

FALL PROTECTION



- Technical Data Information
- Anchorage
- Body Support
- Connection
- Descent / Rescue
- Work and fall protective equipment selection samples

Fall Protection Regulations & Standards

1. Must assign qualified personnel.
2. Wear appropriate clothing.
3. The anchorage point must be capable of withstanding all potential forces
4. Wear any additional protective equipment while working as necessary. Examples: clean gloves, safety shoes, full body harness and lanyard or SRL
5. Ensure all work permits are in order and any additional equipment such as tripods or winches are on site and fit for purpose.



Working at Height General Rules

1. Do not work at height alone
2. Move slowly and carefully at all times.
3. Do not throw any items or equipment to personnel on the ground
4. Do not leave any relevant items or equipment on the ground
5. Carefully cutting or welding at the height, inspect and move the fuel or gas at the ground first.
6. Security barriers must be in place to keep unauthorized personnel away from the work area.



Working at Heights Safety Tips: ABCD

A Anchorage provides a secure point of attachment for the fall arrest system. It can sustain a force of 5,000 lbs or 22.2 kilonewtons (kN). Tether yourself to a secure anchor point. This can be a fixed point for Lifeline, Lanyard, SRL and other fall protective equipment including a Rescue System. Anchor point equipment, H-Beam, Metal structure, concrete or wood pole, etc. uses the following equipment: Web-tie, Beam anchor and Concrete anchor which is the connector to the anchor point, Sling, Webbing and Cable.

B Body Support is typically a full body harness. Harness distributes fall forces. They provide a connection point on the worker for the personal fall arrest system when working at heights.

C Connection is a device that connects the full body harness to the anchorage system. This can be a single product or multiple devices working together, examples: Snap hook, Big hook, Carabiners, Lanyard, Shock absorber.

D Descent/Rescue systems enable the retrieval of an injured or incapacitated worker. In the event of a rescue, this equipment facilitates rapid recovery of the worker without endangering other workers in the process.





Safety in Working at Heights

1. Any work place over 2 meters high, the worker must be protected against fall and use scaffolding.
2. Any work place over 4 meters high, the worker must wear a full safety harness and lanyard. A safety belt on its own must not be used for working at height.
3. Windows should be covered and chimneys fenced off.
4. If working on a sloping area, where the incline is in excess of 15 degrees, then scaffolding must be used.
5. All equipment used for working at height must be maintained correctly and inspected before and after every use.
6. Ladders must be tethered and used at the correct angles
7. When a mobile crane is used all necessary safety precautions must be taken. The driver and navigator must be trained and competent. The crane must be checked by a certified officer before use.

Full Body Harness Feature



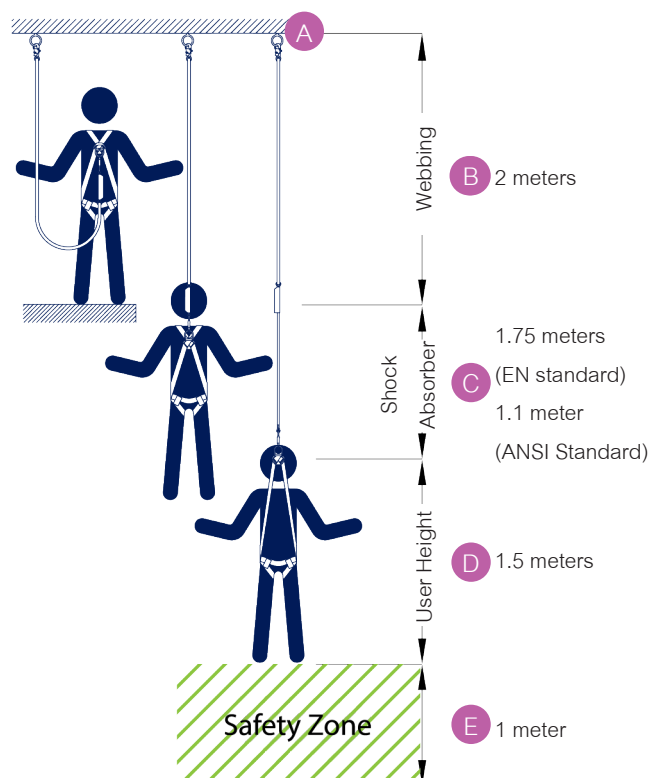
Technical Data Information

How to determine total fall distance

Total Fall Distance (TFD) is defined as the sum of distance between point A to anchorage connector B. Knowing how to calculate Total Fall Distance is just as important as selecting the proper harness, lanyard, anchorage connector and anchorage point for the specific task to performed. If the distance is less than 5 meters, Self Retracting Lifeline (SRL) should be considered.



SRL



Calculation:

- A) The anchorage point must be above the shoulder of users to reduce the centrifugal or pulling force
- B) The length of rope (from the anchorage point-connector length-shock absorber length) should not be longer than 2 meters
- C) When the user falls, the shock absorber will extend to the specified length dependent on specification.
- D) Standard length of Shock absorber: 1.75 meter (EN standard) or 1.1 meter (ANSI standard)
- E) The sum from (B) must be included the height of the user plus an additional 1 meter (safety zone)

$$\text{Safety zone} = B + C + D + E = 5.6 - 6.25 \text{ meter}$$

Notes: The average height of the building is 6.5 meter

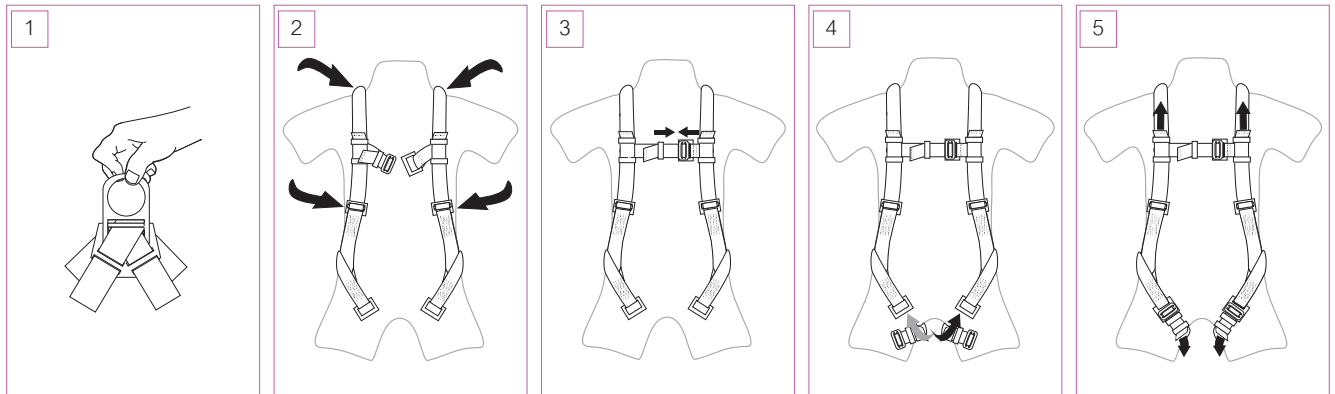
Fall Protection Inspection

Fall protection equipment must be visually inspected before each use.

<p>1. Lanyards examination</p> <ul style="list-style-type: none"> • Worn • Broken or cut fibers • Obvious signs of chemical or heat damage. • No breaks in stitching • Any cuts or breaks 	<p>2. Steel Connectors</p> <ul style="list-style-type: none"> • Free of sharp edges • Free of distortion or cracks • Not twisted or out of shape
<p>3. Check all ropes for fraying and discolouration.</p>	<p>4. After cleaning all fall arrest equipment should dry thoroughly without exposure to intense heat, steam or long periods of sunlight.</p>



How to Put on a Full Body Harness



1. Hold harness by back D-ring. Shake harness to allow all straps to fall in place.
2. Slip straps over shoulders so D-ring is located in middle of back between shoulder blades.
3. Pull leg strap between legs and connect to opposite end.
4. Connect chest strap and position in mid-chest area. Tighten to keep shoulder straps taut.
5. After all straps have been buckled, tighten all buckles so that harness fits snug but allows full range of movement.

Standard

Standard	CE EN	ANSI	ASNZS
Force limitation	6 kN	8 kN	6 kN
The rest energy absorber	6 kN	4 kN	6 kN
Absorber release distance	1.75 m	1.1 m	1.75 m
Anchorage strength	10 kN	22.2 kN	15 kN
Floating distance	4 m	1.8 m	2 m
Test distance	4 m	1.8 m	4 m

* 1 kN = 100 kg. = 225 lb





<p>EN 341 PPE against falls from a height. Descender devices. EN 341 change A1 – descender device – change</p>	<p>EN 353 – 1, 2 PPE against falls from a height. Guided type fall arresters.</p>	<p>EN 354 PPE against falls from a height. Connecting equipment max. length 2 m (incl. connectors).</p>
<p>EN 355 PPE against falls from a height. Energy absorbers.</p>	<p>EN 360 PPE against falls from a height. Retractable type fall arresters.</p>	<p>EN 361 PPE against falls from a height. Full body harnesses.</p>
<p>EN 362 PPE against falls from a height. Connectors.</p>	<p>EN 813 PPE against falls from a height. Sit harnesses.</p>	<p>EN 397 PPE against falls from a height. Industrial safety helmets</p>
<p>EN 358 PPE for work positioning and prevention of falls from a height. Work positioning systems.</p>	<p>EN 795, EN 795/A1 Protection against falls from a height. Anchor devices.</p>	<p>EN 1496 Rescue equipment Rescue lifting devices.</p>
<p>EN 1497 Rescue equipment Rescue harnesses.</p>	<p>EN 1891 PPE against falls from a height. Low stretch kernmantel ropes.</p>	<p>EN 892 PPE against falls from a height. Dynamic (stretch) ropes.</p>

Fall Protection

A

Anchorage





Rigging Plate 1/3

- Light Alloy material
- Strength: 36kN
- Additional 3 anchorages gives efficient force distribution in different load directions

CE0333

Code	Description	UOM	Package
HNSR3007ZZZ	Rigging Plate 1/3+	1 piece	1 piece

A

Anchorage





Tie Off Adaptor Pt 3"

- Polyester webbing: 1-3/4 inch x W 3 inch x L 3 ft., Strength 5,000 lbs.
- Pass-thru lock system, easy and fast operation
- Steel loops: durable and anti-rust

OSHA,
ANSI and the stringent ANSI Z359

- | Code | Description | Color | UOM | Package |
|-------------|-----------------------|--------|---------|---------|
| SALA1003000 | TIE OFF ADAPTOR PT 3+ | Yellow | 1 piece | 1 piece |

Code	Description	Color	UOM	Package
SALA1003000	TIE OFF ADAPTOR PT 3+	Yellow	1 piece	1 piece



Sayflite™ Synthetic Horizontal Lifeline System

- Synthetic lifeline: L 50 ft. (15.2 m.)
- Diameter 11/16 inches (17.5 mm.)
- Contains rope adjustment equipment
- Absorber at the end of rope to reduce fall strength
- 2 Webbing straps and D-ring, L 6 ft. (1.8 m.)
- Accommodates 2 users
- Carrying bag, light and portable

Code	Description	Color	UOM	Package
SALA7600505	SAYFLINE, 50' (15.2 m.):	Black	1 set	1 set



I-Beam Trolley 3-8 Adjustable Assembly

- Anchorage trolley is designed to easily fit to horizontal I-beams 11/16 inches thick and wide of 3-8 inches (7.6-20.3 cm)
- Running according to user's requirement

Code	Description	UOM	Package
SALA2103143	TROLLEY, 3-8 ADJ ASSY+	1 piece	1 piece

B Body Support



Full Body Harness #Body II EN361,CE1019

- Polyamide material, Durable
- 1 D-ring at the back
- 1 front loop for additional equipment connection
- Easily adjustable
- Easy to attach to safety belt and back support Model: HNSR1004ZM,L, XL

Code	Description	Size	UOM	Package
HNSR1001ZZS	Full Body Harness #Body II S+	S	1 piece	1 piece
HNSR1001ZML	Full Body Harness #Body II M/L+	M/L	1 piece	1 piece



EN358, EN813,
EN361,CE1019

Full Body Harness #Technic



- Polyamide material, durable
- 5 D-rings: Chest, waist, back, both sides
- Full body support for work at height
- Anatomic waist belt, leg loops and padded shoulder straps ensure wearer comfort
- Innovated front and back buckles enable fluent and fast adjustment to fit users body
- Additional loops at both sides for attaching more equipment

Code	Description	Size	UOM	Package
HNSR1002ZZS	Full Body Harness #Technic S+	S	1 piece	1 piece
HNSR1002ZML	Full Body Harness #Technic M/L+	M/L	1 piece	1 piece
HNSR1002ZXL	Full Body Harness #Technic XL:	XL	1 piece	1 piece



Full Body Harness #Profi Worker III Speed

EN358, EN813,
EN361,CE1019

- Polyamide material, durable
- 5 D-rings: Chest, waist, back, both sides
- Full body support for work at height
- Anatomic waist belt, leg loops and padded shoulder straps ensure wearer comfort
- Innovated front and back buckles enable fluent and fast adjustment to fit users body
- Additional loops at both sides for attaching more equipment
- Shoulder straps and leg loops are independently adjustable

Code	Description	Size	UOM	Package
HNSR1003ZML	Full Body Harness #Profiworkerspeed M/L+	M/L	1 piece	1 piece



Safety Belt #Pole

EN358,CE1019

- Polyamide material, durable
- Waist belt for work positioning
- Padded belt to ensure comfort
- Can use with HNSR2003 with light loops (Tower climbing)

Code	Description	Size	UOM	Package
HNSR1004ZML	Pole M/L+	M/L	1 piece	1 piece
HNSR1004ZXL	Pole XL+	XL	1 piece	1 piece



HNSL-K452



HNSL-K452KIT

Code	Description	Color	UOM	Package
HNSL-K452	Full Body Harnes Swelock #K-452+	Red	1 piece	1 piece
HNSL-K452KIT	Full Body Harnes Swelock #K452 W/Lanyard +	Red	1 set	1 set

Full Body Harness #K452

CE EN361

- High-tensile polyamide, high tensile polyester webbing 44mm. width, weight 950g
- Locker and 1 dorsal D-ring at the back made from galvanized steel
- Zinc-Plated steel chest straps
- Strength: >15kN

Full Body Harness with Lanyard #K452KIT

CE EN361 CE EN354

- Full body harness Model: HNSL-K452 with lanyard Model: K611
- Polyamide rope, L 1.5m. x diameter 12 mm, weight 0.80 kg, strength 22 kN
- 1 Snap hook Model K333 W20 mm. x 1.55 m., safety lock system
- 1 Big hook Model K332, metal steel, gate opening 53 mm. x L 205 mm., safety lock system



Back Support Belt

Full Body Harness #K453S

CE EN361

- High-tensile polyamide, high tensile polyester webbing 45mm. width, weight 1.2kg and durable
- Locker and 1 dorsal D-ring at the back made of Galvanized Steel
- Zinc-Plated Steel chest straps
- Strength: >15kN
- 2 front D-rings at both shoulders made from galvanized Steel
- Pass-Thru lock system

Code	Description	Color	UOM	Package
HNSL-K453S	Full Body Harness Swelock #K453S+	Red	1 piece	1 piece

Full Body Harness

with Work Positioning Belt #K453/K522R

EN361/

EN358

- High-tensile polyamide, high tensile polyester webbing 45 mm. width, weight 1.2 kg
- Locker and 1 dorsal D-ring at the back made of Galvanized Steel
- Zinc-Plated Steel chest straps
- Strength >15 kN
- 2 front D-ring at both shoulder made from galvanized steel
- Pass-Thru lock system
- With positioning Belt and back support

Code	Description	Color	UOM	Package
HNSL-K453S/ K522R	Full Body Harness Swelock #K453S/K522R+	Red	1 set	1 set

Connection



Connection The equipment between Body Support and Anchorage and is used for fall protection.

Hard-goods

1. Carabiners
2. Snap hooks, Big hooks

Soft- goods

1. Lanyards
2. Shock absorbers

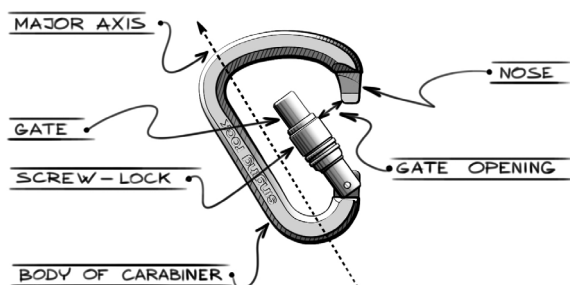
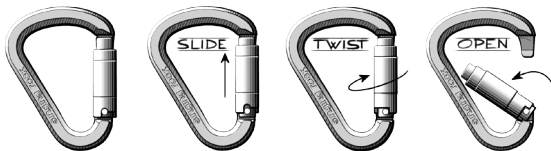
SCREW LOCK



TWL-TWIST LOCK



TRIPLE LOCK



CARABINERS

connecting equipment, many sizes, materials (aluminum or steel) and 2 lock systems

- Auto-locking: Open by hand and self lock
- Manual locking: Open and lock by hand



HNSR3003ZZZ

Oval Steel Connector/Screw (Carabiners)

EN362,CE1019

- Steel material
- Strength 30 kN
- Gate opening: 18 mm.
- Screw gate locking



HNSR3004ZZZ

Oval Steel Connector/Triple lock (Carabiners)

EN362,CE1019

- Steel material
- Strength 30 kN
- Gate opening: 18 mm.
- Triple locks system, high security



HNSR3005ZZZ

HYPNOS/TWL (Carabiners)

EN362, EN12275, CE1019

- Steel material
- Strength 22 kN
- Gate opening: 21.5 mm.
- Double lock system, more secure



HNSR3006ZZZ

HYPNOS/Triple lock (Carabiners)

EN362, EN12275, CE1019

- Steel material
- Strength 22 kN
- Gate opening: 21.5 mm.
- Triple lock system, high security

Code	Description	Color	UOM	Package
HNSR3003ZZZ	Carabiners Oval Steel Connector/ Screw+	Silver/ Golden	1 piece	1 piece
HNSR3004ZZZ	Carabiners Oval Steel Connector/ Triple lock+	Silver/ Golden	1 piece	1 piece
HNSR3005ZZZ	Carabiners HYPNOS/TWL+	Golden/ Yellow	1 piece	1 piece
HNSR3006ZZZ	Carabiners HYPNOS/Triple lock+	Golden/ Red	1 piece	1 piece

Connection



Certified Sling For Locker

EN354,
CE1019

- For connection of your harness and fall arrester locker
- Strength 22 kN



Maillon Big D (Carabiner)

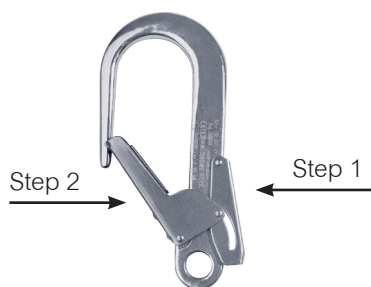
CE0082,
EN12275, EN362

- Steel D Maillon
- Strength 45 kN
- Gate opening: 12 mm.

Code	Description	Size	UOM	Package
HNSR3010ZZZ	Certified Sling for Locker #LOCKERSLING+	20 cm.	1 piece	1 piece

Code	Description	UOM	Package
HNSR3012ZZZ	Carabiners #Maillon Big D+	1 piece	1 piece

SNAP HOOK/BIG HOOK Snap hooks are self-closing/self-locking connectors. The snap hooks provide an eye for permanent attachment of a lifeline or lanyard.



Large Double Lock, Snap Hook (Big Hook Polished)

EN362,CE0321

- Light Alloy, light weight 500 g
- Strength 28 kN
- Gate opening: 60 mm

Code	Description	UOM	Package
HNSR3011ZZZ	Big Hook Polished+	1 piece	1 piece



LANYARDS A Lanyard is the equipment used for connecting anchorage and body support, normally used with other equipment such as: hook, carabiner and shock absorber.

Material types:

1. Rope

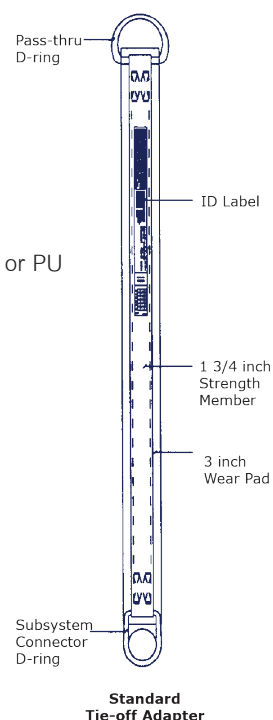
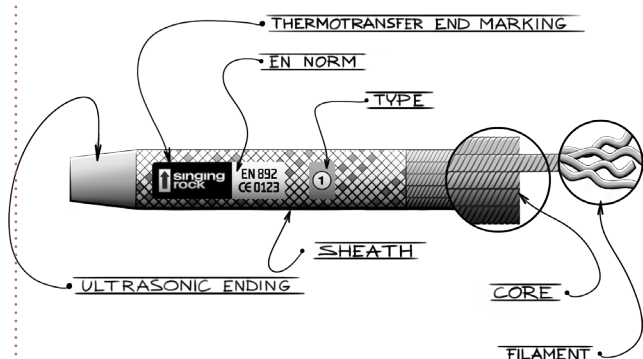
- Nylon or Polyester twill
- Lightweight and economical

2. Webbing

- Polyamide, Kevlar, Nomex or PU for special situations
- Durable

3. Cable

- Galvanized
- Stainless
- For chemical protection
- Heat and welding
- Not suitable when used in close proximity to electrical apparatus



Connection



Lanyard + Large Hook

- Polyamide rope, durable.
- L 1.5m. x diameter 11 mm. with large hook
- Strength 22 kN

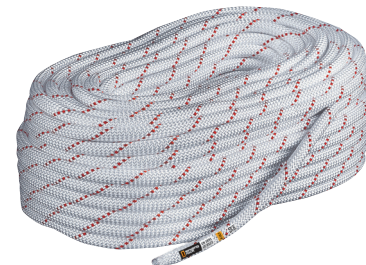
EN354, EN795B,
CE1019, CE0321, EN362

Lanyard

- Polyamide rope, durable.
- L 1.5 m. x diameter 11 mm.
- Strength 22 k

EN354, EN795B,
CE1019

Code	Description	Size	UOM	Package
HNSR2001ZZZ	Lanyard "I" 150 cm.+Largehook+	150 cm.	1 piece	1 piece
HNSR2002ZZZ	Lanyard "I" 150 cm.+	150 cm.	1 piece	1 piece



Static R44

EN1891,CE1019

- Polyamide rope, durable with special rope-braiding technology and patented by Singing Rock
- Diameter 11 mm. Strength 34.7 kN
- High elasticity and energy absorption

Code	Description	Size	UOM	Package
HNSR2004ZZZ	Lanyard StaticR44 100m.+	100 m.	1 piece	1 piece
HNSR2009ZZZ	Lanyard StaticR44 50m. +	50 m.	1 piece	1 piece



Rope with sewn loop

EN1891,CE1019

- Static Rope (Polyamide), durable
- Diameter 11 mm and strength 30 kN
- 1 loop for connecting to other equipment
- High elasticity and absorption

Code	Description	Size	UOM	Package
HNSR2005ZZZ	StitchedEye11;1EYE10m.+	10 m.	1 piece	1 piece
HNSR2006ZZZ	StitchedEye11;1EYE20m+	20 m.	1 piece	1 piece
HNSR2011ZZZ	StitchedEye11;1EYE100m+	100 m.	1 piece	1 piece
HNSR2012ZZZ	StitchedEye11;1EYE200m+	200 m.	1 piece	1 piece





Site - Locker + Static 2 m.

EN358, EN353-2, CE1019

- Rope covered with tubular webbing
- 2 m. x diameter 11 mm.
- Parking cam for blocking in required position
- Fall protection: work positioning, roof, construction, electric pole

Code	Description	Size	UOM	Package
HNSR2003ZZZ	SITE-locker+static2m.+	2 m.	1 piece	1 piece

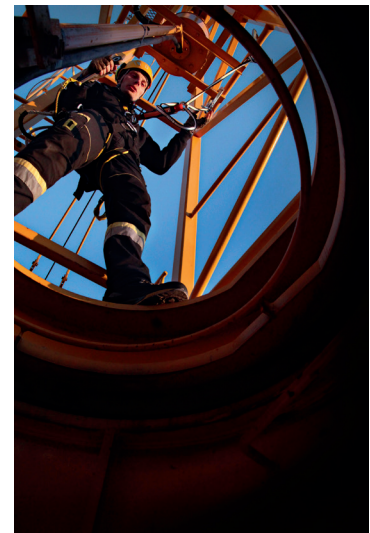


Double Lanyard With Absorber

EN355,CE1019

- Aluminum alloyhooks
- Shock absorber to reduce impact when falling, elastic rope will stretch 140 cm.
- Double webbing ropes attached to snap hook

Code	Description	Size	UOM	Package
HNSR2007ZZZ	Double Lanyard Reactor2ringy 155 cm.+	155 cm.	1 piece	1 piece

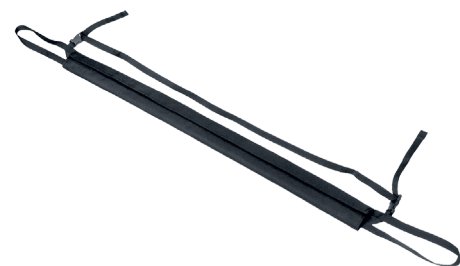


Lanyard with absorber

EN355,CE1019

- The arrester is activated after reaching a load of 2kN (2000 kg)
- Length without connector 2 m.

Code	Description	Size	UOM	Package
HNSR2008ZZZ	Lanyard with Absorber #JOULE+	120 cm.	1 piece	1 piece



Defender (Rope Protector)

- Cortex Fabric, 120 cm.
- Protecting rope sheath against abrasion on rough surfaces and edges

Code	Description	UOM	Package
HNSR3002ZZZ	Defender (Rope Protector) #Defender+	1 piece	1 piece

Connection

SWELOCK



Work Positioning Lanyard

CE EN358 , EN362

- Polyamide 16 mm & 3 strands fiber rope, for rope of diameter 16mm., durable
- Aluminum adjuster
- Static strength > 15kN
- Net Weight: 1.3 kg
- It can be used in connection with full body harness or belt. Suitable for pole climbing and work at height for a certain time.

Code	Description	Color	UOM	Package
HNSL-K610	Work Positioning Lanyard #K610+	White	1 piece	1 piece



Rope Type Lanyard

CE EN354

- Polyamide rope, diameter 12 mm. & 3 strands fiber rope
- Chrome-plated & forged steel big hook with opening gate 53 mm. and double lock
- Static strength 20 kN
- New weight: 800 g
- Connecting with full body harness. Suitable for construction and maintenance

Code	Description	Color	UOM	Package
HNSL-K611	Rope Type Lanyard #K611+	White	1 piece	1 piece



Webbing Type Shock Absorbing Lanyard

CE EN354

- Polyester webbing rope W25 mm. x 1.8 m.
- Energy absorber: Polyamide W45 mm.
- Chrome-plated & forged steel big hook with opening gate 53 mm
- Static strength >15 kN.
- Net weight: 1.15 kg.
- Connecting with full body harness. Suitable for construction and maintenance

Code	Description	Color	UOM	Package
HNSL-K645	Webbing Type Shock Absorbing Lanyard #K645+	Red	1 piece	1 piece



Double Webbing Type Shock Absorbing Lanyard

CE EN355

- Polyester webbing rope W25 mm. x 1.8 m.
- Energy absorber: Polyamide W45 mm. Duration
- Chrome-plated & forged steel big hook with opening gate 53 mm
- Static strength >15 kN.
- Net weight: 1.7 kg
- Connecting with full body harness. Suitable for construction and maintenance

Code	Description	Color	UOM	Package
HNSL-K647KL	Double Webbing #K647KLL Lanyard+	Red	1 piece	1 piece

Fall Protection

Connection



SALA Y-Lnyd 2' Ewb, Spreader Bar

ANSI Z359.3

- Rescue and Retrieval "Y" design, length 2ft (0.6m)
- High-strength D-ring tie-off point provides a safe and compatible connection point for your rescue subsystem.
- Abrasion-resistant polyester webbing for added durability. 2 Snap Hooks at the end of shoulder Harness.

Code	Description	Color	UOM	Package
SALA1231460	SALA Y-LNYD 2' EWB, SPREADER BAR:	Blue	1 piece	1 piece

Connection



Safety Rope

EN1891, EN696

- Durable Polyamide rope diameter 14 mm.
- Lengths: 10 m. and 20 m.

Code	Description	Size	Color	UOM	Package
HRNR0002	Safety rope 10 m.	10 m.	White	1 piece	1 piece
HRNR0003	Safety rope 20 m.	20 m.	White	1 piece	1 piece

Self Retracting Lifelines (SRL)

Self Retracting Lifelines are able to be pulled back by the user. To pull, the tagline must be attached with a Snap hook.

Feature

- Swiveling anchorage point
- Available length of 2 -30 m.
- Swiveling self-locking snap hook with impact indicator
- Height limitation is 2 m.



SRL Talon 8'(2.4M) Web 9502195 End

ANSI Z359.14

- Nylon material. Length 8ft (2.4 m) x 1in (2.5 cm)
- Lightweight thermoplastic Housing
- Swivel snap hook at the end for harness connection

Code	Description	Color	UOM	Package
SALA3101001	SRL TALON 8'(2.4m) WEB 9502195 END+	Blue	1 piece	1 piece

Connection

**SRL Nano-Lock 6' Twin 9502058**

ANSI Z359.14

- Attaches directly to the back of most harnesses
- Dyneema® and Polyester Material. Length 6ft (1.8 m) x 0.75in (19 mm)
- Large Aluminum Hook and two Shock Absorbers

Code	Description	Color	UOM	Package
SALA3101273	SRL NANO-LOK 6' TWIN 9502058:	Blue	1 piece	1 piece



Connection



SALA3590500

SALA3590590

SALA3100426

SALA3100432



10 m.



20 m.



3.3 m.



6 m.

**Rebel™ Self Retracting Lifeline - Cable**

ANSI Z359.14

- Galvanized Steel wire rope length 33ft (10m) and 66 ft (20 m), diameter 3/16"(5 mm)
- Swiveling snap hook
- Thermoplastic housing and anchorage carabiner.

Code	Description	Size	Color	UOM	Package
SALA3590500	SRL REBEL 33'(10m) GALV 9504307+	10 m.	Red	1 piece	1 piece
SALA3590590	SRL REBEL 66'(20m) GALV 9504307+	20 m.	Red	1 piece	1 piece

Rebel™ Self Retracting Lifeline - Web

ANSI Z359.14

- Polyester weblifeline
- 20ft (6.1 m) x 1in (2.5 cm)
- Swiveling snap hook and self-locking anchorage carabiner.
- Rugged aluminum housing
- Self-locking snap hook on lifeline
- External energy absorber and impact indicator

Code	Description	Size	Color	UOM	Package
SALA3100426	SRL REBEL 11'(3.3m) WEB SELF LOCKING SNAP HOOK+	3.3 m.	Red	1 piece	1 piece
SALA3100432	SRL REBEL 20'(6m) WEB SELF LOCKING SNAP HOOK+	6 m.	Red	1 piece	1 piece



Descender With Double Stop

EN341, EN12841,CE0123

- Automatic Lock and speed at 2 minute/second
- Descend 200 m. at a time
- Double lock in emergency situations
- Flexible handle and suitable for working at height and rescue
- 11 mm. rope can carry 150 kgs. weight

Code	Description	UOM	Package
HNSR3008ZZZ	Descender with Double Stop #DSD30+	1 piece	1 piece



Locker

EN353-2, EN358,CE1019

- Light - alloy aluminum material
- Suitable for both vertical or slope drops
- In the event of an accident the rope will lock safely.

Code	Description	UOM	Package
HNSR3009ZZZ	LOCKER +	1 piece	1 piece



Figure 8

- Light - alloy aluminum material
- Shape 8 ring descender
- Strength: 25 kN for HNSR3016ZZZ and 30 kN for HNSR3017ZZZ
- Always use a carabiner with locking mechanism, preferably the HMS carabiner and always make knots at the end of the rope to prevent accidental slip.

Code	Description	Size	UOM	Package
HNSR3016ZZZ	Figure 8 L+	L	1 piece	1 piece
HNSR3017ZZZ	Figure 8 M+	M	1 piece	1 piece



Sir Descender

EN12841C , EN341A

- Unimpeded movement of the cam by pulling onto the working end of the rope engages and jams the rope by pulling the lever of the cam gradually releasing the rope
- If the lever is pulled down to its terminal position the double-stop function is triggered which blocks the rope again
- Spring loaded pin for impeded swinging of the cam
- For use with Static rope 10 mm. – 12 mm. of diameter
- Maximum load 180 kg
- CE EN 1284-C, EN341-A

Code	Description	UOM	Package
HNSR3025ZZZ	Sir Descender #K032SIR00+	1 piece	1 piece



Hand Ascender

CE0333, EN567

- For safe and smooth ascent
- For use with ropes of diameter 8-13 mm.
- Automatic lock provides safety if the rope is wet or dirty
- Available for both left & right hands

Code	Description	UOM	Package
HNSR3013ZZZ	Hand Ascender #Liftright+	1 piece	1 piece



CE0333, EN567

Chest Ascender

- Hands free lock
- For use with ropes of diameter 8-13 mm.

Code	Description	UOM	Package
HNSR3014ZZZ	Chest Ascender #Cam clean+	1 piece	1 piece

Descent/Rescue



Footer II Complete

- Marked ascending loop
- Length adjustable

Code	Description	UOM	Package
HNSR4003ZZZ	Footer II Complete+	1 piece	1 piece



Work Positioning Seat

- Easy to adjust with Rock and Lock Buckles
- Allows comfortable handling or standing work position
- Maximum weight 250 kgs.
- Three D-rings with 50 kg. (110 lbs) bearing capacity.

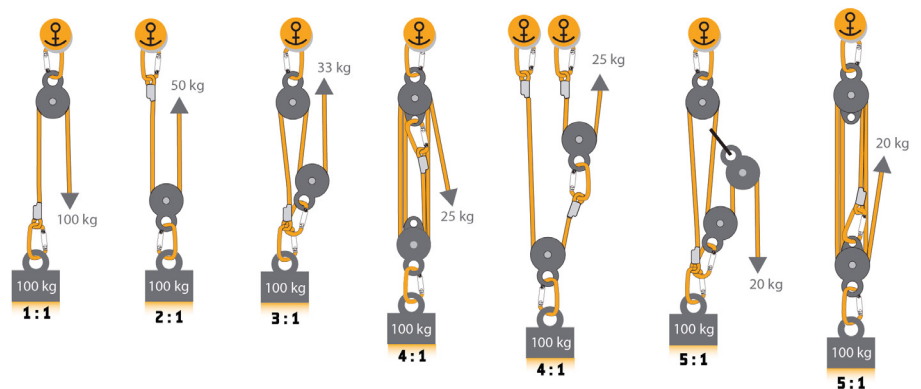
Code	Description	UOM	Package
HNSR3001ZZZ	Work Positioning Seat #FRANKLIN+	1 piece	1 piece



EN12278,
CE1019

Pulley Twin Roll

- Durable and lightweight light-alloy material
- Ball bearing and large sheave diameter for high efficiency
- Strength 36 kN
- Maximum diameter of rope: 13 mm.
- Designed and optimized for use with a Prusik friction knot



Code	Description	Color	UOM	Package
HNSR3021ZZZ	Pulley twin roll+	Orange	1 piece	1 piece



Rescue Pole

- Strong and durable fiberglass pole
- Slim fit shoulder pad with carabiner loop (HNSR30023ZZZ) which holds all components
- Available with three different heads
- Length: 2.8 meters.

Head of hook

- Manufactured from stainless for use with Big Connector (HNSR3011ZZZ)
- For model that can be used with Carabiners (Model Hypnos) please contact our salesoffice
- Slim fit shoulder pad with carabiner loop (HNSR30024ZZZ) which holds all components

Code	Description	UOM	Package
HNSR3024ZZZ	Rescue pole	1 piece	1 piece
HNSR3023ZZZ	Head of hook	1 piece	1 piece



Working helmet

EN 397

- Durable ABS injection moulded outer shell
- Fully adjustable, fast and secure adjustment system: EN397
- Well ventilated with 8 air intakes
- Four head lamp holders (Polyamide) compatible with any headlamp on the market
- Inner padding and headband full removable and washable
- EPS inner structure

Code	Description	Color	UOM	Package
HNSR4002ZRD	Working Helmet #Kappa RED+	Red	1 piece	1 piece
HNSR4002ZYL	Working Helmet #Kappa Yellow+	Yellow	1 piece	1 piece

Descent/Rescue



Rope Grab & Rope with Shock Absorber

CE EN353-2 ,EN 362

- Made of Polyamide rope, diameter 16 mm.
- Length: 5 m. , 10 m. & 20 m.
- Shock Absorber
- Can absorb over 15 kN
- 1 Big Hook (K332), opening 53 mm., length 2.05 m. Safety Double Lock
- Rope Grab for rope diameter 14- 16 mm.,with 1 set of safety lock (w. 20 mm. x 1.55 m.) Snap hook
- Use with harness by hooking at Front or Back D-Ring: Suitable for ladder climbing, electric pole climbing, mechanic and warehouse.

Code	Description	Size	Color	UOM	Package
HNSL-K810-1/5M.	Rope Grab & Rope with Shock Absorber #5m.+	5 m.	White	1 set	1 set
HNSL-K810-1/10 M.	Rope Grab & Rope with Shock Absorber #10m.+	10 m.	White	1 set	1 set
HNSL-K810-1/20 M.	Rope Grab & Rope with Shock Absorber #20m.+	20 m.	White	1 set	1 set

Descent/Rescue



Lad-Saf™ Mobile Rope Grab

EN353-2, EN358,CE1019

- For use with 5/8" (16 mm) diameter rope lifeline
- Use with harness by hooking at Front or Back D-Ring: Suitable for ladder climbing, electric pole climbing, mechanic and warehouse.
- Unique design automatically follows user and a friction sensitive brake to lock the rope grab onto the lifeline in case of a fall.

Code	Description	UOM	Package
SALA5000335	Rope Grab 5/8"(16 mm) MOBILE	1 piece	1 piece



Lad-Saf™ Mobile Rope Grab Kit

EN353-2, EN358,CE1019

- Use with harness by hooking at Front or Back D-Ring: Suitable for ladder climbing, electric pole climbing, mechanic and warehouse.
- For use with 5/8" (16 mm) diameter rope lifeline
- Durable and lightweight 50ft. (15 m.) blended rope lifeline with snap hook
- Unique design automatically follows user and a friction sensitive brake to lock the rope grab onto the lifeline in case of a fall
- 1 set: carrying bag, complete rope grab fall protection kit: 1 lifeline (16 mm xL.15 m.), 1 rope grip, 1 sand bag.

Code	Description	UOM	Package
SALA5000400	RG(5000335)SYSTEM 50'	1 set	1 set

LAD - SAF

6116280
Standard
Top Bracket

- Top bracket for Lad-Saf™ fixed ladder safety system up to 499 ft. (152.1 m)
- User installed system is fast, easy and safe
- Extremely rugged and corrosion resistant galvanized construction
- Built-in energy absorber protects user and structure
- Complete system accommodates up to 4 workers at one time
- Install with ladder on top

Code	Description	UOM	Package
SALA6116280	FLEX TOP BRKT GALV STD1 1/8 RUNG, TRI RUNG	1 set	1 set

6110030
Cable Lifeline

- Galvanized cable
- Diameter 9.5 mm
- Last 3 digit of item code is length of cable

Code	Description	UOM	Package
SALA6110030	CABLE,FLEX,3/8X30' 1X7, GALV	1 set	1 set

SALA6100400
Cable Guide

- By-passable intermediate cable guide for Lad-Saf™ fixed ladder safety system
- For systems up to 199 ft. (60.6 m) in length
- Fits rungs up to 1-1/8" (2.85 cm) diameter
- One guide is needed every 25 ft. (7.6 m)
- Non-metallic guide prevents metal-to-metal contact
- Extremely rugged and corrosion resistant galvanized mounting hardware
- Fast, easy and safe installation

Code	Description	UOM	Package
SALA6100400	FLEX CABLE GUIDE ASSY GALV,1 1/8 RUNG	1 set	1 set

6160030
Lad-Saf X2
Detachable
Cable Sleeve

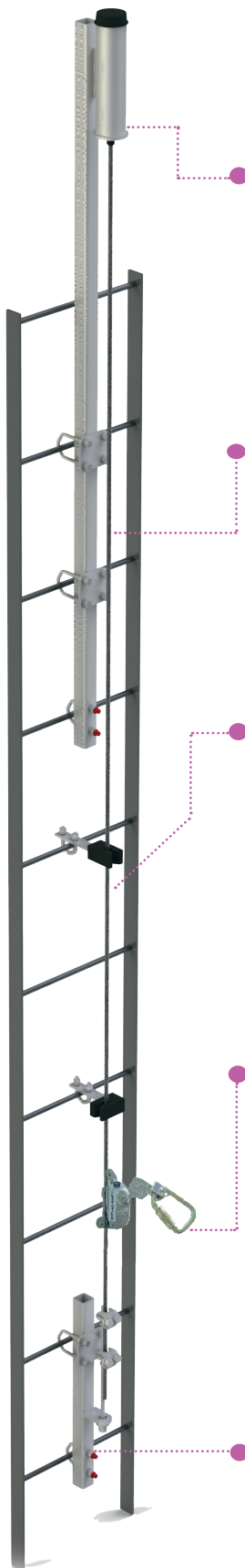
- Sleeve for Lad-Saf™ fixed ladder safety system
- For use on 3/8" (9.5 mm) and 5/16" (8 mm) 1x7 or 7x19 solid core cable
- Mobile design follows user for convenient climbing protection
- Easy to install and detach anywhere along lifeline
- Dual independent locking system
- Built-in energy absorber and fall indicator
- Saflok™ steel carabiner for secure connection to harness
- Extremely rugged and corrosion resistant construction
- Extremely compact, lightweight design
- Order top and bottom brackets, cable and guides separately

Code	Description	UOM	Package
SALA6160030	FLEX,SLEEVE,LS X2	1 set	1 set

6100090
Standard
Bottom
Bracket

- Bottom bracket for Lad-Saf™ fixed ladder safety system
- User installed system is fast, easy and safe
- Extremely rugged and corrosion resistant galvanized construction
- Built-in cable tension system
- Complete system accommodates up to 4 workers at one time
- Customizable to suit almost any application
- Order top bracket, cable, cable guide and sleeve separately

Code	Description	UOM	Package
SALA6100090	FLEX BTM BRKT,GALV	1 set	1 set





LAD - SAF



D Descent/Rescue



Construction or Aluminum Tripod

#8000000

ANSI Z359.1

- Tripod features two head-mounted pulleys to save valuable vertical space.
- Light weight and portable.
- Size: 5 ft - 7 ft.
- Equipped with a quick-mount bracket for a winch and safety chains.
- Winch is easy to set up by 1 person, and movable.
- Good design for working in confined space
- UL Standard
- The rated working load is 350 lbs. (157 kgs) for work support
- The legs are adjustable and lock into place.
- Fitted rubber safety shoes with spiked edges provide slip-free footing.

Code	Description	UOM	Package
SALA8000000	TRIPOD,5'-7" ALUMINIUM+	1 piece	1 piece



Self Retracting Lifelines/ Winch #8102001

- Raise or lower a worker and/or rescue & evacuate workers
- Its 6:1 gear ratio delivers an average lifting speed of 12.75 ft/min (3.9 m/min).
- Easy to set up with Tripod. Carrying bag are included
- Lightweight polyethylene structure.
- Special design to protect the spring from dust and dirt.
- Impact indicator at Hook
- Length: 60 ft. or 20 m.

Code	Description	UOM	Package
SALA8102001	SWINCH 60' GALV 1/4" SALALIFT II+	1 piece	1 piece

Sealed-Blok™ Self Retracting Lifeline - Retrieval/ Bracket

ANSI Z359.14 ,A10.32,Z359.4

- Lightweight polyethylene structure.
- Special design to protect the spring from dust and dirt.
- Impact indicator at Hook and color stripe on monitor will show when there is an arresting force.
- Connects winch or SRL. Length 50 ft. or 16 m.
- Easy to set up with Tripod.
- Carrying bag is included

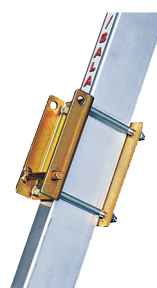
Code	Description	UOM	Package
SALA3400923	SRL 50' GALV RTRVL, BRKT 2100042 END, 420lb CAP:	1 piece	1 piece



Confined Space Tripod Pulley

- Tripod Pulley is used with Tripod (8000000 series) and set on the tripod legs
- Accommodates lifelines up to 0.25 in. (6.3mm)

Code	Description	UOM	Package
SALA8003238	LEG MOUNT PULLEY ASSEMBLY TRIPOD+	1 piece	1 piece

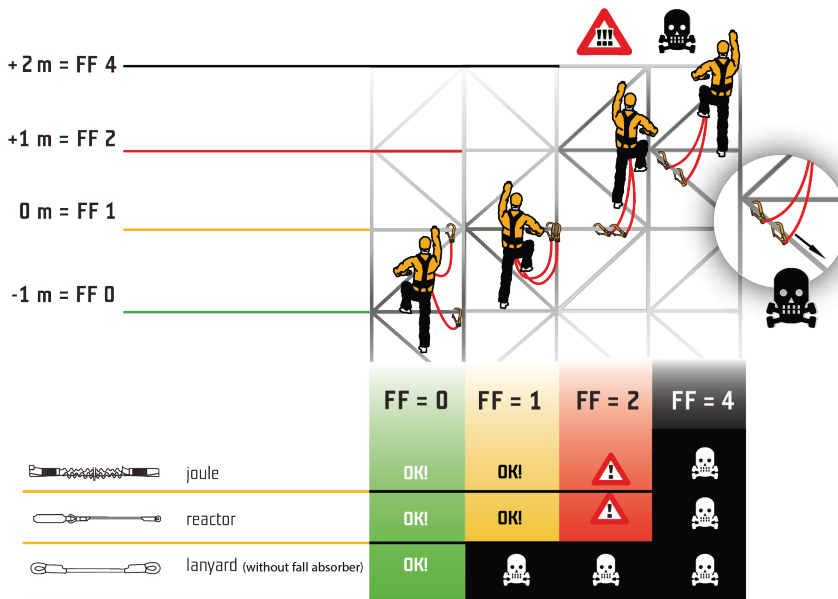


Confined Space Tripod Mounting Base

- Metallic manufacture c/w rust resistant spray coating. Attached to the leg of tripod and set for Winch
- Designed for easy and fast mounting

Code	Description	UOM	Package
SALA8005048	SALA QUICK MOUNT BASE, HDWR, TRIPOD+	1 piece	1 piece

Slope workplace



Fall Factor 0 (FF 0)

would be achieved if the climber could not fall any distance, such as when the rope or lanyard is anchored directly above them. This provides a good level of protection for the climber and the equipment, top-rope and bottom-rope climbing methods can provide minimal fall factors.

Fall Factor 1 (FF 1)

The work where the anchor point is movable and lower than the shoulder height. It's more risky. Lanyard with Shock absorber is suitable.

Fall Factor 2 (FF 2)

The work place is higher than anchor point, no suggestion for the work.

Notes: The anchor point should not be lower the waist of the worker.

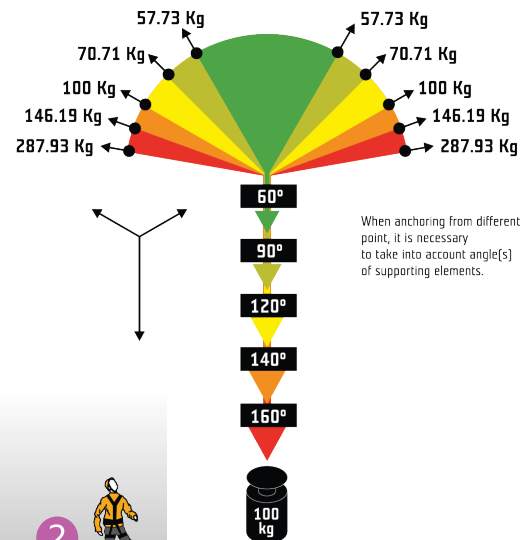
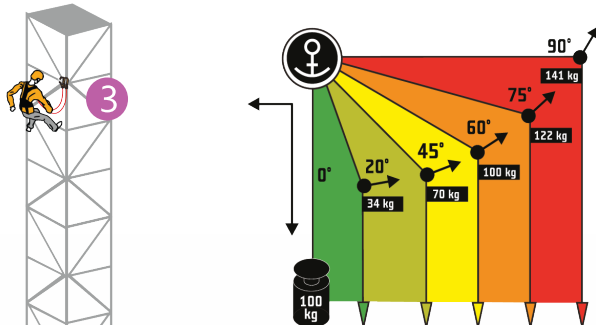
Fall Factor 4 (FF 4)

Do not work at the level where the anchor point is movable and lower than the waist.

Fall Protection Lifeline Systems

The more degree the anchor point is set, the more pendulum effect will get.

When you need to set the anchor point at the different degrees, it is necessary to set other anchor points to support the main anchor point.



Working at Height System

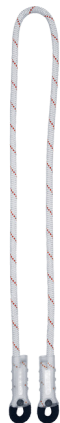
1. Working at the flat roof
2. Working on the slope area
3. Working in the vertical

Practices and Fall Protective Equipment Selection Samples

Slope workplace Working on Roofs



HNSR1001
Full body
harness
Page 127



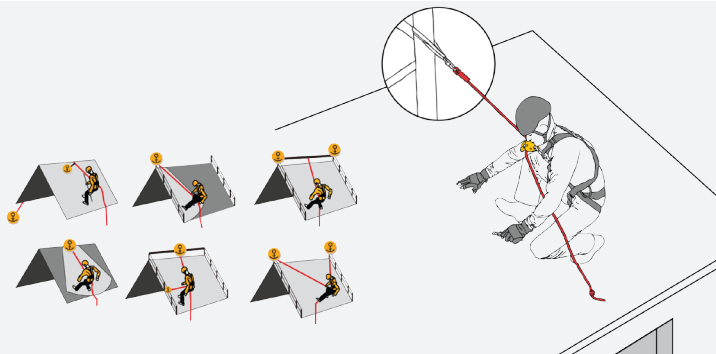
HNSR2002
Lanyard 150
cm.
Page 131



HNSR3005 [x2]
Carabiners
Page 129



HNSR2003⁽¹⁾
Site-Locker
+Static 2 m.
Page 132



Option: In case, workplace is more space, equipment (2) can be used instead of equipment (1).



HNSR2006⁽²⁾
Rope with
sewn loop
Page 131



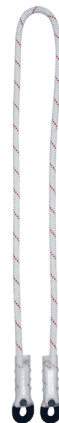
HNSR3009⁽²⁾
Locker
Page 136

Horizontal workplace

Construction scaffolding, the top floor or roof cleaning, High building-Window Installation



HNSR1001
Full body
harness
Page 127



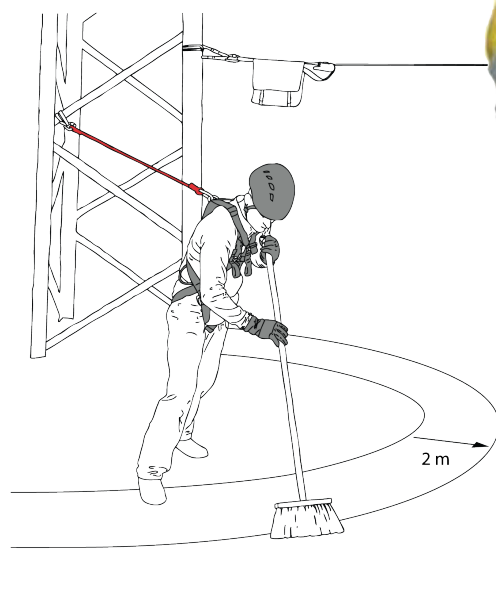
HNSR2002⁽¹⁾
Lanyard 150
cm.
Page 131



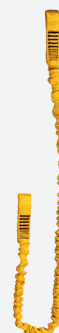
HNSR3011
Large double lock,
snap hook
Page 130



HNSR3004 [x2]
Carabiners
Page 129



Option:
Equipment (2)
can be used
instead of
equipment (1) to
reduce the
impact.



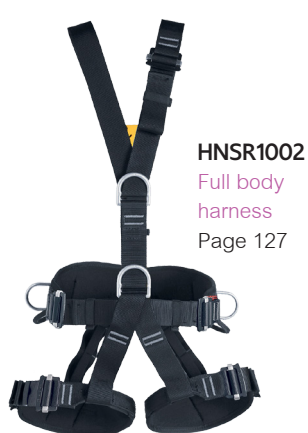
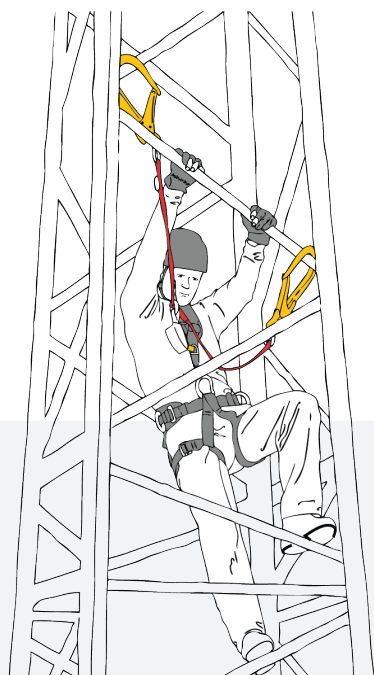
HNSR2008⁽²⁾
The fall absorber
120 cm.
Page 132



*Notes: Adjust the equipment to meet requirement.

Pole climbing: (without Life line)

Electric Pole climbing, high voltage poles, Scaffold climbing and High rack Warehouse climbing

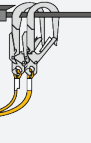
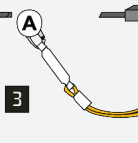
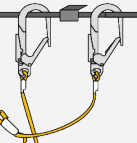
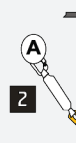
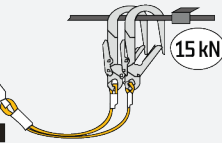
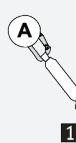
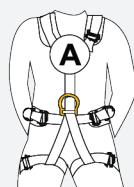


EN361

EN355

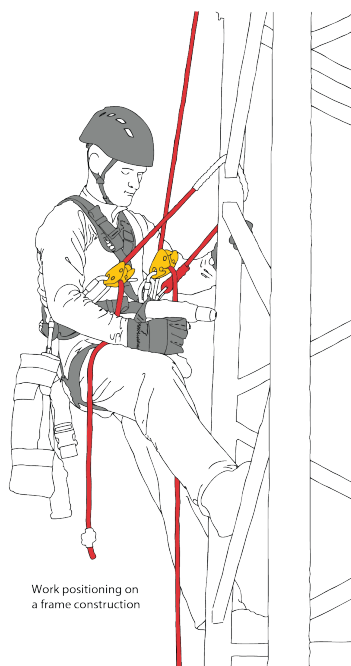
EN362

EN 795

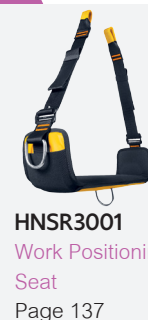
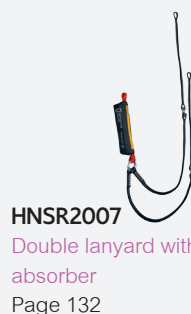


Pause at the middle of the pole climbing: (with Life Line)

Electric Pole climbing, high voltage poles, Scaffold climbing, Ladder climbing and High rack Warehouse climbing



Option: Accessories



Practices and Fall Protective Equipment Selection Samples

Vertical-Climbing

High Building winder cleaning, Color Planner or Rescue



HNSR1003
Full body harness
Page 127



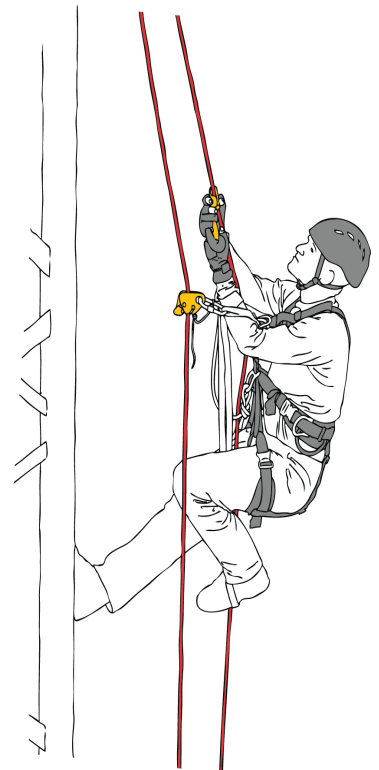
HNSR2002
Lanyard 150 cm.
Page 131



HNSR2006 [x2]
Rope with sewn loop
Page 131



HNSR4003
Footer
Page 137



HNSR3005 [x3]
Carabiners
Page 129



HNSR3009
Locker
Page 136



HNSR3012
Carabiner
Page 130



HNSR3014
Chest ascender
Page 136



HNSR3010
Certified sling
for the locker
Page 130



HNSR3013
Hand ascender
Page 136

Option: Accessories



HNSR3001
Work Positioning Seat
Page 137



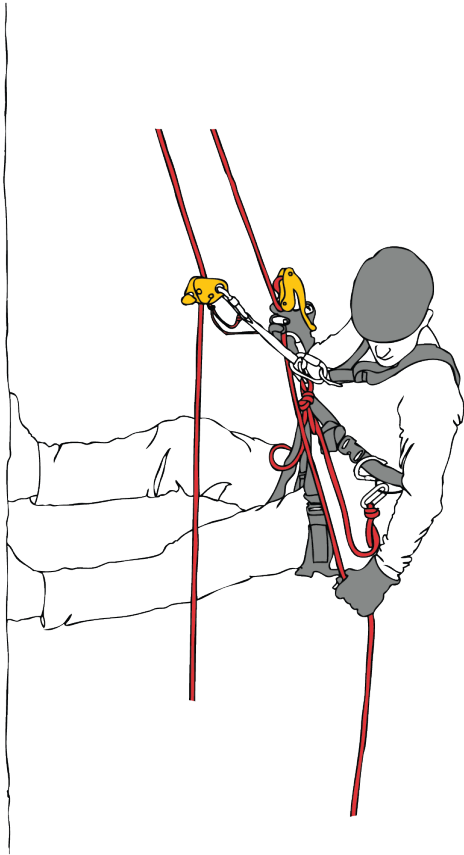
HNSR3005
Carabiners
Page 129



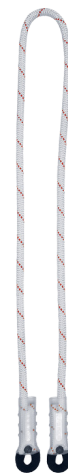
*Notes: Adjust the equipment to meet requirement.

Vertical-Rappelling

High Building window cleaning, Color Planner or Rescue



HNSR1003
Full body harness
Page 127



HNSR2002
Lanyard 150 cm.
Page 131



HNSR2006 [x2]
Rope with sewn loop
Page 131



HNSR3005 [x3]
Carabiners
Page 129



HNSR3025
Sir Descender
Page 136



HNSR3009
Locker
Page 136



HNSR3010
Certified sling for the locker
Page 130

Option: Accessories



HNSR3001
Work Positioning Seat
Page 137



HNSR3008
Descender with double Stop replace (HNSR3025) Sir Descender
Page 136



HNSR3005
Carabiners
Page 129

*Notes: Adjust the equipment to meet requirement.

Practices and Fall Protective Equipment Selection Samples

Military and rescue units



STRIKE
Tactic harness



PLASMA WORK
Work helmet



HNSR3013
Hand ascender
Page 136



HNSR3009
Locker
Page 136



HNSR3010
Certified sling
for the locker
Page 130



ROPE
Protector



OZONE srew
Light alloy oval
carabiner



RESCUE FIGURE EIGHT
Special figure
eight for rescue



EYE SLING
Sewn sling



STATIC 10,5
Static rope

