

F.No. U.II-98(Spec.)/2012-13-Prov(Ruck Sack)-MHA-Prov-I - 1285

भारत सरकार/Government of India

गृह मंत्रालय/Ministry of Home Affairs

पुलिस आधुनिकीकरण प्रभाग /Police Modernization Division

संभरण-I डेस्क /Prov.I Desk

Jaisalmer House, 26, Man Singh Road,
New Delhi, the 02nd November, 2016

To,

The DsG: AR (through LOAR), BSF, CISF, CRPF, ITBP, NSG, SSB & BPR&D.

Subject: Revised QRs & Trial Directives of Ruck Sack (70-85 Ltrs) for all CAPFs.

The undersigned is directed to refer to the subject mentioned above and to say that the Revised QRs and Trial Directive in respect of Ruck Sack (70- 85 Ltrs) as per Annex-I and Annex-II respectively have been approved by the competent authority in MHA.

2. Henceforth, all the CAPFs should procure the above items required by them strictly as per the laid down QRs and TDs of Ruck Sack (70- 85 Ltrs).

3. Concerned CAPFs will be accountable for correctness of the QRs and Trial Directives of Ruck Sack (70- 85 Ltrs).

4. QRs/Specifications of Ruck Sack (70-100 Ltrs) issued earlier vide MHA's letter No. U.II-98(Spec.)/12-13-Prov(Ruck Sack) dated 12.2.2013 is rescinded.

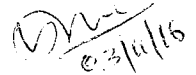
Encl: As above.

Yours faithfully,


(Ritesh Kumar)

Under Secretary to the Govt. of India

✓ Copy forwarded for necessary action to: SO (IT), MHA - with the request to host the Trial Directives on official website of MHA (under the page of Organizational Set up, Police Modernization Division-Clothing items) and remove earlier QRs/Specifications of Ruck Sack (70-100 Ltrs) vide MHA's letter No. U.II-98(Spec.)/12-13-Prov(Ruck Sack) dated 12.2.2013. Soft copy is being sent through email also.


03/11/16

(V. Devadas)

Section officer (Prov-I)

Copy to: Director (Procurement), MHA

(15)

Revised QRs/Specification of Ruck Sack(70-85 Ltrs)

Sl. No.	Parameter	Requirement in Specification
1	Type	Top Loader with detachment pack
2	Compartment	<ul style="list-style-type: none"> • One Bottom Compartment • One Top Compartment with central Zip and draw cord and skirting top lid with pocket & side compartments • Detachable Pack of 08 Ltrs\pm10% with provision for carriage of a water bottle
3	Featuring	<ul style="list-style-type: none"> • Top Compression straps. • Side Compression Straps. • Front Compression Straps. • Adjustable Lid Closure. • Adjustable back system with top and bottom load adjusters. • Padded and S shaped shoulder straps with sternum strap. • Padded and curved waist belt. <p>Dimensions of Pockets:-</p> <ul style="list-style-type: none"> i) Right Side Pocket-38(\pm3) cm x 10(\pm1) cm x 9(\pm1) cms ii) Front Pocket-51(\pm4)cm x 26(\pm1)cm x 9(\pm1)cms iii) Main Compartment-60(\pm5)cm x 35(\pm3)cm x 23(\pm2)cms iv) Upper Left side Pocket-21(\pm1)cm x 10 (\pm1)cm x 5(\pm1)cms v) Lower Left Side Pocket-17(\pm2)cm x 10(\pm1)cm x 5(\pm1)cms <ul style="list-style-type: none"> • Main compartment divider can be released to create one large compartment. • Side waist belt adjusters.
4	Fabric Used	<ul style="list-style-type: none"> a) Main Fabric (Base Fabric):- Nylon 6,6, PU Coated 1000 Den. (Appendix-4-1) GSM 360 minimum b) Lining Fabric:- Shell Lining 190* Taffeta, GSM 105 minimum <p>*190T denotes thread count i.e. EPI+PPI (\pm5% tolerance)</p>
5	Webbing	Nylon Tapes (Nylon Six HT Filament yarn)
6	Volume(approx)	Minimum 70 Ltrs to Maximum 85 Ltrs Dimension of main Compartment:- Lenth-70 \pm 5cm Width-40 \pm 3cm Height-25 \pm 2cm
7	Extras	Attachment foldable combat colour cover with RUCK SACK of synthetic water proof material

Approved/ Not Approved

K. Durga Prasad, IPS,
DG CRPF

1000 D Cordura Specs or its equivalent

Sl. No	Characteristics	Requirement	Method
1	Nature of Fibre/Filament	100% Nylon 66 Air Textured	AATCC20:2010
2	Nature of Coating	Polyurethane	
3	Weave	Plain-1 up 1 down	Visual
4	GSM	370 Max	IS 1964:1970
5	Tearing Strength(N)		IS 6489: 1993
	-Warp(minimum)	300	
	-Weft(minimum)	220	
6	Breaking Strength		IS 1969
	-Warp(minimum)	3000	
	-Weft(minimum)	2400	
7	Abrasion Resistance(Martindale)- After 50000 cycles	No thread breakage	IS 12673:1989
8	Colour fastness to washing		IS/ISO 105 C10-C(3)
	-Change in colour	4 or better	
	-staining to adjacent fabric	4 or better	
9	Colour fastness to perspiration		IS 971:1983
	-Change in colour	4 or better	
	-Staining to adjacent fabric	4 or better	
10	Colour fastness to rubbing		IS 766:1988
	-Dry	4 or better	
	-Wet	4 or better	
11	Colour fastness to light	5 or better	IS 2454:1989
12	Dimensional change due to relaxations, both directions, percentage, maximum	2.0	IS 2977: 1989
13	Water proofness (Hydrostatic pressure head test at 30 cm water column height for 60 mins)	No percolation of water through the fabric or wetting of the outer surface	IS 7016 Part VII(A-2)
14	Water repellency (uncoated face)	Spray rating Min. 80	IS 390: 1975
15	Separation of PU film	On fraying threads in warp and weft directions up to 5 mm after cutting the fabric from any portion. there shall not be a continuous PU film on the areas from where the threads been removed.	
16	Resistance to accelerated ageing at 70 C±1C for 168 hrs in hot air circulating oven	There shall not be any softening, stiffening, tackiness, discolouration and objectionable odour	IS 70 7016 Pt. VII:1975
17	Resistance to damage by Flexing after 1,00,000 cycles	There shall not be any wrinkling, cracking flaking	IS 7016 Pt. IV:1987
18	pH of Aqueous extract	6.0-8.0	IS 1390: 1983(Cold Method)

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Appendix-'A'

TRIAL DIRECTIVES OF RUCK SACK(70- 85 LTRS)

AIM

To frame trial directives to facilitate board of Officers to carryout physical/technical evaluation of Samples of Ruck Sack at the time of procurement.

Composition of the Trial

The trial will be conducted on the basis of

- a) Physical specification:- To be checked by BOO
- b) Technical Specification:- NABL accredited lab test report as per requirement of QRs.

No part of accessory of Ruck Sack will be replaced/changed once the technical evaluation of tender sample has commenced.

General requirement

Following men material should be available during the trial procedure.

- a. Advance Sample of Ruck Sack as per QRs.
- b. Measuring tape & weighting machine.
- c. Magnate to check aluminum/brass item.
- d. Computer with printer.
- e. Calculator.
- f. Sufficient stationery including clip board, plain papers, pen & pencils.

General Instructions:

- a) This Trial Directive is issued to assist and guide the evaluation committee. Nothing in this trial Directives absolves the BOOs from their responsibility to ensure that the evaluation is carried out strictly as per the specifications in every respect.
- b) The Evaluation Committed may carry out additional test which they consider necessary after seeking approval of Competent Authority to verify the quality of the tender sample with the specifications.

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TRIAL DIRECTIVES OF RUCK SACK 70 TO 85 LTRS

Sl. No.	QRs/Specification		Trial Directives
	Parameter	Requirements in Specification	
1	Type	Top Loader with detachment pack	The Board shall check physically
2	Compartments	<ul style="list-style-type: none"> • One Bottom compartment • One top compartment with central zip and draw cord and skirting, top lid with pocket & side compartments. • Detachable Pack of 08 Ltrs $\pm 10\%$ with provision for carriage of a water bottle. 	<ul style="list-style-type: none"> • The Board shall check physically. • The functional quality of a zipper lies in how smoothly it operates. Zips will be tested by opening and closing them a given number of times (minimum 100) and checked for whether they snag or require extra effort at any stage or leave any part unzipped. • The detachable pack of 08 Ltrs shall be attached with zip in front of main Ruck Sack. • NABL accredited laboratory test report is required from the firm for confirming capacity of pack. • Weight carrying capacity of the Ruck Sack:- The Ruck Sack will be loaded with 6 Kg and hoisted a given number of times by its main handle as well as by the shoulders straps to confirm that it can hold the weight without snapping, rupturing or giving way in any other manner. • Detachable pack shall be so designed that it can be used separately.

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3.	Featuring	<ul style="list-style-type: none"> • Top Compression Straps. • Side Compression Straps. • Front Compression Straps • Adjustable Lid Closure. • Adjustable back system with top and bottom load adjusters. • Padded and S shaped shoulder straps with sternum strap. • Padded and curved waist belt. <p>Dimensions of Pockets:-</p> <ul style="list-style-type: none"> (i) Right Side Pocket- 38(±3)cm x 10(±1)cm x 9(±1)cms (ii) Front Pocket- 51(±4)cm x 26(±1)cm x 9(±1)cms (iii) Main Compartment- 60(±5)cm x 35(±3)cm x 23(±2) cms (iv) Upper Left Side Pocket- 21 (±1)cm x 10(±1)cm x 5(±1)cms (v) Lower Left Side Pocket – 17(±2) cm x 10(±1) cm x 5(±1) cms <ul style="list-style-type: none"> • Main compartment divider can be released to create one large compartment. • Side Waist belt adjusters. 	<ul style="list-style-type: none"> • The Board shall check physically the various straps by using the equipment. • Snap-lock buckles: They will be tested for slippage by providing tension of 25 Kg Weight. • Compression Straps should be made of Nylon Fabric. • Adjustable back system shall be checked by Board by adjusting the Ruck Sack as per convenience. Padded, S shaped shoulder straps with sternum strap, padded and Curve waist belt should be checked by the Board to confirm utility for Force personnel by random sampling. • The Board shall check physically the dimensions as per QRs/Specifications <p>Dimensions of Pockets:-</p> <ul style="list-style-type: none"> (i) Right Side Pocket- 38(±3)cm x 10(±1)cm x 9(±1)cms (ii) Front Pocket- 51(±4)cm x 26(±1)cm x 9(±1)cms (iii) Main compartment- 60(±5)cm x 35(±3)cm x 23(±2) cms (iv) Upper Left Side Pocket- 21 (±1)cm x 10(±1)cm x 5(±1)cms (v) Lower Left Side Pocket – 17(±2) cm x 10(±1) cm x 5(±1) cms <ul style="list-style-type: none"> • Provision of main compartment divider shall be checked physically by the Board. • Side Waist belt adjusters shall be checked physically by Board by adjusting to confirm utility for Force personnel by random sampling.
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4	Fabric used	<p>a) Main Fabric (Base Fabric):- Nylon 6,6, PU Coated 1000 Den. GSM 360 minimum</p> <p>b) Lining Fabric:- Shell Lining 190* Taffeta, GSM 105 minimum</p> <p>*190T denotes thread count i.e. EPI+PPI (±5% tolerance)</p>	<ul style="list-style-type: none"> The material Nylon 6.6. PU Coated 1000 Den. GSM 360 minimum and Shell lining 190* Taffeta, GSM 105 minimum shall be got tested in any NABL accredited laboratory. Colour fastness:- Colour fastness to washing by IS764:1979 (4 or better); to rubbing by IS 766:1983 (4 or better); to rubbing by IS 766,1988(4 or better); and to light by IS 2454:1985 (5 or better). Trueness of colour combination will be done by visual inspection. Strength of the Fabric:- <ul style="list-style-type: none"> (i) Abrasion: by ASTM 3884 method, Taber H-18, 500 grams. cycles wear through minimum 2000. Or by IS 12673:1989. Martindale. after 50,000 cycles. no thread breakage should occur. (ii) Tears: By ASTM 2261 warp minimum 510. fill (weft) minimum 48.4 lbs. <p>The NABL lab report required for checking colour code as per CIE LCH. D65 illuminate observer. 10 Degree Standard observer, 2:1 CMC (l:c) for brown, green and khaki colours:-</p> <table border="1" data-bbox="917 1194 1380 1426"> <thead> <tr> <th></th> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>Brown</td> <td>5.664</td> <td>5.640</td> <td>4.432</td> </tr> <tr> <td>Green</td> <td>4.103</td> <td>4.654</td> <td>4.176</td> </tr> <tr> <td>Khaki</td> <td>16.918</td> <td>17.722</td> <td>10.822</td> </tr> </tbody> </table> <table border="1" data-bbox="917 1448 1380 1714"> <thead> <tr> <th></th> <th>L</th> <th>C</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Brown</td> <td>28.485</td> <td>8.448</td> <td>63.758</td> </tr> <tr> <td>Green</td> <td>25.725</td> <td>5.988</td> <td>135.782</td> </tr> <tr> <td>Khaki</td> <td>49.157</td> <td>19.275</td> <td>87.970</td> </tr> </tbody> </table>		X	Y	Z	Brown	5.664	5.640	4.432	Green	4.103	4.654	4.176	Khaki	16.918	17.722	10.822		L	C	H	Brown	28.485	8.448	63.758	Green	25.725	5.988	135.782	Khaki	49.157	19.275	87.970
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5	Webbing	Nylon Tapes (Nylon six HT Filament yarn)	NABL accredited laboratory test report is required from the firm.
6	Volume (approx)	Minimum 70 Ltrs to Maximum 85 Ltrs Dimension of main Compartment:- Lenth-70±5cm Width-40±3cm Height-25±2cm	<ul style="list-style-type: none">• NABL accredited laboratory test report is required from the firm for confirming capacity of the Ruck Sack.• Weight carrying capacity of the Ruck Sack:- The Ruck Sack will be loaded with 50 kg and hoisted a given number of times (minimum 50) by its main handle as well as by the shoulders straps to confirm holding of the weight without snapping, rupturing or giving way in any manner.
7	Extras	Attachment foldable combat coloured cover with RUCK SACK of synthetic water proof material.	<ul style="list-style-type: none">• NABL accredited laboratory test report is required from the firm to confirm the material to be synthetic water proof.• NABL accredited laboratory test is required to confirm colour code (disruptive pattern).• The outer colour should be checked and confirmed to be OG.

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Ruck Sack

Approved/Not Approved


K. Durga Prasad, IPS,
DG CRPF