SECTION XXXXX

THALER ROOF ANCHORS

PART 1 GENERAL	 		
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1.1 SYSTEM DESCRIPTION

- A. Type of system required: roof anchor Single point anchors
- B. System location: Roof/ Wall/ Tower/ Fixed Ladder, Misc. Structure, etc...
- C. Maximum number of workers on system at one time: ##
- D. Systems environmental exposure: What are the service conditions (indoors, outdoors, corrosive environment)? What materials will be required (steel, hot dip galvanizing, stainless steel, marine grade stainless etc...)?
- E. Workers task while on the system: Workers will walk along edge. Occasionally, workers are required to look over the edge. While walking, workers need to carry heavy objects.
- F. Type of fall protection required: Fall Arrest
- G. Additional information: Supporting Documents
- H. Insurances required: Commercial Liability and Workers' Comp.

1.2 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

1.3 REFERENCES

- A. Occupational Safety & Health Administration (OSHA)
 - 1. 29 CFR 1910.28 (b) (1) & 29 CFR 1926.501(b) (1) Occupational Health and Safety Standards General Industry & Construction: Duty to have fall protection
 - 2. 29 CFR 1910.140(c) (11) (i-ii) & 29 CFR 1926.502(d) (8) Safety and Health Regulations for General Industry & Construction: Horizontal Lifeline Design Requirements.
 - 3. 29 CFR 1910.140(c) (13) (i-ii) & 29 CFR 1926.502(d) (15) (i-ii) Safety and Health Regulations for General Industry & Construction: Anchorage Design Requirements.
 - 4. 29 CFR 1910.66 (e) (1) (i) General Industry: Powered Platform Installations -Affected parts of buildings.
- B. American National Standards Institute (ANSI)
 - 1. Z359.1 [2016] The Fall Protection Code
 - 2. Z359.3 [2017] Safety Requirements for Positioning and Travel Restraint Systems.
 - 3. Z359.6 [2016] Specifications and Design Requirements for Active Fall Protection Systems.
 - 4. Z359.11 [2014] Safety Requirements for Full Body Harnesses.
 - 5. Z359.12 [2009] Connecting Components for Personal Fall Arrest Systems.
 - 6. Z359.13 [2013] Personal Energy Absorbers and Energy Absorbing Lanyards.
 - 7. Z359.14 [2014] Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems.
 - 8. Z359.15 [2014] Safety Requirements for Single Anchor Lifelines and Fall Arrester for Personal Fall Arrest Systems.
 - 9. Z359.18 [2017] Safety Requirements for Anchorage Connectors for Active Fall Protection Systems.
- C. Materials, Bolting, Finishing: American Society of Testing Materials (ASTM)
 - 1. A36 Standard Specification for Carbon Structural Steel.

- 2. A500 Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
- 3. A53 Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
- 4. F1554 Standard Specification for Anchor Bolts, Steel, 36, 55, and 105 KSI Yield Strength.
- A193 Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications
- 6. A123 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- 7. A666 Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- 8. A992 Standard Specification for Structural Steel Shapes.
- 9. F3125 Standard Specification for High Strength Structural Bolts, Steel and Alloy, Heat Treated, 120ksi and 150ksi Minimum Tensile Strength, Inch and Metric Dimensions.
- D. American Welding Society (AWS) D1.1/D1 Structural Welding Code Steel
- E. International Window Cleaning Association (ANSI/IWCA) I 14.1 [2006] Window Cleaning Safety Standard: Anchorages and Fall Protection
- F. Design Standards
 - 1. American Institute of Steel Construction (AISC) 325-11 [14th ed.] Steel Construction Manual
 - 2. National Design Specification (ANSI/NDS) [2012] Wood Construction Manual
 - 3. International Building Code (IBC) [2012] Building Design Manual
 - 4. American Society of Civil Engineers (ASCE/SEI) 7-10 [2010] Minimum Design Loads for Buildings and Other Structures
 - 5. American Concrete Institute (ACI) 318-11 Building Code Requirements for Structural Concrete.
- G. Definitions

- 1. Anchorage per ANSI Z359.0 A secure connecting point or a terminating component of a fall protection system capable of supporting impact forces applied by a fall protection system.
- 2. Anchorage Connector per ANSI Z359.0 A component or subsystem that functions as an interface between the anchorage and a fall protection, work positioning, rope access or rescue system for the purpose of coupling the system to the anchorage.
- 3. Clearance per ANSI Z359.0 The distance below an authorized person that must remain clear of obstructions in order to ensure that the authorized person does not make contact with any objects that would cause injury in the event of a fall.
- 4. Continuous Fall Protection per ANSI Z359.0 One or more fall protection systems that provide fall protection without interruption.
- 5. Fall Arrest per ANSI Z359.0 The action or event of stopping a free fall or the instant where the downward free fall has been stopped.
- 6. Fall Hazard per ANSI Z359.0 Any location where a person is exposed to a potential free fall.
- 7. Fall Restraint/Travel Restraint per ANSI Z359.0 A combination of anchorage, anchorage connector, lanyard (or other means of connection) and body support (full body harness) that limits travel in such a manner that the user is not exposed to a fall hazard.
- Qualified Person per ANSI Z359.0 A person with a recognized degree or professional certificate and with extensive knowledge, training and experience in the fall protection and rescue field who is capable of designing, analyzing, evaluating and specifying fall protection and rescue systems to the extent required by the Z359 standards.

1.4 PERFORMANCE

- A. System shall comply with 1.1 System Description
- B. Performance Requirements
 - 1. System Performance
 - a. The Anchor Post(s) shall provide a secure attachment means to the supporting structure in conjunction with the manufacturer's requirements. The Anchor Post shall provide compatible connections with the applicable anchorage connector. All components shall be designed by the fall protection system supplier and shall meet the applicable fall protection ANSI standards and applicable OSHA regulations.

- b. The Fall Protection Horizontal Lifeline System shall be designed to allow users to walk the entire length of the system without having to disconnect from the system to pass through intermediate support points. The system shall be designed to support required number of users in case of a fall and to prevent the users from free falling more than 6 feet. All components shall be designed by the fall protection system supplier and shall meet the applicable fall protection ANSI standards and applicable OSHA regulations.
- 2. Structural Performance:
 - a. Structure supporting the Horizontal Lifeline system must be capable of withstanding design loads as required by governing regulations and codes. Where component design loads are specified herein, they represent design minimum requirements.
 - b. Structure supporting Anchor Post(s) must be capable of withstanding the design loads as required by governing regulations and codes. Where component design loads are specified herein, they represent design minimum requirements.
 - c. All fall protection components and systems shall be designed with a minimum 2:1 safety factor per reference 1.3.A.2.

1.5 DESIGN

- A. Design Requirements
 - 1. Roof anchor shall comply with current applicable OSHA, ANSI, IWCA and state regulations and standards.
 - 2. The roof anchor and any supporting structure shall be designed by:

Thaler Metal Industries LTD	Phone:	1-800-576-1200
3857 Nashua Drive	Website:	www.thalermetal.com
Mississauga, Ontario, Canada	E-mail:	info@thalermetal.com.
Gravitec Systems Inc.	Phone:	1-800-755-8455
21291 Urdahl Road NW,	Website:	www.gravitec.com
Poulsbo, WA 98370-7124	E-mail:	solutions@gravitec.com.

- 3. General Requirements:
 - a. Roof anchor(s) connection to structure shall be designed and installed, under the supervision of a Qualified Person, as part of a complete personal Fall Protection system.
 - b. Roof anchor energy absorbers shall not be used to limit the maximum arrest force of the worker. Roof anchor energy

absorbers shall be used only to control or reduce the maximum arrest load on the structure.

- c. The design engineer shall ensure the increased clearance requirements of a deployed roof anchor will not conflict with the required clearance of the system.
- d. Roof anchor(s) shall satisfy the seismic conditions for nonstructural components as described by ASCE/SEI 7 and the most current edition of the IBC. No exceptions can be taken if the system is required to function for life-safety purposes after an earthquake.
- e. Brackets and supports shall be attached to the structure with appropriate anchors of proper size to adequately support the intended loaded.
- f. The designer shall take into account environmental factors (snow, ice, debris, etc...) when designing a roof anchor such that the roof anchor functions properly.
- g. The roof anchor(s) shall comply with Thaler design requirements.
- 4. Restraint roof anchor(s) shall be designed per ANSI Z359.2 & ANSI Z359.6:
 - a. The roof anchor(s) shall prevent workers from reaching and falling into any open hole or off the edge of a working surface.
 - b. The roof anchor(s) shall comply with the requirements for fall arrest roof anchor(s) as indicated in this document.
 - c. Where a worker is using a full body harness the force on the worker's body shall not exceed 400 lbs.
 - d. Roof anchor(s) may be used in restraint systems; provided that the engineer has determined that the restraint forces will not cause the roof anchor(s) to deploy and ensures that the roof anchor extension in combination with other deformations of the restraint system will not permit the worker(s) to reach the fall hazard.
 - e. The use of fall restraint systems shall be limited to surfaces at or less than a slope of 4:12 from the horizontal. This is so a fall will not result in dynamic loading on the fall restraint system or where the authorized person could end up being suspended vertically from the system.

- 5. Fall Arrest roof anchor(s) shall be designed per ANSI Z359.2 & ANSI Z359.6:
 - a. The selection, design, and installation of fall arrest roof anchor(s) shall be performed under the supervision of a Qualified Person.
 - b. Anchorages designed for fall arrest systems shall have the strength capable of sustaining static loads applied in the directions permitted by the system of at least two times the maximum arresting force.
- 6. Window Washing Roof Anchors (ANSI/IWCA I-14.1 9):
 - a. Roof anchor shall provide independent fall arrest anchorages in addition to suspension line anchorages for each descent location as required by IWCA.
 - b. Roof anchor shall be designed to be compatible with current window cleaning industry standard equipment (e.g. rope descent systems, Boatswain chairs, swing stages, transportable suspension devises).
 - c. Design of the fall protection anchors, and equipment shall meet or exceed the following:
 - I. Roof anchors shall be capable of sustaining a 5000 lb minimum load or a minimum 4 to 1 safety factor, whichever is greater, in any direction that a load may be applied.
 - II. Anchorages, if used for more than one lifeline, shall have the load factor multiplied by each the number of user.
 - III. All Anchorages shall be connected to the structure using a minimum of two fasteners (e.g. bolts, epoxy anchors, threaded rod, etc...) per anchorage.
- B. Sub-System Requirements
 - 1. Harnesses and Vertical Lifelines (VLLs) used with the system shall comply with ANSI Z359.1
 - 2. Connecting Components (carabiners and snaphooks) used with the system shall comply with ANSI Z359.12
 - 3. Energy Absorbing Lanyards (EALs) used with the system shall comply with ANSI Z359.13
 - 4. Self Retracting Lifelines (SRLs) used with the system shall comply with ANSI Z359.14

- C. The fall protection system shall be used exclusively for its designed use and shall be marked to prevent other uses.
- D. The design shall take into consideration the potential uses of and loads on the fall protection system, in order to facilitate the prompt rescue of workers who may fall while attached to the system.

1.6 SUBMITTALS

- A. Submit under provisions of Section ##### Submittal Procedures
- B. Product Data: Thaler's data sheet on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations
 - 3. Installation methods
- C. Drawings and Calculations:
 - 1. Drawings:
 - a. Show the layout of the system including where the system is located and the complete assembly of all components.
 - b. Include a specification of the number, location, and qualifications of workers using the system.
 - c. Clearly specify the equipment dimensions, materials, fabrication details, hardware, and installation instructions.
 - 2. Calculations:
 - a. Calculations shall be prepared under the supervision of a registered Professional Engineer and Qualified Person.
 - b. Include a statement defining the type of system and indicating that the CRP attachment design is in accordance with the requirements of ANSI Z359.6.
 - 3. The Professional Engineer who oversaw the design of the system shall affix their professional seal to each drawing and calculation package issued.
- D. Operation and Maintenance Data shall be prepared per ANSI Z359.2 & ANSI Z359.6:

- 1. Include complete list of equipment replacement parts; identify each entry with the equipment description and part numbers.
- 2. Include technical information for servicing equipment.
- 3. Include legible "as-constructed" drawings of the installed system.
- 4. Include installation date and system owner's name and address.
- 5. Include detailed operating procedures:
 - a. Written by a Qualified or Competent Person.
 - b. Identifying the roof anchor(s) location
 - c. Stating any safety precautions that shall be followed during access and egress.
 - d. Describing the limitation on use of system: maximum load, designated equipment, required clearance and maximum number of persons permitted to be attached to the system at one time.
 - e. Instructions for inspection, maintenance, and retirement of the system and all of its components, including how often inspection and maintenance are to be performed and a description of the qualifications required for persons performing these tasks.
 - f. Procedure for inspection:
 - I. Required or recommended inspection intervals.
 - II. Detailed instruction for inspecting each component of the system.
 - III. Description of acceptance or rejection criteria, including retirement criteria, of each component of the system.
 - IV. Fall protection procedures shall include a requirement that any incidents, including accidents or near misses, be investigated to determine if procedures can be improved.
- 6. Provide or direct the owner of the system or the employer of the workers using the system to develop and implement a rescue plan before the system is used.

1.7 QUALITY ASSURANCE

A. Single Source: Obtain all materials and equipment required under this section from a single supplier.

- B. Designer/Installer Qualifications: Engage a single firm to assume undivided responsibility for the design and fabrication of all fall protection system components. Firm shall have a minimum of 5 years documented experience in the fabrication of such components similar to that required for this project. Additionally, the firm shall have a minimum of 5 years documented experience in the installation of such components and who offers a regular inspection and maintenance service on such systems.
- C. Design Engineer: Employ a firm with a minimum of 10 years experience designing fall protection systems with a minimum of 5 systems installed in the previous 12 months. Who employs a registered Professional Engineer (PE), with evidence of being the principal PE on at least 3 fall arrest systems which have been in use for no less than 1 year prior to bid closing date.
- D. Professional Engineer and Fall Protection Qualified Person: Shall oversee the fall protection systems' design, such that all component items meet the "Structural Performance" requirements, including sizing and spacing of all attachments to the building structure and verify the design is compliant with all applicable OSHA and ANSI standards. Additionally, they must prepare, stamp and sign all required calculations; while also approving the system designer's drawings.
- E. Welding to be executed by certified welders in accordance with AWS requirements.

1.8 DELIVERY, STORAGE & HANDLING

- A. Material delivery shall be coordinated with all effected entities.
- B. Storage and Protection:
 - 1. Store originally packaged materials in a cool, dry, and protected location.
 - 2. Materials shall be in new condition and show no signs of damage.

1.9 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.10 WARRANTY

A. Manufacturer's standard one year warranty for materials and workmanship.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers shall comply with the *Quality Assurance* section of this documentation.

B. All supporting structure which connects the roof anchor(s) to the super structure shall be designed by:

Gravitec Systems Inc.	Phone:	1-800-755-8455
21291 Urdahl Road NW,	Website:	www.gravitec.com
Poulsbo, WA 98370-7124	E-mail:	solutions@gravitec.com.

2.2 PRODUCTS

A.	Thaler Metal Industries LTD	Phone:	1-800-576-1200
	3857 Nashua Drive	Website:	www.thalermetal.com
	Mississauga, Ontario, Canada	E-mail:	info@thalermetal.com.

2.3 MATERIALS

- A. Product
 - 1. The system shall be a complete and turnkey complying with the performance and design criteria of this document.
 - 2. The roof anchor(s) shall be the product of Thaler.
 - 3. Components: All system connectors, cables and bolts shall be stainless steel Type 316 or epoxy coated aluminum. Fabricated supports required for additional support may be carbon steel with a corrosion resistant coating. However a faying surface shall be used to prevent galvanic reactions.
 - 4. Anchor Bolt Connectors: Provide complete with required components for weatherproof mounting to the following surfaces:
 - a. Bolt-Through.
 - b. Adhesive Bolt.
 - c. Bolt Around Beam.
 - d. Weldable.
 - e. Cast-In-Place.
 - f. Bolt around OWSJ.
 - g. Pre-Cast Core Bolt.
 - 5. D-Ring Options: All D-ring options shall be stainless steel.
 - a. Forged eye, galvanized.

- b. Forged eye, stainless steel.
- c. U-bolt, stainless steel.
- 6. The roof anchor(s) shall be attached to the supporting structure with appropriate fasteners. The fasteners shall be designed to support a load on the fall protection system of 2 times the maximum design load without failure.
- 7. Provide all designed sub-system items per Section 1.5 (B) of this document.
- B. Supporting Structure
 - 1. Structural Components shall comply with the applicable standards:
 - a. Structural Steel: ASTM A36
 - b. Structural Tubing: ASTM A500 Grade B
 - c. Structural Bars, Plates, Shapes, and Sheet Piling: ASTM A6
 - d. Piping: ASTM A53
 - 2. Fasteners shall comply with the applicable standards:
 - a. Structural Bolts: ASTM A325
 - b. Alloy-Steel and Stainless Steel Bolting: ASTM A193
 - 3. Flashing and Sealing Material shall comply with the applicable standards:
 - 4. Material substitutions shall be better than or equal to the requirements found in this section.
 - 5. The Anchor Post(s) shall be attached to the supporting structure with appropriate fasteners. The fasteners shall be designed to support a load on the fall protection system of 2 times the maximum design load without failure.
 - 6. Fabrication
 - a. Fabricate work true to dimension, square, plumb, level, and free from distortion or defects detrimental to performance.
 - b. Coordinate the system with supporting structure.
 - c. Welding:

- I. AWS D 1.1 as applicable.
- II. If Butt welds are used, then surplus welding material is to be ground off to ensure exposed surfaces are smooth. Fillet welds shall not be ground.
- III. Slag is to be removed from the materials surface.

7. Finishes

- a. Hot Dipped Galvanizing: Comply with ASTM A123.
- b. Powder Coat: Safety Yellow

2.4 ROOF ANCHOR DESIGN

- A. Roof anchor design shall comply with the *Design Requirement* section of this document.
- B. Steel design shall comply with AISC 14th ed.
- C. Wood design shall comply with ANSI/NDS [2005]
- D. Concrete design shall comply with ACI [2008]
- E. Fall protection systems attached onto an existing or new structure shall comply with IBC [2009] and ASCE/SEI [2010]

PART 3 EXECUTION

3.1 INSTALLATION

A. Installation shall be performed by:

Gravitec Systems Inc.	Phone:	1-800-755-8455
21291 Urdahl Road NW,	Website:	www.gravitec.com
Poulsbo, WA 98370-7124	E-mail:	solutions@gravitec.com.

- B. Install in accordance with approved shop drawings and manufacturer's instructions.
- C. The Thaler Fall Protection System shall be installed under the direction of manufacturer's authorized trained personnel and under the supervision of a Qualified Person.
- D. Install anchorages and fasteners in accordance with their manufacturer's recommendations to obtain the allowable working loads published in the product literature and in accordance with this specification.

- E. Do not load or stress the Thaler Fall Protection System until all materials and fasteners are properly installed and ready for service.
- F. Where bolting is used for fastening, no fewer than three threads are to be exposed and the nut is to be positively locked using a thread-locking fluid or the double nutting technique.
- G. Dissimilar materials with greater than 0.15V shall be separated by a faying surface.
- H. Constant Force posts must be secured to roof surface with waterproof mechanical connectors as approved.

3.2 FIELD QUALITY CONTROL

A. After the Thaler Fall Protection System is installed, a Thaler approved authorized Qualified or Competent Person shall inspect and operate the system and shall make all final adjustments for proper operation.

3.3 ADJUSTMENTS 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 a complete drawing set with any revisions to the design or layout of the fall protection system during installation.

3.4 OPERATOR TRAINING

A Provide a minimum of 4 hours of operator training after system has been installed. Training is to be for the users of the system conducted at the installation site.

3.5 MAINTENANCE, INSPECTION AND TESTING

- A. Provide manufacturer maintenance, inspection and testing instructions.
- B. Provide documentation that is consistent with applicable OSHA, ANSI and IWCA standards.

END OF SECTION



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.

ROOF SPECIALTIES FARA-1/-11/-11U "FIXED EYE" **FALL ARREST ROOF** ANCHORS (Bolt-Through)

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.



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 eve 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 > 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.

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.



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.

ROOF SPECIALTIES FARA-3/-13/-13U "FIXED 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, 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



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

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-4/-14/-14U "FIXED EYE" **FALL ARREST ROOF** ANCHORS (Weldable)

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; 5 J-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.



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

INSTALLATION:

"Installation Instructions" are provided with every Thaler product. Essentially, Thaler FARA-5/-15/ 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.

ROOF SPECIALTIES FARA-5/-15/-15U "FIXED EYE" FALL ARREST ROOF ANCHORS (Cast-In-Place)

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 > 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.



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.

ROOF SPECIALTIES FARA-6/-16/-16U "FIXED EYE" FALL ARREST ROOF ANCHORS (Bolt Around OWSJ)

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).
- 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 1100-0T 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



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:

- With very high strength, galvanized forged eye (FARA-7). All stainless steel (FARA-17SS).
- 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.



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

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

ROOF SPECIALTIES FARA-31/-41/-41U "SWIVEL EYE" **FALL ARREST** ROOF ANCHORS (Bolt-Through)

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 eve options:

- 1. With very high strength, galvanized forged eye (FARA-31). All stainless steel (FARA-41SS).
- With very high strength stainless steel forged eye (FARA-41). All stainless steel (FARA-41SS).
- 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