General Industry Safety Order, California Code of Regulations), and Department of Labor Memorandum to Regional Administrators for Descent Control Devices.

PARAGRAPH REFERENCE	REQUIREMENT
Boatswain's Chairs 1926.501 (i)(6)	The workman shall be protected by a safety life belt attached to a lifeline. The lifeline shall be securely attached to substantial members of the structure (not scaffold), or to securely rigged lines, which will safely suspend the worker in case of a fall. The roof irons, hooks, or the object to which the tackle is anchored shall be securely installed. Tiebacks when used shall be installed at right angles to the face of the building and securely fastened.
Float or Ship Scaffolds 1910.28(u)(6)	Each workman shall be protected by a safety lifebelt attached to a lifeline. The lifeline shall be securely attached to substantial members of the structure (not scaffold), or to securely rigged lines, which will safely suspend the worker in case of a fall.

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ROOF SPECIALTIES
OSHA Department of Labor Memorandum to Regional Administrators for Descent Control Devices

This document contains extracts from an OSHA Standards Interpretation and Compliance Letter (04/07/1999 - Procedures and precautions for employees using descent control equipment). The extracts refer to a Memorandum to Regional Administrators (March 12, 1991) from Patricia K. Clark, Director, Directorate of Compliance Programs. The subject relates to a December 5, 1989 letter from Mr. Thomas J. Shepwich to Mr. Carl A. Pedersen regarding Descent Control Devices.

The purpose of the memorandum is to clarify statements made in the above-referenced letter regarding the use of descent control equipment by employees performing building exterior cleaning, inspection and maintenance. The extracts pertain to fall protection anchorages.

REQUIREMENT

Descent control equipment (friction devices such as "Sky Genies", "racks" and "figure eights") is not covered by existing Occupational Safety and Health Administration (OSHA) standards. Therefore, the Agency addresses the safety of descent control devices through its enforcement of section 5(a)(1) of the OSH Act. Under this approach, OSHA references the safety principles applicable to similar equipment (in this case, boatswains' chairs, single-point and two-point suspended scaffolds) and national consensus standards (such as ANSI A39.1-1987, with addenda A through C, "Safety Requirements for Window Cleaning") insofar as they are pertinent to the subject matter. As indicated in the December 5, 1989 letter, OSHA allows employees to use descent control equipment, provided that the equipment is used in accordance with the instructions, warnings and design limitations set by manufacturers or distributors. In addition, the Agency expects employers whose employees use descent control devices to implement procedures and precautions, as follows:

1. Training of employees in the use of the equipment before it is used;

2. Inspection of equipment each day before use;

3. Proper rigging, including sound anchorages and tiebacks, in all cases, with particular emphasis on providing tiebacks when counterweights, cornice hooks, or similar non-permanent anchorage systems are used;

4. Use of a separate fall arrest system (including bodybelt, sit harness, or full body harness; rope grab or similar device; lifeline; and anchorage (all of which are completely independent of the friction device and its support system), so that any failure in a friction device, support seat (or harness), support line, or anchorage system will not affect the ability of the fall arrest system to operate and quickly stop the employee's fall;

5. All lines installed (such as by using knots, swages or eye splices) when rigging descent control devices shall be capable of sustaining a minimum tensile load of 5,000 pounds.

6. Provisions are made for rescue;

7. Ropes are effectively padded where they contact edges of the building, anchorage, obstructions, or other surfaces which might cut or weaken the rope;

8. Provisions are made for intermittent stabilization for descent in excess of 130 feet. In accordance with ANSI A39.1-1987 (and addenda a-c), emergency descent devices are prohibited for use in window cleaning. That statement pertains to devices designed only for emergency use. The statement would not preclude the use of descent control equipment designed to be used for window cleaning, nor would it preclude the use of devices that are designed for both window cleaning and emergency descent, provided these devices are used in accordance with the guidance outlined in this memorandum.

END

This document contains extracts from Part 21 of the DOSH "Industrial Code Rules", "Protection of Persons Employed at Window Cleaning - Structural Requirements, Equipment and Procedures". The extracts pertain to fall protection anchorages.

PARAGRAPH REFERENCE	REQUIREMENT
21.0 Finding of Fact	The board finds that the trade, occupation or process of cleaning the windows of public buildings involves such elements of danger to the lives, health or safety of persons employed therein as to require special regulations for the protection of such persons, in that such trade, occupation or process necessarily involves the constant hazard of falling from dangerous heights and creates a substantial risk of serious injury to such persons and others.
21.1 Application	(a) This Part (rule) applies to the trade, occupation and process of cleaning the windows of the public buildings which are subject to the provisions of section 202 of the Labor Law; it applies also to the owners of such buildings, to the cleaners and their employers, and to all persons providing equipment required by this Part (rule).
21.3 General provisions	(a) Owner's statement required. Before windows or window anchors are installed in a building subject to section 202 of the Labor Law a sufficient statement of the proposed means and methods of cleaning such windows shall be submitted by the owner (as defined) to the commissioner. (b) Means and methods required. (See §21.4, infra.) (1) No owner shall suffer or permit a cleaner to clean a window of his building unless it has the structural features and the anchors or other fixed devices required by this Part (rule) in respect to the authorized means and methods of cleaning used by the cleaner. (2) No employer shall suffer or permit an employee to clean a window otherwise than in accordance with an authorized means and method. Every employer must provide or cause to be provided to a cleaner in his employ the portable equipment, devices and materials specified in respect to the authorized means and methods used by such cleaner. (3) No cleaner shall clean any window otherwise than in accordance with an authorized means and method. (d) Defective windows and structures. (1) No owner shall suffer or permit a cleaner to clean any window installed in his building if any part of such window or surrounding structures upon which the cleaner may depend for support is so defective, damaged or deteriorated as to affect its structural strength. (2) The owner shall repair or replace any defective part upon which the cleaner may depend for support. (e) Unsafe equipment prohibited. (1) No person shall willfully sell, lend, provide or suffer or permit the use of, window cleaning equipment that is unsafe in any respect. (h) Installation of unapproved anchors. No person shall install an unapproved anchor. (i) Unauthorized installations-removal by owner. Every unapproved anchor and every unauthorized installation of an anchor, and every anchor of which the fastenings or supports are damaged or deteriorated, shall be removed or rendered unusable by detachment of the anchor head.

PARAGRAPH REFERENCE	REQUIREMENT
21.4 Authorized means and methods	The following means and methods are authorized for window cleaning as hereinafter set forth: (a) Working from safe surfaces. (b) Working from window sills or ledges. (c) Working from ladders. (d) Working from boatswain's chairs. (e) Working from scaffolds.
21.5 Working from safe surfaces	(b) Working surface. In using this method for cleaning from the outside the cleaner shall work from a position on the ground level or on a roof, balcony or other structural part of the building which is capable of sustaining the weight of the cleaner and his equipment. The surface on which the cleaner works shall not be pitched more than one inch in 12 inches. It shall either extend six feet or more about the working position or be provided with a firm railing or parapet at least 32 inches high.
21.8 Working from boatswain's chairs	(a) Approval required over 75 feet. After October 1, 1967, a boatswain's chair which is suspended from a point with an elevation of more than 75 feet above the nearest street or ground surface shall be approved for the specific building and location where it is to be used to clean windows. Approval will not be considered unless other authorized means of cleaning the windows have been found impracticable or impossible due to the exterior features of the building. (b) Suspended point height of 75 feet or less. A manually operated boatswain's chair which is suspended from a point with an elevation of 75 feet or less above the nearest street or ground surface is not required to be approved but shall conform to the following requirements: (1) Safety belt and lifeline required. Each person working from a boatswain's chair shall be provided with and shall use an approved safety belt and a lifeline consisting of a hanging line and a tail line. The tail line shall be of minimum practical length and shall be attached to the hanging line by an approved special device to allow vertical adjustment of the point of attachment. Exception: See section 23.30 of Industrial Code Part (Rule No.) 23. (4) Chairs. Boatswain's chairs and all supports shall be designed and constructed to sustain without failure a minimum load of 600 pounds. (6) Anchorage. The object to which the tackle is anchored shall be rigid and of sample strength. (c) Powered boatswain's chairs. A powered boatswain's chair used for window cleaning shall be approved in respect to its hoisting machine and shall be subject to the requirements set forth in this section in subdivision (a) and paragraphs (1), (2), (3), (4), (6) and (7) of subdivision (b).
21.9 Working from scaffolds	(a) Compliance with Part (Rule No.) 23. Every scaffold used for cleaning by this method shall be designed, constructed, installed, operated and maintained in compliance with all relevant provisions of Part (Rule No.) 23, Protection of Persons Employed in Construction and Demolition Work, as amended, except as the board may otherwise provide in this Part (rule) or in a resolution of approval of a specific scaffold or type thereof. (b) Maintenance and inspection requirements. (1) The owner of the scaffold shall establish and maintain a log showing inspection and maintenance work performed on the scaffold. The maintenance schedule and log sheet, recorded on forms furnished by the commissioner, shall be available at the site for use by the commissioner or his authorized representative. (2) Prior to being put into operation on any day, the scaffold shall be subjected to a preliminary inspection and test to assure its safe condition. Results of this inspection shall be noted in the log. This inspection shall be performed by the foreman or other responsible person trained in the use and operation of the scaffold. (3) Upon discovery of any substantial defect or abnormal condition in the scaffold or any part thereof, the scaffold shall be placed out of operation until such time as the abnormality or defect has been corrected and the scaffold restored to its normal condition. (c) Suspended scaffolds - 75 feet or more. Every suspended scaffold so used including both manually or power operated types shall be approved if it is or is intended to be suspended from any point which has an elevation 75 feet or more above the nearest street or ground surface. (d) Suspended scaffolds - not exceeding 75 feet; lifelines. (1) Every scaffold including both manually and power operated types which is suspended or is intended to be suspended from any point not exceeding 75 feet in elevation above the nearest street or ground surface is required to be approved only in respect to any hoisting machine which may be used thereon, provided that all other components comply with Part (Rule No.) 23. A block and tackle is not construed to be a hoisting machine. Any part of such scaffold assembly and suspension which is not named or described in Part (Rule No.) 23 is required to be approved pursuant to section 23.26 of said Part (rule). (2) Each person working on such a suspended scaffold shall be provided with and shall use an approved safety belt. Each belt shall have its own lifeline, which shall consist of a hanging line and a tail line. The tail line shall be of minimum practical length and shall be attached to the hanging line by an approved special device to allow vertical adjustment of the point of attachment. The lifeline shall be securely attached to a sufficient anchorage. Exception: See section 23.30 of Industrial Code Part (Rule No.) 23.

The following chart contains extracts from Industrial Code Part (Rule No.) 23 that have a relationship with Part (Rule No.) 21.

PARAGRAPH REFERENCE	REQUIREMENT
23-1.16 Safety belts, harnesses, tail lines and lifelines	(a) Approval required. Safety belts, harnesses and all special devices for attachment to hanging lifelines shall be approved. (b) Attachment required. Every approved safety belt or harness provided or furnished to an employee for his personal safety shall be used by such employee in the performance of his work whenever required by this Part (rule) and whenever so directed by his employer. At all times during use such approved safety belt or harness shall be properly attached either to a securely anchored tail line, directly to a securely anchored hanging lifeline or to a tail line attached to a securely anchored hanging lifeline. Such attachments shall be so arranged that if the user should fall such fall shall not exceed five feet. (d) Lifelines. Any hanging lifeline required by this Part (rule) shall be not more than 300 feet in length from the point of suspension to grade, building setback or other surface. Every hanging lifeline shall be securely attached to a sufficient anchorage. (a) Outrigger beams. Outrigger beams shall extend not more than six feet beyond the face of the building or other structure. The inboard ends of outrigger beams, measured from the fulcrum points to the extreme inboard points of support, shall be not less than one and one-half times the outboard ends in length. (b) Inboard supports. The inboard ends of outrigger beams shall be securely supported either by means of struts bearing against the sills in contact with an overhead structure or by means of anchoring tension members such as U-bolts secured to the structural frame of the building or other structure.

23-5.8 All Suspension Scaffolds	(a) Inspection before installation. All load-carrying parts or components and means of suspension including adequacy of anchorage or support of every suspended scaffold shall be inspected before such scaffold is installed.
	
	(b) Suspension from roof hooks or irons. No parapet, curtain wall or similar portion of a building or other structure shall be used to support the roof hooks or irons of any suspended scaffold unless a professional engineer licensed to practice in the State of New York certifies that such parapet, curtain wall or similar portion of a building or other structure is adequate to support the loads intended to be imposed thereon. Such certification shall be kept on the job site available for examination by the commissioner.
	
	(c) Installation and use.
	
	    (1) The installation or horizontal change in position of every suspended scaffold shall be in charge of and under the direct supervision of a designated person.
	
	    (2) The horizontal displacement of any suspended scaffold platform in a direction perpen dicular to the face of a building or other structure by means of an applied horizontal force shall not exceed one-tenth of the vertical distance from the elevation of the scaffold platform to its point of suspension. Any person who applies such horizontal force to a scaffold platform while he is located on any portion of the building or other structure at a point more than 10 feet above the ground, grade or equivalent surface shall be provided with and shall use an approved safety belt with a lifeline in compliance with this Part (rule).

23-5.9 Two-point suspension scaffold	(c) Roof irons. Roof irons or hooks used in connection with two-point suspension scaffolds shall be constructed of mild steel or wrought iron and shall be securely anchored. They shall be provided with tie-backs of at least three-quarters inch manila rope so installed that the tension is at right angles to the face of the building or other structure. (e) Use of two-point suspension scaffolds. (2) Every person located on any two-point suspension scaffold shall be provided with and shall be required to use an approved safety belt or harness together with a separate hanging lifeline in compliance with this Part (rule). **END**

This document contains extracts from the Fall Protection and Scaffolding Regulations made under Section 82 of the Occupational Health and Safety Act (S.N.S. 1996, c. 7, O.I.C. 96-14, January 3, 1996, N.S. Reg. 2/96). The extracts pertain to fall protection anchorages.

PARAGRAPH REFERENCE	REQUIREMENT

Part II: Fall Protection Fall Protection Required	(1) Where a person is exposed to the hazard of falling from a work area that is
	
	(a) 3 m or more above the nearest safe surface or water;
	
	(b) above a surface or thing that could cause injury to the person upon contact; or
	
	(c) above an open tank, pit or vat containing hazardous material,
	
	    (i) the person shall wear a fall arrest system that includes a full body harness, a lanyard and an anchor point and that otherwise complies with Section 8,
	
	    (ii) a guardrail shall be provided that meets the requirements of Section 9,
	
	    (iii) a personnel safety net shall be provided that meets the requirements of Section 10,
	
	    (iv) temporary flooring shall be provided that meets the requirements of Section 14, or
	
	    (v) a means of fall protection shall be provided that provides a level of safety equal to or greater than a fall arrest system.
	
	(2) Despite subsection (1)
	
	(a) where a person is entering or exiting a work area by a safe means of access and egress, the requirements of subsection (1) do not apply; and
	
	(b) where work must be performed on or from a vehicle, rail car or other mobile equipment, fall protection is required only where and to the extent reasonably practicable;
	
	(c) where it would not be practical to perform work other than from a ladder and it is not practical for the worker to maintain three points of contact while performing the work, fall protection is required only where and to the extent practical; and
	
	(d) where density of tree branches prevents an arborist from crotching, fall protection is required only where and to the extent practical.
	
	(3) Where a person is exposed to the hazard of falling from a work area that is in a location other than those specified in clauses (1)(a), (b) or (c) and an officer determines that fall protection is required, fall protection shall be used.

PARAGRAPH REFERENCE	REQUIREMENT
Fall Arrest Systems	(1) A fall arrest system shall

(1) A fall arrest system shall

    (a) be adequately secured to

        (i) an anchor point, or

        (ii) a lifeline that is

        (A) securely fastened to an anchor point, or

        (B) attached to a static line that is securely fastened to an anchor point that is capable of withstanding either the maximum load likely to be imposed on the anchor point or a load of 17.8 kN, whichever is greater;

    (b) include a lanyard that

        (i) is attached to an anchor point or lifeline, where practicable, above the shoulder of the user, and

        (ii) complies with CSA Standard Z259.1-1995, "Fall Arresting Safety Belts and Lanyards for the Construction and Mining Industries";

    (c) prevent a free fall greater than 1.22 m where

        (i) the fall arrest system is not equipped with a shock absorption system that complies with CSA Standard Z259.11-M92, "Safety Belts and Lanyards", and that reduces the shock level of any fall to less than 4 kN; or

        (ii) the combined free fall and shock absorbed deceleration distance exceeds the distance between the work area and a safe surface; and

    (d) include a full body harness that

        (i) is attached to a lanyard,

        (ii) is adjusted to fit the user of the harness, and

        (iii) complies with CSA Standard Z259.10-M90, "Full Body Harnesses".

(2) A lifeline in a fall arrest system shall

    (d) be securely attached to an anchor point;
        (i) be used by no more than one person at a time;

(5) Each component of a fall arrest system, including each lifeline, shall be inspected by a competent person prior to each use to determine whether there are any defective, or otherwise unsafe components and if a defect is observed, no person shall use or permit the use of the system until the defective components are replaced or repaired.

(6) A fall arrest system that has arrested a fall shall

    (a) be removed from service and inspected by a competent person; and

    (b) be repaired to the original manufacturer's specifications or destroyed, when a defect is observed.

(7) A static line shall have a nominal diameter of at least 12.7 mm and shall

    (a) be equipped with vertical supports at least every 9 m;

    (b) have a maximum deflection, when taut, of no greater than 381 mm for a 9 m span;

    (c) be equipped with turnbuckles or other comparable tightening device that provides anequivalent level of protection, at the ends of the line;

    (d) be made of Improved Plow Wire Rope;

    (e) be equipped with softeners at all sharp edges or corners to protect against cuts or chafing; and

    (f) be made only of components that are able to withstand either the maximum load likely to be imposed on the components or a load of 8 kN, whichever is greater.

PARAGRAPH REFERENCE	REQUIREMENT
Roof Work	17 (1) Where work is being done from or near the edge of a roof that has a slope of less than 3/12 in circumstances described in subsection 7(1), fall protection shall be provided, in accordance with Section 7.
Suspended Scaffolds	(16) Any outrigger or parapet clamp used on a suspended scaffold shall be tied to an anchor point so as to prevent movement of the outrigger or clamp. 19) A fall arrest system, including a ropegrab and an independent life line, shall be used by all persons working on or from a suspended scaffold, and by all persons entering onto or leaving a suspended scaffold. (20) Despite subsection (19), where a suspended scaffold has more than one means of support on each side of the work platform, either of which would prevent collapse of the scaffold in the event of the failure of the other, a fall arrest system that is attached to an adequate anchor point on the platform may be used. (21) Despite subsection (19), where the suspended scaffold has more than one means of support on each side of the work platform, either of which would prevent displacement of the work platform and falls by persons on the work platform in the event of the failure of the other, persons need not use a fall arrest system. **END**

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
WCB OF BRITISH COLUMBIA, Part 11 Fall Protection Regulation (1997)

This document contains extracts from the Workers' Compensation Board of British Columbia Policy and Legislation, Part 11: Fall Protection/Occupational Health and Safety Regulation ('97). The extracts pertain to fall protection anchorages.

PARAGRAPH REFERENCE	REQUIREMENT

GENERAL REQUIREMENTS
 	
Obligation to use fall protection
	11.2
	
	(1) Unless elsewhere provided for in this Regulation, an employer must ensure that a fall protection system is used when work is being done at a place
	
	    (a) from which a fall of 3 m (10 ft) or more may occur, or
	
	    (b) where a fall from a lesser height involves an unusual risk of injury.
	
	(2) The employer must ensure that guardrails meeting the requirements of Part 4 (General Conditions) or other similar means of fall restraint are used when practicable.
	
	(3) If the use of guardrails or similar means of fall restraint is not practicable, the employer must ensure that another fall restraint system is used.
	
	(4) If the use of a fall restraint system is not practicable, the employer must ensure that a fall arrest system is used.
	
	11.3
	
	(1) The employer must have a written fall protection plan for a workplace if
	
	    (a) work is being done at a location where workers are not protected by permanent guardrails, and from which a fall of 7.5 m (25 ft) or more may occur,
	
	    (b) the employer uses a safety monitor and control zone or other work procedures as the means fall protection, or
	
	    (c) the board so directs, because a fall may involve an unusual risk of injury.
	
	(2) The fall protection plan must be available at the workplace before work with a risk of falling begins.
	
	(3) The plan must specify
	
	    (a) the fall hazards expected in each work area,
	
	    (b) the fall protection system or systems to be used in each area,
	
	    (c) the procedures to assemble, maintain, inspect, use and disassemble the fall protection system or systems, and
	
	    (d) the procedures for rescue of a worker who has fallen and is suspended by a personal fall protection system or safety net, but is unable to effect self rescue.

PARAGRAPH REFERENCE	REQUIREMENT
ANCHORS **General Requirements**	**11.13** (1) A lifeline, or a lanyard used without a lifeline, must be secured to an anchor. (2) An anchor plate with multiple attachment points designed to support combinations of suspension lines, tie-back lines and lifelines must be certified in writing by a professional engineer. (3) A temporary anchor must be removed upon completion of the work for which it was intended.

Fall Arrest Anchors	**11.15**
	
	In a fall arrest system, an anchor for a vertical lifeline or for a lanyard used without a lifeline must
	
	    (a) have an ultimate load capacity of at least 22 kN (5 000 lbs), in any direction required to resist a fall, and,
	
	    (b) if permanent, be certified in writing by a professional engineer as having the required load capacity.

VERTICAL LIFELINES **Free fall limits**	**11.22** (1) A personal fall arrest system without a shock absorber must limit the free fall of a worker to 1.2 m (4 ft). (2) A personal fall arrest system with a shock absorber may allow a free fall of up to 2 m (6.5 ft), or the limit specified in the manufacturer's instructions, whichever is less.
Swing-fall hazard	**11.23** A vertical lifeline must be installed and used in a manner that minimizes the swing-fall hazard.
Independent Anchorage	**11.24** Each vertical lifeline used for fall arrest must be secured to an independent point of anchorage.
Number of workers	**11.25** Only one worker may be attached to a vertical lifeline, unless the vertical lifeline is part of a ladder safety device.
Double line systems	**11.27** A double line system, where the lifeline and equipment suspension line are rigged through a common control descent device, must not be used unless the system and procedures for its use are acceptable to the board.

Permanent systems	**11.30**
	
	Before a permanent horizontal lifeline system is used the employer must ensure that a professional engineer supplies to the workplace a signed and dated drawing and instructions for the lifeline system showing
	
	    (a) the layout in plan and elevation, including anchor locations, installation specifications, anchor design and detailing,
	
	    (b) horizontal lifeline system specifications, including permissible free fall distance, clearance to obstructions below, and rope size, breaking strength, termination details and initial sag or tension,
	
	    (c) the number of workers permitted to connect to the lifeline, and maximum arrest force to each worker, and
	
	    (d) written certification that the lifeline system has been installed in accordance with the design documents.

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PARAGRAPH REFERENCE	REQUIREMENT

INSPECTION AND MAINTENANCE
 	
General Requirement
	11.31
	
	Safety belts, harnesses, lanyards, lifelines, connecting hardware, anchors and other similar devices must be
	
	    (a) inspected by a qualified person before use on each workshift,
	
	    (b) kept free from substances and conditions that could contribute to their deterioration, and
	
	    (c) maintained in good working order.

Suspended Scaffolds	**11.32**
	
	(1) A device or part that is defective in condition or function must be removed from service.
	
	(2) After a fall protection system has arrested the fall of a worker, it must
	
	    (a) be removed from service, and
	
	    (b) not be returned to service until it has been inspected and recertified as safe for use by the manufacturer or its authorized agent, or by a professional engineer.
	
	END

This document contains extracts from the "I-14" Standard, an American National Standard (ANSI), relating to fall protection anchorages. For complete data, refer to the actual standard.

The purpose of the Standard is to provide safety to window cleaners and to others, such as a passerby, where window cleaning operations are in progress, by specifying equipment with practical and adequate factors and features, and requiring safe use, design and maintenance of such equipment.
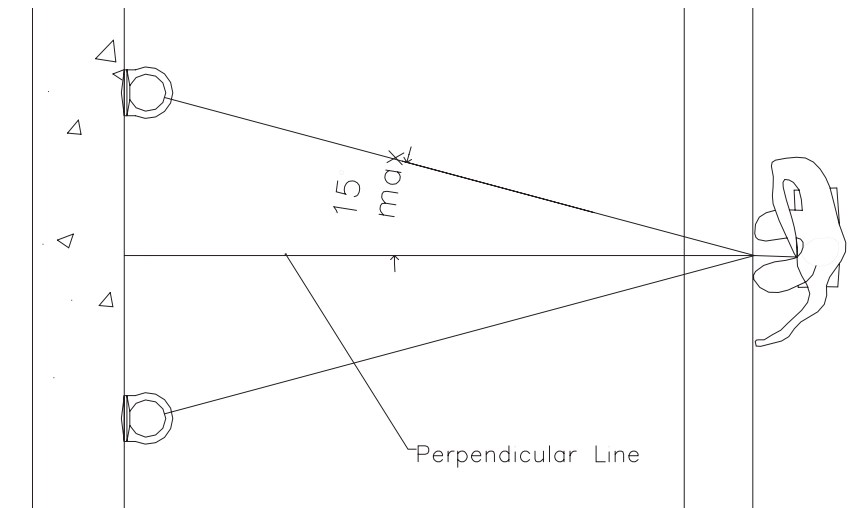
The Standard is also designed for reference by regulatory governmental agencies or to serve these agencies as a guide in the formation of safety rules and regulations and is for use by registered professional engineers and architects and by manufacturers of window cleaning equipment and devices.

PARAGRAPH REFERENCE	REQUIREMENT
Fall Protection 3.8	Fall protection, perimeter guarding, personal fall arrest systems or a personal fall restraint system (as applicable) shall be provided for all work areas (with the exception of working from a ladder supported at grade or using a window cleaner's belt and window cleaner's belt anchors) that expose a worker to a fall hazard when approaching within 6 feet (1800 mm) of an unguarded edge or unguarded skylight. The means or methods used shall comply with the requirements found in Section 9.2 of this Standard
Anchorages 3.9	Building owners and window cleaning contractors shall not allow suspended work to be performed unless it has been determined that the building has provided, identified and certified anchorages complying with Section 9 or 10 for: independent safety lines; tie-backs for outriggers, parapet clamps and cornice hooks; primary support anchorages for powered and manual boatswain's chairs; primary support anchorages for rope descent systems; horizontal (rope) lines or lifelines; and wherever else required
Building Requirements 7.1.1	All buildings where window cleaning is performed in accordance with Section 1.3 and employing suspended equipment shall be equipped with roof anchorages or other approved devices that will provide for safe use of the equipment in conformance with the provisions of this Standard.
7.1.2	Window cleaning performed that employs other methods than those complying with Section 4.1.1 shall have or utilize approved devices that will provide for safe working procedures in conformance with the provisions of this Standard.
7.1.6	Existing buildings without provisions for a window cleaning system may provide a combination of building supplied fall protection and anchorages plus window cleaning contractor supplied transportable equipment or a window cleaner's belt anchor system. Where such a decision is selected, roof anchorages, supporting fixtures, window cleaner's belt anchors and/or transportable equipment shall be designed, manufactured, installed, operated and maintained in accordance with applicable portions of Part B. Fall protection provisions shall comply with Section 9.2. Wind sway protection, where required, shall comply with Section 15.14.
Anchorages and Fall Protection 9.2.1	Anchorages shall be capable of sustaining a 5000 pound (2268 kg) minimum load or a minimum 4-to-1 safety factor, whichever is greater, in any direction that a load may be applied.
9.1.9	Anchorages shall be inspected annually by a qualified person. Anchorages shall be re-certified when re-roofing or renovating (pertinent to the window cleaning system) or at periods not to exceed 10 years. The report of this inspection shall be included in the building's log book. If during the anchorage's inspection an area of suspicion is identified, a test procedure, if necessary, shall be performed under the approval of a registered professional engineer.
9.1.10	Certification and re-certification of anchorages shall be under the supervision of a registered professional engineer.
9.1.11	A horizontal (rope) line may be used as an anchorage or may be a fundamental part of a fall arrest system. In all cases, horizontal lines shall be designed by or under the direct supervision of a registered professional engineer experienced in such designs.

PARAGRAPH REFERENCE	REQUIREMENT
Personal Fall Arrest System 9.2.2 (f) 9.2.2 (g)	Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists. Personal fall arrest systems, when stopping a fall shall: 1) limit maximum arresting force on an employee to 1800 pounds (8 kN) when used with a body harness; 2) be rigged such that an employee can neither free fall more than 6 feet (1800 mm), nor contact any lower level; 3) bring an employee to a complete stop and limit maximum deceleration travel distance of an employee to 42 inches (1067 mm); 4) have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet (1800 mm), or the free fall distance permitted by the system, whichever is less.
Boatswain Chair Roof Anchorages 13.2.1 13.2.2	When manual swinging scaffold and boatswain's chairs are used for window cleaning, building owners shall provide anchorages conforming to Sections 9 and 17 of this Standard. All anchorages shall be designed, installed and located under the supervision of a registered professional engineer. Window cleaners are not permitted to use anchorages for any other purpose that the one identified in the plan of maintenance for the building. An anchorage used for a personal fall arrest system shall be independent from the anchorage used for the suspension system. Fall arrest anchorages shall be provided by the building owner and comply with Sections 9 and 17 of this Standard.
Transportable Suspended Powered Platforms (single and multiple suspensions) 1.2.1 15.2.2	Occupants of powered platforms shall have means to prevent them from falling more than 6 feet (1800 mm) in the event one or more suspension point fails. When operating a platform suspended from a single point system with two wire rope support, means shall be provided for an independent vertical lifeline attached to a certified anchorage on the roof. When operating a platform suspended from a two point system with two wire rope support, means shall be provided for an independent vertical lifeline attached to a certified anchorage on the roof. When operating a platform suspended from a two point system with four rope support, means shall be provided for an independent vertical lifeline attached to a certified anchorage on the roof or to an engineered horizontal lifeline (dog line) structurally affixed to the work platform.
Ground Rigid Platforms 15.15.1 15.15.2	Ground rigged scaffolding may be suspended from roof support equipment (complying with Section 17), providing the height of suspension does not exceed 300 feet (91m) unless continuous engagement is employed to provide wind sway protection. Where suspension heights exceed 130 feet (40 m) and where rigging must be suspended by hand , mechanical means shall be provided for raising and lowering lines (wire rope, fiber and cable) when the entire line's weight exceeds 55 pounds (25 kg).
Single Point Suspended Working Platforms 15.16	In addition to complying with all applicable provisions of Section 15, powered, single point suspended working platforms shall be equipped with a secondary wire rope separate from the suspension rope which will prohibit the work platform from falling should there be a failure of the primary means of support. Except for powered cages with an overhead obstruction, the operator shall be either secured to the work platform by a full body harness and lanyard or to an independent vertical lifeline.

PARAGRAPH REFERENCE	REQUIREMENT
(Note: Powered Boatswain's Chairs similar) **Roof Support Equipments** 17.1.4	Horizontal lines constructed of wire rope are permissible for use as a tie-back provided: a) the line(s) is (are) permanently left in place; b) they are attached to certified anchorages, excluding parapet clamps; c) its wire rope and wire rope end attachments comply with Section.9.1.1; d) the wire is inspected prior to each use in accordance with Section 9.1.9.
Davits and Davit Fixtures 17.2.1	Davits may be used to support window cleaning activities providing they are no used within 10 feet (3 m) of high-voltage lines and: a) the davit is designed by a registered professional engineer; b) the davit has a stability factor of at least 4 to 1 against overturning. Each davit shall be designed to support an ultimate load of not less than 4 times the rated load (based upon the rated load of the hoist when supporting a powered access platform); c) the davit has a load rating plate permanently affixed to it stating the davits weight, the manufacturer's name, date of manufacture and maximum allowable load and that the working load is not to be exceeded during its use; d) the suspension rope (s) shall be attached to the davit with a safety hook or screw pin shackle; e) the davit is not craned to the roof level where it is to be used; f) the davit's butt or base fixture mates to the building's socket; g) means are provided to lock the davit to its socket or base before it is used to suspend the platform; h) the roof socket meets all requirements of Section 17.3: i) the davit weighs less than 80 pounds (36.2 kg) or is equipped with wheels.
17.2.2	Portable davits shall not have an arm reach exceeding eight (8) foot, six (6) inches (2.6 m) measured from the primary rope support to the centerline of the davits' mast.

Sockets
17.3.1
	Roof or parapet mounted sockets may be used to support portable davits providing:
	
	a) the socket has a load rating plate and that the load is not exceeded;
	
	b) the socket allows for the davit to be tipped down for insertion of the davit butt into the socket and the angle of tip down shall not exceed a maximum of 15 degrees above the horizon;
	
	c) if the direction of tip down is parallel to the parapet, provisions shall be provided so as to prohibit the davit from being accidentally dropped over the side of the building;
	
	d) any parapet exceeding six feet in height, to which a socket is mounted, shall provide means for the:
	
	    1) safe access of personnel to rig the tip of the davit;
	
	    2) davit erection;
	
	    3) rotation of the davit arm is necessary for the specific application;
	
	    4) safe boarding of the suspended unit.

17.3.2	When portable sockets are used they shall: a) be designed to be used with the davit and the roof fixture to which it mates; b) be fitted with wheels to allow ready movement from pedestal to pedestal; c) not require lifting to mate with the pedestal; d) shall have a pedestal pin attachment connection or positive locking pin connection to the pedestal; e) socket/pedestal connections requiring bolts or other threaded fasteners shall not be used.

PARAGRAPH REFERENCE	REQUIREMENT

Counterweight Outriggers 17.5.1	Transportable, counterweighted outriggers may be used to support ground rigged window cleaning activities and RDS, providing:
	
	 a) the outrigger is designed by a registered professional engineer;
	
	 b) the outrigger has a stability factor of four against overturning or upsetting of the outrigger. Each outrigger shall be designed to support an ultimate load of not less than 4 times the rated load (based upon the rated load of the hoist when supporting a pow ered access platform). The fulcrum point of the beam shall rest on leg(s) or equivalent supports securely attached to the beam and so arranged as to prevent lateral overturning of the beam. Each outrigger shall be designed for lateral stability to prevent rollover in the event an accidental lateral load is applied to the outrigger. The accidental lateral load to be considered in this design shall not be less than 15% of the rated load;
	
	 c) the inboard end of outrigger beams, measured from the fulcrum point to the anchorage point, shall be not less than 1-½ times the outboard end in length;
	
	 d) solid counterweights are secured to the inboard end of the outrigger;
	
	 e) the outrigger has a load rating plate permanently affixed to it and readily visible, bearing the following information in letters at least ¼ inch (6.4 mm) in height:
	
	     1) the beam's rated load;
	
	     2) manufacturer's name;
	
	     3) precautionary warning message prohibiting use of the beam within 10 feet of high voltage lines:
	
	 f) the suspension rope(s) shall be attached to the outrigger with a safety hook or screw pin shackle;
	
	 g) the outrigger is not craned to the roof level where it is to be used;
	
	 h) each outrigger shall be tied back to a certified anchorage on the building with a wire rope equivalent in strength to the suspension rope, but in no case less than 5/16 inch (8mm) in diameter. The tie-back rope shall be installed parallel to the center line (longitudinal axis) of the outrigger. All tie-down fittings at the inboard end of the beam shall be of a type that vibration effects shall not produce accidental disengagement. Safety hooks for beam tie-down shall not be used.
	
	 i) the outrigger shall be so located that the suspension wires for a two point suspended working platform are hung parallel and any portion of the outrigger or its counter weights weighing more than 80 pounds (36 kg) shall be equipped with a stable means for its transport

Parapet Clamps and Cornice Hooks 17.6.1 (f)	Each clamp/hook shall be tied back to a certified anchorage on the building with rope equivalent in strength to the suspension rope but in no case less than 5/16 inch (8 mm) in diameter. The tie-back rope shall be installed parallel to the center line (longitudinal axis) of the clamp/hook
Overhead Monorail Tracks and Trolleys 17.7.1	Transportable trolleys may be used on overhead tracks permanently affixed to the building to support window cleaning activities providing: a) the monorail tracks have end stops and the system is equipped with independent trolleys from which the operator's vertical lifeline is suspended; b) the primary support trolley(s) and the safety line trolley(s) are designed by a registered professional engineer and has a stability factor of at least 4 to 1 against the causation of structural damage to its supporting track. Each trolley and its supporting track struc ture shall be designed to support an ultimate load of not less than 4 times the rated load (based upon the rated load of the hoist when supporting a powered access plat form) plus the safety line load for each operator suspended from the track; c) the trolley's wheel diameter and wheel gauge have been verified by a registered professional engineer for specific use on the monorail beam and the beam will safely support the loads applied; d) the trolley system is designed in accordance with ASME A120.1; e) the trolley and track are inspected and tested in strict accordance with Section 8 of this Standard.

PARAGRAPH REFERENCE	REQUIREMENT
Appendix C - Anchor Placement for Working Lines, Lifelines and Tie-Back Lines	NOTE: These appendices are intended to be used only as a reference or guideline and are not to be considered a part of the ANSI/IWCA I-14.1 Window Cleaning Safety Standard.
	The following recommendations are a guideline for the placement and installation of permanent anchorages on buildings where workers will be using suspended access equipment to perform window cleaning. The ANSI/IWCA I-14.1 Standard presently requires that working lines, lifelines and tie back lines be anchored either in line with the suspended worker or within 15 degrees of perpendicular.
New Construction	Newly constructed buildings compliance with the requirement of "in line" is easily done during the design phase of the building. Anchors should be placed in line to the work area so as to prevent displacement of lines under load and/or a fall greater than 6 feet (1800 mm). Placement of anchors shall not be within 6 feet (1800 mm) of the roof edge unless fall protection is provided to access those anchors safely. In no case should anchor spacing exceed 12 feet (3.6 m). In essence, the risk to the worker is greatly reduced by placing the anchors further back from the roof edge. (12 feet [3.6 m] to 50 feet [15.2 m]).
Existing Buildings	The installation or identification of anchorages on existing buildings will vary from that of new buildings. Existing buildings can present obstacles that will prevent ideal anchor placement. However, the safety of the worker(s) shall be of utmost importance when designing an anchor system to be installed on an existing building in compliance with Section 14.6. Ideally, anchors are to be placed in line with the suspended worker(s). Where this is impracticable, anchors may be offset no more than 15 degrees from in line (perpendicular) provided displacement of the rope under load can be prevented. (see Fig. AP-1)

Fig. AP-1 Suggested Anchor Placement

Perpendicular Line

As with new construction, placement of anchors shall not be within 6 feet (1800 mm) of the roof edges unless fall protection is provided to access those anchors safely. In no case should anchor spacing exceed 12 feet (3.6 m). As stated for new buildings, the risk to the worker(s) is greatly reduced by placing the anchors further back from the roof edge. (12 feet [3.6 m] to 50 feet [15.2 m]).

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**CSA-Z259.13-04
(Flexible Horizontal
Lifeline Systems)**

This document contains extracts from the CSA-Z259.13-04. Standard relating to horizontal lifeline fall protection systems. This is the first edition of CSA Z259.13, Flexible horizontal lifeline systems. It is part of the Z259 series of Standards for components of personal fall-arrest systems.

The purpose of this Standard is to specify requirements related to the performance, design, testing, labeling, and provision of instructions for every element of flexible horizontal lifeline systems, including every element of the system from anchorage connector to anchorage connector, it does not, however, cover anchorages or anchor design.

This Standard was prepared by the Technical Committee on Fall Protection, under the Jurisdiction of the Strategic Steering Committee on Occupational Health and Safety, and has been formally approved by the Technical Committee. It will be submitted to the Standards Council of Canada for approval as a National Standard of Canada.

PARAGRAPH REFERENCE	REQUIREMENT
FScope 1.1	This Standard specifies requirements related to the performance, design, testing, labeling, and provision of instructions for pre-engineered flexible horizontal lifeline systems (FHLSs) for the attachment of personal protective equipment for protection against falls from a height. These systems are used for arresting falls and may be used for work positioning and travel restraint.
Minimum Strength Requirement 4.4	The minimum strength of a newly assembled FHLS shall be at least twice the anticipated MAL when the system is installed and used in accordance with the manufacturer's instructions. The minimum strength shall be verified by the test procedures described in Clause 7.3.An FHLS should not be used under conditions that could diminish the strength of the system, such as with worn, broken, missing, altered, or corroded components, or after the system has arrested a fall or been exposed to the forces equivalent to those created by arresting a fall.
End Anchorage Strength Requirement 4.5	The manufacturer of an FHLS shall provide data on maximum arrest loads (MALs) to enable the certification organization to accurately assess the minimum strength requirements for the end anchorages. Each end anchorage shall be rated at a minimum strength at least twice the MAL in the direction of intended loading when the FHLS is installed and used in accordance with the manufacturer's instructions.
Minimum Clearance Requirement 4.6	An FHLS shall be designed, tested, and installed in a manner that will provide adequate clearance in the potential path of a fall for those foreseeable conditions of use intended by the manufacturer of the system. FHLS manufacturers shall give FHLS owners data that is sufficient for accurately assessing the minimum clearance required for each FHLS configuration when the system is installed and used in accordance with the manufacturer's instructions (including a safety margin of 1 m (3.3 ft or more).
Wire Rope Lines 4.6	The minimum breaking strength of a terminated wire rope shall be at least twice the MAL but not less than 28.9 kN (6500 lbf). The minimum rope diameter shall be 8 mm (5/16 in). Wire rope lines shall comply with CSA G4.

PARAGRAPH REFERENCE	REQUIREMENT
In-Line Fittings 5.2.4	The minimum breaking strength of all in-line fittings shall be at least twice the MAL but not less than 22.2 kN (5000 lbf). Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists.
Horizontal Life Energy Absorbers 5.2.5.1	The minimum breaking strength of a horizontal lifeline energy absorber at maximum extension shall be at least twice the MAL but not less than 22.2 kN (5000 lbf).
Intermediate Anchorage Connectors 5.3.2	Every intermediate anchorage connector and its related hardware shall be designed to (a) allow the line to pass through the connector aperture; and (b) resist and transfer to the intermediate anchorage a minimum load of 4.0 kN (900 lbf) for each worker permitted on the system, but not less than 16.0 kN (3600 lbf) in all potential directions of loading.
Mobile Attachment Devices 5.5	Mobile attachment devices shall (a) be capable of resisting a static force of 16.0 kN (3600 lbf): and b) be either (i) impossible for workers to remove from the lifeline: or (ii) removable only by two consecutive deliberate actions. The manufacturer shall supply specific instructions for the inspection of all the wear elements of the mobile attachment device. Pulleys, snap hooks, and carabiners should be selected for both the suitability of the material from which they are made and the thickness of material to resist wear from frequent travelling along the lifeline. The finish on these devices should be such as not to damage the line or fittings. The instructions for systems installed by the manufacturer or by an installer authorized by the manufacturer shall contain the same information as is provided for systems supplied in kit form, except that a bill of material shall be supplied in place of a complete list of kit components
Instructions 8.3.1	Essentially, clear instructions in both English and French shall be supplied. The following shall be included in the instructions: (a) the required end anchorage strength and stiffness; (b) the required intermediate anchorage strength and stiffness; (c) the recommended height above the platform for installation of the horizontal lifeline; (d) a method for determining the configurations in which the system may be used; (e) a method for determining, setting, adjusting, and checking the specified line tension; (f) a method for determining the required minimum clearances; (g) the maximum number of workers allowed to be on the system at one time, and where they shall be positioned on the system (this is especially important in cases where the number of allowable workers on the same span is different from the total recommended number of workers); (h) the specifications of the appropriate connecting subsystems; (i) instructions for workers for maintaining continuous attachment to the system (including an instruction that mobile attachment devices should be removed from the lifeline only in a safe area such as an entry/exit point); (j) appropriate warnings concerning environments that pose a hazard, as well as guidelines for selecting environments that are suitable for use; (k) a warning that if a fall occurs or an inspection reveals an unsafe condition, the system is to be taken out of service until an inspector authorized by the manufacturer or the manufacturer's representative can determine whether the system is safe for continued use; (l) the recommended maintenance and inspection procedure; (m) a warning that only suitably trained people should be allowed to use the system; (n) a warning against alterations or additions to the system without the manufacturer's prior written consent; (o) a complete list of the contents of the system provided by the manufacturer at the time of sale; (p) a warning to inspect the system before each use; and (q) a recommendation that a plan be put in place and the means be at hand for prompt rescue of workers following a fall arrest occurrence, including any use of the FHLS in effecting the rescue.

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PARAGRAPH REFERENCE	REQUIREMENT
Labeling 8.2.2	The labeling for systems installed by the manufacturer or by an installer authorized by the manufacturer shall contain the same information as is provided for systems in kit form, except that the name, address, and telephone number of the installer shall be supplied in addition to the name, address, and telephone number of the manufacturer.

Essentially the following information, in both English and French, shall be indelibly marked on labels permanently attached at the intended entry points or at one end of the lifeline:

(a) the manufacturer's name, address, and telephone number;

(b) the year of manufacture;

(c) the serial number, if applicable;

(d) the mark of a certification organization accredited by the Standards Council of Canada indicating that the system conforms to this Standard;

(e) the required end anchorage strength;

(f) the required intermediate anchorage strength;

(g) a method for determining the required minimum clearances;

(h) the maximum number of workers allowed to be on the system at one time, and where they shall be positioned on the system;

(i) the specifications of the appropriate connecting subsystems;

(j) appropriate warnings concerning environments that pose a hazard, as well as guidelines for selecting environments that are suitable for use;

(k) a warning that if a fall occurs or an inspection reveals an unsafe condition, the system is to be taken out of service until an inspection authorized by the manufacturer or the manu facturer's representative can determine whether the system is safe for continued use;

(l) the recommended maintenance and inspection procedure;

(m) a warning that only suitably trained workers should be allowed to use the system;

(n) a warning against alterations or additions to the system without the manufacturer's prior written consent;

(o) a warning to inspect the system before each use;

(p) the permissible direction of loading on the system; and

(q) a recommendation that a plan be put in place and the means be at hand for prompt rescue of workers following a fall arrest occurrence, including any use of the FHLS in effecting the rescue.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
ONTARIO BUILDING CODE, 1997 (Anchor System on Building Exterior)

This document contains extracts from the OBC relating to anchor system used for fall protection when performing exterior building maintenance or window cleaning operations.

PARAGRAPH REFERENCE	REQUIREMENT
Anchor System on Building Exterior 4.1.10.8	(1) Where maintenance and window cleaning operations are intended to be carried out on the exterior of a building described in Article 2.1.1.2, anchor systems shall be provided where any portion of the roof is more than 8 m (26 ft 3 in) above adjacent ground level.
	(2) Except as provided in Sentence (3), the anchor system in Sentence (1) shall be designed, installed and tested in conformance with CSA Standard Z91, "Safety Code for Window Cleaning Operations".
	(3) Other anchor systems may be used where such systems provide an equal level of safety
	(4) The anchor system material shall be made of stainless steel, aluminum, or other corrosoin resistant base material, or from steel that is hot dipped galvanized, in accordance with CSA Standard G164-M81, "Hot Dip Galvanizing of Irregularly Shaped Articles".

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ROOF SPECIALTIES
**FALL ARREST
ROOF ANCHORS, ETC**
SPECIFICATION

Note: This fall arrest roof anchors specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part of a roofing specification in regions where this feature is desired.

PART 1: GENERAL

1.01   SECTION INCLUDES

A. Supply and installation of roof accessories, including:
1. Roof anchors
2. Wall anchors
3. Davit beams and bases
4. Outrigger arms and bases
5. Monorails

1.02   RELATED SECTIONS

A. Section 03300 - Cast-in-Place Concrete

B. Section 05210 - Steel Joists

C. Section 05300 - Metal Deck

D. Section 06100 - Rough Carpentry

E. Section 07200 - Thermal Protection

F. Section 07500 - Membrane Roofing

G. Section 07900 - Joint Sealers

1.03   REFERENCES

A. The work of this Section to conform to:

Canadian

1.   National Standards of Canada

A. CAN/CSA-Z91-02 (Safety Code for Window Cleaning Operations).

B. CAN/CSA- Z271-98 (Safety Code for Suspended Elevating Platforms).

2.   Canadian Standards Association

A. CSA G40.21-M1987, M350W and M300W (Structural Quality Steels).

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ROOF SPECIALTIES
**FALL ARREST
ROOF ANCHORS**
SPECIFICATION

1. "Fixed Eye" Roof Anchors (Bolt-Through), Non-Standard Height

Fall arrest roof anchors: Thaler [FARA-1NS with galvanized forged 1018 steel eye] [FAR11NS with Type 304 stainless steel forged eye] [FARA-11UNS with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 14" and up (356 mm) high welded to 3/4" x 8" x 8" (19 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut and washer, and Type 304 s.s. 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) underdeck plate, lock washer and nut; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum][.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. A. 1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-11SS with Type 304 stainless steel forged eye] [FARA-11USS with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow s.s. type 304 steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) s.s. type 304 base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut and washer, and type SJ-34(9), 9" (229 mm) 304 s.s. 1/4" x 4" x 4" (6 mm x 102 x 102 x mm) under deck plate, lock washer and nut; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of .018" (0.46 mm) Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and base seal and [PVC coated deck flange] [bituminous painted deck flange].

"Fixed Eye" Roof Anchors (Adhesive Bolt)

B. Fall arrest roof anchors: Thaler [FARA-2 with galvanized forged 1018 steel eye] [FARA-12 with Type 304 stainless steel forged eye] [FARA-12U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. B. 1. for all stainless steel anchor.

1. Fall arrest roof anchor: Thaler [FARA-12SS with type 304 stainless steel forged eye] [FARA-12USS with type 304 stainless steel U bolt] roof anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow type 304 s.s. post 1/4" (6 mm) wall thickness x 4-1/2" (114) dia. x 12" (305) high welded to 5/8" x 8" x 8" (16 mm x 203 x 203 mm) Type 304 s.s. base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing .018" (0.46 mm) type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

"Fixed Eye" Roof Anchors (Bolt Around Beam)

C. Fall arrest roof anchors: Thaler [FARA-3 with galvanized forged 1018 steel eye] [FARA-13 with Type 304 stainless steel forged eye] [FARA-13U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate: four 5/8" (16 mm) Type 304 s.s. bolts and 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) under-beam

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

1. Fall arrest roof anchors: Thaler [FARA-13SS with Type 304 stainless steel forged eye] [FARA-13USS with stainless steel U bolt] roof anchor to [CSA 1910.66, Sub parts D and F] with; urethane insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) Type 304 s.s. base plate; four 5/8" (16 m mm) Type 304 s.s. bolts and 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) under-beam s.s. plate; SJ-37(9), 9" (229 mm) high New-Standard STACK JACK flashing .018" (0.46 mm) type 304 stainless steel to CSA B27293, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange].

"Fixed Eye" Roof Anchors (Weldable)
D. Fall arrest roof anchors: Thaler [FARA-4 with galvanized forged 1018 steel eye] [FARA-14 with Type 304 stainless steel forged eye] [FARA-14U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 5" x 5" (16 mm x 127 mm x 127 mm) 44W base plate; SJ-37(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. D.1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-14SS with Type 304 stainless steel forged eye] [FARA-14USS with stainless steel U bolt] roof anchor to [CSA 1910.66, Sub parts D and F] with; urethane insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114) dia. x 12" (305 mm) high welded to 5/8" x 5" x 5" (16 mm x 127 mm x 127 mm) Type 304 s.s. base plate; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing .018" (0.46 mm) type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

"Fixed Eye" Roof Anchors (Cast-In-Place)
E. Fall arrest roof anchors: Thaler [FARA-5 with galvanized forged 1018 steel eye] [FARA-15 with Type 304 stainless steel forged eye] [FARA-15U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. anchor bolt with EPDM weather seal, top nut and washer; SJ-34(9), 9" (229 mm) high New- Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

"Fixed Eye Roof Anchors (Cast-In-Place), Non-Standard Height
1. Fall arrest roof anchors: Thaler [FARA-5NS with galvanized forged 1018 steel eye] [FARA-15NS with Type 304 stainless steel forged eye] [FARA-15UNS with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped gavanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 14"

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"Fixed Eye" Roof Anchors (Pre-cast Core Bolt)

G. Fall arrest roof anchors: Thaler [FARA-7 with galvanized forged 1018 steel eye] [FARA-17 with Type 304 stainless steel forged eye] [FARA-17U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 10" x 10" (16 mm x 254 mm x 254 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut and washer; galvanized 5/8" x 4" x 12" (16 mm x 102 mm x 305 mm) core slab plate, lock washer and nut; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. G. 1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-17SS with Type 304 stainless steel forged eye] [FARA-17USS with stainless steel U bolt] roof anchor to [CSA 1910.66, Sub parts D and F] with; urethane insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114) dia. x 12" (305 mm) high welded to 5/8" x 10" x 10" (16 mm x 254 mm x 254 mm) Type 304 s.s. base plate SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing .018" (0.46 mm) type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange].

"Swivel Eye" Roof Anchors (Bolt Through)

H. Fall arrest roof anchors: Thaler [FARA-31 with galvanized forged 1018 steel eye] [FARA-41 with Type 304 stainless steel forged eye] [FARA-41U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 s.s. cap assembly to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt with: EPDM weather seal, top nut, washer, s.s. cotter pin; Type 304 s.s. 1/4" x 4" x 4" (6 mm x 102 mm x102 mm) underdeck plate, lock washer and nut; manufacturer's standard flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum][.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange [bituminous painted deck flange].

Note: Specify 2. 02. H. 1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-41SS with Type 304 stainless steel forged eye] [FARA-41USS with stainless steel U bolt] roof anchor to [CSA 1910.66, Sub parts D and F] with; urethane insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) Type 304 s.s. base plate SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing .018" (0.46 mm) type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange].

"Swivel Eye" Roof Anchors (Adhesive Bolt)

I. Fall arrest roof anchors: Thaler [FARA-32 with galvanized forged 1018 steel eye] [FARA-42 with Type 304 stainless steel forged eye] [FARA-42U with Type 304 stainless steel U bolt] roof anchor with Type 304 s.s. cap assembly to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); manufacturer's standard flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange].

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Note: Specify 2. 02. I. 1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-42SS with Type 304 stainless steel forged eye] [FARA-42USS with stainless steel U bolt] roof anchor with Type 304 s.s. cap assembly to [CSA Z91-M90][OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) Type 304 s.s. base plate; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of .031" (0.79 mm) 22 ga. Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

"Swivel Eye" Roof Anchors (Bolt Around Beam)
J. Fall arrest roof anchors: Thaler [FARA-33 with galvanized forged 1018 steel eye] [FARA-43 with Type 304 stainless steel forged eye] [FARA-43U with Type 304 stainless steel U bolt] roof anchor with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; four 5/8" (16 mm) Type 304 s.s. bolts, 5/8" x 8" x 8" (16 mm x 203 x 203 mm) under-beam steel plate, lock washers and nuts; SJ-37 (9) 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. J. 1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-43SS with Type 304 stainless steel forged eye] [FARA-43USS with stainless steel U bolt] roof anchor to [CSA 1910.66, Sub parts D and F] withType 304 s.s. cap assembly to [CSA Z91-02][OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; insu; urethane insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) Type 304 s.s. base plate; four 5/8" (16 mm) Type 304 s.s. bolts; 5/8" x 8" x 8" (16 mm x 203 x 203 mm) under-beam stainless steel plate, lock washers and nuts; SJ-37(9), 9" (229 mm) high New-Standard STACK JACK flashing .031" (0.79 mm) 22 ga. Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange].

"Swivel Eye" Roof Anchors (Weldable)
K. Fall arrest roof anchors: Thaler [FARA-34 with galvanized forged 1018 steel eye] [FARA-44 with Type 304 stainless steel forged eye] [FARA-44U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 5" x 5" (16 mm x 127 mm x 127 mm) 44W base plate; SJ-37 (9) 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper][.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. K. 1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-44SS with Type 304 stainless steel forged eye] [FARA-44USS with stainless steel U bolt] roof anchor to [CSA 1910.66, Sub parts D and F] with Type 304 s.s. cap assembly to [CSA Z91-02][OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114) dia. x 12" (305 mm) high welded to 5/8" x 5" x 5" (16 mm x 127 mm x 127 mm) Type 304 s.s. base plate SJ-37(9), 9" (229 mm) high New-Standard STACK JACK flashing .031" (0.79 mm) 22 ga. Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

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"Swivel Eye" Roof Anchors (Cast-In-Place)

L. Fall arrest roof anchors: Thaler [FARA-35 with galvanized forged 1018 steel eye] [FARA-45 with Type 304 stainless steel forged eye] [FARA-45U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt ; manufacturer's standard SJ-34 (9) flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. L.1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-45SS with Type 304 stainless steel forged eye] [FARA-45USS with stainless steel U bolt] roof anchor to [CSA 1910.66, Sub parts D and F] with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) Type 304 s.s. base plate; single 1" (25 mm) Type 304 s.s. bolt; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing .031" (0.79 mm) 22 ga. Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

"Swivel Eye" Roof Anchors (Bolt Around OWSJ)

M. Fall arrest roof anchors: Thaler [FARA-36 with galvanized forged 1018 steel eye] [FARA-46 with Type 304 stainless steel forged eye] [FARA-46U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 s.s. cap assembly to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate; 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) under-joist steel plate and 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) HSS crosstube assembly; four 5/8" (16 mm) Type 304 s.s. bolts with lock washers and nuts; manufacturer's standard flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper][.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. M.1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-46SS with Type 304 stainless steel forged eye] [FARA-46USS with stainless steel U bolt] roof anchor to [CSA 1910.66, Sub parts D and F] with ; with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) Type 304 s.s. base plate; 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) under-joist Type 304 s.s. plate and 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) HSS crosstube assembly; four 5/8" (16 mm) Type 304 s.s. bolts with lock washers and nuts; SJ-37(9), 9" (229 mm) high New-Standard STACK JACK flashing .031" (0.79 mm) 22 ga. Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange]. (HSS)

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ROOF SPECIALTIES
**FALL ARREST
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SPECIFICATION

"Swivel Eye" Roof Anchors (Pre-Cast Core Bolt)

N. Fall arrest wall anchors: Thaler [FARA-37 with galvanized forged 1018 steel eye][FARA-47 with Type 304 stainless steel forged eye][FARA-47U with Type 304 stainless steel U bolt] roof anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 10" x 10" (16 mm x 254 mm x 254 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut, washer and s.s. cotter pin; galvanized 5/8" x 4" x 12" (16 mm x 102 mm x305 mm) core slab plate, lock washer and nut; manufacturer's standard flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.021" (0.53 mm) 16 oz. copper] [.018" (0.46 mm) Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. N.1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-47SS with Type 304 stainless steel forged eye] [FARA-47USS with stainless steel U bolt] roof anchor to [CSA 1910.66, Sub parts D and F] with; urethane insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 10" x 10" (16 mm x 254 mm x 254 mm) Type 304 s.s. base plate; single 1" (25 mm) Type 304 s.s. bolt with EPDM weather seal, top nut, washer and s.s. cotter pin; s.s. Type 304 5/8" x 4" x 12" (16 mm x 102 mm x305 mm) core slab plate, lock washer and nut; SJ-34(9), 9" (229 mm) high New-Standard STACKJACK flashing .018" (0.46 mm) Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Wall Anchors (Bolt Through)

O. Fall arrest wall anchors: Thaler [FARA-81 with galvanized forged 1018 steel eye] [FARA-91 with Type 304 stainless steel forged eye] [FARA-91U with Type 304 stainless steel U bolt] wall anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with single 3/4" (19 mm) dia. s.s. bolt, lock washer, nut and 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) s.s. Type 304 back up plate.

Wall Anchors (Cast-In-Place)

P. Fall arrest wall anchors: Thaler [FARA-82 with galvanized forged 1018 steel eye] [FARA-92 with Type 304 stainless steel forged eye] [FARA-92U with Type 304 stainless steel U bolt] wall anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with single 3/4" (19 mm) dia. cast-in-place s.s. anchor bolt with lock washer and nut.

Wall Anchors (Adhesive Bolt)

Q. Fall arrest wall anchors: Thaler [FARA-83 with galvanized forged 1018 steel eye] [FARA-93 with Type 304 stainless steel forged eye] [FARA-93U with Type 304 stainless steel U bolt] wall anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W galv. base plate.

Note: Specify 2. 02. Q.1. for all stainless steel anchor

1. Fall arrest wall anchors: Thaler [FARA-93SS with Type 304 stainless steel forged eye] [FARA-93USS with Type 304 stainless steel U bolt eye] wall anchor to [CSA 1910.66, Sub parts D and F] welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) Type 304 s.s. base plate.

Wall Anchors (Cladding Bolt)

R. Fall arrest wall anchors: Thaler [FARA-84 with galvanized forged 1018 steel eye] [FARA-94 with Type 304 stainless steel forged eye] [FARA-94U with Type 304 stainless steel U bolt] wall anchor to [CSA Z91-M90] [OSHA 1910.66, Sub parts D and F] with single 3/4" (19 mm) dia. s.s. bolt and EPDM washer seal, ASMT 500C HSS cladding spacer 1/4" x 4-1/2" (6 mm x 114 mm), 1/4" x 4" x 4" (16 mm x 102 mm x102 mm) s.s. back up plate, lock washer and nut.

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Note: Specify 2. 02. R. 1. for all stainless steel anchor.

1. Fall arrest wall anchors: Thaler [FARA-94SS with Type 304 stainless steel forged eye] [FARA-94USS with Type 304 stainless steel U bolt eye] wall anchor to [CSA Z91-02] [OSHA 1910.66, [Sub parts D and F] with single 3/4" (19 mm) dia. s.s.bolt and EPDM washer seal, s.s. cladding spacer HSS 1/4" x 4-1/2"; 1/4" x4" x 4" (6 mm x 102 mm x 102 mm) s.s. back up plate, lock washer and nut.

Wall Anchors (Pier Bolt)
S. Fall arrest wall anchors: Thaler [FARA-85 with galvanized forged 1018 steel eye] [FARA-95 with Type 304 stainless steel forged eye] [FARA-95U with Type 304 stainless steel U bolt] wall anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with single 3/4" (19 mm) s.s. pier bolt and s.s. 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) s.s. back up plate; 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) galv. ASTM 500C HSS pier welded to a 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) galv. 44W base plate prepared to receive four 5/8" (16 mm) anchor bolts (by others).

Note: Specify 2. 02. S. 1. for all stainless steel anchor.

1. Fall arrest wall anchors: Thaler [FARA-95SS with Type 304 stainless steel forged eye] [FARA-95USS with Type 304 stainless steel U bolt eye] wall anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with single 3/4" (19 mm) s.s pier bolt and s.s. 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) Type 304 s.s. back up plate; 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) Type 304 s.s. HSS pier welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) Type 304 s.s. base plate prepared to receive four 5/8" (16 mm) anchor bolts (by others).

"Swivel Eye" Terrace Anchor (Adhesive Bolt)
Fall arrest terrace anchors: Thaler FARA-96 anchor with 1/4" (6 mm) Type 304 stainless steel swivel plate eye to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: hot dip galvanized hollow ASTM 500C steel low post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); two EPDM washer seals; 22 ga. x 11-1/2" x 11-1/2" (0.76 mm x 292 mm x 292 mm) perforated Type 304 s.s. enclosure box with solid 1/8" x 12" x 12" (3 mm x 305 mm x305 mm) s.s. pan formed cover; 22 ga. x 17-1/2" (0.76 mm x 445 mm) dia. s.s. flashing disc.

Note: Specify 2. 02. T. 1. for all stainless steel anchor.

1. Fall arrest terrace anchors: Thaler FARA-96SS anchor with 1/4" (6 mm) Type 304 stainless steel swivel plate eye to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: hollow type 304 s.s.low post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) Type 304 s.s.base plate prepared to receive four 5/8" (16 mm) dia.adhesive anchor bolts (by others); two EPDM washer seals; 22 ga. x 11-1/2" x 11-1/2" (0.76 mm x 292 mm x 292 mm) perforated Type 304 s.s.enclosure box with solid 1/8" x 12" x 12" (3 mm x 305 mm x 305 mm) s.s.pan formed cover; 22 ga. x 17-1/2" (0.76 mm x 445 mm) dia. s.s. flashing disc.

"Swivel Eye" High Terrace Roof Anchors (Adhesive Bolt)
T 1. Fall arrest roof anchors: Thaler [FARA-96A with galvanized forged 1018 steel eye] [FARA-106A with Type 304 stainless steel forged eye] [FARA-106AU with Type 304 stainless steel U bolt] roof anchor with Type 304 s.s. cap assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: EPDM weather seal, top nut, washer, s.s. cotter pin; urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); 22 ga. (0.76 mm) manufacturer's flashing Type 304 stainless steel; 22 ga. x 11-1/2" x 11-1/2" (0.76 mm x 292 mm x 292 mm) perforated Type 304 stainless steel enclosure box with solid 1/8" x 12" x 12" (3 mm x 305 mm x 305 mm) s.s. pan formed cover, and [PVC coated deck flange] [bituminous painted deck flange].

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"Fixed Eye" High Terrace Roof Anchors (Adhesive Bolt)
T 2. Fall arrest roof anchors: Thaler [FARA-96B with galvanized forged 1018 steel eye] [FARA-106B with Type 304 stainless steel forged eye] [FARA-106BU with Type 304 stainless steel U bolt] to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); 22 ga. x 8" x 8" (0.76 mm x 203 mm x 203 mm) perforated Type 304 stainless steel enclosure box with solid 1/8" x 8-1/2" x 8-1/2" (3 mm x 216 mm x 216 mm) s.s. pan formed cover; SJ-37, 7" (178 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. T 2. 1. for all stainless steel anchor.

1. Fall arrest roof anchors: Thaler [FARA-106BSS with Type 304 stainless steel forged eye] [FARA-106BUSS with stainless steel U bolt] roof anchor to [CSA 1910.66, Sub parts D and F] with; urethane insulated hollow Type 304 s.s. post (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia. x 12" (305 mm) high welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) Type 304 s.s. base plate; SJ-37 7" (178 mm) high .031 (0.79 mm) 22 ga. Type 304 stainless steel New Standard STACK JACK flashing to CSA B272-93; 22 ga. x 8" x 8" (0.76 mm x 203 mm x 203 mm) perforated Type 304 stainless steel enclosure box with solid 1/8" x 8-1/2" x 8-1/3" (3 mm x 216 mm x 216 mm) s.s. pan formed cover; with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

"Rope Stop" Anchors
U. Rope stop roof anchors: Thaler FARA-100 through bolt 3/4" (19 mm) dia. Type 304 s.s. rope stop anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F], complete with 9" (229 mm) dia. x 18 ga. (1.2 mm) s.s. flashing deck flange welded to rope stop, 2" (51 mm) dia. s.s. stop plug to suit roof condition and 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) s.s. back up plate, lock washer and nut.

Davit Arm and Base
V. Davit arms and bases: Thaler FARA-150 Davit Arm Base and FARA-155 Davit Arm complete davit assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F], with urethane filled, hot dipped galv. ASTM 500C base 9" dia. x 1/4" (229 mm x 6 mm) welded to 3/4" x 14" x 14" (19 mm x 356 mm x 356 mm) 44W base plate and bolted to 1/4" x 14" x 14" (6 mm x 356 mm x 356 mm) under-deck plate using four 3/4" (19 mm) dia. s.s. bolts; davit arm holder 1/2" x 8-7/8" I.D. (12 mm x 225 mm) hot deep galvanized ASTM 500C with weep holes, connected to steel hinge using two 3/4" (19 mm) s.s. hinge pins tethered with 1/8" (3 mm) s.s. cable; mast upright 5/16" x 8-5/8" O.D. (8 mm x 220 mm) 6061-T6 extruded alum. with handle grips; horizontal 6061-T6 alum. I-beam 1/4" x 3-1/2" x 6" (6 mm x 89 mm x 152 mm) with 1" (25 mm) thick sliding s.s. suspension line attachment plate and handle grips; Type 304 rotatable s.s. head with levelling devices; strut reinforcing 1/4" x 3" x 3" (6 mm x 76 mm x 76 mm) with 1/4" (6 mm) connector plates: SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper][.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

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Davit Arm and Base

W. Davit arms and bases: Thaler FARA-150-RH Davit Arm Base and FARA-155-RH Rotating Head Davit Arm complete davit assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F], with urethane filled, hot dipped galv. ASTM 500C base 9" dia. x 1/4" (229 mm x 6 mm) welded to 3/4" x 14" x 14" (19 mm x 356 mm x 356 mm) 44W base plate and bolted to 1/4" x 14" x 14" (6 mm x 356 mm x 356 mm) under-deck plate using four 3/4" (19 mm) dia. s.s. bolts; davit arm mast holder 5/8" x 6-7/8" I.D. (16 mm x 175 mm) hot deep galvanized ASTM 500C with weep holes, connected to steel hinge using two 3/4" (19 mm) s.s. hinge pins tethered with 1/8" (3 mm) s.s. cable; mast upright 5/16" x 8-5/8" O.D. (8 mm x 220 mm) 6061-T6 extruded alum.; Horizontal 6061-T6 alum. HSS rotating boom 1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) with 1" (25 mm) dia. sliding s.s. suspension line attachment bolt and plates; strut reinforcing 1/4" x 3" x 3" (6 mm x 76 mm x 76 mm); solid rubber wheel assembly; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper][.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Reccessed Davit Base

X. Davit arm bases: Thaler FARA-160 Recessed Davit Arm Base designed to receive a FARA-155-RH, rotating head Davit Arm; to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with stainless steel 5/8" x 10" x 10" (16 mm x 254 mm x 254 mm) base plate and two s.s. 3/4" (19 mm) locking plates; 18 Ga. x 18-1/2" x 16-1/2" (1.27 mm x 457 mm x 406 mm) stainless steel enclosure box with s.s. cover; 1/8" x 22" x 24" (3 mm x 559 mm x 610 mm) s.s. under-base plate; 3/4" (19 mm) dia. s.s. cage assembly; galvanized davit arm holder 5/8" x 6-7/8" I.D. (16 mm x 175 mm) ASTM 500C, with weep holes, connected to steel flanges using two 3/4" (19 mm) s.s. hinge and locking pins tethered with 1/8" (3 mm) s.s. cable; 1/16" x 10" x 10" (1.59 mm x 254 mm x 254 mm) EPDM plate and [PVC coated deck flange] [bituminous painted deck flange].

Swivel Outrigger Arm and Base

Y. Outrigger arm and base: Thaler FARA-170 complete outrigger assembly to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F], with urethane filled, hot dipped galv. ASTM 500C base 1/4" x 4-1/2" (6 mm x 114 mm) welded to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) ASTM 500C base plate and bolted through roof deck to 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) back-up plate using a single 1" (25 mm) dia. s.s. bolt; arm holder 1/4" (6 mm) thick stainless steel steel with 1" (25 mm) dia. s.s. pin tethered with 1/8" (3 mm) s.s. cable; outrigger arm beam 1/4" x 5" x 7" (5 mm x 127 mm x 178 mm) hollow 6063-T6 mill finish alum. or galvanized steel with handle grip and s.s. U bolt suspension line attachment plate; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Portable Outrigger Beams

Z. Portable outrigger beams: Thaler [FARA-175-A] [FARA-175-B] [FARA-175-C] [FARA-175-D] Portable Outrigger Beam to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with 1/4" x 4" x 6" (6 mm x 02 mm x 152 mm) T-6061 aluminum upper and lower sliding beam; 1/4" x 4" x 6" (6 mm x 102 mm x 152 mm); pedestal to receive adjustable beam; 3/8" (10 mm) s.s. eye suspension line attachment rigging plate; aluminum T-6061 transport wheel frame; stainless steel anchor connectors; [galvanized] [stainless steel] urethane insulated tie-back (tie down) anchor and separate lifeline anchor both with [SJ-34, 7" (178 mm) high] [SJ-35,13" (330 mm) high] New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

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Portable Outriggers

AA. Portable Outriggers: Thaler FARA-155-P Portable Outrigger(s) to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] , 15'-9" (4.8 m) overall length with 1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) T-6061 aluminum pedestal support, suspension beam and carrier beam; 3/8" (10 mm) s.s. eye suspension line attachment rigging plate; transport wheel assembly; A frame assembly of 1/4" x 3" x 3" (6 mm 76 mm x 76 mm) aluminum tube and two 2" (51 mm) dia. alum. leg supports; s.s. turnbuckle assembly with 3/8" (10 mm) s.s. cable; s.s end caps with s.s. U-bolt turnbuckle and tie-back eyes; [galvanized] [stainless steel] tie-back anchor and separate lifeline anchor.

"Rope Drop" Anchors

BB. Rope drop roof anchor: Thaler FARA-180 adhesive bolt galvanized rope drop anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F], with: 6" (152 mm) dia. hollow ASTM 500C steel sleeve section (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia., length to suit application, welded to 5/8" x 12" x 12" (16 mm x 305 mm x 305 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); removable stainless steel 18 ga. cap w/ set screw tethered to 1/8" (3 mm) s.s. cable; 1" (25 mm) s.s. cross bar; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. BB.1. for all stainless steel anchor.

1. Rope drop roof anchor: Thaler FARA-180SS adhesive bolt Type 304 s.s. rope drop anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F], with: 4-1/2" (114 mm) dia. hollow s.s. steel sleeve section (HSS) 1/4" (6 mm) wall thickness x 6" (152 mm) dia., length to suit application, welded to 5/8" x10" x 10" (16 mm x 254 mm x 254 mm) s.s. base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); removable stainless steel 18 ga. cap w/ set screw tethered to 1/8" (3 mm) s.s. cable; 1" (25 mm) s.s. cross bar; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of .031" (0.79 mm) 22 ga. Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Monorail Susupended Maintenance System

CC. Monorail Maintenance System (Exposed I Beam): Thaler FARA-200 Monorail Suspended Maintenance System to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with T-6061 aluminum I-beam to suit main structure; 1/4" x 4" x 4" (12 mm x 102 mm x 102 mm) steel angles for bolting I-beam to main structure; 3/8" (10 mm) galvanized clamps; 10" (254 mm) wide steel connector plates; s.s. hanger bolts, washers and nuts of sizes shown on drawings; s.s. trolleys with s.s. eyes.

1. Monorail Maintenance System (Bolt Around Beam): Thaler FARA-201 Monorail Suspended Maintenance System to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with T-6061 aluminum C channel beam to suit main structure; 1/4" x 5" x 7" (12 mm x 127 mm x 178 mm) galvanized hanger welded to 5/8" x 10" (16 mm x 254 mm) underbeam plate for bolting to main I-beam structure; 10" (254 mm) wide steel upper plate; s.s. hanger bolts, washers and nuts of sizes shown on drawings; trolleys with s.s. eyes.

Travel Restraint roof anchors

DD. Travel restraint roof anchors: Thaler [FARA-710] [FARA-720] anchors including appropriate mounting hardware for fastening to structural roof deck; to [CSA Z9-02] [OSHA 1910.66, Sub parts D and F], with galvanized forged 1018 steel eye; urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post section (HSS) 1/4" (6 mm) wall thickness x 2-3/8" (60 mm) dia. x [18" (457 mm)] [36" (915 mm)] high welded to 44W base plate; [SJ-37, 7" (178 mm) high] [SJ-38, 13" (330 mm) high] [SJ-39, 19" (483 mm) high] New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 2 ga. Type 304 stainless steel;] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

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3.02   PREPARATION

Note: The following clauses apply to re-roofing or retrofit installations only.

A. For re-roofing or retrofit work, remove existing roof assembly as necessary to allow for installation of roof anchors.

B. In the event of structural deficiencies, deck corrosion or deterioration, ensure that a structural engineer has assessed and approved all surfaces upon which the work of this Section depends. Institute repairs and/or reinforcement where necessary.

C. If necessary, protect building interior and contents against ingression of water, dust, debris or other deleterious material.

3.03   INSTALLATION

Note: [Roof Anchors] [Davits] [Outriggers]

 A. Roof Supports

1. Install anchors or equipment in accordance with manufacturer's printed instructions, shop drawings and as specified.

2. Ensure anchors or equipment is installed under the direct supervision of a Professional Engineer [and Roofing Consultant].

3. Where necessary, provide protection against deterioration due to contact of dissimilar materials.

4. Where bolting is used for fastening anchors, no fewer than two threads is to be exposed and the nut is to be positively locked by deforming threads, welding, pinning or equivalent method.

5. Ensure work is inspected prior to application of roofing.

B. Flashing

1. Install roof support flashing in accordance with manufacturer's printed instructions.

BUR
2. Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

Modified Bitumen
3. Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply
4. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACKJACK Flashing.

Note: For PVC membrane, specify PVC coated flashing; weld roofing to deck flange using PVC torch.

PVC Single Ply
5. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Weld roofing to deck flange using PVC torch

RT 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

Note: Review design criteria for tapered roof insulation systems if necessary for specific projects.

B. For roofs employing tapered insulation systems, height adjustments may be necessary i.e. ensure anchor eye is minimum 9" (229 mm) above roof surface.

C. Retrofit Work

1. Remove sufficient area of roofing down to deck level to facilitate anchor installation.

2. Where possible and as directed by Roofing Consultant, reuse any salvageable materials and restore roofing system to match original.

3. Structural adequacy of a parapet or other part of the building on which the support system is placed shall be verified by a professional engineer before rigging.

3.04   FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

B. All anchor work to be inspected by a qualified testing agency, Professional Engineer [and Roof Consultant] upon completion of work.

Note: Field testing of roof and wall anchor products is not required. Only the field testing of adhesive fasteners is required. In rare instances where adhesive fasteners must be tested after roof anchors have been roofed in, consult a Professional Engineer for calculation of the load requirement prior to testing.

3.05   ADJUSTING AND FINAL INSPECTION

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

B. Provide necessary documentation certifying system is acceptable for service (Engineer's Certificate of Acceptance).

3.06   CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleaners or techniques which could impair performance of the roofing system.

End of Section

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Portable Outriggers

AA. Portable Outriggers: Thaler FARA-155-P Portable Outrigger(s) to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] , 15'-9" (4.8 m) overall length with 1/4" x 4" x 6" (6 mm x 102 mm x 152 mm) T-6061 aluminum pedestal support, suspension beam and carrier beam; 3/8" (10 mm) s.s. eye suspen sion line attachment rigging plate; transport wheel assembly; A frame assembly of 1/4" x 3" x 3" (6 mm 76 mm x 76 mm) aluminum tube and two 2" (51 mm) dia. alum. leg supports; s.s. turnbuckle assembly with 3/8" (10 mm) s.s. cable; s.s end caps with s.s. U-bolt turnbuckle and tie-back eyes; galvanized] [stainless steel] tie-back anchor and separate lifeline anchor.

"Rope Drop" Anchors

BB. Rope drop roof anchor: Thaler FARA-180 adhesive bolt galvanized rope drop anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F], with: 6" (152 mm) dia. hollow ASTM 500C stee sleeve section (HSS) 1/4" (6 mm) wall thickness x 4-1/2" (114 mm) dia., length to suit application, welded to 5/8" x 12" x 12" (16 mm x 305 mm x 305 mm) 44W base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); removable stainless steel 18 ga. cap w/ set screw tethered to 1/8" (3 mm) s.s. cable; 1" (25 mm) s.s. cross bar; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Note: Specify 2. 02. BB.1. for all stainless steel anchor.

1. Rope drop roof anchor: Thaler FARA-180SS adhesive bolt Type 304 s.s. rope drop anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F], with: 4-1/2" (114 mm) dia. hollow s.s. steel sleeve section (HSS) 1/4" (6 mm) wall thickness x 6" (152 mm) dia., length to suit application, welded to 5/8" x10" x 10" (16 mm x 254 mm x 254 mm) s.s. base plate prepared to receive four 5/8" (16 mm) dia. adhesive anchor bolts (by others); removable stainless steel 18 ga. cap w/ set screw tethered to 1/8" (3 mm) s.s. cable; 1" (25 mm) s.s. cross bar; SJ-34(9), 9" (229 mm) high New-Standard STACK JACK flashing of .031" (0.79 mm) 22 ga. Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Monorail Suspended Maintenance System

CC. Monorail Maintenance System (Exposed I Beam): Thaler FARA-200 Monorail Suspended Maintenance System to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with T-6061 aluminum I-beam to suit main structure; 1/4" x 4" x 4" (12 mm x 102 mm x 102 mm) steel angles for bolting I-beam to main structure; 3/8" (10 mm) galvanized clamps; 10" (254 mm) wide steel connector plates; s.s. hanger bolts, washers and nuts of sizes shown on drawings; s.s. trolleys with s.s. eyes.

1. Monorail Maintenance System (Bolt Around Beam): Thaler FARA-201 Monorail Suspended Maintenance System to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with T-6061 aluminum C channel beam to suit main structure; 1/4" x 5" x 7" (12 mm x 127 mm x 178 mm) galvanized hanger welded to 5/8" x 10" (16 mm x 254 mm) underbeam plate for bolting to main I-beam structure; 10" (254 mm) wide steel upper plate; s.s. hanger bolts, washers and nuts of sizes shown on drawings; trolleys with s.s. eyes.

Travel Restraint roof anchors

DD. Travel restraint roof anchors: Thaler [FARA-710] [FARA-720] anchors including appropriate mounting hardware for fastening to structural roof deck; to [CSA Z9-02] [OSHA 1910.66, Sub parts D and F], with galvanized forged 1018 steel eye; urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post section (HSS) 1/4" (6 mm) wall thickness x 2-3/8" (60 mm) dia. x [18" (457 mm)] [36" (915 mm)] high welded to 44W base plate; [SJ-37, 7" (178 mm) high] [SJ-38, 13" (330 mm) high] [SJ-39, 19" (483 mm) high] New-Standard STACK JACK flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 2 ga. Type 304 stainless steel;] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
SPLIT FLASHINGS

TABLE OF CONTENTS

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
SPLIT FLASHINGS

WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is the responsibility of specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler Split Flashings products have a number of Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE
COMPETITION

THALER VALUE
ADDED FEATURES

100% Watertight; unlike soldered-type split flashings or pitch pans, Thaler Split Flashings provide an unparalleled seal and remain flexible enough to allow movement of penetrating items while coping with the vibration often associated with cooling tower supports and similar mechanical equipment.

New-Age flashing; Thaler split flashings are designed to do away with the ultimately expensive, unreliable and high maintenance "pitch pans"; they pose an open threat of leaks and require frequent maintenance checks and repair of bitumen embrittled by sunlight and cold weather.

Ideal for structural protrusions; many techniques employed to flash complicated shapes such as H-beams, I-beams and C-channels can be labour intensive and lacking in consistent quality, performance and looks. Thaler Split Flashings are quality controlled at the factory, sized to accommodate precise web thicknesses, while sleeves employ a simple, applicator-friendly, snap together "lock-fast" installation procedure.

Utilizes proven concept; Thaler Split Flashings provide the best flashing detail at roof penetrations which follows the general rule of attaching the base flashing (sleeve) to the structural deck and counter flashing (cap) to the penetrating element.

Aesthetically pleasing; arguably the best looking split flashing available on the market today. Unique installation method means clean assembly without messy caulking seals, soldered joints or adhesives.

Re-Usable; providing split flashings are carefully twisted off, they can be used again for re-roofing projects.

EPDM Triple Pressure Grommet Seal; EPDM "memory" in the seal provides constant pressure to outside of protrusion to prevent leaks. See Thaler EPDM Flashing Seals literature.

CSA Approved; all Thaler flashings conform to CSA B272-93 - Prefabricated Self-Sealing Roof Vent Flashings.

Treated deck flange; can be PVC coated for proper welding of PVC membrane or bituminous painted for BUR or ModBit membrane.

20 year Warranty; guaranteed against leaks and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

Maintenance-Free; never needs caulking (any caulking at any time will invalidate 20 year warranty.

Written "Installation Instructions"; provided with every Thaler product.

TOP VIEW OF CAP

1/8" (3 mm) STAINLESS STEEL NUTS AND BOLTS

ONE THIRD OF SLEEVE SIZE TO MAXIMUM OF 12" (305 mm)

FROM 9" TO 48" HIGH (229 mm TO 1220 mm) IN ANY INCREMENT

1" (25 mm)

EPDM TRIPLE PRESSURE GROMMET SEAL

26 ga. TYPE 304 STAINLESS STEEL CAP

26 ga. TYPE 304 STAINLESS STEEL SLEEVE

STAINLESS STEEL CLIPS, ARE USED TO SNAP OR LOCK FRICTION FITTED FLASHING SECTION TOGETHER

4" (102 mm) TO 120" (3048 mm) DIA. IN ANY INCREMENT IS STANDARD

5" (127 mm)

3 PLY FELT FLASHING OVER FLANGE 4" (102 mm), 6" (152 mm) AND 8" (203 mm) ONTO ROOF

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

STEEL DECK

CONCRETE DECK

SPJ-1 ROUND SPLIT FLASHING
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler split flashings are installed by aligning the flashing sections (2, 3, or 4 sections, depending on diameter), applying silicone lubricant to EPDM seals, temporarily snapping the sections together using one or more Crawford ratchet type tightening straps (by others), and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: orch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve as per single ply manufacturer's recommenda-tions and clamp membrane to flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. SJP-1-P; weld roofing to deck flange using PVC torch

Precautions: If coating deck flange with bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Coolie-Ht Cap: Twist cap open and fit around pipe or protrusion and connect the lap joint by re-installing the stainless steel bolt.

**Ordering:** Available throughout North SPJ-1 ROUND SPLIT FLASHING America. Contact Thaler forcurrent cost information. Most products readily available from stock.

DESCRIPTION:
Thaler SPJ-1 Round Split Flashings consist of a split stainless steel flashing sleeve with integral deck flange and split coolie-hat cap fitted with an EPDM triple pressure grommet seal. Continuous EPDM seals are also located at the split junctures of the sleeve and deck flange. Available in stainless steel only. Clips are used to snap or lock the friction-fit flashing sections together.

DIAMETER:
3" to 120" (76 mm to 3048 mm) in any increment. Note: Flashings are installed in two split sections for up to 48" (1220 mm) dia; three sections for 48" to 72" (1220 mm to 1830 mm) dia; four sections for over 72" (1830 mm) dia.

HEIGHT:
9" to 48" (229 mm to 1220 mm) in any increment.

PROMINENT FEATURES:
Custom sizing is standard. Never needs caulking (see Thaler EPDM Flashing Seals literature). More economical than SPJ-2 Round Split Flashing (Vented Cap).

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. See SPJ- 2 for vented cap (prevents condensation build-up on inside of sleeve).

RECOMMENDED USE:
Suitable for round plastic, steel, stainless, copper or cast iron pipes, stacks or other round roof projections where flashing sleeve can only be fitted around the projection rather than over it. Example uses include hydro generator stacks, oil refinery process piping, railings, and other retrofit applications.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings). Note: In addition to the CSA tests, Thaler in-house testing was performed with the EPDM Triple Pressure Grommet Seal submerged in 8" (203 mm) of water for 3 months with no leakage.

WARRANTY:
20 year warranty against leaks and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where EPDM seals are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Round split flashings: Thaler SPJ-1 Round, Split Flashing [12" (305 mm) high] x [8" (203 mm) dia.] [of sizes as noted on drawings] .018" (26 ga.) sleeve with gauge of cap to suit, Type 304 stainless steel; to CSA B272-93; with EPDM triple pressure grommet seal around cap and continuous EPDM seals at split junctures of sleeve and deck flange; [PVC coated deck flange] [bituminous painted deck flange]; matching split cap with overlapped and s.s. bolted closure design; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks and defects in materials and/or manufacture.

THALER

ISOMETRIC VIEW

TOP VIEW

6.5" (165 mm)

FRONT VIEW

1" (25 mm)

TOP VIEW OF CAP

STAINLESS STEEL CLIPS ARE USED TO SNAP OR LOCK THE FRICTION-FIT FLASHINGS SECTIONS TOGETHER

3 PLY FELT FLASHING OVER FLANGE AN 4" (102 mm) 6" (152 mm) AND 8" (203 mm) ONTO ROOF

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

FROM 12" TO 48" (305 mm TO 1220 mm) IN ANY INCREMENT

4" (102 mm) TO 120" (3048 mm) IN ANY INCREMENT IS STANDARD

EPDM TRIPLE PRESSURE GROMMET SEAL

1/8" (3 mm) S.S. SCREW

PERFORATED FOR 2" (51 mm) DEPTH

0.048" (18 ga.) TYPE 304 STAINLESS STEEL CAP UP TO 12" (305 mm) AND 0.018" (26 ga.) FOR LARGER SIZES

0.018" (26 ga.) TYPE 304 STAINLESS STEEL SLEEVE

5" (127 mm)

STEEL DECK   PATENTED   CONCRETE DECK

SPJ-2 ROUND SPLIT FLASHING (Vented Cap)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler split flashings are installed by aligning the flashing sections (2, 3, or 4 sections, depending on diameter), applying silicone lubricant to EPDM seals, snapping the sections together using safe grip plypliers.
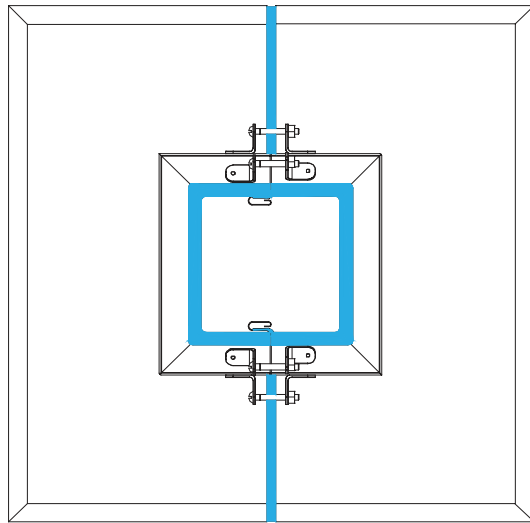
BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.
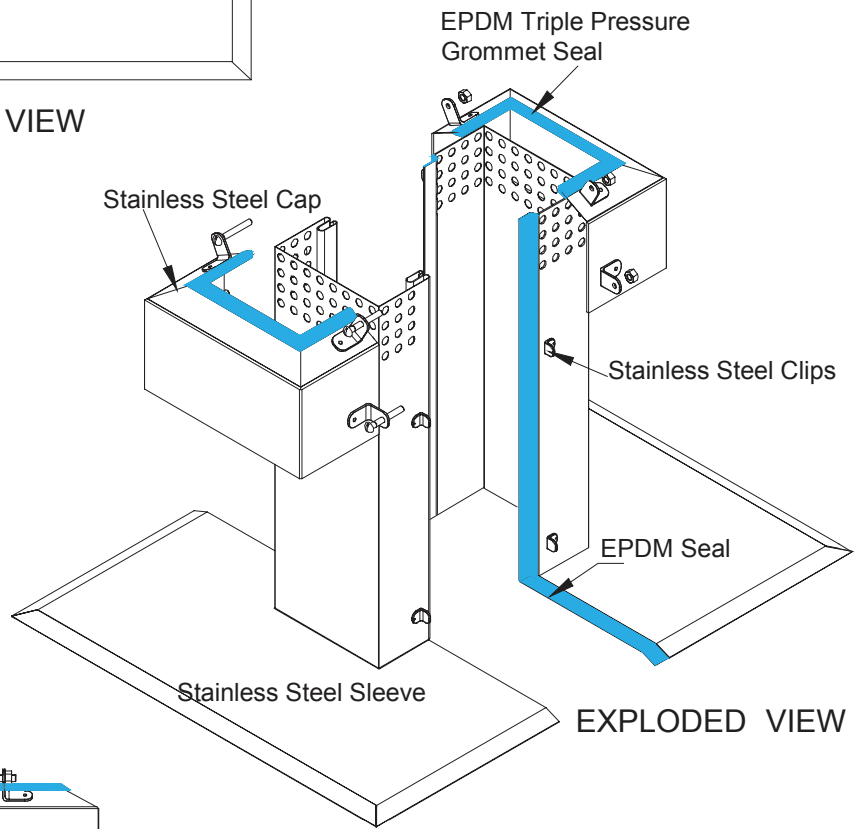
Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve as per single ply manufacturer's recommendations and clamp membrane to flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. SJP-2-P; weld roofing to deck flange using PVC torch.

Vented Cap: Fit sections around pipe or protrusion and connect the lap joints by re-installing the stainless steel bolts.
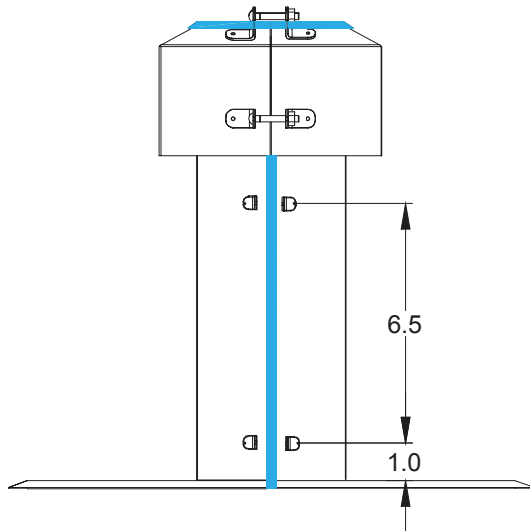
Ordering: Available throughout North America. Contact Thaler for lists of distributors and current cost information. Most products readily available from stock.

DESCRIPTION:
Thaler SPJ-2 Round Split Flashings consist of a split stainless steel flashing sleeve with integral deck flange and vented cap fitted with an EPDM triple pressure grommet seal. Continuous EPDM seals are also located at the split junctures of the sleeve and deck flange. Available in stainless steel only. Clips are used to snap or lock the friction-fit flashing sections together.

DIAMETER:
4" to 120" (102 mm to 3048 mm) in any increment. Note: Flashings are installed in two sections for up to 48" (1220 mm) dia; three sections for 48" to 72" (1220 mm to 1830 mm) dia; four sections for over 72" (1830 mm) dia.

HEIGHT:
9" to 48" (229 mm to 1220 mm) in any increment.

PROMINENT FEATURES:
Prevents condensation build-up on inside of sleeve. Custom sizing is standard. Never needs caulking (see Thaler EPDM Flashing Seals literature).

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. See SPJ-1 Coolie-Hat Cap for more economical flashing.

RECOMMENDED USE:
Suitable for plastic, steel, stainless, copper or cast iron pipes, stacks or other round roof projections where flashing sleeve can only be fitted around vent stack rather than over the stack. Example uses include hydro generator stacks, oil refinery process piping, railings, and other retrofit applications.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings). Note: In addition to the CSA tests, Thaler in-house testing was performed with the EPDM Triple Pressure Grommet Seal submerged in 8" (203 mm) of water for 3 months with no leakage.

WARRANTY:
20 year warranty against leaks and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where EPDM seals are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Round split flashings: Thaler SPJ-2 Round, Vented Cap Split Flashing [12" (305 mm) high] x [8" (203 mm) dia.] [of sizes as noted on drawings] .018" (26 ga.) sleeve with gauge of cap to suit, Type 304 stainless steel; to CSA B272-93; with EPDM triple pressure grommet seal around cap and continuous EPDM seals at split junctures of sleeve and deck flange; [PVC coated deck flange] [bituminous painted deck flange]; matching split vented cap with overlapped and s.s. bolted closure design; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

EXPLODED VIEW

EPDM Triple Pressure
Grommet Seal

Stainless Steel Cap

Stainless Steel Screw

Stainless Steel Clip

Stainless Steel Sleeve

EPDM Seal

6.5" (165 mm)

1" (25 mm)

FRONT VIEW

THALER

TOP VIEW OF CAP

1/8" (3 mm) STAINLESS STEEL SCREW

EPDM TRIPLE PRESSURE GROMMET SEAL

0.018" (26 ga.) TYPE 304 STAINLESS STEEL CAP

0.018" (26 ga.) TYPE 304 STAINLESS STEEL SLEEVE

12" (305 mm) OR 18" (457 mm)

3 PLY FELT FLASHING OVER FLANGE 4" (102 mm) 6" (152 mm) AND 8" (203 mm) ONTO ROOF

S.S INSTALLATION CLAMPING CLIPS SPOT WELDED TO SLEEVE ON TWO SIDES (3 OR 4 CLIPS DEPENDING ON HEIGHT)

1" (25 mm)

5" (127 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

STEEL DECK   PATENTED   CONCRETE DECK

SPJ-3 SQUARE SPLIT FLASHING
PATENTED

DESCRIPTION:
Thaler SPJ-3 Square Split Flashings consist of a two-piece split stainless steel flashing sleeve with integral deck flange and four-piece split coolie-hat cap fitted with an EPDM triple pressure grommet seal. Continuous EPDM seals are also located at the split junctures of the sleeve and deck flange. Available in stainless steel only. Clips are used to snap or lock the friction-fit flashing sections together.

SIZE:
Fits up to 12" (305 mm) square protrusion in any increment.

HEIGHT:
12" (305 mm) and 18" (457 mm) is standard. Consult Thaler for other heights.

PROMINENT FEATURES:
Never needs caulking (see Thaler EPDM Flashing Seals literature). More economical than SPJ-4 Square Split Flashing (Vented Cap).

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. See SPJ- 4 for vented cap (prevents condensation build-up on inside of sleeve).

RECOMMENDED USE:
Suitable for all types of square roof projections where flashing sleeve can only be fitted around the projection rather than over the projection. Example uses include square columns, railings, supports, and other retrofit applications.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings). Note: In addition to the CSA tests, Thaler in-house testing was performed with the EPDM Triple Pressure Grommet Seal submerged in 8" (203 mm) of water for 3 months with no leakage.

WARRANTY:
20 year warranty against leaks and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where EPDM seals are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Square split flashings: Thaler SPJ-3 Square, Cap Split Flashing [12" (305 mm) high] [18" (457 mm) high] x [8" (203 mm) square] [of sizes as noted on drawings] .018" (26 ga.) Type 304 stainless steel; to CSA B272-93; with EPDM triple pressure grommet seal around cap and continuous EPDM seals at split junctures of sleeve and deck flange; [PVC coated deck flange] [bituminous painted deck flange]; matching split cap with overlapped and s.s. bolted closure design; manufactured by Thaler Metal Industries, 1-800-387-7217(Mississ- auga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler split flashings are installed by aligning the two flashing sections, applying silicone lubricant to EPDM seals, snapping the sections together using pliers at clip locations, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve as per single ply manufacturer's recommenda- tions and clamp membrane to flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. SJP-3-P; weld roofing to deck flange using PVC torch.

Coolio-Hat Cap: Twist cap open and fit around pipe or protrusion and connect the lap joint by re-installing the stainless steel bolt.

Ordering: Available throughout North America. Contact Thaler for lists of distributors and current cost information. Most products readily available from stock.
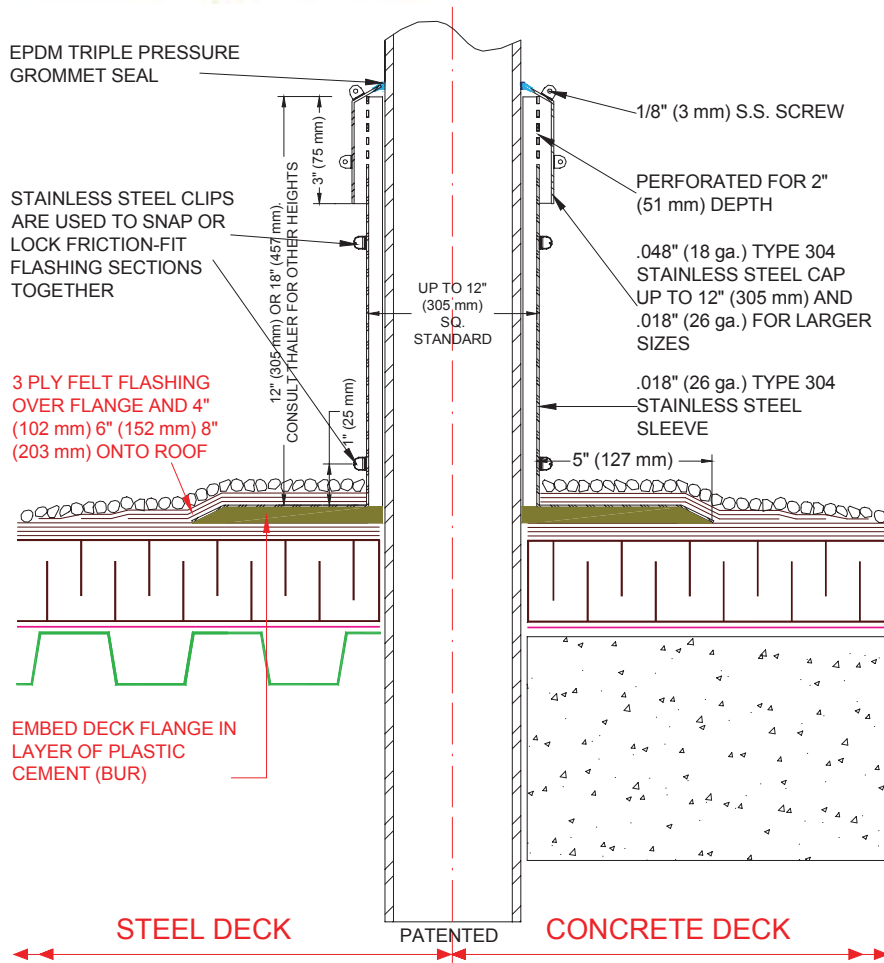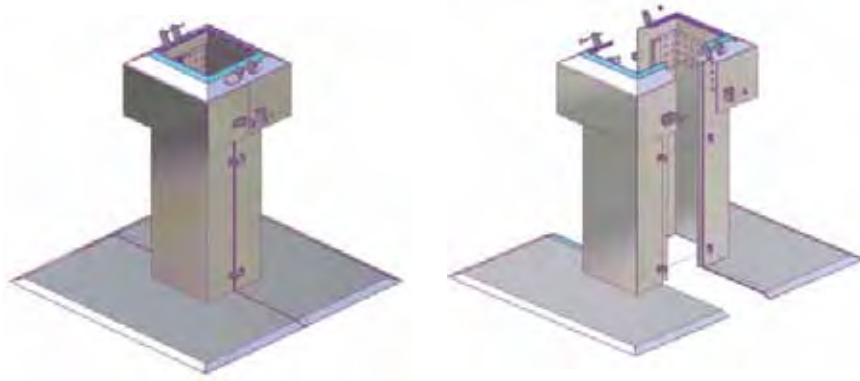
DESCRIPTION:
Thaler SPJ-4 Square Split Flashings consist of a split stainless steel flashing sleeve with integral deck flange and contoured vented cap fitted with an EPDM triple pressure grommet seal. Continuous EPDM seals are also located at the split junctures of the sleeve and deck flange. Available in stainless steel only. Clips are used to snap or lock the friction-fit flashing sections together.

SIZE:
Fits up to 12" (305 mm) square protrusion in any increment.

HEIGHT:
12" (305 mm) and 18" (457 mm) is standard. Consult Thaler for other heights.

PROMINENT FEATURES:
Prevents condensation build-up on inside of sleeve. Never needs caulking (see Thaler EPDM Flashing Seals literature).

OPTIONS:
PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane. See SPJ-3 Coolie-Hat Cap for more economical flashing.

RECOMMENDED USE:
Suitable for all types of square roof projections where flashing sleeve can only be fitted around the projection rather than over the projection. Example uses include square columns, railings, supports, and other retrofit applications.

APPROVALS:
CSA Approved to CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings). Note: In addition to the CSA tests, Thaler in-house testing was performed with the EPDM Triple Pressure Grommet Seal submerged in 8" (203 mm) of water for 3 months with no leakage.

WARRANTY:
20 year warranty against leaks and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Warranty not valid where EPDM seals are subjected to unusually harsh corrosive environments e.g. pulp mills, mining facilities and similar applications.

MAINTENANCE:
No maintenance required (maintenance free).

SPECIFICATION (SHORT FORM):
Square split flashings: Thaler SPJ-4 Square, Vented Cap Split Flashing [12" (305 mm) high] [18" (457 mm) high] x [8" (203 mm) square] [of sizes as noted on drawings] .018" (26 ga.) Type 304 stainless steel; to CSA B272-93; with EPDM triple pressure grommet seal around cap and continuous EPDM seals at split junctures of sleeve and deck flange; [PVC coated deck flange] [bituminous painted deck flange]; matching split vented cap with overlapped and s.s. bolted closure design; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

SPJ-4 SQUARE SPLIT FLASHING (Vented Cap)
PATENTED

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, Thaler split flashings are installed by aligning the two flashing sections, applying silicone lubricant to EPDM seals, snapping the sections together using pliers at clip locations, and as follows:

BUR: Set deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set deck flange in layer of membrane adhesive and extend single ply up sleeve as per single ply manufacturer's recommendations and clamp membrane to flashing. Note: for PVC membrane, specify PVC coated flashing by adding suffix P to end of model number, e.g. SJP-4-P; weld roofing to deck flange using PVC torch.

Vented Cap: Fit sections around pipe or protrusion and connect the lap joints by re-installing the stainless steel bolts.

Ordering: Available throughout North America. Contact Thaler for lists of distributors and current cost information. Most products readily available from stock.

TOP VIEW

EPDM Triple Pressure
Grommet Seal

Stainless Steel Cap

Stainless Steel Clips

EPDM Seal

Stainless Steel Sleeve

EXPLODED VIEW

6.5

1.0

FRONT VIEW

Note: This mechanical and electrical roof support specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part of a roofing specification.

PART 1: GENERAL

1.01 SECTION INCLUDES

A. Supply and installation of roof accessories, including:
 1. Preformed metal flashings

1.02 RELATED SECTIONS

A. Section 06100 - Rough Carpentry

B. Section 07500 - Membrane Roofing

C. Section 07900 - Joint Sealers

D. Section 15800 - Air Distribution

1.03 REFERENCES

[A. CSA B272-93 - Prefabricated Self-Sealing Roof Vent Flashings]

[B. CRCA (Canadian Roofing Contractor's Association)]

[C. NRCA (National Roofing Contractor's Association)]

[D. SPRI (Single Ply Roofing Institute)]

1.04 SUBMITTALS

A. Manufacturer's descriptive literature for each product, including section or other type details.

B. Manufacturer's written installation instructions.

C. Shop drawings and samples, when required, in accordance with Section [01300].

1.05 QUALITY ASSURANCE

A. Roof accessories manufactures to have minimum 5 years documented experience in the design and fabrication of roofing specialities and accessories.

1.06 SPECIAL WARRANTY

A. Warrant products installed under this section of work to be free of defects in materials and/or manufacture [and condensation] for a period of 20 years when installed in accordance with the manufacturer's written instructions.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
SPLIT FLASHINGS
SPECIFICATION

J-6

PART 2: PRODUCTS

2.01   MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (Buffalo, NY) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:
1. 20 year warranty against defects in materials and/or manufacture, as applicable;
2. compliance with CSA B272-93 (Prefabricated Self-Sealing Roof Vent Flashings)
3. air barrier design using EPDM seals only;
4. maintenance free design;
5. materials and sizes options, and thickness;
6. injection molded urethane insulation to CGSB-51-GP 46MP and ASTM C1029-90, as applicable;
7. treated deck flange, as applicable;
8. written installation instructions.

2.02   MANUFACTURED UNITS

SPJ-1 Round Split Flashing
A. Thaler SPJ-1 Round, Split Flashing [12" (305 mm) high] x [8" (203 mm) dia.] [of sizes as noted on drawings] .018" (26 ga.) sleeve with gauge of cap to suit, Type 304 stainless steel; to CSA B272-93; with EPDM triple pressure grommet seal around cap and continuous EPDM seals at split junctures of sleeve and deck flange; [PVC coated deck flange] [bituminous painted deck flange]; matching split cap with overlapped and s.s. bolted closure design.

SPJ-2 Round Split Flashing (Vented Cap)
B. SPJ-2 Round, Vented Cap Split Flashing [12" (305 mm) high] x [8" (203 mm) dia.] [of sizes as noted on drawings] .018" (26 ga.) sleeve with gauge of cap to suit Type 304 stainless steel; to CSA B272-93; with EPDM triple pressure grommet seal around cap and continuous EPDM seals at split junctures of sleeve and deck lange; [PVC coated deck flange] [bituminous painted deck flange]; matching split vented cap with overlapped and s.s. bolted closure design.

SPJ-3 Square Split Flashing
C. Thaler SPJ-3 Square, Split Flashing [12" (305 mm) high] [18" (457 mm) high] x [8" (203 mm) square] [of sizes as noted on drawings] .018" (26 ga.) sleeve with gauge of cap to suit, Type 304 stainless steel; to CSA B272-93; with EPDM triple pressure grommet seal around cap and continuous EPDM seals at split junctures of sleeve and deck flange; [PVC coated deck flange] [bituminous painted deck flange]; matching split cap with overlapped and s.s. bolted closure design.

SPJ-4 Square Split Flashing (Vented Cap)
D. Thaler SPJ-4 Square, Vented Cap Split Flashing [12" (305 mm) high] [18" (457 mm) high] x [8" (203 mm) square][of sizes as noted on drawings] .018" (26 ga.) sleeve with gauge of cap to suit, Type 304 stainless steel; to CSA B272-93; with EPDM triple pressure grommet seal around cap and continuous EPDM seals at split junctures of sleeve and deck flange; [PVC coated deck flange] [bituminous painted deck flange]; matching split vented cap with overlapped and s.s. bolted closure design.

PART 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
SPLIT FLASHINGS
SPECIFICATION

J-7

3.02   INSTALLATION

A. Install relief vents in accordance with manufacturer's printed instructions.

BUR
B. Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

Modified Bitumen
C. Torch membrane until bitumen is fluid and set flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply
D. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to Flashing.

Note: For PVC membrane, specify PVC coated flashing by adding suffix P to end of Thaler model number, e.g. SJ-24-P; weld roofing to deck flange using PVC torch.

PVC Single Ply
E. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Weld roofing to deck flange using PVC torch.

Shingle Roof
F. Set deck flange in layer of plastic cement, ensuring that flange is placed over shingles on downslope side of flashing and under shingles on upslope side.

3.03   FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

3.04   ADJUSTING

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

3.05   CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleanersor techniques which could impair performance of the roofing system.

End Of Section

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
EASY SLIDER™
HORIZONTAL LIFELINE
FALL PROTECTION SYSTEMS

TABLE OF CONTENTS

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**HORIZONTAL
LIFELINE SYSTEMS**

WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is the responsibility of specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler Horizontal Lifeline products have a number of Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE
COMPETITION

THALER VALUE
ADDED FEATURES

[X] ✓ **Provides unique fall protection;** new in-line Thaler Energy Absorber (TEA) assists in reducing or dissipating fall arrest forces should users experience a fall, thereby lessening Maximum Arrest Force (MAF) the shortduration, dynamic peak force acting for 5 to 10 milliseconds on a falling body during fall arrest.

[X] ✓ **Protects up to 4 workers simultaneously;** depending on anchor spacing, and number of shuttle runners provided, Thaler "EASY SLIDER" is designed to protect up to 4 workers from falling, on same system.

[X] ✓ **Superior cable composition;** 3/8" (10 mm) diameter Type 304 stainless steel, 7 x 19 structure provides unlimited line strength, added strength, and extra margin of safety.

[X] ✓ **Added anchor strength;** all anchor posts are designed to resist without fracture a pullout force of 5400 lbs (24.02 kN), applied in the most adverse direction.

[X] ✓ **Specify any angle for corners;** in addition to common corner angles such as 45°, 90°, 135°, any angle in 1° increments way be specified without additional cost.

[X] ✓ **Cost advantage to building owner;** most Thaler "EASY SLIDER" system components are fabricated in-house thereby eliminating middle-man suppliers which can result in significant savings. "EASY SLIDER" is one of the most cost-efficient horizontal lifeline systems on the market. Be sure to obtain accurate cost data before making specifying decision.

[X] ✓ **"EASY SLIDER" means hands free movement;** users travel full length of horizontal lifeline without disconnecting while having both hands free.

[X] ✓ **Aesthetically pleasing flashing;** pre-formed Thaler STACK JACK flashing used with roof anchor posts are arguably the best , most reliable, maintenance-free flashing product on the market today. The STACK JACK relies on memory in the EPDM seals to prevent leaks from above and condensation from below (air barrier design). See Thaler STACK JACK flashing literature (Section A of manual), or Thaler EPDM Flashing Seals literature.

[X] ✓ **Long distance between supports;** a single line horizontal lifeline system such as the Thaler K-703 "EASY SLIDER" reduces the number of roof penetrations by providing up to 80'-0" (24.4 m) distance between supports using a double TEA (Thaler Energy Absorber) in the horizontal cable, or 60'-0" (18.3 m) distance using single TEA.

[X] ✓ **Maintenance-Free;** except for occasional wiping of any dirt that has accumulated on the stainless steel horizontal cable, and annual inspection (by others), the "EASY SLIDER" requires no maintenance. In addition the STACK JACK flashing used for the anchor posts is simply and cleanly installed without messy vaulking seals.

[X] ✓ **20 year Warranty;** guaranteed against leaks and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

[X] ✓ **Written "Installation Instructions";** provided with every Thaler product.

THALER Metal Industries Ltd.

THALER 05 11 24 23 MAINTENANCE EQUIPMENT
2005 horizontal lifeline systems
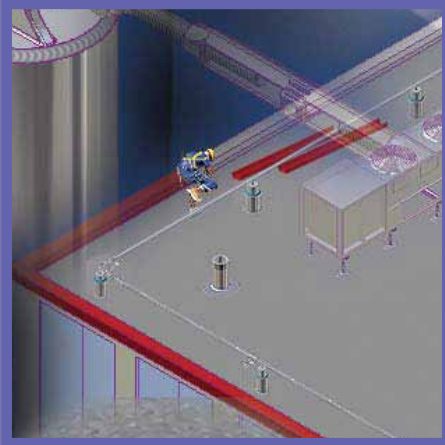
Thaler Energy Absorber (TEA)
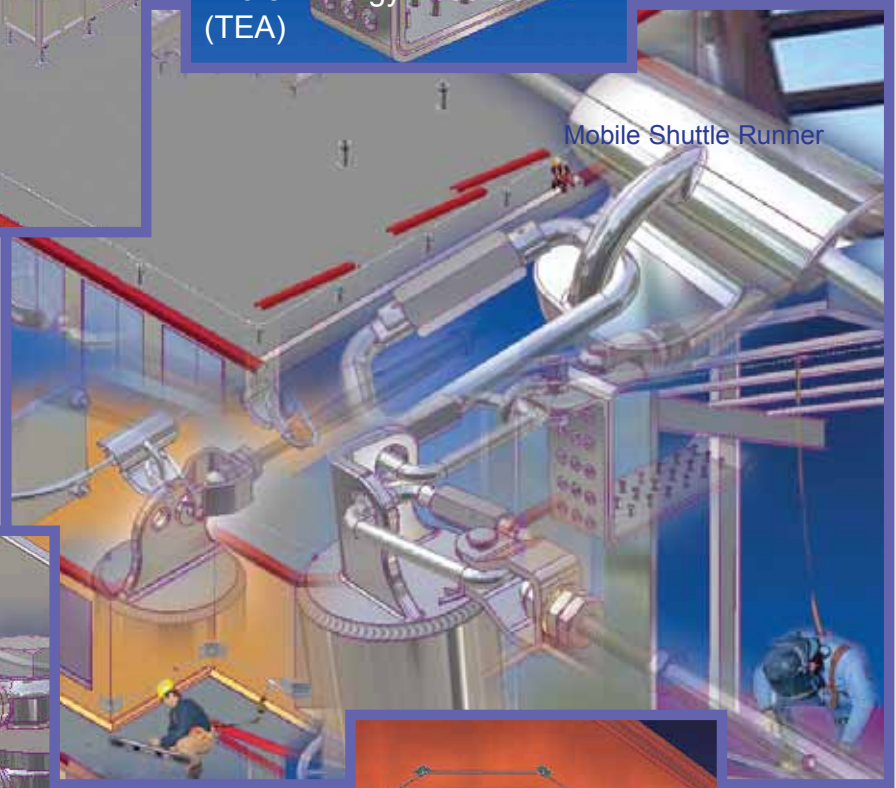
Mobile Shuttle Runner
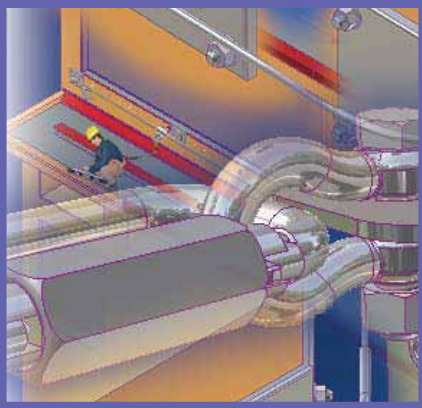
EASY SLIDER™ HORIZONTAL LIFELINE

PRIMER

A Pre-Engineered, Hands Free Fall Protection System For Roof, Wall & Overhead Applications

INTRODUCTION

A fall from elevation (the uncontrolled drop from one level to another) is similar to winning the lottery. You never know when it is going to happen.

The quality management concept that 99.9% reliability is not good enough should be the watchword for building designers or owners when it comes to fall protection.

Fall protection can be profitable. At present, the losses in injury/fatality costs and suffering are staggering. The cost of fall protection currently is incurred at the legal and compensation end of the economic cycle, rather than at the planning or equipment use stage. Plaintiff lawyers know that the violation of OSHA, CSA or department of labor standards or rules, and the general lack of common sense when it comes to fall hazards, is rampant in almost every industry in North America.
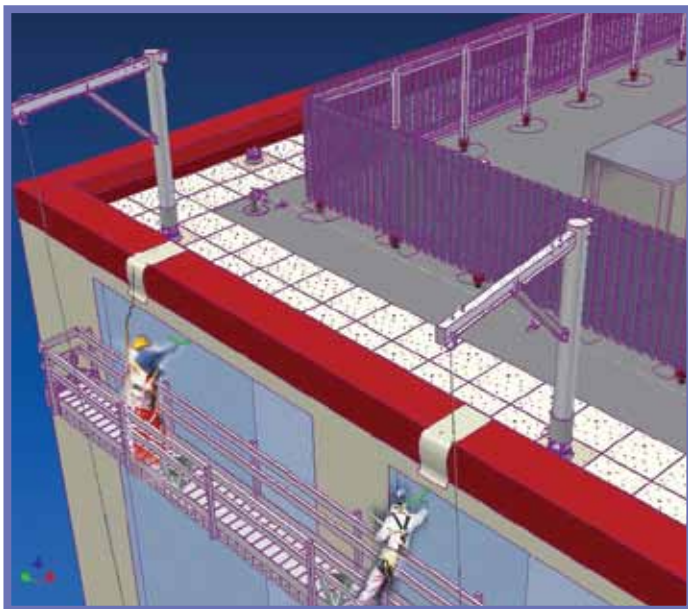
Single Span horizontal lifeline used to access and provide fall protection for window cleaning operations.

Window cleaners, rooftop equipment maintenance personnel, roof inspectors, and other workers performing tasks at rooftop level without benefit or guardrails or guardrail height parapets are particularly vulnerable to falls from height. Elevated fall hazards are a risk architects, engineers, general contractors, and building owners shouldn't be taking.....or imposing on others.
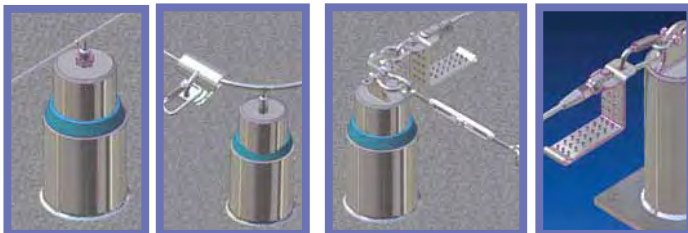
Finished installation shows aesthetic qualities of Thaler anchor *and* flashing products.

THE CONCEPT OF FALL PROTECTION

Can anyone know if a serious or fatal fall will occur in the first few seconds of a worker's career or 30 years later in the last few seconds? Professionally, any safety approach must assume the first few seconds, and building owners or their agents must immediately act to control a fall hazard, which is likely to result in serious or fatal injury if the fall occurs.

Fall protection is the back-up system planned for a worker who could potentially lose his or her balance at height. It is a planned response used to control or eliminate injury potential where foreseeable fall hazards are present.

Fall protection can minimally be applied by the use of personnel fall protection equipment with pre-designated anchorage points, and a cable-type horizontal lifeline, mounted on roof, wall or overhead surfaces, to provide safe mobility at elevation, including travel to and from workstations e.g. window cleaning, mechanical equipment, roof edge, around skylights (interior falls), narrow roof areas and similar locations.
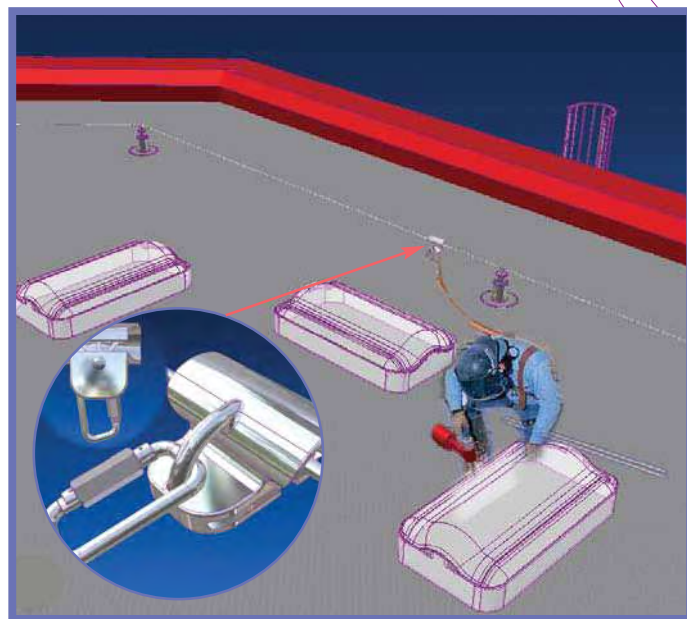
Safety organizations recommend using fall protection around skylight areas if not protected by guardrails or screen covers (interior fall hazard).

Protection is required to keep workers from striking objects over a certain fall distance and to avoid pendulum swing, crushing and forseeable impact with any part of the body to which injury could occur.

The objective of elevated fall protection is to convert the hazard to a slip or minor fall at the very worst - a fall from which, hopefully, no injury occurs.

HORIZONTAL LIFELINES

The EASY SLIDER horizontal lifeline designs offered by Thaler Metal Industries consists of a stainless steel cable installed horizontally and used for the attachment of a worker's lanyard or lifeline device (self-retracting lifeline or synthetic lifeline with rope grab) while moving horizontally. It is used to control dangerous pendulum-like swing falls by limiting free fall distance.
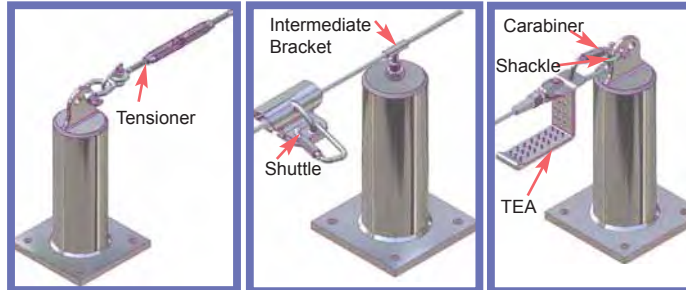
Terminal Anchor With Tensioner

Intermediate Anchor

Terminal End Anchor With Thaler Energy Absorber (TEA)

BASIC EASY SLIDER ROOF MOUNTED COMPONENTS

The cable is mounted to fixed anchorages secured to roof, wall or other structural elements of the building. These anchor points are capable of supporting at least twice the maximum potential force for each fall protection system that may be used.

A full body harness (not belt) supplied by others, is to be used with Thaler EASY SLIDER designs. The harness consists of an arrangement of straps designed to distribute arresting and suspension forces over the buttocks, pelvis, thighs, chest and shoulders.

BASIC EASY SLIDER WALL MOUNTED COMPONENTS

Thaler EASY SLIDER Horizontal Lifeline, designed for restraint and strong enough for fall protection, is a "hands-free" fall protection system that allows users to walk uninterrupted the entire length of the system without having to unhook to pass through intermediate or corner support points. The number of users (up to four per system) is dependent on anchor spacing. Note: double lanyard systems have proven cumbersome and do not always provide continuos protection due to worker misuse.

EASY-SLIDER is made up of end anchorages, intermediate anchorages, mobile shuttle runners (one per worker) stainless steel horizontal cable, and inline fittings such as Thaler Energy Absorber, tensioner, corner brackets, swages and other components.

However, the heart of the EASY-SLIDER systems are embodied in the mobile shuttle runner and Thaler Energy Absorber. Here's how they work.
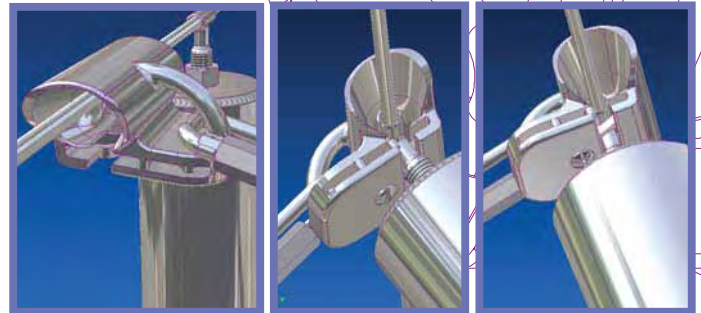
EASY-SLIDER shuttle runner position on cable.

Shuttle runner entering the intermediate bracket

Shuttle runner moves between and through spur wheel and upper part of bracket.

MOBILE SHUTTLE RUNNER

In-House Testing Assembly

Connection Detail Between Anchor and Thaler Energy Absorber

Thaler Energy Absorber (TEA) Before Load Test.

Thaler Energy Absorber (TEA) After Load Test

Force in the horizontal lifeline is absorbed by dissipation of energy due to plastic deformation (or rupture and cracking) of stainless steel rivets and stainless steel L shaped bracket.

HOW THE THALER ENERGY ABSORBER (TEA) WORKS

BASIC OVERHEAD MOUNTED COMPONENTS

CONFORMANCES

The Thaler EASY SLIDER Horizontal Lifeline System conforms to:
Canadian

1. **National Standards of Canada**
   A. CAN/CSA-Z91-02 (Health and Safety Code for Suspended Equipment Operations).
   B. CAN/CSA- Z259.13-04 (Flexible Horizontal Lifeline Systems).
   C. CAN/CSA-Z271-98 (Safety Code for Suspended Elevating Platforms).
   D. CAN/CSA-Z259.10-M90 (Full Body Harness).
   E. CAN/CSA-Z259.1-95 (Safety Belts and Lanyards).

2. **Canadian Standards Association**
   A. CSA G40.21-M1987, M350W and M300W (Structural Quality Steels).
   B. CSA W47.1-1983 (Certification of Companies for Fusion Welding of Steel Structures).
   C. CSA W59-M1989 (Welded Steel Construction - Metal ARC Welding).
   D. CSA G164-M1981 (Hot Dip Galvanizing of Irregularly Shaped Articles).

3. **Ontario Ministry of Labour**
   A. Ontario Regulation 527/88 and 714/82 (Regulation for Window Cleaning).

4. **Ontario New Home Warranty Program**
   A. ONHWP Condominium Construction Guide (Chapter 12-Roof Anchors).

5. **Canadian General Standards Board**
   A. CGSB-51-GP 46MP (Manual for Installers of Spray Urethane Foam Thermal Insulation).

6. **Canadian Urethane Foam Contractor's Association**
   A. CUFCA Manual for Installers of Spray Polyurethane Foam Thermal Insulation.

United States

7. **Occupational Safety & Health Administration (U.S. Department of Labor)**
   A. OSHA 1910.28 SubPart D (Walking-Working Surfaces)
   B. OSHA 1910.66, SubPart F (Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms).
   C. OSHA 1926.502, SubPart M (Fall Protection Systems Criteria and Practices)
   D. CAL OSHA, Title 8, Section 3291(f), Article 5. Window Cleaning (General Industry Safety Order, California Code of Regulations)
   E. Department of Labor Memorandum to Regional Administrators for Descent Control Devices.

8. **American National Standards Institute**
   A. ANSI A39.1-1969 (Safety Requirements for Window Cleaning).
   B. ANSI Z359.1-1992 (Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components).
   C. ANSI A10.14-1991(Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Industrial Use).

9. **American Society of Mechanical Engineers**
   A. ASME A120.1-1996 (Safety Requirements for Powered Platforms for Building Maintenance).
   B. ASME Addenda A120.1a-1997 and A120.1b-1999.

10. **International Window Cleaner's Association**
    A. IWCA I-14.1-2001 (Window Cleaning Safety Standard), An American National Standard.

11. **American Society for Testing and Materials**
    A. ASTM D3963/D M-87 (Structural Specification for Epoxy Reinforcing Steel).
    B. ASTM A36 (Non exposed Structural Components).
    C. ASTM A123 (Standard Specification for Zinc Coating-Hot Dip Galvanizing of Iron and Steel Products).
    D. ASTM Z325 (Bolts, Nuts and Washers).

12. **American Welding Society**
    A. AWS D1.1 (Structural Welding Code).

13. **Aluminum Association**
    A. AA 5AS-30 (Specifications for Aluminum Structures).

FALL PROTECTION TERMINOLOGY

A few definitions construction professionals and building owners should be acquainted with include:

Fall Arrest System: A tested device and components that function together as a system to arrest a free fall and minimize the potential for compounding injury.

Personal Fall Protection System: A system used to arrest an employee in a fall from working level. It consists of an anchorage, connectors, a body harness, and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

Free Fall: The act of falling before the personal fall arrest system begins to apply force to arrest the fall.

Free Fall Distance: The vertical displacement of the fall arrest attachment point on the employee's body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline and lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before their operation and before full arrest forces occur. The vertical component of a swing fall should not exceed 6'-0" (1.8 m) or the maximum free fall distance permitted by the authority having jurisdiction e.g. 1.5 meters in Ontario.

Illustration shows workers on narrow roof secured to wall-type horizontal lifeline.

Maximum Arrest Force (MAF): The peak force measured by the test instrumentation during arrest of the test weight in the dynamic tests set forth in a standard such as ANSI Z359.1-1992.

Thaler Note: Maximum Arrest Force (MAF) is the short-duration, dynamic peak force acting 5 to 10 milliseconds on a falling body during arrest of its fall. The value of the MAF is regulated; in Canada and the United States it must not exceed 8kN (1800 lbs). That legal limit has its origins in medical and biomechanical research on human volunteers (research restricted to levels below MAF) and animals (dogs and monkeys). Researchers concluded that the short-duration force acting vertically upward along the human spine is unlikely to cause an injury if it is below 9kN (2000 lbs): The MAF limit of 8 kN (1800 lbs) represents an injury threshold for the upward force applied via the sub-pelvic strap; therefore, if the user is using a safety belt, less than half the current MAF limit may result in injury. A healthy individual in a full body harness with D-ring (mandatory equipment) between the shoulder blades should survive an MAF of 8kN (1800 lbs) without any serious injury.

CABLE HEIGHT, TENSION AND CLEARANCES

Horizontal lifeline height should be such that lanyards or other connection devices are easily attached without interfering with the movement of the user.

The sag in the horizontal cable between any two supports of the lifeline system should be limited to 12" (305 mm). This criteria (installation tension) is related to a fall situation when a fall occurs and the line is loaded with MAF (Maximum Arrest Force).

The minimum clearance required below the level of the horizontal lifeline to the nearest obstruction is outlined in the following chart.

INITIAL SAG REQUIREMENT, 450 lbs (204 kg), 2 men falling 6'-0" (1.8 m)

SPAN	MIN. SAG	RECOMMENDED SAG
10' (3.048 m)	0.25" (6 mm)	2.25" (57 mm)
20' (6.096 m)	1.25" (32 mm)	3" (76 mm)
30' (9.144 m)	2" (51 mm)	3.75" (95 mm)
40' (12.192 m)	2.75" (70 mm)	4.50" (114 mm)
50' (15.24 m)	3.5" (89 mm)	5.25" (133 mm)
60' (18.288 m)	4" 102 mm)	6" 152 mm)
70' (21.366 m)	4.75" (121 mm)	6.75" (171 mm)
80' (24.384 m)	5.5" (140 mm)	7.50" (191 mm)
90' (17.432 m)	6.25" (159 mm)	8.25" (210 mm)
100' (30.48 m)	7" (178 mm)	9" (228 mm)
110' (33.528 m)	7.75" (197 mm)	9.75" (2487 mm)
120' (36.576 m)	8.5" (216 mm)	10.5" (267 mm)

CLEARANCE REQUIREMENT, 450 lbs (204 kg), 2 men falling 6'-0" (1.8 m)

SPAN	MIN. CLEARANCE WITH 6'-0" (1.8 m) LANYARD	MIN. CLEARANCE WITH SELF RETRACTING LANYARD
10' (3.048 m)	17.92' (5.5 m)	6.92' (2.1 m)
20' (6.096 m)	19.16' (5.8 m)	8' (2.44 m)
30' (9.144 m)	20.5' (6.25 m)	9.08' (2.77 m)
40' (12.192 m)	21.83' (6.65 m)	10.16' (3.10 m)
50' (15.24 m)	23.08' (7.03 m)	11.33' (3.45 m)
60' (18.288 m)	24.42' (7.44 mm)	12.42' (3.78 m)
70' (21.366 m)	25.66 (7.82 m)	13.5' (4.12 m)
80' (24.384 m)	27' (8.23 m)	14.58' (4.44 m)
90' (17.432 m)	28.33' (8.63 m)	15.66' (4.77 m)
100' (30.48 m)	29.58' (9.02 m)	16.83' (5.13 m)
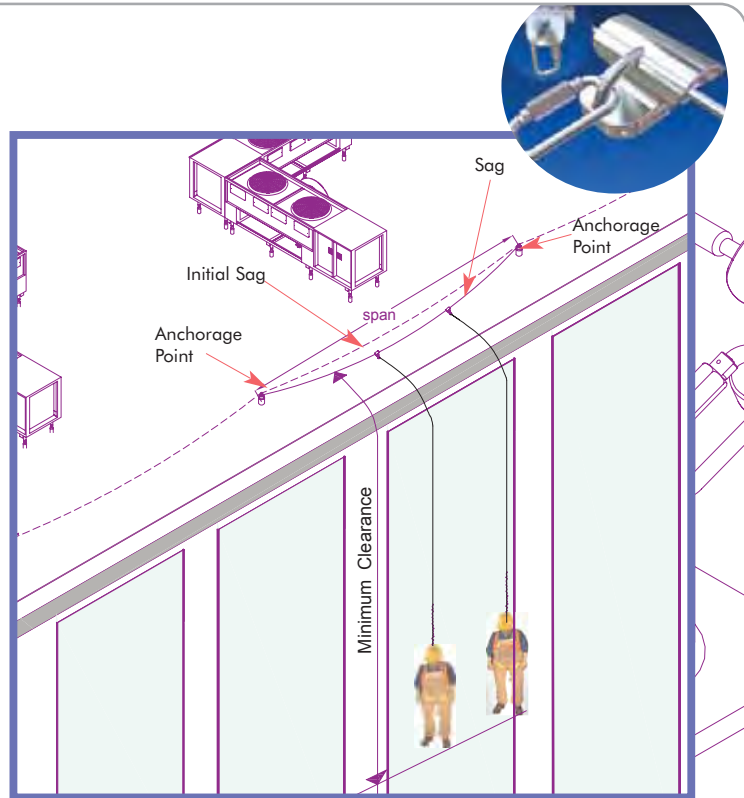
KEY LINE DIAGRAM ILLUSTRATING CLEARANCE REQUIREMENT IN A FALL ARREST SITUATION

PLANNING ASSISTANCE

Without obligation, Thaler Metal Industries Ltd. will provide layout drawings for EASY SLIDER systems in compliance with all applicable standards, safety regulations and local building codes.

Simply forward the following Autocad drawings via e-mail courier, or mail:
- Architectural roof plan
- Structural roof plan
- Building elevation drawings
- Building section drawings with special emphasis on parapet or roof edge details
- System access openings e.g. hatches, operable windows, roof ladders or stairs, and similar access points
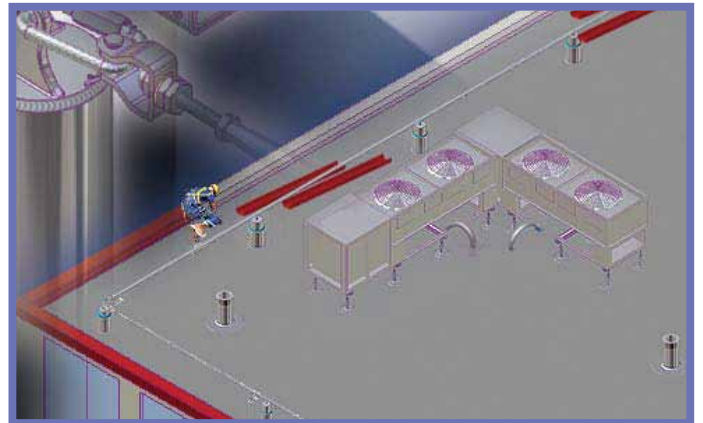
Working around mechanical equipment close to roof edges is a common fall hazard area.

RELATED DATA

Refer to the following specific product data or other Thaler literature for Thaler EASY SLIDER Horizontal Lifeline fall protection systems (Section K of Thaler Manual).

- K-700 (Roof Application)
- K-701 (Wall Application)
- K-702 (Overhead Application)
- K-703 (Single Span Application)
- Specification (Section of Work, 3-Part Format)
- Components
- What It Takes To Be "Thaler Or Equal"
- STACK JACK Flashings (Section A of Manual)
- EPDM Flashing Seals (Section A of Manual)
- Horizontal Lifeline For Metal roofs (Section D of Manual)
- Fall Arrest Roof Anchors (Section I of Manual)

EPDM Triple Pressure Grommet Seal Features:
Eliminates Leaks
Eliminates Maintenance
Eliminates Removable Cap

EPDM Base Seal Features:
Eliminates Condensation & Condensation Build-Up
Eliminates Vapour Return
Eliminates Urethane Insulation
Incorporates Air Barrier Principles

Aluminum, Copper or Stainless Steel Flashing

Deck Flange

Thaler STACK JACK Flashing meets the requirements for air leakage control better than any protrusion flashing on the market to-day (better looking too).

Thaler EASY SLIDER Horizontal Lifeline (overhead application) for Construction use.

Thaler EASY SLIDER Horizontal Lifeline for Metal Roof employing Thaler EPDM Flexible Flashing

Thaler EASY-SLIDER Horizontal Lifeline for Metal Roofs (see Section D of Manual)

Maintenance Personnel Working Around Parapet Edge of building, A Recognized Fall Hazard Area
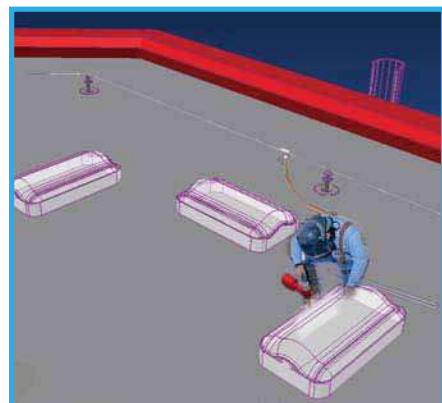
Tied Off While Working Around Skylights, A Potentially Dangerous Area.

Mechanical Equipment

Narrow Roof Area

Less Than 6'-0" (1.8 m), Common Fall Hazard Area
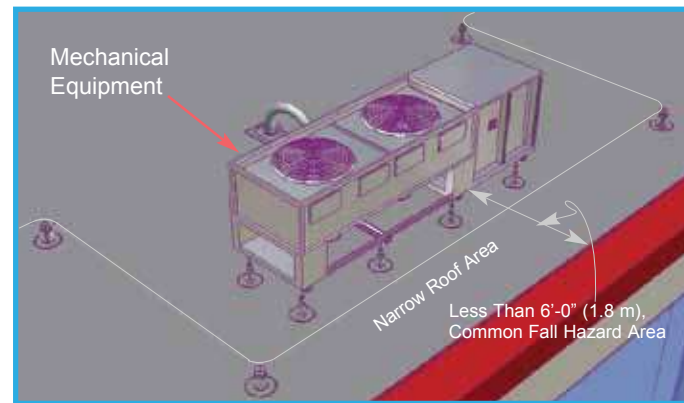
Close Up View of EASY SLIDER Horizontal Lifeline For Servicing Mechanical Equipment Close to Roof Edge

Close-Up View of Mobile Shuttle Runner. Inset shows Underside of Shuttle

EASY SLIDER To Be Accessed Via Roof Hatch, Stair Well Or Other Safe Area For Continous Fall Protection

Terminal CornerAnchor (Start and Finish Of Installation)

6'-6" (1.98 m) Recommended Spacing From Roof Edge

Intermediate Anchors
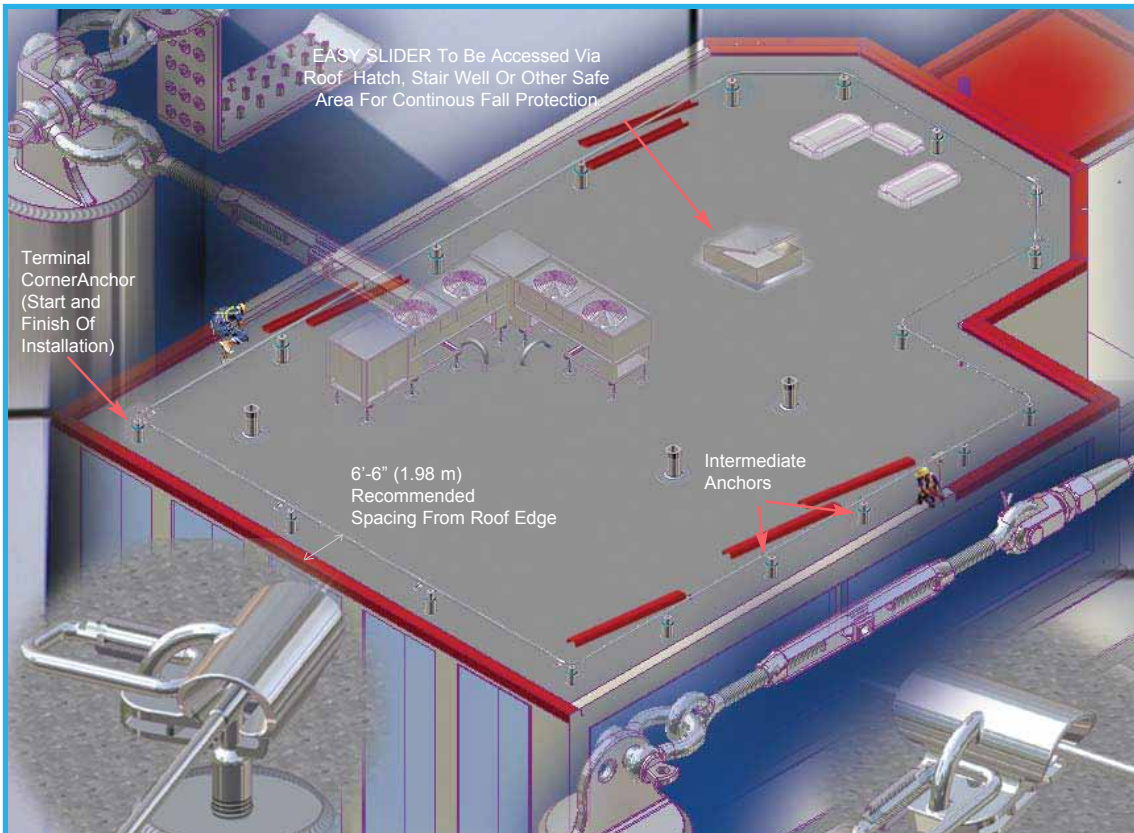
EASY SLIDER Horizontal Lifeline Installed Around Perimeter Of Roof With Low Parapet (less than guardrail height)

Terminal Corner Anchor with Tensioner and Thaler Energy Absorber (TEA)

Thaler STACK JACK Flashibg

Terminal Anchor With Tensioner

Intermediate Anchor With Bracket

Terminal Anchor With Thaler Energy Absorber (TEA)

Corner Anchor With Any-Angle Bracket

1/2" (13 mm) 3/8" (10 mm) 304 throut S.S. CABLE

S.S. INTERMEDIATE BRACKET

2-1/4" (57 mm) 3/4" (19 mm) 1/4" x 3-1/2" (6 mm x 89 mm) HSS WELDED TO 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION

EPDM TRIPLE PRESSURE GROMMET TOP SEAL

THALER SJ-34 NEW-STANDARD STACKJACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

THALER SJ-35 NEW-STANDARD STACKJACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

12-5/8" (321 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

INVERTED ROOF ILLUSTRATED (BUR)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

1" (25 mm) TYPE 304 S.S. BOLT AND NUT WELDED TO BASE PLATE (SEE PAGE K-2A FOR OTHER FASTENING METHODS)

MINIMUM 6" (152 mm)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

1/4" x 4" x 4" (6 x 102 x 102 mm) STAINLESS STEEL PLATE, LOCK WASHER AND NUT

ROOF SPECIALTIES
K-700 EASY SLIDER™ HORIZONTAL LIFELINE FALL PROTECTION SYSTEM (Roof Application)

DESCRIPTION:
The Thaler K-700 EASY SLIDERTM Horizontal Lifeline Fall Protection System is a complete pre-engineered multi-span flexible lifeline system consisting of end anchors, intermediate anchors, stainless steel cable, mobile attachment devices (shuttle runners), in-line fittings (tensioner, energy absorber, corner fittings, etc.) and up to 4 shuttles as standard. Full body harnesses with 6'-0" (1.8 m) long shock absorbing lanyards (by others) completes the assembly. End and intermediate anchors consist of urethane insulated hollow steel posts (HSS) equipped with different type heads to accommodate the cable, and time-tested Thaler STACK JACK Flashing. Anchor are also available with different type bases for fastening to a variety of roof structures. All anchor posts are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction.

PROMINENT FEATURES:
Designed to protect up to 2 workers against falls from height for systems in length up to 200'-0" (61 m) and 4 workers for the systems more than 200'-0" (61 m) as standard (prevents users from falling more than 6'-0" or 1.8 m). Hands free system allows users to walk uninterrupted the entire length of system. Thaler Energy Absorber (TEA), separate from harness shock absorber, assists in dissipating or reducing fall arrest forces. EASY SLIDER shuttle permits worker to connect or disconnect at any position on cable. Line length is unlimited. Condensation free and maintenance free (attractive, neat flashing never needs caulking. See Thaler EPDM Flashing Seals literature). Anchor integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
Any-angle corner units available as standard. Any type securement to suit structural substrate (cast-in-place, bolted, welded, etc.). PVC coated flashing deck flange for PVC roof membrane, bituminous painted flashing deck flange for BUR and ModBit roof membrane. Flashing is available aluminum, copper or stainless steel.

RECOMMENDED USE:
Suitable for both travel restraint and fall arrest using full body harness and lanyard, self retracting lifeline or lifeline with rope grab. Provides fall protection for servicing rooftop equipment, roof inspection, accessing window cleaning stations and similar applications on low slope/flat roofs. Designed to protect up to four workers (as standard) on system. See K-701 and K-702 systems for wall or overhead applications.

APPLICABLE STANDARDS:
Thaler K-700 EASY SLIDER conforms to all Canadian and U.S. standards, provincial and state labor/safety codes and materials standards relating to anchor fabrication and horizontal lifeline applications. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL OSHA, AISC, AWS, and other references. See Thaler EASY SLIDER Horizontal Lifeline Primer literature for introductory data on subject of fall protection.
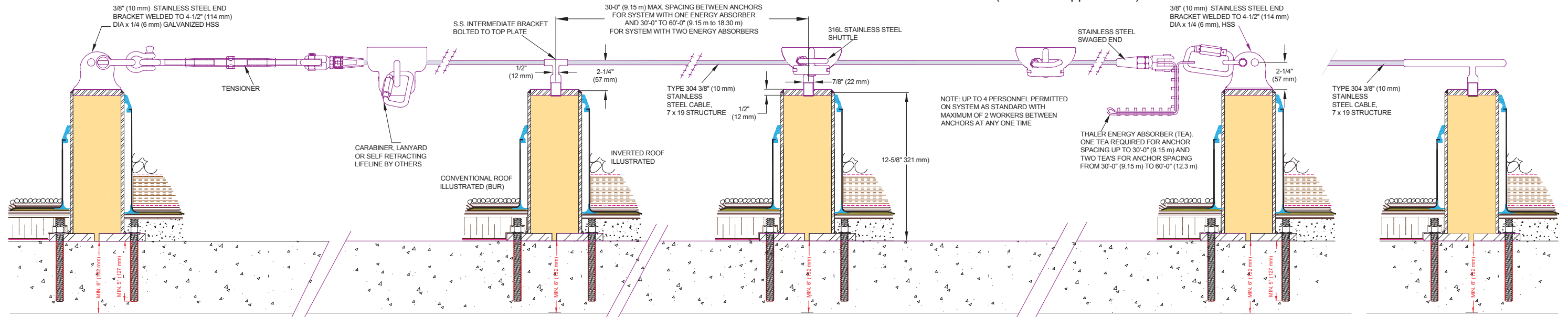
WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instruct-ions".

MAINTENANCE:
Regulatory authorities require the horizontal lifeline system be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log book. Apart from this requirement, (continued on left)

INTERMEDIATE HORIZONTAL LIFELINE ANCHOR (K-FARA-1-706)
PATENT PENDING

the K-700 EASY SLIDER stainless steel cable only requires occasional wiping with a damp cloth to ensure free and easy movement of the shuttle component. In the event of a fall, the system including any affected harness, must be re-approved by a professional engineer before being placed back in service.

PLANNING SERVICE:
Thaler will provide layout drawings for the K-700 EASY SLIDER in compliance with all standards, safety regulations and local building codes.

SPECIFICATION (Short Form):
Horizontal lifeline system: Thaler K-700 EASY SLIDER Horizontal Lifeline fall protection system to [CSA-Z91-02][OSHA 1910.66, Subparts D and F] with: 3-1/2" (89 mm) dia. urethane insulated HSS anchor posts, wall thickness 1/4" (6 mm), hot dipped galvanized ASTM 500, 12" (305 mm) high, welded and bolted to 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) 44W base plate, securement to suit substrate; Type 316 stainless steel fittings (swaged end, energy absorber, double locking carabiner, shuttles end tensioner, intermediate brackets, corner pieces); Type 304 s.s. cable, 3/8" (10 mm) dia. 7 x 19 structure; [2][4] full body harnesses with integral shock absorber by others; [SJ-34, 7" (178 mm) high] [SJ-35 13" (330 mm) high] New-Standard STACK JACK Flashing of [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. However, only Thaler or Thaler approved installers may install the the system which must be certified by a professional engineer prior to initial use. Essentially, the K-700 EASY SLIDER Horizontal Lifeline is installed by fastening the anchor posts to the roof structural substrate, installing flashing, and cable, including fittings.

Recommended Layout: Maximum spacing between anchor posts is 30'-0" (9.15 m) for system with one energy absorber, and 30'-0" to 60'-0" (9.15 to 12.3 m) for system with two energy absorbers. Entry and exit points should be located in a safe area to ensure continuous protection. Horizontal lifeline should not be located closer than 6'-6" (1.98 m) from any roof edge. For minimum clearance required below the level of the horizontal lifeline, see page K-1. Consult with Thaler for layout recommendations.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Products are typically available from stock.
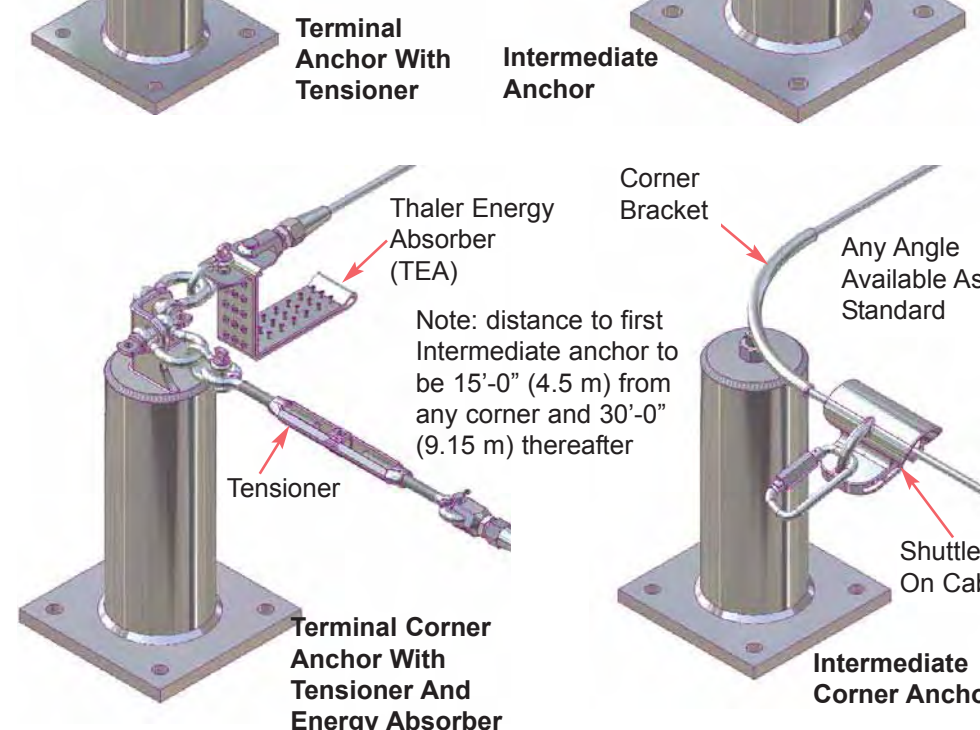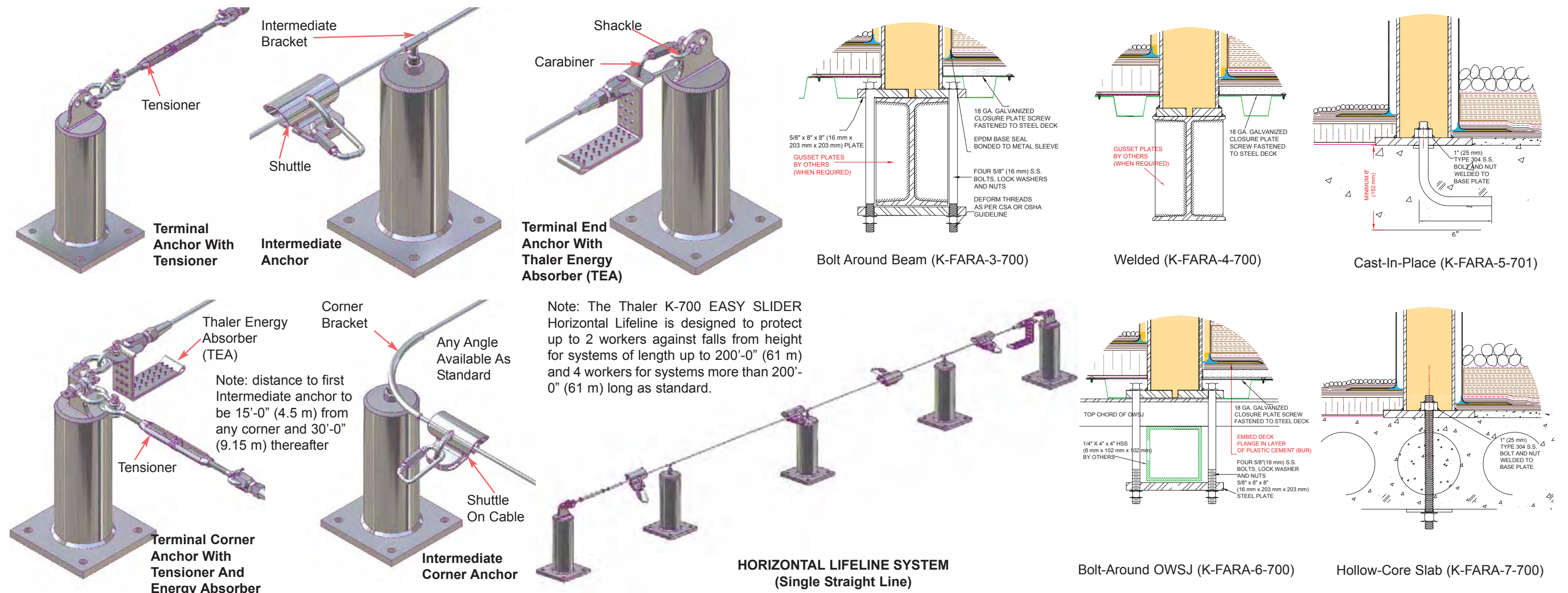
Note: All Anchors are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction

Note: Anchor to roof slab fastening shows adhesive bolt securement (for retrofit applications)

3/8" (10 mm) STAINLESS STEEL END BRACKET WELDED TO 4-1/2" (114 mm) DIA x 1/4 (6 mm) GALVANIZED HSS

TENSIONER

CARABINER, LANYARD OR SELF RETRACTING LIFELINE BY OTHERS

CONVENTIONAL ROOF ILLUSTRATED (BUR)

S.S. INTERMEDIATE BRACKET BOLTED TO TOP PLATE

30'-0" (9.15 m) MAX. SPACING BETWEEN ANCHORS FOR SYSTEM WITH ONE ENERGY ABSORBER AND 30'-0" TO 60'-0" (9.15 m to 18.30 m) FOR SYSTEM WITH TWO ENERGY ABSORBERS

1/2" (12 mm)

2-1/4" (57 mm)

TYPE 304 3/8" (10 mm) STAINLESS STEEL CABLE, 7 x 19 STRUCTURE

INVERTED ROOF ILLUSTRATED

316L STAINLESS STEEL SHUTTLE

7/8" (22 mm)

1/2" (12 mm)

NOTE: UP TO 4 PERSONNEL PERMITTED ON SYSTEM AS STANDARD WITH MAXIMUM OF 2 WORKERS BETWEEN ANCHORS AT ANY ONE TIME

12-5/8" 321 mm)

STAINLESS STEEL SWAGED END

3/8" (10 mm) STAINLESS STEEL END BRACKET WELDED TO 4-1/2" (114 mm) DIA x 1/4 (6 mm), HSS

THALER ENERGY ABSORBER (TEA). ONE TEA REQUIRED FOR ANCHOR SPACING UP TO 30'-0" (9.15 m) AND TWO TEA'S FOR ANCHOR SPACING FROM 30'-0" (9.15 m) TO 60'-0" (12.3 m)

2-1/4" (57 mm)

TYPE 304 3/8" (10 mm) STAINLESS STEEL CABLE, 7 x 19 STRUCTURE

MIN. 6" (152 mm)

END ANCHOR WITH TENSIONER

INTERMEDIATE ANCHOR

INTERMEDIATE ANCHOR

END ANCHOR WITH ENERGY ABSORBER

CORNER ANCHOR

FASTENING METHODS FOR DIFFERENT STRUCTURES

Tensioner

Intermediate Bracket

Shuttle

Terminal Anchor With Tensioner

Intermediate Anchor

Shackle

Carabiner

Terminal End Anchor With Thaler Energy Absorber (TEA)

5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) PLATE

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

EPDM BASE SEAL BONDED TO METAL SLEEVE

FOUR 5/8" (16 mm) S.S. BOLTS, LOCK WASHERS AND NUTS

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE

Bolt Around Beam (K-FARA-3-700)

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

Welded (K-FARA-4-700)

MINIMUM 6" (152 mm)

1" (25 mm) TYPE 304 S.S. BOLT AND NUT WELDED TO BASE PLATE

6"

Cast-In-Place (K-FARA-5-701)

Thaler Energy Absorber (TEA)

Tensioner

Note: distance to first Intermediate anchor to be 15'-0" (4.5 m) from any corner and 30'-0" (9.15 m) thereafter

Terminal Corner Anchor With Tensioner And Energy Absorber

Corner Bracket

Any Angle Available As Standard

Shuttle On Cable

Intermediate Corner Anchor

Note: The Thaler K-700 EASY SLIDER Horizontal Lifeline is designed to protect up to 2 workers against falls from height for systems of length up to 200'-0" (61 m) and 4 workers for systems more than 200'-0" (61 m) long as standard.

HORIZONTAL LIFELINE SYSTEM (Single Straight Line)

TOP CHORD OF OWSJ

1/4" X 4" x 4" HSS (6 mm x 102 mm x 102 mm) BY OTHERS

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

FOUR 5/8"(16 mm) S.S. BOLTS, LOCK WASHER AND NUTS 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) STEEL PLATE

Bolt-Around OWSJ (K-FARA-6-700)

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

1" (25 mm) TYPE 304 S.S. BOLT AND NUT WELDED TO BASE PLATE

Hollow-Core Slab (K-FARA-7-700)

Intermediate Anchor

EASY SLIDER Lifeline

Corner Anchor (90° Illustrated)

End Anchor

6'-6" (1.98 m) Recommended Typical Spacing From Roof Edge

Roof Access Hatch

K-700 EASY SLIDER (Roof Application)

Any-Angle Corner Anchor

End Anchor

Corner Anchor (Any Angle)

K-701 EASY SLIDER (Wall Application)

Top View of Internal Corner Anchor

Montage Illustration Shows K-701 EASY SLIDER Horizontal Lifeline Fall Protection System For Walls

Intermediate Wall Anchor K-FARA-93-710 With Thaler EASY SLIDER Shuttle

Corner Wall Anchor K-FARA-93-711 With EASY SLIDER Shuttle (90° Angle Illustrated)
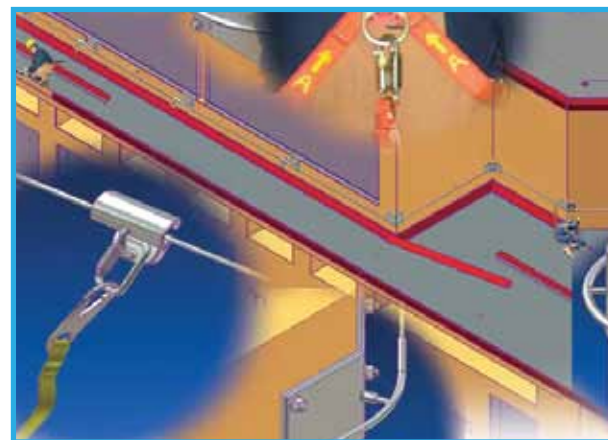
Maintenance Personnel Working Around Low Parapet and Narrow Roof Area, a Typical Fall Hazard Area

Terminal End Anchor K-FARA-93-709 (adhesive bolt fastening for retrofit applications)

Swaged End

Carabiner

Shackle
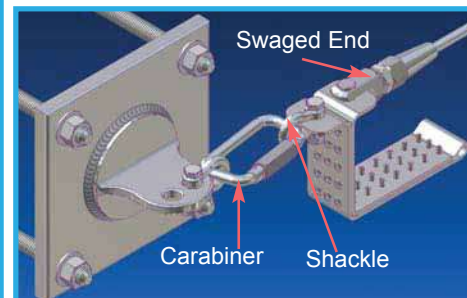
Terminal End Anchor K-FARA-93-709 With Thaler Energy Absorber (TEA). Adhesive Bolt Fastening For Retrofit Applications
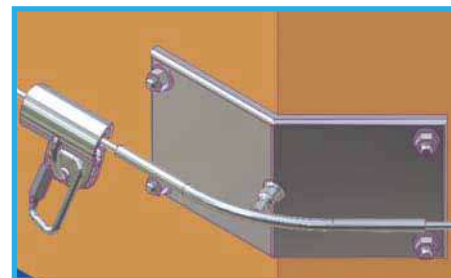
Any-Angle Corner Anchor K-FARA-93-712 And EAASY SLIDER Shuttle

End Tensioner

Thaler Energy Absorber (TEA)

SECTION VIEW

CONTINUOUS CAULKING AROUND WALL PLATES (BY OTHERS)

2-3/4" (70 mm)

3/8" (10 mm) S.S. END BRACKET WELDED TO TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) S.S. WALL PLATE

MINIMUM 5" (127 mm)

MINIMUM 6" (152 mm)

CONTINUOUS 5/16 (8 mm) FILLET WELD

FOUR 5/8" (16 mm) ADHESIVE FASTENERS (RETROFIT APPLICATION)

FRONT VIEW

SHACKLE

304 3/8" (10 mm) STAINLESS STEEL CABLE, 7 x 19 STRUCTURE

STAINLESS STEEL SWAGED END

THALER ENERGY ABSORBER (TEA)

30'-0" (9.15 m) MAX. SPACING BETWEEN ANCHORS FOR SYSTEM WITH ONE ENERGY ABSORBER

30'-0" TO 60'-0" (9.15 to 18.3 m) FOR SYSTEM WITH TWO ENERGY ABSORBERS

PLAN VIEW

SHACKLE

CARABINER

THALER ENERGY ABSORBER (TEA)

NOTE: ADHESIVE FASTENING ANCHOR SECUREMENT IS ILLUSTRATED (RETROFIT APPLICATION). SEE PAGE K-3A FOR OTHER FASTENING METHODS

Top View of End Wall Anchor With Mobile Shuttle Runner

DESCRIPTION:
The Thaler K-701, EASY SLIDERTM Horizontal Lifeline Fall Protection System for walls is a complete pre-engineered multi-span flexible lifeline system consisting of end wall anchors, intermediate anchors, stainless steel cable, mobile attachment devices (shuttle runners), in-line fittings (tensioner, tension indicator, energy absorber, corner fittings, etc.) and up to 4 shuttles as standard. Full body harnesses with 6'-0" (1.8 m) long shock absorbing lanyards (by others) completes the system. End and intermediate anchors consist of stainless steel base plates with s.s. end bracket with two holes. Anchors are also available with different type bases for fastening to wall or similar structures. All anchors are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction.

PROMINENT FEATURES:
Designed to protect up to 2 workers against falls from height for systems in length up to 200'-0" (61 m) and 4 workers for the systems more than 200'-0" (61 m) as standard (from falling more than 6'-0" or 1.8 m). Hands free system allows users to walk uninterrupted the entire length of system. Thaler Energy Absorber (TEA), separate from harness shock absorber assists in dissipating or reducing fall arrest forces. EASY SLIDER shuttle permits worker to connect or disconnect at any position on cable. Line length is unlimited. Maintenance free. Anchor integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
Any-angle corner units available as standard. Any type securement to suit structural substrate (cast-in-place, bolted, welded, etc.).

RECOMMENDED USE:
Suitable for both travel restraint and fall arrest using full body harness and lanyard, self retracting lifeline or lifeline with rope grab. Provides fall protection for servicing rooftop equipment, roof inspection, accessing window cleaning stations and similar applications. Designed to protect up to four workers as standard. See K-700 and K-702 system for roof and overhead applications.

APPLICABLE STANDARDS:
Thaler K-700 EASY SLIDER conforms to all Canadian and U.S. standards, provincial and state labor/safety codes and materials standards relating to anchor fabrication and horizontal lifeline applications. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL OSHA, AISC, AWS, and other references. See Thaler EASY SLIDER Horizontal Lifeline Primer literature for introductory data on subject of fall protection.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

MAINTENANCE:
Regulatory authorities require the horizontal lifeline system be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log book. Apart from this requirement, the K-701 EASY SLIDER stainless steel cable only requires occasional wiping with a damp cloth to ensure free and easy movement of the shuttle component. In the event of a fall, the system including any affected harness, must be re-approved by a professional engineer before being placed back in service. Inspection of caulking around wall plates should be carried under regular roof inspection procedures.

TERMINAL END HORIZONTAL LIFELINE ANCHOR (K-FARA-93-709)
PATENT PENDING

PLANNING SERVICE:
Thaler will provide layout drawings for the K-701 EASY SLIDER in compliance with all standards, safety regulations and local building codes.

SPECIFICATION (Short Form):
Horizontal lifeline system: Thaler K-701 EASY SLIDER Horizontal Lifeline fall protection system for walls to [CSA-Z91-02][OSHA 1910.66, Subparts D and F] with: stainless steel 3/8" (10 mm) brackets welded to stainless steel base plates 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm), securement to suit substrate; Stainless steel fittings (swaged end, energy absorber, double locking carabiner, end tensioner, intermediate brackets, corner pieces); 304 s.s. cable, 3/8" (10 mm) dia. 7 x 19 structure; [2][4] fully body harnesses with integral shock absorber by others; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture. Caulking of wall plates by others.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. However, only Thaler or Thaler approved installers may install the the system which must be certified by a professional engineer prior to initial use. Essentially, the K-701 EASy SLIDER Horizontal Lifeline is installed by fastening anchors to the wall, or other structural substrate, installing cable, including fittings, and sealing the wall plates to surfaces where applicable.

Recommended Layout: Maximum spacing between anchors is 30'-0" (9.15 m) for system with one Thaler Energy Absorber (TEA), and from 30'-0" to 60'-0" (9.15 to 18.3 m) for system with two energy absorbers. Entry and exit points should be located in a safe area to ensure continuous protection. Horizontal lifeline should not be located closer than 6'-6" (1.98 m) from any roof edge except for narrow roof areas. For minimum clearance required below the level of the horizontal lifeline, see page K-1. Consult with Thaler for layout recommendations.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Products are typically available from stock.

Note: All Anchors are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction


3/8" (10 mm) STAINLESS STEEL BRACKET WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) S.S. WALL PLATE

CARABINER FOR ATTACHMENT OF LANYARD, SELF RETRACTING LIFELINE OR LIFELINE WITH ROPE GRAB

EASY SLIDER SHUTTLE IS SHOWN BY-PASSING INTERMEDIATE ANCHOR

S.S. INTERMEDIATE BRACKET BOLTED TO 1/2" (12 mm) PLATE

STAINLESS STEEL SWAGED END

3/8" (10 mm) 316L STAINLESS STEEL CABLE, 7 x 19 STRUCTURE

30-0" (9.15 m) MAX. SPACING BETWEEN ANCHORS FOR SYSTEM WITH ONE ENERGY ABSORBER

AND 30'-0" TO 60'-0" (9.15 m to 18.30 m) FOR SYSTEM WITH TWO ENERGY ABSORBERS

316L STAINLESS STEEL EASY SLIDER MOBILE SHUTTLE RUNNER

316L STAINLESS STEEL TENSIONER

SHACKLE

THALER ENERGY ABSORBER (TEA)

TERMINAL END ANCHOR WITH ENERGY ABSORBER

INTERMEDIATE ANCHOR

INTERMEDIATE ANCHOR

INTERMEDIATE ANCHOR

Note: The Thaler K-701 EASY SLIDER Horizontal Lifeline is designed to protect up to 2 workers against falls from height for systems of length up to 200'-0" (61 m) and 4 workers for systems more than 200'-0" (61 m) long as standard.

TERMINAL END ANCHOR WITH TENSIONER

EXTERNAL CORNER ANCHOR (90° Angle Illustrated)

FRONT ELEVATION OF K-701 EASY SLIDER WALL MOUNTED HORIZONTAL LIFELINE SYSTEM

FASTENING METHODS FOR DIFFERENT STRUCTURES

HORIZONTAL LIFELINE SYSTEM SINGLE STRAIGHT LINE CABLE FOR WALLS

Shackle

Carrabiner
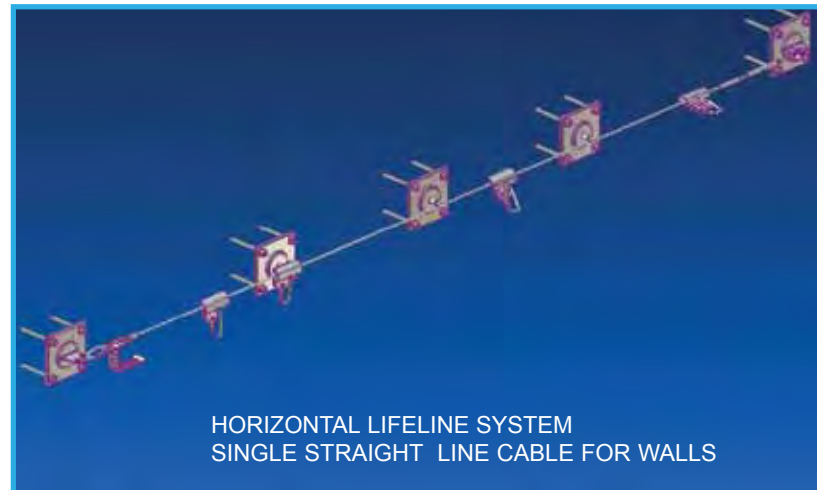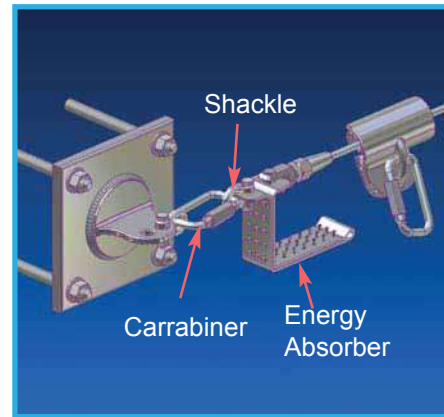
Energy Absorber

TERMINAL END WALL ANCHOR WITH ENERGY ABSORBER AND SWAGED END
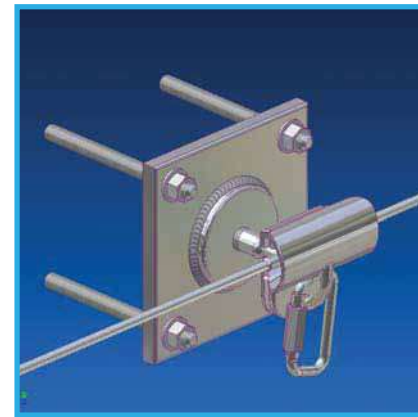
INTERMEDIATE ANCHOR WITH EASY SLIDER SHUTTLE BY-PASSING INTERMEDIATE BRACKET

Intermediate Bracket

WALL INTERMEDIATE ANCHOR

CONTINUOUS CAULKING (BY OTHERS)

MINIMUM 6" (152 mm)

CONTINUOUS 5/16 (8 mm) FILLET WELD

FOUR 5/8" (16 mm) S.S. BOLTS
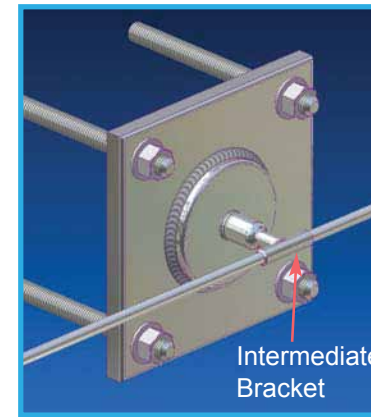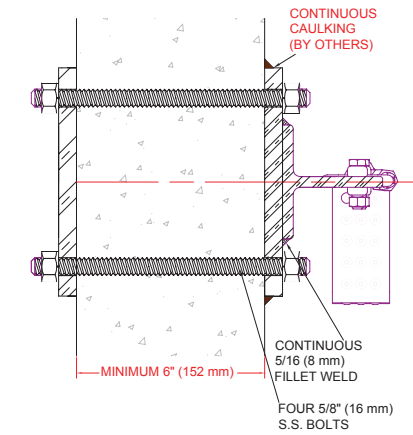
BOLT THROUGH FASTENING (K-FARA-91-701) SECTION DETAIL

5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) PLATES

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE

FOUR 5/8" (16 mm) S.S. BOLTS, LOCK WASHERS AND NUTS

2-3/4" (70 mm)
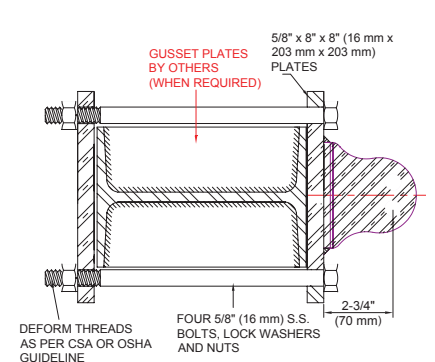
BOLT AROUND BEAM (K-FARA-701) FASTENING SECTION DETAIL

INTERNAL CORNER ANCHOR (90° Angle Illustrated)

Shuttle On Cable

Corner Bracket

EXTERNAL CORNER ANCHOR (90° Angle Illustrated)

All Angles Available
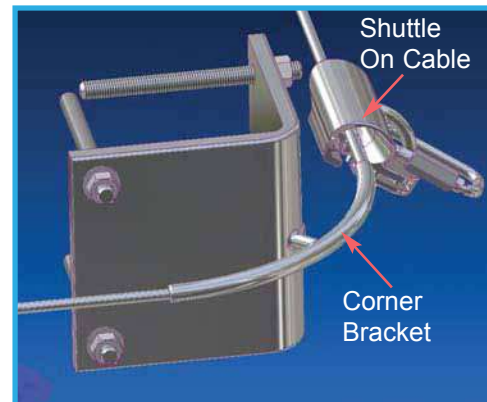
EXTERNAL CORNER ANCHOR (Any Angle Bracket Available As Standard)
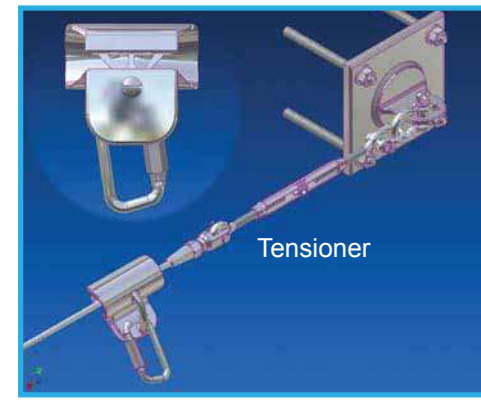
Tensioner

TERMINAL END ANCHOR WITH TENSIONER (Inset shows Underside of Shuttle)

For adhesive fastening (K-FARA-93-701), see front side of page for retrofit applications

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

2-3/4" (70 mm)

STAINLESS STEEL 3/8" (10 mm) END BRACKET WELDED TO TO STAINLESS STEEL 5/8" x 5" x 5" (16 mm x 127 mm x 127 mm) PLATE
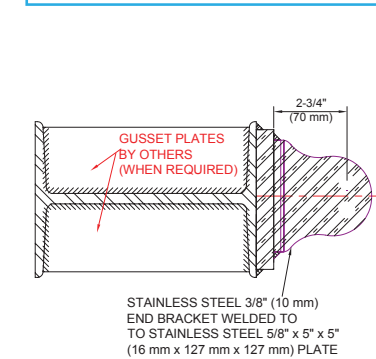
WELDED TO BEAM (K-FARA-701) FASTENING

CONTINUOUS CAULKING (BY OTHERS)

STAINLESS STEEL 3/8" (10 mm) END BRACKET WELDED TO TO STAINLESS STEEL 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) PLATE

FOUR 5/8" (16 mm) S.S. CAST IN PLACE BOLTS

6"

MINIMUM 6" (152 mm)
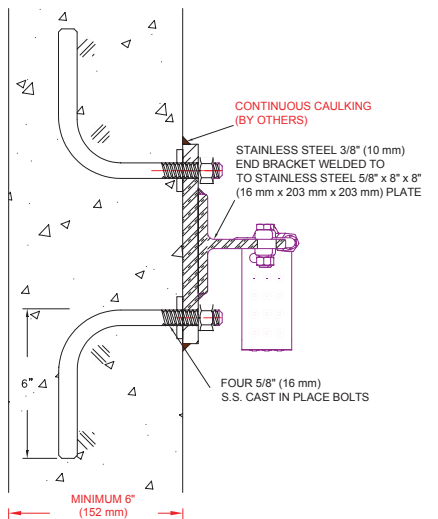
CAST-IN-PLACE (K-FARA-92-701) SECTION DETAIL
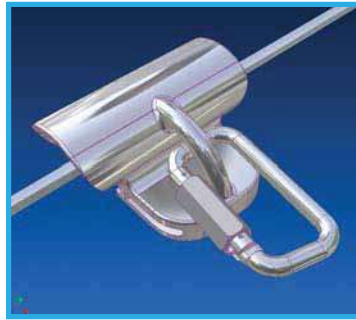
Close Up View of Mobile Shuttle Runner With Carabiner Attached

View Shows Underside of Shuttle Runner

End Anchor

K-702 EASY SLIDER Lifeline

Any-Angle Corner Anchors

Intermediate Anchors

End Anchor With Tensioner

K-702 EASY SLIDER Horizontal Lifeline Provides Fall Protection For Window Cleaning

Terminal Anchor With Thaler Energy Absorber (TEA)

Terminal Anchor With End Tensioner

Intermediate Anchor With By-Pass Bracket

Corner Anchor With Any-Angle By-Pass Bracket

Easy Slider To Be Accessed Via Operable Window, Access Hatch, Roof Area Or Other Safe Access Offering Continuous Protection

Inset Illustration Show Lanyard Connection To Worker's Harness (Lower Left) And To Cable Shuttle (Upper Right)

Horizontal Lifeline on Steel Structure Construction Site

ROOF SPECIALTIES
K-702 EASY SLIDER™
HORIZONTAL LIFELINE
FALL PROTECTION SYSTEM
(Overhead Application)

Terminal End Anchor With Thaler Energy Absorber (TEA)

DESCRIPTION:
The Thaler K-702, EASY SLIDER™ Horizontal Lifeline Fall Protection System for overhead application is a complete pre-engineered multi-span flexible lifeline system consisting of terminal end anchors, intermediate anchors, stainless steel cable, mobile attachment devices (shuttle runners), in-line fittings (tensioner, energy absorber, corner fittings, etc.) and up to 4 shuttles. Full body harnesses with 6'-0" (1.8 m) long shock absorbing lanyards (by others) completes the assembly. End and intermediate anchors consist of a stainless steel base plate and end bracket with two holes. Anchors are also available with different type bases for fastening to a variety of overhead or similar structures. All anchors are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction.

PROMINENT FEATURES:
Designed to protect up to 2 workers against falls from height for systems in length up to 200'-0" (61 m) and 4 workers for the systems more than 200'-0" (61 m) as standard (prevents users from falling more than 6'-0" or 1.8 m). Hands free system allows users to walk uninterrupted the entire length of system. Thaler Energy Absorber (TEA), separate from harness shock absorber assists in dissipating or reducing fall arrest forces. EASY SLIDER shuttle permits worker to connect or disconnect at any position on cable. Maintenance free. Anchor integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
Any-angle corner units available as standard. Any type securement to suit structural substrate (cast-in-place, bolted, welded, etc.).

RECOMMENDED USE:
Suitable for both travel restraint and fall arrest using full body harness and lanyard, self retracting lifeline or lifeline with rope grab. Provides fall protection for servicing rooftop equipment, roof inspection, accessing window cleaning stations and similar applications. Designed to protect up to four workers. Line length is unlimited. See K-700 and K-701 system for roof and wall applications.

APPLICABLE STANDARDS:
Thaler K-702 EASY SLIDER conforms to all Canadian and U.S. standards, provincial and state labor/safety codes and materials standards relating to anchor fabrication and horizontal lifeline applications. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL OSHA, AISC, AWS, and other references. See Thaler EASY SLIDER Horizontal Lifeline Primer literature for introductory data on subject of fall protection.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

MAINTENANCE:
Regulatory authorities require the horizontal lifeline system be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log book. Apart from this requirement, the K-702 EASY SLIDER stainless steel cable only requires occasional wiping with a damp cloth to ensure free and easy movement of the shuttle component. In the event of a fall, the system including any affected harness, must be re-approved by a professional engineer before being placed back in service. Inspection of caulking around plates should be carried out under regular roof inspection procedures.

Diagram labels:

MINIMUM 6" (152 mm)

MINIMUM 5" (127 mm)

CONCRETE CORNICE, OR SOFFIT ILLUSTRATED

CONTINUOUS CAULKING AROUND PLATES (BY OTHERS)

FOUR 5/8" (16 mm) ADHESIVE FASTENERS (RETROFIT APPLICATION)

CONTINUOUS 5/16 (8 mm) FILLET WELD

3/8" (10 mm) S.S END BRACKET WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) S.S. PLATE

SHACKLES

304 3/8" (10 mm) STAINLESS STEEL CABLE, 7 x 19 STRUCTURE

STAINLESS STEEL SWAGED END

THALER ENERGY ABSORBER (TEA)

30'-0" (9.15 m) MAX. SPACING BETWEEN ANCHORS FOR SYSTEM WITH ONE ENERGY ABSORBER AND 30'-0" TO 60'-0" (9.15 m to 18.30 m) MAX. SPACING FOR SYSTEM WITH TWO ENERGY ABSORBERS

K-702 HORIZONTAL LIFELINE TERMINAL END ANCHOR (K-FARA-93-713)
PATENT PENDING

PLANNING SERVICE:
Thaler will provide layout drawings for the K-701 EASY SLIDER in compliance with all standards, safety regulations and local building codes.

SPECIFICATION (Short Form):
Horizontal lifeline system: Thaler K-702 EASY SLIDER Overhead Horizontal Lifeline fall protection system for overhead or similar applications to [CSA-Z91-02][OSHA 1910.66, Subparts D and F][OSHA 1926.500, Subpart M (Construction)] with: stainless steel 3/8" (10 mm) brackets welded to stainless steel base plates 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm), securement to suit substrate; Stainless steel fittings (swaged end, energy absorber, double locking carabiner, end tensioner, intermediate brackets, corner pieces); 304 s.s. cable, 3/8" (10 mm) dia. 7 x 19 structure; [2][4] fully body harnesses with integral shock absorber (by others); manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide 20 year warranty against defects in materials and/or manufacture. Caulking of anchors plates by others.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. However, only Thaler Metal Industries, Thaler approved installers or competent installers following Thaler Installation Instruction may install the system which must be certified by a professional engineer prior to initial use. Essentially, the K-702 EASY SLIDER Horizontal Lifeline is installed by fastening the anchors to a soffit, cornice, or other structural substrate, installing cable, including fittings and sealing the plates to surfaces where applicable.

Recommended Layout: Maximum spacing between anchors posts is 30'-0" (9.15 m) for the system with one energy absorber and 30'-0" (9.15 m) to 60'-0" (18.3 m) for the system with two energy absorbers. Entry and exit points should be located in a safe area to ensure continuous protection. Horizontal lifeline ideally should not be located closer than 6'-6" (1.98 m) from any roof edge except for narrow roof areas. For minimum clearance required below the level of the horizontal lifeline, see page K-1. Consult with Thaler for layout recommendations.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Products are typically available from stock.
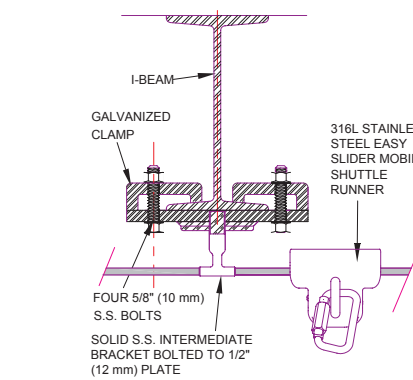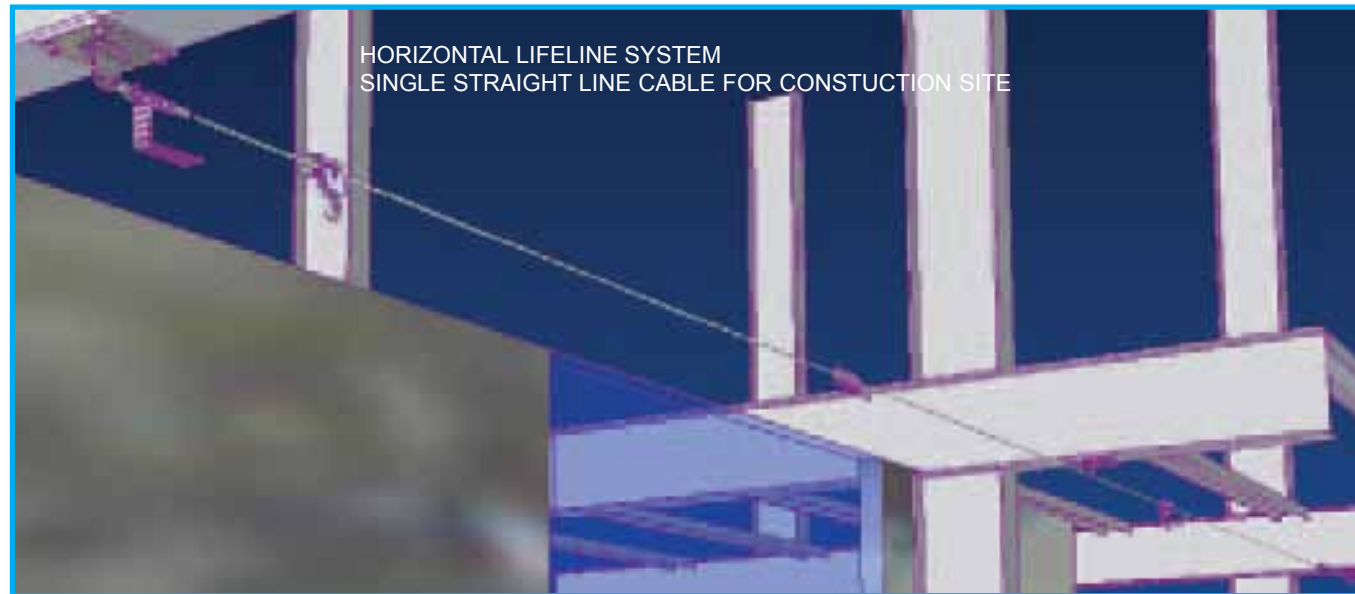
Note: All Anchors are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction

Note: The Thaler K-700 EASY SLIDER Horizontal Lifeline is designed to protect up to 2 workers against falls from height for systems of length up to 200'-0" (61 m) and 4 workers for systems more than 200'-0" (61 m) long as standard.
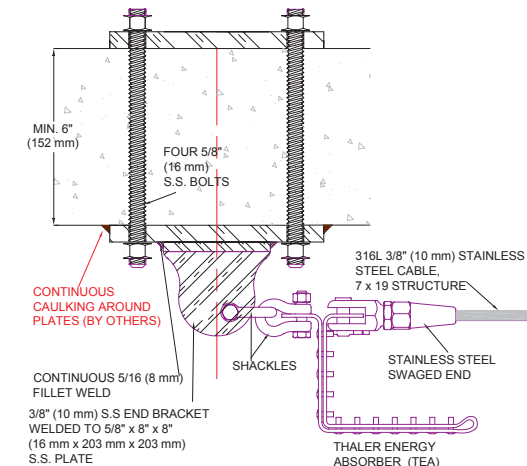
3/8" (10 mm) STAINLESS STEEL BRACKET WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) S.S. MOUNTING PLATE

30-0" (9.15 m) MAX. SPACING BETWEEN ANCHORS FOR SYSTEM WITH ONE ENERGY ABSORBER AND 30'-0" TO 60'-0" (9.15 m to 18.30 m) FOR SYSTEM WITH TWO ENERGY ABSORBERS

S.S. INTERMEDIATE BRACKET BOLTED TO 1/2" (12 mm) PLATE

316L STAINLESS STEEL TENSIONER

THALER ENERGY ABSORBER (TEA)

CARABINER FOR ATTACHMENT OF LANYARD, SELF RETRACTING, LIFELINE OR LIFELINE WITH ROPE GRAB

304 3/8" (10 mm) STAINLESS STEEL CABLE, 7 x 19 STRUCTURE

316L STAINLESS STEEL MOBILE SHUTTLE RUNNER

TERMINAL END ANCHOR WITH ENERGY ABSORBER

INTERMEDIATE ANCHOR

INTERMEDIATE ANCHOR

TERMINAL END ANCHOR WITH TENSIONER

CORNER ANCHOR (Any-Angle Bracket Available as Standard)

FRONT ELEVATION OF K-702 EASY SLIDER OVERHEAD MOUNTED HORIZONTAL LIFELINE SYSTEM

FASTENING METHODS FOR DIFFERENT STRUCTURES

HORIZONTAL LIFELINE SYSTEM
SINGLE STRAIGHT LINE CABLE FOR CONSTUCTION SITE

I-BEAM

GALVANIZED CLAMP

316L STAINLESS STEEL EASY SLIDER MOBILE SHUTTLE RUNNER

FOUR 5/8" (10 mm) S.S. BOLTS

SOLID S.S. INTERMEDIATE BRACKET BOLTED TO 1/2" (12 mm) PLATE

TEMPORARY CLAMP AROUND BEAM FLANGE (K-FARA-91-702) SECTION DETAIL FOR CONSTRUCTION APPLICATIONS

For Adhesive Bolt (K-FARA-93-702) Fastening for Retrofit Application, See Top of Page and Front Side of Page

MIN. 6" (152 mm)

FOUR 5/8" (16 mm) S.S. BOLTS

316L 3/8" (10 mm) STAINLESS STEEL CABLE. 7 x 19 STRUCTURE

CONTINUOUS CAULKING AROUND PLATES (BY OTHERS)

CONTINUOUS 5/16 (8 mm) FILLET WELD

3/8" (10 mm) S.S END BRACKET WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) S.S. PLATE

SHACKLES

STAINLESS STEEL SWAGED END

THALER ENERGY ABSORBER (TEA)

BOLT THROUGH (K-FARA-91-702) SECTION DETAIL

MINIMUM 6" (152 mm)

FOUR 5/8" (16 mm) S.S. CAST-IN-PLACE BOLTS

CONTINUOUS CAULKING AROUND MOUNTING PLATE (BY OTHERS)

SOLID STAINLESS STEEL INTERMEDIATE BRACKET
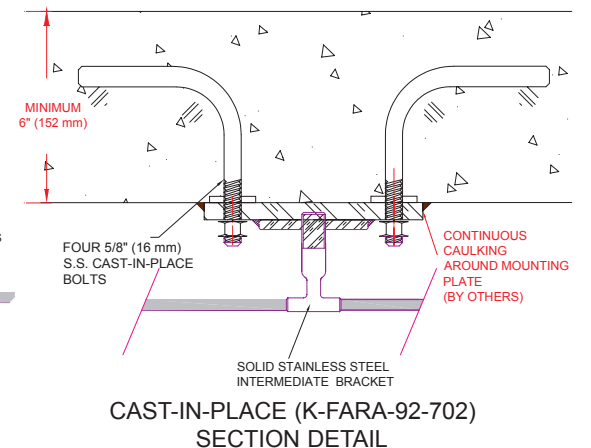
CAST-IN-PLACE (K-FARA-92-702) SECTION DETAIL
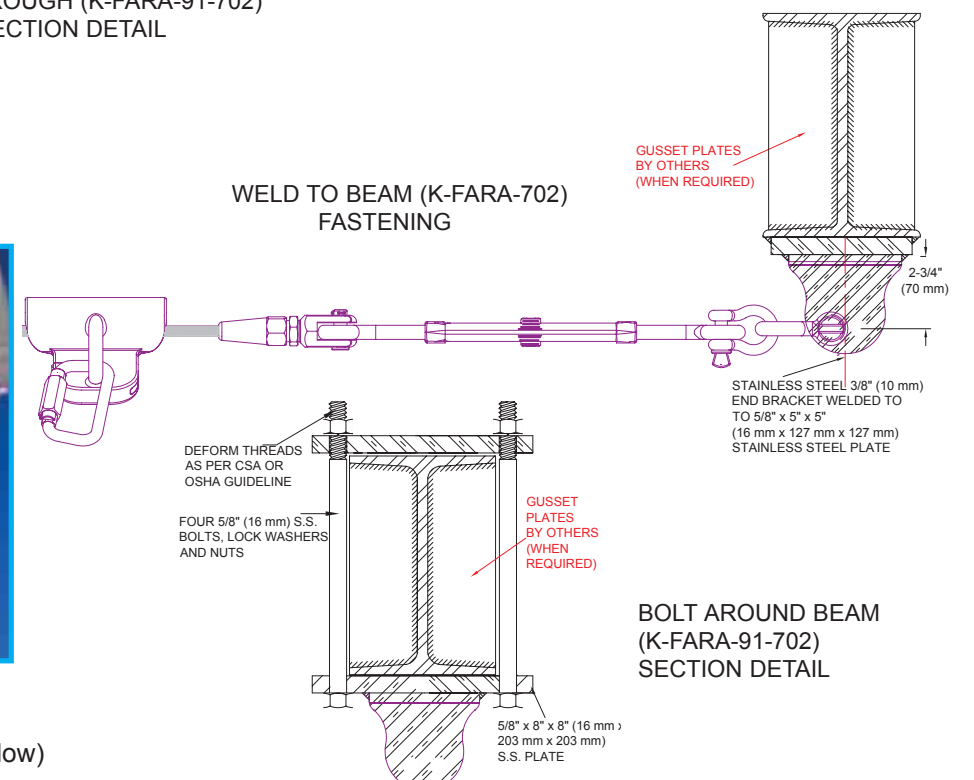
WELD TO BEAM (K-FARA-702) FASTENING

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

2-3/4" (70 mm)

STAINLESS STEEL 3/8" (10 mm) END BRACKET WELDED TO TO 5/8" x 5" x 5" (16 mm x 127 mm x 127 mm) STAINLESS STEEL PLATE

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE

FOUR 5/8" (16 mm) S.S. BOLTS, LOCK WASHERS AND NUTS

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

BOLT AROUND BEAM (K-FARA-91-702) SECTION DETAIL

5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) S.S. PLATE

Shackle
Energy Absorber
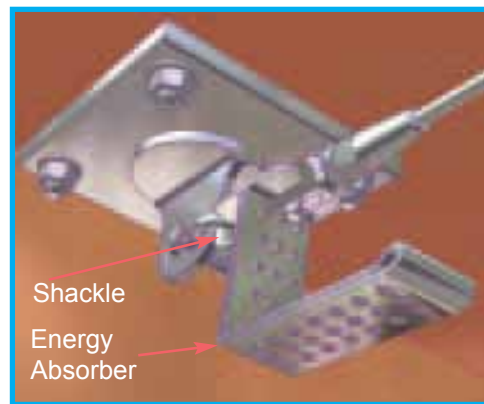
TERMINAL END ANCHOR WITH ENERGY ABSORBER AND SWAGED END
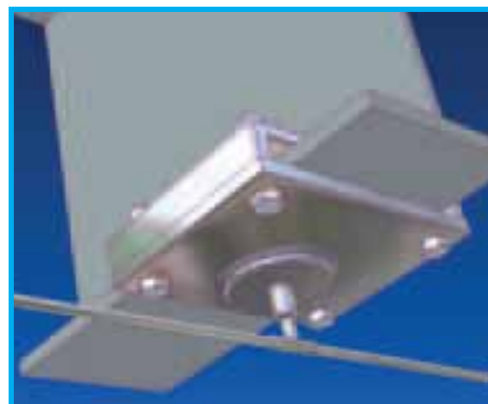
INTERMEDIATE ANCHOR CONSTRUCTION CLAMP (Temporary)
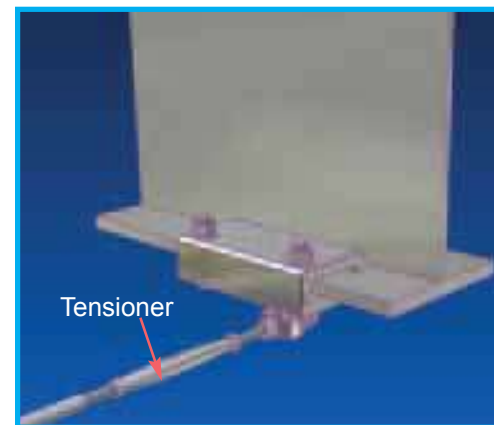
Tensioner

TERMINAL END ANCHOR WITH TENSIONER (Temporary. View From Above)

Shuttle On Cable

Corner Bracket
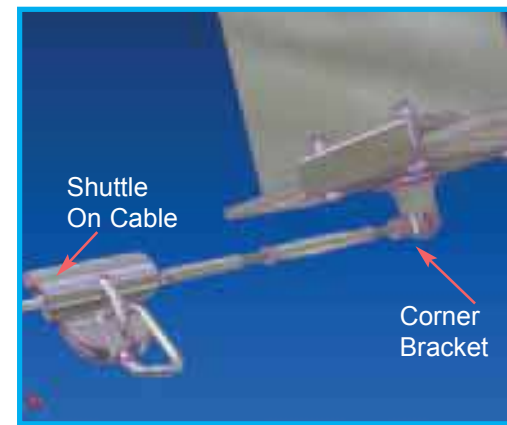
TERMINAL END ANCHOR WITH TENSIONER (Temporary. View From Below)

THALER

K-3A

End Anchor With Thaler
Energy Absorber (TEA) and
Swaged End

End Anchor With Tensioner

End Anchor With
Thaler Energy Absorber (TEA)

K-703 EASY SLIDER
(Single Span Application)

Narrow Roof Area

Vertical Lifelines (by others)
Attached To Horizontal Lifeline

End Anchor
With Tensioner

Suspension
Line

Worker Attached
With Rope Grab To
Lifeline (by others)
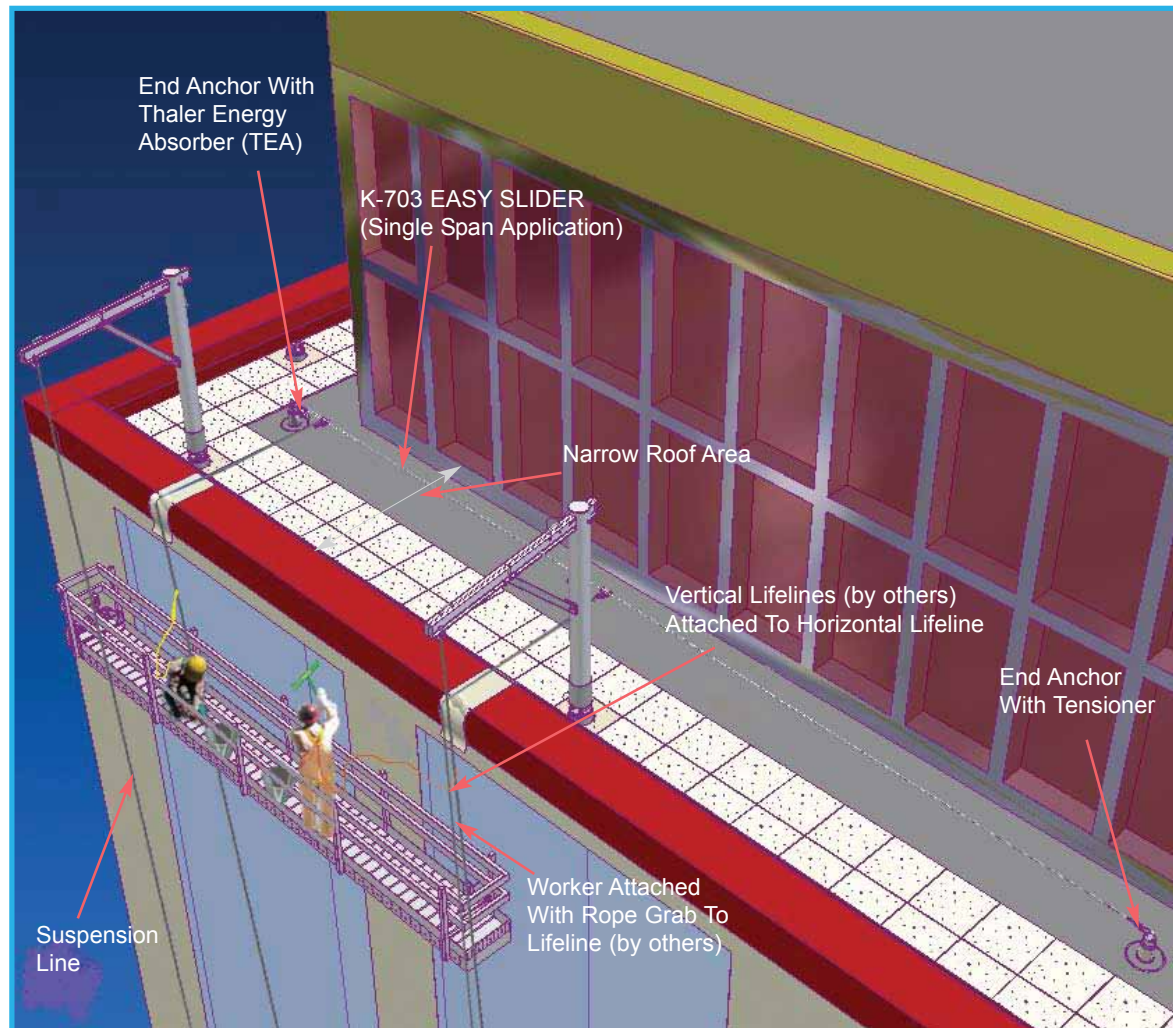
Illustration Shows K-703 EASY SLIDER Horizontal Lifeline Fall Protection System For Single Span Application
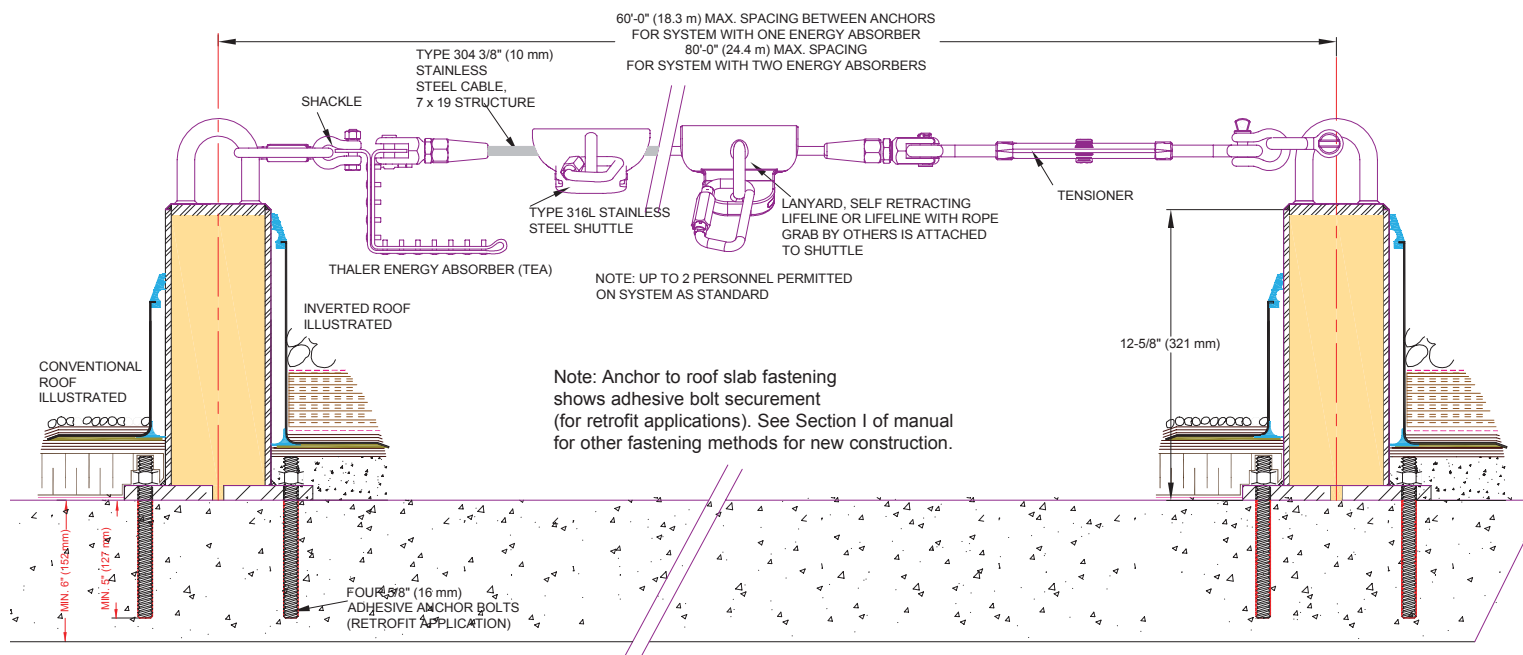
K-703 Horizontal Lifeline Single Span Application

Note: For Minimum Fall Clearance Required Below System See Page K-1

ROOF SPECIALTIES
K-703 EASY SLIDER™
HORIZONTAL LIFELINE
FALL PROTECTION SYSTEM
(Single Span Application)

DESCRIPTION:
The Thaler K-703 EASY SLIDERTM Horizontal Lifeline Fall Protection System is a complete pre-engineered single-span flexible lifeline system consisting of end anchors, stainless steel cable, mobile attachment devices (shuttle runners), in-line fittings (tensioner, tension indicator, energy absorber, etc.) and up to 2 shuttles as standard. Full body harnesses with 6'-0" (1.8 m) long shock absorbing lanyards (by others) completes the assembly. End anchors consist of urethane insulated hollow steel posts (HSS) with stainless steel U-bolt eye to accommodate the cable, and time-tested Thaler STACK JACK Flashing. Anchors are also available with different type bases for fastening to a variety of roof structures. All anchor posts are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction.

PROMINENT FEATURES:
Designed to protect up to 2 workers against falls from height for systems of length up to 80'-0" (24.4 m) as standard (prevents users from falling more than 6'-0" or 1.8 m). Hands free system allows users to walk uninterrupted the entire length of system. Thaler Energy Absorber (TEA), separate from harness shock absorber, assists in dissipating or reducing fall arrest forces. EASY SLIDER shuttle permits worker to connect or disconnect at any position on cable. Condensation free and maintenance free (attractive, neat flashing never needs caulking. See Thaler EPDM Flashing Seals literature. Anchor integrity is backed by high $7,000,000.00 liability insurance.

OPTIONS:
Any type securement to suit structural substrate (cast-in-place, bolted, welded, etc.). PVC coated flashing deck flange for PVC roof membrane, bituminous painted flashing deck flange for BUR and ModBit roof membrane. Flashing is available aluminum, copper or stainless steel.

RECOMMENDED USE:
Suitable for both travel restraint and fall arrest using full body harness and lanyard, self retracting lifeline or lifeline with rope grab. Provides fall protection for window cleaning, servicing rooftop equipment, roof inspection, accessing window cleaning stations and similar applications on flat or low slope roofs. Designed to protect up to two workers (as standard) on system.

APPLICABLE STANDARDS:
Thaler K-703 EASY SLIDER conforms to all Canadian and U.S. standards, provincial and state labor/safety codes and materials standards relating to anchor fabrication and horizontal lifeline applications. Conformance includes CSA, OML, ASME, ANSI, IWCA, OSHA, CAL OSHA, AISC, AWS, and other references. See Thaler EASY SLIDER Horizontal Lifeline Primer literature for introductory data on subject of fall protection.

WARRANTY:
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instruct-ions".

MAINTENANCE:
Regulatory authorities require the horizontal lifeline system be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log book. Apart from this requirement, the K-703 EASY SLIDER stainless steel cable only requires occasional wiping with a damp cloth to ensure free and easy movement of the shuttle component. In the event of a fall, the system including any affected harness, must be re-approved by a professional engineer before being placed back in service.

Close-Up View of Mobile Shuttle Runner.
Inset shows Underside of Shuttle

CARABINER

SWAGED END

1/4' x 4-1/2" DIA. (6 mm x 114 mm) HSS WELDED TO 5/8" x 8" x8" (16 mm x 203 x 203 mm) BASE PLATE USING 5/16" (8 mm) FILLET WELD, ALL HOT DIP GALVANIZED AND URETHANE INSULATED TO PREVENT CORROSION.

SHACKLE

TYPE 304 3/8" (10 mm) STAINLESS STEEL CABLE, 7 x 19 STRUCTURE

TYPE 316L STAINLESS STEEL SHUTTLE

EPDM TRIPLE PRESSURE GROMMET SEAL

THALER SJ-38 NEW-STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOF ILLUSTRATED (BUR)

THALER SJ-37 NEW-STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

THALER ENERGY ABSORBER (TEA). TWO TEAS REQUIRED FOR 80'-0" (24.4 m) POST SPACING, ONE TEA FOR 60'-0" (18.3 m) SPACING

CONVENTIONAL ROOF ILLUSTRATED (BUR)

12-5/8" (321 mm)

NOTE: BOLT AROUND BEAM ANCHOR SECUREMENT ILLUSTRATED. SEE SECTION "I" (FALL ARREST ROOF ANCHORS) SECTION OF MANUAL FOR OTHER FASTEN-ING METHODS

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

18 GA. GALVANIZED CLOSURE PLATE SCREW FASTENED TO STEEL DECK

5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) PLATE

EPDM BASE SEAL BONDED TO METAL SLEEVE (SEE THALER EPDM FLASHING SEALS LITERATURE)

GUSSET PLATES BY OTHERS (WHEN REQUIRED)

FOUR 5/8" (16 mm) S.S. BOLTS, LOCK WASHERS AND NUTS

DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)

TERMINAL END HORIZONTAL LIFELINE ANCHOR (K-FARA-13-717)
PATENT PENDING

PLANNING SERVICE:
Thaler will provide layout drawings for the K-703 EASY SLIDER in compliance with all standards, safety regulations and local building codes.

SPECIFICATION (Short Form):
Horizontal lifeline system: Thaler K-703 EASY SLIDER Horizontal Lifeline fall protection system to [CSA-Z91-02][OSHA 1910.66, Subparts D and F] with: 4-1/2" (114 mm) dia. urethane insulated HSS anchor posts, wall thickness 1/4" (6 mm), hot dipped galvanized ASTM 500, 12" (305 mm) high, welded and bolted to 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) 44W base plate, securement to suit substrate; stainless steel fittings (swaged end, energy absorber, double locking carabiner, shuttles, end tensioner); Type 304 s.s. cable, 3/8" (10 mm) dia. 7 x 19 structure); [1][2] full body harnesses with integral shock absorber by others; [SJ-34 (uninsulated) or SJ-37 (insulated), 7" (178 mm) high] [SJ-35 (uninsulated) or SJ-38 (insulated), 13" (330 mm) high] New-Standard STACK JACK Flashing of [.064" (1.6 mm) mill finish 1100-OT alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (Niagara Falls, NY), installed as per manufacturer's written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. However, only Thaler Metal Industries, Thaler approved installers or competent installers following Thaler Installation Instructions may install the system which must be certified by a professional engineer prior to initial use. Essentially, the K-703 EASY SLIDER Horizontal Lifeline is installed by fastening the anchor posts on the roof structural substrate, installing flashing, and cable, including fittings.

Recommended Layout: Maximum spacing between anchor posts is 80'-0" (24.4 m) for system with two energy absorbers, and 60'-0" (18.3 m) for system with one energy absorber. Horizontal lifeline should not be located closer than 6'-6" (1.98 m) from any roof edge. For minimum clearance required below the level of the horizontal lifeline, see page K-1. Consult with Thaler for layout recommendations.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Products are typically available from stock.

60'-0" (18.3 m) MAX. SPACING BETWEEN ANCHORS FOR SYSTEM WITH ONE ENERGY ABSORBER
80'-0" (24.4 m) MAX. SPACING FOR SYSTEM WITH TWO ENERGY ABSORBERS

TYPE 304 3/8" (10 mm) STAINLESS STEEL CABLE, 7 x 19 STRUCTURE

SHACKLE

TYPE 316L STAINLESS STEEL SHUTTLE

LANYARD, SELF RETRACTING LIFELINE OR LIFELINE WITH ROPE GRAB BY OTHERS IS ATTACHED TO SHUTTLE

TENSIONER

THALER ENERGY ABSORBER (TEA)

NOTE: UP TO 2 PERSONNEL PERMITTED ON SYSTEM AS STANDARD

INVERTED ROOF ILLUSTRATED

12-5/8" (321 mm)

CONVENTIONAL ROOF ILLUSTRATED

Note: Anchor to roof slab fastening shows adhesive bolt securement (for retrofit applications). See Section I of manual for other fastening methods for new construction.

MIN. 6" (152mm)

MIN. 5" (127 mm)

FOUR 5/8" (16 mm) ADHESIVE ANCHOR BOLTS (RETROFIT APPLICATION)

K-700 EASY SLIDER HORIZONTAL LIFELINE FALL PROTECTION SYSTEM (Roof Application)

3/8" (10 mm) Thickness End Anchor Bracket with two 3/4" (19 mm) holes welded to top plate of HSS anchor post

K-FARA-2-700-705 End Anchor

K-FARA-2-700-705 With TEA (Thaler Energy Absorber)

K-FARA-2-700-705 With Tensioner

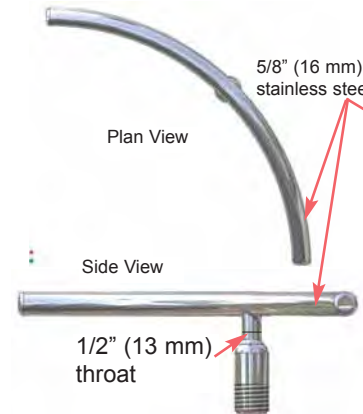3/8" (10 mm) Thickness Terminal Corner Anchor Bracket with two 3/4" (19 mm) holes welded to top plate of HSS anchor post

K-FARA-2-700-706 Start And End Corner Anchor

K-715 Mobile Shuttle Runner With Carabiner

Intermediate bracket bolted to top of HSS anchor post
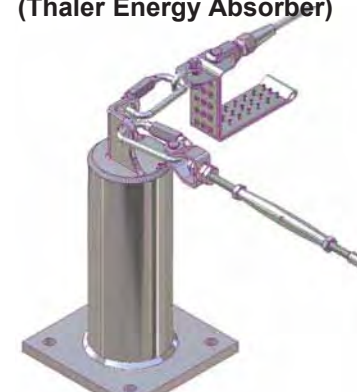
K-FARA-2-700-707 Intermediate Anchor

1/2" (13 mm) throat

Intermediate Anchor Bracket

5/8" (16 mm) dia. stainless steel

Plan View

Side View

1/2" (13 mm) throat

90° Corner Anchor Bracket

90° corner bracket bolted to top of HSS anchor post
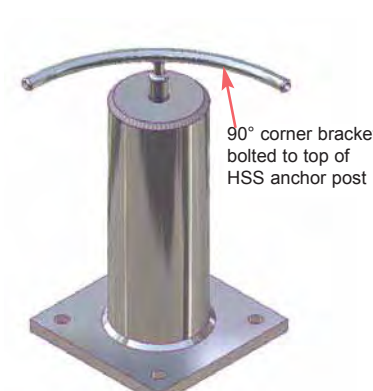
K-FARA-2-700-708 Intermediate 90° Corner Anchor

Any-Angle Corner bracket bolted to top of HSS anchor post
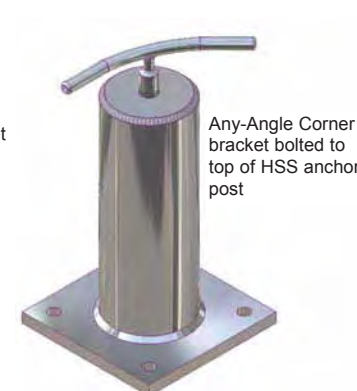
K-FARA-2-700-709 Any-Angle Corner Anchor

5/8" (16 mm) dia. stainless steel

Any angle in 1° increments available as standard

1/2" (13 mm) throat
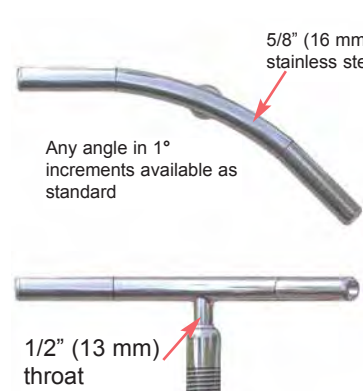
Any-Angle Corner Anchor Bracket

K-701 EASY SLIDER HORIZONTAL LIFELINE FALL PROTECTION SYSTEM (Wall Application)

3/8" (10 mm) Thickness End Anchor Bracket with two 3/4" (19 mm) holes, welded to plate
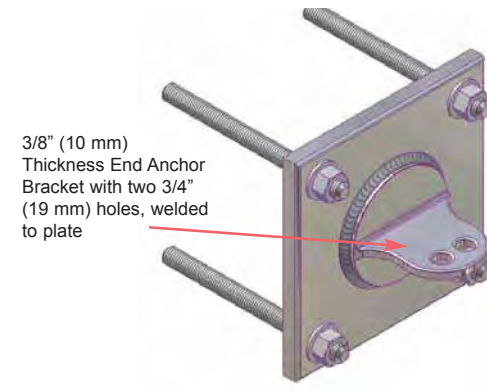
K-FARA-93-701-710 End Anchor

Intermediate Bracket bolted to plates
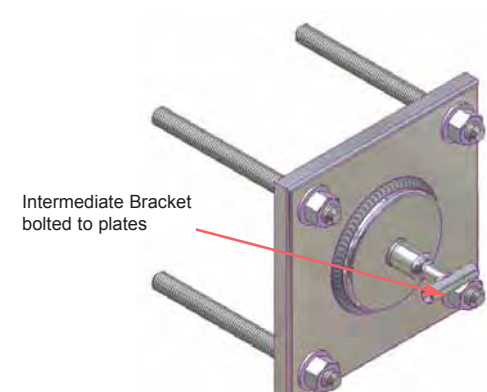
K-FARA-93-701-711 Intermediate Anchor
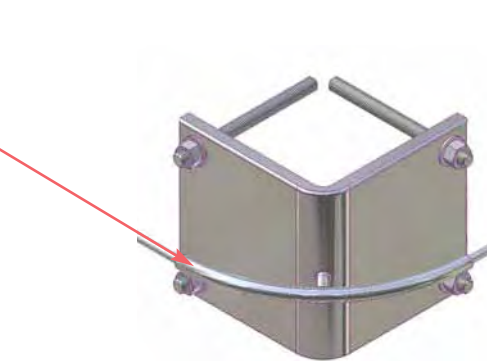
K-FARA-93-701-712 90° Corner Anchor

Any angle in 1° increments available as standard
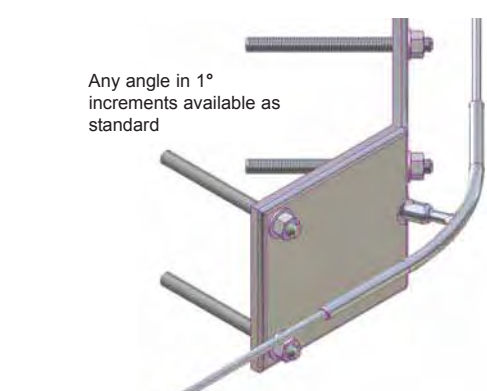
K-FARA-93-701-713 Any Angle Corner Anchor

K-702 EASY SLIDER HORIZONTAL LIFELINE FALL PROTECTION SYSTEM (Overhead Application)

3/8" (10 mm) Thickness End Anchor Bracket with two 3/4" (19 mm) holes, welded to plate
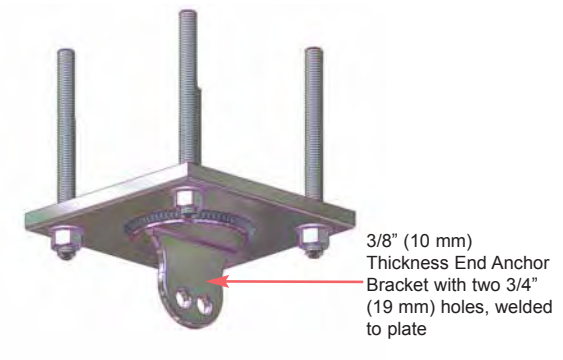
K-FARA-93-702-710 End Anchor

Intermediate Bracket bolted to plates
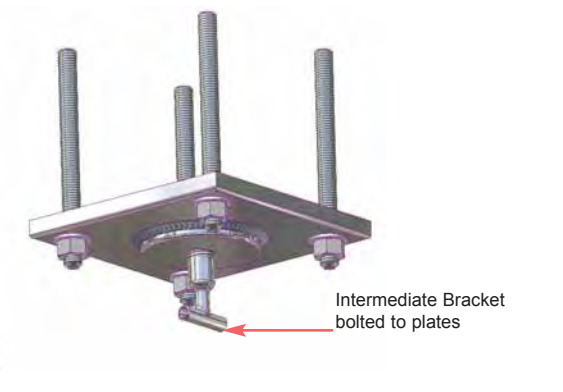
K-FARA-93-702-711 Intermediate Anchor

5/8" (16 mm) dia. stainless steel
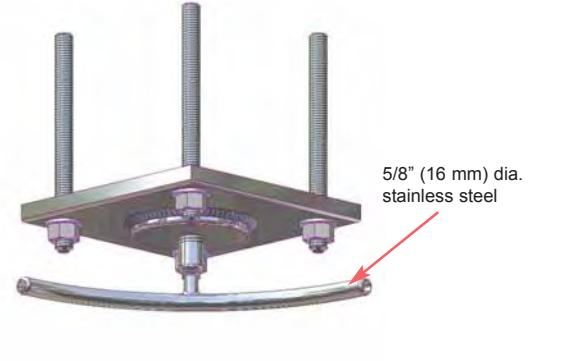
K-FARA-93-702-713 90° Corner Anchor
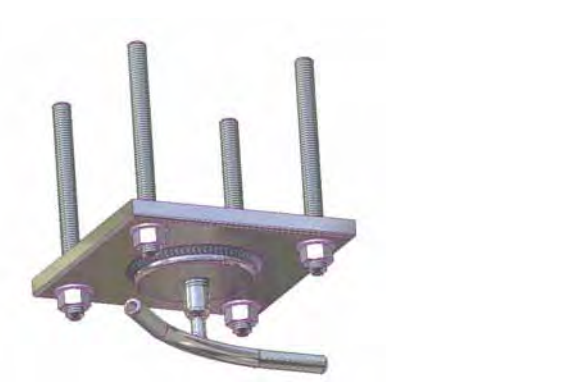
K-FARA-93-702-714 Any-Angle Corner Anchor

K-703 EASY SLIDER HORIZONTAL LIFELINE FALL PROTECTION SYSTEM (Single Span Application)

K-FARA-12U-703 End Anchor
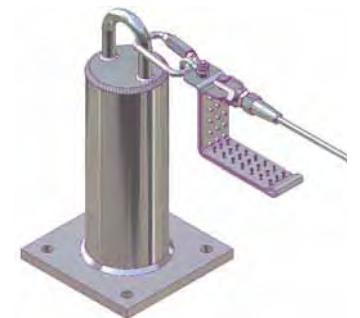
K-FARA-12U-703 End Anchor With TEA (Thaler Energy Absorber)

K-FARA-12U-703 End Anchor With Tensioner

K-716 Thaler Energy Absorber (TEA)

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**HORIZONTAL LIFELINE
FALL PROTECTION SYSTEM**
SPECIFICATION

K-7
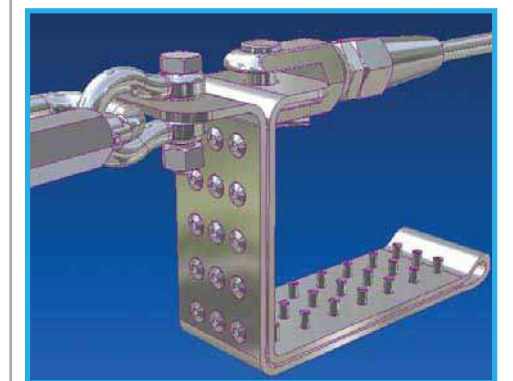
Note: This horizontal lifeline specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part of a roofing specification in regions where this feature is desired.

PART 1: GENERAL

1.01   SECTION INCLUDES

A. Supply and installation of roof accessories, including:
1. [Roof][Wall][Overhead] anchors
2. Horizontal lifeline
3. Preformed metal flashing

1.02   RELATED SECTIONS

A. Section 03300 - Cast-in-Place Concrete

B. Section 05210 - Steel Joists

C. Section 05300 - Metal Deck

D. Section 06100 - Rough Carpentry

E. Section 07200 - Thermal Protection

F. Section 07500 - Membrane Roofing

G. Section 07900 - Joint Sealers

1.03   REFERENCES

A. The work of this Section to conform to:

Canadian

1. National Standards of Canada

A. CAN/CSA-Z91-02 (Safety Code for Window Cleaning Operations).

B. CAN/CSA- Z271-98 (Safety Code for Suspended Elevating Platforms).

2. Canadian Standards Association

A. CSA G40.21-M1987, M350W and M300W (Structural Quality Steels).

B. CSA W47.1-1983 (Certification of Companies for Fusion Welding of Steel Structures).

C. CSA W59-M1989 (Welded Steel Construction - Metal ARC Welding).

D. CSA G164-M1981 (Hot Dip Galvanizing of Irregularly Shaped Articles).

3. Ontario Ministry of Labour

A. Ontario Regulation 859 (Window Cleaning).

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
HORIZONTAL LIFELINE
FALL PROTECTION SYSTEM
SPECIFICATION

K-8

4. Ontario New Home Warranty Program

    A. ONHWP Condominium Construction Guide (Chapter 12 - Roof Anchors).

5. Canadian General Standards Board

    A. CGSB-51-GP 46MP (Manual for Installers of Spray Urethane Foam Thermal Insulation).

6. Canadian Urethane Foam Contractor's Association

    A. CUFCA Manual for Installers of Spray Polyurethane Foam Thermal Insulation.

United States

7. Occupational Safety & Health Administration (U.S. Department of Labor)

    A. OSHA 1910.28 SubPart D (Walking-Working Surfaces).

    B. OSHA 1920.28 Safety Requirements for Scaffolding.

    C. OSHA 1910.66, SubPart F (Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms).

    D. OSHA 1926.500, SubPart M (Fall Protection).

    E. CAL OSHA, Title 8, Section 3291(f), Article 5. Window Cleaning (General Industry Safety Order, California Code of Regulations), Article 6, Powered Platforms for Exterior Building Maintenance, Article 23, Suspended Scaffolds (Construction), and Article 24, Fall Protection (construction).

    F. Department of Labor Memorandum to Regional Administrators for Descent Control Devices.

8. American National Standards Institute

    A. ANSI A39.1-1969 (Safety Requirements for Window Cleaning).

9. American Society of Mechanical Engineers

    A. ASME A120.1-1996 (Safety Requirements for Powered Platforms for Building Maintenance).

    B. ASME Addenda A120.1a-1997 and A120.1b-1999.

10. International Window Cleaner's Association

    A. IWCA I-14-2001 (Window Cleaning Safety Standard).

11. American Society for Testing and Materials

    A. ASTM D3963/D M-87 (Structural Specification for Epoxy Reinforcing Steel).

    B. ASTM A36 (Non exposed Structural Components).

    C. ASTM A123 (Standard Specification for Zinc Coating Hot Dip Galvanizing of Iron and Steel Products).

    D. ASTM Z325 (Bolts, Nuts and Washers).

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
HORIZONTAL LIFELINE
FALL PROTECTION SYSTEM
SPECIFICATION

12. American Welding Society

A. AWS D1.1 (Structural Welding Code)

13. Aluminum Association

A. AA 5AS-30 (Specifications for Aluminum Structures)

1.04   SYSTEM DESCRIPTION

A. Design horizontal lifeline fall protection system to provide for safe execution of window washing or other suspended maintenance operations [including travel restraint].

B. Co-ordinate work of this Section with [Section 07500 - Membrane Roofing], to provide continuous waterproof protection.

C. Design anchors to resist without fracture a pull-out force of 5400 lbs (24.03 kN), applied in the most adverse direction.

1.05   SUBMITTALS

A. Manufacturer's descriptive literature for each product, including section or other type details.

B. Manufacturer's written installation instructions.

C. Shop drawings and samples, when required, in accordance with Section [01300]. Shop drawings to show roof layout indicating location and spacing of anchors and horizontal lifeline, including dimensions, detail drawings of securement to structure, design details, and similar data. Drawings to bear stamp of Professional Engineer licensed in the [Province] [State] in which the project is located.

D. Upon completion of project, provide Owner with Log Book for mandatory annual inspection.

E. Upon completion of project, provide Owner with roof plan showing layout of safety anchor system.

1.06   QUALITY ASSURANCE

A. Horizontal lifeline fall protection system manufacturer to have minimum 5 years documented experience in the design and fabrication of fall protection systems.

B. Comply with all requirements of:

1. [NBC (National Building Code of Canada].

2. [OBC (Ontario Building Code].

3. [ICBO (International Conference of Building Officials - Uniform Building Code].

4. [BOCA (Building Officials Code Administrators - National Building Code].

5. [SBBCI (Southern Building Code Congress International - Standard Building Code].

1.06   SPECIAL WARRANTY

A. Warrant products installed under this section of work to be free of leaks, condensation and defects in materials and/or manufacture, as applicable, for a period of 20 years when installed in accordance with the manufacturer's written instructions.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
**HORIZONTAL LIFELINE
FALL PROTECTION SYSTEM**
SPECIFICATION

PART 2: PRODUCTS

2.01 MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:
1. 20 year warranty against leaks, condensation and defects in materials and/or manufacture, as applicable;
2. structural rating for up to 12,000 lbf (53.28 kN) strength for anchors equipped with forged round eye;
3. structural integrity backed by $7,000,000.00 liability insurance;
4. injection molded urethane insulation to CGSB-51-GP 46MP and ASTM C1029-90, as applicable;
5. air barrier flashing design using EPDM seals only complying with CSA B272-93 flashing standard;
6. maintenance free design;
7. materials and sizes options, and thickness;
8. treated flashing deck flange, as applicable;
9. written installation instructions.

2.02 MANUFACTURED UNITS

K-700 EASY SLIDER™ Horizontal Lifeline Fall Protection System (Roof Application)
A. Horizontal lifeline system (roof application): Thaler K-700 EASY SLIDER Horizontal Lifeline fall protection system to [CSA-Z91-02][OSHA 1910.66, Subparts D and F] with: 3-1/2" (89 mm) dia. urethane insulated HSS anchor posts, wall thickness 1/4" (6 mm), hot dipped galvanized ASTM 500, 12" (305 mm) high, welded and bolted to 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) 44W base plate, securement to suit substrate; Stainless steel fittings (swaged end, energy absorber, double locking carabiner, shuttles, end tensioner, intermediate brackets, corner pieces); Type 304 s.s. cable 3/8" (10 mm) dia. 7 x 19 structure); [2][4] full body harnesses with integral shock absorber (by others); [SJ-34, 7" (178 mm) high] [SJ-35 13" (330 mm) high] New-Standard STACK JACK Flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange].

K-701 EASY SLIDER™ Horizontal Lifeline Fall Protection System (Wall Application)
A. Horizontal lifeline system (wall application): Thaler K-701 EASY SLIDER Horizontal Lifeline fall protection system for walls to [CSA-Z91-02][OSHA 1910.66, Subparts D and F] with: stainless steel 3/8" (10 mm) brackets welded to stainless steel base plates 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm), securement to suit substrate; stainless steel fittings (swaged end, energy absorber, double locking carabiner, shuttles, end tensioner, intermediate brackets, corner pieces); Type 304 s.s. cable, 3/8" (10 mm) dia. 7 x 19 structure; [2][4] fully body harnesses with integral shock absorber (by others).

K-702 EASY SLIDER™ Horizontal Lifeline Fall Protection System (Overhead Application)
A. Horizontal lifeline system (Overhead Application): Thaler K-702 EASY SLIDER OverheadHorizontal Lifeline fall protection system for overhead or similar applications to [CSA-02][OSHA 1910.66, Subparts D and F][OSHA 1926.500, Subpart M (Construction)] with: stainless steel 3/8" (10mm) brackets welded to stainless steel base plates 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm), securement to suit substrate; stainless steel fittings (swaged end, energy absorber, double locking carabiner, end tensioner, shuttles, intermediate brackets, corner pieces); Type 304 s.s. cable, 3/8" (10 mm) dia. 7 x 19 structure; [2][4] fully body harnesses with integral shock absorber (by others).

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ROOF SPECIALTIES
HORIZONTAL LIFELINE
FALL PROTECTION SYSTEM
SPECIFICATION

K-703 EASY SLIDER™ Horizontal Lifeline Fall Protection System (Single Span Application)
A. Horizontal lifeline system (Single Span Application): Thaler K-703 EASY SLIDER Horizontal Lifeline fall protection system to [CSA-Z91-02][OSHA 1910.66, Subparts D and F] with: 3-1/2" (89 mm) dia. urethane insulated HSS anchor posts, wall thickness 1/4" (6 mm), hot dipped galvanized ASTM 500, 12" (305 mm) high, welded and bolted to 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) 44W base plate, securement to suit substrate; stainless steel fittings (swaged end, energy absorber, double locking carabiner, shuttles, end tensioner); Type 304 s.s. cable, 3/8" (10 mm) dia. 7 x 19 structure); [1][2] full body harnesses with integral shock absorber (by others); [SJ-34 (uninsulated) or SJ-37 (insulated), 7" (178 mm) high] [SJ-35 (uninsulated) or SJ-38 (insulated), 13" (330 mm) high] New-Standard STACK JACK Flashing of [.064" (1.6 mm) mill finish 1100-0T alloy aluminum] [.032" (0.831 mm) 24 oz. copper] [.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange].

PART 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

Note: Review design criteria for tapered roof insulation systems if necessary for specific projects.

B. For roofs employing tapered insulation systems, height adjustments may be necessary i.e. ensure centre line of cable anchor bracket is minimum 9" (229 mm) above roof surface.

3.02   PREPARATION

Note: The following clauses apply to re-roofing or retrofit installations only.

A. For re-roofing or retrofit work, remove existing roof assembly as necessary to allow for installation of roof anchors.

B. In the event of structural deficiencies, deck corrosion or deterioration, ensure that a structural engineer has assessed and approved all surfaces upon which the work of this Section depends. Institute repairs and/or reinforcement where necessary.

C. If necessary, protect building interior and contents against ingression of water, dust, debris or other material.

D. Where possible and as directed by Roofing Consultant, reuse any salvageable materials and restore roofing system to match original.

3.03   INSTALLATION

Note: Delete clauses not applicable.

A. [Roof Anchors] [Wall Anchors] [Overhead Anchors]

1. Install anchors or equipment in accordance with manufacturer's printed instructions, shop drawings and as specified.

2. Ensure anchors or equipment is installed under the direct supervision of a Professional Engineer [and Roofing Consultant].

3. Where necessary, provide protection against deterioration due to contact of dissimilar materials.

4. Where bolting is used for fastening anchors, no fewer than two threads is to be exposed and the nut is to be positively locked by deforming threads, welding, pinning or equivalent method.

5. Ensure work is inspected prior to application of roofing.

B. Flashing

1. Install roof support flashing in accordance with manufacturer's printed instructions.

BUR
2. Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

Modified Bitumen
3. Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply
4. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing.

Note: For PVC membrane, specify PVC coated flashing; weld roofing to deck flange using PVC torch

PVC Single Ply
5. Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Weld roofing to deck flange using PVC torch.

6. Structural adequacy of [roof][wall][soffit] or other part of the building on which the support system is placed shall be verified by a professional engineer before installing horizontal lifeline.

3.04   FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

B. All anchor work to be inspected by a qualified testing agency, Professional Engineer [and Roof Consultant] upon completion of work.

Note: Field testing of roof, wall or overhead anchor products is not required. Only the field testing of adhesive fasteners is required. In rare instances where adhesive fasteners must be tested after roof anchors have been roofed in, consult a Professional Engineer for calculation of the load requirement prior to testing.

3.05   ADJUSTING AND FINAL INSPECTION

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

B. Provide necessary documentation certifying system is acceptable for service (Engineer's Certificate of Acceptance).

3.06   CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleaners or techniques which could impair performance of the roofing system.

End Of Section

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
ROOF DRAINS

TABLE OF CONTENTS

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
ROOF DRAINS

WHAT IT TAKES TO BE
THALER OR EQUAL

When specifications read Thaler or Equal, it is responsibility of specifiers and building owners to determine what it means to be "Or Equal". The following data has been presented to quickly help assess the comparative merits of "competitive" products. Thaler roof Drain products have several Value Added features that should be considered when trying to equate the "Or Equal".

CHECK THE
COMPETITION

THALER VALUE
ADDED FEATURES

[X] ✓ **Fast installation;** all Thaler new and retrofit roof drains are quickly installed in a few minutes or less vs. nearly an hour for some competitive products.

[X] ✓ **Fits more leader diameters (as applicable);** accommodates all leader sizes 2" to 10" (51 mm to 254 mm) diameter.

[X] ✓ **ANSI Approved;** All Thaler roof drains conform to ANSI A112.212-Roof Drains.

[X] ✓ **Modern accessories;** compare Thaler accessories with our competition with regard to best and most up-to-date offering (see Thaler Roof Drain Options literature). Check out fast, new-to-the-industry EPDM retrofit seal, PVC or bituminous coated flashing deck flanges, and T-7 Flow Control accessory.

[X] ✓ **New RDX30 series drain;** brand new all-purpose, patented retro-fit design provides unique 360° membrane clamping ring (compression unit), super fast installation, superior outlet-to-leader seal and the toughest vandal-proof strainer on the market today.

[X] ✓ **100% corrosion free;** all drains are manufactured using non-corrosive metals or other materials (non-galvanized or other non-durable materials).

[X] ✓ **Treated deck flange;** can be PVC coated for proper weld of PVC membrane or bituminous painted for proper adhesion of BUR or ModBit membrane.

[X] ✓ **Super-Seal EPDM Retrofit Drain Seal;** patented EPDM sealing ring provides a superior outlet-to-leader seal in the event drains or pipes become clogged (see Thaler Super-Seal Retrofit Drain Seal literature).

[X] ✓ **Vandalproof strainer (as applicable);** non-removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains, while vandalproof hinged gate (allen-key openable) allows drains to be cleaned if necessary.

[X] ✓ **20 year Warranty;** guaranteed against leaks, condensation and defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions".

[X] ✓ **Maintenance-Free;** apart from industry recommended semi-annual preventative inspection to keep drains clear of debris, Thaler drains do not require any maintenance.

[X] ✓ **Written "Installation Instructions";** provided with every Thaler product.

See Reverse Side of Page For Optional Accessories and 3-D Illustrations

T-7 ALUMINUM FLOW CONTROL ACCESSORY (OPTIONAL)

T-5 COPPER SEDIMENT COLLAR (OPTIONAL)

T-12 STAINLESS STEEL BALLAST GUARD (OPTIONAL)

Note: Specify accessories required by adding appropriate suffix to model number e.g. RD-1C-T-5 for sediment collar, T-7 for flow control and T-12 for ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

10" (254 mm)

VANDAL PROOF ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE AND CLAMPING RING

1/8" (3 mm) S.S. RIVET

S.S. VANDALPROOF RETAINING SCREW

STUDS WELDED TO BASE

FOUR 3/8" (9 mm) MOUNTING BOLTS WELDED TO PAN-SHAPED COPPER DRAIN BODY

4" (102 mm)

7" (178 mm)

CAST BRONZE STABILIZER RING WELDED TO UNDERSIDE OF DRAIN BODY

3/8" (9mm) STAINLESS STEEL BOLT AND NUT

0.032" (0.813 mm) COPPER EXPANSION OUTLET

CAST ALUMINUM UNDERDECK CLAMPING RING

3/8" (9 mm) STAINLESS STEEL BOLT AND NUT

T-6 COPPER FERRULE

MECHANICAL CONNECTION (BY OTHERS)

URETHANE INSULATION (BY OTHERS) IS RECOMMEND ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW.

STAINLESS STEEL CLAMPS

CONCRETE DECK — STEEL DECK

RD-1C VANDAL PROOF COPPER ROOF DRAIN (All Purpose, Expansion Outlet)

DESCRIPTION:
The Thaler RD-1C Roof Drain consists of a vandalproof cast aluminum dome strainer with hinged access gate, cast bronze stabilizer ring, stainless steel mounting bolts, flat, pan-formed copper drain body and expansion outlet (with copper ferrule), copper deck flange, and cast aluminum under-deck clamping ring.

PROMINENT FEATURES:
Non-removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key opening) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain. Expansion outlet prevents damage or distortion to drain caused by horizontal and vertical movement and/or elongation of rainwater leaders.

LEADER DIAMETERS:
Suitable for 3", 4" or 6" (76 mm, 102 mm or 152 mm) leader sizes.

OPTIONS:
T-5 copper sediment collar. T-7 aluminum oir copper Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose drain for flat roofs in new construction employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-1C drain for [3" (76 mm)] [4" (102 mm)] [6" (152 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; 24 oz. .032" (0.813 mm) spun copper pan-formed drain body, deck flange and expansion outlet with: copper ferrule; 3/8" (9 mm) s.s. bolts welded to drain body; bronze stabilizer ring; cast aluminum under-deck clamping ring; [T-5 copper sediment collar;] [perforated 22 ga. (0.76 mm) s.s. ballast guard;] [T-7 aluminum flow control accessory;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-1C roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-1C-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.
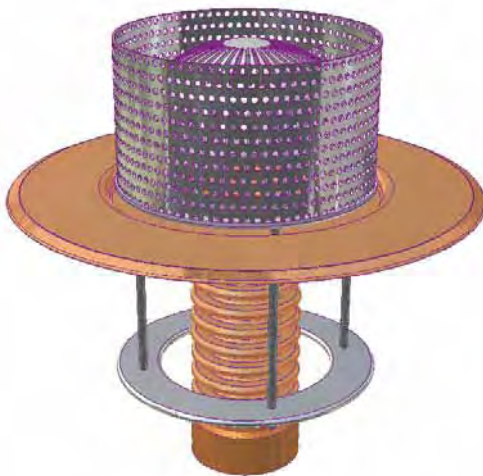
Ordering and Availability: Specify accessories required by adding appropriate suffix to model number e.g. RD-1C-T-5 for sediment collar, T-7 for flow control and T-12 for ballast guard. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
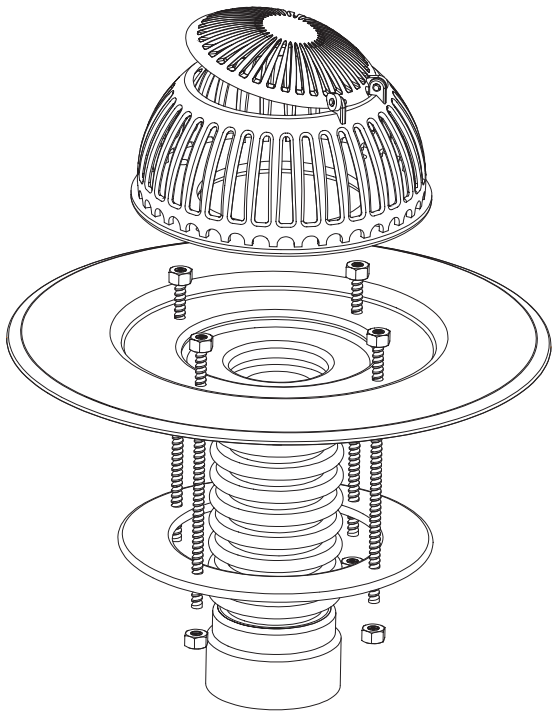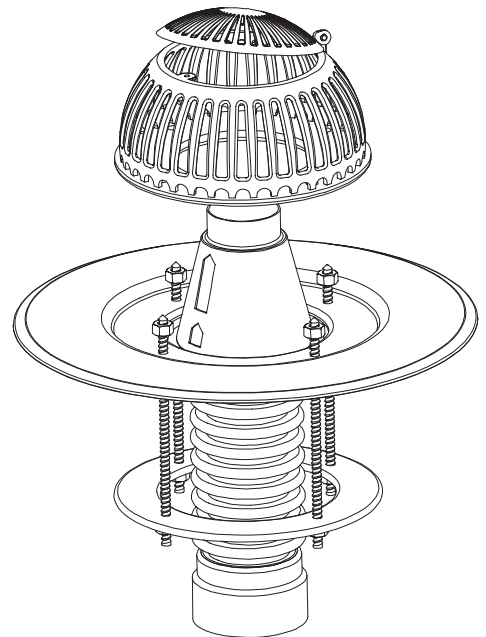
EXPLODED VIEW
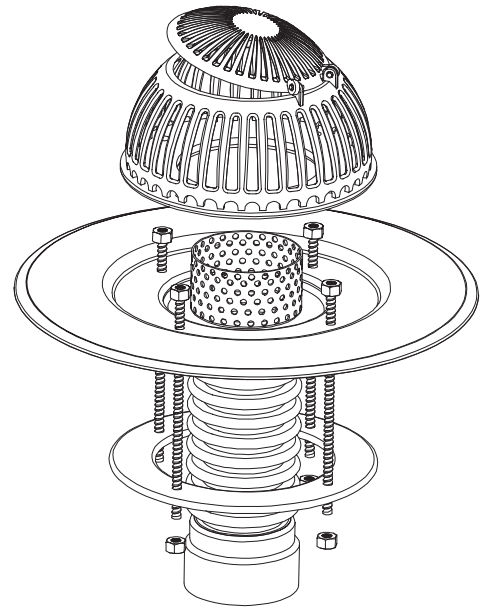
Optional RD-1C With T-5 Copper Sediment Collar
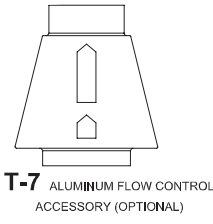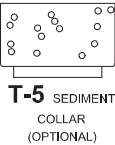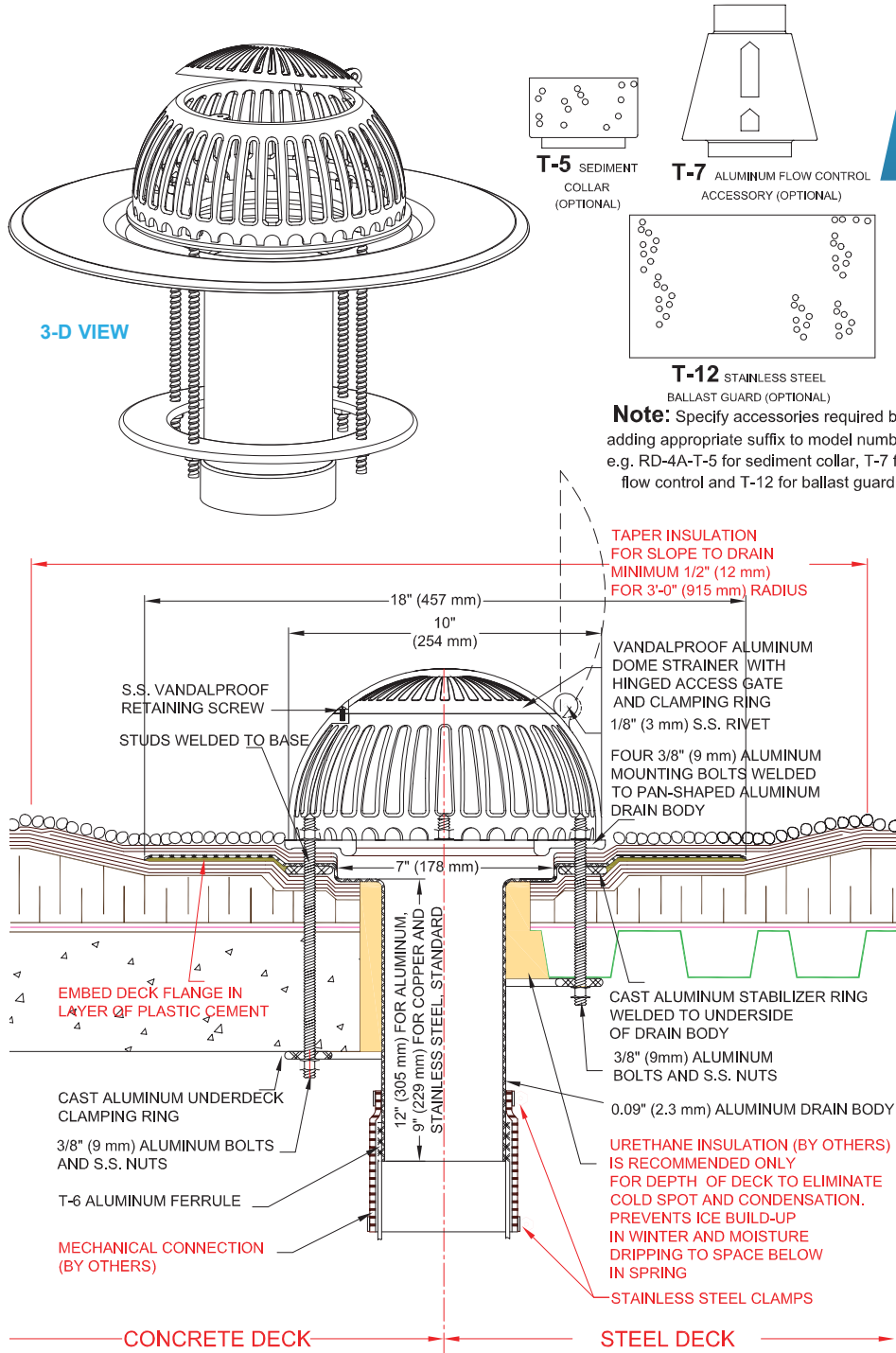**(Shown Friction Fitted To Drain Body)**

Optional RD-1C With T-12 Stainless Steel Ballast Guard
(Shown Friction Fitted To Dome Strainer)

Optional RD-1C With T-7 Flow Control Accessory
(Shown Friction Fitted To Drain Body)

3-D VIEW

T-5 SEDIMENT COLLAR (OPTIONAL)

T-7 ALUMINUM FLOW CONTROL ACCESSORY (OPTIONAL)

T-12 STAINLESS STEEL BALLAST GUARD (OPTIONAL)

Note: Specify accessories required by adding appropriate suffix to model number e.g. RD-4A-T-5 for sediment collar, T-7 for flow control and T-12 for ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

18" (457 mm)

10" (254 mm)

VANDALPROOF ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE AND CLAMPING RING 1/8" (3 mm) S.S. RIVET

S.S. VANDALPROOF RETAINING SCREW

STUDS WELDED TO BASE

FOUR 3/8" (9 mm) ALUMINUM MOUNTING BOLTS WELDED TO PAN-SHAPED ALUMINUM DRAIN BODY

7" (178 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

CAST ALUMINUM STABILIZER RING WELDED TO UNDERSIDE OF DRAIN BODY

3/8" (9mm) ALUMINUM BOLTS AND S.S. NUTS

0.09" (2.3 mm) ALUMINUM DRAIN BODY

12" (305 mm) FOR ALUMINUM, 9" (229 mm) FOR COPPER AND STAINLESS STEEL, STANDARD

CAST ALUMINUM UNDERDECK CLAMPING RING

3/8" (9 mm) ALUMINUM BOLTS AND S.S. NUTS

T-6 ALUMINUM FERRULE

MECHANICAL CONNECTION (BY OTHERS)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

STAINLESS STEEL CLAMPS

CONCRETE DECK   STEEL DECK

RD-4A VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Outlet)
Note: RD-4C (Copper) and RD-4SS (Stainless Steel) Roof Drains similar. See reverse side of page for material change.

DESCRIPTION:
The Thaler RD-4A Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, cast aluminum stabilizer ring, aluminum mounting bolts, pan-formed aluminum drain body and straight aluminum outlet (with aluminum ferrule), deck flange, and cast aluminum under-deck clamping ring.

PROMINENT FEATURES:
Non-removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key opening) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain.

LEADER DIAMETERS:
Suitable for 3", 4", 5" and 6" (76 mm, 102 mm, 127 mm and 152 mm) leader sizes.

OPTIONS:
T-5 aluminum sediment collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose drain for flat roofs in new construction employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-4A drain for [3" (76 mm)] [4" (102 mm)] [6" (152 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.3 mm) pan-formed aluminum drain body, deck flange and straight aluminum outlet with aluminum ferrule; 3/8" (9 mm) aluminum bolts welded to drain; cast aluminum stabilizer ring; cast aluminum under-deck clamping ring; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;] [T-12 perforated 22 ga. (0.79 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Can- ada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-4A roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.
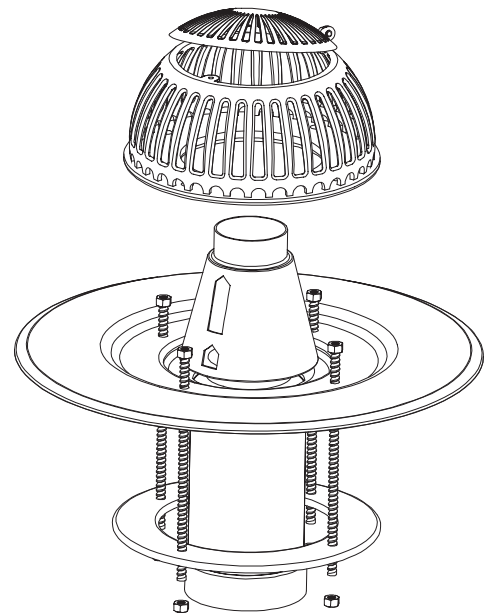
Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-4A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Specify accessories required by adding appropriate suffix to model number e.g. RD-4A-T-5 for sediment collar, T-7 for flow control and T-12 for ballast guard. Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
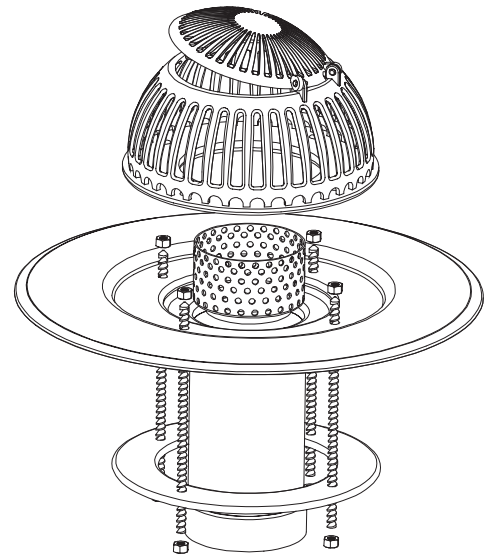
EXPLODED VIEW

Optional T-7 Flow Control Accessory
(Shown Friction Fitted To Drain Body)
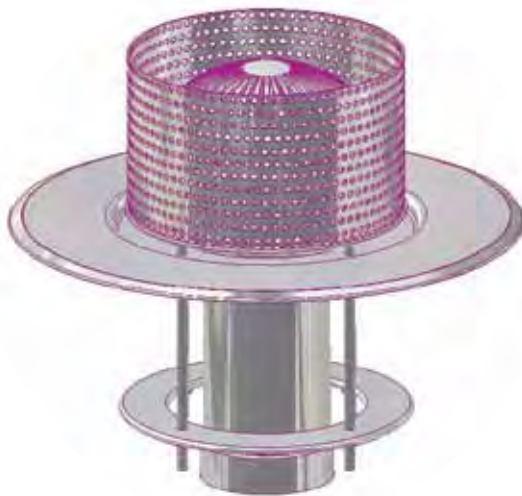
Optional T-12 Stainless Steel Ballast Guard
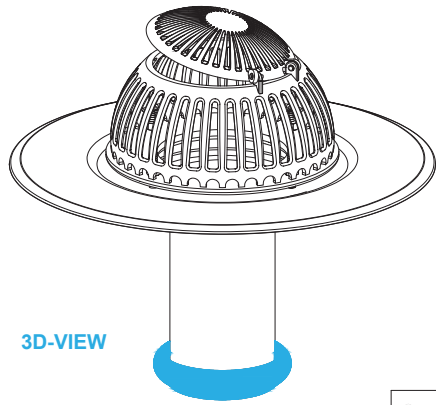**(Shown Friction Fitted To Drain Body)**

Optional With T-7 Sediment Collar
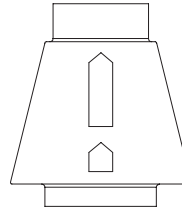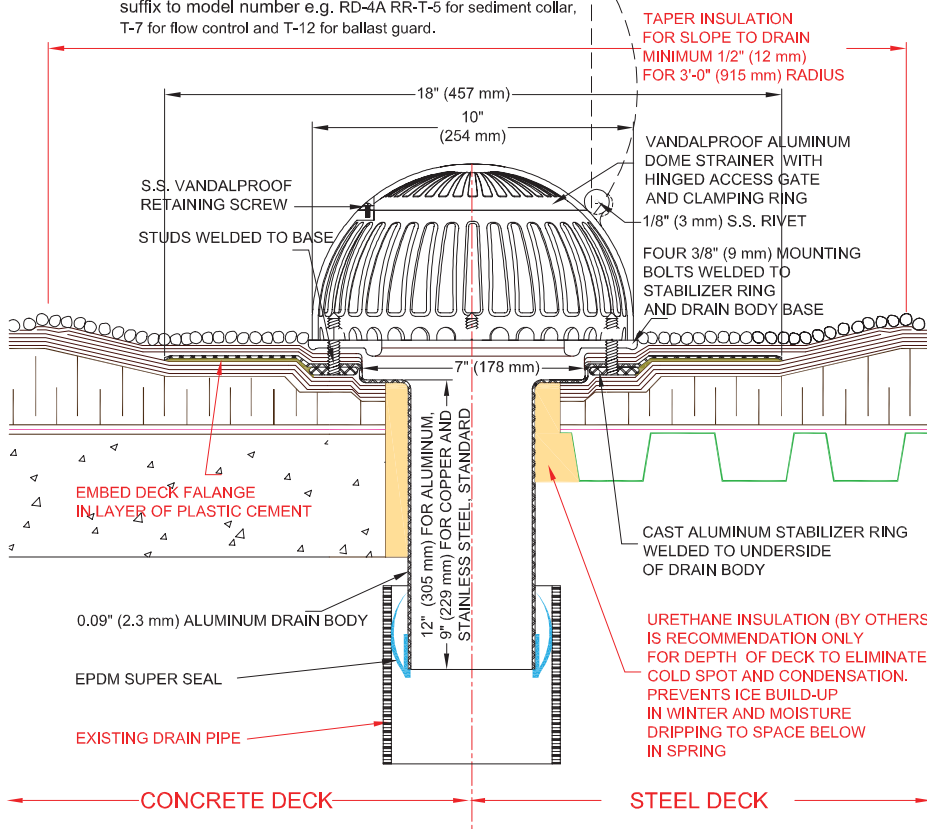**(Shown Friction Fitted To Drain Body)**

Material Specification for RD-4C (Copper) and RD-4SS (Stainless Steel) Roof Drains (RD-4A Illustrated on page M-2)
Note: In Short form Specification on front of sheet, edit specification clause to reflect choice copper (RD-4C) or stainless steel (RD-4SS) roof drain in lieu of aluminum if desired.

Drain Type	Dome Strainer	Stabilizer Ring	Underdeck Clamping Ring	Drain Body and Base	Bolts and Nuts	Ferrule	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-4A	Cast Aluminum	Cast Aluminum	Cast Aluminum	Aluminum 0.09" (2.3 mm)	Aluminum	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-4C	Cast Aluminum	Brass	Cast Aluminum	Copper base: 24 oz. 0.032" (0.813mm) pipe:DWV 0.058"(1.47 mm)	Stainless Steel	Brass	Copper	Copper or Painted Aluminum	Stainless Steel
RD-4SS	Cast Aluminum	Cast Aluminum	Cast Aluminum	Stainless Steel base: 22Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

THALER

M-2A

ROOF SPECIALTIES
RD-4A-RR VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Outlet, Retrofit)

See Reverse Side of Page For RD-4C RR VANDALPROOF ROOF DRAIN and RD-4SS RR VANDALPROOF ROOF DRAIN

3D-VIEW

T-7 ALUMINUM FLOW CONTROL ACCESSORY (OPTIONAL)

T-5 SEDIMENT COLLAR (OPTIONAL)

T-12 STAINLESS STEEL BALLAST GUARD (OPTIONAL)

Note: Specify accessories required by adding appropriate suffix to model number e.g. RD-4A RR-T-5 for sediment collar, T-7 for flow control and T-12 for ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

18" (457 mm)
10" (254 mm)

VANDALPROOF ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE AND CLAMPING RING
1/8" (3 mm) S.S. RIVET

S.S. VANDALPROOF RETAINING SCREW
STUDS WELDED TO BASE

FOUR 3/8" (9 mm) MOUNTING BOLTS WELDED TO STABILIZER RING AND DRAIN BODY BASE

7" (178 mm)

EMBED DECK FALANGE IN LAYER OF PLASTIC CEMENT

12" (305 mm) FOR ALUMINUM, 9" (229 mm) FOR COPPER AND STAINLESS STEEL, STANDARD

CAST ALUMINUM STABILIZER RING WELDED TO UNDERSIDE OF DRAIN BODY

0.09" (2.3 mm) ALUMINUM DRAIN BODY

EPDM SUPER SEAL

EXISTING DRAIN PIPE

URETHANE INSULATION (BY OTHERS) IS RECOMMENDATION ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

CONCRETE DECK | STEEL DECK

RD-4A-RR VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Outlet, Retrofit) Note: RD-4C-RR (Copper) and RD-4SS-RR (Stainless Steel) Roof Drain similar. See reverse side of page for material change

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-4A-RR roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:
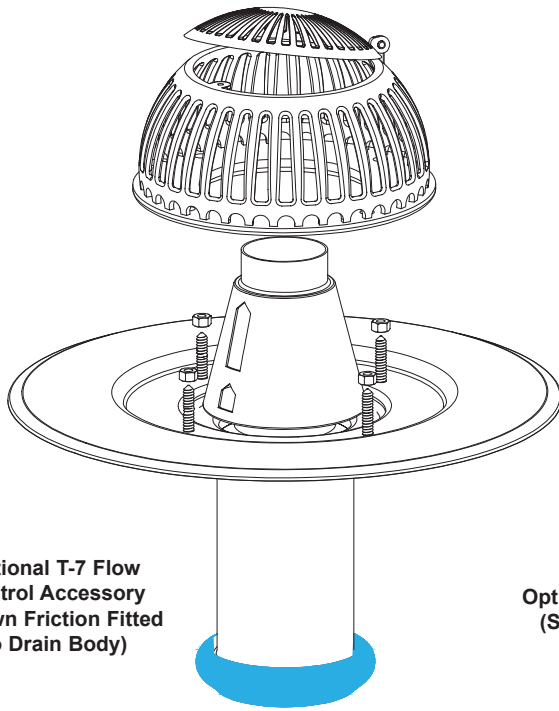
BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.
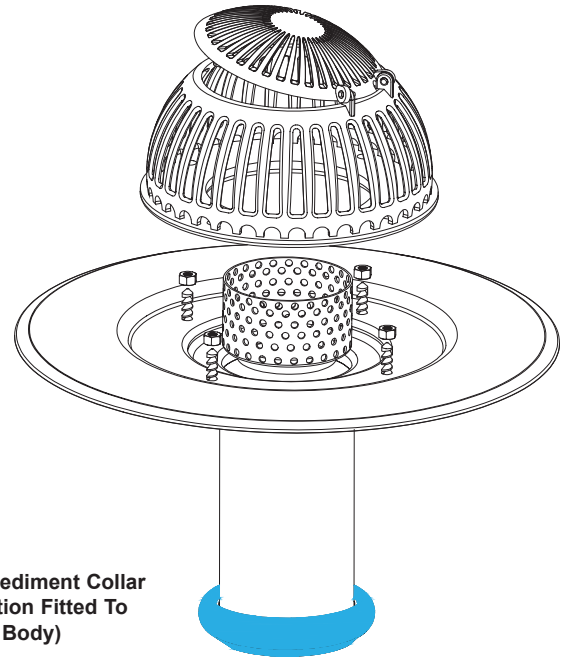
Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-4A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.
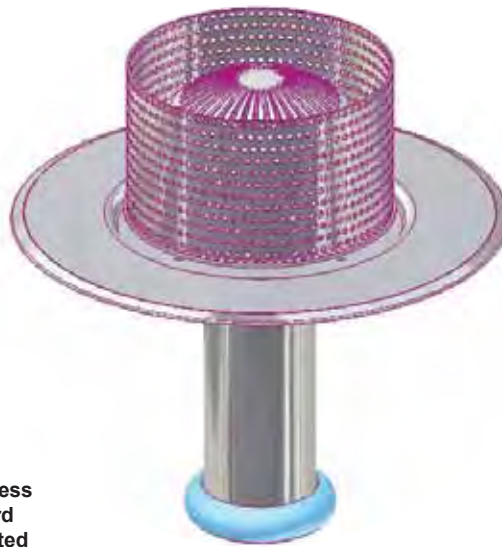
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
The Thaler RD-4A Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, cast aluminum stabilizer ring, stainless steel mounting bolts, pan-formed aluminum drain body and straight aluminum outlet, deck flange and EPDM Super Seal on outlet.

PROMINENT FEATURES:
Non-removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key opening) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain.

LEADER DIAMETERS:
Suitable from 1-3/4" to 7-3/4" (44 mm to 197 mm) leader sizes.

OPTIONS:
T-5 aluminum sediment collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose drain for flat roofs in exisiting construction employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-4A-RR drain for [1-3/4" to 7-3/4" (44 mm to 197 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.3 mm) pan-formed aluminum drain body, deck flange and straight aluminum outlet; 3/8" (9 mm) aluminum bolts welded to drain; cast aluminum stabilizer ring; [T-5 aluminum sediment collar] [T-7 aluminum flow control accessory] [T-9 Super Seal EPDM sealing ring] [T-12 perforated 22 ga. (0.79 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Cana- da) or 1-800-576-1200 (New Braunfels, TX), installed as per manufac-turer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

**Optional T-7 Flow
Control Accessory
(Shown Friction Fitted
To Drain Body)**

**Optional T-5 Sediment Collar
(Shown Friction Fitted To
Drain Body)**

**Optional T-12 Stainless
Steel Ballast Guard
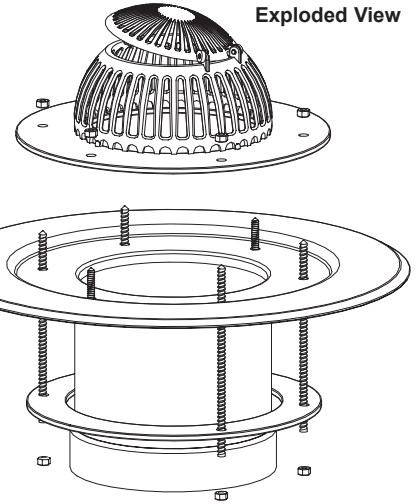(Shown Friction Fitted
To Drain Body)**

Material Specification for RD-4C-RR (Copper) and RD-4SS-RR (Stainless Steel) Roof Drains (RD-4A-RR Illustrated on page M-3)

Note: In Short form Specification on front of sheet, edit specification clause to reflect choice copper (RD-4C-RR) or stainless steel (RD-4SS-RR) roof drain in lieu of aluminum if desired.

Drain Type	Dome Strainer	Stabilizer Ring	Drain Body and Base	Bolts and Nuts	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-4A RR	Cast Aluminum	Cast Aluminum	Aluminum 0.09" (2.3 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-4C RR	Cast Aluminum	Brass	Copper base: 24 oz. 0.032" (0.813mm) pipe:DWV 0.058"(1.47mm)	Stainless Steel	Copper	Copper or Painted Aluminum	Stainless Steel
RD-4SS RR	Cast Aluminum	Cast Aluminum	Stainless Steel base: 22Ga. (0.8mm) pipe: 304 L 0.12"(3mm)	Stainless Steel	Aluminum	Painted Aluminum or Stainless Steel	Stainless Steel

THALER

**NEW CONSTRUCTION**

Exploded View

SPECIFICATION (Short Form)
Roof drains: Thaler [RD-4A-8] [RD-4A-10] big, aluminum roof drain for [8" (203 mm)] [10" (254 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.4 mm) pan-formed aluminum drain body, deck flange and straight aluminum outlet with aluminum ferrule; 3/8" (9 mm) aluminum bolts welded to drain; cast aluminum stabilizer ring; cast aluminum under-deck clamping ring; [T-12 perforated 22 ga. (0.79 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

RD-4A-8 or RD-4A-10 VANDALPROOF ALUMINUM ROOF DRAIN FOR 8" (203 mm) AND 10" (254 mm) LEADER SIZES

ALSO AVAILABLE IN COPPER AND STAINLESS STEEL

Brass Stabilizer ring is welded to underside of Drain Body
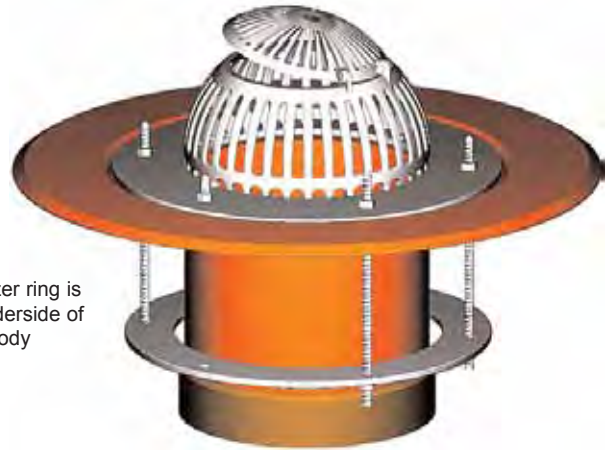
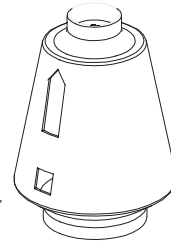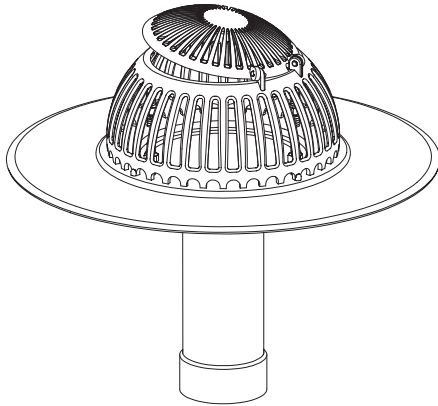**RD-4C-8 or RD-4C-10 VANDALPROOF COPPER ROOF DRAIN FOR 8" (203 mm) AND 10" (254 mm) LEADER SIZES**

Material Specification for RD-4C-8 or RD-4C-10 (Copper) and RD-4SS-8 or RD-4-10 (Stainless Steel) Roof Drains

Drain Type	Dome Strainer	Stabilizer Ring	Underdeck Clamping Ring	Drain Body and Base	Bolts and Nuts	Ferrule	T-12 Ballast Guard
RD-4A-8 or RD-4A-10	Cast Aluminum	Cast Aluminum	Cast Aluminum	Aluminum 0.09" (2.3 mm)	Aluminum	Aluminum	Stainless Steel
RD-4C-8 or RD-4C-10	Cast Aluminum	Brass	Cast Aluminum	Copper base: 24 oz. 0.032" (0.813 mm) pipe: DWV 0.058"(1.47 mm)	Stainless Steel	Brass	Stainless Steel
RD-4SS-8 or RD-4SS-10	Cast Aluminum	Cast Aluminum	Cast Aluminum	Stainless Steel base: 22Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Stainless Steel

Cast Aluminum Stabilizer ring is welded to underside of Drain Body

RD-4SS-8 or RD-4SS-10 VANDALPROOF STAINLESS STEEL ROOF DRAIN FOR 8" (203 mm) AND 10" (254 mm) LEADER SIZES
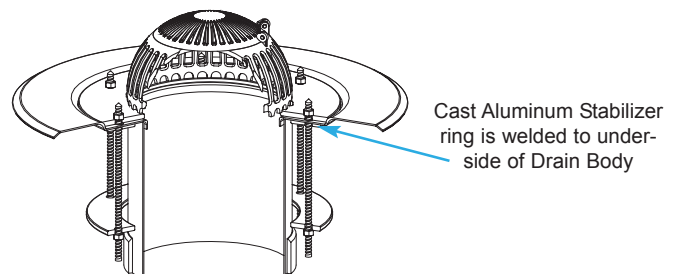
THALER

M-4

RE-ROOFING MODELS

Roof drains: Thaler [RD-4A-8-RR] [RD-4A-10-RR] big, aluminum retrofit roof drain for [8" (203 mm)] [10" (254 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.4 mm) pan-formed aluminum drain body, deck flange and straight aluminum outlet fitted with EMSEAL tape; 3/8" (9 mm) aluminum bolts welded to drain; cast aluminum stabilizer ring; cast aluminum under-deck clamping ring; [T-12 perforated 22 ga. (0.79 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

RD-4A-8-RR or RD-4A-10-RR   ALUMINUM RE-ROOFING ROOF DRAIN FOR 8" (203 mm) AND 10" (254 mm) LEADER SIZES

EMSEAL TAPE
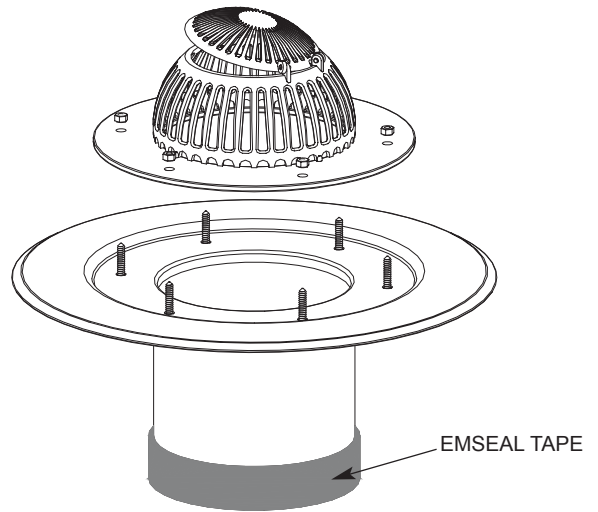
RD-4C-8-RR or RD-4C-10-RR   ALUMINUM RE-ROOFING ROOF DRAIN FOR 8" (203 mm) AND 10" (254 mm) LEADER SIZES
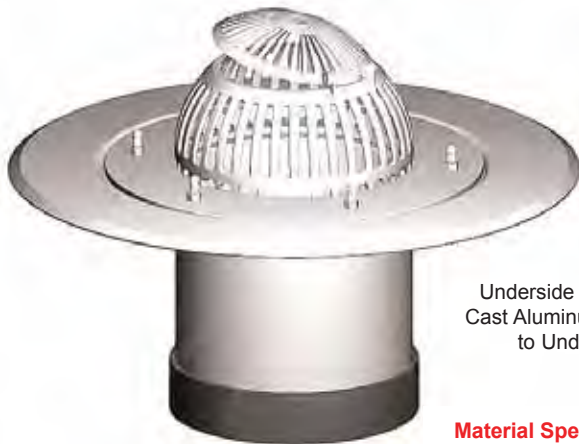
Underside of Deck Flange Showing Cast Aluminum Stabilizer Ring Welded to Underside of Drain Body

RD-4SS-8-RR or RD-4SS-10-RR STAINLESS STEEL RE-ROOFING ROOF DRAIN FOR 8" (203 mm) AND 10" (254 mm) LEADER SIZES
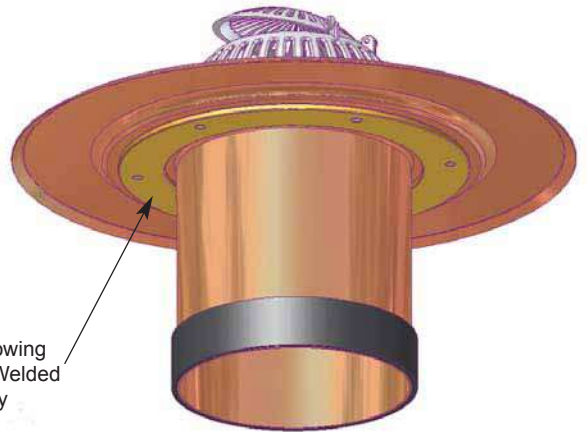
Material Specification for RD-4C-RR-8 or RD-4C-RR-10 (Copper) and RD-4SS-RR-8 or RD-4SS-RR-10 (Stainless Steel) Roof Drains

Drain Type	Dome Strainer	Stabilizer Ring	Drain Body and Base	Bolts and Nuts	Ferrule	T-12 Ballast Guard
RD-4A-RR-8 or RD-4A-RR-10	Cast Aluminum	Cast Aluminum	Aluminum 0.09" (2 mm)	Aluminum	Aluminum	Stainless Steel
RD-4C-RR-8 or RD-4C-RR-10	Cast Aluminum	Brass	Copper base: 24 oz. 0.032" (0.813mm) pipe:DWV 0.058"(1.47 mm)	Stainless Steel	Brass	Stainless Steel
RD-4SS-RR-8 or RD-4SS-RR-10	Cast Aluminum	Cast Aluminum	Stainless Steel base: 22Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Stainless Steel

ROOF SPECIALTIES
RD-7A VANDALPROOF ALUMINUM ROOF DRAIN
(All Purpose, Straight Outlet)

See Reverse Side of Page for
RD-4C VANDALPROOF COPPER ROOF DRAIN
and **RD-4SS VANDALPROOF**
STAINLESS STEEL ROOF DRAIN

T-7 ALUMINUM FLOW CONTROL ACCESSORY (OPTIONAL)

Note: specify accessories required by adding appropriate suffix to model number e.g. RD-7C-T-5 for sediment collar, T-7 for flow control and T-12 for ballast guard, T-10 for under deck clamp

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

INVERTED ROOF ILLUSTRATED (BUR)

18" (457 mm)
10" (254 mm)

VANDALPROOF ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE AND CLAMPING RING 1/8" (3mm) S.S. RIVET

S.S. VANDALPROOF RETAINING SCREW

T-12 STAINLESS STEEL BALLAST GUARD (OPTIONAL)

FOUR 3/8" (9 mm) MOUNTING BOLTS WELDED TO FOUR UNDER BODY SPACERS 1.5" (38 mm) DIA.

CONVENTIONAL ROOF ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

T-5 SEDIMENT COLLAR

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

12" (305 mm) FOR ALUMINUM
9" (229 mm) FOR COPPER AND STAINLESS STEEL, STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

T-6 ALUMINUM FERRULE

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

MECHANICAL CONNECTION (BY OTHERS)

0.090" (2.3 mm) ALUMINUM DRAIN BODY

STEEL DECK — CONCRETE DECK

RD-7A VANDALPROOF ALUMINUM ROOF DRAIN
(All Purpose, Straight Outlet) Note: RD-7C (Copper) and RD-4SS (Stainless Steel) Roof Drain similar. See reverse side of page for material change

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-7A roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
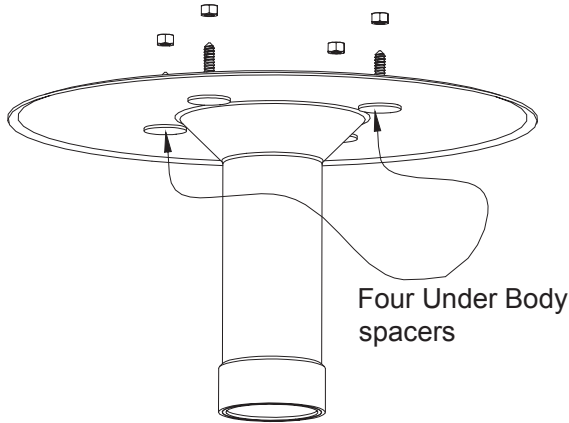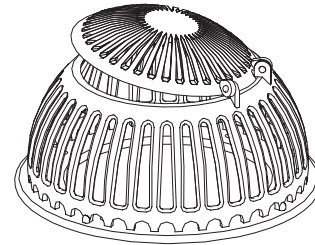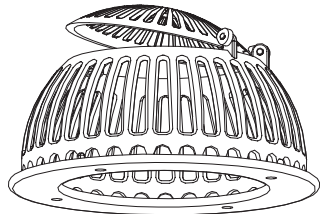
ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-7A-P; weld roofing to drain flange using PVC torch.
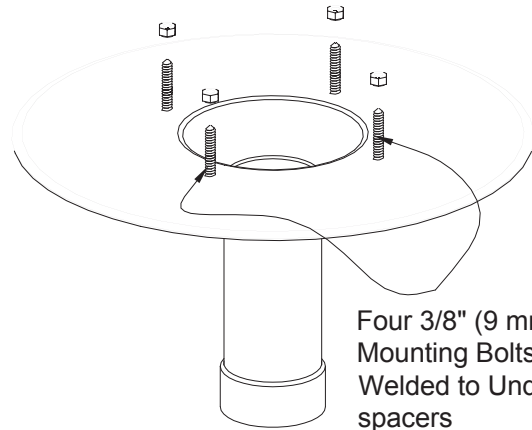
Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
The Thaler RD-7A Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, four mounting bolts, round aluminum body, deck flange and straight outlet fitted with an aluminum ferrule.

PROMINENT FEATURES:
Removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key openable) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain. Drains fitted with aluminum ferrule.

LEADER DIAMETERS:
With Aluminum Ferrule: 1-3/4" to 8" (44 mm to 203 mm). See detail at left for specific sizes.

OPTIONS:
T-10 stainless steel under-deck clamp (provides snug installation in otherwise insecure applications). T-5 aluminum sediment collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose drain for flat roofs in new or existing construction employing conventional roof (membrane above insulation) or inverted roof. Suitable for PVC, cast iron, steel, copper, or other type leaders in both Schedule 40 or 80 leader thickness.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-7A aluminum drain for [1-3/4" to 8" (44 mm to 203 mm)] leader size with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.3 mm) aluminum round drain body, four 3/8" (3 mm) aluminum mounting bolts welded to under body spacer 1.5" (38 mm), deck flange and straight aluminum outlet with [T-5 aluminum sediment collar;] [T-6 aluminum ferrule;] [T-7 aluminum flow control accessory] [T-10 stainless steel under-deck clamp;] [T-12 s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.
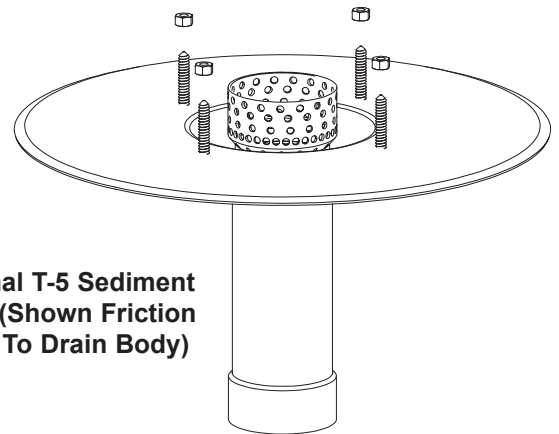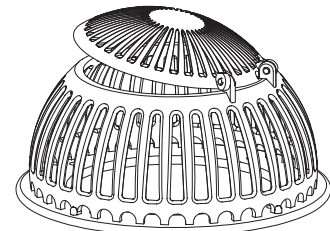
Four Under Body spacers

Four 3/8" (9 mm) Mounting Bolts Welded to Under Body spacers

RD-7C Copper Vandalproof Roof Drain

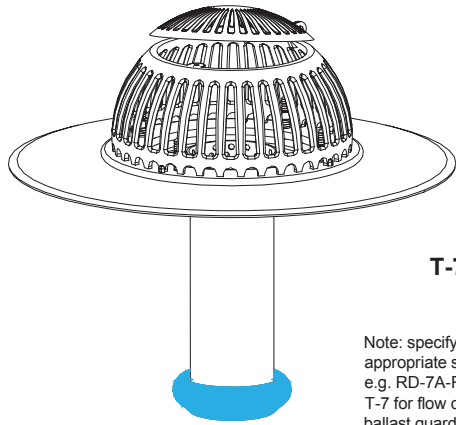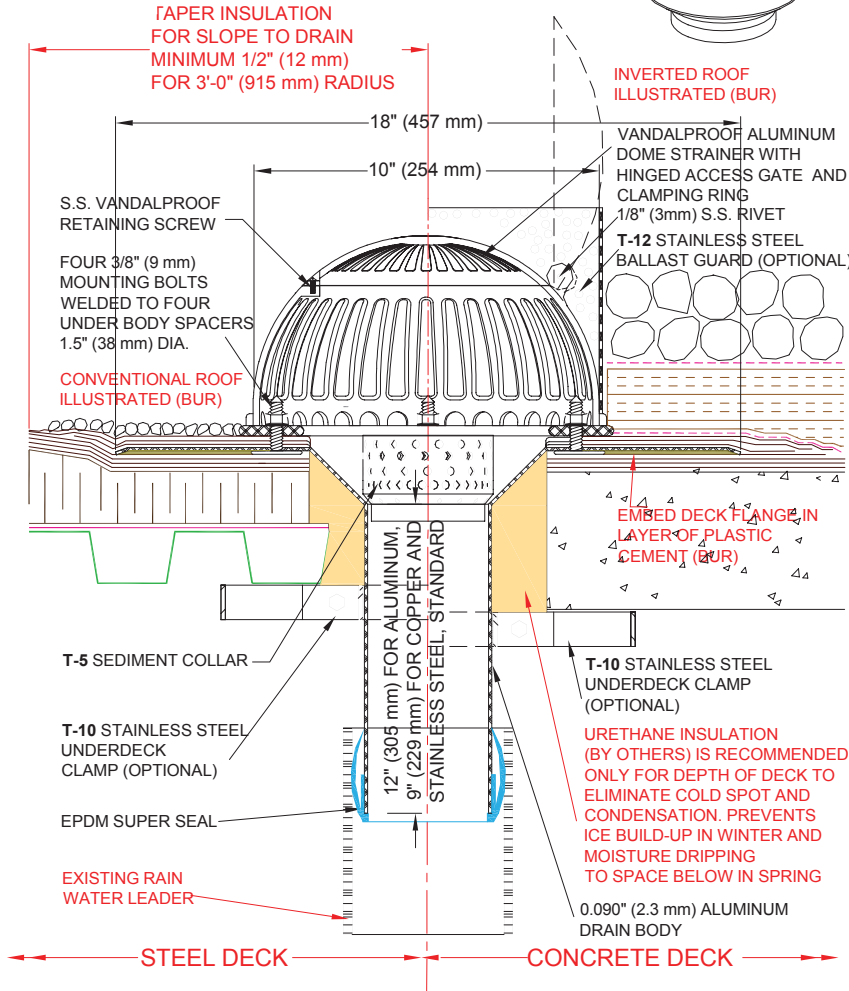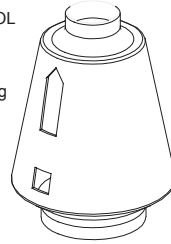**Optional T-7 Flow Control Accessory (Shown Friction Fitted To Drain Body)**

Optional T-5 Sediment Collar (Shown Friction Fitted To Drain Body)

Material Specification for RD-7C (Copper) and RD-7SS (Stainless Steel)Roof Drains (RD-7A Illustrated on page M-5) Note: In Short Form specification on front of sheet, edit specification clause to reflect choice of copper (RD-7C) or stainless steel (RD-7SS) roof drain in lieu of aluminum if desired.

Drain Type	Dome Strainer	Underdeck Clamp	Drain Body and Base	Bolts and Nuts	Ferrule	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-7A	Cast Aluminum	Stainless Steel	Aluminum 0.09" (2 mm)	Aluminum	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-7C	Cast Aluminum	Stainless Steel	Copper base: 24 oz.0.032" (0.813mm) pipe: DWV 0.058" (1.47mm)	Stainless Steel	Brass	Copper	Copper or Painted Aluminum	Stainless Steel
RD-7SS	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Aluminum	Painted Aluminum or Stainless Steel	Stainless Steel

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

RD-7A-RR VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Outlet, Retrofit)

See Reverse Side of Page for
**RD-4C-RR VANDALPROOF
COPPER ROOF DRAIN**
and **RD-4SS-RR VANDALPROOF
STAINLESS STEEL ROOF DRAIN**

T-7 ALUMINUM FLOW CONTROL
ACCESSORY (OPTIONAL)

Note: specify accessories required by adding
appropriate suffix to model number
e.g. RD-7A-RR-T-5 for sediment collar,
T-7 for flow control and T-12 for
ballast guard, T-10 for under-deck clamp

TAPER INSULATION
FOR SLOPE TO DRAIN
MINIMUM 1/2" (12 mm)
FOR 3'-0" (915 mm) RADIUS

INVERTED ROOF
ILLUSTRATED (BUR)

18" (457 mm)

10" (254 mm)

VANDALPROOF ALUMINUM
DOME STRAINER WITH
HINGED ACCESS GATE AND
CLAMPING RING
1/8" (3mm) S.S. RIVET

S.S. VANDALPROOF
RETAINING SCREW

T-12 STAINLESS STEEL
BALLAST GUARD (OPTIONAL)

FOUR 3/8" (9 mm)
MOUNTING BOLTS
WELDED TO FOUR
UNDER BODY SPACERS
1.5" (38 mm) DIA.

CONVENTIONAL ROOF
ILLUSTRATED (BUR)

EMBED DECK FLANGE IN
LAYER OF PLASTIC
CEMENT (BUR)

T-5 SEDIMENT COLLAR

12" (305 mm) FOR ALUMINUM,
9" (229 mm) FOR COPPER AND
STAINLESS STEEL, STANDARD

T-10 STAINLESS STEEL
UNDERDECK CLAMP
(OPTIONAL)

T-10 STAINLESS STEEL
UNDERDECK
CLAMP (OPTIONAL)

EPDM SUPER SEAL

URETHANE INSULATION
(BY OTHERS) IS RECOMMENDED
ONLY FOR DEPTH OF DECK TO
ELIMINATE COLD SPOT AND
CONDENSATION. PREVENTS
ICE BUILD-UP IN WINTER AND
MOISTURE DRIPPING
TO SPACE BELOW IN SPRING

EXISTING RAIN
WATER LEADER

0.090" (2.3 mm) ALUMINUM
DRAIN BODY

STEEL DECK   CONCRETE DECK

RD-7A-RR VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Outlet) Note: RD-7C-RR (Copper) and RD-4SS-RR (Stainless Steel) Roof Drain similar. See reverse side of page for material change.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-7A-RR roof drain is installed by fitting the drain outlet into the rainwater leader, by slowly rotating and pushing down into position, installing the dome strainer (including any optional accessories), and as follows:
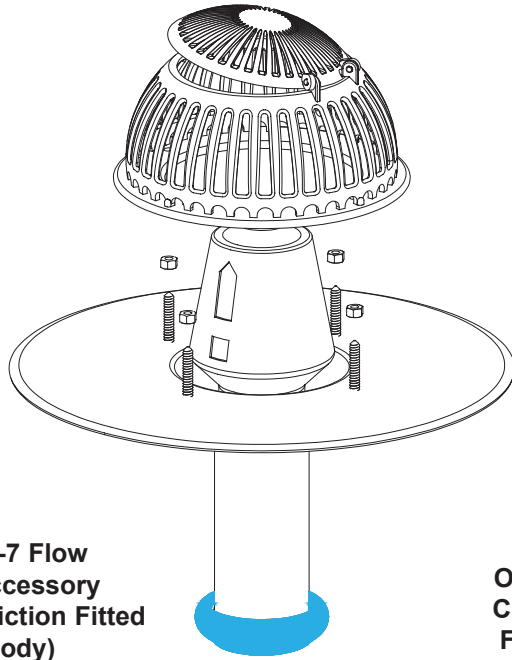
BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.
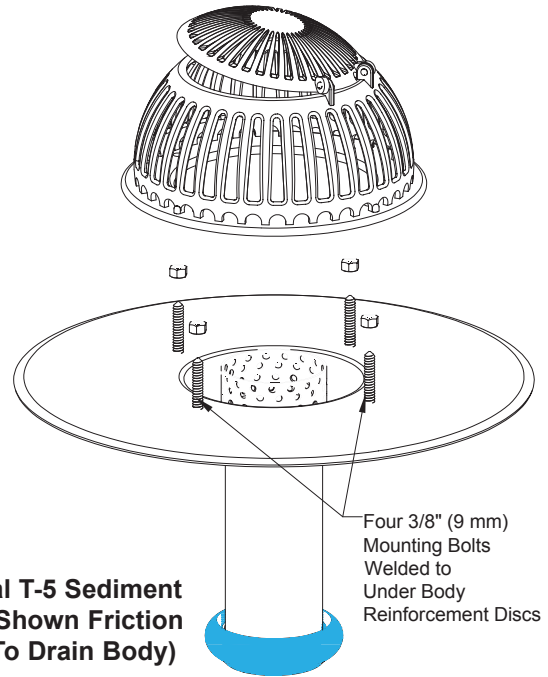
Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-7A-RR-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
The Thaler RD-7A RR Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, four mounting bolts, funnel aluminum body, deck flange and straight outlet fitted with patented EPDM sealing ring (Thaler Super-Seal). The Super-Seal provides a superior seal in the event drains become clogged.

PROMINENT FEATURES:
Removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key opening) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain. Leader Diameters: With Super-Seal EPDM Sealing Ring: 1-3/4" to 8" (44 mm to 203 mm). See detail at left for specific sizes.

OPTIONS:
T-10 stainless steel under-deck clamp (provides snug installation in otherwise insecure applications). T-5 aluminum sediment collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose drain for flat roofs in new or existing construction employing conventional roof (membrane above insulation) or inverted roof and new hook-up e.g. new installation in low spots subject to pounding water. Suitable for PVC, cast iron, steel, copper, or other type leaders in both Schedule 40 or 80 leader thickness.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-7A-RR aluminum drain for [1-3/4" to 8" (44 mm to 203 mm)] leader size with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.3 mm) aluminum funnel drain body, four 3/8" (3 mm) aluminum mounting bolts welded to underbody reinforcing discs, deck flange and straight aluminum outlet with [T-5 aluminum sediment collar;] [T-9 Super-Seal EPDM sealing ring;] [T-7 aluminum flow control accessory] [T-10 stainless steel under-deck clamp;] [T-12 s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

Optional T-7 Flow Control Accessory (Shown Friction Fitted To Drain Body)
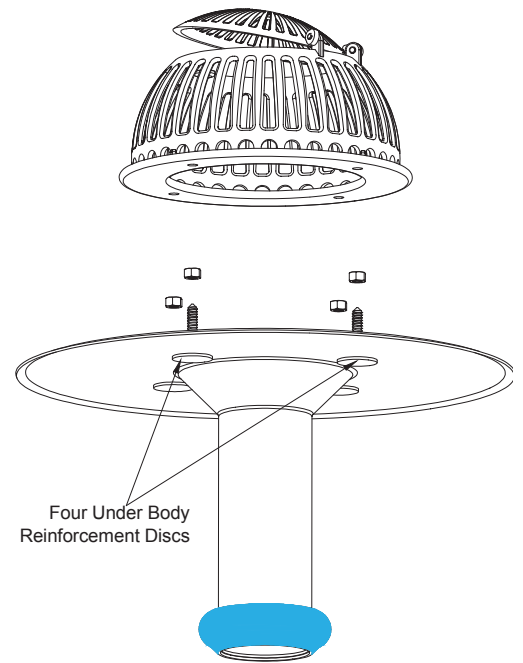
Optional T-5 Sediment Collar (Shown Friction Fitted To Drain Body)

Four 3/8" (9 mm) Mounting Bolts Welded to Under Body Reinforcement Discs

RD-7C-RR Copper Vandalproof Roof Drain
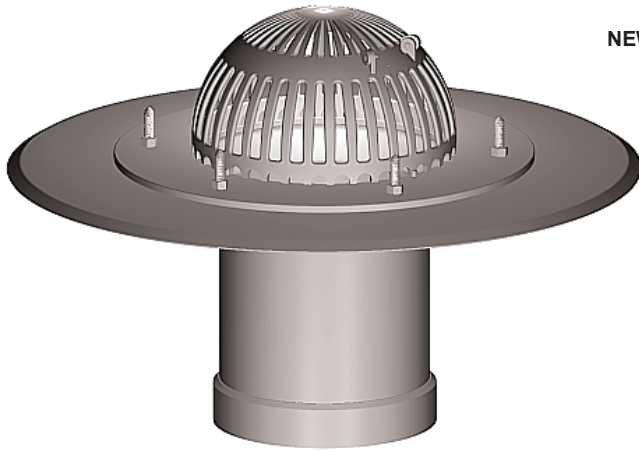
Four Under Body Reinforcement Discs

Material Specification for RD-7C-RR (Copper) and RD-7SS-RR (Stainless Steel) Roof Drains (RD-7A-RR Illustrated on page M-6)
Note: In Short Form specification on front of sheet, edit specification to reflect choice of copper (RD-7C-RR) or stainless steel (RD-7SS-RR) roof drain in lieu of aluminum if desired.

Drain Type	Dome Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-7A RR	Cast Aluminum	Stainless Steel	Aluminum 0.090" (2.3 mm)	Aluminum	Aluminum	Stainless Steel
RD-7C RR	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.813mm) pipe: DWV 0.058" (1.47mm)	Copper	Copper or Painted Aluminum	Stainless Steel
RD-7SS RR	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

NEW CONSTRUCTION

Exploded View

SPECIFICATION (Short Form)
Roof drains: Thaler RD-7A-8 aluminum big roof drain for [8" (203 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate welded to cast aluminum ring ; .090" (2.3 mm) aluminum drain body, deck flange and straight aluminum outlet with aluminum ferrule; six 3/8" (9 mm) aluminum bolts welded to underbody reinforcement discs; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (Niagara Falls, NY), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

RD-7A-8 VANDALPROOF ALUMINUM ROOF DRAIN FOR 8" (203 mm) LEADER SIZE

ALSO AVAILABLE IN COPPER AND STAINLESS STEEL
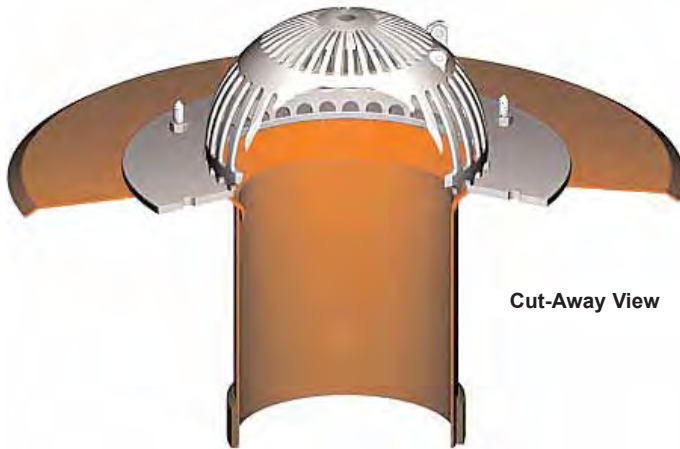
Cut-Away View

RD-7C-8 VANDALPROOF COPPER ROOF DRAIN FOR 8" (203 mm) LEADER SIZE
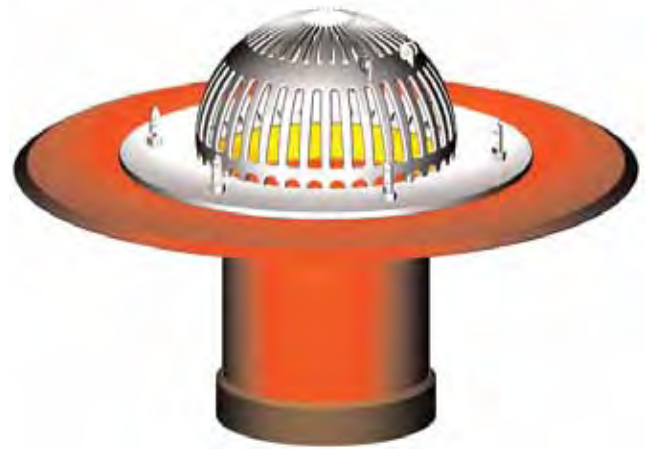
RD-7SS-8 VANDALPROOF STAINLESS STEEL ROOF DRAIN FOR 8" (203 mm) LEADER SIZE

Material Specification for RD-7C-8 (Copper) and RD-7SS-8 (Stainless Steel) Roof Drains

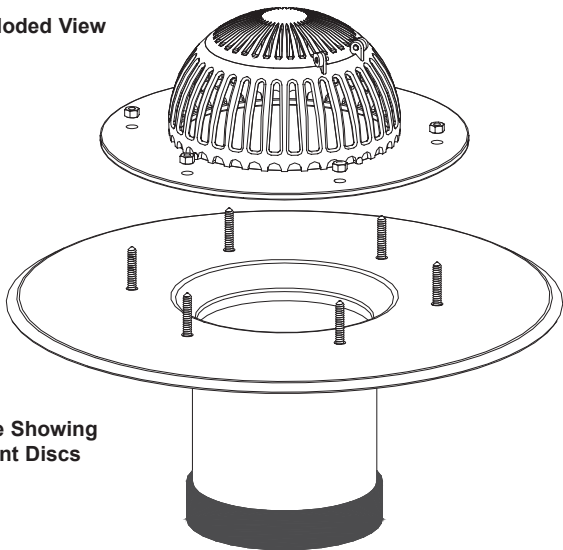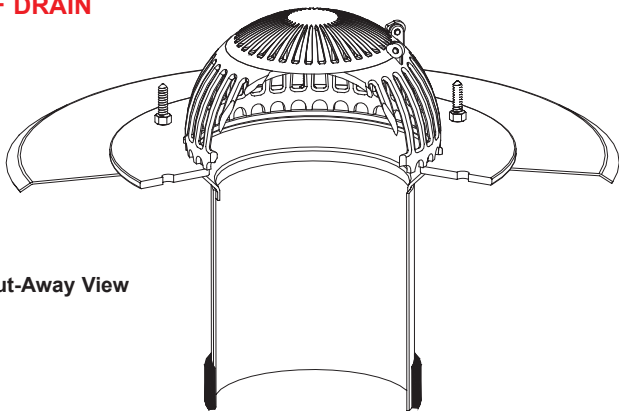| Drain Type	Dome Strainer	Underdeck Clamp	Drain Body and Base	Bolts and Nuts	Ferrule	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-7A-8	Cast Aluminum	Stainless Steel	Aluminum 0.090" (2.3 mm)	Aluminum	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-7C-8	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.813mm) pipe: DWV 0.058" (1.47mm)	Stainless Steel	Brass	Copper	Copper or Painted Aluminum	Stainless Steel
RD-7SS-8	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

RE-ROOFING MODELS

SPECIFICATION (Short Form)
Roof drains: Thaler RD-7A-8-RR aluminum big re-roofing roof drain for [8" (203 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate welded to cast aluminum ring ; .090" (2.3 mm) aluminum drain body, deck flange and straight aluminum outlet with EMSEAL tape; six 3/8" (9 mm) aluminum bolts welded to underbody reinforcement discs; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp;] [T-12 perforated 22 ga. (0.79 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

RD-7A-8-RR VANDALPROOF ALUMINUM RE-ROOFING ROOF DRAIN

Exploded View

**Underside of Deck Flange Showing
Underbody reinforcement Discs**

RD-7C-8-RR VANDALPROOF COPPER RE-ROOFING ROOF DRAIN

Cut-Away View

**RD-7SS-8-RR VANDALPROOF
STAINLESS STEEL RE-ROOFING
ROOF DRAIN**

**Material Specification for RD-7C-8-RR (Copper) Re-Roofing and RD-7SS-8-RR (Stainless Steel)
Re-Roofing Roof Drains**

Drain Type	Dome Strainer	Underdeck Clamp	Drain Body and Base	Bolts and Nuts	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-7A-8-RR	Cast Aluminum	Stainless Steel	Aluminum 0.090" (2.3 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-7C-8-RR	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.813mm) pipe: DWV 0.058" (1.47mm)	Stainless Steel	Copper	Copper or Painted Aluminum	Stainless Steel
RD-7SS-8-RR	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

ROOF SPECIALTIES
RD-14A VANDALPROOF ALUMINUM ROOF DRAIN
(All Purpose, Straight Outlet)

T-5 SEDIMENT COLLAR (OPTIONAL)

T-7 ALUMINUM FLOW CONTROL ACCESSORY (OPTIONAL)

Note: Specify accessories required by adding appropriate suffix to model number e.g. RD-14C-T-5 for sediment collar, T-7 for flow control and T-12 for ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

INVERTED ROOF ILLUSTRATED (BUR)
VANDALPROOF ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE WELDED TO DRAIN BODY

18" (457 mm)
10" (254 mm)

1/8" (3mm) S.S. RIVET
T-12 STAINLESS STEEL BALLAST GUARD

S.S. VANDALPROOF RETAINING SCREW

CONVENTIONAL ROOF ILLUSTRATED (BUR)

4" (102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

12" (305 mm) FOR ALUMINUM, 9" (229 mm) FOR COPPER AND STAINLESS STEEL, STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

0.090" (2.3 mm) ALUMINUM DRAIN BODY

T-6 ALUMINUM FERRULE

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

MECHANICAL CONNECTION (BY OTHERS)

STEEL DECK — CONCRETE DECK

RD-14A VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Outlet) Note: RD-14C (Copper) and RD-14SS (Stainless Steel) Roof Drain similar. See reverse side of page for material change

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-14A roof drain is installed by coring or cutting the roof assembly, fitting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:
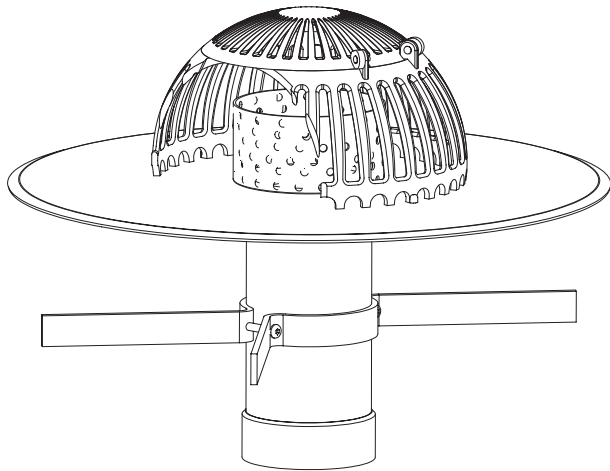
BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.
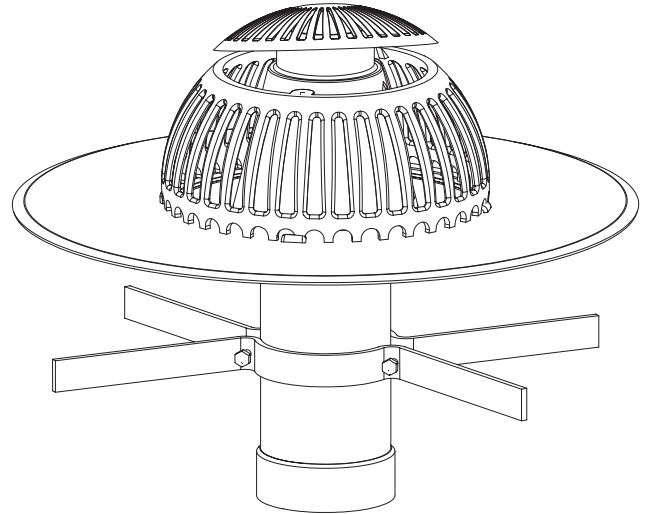
Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-14A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION:
The Thaler RD-14A Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, flat aluminum body, deck flange and straight outlet fitted with a brass ferrule.

PROMINENT FEATURES:
Non-removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key openable) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain.

LEADER DIAMETERS:
With Aluminum Ferrule: 2" to 10" (51 mm to 254 mm). See detail at left for specific sizes.

OPTIONS:
Aluminum ferrule on outlet. T-5 aluminum sediment collar. Stainless steel under-deck clamp (provides snug installation in otherwise insecure applications). T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
For flat roofs in new or existing construction employing conventional roof (membrane above insulation) or inverted roof and new hook-up e.g. new installation in low spots subject to ponding water. Suitable for PVC, cast iron, steel, copper, or other type leaders in both Schedule 40 or 80 leader thicknesses.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-14A aluminum drain for [2" to 10" (51 mm to 254 mm)] leader size with: vandalproof cast aluminum dome with hinged access gate welded to drain body; .090" (2.3 mm) spun aluminum flat drain body, deck flange and straight seamless aluminum outlet with [T-5 aluminum sediment collar;] [T-6 aluminum ferrule;] [T-10 stainless steel under-deck clamp;] [T-7 aluminum flow control accessory;] [T-12 stainless steel ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Cana- da) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

Optional T-5 Sediment Collar
(Shown Friction Fitted To Drain Body)

Optional T-7 Flow Control Accessory
(Shown Friction Fitted To Drain Body)

Optional T-12 Stainless Steel Ballast Guard on RD-14SS Roof Drain
**(Shown Friction Fitted To Drain Body)**

RD-14C (Copper) Roof Drain

Material Specification for RD-14C (Copper) and RD-14SS
(Stainless Steel) Roof Drains (RD-14A Aluminum Illustrated on page M-8)
Note: In Short Form specification on front of sheet, edit clouse to reflect choice of copper
(RD-14C) or stainless steel (RD-14SS) roof drain in lieu of aluminum if desired.

Drain Type	Dome Strainer	Underdeck Clamp	Drain Body and Base	Ferrule	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-14A	Cast Aluminum	Stainless Steel	Aluminum 0.090" (2.3 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-14C	Cast Aluminum	Stainless Steel	Copper base: 24 oz 0.032" (0.813mm) pipe:DWV 0.058"(1.47mm)	Brass	Copper	Copper or Painted Aluminum	Stainless Steel
RD-14SS	Cast Aluminum	Stainless Steel	Stainless Steel base: 22Ga. (0.8 mm) pipe:304 L 0.12"(3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

ROOF SPECIALTIES
RD-14A-RR VANDALPROOF ALUMINUM ROOF DRAIN
(All Purpose, Low Spot Retrofit)

T-5 SEDIMENT COLLAR (OPTIONAL)

T-7 ALUMINUM FLOW CONTROL ACCESSORY (OPTIONAL)
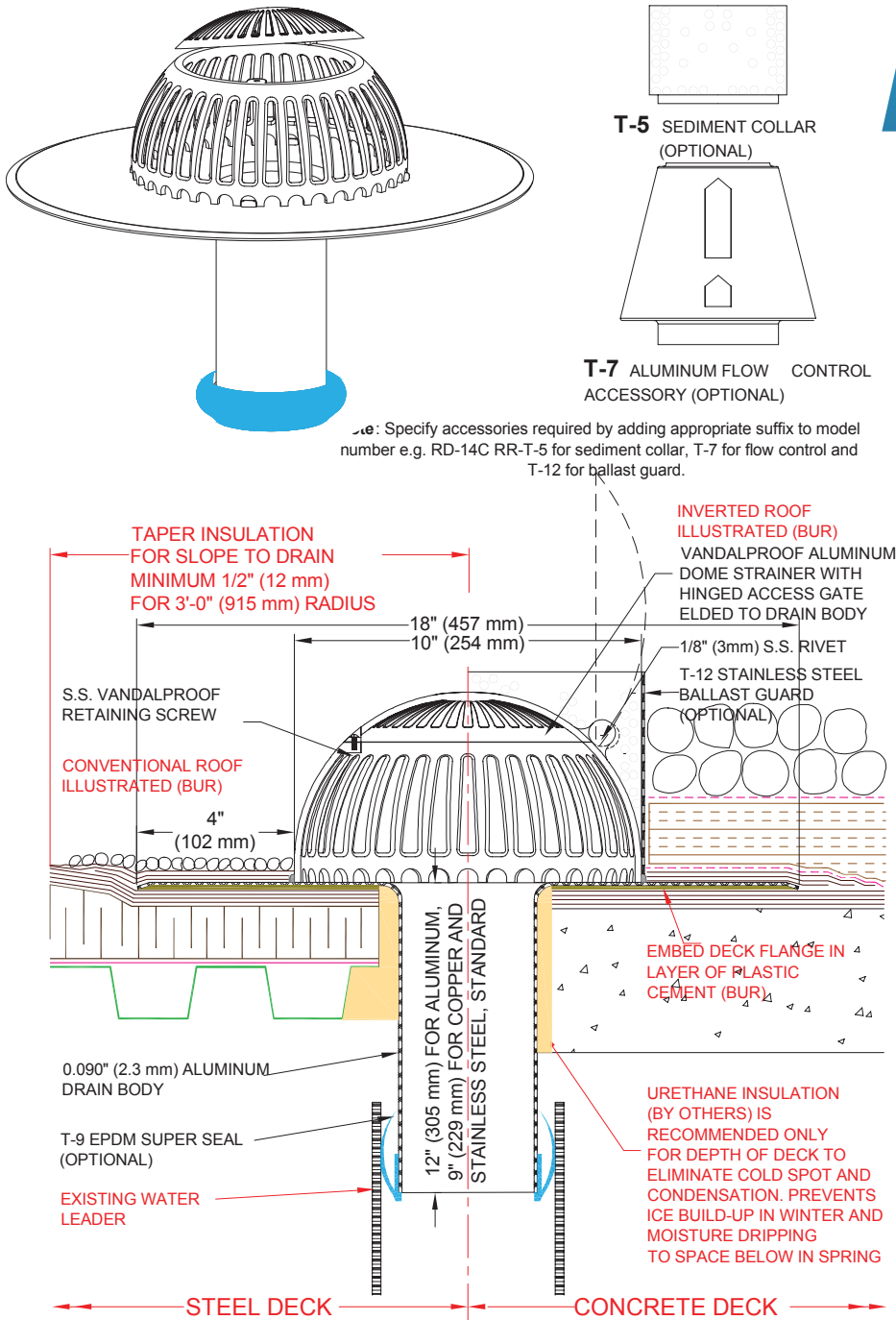
Note: Specify accessories required by adding appropriate suffix to model number e.g. RD-14C RR-T-5 for sediment collar, T-7 for flow control and T-12 for ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

INVERTED ROOF ILLUSTRATED (BUR)

VANDALPROOF ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE ELDED TO DRAIN BODY

18" (457 mm)
10" (254 mm)

1/8" (3mm) S.S. RIVET

T-12 STAINLESS STEEL BALLAST GUARD (OPTIONAL)

S.S. VANDALPROOF RETAINING SCREW

CONVENTIONAL ROOF ILLUSTRATED (BUR)

4" (102 mm)

12" (305 mm) FOR ALUMINUM, 9" (229 mm) FOR COPPER AND STAINLESS STEEL, STANDARD

0.090" (2.3 mm) ALUMINUM DRAIN BODY

T-9 EPDM SUPER SEAL (OPTIONAL)

EXISTING WATER LEADER

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

STEEL DECK   CONCRETE DECK

RD-14A-RR VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Low Spot Retrofit) Note: RD-14C-RR (Copper) and RD-14SS-RR (Stainless Steel) Roof Drain similar. See reverse side of page for material change.

DESCRIPTION:
The Thaler RD-14A-RR Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, flat aluminum body, deck flange and straight outlet fitted with EPDM sealing ring (Thaler Super-Seal). The Super-Seal provides a superior seal in the event drains or pipes become clogged.

PROMINENT FEATURES:
Easy installation for retrofit applications requiring new hook-up (see Recommended Use). Non-removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key opening) allows drain to be cleaned if necessary.

LEADER DIAMETERS:
With Super-Seal EPDM Sealing Ring: 1-3/4" to 5-3/4" (44 mm to 146 mm). See detail at left for specific sizes.

OPTIONS:
Without Super-Seal on outlet (see Thaler Super-Seal Retrofit Drain Seal literature). T-5 aluminum sediment collar. T-10 Stainless steel under-deck clamp (provides snug installation in otherwise insecure applications). T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
For flat roofs in existing construction employing conventional roof (membrane above insulation) or inverted roof and new hook-up e.g. new installation in low spots subject to ponding water. Suitable for PVC, cast iron, steel, copper, or other type leaders in both Schedule 40 or 80 leader thicknesses.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-14A-RR aluminum drain for [1-3/4" (44 mm) to 5-3/4" (146 mm)] leader size with: vandalproof cast aluminum dome with hinged access gate welded to drain body; .090" (2.3 mm) spun aluminum flat drain body, deck flange and straight seamless aluminum outlet with [T-5 aluminum sediment collar;] [T-9 Super-Seal EPDM sealing ring;] [T-10 stainless steel under-deck clamp;] [T-7 aluminum flow control accessory;] [T-12 stainless steel ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-14A-RR roof drain is installed by coring or cutting the roof assembly, fitting the drain outlet into the rainwater leader, slowly rotatening and pushing down into position, installing the dome strainer (including any optional accessories), and as follows:
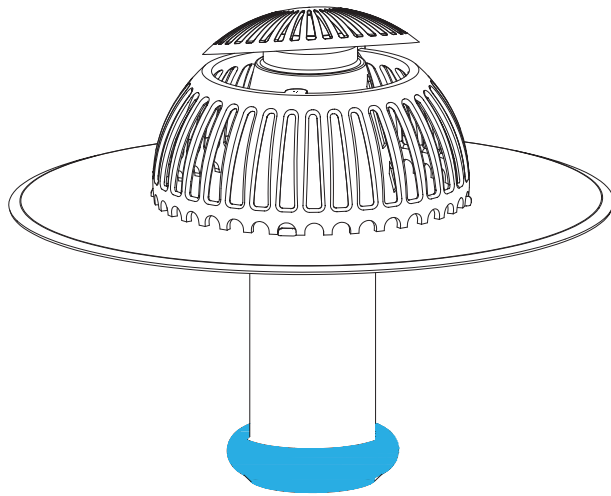
BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-14A-RR-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

Optional T-7 Flow Control Accessory
(Shown Friction Fitted To Drain Body)
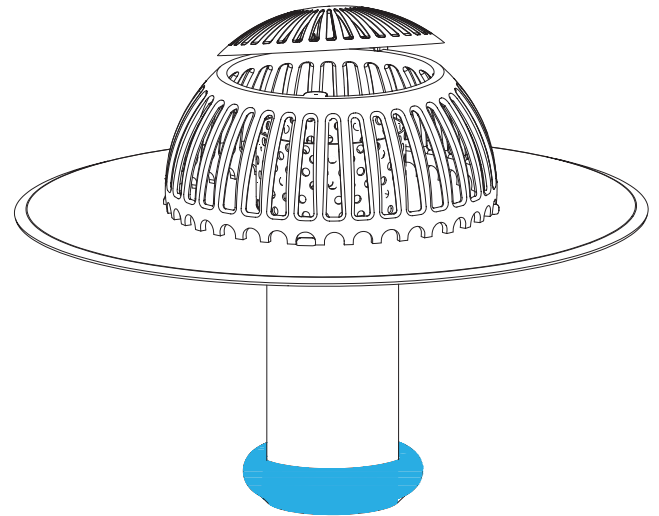
Optional T-5 Sediment Collar
(Shown Friction Fitted To Drain Body)

RD-14C-RR (Copper)
Roof Drain

Optional T-12 Stainless Steel Ballast Guard
on RD-14SS-RR Roof Drain
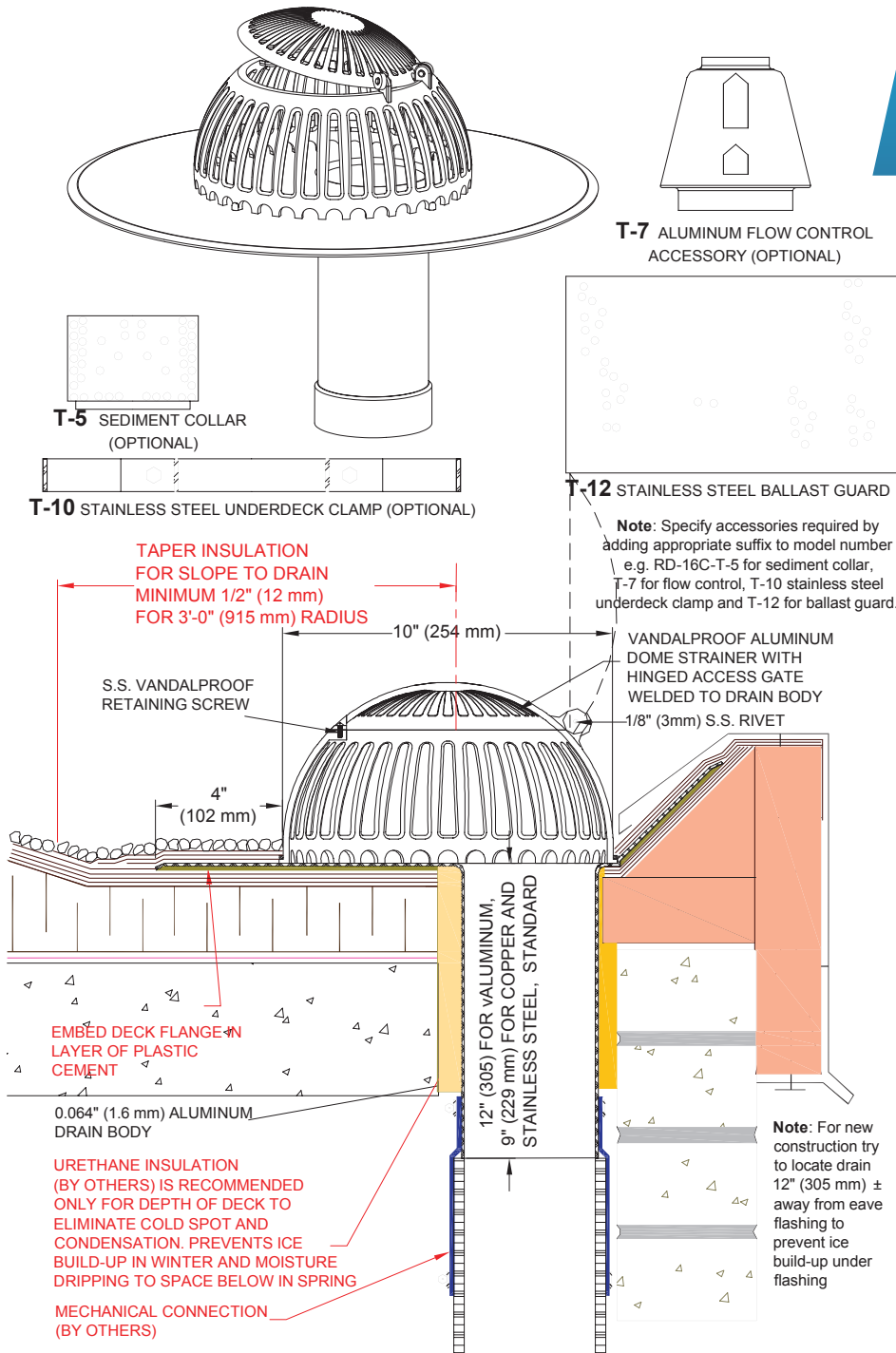**(Shown Friction Fitted To Drain Body)**

RD-14SS-RR (Stainless Steel)
Roof Drain

**Material Specification for RD-14C-RR (Copper) and RD-14SS-RR
(Stainless Steel) Roof Drains (RD-14A-RR Aluminum Illustrated on page M-9)
Note: In Short Form specification on front of sheet, edit clause to reflect
choice of copper (RD-14C-RR) or stainless steel (RD-14SS-RR)
roof drain in lieu of aluminum if desired.**

Drain Type	Dome Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-14A-RR	Cast Aluminum	Stainless Steel	Aluminum 0.090" (2.3 mm)	Aluminum	Aluminum	Stainless Steel
RD-14C-RR	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.813) pipe:DWV 0.058"(1.47mm)	Copper	Copper or Painted Aluminum	Stainless Steel
RD-14SS-RR	Cast Aluminum	Stainless Steel	Stainless Steel base:26Ga. (0.476mm) pipe:304L 0.058"(1.47mm)	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

THALER

ROOF SPECIALTIES
RD-16A VANDALPROOF ALUMINUM ROOF DRAIN
(All Purpose, Straight Offset Outlet)

T-7 ALUMINUM FLOW CONTROL ACCESSORY (OPTIONAL)

T-5 SEDIMENT COLLAR (OPTIONAL)

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

T-12 STAINLESS STEEL BALLAST GUARD

Note: Specify accessories required by adding appropriate suffix to model number e.g. RD-16C-T-5 for sediment collar, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

10" (254 mm)

S.S. VANDALPROOF RETAINING SCREW

VANDALPROOF ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE WELDED TO DRAIN BODY

1/8" (3mm) S.S. RIVET

4" (102 mm)

12" (305) for vALUMINUM, 9" (229 mm) FOR COPPER AND STAINLESS STEEL, STANDARD

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

0.064" (1.6 mm) ALUMINUM DRAIN BODY

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

MECHANICAL CONNECTION (BY OTHERS)

Note: For new construction try to locate drain 12" (305 mm) ± away from eave flashing to prevent ice build-up under flashing

RD-16A VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Offset Outlet) Note: RD-16C (Copper) and RD-16SS (Stainless Steel) similar. See reverse side of page for material change.

DESCRIPTION:
The Thaler RD-16A Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, aluminum body, deck flange and straight offset outlet fitted with a aluminum ferrule.

PROMINENT FEATURES:
Easy installation for applications requiring new hook-up (see Recommended Use). Non-removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key openable) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain.

LEADER DIAMETERS:
With Brass Ferrule: 2" to 8" (51 mm to 204 mm).

OPTIONS:
Brass ferrule. T-5 copper sediment collar. T-10 stainless steel under-deck clamp (provides snug installation in otherwise insecure applications). T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
For flat roofs in new or existing construction employing conventional roof (membrane above insulation) or inverted roof and new hook-up e.g. new installation in low spots subject to ponding water at parapet walls, roof/wall juncture, flat/sloped roof transition. Suitable for PVC, cast iron, steel, copper, or other type leaders in both Schedule 40 or 80 leader thicknesses.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-16A Aluminum drain for [2" to 8" (51 mm to 203 mm)] leader size with: vandalproof cast aluminum dome with hinged access gate welded to drain body; .064" (1.6 mm) aluminum drain body, deck flange and straight offset outlet with [T-5 aluminum sediment collar;] [T-6 aluminum ferrule;] [T-10 stainless steel under-deck clamp;] [T-7 aluminum flow control accessory;] [T-12 s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; as manufactured by Thaler Metal Industries, 1-800-387-7217 Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-16A roof drain is installed by coring or cutting the roof assembly, bending the base over slope, fitting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-16A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.
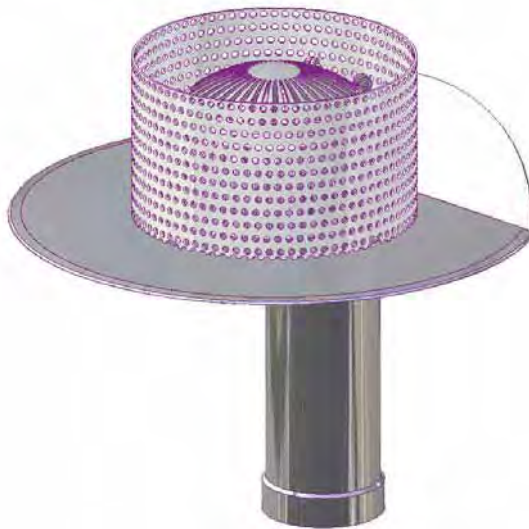
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
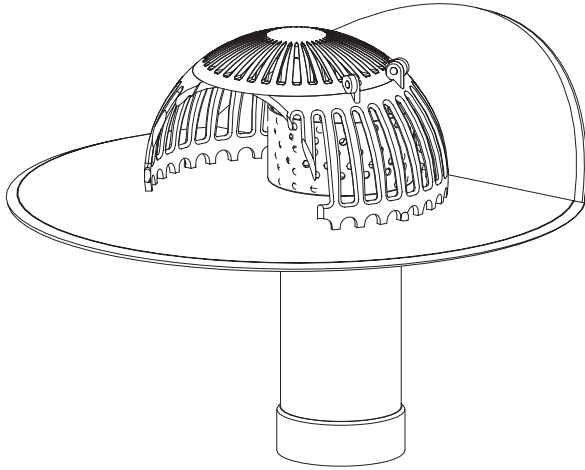
Optional T-5 Sediment Collar
(Shown Friction Fitted To
Drain Body)
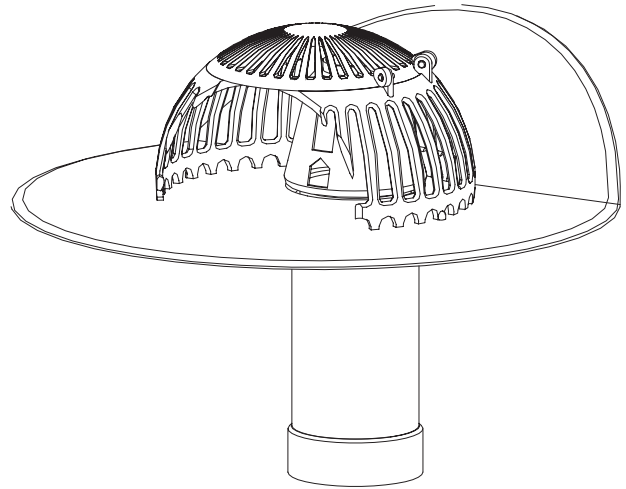
Optional T-7 Flow Control Accessory
(Shown Friction Fitted To Drain Body)

Optional T-12 Stainless Steel Ballast Guard
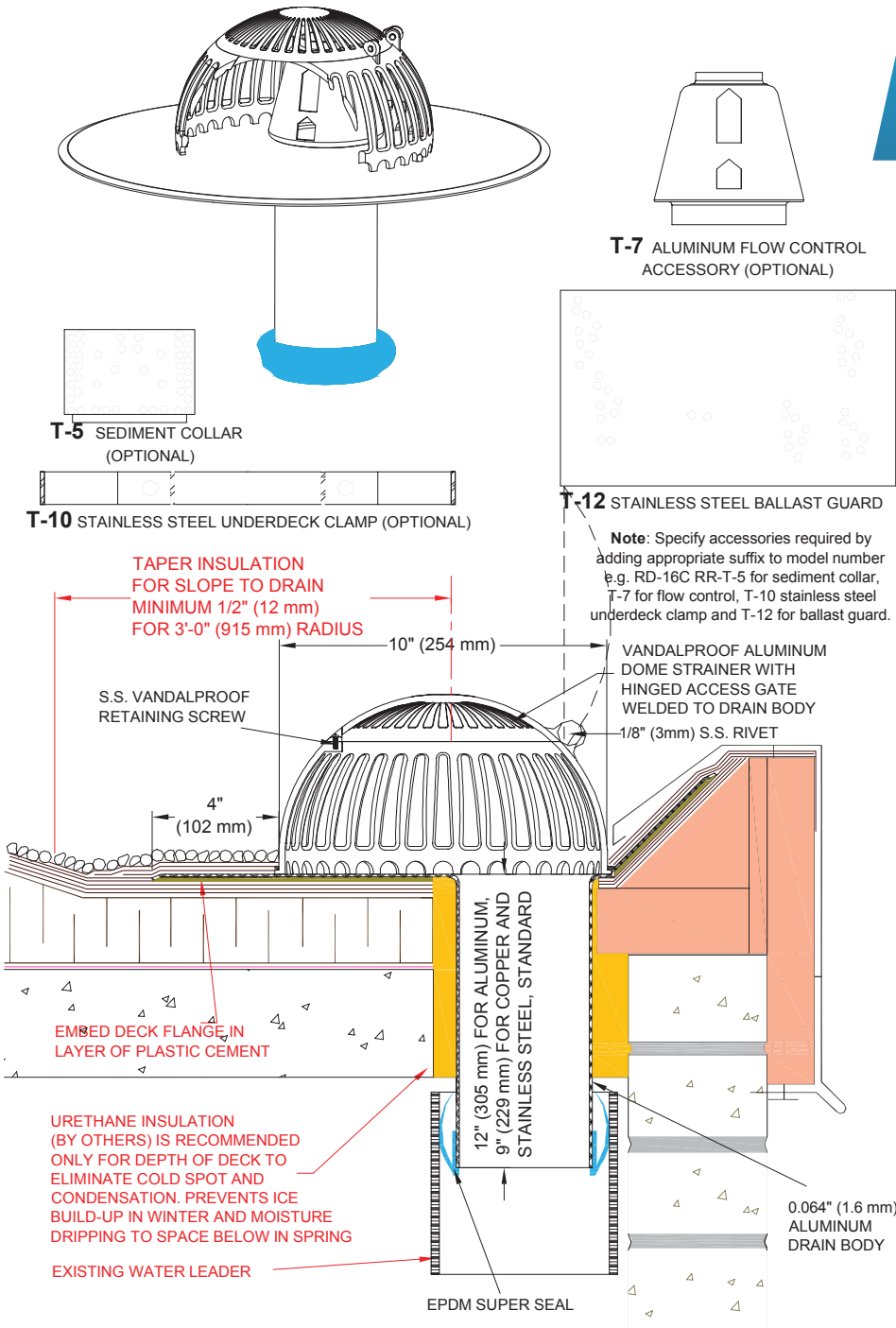**(Shown Friction Fitted To Dome Strainer of RD-16SS Roof Drain)**

RD-16C (Copper)

Material Specification for RD-16C (Copper) and RD-16SS (Stainless Steel) Roof Drains (RD-16A Aluminum Illustrated on page M-10)
Note: In Short Form specification on front of sheet, edit clause to reflect choice of copper (RD-16C) or stainless steel (RD-16SS) roof drain in lieu of aluminum if desired.

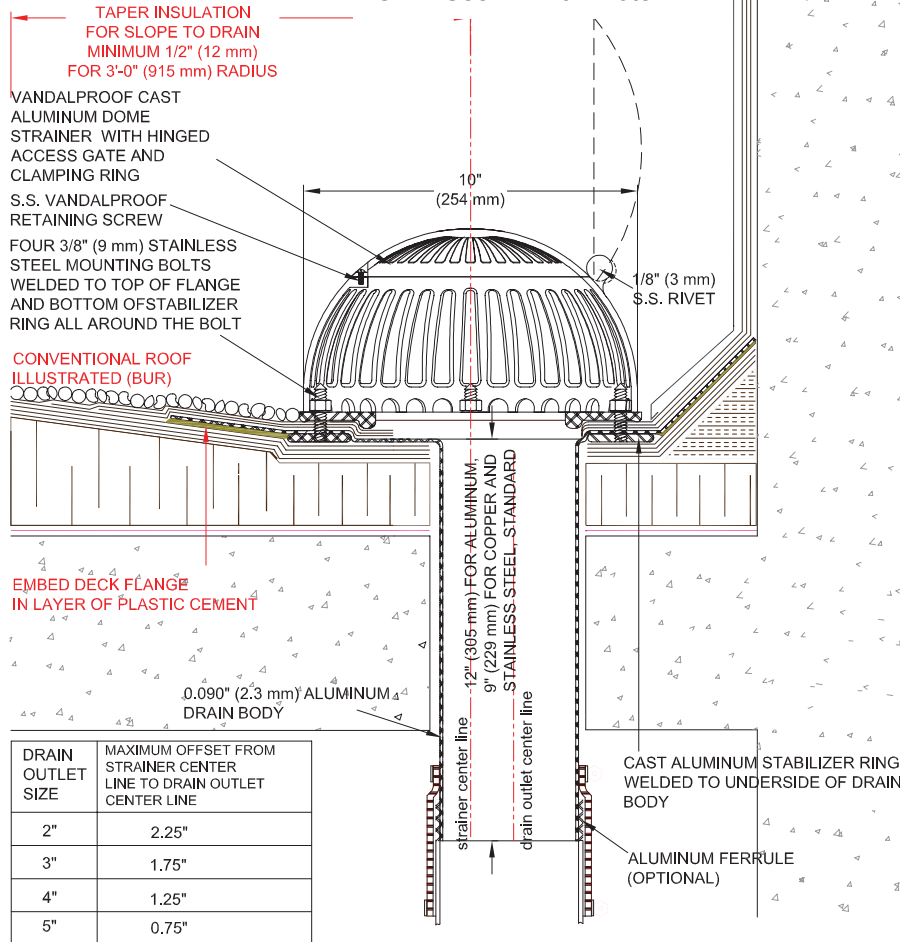| Drain Type	Dome Strainer	Underdeck Clamp	Drain Body and Base	Ferrule	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-16A	Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-16C	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.813mm) pipe:DWV 0.058"(1.47mm)	Brass	Copper	Copper or Painted Aluminum	Stainless Steel
RD-16SS	Cast Aluminum	Stainless Steel	Stainless Steel base: 26Ga. (0.476mm) pipe:304 L 0.12"(3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

THALER

RD-16A-RR VANDALPROOF ALUMINUM ROOF DRAIN
(All Purpose, Low Spot, Retrofit, Offset Outlet)

T-7 ALUMINUM FLOW CONTROL ACCESSORY (OPTIONAL)

T-5 SEDIMENT COLLAR (OPTIONAL)

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

T-12 STAINLESS STEEL BALLAST GUARD

Note: Specify accessories required by adding appropriate suffix to model number e.g. RD-16C RR-T-5 for sediment collar, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

10" (254 mm)

VANDALPROOF ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE WELDED TO DRAIN BODY

S.S. VANDALPROOF RETAINING SCREW

1/8" (3mm) S.S. RIVET

4" (102 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

12" (305 mm) FOR ALUMINUM, 9" (229 mm) FOR COPPER AND STAINLESS STEEL, STANDARD

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

EXISTING WATER LEADER

EPDM SUPER SEAL

0.064" (1.6 mm) ALUMINUM DRAIN BODY

RD-16A-RR VANDALPROOF ALUMINUM RETROFIT ROOF DRAIN (All Purpose, Low Spot, Retrofit, Offset Outlet) Note: RD-16C-RR (Copper) AND RD-16SS-RR (Stainless Steel) Roof Drain similar. See reverse side of page for material change.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-14A-RR roof drain is installed by fitting the drain outlet into the rainwater leader, by slowly rotating and pushing down into position, installing the dome strainer (including any optional accessories) and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-14A-RR-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

DESCRIPTION
The Thaler RD-14A-RR Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, flat aluminum body, deck flange and straight offset outlet fitted with a patented EPDM sealing ring (optional Thaler Super-Seal). The Super-Seal provides a superior seal in the event drains or pipes become clogged.

PROMINENT FEATURES:
Easy installation for retrofit applications requiring new hook-up (see Recommended Use). Non-removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key opening) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain. Leader Diameters: With Super-Seal EPDM Sealing Ring: 1-3/4" to 5-3/4" (44 mm to 146 mm). See detail at left for specific sizes.

OPTIONS:
without Super-Seal on outlet (see Thaler Super-Seal Retrofit Drain Seal literature). T-5 aluminum sediment collar. Stainless steel under-deck clamp (provides snug installation in otherwise insecure applications). T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
For flat roofs in existing construction employing conventional roof (membrane above insulation) or inverted roof and new hook-up e.g. new installation in low spots subject to ponding water at parapet walls, roof/wall juncture, flat/sloped roof transition. Suitable for PVC, cast iron, steel, copper, or other type leaders in both Schedule 40 or 80 leader thicknesses.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-16A-RR aluminum drain for [1-3/4" to 5-3/4" (44 mm to 146 mm)] leader size with: vandalproof cast aluminum dome with hinged access gate welded to drain body; .064" (1.6 mm) aluminum flat drain body, deck flange and straight offset aluminum outlet with [T-5 aluminum sediment collar;] [T-9 Super-Seal EPDM sealing ring;] [T-10 stainless steel under-deck clamp;] [T-7 aluminum flow control accessory;] [T-12 s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

Optional T-5 Sediment Collar
(Shown Friction Fitted To Drain Body)

Optional T-7 Flow Control Accessory
(Shown Friction Fitted To Drain Body)

Optional T-12 Stainless Steel Ballast Guard
(Shown Friction Fitted To Dome Strainer of RD-16SS-RR Roof Drain)

RD-16C-RR (Copper)

Material Specification for RD-16C-RR (Copper) and RD-16SS-RR (Stainless Steel) Roof Drains (RD-16A-RR Aluminum Illustrated on page M-11)
Note: In Short Form specification on front of sheet, edit clause to reflect choice of copper (RD-16C-RR) or stainless steel (RD-16SS-RR) roof drain in lieu of aluminum if desired.

Drain Type	Dome Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-16A-RR	Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Stainless Steel
RD-16C-RR	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.813mm) pipe:DWV 0.058"(1.47mm)	Copper	Copper or Painted Aluminum	Stainless Steel
RD-16S-RR	Cast Aluminum	Stainless Steel	Stainless Steel base: 26Ga. (0.476mm) pipe:304 L 0.12"(3mm)	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

THALER

M-11A

RD-160A VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Offset Outlet)

RD-160A

RD-160SS

NOTE: See RD-16A Note

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

VANDALPROOF CAST ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE AND CLAMPING RING

S.S. VANDALPROOF RETAINING SCREW

FOUR 3/8" (9 mm) STAINLESS STEEL MOUNTING BOLTS WELDED TO TOP OF FLANGE AND BOTTOM OF STABILIZER RING ALL AROUND THE BOLT

CONVENTIONAL ROOF ILLUSTRATED (BUR)

10" (254 mm)

1/8" (3 mm) S.S. RIVET

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

12" (305 mm) FOR ALUMINUM, 9" (229 mm) FOR COPPER AND STAINLESS STEEL, STANDARD

strainer center line

drain outlet center line

0.090" (2.3 mm) ALUMINUM DRAIN BODY

CAST ALUMINUM STABILIZER RING WELDED TO UNDERSIDE OF DRAIN BODY

ALUMINUM FERRULE (OPTIONAL)

DRAIN OUTLET SIZE	MAXIMUM OFFSET FROM STRAINER CENTER LINE TO DRAIN OUTLET CENTER LINE
2"	2.25"
3"	1.75"
4"	1.25"
5"	0.75"

RD-160A VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Offset Outlet) Note: RD-160C (Copper) and RD-160SS (Stainless Steel) similar. See reverse side of page for material change.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-160A roof drain is installed by coring or cutting the roof assembly, bending the base over slope, fitting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
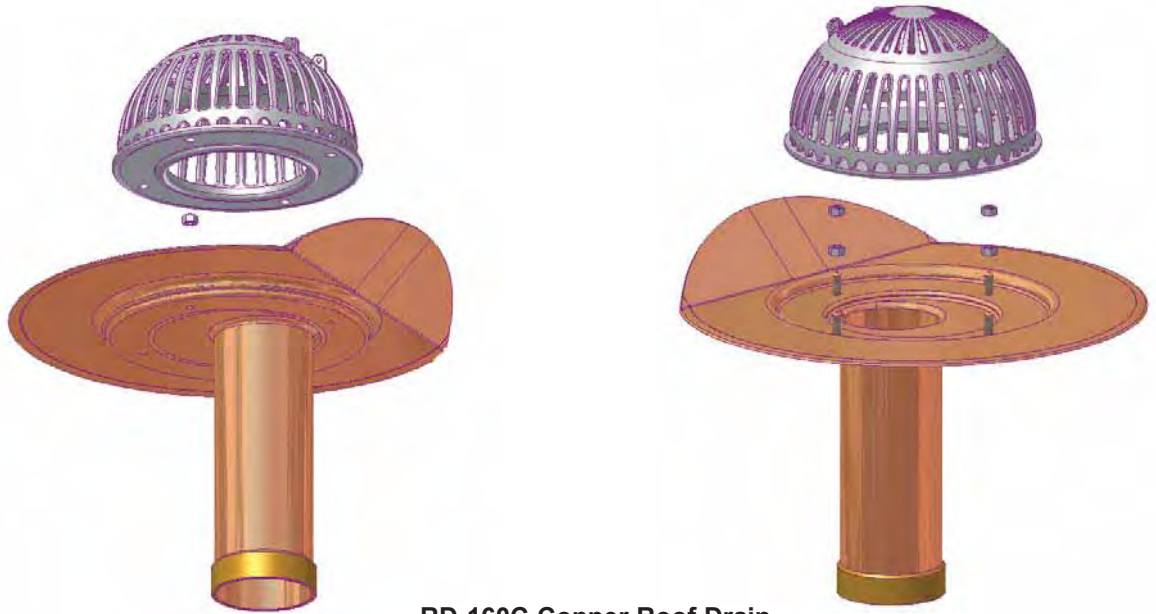
ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-160A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
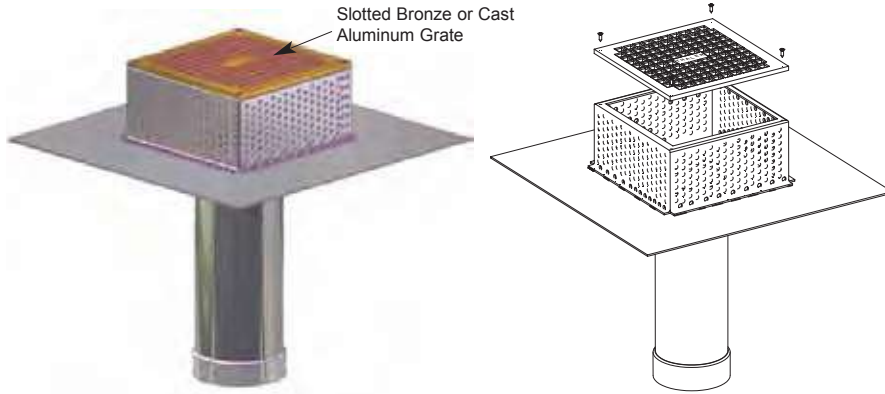
DESCRIPTION:
The Thaler RD-160A Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, cast aluminum stabilizer ring, stainless steel mounting bolts, aluminum body, deck flange and straight offset outlet fitted with an aluminum ferrule (optional).

PROMINENT FEATURES:
Easy installation for applications requiring new hook-up (see Recommended Use). Non-removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key openable) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain.

LEADER DIAMETERS:
With Brass Ferrule: 2" to 5" (51 mm to 127 mm).

OPTIONS:
T-6 Brass ferrule. T-5 copper sediment collar. T-10 stainless steel under-deck clamp (provides snug installation in otherwise insecure applications). T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
For flat roofs in new or existing construction employing conventional roof (membrane above insulation) or inverted roof and new hook-up e.g. new installation in low spots subject to ponding water at [parapet walls, roof/wall juncture, flat/sloped roof transition. Suitable for PVC, cast iron, steel, copper, or other type leaders in both Schedule 40 or 80 leader thicknesses.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-160A Aluminum drain for [2" to 5" (51 mm to 127 mm)] leader size with: vandalproof cast aluminum dome with hinged access gate; .064" (1.6 mm) aluminum drain body, deck flange and straight offset outlet with, cast aluminum stabilizer ring, 3/8" (9 mm) aluminum bolts welded to drain body and stabilizer ring, [T-5 aluminum sediment collar;] [T-6 aluminum ferrule;] [T-10 stainless steel under-deck clamp;] [T-7 aluminum flow control accessory;] [T-12 s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

RD-160C Copper Roof Drain

ROOF DRAIN ACCESSORIES

T-7 Flow Control

T-5 Sediment Collar

T-10 Stainless Steel Underdeck Clamp

T-6 Ferrule

T-12 Stainless Steel Ballast guard
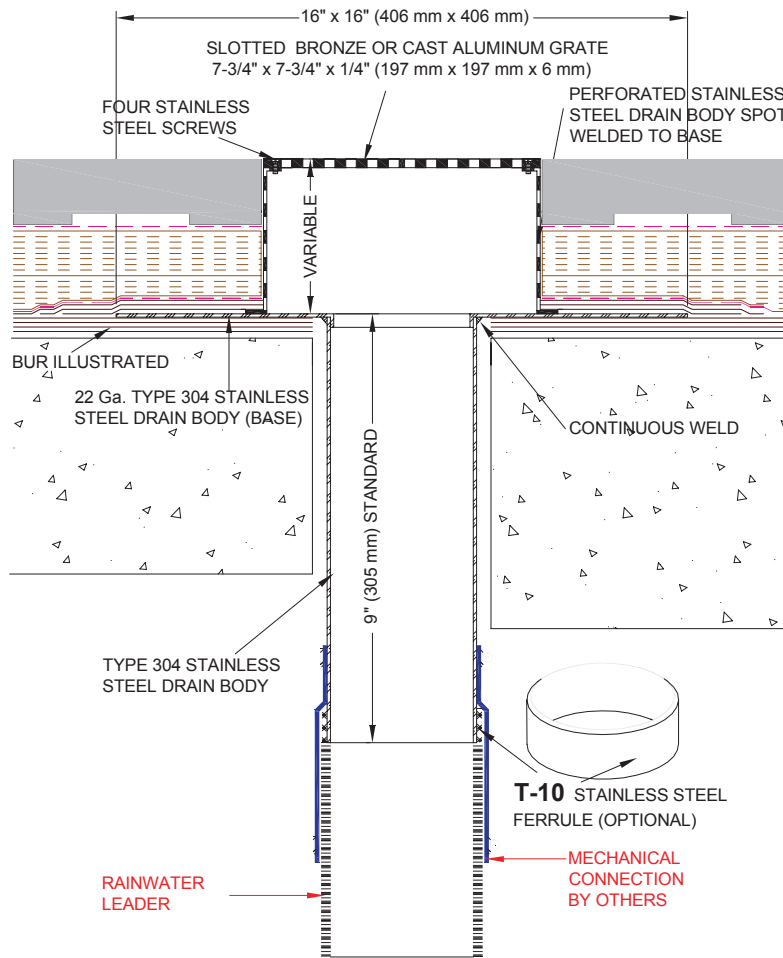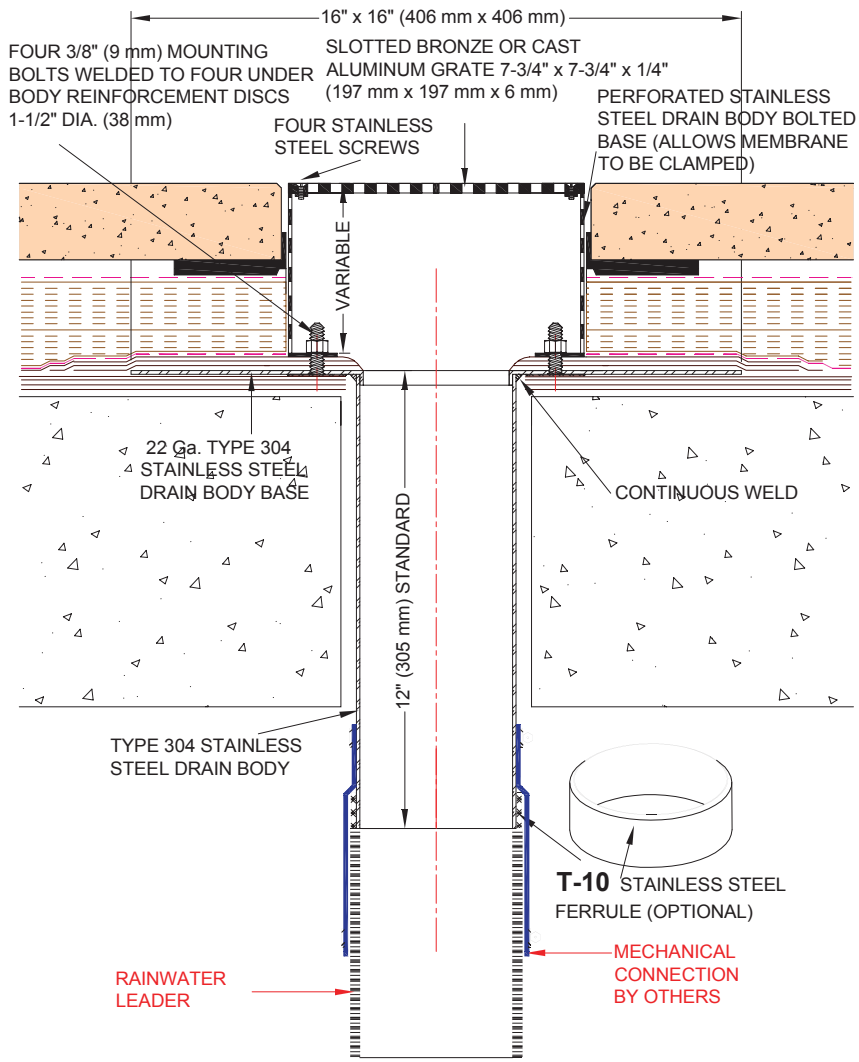
EMSEAL Tape

Material Specification for RD-160C (Copper) and RD-160SS
(Stainless Steel) Roof Drains (RD-160A Aluminum Illustrated on page M-12)
Note: In Short Form specification on front of sheet, edit clause to reflect choice of copper
(RD-160C) or stainless steel (RD-160SS) roof drain in lieu of aluminum if desired.

Drain Type	Dome Strainer	Underdeck Clamp	Drain Body and Base	Ferrule	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-160A	Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-160C	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.813 mm) pipe:DWV 0.058"(1.47mm)	Brass	Copper	Copper or Painted Aluminum	Stainless Steel
RD-160SS	Cast Aluminum	Stainless Steel	Stainless Steel base: 26Ga. (0.476mm) pipe:304 L 0.12"(3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

THALER

ROOF SPECIALTIES
RD-19-SS STAINLESS STEEL ROOF DRAIN
(For Promenade Decks or Terraces)

Slotted Bronze or Cast Aluminum Grate

RD-19-SS (Exploded View Showing Drain Body Spot Welded to Base)

16" x 16" (406 mm x 406 mm)

SLOTTED BRONZE OR CAST ALUMINUM GRATE
7-3/4" x 7-3/4" x 1/4" (197 mm x 197 mm x 6 mm)

FOUR STAINLESS STEEL SCREWS

PERFORATED STAINLESS STEEL DRAIN BODY SPOT WELDED TO BASE

VARIABLE

BUR ILLUSTRATED

22 Ga. TYPE 304 STAINLESS STEEL DRAIN BODY (BASE)

CONTINUOUS WELD

9" (305 mm) STANDARD

TYPE 304 STAINLESS STEEL DRAIN BODY

T-10 STAINLESS STEEL FERRULE (OPTIONAL)

RAINWATER LEADER

MECHANICAL CONNECTION BY OTHERS

DESCRIPTION:
The Thaler RD-19-SS Roof Drain consists of a removable, slotted bronze or cast aluminum grate, perforated stainless steel drain body and straight seamless stainless steel outlet fitted with an optional stainless steel ferrule.

PROMINENT FEATURES:
Easy installation for retrofit applications see page M-14.

LEADER DIAMETERS:
With Stainless Steel Ferrule: 2" to 6" (51 mm to 152 mm). See detail at left for specific sizes.

OPTIONS:
Suitable for PVC, cast iron, steel, copper, or other type leaders in both Schedule 40 or 80 leader thickness. Bolted drain body (see RD-19-SS-BDB on reverse side of page).

RECOMMENDED USE:
For traffic bearing or landscaped roofs employing an inverted (protected) membrane e.g. promenade, podium or plaza deck roofs or roof gardens.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-19-SS drain for inverted roofs, for [4" (102 mm) to 6" (152 mm)] leader size; with: 7-3/4" (197 mm) removable, square, linear slotted [bronze] [cast aluminum] grate; 22 ga. (0.8 mm) Type 304 stainless steel drain body (base), 7-3/4" (197 mm) square x [specified height] with 1/4" (6 mm) or larger perforations in drain body; deck flange; Type 304 stainless steel straight outlet with [T-6 stainless steel ferrule]; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.
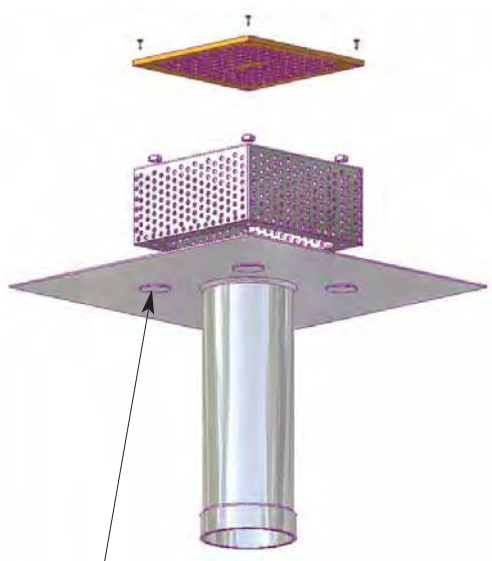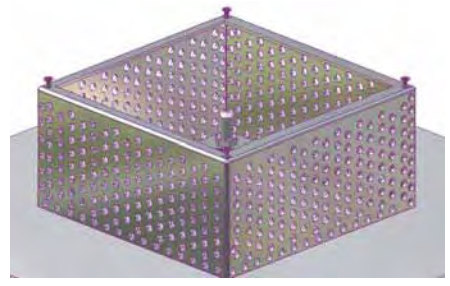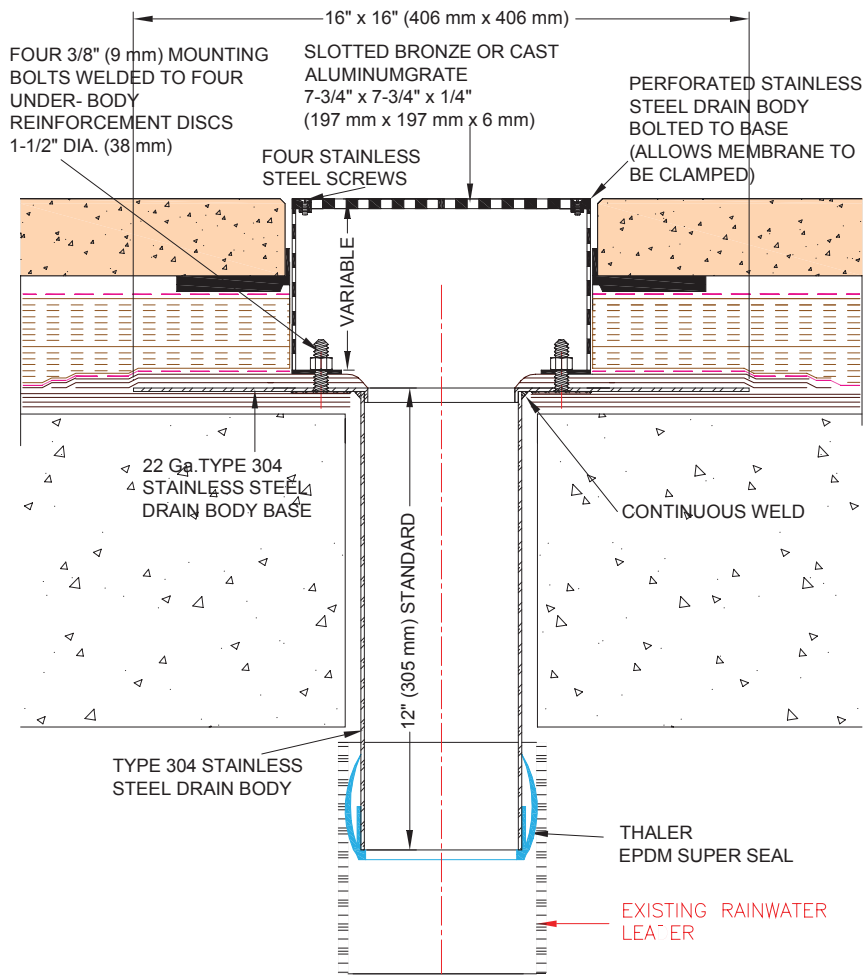
RD-19-SS STAINLESS STEEL ROOF DRAIN
(For Promenade Decks or Terraces)

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-19-SS roof drain is installed by fitting the drain outlet into the rainwater leader, and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-19-SS-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

16" x 16" (406 mm x 406 mm)

FOUR 3/8" (9 mm) MOUNTING BOLTS WELDED TO FOUR UNDER BODY REINFORCEMENT DISCS 1-1/2" DIA. (38 mm)

SLOTTED BRONZE OR CAST ALUMINUM GRATE 7-3/4" x 7-3/4" x 1/4" (197 mm x 197 mm x 6 mm)

FOUR STAINLESS STEEL SCREWS

PERFORATED STAINLESS STEEL DRAIN BODY BOLTED BASE (ALLOWS MEMBRANE TO BE CLAMPED)

VARIABLE

22 Ga. TYPE 304 STAINLESS STEEL DRAIN BODY BASE

CONTINUOUS WELD

12" (305 mm) STANDARD

TYPE 304 STAINLESS STEEL DRAIN BODY

T-10 STAINLESS STEEL FERRULE (OPTIONAL)

RAINWATER LEADER

MECHANICAL CONNECTION BY OTHERS

RD-19-SS-BDB (Bolted Drain Body) ROOF DRAIN (OPTIONAL)

RD-19-SS-BDB

Exploded View Showing Mounting Bolts Welded to Reinforcement Discs

Exploded View Showing Under-Body Reinforcement Discs

View Showing Drain Body Bolted to Base For Clamping Membrane

Slotted Bronze or
Cast Aluminum Grate

RD-19-SS-RR

RD-19-SS-RR (Exploded View Showing Drain Body Spot Welded to Base)

16" x 16" (406 mm x 406 mm)

SLOTTED BRONZE OR
CAST ALUMINUM GRATE
7-3/4" x 7-3/4" x 1/4"
(197 mm x 197 mm x 6 mm)

FOUR STAINLESS
STEEL SCREWS

PERFORATED STAINLESS
STEEL DRAIN BODY SPOT
WELDED TO BASE

VARIABLE

BUR ILLUSTRATED

22 Ga. TYPE 304
STAINLESS STEEL
DRAIN BODY BASE

CONTINUOUS WELD

12" (305 mm) STANDARD

0.12" (3 mm) TYPE 304
STAINLESS STEEL
DRAIN BODY

THALER
EPDM SUPER SEAL

EXISTING RAINWATER
LEADER

RD-19-SS-RR STAINLESS STEEL RETROFIT ROOF DRAIN
(For Promenade Decks or Terraces)

DESCRIPTION:
The Thaler RD-19-SS-RR Retrofit Roof Drain consists of a removable, slotted bronze or cast aluminum grate, perforated stainless steel drain body and straight seamless stainless steel outlet fitted with patented EPDM sealing ring (Thaler Super-Seal). The Super-Seal provides a superior seal in the event drains or pipes become clogged.

PROMINENT FEATURES:
Easy installation for retrofit applications requiring new hook-up (see Recommended Use).

LEADER DIAMETERS:
With Super-Seal EPDM Sealing Ring: 1-3/4" to 5-3/4" (44 mm to 146 mm).

OPTIONS:
EPDM Super-Seal on outlet (see Thaler Super-Seal Retrofit Drain Seal literature). Suitable for PVC, cast iron, steel, copper, or other type leaders in both Schedule 40 or 80 leader thicknesses. Bolted drain body (see RD-19-SS-SS-BDB on reverse side of page).

RECOMMENDED USE:
For traffic bearing or landscaped roofs employing an inverted (protected) membrane e.g. promenade, podium or plaza deck roofs or roof gardens.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-19-SS-RR retrofit roof drain for inverted roofs, for [1-3/4" (44 mm) to 5-3/4" (146 mm)] leader size; with: 7-3/4" (197 mm) removable, square, slotted [bronze][cast aluminum] grate; 22 Ga. (0.8 mm) Type 304 stainless steel drain body, 7-3/4"" (197 mm) square x [specified height] with 1/4" (6 mm) or larger perforations in drain body; deck flange; stainless steel straight outlet with Super-Seal EPDM sealing ring; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.
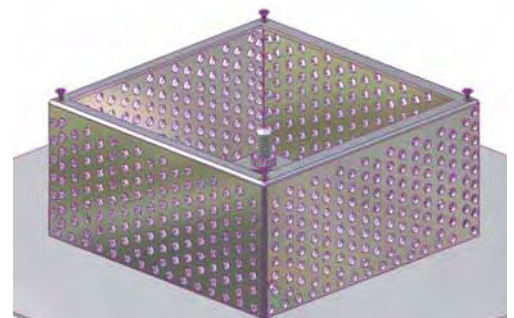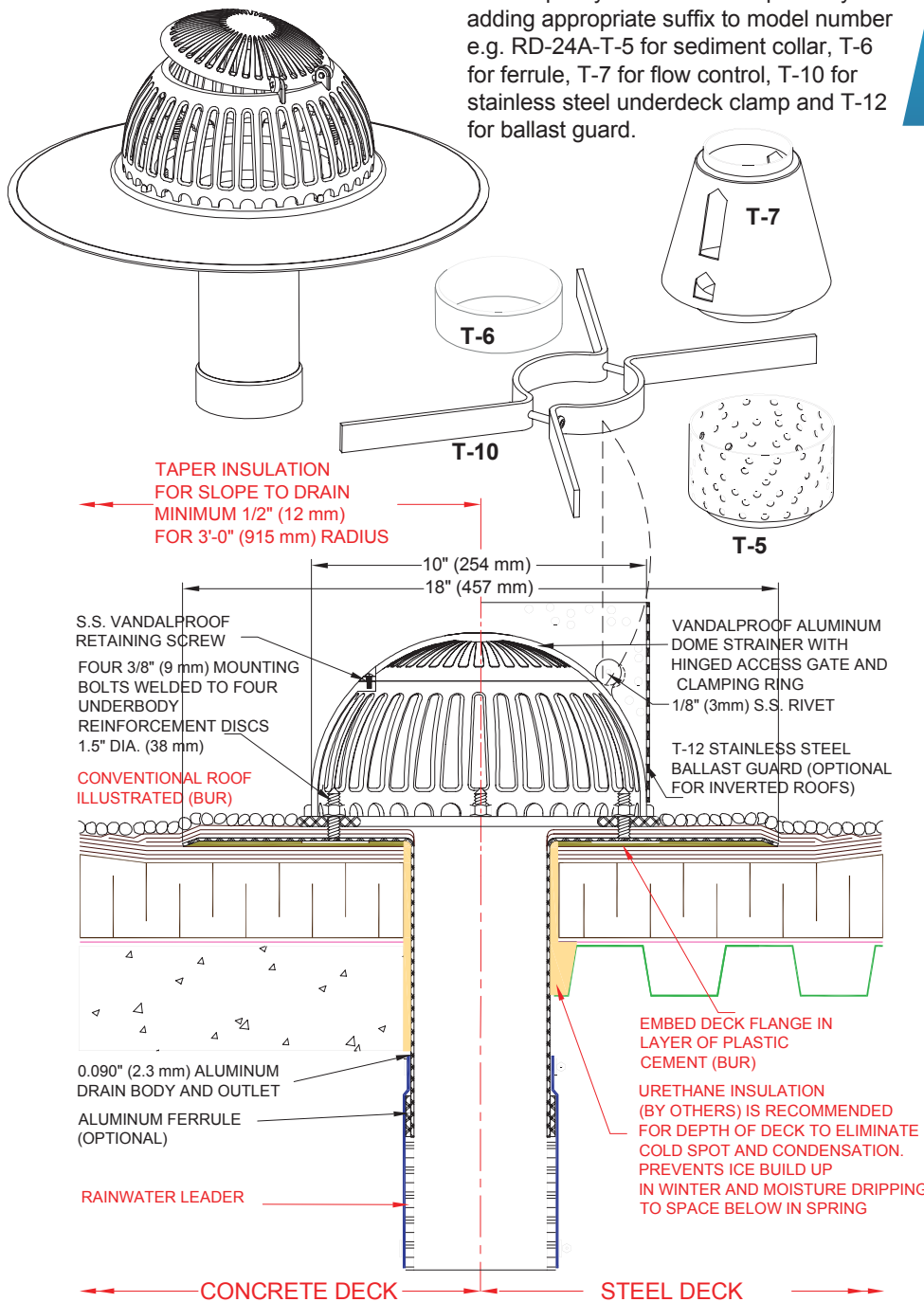
INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-19-SS-RR retrofit roof drain is installed by fitting the drain outlet into the rainwater leader, by slowly rotating and pushing down into position, and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-19-RR-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

16" x 16" (406 mm x 406 mm)

FOUR 3/8" (9 mm) MOUNTING BOLTS WELDED TO FOUR UNDER- BODY REINFORCEMENT DISCS 1-1/2" DIA. (38 mm)

SLOTTED BRONZE OR CAST ALUMINUMGRATE 7-3/4" x 7-3/4" x 1/4" (197 mm x 197 mm x 6 mm)

FOUR STAINLESS STEEL SCREWS

PERFORATED STAINLESS STEEL DRAIN BODY BOLTED TO BASE (ALLOWS MEMBRANE TO BE CLAMPED)

VARIABLE

22 Ga.TYPE 304 STAINLESS STEEL DRAIN BODY BASE

CONTINUOUS WELD

12" (305 mm) STANDARD

TYPE 304 STAINLESS STEEL DRAIN BODY

THALER EPDM SUPER SEAL

EXISTING RAINWATER LEADER

RD-19-SS-RR-BDB (Bolted Drain Body) ROOF DRAIN (OPTIONAL)
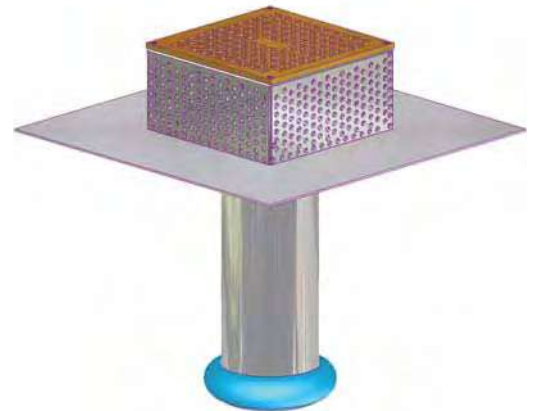
RD-19-SS-RR-BDB
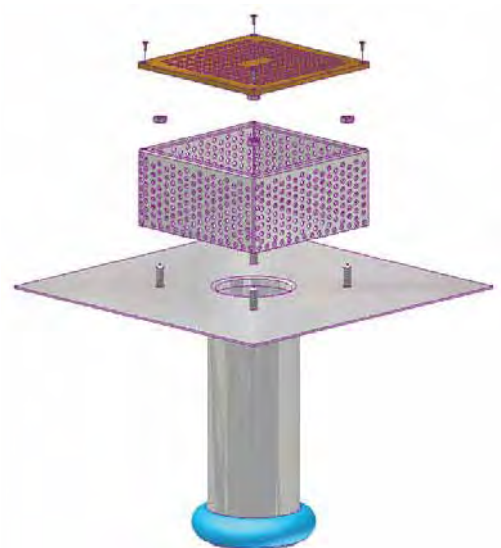
Exploded View Showing Mounting Bolts Welded to Reinforcement Discs
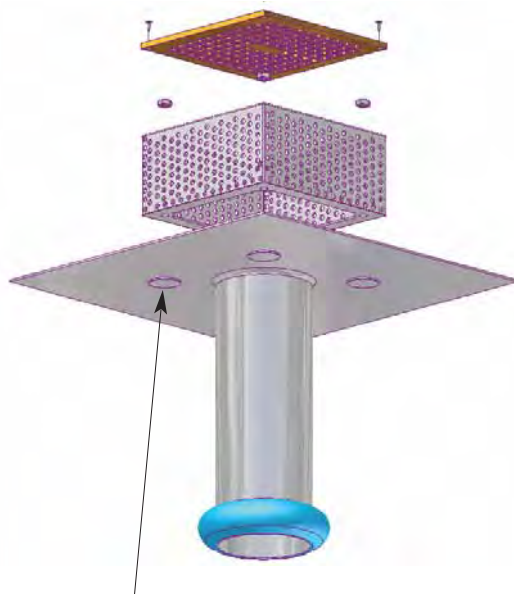
Exploded View Showing Under-Body Reinforcement Discs

View Showing Drain Body Bolted to Base For Clamping Membrane

THALER

M-14A

Note: Specify accessories required by adding appropriate suffix to model number e.g. RD-24A-T-5 for sediment collar, T-6 for ferrule, T-7 for flow control, T-10 for stainless steel underdeck clamp and T-12 for ballast guard.

ROOF SPECIALTIES
RD-24A VANDALPROOF ALUMINUM ROOF DRAIN
(All Purpose, Straight Outlet)

T-7

T-6

T-10

T-5

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

10" (254 mm)
18" (457 mm)

S.S. VANDALPROOF RETAINING SCREW

FOUR 3/8" (9 mm) MOUNTING BOLTS WELDED TO FOUR UNDERBODY REINFORCEMENT DISCS 1.5" DIA. (38 mm)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

VANDALPROOF ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE AND CLAMPING RING
1/8" (3mm) S.S. RIVET

T-12 STAINLESS STEEL BALLAST GUARD (OPTIONAL FOR INVERTED ROOFS)

0.090" (2.3 mm) ALUMINUM DRAIN BODY AND OUTLET

ALUMINUM FERRULE (OPTIONAL)

RAINWATER LEADER

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

CONCRETE DECK   STEEL DECK

RD-24A VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Outlet) Note: RD-24C (Copper) and RD-24SS (Stainless Steel) Roof Drain similar. See reverse side of page for material changes.

DESCRIPTION:
The Thaler RD-24A Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, mounting bolts welded to reinforcement discs 1.5" (38 mm) dia. drain body and straight aluminum outlet with aluminum ferrule and drain deck flange.

PROMINENT FEATURES:
Removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key openable) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain.

LEADER DIAMETERS:
Suitable for 2", 3", 4", 5" and 6" (51 mm, 76 mm, 102 mm, 127 mm and 152 mm) leader sizes.

OPTIONS:
T-5 aluminum sediment collar. Without T-6 aluminum ferrule. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose roof drain for flat roofs in new construction employing conventional roof (membrane above insulation) or inverted roof membrane application (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-24A drain for conventional roofs, for [2" (51 mm) 3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate and clamping ring; .090" (2.3 mm) aluminum drain body, deck flange and straight aluminum outlet [with] [without] T-6 aluminum ferrule; 3/8" (9 mm) aluminum bolts welded to reinforcement discs; [T-5 aluminum sediment collar]; [T-6 aluminum ferrule]; [T-7 flow control accessory]; [T-10 stainless steel underdeck clamp]; [T-12 stainless steel ballast guard]; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-721 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-24A roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, installing the dome strainer assembly, and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-24A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.
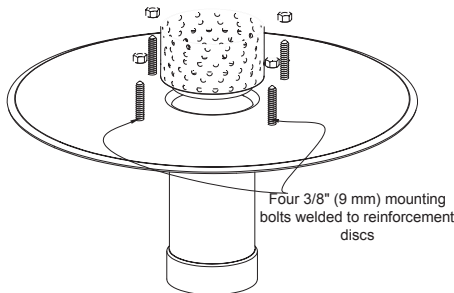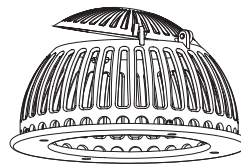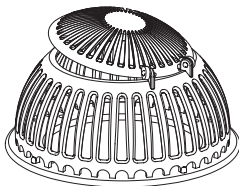
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
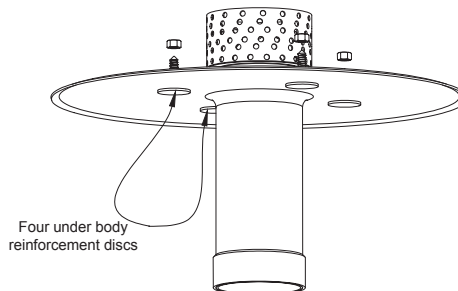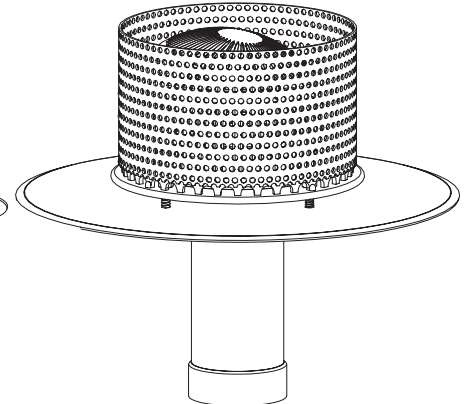
RD-24 C Copper Roof Drain

Exploded View Showing Optional T-7 Flow Control Accessory

Four 3/8" (9 mm) mounting bolts welded to reinforcement discs

Four under body reinforcement discs

Exploded View Showing Optional T-5 Sediment Collar Accessory (Friction Fitted to Drain Body)

Exploded View Showing Optional T-5 Sediment Collar Accessory (Friction Fitted to Drain Body)

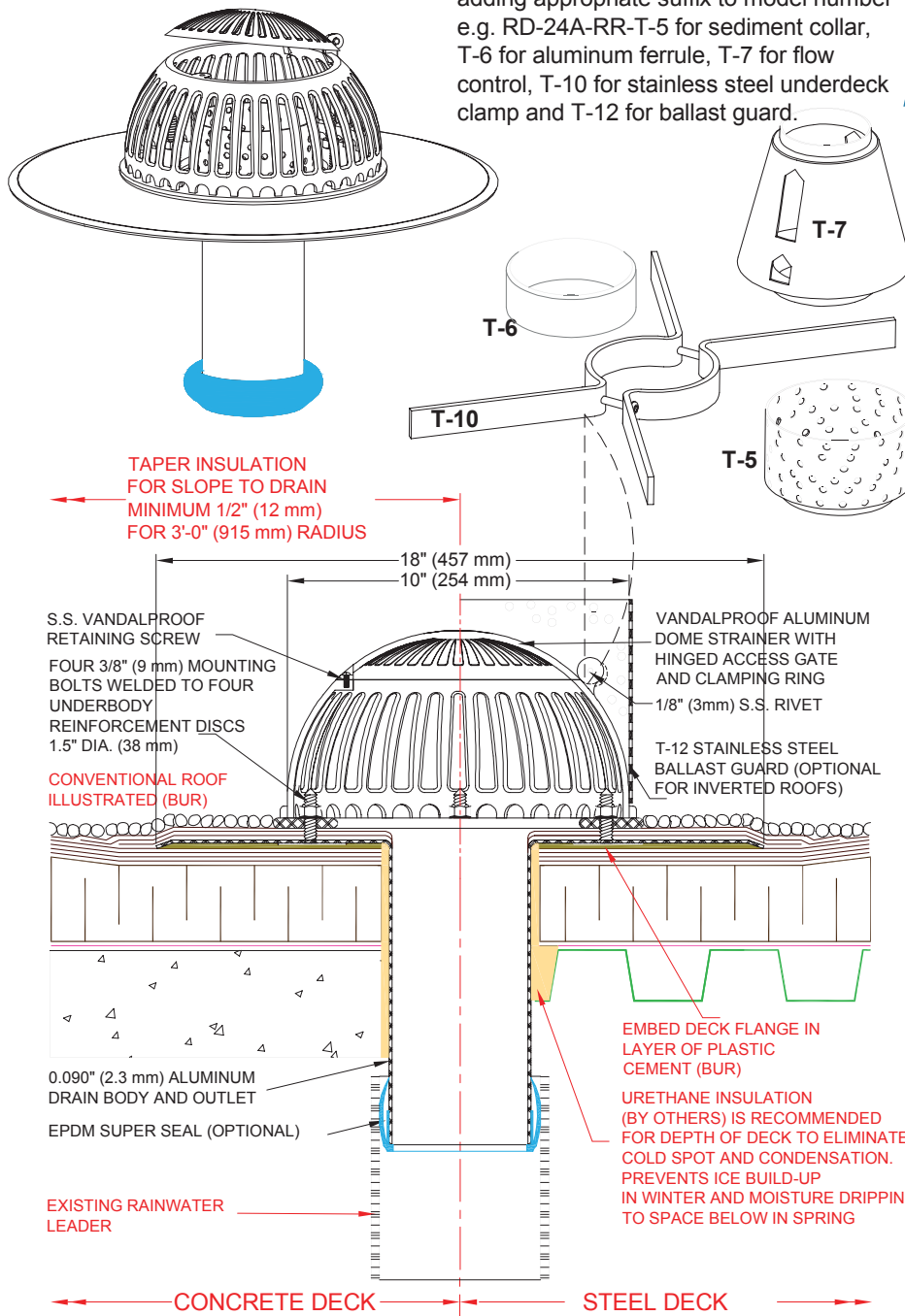**View Showing Optional T-12 Ballast Guard Accessory (Friction Fitted to Dome Strainer)**

Material Specification for RD-24C (Copper) and RD-24SS (Stainless Steel) Roof Drains (RD-24A Aluminum Roof Drain Illustrated on page M-15)
Note: In Short Form Specification on front side of sheet, edit clause to reflect choice of copper (RD-24C) or stainless steel (RD-24SS) roof drain in lieu of aluminum if desired.

Drain Type	Dome Strainer	Drain Body and Base	Bolts and Nuts	T-5 Sediment Collar	T-6 Ferrule	T-7 Flow Control	T-10 Underdeck Clamp	T-12 Ballast Guard
RD-24A	Cast Aluminum	Aluminum 0.090" (2.3 mm)	Aluminum	Aluminum	Aluminum	Aluminum	Stainless Steel	Stainless Steel
RD-24C	Cast Aluminum	Copper base: 24 oz. 0.032" (0.813 mm) pipe:DWV 0.058"(1.47mm)	Stainless Steel	Copper	Brass	Copper or Painted Aluminum	Stainless Steel	Stainless Steel
RD-24SS	Cast Aluminum	Stainless Steel base: 22Ga. (0.8mm) pipe: 304 L 0.12"(3mm)	Stainless Steel	Aluminum	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel	Stainless Steel

Note: Specify accessories required by adding appropriate suffix to model number e.g. RD-24A-RR-T-5 for sediment collar, T-6 for aluminum ferrule, T-7 for flow control, T-10 for stainless steel underdeck clamp and T-12 for ballast guard.

T-7

T-6

T-10

T-5

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

18" (457 mm)
10" (254 mm)

S.S. VANDALPROOF RETAINING SCREW

FOUR 3/8" (9 mm) MOUNTING BOLTS WELDED TO FOUR UNDERBODY REINFORCEMENT DISCS 1.5" DIA. (38 mm)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

VANDALPROOF ALUMINUM DOME STRAINER WITH HINGED ACCESS GATE AND CLAMPING RING

1/8" (3mm) S.S. RIVET

T-12 STAINLESS STEEL BALLAST GUARD (OPTIONAL FOR INVERTED ROOFS)

0.090" (2.3 mm) ALUMINUM DRAIN BODY AND OUTLET

EPDM SUPER SEAL (OPTIONAL)

EXISTING RAINWATER LEADER

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

CONCRETE DECK — STEEL DECK

RD-24A-RR VANDALPROOF ALUMINUM RETROFIT ROOF DRAIN (All Purpose, Straight Outlet) Note: RD-24C-RR (Copper) and RD-24SS-RR (Stainless Steel) Roof Drain similar. See reverse side of page for material change.

DESCRIPTION:
The Thaler RD-24A-RR Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, mounting bolts welded to underbody reinforcement discs 1.5" (38 mm) dia., drain body and straight aluminum outlet with EPDM sealing ring (optional Thaler Super-Seal). The super seal provides a superior seal in the event drains or pipes become clogged.

PROMINENT FEATURES:
Removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key openable) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain.

LEADER DIAMETERS:
Suitable for 1-3/4" to 7-3/4" (44 mm to 197 mm) leader sizes.

OPTIONS:
T-5 aluminum sediment collar. T-7 aluminum flow control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamping ring. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose roof drain for flat roofs in new or existing construction employing conventional roof (membrane above insulation) or inverted roof membrane application with ballast guard. Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-24A-RR drain for [1-3/4" to 7-3/4" (44 mm to 197 mm)] leader sizes; with: vandalproof cast aluminum dome with hinged access gate and four 3/8" (9 mm) mounting bolts welded to underbody reinforcement discs, 0.090" (2.3 mm) aluminum drain body, deck flange and straight, aluminum outlet with EPDM Super Seal; [T-5 aluminum sediment collar] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp]; [T-12 stainless steel ballast guard]; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Cana- da) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-24A-RR roof drain is installed by fitting the drain outlet into the rainwater leader, by slowly rotating and pushing down into position, installing the dome strainer assembly, and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-24A-RR-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.
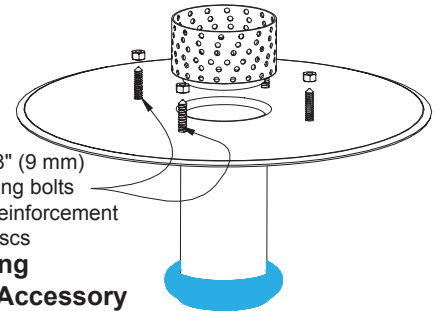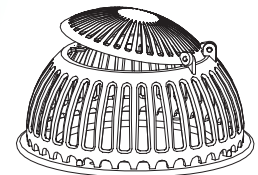
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

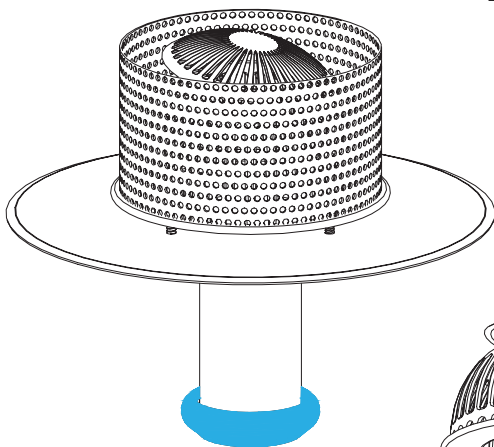**RD-24SS-RR Stainless Steel Retrofit Roof Drain**

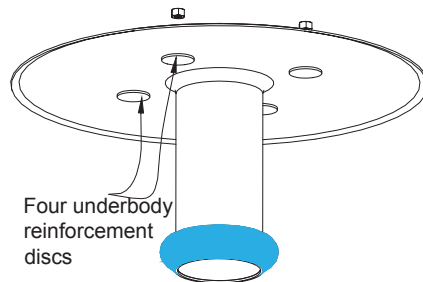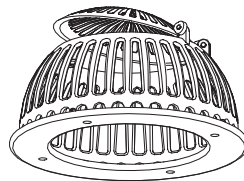**Exploded View of RD-24C-RR Copper Retrofit Roof Drain Showing T-7 Aluminum Flow Control Accessory**

Four 3/8" (9 mm) mounting bolts welded to reinforcement discs

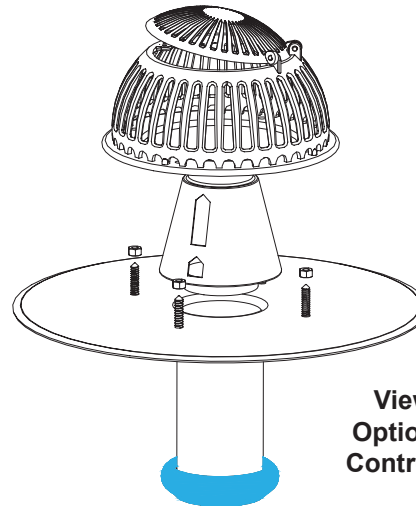**Exploded View Showing Optional T-5 Sediment Collar Accessory**

View Showing Ballast Guard Friction Fitted to Dome Strainer

Underside of Deck Flange showing Underbody Reinforcement Discs

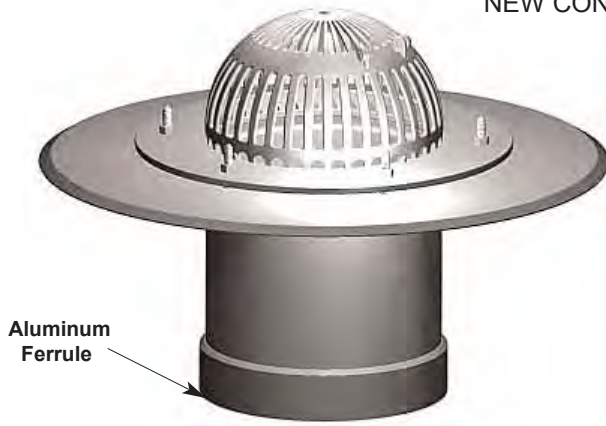Four underbody reinforcement discs

View Showing Optional T-7 Flow Control Accessory

Material Specification for RD-24C-RR (Copper) and RD-24SS-RR (Stainless Steel) Roof Drains
(RD-24A-RR Aluminum Roof Drain Illustrated on page M-16)
Note: In Short Form Specification on front side of sheet, edit clause to reflect choice of copper (RD-24C-RR) or stainless steel (RD-24SS-RR) roof drain in lieu of aluminum if desired.

Drain Type	Dome Strainer	Drain Body and Base	Bolts and Nuts	T-5 Sediment Collar	T-6 Ferrule	T-7 Flow Control	T-10 Underdeck Clamp	T-12 Ballast Guard
RD-24A-RR	Cast Aluminum	Aluminum 0.090" (2.3 mm)	Aluminum	Aluminum	Aluminum	Aluminum	Stainless Steel	Stainless Steel
RD-24C-RR	Cast Aluminum	Copper base: 24 oz. 0.032" (0.813 mm) pipe:DWV 0.058"(1.47mm)	Stainless Steel	Copper	Brass	Copper or Painted Aluminum	Stainless Steel	Stainless Steel
RD-24SS-RR	Cast Aluminum	Stainless Steel base: 22Ga. (0.8mm) pipe: Type 304 L 0.12"(3mm)	Stainless Steel	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel	Stainless Steel

THALER

M-16A

NEW CONSTRUCTION

Aluminum Ferrule

Exploded View

RD-24A-8 or RD-24A-10 VANDALPROOF BIG ALUMINUM ROOF DRAIN FOR 8" (203 mm) or 10" (254 mm) LEADER SIZES

SPECIFICATION (Short Form)

Roof drains: Thaler RD-24A-8 or RD-24A-10 drain for [8" (203 mm)] [10" (254 mm)] leader sizes; with: vandalproof cast aluminum dome with hinged access gate welded to cast aluminum ring; .090" (2.4 mm) flat aluminum drain body, deck flange and straight aluminum outlet with aluminum ferrule; six 3/8" (9 mm) aluminum bolts welded to reinforcement discs; [T-10 stainless steel underdeck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

ALSO AVAILABLE IN COPPER AND STAINLESS STEEL

Underside of Deck Flange showing Reinforcement Discs
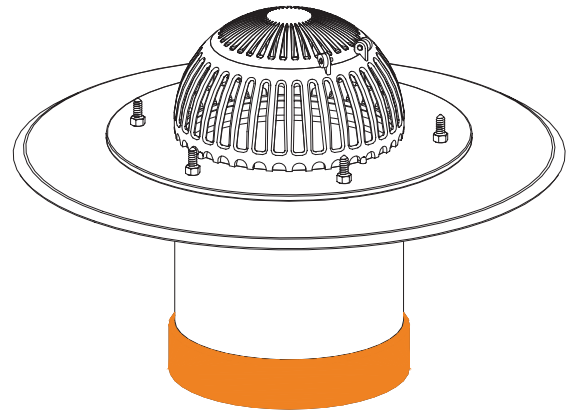
RD-24C-8 or RD-24C-10 VANDALPROOF BIG COPPER ROOF DRAIN FOR 8" (203 mm) or 10" (254 mm) LEADER SIZES

Material Specification for RD-24C-8 or RD-24C-10 (Copper) and RD-4SS-8 or RD-4-10 (Stainless Steel) Roof Drains

Drain Type	Dome Strainer	Clamping Ring	Drain Body and Base	Bolts and Nuts	Ferrule	T-12 Ballast Guard
RD-24A-8 or RD-24A-10	Cast Aluminum	Cast Aluminum	Aluminum 0.090" (2.3 mm)	Aluminum	Aluminum	Stainless Steel
RD-24C-8 or RD-24C-10	Cast Aluminum	Cast Aluminum	Copper base: 24 oz. 0.032" (0.831 mm) pipe:DWV 0.058"(1.47 mm)	Stainless Steel	Brass	Stainless Steel
RD-24SS-8 or RD-24SS-10	Cast Aluminum	Cast Aluminum	Stainless Steel base: 22Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Stainless Steel

RD-24SS-8 or RD-24SS-10 VANDALPROOF BIG STAINLESS STEEL ROOF DRAIN FOR 8" (203 mm) or 10" (254 mm) LEADER SIZES

THALER M-17

SPECIFICATION (Short Form)
Roof drains: Thaler RD-24A-RR-8 or RD-24A-RR-10 drain for [8" (203 mm)] [10" (254 mm)] leader sizes; with: vandalproof cast aluminum dome with hinged access gate welded to cast aluminum ring; .090" (2.3 mm) flat aluminum drain body, deck flange and straight aluminum outlet with aluminum EMSEAL tape; six 3/8" (9 mm) aluminum bolts welded to reinforcement discs; [T-10 stainless steel underdeck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

RD-24A-RR-8 or RD-24A-RR-10 VANDALPROOF BIG ALUMINUM RETROFIT ROOF DRAIN FOR 8" (203 mm) or 10" (254 mm) LEADER SIZES

EMSEAL TAPE

Underside of Deck Flange Showing Reinforcement Discs

RD-24A-RR-8 or RD-24A-RR-10 VANDALPROOF BIG COPPER RETROFIT ROOF DRAIN FOR 8" (203 mm) or 10" (254 mm) LEADER SIZES

EMSEAL TAPE

RD-24A-RR-8 or RD-24A-RR-10 VANDALPROOF BIG STAINLESS STEEL RETROFIT ROOF DRAIN FOR 8" (203 mm) or 10" (254 mm) LEADER SIZES
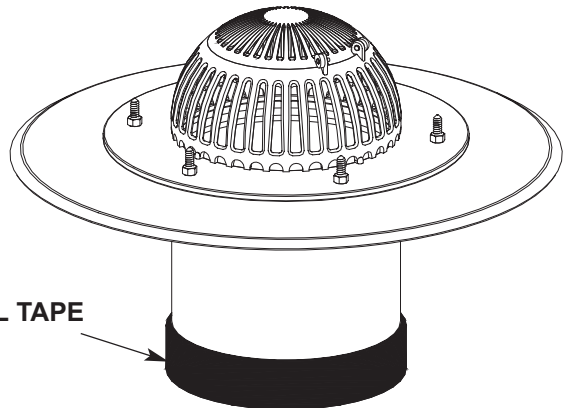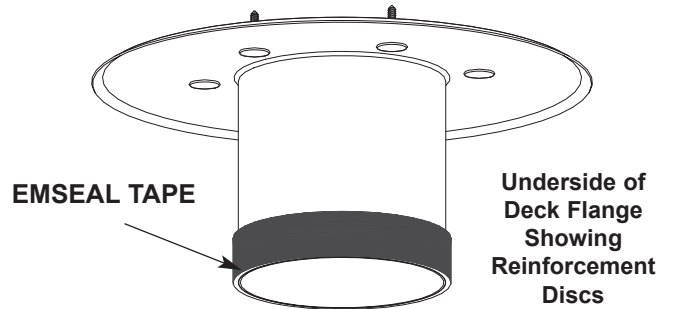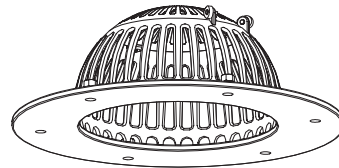
Material Specification for RD-24C-RR-8 or RD-24C-RR-10 (Copper) and RD-24SS-RR-8 or RD-24SS-RR-10 (Stainless Steel) Roof Drains

Drain Type	Dome Strainer	Underdeck Clamp	Drain Body and Base	Bolts and Nuts	T-12 Ballast Guard
RD-24A-8 or RD-24A-10	Cast Aluminum	Stainless Steel	Aluminum 0.090" (2.3 mm)	Aluminum	Stainless Steel
RD-24C-8 or RD-24C-10	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.831 mm) pipe:DWV 0.058"(1.47 mm)	Stainless Steel	Stainless Steel
RD-24SS-8 or RD-24SS-10	Cast Aluminum	Stainless Steel	Stainless Steel base: 22Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel

RD-240A

RD-240SS

ROOF SPECIALTIES
RD-240A VANDALPROOF ALUMINUM ROOF DRAIN
(All Purpose, Straight Outlet)

DESCRIPTION:
The Thaler RD-240A Roof Drain consists of a vandalproof cast aluminum dome with hinged access gate, mounting bolts welded to reinforcement discs 1.5" (38 mm) dia. drain body and straight aluminum outlet with aluminum ferrule and drain deck flange.

PROMINENT FEATURES:
Removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains. Vandalproof hinged access gate (allen-key openable) allows drain to be cleaned if necessary, or dismantled by permitting access to bolts inside drain.

LEADER DIAMETERS:
Suitable for 2" to 10" (51 mm to 254 mm)) leader sizes.

OPTIONS:
T-5 aluminum sediment collar. Without T-6 aluminum ferrule. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose roof drain for flat roofs in new construction employing conventional roof (membrane above insulation) or inverted roof membrane application (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-240A drain for conventional roofs, for [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate; .090" (2.3 mm) aluminum drain body, deck flange and straight aluminum outlet [with] [without] T-6 aluminum ferrule; 3/8" (9 mm) aluminum bolts welded to reinforcement discs; [T-5 aluminum sediment collar]; [T-6 aluminum ferrule]; [T-7 flow control accessory]; [T-10 stainless steel underdeck clamp]; [T-12 stainless steel ballast guard]; [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-721 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.
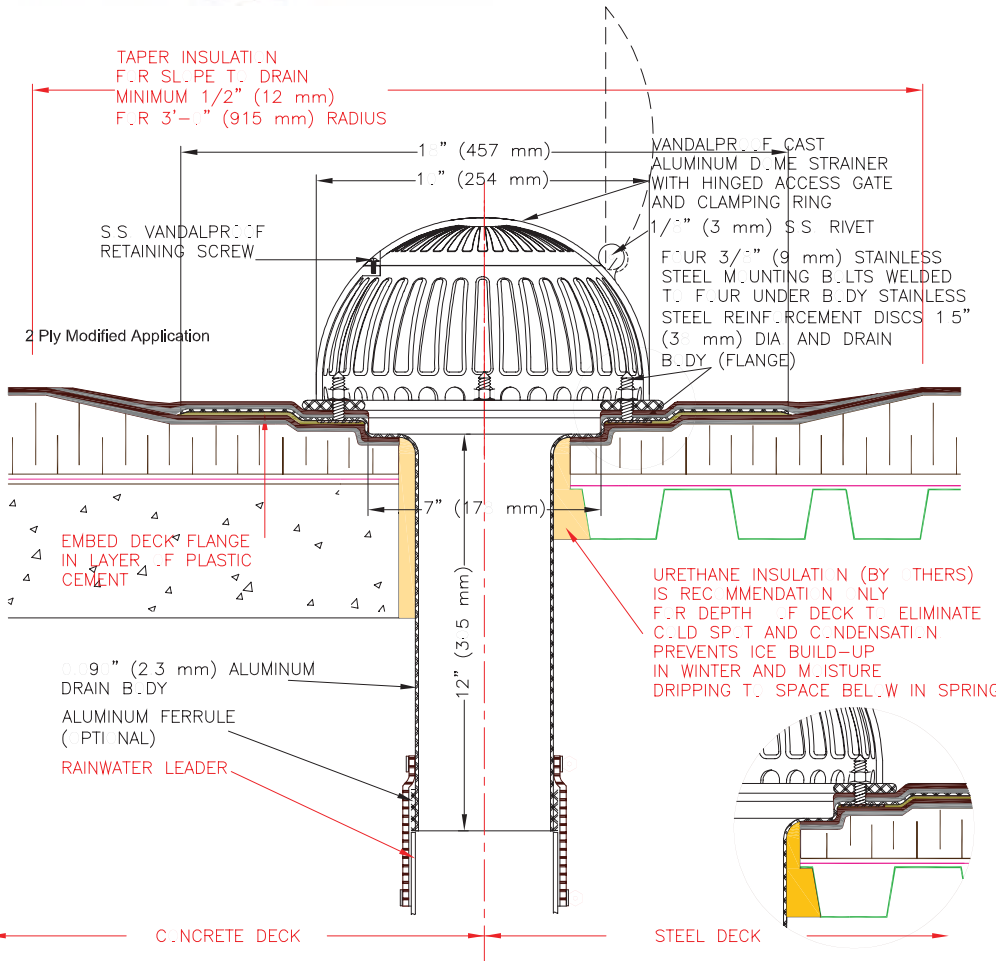
RD-240A VANDALPROOF ALUMINUM ROOF DRAIN (All Purpose, Straight Outlet) Note: RD-240C (Copper) and RD-240SS (Stainless Steel) Roof Drain similar. See reverse side of page for material changes.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-240A roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, installing the dome strainer assembly, and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-240A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
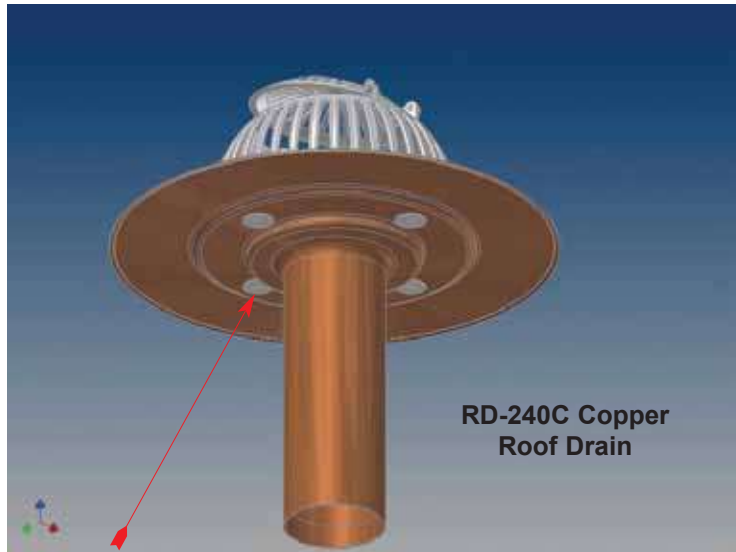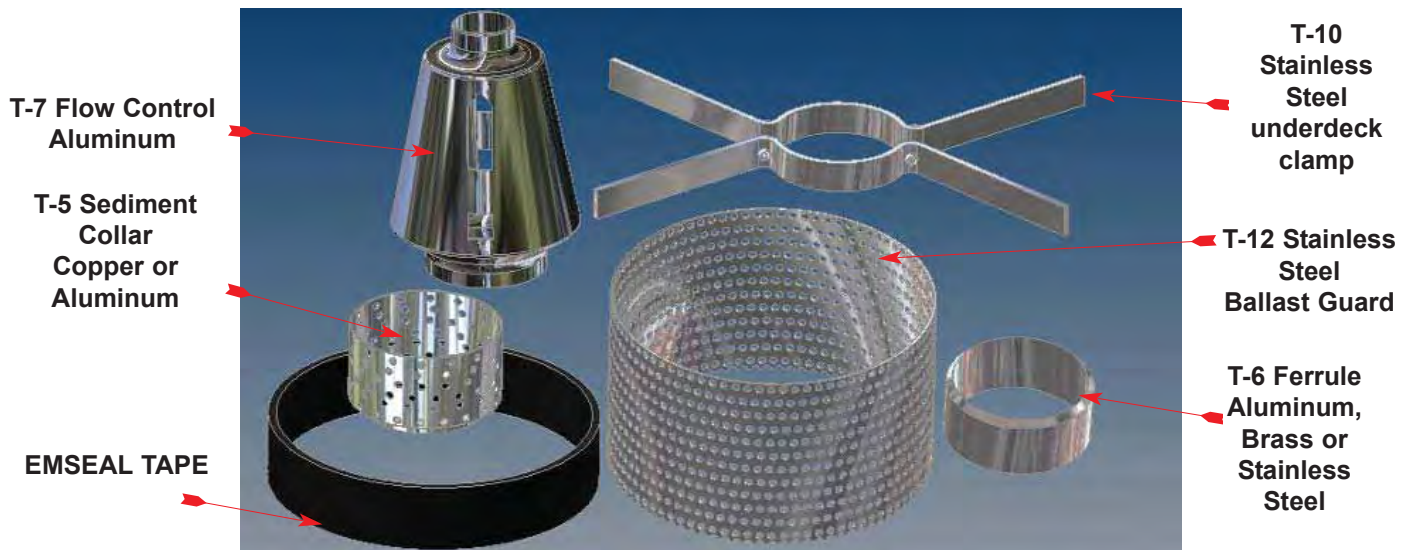
RD-240C Copper Roof Drain

Underside of Deck Flange showing Underbody Reinforcement Discs

Exploded View Showing four 3/8" (9 mm) mounting bolts welded to four underbody stainless steel reinforcement discs and drain body (flange)
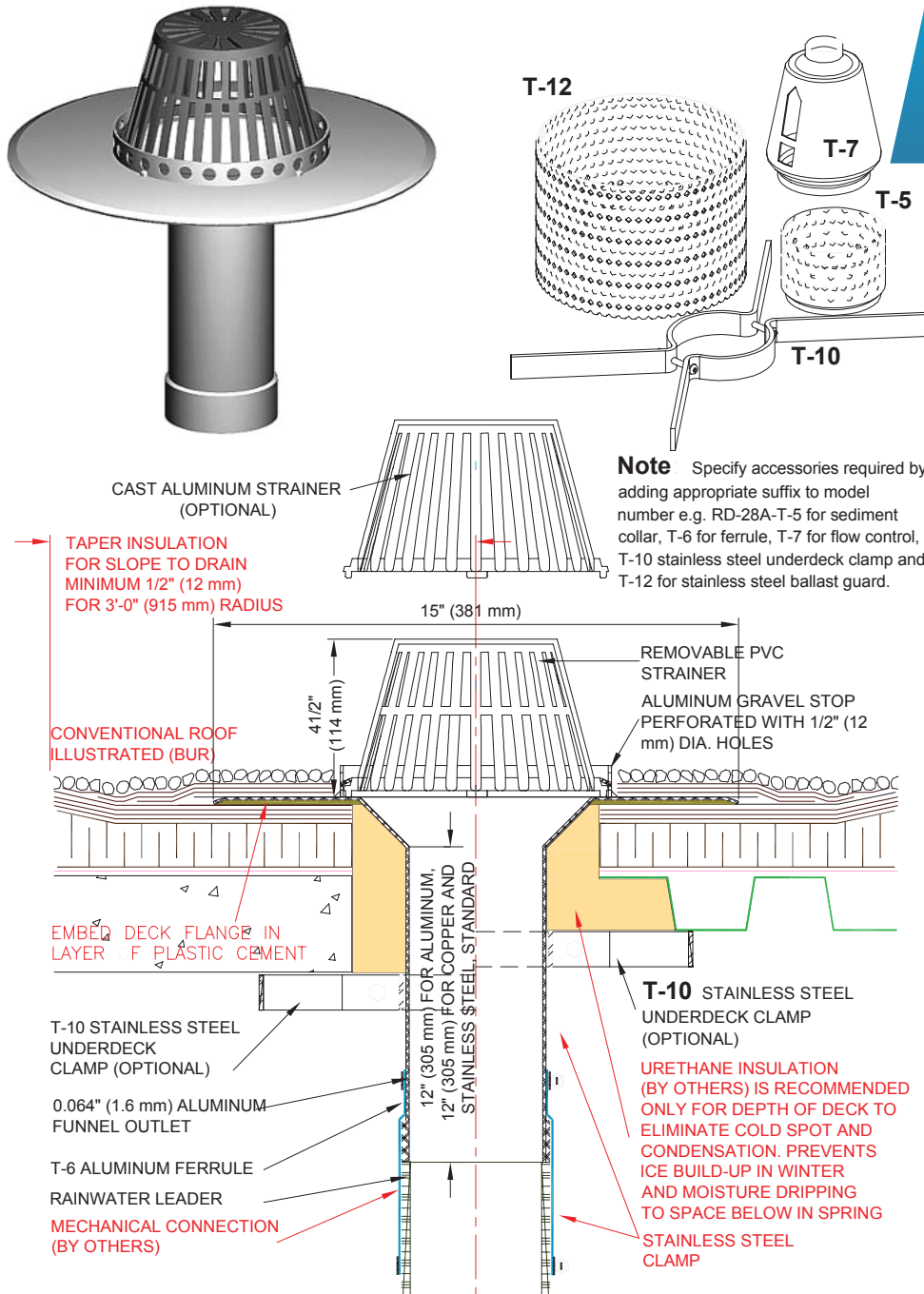
Roof Drain Accessories

T-7 Flow Control Aluminum

T-5 Sediment Collar Copper or Aluminum

EMSEAL TAPE

T-10 Stainless Steel underdeck clamp

T-12 Stainless Steel Ballast Guard

T-6 Ferrule Aluminum, Brass or Stainless Steel

Material Specification for RD-240C (Copper) and RD-240SS (Stainless Steel) Roof Drains
(RD-240A Aluminum Roof Drain Illustrated on page M-18)
Note: In Short Form Specification on front side of sheet, edit clause to reflect choice of copper (RD-240C) or stainless steel (RD-240SS) roof drain in lieu of aluminum if desired.

Drain Type	Dome Strainer	Drain Body and Base	Bolts and Nuts	T-5 Sediment Collar	T-6 Ferrule	T-7 Flow Control	T-10 Underdeck Clamp	T-12 Ballast Guard
RD-240A	Cast Aluminum	Aluminum 0.090" (2.3 mm)	Aluminum	Aluminum	Aluminum	Aluminum	Stainless Steel	Stainless Steel
RD-240C	Cast Aluminum	Copper base: 24 oz. 0.032" (0.831 mm) pipe:DWV 0.058"(1.47mm)	Stainless Steel	Copper	Brass	Copper or Painted Aluminum	Stainless Steel	Stainless Steel
RD-240SS	Cast Aluminum	Stainless Steel base: 22Ga. (0.8mm) pipe: 304 L 0.12"(3mm)	Stainless Steel	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel	Stainless Steel

T-12

T-7

T-5

T-10

CAST ALUMINUM STRAINER
(OPTIONAL)

TAPER INSULATION
FOR SLOPE TO DRAIN
MINIMUM 1/2" (12 mm)
FOR 3'-0" (915 mm) RADIUS

Note Specify accessories required by adding appropriate suffix to model number e.g. RD-28A-T-5 for sediment collar, T-6 for ferrule, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for stainless steel ballast guard.

15" (381 mm)

4 1/2" (114 mm)

REMOVABLE PVC STRAINER

ALUMINUM GRAVEL STOP PERFORATED WITH 1/2" (12 mm) DIA. HOLES

CONVENTIONAL ROOF ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

12" (305 mm) FOR ALUMINUM,
12" (305 mm) FOR COPPER AND STAINLESS STEEL STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

0.064" (1.6 mm) ALUMINUM FUNNEL OUTLET

T-6 ALUMINUM FERRULE

RAINWATER LEADER

MECHANICAL CONNECTION (BY OTHERS)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

STAINLESS STEEL CLAMP

RD-28A ECONOMY ROOF DRAIN (Aluminum, Funnel Outlet)
RD-28C ECONOMY ROOF DRAIN (Copper, Funnel Outlet)
RD-28SS ECONOMY ROOF DRAIN (Stainless Steel, Funnel Outlet)
Note: RD-28C (Copper) and RD-28SS (Stainless Steel) similar. See reverse side of page for material changes.

DESCRIPTION:
The Thaler RD-28A Economy Roof Drain consists of a removable PVC strainer, aluminum deck flange, perforated aluminum gravel stop and funnel type straight seamless aluminum outlet fitted with an aluminum ferrule.

PROMINENT FEATURES:
Removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains.

LEADER DIAMETERS:
Suitable for 2" (51 mm) to 6" (152 mm) leader sizes.

OPTIONS:
Cast aluminum strainer. T-5 aluminum collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose drain for flat roofs employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.
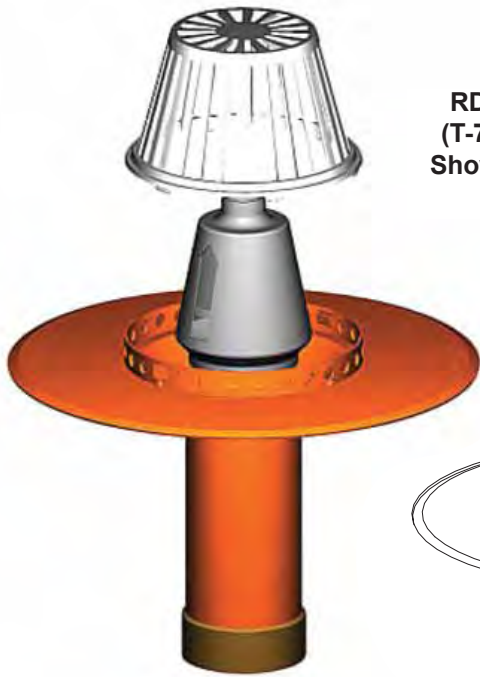
WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-28A drain for [2"to 6" (51mm to 152 mm)] leader size, with: removable [PVC] [cast aluminum] strainer; perforated .064 (1.6 mm) seamless aluminum gravel stop; .064 (1.6 mm) deck flange and funnel outlet fitted with aluminum ferrule; [T-5 aluminum sediment collar] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-28A roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-28A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

RD-28C Copper Roof Drain
(T-7 Flow Control Accessory
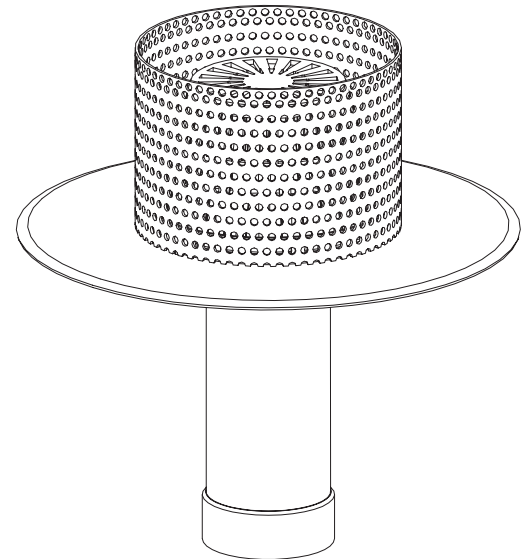**Shown Friction Fitted to Drain**
Body)

Exploded View of RD-28SS Stainless Steel
Roof Drain
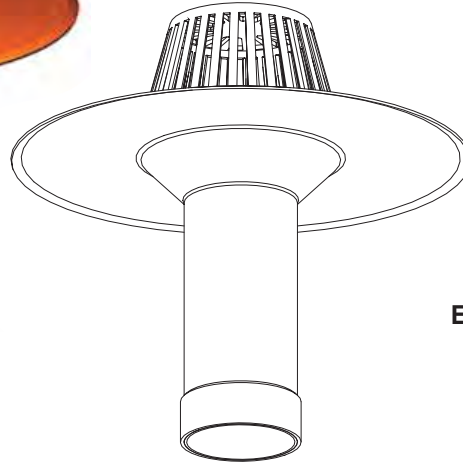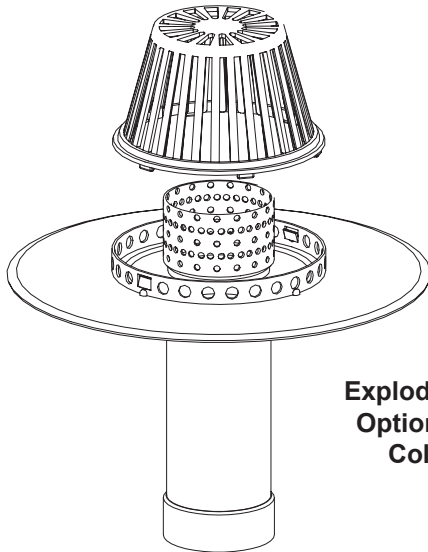
Underside of
Deck Flange showing
Funnel Outlet

Exploded View Showing
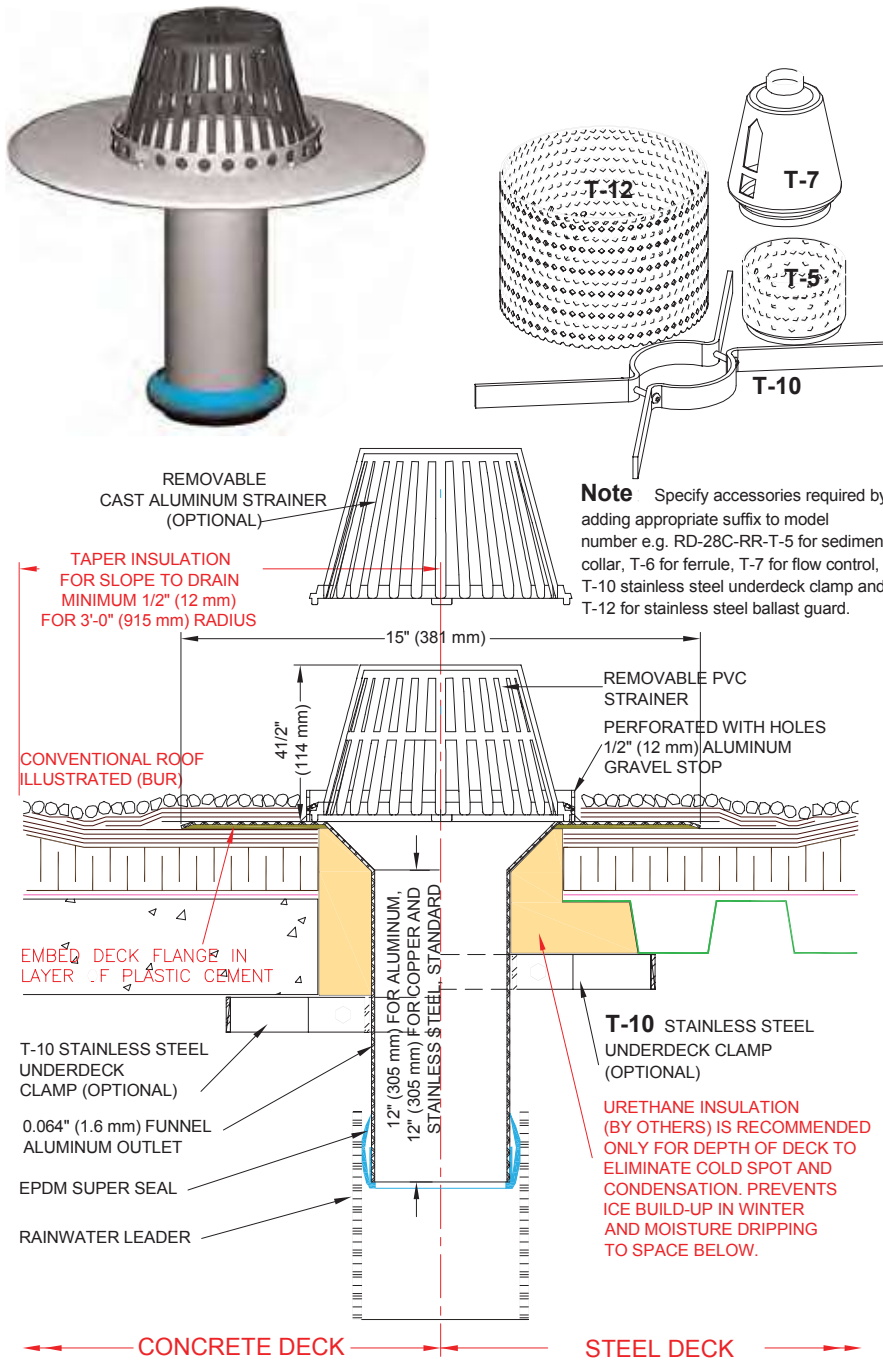**Optional T-5 Sediment**
Collar Accessory

View Showing Ballast Guard Friction
Fitted to Dome Strainer

Material Specification for RD-28C (Copper) and RD-28SS (Stainless Steel) Roof Drains (RD-28A Aluminum Illustrated on page M-19)
Note: In Short Form specification on front side of sheet, edit clause to reflect choice of copper
(RD-28C) or stainless steel (RD-28SS) roof drain in lieu of aluminum if desired.

Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-6 Ferrule	T-7 Flow Control	T-12 Ballast Guard
RD-28A	PVC or Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-28C	PVC or Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.831 mm) pipe: DWV 0.058" (1.47mm)	Copper	Brass	Copper or Painted Aluminum	Stainless Steel
RD-28SS	PVC or Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

THALER M-19A

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

REMOVABLE CAST ALUMINUM STRAINER (OPTIONAL)

T-12

T-7

T-5

T-10

Note Specify accessories required by adding appropriate suffix to model number e.g. RD-28C-RR-T-5 for sediment collar, T-6 for ferrule, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for stainless steel ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

15" (381 mm)

41/2" (114 mm)

REMOVABLE PVC STRAINER

PERFORATED WITH HOLES 1/2" (12 mm) ALUMINUM GRAVEL STOP

CONVENTIONAL ROOF ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

0.064" (1.6 mm) FUNNEL ALUMINUM OUTLET

EPDM SUPER SEAL

RAINWATER LEADER

12" (305 mm) FOR ALUMINUM, 12" (305 mm) FOR COPPER AND STAINLESS STEEL STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW.

CONCRETE DECK

STEEL DECK

RD-28A-RR ECONOMY ROOF DRAIN (Aluminum Funnel Outlet)
RD-28C-RR ECONOMY ROOF DRAIN (Copper Funnel Outlet)
RD-28SS-RR ECONOMY ROOF DRAIN (Stainless Steel Funnel Outlet)
Note: RD-28C-RR (Copper) and RD-28SS-RR (Stainless Steel) similar.
See reverse side of page for material changes.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-28A-RR roof drain is installed by fitting the drain outlet into the rainwater leader, by slowly rotating and pushing down into position, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-28 A-RR-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

CANADA: 1.800.387.7217 **U.S.:** 1.800.576.1200 **WEB:** www.thalermetal.com **EMAIL:** info@thalermetal.com

DESCRIPTION:
The Thaler RD-28A-RR Economy Roof Drain consists of a removable PVC strainer, aluminum deck flange, perforated aluminum gravel stop and funnel type straight seamless aluminum outlet fitted with a patented EPDM sealing ring (Thaler super Seal). The Super Seal provides a superior seal in the event drains or pipes become clogged.

PROMINENT FEATURES:
Provides best value for least cost when retrofitting existing drains; Super Seal ring permits faster, more economical installation than other comparably priced drains while providing an extremely reliable seal.

LEADER DIAMETERS:
Suitable for 1-3/4", 2-3/4", 3-3/4", 4-3/4", and 5-3/4" (44 mm, 70 mm, 95 mm, 121 mm and 146 mm). leader sizes.

OPTIONS:
Cast aluminum strainer. T-5 aluminum sediment collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose retrofit economy drain for flat roofs employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-28A-RR drain for [1-3/4" (44 mm)] [2-3/4" (70 mm)] [3-3/4" (95 mm)] [4-3/4" (121 mm)] [5-3/4" (146 mm)] leader size, with: removable [PVC] [cast aluminum] strainer; perforated .064 (1.6 mm) aluminum gravel stop; .064 (1.6 mm) deck flange and funnel outlet fitted with a Super Seal EPDM sealing ring; [T-5 aluminum sediment collar] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.
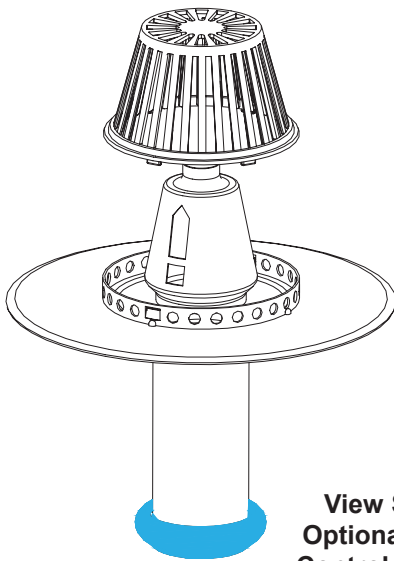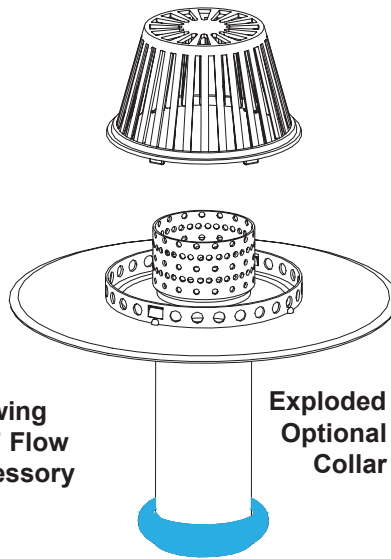
THALER

M-20

RD-28C-RR (Copper Roof Drain)

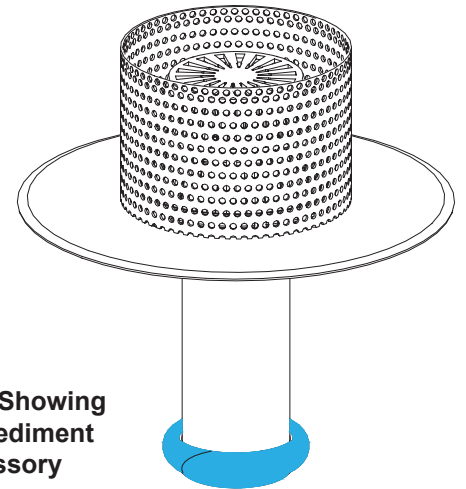**RD-28SS-RR (Stainless Steel Roof Drain)**
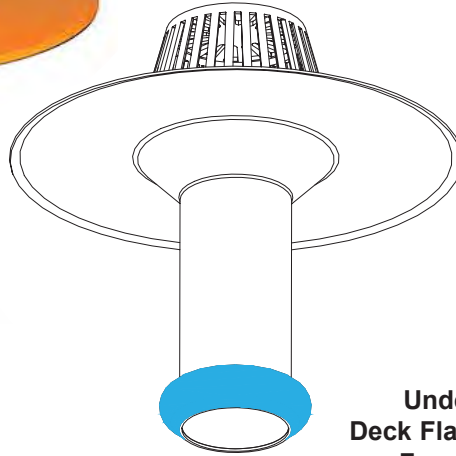
Underside of Deck Flange showing Funnel Outlet

View Showing Optional T-7 Flow Control Accessory

**Exploded View Showing Optional T-5 Sediment Collar Accessory**

View Showing Optional T-12 Ballast Guard Friction Fitted to Strainer

Material Specification for RD-28C-RR (Copper) and RD-28SS-RR (Stainless Steel) Roof Drains (RD-28A-RR Illustrated on page M-20)
Note: In Short Form specification on front side of sheet, edit specification clause to reflect choice of copper (RD-28C-RR) or stainless steel (RD-28SS-RR) roof drain in lieu of aluminum if desired.

Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-28A-RR	Cast Aluminum or PVC	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Stainless Steel
RD-28C-RR	Cast Aluminum or PVC	Stainless Steel	Copper base: 24 oz. 0.032" (0.831 mm) pipe: DWV 0.058" (1.47mm)	Copper	Copper or Painted Aluminum	Stainless Steel
RD-28SS-RR	Cast Aluminum or PVC	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Aluminum	Painted Aluminum or Stainless Steel	Stainless Steel

THALER

M-20A

T-7

T-5

T-12

T-10

CAST ALUMINUM STRAINER (OPTIONAL)
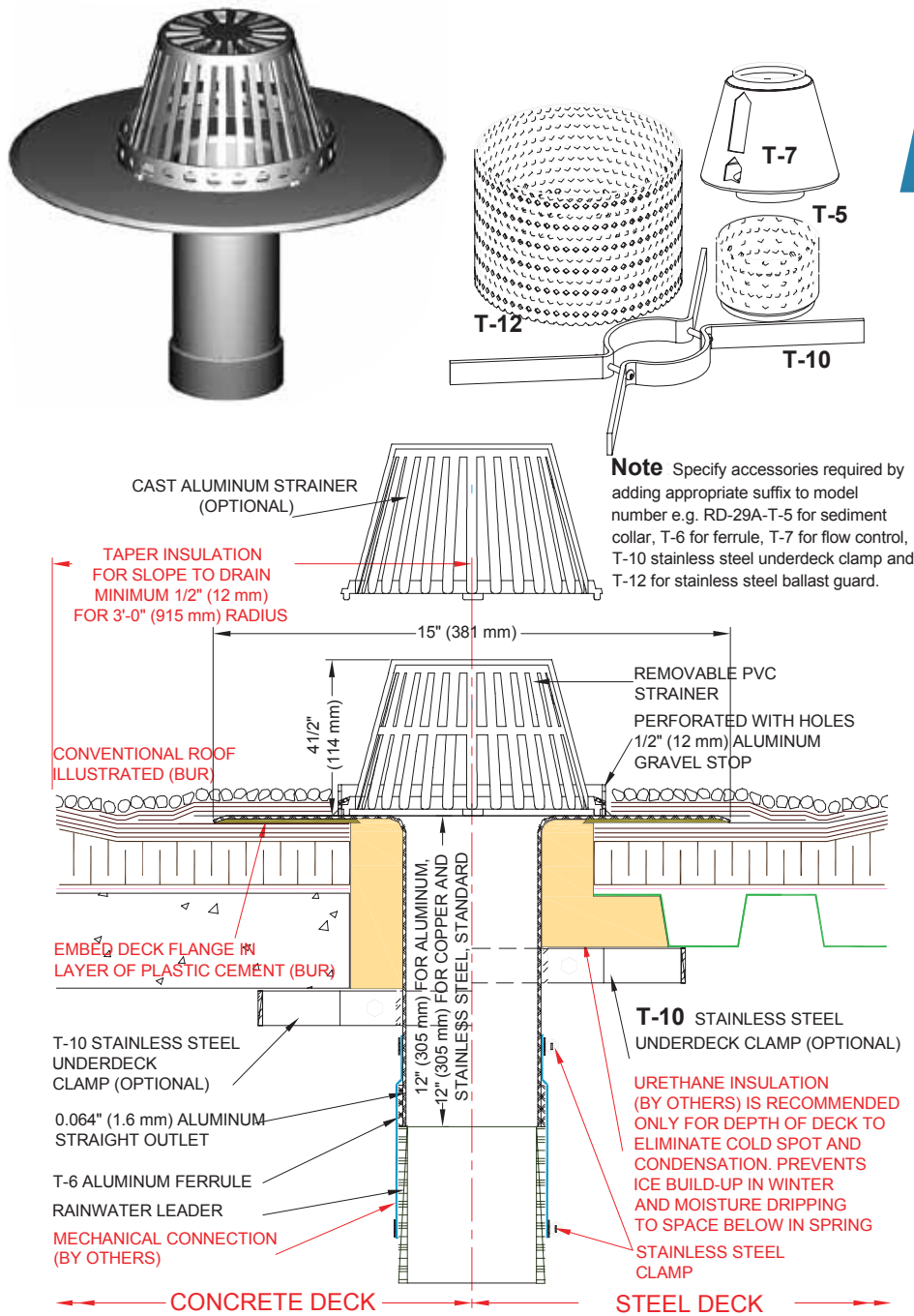
Note Specify accessories required by adding appropriate suffix to model number e.g. RD-29A-T-5 for sediment collar, T-6 for ferrule, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for stainless steel ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

15" (381 mm)

REMOVABLE PVC STRAINER

41/2" (114 mm)

PERFORATED WITH HOLES 1/2" (12 mm) ALUMINUM GRAVEL STOP

CONVENTIONAL ROOF ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

12" (305 mm) FOR ALUMINUM, 12" (305 mm) FOR COPPER AND STAINLESS STEEL, STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

0.064" (1.6 mm) ALUMINUM STRAIGHT OUTLET

T-6 ALUMINUM FERRULE

RAINWATER LEADER

MECHANICAL CONNECTION (BY OTHERS)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

STAINLESS STEEL CLAMP

CONCRETE DECK

STEEL DECK

RD-29A ECONOMY ROOF DRAIN (Aluminum, Straight Outlet)
RD-29C ECONOMY ROOF DRAIN (Copper, Straight Outlet)
RD-29SS ECONOMY ROOF DRAIN (Stainless Steel, Straight Outlet)
Note: RD-29C (Copper) and RD-29SS (Stainless Steel) similar.
See reverse side of page for material changes.

DESCRIPTION:
The Thaler RD-29A Economy Roof Drain consists of a removable PVC strainer, aluminum deck flange, perforated aluminum gravel stop and straight seamless aluminum outlet fitted with a aluminum ferrule.

PROMINENT FEATURES:
Removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains.

LEADER DIAMETERS:
Suitable for 2" (51 mm) to 6" (152 mm) leader sizes.

OPTIONS:
Cast aluminum strainer. T-5 aluminum sediment collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose drain for flat roofs employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
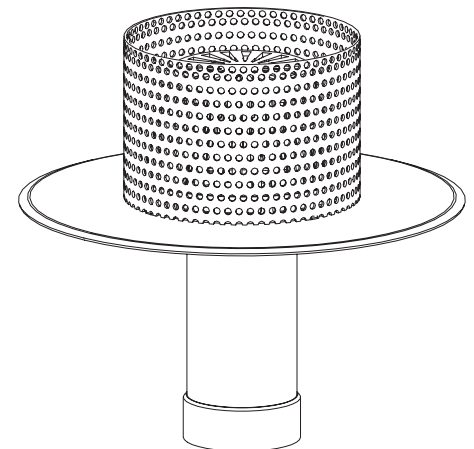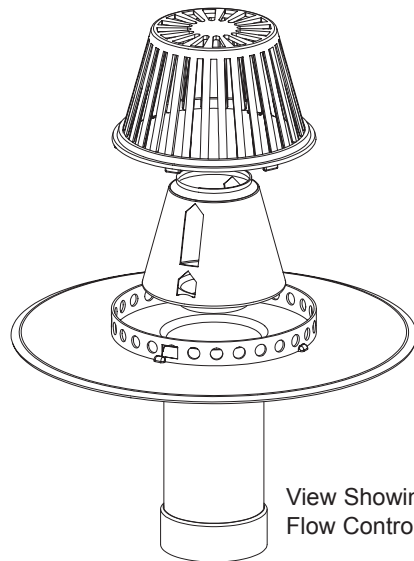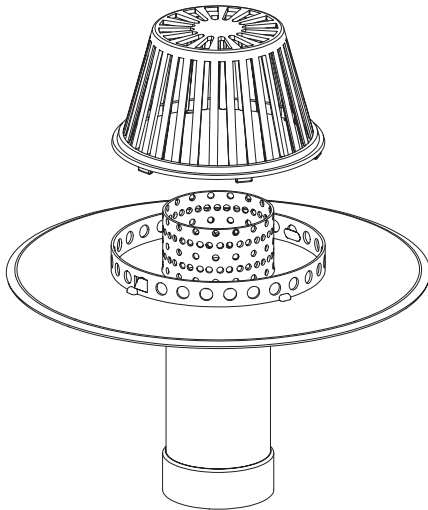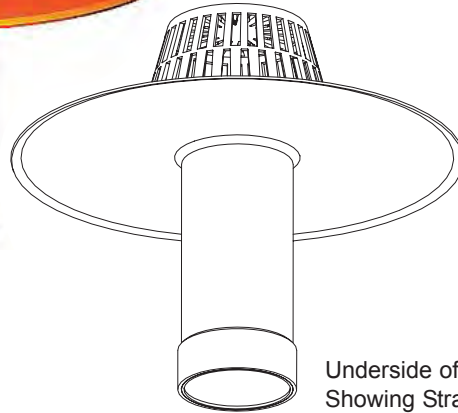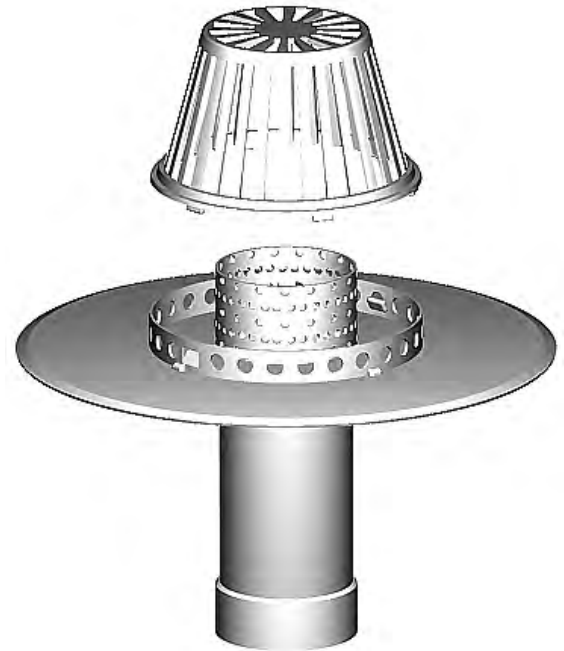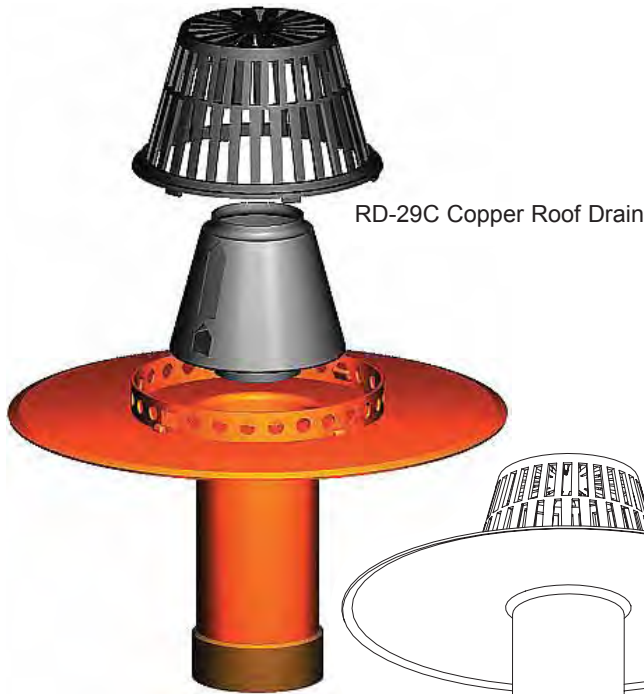Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-29A drain for [2" to 6" (51 mm to 152 mm)] leader size, with: removable [PVC] [cast aluminum] strainer; perforated .064 (1.6 mm) seamless aluminum gravel stop; .064" (1.6 mm) deck flange and straight outlet fitted with aluminum ferrule; [T-5 aluminum sediment collar] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.
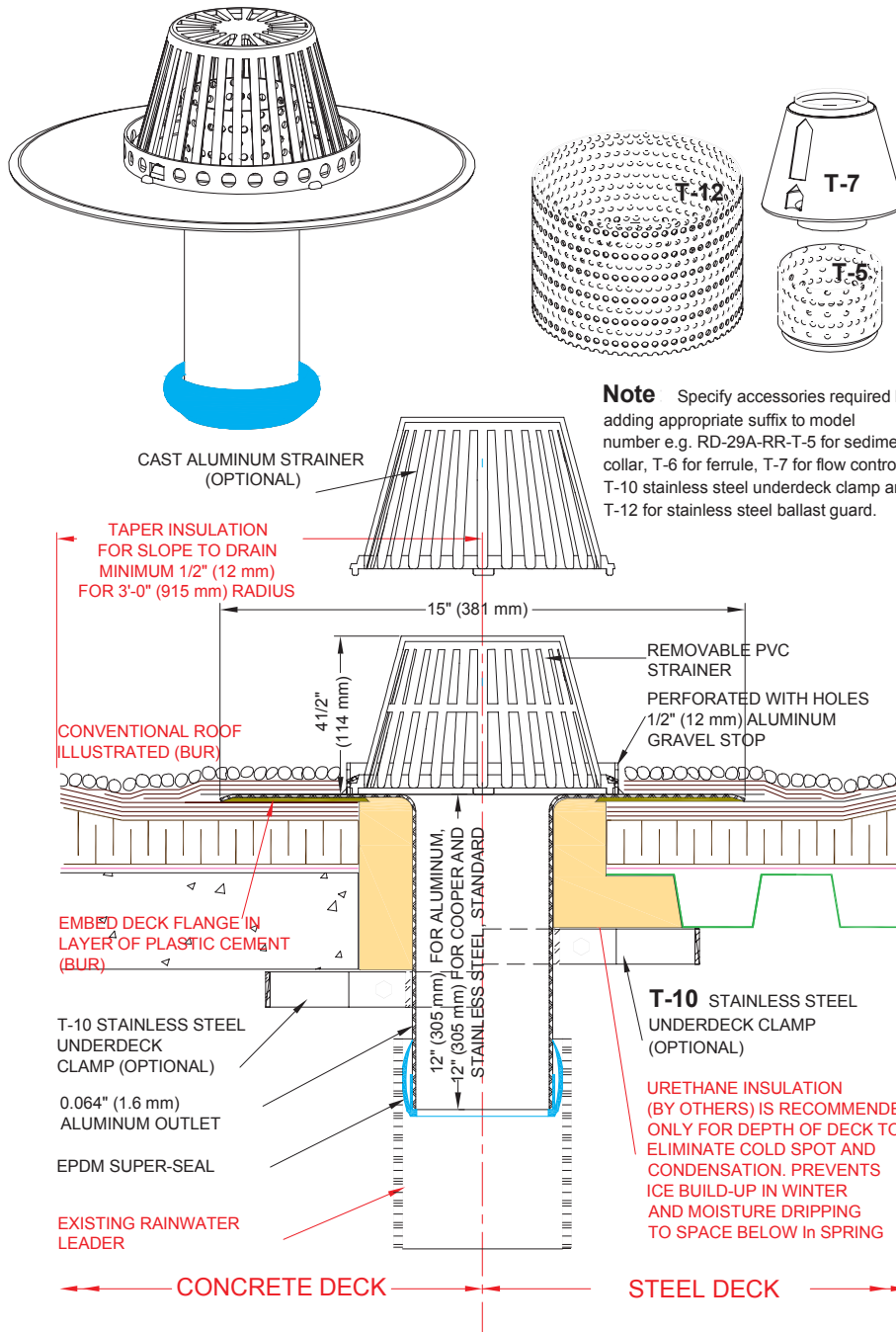
INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-29A roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-2A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

RD-29C Copper Roof Drain

RD-29SS Stainless Steel Roof Drain

Underside of Deck Flange
Showing Straight Outlet

Exploded View Showing Optional T-5
Sediment Collar Accessory

View Showing Optional T-7
Flow Control Accessory

View Showing Ballast Guard
Friction Fitted To Dome Strainer

Material Specification for RD-29C (Copper) and RD-29SS (Stainless Steel) Roof Drains (RD-29A Aluminum Illustrated on page M-21)
Note: In Short Form specification on front side of sheet, edit clause to reflect choice of copper
(RD-29C) or stainless steel (RD-29SS) roof drain in lieu of aluminum if desired.

Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-6 Ferrule	T-7 Flow Control	T-12 Ballast Guard
RD-29A	PVC or Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-29C	PVC or Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.813mm) pipe: DWV 0.058" (1.47mm)	Copper	Brass	Copper or Painted Aluminum	Stainless Steel
RD-29SS	PVC or Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: Type 304 0.12" (3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

THALER

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

T-12

T-7

T-5

CAST ALUMINUM STRAINER (OPTIONAL)

Note Specify accessories required by adding appropriate suffix to model number e.g. RD-29A-RR-T-5 for sediment collar, T-6 for ferrule, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for stainless steel ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

15" (381 mm)

REMOVABLE PVC STRAINER

PERFORATED WITH HOLES 1/2" (12 mm) ALUMINUM GRAVEL STOP

4 1/2" (114 mm)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

12" (305 mm) FOR ALUMINUM, 12" (305 mm) FOR COOPER AND STAINLESS STEEL, STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

0.064" (1.6 mm) ALUMINUM OUTLET

EPDM SUPER-SEAL

EXISTING RAINWATER LEADER

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW In SPRING

CONCRETE DECK   STEEL DECK

RD-29A-RR ECONOMY ROOF DRAIN (Aluminum, Straight Outlet, Retrofit)
RD-29C-RR ECONOMY ROOF DRAIN (Copper, Straight Outlet, Retrofit)
RD-29SS-RR ECONOMY ROOF DRAIN (Stainless Steel, Straight Outlet, Retrofit)
Note: RD-29C-RR (Copper) and RD-29SS-RR (Stainless Steel) similar.
See reverse side of page for material changes.

DESCRIPTION:
The Thaler RD-29A-RR Economy Retrofit Roof Drain consists of a removable PVC strainer, aluminum deck flange, perforated aluminum gravel stop and straight seamless aluminum outlet fitted with a patented EPDM sealing ring (Thaler Super-Seal). The Super Seal provides a superior seal in the event or pipes become clogged (see Thaler Super-Seal Retrofit Drain Seal literature).

PROMINENT FEATURES:
Provides best value for least cost when retrofitting existing drains; super seal ring permits faster, cheaper installation than other comparably priced drains while providing an extremely reliable seal.

LEADER DIAMETERS:
1-3/4", 2-3/4", 3-3/4", 4-3/4", and 5-3/4" (44 mm, 70 mm, 95 mm, 121 mm and 146 mm)

OPTIONS:
Cast aluminum strainer. T-5 aluminum sediment collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose retrofit economy drain for flat roofs, employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-29A-RR drain for [2" to 6" (51 mm to152 mm)] leader size, with: removable [PVC] [cast aluminum] strainer; perforated .064" (1.6 mm) seamless aluminum gravel stop; .064" (1.6 mm) deck flange and straight outlet fitted with Super-Seal EPDM sealing ring; [T-5 aluminum sediment collar] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Cana- da) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-29A-RR roof drain is installed by fitting the drain outlet into the rainwater leader, slowly rotating and pushing down into position, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-28A-RR-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.
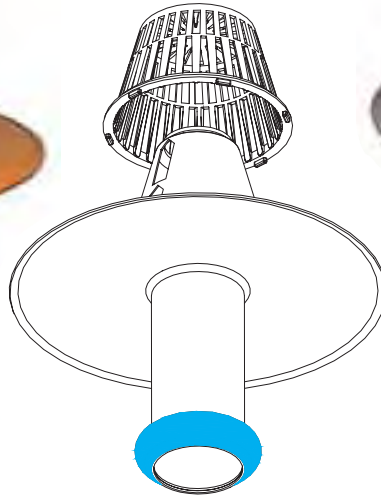
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
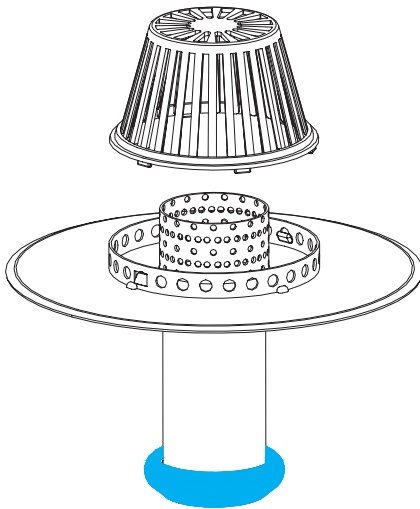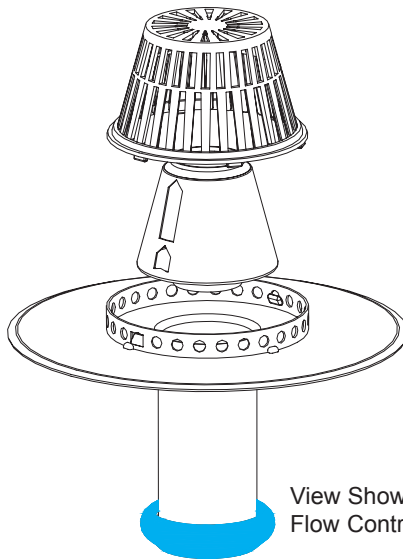
RD-29C (Copper Roof Drain)
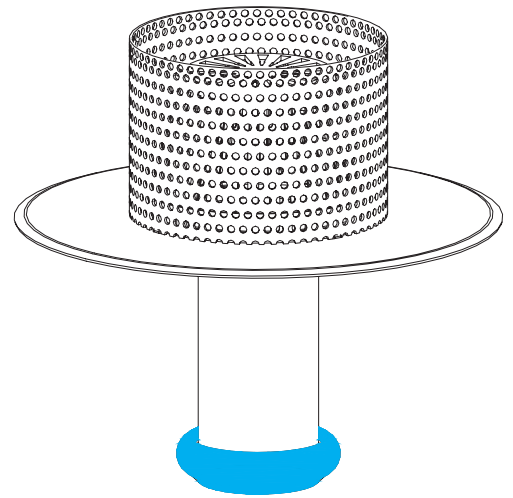
RD-29SS (Stainless Steel Roof Drain)

Underside of Deck Flange
Showing Straight Outlet

Exploded View Showing Optional T-5
Sediment Collar Accessory

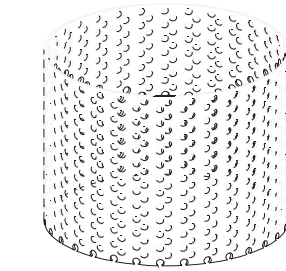View Showing Optional T-7
Flow Control Accessory

View Showing Ballast Guard
Friction Fitted To Dome Strainer

Material Specification for RD-29C-RR (Copper) and RD-29SS-RR (Stainless Steel) Roof Drains
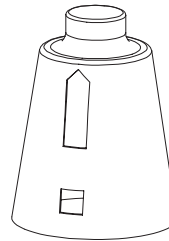**(RD-29A-RR Aluminum Illustrated on page M-22)**
Note: In Short Form specification on front side of sheet, edit clause to reflect choice of copper
(RD-29C-RR) or stainless steel (RD-29SS-RR) roof drain in lieu of aluminum if desired.

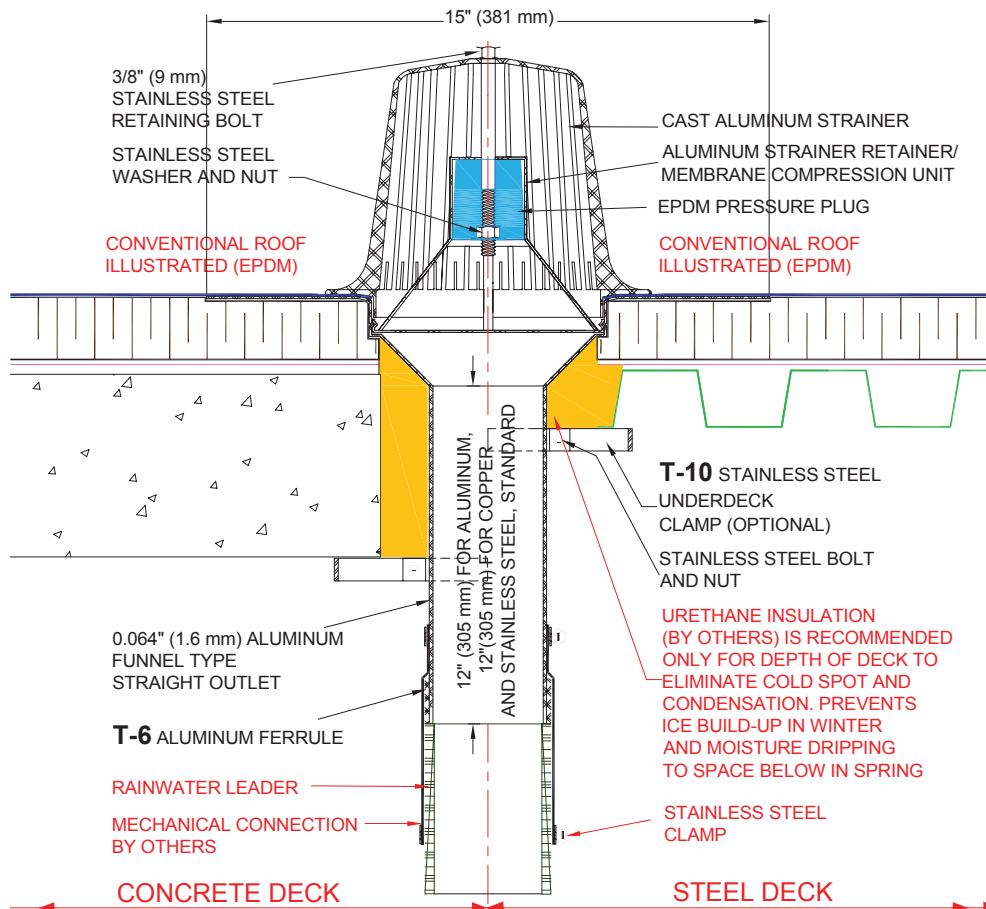| Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-6 Ferrule	T-7 Flow Control	T-12 Ballast Guard
RD-29A-RR	PVC or Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-29C-RR	PVC or Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.831mm) pipe: DWV 0.058" (1.47mm)	Copper	Brass	Copper or Painted Aluminum	Stainless Steel
RD-29SS-RR	PVC or Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: Type 304 L 0.12" (3 mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

THALER

T-12 STAINLESS STEEL BALLAST GUARD

T-7 ALUMINUM FLOW CONTROL ACCESSORY

Note: Specify accessories required by adding appropriate suffix to model number e.g. RDX30- A-T-6 for ferrule, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for stainless steel ballast guard.

ROOF SPECIALTIES
RDX30-A ECONOMY ALUMINUM ALUMINUM ROOF DRAIN
(All Purpose, Funnel Outlet)

DESCRIPTION:
The Thaler RDX30-A Economy Roof Drain consists of a vandalproof cast aluminum strainer, aluminum strainer retainer/membrane compression unit, deck flange with funnel type straight aluminum outlet fitted with an aluminum ferrule.

PROMINENT FEATURES:
Faster, more economical and easier installation (2 minutes) than competitively positioned drains (no special expertise required). Provides extremely reliable outlet/leader seal. Unique strainer retainer/membrane compression unit also provides best obtainable seal around deck flange by clamping membrane perfectly at a critical juncture. Strainer is rendered vandalproof via 3/8" (10 mm) dia. s.s. retaining bolt.

LEADER DIAMETERS:
Suitable for 2" (51 mm) to 6" (152 mm) leader sizes.

OPTIONS:
Copper or stainless steel model also available. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard for inverted roof applications. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Primarily all purpose economy drain for flat roofs employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.
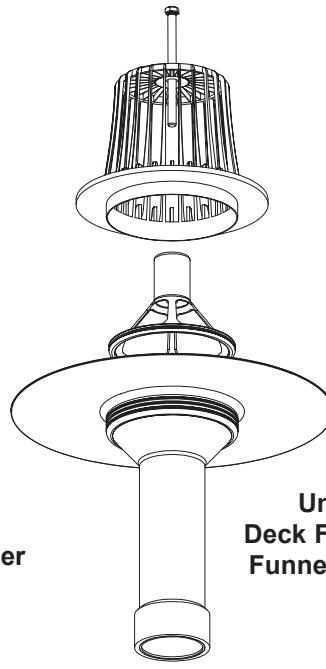
SPECIFICATION (SHORT FORM):
Roof drains: Thaler RDX30-A drain for [2" (51 mm)] to [6" (152 mm)] leader size, with: vandalproof cast aluminum strainer with integral gravel guard fins and 3/8" (10 mm) s.s. retaining bolt; strainer retainer/membrane compression unit; .064" (1.6 mm) spun aluminum compression unit; deck flange with funnel type straight outlet fitted with aluminum ferrule; [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canda) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.
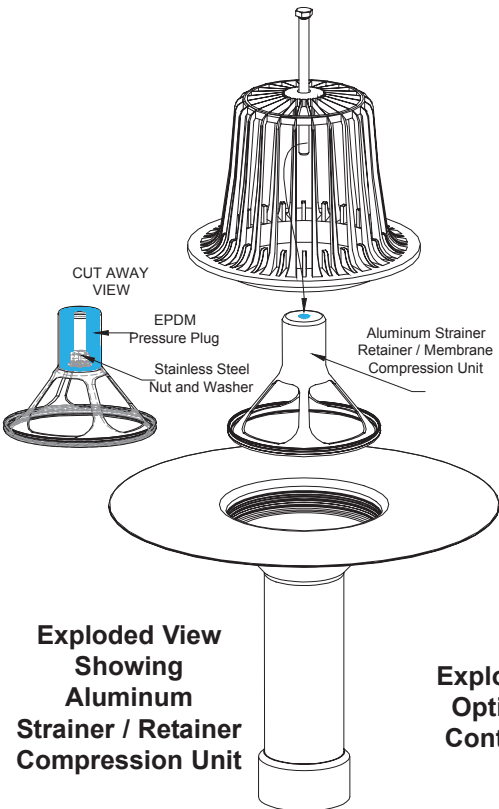

15" (381 mm)

3/8" (9 mm) STAINLESS STEEL RETAINING BOLT

STAINLESS STEEL WASHER AND NUT

CAST ALUMINUM STRAINER

ALUMINUM STRAINER RETAINER/ MEMBRANE COMPRESSION UNIT

EPDM PRESSURE PLUG

CONVENTIONAL ROOF ILLUSTRATED (EPDM)

CONVENTIONAL ROOF ILLUSTRATED (EPDM)

12" (305 mm) FOR ALUMINUM, 12" (305 mm) FOR COPPER, AND STAINLESS STEEL, STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

STAINLESS STEEL BOLT AND NUT

0.064" (1.6 mm) ALUMINUM FUNNEL TYPE STRAIGHT OUTLET

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

T-6 ALUMINUM FERRULE

RAINWATER LEADER

MECHANICAL CONNECTION BY OTHERS

STAINLESS STEEL CLAMP

CONCRETE DECK

STEEL DECK

RDX30-A ECONOMY ROOF DRAIN (Aluminum, Funnel Type Outlet)
RDX30-C ECONOMY ROOF DRAIN (Copper, Funnel Type Outlet)
RDX30-SS ECONOMY ROOF DRAIN (Stainless Steel, Funnel Type Outlet)
Note: RDX30-C (Copper) and RDX30-SS (Stainless Steel) similar.
See reverse side of page for material changes.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler RDX30-A roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, screwing the strainer retainer/membrane compression unit into the funnel, carefully bolting down the strainer to clamp the membrane to the deck flange, and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RDX30-A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

**RDX30-SS Stainless Steel
Roof Drain**

**RDX30-C Copper
Roof Drain**

**Underside of
Deck Flange showing
Funnel Type Straight
Outlet**

CUT AWAY
VIEW

EPDM
Pressure Plug

Stainless Steel
Nut and Washer

Aluminum Strainer
Retainer / Membrane
Compression Unit

T-7 Flow Control

**Exploded View
Showing
Aluminum
Strainer / Retainer
Compression Unit**
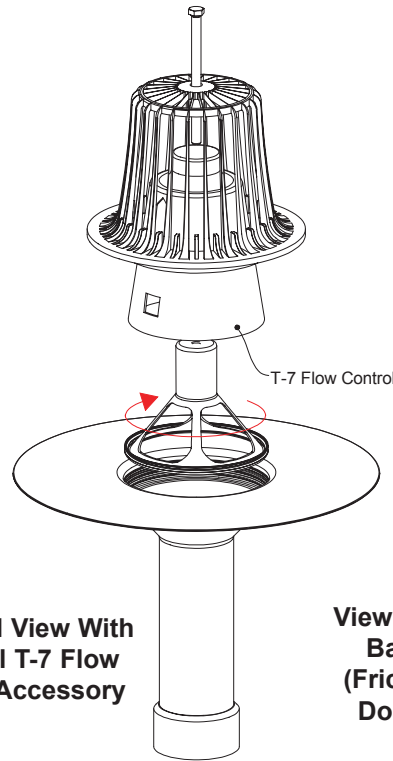
**Exploded View With
Optional T-7 Flow
Control Accessory**
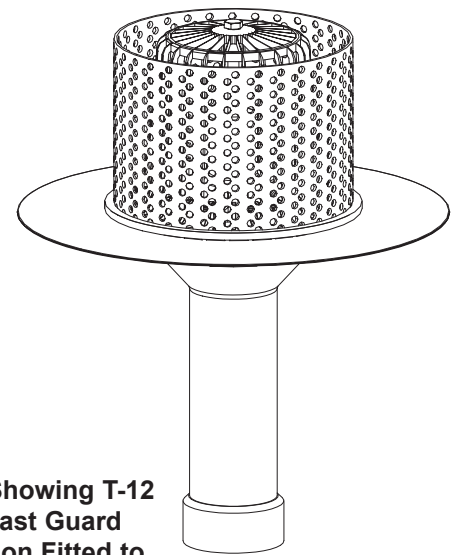
**View Showing T-12
Ballast Guard
(Friction Fitted to
Dome Strainer)**

**Material Specification for RDX30-C (Copper) and RDX30-SS (Stainless Steel) Roof Drains
(RDX30-A Aluminum Illustrated on page M-23)
Note: In Short Form specification on front side of sheet, edit clause to reflect choice of copper
(RDX30-C) or stainless steel (RX30-SS) roof drain in lieu of aluminum if desired.**

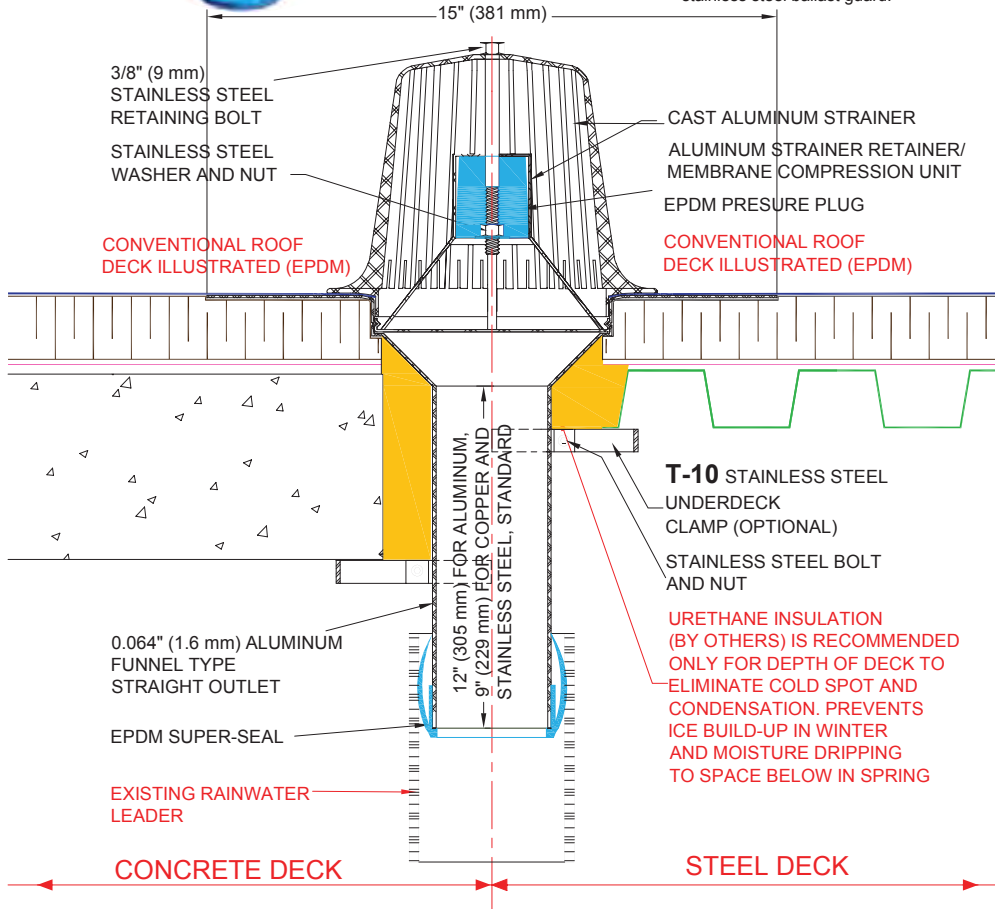| Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	Membrane Compression Unit	T-6 Ferrule	T-7 Flow Control	T-12 Ballast Guard
RDX30-A	Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RDX30-C	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.831 mm) pipe: DWV 0.058" (1.47mm)	Copper	Brass	Copper or Painted Aluminum	Stainless Steel
RDX30-SS	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: Type 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel
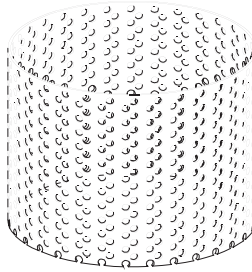
T-12 STAINLESS STEEL BALLAST GUARD
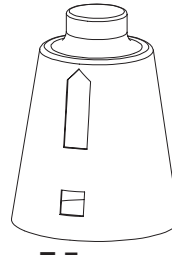
T-7 ALUMINUM FLOW CONTROL ACCESSO

Note: Specify accessories required by ad appropriate suffix to model number e.g. RD A-T-6 for ferrule, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 stainless steel ballast guard.

15" (381 mm)

3/8" (9 mm) STAINLESS STEEL RETAINING BOLT

STAINLESS STEEL WASHER AND NUT

CAST ALUMINUM STRAINER

ALUMINUM STRAINER RETAINER/ MEMBRANE COMPRESSION UNIT

EPDM PRESURE PLUG

CONVENTIONAL ROOF DECK ILLUSTRATED (EPDM)

CONVENTIONAL ROOF DECK ILLUSTRATED (EPDM)

12" (305 mm) FOR ALUMINUM, 9" (229 mm) FOR COPPER AND STAINLESS STEEL, STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

STAINLESS STEEL BOLT AND NUT

0.064" (1.6 mm) ALUMINUM FUNNEL TYPE STRAIGHT OUTLET

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

EPDM SUPER-SEAL

EXISTING RAINWATER LEADER

CONCRETE DECK

STEEL DECK

RDX30-A-RR RETROFIT ROOF DRAIN (Aluminum, Funnel Type Outlet)
RDX30-C-RR RETROFIT ROOF DRAIN (Copper, Funnel Type Outlet)
RDX30-SS-RR RETROFIT ROOF DRAIN (Stainless Steel, Funnel Type Outlet)
Note: RDX30-C-RR (Copper) and RDX30-SS-RR (Stainless Steel) similar.
See reverse side of page for material changes.

DESCRIPTION:
The Thaler RDX30-A-RR Super-Seal Roof Drain consists of a vandalproof cast aluminum strainer, aluminum strainer retainer/membrane compression unit, deck flange with funnel type straight aluminum outlet fitted with a patented EPDM sealing ring (Thaler Super-Seal). The Super -Seal provides a superior seal in the event drains or pipes become clogged (see Thaler Super-Seal Retrofit Drain Seal literature).

PROMINENT FEATURES:
Faster, more economical and easier installation (2 minutes) than competitively positioned drains (no special expertise required). Provides extremely reliable outlet/leader seal. Unique strainer retainer/membrane compression unit also provides best obtainable seal around deck flange by clamping membrane perfectly at a critical juncture (no lateral leakage into roof membrane). Strainer is rendered vandalproof via 3/8" (10 mm) dia. s.s. retaining bolt.

LEADER DIAMETERS:
Suitable for 1-3/4", 2", 2-3/4", 3", 3-3/4", 4", 4-3/4", 5-3/4" and 6" (44 mm, 51 mm, 70 mm, 76 mm, 95 mm, 102 mm, 121 mm, 146 mm and 152mm)) (152 leader sizes.

OPTIONS:
Copper or stainless steel model also available. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard for inverted roof applications. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Primarily all purpose retrofit economy drain for flat roofs employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RDX30-A-RR drain for [1-3/4"" (44 mm)] to [6" (152 mm)] leader size, with: vandalproof cast aluminum strainer with integral gravel guard fins and 3/8" (10 mm) s.s. retaining bolt; strainer retainer/membrane compression unit; .064" (2 mm) spun aluminum compression unit; deck flange with funnel type straight outlet fitted with Super-Seal EPDM sealing ring; [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler RDX30-A-RR roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, slowly pushing down into position, screwing the strainer retainer/membrane compression unit into the funnel, carefully bolting down the strainer to clamp the membrane to the deck flange, and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RDX30-A-RR-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
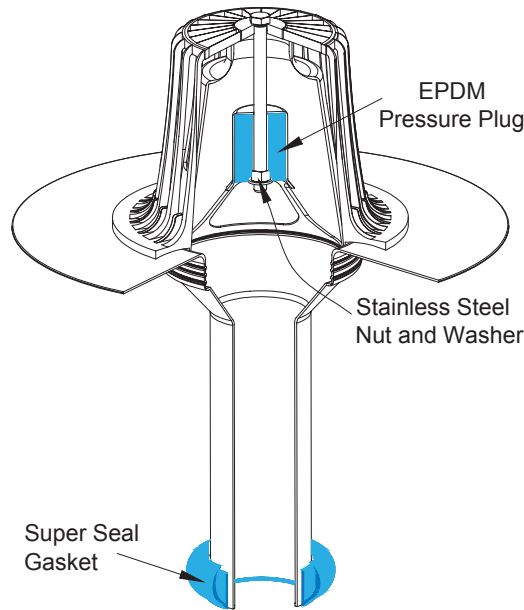
RDX30-SS-RR
Stainless Steel Roof Drain
Showing Aluminum strainer
Retainer/ Compression Unit
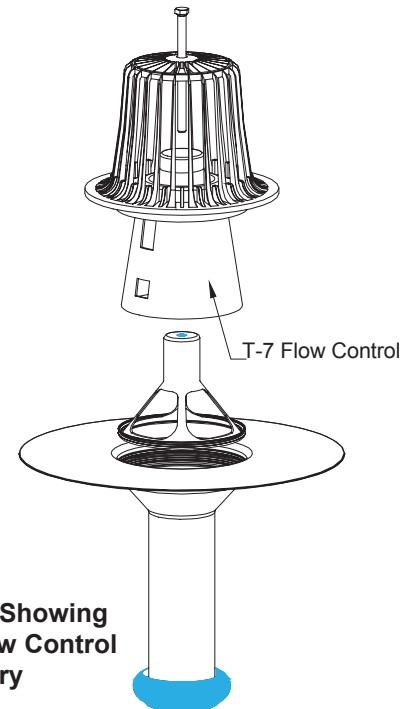**Screwed to Drain Body**

RDX30-C-RR Copper
Roof Drain

EPDM
Pressure Plug

Stainless Steel
Nut and Washer

Super Seal
Gasket
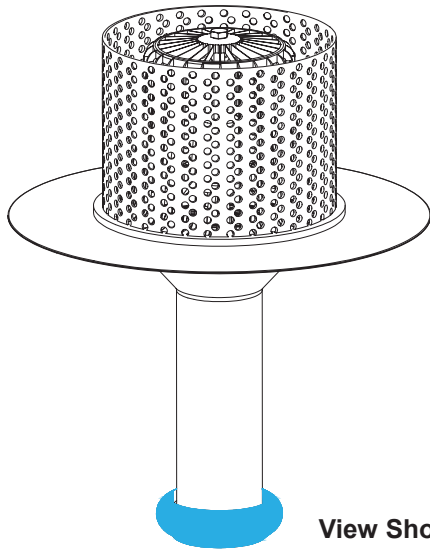
Cut-Away View Showing
Aluminum
Strainer Retainer/Membrane
Compression Unit

T-7 Flow Control

View Showing T-12
Ballast Guard
Friction Fitted to
Dome Strainer

**Exploded View Showing**
Optional T-7 Flow Control
Accessory

Material Specification for RDX30-C-RR (Copper) and RDX30-SS-RR (Stainless Steel) Roof Drains
(RDX30-A-RR Aluminum Illustrated on page M-24)
Note: In Short Form specification on front side of sheet, edit clause to reflect choice of copper
(RDX30-C-RR) or stainless steel (RX30-SS-RR) roof drain in lieu of aluminum if desired.

Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	Membrane Compression Unit	T-6 Ferrule	T-7 Flow Control	T-12 Ballast Guard
RDX30-A-RR	Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RDX30-C-RR	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.831 mm) pipe: DWV 0.058" (1.47mm)	Copper	Brass	Copper or Painted Aluminum	Stainless Steel
RDX30- SS-RR	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: Type 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

ROOF SPECIALTIES
RDX300-A ECONOMY ALUMINUM ROOF DRAIN
(Recessed body, Funnel Outlet)
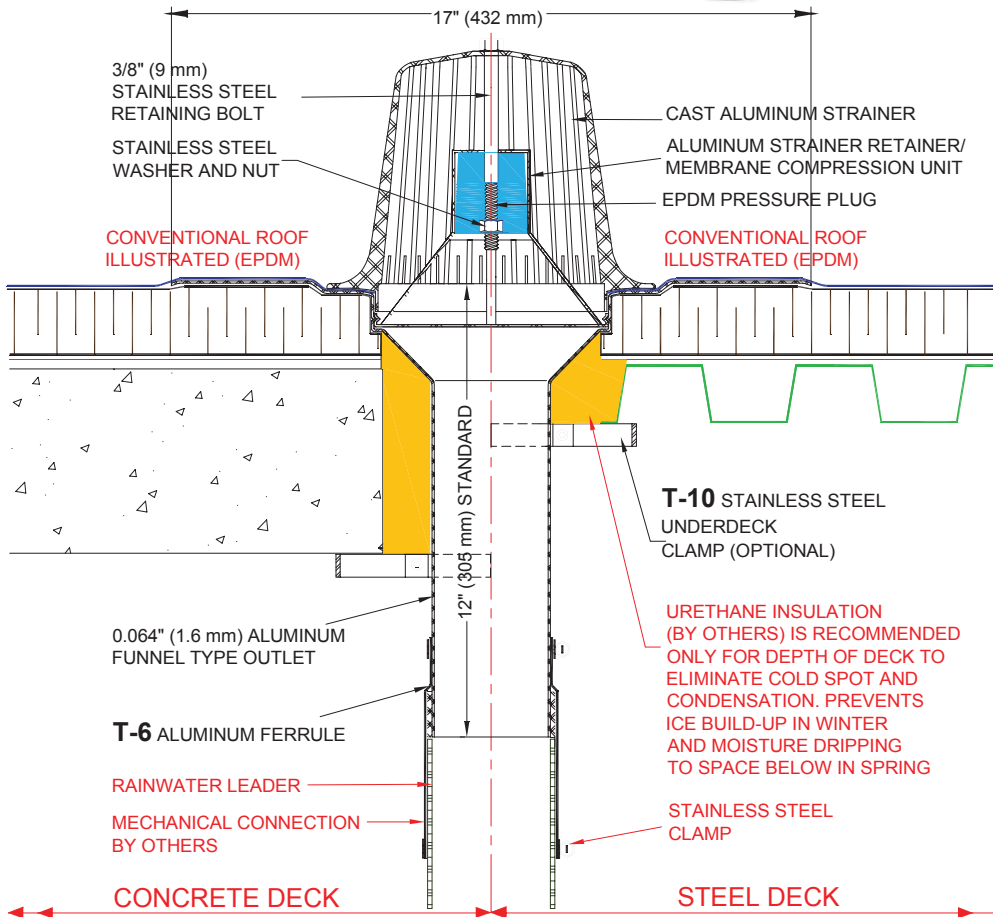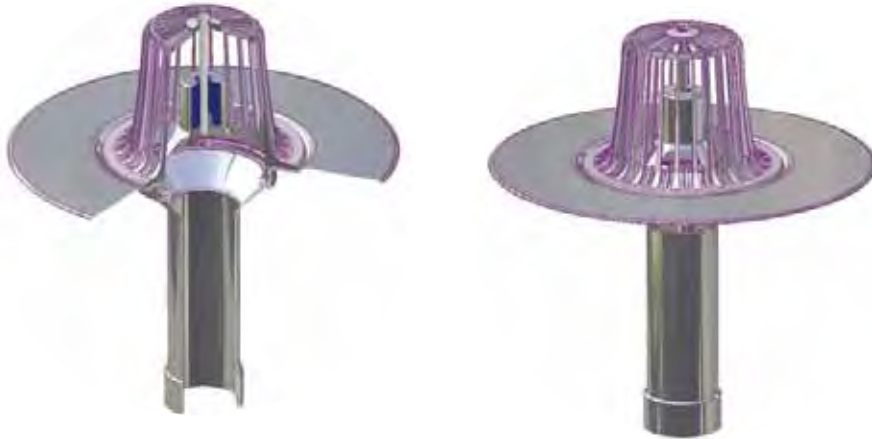
DESCRIPTION:
The Thaler RDX300-A Economy Roof Drain consists of a vandalproof cast aluminum strainer, aluminum recessed strainer retainer/membrane compression unit, deck flange with funnel type straight aluminum outlet fitted with a aluminum ferrule.

PROMINENT FEATURES:
Faster, more economical and easier installation (2 minutes) than competitively positioned drains (no special expertise required). Provides extremely reliable outlet/leader seal. Unique strainer retainer/membrane compression unit also provides best obtainable seal around deck flange by clamping membrane perfectly at a critical juncture. Strainer is rendered vandalproof via 3/8" (10 mm) dia. s.s. retaining bolt.

LEADER DIAMETERS:
Suitable for 2" (51 mm) to 6" (152 mm) leader sizes.

OPTIONS:
Copper or stainless steel model also available. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard for inverted roof applications. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
Primarily all purpose economy drain for flat roofs employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RDX30-A drain for [2" (51 mm)] to [6" (152 mm)] leader size, with: vandalproof cast aluminum strainer with integral gravel guard fins and 3/8" (10 mm) s.s. retaining bolt; strainer retainer/membrane compression unit; .064" (1.6 mm) spun aluminum compression unit; deck flange with funnel type straight outlet fitted with aluminum ferrule; [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

RDX300-A ECONOMY ROOF DRAIN (Aluminum, Funnel Type Outlet)
RDX300-C ECONOMY ROOF DRAIN (Copper, Funnel Type Outlet)
RDX300-SS ECONOMY ROOF DRAIN (Stainless Steel, Funnel Type Outlet)
Note: RDX300-C (Copper) and RDX300-SS (Stainless Steel) similar.
See reverse side of page for material changes.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the Thaler RDX300-A roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, screwing the strainer retainer/membrane compression unit into the funnel, carefully bolting down the strainer to clamp the membrane to the deck flange, and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RDX300-A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.
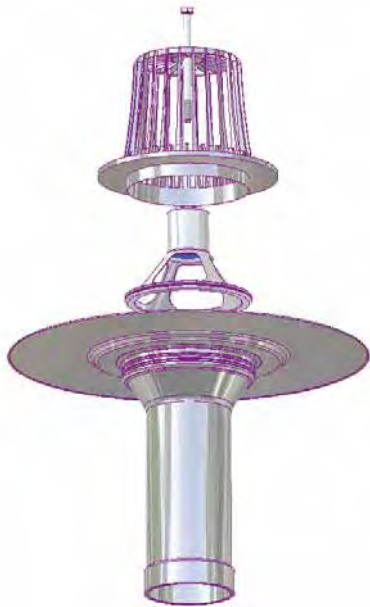
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

RDX300-C Cooper Roof Drain

**Exploded View Aluminum
Strainer / Retainer Compression Unit**

**Optional T-7 Flow
Control Accessory**

**Underside of Deck Flange Showing
Funnel Type Outlet**

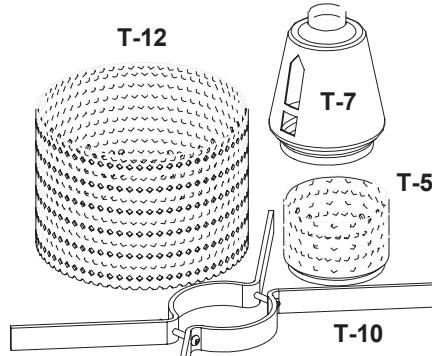**T-12 Ballast Guard**

**Material Specification for RDX300-C (Copper) and RDX300-SS (Stainless Steel) Roof Drains
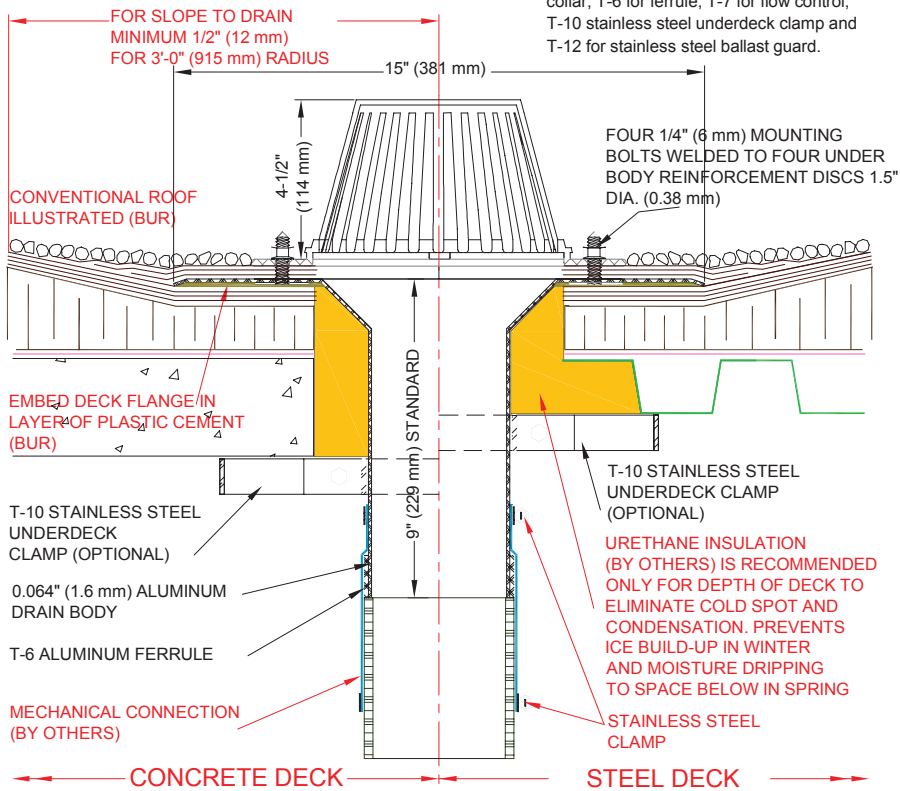(RDX300-A Aluminum Illustrated on page M-25)
Note: In Short Form specification on front side of sheet, edit clause to reflect choice of copper
(RDX300-C) or stainless steel (RX300-SS) roof drain in lieu of aluminum if desired.**

Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	Membrane Compression Unit	T-6 Ferrule	T-7 Flow Control	T-12 Ballast Guard
RDX300-A	Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RDX300-C	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.831 mm) pipe: DWV 0.058" (1.47mm)	Copper	Brass	Copper or Painted Aluminum	Stainless Steel
RDX300- SS	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: Type 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

THALER

T-12

T-7

T-5

T-10

Note Specify accessories required by adding appropriate suffix to model number e.g. RD-38A-T-5 for sediment collar, T-6 for ferrule, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for stainless steel ballast guard.

DESCRIPTION:
The Thaler RD-38A Economy Roof Drain consists of a cast aluminum strainer, aluminum deck flange, and funnel type straight seamless aluminum outlet fitted with an aluminum ferrule.

PROMINENT FEATURES:
Removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains.

LEADER DIAMETERS:
Suitable for 2" (51 mm) to 6" (152 mm) leader sizes.

OPTIONS:
T-5 aluminum collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose drain for flat roofs employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.
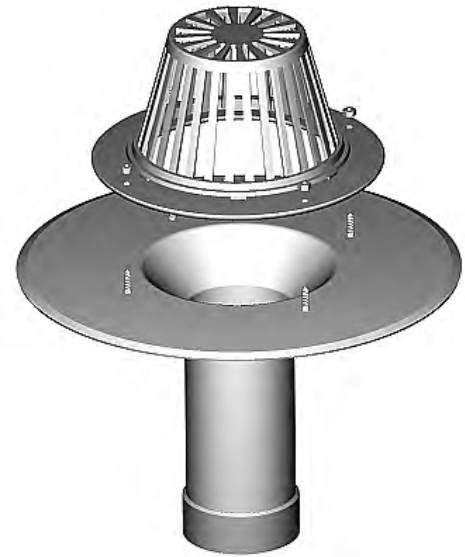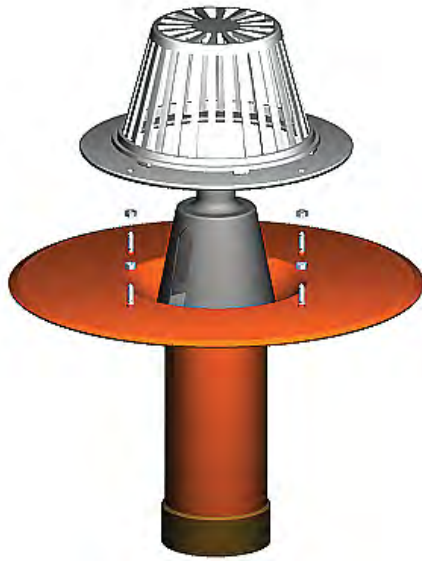
MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-38A drain for [2" to 6" (51mm to 152 mm)] leader size, with: removable cast aluminum strainer with clamping ring; .064 (1.6 mm) deck flange and funnel outlet fitted with aluminum ferrule; [T-5 aluminum sediment collar] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387- 7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

15" (381 mm)

4-1/2" (114 mm)

FOUR 1/4" (6 mm) MOUNTING BOLTS WELDED TO FOUR UNDER BODY REINFORCEMENT DISCS 1.5" DIA. (0.38 mm)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

9" (229 mm) STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

0.064" (1.6 mm) ALUMINUM DRAIN BODY

T-6 ALUMINUM FERRULE

MECHANICAL CONNECTION (BY OTHERS)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

STAINLESS STEEL CLAMP

CONCRETE DECK   STEEL DECK

RD-38A ECONOMY ROOF DRAIN (Aluminum, Funnel Outlet)
RD-38C ECONOMY ROOF DRAIN (Copper, Funnel Outlet)
RD-38SS ECONOMY ROOF DRAIN (Stainless Steel, Funnel Outlet)
Note: RD-38C (Copper) and RD-38SS (Stainless Steel) similar.
See reverse side of page for material changes.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-38A roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-38A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
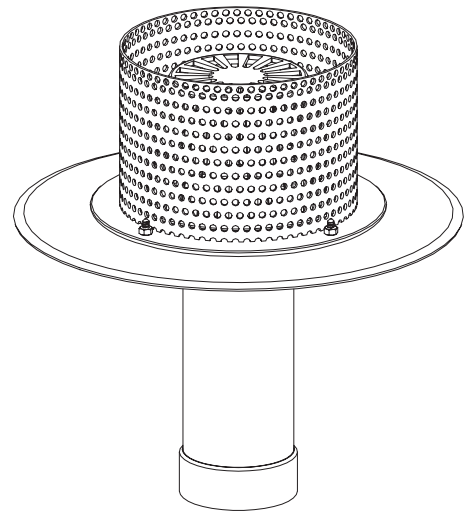
**RD-38C Copper Roof Drain
(T-7 Flow Control Accessory
Shown Friction Fitted to Drain
Body)**

**Exploded View of RD-38SS
Stainless Steel Roof Drain**
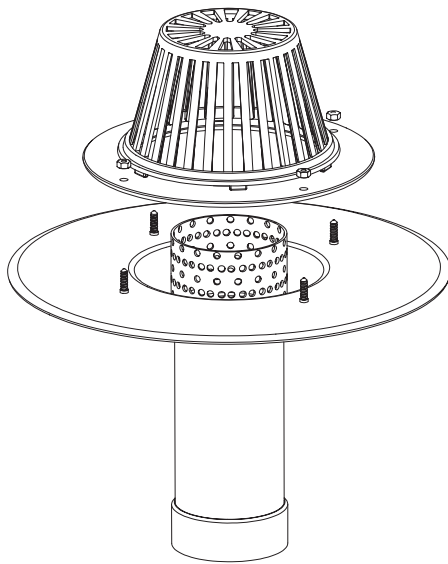
**Exploded View Showing Optional
T-5 Sediment Collar Accessory**

**View Showing Ballast Guard
Friction Fitted to Dome Strainer**

**Material Specification for RD-38C (Copper) and RD-38SS (Stainless Steel) Roof Drains (RD-38A Aluminum Illustrated on page M-26)
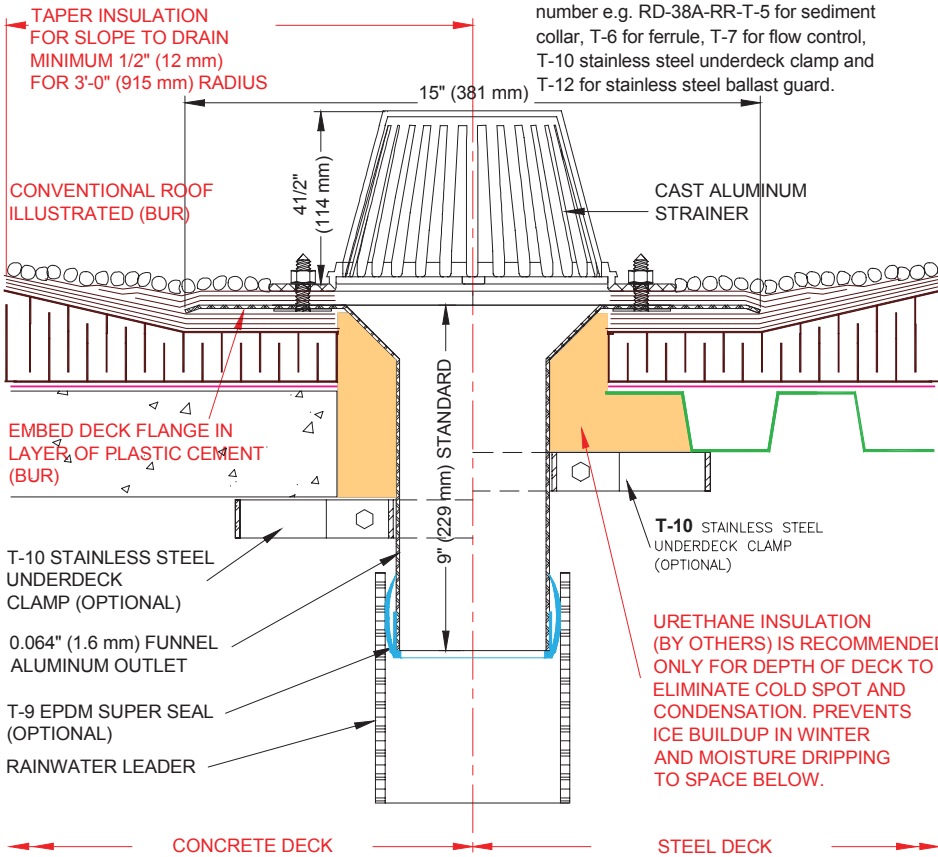Note: In Short Form specification on front side of sheet, edit clause to reflect choice of copper
(RD-38C) or stainless steel (RD-38SS) roof drain in lieu of aluminum if desired.**

Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-6 Ferrule	T-7 Flow Control	T-12 Ballast Guard
RD-38A	Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-38C	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.831 mm) pipe: DWV 0.058" (1.47mm)	Copper	Brass	Copper or Painted Aluminum	Stainless Steel
RD-38SS	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8 mm) pipe: 304 L 0.12" (3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

T-12

T-7

T-5

T-10
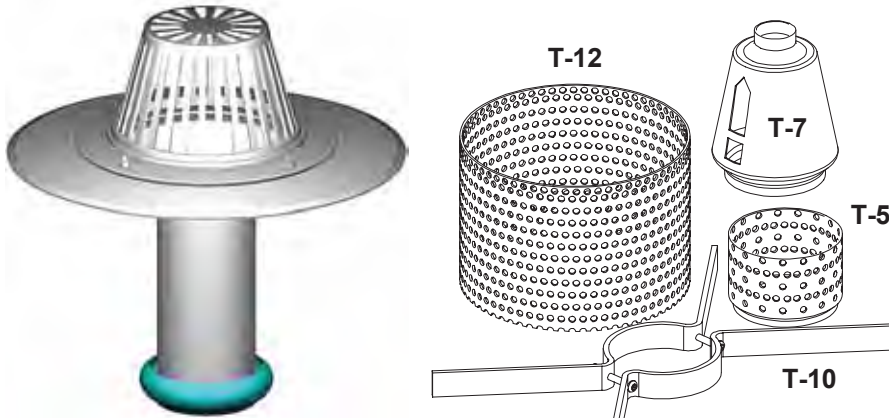
Note : Specify accessories required by adding appropriate suffix to model number e.g. RD-38A-RR-T-5 for sediment collar, T-6 for ferrule, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for stainless steel ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

15" (381 mm)

4 1/2" (114 mm)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

CAST ALUMINUM STRAINER

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

9" (229 mm) STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

0.064" (1.6 mm) FUNNEL ALUMINUM OUTLET

T-9 EPDM SUPER SEAL (OPTIONAL)

RAINWATER LEADER

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILDUP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW.

CONCRETE DECK

STEEL DECK

RD-38A-RR ECONOMY ROOF DRAIN (Aluminum Funnel Outlet)
RD-38C-RR ECONOMY ROOF DRAIN (Copper Funnel Outlet)
RD-38SS-RR ECONOMY ROOF DRAIN (Stainless Steel Funnel Outlet)
Note: RD-38C-RR (Copper) and RD-38SS-RR (Stainless Steel) similar. See reverse side of page for material changes.

DESCRIPTION:
The Thaler RD-38A-RR Economy Roof Drain consists of a removable cast aluminum strainer, deck flange, and funnel type straight seamless aluminum outlet fitted with a patented EPDM sealing ring (optional Thaler Super-Seal). The Super-Seal provides a superior seal in the event drains or pipes become clogged.

PROMINENT FEATURES:
Provides best value for least cost when retrofitting existing drains; Super-Seal ring permits faster, more economical installation than other comparably priced drains while providing an extremely reliable seal.

LEADER DIAMETERS:
Suitable for 1-3/4", 2-3/4", 3-3/4", 4-3/4", and 5-3/4" (44 mm, 70 mm, 95 mm, 121 mm and 146 mm). leader sizes.

OPTIONS:
Without Cast aluminum strainer. T-5 aluminum sediment collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose retrofit economy drain for flat roofs employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-38A-RR drain for [1-3/4" (44 mm)] [2-3/4" (70 mm)] [3-3/4" (95 mm)] [4-3/4" (121 mm)] [5-3/4" (146 mm)] leader size, with: removable cast aluminum strainer with clamping ring; .064 (1.6 mm) deck flange and funnel outlet fitted with a Super-Seal EPDM sealing ring; [T-5 aluminum sediment collar] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-38A-RR roof drain is installed by fitting the drain outlet into the rainwater leader, by slowly rotating and pushing down into position, installing the dome strainer (including any optional accessories), and as follows:
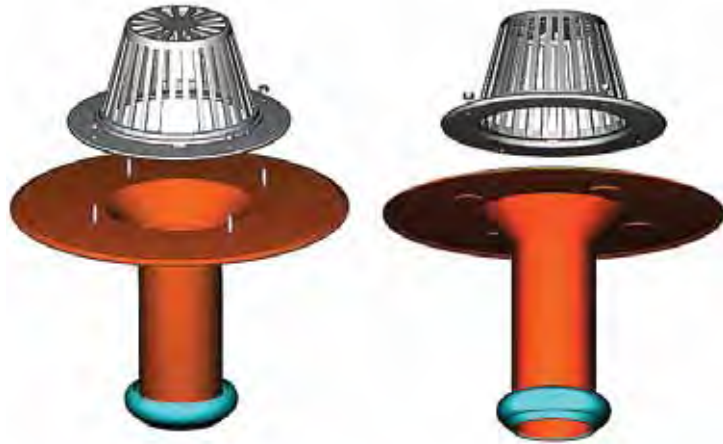
BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-38A-RR-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.
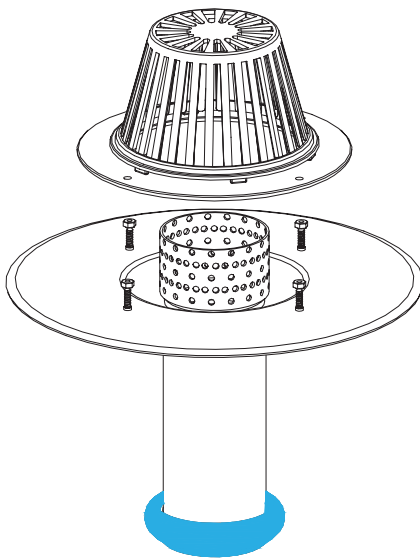
Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.
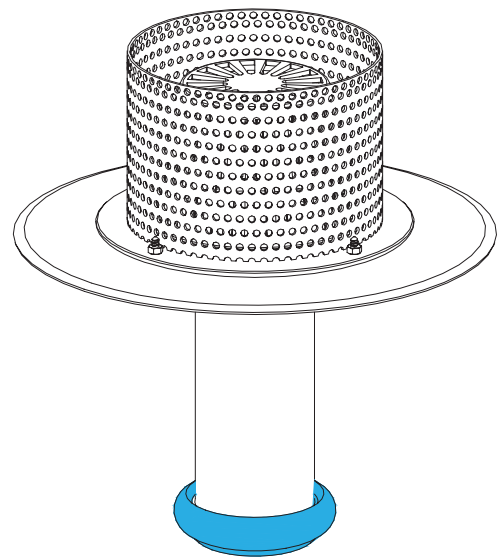
**Underside of Deck Flange
Showing Funnel Outlet**

**View Showing Optional T-7 Flow
Control Accessory**

**Exploded View Showing Optional
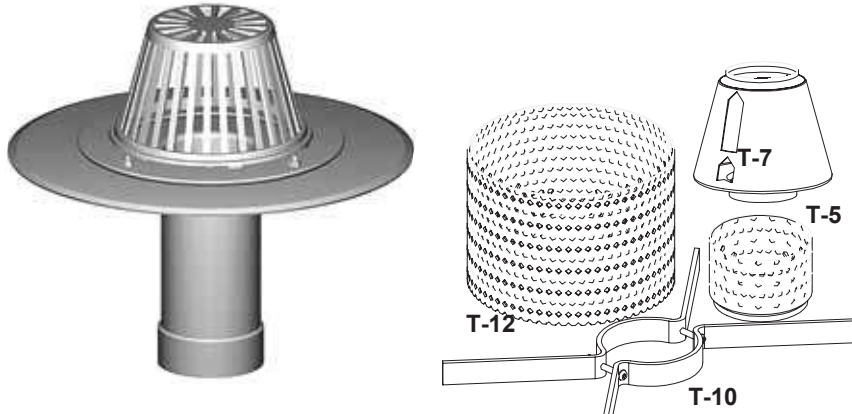T-5 Sediment Collar Accessory**

**View Showing Optional T-12 Ballast
Guard Friction Fitted to Dome Strainer**

**Material Specification for RD-38C-RR (Copper) and RD-38SS-RR (Stainless Steel) Roof Drains (RD-38A-RR Illustrated on page M-27)
Note: In Short Form specification on front side of sheet, edit clause to reflect choice of copper
(RD-38C-RR) or stainless steel (RD-38SS-RR) roof drain in lieu of aluminum if desired.**

Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-7 Flow Control	T-12 Ballast Guard
RD-38A-RR	Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Stainless Steel
RD-38C-RR	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.831 mm) pipe: DWV 0.058" (1.47mm)	Copper	Copper or Painted Aluminum	Stainless Steel
RD-38SS-RR	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: 304 L 0.12" (3mm)	Aluminum	Painted Aluminum or Stainless Steel	Stainless Steel

T-7

T-5

T-12

T-10

Note Specify accessories required by adding appropriate suffix to model number e.g. RD-39A-T-5 for sediment collar, T-6 for ferrule, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for stainless steel ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

15" (381 mm)

41/2" (114 mm)

FOUR 1/4" (6 mm) MOUNTING BOLTS WELDED TO FOUR UNDERBODY REINFORCEMENT DISCS 1.5" (38 mm)

CONVENTIONAL ROOF ILLUSTRATED (BUR)

9" (229 mm) STANDARD

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

0.064" (1.6 mm) ALUMINUM DRAIN BODY

T-6 ALUMINUM FERRULE

MECHANICAL CONNECTION (BY OTHERS)

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

STAINLESS STEEL CLAMP

CONCRETE DECK

STEEL DECK

DESCRIPTION:
The Thaler RD-39A Economy Roof Drain consists of a cast aluminum strainer, aluminum deck flange, and straight seamless aluminum outlet fitted with a aluminum ferrule.

PROMINENT FEATURES:
Removable dome strainer eliminates improper strainer installation or lost strainers that can result in plugged drains.

LEADER DIAMETERS:
Suitable for 2" (51 mm) to 6" (152 mm) leader sizes.

OPTIONS:
T-5 aluminum sediment collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose drain for flat roofs employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-39A drain for [2" to 6" (51mm to 152 mm)] leader size, with: removable cast aluminum strainer and clamping ring; .064" (1.6 mm) deck flange and straight outlet fitted with aluminum ferrule; [T-5 aluminum sediment collar] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

RD-39A ECONOMY ROOF DRAIN (Aluminum, Straight Outlet)
RD-39C ECONOMY ROOF DRAIN (Copper, Straight Outlet)
RD-39SS ECONOMY ROOF DRAIN (Stainless Steel, Straight Outlet)
Note: RD-39C (Copper) and RD-39SS (Stainless Steel) similar.
See reverse side of page for material changes.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-39A roof drain is installed by fitting and connecting the drain outlet into the rainwater leader, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-39A-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

RD-39C Copper Roof Drain

**Underside of deck Flange
Showing Straight Outlet**

**RD-39SS Stainless Steel Roof
Drain**

**Exploded View Showing
Optional T-5 Sediment Collar
Accessory**

**View Showing Optional T-7
Flow Control Accessory**

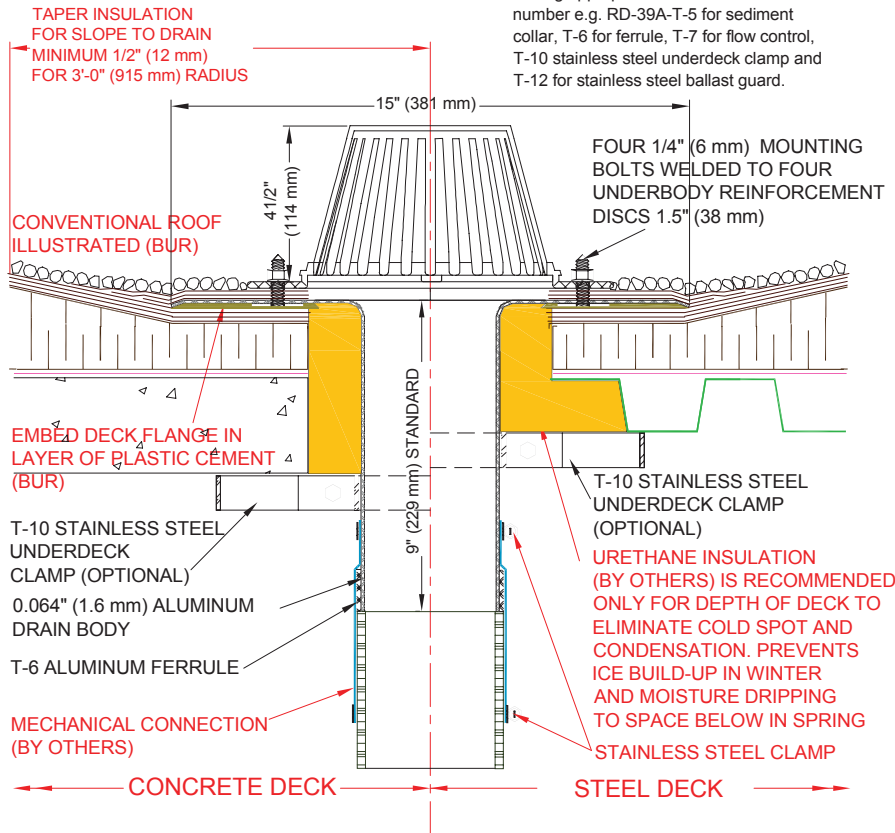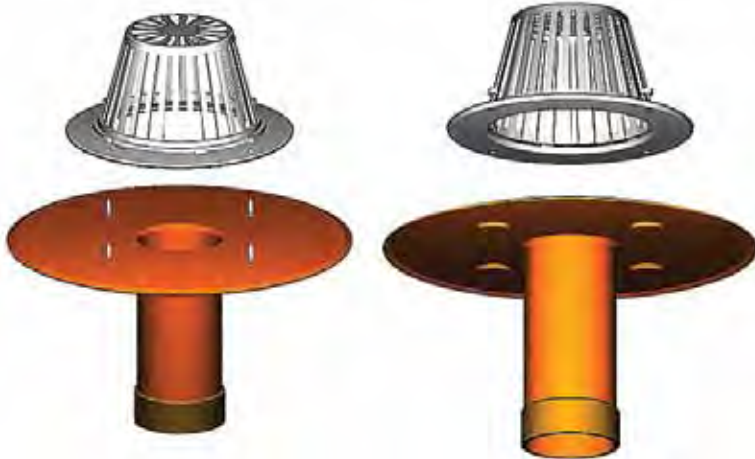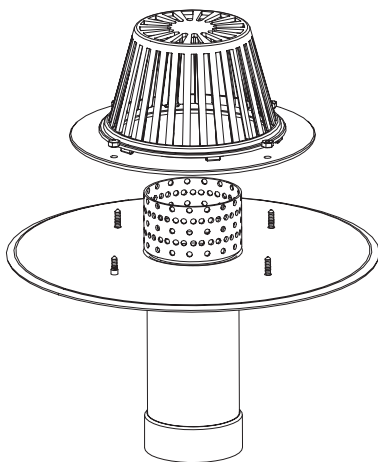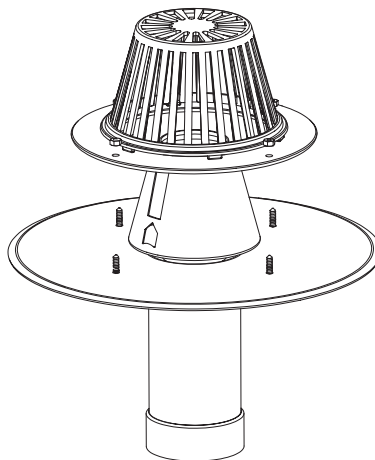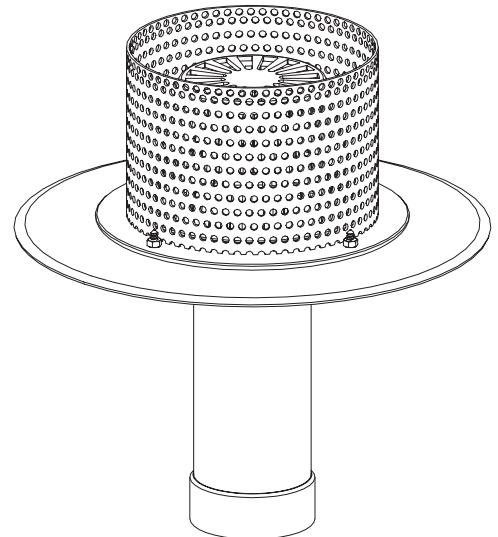**View Showing Ballast Guard
Friction Fitted to Dome Strainer**

Material Specification for RD-39C (Copper) and RD-39SS (Stainless Steel) Roof Drains (RD-39A Aluminum Illustrated on page M-28)
Note: In Short Form specification on front side of sheet, edit clause to reflect choice of copper
(RD-39C) or stainless steel (RD-39SS) roof drain in lieu of aluminum if desired.

Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-6 Ferrule	T-7 Flow Control	T-12 Ballast Guard
RD-39A	Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-39C	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.831 mm) pipe: DWV 0.058" (1.47mm)	Copper	Brass	Copper or Painted Aluminum	Stainless Steel
RD-39SS	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: Type 304 0.12" (3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

T-12

T-7

T-5

Note Specify accessories required by adding appropriate suffix to model number e.g. RD-39A-RR-T-5 for sediment collar, T-6 for ferrule, T-7 for flow control, T-10 stainless steel underdeck clamp and T-12 for stainless steel ballast guard.

TAPER INSULATION FOR SLOPE TO DRAIN MINIMUM 1/2" (12 mm) FOR 3'-0" (915 mm) RADIUS

15" (381 mm)

CAST ALUMINUM STRAINER

CONVENTIONAL ROOF ILLUSTRATED (BUR)

4 1/2" (114 mm)

FOUR 1/4" (6 mm) MOUNTING BOLTS WWELDED TO FOUR UNDERBODY REINFORCEMENT DISCS 1.5" (38 mm)

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

9" (229 mm) STANDARD

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

0.064" (1.6 mm) ALUMINUM OUTLET

EPDM SUPER-SEAL

EXISTING RAINWATER LEADER

T-10 STAINLESS STEEL UNDERDECK CLAMP (OPTIONAL)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED ONLY FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING

CONCRETE DECK

STEEL DECK

RD-39A-RR ECONOMY ROOF DRAIN (Aluminum, Straight Outlet, Retrofit)
RD-39C-RR ECONOMY ROOF DRAIN (Copper, Straight Outlet, Retrofit)
RD-39SS-RR ECONOMY ROOF DRAIN (Stainless Steel, Straight Outlet, Retrofit)
Note: RD-39C-RR (Copper) and RD-39SS-RR (Stainless Steel) similar.
See reverse side of page for material changes.

DESCRIPTION:
The Thaler RD-39A-RR Economy Retrofit Roof Drain consists of a removable cast aluminum strainer, aluminum deck flange, and straight seamless aluminum outlet fitted with a patented EPDM sealing ring (Thaler Super-Seal). The Super Seal provides a superior seal in the event or pipes become clogged (see Thaler Super-Seal Retrofit Drain Seal literature).

PROMINENT FEATURES:
Provides best value for least cost when retrofitting existing drains; super seal ring permits faster, cheaper installation than other comparably priced drains while providing an extremely reliable seal.

LEADER DIAMETERS:
1-3/4", 2-3/4", 3-3/4", 4-3/4", and 5-3/4" (44 mm, 70 mm, 95 mm, 121 mm and 146 mm)

OPTIONS:
T-5 aluminum sediment collar. T-7 aluminum Flow Control accessory (weir) for utilizing roof as temporary reservoir during excessive rainfall. T-10 stainless steel underdeck clamp. T-12 stainless steel ballast guard. See Thaler Roof Drain Options literature. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:
All purpose retrofit economy drain for flat roofs, employing conventional roof membrane applications (without ballast guard) or inverted roof membrane applications (with ballast guard). Suitable for PVC, cast iron, steel, copper, or other type leaders.

APPROVALS:
Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:
20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:
No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed from both around and inside the strainer.

SPECIFICATION (SHORT FORM):
Roof drains: Thaler RD-39A-RR drain for [2" to 6" (51 mm to152 mm)] leader size, with: removable cast aluminum strainer and clamping ring; .064" (1.6 mm) deck flange and straight outlet fitted with Super-Seal EPDM sealing ring; [T-5 aluminum sediment collar] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange]; manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufacturer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:
"Installation Instructions" are provided with every Thaler product. Essentially, the RD-39A-RR roof drain is installed by fitting the drain outlet into the rainwater leader, slowly rotating and pushing down into position, installing the dome strainer (including any optional accessories), and as follows:

BUR: Set drain flange over membrane in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

ModBit: Torch membrane until bitumen is fluid and set drain flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer.

Single Ply: Set drain flange in layer of membrane adhesive before applying membrane over flange. Note: for PVC membrane, specify PVC coated drain flange by adding suffix P to end of model number, e.g. RD-38A-RR-P; weld roofing to drain flange using PVC torch.

Precautions: If coating drain flange with a bituminous paint on site, allow 24 hours for drying before applying roof membrane.

Ordering and Availability: Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

RD-39C Copper Roof Drain

Underside of Deck Flange Showing Straight Outlet

RD-39SS Stainless Steel Roof Drain

Exploded View Showing Optional T-5 Sediment Collar Accessory

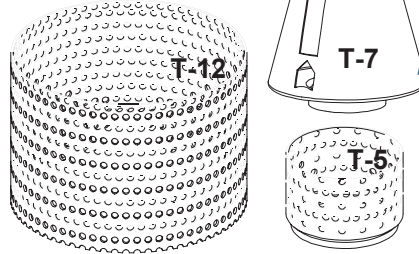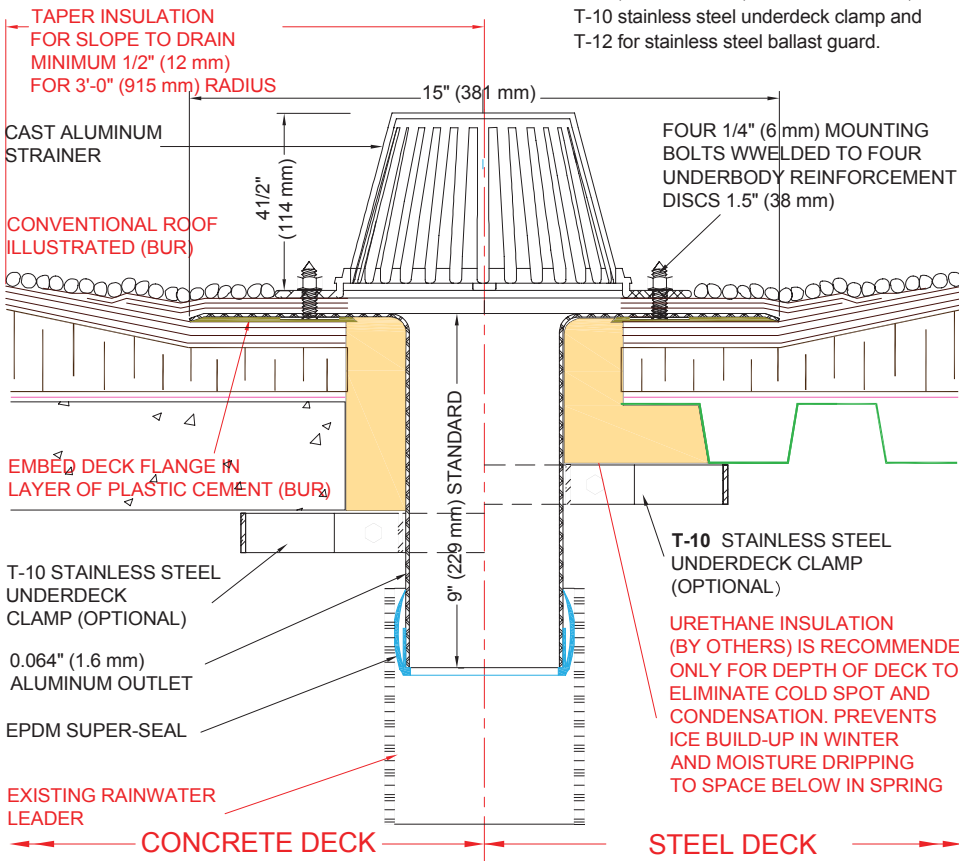**View Showing Optional T-7 Flow Control Accessory**

View Showing Ballast Guard Friction Fitted to Dome Strainer
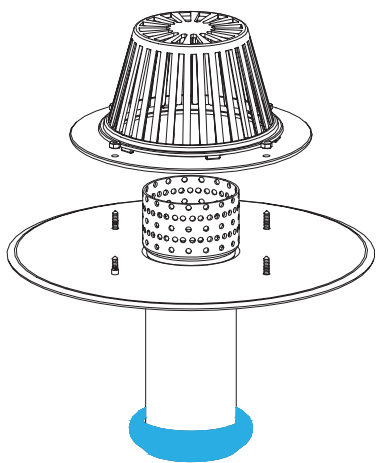
Material Specification for RD-39C (Copper) and RD-39SS (Stainless Steel) Roof Drains (RD-39A Aluminum Illustrated on page M-28)
Note: In Short Form specification on front side of sheet, edit clause to reflect choice of copper
(RD-39C) or stainless steel (RD-39SS) roof drain in lieu of aluminum if desired.

Drain Type	Strainer	Underdeck Clamp	Drain Body and Base	T-5 Sediment Collar	T-6 Ferrule	T-7 Flow Control	T-12 Ballast Guard
RD-39A	Cast Aluminum	Stainless Steel	Aluminum 0.064" (1.6 mm)	Aluminum	Aluminum	Aluminum	Stainless Steel
RD-39C	Cast Aluminum	Stainless Steel	Copper base: 24 oz. 0.032" (0.831 mm) pipe: DWV 0.058" (1.47mm)	Copper	Brass	Copper or Painted Aluminum	Stainless Steel
RD-39SS	Cast Aluminum	Stainless Steel	Stainless Steel base: 22 Ga. (0.8mm) pipe: Type 304 0.12" (3mm)	Stainless Steel	Stainless Steel	Painted Aluminum or Stainless Steel	Stainless Steel

DD-1A TERRACE DECK DRAIN (ALUMINUM)

PAVER DRAINAGE SLOTS

PAVER PEDESTAL

PAVERS

ALUMINUM LOWER DRAIN PLATE

1/4" (6 mm) THICK CAST ALUMINUM DECK DRAIN STRAINER/ COVER PLATE

FOUR COUNTERSUNK FLAT HEAD SCREWS

4" (102 m)

10" (254 mm) OR VARIABLE

0.064" (1.6 mm) ALUMINUM DRAIN BODY AND OUTLET

ALUMINUM FERRULE (OPTIONAL)

RAINWATER LEADER

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

URETHANE INSULATION (BY OTHERS) IS RECOMMENDED FOR DEPTH OF DECK TO ELIMINATE COLD SPOT AND CONDENSATION. (PREVENTS ICE BUILD-UP IN WINTER AND MOISTURE DRIPPING TO SPACE BELOW IN SPRING)

CLIT ROOF MEMBRANE ± 1" (25 mm) AROUND INSIDE OF DRAIN AND SECURE WITH DRAIN STRAINER PLATE

LARGE SCALE DETAIL

DD-1C TERRACE DECK DRAIN (COPPER)

Stainless Steel Screws

Cast Aluminum Strainer Cover

Copper Lower Ring

Brass Ferrule

24 oz. 032" (0.831 mm) Copper Deck Flange and Outlet

DESCRIPTION:

The Thaler DD-1A Terrace Deck Drain consists of a cast aluminum cover strainer/plate, aluminum lower ring, cover plate retaining screws, aluminum funnel type outlet (with aluminum ferrule), and deck flange.

LEADER DIAMETERS:

Suitable for 2" and 3" (51 mm and 76 mm) leader sizes, or 4" (102 mm) on special order.

OPTIONS:

DD-1 C copper drain. PVC coated deck flange for PVC roof membrane. Bituminous painted deck flange for BUR and ModBit roof membrane.

RECOMMENDED USE:

All purpose drain for terrace roofs in new construction applications with pavers, or floors (see reverse side of page).

APPROVALS:

Conforms to ANSI A112.21.2 Roof Drains standard.

WARRANTY:

20 year warranty against defects in materials and/or manufacture when installed in accordance with Thaler "Installation Instructions". Copy of Warranty Certificate available upon request.

MAINTENANCE:

No maintenance required (maintenance free), however, as per CRCA/NRCA recommendations, drains should be inspected twice a year (spring and fall) and any debris removed.

SPECIFICATION (SHORT FORM):

[Roof][Floor] drains: Thaler [DD-1A drain][DD-1C drain] for [2" (51 mm) 3" (76 mm)] [4" (102 mm)] leader size; with: 1/4" (6 mm) cast aluminum cover strainer, lower drain plate; [.064" (1.6 mm) funnel type aluminum drain body, deck flange and straight aluminum outlet with aluminum ferrule] [24 oz. funnel type drain body, deck flange and straight copper outlet with brass ferrule;] four 1/4" (6 mm) s.s. screws; manufactured by Thaler Metal Industries, 1-800-387-7217 Mississa- uga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX), installed as per manufac-turer's written instructions. Provide standard 20 year warranty against defects in materials and/or manufacture.

INSTALLATION:

"Installation Instructions" are provided with every Thaler product. Essentially, the DD-1A or DD-1C roof drain is installed by fitting and connecting the drain outlet to the rainwater leader, applying the membrane over the drain deck flange and into the drain body minimum 1" (25 mm), installing the strainer cover and bolting into lower drain plate, and as follows:

ORDERING:

Available throughout North America. Contact Thaler for list of distributors and current cost information. Most products are readily available from stock.

Stainless Steel Bolts

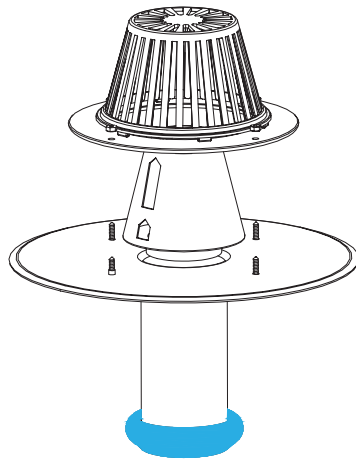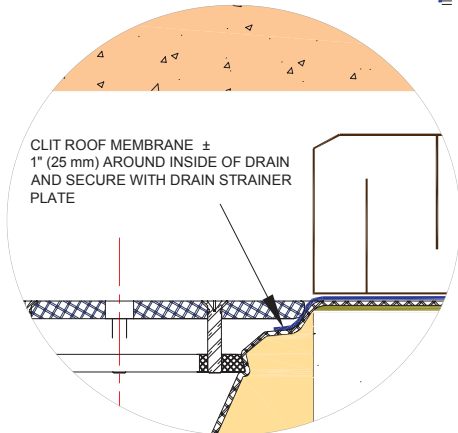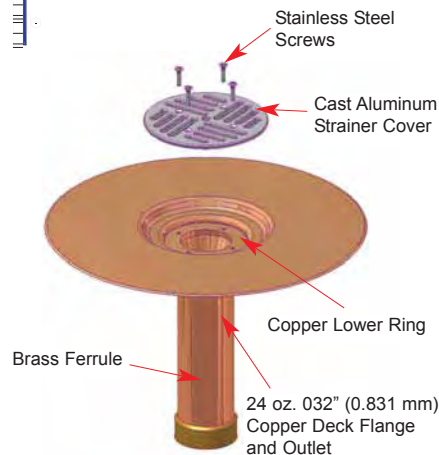Cast Aluminum Cover

DD-1AF Aluminum or DD-1CF Copper deck flange and funnel-type outlet

PLAN VIEW

FLOOR TILE

1-1/2" (38 mm)

7" (178 mm)
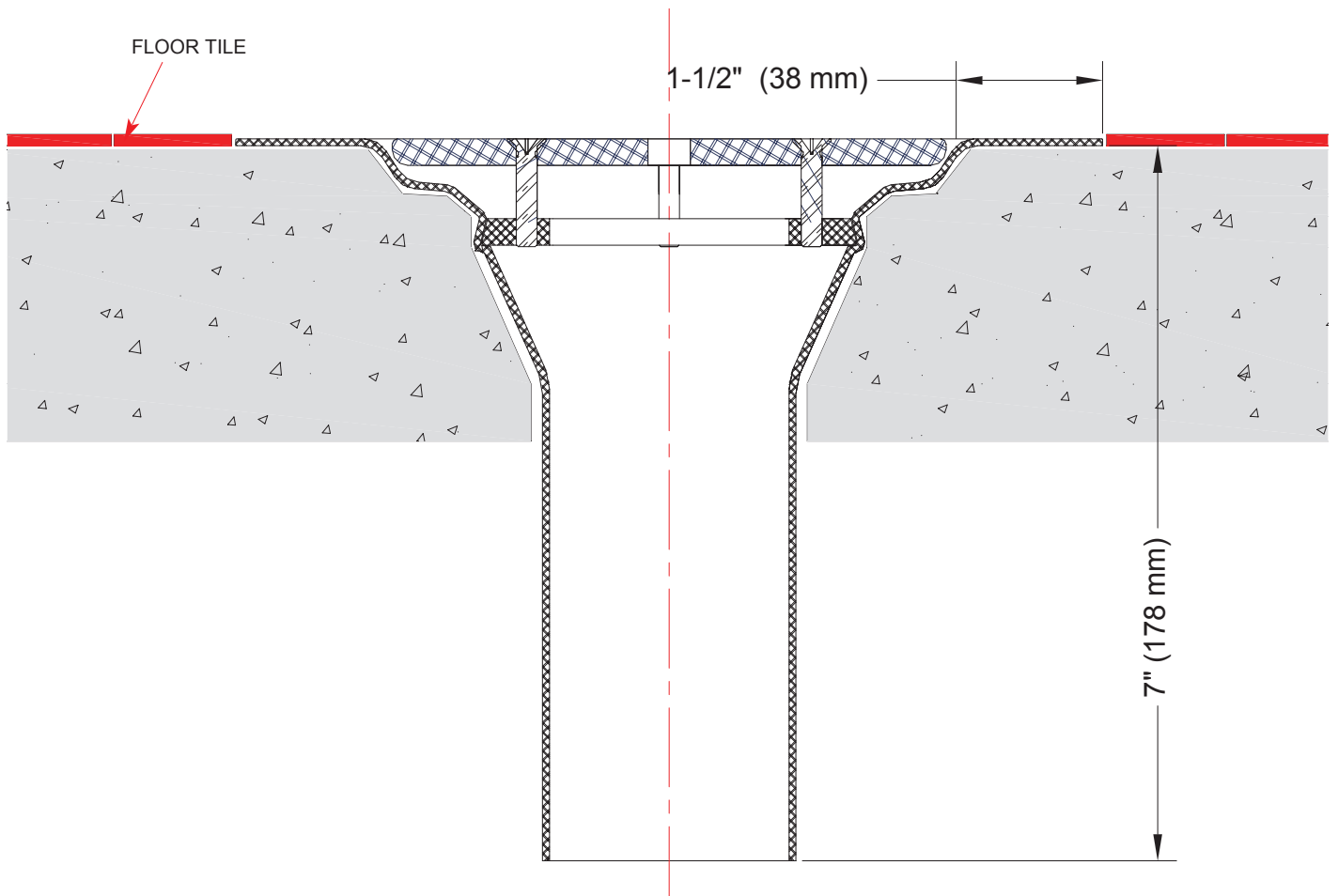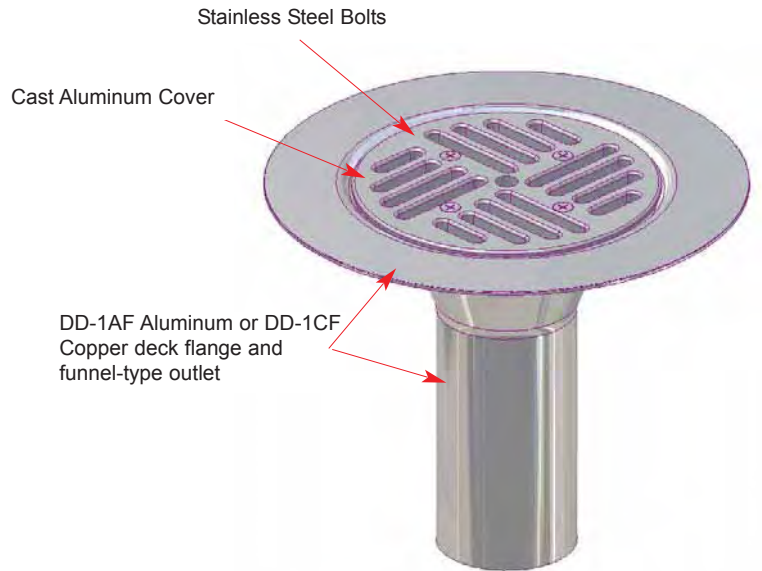
DD-1AF ALUMINUM FLOOR DRAIN / DD-1CF COPPER FLOOR DRAIN

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
HYDROSTATIC TEST RESULTS FOR THALER RETROFIT ROOF DRAIN WITH SUPER-SEAL RING GASKET

INTRODUCTION

A number of mocked-up roof drain assemblies equipped with the Thaler Super-Seal EPDM sealing ring gasket were tested to establish at what pressure water bypassed the installed Super-Seal ring. Each of the mock-up samples consisted of:
- a 12" (305 mm) long steel "drain pipe leader" with a flat plate welded onto the bottom of the pipe.
- a 9" (229 mm) long copper "drain outlet pipe" with the top capped with a copper plate equipped with two nipples soldered to the plate (one nipple for introducing air pressure and the other nipple to monitor the supplied pressure). The bottom of the "outlet" was fitted with the Thaler Super-Seal EPDM sealing ring.

PROCEDURE

Each "leader" was filled with water to a level 1/2" (12 mm) below the top edge of the "leader".

The copper "drain outlet" with silicone lubricated Super-Seal ring was then inserted into the steel "leader" and secured using a threaded rod attached to the top and bottom plates to prevent the two components from separating during testing.

Air pressure was applied using a regulated electric air pump or regulated shop service, as required. Pressure was monitored using a calibrated 0" to 200" H_2O Merical digital manometer or calibrated Matheson 0 to 30 psi gauge, as required. Air pressure was slowly introduced into each assembly until visible water leakage was noted around the Super-Seal EPDM sealing ring. The pressure at which leakage was observed was then noted. The results are shown in the chart below.

HYDROSTATIC TEST RESULTS*

Nominal Size Steel Drain Pipe Leader	Steel "Drain Pipe Leader" I.D.	Copper "Drain Outlet" Pipe O.D.	** Maximum Applied Pressure at Which Leakage Occurred		
2" (51 mm)	1.97" (50 mm) Sched 80	1.37" (34.8 mm)	2.67 psi (18.40 kPa)	74" H_2O (1880 mm)	384 psf (18.40 kPa)
	2.06" (52.3 mm) Sched 40		1.55 psi (10.69 kPa)	43" H_2O (1093 mm)	223 psf (10.63 kPa)
3" (76 mm)	2.92" (74.2 mm) Sched 80	2.35" (59.7 mm)	3.28 psi (22.61 kPa)	91" H_2O (2311 mm)	472 psf (22.6 kPa)
	3.070" (78 mm) Sched 40		2.78 psi (19.17 kPa)	77" H_2O (1956 mm)	400 psf (19.15 kPa)
4" (102 mm)	3.84" (97.5 mm) Sched 80	3.32" (84.3 mm)	2.75 psi (18.96 kPa)	76.1" H_2O (1933 mm)	396 psf (18.96 kPa)
	4.04" (102.6 mm) Sched 40		1.10 psi (7.58 kPa)	30.5" H_2O (775 mm)	158 psf (7.57 kPa)
5" (127 mm)	4.875" (124 mm) Sched 80	4.34" (110 mm)	30 psi (206.84 kPa)	830" H_2O (21 082 mm)	4320 psf (206.84 kPa)
	5.084" (129 mm) Sched 40		1.84 psi (12.68 kPa)	51" H_2O (1295 mm)	265 psf (12.69 kPa)
6" (152 mm)	5.743" (146 mm) Sched 80	5.258" (134 mm)	20 psi (137.89 kPa)	553" H_2O (14 046 mm)	2880 psf (137.89 kPa)
	6.050" (154 mm) Sched 40		1.37 psi (9.44 kPa)	38" H_2O (965 mm)	197psf (9.44 kPa)

See reverse side of page for additional Illustrations

* Test performed by ITS (Intertek Testing Services), Mississauga, Ontario, Canada. A copy of the actual test report is available from Thaler upon request.

** A cubic foot (28.32 L) of water weighs approximately 62.4 lbs (28.3 Kg). A one-inch (25 mm) high column of water exerts a pressure of 1/1728 of 62.4 (28.3 Kg) or .361 lbs (1.64 Kg) on one square inch (645 mm ^{2}).
On one square foot (0.0929 m²) the load is 1/12 of 62.4 (28.3 Kg) or 5.2 lbs (2.36 Kg). Stated another way, the measurement of a static head of 1" (25 mm) water column equals 5.2 psf or 0.036 psi (0.670 kPa or 0.248 kPa) pressure. The conversion factor for 1 inch of water (H_2O) column (20°C, 68°F) is 3 374.110 Pa or 3.374 110 kPa.

**Thaler Retrofit
Roof Drain With
Super-Seal Gasket**

EPDM
Pressure Plug

Stainless Steel
Nut and Washer

Super Seal
Gasket

1/2" (12.7 mm)

1" (25 mm)

Water Level

9" (229 mm) Long
Copper Pipe Section
(Simulated Drain Outlet)

Thaler Super-Seal
EPDM Ring Gasket
(Drain Outlet-To-Leader Seal)

Air Presuure
Supply Line

Line For Air
Pressure Monitor

Nipples

Copper Pipe Section
and Steel Pipe Section
Are Held Together
Using Threaded Rod
To Prevent Pipes From
Separating

Water Level

12" (305 mm) Long
Steel Pipe Section
(Simulated Existing
Drain Pipe or
Rainwater Leader)

Flat Plate Welded
To Bottom of "Leader"

TYPICAL TEST MOCK-UP SAMPLE OF DRAIN OUTLET-TO-LEADER SEAL

DRAIN DOWN TIME IN HOURS FOR FLAT ROOFS FOR VARIOUS HEADS OF WATER AND ROOF AREA

FLOW IN U.S. GPM (horizontal axis: 1–20)
HEAD INCHES OF WATER (vertical axis)

Head	2500	5000	7500	10,000 s
4.0"	11.0	21.9	32.8	43.9
3.9"	10.8	21.6	32.4	43.4
3.8"	10.8	21.4	32.0	42.7
3.7"	10.5	21.1	31.5	42.1
3.6"	10.3	20.5	30.6	41.0
3.5"	10.3	20.5	30.6	40.3
3.4"	10.0	20.2	29.7	39.7
3.3"	9.9	19.8	29.6	39.7
3.2"	9.7	19.5	28.6	39.6
3.1"	9.5	18.7	28.2	37.7
3.0"	9.1	18.5	27.6	37.0
2.9"	9.0	18.2	27.0	36.2
2.8"	8.8	17.8	26.4	35.4
2.7"	8.6	17.2	26.0	34.6
2.6"	8.6	17.0	25.1	34.0
2.5"	8.3	16.5	24.6	33.0
2.4"	8.1	16.0	24.0	32.1
2.3"	7.9	15.8	23.2	31.1
2.2"	7.5	15.0	22.5	30.0
2.1"	7.4	14.6	21.8	29.0
2.0"	7.1	14.0	20.9	27.8
1.9"	6.8	13.4	20.0	26.7
1.8"	6.5	12.8	19.2	25.5
1.7"	6.2	11.5	17.3	23.0
1.6"	5.8	11.3	16.1	22.0
1.5"	5.5	10.7	14.9	20.0
1.4"	5.1	10.0	13.7	19.2
1.3"	4.7	9.2	12.2	18.2
1.2"	4.2	8.2	10.3	16.4
1.1"	3.7	7.2	9.1	12.2
1.0"	3.1	6.1	7.3	9.9
.9"	2.5	4.3	5.2	9.0
.8"	1.8	3.4	3.8	5.2
.7"	1.0	1.8	2.8	2.0
.6"	0.5	0.9	1.2	1.2

(Diagram labels)
Single Set of Two Holes

20 U.S. GPM	4"
15 U.S. GPM	3"
10 U.S. GPM	2"
5 U.S. GPM	1"
ROOF LEVEL	

FLOW CONTROL APPLICATION

The need to control or restrict the flow of rainwater was a result of rapid growth within city centres. Existing drainage systems were unable to cope with the increased flow created by new commercial developments.

To meet this increased demand the Thaler T-7 Flow Control (weir) accessory was developed.

With the use of this specialty designed T-7 Flow Control accessory the roof is utilized as a temporary rainwater reservoir, thus eliminating the need to upgrade existing municipal drainage systems. Rather than draining rainwater as fast as it falls, the T-7 Flow Control, which is pre-calibrated at the factory, holds water back on the roof temporarily and sufficiently for the drainage system to function normally, even under adverse rainfall conditions.

DRAIN SELECTION RAINFALL PROCEDURE FOR THALER FLOW CONTROLS

A Determine maximum rain fall per hour in locality of building.
B Determine total roof area to be drained.
C Calculate the total number of roof drains required for roof size (See local by-laws for maximum drain spacing).
D Calculate GPM per drain
E Specify GPM requirement on drawing.

Example: A 1" (25 mm) head of water on a 2500 square foot (232 square metre) roof will take approximately 3.7 hours to drain, based on the use of a single roof drain flowing at a rate of 5 U.S. GPM. The same head of water on a 10,000 square foot (929 square metre) roof, based on the use of one drain, flowing at a rate of 5 U.S. GPM, would take 14.4 hours to drain; alternatively, if using four drains on the larger roof, the drain down time would be 3.7 hours.

CAUTION: ENSURE STRUCTURE IS CAPABLE OF WITHSTANDING THE INCREASED LOADS (Head of Water).
Note: All calculations based on single set of two holes supplied with T-7 Flow Control accessory. A four hole accessory is available which provides twice the efficiency.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

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Note: This roof drains specification, with minor editing, has been written as a separate section of work. Alternatively, the appropriate clauses may be incorporated as part of a roofing specification.

PART 1: GENERAL

1.01   SECTION INCLUDES

A. Supply and installation of roof accessories, including:
    1. Roof drains.

1.02   RELATED SECTIONS

A. Section 07200 - Thermal Protection

Note: Urethane insulation air/vapour barrier protection is recommended for depth of deck where drains penetrate the roof deck, to eliminate cold spots and prevent ice build-up in winter and moisture dripping to space below in spring.

B. Section 07500 - Membrane Roofing

C. Section 15413 - Drainage Waste and Vent Piping - Cast Iron and Copper

D. Section 15414 - Drainage Waste and Vent Piping - Plastic

1.03   REFERENCES

[A. ANSI A112.21.2 - Roof Drains]

[B. CRCA (Canadian Roofing Contractor's Association)]

[C. NRCA (National Roofing Contractor's Association)]

[D. SPRI (Single Ply Roofing Institute)]

[E. CUFCA (Canadian Urethane Foam Contractor's Association) and CGSB-51-GP 46MP Manual for "Installers of Spray Polyurethane Foam Thermal Insulation" and ASTM C1029-90 "Spray Applied Rigid Cellular Polyurethane Thermal Insulation"]

1.04   SUBMITTALS

A. Manufacturer's descriptive literature for each product, including section or other type details.

B. Manufacturer's written installation instructions.

C. Shop drawings and samples, when required, in accordance with Section [01300]. Indicate drain size, type and location of tapered insulation sumps as applicable.

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

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1.05   QUALITY ASSURANCE

A. Roof accessories manufacturer to have minimum 5 years documented experience in the design and fabrication of roofing specialties and accessories.

1.06   SPECIAL WARRANTY

A. Warrant products installed under this section of work to be free of leaks and defects in materials and/or manufacture for a period of 20 years when installed in accordance with the manufactuer's written instructions.

PART 2: PRODUCTS

2.01   MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:
1. 20 year warranty against leaks and defects in materials and/or manufacture, as applicable;
2. compliance with ANSI A112.21.2 Roof Drains standard;
3. maintenance free design;
4. materials and sizes options, and thicknesses;
5. drain options available i.e. sediment collar, flow control accessory, treated deck flange, copper annealed expansion outlet, EPDM outlet-to-leader retrofit seal, stainless steel under-deck clamp, brass or aluminum ferrules;
6. availability of engineered flow chart data where required for metered drainage;
7. use of EPDM outlet-to-leader gasket for retrofit drains, as applicable;
8. written installation instructions.

2.02   GENERAL

A. This section to be read in conjunction with Sections [07_____] and [15_____].

2.03   MANUFACTURED UNITS

RD-1C Vandalproof Copper Roof Drain (All Purpose, Expansion Outlet)
A. Roof drains: Thaler RD-1C drain for [3" (76 mm)] [4" (102 mm)] [6" (152 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; 24 oz. .032" (0.813 mm) spun copper pan-formed drain body, deck flange and expansion outlet with: copper ferrule; 3/8" (9 mm) s.s. bolts welded to drain body; bronze stabilizer ring; cast aluminum underdeck clamping ring; [T-5 copper sediment collar;] [perforated 22 ga. (0.76 mm) s.s. ballast guard;] [T-7 aluminum flow control accessory;] [PVC coated deck flange] [bituminous painted deck flange].

RD-4A Vandalproof Aluminum Roof Drain (All Purpose, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-4C) or stainless steel (RD-4SS) roof drain in lieu of aluminum if desired.

B. Roof drains: Thaler RD-4A drain for [3" (76 mm)] [4" (102 mm)] [6" (152 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.3 mm) pan-formed aluminum drain body, deck flange and straight aluminum outlet with aluminum ferrule; 3/8" (9 mm) aluminum bolts welded to drain; cast aluminum stabilizer ring; cast aluminum under-deck clamping ring; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;][T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-4A-RR Vandalproof Aluminum Roof Drain (All Purpose, Straight Outlet, Retrofit)

Note: Edit specification clause to reflect choice of copper (RD-4C-RR) or stainless steel (RD-4SS-RR) roof drain in lieu of aluminum if desired.

C. Roof drains: Thaler RD-4A-RR drain for [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.3 mm) pan-formed aluminum drain body, deck flange and straight aluminum outlet with aluminum ferrule; 3/8" (9 mm) aluminum bolts welded to drain; cast aluminum stabilizer ring; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;] [T-9 Super-Seal EPDM sealing ring;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-4A-8 or 10 Vandalproof Big Aluminum Roof Drain (All Purpose, Straight Outlet, New Construction)

Note: Edit specification clause to reflect choice of copper (RD-4C-8 or RD-4C-10) or stainless steel (RD-4SS-8 or RD-4SS-10) roof drain in lieu of aluminum if desired.

D. Roof drains: Thaler [RD-4A-8] [RD-4A-10] big, aluminum roof drain for [8" (203 mm)] [10" (254 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.3 mm) pan-formed aluminum drain body, deck flange and straight aluminum outlet with aluminum ferrule; 3/8" (9 mm) aluminum bolts welded to drain; cast aluminum stabilizer ring; cast aluminum under-deck clamping ring; [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-4A-8-RR or 10 Vandalproof Big Aluminum Roof Drain (All Purpose, Straight Outlet, Retrofit)

Note: Edit specification clause to reflect choice of copper (RD-4C-RR-8 or RD-4C-RR-10) or stainless steel (RD-4SS-8-RR or RD-4SS-10-RR) roof drain in lieu of aluminum if desired.

E. Roof drains: Thaler [RD-4A-8-RR] [RD-4A-10-RR] big aluminum retrofit roof drain for [8" (203 mm)] [10" (254 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.3 mm) pan-formed aluminum drain body, deck flange and straight aluminum outlet with Emseal tape; 3/8" (9 mm) aluminum bolts welded to drain; cast aluminum stabilizer ring; cast aluminum under-deck clamping ring; [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

RD-7A Vandalproof Aluminum Roof Drain (All Purpose, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-7C) or stainless steel (RD-7SS) roof drain in lieu of aluminum if desired.

F. Roof drains: Thaler RD-7A aluminum drain for [2" to 8" (44 mm to 203 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.3 mm) aluminum funnel drain body, four 3/8" (9 mm) aluminum mounting bolts welded to underbody reinforcement discs, deck flange and straight aluminum outlet with [T-5 aluminum sediment collar;] [T-6 aluminum ferrule;] [T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;] [T-12 s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-7A-RR Vandalproof Aluminum Roof Drain (All Purpose, Straight Outlet, Retrofit)

Note: Edit specification clause to reflect choice of copper (RD-7C-RR) or stainless steel (RD-7SS-RR) roof drain in lieu of aluminum if desired.

G. Roof drains: Thaler RD-7A-RR aluminum drain for [1-3/4" to 7-3/4" (44 mm to 197 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate clamped directly to drain body; .090" (2.3 mm) aluminum round drain body, four 3/8" (3 mm) aluminum mounting bolts welded to underbody reinforcement discs, deck flange and straight aluminum outlet with [T-5 aluminum sediment collar;] [T-9 Super-Seal EPDM sealing ring;] [T-7 aluminum flow control accessory;][T-10 stainless steel under-deck clamp;] [T-12 s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-7A-8 Vandalproof Big Aluminum Roof Drain (All Purpose, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-7C-8) or stainless steel RD-7SS-8) roof drain in lieu of aluminum if desired.

H. Roof drains: Thaler RD-7A-8 aluminum big roof drain for 8" (203 mm) leader size; with: vandalproof cast aluminum dome with hinged access gate welded to cast aluminum ring; .090" (2.3 mm) aluminum drain body, deck flange and straight aluminum outlet with aluminum ferrule; six 3/8" (9 mm) aluminum bolts welded to underbody reinforcement discs; [T-5 aluminu sediment collar;] [T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-7A-8-RR Vandalproof Big Aluminum Roof Drain (All Purpose, Straight Outlet, Retrofit)

Note: Edit specification clause to reflect choice of copper (RD-7C-RR) or stainless steel (RD-7SS-RR) roof drain in lieu of aluminum if desired.

I. Roof drains: Thaler RD-7A-8-RR aluminum big re-roofing roof drain for 8" (203 mm) leader size; with: vandalproof cast aluminum dome with hinged access gate welded to cast aluminum ring; .090" (2.3mm) aluminum drain body, deck flange and straight aluminum outlet with EMSEAL tape; six 3/8" (9 mm) aluminum bolts welded to underbody reinforcement discs; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

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RD-14A Vandalproof Aluminum Roof Drain (All Purpose, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-14C) or stainless steel (RD-14SS) roof drain in lieu of aluminum if desired.

J.   Roof drains: Thaler RD-14A aluminum drain for [2" to 10" (51 mm to 254 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate welded to drain body; .090" (2.3 mm) spun aluminum flat drain body, deck flange and straight seamless aluminum outlet with [T-5 aluminum sediment collar;] [T-6 aluminum ferrule;] [T-10 stainless steel under-deck clamp;] [T-7 aluminum flow control accessory;] [T-12 stainless steel ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-14A-RR Vandalproof Aluminum Roof Drain (All Purpose, Low Spot Retrofit)

Note: Edit specification clause to reflect choice of copper (RD-14C-RR) or stainless steel (RD-14SS-RR) roof drain in lieu of aluminum if desired.

K. Roof drains: Thaler RD-14A-RR aluminum drain for [1-3/4" to 5-3/4" (44 mm to 146 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate welded to drain body; .090" (2.3 mm) spun aluminum flat drain body, deck flange and straight seamless aluminum outlet with [T-5 aluminum sediment collar;] [T-9 Super-Seal EPDM sealing ring;] [T-10 stainless steel under deck clamp;] [T-7 aluminum flow control accessory;] [T-12 stainless steel ballast guard;][PVC coated deck flange] [bituminous painted deck flange].

RD-16A Vandalproof Aluminum Roof Drain (All Purpose, Straight Offset Outlet)

Note: Edit specification clause to reflect choice of copper (RD-16C) or stainless steel (RD-16SS) roof drain in lieu of aluminum if desired.

L.   Roof drains: Thaler RD-16A aluminum drain for [2" to 8" (51 mm to 204 mm)] leader size; with: andalproof cast aluminum dome with hinged access gate welded to drain body; .090" (2.3 mm) aluminum drain body, deck flange and straight offset aluminum outlet with [T-5 aluminum sediment collar;] [T-6 aluminum ferrule;] [T-10 stainless steel under-deck clamp;] [T-7 aluminum flow control accessory;] [T-12 s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-16A-RR Vandalproof Aluminum Roof Drain (All Purpose, Low Spot Retrofit, Offset Outlet)

Note: Edit specification clause to reflect choice of copper (RD-16C-RR) or stainless steel (RD-16SS-RR) roof drain in lieu of aluminum if desired.

M. Roof drains: Thaler RD-16A-RR aluminum drain for [1-3/4" to 5-3/4" (44 mm to 146 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate welded to drain body; .090" (2.3 mm) aluminum flat drain body, deck flange and straight offset aluminum outlet with [T-5 aluminum sediment collar;] [T-9 Super-Seal EPDM sealing ring;] [T-10 stainless steel under-deck clamp;] [T-7 aluminum flow control accessory;] [T-12 s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

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RD-160A Vandlproof Aluminum Roof Drain (All Purpose, Straight Offset Outlet)

DD. Roof Drains: Thaler RD-160A Aluminum drain for [2" to 5" (51 mm to 127 mm)] leader size with: vandalproof cast aluminum dome with hinged access gate and clmping ring; .090" (2.3 mm) aluminum drain body, deck flange and straight offset outlet with, cast aluminum stabilizer ring, 3/8" (9 mm) aluminum bolts welded to drain body and stabilizer ring, [T-5 aluminum sediment collar;] [T-6 aluminum ferrule;] [T-10 stainless steel under-deck clamp;] [T-7 aluminum flow control accessory;] [T-12 s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange];

RD-19-SS Stainless Steel Roof Drain (for Promenade Decks or Terraces)

N. Roof drains: Thaler RD-19-SS drain for inverted roofs, for [2 (51mm) to 6" (152 mm)] leader size; with: 7-3/4" (197 mm) removable, square, linear slotted [cast aluminum] [bronze] grate; 22 ga. (0.8 mm) stainless steel drain body, 7-3/4" (197 mm) square x [specified height] with 1/4" (6 mm) or larger perforations throughout; deck flange; 0.12" (3 mm) stainless steel Type 304 straight out et with [T-6 stainless steel ferrule]; [PVC coated deck flange] [bituminous painted deck flange].

RD-19-SS-RR Stainless Steel Retrofit Roof Drain (for Promenade Decks or Terraces)

O. Roof drains: Thaler RD-19-SS-RR retrofit drain for inverted roofs, for [1-3/4" (44 mm) to 5-3/4" 146 mm)] leader size; with: 7-3/4" (197 mm) removable, square, linear slotted [cast aluminum] [bronze] grate; 22 ga. (0.8 mm) stainless steel drain body, 7-3/4" (197 mm) square x [specified height] with 1/4" (6 mm) or larger perforations throughout; deck flange; stainless steel straight outlet with [Super-Seal EPDM sealing ring]; [PVC coated deck flange] [bituminous painted deck flange].

RD-24A Vandalproof Aluminum Roof Drain (All Purpose, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-24C) or stainless steel (RD-24SS) roof drain in lieu of aluminum if desired.

P. Roof drains: Thaler RD-24A drain for conventional roofs, for [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate and clamping ring; 0.09" (2.3 mm) aluminum drain body, deck flange and straight aluminum outlet with aluminum ferrule; 3/8" (9 mm) aluminum bolts welded to underbody reinforcement discs; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp;] [T-12 stainless steel ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-24A-RR Vandalproof Retrofit Aluminum Roof Drain (All Purpose, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-24C-RR) or stainless steel (RD-24SS-RR) roof drain in lieu of aluminum if desired.

Q. Roof drains: Thaler RD-24A-RR drain for [1-3/4" to 5-3/4" (44 mm to 146 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate, four 3/8" (9 mm) mounting bolts welded to underbody reinforcement discs, 0.09" (2.3 mm) aluminum drain body, deck flange and straight aluminum outlet with EPDM Super-Seal; [T-5 aluminum sediment collar;] [T-6 aluminum ferrule;] [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp;] [T-12 stainless steel ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

RD-24A-8 or 10 Vandalproof Big Aluminum Roof Drain (All Purpose, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-24C-8 or RD-24C-10) or stainless steel (RD-24SS-8 or RD-24SS-10) roof drain in lieu of aluminum if desired.

R. Roof drains: Thaler [RD-24A-8] [RD-24A-10] drain for [8" (203 mm)] [10" (254 mm)] leader size with: vandalproof cast aluminum dome with hinged access gate welded to cast aluminum ring; .090" (2.3 mm) flat aluminum drain body; deck flange and straight aluminum outlet with aluminum ferrule; six 3/8" (9 mm) mounting bolts welded to underbody reinforcement discs; [T-10 stainless steel underdeck clamp;[T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-24A-RR-8 or 10 Vandalproof Big Aluminum Roof Drain (All Purpose, Retrofit, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-24C-RR-8 or RD-24C-RR-10) or stainless steel (RD-24SS-RR-8 or RD-24SS-RR-10) roof drain in lieu of aluminum if desired.

S. Roof drains: Thaler [RD-24A-RR-8] [RD-24A-RR-10] drain for [8" (203 mm)] [10" (254 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate welded to cast aluminum ring; .090" (2.4 mm) flat aluminum drain body, deck flange and straight aluminum outlet with Emseal tape; six 3/8" (9 mm) mounting bolts welded to underbody reinforcement discs; [T-10 stainless steel underdeck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-240A Vandlproof Aluminum Roof Drain (All Purpose, Straight Outlet)
EE. Roof Drains: Thaler RD-240A drain for conventional roofs, for [3" (76 mm)] [4" (102 mm)] [5" (127 mm)] [6" (152 mm)] leader size; with: vandalproof cast aluminum dome with hinged access gate and clmping ring; .09" (2.3 mm) aluminum drain body, deck flange and straight aluminum outlet [with] [without] T-6 aluminum ferrule; 3/8" (9 mm) aluminum bolts welded to reinforcement discs; [T-5 aluminum sediment collar]; [T-6 aluminum ferrule]; [T-7 flow control accessory]; [T-10 stainless steel underdeck clamp]; [T-12 stainless steel ballast guard]; [PVC coated deck flange] [bituminous painted deck flange];

RD-28A- Economy Aluminum Roof Drain (All Purpose, Funnel Outlet)

Note: Edit specification clause to reflect choice of copper (RD-28C) or stainless steel (RD-28SS) roof drain in lieu of aluminum if desired.

T. Roof drains: Thaler RD-28A drain for [2" to 6" (51 mm to 152 mm)] leader size; with: removable [PVC] [cast aluminum] strainer; perforated .064" (1.6 mm) aluminum gravel stop; .064" (1.6 mm) deck flange and funnel outlet fitted with aluminum ferrule; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;]

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

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RD-28A-RR Economy Retrofit Aluminum Roof Drain (All Purpose, Funnel Outlet)

Note: Edit specification clause to reflect choice of copper (RD-28C-RR or stainless steel (RD-28SS-RR) roof drain in lieu of aluminum if desired.

U. Roof drains: Thaler RD-28A-RR drain for [1-3/4" (44 mm)] [2-3/4" (70 mm)] [3-3/4" (95 mm)] [4-3/4" (121 mm)] [5-3/4" (146 mm)] leader size, with: removable [PVC] [cast aluminum] strainer; perforated .064" (1.6 mm) aluminum gravel stop; .064" (1.6 mm) deck flange and funnel outlet fitted with Super-Seal EPDM sealing ring; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-29A Economy Aluminum Roof Drain (All Purpose, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-29C) or stainless steel (RD-29SS) roof drain in lieu of aluminum if desired.

V. Roof drains: Thaler RD-29A drain for [2" to 6" (51 mm to 152 mm)] leader size; with: removable [PVC] [cast aluminum] strainer; perforated .064" (1.6 mm) aluminum gravel stop; .064" (1.6 mm) deck flange and straight outlet fitted with aluminum ferrule; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;] [T-12 perfo 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-29A-RR Economy Retrofit Aluminum Roof Drain (All Purpose, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-29C-RR) or stainless steel (RD-29SS-RR) roof drain in lieu of aluminum if desired.

W. Roof drains: Thaler RD-29A-RR drain for [1-3/4" to 5-3/4" (44 mm to 146 mm)] leader size; with: removable [PVC] [cast aluminum] strainer; perforated .064" (1.6 mm) aluminum gravel stop; .064" (1.6 mm) deck flange and straight outlet fitted with a Super-Seal EPDM sealing ring; [T-5 aluminum sediment collar;] [T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RDX30-A Economy Aluminum Roof Drain (All Purpose, Funnel Outlet)

Note: Edit specification clause to reflect choice of copper (RDX30-C) or stainless steel (RDX30-SS) roof drain in lieu of aluminum if desired.

X. Roof drains: Thaler RDX30-A drain for [2" to 6" (51 mm to 152 mm)] leader size; with: vandalproof cast aluminum strainer with integral gravel guard fins and 3/8" (9 mm) s.s. retaining bolt; strainer retainer/membrane compression unit; .064" (1.6 mm) spun aluminum compression unit; deck flange with funnel type straight outlet fitted with aluminum ferrule; [T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

ROOF SPECIALTIES
ROOF DRAIN
SPECIFICATION

M-41

RDX30-A-RR Economy Retrofit Aluminum Super-Seal Retrofit Roof Drain (All Purpose, Funnel Outlet)

Note: Edit specification clause to reflect choice of copper (RDX30-C-RR) or stainless steel (RDX30-SS-RR) roof drain in lieu of aluminum if desired.

Y. Roof drains: Thaler RDX30-A-RR drain for [1-3/4" to 5-3/4" (44 mm to 146 mm)] leader size; with: vandalproof cast aluminum strainer with integral gravel guard fins and 3/8" (9 mm) s.s. retaining bolt; strainer retainer/membrane compression unit; .064" (1.6 mm) spun aluminum compression unit; deck flange with funnel type straight outlet fitted with Super-Seal EPDM sealing ring; [T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-300A Economy Aluminum Roof Drain (Reccesed Body, Funnel Outlet)

Note: Edit specification clause to reflect choice of copper (RD-300C) or stainless steel (RD-300SS) roof drain in lieu of aluminum if desired.

YY. Roof drains: Thaler RDX300-A drain for [2" (51 mm)] to [6" (152 mm)] leader size, with: vandal-proof cast aluminum strainer with integral gravel guard fins and 3/8" (10 mm) s.s. retaining bolt; strainer retainer/membrane compression unit; .064" (1.6 mm) spun aluminum compression unit; deck flange with funnel type straight outlet fitted with aluminum ferrule; [T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange];

RD-38A Economy Aluminum Roof Drain (All Purpose, Funnel Outlet)

Note: Edit specification clause to reflect choice of copper (RD-38C) or stainless steel (RD-38SS) roof drain in lieu of aluminum if desired.

Z. Roof drains: Thaler RD-38A drain for [2" to 6" (51 mm to 152 mm)] leader size; with: removable cast aluminum strainer welded to clamping ring; .064" (1.6 mm) deck flange with funnel type straight outlet fitted with aluminum ferrule; [T-5 aluminum sediment collar][T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;] [T-12 perforated 22 ga. (0.76mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-38A-RR Economy Retrofit Aluminum Retrofit Roof Drain (All Purpose, Funnel Outlet)

Note: Edit specification clause to reflect choice of copper (RD-38C-RR) or stainless steel (RD-38SS-RR) roof drain in lieu of aluminum if desired.

AA. Roof drains: Thaler RD-38A-RR drain for [1-3/4" to 5-3/4" (44 mm to 146 mm)] leader size; with: removable cast aluminum strainer welded to clamping ring; .064" (1.6 mm) deck flange with funnel type straight outlet fitted with Super-Seal EPDM sealing ring; [T-5 aluminum sediment collar][T-7 aluminum flow control accessory;] [T-10 stainless steel under-deck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

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ROOF SPECIALTIES
ROOF DRAIN
SPECIFICATION

M-42

RD-39A Economy Aluminum Roof Drain (All Purpose, Funnel Outlet)

Note: Edit specification clause to reflect choice of copper (RD-39C) or stainless steel (RD-39SS) roof drain in lieu of aluminum if desired.

BB. Roof drains: Thaler RD-39A drain for [2" to 6" (51 mm to 152 mm)] leader size; with: removable cast aluminum strainer with clming ring; .064" (1.6 mm) deck flange with straight outlet fitted with aluminum ferrule; [T-5 aluminum sediment collar][T-7 aluminum flow control accessory;] [T-10 stainless steel underdeck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;] [PVC coated deck flange] [bituminous painted deck flange].

RD-39A-RR Economy Aluminum Retrofit Roof Drain (All Purpose, Straight Outlet)

Note: Edit specification clause to reflect choice of copper (RD-39C-RR) or stainless steel (RD-39SS-RR) roof drain in lieu of aluminum if desired.

AA.Roof drains: Thaler RD-39A-RR drain for [1-3/4" to 5-3/4" (44 mm to 146 mm)] leader size; with: removable cast aluminum strainer welded to clamping ring; .064" (1.6 mm) deck flange with traight outlet fitted with Super-Seal EPDM sealing ring; [T-5 aluminum sediment collar][T-7 aluminum flow control accessory;][T-10 stainless steel under-deck clamp;] [T-12 perforated 22 ga. (0.76 mm) s.s. ballast guard;][PVC coated deck flange] [bituminous painted deck flange].

DD-1A Aluminum Terrace Deck (or Floor) Drain

Note: Edit specification clause to reflect choice of copper (RD-40C) roof drain in lieu of aluminum if desired.

Thaler DD-1A drain for [3" (76 mm)] leader size, with: cast aluminum cover and stainless steel countersunk flat head screws; .064" (1.6 mm) aluminum deck flange with funnel type straight outlet; 1/4" (6 mm) lower aluminum ring to receive four screws.

PART 3: EXECUTION

3.01   EXAMINATION

A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

B.   Co-ordinate with Sections [07500] and [15000] prior to installation of drains.

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ROOF SPECIALTIES
ROOF DRAIN
SPECIFICATION

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3.02   INSTALLATION

1. Install roof drains in accordance with manufacturer's printed instructions.

BUR
2. Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

Modified Bitumen
3. Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Single Ply
4. Set deck flange in layer of membrane adhesive and extend single ply over flange and seal in accordance with membrane manufacturer's recommendations.

Note: For PVC membrane, specify PVC coated deck flange by adding suffix P to end of Thaler model number, e.g. RD-1-P; weld roofing to deck flange using PVC torch.

PVC Single Ply
5. Set deck flange in layer of membrane adhesive and extend single ply over flange. Weld roofing to deck flange using PVC torch

3.03   FIELD QUALITY CONTROL

A. Comply with the requirements of Section [01400 - Quality Control].

3.04   ADJUSTING

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

3.05   CLEANING

A. Clean manufactured units using materials and methods approved by manufacturer. Do not use cleaners or techniques which could impair performance of the roofing system.

End Of Section