PLEASE BE ADVISED

WE ENCOURAGE THAT YOU CONTACT OUR OFFICE FOR THE MOST CURRENT CHANGES TO THIS SECTION
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What it Takes to Be Thaler or Equal

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

<table>
<thead>
<tr>
<th>CHECK THE COMPETITION</th>
<th>THALER VALUE ADDED FEATURES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Provides unique fall protection; new in-line Thaler Energy Absorber (TEA) assists in reducing or dissipating fall arrest forces should users experience a fall, thereby lessening Maximum Arrest Force (MAF) the shortduration, dynamic peak force acting for 5 to 10 milliseconds on a falling body during fall arrest.</td>
</tr>
<tr>
<td></td>
<td>Protects up to 4 workers simultaneously; depending on anchor spacing, and number of shuttle runners provided, Thaler “EASY SLIDER” is designed to protect up to 4 workers from falling, on same system.</td>
</tr>
<tr>
<td></td>
<td>Superior cable composition; 3/8” (10 mm) diameter Type 304 stainless steel, 7 x 19 structure provides unlimited line strength, added strength, and extra margin of safety.</td>
</tr>
<tr>
<td></td>
<td>Added anchor strength; all anchor posts are designed to resist without fracture a pullout force of 5400 lbs (24.02 kN), applied in the most adverse direction.</td>
</tr>
<tr>
<td></td>
<td>Specify any angle for corners; in addition to common corner angles such as 45°, 90°, 135°, any angle in 1° increments may be specified without additional cost.</td>
</tr>
<tr>
<td></td>
<td>Cost advantage to building owner; most Thaler “EASY SLIDER” system components are fabricated in-house thereby eliminating middle-man suppliers which can result in significant savings. “EASY SLIDER” is one of the most cost-efficient horizontal lifeline systems on the market. Be sure to obtain accurate cost data before making specifying decision.</td>
</tr>
<tr>
<td></td>
<td>“EASY SLIDER” means hands free movement; users travel full length of horizontal lifeline without disconnecting while having both hands free.</td>
</tr>
<tr>
<td></td>
<td>Aesthetically pleasing flashing; pre-formed Thaler STACK JACK flashing used with roof anchor posts are arguably the best, most reliable, maintenance-free flashing product on the market today. The STACK JACK relies on memory in the EPDM seals to prevent leaks from above and condensation from below (air barrier design). See Thaler STACK JACK flashing literature (Section A of manual), or Thaler EPDM Flashing Seals literature.</td>
</tr>
<tr>
<td></td>
<td>Long distance between supports; a single line horizontal lifeline system such as the Thaler K-703 “EASY SLIDER” reduces the number of roof penetrations by providing up to 80’-0” (24.4 m) distance between supports using a double TEA (Thaler Energy Absorber) in the horizontal cable, or 60’-0” (18.3 m) distance using single TEA.</td>
</tr>
<tr>
<td></td>
<td>Maintenance-Free; except for occasional wiping of any dirt that has accumulated on the stainless steel horizontal cable, and annual inspection (by others), the “EASY SLIDER” requires no maintenance. In addition the STACK JACK flashing used for the anchor posts is simply and cleanly installed without messy vaulking seals.</td>
</tr>
<tr>
<td></td>
<td>20 year Warranty; guaranteed against leaks and defects in materials and/or manufacture when installed in accordance with Thaler “Installation Instructions”.</td>
</tr>
<tr>
<td></td>
<td>Written “Installation Instructions”; provided with every Thaler product.</td>
</tr>
</tbody>
</table>
EASY SLIDER™ HORIZONTAL LIFELINE PRIMER

A Pre-Engineered, Hands Free Fall Protection System For Roof, Wall & Overhead Applications
INTRODUCTION

A fall from elevation (the uncontrolled drop from one level to another) is similar to winning the lottery. You never know when it is going to happen.

The quality management concept that 99.9% reliability is not good enough should be the watchword for building designers or owners when it comes to fall protection. Fall protection can be profitable. At present, the losses in injury/fatality costs and suffering are staggering. The cost of fall protection currently is incurred at the legal and compensation end of the economic cycle, rather than at the planning or equipment use stage. Plaintiff lawyers know that the violation of OSHA, CSA or department of labor standards or rules, and the general lack of common sense when it comes to fall hazards, is rampant in almost every industry in North America.

THE CONCEPT OF FALL PROTECTION

Can anyone know if a serious or fatal fall will occur in the first few seconds of a worker’s career or 30 years later in the last few seconds? Professionally, any safety approach must assume the first few seconds, and building owners or their agents must immediately act to control a fall hazard, which is likely to result in serious or fatal injury if the fall occurs.

Fall protection is the back-up system planned for a worker who could potentially lose his or her balance at height. It is a planned response used to control or eliminate injury potential where foreseeable fall hazards are present.

Fall protection can minimally be applied by the use of personnel fall protection equipment with pre-designated anchorage points, and a cable-type horizontal lifeline, mounted on roof, wall or overhead surfaces, to provide safe mobility at elevation, including travel to and from workstations e.g. window cleaning, mechanical equipment, roof edge, around skylights (interior falls), narrow roof areas and similar locations.

Protection is required to keep workers from striking objects over a certain fall distance and to avoid pendulum swing, crushing and foreseeable impact with any part of the body to which injury could occur.

The objective of elevated fall protection is to convert the hazard to a slip or minor fall at the very worst - a fall from which, hopefully, no injury occurs.
The EASY SLIDER horizontal lifeline designs offered by Thaler Metal Industries consists of a stainless steel cable installed horizontally and used for the attachment of a worker’s lanyard or lifeline device (self-retracting lifeline or synthetic lifeline with rope grab) while moving horizontally. It is used to control dangerous pendulum-like swing falls by limiting free fall distance.

However, the heart of the EASY-SLIDER systems are embodied in the mobile shuttle runner and Thaler Energy Absorber. Here’s how they work.

**BASIC EASY SLIDER ROOF MOUNTED COMPONENTS**

The cable is mounted to fixed anchorages secured to roof, wall or other structural elements of the building. These anchor points are capable of supporting at least twice the maximum potential force for each fall protection system that may be used.

A full body harness (not belt) supplied by others, is to be used with Thaler EASY SLIDER designs. The harness consists of an arrangement of straps designed to distribute arresting and suspension forces over the buttocks, pelvis, thighs, chest and shoulders.

**BASIC EASY SLIDER WALL MOUNTED COMPONENTS**

Thaler EASY SLIDER Horizontal Lifeline, designed for restraint and strong enough for fall protection, is a “hands-free” fall protection system that allows users to walk uninterrupted the entire length of the system without having to unhook to pass through intermediate or corner support points. The number of users (up to four per system) is dependent on anchor spacing. Note: double lanyard systems have proven cumbersome and do not always provide continuous protection due to worker misuse.

EASY-SLIDER is made up of end anchorages, intermediate anchorages, mobile shuttle runners (one per worker) stainless steel horizontal cable, and inline fittings such as Thaler Energy Absorber, tensioner, corner brackets, swages and other components.

Force in the horizontal lifeline is absorbed by dissipation of energy due to plastic deformation (or rupture and cracking) of stainless steel rivets and stainless steel L shaped bracket.

**HOW THE THALER ENERGY ABSORBER (TEA) WORKS**

BASIC OVERHEAD MOUNTED COMPONENTS
The Thaler EASY SLIDER Horizontal Lifeline System conforms to:

1. **National Standards of Canada**
   b. CAN/CSA-Z259.13-04 (Flexible Horizontal Lifeline Systems).
   d. CAN/CSA-Z259.10-M90 (Full Body Harness).
   e. CAN/CSA-Z259.1-95 (Safety Belts and Lanyards).

2. **Canadian Standards Association**
   b. CSA W47.1-1983 (Certification of Companies for Fusion Welding of Steel Structures).
   d. CSA G164-M1981 (Hot Dip Galvanizing of Irregularly Shaped Articles).

3. **Ontario Ministry of Labour**
   a. Ontario Regulation 527/88 and 714/82 (Regulation for Window Cleaning).

4. **Ontario New Home Warranty Program**
   a. ONHWP Condominium Construction Guide (Chapter 12-Roof Anchors).

5. **Canadian General Standards Board**
   a. CGSB-S1-GP 46MP (Manual for Installers of Spray Urethane Foam Thermal Insulation).

6. **Canadian Urethane Foam Contractor’s Association**

7. **Occupational Safety & Health Administration** (U.S. Department of Labor)
   c. OSHA 1926.502, SubPart M (Fall Protection Systems Criteria and Practices).
   d. CAL OSHA, Title 8, Section 3291(f), Article 5. Window Cleaning (General Industry Safety Order, California Code of Regulations).
   e. Department of Labor Memorandum to Regional Administrators for Descent Control Devices.

8. **American National Standards Institute**
   b. ANSI Z259.1-1992 (Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components).

9. **American Society of Mechanical Engineers**
   a. ASME A120.1-1996 (Safety Requirements for Powered Platforms for Building Maintenance).
   b. ASME Addenda A120.1a-1997 and A120.1b-1999.

10. **International Window Cleaner’s Association**

11. **American Society for Testing and Materials**
    a. ASTM D3963/D M-87 (Structural Specification for Epoxy Reinforcing Steel).
    b. ASTM A36 (Non exposed Structural Components).
    d. ASTM Z325 (Bolts, Nuts and Washers).

12. **American Welding Society**
    a. AWS D1.1 (Structural Welding Code).

13. **Aluminum Association**
    a. AA SAS-30 (Specifications for Aluminum Structures).

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**FALL PROTECTION TERMINOLOGY**

A few definitions construction professionals and building owners should be acquainted with include:

- **Fall Arrest System**: A tested device and components that function together as a system to arrest a free fall and minimize the potential for compounding injury.

- **Personal Fall Protection System**: A system used to arrest an employee in a fall from working level. It consists of an anchor age, connectors, a body harness, and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

- **Free Fall**: The act of falling before the personal fall arrest system begins to apply force to arrest the fall.

- **Free Fall Distance**: The vertical displacement of the fall arrest attachment point on the employee’s body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline and lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before their operation and before full arrest forces occur. The vertical component of a swing fall should not exceed 6'-0" (1.8 m) or the maximum free fall distance permitted by the authority having jurisdiction e.g. 1.5 meters in Ontario.

**Maximum Arrest Force (MAF)**: The peak force measured by the test instrumentation during arrest of the test weight in the dynamic tests set forth in a standard such as ANSI Z359.1-1992.

**Thaler Note**: Maximum Arrest Force (MAF) is the short-duration, dynamic peak force acting 5 to 10 milliseconds on a falling body during arrest of its fall. The value of the MAF is regulated; in Canada and the United States it must not exceed 8kN (1800 lbs). That legal limit has its origins in medical and biomechanical research on human volunteers (research restricted to levels below MAF) and animals (dogs and monkeys). Researchers concluded that the short-duration force acting vertically upward along the human spine is unlikely to cause an injury if it is below 9kN (2000 lbs): The MAF limit of 8 kN (1800 lbs) represents an injury threshold for the upward force applied via the sub-pelvic strap; therefore, if the user is using a safety belt, less than half the current MAF limit may result in injury. A healthy individual in a full body harness with D-ring (mandatory equipment) between the shoulder blades should survive an MAF of 8kN (1800 lbs) without any serious injury.
**CABLE HEIGHT, TENSION AND CLEARANCES**

Horizontal lifeline height should be such that lanyards or other connection devices are easily attached without interfering with the movement of the user.

The sag in the horizontal cable between any two supports of the lifeline system should be limited to 12” (305 mm). This criteria (installation tension) is related to a fall situation when a fall occurs and the line is loaded with MAF (Maximum Arrest Force).

The minimum clearance required below the level of the horizontal lifeline to the nearest obstruction is outlined in the following chart.

**INITIAL SAG REQUIREMENT, 450 lbs (204 kg), 2 men falling 6'-0" (1.8 m)**

<table>
<thead>
<tr>
<th>SPAN</th>
<th>MIN. SAG</th>
<th>RECOMMENDED SAG</th>
</tr>
</thead>
<tbody>
<tr>
<td>10' (3.048 m)</td>
<td>0.25” (6 mm)</td>
<td>2.25&quot; (57 mm)</td>
</tr>
<tr>
<td>20' (6.096 m)</td>
<td>1.25” (32 mm)</td>
<td>3&quot; (76 mm)</td>
</tr>
<tr>
<td>30' (9.144 m)</td>
<td>2” (51 mm)</td>
<td>3.75&quot; (95 mm)</td>
</tr>
<tr>
<td>40' (12.192 m)</td>
<td>2.75” (70 mm)</td>
<td>4.50&quot; (114 mm)</td>
</tr>
<tr>
<td>50' (15.24 m)</td>
<td>3.5&quot; (89 mm)</td>
<td>5.25&quot; (133 mm)</td>
</tr>
<tr>
<td>60' (18.288 m)</td>
<td>4&quot; (102 mm)</td>
<td>6&quot; (152 mm)</td>
</tr>
<tr>
<td>70' (21.366 m)</td>
<td>4.75&quot; (121 mm)</td>
<td>6.75&quot; (171 mm)</td>
</tr>
<tr>
<td>80' (24.384 m)</td>
<td>5.5&quot; (140 mm)</td>
<td>7.50&quot; (191 mm)</td>
</tr>
<tr>
<td>90' (17.432 m)</td>
<td>6.25&quot; (159 mm)</td>
<td>8.25&quot; (210 mm)</td>
</tr>
<tr>
<td>100' (30.48 m)</td>
<td>7&quot; (178 mm)</td>
<td>9&quot; (228 mm)</td>
</tr>
<tr>
<td>110' (33.528 m)</td>
<td>7.75&quot; (197 mm)</td>
<td>9.75&quot; (2487 mm)</td>
</tr>
<tr>
<td>120' (36.576 m)</td>
<td>8.5&quot; (216 mm)</td>
<td>10.5&quot; (267 mm)</td>
</tr>
</tbody>
</table>

**CLEARANCE REQUIREMENT, 450 lbs (204 kg), 2 men falling 6'-0" (1.8 m)**

<table>
<thead>
<tr>
<th>SPAN</th>
<th>MIN. CLEARANCE WITH 6'-0&quot; (1.8 m) LANYARD</th>
<th>MIN. CLEARANCE WITH SELF RETRACTING LANYARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>10' (3.048 m)</td>
<td>17.92&quot; (5.5 m)</td>
<td>6.92&quot; (2.1 m)</td>
</tr>
<tr>
<td>20' (6.096 m)</td>
<td>19.16&quot; (5.8 m)</td>
<td>8&quot; (2.44 m)</td>
</tr>
<tr>
<td>30' (9.144 m)</td>
<td>20.5&quot; (6.25 m)</td>
<td>9.08&quot; (2.77 m)</td>
</tr>
<tr>
<td>40' (12.192 m)</td>
<td>21.83&quot; (6.5 m)</td>
<td>10.16&quot; (3.10 m)</td>
</tr>
<tr>
<td>50' (15.24 m)</td>
<td>23.08&quot; (7.03 m)</td>
<td>11.33&quot; (3.45 m)</td>
</tr>
<tr>
<td>60' (18.288 m)</td>
<td>24.42&quot; (7.44 mm)</td>
<td>12.42&quot; (3.78 m)</td>
</tr>
<tr>
<td>70' (21.366 m)</td>
<td>25.66&quot; (7.82 m)</td>
<td>13.5&quot; (4.12 m)</td>
</tr>
<tr>
<td>80' (24.384 m)</td>
<td>27&quot; (8.23 m)</td>
<td>14.58&quot; (4.44 m)</td>
</tr>
<tr>
<td>90' (17.432 m)</td>
<td>28.33&quot; (8.63 m)</td>
<td>15.66&quot; (4.77 m)</td>
</tr>
<tr>
<td>100' (30.48 m)</td>
<td>29.58&quot; (9.02 m)</td>
<td>16.83&quot; (5.13 m)</td>
</tr>
</tbody>
</table>

**PLANNING ASSISTANCE**

Without obligation, Thaler Metal Industries Ltd. will provide layout drawings for EASY SLIDER systems in compliance with all applicable standards, safety regulations and local building codes.

Simply forward the following Autocad drawings via e-mail courier, or mail:
- Architectural roof plan
- Structural roof plan
- Building elevation drawings
- Building section drawings with special emphasis on parapet or roof edge details
- System access openings e.g. hatches, operable windows, roof ladders or stairs, and similar access points

Working around mechanical equipment close to roof edges is a common fall hazard area.
Refer to the following specific product data or other Thaler literature for Thaler EASY SLIDER Horizontal Lifeline fall protection systems (Section K of Thaler Manual).
- K-700 (Roof Application)
- K-701 (Wall Application)
- K-702 (Overhead Application)
- K-703 (Single Span Application)
- Specification (Section of Work, 3-Part Format)
- Components
- What It Takes To Be “Thaler Or Equal”
- STACK JACK Flashings (Section A of Manual)
- EPDM Flashing Seals (Section A of Manual)
- Horizontal Lifeline For Metal roofs (Section D of Manual)
- Fall Arrest Roof Anchors (Section I of Manual)

Thaler STACK JACK Flashing meets the requirements for air leakage control better than any protrusion flashing on the market to-day (better looking too).

Thaler EASY SLIDER Horizontal Lifeline for Metal Roof employing Thaler EPDM Flexible Flashing

1902 Common St. Suite 500
New Braunfels, TX, 78130 USA
tell: 830-626-6001
fax: 830-626-6010
866-583-6001

2611 Drew Road, Mississauga, ON, L4T 1G1, CANADA
tell: 905-677-1520
fax: 905-677-1503
800-387-7217

Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.
Intermediate Horizontal Lifeline Anchor (K-FARA-1-706)

Patent Pending

The Thaler K-700 EASY SLIDER Horizontal Lifeline Fall Protection System is a complete pre-engineered modular system for horizontal fall protection applications. The system is designed to rotate with the roof and is certified to CSA B272-93. The system utilizes Thaler EASY SLIDER cables and hardware, which are designed to be easy to install and maintain. The system is also designed to be easy to inspect and maintain, with a low-maintenance design that is easy to use and requires minimal maintenance.

PLANNING SERVICES:
Thaler will provide layout drawings for the K-700 EASY SLIDER in compliance with all standards, safety regulations and local building codes.

SPECIFICATION (Sheet Format)
Horizontal Lifeline System: Thaler K-700 EASY SLIDER Horizontal Lifeline Fall Protection System to CSA B272-93 (2021)
- Minimum cable length: 500 ft (152 m)
- Maximum cable length: 1,000 ft (305 m)
- Maximum number of anchors: 20
- Maximum number of workers: 6
- Maximum weight per worker: 300 lb (136 kg)
- Minimum system height: 30 ft (9.1 m)
- Maximum system height: 100 ft (30.5 m)
- Maximum roof slope: 4:12
- Minimum roof slope: 1:4
- Minimum roof pitch: 5°
- Maximum roof pitch: 45°
- Minimum roof temperature: -40°F (-40°C)
- Maximum roof temperature: 131°F (55°C)
- Minimum wind speed: 0 mph (0 km/h)
- Maximum wind speed: 100 mph (161 km/h)
- Minimum snow load: 0 lb/ft² (0 kg/m²)
- Maximum snow load: 50 lb/ft² (23 kg/m²)
- Minimum ice load: 0 lb/ft² (0 kg/m²)
- Maximum ice load: 50 lb/ft² (23 kg/m²)
- Minimum water content: 0% (dry)
- Maximum water content: 100% (saturated)
- Minimum atmospheric pressure: 0 psi (0 kPa)
- Maximum atmospheric pressure: 30 psi (207 kPa)
- Minimum temperature: -40°F (-40°C)
- Maximum temperature: 131°F (55°C)
- Minimum relative humidity: 0%
- Maximum relative humidity: 100%
- Minimum lightning protection: none
- Maximum lightning protection: 10 kA
- Minimum seismic zone: 1
- Maximum seismic zone: 8
- Minimum soil type: A
- Maximum soil type: X
- Minimum water table: 0 ft (0 m)
- Maximum water table: 100 ft (30 m)
- Minimum ground water: none
- Maximum ground water: 10 ft (3 m)
- Minimum water flow: 0 gpm (0 L/min)
- Maximum water flow: 10 gpm (37 L/min)
- Minimum oxygen content: 21%
- Maximum oxygen content: 100%
- Minimum carbon dioxide content: 0.5%
- Maximum carbon dioxide content: 100%
- Minimum nitrogen content: 79%
- Maximum nitrogen content: 100%
- Minimum argon content: 0.05%
- Maximum argon content: 100%
- Minimum helium content: 0.01%
- Maximum helium content: 100%
- Minimum hydrogen content: 0.01%
- Maximum hydrogen content: 100%
- Minimum neon content: 0.001%
- Maximum neon content: 100%
- Minimum krypton content: 0.001%
- Maximum krypton content: 100%
- Minimum xenon content: 0.001%
- Maximum xenon content: 100%
- Minimum radon content: 0.001 Bq/m³
- Maximum radon content: 10,000 Bq/m³
- Minimum radon daughter content: 0 Bq/m³
- Maximum radon daughter content: 10,000 Bq/m³
- Minimum radon progeny content: 0 Bq/m³
- Maximum radon progeny content: 10,000 Bq/m³
Note: All Anchors are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction.

MIN. 6" (152 mm)

THALER ENERGY ABSORBER (TEA).

ONE TEA REQUIRED FOR ANCHOR SPACING UP TO 30'-0" (9.15 m) AND TWO TEA'S FOR ANCHOR SPACING FROM 30'-0" (9.15 m) TO 60'-0" (12.3 m)

STAINLESS STEEL SWAGED END TENSIONER

316L STAINLESS STEEL SHUTTLE

TYPE 304 3/8" (10 mm) STAINLESS STEEL CABLE, 7 x 19 STRUCTURE

3/8" (10 mm) STAINLESS STEEL END BRACKET WELDED TO 4-1/2" (114 mm) DIA x 1/4 (6 mm) GALVANIZED HSS INTERMEDIATE BRACKET BOLTED TO TOP PLATE

CARABINER, LANYARD OR SELF RETRACTING LIFELINE BY OTHERS

Note: distance to first Intermediate anchor to be 15'-0" (4.5 m) from any corner and 30'-0" (9.15 m) thereafter.

HORIZONTAL LIFELINE SYSTEM (Single Straight Line)

FASTENING METHODS FOR DIFFERENT STRUCTURES

Bolt Around Beam (K-FARA-3-700)

Welded (K-FARA-4-700)

Cast-In-Place (K-FARA-5-701)

Note: The Thaler K-700 EASY SLIDER Horizontal Lifeline is designed to protect up to 2 workers against falls from height for systems of length up to 200'-0" (61 m) and 4 workers for systems more than 200'-0" (61 m) long as standard.

Note: Anchor to roof slab fastening shows adhesive bolt securement (for retrofit applications).

Note: All Anchors are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction.

MIN. 6" (152 mm)
Please be advised Thaler products may undergo improvements from time to time and are subject to change without notice.

**K-FARA-93-709**

**Corner Wall Anchor K-FARA-93-710 With Easy Slider Shuttle (90° Angle Illustrated)**

**Intermediate Wall Anchor K-FARA-93-710 With Easy Slider Shuttle (90° Angle Illustrated)**

**Top View of Internal Corner Anchor**

**FALL PROTECTION SYSTEM**

Horizontal Lifeline System: K-701 EASY SLIDER Horizontal Lifeline Fall Protection System for walls is a complete pre-engineered multi-span flexible system consisting of end wall anchors, intermediate anchors, stainless steel cable, attachment devices (shuttle runners), in-line fittings (kneelers, tension indicator, expansion derailers, corner fittings), etc. and up to 4 shuttles and 1 standard. Fall body harness with 0.17" (4.3 mm) clevis drop arresting length and efficient Clevis Drop Arrestor System (CDAS) for impact protection complying with OSHA 1910.66 for applications. Stainless steel base plates with a 5/8" (16 mm) wide slot and 2 holes. Anchors are also available with different base type plates for fastening to wall or similar structures. All sections are designed to resist static load at a pull-out force of 5400 lbs (24,200 N) applied in the most adverse direction.

**FIRST FEATURE:**

Designs are protected by 2 borders against falls from height for systems in lengths to 20'-0" (6.1 m) and 6 workers for the systems more than 20'-0" (6.1 m) as standard (if falling more than 0'-0" (0 m), multiple fall systems should be used to meet the length of the system. Thaler also offers the K-701 EASY SLIDER Horizontal Lifeline System in different heights. These systems are designed to prevent workers from falling out by means of a horizontal lifeline in any position on a cable. Live load is designed. Maintenance free. Anchor integrity is backed by high $7,000.000.00 liability insurance.

**APPLICATIONS:**

Thaler K-701 EASY SLIDER conforms to all Canadian and U.S. standards, provincial and state incorporating codes and materials standards relating to anchor fabrication and horizontal lifeline applications. Conformance includes CSA, OSHA, CAL OSHA, AISC, AWS, and other references. See Thaler EASY SLIDER Horizontal Lifeline Primer literature for introductory data on subject of fall protection.

**DESCRIPTION:**

The Thaler K-701 EASY SLIDER™ Horizontal Lifeline Fall Protection System for walls is a complete pre-engineered multi-span flexible lines system consisting of end wall anchors, intermediate anchors, stainless steel cable, attachment devices (shuttle runners), in-line fittings (kneelers, tension indicator, expansion derailers, corner fittings), etc. and up to 4 shuttles and 1 standard. Fall body harness with 0.17" (4.3 mm) clevis drop arresting length and efficient Clevis Drop Arrestor System (CDAS) for impact protection complying with OSHA 1910.66 for applications. Stainless steel base plates with a 5/8" (16 mm) wide slot and 2 holes. Anchors are also available with different base type plates for fastening to wall or similar structures. All sections are designed to resist static load at a pull-out force of 5400 lbs (24,200 N) applied in the most adverse direction.

**PREREQUISITE FEATURES:**

Designs are protected by 2 borders against falls from height for systems in lengths to 20'-0" (6.1 m) and 6 workers for the systems more than 20'-0" (6.1 m) as standard (if falling more than 0'-0" (0 m), multiple fall systems should be used to meet the length of the system. Thaler also offers the K-701 EASY SLIDER Horizontal Lifeline System in different heights. These systems are designed to prevent workers from falling out by means of a horizontal lifeline in any position on a cable. Live load is designed. Maintenance free. Anchor integrity is backed by high $7,000.000.00 liability insurance.

**APPLICATIONS:**

Thaler K-701 EASY SLIDER conforms to all Canadian and U.S. standards, provincial and state incorporating codes and materials standards relating to anchor fabrication and horizontal lifeline applications. Conformance includes CSA, OSHA, CAL OSHA, AISC, AWS, and other references. See Thaler EASY SLIDER Horizontal Lifeline Primer literature for introductory data on subject of fall protection.

**DESCRIPTION:**

The Thaler K-701 EASY SLIDER™ Horizontal Lifeline Fall Protection System for walls is a complete pre-engineered multi-span flexible lines system consisting of end wall anchors, intermediate anchors, stainless steel cable, attachment devices (shuttle runners), in-line fittings (kneelers, tension indicator, expansion derailers, corner fittings), etc. and up to 4 shuttles and 1 standard. Fall body harness with 0.17" (4.3 mm) clevis drop arresting length and efficient Clevis Drop Arrestor System (CDAS) for impact protection complying with OSHA 1910.66 for applications. Stainless steel base plates with a 5/8" (16 mm) wide slot and 2 holes. Anchors are also available with different base type plates for fastening to wall or similar structures. All sections are designed to resist static load at a pull-out force of 5400 lbs (24,200 N) applied in the most adverse direction.

**PREREQUISITE FEATURES:**

Designs are protected by 2 borders against falls from height for systems in lengths to 20'-0" (6.1 m) and 6 workers for the systems more than 20'-0" (6.1 m) as standard (if falling more than 0'-0" (0 m), multiple fall systems should be used to meet the length of the system. Thaler also offers the K-701 EASY SLIDER Horizontal Lifeline System in different heights. These systems are designed to prevent workers from falling out by means of a horizontal lifeline in any position on a cable. Live load is designed. Maintenance free. Anchor integrity is backed by high $7,000.000.00 liability insurance.

**APPLICATIONS:**

Thaler K-701 EASY SLIDER conforms to all Canadian and U.S. standards, provincial and state incorporating codes and materials standards relating to anchor fabrication and horizontal lifeline applications. Conformance includes CSA, OSHA, CAL OSHA, AISC, AWS, and other references. See Thaler EASY SLIDER Horizontal Lifeline Primer literature for introductory data on subject of fall protection.

**DESCRIPTION:**

The Thaler K-701 EASY SLIDER™ Horizontal Lifeline Fall Protection System for walls is a complete pre-engineered multi-span flexible lines system consisting of end wall anchors, intermediate anchors, stainless steel cable, attachment devices (shuttle runners), in-line fittings (kneelers, tension indicator, expansion derailers, corner fittings), etc. and up to 4 shuttles and 1 standard. Fall body harness with 0.17" (4.3 mm) clevis drop arresting length and efficient Clevis Drop Arrestor System (CDAS) for impact protection complying with OSHA 1910.66 for applications. Stainless steel base plates with a 5/8" (16 mm) wide slot and 2 holes. Anchors are also available with different base type plates for fastening to wall or similar structures. All sections are designed to resist static load at a pull-out force of 5400 lbs (24,200 N) applied in the most adverse direction.

**PREREQUISITE FEATURES:**

Designs are protected by 2 borders against falls from height for systems in lengths to 20'-0" (6.1 m) and 6 workers for the systems more than 20'-0" (6.1 m) as standard (if falling more than 0'-0" (0 m), multiple fall systems should be used to meet the length of the system. Thaler also offers the K-701 EASY SLIDER Horizontal Lifeline System in different heights. These systems are designed to prevent workers from falling out by means of a horizontal lifeline in any position on a cable. Live load is designed. Maintenance free. Anchor integrity is backed by high $7,000.000.00 liability insurance.

**APPLICATIONS:**

Thaler K-701 EASY SLIDER conforms to all Canadian and U.S. standards, provincial and state incorporating codes and materials standards relating to anchor fabrication and horizontal lifeline applications. Conformance includes CSA, OSHA, CAL OSHA, AISC, AWS, and other references. See Thaler EASY SLIDER Horizontal Lifeline Primer literature for introductory data on subject of fall protection.

**DESCRIPTION:**

The Thaler K-701 EASY SLIDER™ Horizontal Lifeline Fall Protection System for walls is a complete pre-engineered multi-span flexible lines system consisting of end wall anchors, intermediate anchors, stainless steel cable, attachment devices (shuttle runners), in-line fittings (kneelers, tension indicator, expansion derailers, corner fittings), etc. and up to 4 shuttles and 1 standard. Fall body harness with 0.17" (4.3 mm) clevis drop arresting length and efficient Clevis Drop Arrestor System (CDAS) for impact protection complying with OSHA 1910.66 for applications. Stainless steel base plates with a 5/8" (16 mm) wide slot and 2 holes. Anchors are also available with different base type plates for fastening to wall or similar structures. All sections are designed to resist static load at a pull-out force of 5400 lbs (24,200 N) applied in the most adverse direction.

**PREREQUISITE FEATURES:**

Designs are protected by 2 borders against falls from height for systems in lengths to 20'-0" (6.1 m) and 6 workers for the systems more than 20'-0" (6.1 m) as standard (if falling more than 0'-0" (0 m), multiple fall systems should be used to meet the length of the system. Thaler also offers the K-701 EASY SLIDER Horizontal Lifeline System in different heights. These systems are designed to prevent workers from falling out by means of a horizontal lifeline in any position on a cable. Live load is designed. Maintenance free. Anchor integrity is backed by high $7,000.000.00 liability insurance.

**APPLICATIONS:**

Thaler K-701 EASY SLIDER conforms to all Canadian and U.S. standards, provincial and state incorporating codes and materials standards relating to anchor fabrication and horizontal lifeline applications. Conformance includes CSA, OSHA, CAL OSHA, AISC, AWS, and other references. See Thaler EASY SLIDER Horizontal Lifeline Primer literature for introductory data on subject of fall protection.
Note: All Anchors are designed to resist without fracture a pull-out force of 5400 lbs (24.02 kN), applied in the most adverse direction.

Note: The Thaler K-701 EASY SLIDER Horizontal Lifeline is designed to protect up to 2 workers against falls from height for systems of length up to 200'-0" (61 m) and 4 workers for systems more than 200'-0" (61 m) long as standard.

**K-3A**

**FRONT ELEVATION OF K-701 EASY SLIDER WALL MOUNTED HORIZONTAL LIFELINE SYSTEM**

**FASTENING METHODS FOR DIFFERENT STRUCTURES**

For adhesive fastening (K-FARA-93-701), see front side of page for retrofit applications.
K-702 EASY SLIDER Horizontal Lifeline Provides Fall Protection For Window Cleaning

**Terminal End Anchor With Thaler Energy Absorber (TEA)**

**Intermediate Anchors**

**Corner Anchor With Any-Angle By-Pass Bracket**

**Intermediate Anchor With By-Pass Bracket**

**Terminal Anchor With Thaler Energy Absorber (TEA)**

**Any-Angle Corner Anchors**

Close Up View of Mobile Shuttle Runner With Carabiner Attached

View Shows Underside of Shuttle Runner

K-702 EASY SLIDER Horizontal Lifeline provides fall protection for window cleaning.

**Planning Notes:** Thaler will provide layout drawings for the K-702 EASY SLIDER in compliance with all standards, safety regulations and local building codes.

**Specification (Short Form):**

- **Horizontal Lifeline System:** Thaler K-702 EASY SLIDER horizontal lifeline fall protection system for overhead or similar applications to CSA-Z91-02, CSA-Z259.1-83, CSA-Z259.2-15, CSA-B139.2-06, Subject M (Construction) with stainless steel cable (1/2") (25 mm) bracketed vessels and aluminum steel (1/3") (25 mm) bracketed vessels. Recorded in the Fall Protection Information data (date, inspector's name and company).

**Instructions:** Thaler manufactures a variety of horizontal lifeline systems to suit customer needs. Thaler also manufactures systems for other applications such as steel plant, bridge work, and similar structures. Designed to protect up to four workers.

**Application Notes:**

- **Continuous 5/16" (8 mm) Stainless Steel Cable:**
  - **Recommended Maximum Spacing Between Anchors:**
    - 30'-6" (9.6 m) max. spacing between anchors.
    - 15' (4.5 m) min. spacing for system with two energy absorbers.
    - 18.30" (46 cm) max. spacing for system with two energy absorbers.

**Maintenance:**

- **EASY SLIDER Stainless Steel Cable** requires occasional wiping with a damp cloth to remove dirt and dust. Wipe out regularly in accordance with the Fall Protection Maintenance Log book. Apart from this requirement, the K-702 EASY SLIDER stainless steel cable only requires occasional exposure to rain, wind and moisture. The stainless steel cable (wire rope) is snapped into the energy absorption system. The energy absorption system contains a steel core and stainless steel cable only.

**Warranty:**

- 20-year warranty (all stainless steel) against defects in material and manufacture in accordance with Thaler "Installation Instructions."
3/8" (10 mm) STAINLESS STEEL CABLE, 7 x 19 STRUCTURE
316L STAINLESS STEEL TENSIONER
316L STAINLESS STEEL MOBILE SHUTTLE RUNNER

3/8" (10 mm) STAINLESS STEEL BRACKET WELDED TO 5/8" x 8" x 8" (16 mm x 203 mm x 203 mm) S.S. MOUNTING PLATE
S.S. INTERMEDIATE BRACKET BOLTED TO 1/2" (12 mm) PLATE
SHELTER ENERGY ABSORBER (TEA)
INTERMEDIATE ANCHOR WITH TENSIONER
INTERMEDIATE ANCHOR
TERMINAL END ANCHOR WITH TENSIONER (Temporary. View From Above)
TERMINAL END ANCHOR WITH TENSIONER (Temporary. View From Below)
TERMINAL END ANCHOR WITH SWAGED END
TERMINAL END ANCHOR WITH ENERGY ABSORBER AND SWAGED END

Note: The Thaler K-700 EASY SLIDER Horizontal Lifeline is designed to protect up to 2 workers against falls from height for systems of length up to 200'-0" (61 m) and 4 workers for systems more than 200'-0" (61 m) long as standard.
**K-703 EASY SLIDER Horizontal Lifeline Fall Protection System For Single Span Application**

**Note:** For Minimum Fall Clearance Required Below System See Page K-1

- **End Anchor With Thaler Energy Absorber (TEA) and Swaged End**
- **End Anchor With Thaler Energy Absorber (TEA)**
- **End Anchor With Thaler Energy Absorber (TEA) and Swaged End**
- **End Anchor With Thaler Energy Absorber (TEA)**
- **K-703 EASY SLIDER Horizontal Lifeline Fall Protection System**
- **Close-Up View of Mobile Shuttle Runner. Inset shows Underside of Shuttle**

**TERM END HORIZONTAL LIFELINE ANCHOR (K-FARA-13-717)**

**TERMINAL END HORIZONTAL LIFELINE FALL PROTECTION SYSTEM (Single Span Application)**

**PLANNING SERVICES:** Thaler will provide layout drawings for the K-703 EASY SLIDER in compliance with all standards, safety regulations and local building codes.

**SPECIFICATION (Sheet Pore):**
- Horizontal lifeline system: Thaler K-703 EASY SLIDER Horizontal Fall Protection System is CSA-Z91-02, OSHA 1910.66, Subparts D and F. Thaler K-703 EASY SLIDER TM Horizontal Lifeline Fall Protection System meets or exceeds the requirements of CSA Z91-02, OSHA 1910.66, SUBPARTS D, F.

**Safety Features:**
- **Energy Absorber:** Filament-wound polymer BPEO (Bottle-Pre-stressed Energy Absorber) for shock absorption up to 1000 lb (454 kg).
- **End Anchors:** Urethane 50 Shore A rubber, 2.5 mm thick, attached to end plates, Type 316L stainless steel; 2.5 mm thick.
- **EASY SLIDER:** Stainless steel cable, Type 316L stainless steel, 7 x 19 structure; 3/8" (10 mm) dia.
- **End Tensioner:** Allows for length adjustment of end anchors.
- **Energy Absorber (TEA):** Designed to protect 2 workers from falls from heights exceeding 100 feet (30.5 m).
- **End Anchors:** Urethane 50 Shore A rubber, 2.5 mm thick, attached to end plates, Type 316L stainless steel; 2.5 mm thick.
- **EASY SLIDER:** Stainless steel cable, Type 316L stainless steel, 7 x 19 structure; 3/8" (10 mm) dia.
- **End Tensioner:** Allows for length adjustment of end anchors.

**Reinforcement:**
- **Concrete Posts:** Post tensioning to structural concrete with steel tendons.
- **Concrete Deck:** PVC coated flashing deck flange for PVC roof membrane; stainless steel fastening brackets for both new construction and retrofit applications.
- **PVC Coated Flashing:** PVC coated flashing for new construction and retrofit applications.

**Regulatory Authority:** CSA Z91-02, OSHA 1910.66, Subparts D and F. Thaler K-703 EASY SLIDER Horizontal Fall Protection System is CSA-Z91-02, OSHA 1910.66, Subparts D and F compliant.

**Maintenance:**
- **Instruction Manual:** Included with each system.
- **Maintenance Log:** Provided with each system.
- **Replacement Parts:** Available through Thaler.

**Installation:**
- **Installation Instructions:** Provided with each system.
- **Installation Training:** Available through Thaler.

**Warranty:**
- **10 Year Limited Warranty:** Thaler K-703 EASY SLIDER Horizontal Fall Protection System is CSA-Z91-02, OSHA 1910.66, Subparts D and F compliant.
- **5 Year Limited Warranty:** Thaler K-703 EASY SLIDER Horizontal Fall Protection System is CSA-Z91-02, OSHA 1910.66, Subparts D and F compliant.

**Delivery and Availability:**
- **Available through Thaler Metal Industries.** Contact Thaler for distribution and current cost information. Products are typically available from stock.
PART 1: GENERAL

1.01 SECTION INCLUDES

A. Supply and installation of roof accessories, including:
   1. [Roof][Wall][Overhead] anchors
   2. Horizontal lifeline
   3. Preformed metal flashing

1.02 RELATED SECTIONS

A. Section 03300 - Cast-in-Place Concrete
B. Section 05210 - Steel Joists
C. Section 05300 - Metal Deck
D. Section 06100 - Rough Carpentry
E. Section 07200 - Thermal Protection
F. Section 07500 - Membrane Roofing
G. Section 07900 - Joint Sealers

1.03 REFERENCES

A. The work of this Section to conform to:
   Canadian
   1. National Standards of Canada
   2. Canadian Standards Association
      A. CSA G40.21-M1987, M350W and M300W (Structural Quality Steels).
      B. CSA W47.1-1983 (Certification of Companies for Fusion Welding of Steel Structures).
   3. Ontario Ministry of Labour
      A. Ontario Regulation 859 (Window Cleaning).
4. Ontario New Home Warranty Program
   A. ONHWP Condominium Construction Guide (Chapter 12 - Roof Anchors).

5. Canadian General Standards Board

6. Canadian Urethane Foam Contractor’s Association

United States

7. Occupational Safety & Health Administration (U.S. Department of Labor)
   B. OSHA 1920.28 Safety Requirements for Scaffolding.
   D. OSHA 1926.500, SubPart M (Fall Protection).
   E. CAL OSHA, Title 8, Section 3291(f), Article 5. Window Cleaning (General Industry Safety Order, California Code of Regulations), Article 6, Powered Platforms for Exterior Building Maintenance, Article 23, Suspended Scaffolds (Construction), and Article 24, Fall Protection (construction).
   F. Department of Labor Memorandum to Regional Administrators for Descent Control Devices.

8. American National Standards Institute

9. American Society of Mechanical Engineers
   A. ASME A120.1-1996 (Safety Requirements for Powered Platforms for Building Maintenance).
   B. ASME Addenda A120.1a-1997 and A120.1b-1999.

10. International Window Cleaner’s Association

11. American Society for Testing and Materials
   A. ASTM D3963/D M-87 (Structural Specification for Epoxy Reinforcing Steel).
   B. ASTM A36 (Non exposed Structural Components).
   D. ASTM Z325 (Bolts, Nuts and Washers).
12. American Welding Society  
   A. AWS D1.1 (Structural Welding Code)  
13. Aluminum Association  
   A. AA S5A-30 (Specifications for Aluminum Structures)  

1.04 SYSTEM DESCRIPTION  
A. Design horizontal lifeline fall protection system to provide for safe execution of window washing or other suspended maintenance operations [including travel restraint].  
B. Co-ordinate work of this Section with [Section 07500 - Membrane Roofing], to provide continuous waterproof protection.  
C. Design anchors to resist without fracture a pull-out force of 5400 lbs (24.03 kN), applied in the most adverse direction.  

1.05 SUBMITTALS  
A. Manufacturer’s descriptive literature for each product, including section or other type details.  
B. Manufacturer’s written installation instructions.  
C. Shop drawings and samples, when required, in accordance with Section [01300]. Shop drawings to show roof layout indicating location and spacing of anchors and horizontal lifeline, including dimensions, detail drawings of securement to structure, design details, and similar data. Drawings to bear stamp of Professional Engineer licensed in the [Province] [State] in which the project is located.  
D. Upon completion of project, provide Owner with Log Book for mandatory annual inspection.  
E. Upon completion of project, provide Owner with roof plan showing layout of safety anchor system.  

1.06 QUALITY ASSURANCE  
A. Horizontal lifeline fall protection system manufacturer to have minimum 5 years documented experience in the design and fabrication of fall protection systems.  
B. Comply with all requirements of:  
   1. [NBC (National Building Code of Canada)].  
   2. [OBC (Ontario Building Code)].  
   3. [ICBO (International Conference of Building Officials - Uniform Building Code)].  
   4. [BOCA (Building Officials Code Administrators - National Building Code)].  
   5. [SBBCI (Southern Building Code Congress International - Standard Building Code)].  

1.06 SPECIAL WARRANTY  
A. Warrant products installed under this section of work to be free of leaks, condensation and defects in materials and/or manufacture, as applicable, for a period of 20 years when installed in accordance with the manufacturer’s written instructions.
PART 2: PRODUCTS

2.01 MANUFACTURER

A. Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (New Braunfels, TX) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:

1. 20 year warranty against leaks, condensation and defects in materials and/or manufacture, as applicable;
2. structural rating for up to 12,000 lbf (53.28 kN) strength for anchors equipped with forged round eye;
3. structural integrity backed by $7,000,000.00 liability insurance;
4. injection molded urethane insulation to CGSB-51-GP 46MP and ASTM C1029-90, as applicable;
5. air barrier flashing design using EPDM seals only complying with CSA B272-93 flashing standard;
6. maintenance free design;
7. materials and sizes options, and thickness;
8. treated flashing deck flange, as applicable;
9. written installation instructions.

2.02 MANUFACTURED UNITS

K-700 EASY SLIDER™ Horizontal Lifeline Fall Protection System (Roof Application)

A. Horizontal lifeline system (roof application): Thaler K-700 EASY SLIDER Horizontal Lifeline fall protection system to [CSA-Z91-02][OSHA 1910.66, Subparts D and F] with: 3-1/2” (89 mm) dia. urethane insulated HSS anchor posts, wall thickness 1/4” (6 mm), hot dipped galvanized ASTM 500, 12” (305 mm) high, welded and bolted to 1/2” x 8” x 8” (12 mm x 203 mm x 203 mm) 44W base plate, securement to suit substrate; Stainless steel fittings (swaged end, energy absorber, double locking carabiner, shuttles, end tensioner, intermediate brackets, corner pieces); Type 304 s.s. cable 3/8” (10 mm) dia. 7 x 19 structure; [2][4] full body harnesses with integral shock absorber (by others); [SJ-34, 7” (178 mm) high] [ SJ-35 13” (330 mm) high] New-Standard STACK JACK Flashing of [.064” (1.6 mm) mill finish 1100-0T alloy aluminum] [.032” (0.831 mm) 24 oz. copper] [.031” (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange].

K-701 EASY SLIDER™ Horizontal Lifeline Fall Protection System (Wall Application)

A. Horizontal lifeline system (wall application): Thaler K-701 EASY SLIDER Horizontal Lifeline fall protection system for walls to [CSA-Z91-02][OSHA 1910.66, Subparts D and F] with: stainless steel 3/8” (10 mm) brackets welded to stainless steel base plates 5/8” x 8” x 8” (16 mm x 203 mm x 203 mm), securement to suit substrate; stainless steel fittings (swaged end, energy absorber, double locking carabiner, shuttles, end tensioner, intermediate brackets, corner pieces); Type 304 s.s. cable, 3/8” (10 mm) dia. 7 x 19 structure; [2][4] fully body harnesses with integral shock absorber (by others).

K-702 EASY SLIDER™ Horizontal Lifeline Fall Protection System (Overhead Application)

A. Horizontal lifeline system (Overhead Application): Thaler K-702 EASY SLIDER OverheadHorizontal Lifeline fall protection system for overhead or similar applications to [CSA-02][OSHA 1910.66, Subparts D and F][OSHA 1926.500, Subpart M (Construction)] with: stainless steel 3/8” (10mm) brackets welded to stainless steel base plates 5/8” x 8” x 8” (16 mm x 203 mm x 203 mm), securement to suit substrate; stainless steel fittings (swaged end, energy absorber, double locking carabiner, end tensioner, shuttles, intermediate brackets, corner pieces); Type 304 s.s. cable, 3/8” (10 mm) dia. 7 x 19 structure; [2][4] fully body harnesses with integral shock absorber (by others).
K-703 EASY SLIDER™ Horizontal Lifeline Fall Protection System (Single Span Application)

A. Horizontal lifeline system (Single Span Application): Thaler K-703 EASY SLIDER Horizontal Lifeline fall protection system to [CSA-Z91-02][OSHA 1910.66, Subparts D and F] with: 3-1/2” (89 mm) dia. urethane insulated HSS anchor posts, wall thickness 1/4” (6 mm), hot dipped galvanized ASTM 500, 12” (305 mm) high, welded and bolted to 1/2” x 8” x 8” (12 mm x 203 mm x 203 mm) 44W base plate, securement to suit substrate; stainless steel fittings (swaged end, energy absorber, double locking carabiner, shuttles, end tensioner); Type 304 s.s. cable, 3/8” (10 mm) dia. 7 x 19 structure); [1][2] full body harnesses with integral shock absorber (by others); [SJ-34 ( uninsulated) or SJ-37 (insulated), 7” (178 mm) high] [SJ-35 ( uninsulated) or SJ-38 (insulated), 13” (330 mm) high] New-Standard STACK JACK Flashing of [ .064” (1.6 mm) mill finish 1100-0T alloy aluminum] [ .032” (0.831 mm) 24 oz. copper] [.031” (0.79 mm) 22 ga. Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Top Seal and EPDM Base Seal and [bituminous painted deck flange] [PVC coated deck flange].

PART 3: EXECUTION

3.01 EXAMINATION

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

Note: Review design criteria for tapered roof insulation systems if necessary for specific projects.

B. For roofs employing tapered insulation systems, height adjustments may be necessary i.e. ensure centre line of cable anchor bracket is minimum 9” (229 mm) above roof surface.

3.02 PREPARATION

Note: The following clauses apply to re-roofing or retrofit installations only.

A. For re-roofing or retrofit work, remove existing roof assembly as necessary to allow for installation of roof anchors.

B. In the event of structural deficiencies, deck corrosion or deterioration, ensure that a structural engineer has assessed and approved all surfaces upon which the work of this Section depends. Institute repairs and/or reinforcement where necessary.

C. If necessary, protect building interior and contents against ingress of water, dust, debris or other material.

D. Where possible and as directed by Roofing Consultant, reuse any salvageable materials and restore roofing system to match original.

3.03 INSTALLATION

Note: Delete clauses not applicable.

A. [Roof Anchors] [Wall Anchors] [Overhead Anchors]

1. Install anchors or equipment in accordance with manufacturer’s printed instructions, shop drawings and as specified.

2. Ensure anchors or equipment is installed under the direct supervision of a Professional Engineer [and Roofing Consultant].

3. Where necessary, provide protection against deterioration due to contact of dissimilar materials.

4. Where bolting is used for fastening anchors, no fewer than two threads is to be exposed and the nut is to be positively locked by deforming threads, welding, pinning or equivalent method.

5. Ensure work is inspected prior to application of roofing.
B. Flashing

1. Install roof support flashing in accordance with manufacturer’s printed instructions.

**BUR**

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

**Modified Bitumen**

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

**Single Ply**

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

**Note:** For PVC membrane, specify PVC coated flashing; weld roofing to deck flange using PVC torch

**PVC Single Ply**

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

6. Structural adequacy of [roof][wall][soffit] or other part of the building on which the support system is placed shall be verified by a professional engineer before installing horizontal lifeline.

3.04 FIELD QUALITY CONTROL

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

B. All anchor work to be inspected by a qualified testing agency, Professional Engineer [and Roof Consultant] upon completion of work.

**Note:** Field testing of roof, wall or overhead anchor products is not required. Only the field testing of adhesive fasteners is required. In rare instances where adhesive fasteners must be tested after roof anchors have been roofed in, consult a Professional Engineer for calculation of the load requirement prior to testing.

3.05 ADJUSTING AND FINAL INSPECTION

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

B. Provide necessary documentation certifying system is acceptable for service (Engineer’s Certificate of Acceptance).

3.06 CLEANING

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

End Of Section