

## **Annexure A: Specification Returnable**

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### **3. Personal Protective Equipment for Work at Height Specification**

#### **3.1 General requirements**

- a) An employer shall ensure that all information, instructions, and training on the usage of PPE for work at height are communicated to all applicable employees prior to its use. This shall include the limitations of identified equipment/accessories.
- b) An employer shall not require or permit any employee to work, unless such an employee is issued with the required work-at-height safety equipment and makes proper use of it.
- c) The warranty shall be at least 12 months for each component of the fall arrest system supplied.
- d) The marking on all FAS components shall be as described in SANS 50365.
- e) The marking on all FAS components shall have a transparent cover to preserve markings for the duration of the unit.
- f) The marking on all FAS components shall have a serial number for traceability.
- g) The harness shall:
  - be comfortable;
  - have adequate buttock support;
  - have strap guides to prevent the end of loose straps flapping;
  - be circumferential;
  - have a chest support that joins shoulder straps in the front; and
  - have ease of fastening and fitting.
- h) Adjustment has to remain constant. No movement is allowed after fitting.
- i) There is a preference for relatively lighter-weight units. That is relative to what a worker can comfortably wear on a structure and various products that are available in the marketplace.
- j) The FAS unit must be supplied in a hold bag.
- k) The life expectancy of the work-at-height equipment shall be determined by the manufacturer.

#### **3.2 Minimum requirements of a fall arrest system**

##### **3.2.1 Full body harness**

- a) The full body harness shall be manufactured according to Eskom-specified sizes. A means of adjustment shall be provided.
- b) The full body harness shall not be easily disassembled. It is required that it shall be so constructed that it is not possible to disassemble it without the use of a tool or equipment.

##### **3.2.2 Lanyards**

###### **3.2.2.1 Sewing threads**

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#### **3.2.2.2 Work positioning lanyard**

- a) Work positioning lanyards made from chains or wire ropes shall not be used.
- b) The work positioning lanyard shall have a protective sleeve of not less than 600 mm and shall be made of webbing. The protective sleeve shall be able to slide open for inspection purposes.

#### **3.2.2.3 Safety lanyards**

- a) The maximum force that is allowed during the braking period of a fall shall not exceed 6 kN for the safety lanyards.
- b) The length of a lanyard shall not be more than 1,75 m. The safety lanyard shall be made from synthetic fibre rope or webbing.
- c) Wire rope and chain lanyards shall not be used.
- d) The sewing thread shall be of the same material as the webbing, but shall be of contrasting colour to facilitate visual inspection.
- e) The energy absorber and the lanyard shall form an integral part of the lanyard (no loop on the connecting point sun brim).

### **3.2.3 Connectors and attachment elements**

- a) All metallic components (excluding karabiners and pylon hooks) shall be of stainless steel or aluminium alloy construction.
- b) All metallic components shall bear a serial number and an SWL value plus the name of the manufacturer.
- c) The connectors shall be capable of being opened only by at least two consecutive deliberate manual actions (no screw-gate connector). The connector shall withstand a force of 15 kN without tearing or rupturing when tested as described in SABS EN 362:1992 paragraph 5.1.
- d) Karabiner and pylon hooks must be of a weatherproof, non-corrosive alloy (not weatherproof-coated), for example, aluminium alloy or stainless steel.
- e) Pylon hooks shall be lightweight and durable and have a minimum gate-opening aperture of 60 mm.

### **3.2.4 Attachment straps**

- a) The attachment straps supplied for fall arrest purposes shall comply with SABS EN 795:1996 and SABS EN 566.
- b) The attachment strap shall have a lined cover sleeve for the purpose of:
  - wear protection; and
  - grip to vertical undressed poles and structures.
- c) The lined cover sleeve shall have:
  - a standard warp/wet weave with acrylic finish, which has proven to work best for adhesion and workability on poles; and
  - cover material constructed from polyester yarn.

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### **3.2.5 Fall arrest system live work**

- a) All the basic components are the same as the normal FAS used by non-live work members, but shall have the following attributes that are specific to HV/MV live work equipment.
- b) The live work unit shall also:
  - be flame-resistant;
  - have non-conductive webbing; and

- be labelled as flame-resistant and non-conductive.

### 3.2.7 Protector bags

- The protector bag for the fall arrest system shall be labelled according to the supplier's details.
- The bag shall be easy to carry.
- The bag may be any colour, except red, which is exclusively reserved for the rescue kit.
- The bags shall be labelled as follows:
  - "Fall Arrest System – Power Lines" for power line FAS
  - "Fall Arrest System – Live Work" for live work FAS
  - "Fall Arrest System – Subs and Aux" for substation FAS
  - "Fall Arrest System – Rope Access" for rope access systems
  - "Fall Arrest System – Retractable" for retractable FAS
  - "Fall Arrest System – Rescue" for rescue kit
  - "Fall Arrest System – Climb Safe" for climb safe FAS
- For cylinder/round-type bags, the size of the top of the bag shall be 420 mm for ease of packing and unpacking of the harness.
- For carry bags with zip opening, the bag size shall be 420 mm for ease of packing and unpacking of the harness.

### 3.2.9 Retractable fall arrester

- The retractable FAS shall integrate with the existing basic FAS unit.
- The descender device shall:
  - comply with SABS EN 341 Class A 10-11 mm and PrEN 12841 Type C 10-13 mm;
  - have a registered breakable seal, applied to the descender device for inspection purposes;
  - have a minimum load-bearing capability of 150 kg;
  - have a double-brake system; and
  - be attached to a rope, and it should not be required to reeve the rope through the descender device.

### 3.3 FAS rescue kit

- The rescue kit shall be packaged to accommodate easy use and be practicable to take up.
- The rescue kit shall be taken up as a standard practice when working.
- The rescue kit shall consist of the following:
  - A red bag, labelled "Rescue kit", with shoulder straps
  - A double-brake descending device as per the specification
  - A rope system that is weatherproof, labelled, numbered, and marked
  - Two stainless steel karabiners
  - One webbing cutter

### **3.2.8 Remote access connector**

- a) The remote pylon hook used shall comply with the requirements for connectors.
- b) The remote connector shall be able to be attached and removed safely by means of a standard Eskom link stick. If the remote connector does not fit onto a standard Eskom link stick, an adapter fitting onto the Eskom link stick shall be provided.
- c) The remote connector shall be able to be attached safely onto standard Eskom plant (for example, MV pole eye bolt, HV pylon structures).

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### **3.9 Instructions for use, maintenance, periodic examinations, repair, marking, and packaging**

- a) The general requirements for instructions for use, maintenance, periodic examinations, repair, marking, and packaging shall be according to the SANS 50365 EN 365 standard.
- b) Documents on the information supplied by the manufacturer shall be according to the relevant standard.
- c) The marking on all FAS components shall have a transparent cover to preserve markings for the duration of the unit.
- d) The FAS shall be:
  - kept as a unit at all times (in a bag);
  - discarded if it has experienced a fall; and
  - inspected every three months by a person appointed in writing as being competent, but that does not absolve the user of the responsibility to inspect the FAS before every usage.





240-100979499 PPE  
for Work at Heights S

## Harness order

### Inventory:

Trauma strap serial number

Full body harness

Safety lanyard

Connectors and attachment elements

Attachment straps

Fall arrest system live work (HV)

Protector bags (cylinder / round-type) - dark blue

Retractable fall arrestor

Additional back support

### Requirements:

1. Safety harnesses to come as a complete unit in each bag.

2. Below are the required sizes and numbers of bags per size:

Small: x6 bags

Medium: x25 bags

Large: x6 bags

3. Supplier to provide sample of each size prior to delivery of all safety harnesses.

4. Supplier to demonstrate how to inspect and wear the harnesses when samples are delivered.

5. To include manual with Instructions for use, maintenance, periodic examinations, what to inspect / examine, repair, marking, packaging, expiry date and certificates for each harness

**Supplier adherence to specification checklist mandatory returnable**

The tenderer must complete, sign and submit the below specification checklist

<b>Specification Standard: 240-100979499 Sections</b>	<b>Description of scope</b>	<b>Yes</b>	<b>No</b>
3.1	General requirements		
3.2	<b>Minimum requirements of all fall systems</b>		
3.2.1	Full body harness		
3.2.2	Lanyards		
3.2.2.1	Sewing threads		
3.2.2.2	Works positioning lanyards		
3.2.2.3	Safety lanyards		
3.2.3	Connectors and attached elements		
3.2.4	Attachments straps		
3.2.5	Fall arrest system live work		
3.2.7	Protector bags		
3.2.8	Remote access connector		
3.2.9	Retractable fall arrester		
3.3	<b>FAS rescue kit</b>		
3.9	Instruction for use, maintenance, periodic examiner, repair, marking and package		
<b>Supplier confirmation</b>			
<b>Title</b>	<b>Name and Surname</b>	<b>Signatures</b>	<b>Date</b>

**Note:**

Failure to submit the above-mentioned mandatory returnables will result in a disqualification from further evaluation.