

INCH/POUND

A-A-59847  
19 November 2009

## COMMERCIAL ITEM DESCRIPTION

## HARNESS, MOUNTAINEERING

This commercial item description is approved for use by the Defense Supply Center, Philadelphia and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE. This commercial item description covers the requirements for mountaineering harnesses which are used for protecting climbers on steep terrain through the attachment to rope installations and anchors to the harness.

2. CLASSIFICATION. The harnesses will be furnished in the following types and sizes:

2.1 Types:

- Type I – Harness, Seat, Basic
- Type II – Harness, Seat, Advanced
- Type III – Harness, Chest

2.2 Sizes: Sizes are defined by Types in 2.2.1, 2.2.2 and 2.2.3

2.2.1 Type I. The basic seat harness will be furnished in one size fits all (OSFA) which will be adjustable and conform to the waist and leg loop sizes measurements in Table I.

TABLE I. Physical characteristics Type I (inches)

Size	Waist Size	Waist Size	Leg Loop	Leg Loop
OSFA	27	44	20	27
Tolerance	(Minimum) ± 0.5 inches	(Maximum) ± 0.5 inches	(Minimum) ± 0.5 inches	(Maximum) ± 0.5 inches

2.2.2 Type II. The advanced seat harness will be adjustable and furnished in four (4) sizes which conform to the waist and leg loop measurements in Table II.

Comments, suggestions, or questions on this document should be addressed to: Defense Supply Center Philadelphia, Clothing and Textiles Directorate, Attn: DSCP Standardization Team, 700 Robbins Avenue, Philadelphia, PA 19111-5096. Since contact information can change, you may want to verify the currency of this address information using Acquisition Streamlining and Standardization Information System (ASSIST) online database at <http://assist.daps.dla.mil/>.

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TABLE II. Physical characteristics Type II (inches)

Size	Waist Size	Waist Size	Leg Loop	Leg Loop
I	27	30	19	27
II	30	33	20	28
III	33	37	23	30
IV	37	41	24	31
Tolerance	(Minimum) ± 0.5 in	(Maximum) ± 0.5 in	(Minimum) ± 0.5 in	(Maximum) ± 0.5 in

2.2.3 Type III. The chest harness will be adjustable and conform to the chest sizes in Table III.

TABLE III. Physical characteristics Type III (inches)

Size	Chest Size	Chest Size
OSFA	35	47
Tolerance	(Minimum) ± 0.5 inches	(Maximum) ± 0.5 inches

3. SALIENT CHARACTERISTICS. The seat and chest harnesses shall be designed for both alpine and rock climbing and shall provide ease of use with typical combat gloves while meeting the standards in this description. The chest harness is intended to keep a climber upright in case of a severe fall when used in conjunction with a seat harness and shall meet the design and physical characteristics of 3.3.

3.1 Type I. The Type I harness shall consist of a waist belt, tie-in point, leg loops, gear loop, rear haul loop and leg straps (see Drawing 3-3-0151).

3.1.1 Waist belt. The waist belt, a one-size-fits-all design, shall be adjustable for waist sizes in accordance with Table I. The waist webbing must be long enough to route the straps for positive locking through the pre-threaded, quick adjust buckle. The harness shall provide some means of securing excess webbing (i.e. elastic bands or clips). The waist belt shall have a single fixed tie-in point for tying into, clipping into and belaying from. The tie-in point shall be sized to accommodate a knot tied with a 10 millimeter rope and any two carabiners in accordance with A-A-59836 at a minimum. The tie-in point shall be protected against excessive abrasion. The waist webbing shall be affixed in such a manner as to prevent un-routing of the pre-threaded, quick adjust buckle and to speed donning and doffing. The waist belt shall have a diagram near the tie in point depicting the proper method of tying/clipping in.

3.1.2 Leg loops. The harness shall have two adjustable leg loops. The leg loops shall be fixed to the waist belt. The leg loops shall be adjustable in accordance with Table I. The leg loop webbing shall be long enough to route the straps for positive locking through pre-threaded, quick adjust buckles. The harness shall provide some means of securing excess webbing (i.e. elastic bands or clips) on the leg loops. The leg loop webbing shall be affixed in such a manner as to prevent un-routing of the pre-threaded, quick adjust buckle and to speed donning and doffing.

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3.1.3 Rear haul loop. A haul loop shall be provided at the back of the harness in the center. The haul loop shall have a tensile strength of at least 10 kiloNewtons (2248 pounds of force).

3.1.4 Leg loop rear straps. Elastic rear straps shall be provided to keep the leg loops from riding down at the back. There shall be a quick release mechanism for these straps so that the entire harness will not have to be removed when the Soldier must use the latrine.

3.1.5 Gear loop. The harness shall have one gear loop. The gear loop shall be 4 ( $\pm 0.5$ ) inches long, horizontally while sticking out away from the harness 2 ( $\pm 0.5$ ) inches at the center point to ensure ease of equipment racking and un-racking. The gear loop shall be covered with a stiff protective coating to aid equipment racking and un-racking.

3.2 Type II. The Type II harness shall consist of a waist belt, belay loop, leg loops, leg loop cross piece, gear loops, haul loop and rear straps (see Drawing number 3-3-0134).

3.2.1 Waist belt. The Type II waist belt shall be adjustable and furnished in the sizes listed in Table II. The waist belt shall be padded for comfort and tapered towards the front allowing a greater range of comfort and freedom of movement. The waist webbing must be long enough to route the straps for positive locking through buckles. The harness shall provide some means of securing excess webbing (i.e. elastic bands or clips). The harness shall have a rigid webbing loop at the front, strength tested to UIAA standards. This loop shall be one of two points used to attach the climbing rope to the user's harness. The waist belt shall have a belay loop that connects the waist belt to the leg loop cross piece. The tie-in point shall be sized to accommodate a 10 millimeter rope and two Type H (1) carabiners in accordance with A-A-59836 at a minimum. The tie-in point shall be protected against excessive abrasion. When a double-passed buckle is used, the double pass buckle shall show the word "DANGER" when not double passed. The waist belt shall have a diagram near the tie in point depicting the proper method of tying/clipping.

3.2.2 Leg loops. The harness shall have two adjustable leg loops. The leg loops shall be sized in accordance with Table II. The leg loop webbing shall be long enough to route the straps for positive locking through buckles. The harness shall provide some means of securing excess webbing (i.e. elastic bands or clips) on the leg loops. The leg loops shall be joined in the middle with a cross piece.

3.2.3 Leg loop cross piece. The leg loop cross piece shall be an integrating piece that connects the two leg loops and the belay loop. The cross piece shall be protected against excessive abrasion. This loop shall be used to attach the climbing rope to the user's harness.

3.2.4 Belay loop. The harness shall have a belay loop in the center front that connects the leg loop cross piece and the waist belt fixed point. The belay loop shall have a tensile strength in accordance with EN 12277.

3.2.5 Gear loop. The harness shall have four gear loops, two large and two small. The large gear loops shall be 4.5 ( $\pm 0.5$ ) inches horizontally while sticking out away from the harness 2 ( $\pm 0.5$ ) inches long at the center point to aid equipment racking and un-racking. The small gear

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loops shall be 3 ( $\pm 0.5$ ) inches horizontally while sticking out away from the harness 1.75 ( $\pm 0.5$ ) inches long at the center point to ensure ease of equipment racking. The gear loops shall be covered with a stiff protective coating to aid equipment racking and un-racking. The gear loops shall have a tensile strength of 10 kiloNewtons.

3.2.6 Real haul loop. A real haul loop shall be provided at the back of the harness in the center. The haul loop shall have a tensile strength of at least 10 kiloNewtons (2248 pounds of force).

3.2.7 Leg loop straps. Elastic straps shall be provided to keep the leg loops from riding down at the back. The leg loop straps shall be easily removable so that the entire harness doesn't have to be removed when the Soldier must use the latrine.

3.3 Type III. The Type III chest harness shall be (OSFA) with a design capable of being adjusted for varying size upper torsos and clothing measurements in Table III. The chest harness shall be comprised of integrated shoulder and chest straps, buckles and two fixed tie in loops. The chest harness shall provide some means of securing excess webbing (i.e. elastic bands or clips) on the shoulder straps. Each fixed tie in loop shall be 2 ( $\pm 0.5$ ) inches long to enable sufficient room for proper tying/clipping into. The chest strap shall have a diagram near the tie in point depicting the proper method of tying/clipping in (see Drawing 3-3-0150).

3.4 Color. The harness for all types shall provide low contrast with typical use terrain unless otherwise specified in the solicitation or contract.

### 3.5 Materials.

#### 3.5.1 Harness, seat, basic (Type I) and harness, seat, advanced (Type II).

3.5.1.1 Waist belt and leg loop material (Type I and Type II) The waist belt and leg loops shall be constructed of nylon.

3.5.1.2 Leg loop strap material (Type I and Type II). The leg loop strap shall be constructed of elastic.

3.5.1.3 Buckles (Type I and Type II). The buckles shall be constructed of aluminum or steel.

3.5.1.4 Gear loop material.(Type II only) The gear loop shall be constructed of nylon.

3.5.1.5 Rear haul loop material (Type I and Type II). The rear haul loop shall be constructed of nylon.

#### 3.5.2 Harness, chest (Type III).

3.5.2.1 Chest and shoulder strap material. The chest and shoulder straps shall be constructed of nylon.

3.5.2.2 Buckles. The buckles shall be constructed of aluminum or steel.

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3.6 Stitches, seams, and stitching. Seam allowances shall be maintained with seams sewn so that twists, pleats, or puckers will not result. All seams shall start and finish evenly. Ends of a continuous line of stitching shall be overlapped not less than 1/2 inch.

3.6.1 Stitching. The ends of all seams and stitching, when caught in other seams or stitching, shall be backstitched not less than 1/4 inch. Thread tension shall be maintained so that there shall be no loose stitching resulting in loose bobbin or top thread, or excessively tight stitching resulting in puckering of the materials sewn.

3.7 End Item Testing. The harnesses shall meet International Mountaineering and Climbing Federation Union Internationale des Associations d'Alpinisme – (UIAA) Standard 105 or EN 12277: for their respective types.

Harness, Mountaineering, Type I	Type C, Sit Harness
Harness, Mountaineering, Type II	Type C, Sit Harness
Harness, Mountaineering, Type III	Type D, Chest Harness

3.8 Labels Each harness shall have identification label (Class 1) a size label (Class 2) and instruction label (Class 3) or a combination size, identification and instruction label (Class 14) conforming to Type VI of MIL-DTL-32075. The color of the labels shall be white. Size and instruction information details will be in accordance with EN12277. The following identification information shall be included in the printing for the labels for the harnesses.

HARNESS, MOUNTAINEERING  
TYPE (I, II, or III)  
NSN: XXXX-XX-XXX-XXXX

3.9 Workmanship. The finished harness shall conform to the quality of product established by this document. The occurrence of defects shall not exceed the contractors own quality assurance standards and the quality assurance standards defined in the technical data in the solicitation and/or contract.

3.10 Service life. The harness shall have no unexpected material or component failures during a continuous one-year cycle. The harness shall have no unexpected material or component failures during periodic use over a five year period.

3.11 Labels/barcoding/instruction slip. If applicable, all labeling, barcoding and instruction slip requirements shall be as specified in the solicitation or contract (see 7.2).

4. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

4.1 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible, provided

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that the material meets or exceeds the operational and maintenance requirements and promotes economically advantageous life cycle costs.

## 5. PRODUCT CONFORMANCE PROVISIONS.

5.1 Product conformance. The products provided shall meet the salient characteristics of this commercial item description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The Government reserves the right to require proof of such conformance.

5.2 Market acceptance criteria. The item offered or generic equivalent must have been sold to the commercial market or to the Government.

5.3 Visual examination. Each harness shall be examined for the following defects as listed in Table IV.

TABLE IV. End item examination

Examine	Defect Description
Cleanness	Spots or stains clearly noticeable affecting appearance
Finish	Not smooth and adherent
	Not low reflectance, matte finish
	Does not provide low contrast with typical use terrain
Construction	Component misplaced or workmanship improperly performed
	Component missing
	Component damaged
Straps	Not as specified
	Not specified color, streaky or shaded
	Any run, dropped stitch, snag, pull, slubby yarn or broken end
Seams and stitching	Open seams in single stitched seam or in either stitching row of a double stitched seam
	Loose stitch tension resulting in a loosely secured seam or tight stitch resulting in breaking of stitches when donning or doffing
	Ends of stitching not secured as specified
	Part caught in unrelated row of stitching
	Not backstitched where required
	Not repaired as specified (when applicable)
Label/barcoding and instruction slip	Incorrect, illegible, omitted or misplaced.
Marking	Omitted, missing information or illegible

5.4 Acceptance criteria. Acceptance criteria shall be as specified in the contract or purchase order (see 7.2).

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## 6. PACKAGING.

6.1 Preservation, packing and marking. The preservation, packing and marking shall be as specified in the contract or order (see 7.2).

## 7. NOTES.

### 7.1 Sources of documents.

7.1.1 Government documents. Copies of Government documents are available online at <http://assist.daps.dla.mil/quicksearch/> or from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

## DRAWINGS

### U.S. ARMY NATICK SOLDIER CENTER

3-3-0151	Harness, Mountaineering, Type I
3-3-0134	Harness, Mountaineering, Type II
3-3-0150	Harness, Mountaineering, Type III

(Copies of drawings are available from the U.S. Army Natick Research Development and Engineering Center, Natick Soldier Center, ATTN: NSRDEC-RDNS-WPW-C, Natick, MA 01760)

7.1.2 Federal Acquisition Regulations are available online at <http://acquisition.gov/far/index.html> or by contacting the Superintendent of Documents at 202-512-1800.

7.1.3 Non-Government documents. Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents may be available in or through libraries or other informational services.

## EUROPEAN STANDARD (EN)

EN 12277: Mountaineering Equipment – Harnesses – Safety Requirements and Test Methods

(Copies are available online at [www.bsi-global.com](http://www.bsi-global.com) or from BSI British Standards, Customer Services 389 Chiswick High Road London W4 4AL United Kingdom)

## INTERNATIONAL MOUNTAINEERING AND CLIMBING FEDERATION UNION INTERNATIONALE DES ASSOCIATIONS D'ALPINISME (UIAA)

UIAA Safety Standard 105 Mountaineering and Climbing Equipment, Harnesses

(Copies are available online at [www.theuiaa.org](http://www.theuiaa.org) or from the Union Internationale Des Associations D'Alpinisme (UIAA) Monbijoustrasse 61 Postfach CH-3000 Bern 23 Switzerland)

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7.2 Ordering data. The contract or order should specify the following:

- a. Title, number, and date of this Commercial Item Description.
- b. Type, sizes required. (See 2.1)
- c. Color required. (See 3.4)
- d. When required, labeling, barcoding, and instruction slip (See 3.11)
- e. Acceptance criteria. (See 5.4)
- f. Packaging requirements. (See 6.1)

7.3 Subject term (key word) listing.

Seat, Rappel  
Seat, Swiss

MILITARY INTERESTS:

CIVIL AGENCY COORDINATING ACTIVITY:  
GSA – FSS

Custodian:

Army - GL  
Marine Corps – MC

PREPARING ACTIVITY:

DLA-CT

Project 8465-2009-012

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST Online database at <http://assist.daps.dla.mil/>.