



Fall Protection

# STANDING SEAM ROOF ANCHOR

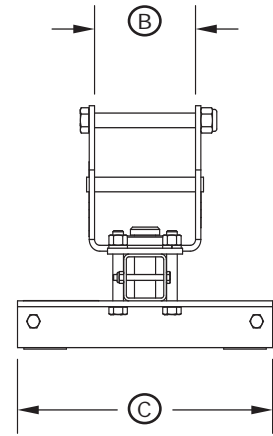
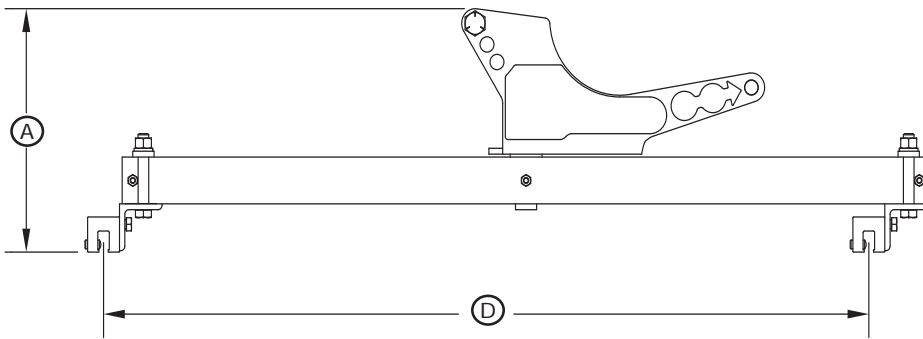
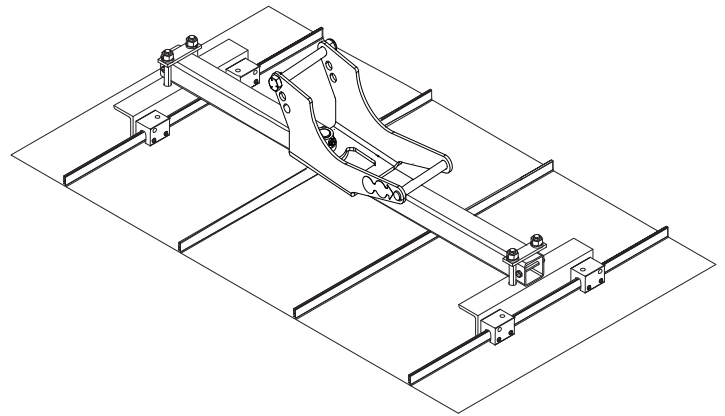
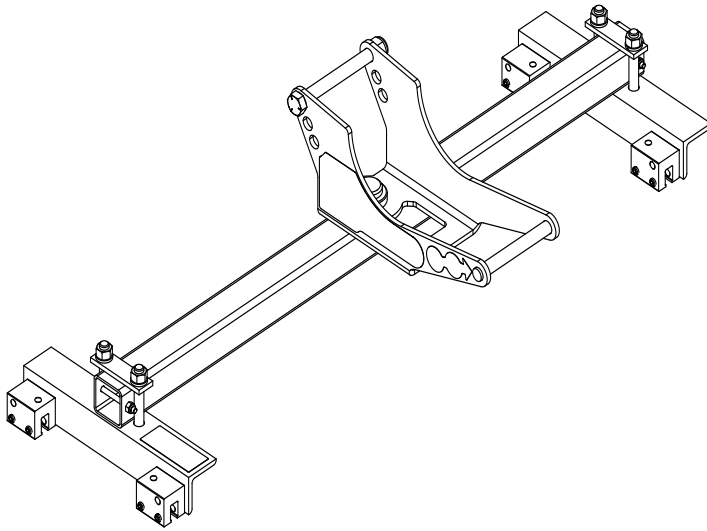
## Anchorage Connector

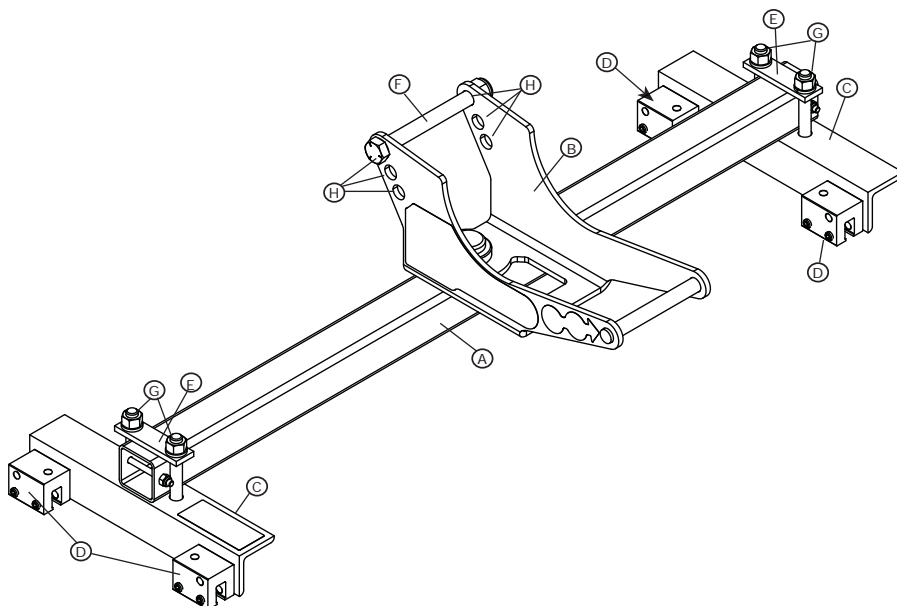
### USER INSTRUCTION MANUAL

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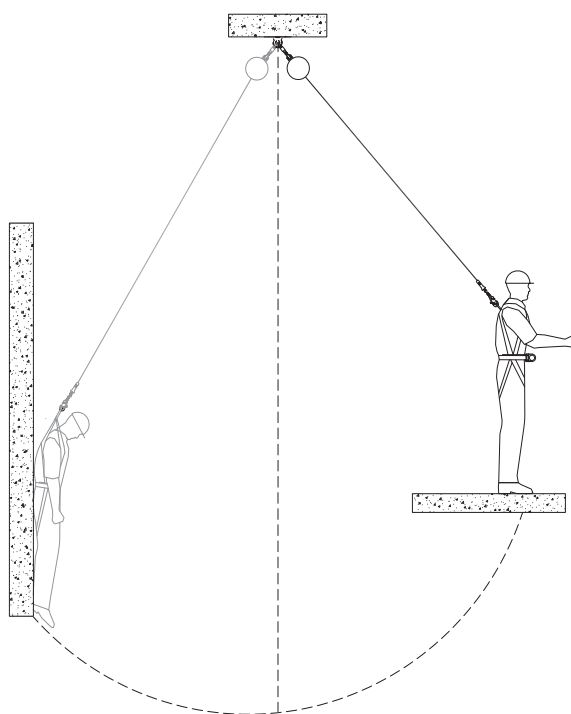
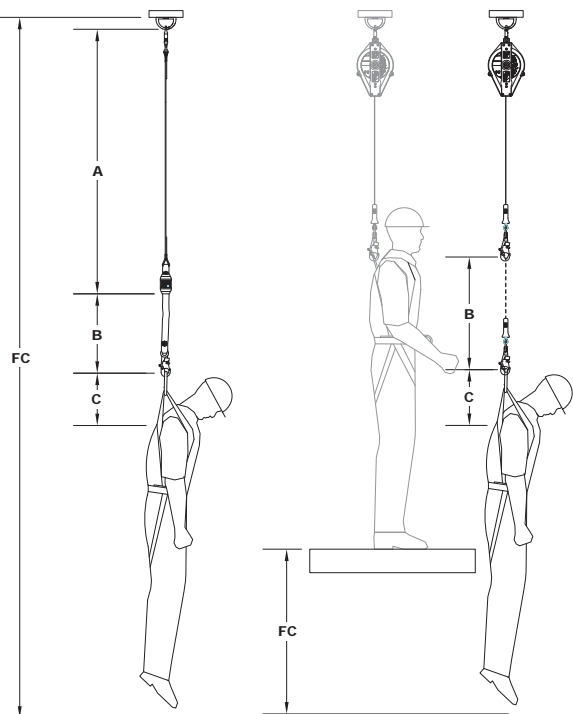
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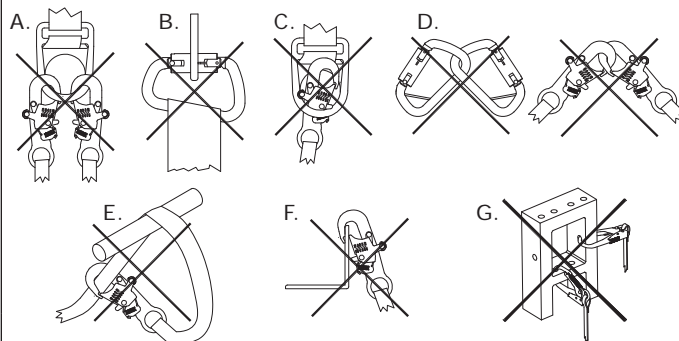
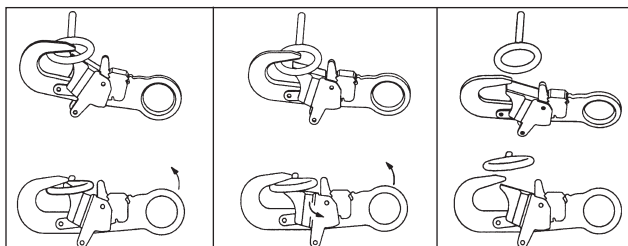
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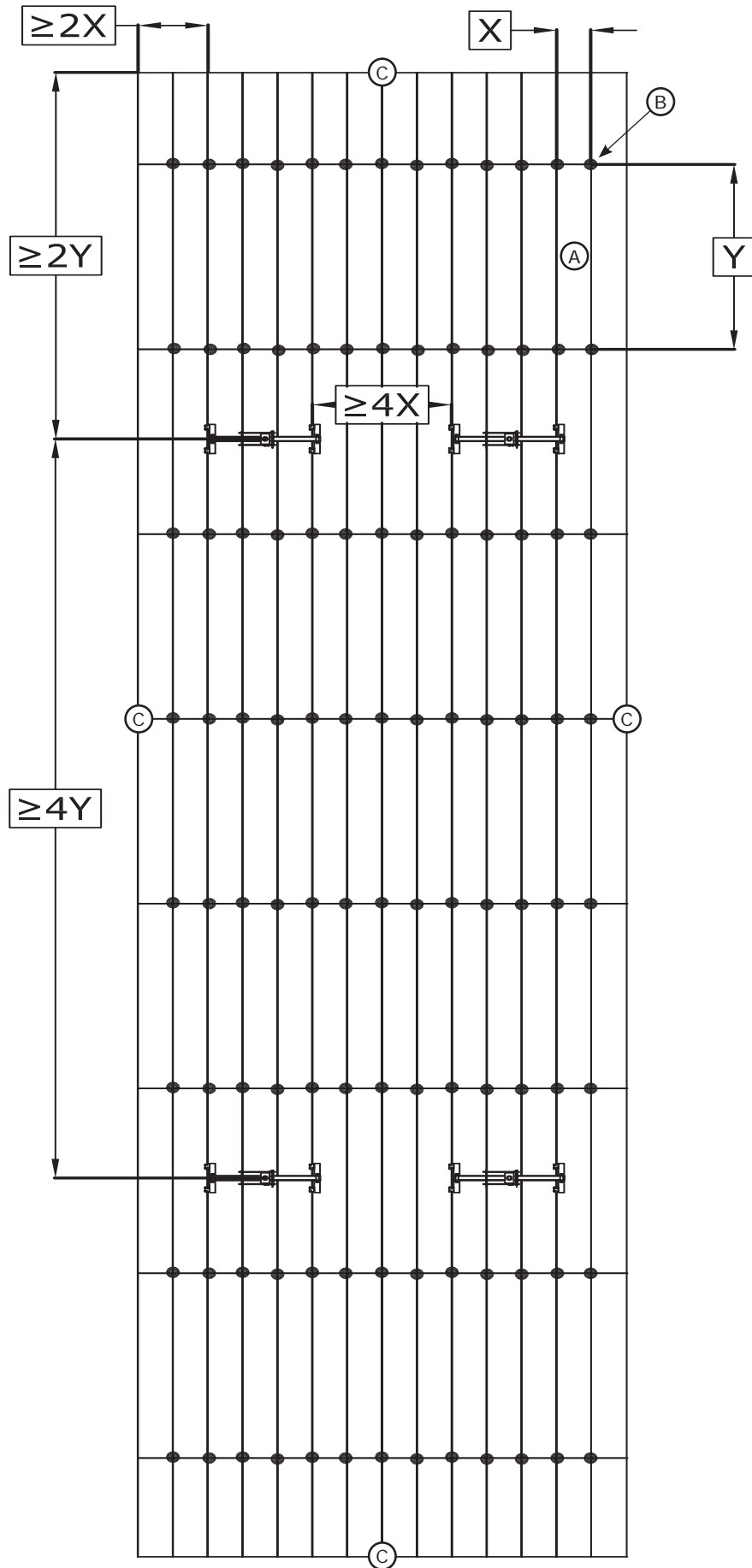
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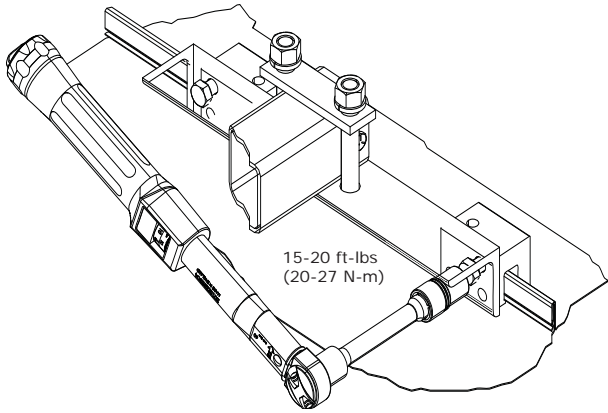
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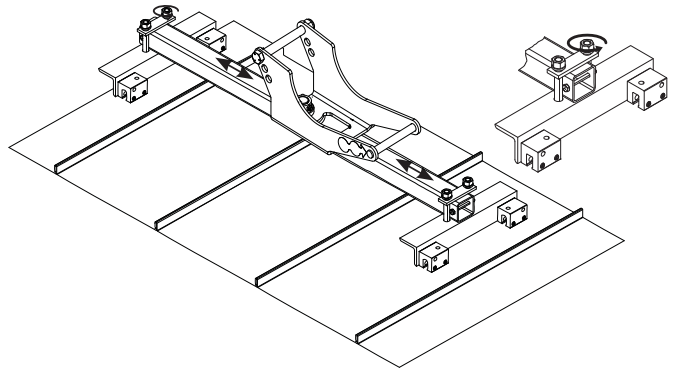


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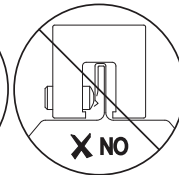
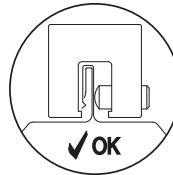
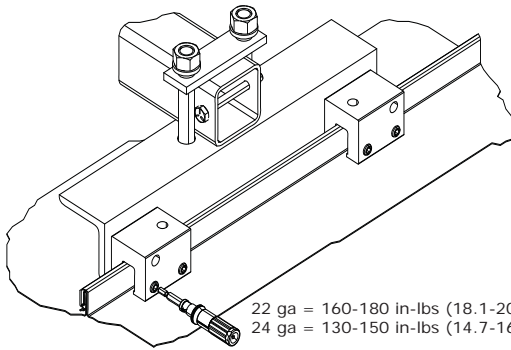
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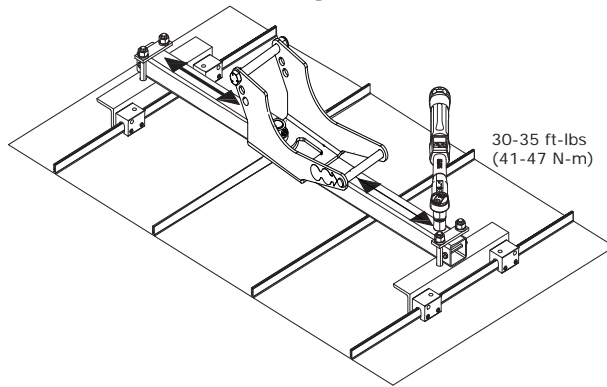
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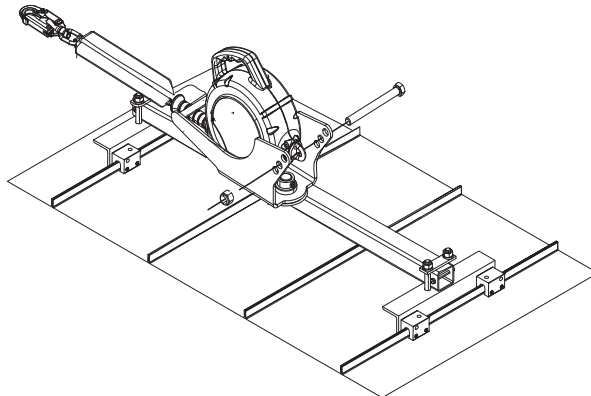
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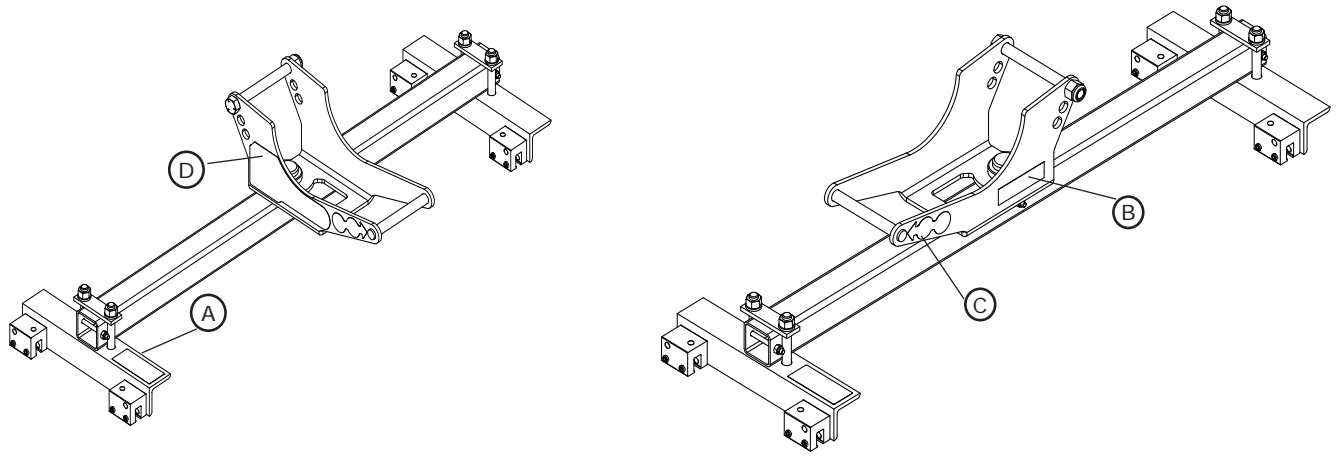


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**⚠ WARNING / AVERTISSEMENT** Manufacturer's instructions supplied with this product at time of shipment must be followed for proper use, maintenance, and inspection. Alteration or misuse of this product, or failure to follow instructions, may result in serious injury or death. Make only compatible connections. This equipment must be installed and used under the supervision of a qualified person. Fall arrest forces must be limited to 1800 lbs (8 kN). Exercise caution using this equipment near hazardous thermal, electrical, or chemical sources. / On doit observer les instructions du fabricant fournies au moment de l'expédition. Une modification ou une mauvaise utilisation de ce produit, ou le fait de négliger d'observer les instructions, peut provoquer une blessure grave voire mortelle. Effectuer seulement des connections compatibles. Cet équipement doit être installé et utilisé sous la supervision d'une personne qualifiée. Les forces d'arrêt des chutes doivent être limitées à 1800 lbs (8 kN). Rester prudent lors de l'utilisation de ce produit à proximité de sources thermiques, électriques ou chimiques dangereuses. 9514258 Rev. A



**3M**

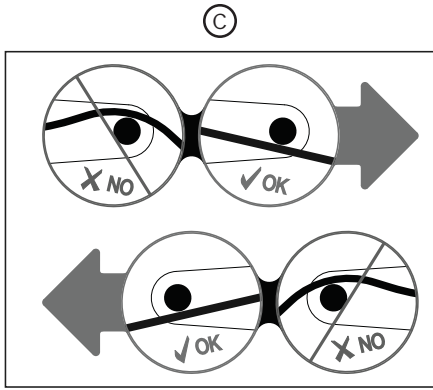


**PROTECTA**

Fall Protection

9508161 Rev. C

MFRD. (YR, MO) / FABR. (AN, MO):
LOT #:
MODEL NO / N° DE MODELE:



**Swiveling Standing Seam Roof Anchor**  
**Ancre de Toit à Joint Debout Pivotant**

3M.com/FallProtection

**INSPECTION:** Inspect anchor before each use. Do not use if inspection reveals an unsafe or defective condition. Not user repairable. Re-torque set screws daily to 130-150 in-lbs (15-17 Nm) for 24 gauge steel and 160-180 in-lbs (18-20 Nm) for 22 gauge or thicker steel. / Inspecter l'ancrage avant utilisation. Ne pas utiliser si l'inspection révèle une condition défectueuse ou dangereuse. Non réparable par l'utilisateur. Resserrer les vis sans têtes quotidiennement à 130-150 po-lb (15-17 Nm) pour un acier d'épaisseur calibre 24 et à 160-180 po-lb (18-20 Nm) pour un acier d'épaisseur calibre 22 ou plus épais.

**USE / UTILISATION:** Maximum seam spacing is 36 inches (0.91 m). Minimum decking thickness is 24 gauge steel. Clamp the two leg assemblies to roof seams with clamps positioned as shown in diagram. Tighten set screws on all four clamps to 130-150 in-lbs (15-17 Nm) for 24 gauge steel and 160-180 in-lbs (18-20 Nm) for 22 gauge or thicker steel. Connect swivel assembly to leg assemblies using clamp plates and 1/2 in. (12.7 mm) fasteners. Swivel must be centered between leg assemblies and must rotate without contacting clamp plates. Torque fasteners to 30-35 ft-lbs (41-47.5 Nm). See user manual for details. / L'espacement maximum entre joints est de 36 po (0.91 m). L'épaisseur minimum de tôle est de calibre 24 en acier. Fixer les deux assemblages de jambes au joint du toit avec les mâchoires positionnées comme montré sur les diagrammes. Serrer les vis sans têtes des quatre mâchoires à 130-150 po-lb (15-17 Nm) pour un acier d'épaisseur calibre 24 et à 160-180 po-lb (18-20 Nm) pour un acier d'épaisseur calibre 22 ou plus épais. Connecter l'assemblage pivotant à l'assemblage des jambes en utilisant des plaques de serrage et la visserie de 1/2 in. (12.7 mm). La partie pivotante doit être centrée entre les assemblages de jambes et doit pivoter sans rentrer en contact avec les plaques de serrage. Serrer la visserie à 30-35 ft-lbs (41-47.5 Nm). Voir le guide d'utilisation pour les détails.

INSPECTION LOG  
JOURNAL D'INSPECTION

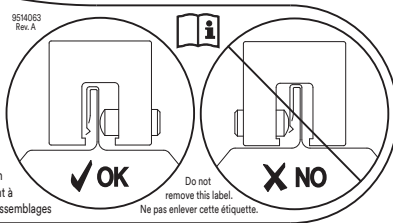
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**SPECIFICATIONS  
CARACTERISTIQUES:**

Capacity / Capacité:  
1 person / personne, 420 lbs (191 kg)

Material / Matériau:  
Carbon Steel / Acier carbone

Meets / Rencontre:  
OSHA 1910.140 & 1926.502



## SAFETY INFORMATION

Please read, understand, and follow all safety information contained in these instructions prior to the use of this Anchorage Connector. **FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.**

These instructions must be provided to the user of this equipment. Retain these instructions for future reference.

### Intended Use:

This Anchorage Connector is intended for use as part of a complete personal fall protection system.

Use in any other application including, but not limited to, material handling, recreational or sports related activities, or other activities not described in the User Instructions, is not approved by 3M and could result in serious injury or death.

This device is only to be used by trained users in workplace applications.

### WARNING

This Anchorage Connector is part of a personal fall protection system. It is expected that all users be fully trained in the safe installation and operation of their personal fall protection system. **Misuse of this device could result in serious injury or death.** For proper selection, operation, installation, maintenance, and service, refer to these User Instructions and all manufacturer recommendations, see your supervisor, or contact 3M Technical Service.

- **To reduce the risks associated with working with an Anchorage Connector which, if not avoided, could result in serious injury or death:**
  - Inspect the device before each use, at least annually, and after any fall event. Inspect in accordance with the User Instructions.
  - If inspection reveals an unsafe or defective condition, remove the device from service and repair or replace according to the User Instructions.
  - Any device that has been subject to fall arrest or impact force must be immediately removed from service and destroyed.
  - The device must only be installed in the specified substrates or on structures detailed in the User Instructions. Installations and use outside the scope of this instruction must be approved by 3M Fall Protection.
  - The substrate or structure to which the anchorage connector is attached must be able to sustain the static loads specified for the anchor in the orientations permitted in the User Instructions.
  - Only connect other fall protection subsystems to the designated anchorage connection point on the device.
  - Prior to drilling or fastening, ensure no electric lines, gas lines, or other critical embedded systems will be contacted by the drill or the device.
  - Ensure that fall protection systems/subsystems assembled from components made by different manufacturers are compatible and meet the requirements of applicable standards, including the ANSI Z359 or other applicable fall protection codes, standards, or requirements. Always consult a Competent or Qualified Person before using these systems.
  - (ROOF ANCHORS) Never attach a horizontal lifeline between two or more roof anchors unless specifically provided for in the User Instructions.
  - (ROOF ANCHORS) Only attach device to roof sheathing that is appropriately secured to a structural member that can sustain the static loads required by this device.
  - (ROOF ANCHORS) Only use fasteners specified for use with this device. Other fastener types must be approved by 3M.
  - (STANDING SEAM ANCHORS) Always ensure the roof seam is compatible with the device seam clamps.
- **To reduce the risks associated with working at height which, if not avoided, could result in serious injury or death:**
  - Ensure your health and physical condition allow you to safely withstand all of the forces associated with working at height. Consult with your doctor if you have any questions regarding your ability to use this equipment.
  - Never exceed allowable capacity of your fall protection equipment.
  - Never exceed maximum free fall distance of your fall protection equipment.
  - Do not use any fall protection equipment that fails pre-use or other scheduled inspections, or if you have concerns about the use or suitability of the equipment for your application. Contact 3M Technical Services with any questions.
  - Some subsystem and component combinations may interfere with the operation of this equipment. Only use compatible connections. Consult 3M prior to using this equipment in combination with components or subsystems other than those described in the User Instructions.
  - Use extra precautions when working around moving machinery (e.g. top drive of oil rigs) electrical hazards, extreme temperatures, chemical hazards, explosive or toxic gases, sharp edges, or below overhead materials that could fall onto you or your fall protection equipment.
  - Use Arc Flash or Hot Works devices when working in high heat environments.
  - Avoid surfaces and objects that can damage the user or equipment.
  - Ensure there is adequate fall clearance when working at height.
  - Never modify or alter your fall protection equipment. Only 3M or parties authorized in writing by 3M may make repairs to the equipment.
  - Prior to use of fall protection equipment, ensure a rescue plan is in place which allows for prompt rescue if a fall incident occurs.
  - If a fall incident occurs, immediately seek medical attention for the worker who has fallen.
  - Do not use a body belt for fall arrest applications. Use only a Full Body Harness.
  - Minimize swing falls by working as directly below the anchorage point as possible.
  - If training with this device, a secondary fall protection system must be utilized in a manner that does not expose the trainee to an unintended fall hazard.
  - Always wear appropriate personal protective equipment when installing, using, or inspecting the device/system.

Prior to installation and use of this equipment, record the product identification information from the ID label in the Inspection and Maintenance Log (Table 2) at the back of this manual.

**PRODUCT DESCRIPTION:**

Figure 1 illustrates the 3M™ Protecta™ Standing Seam Roof Anchor. The Standing Seam Roof Anchor is a single point anchorage connector for mounting Leading Edge Self-Retracting Lifelines (SRL-LE) on sloped or flat standing seam roofs on seam spacing of up to 36 inches (91.4 cm). The Standing Seam Roof Anchor can only be used with Rebel Leading Edge Self-Retracting Lifelines.

Figure 2 illustrates components of the Standing Seam Roof Anchor. See Table 1 for Component Specifications. The Standing Seam Roof Anchor is comprised of a Swivel Bracket (B) mounted on a center Load Bar (A) with Adjustable Legs (C) that slide to the width of the roof seam and attach with roof Seam Clamps (D). The Adjustable Legs slide along the Load Bar on Mounting Brackets (E) that can be secured at the desired width. The SRL-LE is secured in the Swivel Bracket by a Mounting Bolt (F) inserted through the appropriate height SRL Mounting Holes (H) in the Swivel Bracket and SRL-LE Swivel Eye.

**Table 1 – Specifications**

System Specifications:	
<b>Capacity:</b>	1 Person with a combined weight (clothing, tools, etc.) of no more than 420 lbs (191 kg) <sup>1</sup> .
<b>Anchorage:</b>	<p><b>Fall Arrest:</b> The structure to which the Anchorage Connector is attached must sustain static loads applied in the directions permitted by the Fall Arrest System of at least: 3,600 lbs (16 kN) with certification of a Qualified Person<sup>2</sup>; or 5,000 lbs (22 kN) without certification. When more than one Personal Fall Arrest System (PFAS) is attached to an anchorage, these static loads must be multiplied by the number of PFAS attached to the anchorage.</p> <div style="border: 1px solid black; padding: 5px;"> <p><input checked="" type="checkbox"/> <b>OSHA 1926.500 and OSHA 1910.66:</b> Anchorages used for attachment to a Personal Fall Arrest System (PFAS) must be independent of any anchorage used to suspend or support platforms and must support 5,000 lbs (22 kN) per user attached, or be designed, installed, and used as part of a complete PFAS which maintains a Safety Factor of at least 2 and is supervised by a Qualified Person<sup>2</sup>.</p> </div> <p><b>Restraint:</b> The structure to which the Anchorage Connector is attached must sustain static loads applied in the directions permitted by the Restraint System of at least 3,000 lbs (13 kN). When more than one Restraint System is attached to an anchorage, the static load must be multiplied by the number of Restraint Systems attached to the anchorage.</p> <p><b>Seam Requirements:</b> The Standing Seam Roof Anchor must be attached to the seam as shown in Figure 8. The hook side of the Seam Clamp must hook under the roof seam for proper attachment.</p> <p><b>Roof Panels:</b> The Standing Seam Roof Anchor must only be used on structural standing seam roof panels that meet the geometric and load requirements specified in Table 1. Roof panels must be a minimum of 24 gauge steel.</p> <p><b>Multiple Anchor Installations:</b> See Figure 7 and Section 3.1 for guidelines on installing multiple Standing Seam Roof Anchors onto one roof. Two or more Standing Seam Roof Anchors must not apply loads to a single panel fastener.</p>
<b>Dimensions:</b>	See Figure 1 for the dimensions of each Standing Seam Roof Anchor model.
<b>Weight:</b>	28 lbs without SRL

Component Specifications:			
Figure 2 Reference	Component	Materials	Note:
(A)	Load Bar	Steel Tube	
(B)	Swivel Bracket	Steel Weldement	
(C)	Adjustable Legs	Steel Angle	
(D)	Seam Clamp and Set Screws	Clamps - Aluminum Set Screw - Stainless Steel	Torque Set Screws to 160-180 in-lbs (18.1-20.3 N-m) for 22 gauge steel or thicker; 130-150 in-lbs (14.7-16.9 N-m) for 24 gauge steel.
(E)	Mounting Brackets	Steel	
(F)	Mounting Bolt	Steel	
(G)	Adjustable Leg Bolts	Steel	Torque Adjustable Leg fasteners to 30-35 ft-lbs (41-47 N-m)
(H)	SRL Mounting Holes		

**1 Capacity:** This product has been tested to a 420 lbs (191 kg) Maximum Capacity per OSHA.

**2 Qualified Person:** An individual with a recognized degree or professional certificate, and extensive experience in Fall Protection. This individual must be capable of design, analysis, evaluation, and specification in Fall Protection.

**Table 1 – Specifications**

<b>Compatible Roof Panels:</b>	
A&S Double-Lok, 22 ga steel	Firestone UC3, 24 ga steel
A&S Double-Lok, 24 ga steel	Firestone UC4, 24 ga steel
A&S Ultra Dek, 22 ga steel	Firestone UC6, 24 ga steel
A&S Ultra Dek, 24 ga steel	MBCI Lok Seam, 22 ga steel
AB Martin Roofing AB Seam 19.5, 24 ga steel	MBCI Lok Seam, 24 ga steel
AEP Span Design Span hp, 22 ga steel	MBCI UltraDek, 22 ga steel
AEP Span High Seam, 24 ga steel	MBCI UltraDek, 24 ga steel
AEP Span Snap Seam, 22 ga steel	McElroy Metals Master-Lok 90 ML90, 22 ga steel
AEP Span Snap Seam, 24 ga steel	McElroy Metals Master-Lok 90, ML90 24 ga steel
American Buildings Company Standing Seam II Panel, 24 ga steel	McElroy Metals Medallion-Lok, 22 ga steel
Architectural Building Components Perma seam, 22 ga steel	McElroy Metals Medallion-Lok, 24 ga steel
Architectural Building Components Perma seam, 24 ga steel	Merchant & Evans #305, 24 ga steel
Bax Steel Buildings Bax-Lock, 22 ga steel	Mesco Ultra Dek, 22 ga steel
Bax Steel Buildings Bax-Lock, 24 ga steel	Mesco Ultra Dek, 24 ga steel
BC Steel Buildings BCL 24-SD, 22 ga steel	Metal Sales Vertical Seam, 22 ga steel
BC Steel Buildings BCL 24-SD, 24 ga steel	Metal Sales Vertical Seam, 24 ga steel
Berridge Cee-Lock, 24 ga steel	NCI/Midwest Metallic Ultra Dek, 22 ga steel
Butler MR24, 24 ga steel	NCI/Midwest Metallic Ultra Dek, 24 ga steel
Ceco CXP, 22 ga steel	New Tech Machinery S5 5500 Snap Lock 1 1/2, 24 ga steel
Ceco CXP, 24 ga steel	New Tech Machinery SS675 Sanp Lock 1 3/4, 24 ga steel
Central States Manufacturing Central Loc, 22 ga steel	Petersen Aluminum Corp Snap Clad, 22 ga steel
Central States Manufacturing Central Loc, 24 ga steel	Petersen Aluminum Corp Snap Clad, 24 ga steel
Central Texas Metal Roofing Supply ShurLoc 175, 22 ga steel	Star Building Systems Starshield, 22 ga steel
Central Texas Metal Roofing Supply ShurLoc 175, 24 ga steel	Star Building Systems Starshield, 24 ga steel
Centria SDP175, 22 ga steel	Taylor Metal Easy Lock Standing Seam, 24 ga steel
Centria SDP175, 24 ga steel	U.S. Metals US-175LS, 22 ga steel
Copper Sales UC3, 24 ga steel	U.S. Metals US-175LS, 24 ga steel
Copper Sales UC4, 24 ga steel	Una-Clad UC3, 24 ga steel
Copper Sales UC6, 24 ga steel	Una-Clad UC4, 24 ga steel
Custom Bilt Metals SL-175,0 24 ga steel	Una-Clad UC6, 24 ga steel
Dimensional Metals DL-15, 24 ga steel	United Structures of America Guardian I, 22 ga steel
Dimensional Metals IL-20, 22 ga steel	United Structures of America Guardian I, 24 ga steel
Dimensional Metal IL-20, 24 ga steel	United Structures of America Guardian II, 22 ga steel
Englert Series 2000, 22 ga steel	United Structures of America Guardian II, 24 ga steel
Englert Series 2000, 24 ga steel	Varco Pruden SSR, 24 ga steel
Fabral 3" Snap Rib, 24 ga steel	Whirlwind Building Systems Super Seam II, 22 ga steel
Fabral Slim Seam, 24 ga steel	Whirlwind Building Systems Super Seam II, 24 ga steel
Fabral Thin Seam, 24 ga steel	



## 1.0 PRODUCT APPLICATION

- 1.1 **PURPOSE:** Anchorage Connectors are designed to provide anchorage connection points for Fall Arrest<sup>1</sup> or Fall Restraint<sup>2</sup> systems: Restraint, Work Positioning, Personnel Riding, Rescue, etc.

**Fall Protection Only:** This Anchorage Connector is for connection of Fall Protection Equipment. Do not connect Lifting Equipment to this Anchorage Connector.

- 1.2 **STANDARDS:** Your Anchorage Connector conforms to the national or regional standard(s) identified on the front cover of these instructions. If this product is resold outside the original country of destination, the re-seller must provide these instructions in the language of the country in which the product will be used.
- 1.3 **SUPERVISION:** Use of this equipment must be supervised by a Competent Person<sup>3</sup>.
- 1.4 **TRAINING:** This equipment must be installed and used by persons trained in its correct application. This manual is to be used as part of an employee training program as required by ANSI and OSHA. It is the responsibility of the users and installers of this equipment to ensure they are familiar with these instructions, trained in the correct care and use of this equipment, and are aware of the operating characteristics, application limitations, and consequences of improper use of this equipment.
- 1.5 **RESCUE PLAN:** When using this equipment and connecting subsystem(s), the employer must have a rescue plan and the means at hand to implement and communicate that plan to users, authorized persons<sup>4</sup>, and rescuers<sup>5</sup>. A trained, on-site rescue team is recommended. Team members should be provided with the equipment and techniques to perform a successful rescue. Training should be provided on a periodic basis to ensure rescuer proficiency.
- 1.6 **INSPECTION FREQUENCY:** The Anchorage Connector shall be inspected by the user before each use and, additionally, by a competent person other than the user at intervals of no longer than one year.<sup>6</sup> Inspection procedures are described in the "Inspection and Maintenance Log". Results of each Competent Person inspection should be recorded on copies of the "Inspection and Maintenance Log".
- 1.7 **AFTER A FALL:** If the Anchorage Connector is subjected to the forces of arresting a fall, it must be removed from service immediately, clearly marked "DO NOT USE", and then destroyed.

## 2.0 SYSTEM REQUIREMENTS

- 2.1 **ANCHORAGE:** Anchorage structure requirements vary with the fall protection application. Structure on which the Anchorage Connector is placed or mounted must meet the Anchorage Strength specifications defined in Table 1.
- 2.2 **PERSONAL FALL ARREST SYSTEM:** Figure 1 illustrates the application of this Anchorage Connector. Personal Fall Arrest Systems (PFAS) used with the system must meet applicable Fall Protection standards, codes, and requirements. The PFAS must incorporate a Full Body Harness and limit Arresting Force to the following values:

	Maximum Arresting Force	Free Fall
PFAS with Shock Absorbing Lanyard	1,800 lb (8 kN)	Refer to the instruction(s) included with your Lanyard or SRD for Free Fall limitations.
PFAS with Self Retracting Device (SRD)	1,800 lb (8 kN)	

- 2.3 **FALL PATH AND SRD LOCKING SPEED:** A clear path is required to assure positive locking of an SRD. Situations which do not allow for an unobstructed fall path should be avoided. Working in confined or cramped spaces may not allow the body to reach sufficient speed to cause the SRD to lock if a fall occurs. Working on slowly shifting material, such as sand or grain, may not allow enough speed buildup to cause the SRD to lock.
- 2.4 **HAZARDS:** Use of this equipment in areas with environmental hazards may require additional precautions to prevent injury to the user or damage to the equipment. Hazards may include, but are not limited to: heat, chemicals, corrosive environments, high voltage power lines, explosive or toxic gases, moving machinery, sharp edges, or overhead materials that may fall and contact the user or Personal Fall Arrest System.
- 2.5 **FALL CLEARANCE:** Figure 3 illustrates the components of a Fall Arrest. There must be sufficient Fall Clearance (FC) to arrest a fall before the user strikes the ground or other obstruction. Clearance is affected by a number of factors including: Anchorage Location, (A) Lanyard Length, (B) Lanyard Deceleration Distance or SRD Maximum Arrest Distance, (C) Harness Stretch and D-Ring/Connector Length and Settling. Refer to the instructions included with your Fall Arrest subsystem for specifics regarding Fall Clearance calculation.

1 **Fall Arrest System:** A collection of Fall Protection Equipment configured to arrest a free fall.

2 **Fall Restraint System:** A collection of Fall Protection Equipment configured to prevent the person's center of gravity from reaching a fall hazard.

3 **Competent Person:** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

4 **Authorized Person:** A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard.

5 **Rescuer:** Person or persons other than the rescue subject acting to perform an assisted rescue by operation of a rescue system.

6 **Inspection Frequency:** Extreme working conditions (harsh environments, prolonged use, etc.) may require increasing the frequency of competent person inspections.

**2.6 SWING FALLS:** Swing Falls occur when the anchorage point is not directly above the point where a fall occurs (see Figure 4). The force of striking an object in a swing fall may cause serious injury or death. Minimize swing falls by working as directly below the anchorage point as possible. Do not permit a swing fall if injury could occur. Swing falls will significantly increase the clearance required when a Self-Retracting Device or other variable length connecting subsystem is used.

**2.7 COMPONENT COMPATIBILITY:** 3M equipment is designed for use with 3M approved components and subsystems only. Substitutions or replacements made with non-approved components or subsystems may jeopardize compatibility of equipment and may affect the safety and reliability of the complete system.

**2.8 CONNECTOR COMPATIBILITY:** Connectors are considered to be compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented. Contact 3M if you have any questions about compatibility.

Connectors (hooks, carabiners, and D-rings) must be capable of supporting at least 5,000 lbs. (22.2 kN). Connectors must be compatible with the anchorage or other system components. Do not use equipment that is not compatible. Non-compatible connectors may unintentionally disengage (see Figure 5). Connectors must be compatible in size, shape, and strength. If the connecting element to which a snap hook or carabiner attaches is undersized or irregular in shape, a situation could occur where the connecting element applies a force to the gate of the snap hook or carabiner (A). This force may cause the gate to open (B), allowing the snap hook or carabiner to disengage from the connecting point (C).

Self-locking snap hooks and carabiners are required by ANSI Z359 and OSHA.

**2.9 MAKING CONNECTIONS:** Snap hooks and carabiners used with this equipment must be self-locking. Ensure all connections are compatible in size, shape and strength. Do not use equipment that is not compatible. Ensure all connectors are fully closed and locked.

3M connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See Figure 6 for examples of inappropriate connections. Do not connect snap hooks and carabiners:

- A. To a D-ring to which another connector is attached.
- B. In a manner that would result in a load on the gate. Large throat snap hooks should not be connected to standard size D-rings or similar objects which will result in a load on the gate if the hook or D-ring twists or rotates, unless the snap hook complies is equipped with a 3,600 lb (16 kN) gate. Check the marking on your snap hook to verify that it is appropriate for your application.
- C. In a false engagement, where features that protrude from the snap hook or carabiner catch on the anchor, and without visual confirmation seems to be fully engaged to the anchor point.
- D. To each other.
- E. Directly to webbing or rope lanyard or tie-back (unless the manufacturer's instructions for both the lanyard and connector specifically allows such a connection).
- F. To any object which is shaped or dimensioned such that the snap hook or carabiner will not close and lock, or that roll-out could occur.
- G. In a manner that does not allow the connector to align properly while under load.

### 3.0 INSTALLATION

*Installation of the Protecta Standing Seam Roof Anchor must be supervised by a Qualified Person<sup>1</sup>. The installation must be certified by a Competent Person<sup>2</sup> as meeting the criteria for a Certified Anchorage, or that it is capable of supporting the potential forces that could be encountered during a fall.*

**3.1 PLANNING:** Table 1 includes a list of *Compatible Roof Panels*. Plan the fall protection system prior to installation of the Standing Seam Roof Anchor. Account for all factors that may affect safety before, during and after a fall. Consider all requirements, limitations and specifications defined in Section 2 and Table 1.

**Anchor Placement:** Figure 7 illustrates proper placement of the Standing Seam Roof Anchor(s) on the standing seam roof. Roof anchors must be located and spaced properly on the roof to preserve structural strengths of the roof and roof anchor. Requirements are as follows:

- A panel Section (A) is comprised of all Roof Panels within the rectangular boundaries (X and Y) of four adjacent Panel Fasteners (B). No two Roof Anchors should apply loads to the same Panel Fastener.
- Roof Anchors must be positioned at least two Panel Section Widths (2X) and two Panel Section Lengths (2Y) from any Roof Edge (C).
- There must be a minimum of four Panel Section Widths (4X) between the Seam Clamps on adjacent Roof Anchors.
- There must be a minimum of four Panel Section Lengths (4Y) between the Swivel Brackets of adjacent Roof Anchors.

**3.2 INSTALLING THE STANDING SEAM ROOF ANCHOR:** The Standing Seam Roof Anchor can be installed on metal roof seams meeting the anchorage requirements specified in Table 1. The maximum allowable roof seam flange width is 36 inches (91.4 cm). Multiple Standing Seam Roof Anchors can be installed on the same roof but they must be positioned on the roof per the requirements defined in the previous section (and Figure 7). Figure 8 illustrates installation of the Standing Seam Roof Anchor. To install the Standing Seam Roof Anchor:

1. Torque the fasteners securing the Seam Clamps on the Adjustable Legs to 15-20 ft-lbs (20-27 N-m).
2. Loosen the Adjustable Leg fasteners and slide the Adjustable Legs along the Load Bar so the Seam Clamps will align on the desired roof seams with the Swivel Bracket centered between the two seams.
3. Position the Seam Clamps on the roof seams. Seam Clamps should be aligned with the Seam Clamp Set Screws opposite the folded overlaps on the standing seams. Torque the Set Screw on each Seam Clamp to the torque value recommended for the roof gauge (see Table 1).
4. Center the Swivel Bracket and Load Bar between the Seam Clamps and tighten the Adjustable Leg fasteners to secure the Load Bar to the Adjustable Legs. Torque the Adjustable Leg fasteners to 30-35 ft-lbs (41-47 N-m).

*Inspection: After installation, inspect the Standing Seam Roof Anchor per the "Competent Person" inspection checkpoints in the "Inspection and Maintenance Log" (Table 2).*

**3.3 INSTALLING THE SRL-LE:** Figure 9 illustrates mounting of Rebel Leading Edge Self-Retracting Lifelines in the Standing Seam Roof Anchor. To install the SRL-LE in the Swivel Bracket of the Standing Seam Roof Anchor:

1. Route the SRL-LE lifeline underneath the welded Cross Bar on the front of the Swivel Bracket. The SRL-LE lifeline must pass underneath this Cross Bar.
2. Position the SRL-LE in the Swivel Bracket with the Swivel Eye on the SRL-LE aligned with the appropriate Mounting Holes in the back end of the Swivel Bracket. Insert the provided SRL Mounting Hardware through the Swivel Bracket and Swivel Eye.

### 4.0 USE

**4.1 BEFORE EACH USE:** Verify that the work area and Personal Fall Arrest System (PFAS) meet all criteria defined in Section 2 and a formal rescue plan is in place. Inspect the Standing Seam Roof Anchor per the 'User' inspection points defined on the "Inspection and Maintenance Log" (Table 2). If inspection reveals an unsafe or defective condition, do not use the system. Remove the system from service and contact 3M regarding replacement.

**4.2 FALL ARREST CONNECTIONS:** The Standing Seam Roof Anchor is used with a full body harness and Leading Edge Self-Retracting Lifeline (SRL-LE). Connect the SRL-LE Lifeline to the back dorsal D-ring on the harness as instructed in the instructions included with the SRL-LE.

### 5.0 INSPECTION

**5.1 INSPECTION FREQUENCY:** The Standing Seam Roof Anchor must be inspected at the intervals defined in Section 1. Inspection procedures are described in the "Inspection and Maintenance Log" (Table 2). Inspect all other components of the Fall Protection System per the frequencies and procedures defined in the manufacturer's instructions.

**5.2 DEFECTS:** If inspection reveals an unsafe or defective condition, remove the Standing Seam Roof Anchor from service immediately and contact 3M regarding replacement. Do not attempt to repair the Fall Arrest System.

**5.3 PRODUCT LIFE:** The functional life of the Fall Arrest System is determined by work conditions and maintenance. As long as the product passes inspection criteria, it may remain in service.

**1 Qualified Person:** An individual with a recognized degree or professional certificate, and extensive experience in Fall Protection. This individual must be capable of design, analysis, evaluation, and specification in Fall Protection.

**2 Competent Person:** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

## **6.0 MAINTENANCE, SERVICING, STORAGE**

- 6.1 CLEANING:** Periodically clean the Standing Seam Roof Anchor metal components with a soft brush, warm water, and a mild soap solution. Ensure parts are thoroughly rinsed with clean water.
- 6.2 SERVICE:** If inspection reveals an unsafe or defective condition, remove the Standing Seam Roof Anchor from service immediately and contact 3M regarding replacement. Do not attempt to repair the Fall Arrest System.
- 6.3 STORAGE AND TRANSPORT:** When not in use, store and transport the Standing Seam Roof Anchor and associated fall protection equipment in a cool, dry, clean environment out of direct sunlight. Avoid areas where chemical vapors may exist. Thoroughly inspect components after extended storage.

## **7.0 LABELS**

Figure 10 Illustrates labels on the Standing Seam Roof Anchor. Labels must be replaced if they are not fully legible.

**Table 2 – Inspection and Maintenance Log**

<b>Inspection Date:</b>		<b>Inspected By:</b>	
<b>Components:</b>	<b>Inspection:</b> (See Section 1 for <i>Inspection Frequency</i> )	<b>User</b>	<b>Competent Person<sup>1</sup></b>
Standing Seam Roof Anchor (Figure 2)	Inspect the Standing Seam Roof Anchor for damage: Look for cracks, dents, corrosion or deformities. Look for bending or wear on the Load Bar (A), Adjustable Legs (C), Swivel Bracket (B), Mounting Bolt (F), and Seam Clamps (D).	<input type="checkbox"/>	<input type="checkbox"/>
	Confirm all hardware: Seam Clamp bolts and nuts, SRL Mounting Bolt and nut, set screws, and Adjustable Leg bolts and nuts are present and in safe working order.	<input type="checkbox"/>	<input type="checkbox"/>
	Confirm the Swivel Bracket, SRL-LE, and the Mounting Bolt can be inserted through the holes in the Swivel Bracket.	<input type="checkbox"/>	<input type="checkbox"/>
	Confirm that the Swivel Bracket freely swivels 360 degrees.	<input type="checkbox"/>	<input type="checkbox"/>
	Re-torque the Mounting Bracket and Seam Clamp fasteners to the torque requirements listed in Table 1.	<input type="checkbox"/>	<input type="checkbox"/>
Labels (Figure 10)	Verify that all labels are securely attached and are legible (see <i>'Labels'</i> )	<input type="checkbox"/>	<input type="checkbox"/>
PFAS and Other Equipment	Additional Personal Fall Arrest System (PFAS) equipment (harness, SRL, etc) that are used with the Anchorage System should be installed and inspected per the manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>

<b>Serial Number(s):</b>	<b>Date Purchased:</b>
<b>Model Number:</b>	<b>Date of First Use:</b>
<b>Corrective Action/Maintenance:</b>	Approved By:
	Date:
<b>Corrective Action/Maintenance:</b>	Approved By:
	Date:
<b>Corrective Action/Maintenance:</b>	Approved By:
	Date:
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<b>Corrective Action/Maintenance:</b>	Approved By:
	Date:

<sup>1</sup> **Competent Person:** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

**GLOBAL PRODUCT WARRANTY, LIMITED REMEDY  
AND LIMITATION OF LIABILITY**

**WARRANTY:** THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Unless otherwise provided by local laws, 3M fall protection products are warranted against factory defects in workmanship and materials for a period of one year from the date of installation or first use by the original owner.

**LIMITED REMEDY:** Upon written notice to 3M, 3M will repair or replace any product determined by 3M to have a factory defect in workmanship or materials. 3M reserves the right to require product be returned to its facility for evaluation of warranty claims. This warranty does not cover product damage due to wear, abuse, misuse, damage in transit, failure to maintain the product or other damage beyond 3M's control. 3M will be the sole judge of product condition and warranty options.

This warranty applies only to the original purchaser and is the only warranty applicable to 3M's fall protection products. Please contact 3M's customer service department in your region for assistance.

**LIMITATION OF LIABILITY:** TO THE EXTENT PERMITTED BY LOCAL LAWS, 3M IS NOT LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO LOSS OF PROFITS, IN ANY WAY RELATED TO THE PRODUCTS REGARDLESS OF THE LEGAL THEORY ASSERTED.

**GARANTIE INTERNATIONALE DU PRODUIT, RECOURS LIMITÉ  
ET LIMITATION DE RESPONSABILITÉ**

**GARANTIE :** CE QUI SUIT REMPLACE TOUTES LES GARANTIES OU CONDITIONS, EXPRESSES OU IMPLICITES, Y COMPRIS LES GARANTIES OU LES CONDITIONS IMPLICITES RELATIVES À LA QUALITÉ MARCHANDE ET À L'ADAPTATION À UN USAGE PARTICULIER.

Sauf disposition contraire de la loi, les produits de protection antichute 3M sont garantis contre tout défaut de fabrication en usine et de matériaux pour une période d'un (1) an à compter de la date d'installation ou de la première utilisation par le propriétaire initial.

**RECOURS LIMITÉ :** Moyennant un avis écrit à 3M, 3M réparera ou remplacera tout produit présentant un défaut de fabrication en usine ou de matériaux, tel que déterminé par 3M. 3M se réserve le droit d'exiger le retour du produit dans ses installations afin d'évaluer la réclamation de garantie. Cette garantie ne couvre pas les dommages au produit résultant de l'usure, d'un abus ou d'une mauvaise utilisation, les dommages subis pendant l'expédition, le manque d'entretien du produit ou d'autres dommages en dehors du contrôle de 3M. 3M jugera seul de l'état du produit et des options de garantie.

Cette garantie s'applique uniquement à l'acheteur initial et est la seule garantie applicable aux produits de protection antichute de 3M. Veuillez communiquer avec le service à la clientèle de 3M de votre région pour obtenir de l'aide.

**LIMITATION DE RESPONSABILITÉ :** DANS LES LIMITES PRÉVUES PAR LES LOIS LOCALES, 3M NE SERA TENU POUR RESPONSABLE DE TOUT DOMMAGE INDIRECT, ACCESSOIRE, SPÉCIFIQUE OU CONSÉCUTIF INCLUANT, SANS S'Y LIMITER, LA PERTE DE PROFIT, LIÉS DE QUELQUE MANIÈRE AUX PRODUITS, QUELLE QUE SOIT LA THÉORIE LÉGALE INVOQUÉE.

**GARANTÍA GLOBAL DEL PRODUCTO, REPARACIONES LIMITADAS  
Y LIMITACIÓN DE RESPONSABILIDAD**

**GARANTÍA:** EL SIGUIENTE TEXTO SIRVE A MODO DE GARANTÍA O CONDICIÓN, EXPLÍCITA O IMPLÍCITA, E INCLUYE LAS GARANTÍAS O CONDICIONES IMPLÍCITAS DE COMERCIABILIDAD O APTITUD PARA UN PROPOSITO ESPECÍFICO.

A menos que las leyes locales indiquen lo contrario, los productos de protección contra caídas 3M tienen garantía por defectos de fábrica en la mano de obra y en los materiales durante un periodo de un año desde la fecha de instalación o desde el primer uso del propietario original.

**REPARACIONES LIMITADAS:** 3M reparará o reemplazará un producto si determina que tiene un defecto de fábrica en la mano de obra o en los materiales y tras haber recibido una notificación por escrito sobre el presunto defecto. 3M se reserva el derecho de exigir la devolución del producto a sus instalaciones para evaluar los reclamos sobre la calidad. Esta garantía no cubre los daños ocasionados por el desgaste, el abuso, el mal mantenimiento, o como consecuencia del traslado del producto, u otros daños ajenos al control de 3M. 3M será el único capaz de determinar la condición del producto y las opciones de la garantía.

Esta garantía solo se aplica al comprador original y es la única garantía válida para los productos de protección contra caídas 3M. Comuníquese con el departamento de servicio al cliente de 3M de su región para obtener ayuda.

**LIMITACIÓN DE RESPONSABILIDAD:** EN LA MEDIDA PERMITIDA POR LAS LEYES LOCALES, 3M NO SERÁ RESPONSABLE DE LOS DAÑOS INDIRECTOS, IMPREVISTOS, ESPECIALES O CONSECUENTES; ENTRE ELLOS, LA PÉRDIDA DE INGRESOS RELACIONADOS DE CUALQUIER MANERA CON LOS PRODUCTOS, INDEPENDIENTEMENTE DE LA TEORÍA JURÍDICA QUE SE PUDIERA INVOCAR.



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# 3M



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EU DECLARATION OF CONFORMITY:  
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