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

1. Galvanized forged eye (TWA-1)
2. Stainless steel forged eye (TWA-11)

All stainless steel (TWA-11USS).

Prominent Features: Condensation free and maintenance free (does not need caulk; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by high $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 TWA models for different secemements.

RECOMMENDED USE: Suitizable for all low sloped flat tops as 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 TWA ECONO 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, MCA, OSHA, CAL OSHA, ASBC, AWS, and other references.

Thaler SJ-34 New Standard STACK JACK Flashing conforms to CSA 8272-93. See separate Thaler Fall Protection Systems 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 regularly 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: Without obligation, Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (Short Form): Fall arrest roof anchors: Thaler [TWA-1 with galvanized forged 1018 steel eye] [TWA-11 with Type 304 stainless steel forged eye] [TWA-11U with Type 304 stainless steel U bolt] ECONO roof anchor to [CSA 29.1-02] [OSHA 1910.66] [American Council IATSE Standards] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt, lock nut welded to base plate, and Type 304 ss. 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) undetector plate, lock washer and nut; [SJ-34, 71 (178 mm)] [SJ-35, 13" (330 mm)] high New-Standard STACK JACK Flashing of 0.032" (0.831 mm) 24 oz. aluminum with urethane insulated hollow aluminum with EPDM Flashing Seals literature). Condensation free and maintenance free (does not need caulk; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by high $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 TWA models for different secemements.

RECOMMENDED USE: Suitizable for all low sloped flat tops as 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 TWA ECONO 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, MCA, OSHA, CAL OSHA, ASBC, AWS, and other references.

Thaler SJ-34 New Standard STACK JACK Flashing conforms to CSA 8272-93. See separate Thaler Fall Protection Systems 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 regularly 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: Without obligation, Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (Short Form): Fall arrest roof anchors: Thaler [TWA-1 with galvanized forged 1018 steel eye] [TWA-11 with Type 304 stainless steel forged eye] [TWA-11U with Type 304 stainless steel U bolt] ECONO roof anchor to [CSA 29.1-02] [OSHA 1910.66] [American Council IATSE Standards] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt, lock nut welded to base plate, and Type 304 ss. 1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) undetector plate, lock washer and nut; [SJ-34, 71 (178 mm)] [SJ-35, 13" (330 mm)] high New-Standard STACK JACK Flashing of 0.032" (0.831 mm) 24 oz. aluminum with urethane insulated hollow aluminum with EPDM Flashing Seals literature). Condensation free and maintenance free (does not need caulk; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by high $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 TWA models for different secemements.

RECOMMENDED USE: Suitizable for all low sloped flat tops as 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 TWA ECONO 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, MCA, OSHA, CAL OSHA, ASBC, AWS, and other references.

Thaler SJ-34 New Standard STACK JACK Flashing conforms to CSA 8272-93. See separate Thaler Fall Protection Systems 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 regularly 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: Without obligation, Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (Short Form): Fall arrest roof anchors: Thaler [TWA-1 with galvanized forged 1018 steel eye] [TWA-11 with Type 304 stainless steel forged eye] [TWA-11U with Type 304 stainless steel U bolt] ECONO roof anchor to [CSA 29.1-02] [OSHA 1910.66] [American Council IATSE Standards] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) 44W base plate; single 1" (25 mm) Type 304 s.s. bolt, lock nut welded to base plate, and Type 304 ss. 1-1/4" x 4" x 4" (6 mm x 102 mm x 102 mm) undetector plate, lock washer and nut; [SJ-34, 71 (178 mm)] [SJ-35, 13" (330 mm)] high New-Standard STACK JACK Flashing of 0.032" (0.831 mm) 24 oz. aluminum with urethane insulated hollow aluminum with EPDM Flashing Seals literature). Condensation free and maintenance free (does not need caulk; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by high $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 TWA models for different secemements.
TWA-2/-12/-12U (ECONO) FALL ARREST Roof Anchors (Adhesive Bolt)

DESCRIPTION
Thaler TWA ECONO adhesive bolt anchors consist of a urethane insulated hollow steel post (HSS) with base plate, secured to concrete roof slabs with adhesive bolts, and flashing sleeve. The top of the anchor is available with three different options:
1. Galvanized forged eye (TWA-2).
2. Stainless steel forged eye (TWA-12).

Prominent Features: Condensation free and maintenance free (attributes that need flashing never needs caulking; see Thaler EPDM Flashing Seals literature). Anchor integrity is backed by high $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 Mod Bitumen roof membrane. See other Thaler TWA ECONO models for different securements.

RECOMMENDED USE
Suitable for all low sloped 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 boilermakers chairs.

APPLICABLE STANDARDS
Thaler TWSLA 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, GML 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 Fall Protection Systems 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
Without obligation Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (Short Form)
Fall arrest roof anchors: Thaler [TWA-2 with galvanized forged 1018 steel eye] [TWA-12 with Type 304 stainless steel slot bolt] ECONO roof anchor to [CSA Z91-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 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, 7" (178 mm)] [SJ-35, 13" (330 mm)] high New-Standard STACK JACK Flashing of [0.054" (1.6 mm) mill finish 1100-0T alloy aluminum] [0.032" (0.831 mm) 24 oz. copper] [0.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93 with EPDM triple pressure grommet top seal and EPDM base plate bonded to metal sleeve. ECONO anchor to [CSA 291-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 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, 7" (178 mm)] [SJ-35, 13" (330 mm)] high New-Standard STACK JACK Flashing of [0.054" (1.6 mm) mill finish 1100-0T alloy aluminum] [0.032" (0.831 mm) 24 oz. copper] [0.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93 with EPDM triple pressure grommet top seal and EPDM base plate bonded to metal sleeve. ECONO anchor to [CSA 291-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 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, 7" (178 mm)] [SJ-35, 13" (330 mm)] high New-Standard STACK JACK Flashing of [0.054" (1.6 mm) mill finish 1100-0T alloy aluminum] [0.032" (0.831 mm) 24 oz. copper] [0.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93 with EPDM triple pressure grommet top seal and EPDM base plate bonded to metal sleeve. ECONO anchor to [CSA 291-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 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, 7" (178 mm)] [SJ-35, 13" (330 mm)] high New-Standard STACK JACK Flashing of [0.054" (1.6 mm) mill finish 1100-0T alloy aluminum] [0.032" (0.831 mm) 24 oz. copper] [0.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93 with EPDM triple pressure grommet top seal and EPDM base plate bonded to metal sleeve. ECONO anchor to [CSA 291-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 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, 7" (178 mm)] [SJ-35, 13" (330 mm)] high New-Standard STACK JACK Flashing of [0.054" (1.6 mm) mill finish 1100-0T alloy aluminum] [0.032" (0.831 mm) 24 oz. copper] [0.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93 with EPDM triple pressure grommet top seal and EPDM base plate bonded to metal sleeve. ECONO anchor to [CSA 291-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated hollow steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 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, 7" (178 mm)] [SJ-35, 13" (330 mm)] high New-Standard STACK JACK Flashing of [0.054" (1.6 mm) mill finish 1100-0T alloy aluminum] [0.032" (0.831 mm) 24 oz. copper] [0.031" (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93 with EPDM triple pressure grommet top seal and EPDM base plate bonded to metal sleeve.
**TWA-3/-13/-13U (ECONO) FALL ARREST ROOF ANCHORS**
(Bolt Around Beam)

**INSTALLATION**

*Installation Instructions* are provided with every Thaler product. Essentially, Thaler TWA-3/-13/-13U ECONO Fall Arrest Roof Anchors are installed by bolting the anchor around a structural beam as per Thaler layout drawings, using a maximum torque of 75 ft-lb (102 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.

**EPDM TRIPLE PRESSURE GROMMET TOP SEAL**: Manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-860-576-1200 (New Braunfels, TX), installed as per manufacturer’s written instructions. Provide 20 year warranty against leaks, condensation and defects in materials and/or manufacture 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 (excluding travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

**PLANNING SERVICE**

Without obligation Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes.

**SPECIFICATION**

Fall arrest roof anchor: Thaler TWA-3 with galvanized forged 1018 steel eye (TWA-3 with Type 304 stainless steel forged eye) TWA-13U with Type 304 stainless steel U Bolt eye) ECONO roof anchor to [CSA 29.1-02] [OSHA 1910.66, Subparts D and F] with urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia x 14 (356 mm) high welded to 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) 44W base plate; four 5/8" (16 mm) Type 304 stainless s.s. bolts and 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) under beam plate, lock washers, nuts, DEFORM THREADS as per CSA or OSHA GUIDELINE.

**DESCRIPTION**

Thaler TWA ECONO 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 options:

1. Galvanized forged eye (TWA-3).
2. Stainless steel forged eye (TWA-13).

All stainless steel (TWA-13SS).

**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.

**APPLICABLE STANDARDS**

Thaler TWA ECONO anchors conform to all Canadian and U.S. standards, provincial and state labor/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, MCA, OSHA, CAL OSHA, ARC, AWS, and other references.

**RECOMMENDED USE**

Suitable for all low sloped roofs as fall arrest anchors for securing workers’ Belts or the tying back of suspended access equipment such as outrigger beams and parapet wall clamps. Also suitable for suspension of boat hook chains.

**STACK JACK Flashing conforms to CSA B272-93. See separate Thaler Fall Protection Systems literature for specific data.**

**APPLICATIONS**

Fall protection for riggers beams and parapet wall clamps. Also suitable for fall protection for riggers beams and parapet wall clamps.
**FORGED EYE** (TWA-4/-14/14SS)

**STACK JACK FLASHING**
- SJ-34 7" (178 mm) HIGH
- SJ-35 13" (330 mm) HIGH

**Installation Notes:**
- 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.
- They include a urethane insulated hollow steel post (HSS) with base plate, welded to a steel beam, and flashing sleeve. The top of the anchor is available with the following options:
  1. Galvanized forged eye (TWA-4).
  2. Stainless steel forged eye (TWA-14).
  3. All stainless steel (TWA-14SS).

**Recommended Use:** Suitable for all low slope/flat roofs as fall arrest anchors for securing workers’ Retines (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 TWA ECONO anchors conform to all Canadian and U.S. standards, Provincial and State labor/safety codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, MCA, CSA, OSHA, CAL OSHA, AISC, AWS, and other references. Thaler TWA-34 and SJ-35 Standard STACK JACK Flashing conforms to CSA B272-93. See separate Thaler Fall Protection Systems literature for specific data.

**Warranty:** 20 year warranty (lifetime on all stainless steel) against leaks, condensation defects, and materials/manufacturer when installed in accordance with Thaler’s installation instructions. Copy of Warranty Certificate available upon request.

**Maintenance:** Regularly requires anchor 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:** Without obligation, Thaler will provide layout drawings for fall arrest roof anchors in compliance with applicable standards, safety regulations and local building codes.

**Specification (Short Form):** Fall arrest roof anchors: Thaler SRA-4 with galvanized forged 1018 steel eye (TWA-14 with Type 304 stainless steel forged eye) (TWA-14 with Type 304 stainless steel U bolt). ECONO roof anchor (CSA B272-93) with stainless steel U bolt eye (CSA B272-93) with epdm base seal bonded to metal sleeve eliminates condensation (see Thaler EPDM flashing seals literature).

**Thaler TWA ECONO Anchors:** Shown to illustrate use of gusset plates (by others) when required.
TWA-5/-15/-15U (ECONO) FALL ARREST ROOF ANCHORS (Cast-In-Place)

### Installation

"Installation Instructions" are provided with every Thaler product. Essentially, Thaler TWA-5/-15/-15U ECONO Fall Arrest Roof Anchors are installed by casting the anchor into structural concrete as per Thaler layout drawings, then placing the flashing sleeve over the anchor and roof membrane, and as follows:

1. Set flashing deck flange in lay of plastic cement and flash in with 3 overlapping layers of felt flashing.
2. ModBlt: Torch membrane until bitumen is fluid and set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
4. Thaler SJ-34 and SJ-35 New-Standard STACK JACK Flashing conforms to CSA B727-93. See separate Thaler Fall Protection Systems 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 fall restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

### Equipment

Thaler TWA ECONO 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, MVA, CSHA, CAL OSHA, ASBC, AWS, and other references. Thaler SJ-34 and SJ-35 New-Standard STACK JACK Flashing conforms to CSA B727-93. See separate Thaler Fall Protection Systems literature for specific data.

### Specification

- Fall arrest anchors: Thaler TWA-5 with galvanized forged 1018 steel eye (TWA-15 with Type 304 stainless steel forged eye) (TWA-15U with Type 304 stainless steel U bolt) ECONO roof anchor to [CSA Z91-02] [OSHA 1910.66, Subparts D and F] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) 44W base plate, 1" (25 mm) Type 304 s.s. bolt; [SJ-34, SJ-35, 7-1/2" (178 mm)] [SJ-35, 13" (330 mm)] ER BAR [SG-35, 14" (356 mm)] EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR) [MINIMUM 6" (152 mm)]
- Fits safely to all different types of Slovakia foundations. Fits safely to all different types of Slovakia foundations with three different options:
  - Prominent Feature: 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.
  -شكّل|TWA-5/-15/-15U (ECONO)

**RE BAR**

- 6" (152 mm) CONVENTIONAL ROOFING ILLUSTRATED (BUR)
- 1" (25 mm) TYPE 304 S.S. BOLT AND NUT WELDED TO BASE PLATE
- 3-1/2" (89 mm) dia. x 14" (356 mm) high U BOLT EYE (TWA-15U/-15USS)
- 1/4" x 3-1/2" DIA. (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 ANDE URETHANE INSULATED TO PREVENT CORROSION
- UTF-8
- UTF-8

**FORGED EYE** (TWA-5/15/15USS)

<table>
<thead>
<tr>
<th>Anchor Type</th>
<th>Eye Construction</th>
</tr>
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<tbody>
<tr>
<td>TWA-5</td>
<td>Galvanized Forged Eye</td>
</tr>
<tr>
<td>TWA-15U</td>
<td>Stainless Steel Forged Eye</td>
</tr>
<tr>
<td>TWA-15US</td>
<td>Stainless Steel U Bolt Eye</td>
</tr>
<tr>
<td>TWA-15</td>
<td>Forged Eye All Stainless Steel</td>
</tr>
<tr>
<td>TWA-15US</td>
<td>U-Bolt Eye All Stainless Steel</td>
</tr>
</tbody>
</table>

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.

**Installation Instructions** are provided with every Thaler product. Essentially, Thaler TWA-5/-15/-15U ECONO Fall Arrest Roof Anchors are installed by casting the anchor into structural concrete as per Thaler layout drawings, then placing the flashing sleeve over the anchor and roof membrane, and as follows:

1. **Installation Instructions** are provided with every Thaler product. Essentially, Thaler TWA-5/-15/-15U ECONO Fall Arrest Roof Anchors are installed by casting the anchor into structural concrete as per Thaler layout drawings, then placing the flashing sleeve over the anchor and roof membrane, and as follows:
   - Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
   - ModBlt: Torch membrane until bitumen is fluid and set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
   - Set flashing deck flange for PVC roof membrane.
   - Thaler SJ-34 and SJ-35 New-Standard STACK JACK Flashing conforms to CSA B727-93. See separate Thaler Fall Protection Systems 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 fall restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

### Equipment

Thaler TWA ECONO 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, MVA, CSHA, CAL OSHA, ASBC, AWS, and other references. Thaler SJ-34 and SJ-35 New-Standard STACK JACK Flashing conforms to CSA B727-93. See separate Thaler Fall Protection Systems literature for specific data.

### Specification

- Fall arrest anchors: Thaler TWA-5 with galvanized forged 1018 steel eye (TWA-15 with Type 304 stainless steel forged eye) (TWA-15U with Type 304 stainless steel U bolt) ECONO roof anchor to [CSA Z91-02] [OSHA 1910.66, Subparts D and F] with: urethane insulated, hollow, hot dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) 44W base plate, 1" (25 mm) Type 304 s.s. bolt; [SJ-34, SJ-35, 7-1/2" (178 mm)] [SJ-35, 13" (330 mm)] ER BAR [SG-35, 14" (356 mm)] EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR) [MINIMUM 6" (152 mm)]

Costs are readily available from stock. Note: The TWA-15 stainless steel forged eye anchor is 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 non-magnetic stainless steel.
Note: Anchors are designed to resist without fracture and/or pull-out a force of $400 lb (24.03 kN), applied in the most adverse direction.

STACK JACK FLAShING SJ-34 7" (178 mm) HIGH, SJ-35 13" (330 mm) HIGH

FORGED EYE (TWA-6/-16/16SS) Galvanized Forged Eye
TWA-6 Stainless Steel Forged Eye
TWA-16 Stainless Steel U Bolt Eye
TWA-16U Forged Eye All Stainless Steel
TWA-16SS U-Bolt Eye All Stainless Steel

FORGED COMBINATION EYE AND BASE, WELDED TO HSS PIPE AND HOT DIP GALVANIZED
1/4" x 3-1/2" DIA. (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

THALER SJ-35 NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)
INVERTED ROOFING ILLUSTRATED (BUR)

U BOLT EYE (TWA-16U/-16USs)

14" (356 mm) TOP CHORD OF OWSJ
THALER ST-S4 NEW-STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)
CONVENTIONAL ROOFING ILLUSTRATED (BUR)

EPDM TRIPLE PRESSURE GROMMET TOP SEAL
THALER SJ-34-NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)
CONVENTIONAL ROOFING ILLUSTRATED (BUR)

14" x 4" x 4" HSS (6 mm x 102 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 1/2 x 8" x 8" (12 mm x 203 mm x 203 mm)

DEFORM THREADS AS PER CSA OR OSHA

TWA-6/-16/-16U/ (Econo) FALL ARREST ROOF ANCHORS (Bolt Around OWSJ)

NOTE: REFER TO PAGE I-1-8 OF TWA ECONO ANCHORS (I-1 Section) FOR NON-STANDARD HEIGHT ANCHORS

INSTALLATION "Installation Instructions" are provided with every Thaler product. Essentially, Thaler TWA-6/-16/-16U ECONO Fall Arrest Roof Anchors are installed by boltting the anchor to the top cord of OWSJ as per layout drawings, using a maximum torque of 75 ft-lbf (102 Nm), reinforcing the base plates with cross tube 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 flashtape in 3 overlapping layers of felt flashing.
ModBit: Torch membrane until bitumen is fluid and set flashing flange into fluid. Flash in flute with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

Precautions: Apply an asphaltic or other type protective coating to both anchors for securing workers’ lifelines or the tying back of suspended access equipment such as outboard beams and parapet wall clamps. Also suitable for suspension of boatswain chairs.

APPLICATIONS Suitable for all low slope/fall roofs as fall arrest anchors for securing workers’ lifelines or the tying back of suspended access equipment such as outboard beams and parapet wall clamps. Also suitable for suspension of boatswain chairs.

APPLICABLE STANDARDS Thaler TWSLA anchors conform to all Canadian and U.S. standards, provincial and state laboratory codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OML, ASME, ANSI, MCA, OSHA, CAL OSHA, AISC, AWS, and other references. Thaler SJ-34 and SJ-35 New-Standard STACK JACK Flashing conforms to CSA B272-93. See separate Thaler Fall Protection Systems 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 inspect- ed annually with inspection data (date, inspector’s name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and other Suspended Access Maintenance Operations (including travel restraint). Apart from this require- ment, Thaler anchors require no maintenance (main- tenance free).

PLANNING SERVICE Without obligation Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (short Form) Fall arrest roof anchors: Thaler TWA-6 with galvanized forged Type 304 stainless steel forged eye (TWA-6 with Type 304 stainless steel forged eye) [TWA-16U with Type 304 stainless steel U bolt eye] ECONO roof anchor to [CSA 291-02] [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 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) 44V base plate 1/2" x 8" x 8" (12 mm x 203 mm x 203 mm) under- joist plate, 1/4" x 4" x 4" (12 mm x 102 mm x 102 mm) cross tube (by others) assembly; four 5/8" (16 mm) Type 304 s.s. bolts; [SJ-34, 7" (178 mm)] [SJ-35, 13" (330 mm)] high New-Standard STACK JACK Flashing conforms to [CSA B272-93, 1.6 mm] 

[OSHA 1100.7 alloy aluminum] [0.032 (0.813 mm) 24 oz. cappie] [0.031 (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 Jersey), installed as per manufacturer’s written instructions. Provide 20 year warranty against leaks, condensation and 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.

Stack Jack Flashing SJ-34 7" (178 mm) HIGH SJ-35 13" (330 mm) HIGH

FORGED EYE (TWA-7-17/17SS)

Anchor Type | Eye Construction
--- | ---
TWA-7 | Galvanized Forged Eye
TWA-17 | Stainless Steel Forged Eye
TWA-17U | Stainless Steel U Bolt Eye
TWA-17SS | Forged Eye All Stainless Steel
TWA-17USS | U-Bolt Eye All Stainless Steel

Note: Anchors are designed to resist without fracture and/or pull-out a force of 5400 lbs (24,05 KN), applied in the most adverse direction.

FORGED COMBINATION EYE AND BASE WELDED TO HSS PIPE AND HOT DIP GALVANIZED
1/4" x 3-1/2" DIA. (6 mm x 89 mm)
HSS WELDED TO 1/2" x 10" x 10" (12 mm x 254 mm x 254 mm))
BASE PLATE USING 5/16" (8 mm)
FILLET WELD, ALL HOT DIP GALVANIZED URETHANE INSULATED TO PREVENT CORROSION
THALER SJ-35 NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

INVERTED ROOFING ILLUSTRATED (BUR)

STACK JACK FLASHING SJ-34 7" (178 mm) HIGH

STACK JACK FLASHING SJ-35 13" (330 mm) HIGH

EMBED DECK FLANGE IN LAYER OF PLASTIC CEMENT (BUR)

TWO 3/4" (19 mm) TYPE 304 S.S.
BOLT, FLAT WASHER AND NUT

EPDM TRIPLE PRESSURE GROMMET TOP SEAL
THALER SJ-34 NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

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

THALER SJ-35 NEW STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)

FORGED EYE (TWA-7-17/17USS)

TWA-7-17/17U/ (ECONO) FALL ARREST ROOF ANCHORS (Pre-Cast Core Bolt)

NOTE: REFER TO PAGE I-1-8 OF TWA ECONO ANCHORS (I-1 Section) FOR NON-STANDARD HEIGHT ANCHORS

WARNING
20 year warranty (lifetime on all stainless steel) against leaks, condensation and defects in materials and/or manufacture when installed in accordance with fabricator guidelines. Thaler anchors require no maintenance (mainly applies to stainless steel and PTFE). Warranty available upon request.

MAINTENANCE
Regulatory authorities require anchors be inspected annually with inspection data (date, inspector's name and comments) recorded in the Fall Protection Maintenance Log Book for Window Cleaning and Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).

PLANNING SERVICE
Without obligation Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes.

SPECIFICATION (Short Form)
Fall arrest roof anchors: Thaler TWA-7 with galvanized forged 1/4" (6 mm) steel eye (TWA-17 with Type 304 stainless steel forged eye) (TWA-17U with Type 304 stainless steel U bolt) ECONO roof anchor to CSA 291-02 (Osha 1910.66. Sub parts D and F) with: urethane insulated, hot, dipped galvanized ASTM 500C steel post (HSS) 1/4" (6 mm) wall thickness x 3-1/2" (89 mm) dia. x 14" (356 mm) high welded to 1/2" x 10" x 10" (12 mm x 254 mm x 254 mm) 4/4 base plate, 3/4" (19 mm) Type 304 stainless steel bolts; two Type 304 stainless steel 1/4" x 4-1/2" x 4-1/2" (6 mm x 114 mm x 114 mm) core slab plates and nuts welded to bolts; SJ-34, 7" (178 mm) [SJ-35, 13" (330 mm)] High New Standard STACK JACK Flashing of [.064" (1.6 mm) mill finish stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and (bitumen painted deck flange) [PC coated deck flange]; manufactured by Thaler Metal Industries, 1-800-576-1200 (New Braunfels, TX), installed as per Thaler “Installation Instructions”. Copy of Warranty Certificate available upon request.

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 Other Suspended Access Maintenance Operations (including travel restraint). Apart from this requirement, Thaler anchors require no maintenance (maintenance free).
**FORGED EYE (TWA-1NS/-11NSS/11NSS)**

Anchor Type | Eye Construction |
---|---|
TWA-1NS | Galvanized Forged Eye |
TWA-11NS | Stainless Steel Forged Eye |
TWA-11NSS | Stainless Steel U Bolt Eye |
TWA-11NSU | Forged Eye All Stainless Steel |
TWA-11NSSU | U Bolt Eye All Stainless Steel |

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.

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**STACK JACK FLASHING SJ-34 7” (178 mm) HIGH**

- Embed deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.
- Lightweight concrete fill or sloped insulation.
- Structural concrete slab.
- Base plate and Type 304 stainless steel U Bolt eye.
- Deforate threads as per CSA or OSHA guideline (2 threads minimum).

**U BOLT EYE (TWA-11NSU/-11NSSU)**

- 1/4” x 4” x 4” (6 x 102 x 102 mm) stainless steel plate, lock washer and nut.
- Stainless steel weld nut welded to steel base plate.
- Stainless steel bolt and nut welded to steel base plate.
- Stainless Steel 1/2” Base Plate, lock washer and nut.

**DEFORM THREADS AS PER CSA OR OSHA GUIDELINE (2 THREADS MINIMUM)**

**FORGED EYE WELDED TO HSS AND HOT DIP GALVANIZED**

1/4” x 3-1/2” dia. (6 mm x 89 mm) 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 condensation.

**EPDM TRIPLE PRESSURE GROMMET TOP SEAL**

- Prominent Features: Condensation free and maintenance free (alpha roof flashing never needs caulking; see Thaler EPDM Flashing Seals literature).

**EPDM BASE SEAL BONDED TO METAL SLEEVE**

- Prominent Features: Condensation free and maintenance free (alpha roof flashing never needs caulking; see Thaler EPDM Flashing Seals literature).

**GROMMET TOP SEAL**

- Prominent Features: Condensation free and maintenance free (alpha roof flashing never needs caulking; see Thaler EPDM Flashing Seals literature).

**ELIMINATES CONDENSATION (SEE.jpg)**

**CONCRETE SLAB**

- Lightweight Fill or sloped insulation. Also suitable for suspension equipment such as outrigger beams and parapet wall clamps.

**BASE PLATE USING HSS WELDED TO 1/2” x 8” x 8” (12 mm x 203 mm x 203 mm) 44W base plate; 5/16” (8 mm) fillet weld, to prevent condensation. All hot dip galvanized and urethane insulated to prevent condensation.

**1/4” x 3-1/2” Dia. (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 condensation.

**20’ (6008 mm) STAINLESS STEEL PLATE, LOCK WASHER AND NUT**

**5/8” (16 mm) STAINLESS STEEL BOLT AND NUT WELDED TO STEEL BASE PLATE**

**THALER SJ-34 NEW-STANDARD STACK JACK FLASHING (ALUMINUM, COPPER OR STAINLESS STEEL)**

- Stack Jack Flashing of [0.064” (1.6 mm) mill finish aluminum] [0.032” (0.831 mm) 24 oz. Type 316 stainless steel] [0.031” (0.79 mm) 22 ga. Type 304 stainless steel] [0.032” (.83) mm 22 ga. Type 304 stainless steel] to CSA B272-93. See separate Thaler Fall Protection Systems 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**

- Without obligation Thaler will provide layout drawings for fall arrest roof anchors in compliance with all applicable standards, safety regulations and local building codes.

**SPECIFICATION (Short Form)**

- Fall arrest roof anchors: Thaler [TWA-1NS with galvanized forged eye (TWA-1NSU with Type 304 stainless steel forged eye); TWA-11NS with Type 304 stainless steel U bolt (ECONO) roof anchor to [CSA Z291-02] [OSHA 1910.66, Sub parts D and F] with: urethane insulated, hot-dipped galvanized ASTM 550C steel post (HSS) 1/4” (6 mm) wall thickness x 3-1/2” (89 mm) dia. x 20” (508 mm) high welded to 1/2” x 8” x 8” (12 mm x 203 mm x 203 mm) 44W base plate 5/8” (16 mm) Type 304 s.s. bolt, top nut welded to base plate and Type 304 s.s. 1/4” x 4” x 4” (6 x 102 mm x 102 mm) 1/2” (12 mm) dia. x 203 mm (8”) diameter underdeck plate, lock washer and nut, SJ-34, 7” (178 mm) high New Standard STACK JACK Flashing of [0.064” (1.6 mm) mill finish aluminum] [0.032” (.83) mm 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and [bitumen painted deck flange] [PC coated deck flange]; manufactured by Thaler Metal Industries. 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.

**TWA-1NS/-11NS/-11UNS/ (ECONO) FALL ARREST ROOF ANCHORS**

<table>
<thead>
<tr>
<th>Anchor Type</th>
<th>Eye Construction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA-1NS</td>
<td>Galvanized Forged Eye</td>
<td>Stainless Steel Forged Eye</td>
</tr>
<tr>
<td>TWA-11NS</td>
<td>Stainless Steel Forged Eye</td>
<td>Stainless Steel U Bolt Eye</td>
</tr>
<tr>
<td>TWA-11NSS</td>
<td>Forged Eye All Stainless Steel</td>
<td>U Bolt Eye All Stainless Steel</td>
</tr>
</tbody>
</table>

**RECOMMENDED USE**

- Suitable for all low slope flat roofs employing lightweight fill or sloped insulation 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 TWA ECONO anchors conform to all Canadian and U.S. standards, Provincial and State labour codes and materials standards relating to anchor fabrication, window cleaning and other suspended maintenance operations. Conformance includes CSA, OIML, ASME, ANSI, MCA, CGSA, CAL OSHA, AISC, AWS, and other references. Thaler SJ-34 and SJ-35 New Standard STACK JACK Flashing conforms to CSA B272-93. See separate Thaler Fall Protection Systems literature for specific data.

**INSTALLATION**

- “Installation Instructions” are provided by every Thaler product. Essentially, Thaler TWA-1NS/-11NS/-11UNS ECONO Fall Arrest Roof Anchors are installed by through-bolting the anchor to the structural concrete deck, as per layout drawings, using a maximum torque of 235 ft-lbf (319 Nm), deforming the exposed bolt threads, then placing the flashing sleeve over the anchor and roof membrane, and as follows:
  - **BUR**: Saturating 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.
  - **Tile Ply**: Set deck flange in layer of membrane adhesive and extend single ply up 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. TWA-1NS-A-P, weed roof 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 bastard 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 appropriate suffix to model number e.g. TWA-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 TWA-1NS 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 TWA ECONO Non-Standard Height 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. Galvanized forged eye (TWA-1NS)
  2. Stainless steel forged eye (TWA-11NS).

- All stainless steel (TWA-11NSS).

- All stainless steel (TWA-11NSSU).

**INTENDED USE**

- Specify flashing material required by adding appropriate suffix to model number e.g. TWA-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.

**CONTACT INFORMATION**

- Canada: 1 800 387-7217
- United States: 1 800 576-1200
- Internet: www.thalermetal.com e-mail: info@thalermetal.com