



MAXSAFE[®]

USER INSTRUCTION MANUAL

FIXED LINE SYSTEMS

THESE INSTRUCTIONS APPLY TO THE FOLLOWING MODELS:

MS4000 (OR) OVER-ROOF FIXED LINE SYSTEM,
MS4000 (OH) OVERHEAD HORIZONTAL LINE SYSTEM,
MS5000 HORIZONTAL ALUMINIUM RAIL SYSTEM,
MS7000 VERTICAL LIFELINE SYSTEM,
MS8000 VERTICAL ANCHORAGE LINE SYSTEM (ALUMINIUM RAIL),
MS9000 HORIZONTAL ALUMINIUM RAIL SYSTEM.

USER MUST READ AND UNDERSTAND INSTRUCTIONS PRIOR TO USE

INTRODUCTION

MAXSAFE® are the producers and suppliers of Products, Training and Services for the height safety industry and working at heights. This instruction manual has been designed to assist all users in the prevention of accidents and to make good, informed choices.

The registered offices of Maximum Safety NZ Ltd are located at:
46 Vickerman Street, Port Nelson, Nelson 7010, New Zealand.
PO Box 697, Nelson 7040, New Zealand.
Telephone: 0800 262 972. Email: sales@maxsafe.co.nz

CONTENTS

Section	Subject	Page
	General User Warning	1
1	General Requirements, Warnings and Limitations	2
2	Vertical Life Line System	3
	Process of installation	3
	Installation of the Mounting Bracket	4
	Shock Absorber / Cable Termination	5
	Cable Termination / Cable Swaging / U-Bolt & Thimble	6
	Intermediates / Tensioner	7
	Extension Arm	8
	Fall Arrester	9
	Recommended PPE	10
3	Horizontal Lifeline	11
	Horizontal Lifeline	11
4	Over-Roof Fixed Line System	11
	Posts	12
	Carriage Body / Recommended PPE	13
5	Vertical Anchorage Line System	14
6	Vertical Anchorage Line System (Aluminium Rail)	15
	Junction & Aluminium Rail Extension	16
	Aluminium Rail Extension / Trolley	16
7	Horizontal Aluminium Rail System - MS9000	17
	Mounting Bracket	17
	Rungs, Half and Full	18
8	Horizontal Aluminium Rail System - MS5000	19
	Mounting Bracket / Mounting Nut	20
	Trolley / Bend	21
9	Pre-use Checks	22
10	Precautions While Using The System	23
11	Tools, Machines and Anchors	24
12	Others - Inspection, Cleaning, Compatibility, Storage, Damaged Product & Withdrawal from Use, Periodic Examination	25
13	Inspection & Maintenance Log	26



WARNING

DO NOT SKIP THIS INSTRUCTION MANUAL. READ THE INSTRUCTION MANUAL CAREFULLY BEFORE USING THE EQUIPMENT. FAILURE TO DO SO MAY CAUSE SERIOUS INJURY OR DEATH.

This manual must be read and understood in its entirety and used as part of the User's fall protection training program as required by AS/NZS. These instructions are intended to meet the manufacturer's instructions as required by AS/NZS 1891. The user must fully understand the proper equipment use and limitations.

This product is part of a personal restraint, work positioning, suspension, or rescue system. The user must read and follow the manufacturer's instructions for each component or part of a complete system. These instructions must be provided to the user of this equipment. The user must read and understand these instructions or have them explained to them before using this equipment. Manufacturer's instructions must be followed for proper use and maintenance of this product. Alterations or misuse of this product or failure to follow instructions may result in serious injury or death.

1. GENERAL REQUIREMENTS, WARNINGS AND LIMITATIONS:

- This equipment is designed for use as a part of a personal fall protection system. Components must not be used for any other operation other than that for which it has been designed and approved. Fall Arrest Systems are designed to comply with AS/NZS standards. Fall Restraint Systems must be designed by a Qualified Competent Person, and must be installed and used under the supervision of a Competent Person.
- All authorized persons/users must refer to the regulations governing occupational safety, as well as applicable AS/NZS standards. Please refer to product labeling for information on specific regulations, and AS/NZS standards met by the product.
- Proper precautions should always be taken to remove any obstructions, debris, material, or other recognized hazards from the work area that could cause injuries or interfere with the operation of the system. All equipment must be inspected before each use according to the manufacturer's instructions. All equipment should be inspected by a Qualified Competent Person on a regular basis as required by legislative controls.
- To minimize the potential for accidental disengagement, a competent person must ensure system compatibility.
- Equipment must not be altered in any way. Repairs must be performed only by the Manufacturer, or persons or entities authorized in writing by the Manufacturer.
- Any product exhibiting deformities, unusual wear, or deterioration must be immediately discarded. Any equipment subject to a fall must be removed from service.
- The authorized person/user shall have a rescue plan and the means at hand to implement it when using this equipment.
- Never use fall protection equipment for purposes other than those for which it was designed. Fall protection equipment should never be used for towing or hoisting.
- All synthetic material must be protected from slag, hot sparks, open flames, or other heat sources. The use of heat resistant materials is recommended in these applications.
- Never use natural materials (manila, cotton, etc.) as part of a fall protection system.
- Do not expose this equipment to chemicals which may have a harmful effect on the materials used to construct it. Be especially aware of caustic environments, or those that contain high levels of organic acids or bases. If you are uncertain about the safe operation of this equipment in any environment, contact MAXSAFE® for further instructions.
- Do not use this equipment near sharp edges and abrasive surfaces.
- Do not use this equipment around moving machinery or electrical hazards.

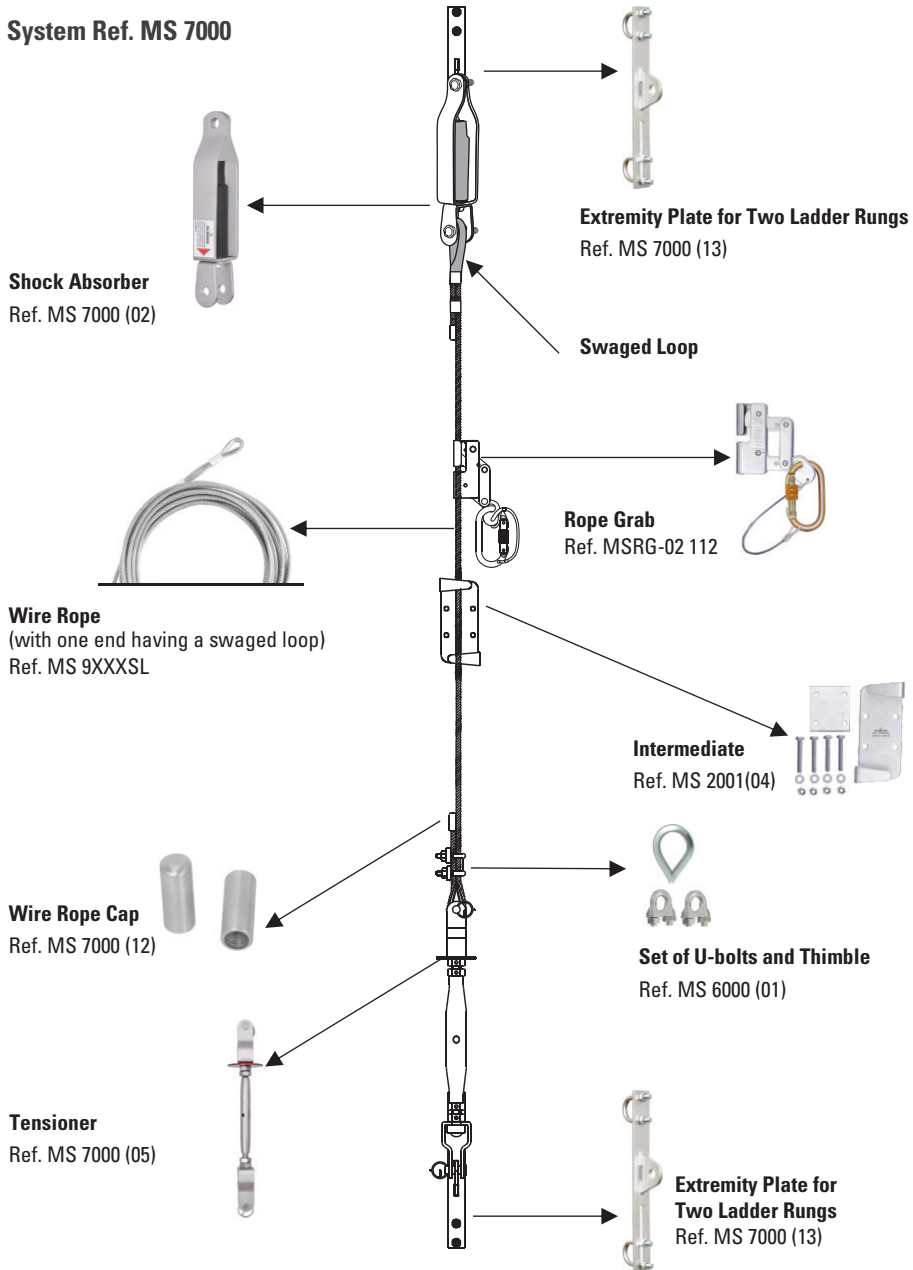
MAXSAFE® FIXED LINE SYSTEMS should be used only with the combinations of components, sub-systems or both which will not affect or interfere with the safe function of one another. Be certain that connecting devices and other elements of the PFAS are safe to use and compatible before use. Contact MAXSAFE® for further instructions.

Disclaimer: Illustrations may not be up-to-date. All dimensions and specifications are approximate and drawings are not to scale.

2. VERTICAL LIFE LINE SYSTEM

PROCESS OF INSTALLATION

System Ref. MS 7000

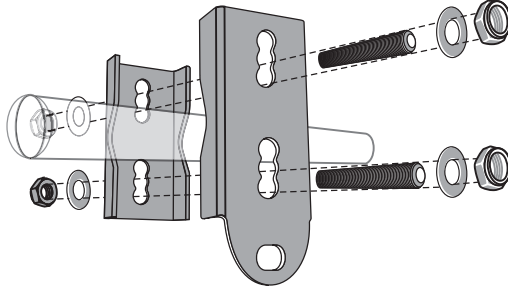


INSTALLATION OF THE MOUNTING BRACKET











The System MS 7000 is installed in the following way:

Step 1: Installation of the Mounting Bracket. Ref: MS 7000 (01) on the Upper Ladder Rung:

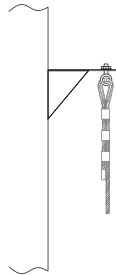
The mounting brackets can be installed on different sections of the ladder rung. Two channel grips are installed on the same ladder rung with the fasteners supplied. The drawings below illustrate the position of the channel grips for different sections.



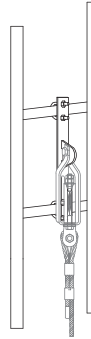
Recommended Torque:

COMPATIBLE SUPPORT SECTION					
PROCESS					

Step 1B:
Installation
of the Mounting
Bracket
Ref. MSSA12.
on the Upper
Ladder
Bracket



Step 1C:
Installation of
the Mounting
Bracket
Ref. MS 7000 (13)
on the Upper
Ladder Rung



Step 1D:
Installation
of the
Mounting
Bracket
Ref. MS 7000 (21)
on the Ladder
Rail



Recommended Torque						
Bolt size	6mm	8mm	10mm	12mm	14mm	16mm
Recommended Torque	9Nm	22Nm	29Nm	50Nm	80Nm	125Nm

SHOCK ABSORBER

Step 2: Installation of the Shock Absorber

Ref: MS 7000 (02)

- Connect the shock absorber to top mounting bracket by inserting the fastener and the nylon spacer so as to pass through mounting bracket and eye of the energy absorber.
- The spacer ensures the correct position of the energy absorber.
- Ensure that the energy absorber is fitted with the red arrow on the label pointing downwards.
- Connect the end extremity to the energy absorber by inserting the fastener through the eye of the energy absorber.

CABLE TERMINATION

A suitable cable termination may be selected according to the site condition. U-bolts and thimbles are only allowed at the bottom termination according to EN353.1:2014

Step 3: Assembling the Cable Extremity:

Ref MS 7000 (03)

- Open up the cable roll and insert the cable into the housing of the cable extremity.
- Open the strands of the wire.
- Insert the core of the cable into the poke pin. The core is the straight strand, all other strands are twisted. With a hollow Center-punch hammer the poke pin deep into the housing of the cable extremity.
- Tighten the connector to the housing of the cable extremity.
- Connect the cable extremity to the mounting bracket (for the upper ladder rung) using a locking pin. Insert the pin ring in to the locking pin to lock.

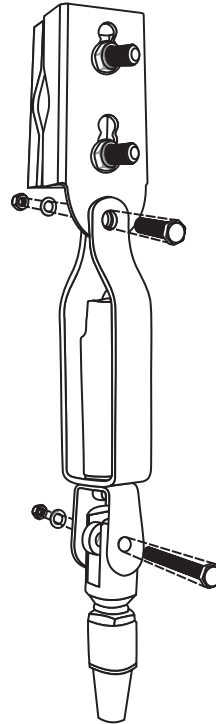


FIG. 1



FIG. 2



FIG. 3

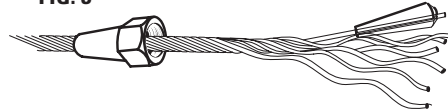
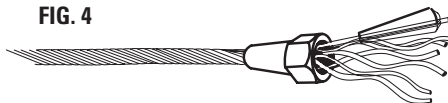


FIG. 4



CABLE TERMINATION

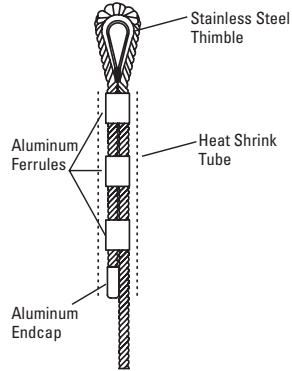
STEP 4: WIRE CRIMPING ASSEMBLY

Ref. MS 7000 (14):

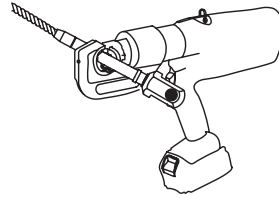
- Insert three ferrules onto the wire.
- Insert the wire into the heat shrink tube and leave until cable swaging is completed.
- Loop the wire across the Stainless Steel Thimble.
- Insert the end of the wire back through the Ferrules.
- Crimp the Ferrules using a 20 Ton Hydraulic Crimping tool.
- Ensure the first ferrule is as close as possible to the thimble. The next two ferrules should be 50mm apart.
- Insert the aluminum cap onto the free end of wire and crimp it.
- Slide the Heat Shrink Tube back up over the entire swaged assembly.
- Shrink the Heat Shrink Tube with a hot air gun.

Wire Crimping

Assembly MS7000(14)
(Step 4)



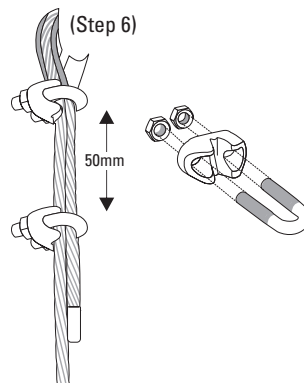
Cable Swaging (Step 5)



STEP 5: CABLE SWAGING

- Insert the cable into the swage tube.
- The swage tube has markings to identify the exact positions for crimping.
- Place the swage tube on the hexloc die of a hydraulic crimping tool (130kN capacity).
- Ensure the mark on the swage tube is in the centre of the die.
- Operate the machine to start the swaging operation holding the trigger until the green light comes on.
- Repeat the process for all 5 markings (minimum).

U-Bolt & Thimble MS 6000 (01)



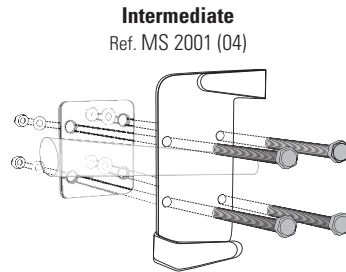
STEP 6: U-BOLT & THIMBLE

- Loop the cable around the Thimble and ensure at least 300mm of the cable is overlapping.
- Fasten the stainless steel U-bolts approximately 50mm apart (Part of Ref. MS 6000 (01)).
- If it is necessary to cut the cable, tape the loose end of the cable with industrial strength tape before cutting the excess cable off.
- U-bolts and Thimbles can also be used instead of Step 4: Wire Crimping Assembly.

INSTALLATION OF THE INTERMEDIATE:

STEP 7A: Ref. MS 2001 (04)

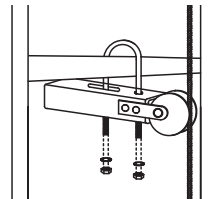
- Place the fisher plate of the Intermediate on the back of the ladder rung. Fasten the Intermediate Plate with the fisher plate with the help of the fasteners supplied. Ensure that the cable is in between the two arms of the intermediate. It is recommended to install an Intermediate with lengths up to 10 metres or more. The Intermediates reduce large deflections in the cable when there are strong winds.



STEP 7B: Ref. MS 7000 (04)

- The Wheel Type Intermediate may be installed if required every 10 metres to reduce heavy vibration in the cable due to wind pressure.
- To Install:** Hold the square section of the Intermediate below the selected ladder rung that the Wheel Type Intermediate is to be installed on to. Ensure the Wheel is facing out from the Ladder Rung towards the cable.
- Install the U-Bolt from above and through the ladder rung into the square section of the Wheel Type Intermediate plate and attach the washers and nuts to the U-Bolt loosely.
- The square section has a slot for adjusting the position of the wheel. Move the Wheel backward or forward so that the Wire Cable is in full contact with the Wire Cable and so that the Wire Cable sits firmly in the centre of the Wheel.
- When the U-Bolt is in place tighten the nuts securely.

Wheel Type Intermediate
Ref. MS 7000 (04)

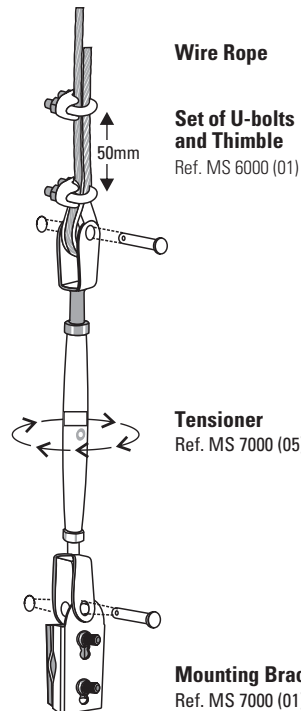


STEP 8: U-BOLT & THIMBLE: Refer to Step 6 .

STEP 9: INSTALLATION OF THE TENSIONER:

Ref: MS 7000 (05)

- The tensioner is installed at the lower end of the system.
- Unwind tensioner to expose threads of the extension rods at both ends. Ensure that 75% of the thread is open.
- Insert the eye of the tensioner to the mounting bracket at the lower ladder rung.
- Insert the stainless steel locking pin so as to pass through the eye of the tensioner and the mounting bracket.
- Insert the pin ring in the locking pin to lock it.



Wire Rope

Set of U-bolts and Thimble
Ref. MS 6000 (01)

Tensioner
Ref. MS 7000 (05)

Mounting Bracket
Ref. MS 7000 (01)

Providing tension to the wire rope:

- Open both the chuck nuts and hold the tensioner eye.
- Insert a steel rod into the housing of the tensioner and rotate the tensioner in an anti-clockwise direction.
- Rotate until tension indicator indicates that the correct tension of the cable has been achieved.
- Tighten both the chuck nuts.

EXTENSION ARM

Ref. MS 7000

Installation of the Extension Arm:

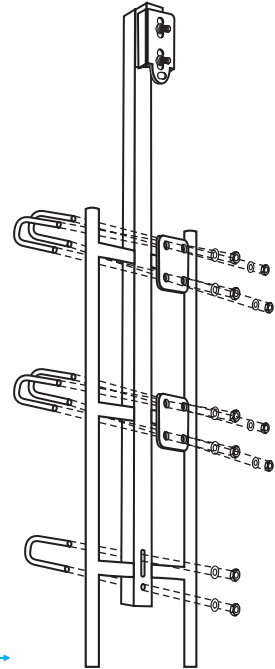
Ref. MS7000 (06)

If the System has been provided with the Extension Arm, this shall be installed in place of Upper Mounting Bracket as in Step 1.

The Extension Arm is provided pre-installed with the Mounting Bracket for the upper end of the system.


Follow the simple steps for easy installation-Top Rung

- Hold the extension arm against the upper last three rungs of the ladder.
- Hold the fisher plate in front of the extension arm.
- Insert the U-bolts supplied through the top rung into the fisher plate. Tighten the nuts of the U-bolts.
- Repeat the exercise for the 2nd Rung from the top.
- On the 3rd Rung from the top, insert the U-bolt supplied through the ladder rung into the slot, so as to pass through the extension arm.
- Tighten the nuts of all the the U-Bolts installed.



80 mm

55 mm

		Helpline: 0800 262 972	
ADDRESS		MAXIMUM SAFETY NZ LTD: 46 VICKERMAN STREET, PORT NELSON, NELSON 7010, NEW ZEALAND.	
PRODUCT			
CODE			
BATCH NO.		YEAR OF MANUFACTURE :	
LENGTH		MTRS.	
INSTALLATION DATE		/ /	
INSPECTION REPORT		Date : / /	
REVALIDATION DUE ON			

STEP 10. FALL ARRESTER

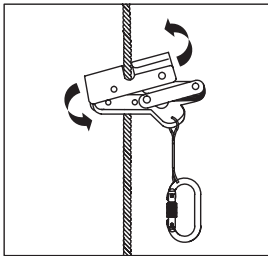
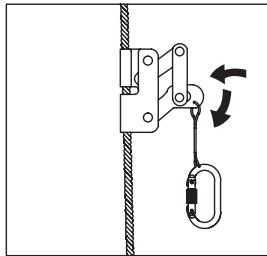
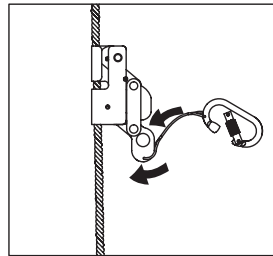
Ref. MS 7000

Installation of the Rope Grab:

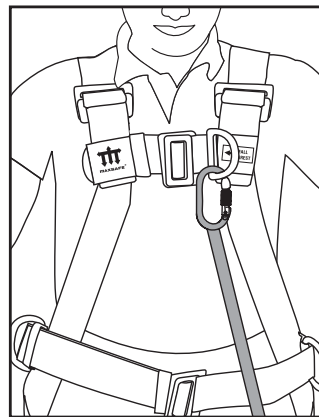
Ref. MSRG (02)

Connect Rope Grab to the cable following the given simple steps:

- Hold and push the Rope Grab through the cable and rotate it counter clockwise as shown in Figure 1.
- Ensure the arrow on the Rope Grab points upwards as shown in Figure 2.
- Insert the Karabiner of the shock absorbing lanyard (Ref MS 2001 (02)) into the eye of the Rope Grab as shown in Figure 3.

FIG.1**FIG.2****FIG.3****STEP 11: CONNECT THE HARNESS TO THE ROPE GRAB**

- Check that all the Full Body Harness straps and buckles are securely connected and adjusted to give it a snug fit.
- Connect the Rope Grab and connecting lanyard to the front attachment point of the Full Body Harness as shown in Figure 4.
- Ensure that the gate of the Karabiner is closed and locked properly.

FIG.4

RECOMMENDED PPE

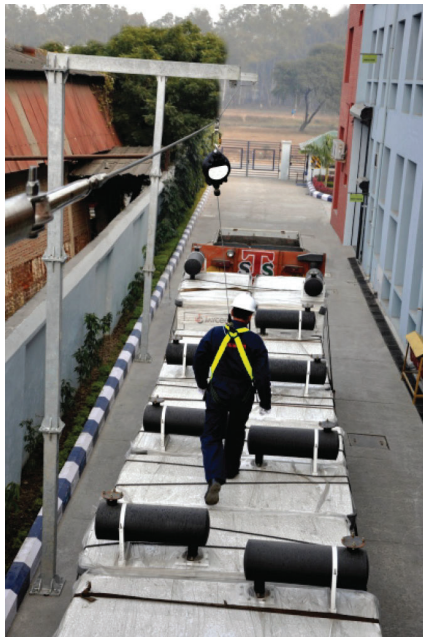
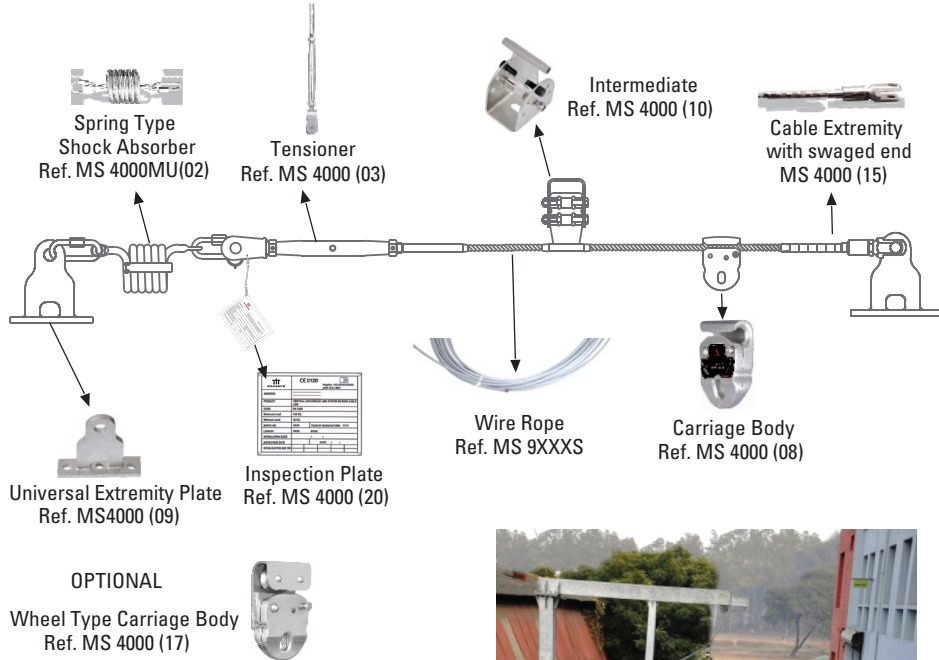
Ref. MS 7000

Once the system is installed the user can use a work positioning harness along with a shock absorbing double lanyard. He can use the double lanyard when he needs to exit the fall arrest system while working on towers. When the user needs to exit from the fall arrest system in a horizontal plane he may need a travel restraint lanyard (MLR-W-1.8m).



3. HORIZONTAL LINE SYSTEM

Ref. HORIZONTAL MS 4000 (O.H.)



4. OVER-ROOF FIXED LINE SYSTEM

Ref. MS4000 (Over-Roof)

POSTS

These Posts are suitable for a variety of trapezoidal roof sheet designs. It has multiple holes to suit different roof sheet profiles.

Step 1: Roof Top Anchor Post Extremity;

Ref. MSSA 07G

- Lay the base plate onto the roof sheet profile in the planned position. Rotate the base plate by 90° if the holes do not match the roof sheet rib profile..
- Identify the hole lines for the fixing positions of the base plate.
- Only on hole lines identified, four at each corner (16 in total), apply adhesive EPDM to the underside of the base plate.
- Mount the post to the base plate using nuts and bolts supplied.
- Connect the eye onto the junction of the top and bottom post brackets.
- Double check the base plate is in the correct position before drilling. Then drill 16 holes for the 8mm Giseppa rivets supplied.
- Install 16 rivets into the roof profile with a riveting gun.

Step 2: Roof Top Anchor Post Intermediate.

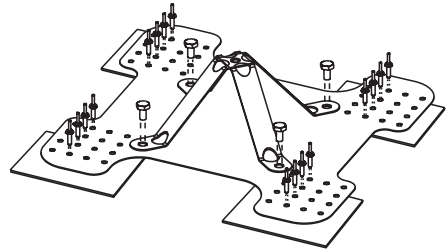
Ref. MSSA 07H

- Install the base plate as described in Step 1 above except for the following point:
- Connect an Intermediate bracket onto the post brackets, using the nuts and bolts supplied, instead of an eye.

Step 3: Corner Piece.

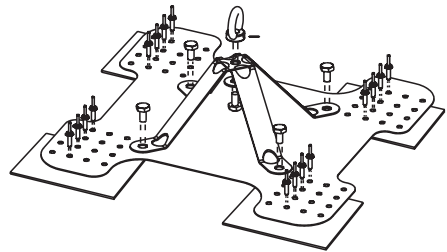
Ref. MS 4000 (26)

- Install the base plate as described in Step 1.
- To make sure the direction of the cable on this corner will be correct double check the corner piece is oriented the right way on the base plate.
- Connect the corner piece assembly to the base plate with the mounts and fasteners supplied.

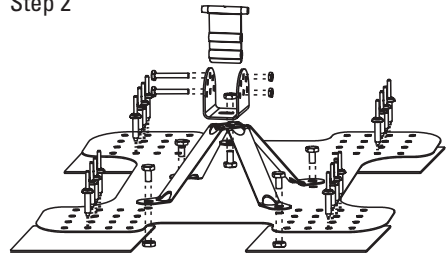


Certified to AS/NZS 5532: 2013

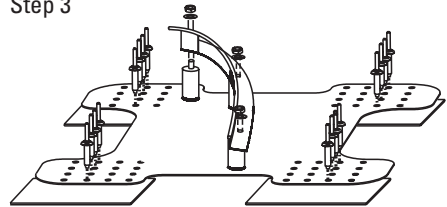
Step 1



Step 2



Step 3

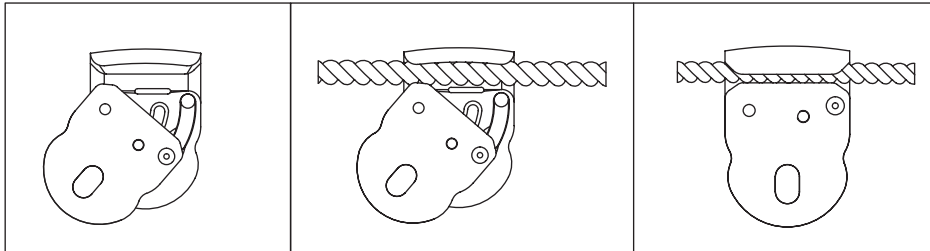


CARRIAGE BODY

Ref. MS 4000 (08)

To connect the line to the user, there is a freely moving Carriage Body (MS 4000 (08)), which moves along the length of the cable line with the user. The User's Full Body Harness is connected to the carriage body by using a connecting element connected to a karabiner.

The carriage body may be attached or detached from the cable line at any given point by two consecutive deliberate actions.



ACTION 1

To attach carriage body to cable line pull locking button out and slide cover plate down clockwise.

ACTION 2

Place carriage body onto cable line. Slide cover plate back up anti clockwise until the locking button clicks into the locked position.

The Carriage Body will slide freely along the cable line once the locking button is engaged.

In applications on roofs, the Carriage Body MS4000 (08) may be used on either side of the roof.

RECOMMENDED PPE



5. VERTICAL ANCHORAGE LINE SYSTEM

REF. MS 8000



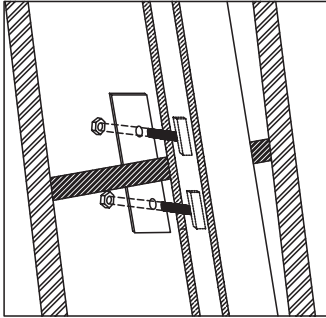
6. VERTICAL ANCHORAGE LINE SYSTEM (ALUMINIUM RAIL)

Ref. MS8000

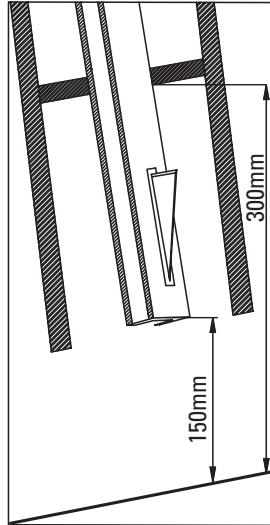
6.1 JUNCTION & ALUMINIUM RAIL EXTREMITY

Installation of Aluminium Rail Extremity

MS 5000 (02)



Position aluminium extremity plate behind ladder rung selected and bolt through plate into aluminium extremity rail from behind ensuring nuts are fastened properly.



Maximum length of aluminium rail extremity for first connection point to ladder or receiving structure or substrate.

Minimum clearance from bottom of ladder and rail system to the floor.

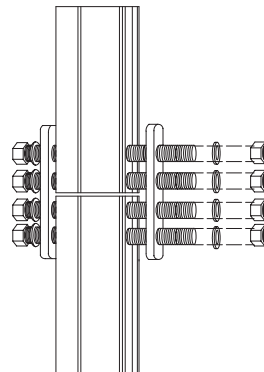
6.2 JUNCTION:

Ref. MS 5000 (08)

Join two lengths of Aluminium Rail Intermediates. Match the sections of both the Aluminium Rail. Place the junction plate on either side of the Aluminium Rail Intermediate with the holes of junction plate matching with those of Aluminium Rail Intermediate.

Fix both the plates using the four sets of fasteners supplied.

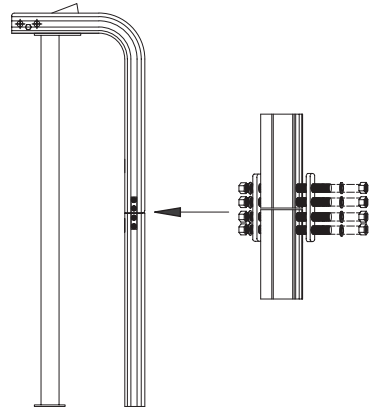
Ensure that the gap between the two rails is not greater than 1.5mm.



6.3 INSTALLATION OF ALUMINIUM RAIL EXTENSION

Ref. MS (8000 (03))

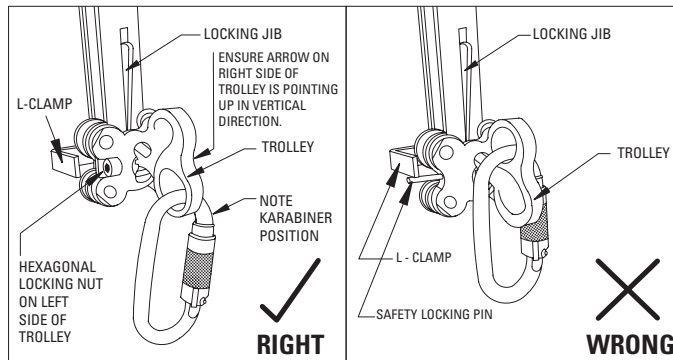
- Connect the Aluminium Rail Extension support and the Aluminium Rail Intermediate.
- Match the sections of both Aluminium Rails with the holes of the Junction Plate. Place the Junction Plate on either side of the Aluminum Rails connecting both the plates using the four sets of fasteners supplied.
- Select the correct Aluminium Rail Extension Support depending upon the type of roof.
- For trapezoidal roof sheets use blind rivets to install the Aluminium Rail Extension support to the roof.
- For standing seam roof profile fasten the Aluminium Rail Extension support using standing seam roof clamps.



6.4 VERTICAL TROLLEY:

Ref. MS 8000 (01)

- Insert the trolley into the Aluminium Rail Extremity. Press the termination locking jib in and slide the trolley over it.
- After the trolley slides onto the Aluminium Rail the terminating locking jib springs back to its original position ensuring that the trolley does not slide off the Aluminium Rail.



7. HORIZONTAL ALUMINIUM RAIL SYSTEM

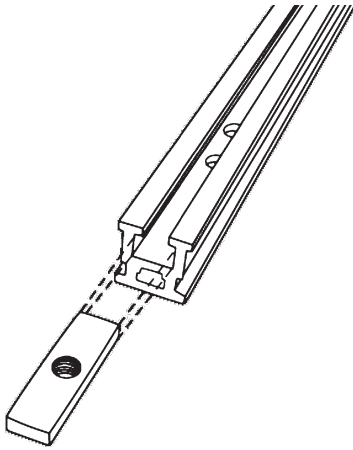
Ref. MS9000

7.1 MOUNTING BRACKET

Installation of Mounting Nut

Ref. MS5000 (03)

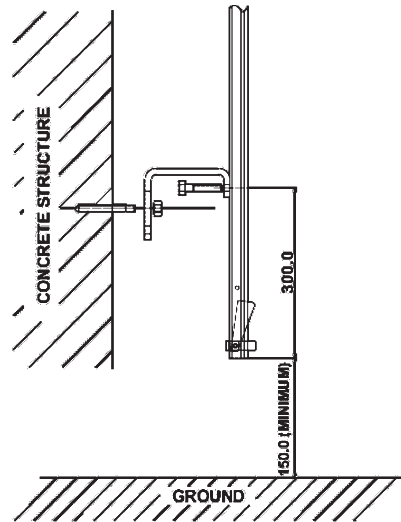
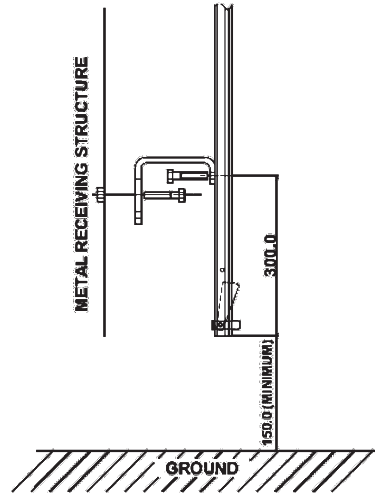
Insert the mounting nut into the Aluminium Rail Extremity. The first mounting nut must be positioned 300mm from the bottom edge and the second mounting nut needs to be 1500mm from the first mounting nut and so on.



Installation of Aluminium Rail Extremity

Ref. MS 5000(02) & Mounting Bracket MS 5000(06)

The Mounting Brackets can be installed on metal and concrete structures by using special fasteners. Chemical fasteners are used to fix the brackets into concrete walls and stainless steel fasteners are used for metal structures. The shorter end of the bracket is mounted onto the aluminium rail by using mounting nuts. The longer end of the bracket is mounted to the structure by using special fasteners.



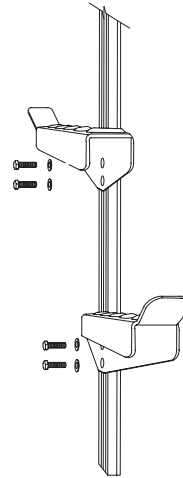
7.2 RUNGS, HALF AND FULL

Ref. MS 9000

Installation of Ladder Rungs

Ref. MS9000(01)

The Aluminium Rail has two holes at regular intervals to attach the rungs to. Insert the bolt along with washer through the rung and into the mounting nut on the aluminium rail and tighten it.



RECOMMENDED PPE



Double Leg Lanyard with Energy Absorber
Ref: MLEA-KR-2LR-1.8m



Work Positioning Lanyard with Grip Adjuster
Ref: MLWPD-KR-GA-2m



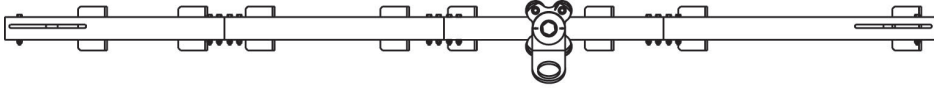
MAXSAFE® Full Body Harness
Ref: MHPRS



MAXSAFE® Temporary Vertical
Lifeline Assembly
Ref: MTVLA-KR15, MTVLA-KR30

8. HORIZONTAL ALUMINIUM RAIL SYSTEM

Ref. MS 5000

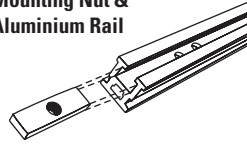


8.1 MOUNTING BRACKET

Ref. MS 5000

Insert the mounting nut into the Aluminium Rail channel as shown in the drawing. The mounting brackets must then be connected to the Aluminium Rail using fasteners supplied.

Mounting Nut & Aluminium Rail

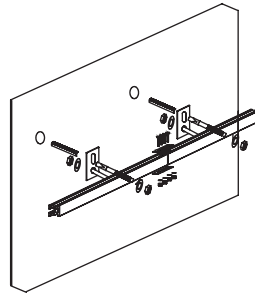


8.2 WALL MOUNTING BRACKET FLUSH TYPE:

Ref. MS 5000 (04)

- To install the mounting bracket into concrete use 12mm Chemical fasteners.
- Connect the bracket to the mounting nut that has been inserted into the Aluminium Rail channel.
- Optional Accessory: Chemical Fastener MSSA 12(04)
Concrete:25 mPA

Wall Bracket Flush Type

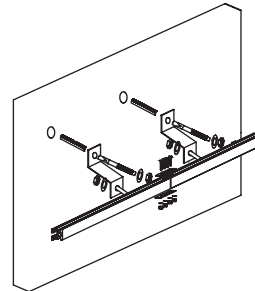


8.3 WALL MOUNTING BRACKET WITH RECESS:

Ref. MS 5000 (05)

- To install the mounting bracket into concrete use 12mm Chemical fasteners.
- Connect the recess bracket to the mounting nut that has been inserted into the Aluminium Rail channel.
- Optional Accessory: Chemical Fastener MSSA 12(04)
Concrete:25 mPA

Wall Bracket Recessed Type

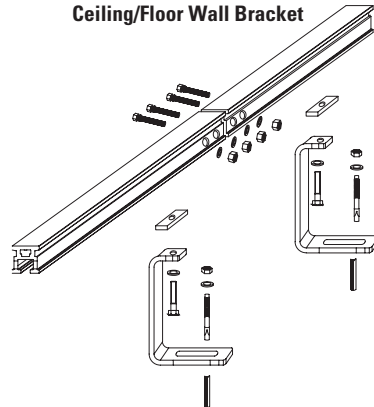


8.4 CEILING MOUNTING BRACKET:

Ref. MS 5000 (06)

- To install the mounting bracket into concrete use 12mm Chemical fasteners.
- Connect the ceiling bracket to the mounting nut that has been inserted into the Aluminium Rail channel.
- Optional Accessory: Chemical Fastener MSSA 12(04)
Concrete:25 mPA

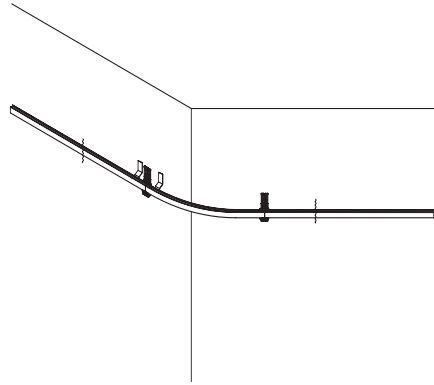
Ceiling/Floor Wall Bracket



8.5 TROLLEY FOR CEILING/FLOOR:

Ref. MS 5000 (12)

- Insert the trolley into the Aluminium Rail extremity. Press the locking jib termination and slide the trolley over the termination. This will ensure it does not slide off the Aluminium Rail.



8.6 TROLLEY FOR WALL:

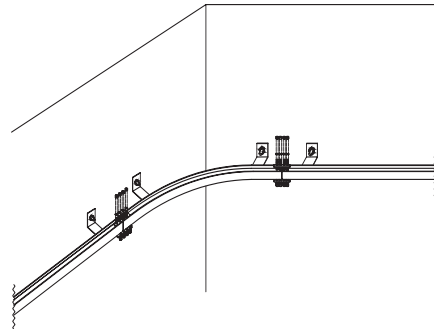
Ref. MS 5000 (13)

- Insert the trolley into the Aluminium Rail extremity. Press the locking jib termination and slide the trolley over the termination. This will ensure it does not slide off the Aluminium Rail.

8.7 CURVED ALUMINIUM RAIL (OUTER WALL MOUNTED):

Ref. MS 5000 (09A)

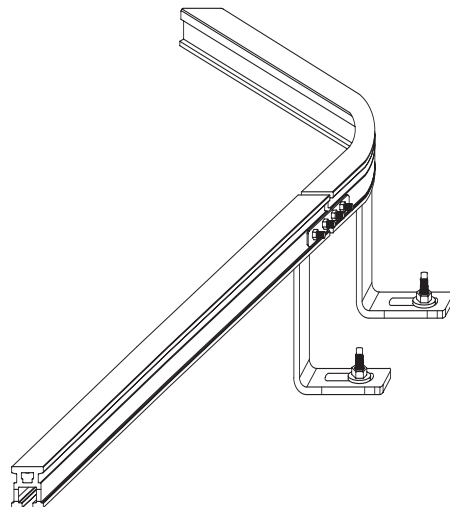
- Join the curved Aluminium Rail with the Aluminium Rail intermediate.
- Place the junction plate on either side of the Aluminium Rail with the holes of the junction plate matching with those of the Aluminium Rail intermediate and curved Aluminium Rail.
- Connect both the plates using the four sets of fasteners supplied.
- Ensure that the gap between the two rails is not greater than 1.5mm.



8.8 CURVED ALUMINIUM RAIL (INNER WALL MOUNTED):

Ref. MS 5000 (09B)

- Join the curved Aluminium Rail with the Aluminium Rail intermediate.
- Place the junction plate on either side of the Aluminium Rail with the holes of the junction plate matching with those of the Aluminium Rail intermediate and curved Aluminium Rail.
- Connect both the plates using the four sets of fasteners supplied.
- Ensure that the gap between the two rails is not greater than 1.5mm.



8.9 CURVED ALUMINIUM RAIL (FLOOR / CEILING):

Ref. MS 5000 (10)

- Follow installation instructions as per Sections 8.7 and 8.8

9. PRE-USE CHECKS

Checks and Precautions

9.1 Post Installation Inspection

- Once installed, it is important to inspect all installed components of rigid and cable height safety systems.
- A Third Party Inspection (TPI) may be required for an engineered certified signoff.
- On-site testing of the structure may be required.

9.2 Pre-Use Checks

- It is mandatory for the Site Inspector/ Supervisor and the actual users of the system to perform a thorough inspection before carrying out any work. MAXSAFE® can train any concerned personnel on pre-use inspections of the system.

9.3 Inspection of the Building Structure

Do not use this system if the building structure has failed inspection.

9.4 Checking the System

- Clean the system from dust/dirt. Check for any mechanical defects.
- Check for wear and tear in all components or unusual bending or deformation.
- Check for any modifications done by the user.
- Check for any missing component.
- Check for any damages that may have been caused due to welding while maintaining other equipment.
- Check the Identification Plate. The system needs to be put out of service if the Identification Plate is not legible or is missing.

9.5 Checking the Cable

- See that there is sufficient tension on the cable by checking the tension indicator.
- Check the condition of the cable. Wear hand gloves and check the wire from all sides. Check for broken strands or any deformity in the cable. Report if strands are found broken.

10. PRECAUTIONS WHILE USING THE SYSTEM

The following points of precaution need to be considered for safe use of the MS 4000 system.

- The life line is for the purpose of fall protection while working at height. A back up fall arrest system is required when transitioning on and off the life line system.
- Never disengage the fall arresting lanyard from the life line while working at height.
- If any fall is reported put the system out of use. Contact the manufacturer for repairs and re-validation.
- Only certified full body harnesses with proper attachment anchorage points should be worn while using the Fixed Line System.
- Do not alter or misuse this equipment. Incorrect components or sub-systems may interfere with the proper functioning of this equipment. MAXSAFE® may not be held responsible for any malfunction from incorrect usage.
- The lifelines must be kept free from dust, grease etc., by periodic cleaning using a soft dry cloth.

Hazards

Hazards existing in immediate environment may require additional precautions to limit the possibility of injury to the user or damage to the equipment. Hazards may include but are not limited to, extreme temperatures, caustic chemicals, corrosive environments, high voltage power lines, explosive or toxic gases, moving machinery, sharp edges, high velocity winds etc. Do not expose the equipment to any hazard which it is not designed to withstand. Consult the manufacturer if in doubt.

Rescue Plan

It is mandatory to ensure that the user shall have a rescue plan and means to execute it while using this equipment. The rescue plan needs to be project specific. The employees must be trained in self-rescue or alternative means shall be provided for prompt rescue in an event of a fall.

Always work in a pair to ensure that in an event of a fall your partner may help with the rescue.

11. TOOLS, MACHINES, ANCHORS



Ring Spanner



Double End Spanner



Socket Set



Tensioner Tightening Tool



Bolt Cutter



Allen Key



Crimping Plier



Cordless Drill Machine



Hammer Drill Machine



Cordless Impact Wrench



Hydra Jaws Lifeline Testing



Swaging Tool



Hydraulic Crimping Head



Power Bird Riveting Machine



12. OTHERS:

INSPECTION

Visually inspect the system before each use to ensure that it is in a serviceable condition and is operating correctly. If during inspection, doubts are raised about the safety of the system or a component, these should be replaced either by the manufacturer or a competent person.

CLEANING

Cleaning after use is important for maintaining the safety and longevity of the product. Remove all dirt, corrosives, and contaminants from the product before and after each use. If the product cannot be cleaned with plain water, use mild soap and water, then rinse and wipe dry. NEVER clean the product with corrosive substances.

COMPATIBILITY

To optimize protection, in some instance it may be necessary to use the product with suitable boots/gloves/helmet or earmuffs. In this case, before carrying out the risk-related activity, consult your supplier to ensure that all your protective products are compatible and suitable for your application.

STORAGE

When not in use, store the product away where it will not be affected by heat, light, excessive moisture, or other degrading elements and away from heavily acidic or chemically hazardous environments. Never place heavy items on top of it.

DAMAGED PRODUCT & WITHDRAWAL FROM USE

- If the product becomes damaged it will not provide the optimum protection and therefore should be immediately replaced. Withdraw it from use. Never use damaged products.
- If the system has been used to arrest a fall, it should be removed from service immediately and destroyed.

PERIODIC EXAMINATION

- It is important to conduct regular periodic examination of the product because the safety of the user depends upon the continued efficiency and durability of the product.
- The frequency of examination should be at least once in a year. However, it can be more than once if legislation requires, or frequency of use is high or environmental conditions have an adverse affect on it (eg. excessive rain, sea side environment, excessive heat etc).
- It is emphasized that the examination be conducted only by a competent person and strictly in accordance with the manufacturer's periodic examination procedures.
- It is also advised the competent person be correctly trained and authorized by the manufacturer.
- Ensure that all markings on the product are legible and can be clearly read.
- It is the responsibility of the User to keep the Inspection & Maintenance Log up-to-date (refer to Back Cover).

