



***hilsen***

Product Catalogue 2020

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### Working at height

Working at height refers to frequently high-risk work that is undertaken in any place where, if the necessary safety precautions were not in place, a person could accidentally fall and suffer a personal injury.

### A hierarchy of safety measures

A risk assessment would be undertaken to determine if the work can be avoided being done at height. However, if there is no other alternative and working at height needs to be carried out, a hierarchy of measures should then be followed to prevent falls from occurring. Some of these measures may include installation of a permanent or temporary handrail, provision of a properly constructed working platform complete with guardrails. If none of these are practicable or where the work is of short duration, suspension equipment could be used, or collective fall arrest equipment could be provided (for example safety nets) or individual fall arrest systems could be provided (for example safety harnesses).

### Fall arrest

Fall arrest refers to the act of stopping the downward free fall of a person who has accidentally fallen (while working at height) with the aid of some supporting equipment. A fall arrest system should offer significant freedom of movement for workers who are carrying out their assigned duties while also protecting them from serious falls when they are working at height.

A fall arrest system is one form of fall protection system that prevents a fall from causing serious harm or death. A safety harness and fall arrest lanyard, a retractable fall arrestor/lifeline or an installed vertical lifeline and mobile fall arrestor are all examples of fall arrest systems.

### Restraint

Work restraint (when working at height) refers to the act of removing the risk of a person ever accessing a position where they may fall. In other words restraint equipment physically limits the range of movement of the user of the equipment to completely eliminate the risk of a fall. An example of restraint equipment would be a belt or harness and a restraint lanyard.

### Work positioning

Work positioning refers in general to the use of equipment (when working at height) to place or secure the user in a particular position to enable them to work efficiently. Examples of work positioning could include use of a work positioning lanyard attached to a safety harness or even being suspended on a rope (using rope access equipment). Importantly, using a work positioning system does not remove the need for (or take the place of) a fall arrest system. The two systems are often used simultaneously.

### Rope access

Rope access (or industrial climbing) is a form of work positioning, which applies practical ropework for workers to access difficult-to-reach locations without the use of scaffolding, cradles or an aerial work platform. Rope access technicians descend, ascend, and traverse ropes for access and work while suspended by their harness. Sometimes a work seat (bosuns chair) may be used.

The support provided by the rope system is intended to eliminate the likelihood of a fall altogether, but a back-up fall arrest system is used in to cover the unlikely failure of the rope system as the primary means of support.

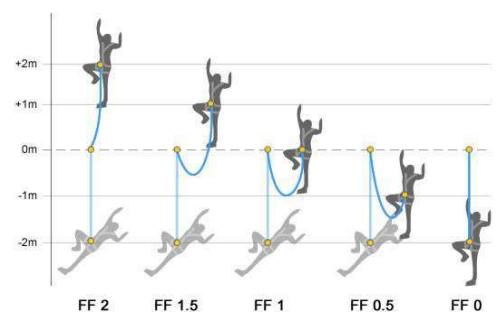
### Fall factors

The 'fall factor' is a technical rope access term generally describing the severity of a fall.

The diagram here specifically applies to the use of a harness and fall arrest lanyard (as a fall arrest system).

The fall factor is dependent on the height of the initial anchor point relative to the position of the person who falls.

A fall with fall factor of 0 (using the highest possible attachment point) is inherently safer than a fall with fall factor of 2 (the lowest possible attachment point).



## 10B/Basic Harness (SN1)



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)
- Features** Easy to fit harness  
Lightweight
- Lanyard set** Single leg lanyard and snap hook  
Energy absorbing element  
1.75m long (including energy absorber)
- Adjustment** Leg straps (standard buckles)  
Chest strap (25mm dee rings)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step®* can be fitted (not supplied standard)  
Can be supplied with a 45mm chest strap



SANS 50361:2003 Full body harnesses, SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards

## 10C/Basic Harness (SN2)



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)
- Features** Easy to fit harness  
Lightweight
- Lanyard set** Double leg lanyard with snap hooks  
Energy absorbing element  
1.75m long (including energy absorber)
- Adjustment** Leg straps (standard buckles)  
Chest strap (25mm dee rings)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step®* can be fitted (not supplied standard)  
Can be supplied with a 45mm chest strap



SANS 50361:2003 Full body harnesses, SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards

## 20B/Basic Harness (SC1)



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)
- Features** Easy to fit harness  
Lightweight
- Lanyard set** Single leg lanyard with scaffold hook  
Energy absorbing element  
1.75m long (including energy absorber)
- Adjustment** Leg straps (standard buckles)  
Chest strap (25mm dee rings)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step®* can be fitted (not supplied standard)  
Can be supplied with a 45mm chest strap



SANS 50361:2003 Full body harnesses, SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards

## 20C/Basic Harness (SC2)



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)
- Features** Easy to fit harness  
Lightweight
- Lanyard set** Double leg lanyard with scaffold hooks  
Energy absorbing element  
1.75m long (including energy absorber)
- Adjustment** Leg straps (standard buckles)  
Chest strap (25mm dee rings)
- Sizing** Small, medium, large, XL and 2XL
- Options** *HiLsen Harness Step*® can be fitted (not supplied standard)  
Can be supplied with a 45mm chest strap



SANS 50361:2003 Full body harnesses, SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards

## 30C/Belted Harness (SC2)



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)
- Features** Easy to fit harness  
Lightweight
- Lanyard set** Double leg lanyard with scaffold hooks  
Energy absorbing element  
1.75m long (including energy absorber)
- Adjustment** Leg straps (standard buckles)  
Chest strap (25mm dee rings)  
Waist belt (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *HiLsen Harness Step*® can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses, SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards

## 30C45/Belted Harness (SC2) with 45mm Chest Strap



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)
- Features** Easy to fit and lightweight
- Lanyard set** Double leg lanyard with scaffold hooks  
Energy absorbing element  
1.75m long (including energy absorber)
- Adjustment** Leg straps (standard buckles)  
Chest strap (standard buckles)  
Waist belt (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *HiLsen Harness Step*® can be fitted (not supplied standard)  
Can be supplied with a 45mm chest strap



SANS 50361:2003 Full body harnesses, SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards

## 8.37/Performance Harness



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)
- Features** Easy to fit  
Lightweight  
Padded dorsal attachment point
- Adjustment** Leg straps (standard buckles)  
Shoulder straps (standard buckles)  
Chest strap (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step®* can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses

## 8.37A/Performance Harness (Padded)



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)
- Features** Easy to fit  
Lightweight  
Padded dorsal attachment point  
Padded waist belt  
Padded leg straps
- Adjustment** Leg straps (standard buckles)  
Shoulder straps (standard buckles)  
Chest strap (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step®* can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses

## 8.37B/Performance Harness (Belay Loops)



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)  
Frontal belay loops (for partial fall arrest)
- Features** Easy to fit  
Lightweight  
Padded dorsal attachment point  
Padded leg straps
- Adjustment** Leg straps (standard buckles)  
Shoulder straps (standard buckles)  
Chest strap (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step®* can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses

### 8.37C/Performance Harness (2-point)



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)  
Frontal position on chest (for partial fall arrest)
- Features** Easy to fit  
Lightweight  
Padded dorsal attachment point  
Padded leg straps
- Adjustment** Leg straps (standard buckles)  
Shoulder straps (standard buckles)  
Chest strap (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step®* can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses

### 8.37D/Performance Harness (3-point)



- Application** Fall arrest  
Work positioning
- Attachment** Dorsal position (for fall arrest)  
On waist belt (for work positioning)
- Features** Padded belt for work positioning  
Padded dorsal attachment point  
Padded leg straps
- Adjustment** Leg straps and shoulder straps (standard buckles)  
Waist belt (standard buckles)  
Chest strap (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step®* can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning

### 8.37E/Performance Harness (4-point)



- Application** Fall arrest  
Work positioning
- Attachment** Dorsal position (for fall arrest)  
Frontal belay loops (for partial fall arrest)  
On waist belt (for work positioning)
- Features** Padded belt for work positioning  
Padded dorsal attachment point  
Padded leg straps
- Adjustment** Leg straps and shoulder straps (standard buckles)  
Waist belt (standard buckles)  
Chest strap (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step®* can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning

## 8.37F - Performance Harness (Mining)



<b>Application</b>	Fall arrest
<b>Attachment</b>	Dorsal position (for fall arrest)
<b>Features</b>	Padded belt with cap lamp straps (mining) Padding on dorsal attachment point Padded leg straps Hook points on chest
<b>Adjustment</b>	Leg straps (standard buckles) Shoulder straps (floating buckles) Waist belt and chest strap (standard buckles)
<b>Sizing</b>	Small, medium, large, XL and 2XL
<b>Options</b>	<i>Hilsen Harness Step®</i> can be fitted (not supplied standard) Add reflectivity



SANS 50361:2003 Full body harnesses

## 8.37G - Performance Harness (X)



<b>Application</b>	Fall arrest
<b>Attachment</b>	Dorsal position (for fall arrest) Frontal belay loops (for partial fall arrest)
<b>Features</b>	X-padding over shoulders Padded leg straps Hook points on chest
<b>Adjustment</b>	Leg straps (quick release buckles) Shoulder straps (floating buckles) Chest strap (quick release buckle)
<b>Sizing</b>	Small, medium, large, XL and 2XL
<b>Options</b>	<i>Hilsen Harness Step®</i> can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses

## 8.37H - Performance Harness (X-Max)



<b>Application</b>	Fall arrest Work positioning
<b>Attachment</b>	Dorsal position (for fall arrest) On waist belt (for work positioning) Frontal belay loops (for partial fall arrest)
<b>Features</b>	X-padding over shoulders Padded belt for work positioning Padded leg straps Hook points on chest
<b>Adjustment</b>	Legs and chest straps (quick release buckles) Waist belt (quick release buckle) Shoulder straps (floating buckles)
<b>Sizing</b>	Small, medium, large, XL and 2XL
<b>Options</b>	<i>Hilsen Harness Step®</i> can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning

## 8.41/Technical Harness

Harness only (pair with any *Hilsen* fall arrest lanyard)



- Application** Fall arrest
- Attachment** Dorsal position (fall arrest)
- Features** X-padding over shoulders  
Padded waist belt  
Padded legs
- Adjustment** Leg straps (standard buckles)  
Shoulder straps (standard buckles)  
Carabiner connector in front (easy fitment)  
Waist belt (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step*® can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses; conforms to SANS 50362:2008 Connectors

## 8.41A/Technical Harness (4-point)

Harness only (pair with any *Hilsen* fall arrest lanyard)



- Application** Fall arrest  
Work positioning
- Attachment** Dorsal position (fall arrest)  
Frontal chest (partial fall arrest)  
On waist belt (work positioning)
- Features** X-padding over shoulders  
Padded waist belt and legs  
Gear loops on waist belt
- Adjustment** Leg straps and shoulder straps (standard buckles)  
Carabiner connector in front (easy fitment)  
Waist belt (quick release buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step*® can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors

## 8.41B/Technical Harness (4-point QR)

Harness only (pair with any *Hilsen* fall arrest lanyard)



- Application** Fall arrest  
Work positioning
- Attachment** Dorsal position (fall arrest)  
Frontal chest (partial fall arrest)  
On waist belt (work positioning)
- Features** X-padding over shoulders  
Padded waist belt and legs  
Gear loops on waist belt
- Adjustment** Leg straps and waist belt (quick release buckles)  
Carabiner connector in front (easy fitment)  
Shoulder straps (standard buckles)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step*® can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors



## 8.41C/Technical Harness (5-point)

Harness only (pair with any *Hilsen* fall arrest lanyard)



- Application** Fall arrest  
Work positioning  
Rope access (and rescue)
- Attachment** Dorsal position (fall arrest)  
Frontal chest (partial fall arrest)  
Frontal waist (rope access and rescue)  
On waist belt (work positioning)
- Features** X-padding on shoulders, padded waist and legs  
Gear loops on waist belt
- Adjustment** Leg straps and shoulder straps (standard buckles)  
Carabiner connector in front (easy fitment)  
Waist belt (quick release buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step*® can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors

## 8.41D/Technical Harness (5-point QR)

Harness only (pair with any *Hilsen* fall arrest lanyard)



- Application** Fall arrest  
Work positioning  
Rope access (and rescue)
- Attachment** Dorsal position (fall arrest), frontal chest (partial fall arrest)  
Frontal waist (rope access and rescue)  
On waist belt (work positioning)
- Features** X-padding on shoulders, padded waist and legs  
Gear loops on waist belt
- Adjustment** Leg straps and waist belt (quick release buckles)  
Carabiner connector in front (easy fitment)  
Shoulder straps (standard buckles)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step*® can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors

## 8.41E/Technical Harness (Mining)

Harness only (pair with any *Hilsen* fall arrest lanyard)



- Application** Fall arrest
- Attachment** Dorsal position (fall arrest)
- Features** Padded belt with cap lamp straps (mining)  
X-padding over shoulders  
Padded legs  
Gear loops on waist belt
- Adjustment** Leg straps and shoulder straps (standard buckles)  
Carabiner connector in front (easy fitment)  
Waist belt (quick release buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step*® can be fitted (not supplied standard)  
Add reflectivity



SANS 50361:2003 Full body harnesses; conforms to SANS 50362:2008 Connectors

## 8.46/Professional Harness



- Application** Fall arrest  
Work positioning  
Rope access (and rescue)
- Attachment** Dorsal position (fall arrest)  
Frontal chest (partial fall arrest)  
Frontal waist (restraint or rescue)  
On waist belt (work positioning)
- Features** Fully padded and multiple adjustment options  
Gear loops on waist belt
- Adjustment** Leg straps and waist belt (quick release buckles)  
Shoulder strap (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** *Hilsen Harness Step®* can be fitted (not supplied standard)



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning

## 8.47/Lanyard SC2 (Professional)



- Application** Fall arrest
- Hooks** Two scaffold hooks
- Features** Energy absorbing element  
Double leg 45mm webbing lanyards  
Hook back points positioned mid lanyard  
Cut and wear resistant protective sleeves
- Sizing** 1.75m long (including energy absorber)  
Custom length between 1m and 2m
- Connectors** Carabiner (as standard)  
Alternatively snap hook or quick link connector



SANS 50355:2003 Energy absorbers; SANS 50354:2003 Lanyards; conforms to SANS 50362:2008 Connectors

## 9.11/Elite Harness



- Application** Fall arrest  
Work positioning  
Rope access (and rescue)
- Attachment** Dorsal position (for fall arrest)  
Frontal chest (partial fall arrest)  
Frontal waist (restraint and rescue)  
On waist belt (work positioning)
- Features** Aluminium components  
Fully padded and adjustable
- Adjustment** Leg straps (quick release buckles)  
Shoulder strap and waist belt (standard buckle)
- Sizing** Small, medium, large, XL and 2XL



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning

## 9.08/Eskom Type Power Lines Kit



- Application** Fall arrest  
Work positioning
- Attachment** Dorsal position (fall arrest)  
Frontal chest (partial fall arrest)  
On waist belt (work positioning)
- Features** Flame retardant and anti-static webbing
- Adjustment** Leg straps and shoulder straps (standard buckles)  
Carabiner connector in front (easy fitment)  
Waist belt (quick release buckle)
- Contents** a. Technical Harness (4-point)  
b. Lanyard SC2 (Adjustable)  
c. Work Positioning Lanyard (webbing type)  
d. Climbing slings 150cm (x2)  
e. Gear Bag 50



SANS 50361:2003 Full body harnesses, SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards; conforms to SANS 50362:2008 Connectors, SANS 50358:2008 Work positioning, SANS 50566:1997 Slings

## 9.09/Transnet Type Harness



- Application** Fall arrest  
Work positioning
- Attachment** Dorsal position (fall arrest)  
Frontal chest (partial fall arrest)  
On waist belt (work positioning)
- Features** X-padding over shoulders  
Padded waist belt and legs  
Gear loops on waist belt
- Adjustment** Leg straps and waist belt (quick release buckles)  
Carabiner connector in front (easy fitment)  
Shoulder straps (standard buckles)
- Sizing** Small, medium, large, XL and 2XL



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors

## 9.10/AMSA (Arcelor Mittal) Type Harness



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)  
Frontal position on chest (for partial fall arrest)
- Features** Easy to fit and lightweight  
Padding on dorsal attachment point  
Padded leg straps  
Harness step
- Adjustment** Leg straps (standard buckles)  
Shoulder straps (standard buckles)  
Chest strap (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** Lanyard options vary per site requirements



SANS 50361:2003 Full body harnesses

## 9.12/Sit Harness



- Application** Work positioning  
Rope access (not to be used for fall arrest)
- Attachment** Frontal carabiner connector on waist (for rope access)  
On waist belt (work positioning)
- Features** Padded waist and legs
- Adjustment** Waist belt (floating buckles)  
Leg straps (standard buckles)
- Sizing** Small, medium, large, XL and 2XL

Conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors

## 9.13/Billiton Type Harness



- Application** Fall arrest  
Work positioning
- Attachment** Dorsal position (for fall arrest)  
On waist belt (work positioning)
- Features** X-padding over shoulders  
Padded leg straps  
Rescue handles on shoulders  
Standing step
- Adjustment** Leg straps, chest strap and shoulder straps (standard buckles)
- Sizing** Small, medium, large, XL and 2XL
- Options** Lanyard options vary with site requirements



SANS 50361:2003 Full body harnesses; conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors

## 9.14/Amplats Type Harness



- Application** Fall arrest
- Attachment** Dorsal position (for fall arrest)  
Frontal chest (rescue points x 2)
- Features** Padding on dorsal attachment point and waist  
Padded leg straps  
Standing step
- Adjustment** Leg straps and shoulder straps (standard buckles)  
Chest strap (standard buckle)
- Sizing** Small, medium, large, XL and 2XL
- Options** Two versions available, one for surface use and one for under ground use (with additional cap lamp straps on waist belt – as pictured here)



SANS 50361:2003 Full body harnesses

## 8.21/Lanyard SC2

Lanyard set only (pair with any *Hilsen* full body harness)



- Application** Fall arrest
- Hooks** Two scaffold hooks
- Features** Energy absorbing element  
Double leg 45mm webbing lanyards
- Sizing** 1.75m long (including energy absorber)  
Custom length between 1m and 2m
- Connectors** Carabiner (as standard)  
Alternatively snap hook or quick link connector
- Options** Available in single or double leg configuration  
Also available with snap hooks



SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards; conforms to SANS 50362:2008 Connectors

## 8.21A/Lanyard SC2 (High Wear)

Lanyard set only (pair with any *Hilsen* full body harness)



- Application** Fall arrest
- Hooks** Two scaffold hooks
- Features** Energy absorbing element  
Double leg 25mm tubular webbing lanyards
- Sizing** 1.75m long (including energy absorber)  
Custom length between 1m and 2m
- Connectors** Carabiner (as standard)  
Alternatively snap hook or quick link connector
- Options** Available in single or double leg configuration  
Also available with snap hooks



SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards; conforms to SANS 50362:2008 Connectors

## 8.47/Lanyard SC2 (Professional)

Lanyard set only (pair with any *Hilsen* full body harness)



- Application** Fall arrest
- Hooks** Two scaffold hooks
- Features** Energy absorbing element  
Double leg 45mm webbing lanyards  
Hook back points positioned mid lanyard  
Cut and wear resistant protective sleeves
- Sizing** 1.75m long (including energy absorber)  
Custom length between 1m and 2m
- Connectors** Carabiner (as standard)  
Alternatively snap hook or quick link connector



SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards; conforms to SANS 50362:2008 Connectors

## 8.48A/Lanyard SC2 (Elasticated)

Lanyard set only (pair with any *Hilsen* full body harness)



- Application** Fall arrest
- Hooks** Two scaffold hooks
- Features** Energy absorbing element  
Double leg 45mm webbing lanyards  
Elasticated webbing sleeves
- Sizing** 1.75m long (including energy absorber)
- Connectors** Carabiner (as standard)  
Alternatively snap hook or quick link connector
- Options** Available in single or double leg configuration  
Also available with snap hooks



SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards; conforms to SANS 50362:2008 Connectors

## 8.43/Lanyard SC2 (Adjustable)

Lanyard set only (pair with any *Hilsen* full body harness)



- Application** Fall arrest
- Hooks** Two scaffold hooks
- Features** Energy absorbing element  
Double leg 45mm webbing lanyards  
Adjustment buckle on each lanyard leg
- Sizing** 1.75m long maximum adjustment (as standard)  
1.00m long minimum adjustment (as standard)
- Connectors** Carabiner (as standard)  
Alternatively snap hook or quick link connector
- Options** Available in single or double leg configuration  
Also available with snap hooks



SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards; conforms to SANS 50362:2008 Connectors

## 8.49/Lanyard SC2 (Wire Rope)

Lanyard set only (pair with any *Hilsen* full body harness)



- Application** Fall arrest
- Hooks** Two scaffold hooks
- Features** Energy absorbing element  
Double leg 6mm steel wire rope lanyards  
Protective sleeve 1mm PVC
- Sizing** 1.75m long (as standard)  
Can specify length between 1m and 2m
- Connectors** Carabiner (as standard)  
Alternatively snap hook or quick link connector
- Options** Available in single or double leg configuration  
Also available with snap hooks



SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards; conforms to SANS 50362:2008 Connectors

## 9.14/Performance Complete Kit



- Application** Fall arrest  
Work positioning
- Attachment** Dorsal position (for fall arrest)  
Frontal belay loops (for partial fall arrest)  
On waist belt (for work positioning)
- Kit Contents** a. Performance harness (4-point)  
b. Lanyard SC2 (carabiner connector)  
c. Work positioning lanyard (webbing type)  
d. Open round sling 60cm  
e. Open round sling 120cm  
f. Gear bag 50
- Options** Order an additional Harness PPE Pack (short brim helmet with chin strap, work gloves), not supplied as standard



SANS 50361:2003 Full body harnesses, SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards; conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors, SANS 50566:1997 Slings

## 9.15/Technical Complete Kit



- Application** Fall arrest  
Work positioning  
Rope access (and rescue)
- Attachment** Dorsal position (for fall arrest)  
Frontal chest (for partial fall arrest)  
Frontal waist (for rope access and rescue)  
On waist belt (for work positioning)
- Kit Contents** a. Technical harness (5-point)  
b. Lanyard SC2 (carabiner connector)  
c. Work positioning lanyard (webbing type)  
d. Open round slings (1 x 60cm and 1 x 120cm)  
e. Gear bag 50
- Options** Order an additional Harness PPE Pack (short brim helmet with chin strap, work gloves), not supplied as standard



SANS 50361:2003 Full body harnesses, SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards; conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors, SANS 50566:1997 Slings

## 9.06/Professional Complete Kit



- Application** Fall arrest  
Work positioning  
Rope access (and rescue)
- Attachment** Dorsal position (fall arrest)  
Frontal chest (partial fall arrest)  
Frontal waist (rope access or rescue)  
On waist belt (work positioning)
- Kit contents** a. Professional harness (5-point)  
b. Professional lanyard SC2 (carabiner connector)  
c. Professional work positioning lanyard  
d. Professional gear bag 50
- Options** Order an additional Harness PPE Pack (short brim helmet with chin strap, work gloves), not supplied as standard



SANS 50361:2003 Full body harnesses, SANS 50355:2003 Energy absorbers, SANS 50354:2003 Lanyards; conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors, SANS 50566:1997 Slings

## 9.04/Temporary Vertical Lifeline Kit (20m)



- Application** Fall arrest
- System** Portable vertical access system with a mobile fall arrestor connecting to harness, an anchored static rope feeds through the fall arrestor which locks in event of a fall
- Contents**
- a. Anchor sling 150cm
  - b. Kernmantel static rope 11mm (20m to 50m rope length)
  - c. Mobile fall arrestor (SR Locker)
  - d. Twist-lock carabiners (2)
  - e. Gear bag 50
- Training** Required training: Unit Standard ID: 229998 Explain and perform fall arrest techniques when working at heights
- Be aware** Requires a harness with frontal attachment point

Conforms to SANS 50362:2008 Connectors, SANS 50795:1996 Anchor devices, SANS 50353-2:2003 Guided type fall arrestors, SANS 51891:1998 Low stretch kernmantel ropes

## 9.03/Temporary Horizontal Lifeline Kit (20m)



- Application** Temporary anchor point
- System** Portable webbing lifeline with adjustable span (maximum span between two suitable anchor points is 20m), to secure a maximum of two users at any time while using a fall arrest lanyard, fall arrestor or vertical lifeline
- Contents**
- a. Anchor slings 150 (3)
  - b. 2.5 ton bow shackle connectors (2)
  - c. Twist-lock carabiner connector (1)
  - d. Webbing lifeline (20m)
  - e. Ratchet 50mm
  - f. Gear bag 50
- Training** Required training: Unit Standard ID: 229998 Explain and perform fall arrest techniques when working at heights

Conforms to SANS 50795:1996 Anchor devices, SANS 50362:2008 Connectors

## 9.16/Roofers Kit (30m)



- Application** Fall arrest (work at height from ladder or roof)
- System** Portable vertical access system with a mobile fall arrestor connecting to harness, an anchored static rope feeds through the fall arrestor which locks in event of a fall
- Contents**
- a. Anchor sling 150cm
  - b. Kernmantel static rope 11mm (30m)
  - c. Mobile fall arrestor (rope grab)
  - d. Twist-lock carabiners (2)
  - e. Rope edge protectors (2)
  - f. Gear bag 50
- Training** Required training: Unit Standard ID: 229998 Explain and perform fall arrest techniques when working at heights
- Be aware** Requires a harness with frontal attachment point

Conforms to SANS 50362:2008 Connectors, SANS 50795:1996 Anchor devices, SANS 50353-2: 2003 Guided type fall arrestors, SANS 51891:1998 Low stretch kernmantel ropes



## 9.01/Basic Rescue Kit (Pick Off Type)



- Application** Fall arrest rescue
- System** Portable vertical ascending and descending system, rescuer descends to the fall victim and lowers both to safety below
- Contents**
- a. Anchor sling 150cm
  - b. Kernmantel static rope 11mm (50m to 150m rope length)
  - c. Double locking descent device (Lory Smart)
  - d. Jumar with tape ladder, e. Rescue knife
  - f. Rescue link
  - g. Twist-lock carabiner connectors (5)
  - h. Gear bag 50
- Training** Required: Unit Standard ID: 229995 Install, use and perform basic rescues from fall arrest systems

Conforms to SANS 50362:2008 Connectors, SANS 50795:1996 Anchor devices, EN 341:2011 Descender devices for rescue, SANS 50353-2: 2003 Guided type fall arrestors and SANS 51891:1998 Low stretch kernmantel ropes

## 9.02/Remote Retrieval Rescue Kit



- Application** Remote fall arrest rescue
- System** Portable vertical ascending and descending system, with setup options for 3:1....4:1....or 5:1 pulley systems
- Contents**
- a. Anchor sling 150cm (2)
  - b. Kernmantel static rope 11mm (10m to 600m rope length)
  - c. Extension pole, Kong Frog and connector
  - d. Rigging plate (medium), e. Lory Smart
  - f. Double pulley (2) and single pulley (1)
  - g. Jumar handle (2), h. Tape ladder
  - i. Twist-lock carabiner connectors (8), j. Gear bag 100
- Training** Required: Unit Standard ID: 229995 Install, use and perform basic rescues from fall arrest systems

Conforms to SANS 50362:2008 Connectors, SANS 50795:1996 Anchor devices, EN 341:2011 Descender devices for rescue, SANS 50353-2: 2003 Guided type fall arrestors and SANS 51891:1998 Low stretch kernmantel ropes

## 9.17/Auto Descender Kit (YIE003)



- Application** Emergency self-rescue device
- System** Controlled descent device where person self-rescuing safely descends at an automatically limited speed
- Contents**
- a. Anchor sling 150cm
  - b. Kernmantel static rope 11mm (30m rope length only)
  - c. Auto descender device(YIE003)
  - d. Twist-lock carabiner connector
  - e. Gear bag 50
- Limitations** Maximum descent height of 30m, maximum load of 150kg, descent speed of 0.8m/s to 1.5m/s depending on load
- Training** Required: Unit Standard ID: 229998 Explain and perform fall arrest techniques when working at heights

Conforms to SANS 50362:2008 Connectors, SANS 50795:1996 Anchor devices, SANS 50353-2: 2003 Guided type fall arrestors and SANS 51891:1998 Low stretch kernmantel ropes

## 7.18/Work Positioning Belt



- Application** Work positioning  
Not to be used for fall arrest!
- Attachment** On waist belt (attached to a work positioning lanyard)
- Features** Padded waist belt  
Side dee rings on waist  
Adjustable work positioning lanyard  
Snap hook connector  
Protective sleeve
- Adjustment** Waist belt (standard buckle)  
Lanyard (floating buckle)
- Note** Selected *Hilsen* harnesses include a work positioning belt and functionality

Conforms to SANS 50358:2008 Work positioning

## 10.05/Work Positioning Lanyard (Webbing Type)



- Application** Work positioning  
Not to be used for fall arrest!
- Features** Adjustable webbing lanyard (floating buckle)  
Maximum adjusted length of 2m  
45mm webbing  
Protective sleeve
- Connectors** Carabiner and snap hook at ends
- Options** Supplied as maximum adjusted length of 2m but other lengths available

Conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors

## 10.06/Work Positioning Lanyard (Rope Type)



- Application** Work positioning  
Not to be used for fall arrest!
- Features** Adjustable rope lanyard (rope grab)  
Maximum adjusted length of 2m  
16mm rope  
Protective sleeve
- Connectors** Carabiner (on rope grab) and snap hook at end
- Options** Supplied as maximum adjusted length of 2m but other lengths are available

Conforms to SANS 50358:2008 Work positioning, SANS 50362:2008 Connectors

## Gear Bags 15 and 20



### 3.01/Gear Bag 15

**Capacity** Height 30cm, diameter 25cm  
Volume 15 litres

**Features** Water resistant PVC fabric  
Fold over top with clip  
Shoulder strap

### 3.02/Gear Bag 20

**Capacity** Height 40cm, diameter 25cm  
Volume 20 litres

**Features** Water resistant PVC fabric  
Fold over top with clip  
Shoulder strap

## Gear Bags 50 and 100



### 3.03/Gear Bag 50

**Capacity** Height 40cm, diameter 30cm  
Volume 28 litres

**Features** Water resistant heavy duty PVC fabric  
Toggle and eyelet top fastening  
Two adjustable shoulder straps  
Carry handle

### 3.09/Gear Bag 100

**Capacity** Height 80cm, diameter 30cm  
Volume 56 litres

**Features** Water resistant heavy duty PVC fabric  
Toggle and eyelet top fastening  
Two adjustable shoulder straps  
Carry handle

## Gear Bags 200 and 200 (Heavy Duty)



### 3.04/Gear Bag 200

**Capacity** Height 80cm, diameter 40cm  
Volume 100 litres

**Features** Water resistant heavy duty PVC fabric  
Heavy duty YKK zip  
Tab and eyelet to take an inspection seal  
Two carry handles  
Two carry straps

### 3.15/Gear Bag 200 (Heavy Duty)

**Capacity** Height 80cm, diameter 40cm  
Volume 100 litres

**Features** As for Gear Bag 200

**HD features** Additional zip protector  
Reinforced bottom panel

## Kernmantel Ropes



### 12.01/Low Stretch Kernmantel Rope (Q4019)

**Specifications** 10.5mm rope, nylon core, polyester outer, weight: 75.7g/m  
Elongation: maximum 2.9%  
Strength: fall arrest 5.9kN, unknotted 31.6kN, knotted 15kN

### 12.02/Low Stretch Kernmantel Rope (Q3891)

**Specifications** 11mm rope, nylon core, polyester outer, weight: 84g/m  
Elongation: maximum 2.8%  
Strength: fall arrest 5.7kN, unknotted 37.7kN, knotted 15kN

### 12.03/Dynamic Kernmantel Rope (N2645)

**Specifications** 11mm rope with nylon core and outer, weight: 77g/m  
Elongation: maximum 5%, dynamic elongation 26%  
Strength: fall arrest peak strength 11.6kN

Conforms to EN 1891:1998 Low stretch kernmantel ropes (Q4019 and Q3891), EN 892:2012 Dynamic mountaineering ropes (N2645)

## Open Round Slings



### 10.01/Open Round Sling 60cm

**Application** Open round webbing sling  
Set up as an anchor point for a fall arrest lanyard

**Features** 25mm tubular webbing  
Minimum breaking strength of 22kN

### 10.02/Open Round Sling 120cm

**Application** Open round webbing sling  
Set up as an anchor point for a fall arrest lanyard

**Features** 25mm tubular webbing  
Minimum breaking strength of 22kN

Conforms to SANS 50566:1997 Slings

## Anchor Slings



### 10.04/Anchor Sling 50cm

**Application** Flat webbing sling  
Set up an anchor point on a structure

**Features** 45mm webbing  
Minimum breaking strength of 22kN  
Protective sleeve and steel dee ring at each end

### 10.03/Anchor Sling 150cm

**Application** Flat webbing sling  
Set up an anchor point on a structure

**Features** 45mm webbing  
Minimum breaking strength of 22kN  
Protective sleeve and steel dee ring at each end

Conforms to SANS 50795:1996 Anchor devices

## 7.00/Fall Arrestor 2m (Compact)



- Application** Use as part of a fall arrest system to reduce vertical impact force by limiting the distance of a fall
- Features** 25mm webbing lanyard  
Maximum extension 2m  
Complete with snap hook and carabiner  
Weight 10kg
- Safe load** 140kg (weight of user, their PPE, clothing and tooling)
- Serviceability** Fully serviceable and can be inspected and certified

Conforms to EN 360:2002 Retractable lanyards, EN 362:2008 Connectors

## Fall Arrestors (Webbing Type)



### 7.01/Fall Arrestor 3.5m

- Application** Use as part of a fall arrest system to reduce vertical impact force by limiting the distance of a fall
- Features** Maximum extension 3.5m, weight 10kg, complete with snap hook and carabiner 25mm webbing lanyard
- Safe load** 140kg (weight of user, their PPE, clothing and tooling)
- Serviceability** Fully serviceable and can be inspected and certified

### 7.02/Fall Arrestor 6m

- Features** Maximum extension 6m, weight 10kg, complete with snap hook and carabiner 25mm webbing lanyard

Conforms to EN 360:2002 Retractable lanyards, EN 362:2008 Connectors

## Fall Arrestors (Cable Type)



### 7.06/Fall Arrestor 6m

- Application** Use as part of a fall arrest system to reduce vertical impact force by limiting the distance of a fall
- Features** Weight 10kg, SWR lanyard, with connectors

### 7.03/Fall Arrestor 10m

- Features** Weight 10kg, 4mm SWR lanyard, with connectors

### 7.04/Fall Arrestor 15m

- Features** Weight 10kg, 4mm SWR lanyard, with connectors

### 7.05/Fall Arrestor 20m

- Features** Weight 10kg, 4mm SWR lanyard, with connectors

Conforms to EN 360:2002 Retractable lanyards, EN 362:2008 Connectors

## 8.35/Harness Step



- Application** Safety device to mitigate risk of suspension trauma
- Fitment** Unit added to any *Hilsen* harness at manufacture
- To deploy**
- Pull connector downward to release harness step
  - Pull step out of protective cover until fully deployed
  - Feed connector through webbing loop
  - Hook connector back onto suitable webbing eye
  - Insert foot (or both feet) into harness step
  - Stand up to relieve pressure from leg straps
- Adjustment**
- Remove foot (or feet) from harness step
  - Move connector to another webbing eye
  - Insert foot (or both feet) into harness step
- Be aware** Training is required to use this device

## 8.35A/Standing Step



- Application** Safety device to mitigate risk of suspension trauma
- Fitment** Unit added to any *Hilsen* harness at manufacture
- To deploy**
- Pull downward on webbing tabs to release step
  - Pull step out of pouch until fully deployed
  - Adjust step using floating buckle
  - Insert foot (or both feet) into step
  - Stand up to relieve pressure from leg straps
- Adjustment**
- Remove foot (or feet) from step
  - Adjust step using floating buckle
  - Insert foot (or both feet) into step
  - Stand up to relieve pressure from leg straps
- Be aware** Training is required to use this device

## 8.35B/Component Harness Step



- Application** Safety device to mitigate risk of suspension trauma
- Fitment**
- Unit supplied separately as a component
  - Select suitable anchor point on harness at waist
  - Loop unit around harness strap
  - Feed back through webbing eye
  - Allow unit to hang freely from waist
- To deploy**
- Pull connector downward to release harness step
  - Pull step out of protective cover until fully deployed
  - Feed connector back through harness webbing
  - Hook connector back onto suitable webbing eye
  - Insert foot (or both feet) into harness step
- Adjustment**
- Remove foot (or feet) from harness step
  - Move connector to another webbing eye
  - Insert foot (or both feet) into harness step
- Be aware** Training is required to use this device

### A universal problem

Suspension trauma is a risk associated with the difficulties of being suspended in an industrial safety harness. The effects are well documented with many studies done. The issue is essentially one of constricted blood flow through the groin area (femoral artery) and the knock on physiological effects that will follow.

Being suspended in a harness not specifically designed for prolonged suspension can put severe pressure on your body, pressure from leg straps constrains blood flow to your legs, toxins may accumulate in the blood trapped in your legs.

Blood pressure may fluctuate as your body tries to solve the problem, you may experience light headedness and may even lose consciousness while suspended in your safety harness. The problem can quickly compound and become very serious, even life threatening.

### An effective solution

A device like the *Hilsen Harness Step*® is an effective solution to the problem of suspension trauma and its mechanism is quite simple, create a temporary step to stand in until the fall victim can be rescued in terms of a fall protection plan.

The pressure relief helps to restore blood flow to the legs and prevent the onset of critical blood pressure changes. In one endurance test a person was able to hang untroubled in the harness using the harness step for 90 minutes.

It is important to adjust the length of the step for maximum effectiveness and while awaiting rescue the fall victim should remain calm and alternate feet in the step frequently.

### The Hilsen Harness Step

The *Hilsen Harness Step*® is a safety device for relief from suspension trauma after a fall arrest. Deploying the step is easy and intuitive, even so, training is required to ensure the user is proficient in its deployment and use:



The *Hilsen Harness Step*® is secured in a plastic sleeve. A lightweight connector protrudes beyond the edge of the sleeve allowing the user to hook a finger through to deploy the step in an emergency. Pulling firmly downward on the connector will release the step.



With the step fully deployed, pass the connector across to the lime coloured webbing eye which is permanently attached to the opposite side of the harness at the waist.

Now feed the connector through webbing eye and then loop it back. There are two webbing eyes sewn along the length of the step.

Select one of the webbing eyes and hook the connector to it. Note that whatever eye you select will determine the length of the step you have now created. You need to choose a length that best suits your leg length.



If you are quite tall and find that neither eye provides a long enough step to stand in, you also have the option of hooking the connector directly onto the webbing eye at the waist.

You can adjust the connector between eyes at any time while suspended in the harness as required.

Now that you have your step set up, go ahead and insert one or both feet into the *Hilsen Harness Step*® and straighten your legs to bring pressure to bear on the step.



As the weight of your body is transferred to the step from your harness leg straps you should feel significant pressure relief.

If you do not feel relief it may be that you have set the step up too long for your leg length. Rectify this by moving the connector to another eye as explained above.

Once you have correctly set up the step and have relieved the pressure on your upper legs you are in a position to safely await rescue or assistance.

Remain calm and alternate feet in the step frequently as required.

