



Fall Protection

Certified to
AS/NZS 5532:2013
Manufacturing requirements
for single-point anchor device
used for harness-based work
at height
Lic. BMP 690543

Certified by
PRODUCT CERTIFICATION

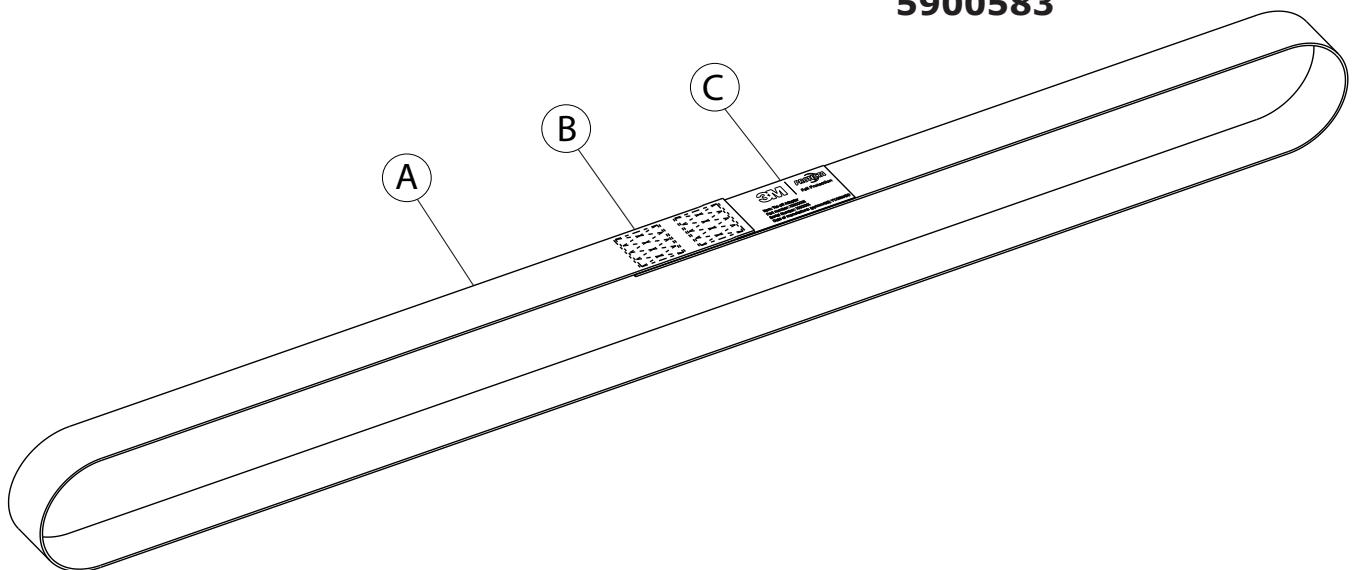
BSI Certified Product

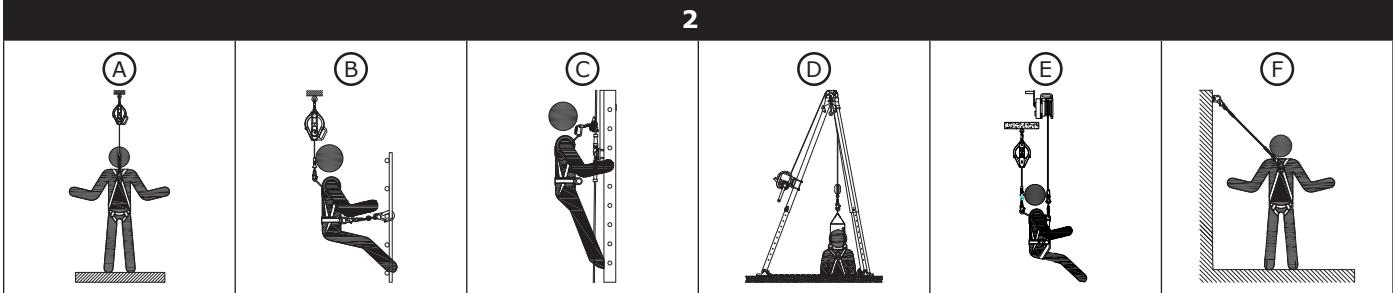
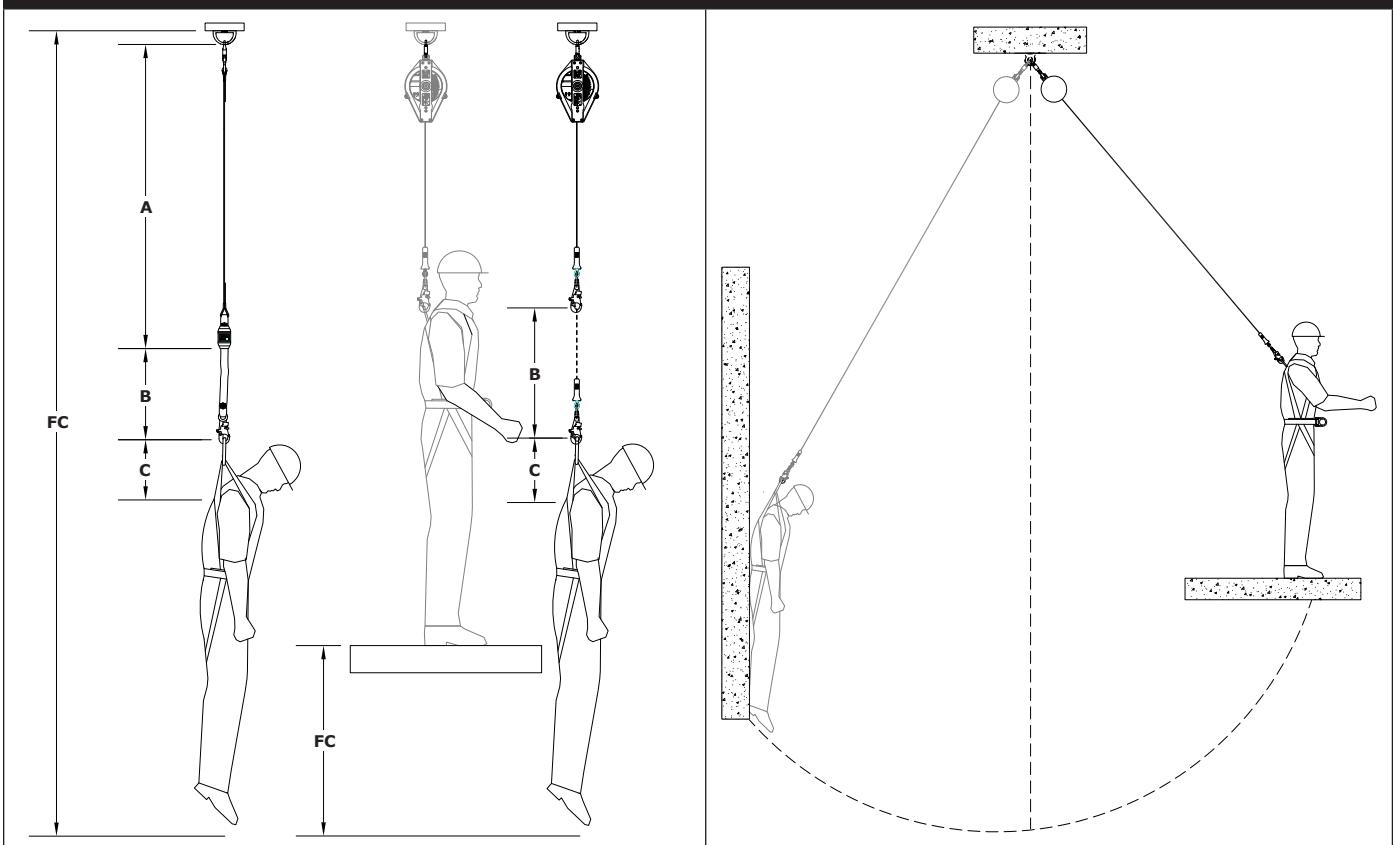
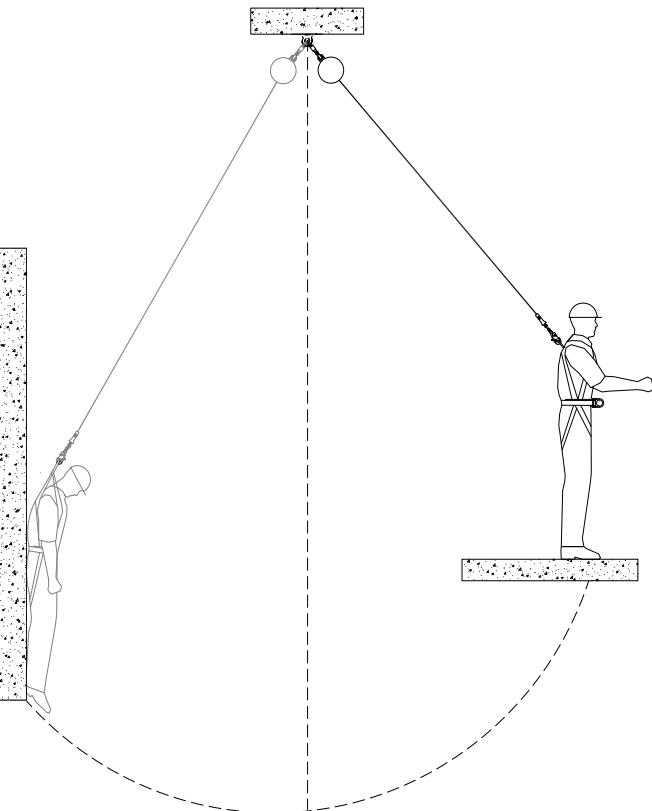
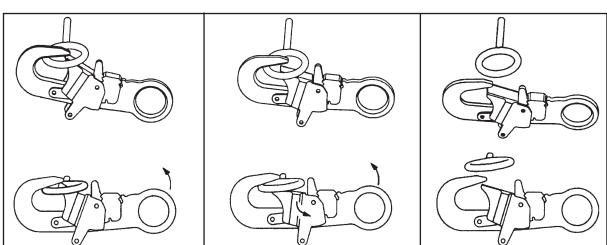
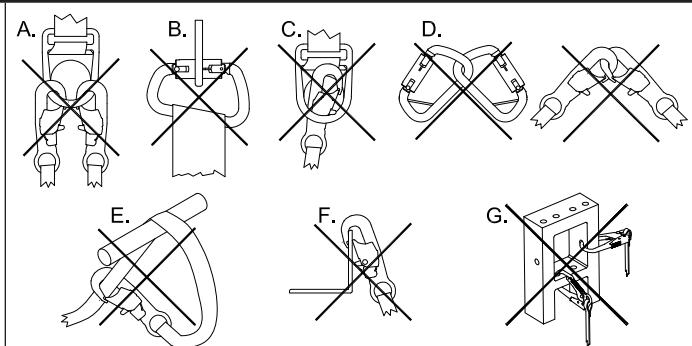
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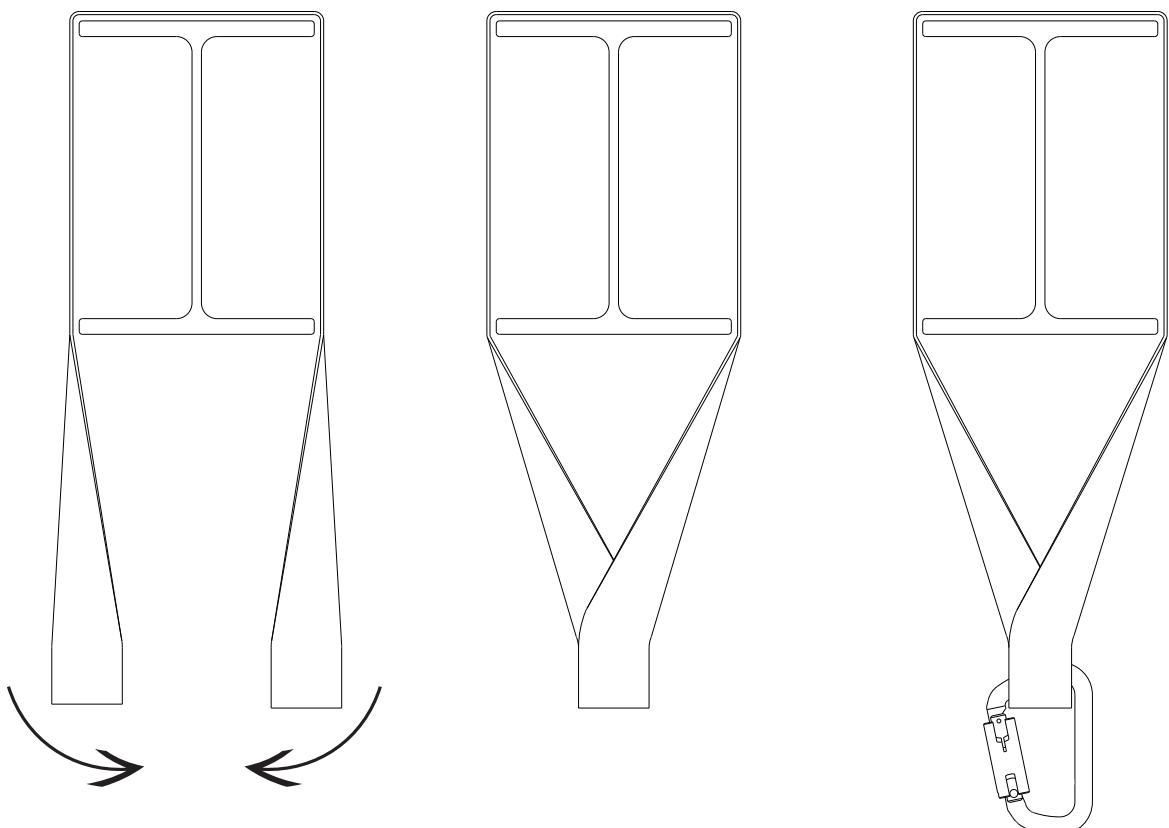
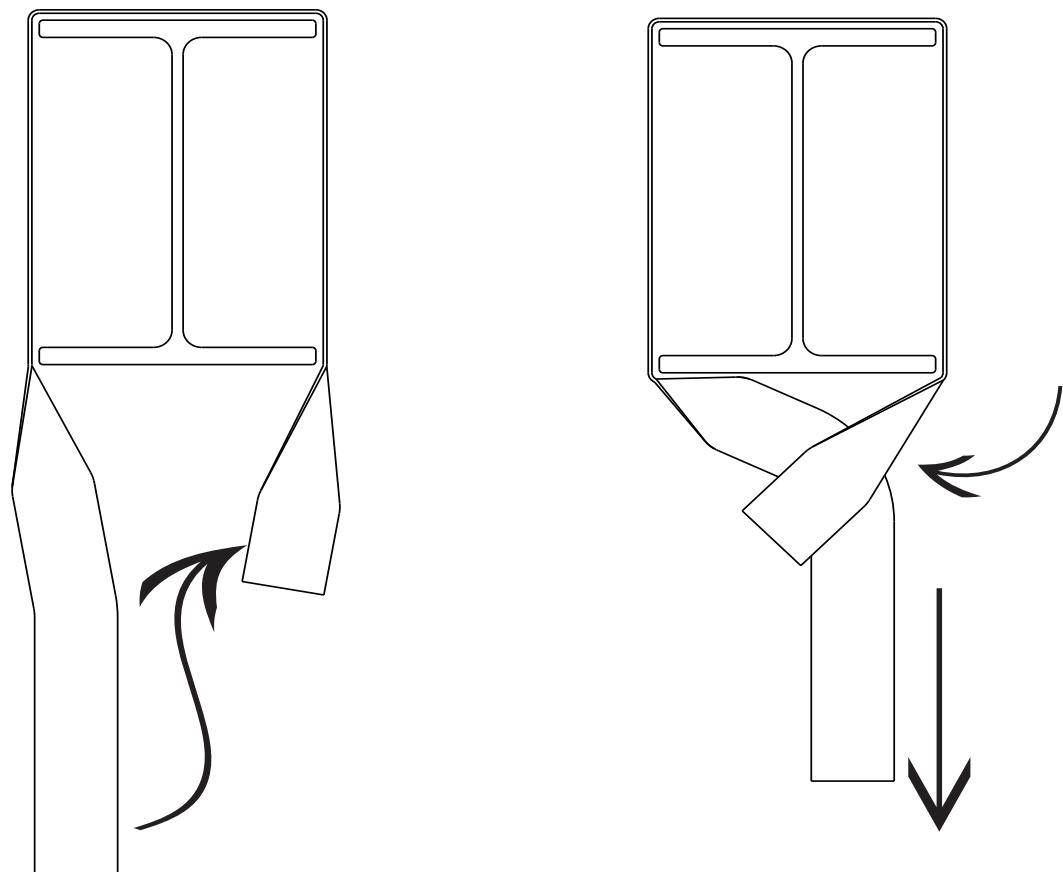
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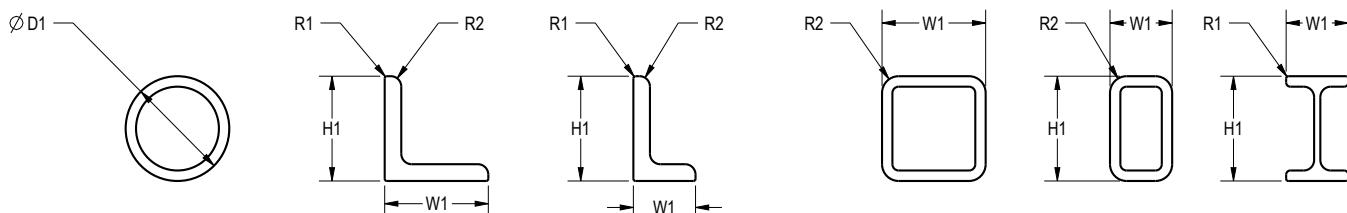
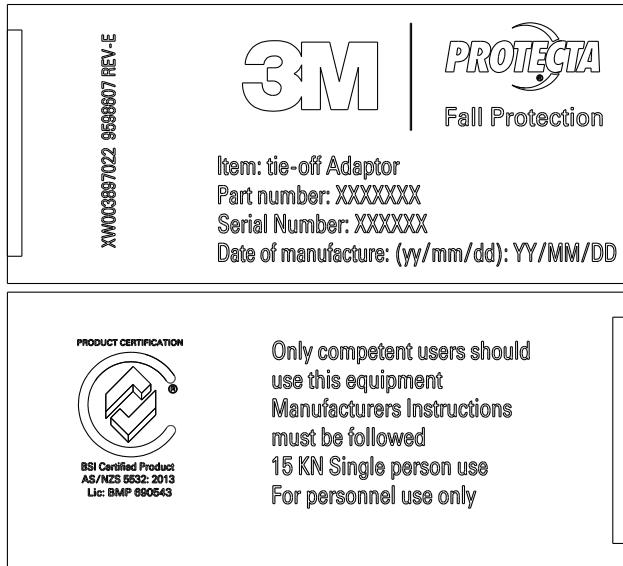
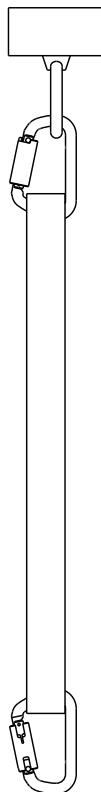
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DIMENSION	H1	W1	D1	R1	R2
MINIMUM (mm)	50	50	50	1	3

SAFETY INFORMATION

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

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

Intended Use:

This product is used as part of a complete 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 these instructions, is not approved by 3M and could result in serious injury or death.

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

WARNING

This product is used as part of a complete Fall Protection system. All users must be fully trained in the safe installation and operation of their complete Fall Protection system. **Misuse of this product could result in serious injury or death.** For proper selection, operation, installation, maintenance, and service, refer to all instruction manuals and manufacturer recommendations. For more information, see your supervisor or contact 3M Technical Services.

- **To reduce the risks associated with using an Anchorage Connector which, if not avoided, could result in serious injury or death:**

- Inspect the product before each use and after any fall event, in accordance with the procedures specified in these instructions.
- If inspection reveals an unsafe or defective condition, remove the product from service immediately and clearly tag it "DO NOT USE". Destroy or repair the product as required by these instructions.
- Any product that has been subject to fall arrest or impact force must be immediately removed from service. Destroy or repair the product as required by these instructions.
- Ensure that Fall Protection systems assembled from components made by different manufacturers are compatible and meet all applicable Fall Protection regulations, standards, or requirements. Always consult a Competent or Qualified Person before using these systems.
- The product must only be installed as described in its instruction manuals. Installations and use outside the scope of these instruction manuals must be approved in writing by 3M.
- The structure the anchorage connector is supported by or attached to must be able to sustain the static loads specified for the product in the orientations permitted in these instructions.
- Only connect Fall Protection subsystems to the designated anchorage connection points on the product.
- Before installing, ensure that the installation methods and the product will not interfere with electric lines, gas lines, or other critical materials or systems.
- Do not twist, tie, knot, or allow slack in the lifeline.
- Use caution when installing, using, or moving the product as moving parts may create pinch points.
- Ensure the product is configured and installed properly for safe operation as described in these instructions.
- Do not exceed the number of allowable users specified in these instructions.

- **To reduce the risks associated with working at height which, if not avoided, could result in serious injury or death:**

- Your health and physical condition must allow you to safely work at height and to withstand all forces associated with a fall arrest event. Consult your doctor if you have questions regarding your ability to use this equipment.
- Never exceed allowable capacity of your Fall Protection equipment.
- Never exceed the maximum free fall distance specified for your Fall Protection equipment.
- Do not use any Fall Protection equipment that fails inspection, or if you have concerns about the use or suitability of the equipment. Contact 3M Technical Services with any questions.
- Some subsystem and component combinations may interfere with the operation of this equipment. Only use compatible connections. Contact 3M Technical Services before using this equipment in combination with components or subsystems other than those described in these instructions.
- Use extra precautions when working around moving machinery, electrical hazards, extreme temperatures, chemical hazards, explosive or toxic gases, sharp edges, abrasive surfaces, or below overhead materials that could fall onto you or your Fall Protection equipment.
- Ensure use of your product is rated for the hazards present in your work environment.
- Ensure there is sufficient fall clearance when working at height.
- Never modify or alter your Fall Protection equipment. Only 3M, or persons authorized in writing by 3M, may make repairs to 3M equipment.
- Before using Fall Protection equipment, ensure a written rescue plan is in place to provide prompt rescue if a fall incident occurs.
- If a fall incident occurs, immediately seek medical attention for the fallen worker.
- Only use a full body harness for Fall Arrest applications. Do not use a body belt.
- Minimize swing falls by working as directly below the anchorage point as possible.
- A secondary Fall Protection system must be used when training with this product. Trainees must not be exposed to an unintended fall hazard.
- Always wear appropriate Personal Protective Equipment when installing, using, or inspecting the product.
- Never work below a suspended load or worker.
- Always maintain 100% tie-off.

Before using this equipment, record the product identification information from the ID label in the "Inspection and Maintenance Log" at the back of this manual.

DESCRIPTION

Figure 1 defines the components of the Anchorage Connector:

- A.** Web loop
- B.** Stitch pattern
- C.** Labels

SPECIFICATIONS

Performance:	
Maximum Free Fall Distance	2 m (6.6 ft)
Connecting System Maximum Allowable Fall Arresting Force	6 kN (1,349 lbs)
Minimum Breaking strength	15 kN (3372 lbs)

Materials:	
Web	Polyester
Thread	Polyester

1.0 APPLICATIONS

1.1 PURPOSE: Anchorage Connectors are to be used as components in Personal Fall Protection Systems, designed to prevent a fall or safely arrest a fall (see Figure 2). Anchorage Connectors are used as part of the following systems:

(A)	Fall Arrest (AS/NZS1891.4): Personal fall arrest systems typically include a Full Body Harness and a connecting subsystem (Energy Absorbing Lanyard, Self-Retracting Device, etc.). Maximum arresting force must not exceed 6 kN (1,349 lb). Maximum free fall distance 2m (6.6 ft). Anchorage Strength: Selected anchorage must sustain loads of 15 kN (3,372 lb) for single person use or 21kN (4721 lb) or greater for 2 person use.
(B)	Work Positioning (AS/NZS1891.4): Work positioning systems typically include a Full Body Harness, positioning lanyard, and a back-up personal fall arrest system. For work positioning applications, connect the work positioning subsystem (example: lanyard, Y-lanyard, etc.) to the lower (hip level) side or belt mounted work positioning attachment anchorage elements (D-Rings). Never use these connection points for fall arrest. Maximum free fall distance 0.6m (2 ft)Anchorage Strength: Selected anchorage must sustain loads of 12 kN (2698 lb) for single person use or 18kN (4047 lb) or greater for 2 person use.
(C)	Climbing (AS/NZS1891.3): The Full Body Harness is used as a component of a climbing system to prevent the user from falling when climbing a ladder or other climbing structure. Climbing systems typically include a Full Body Harness, vertical cable or rail attached to the structure, and climbing sleeve. For ladder climbing applications, harnesses equipped with a frontal D-Ring in the sternal location may be used for fall arrest on fixed ladder climbing systems. Sternal. Anchorage Strength: Structure to which the climbing system is attached must sustain the loads required by the climbing system manufacturer's documentation.
(D)	Rescue: The Full Body Harness is used as a component of a rescue system. Rescue systems are configured depending on the type of rescue. For limited access (confined space) applications, harnesses equipped with D-Rings on the shoulders may be used for entry and egress into confined spaces where worker profile is an issue.
(E)	Controlled Descent: For controlled descent applications, harnesses equipped with a single sternal level D-Ring, one or two frontal mounted D-Rings, or a pair of connectors originating below the waist (such as a seat sling) may be used for connection to a descent or evacuation system.
(F)	Restraint (AS/NZS1891.4): The Full Body Harness is used as a component of a restraint system to prevent the user from reaching a fall hazard. Restraint systems typically include a Full Body Harness and a lanyard or restraint line.

1.2 STANDARDS: The Anchorage Connector included in this manual conform to the standard(s) identified on the front cover of this instruction. 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 TRAINING: It is the responsibility of the user and the purchaser of this equipment to assure that they are familiar with these instructions, trained in the correct care and use of, and are aware of the operating characteristics, application limits, and the consequences of improper use of this equipment.

1.4 LIMITATIONS: Always consider the following application limitations before using this equipment:

- **CAPACITY:** The Anchorage Connector is designed for use by up to single person use, minimum breaking strength of 15 kN (3372 lb). Make sure all of the components in your system are rated to a capacity appropriate to your application.
- **FREE FALL:** Personal fall arrest systems used with this equipment must be rigged to limit the free fall to 2 m (6.6 ft)¹. Restraint systems must be rigged so that no vertical free fall is possible. Work positioning systems must be rigged so that free fall is limited to 0.6 m (2 ft) or less. Personnel riding systems must be rigged so that no vertical free fall is possible. Climbing systems must be rigged so that free fall is limited to 0.46 cm (18 in) or less. Rescue systems must be rigged so that no vertical free fall is possible. See subsystem manufacturer's instructions for more information.
- **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: (A) Lanyard Length, (B) Lanyard Deceleration Distance or SRL Maximum Arrest Distance, (C) Harness Stretch and D-Ring/Connector Length and Settling (typically a Safety Factor of 1 m (3.3 ft). Refer to the instructions included with your Fall Arrest subsystem for specifics regarding Fall Clearance calculation.
- **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.
- **EXTENDED SUSPENSION:** A Full Body Harness is not intended for use in extended suspension applications. If the user is going to be suspended for an extended length of time it is recommended that some form of seat support be used. 3M recommends a seat board, suspension work seat, seat sling, or a boatswain chair. Contact 3M for more information on these items.
- **ENVIRONMENTAL 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, gases, moving machinery, and sharp edges.
- **ENVIRONMENT:** This equipment is design for use between -40° and 60°Celsius (-40 and 140° F).

¹ **Fall Arrest Free Falls:** Free falls greater than 2 m (6.6 ft) may be permitted when users are secured to the anchorage with a connecting subsystem which limits the arresting force to 6 kN (1,349 lb) and is authorized for such use (i.e. Protecta Pro, DBI-SALA Force 2 and EZ-Stop Lanyards).

2.0 SYSTEM USE

2.1 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 users², authorized persons³, and rescuers⁴.

2.2 INSPECTION FREQUENCY: The Anchorage Connector shall be inspected by the user before and after each use and by a competent person⁵ other than the user at intervals of no more than six months⁶. Inspection procedures are described in the *User Instruction Manual's "Inspection and Maintenance Log"*. Results of each Competent Person inspection should be recorded on copies of the "Inspection and Maintenance Log".

Where required by 3M, due to complexity or innovation of the equipment; or where critical knowledge is needed in dismantling, reassembly, or assessment of the equipment, periodic examinations shall only be conducted by 3M or persons or organizations authorised by 3M.

2.3 COMPATIBILITY OF COMPONENTS: 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 effect the safety and reliability of the complete system.

2.4 COMPATIBILITY OF CONNECTORS: Connectors are 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 22.2 kN (5,000 lb). 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 (shown) 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. This force may cause the gate to open, allowing the snap hook or carabiner to disengage from the connecting point. Self-locking snap hooks and carabiners are required.

2.5 MAKING CONNECTIONS: Use only self-locking snap hooks and carabiners with this equipment. Use only connectors that are suitable for each application. 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 inappropriate connections. 3M snap hooks and carabiners should not be connected:

- A. To a D-Ring to which another connector is attached.
- B. In a manner that would result in a load on the gate.
- 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.

2.6 CONNECTING SUBSYSTEMS: Connecting subsystems (self-retracting lifeline, lanyard, rope grab and lifeline, cable sleeve, etc.) must be suitable for your application (See section 1.1). See the subsystem manufacturer's instructions for additional information. Some harness models have web loop connection points. Do not use snap hooks to connect to web loops. Use a self-locking carabiner to connect to a web loop. Ensure the carabiner cannot cross-gate load (load against the gate rather than along the major axis of the carabiner). Some lanyards are designed to choke onto a web loop to provide a compatible connection. Lanyards may be sewn directly to the web loop forming a permanent connection. Do not make multiple connections onto one web loop.

2 User: A person who performs activities at heights while protected by a personal fall protection system.

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

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

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

3.0 INSTALLATION AND USE

3.1 BEFORE EACH USE of this equipment inspect it according to the "*Inspection and Maintenance Log*" (Table 1).

3.2 PLAN your system before use. Consider all factors that will affect your safety during use of this equipment. The following list gives important points to consider when planning your system:

- **Anchorage:** Select an anchorage capable of sustaining the Static Load requirements of the intended fall protection application (see Section 1.1). The anchorage location should address Free Fall, Fall Clearance, Swing Fall, and Environmental limitations described in Section 1.4.
- **Sharp Edges:** Avoid working where system components may be in contact with, or abrade against, unprotected sharp edges.
- **After A Fall:** Components which have been subjected to the forces of arresting a fall must be removed from service and destroyed.
- **Rescue:** The employer must have a rescue plan when using this equipment. The employer must have the ability to perform a rescue quickly and safely.
- **Rescue Harness:** Rescue Harnesses are intended to be worn during normal work activities. Before using rescue attachment elements for the first time, the user should carry out a suspension test in safe conditions to ensure the harness is sized and fitted for optimal comfort during suspension.

3.3 ANCHORAGE REQUIREMENTS: The Anchorage connector shall not be used to connect to an anchorage with sharp edges. Figure 11 illustrates several standard profiles suitable for use. The minimum edge radius, diameter, height and width direction shall be adhered to. For profiles with sharp edges, additional protection is required to use this product. Where possible, this equipment should be installed on an anchorage above the position of the user to limit free fall. This equipment should NOT be installed in an orientation that allows the stitched portion of web to interfere/contact the anchorage.

3.4 INSTALLATION REQUIREMENTS: Choke

1. Place the tie-off adaptor over the anchorage. The ends must be hanging below the anchorage as shown in Figure 7.
2. With the tie-off adaptor positioned on the anchorage, pass one end through the loop in the other end. Slide the loop up to the anchorage.
3. The tie-off adaptor should be tightly wrapped around the anchorage with one end hanging free.
4. You may shorten the distance that the attachment loop hangs from the anchorage by wrapping the adapter around the anchorage several times.

3.5 INSTALLATION REQUIREMENTS: Wrap

1. Place the tie-off adaptor over the anchorage with the ends hanging below the anchorage, see Figure 8.
2. Bring the end loops together and thread both ends onto an open carabiner.
3. After the cable ends are on the carabiner, make sure the carabiner is closed and locked.
4. Any attachments to the installed tie-off adaptor must be made to the closed and locked carabiner.

3.6 INSTALLATION REQUIREMENTS: Extension

1. Connect a carabiner to the existing anchorage connector.
2. Connect the tie-off adaptor to the carabiner and allow to hang straight down.
3. Any attachments to the installed tie-off adaptor must be made to the loop at the bottom of the tie-off adaptor, see figure 9.

3.7 MAKING CONNECTIONS: When using a hook to connect to an anchorage or when coupling components of the system together, ensure roll-out cannot occur. Roll-out occurs when interference between the hook and mating connector causes the hook gate to unintentionally open and release. Self-locking snap hooks and carabiners should be used to reduce the possibility of roll-out. Do not use hooks or connectors that will not completely close over the attachment object. See subsystem manufacturer's instructions for more information on making connections.

3.8 CONNECTING SYSTEM COMPONENTS: After installing the Anchorage Connector the user may then connect to other system components. Follow the guidelines in Section 2 and the manufacturer's instructions included with the component. Connection should not be made to the stitch portion of the web.

4.0 INSPECTION

4.1 INSPECTION FREQUENCY: The Anchorage Connector must be inspected at the intervals defined in Section 2.2. Inspection procedures are described on the "Inspection and Maintenance Log" (Table 1).

4.2 DEFECTS: If inspection reveals a defective condition, is deemed unsuitable for use by a competent person or has been involved in a fall, remove unit from service immediately and destroy.

4.2 PRODUCT LIFE: The functional life of Anchorage Connector is determined by work conditions and maintenance. As long as the product passes inspection criteria, it may remain in service for up to 10 years from the date of manufacture.

5.0 MAINTENANCE, SERVICING, STORAGE

5.1 CLEANING INSTRUCTIONS: Clean the Protecta P50 Anchorage connector as follows:

1. Spot clean the harness with water and a mild soap solution.

Use a bleach-free detergent when washing the harness and pads. Fabric softener or dryer sheets SHOULD NOT be used when laundering and drying the harness and pads.

2. Water temperature for wash and rinse must not exceed 70° C (160° F).
3. The harness and pads may be air dried or tumble dried on low heat not exceeding 90° C (200° F).

More information on cleaning is available from 3M. If you have questions concerning the condition of your harness, or have any doubt about putting it into service, contact 3M.

5.2 AUTHORIZED SERVICE: Additional maintenance and servicing procedures must be completed by a factory authorized service center. Authorization must be in writing. Do not attempt to alter the unit in any way.

5.3 STORAGE AND TRANSPORT: Store and transport the Anchorage Connector in a cool, dry, clean environment out of direct sunlight. Avoid areas where chemical vapors may exist. Thoroughly inspect the Anchorage Connector after extended storage.

6.0 LABELING:

Figure 9 illustrates product labels and their location on the Anchorage Connector. All labeling must be present and fully legible.

Table 1 – Inspection and Maintenance Log

Serial Number(s):	Date Purchased:		
Model Number:	Date of First Use:		
Inspection Date:		Inspected By:	
Component:	Inspection: (See Section 2.2 for Inspection Frequency)	User	Competent Person
Webbing and Stitching	Inspect webbing; material must be free of frayed, cut, or broken fibers. Check for tears, abrasions, mold, burns, or discoloration. Inspect stitching; Check for pulled or cut stitches. Broken stitches may be an indication that the anchorage connector has been impact loaded and must be removed from service.	<input type="checkbox"/>	<input type="checkbox"/>
Labels	All labels should be present and fully legible. See Figure 10.	<input type="checkbox"/>	<input type="checkbox"/>
System & Subsystem Components	Inspect each system component or subsystem according to the manufacturer's instructions. Inspect each system component or subsystem is compatible with this equipment.	<input type="checkbox"/>	<input type="checkbox"/>

Table 2 – Web Damage

Corrective Action/Maintenance:	Approved By:
	Date:
	Next Inspection:
Corrective Action/Maintenance:	Approved By:
	Date:
	Next Inspection:
Corrective Action/Maintenance:	Approved By:
	Date:
	Next Inspection:
Corrective Action/Maintenance:	Approved By:
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	Date:
	Next Inspection:
Corrective Action/Maintenance:	Approved By:
	Date:
	Next Inspection:
Corrective Action/Maintenance:	Approved By:
	Date:
	Next Inspection:

3M AUSTRALIA PTY LTD & 3M NEW ZEALAND LTD ("3M") LIMITATION OF LIABILITY

To the extent permitted by law, 3M's liability and the liability of the person who sold you this product, is limited at 3M's option, to the repair or replacement of the goods or the refund of the purchase price of the goods. 3M will not be liable for any equipment damage resulting from wear, abuse, damage in transit, failure to maintain the product or other damage beyond the control of 3M.

Except to the extent that such liability is not able to be excluded by law, all other liability of 3M whether arising from negligence or otherwise is expressly excluded. For the avoidance of doubt, except where required by the Australian Consumer Law or any other law that cannot be excluded, 3M will not be liable for any indirect, special, incidental or consequential loss (including, but not limited to, loss of profits, and the costs of inspection, testing, storage or transportation).

3M reserves the right to require that the equipment be returned to its plant for inspection before determining the appropriate course of action.



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