

**NORTH**

# *Fall Protection*

[www.northsafety.com](http://www.northsafety.com)



# FALL PRO

## Introduction

North fall protection products are designed with the user in mind. Our goal is to provide high quality easy-to-use fall protection so that your employees are encouraged to wear the products we manufacture for their protection. Everything from easy to read, comprehensive instructions to products that are continuously tested during the manufacturing process are made with safety, comfort and user in mind. Our range of products covers the complete scope of fall protection. North is dedicated to increasing compliance and worker safety in the fall protection area through quality enhancement or manufacturing innovation and the overall promotion of safety in the workplace.



## NORTH INTERNATIONAL

North Safety Products is the most diversified manufacturer of safety and (PPE) Personal Protective Equipment in the world with thirteen complete product lines, manufactured in ISO 9001 certified plants around the world. North works closely with its distributors and end users alike through innovative product design, quality manufacturing, solid marketing, training and support to our customers. We only sell through distribution. Our goal is to enhance worker safety, improve productivity, and create confidence in the workplace.

## NORTH SAFETY PRODUCTS EUROPE

The headquarters of North Safety Products Europe as well as the European Distribution Center are located in the Netherlands. On the industrial area Arnestein I in Middelburg, the Netherlands North has built complete new premises. The total surface built is 12.500 square metres. The offices, warehouses and production facilities are all located in this new building. The warehouse is fitted in four halls of 1000 square metres each. Besides that 2.500 square metres are dedicated for production- and assembling activities. Furthermore North has sales offices in the United Kingdom, Germany, Sweden and France. The complete addresses can be find on the backpage of this catalogue.



# TECTION

## Research and Development



Research and development using computer aided design is an ongoing process integrating our expertise in engineering, ergonomics and manufacturing. New models are developed, manufactured and tested in our laboratories, as well as being consumer tested for fit, style and comfort.

## Training

Training is an important part for selling and using fall protection. As a world-class manufacturer of PPE, North offers therefore a wide diversity of comprehensive training programs that can be done in our training centre in Holland, or on site.



## Manufacturing



North uses modern, computer controlled machines in the manufacture of its fall protection products, to meet exacting standards and ensure consistent quality and performance.

## Quality and Standards Testing

North manufactures and sells fall protection products throughout the world. In order to meet EN in Europe, ANSI in USA, CSA in Canada and AS in Australia, both in house and independent testing ensures certified products meet these standards.

## Quality and Standards Compliance

All fall protection products are checked at every step of production to ensure consistent quality. All components must be produced and assembled to the design standard ensuring the wearer receives the fit, style and most importantly the protection expected. This is paramount to North.



## Marketing & sales

Most sales support tools like: catalogues, data sheets, declarations of conformity and much more you can find on our website [www.northsafety.com](http://www.northsafety.com). Catalogues like the Top Safety Collection brochure are available indicating the most important products from our 13 product lines, as well as individual catalogues for each product group. We can also offer you the Top Safety Collection brochure also with your personal front and back page. Three times a year we publish our North news, with the latest update about products, services and exhibitions. Most important however is our sales team that is on the road every day to meet you personally, as this is the only way in many cases to solve problems and provide solutions.

# GENERAL STANDARDS AND APPROVALS FOR

## FALL PROTECTION PRODUCTS

The safety industry is in constant flux looking for the best possible solutions to safety issues, hazards and product performance. The goal is simple — to get you home each and every night after work. Fall protection is no different. North continues to look for easy-to-use fall protection solutions so that you can use your equipment with confidence. Product standards and regulations play a big part in guaranteeing that North's product line is up to the challenge. They ensure that our products meet the performance requirements set by the industry or in legislation. They also help you in the selection of proper equipment.

Standard	Description
EN341	Personal protective equipment against falls from a height – descender devices
EN353-1	Personal protective equipment against fall from a height – guided type fall arresters including a rigid anchor line
EN353-2	Personal protective equipment against falls from a height – guided type fall arresters including a flexible anchor line
EN354	Personal protective equipment against falls from a height – lanyards
EN355	Personal protective equipment against falls from a height – energy absorbers
EN358	Personal protective equipment for work positioning and prevention of falls from a height – Belts for work positioning and restraint and work positioning lanyards
EN360	Personal protective equipment against falls from a height – retractable type fall arresters
EN361	Personal protective equipment against falls from a height – full body harnesses
EN362	Personal protective equipment against falls from a height – connectors
EN363	Personal protective equipment against falls from a height – fall arrest systems
EN364	Personal protective equipment against falls from a height – test methods
EN365	Personal protective equipment and other equipment for protection against falls from a height – general requirements for instructions for use, maintenance, periodical examination, repair, marking and packaging
EN517	Prefabricated accessories for roofing-roof safety hooks
EN565	Safety requirements and test method
EN795	Protection against falls from a height – Anchor devices requirements and testing
EN813	Personal protective equipment for prevention of falls from a height – sit harnesses
EN1497	Rescue equipment, rescue harnesses
EN1498	Rescue equipment, rescue loops
EN1868	Personal protective equipment against falls from a height – list of equivalent terms

## Certification



The EN-365 standard states that the manufacturer must stress the importance of a regular inspection of the reliable operation of the product. Furthermore a regular maintenance interval must be recommended, depending on the type, frequency of use and environmental factors, but which must be carried out at least once a year. This must be carried out by a competent person in accordance with the procedures drawn up by the manufacturer.

The EC directive 89/686 lays down requirements with regard to the product safety of Personal Protective Equipment. This directive is exhaustive, so the member states do not have to draw up any additional requirements with regard to design and production.

Fall protection is a category III product, as a result of which in addition to the usual requirements for the design, such as being tested by a European approved lab, CE marking, instructions for use in the language of the country of sale, etc., the production must also be controlled. North's ISO 9001 quality assurance system takes care of this.

The Personal Protective Equipment directive defines minimum requirements. These requirements are technically further elaborated in European Standards (EN standards). The use of these standards is the most usual way to comply with the directive, as this achieves a presumption of compliance. As a result one may in principle assume that the product is manufactured in accordance with the directive.

# ANATOMY OF A HARNESS



## 1. FALL ARREST ATTACHMENT POINT

D-ring (large or small) or loop between shoulder blades for fall arrest.

## 2. D-RING EXTENDER

45 cm D-ring or loop extension attached to the back D-ring of the harness. Makes access to D-ring for lanyard attachment easier allowing user to check for 100% snap hook gate closure.

## 3. CHEST STRAP

Webbing which connects the two shoulder straps together. Connected with a buckle to keep user in harness.

## 4. LEG CONNECTORS

Available in both pass-through. Allows the user choice in leg closure suited to the application or worker preference.

## 5. COMFORT PAD

A soft but firm lumbar support providing support to lower back in work positioning applications.

## 6. BODY BELT

Integrated body belt. An excellent support for work positioning and for tool storage.

## 7. SUB-PELVIC STRAP

Webbing strap located just below the buttocks provides comfort in positioning applications and help distributes forces in event of a fall.

## 8. WORK POSITIONING D-RINGS

D-rings located at the hip or just above the hip. Side D-rings are used for work positioning or restraint applications.

## 9. UP ARROW INDICATOR

Arrows indicating the fall arrest attachment point of the harness. Up arrows indicate the proper orientation of the harness, ensuring quick and easy donning.

## 10. STERNAL LOOPS

Reinforced web loops for use in rescue, ladder climbing and descent applications.

# HARNESSES



Adjustable full body harnesses provide the ultimate in comfort and safety. North's lightweight harnesses have a proven track record for comfort and durability. Tough nylon webbing and forged hardware means long-term wear and safety. North designed this lightweight harness complete with a sub-pelvic strap to help evenly distribute the forces generated in a fall.



### MODEL FP699/1D

A basic economy harness for fall arrest only, with a sliding dorsal D-ring.

Part#	Classification	D-Rings	Leg Connectors
FP699/1D	A	B	fold through



### MODEL FP700/1D

Ergonomic lightweight basic harness for fall arrest only, with a sliding dorsal D-ring. The flat bar buckles are easy to use and fail safe.

Part#	Classification	D-Rings	Leg Connectors
FP700/1D	A	B	pass through



### MODEL PPFV81F/1EDBA

Vest style harness. Breathable contoured backpad. Quick release connectors. Very easy to put on. Provided with an extended D-ring shoulder strap arrangement for easy dorsal fittings. Durable polyester webbing.

Type	Classification	D-Rings	Leg connectors
PPFV81F/1EDBA	A	B, X	quick release



### MODEL FP701/3D & ED

A lightweight harness for fall arrest, control descent and rescue. With sliding dorsal D-ring and sternal loops. The flat bar buckles are easy to use and fail safe.

Part#	Classification	D-Rings	Leg Connectors
FP701/3D	A, D, R	B, L	pass through

This E-model is equipped with an extended D-ring shoulder strap arrangement for easy dorsal fittings.

Part#	Classification	D-Rings	Leg Connectors
FP701/3ED	A, D, R	B, L, X	pass through

Classification Legend					
A=Fall arrest	P=Work Positioning	D=Descent	L=Ladder climbing	R=Rescue	
D-Ring Legend					
F=Front	B=Sliding back	S=Side or hip	E=Shoulder	L=Sternal loops or D-rings	X=D-Ring extender



## MODEL FP702/3D

The general purpose harness. Fall arrest, descent, vertical safety and wire/rail systems. With sliding dorsal D-ring and 2 sternal D-rings. The flat bar buckles are easy to use and fail safe. The shoulder straps and the height of the chest strap are adjustable.

Part#	Classification	D-Rings	Leg Connectors
FP702/3D	A, D, L, R	B, L	pass through



## MODEL FP709/5D

Lightweight general purpose economy harness with dorsal D ring, sternal loops and a padded belt with lateral D-rings for workpositioning.

Part#	Classification	D-Rings	Leg Connectors
FP709/5D	A, D, R, P	B, L, S	fold through



## MODEL FP745/5D & 5ED

Heavy duty general purpose harness for all the linesman s activities. Fall arrest, control descent, rescue and work positioning with perfect lumbar support. With dorsal D ring, sternal loops and padded belt with lateral D-rings.

Part#	Classification	D-Rings	Leg Connectors
FP745/5D	A, D, R, P	B, L, S	pass through

The E-model is equipped with an extended D-ring shoulder strap arrangement for easy dorsal fittings.

Part#	Classification	D-Rings	Leg Connectors
FP745/5ED	A, D, R, P	B, L, S, X	pass through



## FP414/2D

Work positioning body belt 45 mm nylon, with moulded lumbar support. Two lateral flat D-rings. Same belt as used in FP745/5D harness.

### Classification Legend

A=Fall arrest      P=Work Positioning      D=Descent      L=Ladder climbing      R=Rescue

### D-Ring Legend

F=Front      B=Sliding back      S=Side or hip      E=Shoulder      L=Sternal loops or      D-rings X=D-Ring extender



## HARNESSE SELECTION GUIDE

There are many harness types to choose from in the North offering. To simplify selection, we have grouped our most popular offering in a guide based on the harness applications. Included is

an application guide to ensure you optimise your selection. Check on appropriate page for additional information and selection.

Type	Webbing material	Back D-ring	Side D-rings	D-ring extender	Front D-rings	Leg connectors	Belt	Applications
<b>Fall arrest</b>								
FP699/1D	Nylon	✓	X	X	X	Fold through	X	General purpose
FP700/1D	Nylon	✓	X	X	X	Pass through	X	General purpose, warehouse picking, construction
FPFV81F-1EDBA	Polyester	✓	X	X	X	Quick release	X	General purpose, inspection, maintenance
<b>Fall arrest, descent, rescue</b>								
FP701/3D	Nylon	✓	X	X	✓ (soft loops)	Pass through	X	Multi purpose, confined space
FP701/3ED	Nylon	✓	X	✓	✓ (soft loops)	Pass through	X	Multi purpose, confined space
<b>Fall arrest, descent, ladder climbing</b>								
FP702/3D	Nylon	✓	X	X	✓	Pass through	X	Multi purpose, confined space, ladder climbing, good fit for female anatomy
<b>Fall arrest, descent, rescue, work positioning</b>								
FP709/5D	Nylon	✓	✓	X	✓ (soft loops)	Fold through	✓	Multi purpose, general contracting
FP745/5D	Nylon	✓	✓	X	✓	Pass through	✓	Scaffolding
FP745/5ED	Nylon	✓	✓	✓	✓	Pass through	✓	Towerwork

X=No ✓=Yes

### STARTKIT



**CONTENTS:**

- ¥ Harness FP700/1D
- ¥ FP0305PE retractable lifeline
- ¥ FP99 stainless steel grip

Kit packed in a blue plastic carrying case.

### ECONOMY KIT



**CONTENTS:**

- ¥ Harness FP700/1D
- ¥ FP551 automatic rope grab
- ¥ 20 metres braided polyamide rope

Kit packed in a sportsbag.

### BASIC KIT



**CONTENTS:**

- ¥ Harness FP702/3D
- ¥ FP551 automatic rope grab
- ¥ 20 metres braided polyamide rope
- ¥ 2 metres lanyard with shock absorber, karabiner and aluminium scaffold hook

Kit packed in a sportsbag.

### CUSTOM MADE FALL PROTECTION KITS



**CONTENTS:**

- ¥ Harness FP702/3D
- ¥ 15 metres retractable lifeline, 5 mm galvanized steel cable
- ¥ One pair of North Worknit HD gloves
- ¥ Edge spectacles

Kit packed in a blue plastic carrying case.

CUSTOM MADE KITS AVAILABLE TO YOUR SPECIFICATIONS, PLEASE CONTACT YOUR NORTH SALES REPRESENTATIVE FOR MORE INFORMATION.

# LANYARDS AND ROPE GRABS





## WORK POSITIONING LANYARDS

### < FP 211 C1

1 metre with standard karabiner FP81 and snaphook FP3500.



### FP 211 CA >

1 metre with standard karabiner FP81 and FP90/3 aluminium scaffold hook.



### < FP 0541

FP0541 Adjustable positioning lanyard with standard karabiner FP81 and snaphook FP3500. Length 2,5 metres.

## ROPE LANYARD 2 METRES WITH SHOCK ABSORBER



### < FP 243 C1

2 metres with shock absorber with standard karabiner FP81 and snaphook FP3500.



### Y-LANYARD >

Identical version as the FP243CA, only with double rope to enable the user to be always secured.



### < FP 243 CA

2 metres with shock absorber with standard karabiner FP81 and aluminium scaffold hook FP90/3.



### < DECELERATOR FPFV2882J/6

North's decelerator is a lightweight energy absorbing lanyard designed to reduce the impact load experienced during a fall. The decelerator is built with safety and quality in mind with features that can help you work more efficiently and cost effectively. Nylon decelerator energy absorbing lanyard with double locking snap hook.

## ROPE GRABS



### < FP 551

Automatic rope grab for 14 mm rope with standard karabiner FP81.



### FP 3571A >

Manual Rope grab for 14 mm rope with 0.7 metres lanyard and standard karabiner FP81.

## SAFETY ROPES



14 mm braided polyamide with loop and FP81 karabiner. Standard lengths of 10, 20, 30 or 40 metres. For use with rope grabs FP551 and FP3571A.

# CONNECTORS, KARABINERS, HOOKS

AND ACCESSORIES



**FP81**



**FP3500**



**FP88**



**SCAFFOLD HOOK**



**FP90/3**



**FP99**



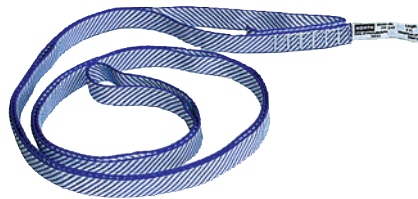
**FP93M**



**FP95M**



**FP06**



**FP242/2**



**FP03/3**



**TAG LINE**



**FP08FT**



**STAINLESS STEEL PULLEY**



**TRIPOD BAG**



**BAGS & BOXES**

The most overlooked piece of equipment is often at the end of the lanyard or other piece of fall protection equipment. Connectors or connecting links do a wide assortment of jobs because they are available in a wide variety of shapes and sizes. All provide safe and secure closure and are designed for easy operation even when you have gloves on. All items listed are rated for 22kN unless otherwise specified.

## SAFETY HOOKS

Type	Construction	Gate opening	Lock type
FP 81	Steel wire	17 mm	screwgate
FP3500	Die-cut steel	20 mm	double action
FP88	Steel wire	25 mm	triple lock
Block hook	Steel wire	60 mm	triple lock
FP90/3	Forged aluminium	60 mm	double action

## STAINLESS STEEL GRIPS

Type	Diameter
FP99/75	75 mm
FP99/100	100 mm
FP99/140	140 mm

## FIRST MAN UP ACCESSORIES

A great alternative to provide overhead anchorage is to take the equipment up to the anchor. It's simple when you use a shepherd's hook attached to an extension pole. The hook is lifted to the anchor with the pole and secured. A rope grab and lifeline or a light weight fall arrest block provide the connection to the full body harness.

Type	Construction	Length	Use with
FP08FT/16	Fiberglass telescopic pole	5 metres long	FP93M, FP95M

Type	Construction	Gate opening
FP93M	Aluminium shepherd anchorage hook	95 mm
FP95M	Aluminium shepherd anchorage hook	190 mm

## GLIDING BEAM ANCHOR

<p><b>FP06</b>                      Gliding beam anchor that mounts anywhere on a suitable metal beam                      Can be dismantled in seconds and moved to a new location or job site                      Stainless steel construction with easy-to-use D-ring connector                      Fits widths of 100 mm to 300 mm</p>
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## FLEXIBLE ANCHORAGE CONNECTORS

<p><b>FP242/2 Spectra sling</b>                      Spectra web loop sling- Tiny 'n Tough (T'nT) sling is made of revolutionary Spectra webbing making it lightweight, small size with exceptional strength                      18 mm web can be used without additional protective materials in concrete forming. 0.6 metres in length</p> <p><b>FP03/3 Pass through anchor sling</b>                      Heavy duty nylon 50 mm web with a small D-ring which passes through the large                      D-ring to form loop around an anchor. 1 metres in length</p>
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## TAG LINE

50 metres of 3 mm braided rope on a reel with a small loaded bag. To transfer a safety line for example over the top of the roof.

## STAINLESS STEEL PULLEY

Stainless pulley for maximum 16 mm rope.

## BAGS AND BOXES

For the storage and presentation of the fall protection products we have a range of bags & boxes.

# TRIPODS & DAVIT SYSTEM





## FP6600 TRIPODS

The North FP6600 tripod is engineered with the user in mind. The aluminium legs are made of square tubing for added lightness and required strength. The cast alloy head has an integrated pulley wheel allowing a cable from a device to pass through the center of the head. This eliminates costly pulleys and allows one of the 2 eyebolts in the head to be used as a tie-off point for the topside worker. Another advantage of the FP6600 tripod is that retractable devices are located on the outside of the working area. This allows a narrower profile and that means the tripod can fit into tighter spaces. North's aluminium construction sacrifices nothing to the safety and security of its users. All are rated for one person at 150 kgs.

Type	Stored Length	Extended length	Weight	Capacity personnel	Capacity material
FFP6600/7	1.4 metres	2.1 metres	13kgs	150kgs	250kgs
FP6600/10	1.8 metres	3 metres	15kgs	150kgs	250kgs

## DAVIT SYSTEM

The Davit systems are an ideal anchorage connector for areas where temporary anchorages are required. They assemble and disassemble with the ability to transport from site to site quickly. The Davit system is built tough to provide a safe secure anchorage for confined space entry, exit, rescue and/or suspension work.

### FEATURES/BENEFITS

- ¥ Components are made of strong aluminium alloy (except for the bases)
- ¥ Rated for one person up to 150 kgs
- ¥ Boom reach up to 122 cm

### APPLICATIONS

- ¥ Confined space retrieval
- ¥ Municipality works departments
- ¥ Automotive plants
- ¥ Water treatment plants
- ¥ Food processing
- ¥ Chemical manufacturing



Type	Description	Weight	Capacity personnel	Capacity material
FP6670/24	Davit mast	16kgs	150kgs	250kgs
FP6680/24	Davit boom	5kgs	150kgs	250kgs
FP6663/00	Portable davit base	30kgs	150kgs	250kgs
FP6660/00	Steel floor base			
FP6662/00	Steel wall base			
FP6660/01	Davit concrete sleeve base core			
FP6660/02	Davit concrete sleeve with flange			
FP6669/00	Davit base cap			
FP6669/01	Davit base flush mount tube cap			



## ACCESSORIES FOR TRIPODS

Type	Brackets
FP6610/15	Mounting bracket for FP2/415xR fall arrest block with rescue winch or FP2/715xR permanent winch
FP6610/33	Mounting bracket for FP3/433xR fall arrest block with rescue winch or FP2/733xR permanent winch

# SELF- RETRACTING LIFELINES





Self retracting lifelines are one of the most versatile products for fall arrest situations. Whether made with webbing, like the retractable web lanyard or synthetic rope the lanyard retracts into the housing to keep it out of the way. They improve comfort, reduce weight and increase user mobility at or on the way to the job site. They are available in a variety of models and lengths to suit every job-site application.

## AUTOMATIC WEBBING LIFE LINE FP0305PE

This small handy block is the first in the range of fall arrest blocks. Because it brakes hard an external webbing energy absorber is fitted. The webbing length is 2 metres and this device is supplied with two standard karabiners FP81.



## DURALITE RANGE



**DURALITE II**

Until now fall arrest blocks were either relatively heavy and serviceable, or light weight and disposable. The North's Duralite range combines the best of both. A composite housing and Dyneema web lanyard result in a low weight. The high tensile, non-corrosive metal parts result in a fully serviceable unit with a long lifetime. North's Duralite range has a built-in shock absorber. The dyneema webbing is cut resistant. The Duralite range can be used for various applications like ladder climbing, industrial maintenance, warehousing, etc



**DURALITE III**

### FEATURES / BENEFITS

- ¥ 3,6 metres working length for the Duralite III
- ¥ 6 metres working length for the Duralite II
- ¥ cut resistant
- ¥ light weight

### SWIVEL

- ¥ prevents webbing from twisting
- ¥ auto inline positioning

### WEIGHT

- 1100 gram for the Duralite III
- 2525 gram for the Duralite II

### STANDARDS

- EN 360 / CSA Z259.2.2 98 / ANSI Z359.1-92

### MATERIALS

- ¥ Housing - Glass filled Nylon
- ¥ Bolts - Stainless steel
- ¥ Lanyard - Polyester + Dyneema
- ¥ Hook - Aluminium + Stainless steel
- ¥ Hook - Zinc plated steel
- ¥ Internal parts - Stainless steel + Aluminium + glass filled Nylon

### TECHNICAL PERFORMANCE

- ¥ Maximum arrest-force: 4 KN (for 0 cm free fall)
- ¥ Maximum arrest-force: 6 KN (for 60 cm free fall)
- ¥ Maximum working load: 150 Kg



## SELF-RETRACTING LIFELINES



**FP1/305**



**FP2/315**



**FP3/333**



**FP3/343**

### QUALITY PRODUCTS

North's self-retracting lifelines (SRL) continue to provide versatile performance for fall arrest. Robust design, a variety of lifeline lengths and corrosion-resistant alloy housing means your SRL investment will go a long way. Units can be equipped with stainless steel or galvanized steel cable. Note: stainless steel cable is ideal for the food industry and environments involving chemicals. All are equipped with a load indicator that triggers to show the unit has been subjected to a severe force.

The range that North produces is of a modular design. The blocks are available in 3 (maximum) cable lengths: 5 metres, 15 metres, 33 metres (43 metres in special design). The materials used are characterised by a high corrosion resistance, a high strength and a relatively low weight. The blocks are constructed in a way that they can be disassembled and hence maintained. These features all ensure a wide usability and a long lifetime.

Small housing		Length	Weight
FP1/305W	25 mm nylon webbing with swivel snap hook	5 metres	3.7kgs
FP1/305G	5 mm galvanized cable with swivel snap hook	5 metres	4.2kgs
FP1/305S	5 mm stainless cable with swivel snap hook	5 metres	4.3kgs
Regular housing			
FP2/310G	5 mm galvanized cable with swivel snap hook	10 metres	7.2kgs
FP2/310S	5 mm stainless cable with swivel snap hook	10 metres	7.3kgs
FP2/315G	5 mm galvanized cable with swivel snap hook	15 metres	7.7kgs
FP2/315S	5 mm stainless cable with swivel snap hook	15 metres	8.2kgs
Large housing			
FP3/320G	5 mm galvanized cable with swivel snap hook	20 metres	13.2kgs
FP3/320S	5 mm stainless cable with swivel snap hook	20 metres	13.4kgs
FP3/325G	5 mm galvanized cable with swivel snap hook	25 metres	13.7kgs
FP3/325S	5 mm stainless cable with swivel snap hook	25 metres	14.0kgs
FP3/333G	5 mm galvanized cable with swivel snap hook	33 metres	14.5kgs
FP3/333S	5 mm stainless cable with swivel snap hook	33 metres	15.0kgs
Large housing with tandem spring:			
FP3/343G	5 mm galvanized cable with swivel snap hook	43 metres	19.0kgs
FP3/343S	5 mm stainless cable with swivel snap hook	43 metres	20.1kgs

## SELF RETRACTING LIFELINES WITH RESCUE WINCH



**FP2/415R**

**FP3/433R**

### 3-WAY SELF RETRACTING LIFELINES

The integrated retrieval winch can raise or lower a person in an emergency situation. With a simple flick of the wrist, this 3-way SRL can be switched from fall arrest mode to retrieval mode to speed rescue of an injured worker.

Note: maximum working load of SRL s is 150 kg with clothing and tools inclusive.

### NORTH ADVANTAGES

1. Easy to activate retrieval mode-one step activates winch process to save precious time
2. 4,5:1 gear ratio-manageable 8 metres per minute retrieval speed

Regular housing	Description	Length	Weight
FP2/415GR	5 mm galvanized cable with swivel snap hook	15 metres	9.5kgs
FP2/415SR	5 mm stainless cable with swivel snap hook	15 metres	10.0kgs
Large housing			
FP3/425GR	5 mm galvanized cable with swivel snap hook	25 metres	16.3kgs
FP3/425SR	5 mm stainless cable with swivel snap hook	25 metres	16.5kgs
FP3/433GR	5 mm galvanized cable with swivel snap hook	33 metres	17.0kgs
FP3/433SR	5 mm stainless cable with swivel snap hook	33 metres	17.0kgs

## PERMANENT WINCHES



**FP2/715R**



**FP3/733R**



**FP4/700R**

The same robust durability and strength of North s SRL s with rescue winch is found in the Personnel Winch. It can handle a variety of tasks including confined space entry/egress, rescue work and material handling.

Type	Description	Length	Weight
FP2/715GR	5 mm galvanized cable with swivel snap hook	15 metres	9.5kgs
FP2/715SR	5 mm stainless cable with swivel snap hook	15 metres	9.5kgs
FP3/733GR	5 mm galvanized cable with swivel snap hook	33 metres	17.0kgs
FP3/733SR	5 mm stainless cable with swivel snap hook	33 metres	17.0kgs

Type	Description	Length	Weight
FP4/700R	continuous rope winch with bracket 9 mm kernmantle rope with karabiners	up to 200 metres	6.4kgs

# CONTROLLED DESCENT AND ROPE SYSTEMS



An emergency descent for evacuation or rescue purposes requires a device you can depend on. You rely on it to work smoothly, safely and without the need of specialized skills to get you to a safe place out of harm's way. North has two options to choose from providing a safe, controlled descent speed for use of single or multiple descents. All operate at approximately 2 metres per second and are suitable for use over land and water. All are certified for use as automatic descenders.

## AUTOMATIC EVACUATION ROPE DESCENDER



- ¥ Continuous rope system provides multiple person evacuation capability.
- ¥ One connector travels up to the next user while the current user descends.
- ¥ Can be stored on site — attached to an anchorage in standby or ready to use format.
- ¥ Must be used with a descent equipped full body harness.
- ¥ 9 mm static kernmantle rope with karabiners.

**FP4/5100W**

**FP4/5100DD**

**FP4/5100DR**

**FP4/5100DDH**

Type	Description
FP4/5100W	Automatic rope descender with single descent break
FP4/5100DD	Automatic rope descender with double descent break, for multiple person evacuation
FP4/5100DR	Automatic rope descender with descent break and rescue winch
FP4/5100DDH	Automatic rope descender with double descent break and hand break

## RETRACTABLE AUTOMATIC DESCENDER



**FP2/515D**

**FP3/533D**

- ¥ Self-retracting lifeline with descent brake for use in case rescue is not possible (after an arrested fall). Also to be used for single person evacuation. This type of descender has a SRL type back-up brake.
- ¥ Can be stored on site — attached to anchorage in standby ready to use format.
- ¥ Must be used with a descent equipped full body harness.

Type	Description	Length
FP2/515GD	5 mm galvanized cable	15 metres
FP2/515SD	5 mm stainless cable	15 metres
FP3/533GD	5 mm galvanized cable	33 metres
FP3/533SD	5 mm stainless cable	33 metres

An unique multi-purpose rope system that provides functions including rescue and self-rescue, ascending and descending and positioning at height. Its simple operation allows one person to control the rate of ascent or descent with the Ascender Handle. For positioning, the unit can be locked-off with the Ascender Handle providing a brake on the line. Reliable, simple and a 3:1 hauling ratio provide a system with

**WORK POSITIONING ROPE SYSTEM**



Type	Lifeline Type	Length
FP5/6400K	Work positioning system with karabiner, ascender handle	up to 50 metres high
FP5/6400B	Work positioning system with spreader bar for bosun's chair, ascender handle	up to 50 metres high
FP8020	Bosun's chair	



**FP8020**

**THE NORTH ADVANTAGES**

- ¥ Can be activated by one person for positioning work
- ¥ Ideal for work where soft bases are a problem like grain elevators, over water or in aggregate silos
- ¥ Can be used with a harness, seat or stretcher
- ¥ Excellent for work where movement up and down a structure is required like ship building, window washing, aerial lifts and cable car rescue
- ¥ Works well for confined space applications and bridge inspection

**LOAD ARRESTOR**

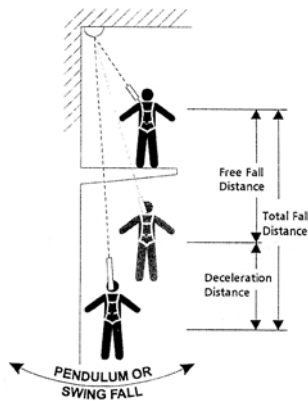


Type	Description
LA1	loads up to 500kgs maximum cable length of 9 metres 6.5 mm galvanized cable

# REGULATIONS

## FALL ARREST

A fall arrest system is required when there is a risk of a worker falling from an elevated position above the regulated height at which fall protection is required. A personal fall arrest system is a passive system which comes into service only when a fall occurs. After arresting a fall, equipment must be removed from service and inspected by a competent person. Any component which does not pass inspection must be replaced.



### HAZARD IDENTIFICATION

Before selecting fall protection system components, an assessment of the workplace hazards and conditions should be made. This will help to determine what options should be selected to guard against any secondary hazards which may be present in the workplace.

These include but are not limited to: Electrical shocks, excess heat or hot objects, combustible liquids and gases, sparks, flames, operating machinery, chemicals-alkaline an

acidic, corrosive atmosphere, excess cold and ice, abrasive surfaces and sharp edges, high winds, unstable surfaces or moving materials, liquids and other submersible substances, potential for extended rescue or retrieval time.

An assessment of these factors will enable you to choose the right options for your fall protection equipment. Some of these factors may be controlled through proper lockout- tag out procedures. Also, an analysis of the workplace geometry and the falling window will enable you to select the appropriate equipment. This analysis will determine the proximity of the anchorage to the work location, size of the work location, access requirements, maximum free fall distance, possible pendulum or swing fall and obstructions in the falling window. When the analysis is completed, it is possible to determine the type of fall protection system required and which style of subsystem components are the most practical and safest to use.

### FALL PREVENTION SYSTEMS

A fall prevention system will prevent a person from falling at heights. It will restrict the worker's movements in order to prevent reaching a location where a fall may occur or it will stabilize and support a worker at an elevated work location and allow free use of both hands.

### WORK POSITIONING

A work positioning system is required if a worker must be held in place while his hands are free to work. A positioning system is an active system and is in use whenever the worker leans back into it. It is not a replacement for a fall arrest system. If there is a risk of falling from above the fall protection regulated height, a complementary fall arrest system must be used.

### PERSONAL SUSPENSION, LOWER/RAISE

A personal suspension and/or lower/raise system is required when it is necessary to lower, raise or suspend and hold a worker from above. A suspension system is an active system used under tension. An independent fall protection system must always be used along with a suspension system.

### PERSONAL RETRIEVAL

A personal retrieval system is required where a person may need to be rescued from a work environment. A retrieval system is a passive system which only becomes active when the worker needs to be removed from a work location. If fall arrest protection is also required during the work, a separate or built-in fall arrest system must also be used.

### PERSONAL FALL PROTECTION SYSTEMS

Consist of a minimum of five basic components:

- Body support or body holding device
- Connecting link
- Anchorage connector
- Anchorage
- Rescue system

### 1. BODY SUPPORT OR BODY HOLDING DEVICE

#### 1.1 DEFINITION:

A body support typically comes in two forms: the full body harness and the waist belt. The full body harness is the only acceptable form of body support available for fall arrest.

#### 1.2 FULL BODY HARNESS

The full body harness is designed to distribute the arrest forces of a fall mainly to the sub pelvic area. The design of a full body harness is such that, when properly attached and adjusted, the worker remains upright after a fall, even if unconscious, until a rescue can be made.

#### 1.3 BODY BELT

A body belt with a single D ring is commonly used for travel restriction while a belt with two lateral D's is used for work positioning. Fall arrest systems must never be connected to a belt.

### 2. CONNECTING LINK

#### 2.1 DEFINITION:

A connecting link is an assembly of components, including the necessary connectors, comprised of all components or subsystems or both, between the anchorage or anchorage connector and the attachments on the body support. Some of the more common connecting links are fixed length and adjustable lanyards with and without shock absorbers, retractable devices, vertical lifelines and rope grabs, rails with sliders, horizontal lifelines and work positioning assemblies. These may be used individually or in combination.

### 3. ANCHORAGE CONNECTORS

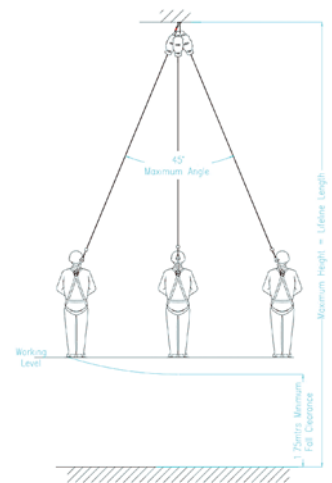
#### 3.1 DEFINITION:

An anchorage connector is a component intended to couple the fall protection and/or retrieval subsystem to an anchorage point. This can either be a permanent device such as an approved or rated eye bolt or a temporary/movable device such as a hook, sling, tripod etc. All anchorage connectors must be able to withstand a minimum of 22kN for each attached worker for fall arrest unless it is part of an engineered certified system or at least 2x the maximum load for non fall arrest uses. The anchorage connector must be compatible with the type of anchorage available and the operational requirements of the system used.

### 4. ANCHORAGE

#### 4.1 DEFINITION:

An anchorage is a fixed structural member or ground to which a fall arrest and/or retrieval system is attached. The anchorage for vertical systems must be able to withstand a minimum impact force of 22 kN per attached worker or at least 2x the maximum arrest force (MAF) for fall arrest or 2x the maximum load for other anchor uses. Anchorages for horizontal lifelines must withstand forces much in excess of 22kN depending on type, length, number of attached workers, etc.



### 5. RESCUE SYSTEM

In every situation where fall arrest systems are used, an appropriate rescue plan must exist in order that a worker can be retrieved in the event of a fall.

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