

## INVITATION OF EXPRESSION OF INTEREST (Eoi) FOR NDRF EQUIPMENT

NDRF is the lead federal force responsible for responding to all types of natural and man-made disasters NDRF acknowledge the importance of having reliable equipment to enhance the efficiency and effectiveness of rescue operations.

2. NDRF now intends to procure DM equipment for each of its 16 Units/Academy. Accordingly, NDRF has prepared a draft technical specification for the following DM Equipment required to enhance the efficiency and effectiveness of rescue operations: -

- i. Flow Meters
- ii. Boat Mountable Marine Flood Light
- iii. Portable toilet complete
- iv. Ratchet Puller with Tripod (3-5 Ton)
- v. T-Shirts Half/ Full Sleeves
- vi. Warning Alarm for Stability Protection (WASP)
- vii. Wind Meter
- viii. Nail Gun

3. The draft specifications are appended as **Appendix- A**.

4. In this context, NDRF invites Expressions of Interest (Eoi) from eligible manufacturers, suppliers and vendors to submit their comments and suggestions. In case these specifications do not match with the available equipment in the market, the same may be highlighted and the specification of the equipment available in the market may kindly be provided with the same functionality. The purpose of the Eoi document is to provide necessary information to NDRF so that genuine and generalized specifications can be framed and finalized for further procurement, and no gap exists in the specifications of the items available in the market out the specifcness floated in the bid by NDRF.

5. This EOI is not an offer by NDRF or a tender document but it is an invitation to receive responses from eligible manufacturers, suppliers, and vendors in the industry the draft specification framed by NDRF.

6. **Eligibility Criteria:** The minimum eligibility criteria for an entity to participate in the Eoi is as follows: -

- i. The entity must be a manufacturer or vendor/supplier/dealer registered in India under relevant applicable Acts and Laws.
- ii. The entity must have some experience in the supply of such equipment.
- iii. NDRF may call manufacturers, suppliers and vendors to conduct the demonstration/field trial of such equipment if needed before finalizing the specification.

7. **Documents to be submitted:** The following documents are required to be submitted as part of the response to this EoI.

- i. Documents supporting Eligibility Criteria as mentioned above.
- ii. List of equipment catalogue with detailed technical specifications along with estimated cost if possible.

8. Eligible manufacturers, suppliers and vendors who have the competence and experience to carry out such work are requested to submit the EoI along with supporting documents within 21 days of the EoI date.

**Important timelines:**

Event	Timeline
Last date of submission of responses	within 21 days Email:- <a href="mailto:rd-cell.ndrf@gov.in">rd-cell.ndrf@gov.in</a>

(Harvinder Singh)

Second-In-Command (R&D)

HQ NDR

No. 1-17018/R&D/2622/SRC//HQ NDRF/2014- 29

Dated 24/01/2025



### Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	14-02-2025 18:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	14-02-2025 18:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	180 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Home Affairs
Department Name/विभाग का नाम	Central Armed Police Forces
Organisation Name/संगठन का नाम	National Disaster Response Force (ndrf)
Office Name/कार्यालय का नाम	Hq Ndrf New Delhi
क्रेता ईमेल/Buyer Email	rd-cell.ndrf@gov.in
Total Quantity/कुल मात्रा	1
Item Category/मद केटेगरी	Eol for NDRF DM Equipment
GeMARPTS में खोजी गई स्ट्रिंग / Searched Strings used in GeMARPTS	Eol for NDRF DM Equipment
GeMARPTS में खोजा गया परिणाम / Searched Result generated in GeMARPTS	Dungaree for NDRF, Crop Protection Equipment - Hand Operated Knapsack Sprayer, Piston Type for Agriculture as per IS 3906, T - Shirts (Operational Uniform) for (NDRF), Trunk Wear Bermuda (Operational Uniform) for (NDRF), PVC Suit - for Personal Protective Gears NDRF, Plastic Sheet (4 x 50 m) for NDRF, Electric Circular Saw for wood cutting (NDRF), Retro - Fit Emission Control Equipment for Diesel Generators (V2), Laboratory Glassware - Burettes (V2) as per IS 1997, Dress for Aquatic Disaster Response During Rain - Water Proof Jacket for NDRF
अधिसूचना के लिए चयनित प्रासंगिक श्रेणियाँ / Relevant Categories selected for notification	<ul style="list-style-type: none"> <li>Recycled T - Shirt</li> <li>Portable Toilet</li> <li>Hydraulic Puller</li> </ul>
MSE Exemption for Years Of Experience/अनुभव के वर्षों से एमएसई छूट/ and Turnover/टर्नओवर के लिए एमएसई को छूट प्राप्त है	Yes
Startup Exemption for Years Of Experience/अनुभव के वर्षों से स्टार्टअप छूट/ and Turnover/ टर्नओवर के लिए स्टार्टअप को छूट प्राप्त है	Yes

Bid Details/बिड विवरण	
<b>Document required from seller/विक्रेता से मांगे गए दस्तावेज़</b>	Bidder Turnover, Certificate (Requested in ATC), OEM Authorization Certificate, OEM Annual Turnover, Additional Doc 1 (Requested in ATC) *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
<b>Do you want to show documents uploaded by bidders to all bidders participated in bid?/</b>	No
<b>Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया</b>	No
<b>Type of Bid/बिड का प्रकार</b>	Single Packet Bid
<b>Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय</b>	5 Days
<b>Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)</b>	No
<b>Evaluation Method/मूल्यांकन पद्धति</b>	Total value wise evaluation
<b>Arbitration Clause</b>	No
<b>Mediation Clause</b>	No

#### EMD Detail/ईएमडी विवरण

Required/आवश्यकता	No
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#### ePBG Detail/ईपीबीजी विवरण

Required/आवश्यकता	No
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#### MII Purchase Preference/एमआईआई खरीद वरीयता

MII Purchase Preference/एमआईआई खरीद वरीयता	No
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#### MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. If the bidder is a Micro or Small Enterprise as per latest definitions under MSME rules, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria" subject to meeting of quality and technical specifications. If the bidder is OEM of the offered products, it would be exempted from the

"OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer.

2. If the bidder is a Startup, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria" subject to their meeting of quality and technical specifications. If the bidder is OEM of the offered products, it would be exempted from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer.

3. Purchase preference will be given to MSEs having valid Udyam Registration and whose credentials are validated online through Udyam Registration portal as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail themselves of the Purchase preference, the bidder must be the manufacturer / OEM of the offered product on GeM. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises and hence resellers offering products manufactured by some other OEM are not eligible for any purchase preference. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service and Buyer will decide eligibility for purchase preference based on documentary evidence submitted, while evaluating the bid. If L-1 is not an MSE and MSE Seller (s) has / have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such MSE Seller shall be given opportunity to match L-1 price and contract will be awarded for 25% (selected by Buyer) percentage of total quantity. The buyers are advised to refer the OM No. F.1/4/2021-PPD dated 18.05.2023 [OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if seller is validated on-line in GeM profile as well as validated and approved by Buyer after evaluation of documents submitted.

#### Pre Bid Detail(s)

Pre-Bid Date and Time	Pre-Bid Venue
03-02-2025 15:00:00	HQ NDRF, 6th Floor, NDCC-II Building, Jai Singh Road, New Delhi

#### EoI For NDRF DM Equipment ( 1 the number pi )

#### Technical Specifications/तकनीकी विशिष्टियाँ

Buyer Specification Document/क्रेता विशिष्टि दस्तावेज़	<a href="#">Download</a>
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#### Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Harvinder Singh	110001,HQ DG, NDRF, 6TH FLOOR, NDCC-II BUILDING, JAI SINGH ROAD, NEW DELHI	1	15

## Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें

### 1. Generic

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.

### 2. Turnover

Bidder Turn Over Criteria: The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3 year old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.

## Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

**All GeM Sellers / Service Providers are mandated to ensure compliance with all the applicable laws / acts / rules including but not limited to all Labour Laws such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972 etc. Any non-compliance will be treated as breach of contract and Buyer may take suitable actions as per GeM Contract.**

[This Bid is also governed by the General Terms and Conditions/ यह बिड सामान्य शर्तों के अंतर्गत भी शासित है](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्यवाई का आधार होगा।

**---Thank You/धन्यवाद---**



## Draft Specification for Flow Meter

**APPENDIX- 'A'**

### **SPECIFICATIONS**

**Name of Equipment:** -Flow Meter (Cup Type Water Current).

**Purpose:** - The Water Current Flow meter measures the velocity of current of water flow in open channel.

S/No.	Proposed Specification		Trial Directive	Remarks of the Board of Officers
1.	Measurement Range	0.5 to 3.5 M/Sec	To be checked physically by the BOOs. <i>&amp; Lab test report</i>	
2.	Type of current meter and rotor	Cup type	To be checked physically by the BOOs. <i>&amp; OEM certification</i>	
3.	Type of current meter (on the basis of availability of ball bearings)	Current meter with ball bearings or pivot bearings.	To be checked physically by the BOOs. <i>&amp; OEM certification</i>	
4.	Material	Stainless Steel and Brass	To be checked physically by the BOOs as well as from <i>Lab</i> Test Report to be provided by the firms.	
5.	Conformity to specifications	As per IS:3910 (Latest)	To be checked by the BOOs from the <i>Lab</i> Test Report to be provided by the firms.	
6.	Test Report	Firm has to provide test report issued by the Govt. approved Labs along with the approval of Lab issued by Govt. Department.	To be checked physical by the BOOs.	
7.	Accessories	i. Display Unit with required necessary accessories. ii. The Flow meter must be with 6-Cup assembly mounted on horizontal shaft. iii. Weight (Min. 10 Kg) duly painted that helps measuring instrument to submerge in the water, 10 Meter Suspension Cable and Wire Rope with Connecting clip, 1.2 Meter long wading Rod, Screw Driver, Spanner Wrench, Oil Can with machine oil and duster.	To be checked physical by the BOOs.	



Availability on GeM Portal

:: Yes.

Number of firms available

:: More than 4 Nos.

Name of Available Firms

:: i) Metlor ii) Gauri Engineering Works iii) Exacta iv) KMV

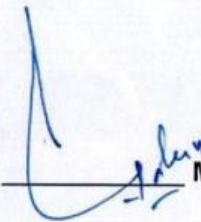
Number of Firms in the open market (If not available on GeM provide details of minimum 03 OEMs along with their catalogues.)

:: N/a

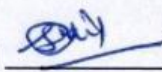
Tentative Cost

:: Rs.50,000/- (Per Unit)

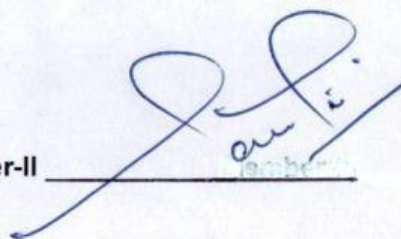
Presiding Officer



Member-I



Member-II



Co-opted Member



# Draft Specification for Boat Mountable Marine Flood Light

Appendix-'A'

## SPECIFICATIONS

**Name of Equipment:** -Boat Mountable Marine Flood Light.

**Purpose:** - This light will be used by NDRF on the Rescue Boat for illumination purpose during night operation.

S/No.	Proposed Specification		Trial Directive	Remarks of the Board of Officers
1	Rated Input Voltage	230 Vac +/- 20%, 50 Hz	BOOs to check physically and Test Report provided by the firm.	
2.	Operating Input Voltage Range	100-310 Vac, 50 Hz	BOOs to verify from Test Report provided by the firm.	
3.	Rated Power	100 Watt	BOOs to verify from Test Report provided by the firm.	
4.	Backup	4-6 Hours	BOOs to verify from Test Report provided by the firm and check physically by Board.	
5	Battery Rating	12 V 48 Ah	BOOs to verify from Test Report provided by the firm.	
6.	Protection	Equipped with Overcharging Protection	BOOs to verify from Test Report provided by the firm.	
7.	Charging Time	3 Hours or less	BOOs to verify from Test Report provided by the firm.	
8.	Driver Type	Class-II (Indian manufactured approved by BIS as per IS15885 Part 2)	BOOs to verify from Test Report provided by the firm.	
9.	Ripple Current	<10%	BOOs to verify from Test Report provided by the firm.	
10.	Ambient Operating Temperature Range	-20 °C to 50 °C	BOOs to verify from Test Report provided by the firm.	
11.	Max. Case Temperature	60 °C	BOOs to verify from Test Report provided by the firm.	
12.	Input Surge Protection	Line-Neutral 4 kV, Line & Neutral-Ground 4kV	BOOs to verify from Test Report provided by the firm.	

Presiding Officer

*[Signature]*  
20/12/24

Member-I

*[Signature]*

Member-II

*[Signature]*

Member-III

*[Signature]*

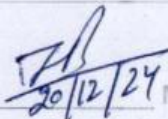
Co-opted Member

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13.	<b>Initial LED Luminaire Efficacy</b>	>110 Lm/ W	BOOs to verify from Test Report provided by the firm.
14.	<b>Available Color Temperature</b>	6000 K (+/- 5%)	BOOs to verify from Test Report provided by the firm.
15.	<b>Optical Cover/ Lens Type Lens material</b>	PC-MLO (Polycarbonate Micro Lenses Optic)	BOOs to verify from Test Report provided by the firm.
16.	<b>Luminaire light beam spread option</b>	120 ° (Symmetrical Beam)	BOOs has to check physically.
17.	<b>LED Life</b>	50000 Hrs. (Minimum)	BOOs to verify from Test Report provided by the firm.
18.	<b>Housing Material</b>	Aluminium Extrusion with Polycarbonate Lenses	BOOs to verify from Test Report provided by the firm.
19.	<b>Mounting Device</b>	Mounting Bracket Adjustable	BOOs has to check physically.
20.	<b>IP Protection</b>	IP 67	BOOs to verify from Test Report provided by the firm.
21.	<b>Weight</b>	12 Kg maximum (Including mountable stand)	BOOs to check physically.
22.	<b>Warranty</b>	2 year	BOOs to verify for certificate provided from the firm.
23.	<b>Accessories</b>	i) Adjustable stand with 3-5 feet height with provisions to mount on rescue boat floor without compromising with the mechanical strength of the boat floor board. The material of stand should be light in weight and must be able to withstand against the jerks that arises from uneven water flow of the river or canal and also able to withstand the weight of LED Flood Light i.e. 8 Kg (Minimum). ii) Charger with adaptor of suitable rating for 12 V 48 AH Battery.	BOOs to check physically and material strength and composition to verify from certificate provided by the firm.
24.	<b>Additional Requirements</b>	i) The LED Flood light must have the provisions for direct charging with OBM Engine and it must have	BOOs to check physically.

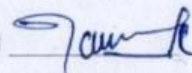
Presiding Officer

  
20/12/24

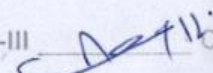
Member-I

  
20/12/24

Member-II



Member-III



Co-opted Member





		suitable voltage regulator and convertor with short circuit safety features. ii) The LED Flood Light must have the provisions for operating in different mode i.e. operating with different power consumption like at 50 %, 75 % and 100 % input power.		
15.	<b>Certification</b>	BIS as per IS 10322.	BOOs to check the certificate to be provided from the firm	
16.	<b>Test Report</b>	Original Test Certificate shall be furnished at free of cost at the time of physical evaluation from BIS laboratories or NABL. The firm shall furnish copy of the following documents from where the test certificate produced:- i) Current valid approval/ accreditation certificate of the laboratories.	BOOs has to check the certificate to be provided from the firm	

**Availability on GeM Portal**

:: Available in Emergency Light Category on GeM but Boat Mountable Marine Flood Light not available on GeM.

**Number of firms available**

:: More than 5 but only in Emergency Light Category.

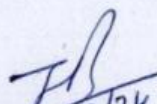
**Number of Firms in the open market**

:: More than 5.  
i) Hesham Industrial Solutions  
ii) Newbie Technology Pvt. Ltd.  
iii) Ascentech Solution Pvt. Ltd.

**Tentative Cost**

:: Rs. 15,000/- per unit.

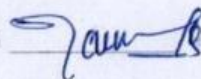
Presiding Officer

  
20/12/24

Member-I



Member-II



Member-III



Co-opted Member





# Draft Specification for Portable Toilet

Appendix- 'A'

S.No	Proposed Specification	Trial Directive	Remarks of the Board
	<b>GENERAL</b>		
1.0	1. 1- seater portable toilet with sludge tank (capacity 200 ltrs) with 75 mm outlet facility through butterfly valve and hosepipe (for 1 -seater ) having specifications are as under:-	BOO to check physically	
	2.Mode of Supply : Assembled ready to use	BOO to check physically	
	3.Number of Compartments : 1 seater portable toilet	BOO to check physically	
	4.Type of WC : European with ceramic base	BOO to check physically	
	5.Number of WC (Water Closet ) : 1	BOO to check physically	
	6.Water facility : By means of overhead tank capacity 200 ltrs or inbuilt Tank	BOO to check physically	
	7.Wash basin : 1 No in each WC unit (inside)	BOO to check physically	
	8.Sewage facility : Sludge tank capacity 200 ltrs with 75 mm outlet facility through butterfly valve and hosepipe	BOO to check physically	
	9.ventilation : One No (Opposite Side of Door)	BOO to check physically	
	10.Lifting hook :four number heavy lifting hook provided made of MS Steel	BOO to check physically or Undertaking by the firm	
	11 .Top(roof) shape : slanting/tapper with made of FRP (Fibre reinforced plastic material )	BOO to check physically or Undertaking by the Firm	
	12 .Projection of Roof : 100 mm projection from front and 50mm projection on other sides	BOO to check physically	



::02::

<b>PANEL MATERIAL</b>	:		
Side panel material	:	5mm thick ply core sandwich with 1mm thick FRP from both sides(5+1+1mm)	BOO to check physically or Undertaking by the Firm
Top(Roof) panel material	:	5mm thick ply core sandwich with 1mm thick FRP from both sides(5+1+1mm)	BOO to check physically or Undertaking by the Firm
Door panel material	:	5mm thick ply core sandwich with 1mm thick FRP from both sides(5+1+1mm)	BOO to check physically or Undertaking by the Firm
partition panel material	:	5mm thick ply core sandwich with 1mm thick FRP from both sides(5+1+1mm)	BOO to check physically or Undertaking by the Firm
Floor material	:	5mm thick FRP material	BOO to check physically or Undertaking by the Firm
<b>DIMENSION</b>	:		
Cabin size(LXWXH) ± 50 mm deviation	:	915mm X 915mm x 1980mm (for 1- seater)	BOO to check physically
Door size(WxH) ± 20mm	:	585mm x 1830mm	BOO to check physically



Ventilation size(WXH) ± 10mm	: 838mm X 150mm(above door) plus 838mm X 75mm(opposite side)	BOO to check physically
Single pan size ± 10mm	: 580mm X 440mm with built in platform/footrest	BOO to check physically
Leg Height ± 10 mm	430-480 mm	BOO to check physically
<b>MISC</b>	:	
Door locking bolts	: Size 100mm of MS outside of door	BOO to check physically
Towerbolt locking	: Towerbolt of MS size 75mm inside of door	BOO to check physically
Overhead tank material	: Made of PVC	BOO to check physically or Undertaking by the Firm
Wash basin material	: made of ceramic	BOO to check physically or Undertaking by the Firm
WC material	: Made of ceramic	BOO to check physically or Undertaking by the Firm
Towel rail/ring	: Made of plastic	BOO to check physically or Undertaking by the Firm
P-trap material	: made of PVC(75mm)	BOO to check physically or Undertaking by the Firm
Sewage tank material	: made of FRP 4mm thick	BOO to check physically or Undertaking by the Firm
Dia of lifting hook	: 40mm	BOO to check physically
Electric provision	: One LED Light of 5 watt Backup of Solar energy	BOO to check physically or Undertaking by the Firm
Sewage provision	: Sludge tank capacity 200 ltrs with 75 mm outlet facility through butterfly valve and hosepipe	BOO to check physically



::04::

Water supply connection	:	UPVC pipe connection with all toilet interconnecting	BOO to check physically	
Soap stand	:	Plastic made	BOO to check physically	
Tap	:	PVC push cock	BOO to check physically	
Provision for vent pipe	:	From sludge tank	BOO to check physically	
COLOUR & FINISH	:		BOO to check physically	
Colour of cabin	:	As per buyer's choice	BOO to check physically	



S/L NO	Proposed Specification	Trial Directive	Remarks of the Board
<b>GENERAL</b>			
<b>Portable Outdoor Camping Toilet</b>			
1	Portable camping Toilet having Dimension of 38 x40 x 42 cm Height Weight : less than 7 kg	BOO to check physically.	
2	Hand water spray Gun is standard supply with this product	BOO to check physically or Undertaking by the Firm	
3	Material used : HDPE ( High Density Polyethylene)	BOO to check physically or Undertaking by the Firm	
4	Weight Bearing Capacity : 120 kg	Undertaking by the Firm	
5	water Tank capacity : 12 liter (less than 15 liter)	BOO to check physically.	
6	waste collection sump capacity : 20 liter( Provided with waste level indicator & vent Plunger )(for spill control)	BOO to check physically.	
7	Very light weight product for easy portability supplied with required chemical kit to lower odor	BOO to check physically.	
8	Top seat and water tank can be separated from Bottom sump releasing side snap type brackets for cleaning .Discharge of collected waste can be carried out through large drain passage opening a threaded cap at the back side .Flush water can be obtained by repeatedly pressing a rubber bellow Bad odor can be restricted closing sliding gate ,when toilet is not in use	BOO to check physically.	



S/L NO	Availability on Gem Portai	Number of Firm Available	Name of Available Firms	Number of firm in the open market (If not available on GEM, provide details of minimum 03 OEMs along with their catalogues)	Tentative Cost
1.0	Yes	03 No's of firm specification available in the Gem Portal that aligned with our specification's	Not mentioned in the Gem portal	N/A	1.5 Lakh (Approx)



# Draft Specification for Ratchet Puller with Tripod

## APPENDIX- 'A'

### SPECIFICATIONS

**Name of Equipment:-**Ratchet Puller with Tripod

**Purpose:** - This equipment will be used by NDRF in Collapsed Structure Search and Rescue Operations for lifting the loads like debris.

S/No.	Proposed Specification		Trial Directive	Remarks of the BOOs
A) Ratchet Puller				
1	Capacity	3.0 to 5.0 Tonne	BOOs has to check physically.	
2	Lift Size	1.5 to 2.0Meter	BOOs has to check physically.	
3	Weight	15-25 Kg	BOOs has to check physically.	
4	General Technical Requirement	i) Ratchet Lever Hoist with roller chain. ii) High Tensile malleable housing. iii) Other parts should be made of high tensile steel and should be heat treated. iv) High Tensile Forged Hooks loadbrake, Brake and Reverse motion stop. v) Provisions for lubricating.	BOOs has to check measurable specification physically and specifications like material mechanical strength and composition can be ensured on the basis of lab test report. <i>for Govt Accredited/NABL lab</i>	
5.	Conformity to Standards	IS:11340 Latest, IS:2403 Latest	BOOs has to check certificates to be provided by firm.	
6.	Certification	ISO	BOOs has to check certificates to be provided by firm.	?
7.	Test Report	Original Test Certificate shall be furnished at free of cost with each consignment either from BIS laboratories or NABL. The firm shall furnish copy of the following documents from where the test certificate produced: - i) Current valid approval/ accreditation certificate of the laboratories.	BOOs has to check certificates to be provided by firm.	
8.	Warranty on Equipment	24 Months	BOOs has to check documents to be provided by firm.	
9.	Warranty on Spare Parts	18 Months	BOOs has to check documents to be provided by firm.	



B) Tripod				
1.	Height	2.0 to 2.5 Meter	BOOs has to check physically.	
2.	Type	Adjustable	BOOs has to check physically.	
3.	Weight	50-60 Kg	BOOs has to check physically.	
4.	Material	Mild Steel	BOOs has to check test report.	
5.	Attachment Points	Two Auxiliary eyebolts and mounted pulley as attachment points.	BOOs has to check test report.	
6.	Weight lifting Capacity	3-5 Tonne	BOOs has to check physically.	
7.	No. of Legs	3 Nos.	BOOs has to check physically.	
8.	Base plate	Mild Steel and other metal which can withstand against heavy load (up to 5 tonne).	BOOs has to check test report.	
9.	Hooking Ring	Firm to supply along with tripod.	BOOs has to check test report.	
10.	Locking the tripod stands	Firm to provide locking arrangement for locking the tripod stand with safety chain to prevent movement.	BOOs has to check test report.	
11.	Anti-Slipping of Tripod	Anti-slipping rubber pads/ support shoes bolted or riveted.	BOOs has to check test report.	
12.	Strength	Strength greater than <del>40</del> KN to <del>50</del> KN	BOOs has to check test report.	
13.	Distance between Legs	1-3 Metre	BOOs has to check physically.	
14.	Warranty on Equipment	60 Months	BOOs has to check documents to be provided	
15.	Test Report	Original Test Certificate shall be furnished at free of cost with each consignment either from BIS laboratories or NABL. The firm shall furnish copy of the following documents from where the test certificate produced: - i) Current valid approval/ accreditation certificate of the laboratories.	BOOs has to check certificates to be provided by firm.	



Availability on GeM Portal

:: Ratchet Puller with 3.0 Tonne and 3.2 Tonne capacity available in "Ratchet Lever (NLCIL) Q3 Category" but not available in 5.0 Tonne capacity and Tripod is not available on GeM Portal.

Number of firms available

:: 2 Nos. for Ratchet Puller with 3.0 Tonne and 3.2 Tonne capacity and no. firm available for Ratchet Puller with 5.0 Tonne capacity and Tripod 3.0 to 5.0 Tonne.

Names of Firm available

:: i) Maxpull ii) Loadmate iii) Speed.

Number of Firms in the open market (If not available on GeM provide details of minimum 03 OEMs along with their catalogues.)

:: More than 3

Ratchet Puller	Tripod
i) Maxpull	i) Yash Pal & Co.
ii) Speed	
iii) Kito Lever Hoist	
Rs. 60,000/- (Per Unit) (Approx.)	Rs. 50,000/- (Per Unit) (Approx.)

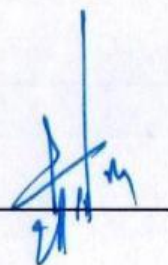
Tentative Cost

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Presiding Officer

28/12/24

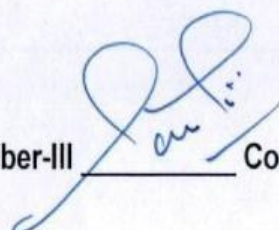
Member-I



Member-II



Member-III



Co-opted Member



# Draft Specification for T-Shirt (Half/Full Sleeves)

## APPENDIX – "A"

### TECHNICAL SPECIFICATION OF T-SHIRT (HALF/ FULL SLEEVES)

Srl No.	Present Specification with date of Formulation	Requirements	Specification/Parameter Proposed to be changed (No change to be written if no change proposed)	Reason for proposed change	Proposed Standards	Proposed Trial directive
1.	Approximate count of yarn (For guidance only)	150 Denier (100% multifilament Polyester, around 100 filaments)	80 Denier	Changing in denier will make the T-shirt lighter, hence more comfortable and more breathable due to the less thickness of yarn.  <b>For Athletic apparel lower Denier is used</b>	IS 3442:1980	To be verified by the BOOs through the lab test report.
2.	Blend Composition, %	100 % Polyester	92 % Polyester 8 % Lycra (Spintex)	<b>Polyester (92%)</b> is durable, moisture-wicking, and resists shrinking and fading. It's also relatively low -maintenance and holds its shape well over time.  <b>Lycra (Spandex) (8%)</b> provides stretch and flexibility, allowing the fabric to move with the body.  <b>Sportswear is generally designed with the same composition.</b>	IS 667:1981 and IS 3416 (pt-1) : 1988 (Dry mass basis)	To be verified by the BOOs through the lab test report.



Srl No.	Present Specification with date of Formulation	Requirements	Specification/Parameter Proposed to be changed (No change to be written if no change proposed)	Reason for proposed change	Proposed Standards	Proposed Trial directive
3.	Mass, gm/m <sup>2</sup>	200 $\pm$ 20	180 $\pm$ 5 %	Changing in mass will reduce the weight of T-shirt.	IS 1964 : 1970	To be verified by the BOOs through the lab test report and to be checked physically.
4.	Bursting Newton/cm <sup>2</sup>	150 $\pm$ 10	100 $\pm$ 10	Bursting Strength of t-shirts starts from 60 N/cm <sup>2</sup> $\pm$ 5	IS 1966 (Part-I) 2009 RA 2018/ ISO: 13938-1 (Hydraulic Method)	To be verified by the BOOs through the lab test report.
5.	Colour fastness to washing - Change in colour - Staining on adjacent fabric	4 or better 4 or better	No Change	-	IS/ISO 105 C 10:2006 RA 2017 Test A (1)	To be verified by the BOOs through the lab test report.
6.	Colour fastness to perspiration - Change in colour - Staining on adjacent fabric	4 or better 4 or better	IS 971: 1983 /ISO 971:1983/ IS/ ISO 105 E04: 2008 RA 2019	Addition of different methods will help getting better testing result and participation of multiple firms.	IS 971 : 1983 /ISO 971:1983/ IS/ ISO 105 E04: 2008 RA 2019	To be verified by the BOOs through the lab test report.
7.	Colour fastness to rubbing - Dry - Wet	4 or better 4 or better	No Change	-	IS/ISO 105-X12:2001 RA 2016	To be verified by the BOOs through the lab test report.



Srl No.	Present Specification with date of Formulation	Requirements	Specification/Parameter Proposed to be changed (No change to be written if no change proposed)	Reason for proposed change	Proposed Standards	Proposed Trial directive
8.	Colour fastness to light	4 or better (on blue wool)	No Change	-	IS 2454 : 1985	To be verified by the BOOs through the lab test report.
9.	Dimensional Change due to relaxation, both directions, percentage, maximum	2.0	No Change	-	IS 2977 : 1989 (RA 2020)/ ISO 6330 : 2021	To be verified by the BOOs through the lab test report.
10.	pH value of aqueous extract	6.0 - 8.5	No Change	-	IS : 1390 2022	To be verified by the BOOs through the lab test report.
11.	Colour	$\Delta E_{cmc} \leq 2.5$	No change	-	-	To be verified by the BOOs through the lab test report.
<b>Slide Fastener</b>						
12.	Designation	Medium - Chain width : $6.00 \pm 0.3$ mm - Thickness: - 2.60 mm (min.)	No Change	-	IS 14181 : 2002 (Part-I)	To be verified by the BOOs through the lab test report.
13.	Type	Closed end	No Change	-	IS 14181 : 2002 (Part-I)	To be verified by the BOOs through the lab test report.



Srl No.	Present Specification with date of Formulation	Requirements	Specification/Parameter Proposed to be changed (No change to be written if no change proposed)	Reason for proposed change	Proposed Standards	Proposed Trial directive
14.	Colour	Orange	No Change	-		To be checked physically by the BOOs.
15.	Security of interlocking of textile chain to cross wise strength	650 N	No Change	-	IS 14181 : 2002 (Part-I)	To be verified by the BOOs through the lab test report.
16.	Security of attachment puller to slider	250 N	No Change	-	IS 14181 : 2002 (Part)	To be verified by the BOOs through the lab test report.
17.	Security of slider lock holding	40 N	No Change	-	IS 14181 : 2002 (Part)	To be verified by the BOOs through the lab test report.

#### Retro reflective Material

18.	Colour	Silver	No Change	-	Visual	To be checked physically by the BOOs.
19.	Co-efficient of retro reflection for separate performance material (Normal state without wash), cd/(1x.m2), Minimum	330 (Coefficient of retro reflection at two rotation angles e1= 0 and e2- 90% should not differ) 15%	No Change	-	BS EN ISO 204171 : 2013 (Observer angle 12", Entrance angle 5°	To be verified by the BOOs through the lab test report.



Srl No.	Present Specification with date of Formulation	Requirements	Specification/Parameter Proposed to be changed (No change to be written if no change proposed)	Reason for proposed change	Proposed Standards	Proposed Trial directive
<b>Additional specifications of T-Shirt</b>						
20.	-	-	Breathable / RET (Resistance to Evaporative Heat Transfer) <3.5 m <sup>2</sup> Pa/W or less	A lower RET means the fabric allows sweat and moisture vapor to pass through more easily, ensuring wearer stays dry and comfortable. It will increase the breathability of the fabric.	ISO 11092 – 2014 IS 17376-2020 / IS 17416:2018	To be verified by the BOOs through the lab test report.
21.	-	-	Thermal conductivity 0.3 W/mk or more	It will help to transfer heat from the body surface to outside of the body. Higher thermal conductivity leads to more heat transfer, keeping the wearer cool and comfortable.	ASTM D 1518-14	To be verified by the BOOs through the lab test report.
22.	-	-	Anti-fungal - No fungal growth	It will help in reducing and controlling fungal growth.	AATCC 30 (Part III) - 2017	To be verified by the BOOs through the lab test report.
23.	-	-	Anti-bacterial Minimum Log 3 (99.9 %) reduction in Bacteria	It will help in reducing and controlling bacterial growth including odor.	JIS L 1902 : 2015/ ISO 20743	To be verified by the BOOs through the lab test report.



Srl No.	Present Specification with date of Formulation	Requirements	Specification/Parameter Proposed to be changed (No change to be written if no change proposed)	Reason for proposed change	Proposed Standards	Proposed Trial directive
24.	-	-	Anti-viral Minimum Antiviral Activity of 2 Mv (>99% inactivation rate)	It will help in reducing and controlling transmission of viruses. Helpful in outbreaks of viruses or in disaster situation where risk of viral transmission is high.	ISO 18184	To be verified by the BOOs through the lab test report.
25.	-	-	Drying Rate 1 ml/hr or more	It will dry the fabric faster so no chance of shivering or hypothermia when the material gets wet.	AATCC 201	To be verified by the BOOs through the lab test report.
26.	-	-	Anti UV / UV Protection UPF 50 (98% blockage of UV-A and UVB radiation) or more	It will protect the wearer against harmful UVA and UVB rays.	AATCC 183	To be verified by the BOOs through the lab test report.
27.	-	-	Banned Azo Colorants – Not detected	Banned Azo Colorants leads to skin irritation, long time cancer risks.	IS 15570: 2005	To be verified by the BOOs through the lab test report.
28.	-	-	Absorbency 3 sec (Max)	Faster the absorbency supports faster wicking and drying.	AATCC-79	To be verified by the BOOs through the lab test report.
29.p	-	-	Wicking (time taken to reach 22 mm) 15 sec (Max)	Faster the wicking, meaning faster the evaporation of sweat/water, and faster drying, enhancing comfort.	AATCC-197	To be verified by the BOOs through the lab test report.



Srl No.	Present Specification with date of Formulation	Requirements	Specification/Parameter Proposed to be changed (No change to be written if no change proposed)	Reason for proposed change	Proposed Standards	Proposed Trial directive
30.	-	-	Pilling resistance 4 or better	Fuzzy balls of fiber normally visible after couple of washes. Pilling resistance of 4 or better ensures very slight pilling after repeated washing.	IS 10971 (Part 1) 2011 RA 2017	To be verified by the BOOs through the lab test report.

Opinion// consultation of testing labs/ agencies like NITRA, NIFT, NABLs may also be sought for finalization of proposed specifications.

1. **Availability of GeM Portal: (Name of GeM category under bid to be floated) :** Category is available on GeM under category name "T - Shirt (V2).
2. **Number of firms available :** 3 - 5
3. **Name of available firms :** (i) Thermaissance, (ii) Tengt Health and (iii) ERG Asia
4. **Number of firms in the open market (If not available on GeM, provide details of minimum 03 OEMs along with their catalogues) :** N/A
5. **Tentative Cost :** Rs. 750 - 1150



## Draft Specification for Warning Alarm for Suability Protection (WASP)

### APPENDIX- 'A'

#### SPECIFICATION OF WARNING ALARM FOR STABILITY PROTECTION

The WASP is an innovative monitoring system designed to protect emergency services workers in a variety of situations. It is highly portable and lightweight. The WASP device would be used in variety of circumstance including:

- 1) Collapsed structures.
- 2) Road traffice collisions
- 3) trench rescues.
- 4) Monitoring Shoring systems.
- 5) Internal breach operations.



S/No.	Proposed Specification		Trial Directive	Remarks of the Board of Officers
1	Sample Frequency:	100 hz ( Range - 0.5 hz to 100 hz )	Lab test Report/Certificate from Govt./ Accredited Lab will be provided by the firm.	
2	Measurement Range:	360 degrees in three directions.	Lab test Report/Certificate from Govt./ Accredited Lab will be provided by the firm.	
3	Resolution:	+/-0.01mm	Lab test Report/Certificate from Govt./ Accredited Lab will be provided by the firm.	
4	Accuracy:	+/-0.1mm	Lab test Report/Certificate from Govt./ Accredited Lab will be provided by the firm.	
5	Power Requirements:	4x1.5V C Cell Batteries	To be check physically by BOO.	
6	Operational Battery Capacity:	Continuous use-one week	To be check physically by BOO.	
7	Dimensions:	Height:140 mm ,Depth: 150 mm ,Width: 170 mm	To be check physically by BOO.	
8	Total Weight with Batteries:	3.5 Kgs. Maximum	To be check physically by BOO.	
<b>MATERIALS</b>				
9	Magnetic Contat Pad:	Galvanised Steel and Rubber.	To be check physically by BOO.	
10	Body:	High impact resistant composite.	Lab test Report/Certificate from Govt./ Accredited Lab will be provided by the firm.	
11	Lid:	Toughened transparent casing (plastic)	To be check physically by BOO.	



<b><u>MAGNETIC CONTACT PAD</u></b>			
12	<b>Pull Force:</b>	35 - 45 Kgs	Lab test Report/Certificate from Govt./ Accredited Lab will be provided by the firm.
13	<b>Shear Force:</b>	20 - 30 Kgs	Lab test Report/Certificate from Govt./ Accredited Lab will be provided by the firm.

<b><u>CONTROL</u></b>			
14	<b>Movement:</b>	Dial setting: 0.1°-2.6°	To be check physically by BOO.
15	<b>Vibration:</b>	Dial setting: 0.5 hz to 100 hz	To be check physically by BOO.
16	<b>Power:</b>	On/Off	To be check physically by BOO.
17	<b>Set:</b>	Arm/Disarm	To be check physically by BOO.
18	<b>Volume:</b>	Off /High	To be check physically by BOO.

<b><u>ALARMS</u></b>			
19	<b>Audible:</b>	Siren (adjustable)	To be check physically by BOO.
20	<b>Visual:</b>	8 x Red LED Strobes	To be check physically by BOO and Lab test Report/Certificate from Govt./ Accredited Lab will be provided by the firm.
21	<b>Water/Dust Proof:</b>	IP66	Lab test Report/Certificate from Govt./ Accredited Lab will be provided by the firm.

<b><u>ACCESSORIES</u></b>			
22	<b>WASP Clamp</b>	Toughened plastic bracket with steel and rubber base.	To be check physically by BOO.
23	<b>WASP Contact Clamp</b>	It is flat and therefore impregnable to air.	To be check physically by BOO.
24	<b>WASP Rescue Strut Bracket</b>	Consist of strap, bracket ,steel and rubber pad which is use to cover any cylindrical object upto 550 mm.	To be check physically by BOO.
25	<b>WASP Multi-Purpose Plate</b>	Steel plate which is in square shape.	To be check physically by BOO.
26	<b>WASP Carabiner</b>	Carabiner Slip lock to monitor areas at ang	To be check physically by BOO.
27	<b>WASP Ratchet Strap</b>		To be check physically by BOO.



# Draft Specification for Wind Meter

Appendix-'B'

## SPECIFICATIONS

**Name of Equipment:** -Wind Meter.

**Purpose:** - This Wind Meter will be used by NDRF on theCSSR Operation and in cyclone.

S/No.	Proposed Specification	Trial Directive	Remarks of the Board of Officers
<b>A. Dimensions &amp; Weight:</b>			
1	Dimensions (H x W x L)(mm)	Maximum accepted weight 2.200 Kg	BOOs recommended to physically trial and Test Report provided by the firm. <i>check</i>
2	Certification	300 x 200 x 150	
<b>B. General Specifications:</b>			
3	Operating Temperature	-50 degC to +80 degC	-do-
4	Probe Material	Stainless Steel	-do-
5	Power	9V DC to 18V DC	-do-
6	Electrical Connection	9-pin Water Tight Plug	-do-
7	Finish	Anodized	-do-
8	Body Material	Aluminium Grade	-do-
<b>C. Wind Speed Sensor Speciation's:</b>			
9	Distance Constant	1.5 meter	-do-
10	Threshold Speed	< 0.4 m/sec	-do-
11	Continuous Monitor Accuracy	+/- 0.25% fs	-do-

12	Principle of Operation	Reed switch sensor with Micro controller based control circuit	-do-	
13	Resolution	0.01 m/sec	-do-	
14	Sensing Element	Magnetic reed/hall effect sensor	-do-	
15	Range	0 - 70 m/sec	-do-	
<b>D. Wind Direction Sensor Specifications:</b>				
16	Continuous Monitor Accuracy of Wind Direction Sensor	+/- 0.3% fs	-do-	
17	Resolution of Wind Direction Sensor	0.1 degree	-do-	
18	Sensing Element of Wind Direction Sensor	Continuous rotation potentiometer	-do-	
19	Range of Wind Direction Sensor	0 - 360 degree	-do-	
20	Principle of Operation of Wind Direction Sensor	Half bridge Potentiometric with Microcontroller based signal conditioning circuit	-do-	
21	Calibration Factor	10 counts per degree, in case of digital outputs, 13.88 mV/degree in case of analog output	-do-	
<b>E. Sensor Outputs:</b>				
22	Analog Outputs	0-5 V	-do-	
23	Outputs	Analog & Digital	-do-	
24	Digital Output	Frequency count 0 to 3500 Hz fs (WS)	-do-	
<b>F. Configuration:</b>				



Economy Multisensor Probe	With analog or outputs	-do-	
Smart Multisensor Probe	With analog & digital outputs	-do-	
Conguration	Smart sensor, Economy sensor	-do-	

Availability on GeM Portal Category

:: Wind Speed & Direction Sensor (Q3 Category)

Number of firms available

:: 03 Nos.

Number of Firms in the open market

:: N/A

Tentative Cost

:: Rs. 50,000/- per unit.

Presiding Officer



Member-I



Member-II

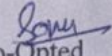


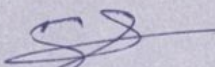
Co-opted Member

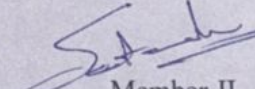


## 02. Technical Specification of Nail Gun

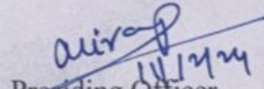
s.no	Proposed Specification		Trial Directive	Remarks of the board
1.	General Nail Gun is light weighted and handy equipment that is designed to deliver improved power for less standing nails and better drive performance into harder woods			
2.	Features :-			
s.no	Specification			
1.	Weight	9.3 lbs.	To be checked by BOOs.	
2.	Power source	Cordless	To be checked by BOOs.	
3.	Motor type	Powerstate Brushless	To be checked by BOOs.	
4.	Material Composition	High Density Polyethylene	To be checked by BOOs.	
5.	Height In inches	12.5"	To be checked by BOOs.	
6.	Length In inches	15.1"	To be checked by BOOs.	
7.	Width In inches	5.3"	To be checked by BOOs.	
8.	Speed	4 nails per second	To be checked by BOOs.	
9.	Nail capacity	1 Strip	To be checked by BOOs.	
10.	Nail Angle	30° Paper-Tape	To be checked by BOOs.	
11.	Nail Type	Duplex nail 8D and 16D	To be checked by BOOs.	
12.	Fuel Type	Framing Fuel with All-Season Formula	To be checked by BOOs.	
13.	Nails per Fuel Cell	Up to 1,200	To be checked by BOOs.	
14.	Fuel life	27 months (check date code on bottom of fuel cell)	To be checked by BOOs.	
15.	Battery System	18 Volt 5.0 AH Battery pack	To be checked by BOOs.	
16.	Battery Life	Sink up to 800 nails per charge	To be checked by BOOs.	
17.	Tool Warranty	3 years	To be checked by BOOs.	
18.	Handle type	Ergonomic handle for use with thick work gloves	To be checked by BOOs.	
19.	Tool Free Jam clearing latch	Yes	To be checked by BOOs.	
20.	LED work light	Yes	To be checked by BOOs.	
21.	Tool free depth adjustment	Yes	To be checked by BOOs.	

  
Co-Opted  
Technical Member

  
Member-III

  
Member-II

  
Member-I

  
Presiding Officer