

### सरदार वल्लभभाई पटेल राष्ट्रीय पुलिस अकादमी SARDAR VALLABHBHAI PATEL NATIONAL POLICE ACADEMY (भारत सरकार : गृह मंत्रालय)

(Government of India : Ministry of Home Affairs) हैदराबाद - 500 052 Hyderabad - 500 052

OPEN TENDER NO: 27011/2/2017-18/HS.STW

# PROCUREMENT OF ROCK CLIMBING EQUIPMENTS FOR STW OF SARDAR VALLABHBHAI PATEL, NATIONAL POLICE ACADEMY, HYDERABAD

Date of Tender Enquiry

: 24/08/2017

Closing date & time of submitting bids:15/09/2017 at 1700 Hrs.



Website: http://www.eprocure.gov.in

## सरदार वल्लभभाई पटेल राष्ट्रीय पुलिस अकादमी SARDAR VALLABHBHAI PATEL NATIONAL POLICE ACADEMY

(भारत सरकार : गृह मंत्रालय)

(Government of India: Ministry of Home Affairs)

**हैदराबाद - 500 052** Hyderabad - 500 052

## OPEN TENDER (e-Tender)

- 1. SVP National Police Academy, Shivrampally, Hyderabad, invites <u>e-bids</u> under single bid system from reputed firms for procurement of Rock Climbing Equipments for training activities with two year warranty for STW of Academy. The store list and technical specifications are enclosed herewith.
- 2. Salient features of the tender enquiry are as follows:-

(a)	Tender No.	27011/2/2017-18/HS.STW
(b)	Description of stores	Procurement of Rock Climbing Equipments for training activities with two year warranty for STW of the Academy
(c)	Specifications	As per Annexure-1
(d)	Type of Tender	Open Tender
(e)	Bid System	Single Bid System (Techno-financial Bid)
(f)	Earnest Money Deposit	Demand draft for Rs 18,000/- (Rupees Eighteen thousand) drawn from any of the Commercial Banks in favour of the 'The Director, S.V.P National Police Academy, Hyderabad.
(g)	Delivery schedule/ completion period	Delivery should be completed within 45 days from the date of supply order
(h)	Terms of Delivery	Free on Rail/ Road (F.O.R) Destination, SVP NPA Hyderabad.
(i)	Bid validity	Bid should be valid for <b>180 days</b> from the date of opening of bid.
(j)	Address of correspondence	The Administrative Officer (Admn) SVP National Police Academy, Shivarampally, Hyderabad, Telangana – 500052
(k)	Warranty	Two year warranty support from the date of supply.
(1)	Sample	Sample should be produced before TPC during the opening of bid. Bidder is self responsible on his own expenditure for showing the sample before board during opening of bid.

3. Important dates related to this tender are furnished below for information: -

S.No.	Particulars	Date	Time
1.	Date of online publication of tender	24/08/2017	1100
2.	Starting date for downloading Tender document	24/08/2017	1200
3.	Bid submission starting date	24/08/2017	1300
4.	Bid submission closing date	15/09/2017	1700
5.	Closing date & time for submission of original copies of EMD	15/09/2017	1700
6.	Opening of technical bids.	18/09/2017	1000

- 4. Interested manufacturers/ authorised dealers/ stockists/ suppliers dealing with above items can download the tender document from CPP Portal (<a href="www.eprocure.gov.in">www.eprocure.gov.in</a>) and bid can only be submitted through the same website. **Bid submitted other than CPP Portal will not be accepted**. The Eligible bidders should have the valid digital signature certificate (DSC) issued from any agency authorised by Controller of Certifying Authority (CCA), Govt. of India.
- 5. The bids are invited online under single cover system (Techno-price bid/ bill of quantity (BOQ) from eligible bidders.
- 6. Bidders can access and download the tender documents from CPP Portal and can fill them with all relevant information and submit the completed tender document online on the website: http://www.eprocure.gov.in. The downloading of tender documents shall be carried out strictly as provided on the website. No editing, addition, deletion of matter shall be permitted. If such action is observed at any stage, such tenders are liable for outright rejection.
- 7. Tender shall be submitted online only at CPPP website. Bidders are advised to refer the Bidders manual kit for e-submission of the bids online through the Central Public procurement portal available at the website: http://www.eprocure.gov.in. Aspiring Bidders/ Suppliers who have not enrolled/ registered in e-procurement should enrol/register before participating through the website http://www.eprocure.gov.in. The portal enrolment is free of cost.
- 8. All the documents as per tender requirement should be uploaded online and further, no documents will be accepted offline. However, Demand Draft (EMD Earnest money deposit) hard copy should be sent to SVP National Police Academy before the due date of opening. Bidders who are not submitting any of the required documents online will summarily be rejected.
- 9. The details of the Tender document and EMD should be filled and uploaded online. Earnest Money Deposit (EMD) for Rs.18,000/- (Rupees Eighteen thousand only) (Refundable) should be deposited in form of Crossed Demand draft Drawn on any nationalized bank in favour of Director, SVP National Police Academy, payable at SBH, Shivarampally, Hyderabad. Bids without EMD will not be considered. Tender Reference Number or details should be mentioned on the backside of the original crossed Demand Draft and the same should be sent to SVP National Policy Academy, Hyderabad before due date of opening of the tender.

#### **Terms and Conditions**

- 10. The TIA (Tender inviting authority) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour. For any queries regarding e-tendering process, the bidders are requested to contact over phone: 08826246593,07799289911 or send a mail over to <a href="mailto:cppp-nic@nic.in">cppp-nic@nic.in</a>.
- 11. Bid should include information related to all specifications sought. It should also contain company brochures of all equipments and should be accompanied by relevant technical documents issued by the manufacturer in support of specifications asked for.
- 12. Delivery/installation is to be completed within 45 days from the date of Supply Order failing which, penalty @ 0.5% of the Supply Order value will be recovered for every week period delay from the final payment. Further in case of inordinate delay of 60 days from the date of Supply Order, this Supply order stands cancelled without any further notice and you will also be liable to be blacklisted.
- 13. The date of placing the order shall be the date of dispatch of order of the delivery there of to the tenderer, when such order is being delivered through some person.
- 14. If the tenderer fails to supply goods within stipulated delivery period then the purchase order will stand cancelled and the security deposits shall be forfeited. In addition, the tenderer may be blacklisted for a definite period to be decided by SVP NPA, during which no supply order would be given to the blacklisted tenderer. In this case, order for the same product(s) will be awarded to the L2 tenderer based on the same documentation & processes.
- 15. After the expiry of the stipulated delivery period, which includes extension period if any, no item shall be accepted by SVP NPA. If the tenderer applies for the extension of the delivery period, the extension can be granted on valid grounds only once and up to a maximum of 30 days.
- 16. Payments would be made only after the receipt of all the items ordered in the supply order. In cases, where part supply has been made and the supply order for the remaining items has been cancelled, payment would be made for the supplied items after deducting the penalty, if any.
- 17. No interest will be allowed on the Earnest Money Deposit or security deposites so remitted and no claim shall be entertained in respect of the same. It may specifically be noted that ordinarily payment will be made only after full supplies are completed as per orders and that no advance payment can be arranged.
- 18. The tenderer shall be responsible for the proper packing of goods so as to avoid damages under normal conditions of transport by rail, road or air and for delivery of the material in good conditions to the consignee at destination. In the event of any loss, damage breakage, leakage or any shortage tenderer shall be liable to make good such loss or shortage.
- 19. **Warranty**. Two year warranty support from the date of supply.

- 20. <u>Bid Validity</u>. The Bid/ Tender submitted shall necessarily remain valid for 180 days. If any bidder withdraws his tender before the said period, SVP NPA shall without prejudice to any other right or remedy, be at liberty to forfeit the bid security submitted alongwith the bid.
- 21. <u>Sample</u>. Sample should be produced before TPC during the opening of bid for checking quality of equipment. Bidder is self responsible on his own expenditure for showing the sample before board during opening of bid.
- 22. Performance Security Clause. The successful bidder shall have to deposit a performance security of 5% of the contract value of the supply/ purchase order rounded up to next hundred in the form of account payee demand draft/ bank guarantee from a nationalized/ scheduled commercial bank in favour of the Director, SVP NPA Hyderabad payable at SBH Shivrampally, Hyderabad within 15 days of the placement of supply order for due performance as per the provisions contained in GFR 171. Failure on the part of the firm to deposit the performance security within stipulated time the purchaser reserves the right to cancel the Supply Order. Performance Security submitted by the bidder will remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. No interest will be payable for "Performance Security."
- 23. The Director, SVP National Police Academy reserves the right to order full or part thereof of the items enclosed or accept/ reject any or all the bids without assigning any reason.
- 24. Terms of Payment. No advance payment or payment against proforma invoice will be made. Payment will be made only after completion of supply & installation.
- 25. Prices shall be quoted in Indian rupees only.
- 26. The prices once accepted by the Purchaser shall remain valid till the successful execution of the complete order to the satisfaction of the Academy. The Academy shall not entertain any increase in the prices during the period. In the event there is a reduction or increase in Government levy/ duties during the period of execution of the order, the rates shall be suitably adjusted with effect from the date notifying the said reduction or increase in the Government levy/ excise duty. However, the Purchaser is not liable to any claim from the Supplier on account of fresh imposition and/ or increase of Excise Duty, Customs Duty, Sales Tax etc. on raw materials and/ or components used directly in the manufacture of contracted goods taking place during the pendency of contract.
- 27. Following scanned documents in **pdf file** format must be enclosed in cover duly sealed and stamped.
  - (a) Firm Registration Certificate as per the Companies Act of India.
  - (b) ISO Certification.
  - (c) Banker details.
  - (d) Details of previous experience/ supply.
  - (e) Authorization certificate from OEM.

- (f) Sales Tax clearance & VAT/GST Registration.
- (g) Income Tax Returns and details of last year turnover.
- (h) Certification from UIAA.
- (i) Scanned copy of EMD Demand Draft drawn in favour of 'The Director, S.V.P. National Police Academy, Hyderabad' submitted in portal followed by original copy before closing of tender date at the address of the Administrative Officer (Admn.), SVP National Police Academy, Shivarampally, Hyderabad. Offers received without the prescribed EMD will be rejected summarily.
- (j) Firms should be submitting only required documents and numbering of all the pages is necessary. Checklist of all the important documents should also be enclosed in the bid.
- (k) Financial bid (In excel file like BoQ): The rates i.e. unit rate of each item and total amount including all taxes, labour charges, if any, are to be quoted explicitly both in words and figures. The Price Bid/ BOQ template must not be modified or replaced by the bidder; else the bid submitted is liable to be rejected for this tender.

#### 28. Taxes and duties.

- (a) Vendor shall be entirely responsible for all taxes, duties, license fees etc. incurred until delivery of the contracted services to the Academy.
- (b) No bid will be considered unless and until all the pages / documents comprising the bid are properly numbered, signed and stamped by the person/s authorized to do so.
- 29. Right to cancel the order. The Director, SVP National Police Academy reserves the right to cancel the purchase order without any financial repercussion on either side and without seeking the consent of the supplier at any stage of purchase process. No further correspondence in this matter will be entertained.

Yours faithfully,

(K.Shankar)

Administrative Officer (Admn.) SVP NPA Hyderabad

Copy to: Programmer with a request to please get the above requirement posted in NPA Website and provides a link

Gram: 'POLACADEMY' e-mail:administrator@svpnpa.gov.in Tel: 91-040-24015151 to 24015158 Fax: 91-040-24015179



#### Annexure-1

### **STORE LIST**

Ser No	Name of Contents	Qty	
1.	Full Body Harness	05 Nos	
2.	Seat Harness	10 Nos	
3.	Rappelling Gloves	20 Pair	
4.	Carabineer Screw Lock	10 Nos	
5.	Carabineer Plain	10 Nos	
6.	Rope Protector	04 Nos	
7.	Descender	02 No	
8.	Self Breaking cam based descender	04 Nos	
9.	Self Breaking based descender with fall arrester	04 Nos	
10.	Ascenders Jummer	04 Nos	
11.	Foot Loop for Ascender	04 Nos	
12.	Cam loaded Rope Clamp	02 Nos	
13.	Chest Ascender	02 Nos	
14.	Secure Shoulder strap	04 Nos	
15.	Mountaineering Helmet	10 Nos	
16.	Mobile fall Arrester	02 Nos	
17.	Drop Proof pulley for long Tyrolean traverses	02 Nos	
18.	Transport Pulley	04 Nos	
19.	Simple Pulley	04 Nos	
20.	Double Prusik Pulley	02 Nos	
21.	Ropes 10mm	05 Nos	
22.	Head Lamp	05 Nos	

#### **TECHNICAL SPECIFICATIONS**

Ser No	Name of the Equipment	Specification	Compliance Yes/No
1.	Full Body Harness	The full body harness should be a proper rescue	
		harness & not a sports harness.	
	15	It should be made of high strength nylon & polyester	
		fabrics	
	- u - v - u	The harness should be a padded full body harness	
	Í	with load bearing metallic anchor points for a fall	
	1	safety, victim pick up & work positioning:	-
		-A dorsal (back shoulder), a sternal (front chest), a	=
		ventral (front waist) & Two lateral (side waist)	
		attachment / anchor points.	
	· 3	The harness should have a cross back design (X) to	
		distribute load & lower pressure points during a	
		rescue operation.	
	the state of the s	It should have a wide & cushioned waist belt, leg	
		loops & shoulder straps with breathable lining	
	3 × y	material for comfort to the rescuer during long	
	1 0	suspensions.	
		The waist belt, shoulder straps & leg loops should be	To the second second second
		size adjustable.	
		The harness should have minimum five to six tool	
	*	holder loops.	
	×	It should be available in various sizes to fit every	Ni .
	5.	Indian human physique	
		- The waist belt sizes should fit to size 60-110 cm	
		- Leg loops should fit to size 45 - 65 cm	
	to the state of th	The weight of the harness should not be more than	
	1707 1	2100 gms	
	1 22	The harness should be CE EN 361, CE EN 358, CE EN	•
	×	813 certified.	
2.	Seat Harness	It should be compatible with a chest harness to	
		convert to a full body harness	
		Waistbelt and leg loops should be lined with	
		breathable perforated foam for comfortable	
		suspension	
	0	It should have Ventral attachment point to distribute	
		the load between the waist belt and the leg loops	
		during suspension	* .
		It should have a rear attachment buckle for	
		attaching the chest harness	
		The waistbelt and leg loops should be equipped with	
	8	two self-locking DoubleBack buckles for quick and	
		easy adjustment	
		It should have 4 equipment loops (two large rigid	
		ones in front and two small flexible ones in back)	
	₩	It should have two slots for tool holder	
	72	Sizes: It should be available in two sizes. Size 1	10
		should fit the waist size 70 - 120 cms, leg loops 50-	
		65 cms & Size 2 should fit waist size 80 - 140 cms,	
		leg loops 60 - 75 cm.	
		Weight: Size 1 & 2 should not weigh more than 850	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		gms & 950 gms respectively.	
		It should have certification(s): CE EN 358, CE EN 813,	

Ser No	Name of the Equipment	Specification Yes 14/2	Compliance Yes/No
3.	Rappelling Gloves	The glove should be a natural, high-quality leather	
		It should have durable double layer of leather in	10000
		high-wear areas (fingertips, palm, between thumb	=
		& index finger)	20
		Back made of breathable stretch nylon	P.
	ese.	Neoprene cuff with Velcro closure	
		Carabiner hole to attach gloves to harness	
		Material(s): goat skin leather, stretch nylon	
	19	Certification(s): CE EN 420, CE EN 388 (3133)	
	e e	Should be available in sizes: XS, S,M,L,XL	
		Weight: 100 gm, 105, 115 g, 118 gm	
1 .	Carabineer Screw	It should be a screw lock carabineer made from light	
4.		weight aluminium	
	Lock	It should have Certification(s): CE EN 362, CE EN	
		12275 type B, UIAA	
		Weight: Maximum 50 gm	
	e e	Major axis strength: Minimum 23 kN	
	1	Minor axis strength: Minimum 8 kN	
e sure y i e i		Open gate strength: Minimum 9 kN	
		Gate opening: Minimum18 mm	
5.	Carabineer Plain	The carabineer should be made of light weight	
		aluminium.	7
		It should have a Keylock system helps avoid the	
		carabiner snagging during maneuvers	
		It should have certification(s): CE EN 12275 type B, UIAA	
		It should have a straight gate	
		Weight: Maximum 50 gm	
11		Major axis strength: Minimum 23 kN	
		Minor axis strength: Minimum 8 kN	
		Open gate strength: Minimum 9 kN	
		Gate opening: Minimum 24 mm	
		Capacity: Minimum 24 mm	-
6.	Rope Protector	It should be a metal rope protector which should	
0.	rtopo i rotootoi	help protect a moving rope from abrasion	
		It should have modules to connect with quick links	
	g.	& designed in a way that the number of modules	
		can be varied according to the terrain	
		Each module should be designed be positioned	
		independently to adapt to the terrain	
		It should have minimum 4 modules + 6 quick links	
		The rope protector shouldn't weigh more than 1050	
_		g: <u>+</u> 10 gms.	
7.	Descender	Should be square shape to reduce twisting of the	
		ropes	
		Material(s): aluminum	
		Weight: 100 gm	
	i A	Should be compatible for use on 8 - 13 mm	
		diameter ropes	

Ser No	Name of the Equipment	Specification	Compliance Yes/No
8.	Self Breaking	Cam based compact self-braking descender.	-
7.00070	cam based	Should have a multi-function handle to control of the	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
	descender	descent speed and positioning	8
	8 1 2	It should have a safety clip to enable the device to	
	· · · · · · · · · · · · · · · · · · ·	remain connected with the harness	
	*	It should have an automatic return system on the	
		handle.	
		It should lower heavy loads up to 200 kg	
		Should be compatible with rope diameter: 10.5 mm -	
		11.5 mm	
		Weight not more than: 400 gm	
		It should have certification(s): EN 341 classe A, CE EN	
		12841 type C, NFPA 1983 Technical Use, EAC	
9.	Self Breaking	The device should be Self Breaking cam & teeth based	
	based descender	Descender.	
	with fall arrester	The handle should allows the user to unlock the rope and	
		control the descent with the hand on the free end of the	
		rope.	*
	The second of th	It should have an Anti-panic function which should	
		activate if the user pulls too hard on the handle	, sine iterative e
		It should have an Anti-error catch to minimise the risk of	
		an accident due to incorrect installation of the device on	
		the rope The shape of the cam is designed to improve	
		rope glide when ascending	
	ē.	It should have a feature that prevents dropping the	19
		device and facilitates rope installation when passing	-
		intermediate anchors	
		It should also be useful to make a progress-capture haul	কা
		system	
*		It should enable to lowers heavy loads up to 250 kg	
		It should be compatible for rope diameters 10 to 11.5	
		mm	
	to a grant of the second	Weight (Maximum): 550 gm	
		It should have certification(s): EN 341 classe A, CE EN	
10		12841 type C, ANSI Z359.4, NFPA 1983 Technical Use, EAC	
10.	Ascenders	It should have a wide opening to allows the handle to be	2
	Jummer	easily grasped even with thick gloves.	
		The safety catch should be totally integrated into the	
		body of the ascender to help prevent snagging	
		The cam with teeth should have self-cleaning slot to	
		optimise performance under any conditions (frozen or	
		dirty ropes)	
		The ascender should have a wide lower hole for	
		carabiners of any lanyard and foot loop to be easily	
		attached	
		It should have a hole for clipping a carabiner around the	2 - 2
	W 0	rope	
		It should be available in left-handed and right-handed	
		versions The second of all residues at six least	
		The ascender should be made of aluminium, stainless	<i>u</i>
		steel, plastic, rubber, nylon	
		Weight: not more than 175 gm	
		It should be compatible with 8-13 mm ropes	
		It should have certification(s): CE EN 567, UIAA	

A CONTRACT	Ser No	Name of the Equipment	Specification	Compliance Yes/No
	11.	Foot Loop for Ascender	The foot loop should be designed to attach to the ascender	
		2	It should have an abrasion-resistant underfoot strap	
*		* 5	It should have an adjustable elastic to keep the foot in the foot loop with any type of shoe	
			It should have a DoubleBack buckle for easy and quick length adjustment of the foot loop	
			It should be made of strong nylon with steel buckles	=
			Weight: Not exceeding 75 gm	
	12.	Cam loaded Rope Clamp	It should be designed for use in haul systems as a progress capture device	
- # -	8		It should have an openable cam to allow installation or removal of the rope clamp at any point on the rope	
2			It should have independent safety catches on each side of the device for easy opening & to minimise the risk of accidental opening. The safety catches must have an unlocked indicator.	
7 7.7		to a set to a material of the second of G	It should have an integrated cam spring to avoid accidental snagging and prolong durability	
			It should be made of aluminium, stainless steel & nylon materials.	
			Weight: Not more than 275 gm	
			It should have certification(s): CE EN 567, CE EN 12841 type B, EAC, NFPA 1983 Technical Use	e **
		20	It should be compatible with 9-13 mm ropes	
	13.	Chest Ascender	It should be a compact, lightweight chest rope clamp	
			It should have a stainless steel toothed cam with self- cleaning slot to perform under any conditions (frozen or muddy ropes)	
			The lower hole should be angled to keep the device flat on chest while ascending	
			Material(s): aluminium, stainless steel, nylon	
			Weight: Maximum 100 gm	
	18.1		It should be compatible with 8-11 mm ropes	
			It should have certification(s): CE EN 567, CE EN 12841 type B, EAC	
	14.	Secure Shoulder strap	Should be simple construction for easy donning	
			Should have Front and rear buckles for easy, quick adjustment	
			Should mounts on seat harnesses with rear rings	W.
			Weight not to exceed 150 gm	

Ser	Name of the Equipment	Specification	Compliance Yes/No
15.	Mountaineering	The helmet should be lightweight & durable	_
	Helmet	The helmet shell should be of injected ABS & expanded polystyrene foam liner	
23	Table 100	It should have sliding shutters to adjust ventilation	
		It should have adjustment buckles, placed to the sides, away from the chin	
		It should be totally adjustable according to head size	
		It should have integrated clips / slots for headlamp	
	=	It should have sizes to fit head circumference 50 - 65 cms	
		Weight not more than 450 gm	**************************************
	- id	Certification(s): CE EN 12492, UIAA	
16.	Mobile fall Arrester	The mobile fall arrester should arrest falls, slides, and uncontrolled descents	-
		It should work on vertical or angled rope	
	(A	It should lock on the rope even if grabbed during the fall	
	and the second of the second o	It should moves up or down the rope without any manual manipulation of the device	
	0 1	Material(s): aluminum, stainless steel	
		It should have certification(s): CE EN 353-2, CE EN 12841 type A, EAC	
	*	Weight with carabineer : Maximum 375 gm	
17.	Drop Proof pulley for long Tyrolean	Should be a drop proof double pulley with integrated wire lock carabineer	
	traverses	Two in-line sheaves for good stability	
	*	Sealed ball bearings	
	,	Front and rear fairings	
	er er	2 supports for the carabiners for protection from cable wear	×
		Cable / Rope diameter: 9 to 13 mm	
	e	Weight: 400 gm	
		Material(s): aluminum, stainless steel, nylon	
		Certification(s): CE, EAC	
18.	Transport Pulley	It should be a double pulley	
		It should have the sheaves mounted on self-lubricating bushings for good efficiency	
		The Maximum allowable speed: 10 m/s	
		The attachment point should accept up to three carabiners	
	at A	It should have CE EN 12278, UIAA Certifications	
		Weight: Maximum200 gm	
-		Max. rope diameter: 13 mm	
		Sheave diameter should be 21 mm	
		Efficiency not less than 71 %	189
		Working load should be10 kN or more	
		Breaking strength should be 24 kN or more	

Ser No	Name of the Equipment	Specification	Compliance Yes/No
19.	Simple Pulley	Lightweight, compact pulley	
		Fixed side plates	
		Sheave mounted on self-lubricating bushings	
	, a	Material(s): aluminum side plates & aluminum sheave	
		Weight: 100 gm	
		Working rope diameter: 7 mm to 13 mm	
		Sheave type: self-lubricating bushings	
		Sheave diameter: 21 mm	
	177 - 1881	Efficiency: 71 %	11
		Working load: 5 kN	
		Breaking strength: 23 kN	
		Certification(s): CE EN 12278, UIAA	
20.	Double Prusik	It should be a double pulley parallel with movable plates.	
	Pulley	It should have parallel mounted sheaves and an	
		attachment point for creating different types of hauling systems.	
ar in participant		The Sheave should be mounted on sealed ball bearings for excellent efficiency	
		It should have aluminium side plates and sheaves	
		It should have CE EN 12278, UIAA certifications	
		Weight: Max 150 gm	
		It should be compatible with rope diameters: 7 - 11 mm  The Sheave diameter should be 25 mm	
			_
		Efficiency should not be less than 91 %	
		Working load should be minimum 6 kN	
		Breaking strength should be minimum 23 kN	
		Working load on one rope strand should be minimum 1.5 kN	2
21.	Ropes 10mm	Diameter: 10 mm	
		Certification(s): CE EN 1891 type A, UIAA	No 11110000
		Breaking strength: 28 kN	2
		Strength tied with figure-eight knot: 16 kN	
		Impact force (factor 0,3): 4,8 kN	
		Number of factor 1 falls: 10	
		Weight per meter not more than: 70 gm	
		Construction: 32 carrier	
		Percentage of sheath: 41 %	
		Static elongation: 3 %	
		Material(s): polyester, nylon	
22.	Head Lamp	Light output: 150 lumens	
		Weight less than: 100 gm	
		Beam pattern: wide	
		Energy: Three AAA/LR03 batteries should be included	11
		Battery compatibility: rechargeable Ni-MH	Ø 3
		Certification: CE	
		Watertightness: IP X4 (weather resistant)	140

\* \*