



GOVERNMENT OF ANDHRA PRADESH

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Fabrication of certain Fire Fighting Vehicles and procurement of certain personnel protective equipment to A.P. State Disaster Response and Fire Services Department

Tender Notice No. : 7.1/APMSIDC/2025-26, Dated: 27.09.2025

Name of the Work : Fabrication of Certain Fire Fighting Vehicles to A.P. State Disaster Response and Fire Services Department

Name of the Agency and Address :
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.....

Tender Inviting Agency/Implementing Agency:

Andhra Pradesh Medical Services & Infrastructure Development Corporation (APMSIDC) Department of Health, Medical & Family Welfare

Government of Andhra Pradesh
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INTRODUCTION

Disclaimer

Andhra Pradesh Medical Services & Infrastructure Development Corporation (APMSIDC) on behalf of “Director General State Disaster Response and Fire Services, Vijayawada, Government of Andhra Pradesh” shall be Fabrication of Fire Fighting vehicles for providing services in Andhra Pradesh.”

The information contained in this Request for Proposal (RFP) document or subsequently provided to bidders whether verbally or in documentary form by or on behalf of APMSIDC, Department of Health, Medical & Family Welfare, Government of Andhra Pradesh, or any of their employees or advisors, is provided to bidders on the terms and conditions set out in this RFP document and any other terms and conditions subject to which such information is provided.

This RFP document is not an agreement and is not an offer or invitation by APMSIDC, Department of Health, Medical & Family Welfare or its representatives to any other party. The purpose of this RFP document is to provide interested parties with information to assist the formulation of their proposal. This RFP document does not purport to contain all the information each applicant may require.

This RFP document may not be appropriate for all persons, and it is not possible for APMSIDC, Department of Health, Medical & Family Welfare, their employees or advisors to consider the investment objectives, financial situation and particular needs of each entity/bidder who reads or uses this RFP document. Certain bidders may have a better knowledge of the proposed project than others. Each applicant should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFP document and obtain independent advice from appropriate sources. APMSIDC, their employees and advisors make no representation or warranty and shall not incur any liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this RFP document. APMSIDC may, in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP document.

SECTION - I: INVITATION FOR BIDS (IFB)

Tender Notice No. 7.1/APMSIDC/2025-26, Dated: 27.09.2025

1. **Andhra Pradesh Medical Services and Infrastructure Corporation on behalf of A.P. State Disaster Response and Fire Services Department is inviting bids to Fabricate certain Fire Fighting Vehicles to A.P state Disaster Response and Fire Services Department.** The successful bidder(s) would be required to collect these vehicles from the Client site, transfer them to their workshops for fabrication and deliver the fabricated vehicles to the locations identified by the Client.
2. Bids are invited on the e-procurement platform for Fabrication of Base Vehicles into Fire Fighting Vehicles as described in the Section V- Schedule of Requirements from the eligible fabricators. The details of bidding conditions and other terms can be downloaded from the electronic procurement platform of Government of Andhra Pradesh i.e. www.tender.apecurement.gov.in
3. Bidders would be required to register on the e-Procurement market place “www.tender.apecurement.gov.in” and submit their bids online. On registration with the e-Procurement market place they will be provided with a user id and password by the system through which they can submit their bids online.
4. The bidders need to scan and upload the required documents as per the Check list given in Section XIII. Such uploaded documents pertaining to technical bid need to be attached to the tender while submitting the bids on line. The attested copies of all these uploaded documents of technical bid, signed undertaking of tenderer should be submitted off line to Managing Director, APMSIDC, Mangalagiri on or before the next day of the last date of submission of bids. The Corporation will consider only the bids submitted through on-line over the copies of the paper-based bids.
5.
 - a) The participating bidder/s will have to pay tender processing fee (non-refundable) for the amounts specified in the Schedule of Requirements (Section –V)
 - b) Further the bidder/s shall furnish, as part of it bid, the Bid security for the amounts specified in the Schedule of Requirements (Section –V) to be paid in the form of an unconditional and irrevocable Bank Guarantee issued by any Scheduled Commercial bank in the standard format as shown in the Tender Schedule or a crossed Demand Draft drawn in favour of Managing Director, APMSIDC, Mangalagiri along with bids. The bidders should note that the MSME units are exempted from payment of E.M.D, subject to the production of necessary documentation to that extent by them.
 - c) Further all the participating bidders have to electronically pay a non-refundable transaction fee to M/s. APTS, the service provider through "Payment Gateway Service on E-Procurement platform", as per the Government Orders placed on the e-procurement website.

- d) APMSIDC will not accept the tenders from blacklisted companies or undependable Suppliers whose past performance with APMSIDC was found poor due to delayed and/or erratic supplies and those with frequent product failures, and also against whom there have been adverse reports of **Sub-Standard Quality / Poor Service** of fabricated vehicles such as Fabrication of Fire Fighting vehicles or similar type of vehicles, as defined in the other parts of the Bidding document.

6. Period of Delivery:

Fabrication of Base Vehicles into Fire Fighting Vehicles - Vehicles to be supplied as per schedule given below:

S. No	No of Vehicles	Delivery Schedule
1	(Prototype) i.e Chasis	Within 15 days from the date of release of order
2	All vehicles	Within 90 days to destination from the date of approval of prototype vehicle

Note:

- The delivery terms include the total time given for fabrication and delivery of vehicle at the destination provided by the Client.

Time Limits prescribed

Sl. No	Activity	Time Limit
1	Comprehensive warranty period	Minimum of two years warranty. The warranty of one year shall be from the date of delivery of last lot.
2	Frequency of visits to vehicles during Warranty	To attend any time for repairs/break down calls.
3	Submission of Performance Security and entering into contract	15 days from the date of issuance of Supply Order
4	Payment Installments	Two Installments and in the ratio 90:10
5	Time for making payments by Purchaser	90% of the invoice amount within 90 days from the date of submission of proper documents
6	Maximum time to attend any Repair call	Within 72 hours
7	Contract period	two years from the receipt of last vehicle to the client location

7. Bidders eligibility and qualifications: Defined at Clause 13 of Instructions to Bidders (Section II) and Qualification Criteria (Section-VI)

8. Details of Tender Process:

1	Downloading of documents	From 22-10-2025 to 11-11-2025 up to 02.55 P.M
2	Pre bid Meeting	27-10-2025 @ 11.00 A.M O/o. APMSIDC, 2 nd Floor, IT Park, Mangalagiri, Guntur 522503
3	Due date for Receipt of tenders	11-11-2025 up to 03.00 P.M
4	Time and date of opening of technical bids	11-11-2025 @ 03.01 PM
5	Time and date of opening of financial bids	Will be intimated later

Note: The dates stipulated above are firm and under no circumstances they will be relaxed unless otherwise extended by an official notification or happen to be Public Holidays. For the assistance in the online submission issues, the bidder may contact the help desk of M/s Vupadhi Techno Services Pvt. Ltd. (e-procurement) at their e-mail address: eprocsupport@vupadhi.com or on the mobile nos. **8645-246370 / 71 / 72 / 73 / 74**

9. Procedure for Bid Submission

- a. The Tenderers/Bidders who are desirous of participating in e-procurement shall submit their Technical bids, price bids etc., in the Standard formats prescribed in the Tender documents, displayed at e-procurement market place.
- b. The bidders shall sign on all the statements, documents, certificates, uploaded by them, owning responsibility for their correctness / authenticity.
- c. No hard copies of the bid are required to be submitted.
- d. The Corporation shall not hold any risk on account of postal delay. Similarly, if any of the certificates, documents, etc., furnished by the tenderer are found to be false / fabricated / bogus, the bidder will be disqualified, blacklisted, action will be initiated as deemed fit and the EMD will be forfeited.
- e. The Corporation will not hold any risk and responsibility for the loss in transit during uploading of the scanned document, for the invisibility of the scanned document online, and any other problem(s) encountered by the Tenderers while submitting his bids online.

10. Important Instructions to the Bidders:

- 10.1** Quality of fabricated Fabrication of Base Vehicles into Fire fighting Vehicles throughout its life cycle period, timely supplies and prompt maintenance support during the warranty without default are being given paramount importance by the Corporation. The Corporation will be dealing with the defaulters with firm hand, which may lead to blacklisting for a specified period in addition to levying penalties.
- 10.2** In case of complaints on the quality and poor maintenance support of the supplied fabricated vehicles, the fabricator/supplier shall rectify the defect free of cost during the Contract Period.
- 10.3** The decision of the Managing Director, APMSIDC, or the Director General, State Disaster Response and Fire Services or any officer authorized by him in respect of the quality of the supplied Fabrication of Base Vehicles into Fire fighting vehicles and other goods etc., shall be final and binding.
- 10.4** No claims shall be allowed against the APMSIDC in respect of interest on Earnest Money Deposit or on Security Deposit or late payments.
- 10.5** Savings Clause: No suit, prosecution or any legal proceedings shall lie against APMSIDC or any person for anything, which is done in good faith or intended to be done in pursuance of bid.

SECTION - II: INSTRUCTIONS TO BIDDERS

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A. Introduction

1. Source of funds:

The funds are made available by the State Government of Andhra Pradesh, towards the procurement processed under this tender notification.

2. Eligible Bidder

This invitation for Bids is open to all Companies who fulfill the eligibility criteria mentioned in the Clause 13 and who meet qualification criteria mentioned in the Section VI.

3. Eligible Fabricated Vehicles

All fabricated vehicles to be supplied under the contract shall meet the requirements as specified in the Technical Specifications and meet the eligibility criteria as given at Clause 14 of ITB.

4. Cost of bidding.

The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Managing Director, APMSIDC, Mangalagiri here in after referred to as "the purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

B. The Bidding Documents

5. Content of Bidding Documents

5.1 In addition to the Invitation for Bids, the bidding documents include:

- (a) Instruction to Bidders;
- (b) General conditions of contract;
- (c) Special conditions of contract;
- (d) Schedule of requirements;
- (e) Technical specifications;
- (f) Bid form and price schedules;
- (g) Bid security form;
- (h) Performance security form.
- (i) Firm Registration/manufacturer license
- (j) Performance statement form.
- (k) Declaration Form
- (l) Check List of the documents uploaded on e-platform as part of the bid

5.2 The bidder is expected to examine all instructions, forms, terms and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the bidder's risk and may result in rejection of its bid.

6. Clarification of bidding documents

A prospective Bidder requiring any clarification of the bidding documents may notify the purchaser in writing at the purchaser's mailing address indicated in the Invitation for Bids. The purchaser will respond in writing to any request for clarification of the Bidding documents if the same is received within 4 days of the tender notice prescribed by the purchaser.

7. Amendment of bidding documents

7.1 At any time prior to the deadline for submission of bids, the purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by prospective bidder, modify the bidding documents by amendment.

7.2 The amendment will be notified online.

7.3 In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bid, the purchaser may, at its discretion, extend the deadline for the submission of bids.

C. Preparation of Bids

8. Language of Bid.

The Bid prepared by the Bidder and all correspondence and documents relating to the bid exchanged by the bidder and the purchaser, shall be written in the English language, provided that any printed literature furnished by the Bidder may be written in another language so long as accompanied by an English translation of its pertinent passages in which case, for purposes of interpretation of the bid, the English translation shall govern.

9. Documents comprising the bid

9.1 The bid prepared by the bidder shall comprise the following components:

1. Technical Bid:

- (a) A Bid form completed in accordance with clause 10
- (b) Documentary evidence established in accordance with clause 13 that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted.

- (c) Documentary evidence established in accordance with clause 14 that the goods and ancillary services to be supplied by the Bidder are eligible goods and services confirm to the Bidding Documents; and
- (d) Bid security furnished in accordance with clause 15.

2. The Price Bid completed in accordance with clauses 11 and 12.

10. Bid Form

10.1 The Bidder shall complete the bid form provided in the Bidding documents, indicating the quantity and other declaration statements.

11. Bid prices.

- a) Bidders are required to quote rates on free delivery at Consignee location basis only. Bids received on far Destination Stations/ Station of dispatch basis or different rates for different destinations shall be summarily rejected. **Rates should be quoted in figures and words clearly INCLUSIVE OF GST, ALL TAXES, DUTIES, DISCOUNTS, TRANSPORTATION COST if any etc., ON SITE WARRANTY as mentioned in the tender.**
- b) **The decision of Director General of State Disaster Response and Fire Services, Andhra Pradesh shall be final as regards the acceptability of tendered articles and goods to be supplied by the Bidders.**

12. Bid currencies.

12.1 Prices shall be quoted in Indian Rupees; Bids quoted other than Indian currency will be rejected.

13. Documents Establishing Bidder's Eligibility and Qualifications.

13.1 Pursuant to clause 9, the bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted

13.2 The documentary evidence of the Bidder's eligibility to bid shall establish to the purchaser's satisfaction that the bidder, at the time of submission of the bid, is an eligible bidder as defined under clause 2.

13.3 The documentary evidence of the Bidders qualifications to perform the contract if its bid is accepted, shall establish to the purchaser satisfaction;

- (i) the legal status, place of registration and principle place of business of the company or firm or partnership etc.
- (ii) Details of experience and past performance of the bidder on specified item offered in the bid and on those of similar nature within the past three years

and details of current contracts in hand and other commitments (suggested proforma given in section XI);

- (iii) Copy of the GST Certificate and Details of IT- PAN / TIN copies
- (iv) The details in compliance to the Qualification Criteria (Section VI).

13.4 The check list for the details of documents to be submitted is given at Section XIII

14. Documents Establishing Supplier/Fabricator's Eligibility and conformity to bidding documents.

14.1 Pursuant to clause 9 the bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the bidding document of all services which the bidder proposes to supply under the contract.

14.3 The documentary evidence of the fabrication of vehicles conformity to the bidding documents may be in the form of literature, drawings and data, and shall furnish:

- (a) a detailed description of the fabrication of essential technical and performance characteristics of the goods.
- (b) A clause-by-clause commentary on the purchaser technical specifications demonstrating the goods and services substantial responsiveness to those specifications or statement of deviations and exceptions of the technical specifications.

14.4 For purpose of the commentary to be furnished pursuant to clause 14.3 above, the bidder shall note that standards for workmanship, material and goods, and references to brand names or catalogue numbers designated by the purchaser in its technical specifications are intended to be descriptive only and not restrictive. The bidder may substitute alternative standards, brand name and / or catalogue numbers in its bid, provided that it demonstrates to the purchaser's satisfaction that the substitutes are substantially equivalent or superior to those designated in the Technical specifications.

15. Bid security

15.1 Pursuant to Clause 9, the Bidder shall furnish, as part of it bid, the Bid security for the amounts specified in the Invitation for Bids (Section -1)

15.2 The bid security is required to protect the purchaser against risk of bidders conduct which would warrant the security forfeiture, pursuant to clause 15.7

15.3 The bid security shall be in Indian Rupees and shall be in one of the following forms:

- (a) A bank guarantee issued by scheduled commercial bank located in India acceptable to the purchaser, in the form provided in the bidding documents

or another form acceptable to the purchaser and valid for 45 days beyond the validity of the bid; or

- (b) A Demand Draft/Pay Order in favour of Managing Director, APMSIDC, Mangalagiri payable at Guntur.

15.4 Any bid not secured in accordance with para 15.1 and 15.3 above will be rejected by the purchaser as non-responsive pursuant to clause 24.

15.5 Unsuccessful Bidder's bid security will be discharged/ returned as promptly as possible but not later than 30 days after the expiration of the period of bid validity prescribed by the purchaser pursuant to clause 16.

15.6 The successful Bidder's bid security will be discharged upon the Bidders executing the contract, pursuant to clause 34 and furnishing the performance security pursuant to clause 35.

15.7 The bid security may be forfeited;

- (a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid form; or
- (b) In case of successful Bidder, if the Bidder fails;
 - (i) to sign the contract in accordance with clause 34; or
 - (ii) to furnish performance security in accordance with clause 35.
- (c) If the Bidder does not accept the corrected amount the Bid will be rejected, and the Bid security may be forfeited.

16. Period of validity of Bids.

16.1 Bids shall remain valid for 90 days after the date of bid opening prescribed by the purchaser pursuant to Clause 19.1. A bid valid for shorter period may be rejected by the purchaser as non-responsive.

16.2 In exceptional circumstances, the Purchaser may solicit the Bidders consent to an extension of the period of validity the request and the responses thereto shall be made in writing (or by mail). The bid security provided under clause 15 shall also be suitably extended. A bidder may refuse the request without forfeiting its bid security.

17. Format and signing of Bid.

- 17.1 The bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the bidder to the contract. The latter authorization shall be indicated by written power-of-attorney accompanying the bid. All pages of the bid, except for unammended printed literature, shall be initialed by the person or persons signing the bid.

The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors and made by the bidder in which case such corrections shall be initialed by the person or persons signing the bid.

D. Submission of Bids

18. Sealing and Marking of bids.

- 18.1 The bids shall be uploaded (submitted) electronically, as described in the Invitation for Bids (Section –I).
- 18.2 The Bids shall be addressed to the purchaser at the following address:

The Managing Director, Plot No:09, survey number: 49, IT Park, Mangalagiri, Guntur District- 522503.

19. Deadline, for submission of bids.

- 19.1 The Bids must be received by the purchaser, no later than the time and date specified in the Invitation for Bids (Section I). In the event of the specified date for the submission of Bids being declared a holiday for the purchaser, the Bids will be received up to the appointed time on the next working day.
- 19.2 The purchaser may, at its discretion, extend this deadline for submission of bids by amending the bid documents in accordance with clause 7, in which case all rights and obligations of the purchaser and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

20. Late Bids.

- 20.1 Any bid received by the purchaser after the deadline for submission of bids prescribed by the purchaser, pursuant to clause 19, will be rejected and/ or returned unopened to the Bidder.

21. Modification and Withdrawal of Bids.

- 21.1 No bid may be modified subsequent to the deadline for submission of bids.
- 21.2 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the

Bid form. Withdrawal of bid during this interval may result in the Bidders forfeiture of its bid security, pursuant to Clause 15.7

E. Bid Opening and Evaluation

22. Opening of Bids by Purchaser

22.1 The Purchaser/or his authorized representative will download the technical bids on **11-11-2025 at 03.01 PM.**

22.2 The Financial Bids of the Technically responsive bidder would be downloaded subsequently from the e-platform, once the technical evaluation is completed.

23. Clarification of Bids.

23.1 To assist in the examination, evaluation and comparison of bids the purchaser may at his discretion, ask the Bidder for clarification of his bid. The request for clarification and the response shall be in writing and no change in price or substance of the bid shall be sought, offered or permitted.

24. Technical Evaluation (Preliminary Examination and Pre-Qualification)

24.1 The purchaser will examine the bids to determine whether they are complete, whether required securities have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

24.2 Prior to the financial evaluation, pursuant to clause 26, the purchaser will determine the responsiveness of each bid to the bidding documents. For purposes of these clauses, a responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. The purchaser's determination of bids responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

24.3 Further the purchaser will determine to his satisfaction whether the Bidder is qualified to satisfactorily perform the contract. The determination will take into account the Bidder's financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder pursuant to clause 13 as well as such other information as the purchaser deems necessary and appropriate.

24.4 An affirmative determination will be prerequisite for the opening of the financial bids. A negative determination will result in rejection of the Bidder's bid.

24.5 A bid determined as not substantially responsive will be rejected by the purchaser.

24.6 The Purchaser may waive any minor informality or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any bidder.

25. Deleted.

26. Evaluation and comparison of Bids.

26.1 The Purchaser will evaluate and compare bids previously determined to be substantially responsive, pursuant to clause 24 for each schedule separately.

26.2 The purchaser's evaluation of a bid will take into account; in addition to the bid price (Goods offered), such price to include all costs as well as duties and taxes paid or payable and cost of incidental services required. The following costs to the extent specified:

- a. cost of inland transportation, insurance and other costs within India incidental to the delivery of goods to their final destination;
- b. the availability of spare parts and after-sales services for the fabrication including any equipment offered in the bid. To this extent the bidders shall give:
 - An Undertaking Availability/ establishment to ensure uninterrupted after sales service during warranty and maintenance period shall be confirmed.

27. Deleted

28. Contacting the purchaser.

28.1 Subject to clause 23, no Bidder shall contact the purchaser on any matter relating to the bid, from the time of the bid opening to the time, the contract is awarded.

28.2 Any effort by a Bidder to influence the Purchaser in the purchaser's bid evaluation, bid comparison or contract award decisions may result in rejection of the Bidders bid.

F. Award of Contract

29. Post - Qualification

Not Applicable

30. Award Criteria

30.1 Subject to clause 32, the purchaser will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily. The Client may award all vehicles to the lowest bidder and declare it as the sole Fabricator of Base

Vehicles into Fire fighting Vehicles. However, the Client shall have the right to ask other bidders to match the price quoted by lowest bidder and may distribute the vehicles among the bidders, if they agree to match the quote of the lowest bid. Allocation of number of vehicles to each bidder shall be made based on the fabrication capacity of the Bidder and discretion of the Client.

31. Purchaser's right to vary quantities at Time of Award

32.1 The Purchase Order will be issued to the lowest quoted price (L1) bidder, subject to the availability and release of funds by the Government.

32. Purchaser's right to accept any Bid and to reject any or all Bids.

32.2 The purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to award of contract, without there by incurring any liabilities to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Purchaser's action.

33. Notification of Award.

33.1 Prior to the expiry of the period of the bid validity, the purchaser will notify the successful Bidder in writing by registered letter or cable or telex, duly confirming that the bid has been accepted.

33.2 The notification of award will constitute the formation of the contract.

33.3 Upon the successful Bidder's furnishing of performance security, pursuant to clause 34, the purchaser will promptly notify each unsuccessful Bidder and will discharge their bid security, pursuant to clause 15.

34. Signing of contract

34.1. Within 15 days of receipt of the notification of award the successful Bidder shall sign the contract.

Performance security

35.1 Within 15 days of the receipt of notification of award from the purchaser, the successful Bidder shall furnish the performance security in accordance with the conditions of contract, in the performance security form provided in the Bidding documents or another form acceptable to the purchaser and signs the agreement.

35.2 Failure of the successful Bidder to comply with the requirement of clause 34 shall constitute sufficient grounds for the annulment of the award and forfeiture of the

bid security, in which event the purchaser may make the award to the next lowest evaluated bidder or call for new bids.

36 Fraud and corruption

36.1 It is the **purchaser's** policy that requires that the bidders, suppliers and contractors and their subcontractor observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the **purchaser**;

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) **"corrupt practice"** is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii) **"fraudulent practice"** is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) **"collusive practice"** is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

(iv) **"coercive practice"** is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(v) **"obstructive practice"** is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(bb) acts intended to materially impede the exercise of the purchaser's inspection and audit rights provided for under sub-clause 36.2 (d) below.

36.2 The purchaser may, without prejudice to other terms of the bidding:

(a) will reject a proposal for award if it determines that the bidder considered for Award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;

(b) will cancel the contract if the purchaser determines at any time that the bidder, supplier and contractors and their sub contractors engaged in corrupt, fraudulent, collusive, or coercive practices.

(c) will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines

that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a contract; and

(d) will have the right to inspect the accounts and records of the bidders, supplier, and contractors and their subcontractors and to have them audited by auditors appointed by the Purchaser.

SECTION - III: GENERAL CONDITIONS OF CONTRACT

TABLE OF CLAUSES

<u>Clause Number</u>	<u>Topic</u>
1.	Definitions
2.	Application
3.	Country of Origin
4.	Standards
5.	Use of Contract Documents and Information
6.	Patent Rights
7.	Performance Security
8.	Inspection and Tests
9.	Packing.
10.	Delivery and Documents
11.	Insurance
12.	Transportation
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15.	Warranty
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20.	Assignment
21.	Subcontracts
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31.	Notices
32.	Taxes and Duties.
33.	Registration of vehicle

Section III: General Conditions of Contract

1. Definitions

1.1 In this contract, the following terms shall be interpreted as indicated;

- (a) "The contract" means the agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by references therein.
- (b) " The contract Price" means the price payable to the supplier under the contract for the full and proper performance of its contractual obligations.
- (c) " The Goods" means all the Fabrication of Base Vehicles into Fire Fighting Vehicles fabricated along with equipment as per Section V which the supplier is required to supply to the purchaser under the contract.
- (d) "Services " means services ancillary to the supply of the goods, such as transportation, insurance and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the supplier covered under the contract.
- (e) "An undependable Supplier/s' under contract means any Supplier who do not accept the purchase order or who delays the supply of required quantities beyond the permitted delays with liquidated damages
- (f) "The Purchaser or Corporation" means the APMSIDC, the purchasing agency or any other agency authorized by the APMSIDC
- (g) "The Supplier" means the individual or firm supplying the goods under this contract.
- (h) "The Government" means the Government of Andhra Pradesh or its authorized representatives
- (i) "The Project Site", where applicable means the place or places named in Schedule of Requirements
- (j) "The End-User" means the authorized user of the Fabrication of Base Vehicles into Fire Fighting Vehicles
- (k) "Day" means calendar day
- (l) "Delivery period" means the period applicable up to completion of supply.

S. No	No of Vehicles	Delivery Schedule
1	(Prototype) i.e Chassis	Within 15 days from the date of release of order
2	All vehicles	Within 90 days to destination from the date of approval of prototype vehicle

Note:

1. The delivery terms include the total time given for fabrication and delivery of vehicle at the destination provided by the Client.

2. Application

- 2.1. These General conditions shall apply to the extent that they are not superseded by provisions in other parts of the contract.

3. Country of Origin: Deleted.

4. Standards

- 4.1 The Goods supplied under this contract shall conform to the standards mentioned in the Technical specifications and when no applicable standard is mentioned the authoritative standard appropriate to the goods country of origin shall be followed and such standard shall be the latest issued by the concerned institution.

5. Use of contract documents and Information

- 5.1 The supplier shall not without the purchaser's prior written consent, disclose the contract or any provision thereof or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the purchaser in connection therewith to any person other than a person employed by the supplier in performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2 The supplier shall not, without the purchasers prior written consent make use of any document or information enumerated in para 5.1 except for purposes of performing the contract.
- 5.3 Any document other than the contract itself enumerated in para 5.1 shall remain the property of the purchaser and shall be returned (in all copies) to the purchaser

on completion of the suppliers performance under the contract if so required by the purchaser.

6. Patent Rights

- 6.1 The supplier shall indemnify the purchaser against all third party claims of infringement of patent, trademark for industrial design rights arising from use of the goods or any part thereof in India..

7. Performance Security

- 7.1 Within 15 days after the supplier's receipt of notification of award of the contract, the supplier shall furnish performance security of 5% of contract value to the purchaser for the amount specified in the special conditions of contract.
- 7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete its obligations under the contract
- 7.3 The performance security shall be denominated in Indian Rupees and shall be in the form of a Crossed Demand Draft in favour of Managing Director, APMSIDC, Mangalagiri.
- 7.4 Performance security will be discharged by the *Purchaser* and returned to the supplier after the end of contract period i.e. following the date of completion of the supplier's performance obligations, including any warranty obligations.

8. Inspections and Tests.

The successful Tenderer shall have the work inspected and approved at the following stages by the Officers nominated by the Director General of State Disaster Response and Fire Services along with one of the following authorized agencies to be selected by the Department.

Under writers Laboratories Inc. (UI India Private Limited)

Indian Register of Shipping (IRS Inspection services)

Any other specialized Organized agencies approved by the Government.

The firm should meet the inspection charges and travel expenses of the officers of the above agencies. The acceptance of the items is subject to inspection by officers of Andhra Pradesh State Disaster Response and Fire Services Department and the representatives of the one of the above agencies, in stages as suggested in the Technical Tender Specification.

9. Packing

- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the

contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration where appropriated the remoteness of the Goods final destination and the absence of heavy handling facilities at all points in transit.

- 9.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements, as shall be provided for in the contract and subject to clause 18 and any subsequent instructions ordered by the purchaser.

10. Delivery and Documents

- 10.1 Delivery of the Goods shall be made by the supplier in accordance with the terms specified by the purchaser in the Notification of Award.

11. Insurance

- 11.1 The goods supplied under the contract shall be fully insured in Indian Rupees against the loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the special conditions of contract.

12. Transportation

- 12.1 The supplier is required to deliver the goods to the destinations specified in the contract and the cost thereof shall be included in the contract price.
- 12.2 The transportation of the Goods after the delivery at the final destination shall be the responsibility of the Purchaser.

13. Incidental services.

- 13.1 The supplier is required to provide the following services, including additional services, if any, specified in SCC:
- (a) Performance of the on-site assembly and start-up of the supplied Goods;
 - (b) Furnishing of tools required for assembly and maintenance of the supplied Goods;
 - (a) Furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods;
 - (b) Performance of maintenance and repair of the supplied Goods, for a period of 1 year, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and

(e) Training of the users and maintenance personnel, in operation, maintenance and repair of the supplied Goods.

- 13.2 Prices charged by the Supplier for incidental services, if not included in the contract price of the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

14. Spare Parts:

- 14.1 As specified in the special conditions of contract, the supplier may be required to provide the following materials and notifications pertaining to spare parts manufacturer:

- (a) Such of spare parts as the purchaser may select to purchase from the supplier providing that this selection shall not relieve the supplier of any warranty obligations under the contract and
- (b) In the event of termination of production of the spare parts;
 - (i) advance notification to the purchaser of the pending terminating in sufficient time to permit the purchaser to procure needed requirements : and
 - (ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawing and specifications of the spare parts, if and when requested.

15. Warranty

GUARANTEE/WARRANTY	
1	Except as otherwise provided in the invitation to the tender, the bidder shall declare that the goods, stores, articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained/mentioned in the contract.
2	The bidder hereby guarantees that the said stores would continue to conform to the description and quality aforesaid for a period 24 calendar months of warranty from the date of delivery of the said stores to the purchaser notwithstanding the fact that the purchaser (Inspecting Authority) may have inspected and/or approved the said stores.
3	If during the aforesaid period of warranty, the said stores be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the bidder and purchaser shall be entitled to call

	upon the bidder to rectify the stores or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the bidder and in such an event, the above mentioned warranty period shall apply to the stores from the date of rectification thereof.
4	In case of failure of the bidder to rectify or replace the goods etc. within specified time, the purchaser shall be entitled to recover the cost with all expenses from the bidder for such defective stores.
5	In the event of contract being cancelled for any breach committed and the purchaser affecting re-purchase of the stores at the risk and the cost of the bidder, the purchaser is not bound to accept the lower offer of allied or sister concern of the bidder.
6	Purchaser will not pay separately for transit insurance and the supplier will be responsible till the entire stores contracted for, arrive in good condition at the destination. The consignee, as soon as possible but not later than 30 days of the date of arrival of the stores at destination, notify to the bidder any loss or changes to the stores that may have occurred during the transit.
7	Bidders who are past suppliers of the item as per T/E Specification should submit their performance statement in enclosed Proforma. In case, it is found that information furnished is incomplete or incorrect, their tender will be liable to be ignored.
8	GOVT. POLICY The purchaser reserves the option to give a purchase/price preference to offers from the public sector units and / or from other Firms in accordance with the policies of the Govt. from time to time.

16. Payment

- 16.1 The method and conditions of payment to be made to supplier under the contract shall be specified in the special conditions
- 16.2 The Suppliers request (s) for payment shall be made to the purchaser in writing accompanied by an invoice describing as appropriate the goods delivered and the services performed and by shipping document, submitted pursuant to clause 10, and upon fulfillment of other obligations stipulated in the contract.
- 16.3 Payments shall be made by the purchaser within sixty (60) days of submission of the invoices / claims by the supplier duly furnishing the certificate specified in the bid document from the competent authority.
- 16.4 Payment shall be made in Indian Rupees.

17. Prices

- 17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not except for any price adjustments authorized by the special conditions of contract, vary from the prices quoted by the supplier in its bid.

18. Change Orders

- 18.1 The Purchaser may at any time by written orders given to the supplier pursuant to clause 31, make changes within the general scope of the contract in any one or more of the following;

- (a) drawings, designs or specifications, where goods to be furnishing under the contract are to be specifically manufactured for the purchaser;
- (b) the method of shipping or packing;
- (c) the place of delivery; or
- (d) the services to be provided by the supplier;

- 18.2 If any such changes causes an increase or decrease in the cost of or the time required for the suppliers performance of any part of the work under the contract, whether changed or not changed by the order, an equitable adjustment shall be made in the contract price or delivery schedule or both and the contract shall accordingly be amended. Any claims by the supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the suppliers receipt of the purchasers change order.

19. Contract Amendments

- 19.1 Subject to clause 18, no variation in an modification of the terms of the contract shall be made except by written amendment signed by the parties .

20. Assignment

- 19.2 The supplier shall not assign in whole or in part, its obligations to perform under the contract, except with the purchasers prior written consent.

21. Sub-contracts

- 21.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under the contract if not already specified in his bid. Such notification, in his original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

22. Delays in the suppliers performance

- 22.1 Delivery of the goods and performance of the services shall be made by the supplier in accordance with the time schedule specified by the purchaser in its schedule of requirements.

- 22.2 Any unexcused delay by the supplier in the performance of its delivery obligations shall render the supplier liable for any or all of the following; i.e. forfeiture of its performance security, imposition of liquidation damages and or termination of the contract for default.
- 22.3 If at any time during the performance of the contract, the supplier or its subcontractor (s) should encounter performance of the services the supplier shall promptly notify the purchaser in writing of the fact of the delay its likely duration and its causes. As soon as practicable after receipt of the suppliers notice, the purchaser shall evaluate the situation and may at its discretion extend the suppliers time for performance, in which case the extension shall be ratified by the parties by amendment of the contract.

23. Liquidated Damages

- 23.1 Subject to clause 25, if the supplier fails to deliver any or all of the goods within the time period specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price as liquidated damages, an amount as specified in the SCC for the period of delay, until actual delivery or performance, up to a maximum deduction of 10 percent of the delayed goods or services contract price. Once the maximum is reached, the purchaser may consider termination of the contract.

24. Termination for Default

- 24.1 The purchaser may, without prejudice to any other remedy for breach of contract by written notice of default sent to the supplier, terminate the contract in whole or part:
- (a) if the supplier fails to deliver any or all of the goods within the time periods specified in the contract or any extension thereof granted by the purchaser pursuant to clause 22; or
 - (b) if the supplier fails to perform any other obligations under the contract.
- 24.2 In the event the purchaser terminates the contract in whole or in part, 24.1 the purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar Goods. However, the supplier shall continue the performance of the contract to the extent not terminated.

25. Force Majeure

- 25.1 Notwithstanding the provisions of clauses 22,23,24, the supplier shall not be liable for forfeiture of its performance security liquidated damages or termination or default, if and to the extent that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.

25.2 For purposes of this clause " Force Majeure" means an event beyond the control of the supplier and not involving the suppliers fault or negligence and not foreseeable. Such events may include but are not limited to, acts of the purchaser either in its sovereign or contractual capacity, wars or revolutions, floods, epidemics, quarantine restrictions and freight embargoes.

25.3 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the purchaser in writing the supplier shall continue to perform its obligations under the contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

26. Termination for Insolvency.

26.1 The purchaser may at any time terminate the contract by giving written notice to the supplier, if the supplier becomes bankrupt or otherwise insolvent , provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

27. Termination for convenience.

27.1 The purchaser, may by written notice sent to the supplier terminate the contract, in whole or in part at any time for its convenience. The notice of termination shall specify that termination is for the purchasers convenience the extent to which performance of work under the contract is terminated and the date upon which such termination becomes effective.

27.2 The goods that are complete and ready for shipment within 30 days after the suppliers receipt for notice of termination shall be purchased by the purchaser and the contract terms and prices. For the remaining goods the purchaser may elect.
(a) to have completed and delivered at the contract terms and prices; and / or
(b) to cancel the remainder and pay to the supplier and agreed amount for partially completed goods and for materials and parts previously procured by the supplier.

28. Resolution of Disputes

28.1 The purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the contract.

28.2 If after thirty (30) days from the commencement of such informal negotiations the purchaser and the supplier have been unable to resolve amicably contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in the special conditions of contract. These mechanisms

may include but are not limited to conciliation, mediation by third party justification in an agreed national or international forum and / or international arbitration. The mechanism shall be specified in the special conditions of contract.

Governing Language

- 29.1 The contract shall be written in English language, as specified by the purchaser in the instructions to bidders. Subject to clause 30, English language version of the contract shall govern

30. Applicable law

- 30.1 The contract shall be interpreted in accordance with the laws of the union of India and the legal jurisdiction is Vijayawada.

31. Notices

- 31.1 Any notices given by one party to the other pursuant to the contract shall be sent in writing and confirmed in writing to the address specified for that purpose in the special conditions of the contract. A notice shall be effective when delivered or on the notices effective date, whichever is later.

32. Taxes and duties

- 32.1 The rates quoted by the bidder shall be deemed to be inclusive of the sales and other taxes that the bidder will have to pay for the performance of this contract, at the prevailing rates notified by the Government. The purchaser will perform such duties in regard to the deduction of such taxes at source as per applicable law.

33 Registration of vehicle

Comply with procedures of RTA of the State of Andhra Pradesh in registration of the vehicles, including payment of taxes and fee and registration of the vehicle as required.

The selected bidder will be responsible for registration of all vehicles.

SECTION - IV: SPECIAL CONDITIONS OF CONTRACT

TABLE OF CLAUSES

(The corresponding clause number of the General condition is in parenthesis)

<u>Item. No.</u>	<u>Topic.</u>
2.	Definitions (Clause - 1)
3.	Country of Origin (Clause -3)
4.	Performance security (Clause 7)
5.	Inspection and Tests (Clause 8)
6.	Packing (Clause-9)
7.	Delivery and Documents (Clause 10)
8.	Insurance (Clause 11)
9.	Incidental services (Clauses 13)
10.	Spare Parts (Clause 14)
11.	Warranty (Clause 15)
12.	Payment (Clause 16)
13.	Prices (Clause 17)
14.	sub-contracts (Clause 21)
15.	Liquidated Damages (Clauses 23)
16.	Resolution of Disputes (Clauses 28)
17.	Notices (Clauses 31)
18.	Comprehensive Maintenance Contract
19.	Actions against Misconduct of the Supplier
20.	Progress of Supplies

Section IV: Special Conditions of the Contract

1. The following special conditions of contract shall supplement the general Conditions of contract. Whenever there is conflict, the provisions herein shall prevail over those of the general conditions of contract the corresponding clause number of the general conditions in parentheses.

2. Definitions (Clause 1)

(a) The Purchaser is: The Managing Director, APMSIDC, Mangalagiri or any other authorized representative notified by the Purchaser.

(b) The Supplier is: -----

3. Country of origin (Clause 3): All goods and related services to be supplied under the contract / agreement shall have their origin in India or any other country with which India has not banned trade relations.

4. Performance security (Clause 7)

4.1 Performance security is 5% of the contract value and shall be valid up to 60 days after the date of completion of performance obligations including warrant obligations and maintenance obligations, as applicable.

4.2 Add clause 7.5 to the GCC as the following:

In the event of any contract amendment, the supplier shall within 7 days of receipt of such amendment furnish the amendment to the performance security rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter

5. Inspection and Tests (clause 8)

The successful Tenderer shall have the work inspected and approved at the following stages by the Officers nominated by the Director General of State Disaster Response and Fire Services along with one of the following authorized agencies to be selected by the Department.

Under writers Laboratories Inc. (UI India Private Limited)

Indian Register of Shipping (IRS Inspection services)

Any other specialized Organized agencies approved by the Government.

The firm should meet the inspection charges and travel expenses of the officers of the above agencies. The acceptance of the items is subject to inspection by officers of Andhra Pradesh State Disaster Response and Fire Services Department and the representatives of the one of the above agencies, in stages as suggested in the Technical Tender Specification.

6. Packing (Clause 9)

The Supplier will be required to pack the goods installed/placed inside the Fabrication of Base Vehicles into Fire Fighting Vehicles if required during transportation with following markings:

Name of the contract, ii. Contract No., iii. Country of origin of Goods, iv. Supplier's Name and v. Packing of list reference number

7. Delivery and Documents (Clause 10)

- (i) Three copies of the Supplier invoice showing Goods description, quantity, unit price, total amount;
- (ii) Railway receipt/acknowledgement of receipt of goods from the Purchaser
- (iii) Manufacture's/Supplier's Warranty and Factory Test certificate as applicable;
- (iv) Acceptance Certificate issued by the Purchaser
- (v) Inspection Certificate issued by the nominated inspection agency, as applicable

8. Deleted

9. Incidental Services (Clause 13)

No additional services are required to be provided over the services already covered under clause 13 of GCC.\

10. Spare parts: (Clause 14)

Add as clause 14.2 to the GCC the following:

During the warranty period, Supplier shall carry sufficient inventories to assure ex stock supply of consumables spares such as gaskets, plugs, washers, belts etc., other spare parts and components shall be promptly as possible but in any case within (3) days of placement of order.

11. Warranty (Clause 15)

11.1 In partial modification of the provisions, the warranty period shall be 12 months, after the Goods, or any portion thereof, as the case may be, have been delivered at site, installed, commissioned, successfully tested and accepted by the Purchaser or its authorized representative.

11.2 Substitute Clause 15.4 of the GCC with the following:

Upon receipt of such notice, the Supplier shall within 3 days, repair or replace the defective goods or parts thereof, free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement.

11.3 If the supplier has not done repair/replacement within the time specified above the purchaser will assess the cost of having the repairs/replacements done and the supplier will pay this amount.

11.4 All software updates, if any required, should be provided free of cost during Warranty period.

12. Payment (Clause 16)

12.1 Payments for the supply of vehicles shall be made in Indian Rupees, lot wise (11 Nos) as and when delivered. 90% of the contract value after preliminary inspection tests such as shower test & any other tests will be paid to the supplier on submission of copy of invoice with original Delivery Challan as proof of supply to destinations, duly certified by the Client. remaining 10% will be paid after three months from the date of installation on submission of performance satisfactory report (Annexure-III), obtained from the Purchaser or its authorized authorities.

12.2 In case any difficulty is experienced by the successful tenderer in obtaining three month performance certificate from any of the purchaser authorized authorities after the commission of the FABRICATION OF BASE VEHICLES INTO FIRE FIGHTING VEHICLES, the same shall be brought to the notice of the Purchaser immediately in writing. In such event(s), if the Purchaser is convinced, the reasons are beyond the control of the successful tenderer, the Purchaser, in case of supply orders placed by it, shall release payments at its discretion. In such case the letter sent to the Purchaser shall be submitted along with the invoices while claiming payment

13. Prices (Clause 17)

Prices payable to the Supplier as stated in the Contract shall not be subject to adjustment during performance of the Contract.

14. Sub-contracts (Clause 21)

Add at the end of sub-clause 21.1 of the GCC the following. "Sub-contract shall be only for bought-out items and sub-assemblies".

15. Liquidated Damages (Clause 23)

15.1 For delays

Substitute Clause 23.1 of the GCC by the following:

Subject to clause 25 of GCC, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated

damages, a sum equivalent to 0.5 percent of the delivered price of the delayed Goods for each week of delay or part thereof until actual delivery, up to a maximum deduction of 10% of the contract price. Once the maximum deduction is reached, the Purchaser may consider termination of the Contract.

15.2.1 For Short fall in FABRICATION OF BASE VEHICLES INTO FIRE FIGHTING VEHICLES Maintenance services

Any major repair intimated by the *Purchaser* shall be rectified by the Supplier from the date of intimation within a period of 3 days related to fabrication/equipment of FABRICATION OF BASE VEHICLES INTO FIRE FIGHTING VEHICLES to the satisfaction of the Purchaser. Failing which the Purchaser has a right to levy a penalty on the Supplier a sum of Rs.1,000/- per day of delay, until the defect is repaired and brought to the normal working condition to the satisfaction of the Purchaser.

16.Resolution of Disputes (Clause 28)

Add as Clauses 28.3 and 28.4 of the GCC the following:

28.3 The dispute resolution mechanism to be applied pursuant to clause 28 of the General Conditions shall be as follows:

- (a) In the case of dispute or difference arising between the Purchaser and a Domestic Supplier relating to any matter arising out of or connected with this agreement, such dispute or difference shall be referred to the award of two Arbitrators, one Arbitrator to be nominated by the Purchaser and the other to be nominated by the Supplier or in the case of the said Arbitrators not agreeing, then at the award of an Umpire to be appointed by the Arbitrators in writing before proceeding with the reference, and in case the Arbitrators cannot agree to the Umpire, he may be nominated by the Arbitration committee of the Indian Council of Arbitration, India. The award of the Arbitrators, and in the event of their not agreeing, of the Umpire appointed by them or by the Arbitration Council of India, India, shall be final and binding on the parties.

(b) The amended Indian Arbitration and Conciliation Act 2015 the rules thereunder and any statutory modification or re-enactments thereof, shall apply to the arbitration proceedings.

28.4 The venue of arbitration shall be the place from where the Contract is issued.

17. Notices (Clause 31)

For the purpose of all notices, the following shall be the address of the purchaser and supplier.

Purchaser: The Managing Director, Plot No:09, survey number: 49, IT Park, Mangalagiri, Guntur District- 522503.

Supplier: (To be filled in at the time of Contract Signature)

18. Comprehensive Warranty Period

Supplier shall provide a minimum of 2 years warranty. The warranty of 2 years shall be from the date of delivery of last lot.

19. Actions Against the Misconduct of the Supplier

- 19.1 A Supplier found being supplied similar items with similar tender conditions to any other agency in the country during the validity of the contract with the APMSIDC, at a rate lower than the rate at which they supplied under this tender, the difference amount is liable to be recovered apart from blacklisting the firm for a minimum period of 3 years. The Supplier should furnish undertaking (Section-XIII) that they will remit the differential cost, if they quote lower rate than the rate quoted to the APMSIDC to any other agency or department or state, during the period of contract
- 19.2 Any substandard supplies without meeting the quality specifications made under the contract shall also entail blacklisting of the firm for a minimum period of three years for that particular product.
- 19.3 If the bidder fails to demonstrate on asked to do so, of the products quoted with their bid, without any valid or convincing reason to the satisfaction of the Purchaser, the bids for other items offered against the bid notice will not be considered and he may be debarred for a certain period as decided by the Purchaser.

20. Progress of Supply

Supplier shall intimate progress of supply, in writing, to the Purchaser as under :

- Qty offered for inspection and date;
- Qty. accepted/rejected by inspecting agency and date;
- Qty. dispatched/delivered to Purchaser and date;
- Qty. where incidental services have been satisfactorily completed with date;

- Quantity where rectification/repair/replacement effected/completed, on receipt of any communication from consignee/Purchaser with date;
- Date of completion of entire Contract including incidental services, if any; and Date of receipt of entire payments under the Contract.

SECTION V
SCHEDULE OF REQUIREMENTS AND TECHNICAL SPECIFICATIONS

S. No	Name of the item	Quantity	EMD	Average Annual Turnover Fy 2021-22, 2022-23,2023-24
1	Fabrication of Light/Mini Rescue Tender	5	₹ 33,92,760	₹ 11,30,92,000
2	Fabrication of Fire water Tender with search and rescue equipment	17	₹ 75,86,964	₹ 25,28,98,800
3	Fabrication of Breathing Apparatus set vehicle	1	₹ 5,31,552	₹ 1,77,18,400
4	Fabrication of Hazmat Vehicle	1	₹ 8,25,552	₹ 2,75,18,400
5	Fabrication of Mini water Tender with Mist Technology	17	₹ 17,77,289	₹ 5,92,42,960
6	Fire-Retardant Coverall	3000	₹ 8,82,000	₹ 2,94,00,000
7	Fire Proximity Suits	300	₹ 4,41,000	₹ 1,47,00,000
8	T-Shirt & Trunk wear Bermuda half & Full track	5000	₹ 5,88,000	₹ 1,96,00,000

Processing fee: The participating bidders will have to pay tender processing fee (non-refundable) of Rs. **59,000/-** in the form of online only.

Note:

1. All the participants should furnish the **EMD**.
2. Vehicles to be collected from M/s.....and after fabrication to be delivered at Vijayawada on their own expenditure.
3. Branding of the vehicle () to be included in price bid.

Technical Specifications

General Information

1. Bidders are requested to offer the Fabrication of Base Vehicles into Fire fighting Vehicles as per the specifications attached.
2. For each item of the Fabrication of Base Vehicles into Various Fire Fighting Vehicles, the bidder should include all the cost associated with fixtures, reinforcements, accessories and ancillary items necessary for the satisfactory operation of FABRICATION OF BASE VEHICLES INTO FIRE FIGHTING VEHICLES.
3. Spare parts list, listing spare likely to be required for (7) years operations shall be attached with the Bid.
4. (i) Bidders are requested to provide, with their tender offer, the following information for all the items of Fabrication of Base Vehicles into Various Fire Fighting Vehicles offered.
 - Name of the Manufacturer
 - Brand Name & Model Number
 - Country of Origin(ii) Catalogue, Pamphlet, descriptive literature, spare parts list and technical specifications for each unit of item must be forwarded with the offer.
5. Deleted
6. All items should be of high quality, durable, and suitable for use in an Fabrication of Base Vehicles into Various Fire Fighting Vehicles. The technical specification and standards of each item delivered shall be that currently in use at the time of delivery.
7. The Bidder, must have necessary quality certifications as applicable to fabrication of Fabrication of Base Vehicles into Fire fighting Vehicles.
8. If the bidder fails to demonstrate any of the products quoted, the bid for that product would be considered as withdrawn and suitable action will be taken as per the Clause 15 of ITB. i.e. forfeiture of the Bid security and also the bidder may be debarred for a certain period as decided by the Managing Director.

Note: Technical specifications of Fabrications of Vehicles are enclosed

SECTION – VI

PRE - QUALIFICATION CRITERIA

(Referred to in clause 13.3 of ITB)

I. Terms of Qualification for Fabrication of Base Vehicles into Fire Fighting Vehicles:

The Bidder should have fabricated and supplied fabricated Fabrication of Base Vehicles into Fire Fighting Vehicles or similar vehicles as specified in Additional Terms and conditions in the specification. The Supplied units should be in working condition without any adverse remarks as on the date of bid notification.

The bidder should be Indian based reputed vehicle fabricator and the above mentioned fabricated vehicles should have interiors done in FRP/ABS.

- The bidder should furnish the information on past supplies and satisfactory performance in the proforma given under Section XI- Format B1, duly attested by the Bid signatory.
- Bidders shall invariably furnish documentary evidence (End-user Certificate) in support of the satisfactory operation of the Fabrication of Base Vehicles into Various Fire Fighting Vehicles Transport Vehicles as specified or a CA/Statutory auditor Certificate to that extent as per the format provided in the Section XI- Format B2

The Bidder shall have an average annual turnover in the last three financial years of not less than the amount specified in the Schedule of the Requirements and also to have a positive net worth as per the latest Annual Accounts. In case the Bidder wishes to bid for more than one item, then the Bidder should have the Average Annual Turnover in the last three financial years of more than the cumulative total of the amounts specified against these items.

- Towards the above, the bidder should furnish data as per the Format (B3) given in Section- XI, to support that he has the financial capacity to perform the contract. Further the bidder as to submit the corresponding Balance Sheets and Profit and Loss Accounts for verification
- The Bidder, must have necessary quality certifications as applicable.

II. Terms of Disqualification:

1. The Bidders who has withdrawn their bids in any of the previous tenders of APMSIDC

2. A bidder who is placed on the black-list by either APMSIDC or by any other State / Central government's department or organization in the last 3 years. The bidder should not be currently blacklisted from the above-mentioned organizations.
3. The bidder who has been declared as 'undependable supplier' for two (2) instances in the last one year by the APMSIDC
4. The bidders against whom there have been reports of substandard Fabrication of Base Vehicles into Fire Fighting Vehicles Fabrication and/ or service are liable for disqualification
5. The following shall be reason for rejection for fabricated Fabrication of Base Vehicles into Fire Fighting Vehicles:

(General appearance of the vehicle shall not show any evidence of poor workmanship)

- a. Rough, sharp or unfinished edges, burrs, seam, sharp corners, joints, cracks, and dents.
- b. Non-uniform panels. Edges that are not filleted, beveled, etc.
- c. Paint runs sags, orange peel, "fish eyes", etc. and any other Imperfection or lack of complete coverage.
- d. Body panels that are uneven, unsealed, or have voids.
- e. Misalignment of body fasteners, glass, viewing panels, light housings, other items with large or uneven gaps, spacing etc. such as door, body panels, and hinged panels.
- f. Improper body design or interface with the chassis that could cause injury during normal use or maintenance.
- g. Improperly fabricated and routed wiring or harnesses.
- h. Improperly supported or secured hoses, wires, wiring harnesses, mechanical controls.
- i. Loose, vibrating, abrading body parts, components, subassemblies, hoses, wiring harnesses or trim.
- j. Interference with chassis components, body parts, doors, etc.
- k. Leaks of any gas or fluid lines, (AC, coolant, oil, oxygen, etc.)
- l. Abnormal Noise, panel vibrations, etc.
- m. Sagging, non-form fitting upholstery or padding.
- n. Incomplete or incorrect application of rust proofing.
- o. Inappropriate or incorrect use of hardware, fasteners, components, or methods of construction.
- p. Incomplete or improper welding, riveting.
- q. Visual deformities.
- r. Lack of uniformity and symmetry where applicable.

- s. Unsealed appurtenances or other body components, gaskets, etc.
- t. In addition, any deviation from specification requirements or any other item, whether or not stipulated herein, that affects form, fit, function, durability, reliability, safety, performance or appearance shall be cause for rejection.
- u. Defective components shall not be furnished. Parts, equipment, and assemblies, which have been repaired or modified to overcome deficiencies, shall not be furnished without the approval of the Government. Welded, bolted, and riveted construction utilized shall be in accordance with the highest standards of industry. Component parts and units shall be manufactured to definite standard dimensions with proper fits, clearances, and uniformity. (All the old parts if any (removed parts from Fabrication of Base Vehicles into various fire fighting vehicles like partition, stretcher, etc. to be handed over to Govt office to the representative.

Note: In all the above cases, the disqualification cut-off date will be till the contract is signed

III. Notwithstanding anything stated above, the purchaser reserves the right to assess the Bidders capabilities and capacity to perform the contract should circumstances warrant such an assessment in the overall interest of the purchaser deciding on award.

SECTION – VII (A): BID FORM

(Name and Address of Purchaser)

Date _____

To
The Managing Director,
APMSIDC, Mangalagiri.

Contract No. _____

Having examined the Bidding Documents including Addenda No. _____ the receipt of which is hereby duly acknowledged, we, the under-signed, offer to supply and deliver _____ (Description of Goods and Services) in conformity with the said Bidding Documents for the sum as given in the Price Bid (electronically) or such other sums as may be ascertained in accordance with the schedule of prices furnished and made part of this bid.

We undertake, if our bid is accepted, to commence delivery as per the delivery schedule mentioned in this RFP and to complete delivery of all the items and perform incidental services as specified in the contract.

If our bid is accepted we will obtain the guarantee of a bank in a sum not exceeding 5% of the Contract price for the due performance of the Contract.

We agree to abide by this bid for a period of **90 (Number) days** from the date fixed for bid opening under Clause 22 of the Instruction to Bidders and shall remain binding upon us and may be accepted at any time before the expiration of that period.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in India like "The Prevention of Corruption Act 1988"

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this _____ day of _____

Signature: _____

(in the Capacity of): _____

Duly Authorized to sign bid for and on behalf of

Section VII (B)- Model Price Schedules (available on e-procurement Platform)

S. No	Quote per vehicle (Rs.)

Note:

1. The price quoted shall be inclusive of all duties and sales and all taxes including transportation, installation, commissioning at site and all incidental charges associated with the contract.

SECTION – VIII : BID SECURITY FORM

To

The Managing Director
APMSIDC, Mangalagiri.

Whereas _____ (hereinafter called "the Bidder" has submitted its bid dated _____ for the supply of _____ (hereinafter called "the Bid")

KNOW ALL MEN by these presents that WE _____ of _____ having our registered office at _____ (hereinafter called the Bank") are bound unto

(hereinafter called "the purchaser") in the sum of _____ for which payment will and truly to be made to the said purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the common Seal of the said Bank this _____ day of _____.

The conditions of this obligation are:

1. If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid form; or
2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity:
 - Fails or refuses to execute the contract form if required;
 - Fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders
 - Does not accept the correction of the bid price pursuant to Clause 15.7(c).

We undertake to pay the purchaser up to the above amount upon receipt of its first written demand, without the purchaser having to substantiate its demand, provided that in its demand the purchaser will note that the amount claimed by it is due to owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date i.e., upto _____.

..... (Signature of the Bank)

SECTION – IX: CONTRACT FORM

THIS AGREEMENT made the _____ day of _____ between _____ (Name of Purchaser) of _____ (Country of Purchaser) (hereinafter "the Purchaser") of one part and _____ (Name of the Supplier) of _____ (City and Country of Supplier) (hereinafter "the Supplier") of the other part.

WHEREAS the Purchaser is desirous that certain Goods and ancillary services should be provided by the supplier, viz, _____ (Brief description of Goods and Services) and has accepted a bid by the supply of Goods and services in the sum of _____ (Contract price in Words and Figures) (hereinafter "the Contract Price").

Now this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the conditions of Contract referred to;
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) The Technical and Price bid of the Supplier
 - (b) The approved Technical Specifications,
 - (c) The General Conditions of Contract,
 - (d) The Special Conditions of Contract, and
 - (e) The Purchaser's Notification of Award.
3. In consideration of the payments to be made by the purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provision of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
5. Brief particulars of goods and services which shall be supplied/provided by the Supplier are as under.

SL NO.	BRIEF DESCRIPTION TO GOODS & SERVICES	QUANTITY TO BE SUPPLIED	UNIT PRICE	DELIVERY TERMS

TOTAL VALUE:

DELIVERY SCHEDULE:

IN witness whereof the parties here to have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the

Said _____ (For the Purchaser)

in the presence of _____

Signed, sealed and Delivered by the

Said _____ (For the supplier)

In the presence of _____

SECTION- X: PERFORMANCE SECURITY FORM

To

The Managing Director
APMSIDC,
Mangalagiri
Guntur.

WHEREAS _____ (Name of the Supplier)
hereinafter called "the Supplier" has undertaken, in pursuance of Contract No.
_____ dated _____ to supply _____
(Description of Goods and Services) hereinafter called " the Contract".

AND WHEREAS it has been stipulated by you in the said contract that the Supplier shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of _____ (Amount of the Guarantee in Words and Figures) and we under take to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limit of _____ (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the _____ day of _____.

Signature and seal of Guarantors

Date _____

Address _____

SECTION XI

FORMAT B1 : PROFORMA FOR PERFORMANCE FOR FABRICATOR (for a period of last three years)

(Please see Section VI: Qualification Criteria)

PERFORMANCE STATEMENT FOR LAST THREE YEARS

Name _____ of _____ Firm/Dealer/Supplier:

SI No	Name of Organization/ Department to whom supplied	Purchase Order No. & Date	Type of Vehicle Supplied (Water Tender's A&B type/Water Bousser/MPT/Foam Tender/mini water Tender with water Mist Technology)	Qty. Supplied	Satisfaction report/ performance reports on supplied vehicles	Remarks
1	2	3	4	5	6	7
1						
2						
3						
4						
5						
6						

Note:- Part-D shall invariably submit by the bidder in the above format.

Signature of the Bidder

SECTION XI

FORMAT B2

CA (STATUTORY AUDITOR) CERTIFICATE

(Please see Section VI: Qualification Criteria)

Certificate from the Statutory Auditor

This is to certify that (name of the Bidder) is a “Fabricator” of Fabrication of Base Vehicles into Fire Fighting Vehicle offered under the Bid. The Bidder had supplied the quantities shown in the past performance statement and also completed the respective supplies within the stipulated delivery period/s.

Further it is certified that the previously supplied <Insert appropriate vehicle type> are reported to be in working condition without any adverse remarks from the respective users and some are working for more than two year as per the records as on the date of this Tender notification.

The bidder has previous experience in maintenance and repairs of Fabrication of Base Vehicles into Various Fire Fighting VehiclesTransport Vehicles for _____ years and has qualified service staff working with him”.

Name of Authorized Signatory:

Designation:

Name of firm:

(Signature of the Authorized Signatory)

Seal of the Firm

B3. FINANCIAL CAPACITY OF THE BIDDER

A. Details of Annual Turnover for Preceding 3 Years.

	Year 1 (2021-22)	Year 2 (2022-23)	Year 3 (2023-24)	Average Annual Turnover
Turn Over (In Rs. Crores)				

B. Details of Net Worth

	Year1 (Last Financial Year i.e. as on 31 st March 2024)
Paid up Capital (Rs. Cr)	
(Add) Free Reserves (Rs. Cr)	
Total Net Worth (Rs. Cr)	
(Signature of Bid Signatory) Seal of the Firm	
Certificate from the Statutory Auditor This is to certify that(name of the Bidder) has an average annual turnover (in the last three financial years) and Net Worth (in the last financial year) as shown above Name of Authorized Signatory: Designation: Name of firm: (Signature of the Authorized Signatory) Seal of the Firm	

Note: Bidder shall submit audited balance sheets for last three financial years

SECTION - XII

Declaration Form

I / We having Our
..... office at read and understood
the terms and conditions contained in the bidding documents under this notification for
bid and offer our bids unconditional, to the extent not stated at any other part of our bid.

We will not quote or supply the fabricated Fabrication of Base Vehicles into Various
Fire Fighting Vehicles similar to the ones offered under this bid notification to any agency
or organization in the country, at the rate lower than the rate quoted in this present tender.

If we found quoting lower rate than the rate quoted to the APMSIDC, to any other
agency in the country during the validity of the present contract, we will remit the
differential cost to the APMSIDC, unconditionally.

Signature :

Date :

Name of the
Firm and address :

SECTION XIII

Check List of Documents to be Uploaded as part of the Bid and Notes to Bidders

I. Documents with the Technical Bid

CHECKLIST FOR TECHNICAL BID

Name of Firm/Dealer/Supplier: _

S. No.	Details	Remarks of the Bidder
1	Processing fee (Rs.59,000)	Online
2	EMD (Online/Offline)	Online/Offline
3	Company/Firm Registration Certificate.	Online/Offline
4	Minimum Average Annual Financial Turnover for the last 3 years.	Online/Offline
5	GST Certificate	Online/Offline
6	SSI Certificate, (if applicable)	Online/Offline
7	NSIC Certificate, (if applicable)	Online/Offline
8	Certificates/Orders regarding Previous Purchase orders.	Online/Offline
9	Supply Orders regarding similar chassis supplied elsewhere other State Fire Services.	Online/Offline
10	Certificate from ARAI/VRDE/ICAT, if applicable.	Online/Offline
11	Other relevant documents if any.	Online/Offline

Signature of bidder

II. Financial (Price) Bid in the format available with the e-procurement platform

- Please note that the Bidder runs the risk of his bid being rejected if the price schedule contains any conditions.

Notes to Bidders

1. Upload the documents in ZIP format with suitable description as defined above.
2. The scanned documents shall be legible failing which they will not be considered.
3. Sign on all statements, documents, certificates uploaded owning responsibility for their correctness / authenticity.
4. All the statements copies of the certificates, documents etc., enclosed to the Technical bid shall be given page numbers on the right corner of each certificate
5. The format of B.G. towards E.M.D. should be adhered to as per prescribed format. Any deviation will result in making the bid non-responsive.
6. The tenderer is subjected to be black listed and the EMD forfeited if he is found to have misled or furnished false information in the forms / statements / certificates submitted in proof of qualification requirements or record of performance (Please see Corrupt and Fraudulent Practices Clause)
7. All the Bidders are requested to quote with single option only, for the each item offered and please note that bids with multiple options, for any one or all of the items offered, will be rejected by the purchaser as Non-responsive.

Annexure -I

ANDHRA PRADESH MEDICAL SERVICES & INFRASTRUCTURE DEVELOPMENT CORPORATION (APMSIDC)

WARRANTY CERTIFICATE

(to be filled jointly by the Tenderer, Purchaser for every fabrication)

Date:

APMSIDC Supply order No :dated.....

The Fabricated **Fabrication of Base Vehicles into Fire Fighting Vehicles**

(Fabricated **Fabrication of Base Vehicles into Fire Fighting Vehicles** Name)

Model No..... bearing serial no was
commissioned successfully at is offered with a
comprehensive warranty for a period of Years
starting from to including all the
following accessories;

Sl. No	Name of the accessory	Manufacturer's name	Fabrication of Base Vehicles into Fire Fighting Vehicle Serial No.	Qty

Name of the Supplier: Signature: Seal:	Name of the Purchaser / End User: Signature: Seal:
--	--

Annexure - II

ANDHRA PRADESH MEDICAL SERVICES & INFRASTRUCTURE DEVELOPMENT CORPORATION (APMSIDC)

GENERAL INFORMATION ABOUT THE TENDERER

Name of the Tenderer

Registered address of the firm:

State:

District

Telephone No.

Fax.No.

Email.

Address			
State		District	
Telephone No.		Fax	
Email		Website	

Type of Firm (Please ✓ relevant box)

Private Ltd.		Public Ltd.		Proprietorship	
Partnership				Others, specify	
Registration No. & Date of Registration.					
Nature of Business (Please ✓ relevant box)					
Fabricator			others (Please specify)		

Annexure - II

On Purchaser letter Head

Dt: _____

ANDHRA PRADESH MEDICAL SERVICES & INFRASTRUCTURE DEVELOPMENT CORPORATION (APMSIDC)

THREE MONTHS PERFORMANCE CERTIFICATE (to be filed by the head of user institution individually for every fabrication)

Vehicle No.			
SUP.CODE / Name of the Supplier			
Fabrication Details			
Name of the item:		Purchase Order No:	
Make / Manufacturer		Purchase Order Date:	
Model		Purchase Amount	
Serial no.		Project Name	
Date of Commissioning		Location / Department	
Whether Fabrication of Base Vehicles into Fire Fighting Vehicle working satisfactorily without any problem for one months?		YES ☐ NO ☐	
If No, provide details of Fabrication of Base Vehicles into Fire Fighting Vehicle failure in the first month (attach additional details if any in a separate sheet)			
BREAK DOWN DETAILS			
Break down Reported Date	Attended date	Rectified date	Attended by
Present status of the fabrication		satisfied ☐ Not satisfied ☐	
Recommended to settle the final 10% of payment		YES ☐ NO ☐	
Recommend for trial run for one more month		YES ☐ NO ☐	
Performance of accessories supplied			
Further Training		Required ☐ Not required ☐	
Remarks of Purchaser			
Three months performance certificate was issued on (date to be filed in by the Purchaser or his authorized representative)			
Name of Purchaser		Sign.	
Signature of the Superintendent.		Sign. & Seal	
Date:		Date:	
Seal of supplier:		Purchaser Seal :	

Technical Specifications for Fabrication of Fire Fighting Vehicles and procurement of Personal Protective Equipment are enclosed herewith

1. TECHNICAL SPECIFICATION OF MINI RESCUE TENDER FOR THE USE OF ANDHRA PRADESH STATE DISASTER RESPONSE AND FIRE SERVICES VIJAYAWADA

1. GENERAL REQUIREMENT

This Vehicle should be designed to cater the needs of emergency created due to road accident and many other Disaster. The Mini Rescue Tender shall conform to the specifications listed below & will be fabricated on a suitable 18.5 Ton Ashok Leyland 20ft G45 FES Cowl chassis with BS –VI emission norms to be supplied by the department. The Rescue Vehicle must be designed to effectively & efficiently carry all the equipment as per the following specifications, which must be fixed in a compact & ergonomic manner & must be readily accessible for use during emergencies. Due care should be taken to ensure that all aggregates are designed for comfort of the operator.

2. CABIN, BODY WORK & STOWAGE

2.1) Enclosed accommodation for six persons shall be provided in the driver cab cum-crew compartment including the driver and the in-charge of the crew. Both the seats shall be independent. The driver's seat shall be adjustable and comfortable. The rear compartment of driver's cabin shall have one removable seat for full width of cab for 5 (five) crew members. The cab floor shall be covered with 3 mm thick aluminium chequered plate rigidly fixed to the frame cross members by means of nuts and bolts or riveting. Trap doors for topping up oil, etc, wherever necessary shall be provided.

2.2) The driver-cum-crew cabin shall be provided with full four doors, one for driver, one for officer and two at the crew compartment. The doors shall be generously sized for easy embarking/disembarking of crew members. All the doors shall be fitted on the super structural members, each hung upon three invisible coach type mild steel stout hinges and fitted with best quality handles.

2.3) The door handle on outside of driver seat shall have a locking arrangement. Other doors shall be lockable from inside. In addition to the door lock, aluminium tower bolt of 20 mm shall be provided for all the doors from inside, adequate grab rails shall be provided for easily boarding and alighting from the appliance.

2.4) The windscreen glass shall be provided in the two halves and shall be flat in shape. Each glass shall be fitted in E.P.D.M. rubber beading. The glasses shall be 5 mm thick toughened safety glass. The rubber beading used for fitting glasses and window frame shall be E.P.D.M. rubber.

2.5) The driver seat shall be adjustable type vertically, forward and backward. The officer seat shall be fixed type. Both the seats shall be rigidly fixed to the flooring by means of nuts and bolts. The seat cushion shall be of latex foam rubber 75 mm thick upholstered in good quality foam leather cloth. The back seat shall be of latex foam rubber 50 mm thick upholstered in good quality foam leather cloth. Below the crew seat, two lockers shall be provided. One locker for battery box to accommodate two 12 V 13 plates batteries and another for keeping accessories and Tool kit container. The extra length of battery cable shall be provided by manufacturer. The crew seat shall be rigidly fixed to floor by means of nuts and bolts, running

full width of the vehicle suitable for sitting five firemen, covered with 75 mm × 50 mm cushion latex foam rubber upholstered in good quality foam leather of approved shade.

2.6) The super structural of the cabin shall be constructed out of 2 mm Mild Steel (M.S) 45 mm × 45 mm × 2 mm pressed 'Top Hat' sections. The super structure shall be strengthened specifically on the members with the lockers doors frames are to be fitted and also the other members by providing brackets and gussets of 2 mm Mild Steel (M.S) plate securely welded. The details of super structure are as follows:

Under frame cross members : 100 mm × 50 mm member's × 5 mm

Floor longitudinal members : 50 mm × 50 mm member's × 6 mm

Vertical members on even side : 45 mm × 45 mm × 2 mm

Skirt member : 45 mm × 45 mm × 2 mm

Waist member : 45 mm × 45 mm × 2 mm

Top deck longitudinal : 45 mm × 45 mm × 2 mm

2.7) The cab and lockers shall be of composite construction with sufficient rigidity and reinforcement and shall be kept as light as possible. The structure/frame work shall be of welded constructions and made from 2 mm thick Galvanized steel pressed sections and square tubes. The angles and channels used shall be of minimum 3 mm thickness. The complete structure material shall be treated for anti-corrosion by zinc plating. The plating thickness shall not be less than 20 microns. Two coats of epoxy paint shall be applied to the completely welded structure. The structure shall be so designed so as to avoid any vibration/rattling/deformation in the intended usage of the vehicle. The interior panelling shall be done from 1.22 mm thick aluminum sheets and the exterior panelling shall be done from 1.60 mm thick aluminum sheets. The entire roof of the vehicle, cabin floor and locker floor shall be covered with minimum 1.60 mm thick aluminum chequered plates. All the lockers sides and complete rear of the vehicle shall be covered with minimum 1.22 mm thick aluminum chequered plates. Lockers shall be provided for secure stowage of all equipment given in Annexure. The height of the lockers from the bottom to the top of the opening shall be not less than 600 mm and the depth shall be not less than 600 mm. All lockers shall be provided with internal automatic lighting arrangement with the master switch in the cab. All lockers shall be provided with internal automatic lighting arrangement with the master switch in the cab. The doors of the lockers shall have efficient means for holding them closed by efficient flush fitting spring loaded locks. The doors of all the lockers shall be hinged so as to move up-wards. All lockers handles should be opened to the right only with Aluminum sticker indicator. The doors of the lockers shall have sufficient means for holding them open and efficient flush fitting spring loaded locks. All locker-handles should be of good quality of Aluminum material.

NOTE: All the hinges and locks used should be of heavy duty and strong. In the cabin the back rest cushion lining should be provided and back panel should be 18 gauge Aluminum sheet duly painted. All internal panelling for doors in the cabin shall be 16 gauge Aluminum sheet.

3. LOCKERS FOR STOWAGE OF EQUIPMENT

All equipment inside the lockers would be stowed very scientifically and systematically in the drawers and each piece of equipment will have its designated location so that at the time of Emergency the required equipment can be very easily located and removed for use. Location of equipment (labels) must be provided on each locker compartment for immediate identification. Each equipment would be properly clamped and strapped in the drawers to

prevent shifting of the equipment while the vehicle is in motion. The lockers shall have smooth operation. The aluminium shutters must be of excellent quality and made of extruded aluminium sections. The shutters must be of roller type only and not sliding type. Each enclosure / space for equipment must be provided with a lighting system which must be centrally operated with separate switches for right and left lockers. All the space on sides of the vehicle, below the chassis frame level must be utilized for stowing Equipment's and must be covered with rollers shutters. Suitable folding / removable arrangement must be made for access to the lockers at height and removal of equipment from lockers.

ACCEPTABLE MAKE: MCD / ROSENBAUER / E-ONE / OSHKOSH

4. WORKMANSHIP AND MATERIAL

Workmanship executed must be of the highest order. All the material used in the fabrication of the body work must be of good quality or approved make & type. All equipment & material shall comply with the requirements of the latest relevant IS specifications.

5. ELECTRICAL EQUIPMENT

Adequate lighting arrangement must be made in all compartments. All equipment lockers will have internal lighting arrangement automatically switched on and off by opening/closing of doors/shutters. All the wiring will be properly fixed in position & will be protected against heat, oil & physical injury. To the extent possible all wiring will pass through conduits. All wires used in the vehicle must be stranded copper or copper alloy conductors of a gauge rated to carry at least 125 percent of the maximum current for which the circuit is protected & must be uniquely identified by colour coding or permanent marking. Voltage drops in all wiring from the power source to the using device shall not exceed 10 percent. All the electrical circuits will have their own separate fuses, suitably marked & grouped in a common fuse box, located in an easily accessible position. Provision will be made for min. 4 spare fuses in the box which must be provided in driver's cabin. All the controls for electrical system will be provided near the driver's seat. The battery will be placed in a totally enclosed box. Arrangement must be made on dashboard opposite to the fire officers' seat to fix a mobile wireless set.

6. ACCESSORIES

The vehicle will be provided with the following accessories in addition to those normally fitted to the chassis. All the accessories will be suitably fixed in position or will be kept in lockers or other suitable place on the tender.

LED Light Bar on top & blinker light on rear side	1
Adjustable Spotlight	2
Perimeter & Underbody Lighting System	1 Set

7. PAINTING & MARKING

The entire appliance will be painted in "FIRE RED" (IS-536) paint using double coat spray painting on the outside. Also, on either side of the vehicle (logo of Client & name) monogram

will be painted or stickered in golden yellow colour at suitable places as advised by the client. The chassis and wheel arches will be painted black. Two coats of anticorrosion & one zinc phosphate-priming coat will be applied before final painting of Emergency Rescue Tender. Lastly, the following details is to be provided on the vehicle at a suitable place before the dispatch of the vehicle.

- ✍ Manufacturer's Name or Trademark.
- ✍ Year of Manufacture.
- ✍ Engine & Chassis Nos.
- ✍ All Instrument Controls will be Identified with nameplates.

8. LIST OF THE ACCESSORIES / EQUIPMENTS TO BE SUPPLIED WITH Mini Rescue tender:

8(A). GENERAL EQUIPMENT:

	<u>DESCRIPTION</u>	<u>QTY</u>
A1	Fire hook	4
A2	Portable Li-ion Powered Battery Operated Smoke Blower Foldable for easy stowing in fire vehicles. Ergonomic design with shoulder strap/backpack for easy carrying. The minimum clear height from the ground for the mobile fire smoke exhauster shall be 75 mm. Permanent Magnet DC-type high-power motor. Lithium battery for at least one hour of operation without mains power. Auto changeover from AC220V to battery or vice versa in case of power source failure. Capability to use through 220V AC supply for continuous usage. Total unit weight is less than 22 kg. 2800 Rpm PMDC fan motor. Minimum air flow at full speed: 8000 cfm. Lithium battery with a built-in charger on the control card/motherboard. No separate charger required. A minimum of 10 meters charging cable shall be provided with the mobile fire smoke exhauster. Smart LCD display showing fan RPM, battery capacity, temperature, and unit status. PP Glass filled front grill for a balance between weight efficiency and robustness. Arrangement for attaching duct on both sides for positive and negative suction. Duct provided: 16 inches dia and 10 meters length. Blower can be used at different angles (30/60/90/120) for various applications. Authorization letter from OEM shall be submitted at the time of Inspection. Acceptable Make: Supervac / Identifire and Rescue Solution / Rosenbauer / E-One	1
A3	Lowering line - 50 mm of 15 m, 30 m & 50 m each	1
	Safety Belt-Full Body Harness with Hook & Rope	4
A4	Set of Extinguishers ✍ CO₂ Expelled 4.5 Litres ✍ ABC Type: 4.5 Kgs	2 Each
A5	Spades	2
A6	Shovel	2
A7	Mattocks handle	2
A8	Firemen Axe	4

A9	Crowbars 1 m long	2
A10	Rake, 3 prong	1
A11	Life Buoy	6
A12	Life Jacket	6
A13	Blanket Woollen (In box)	6
A14	Cable Winch – Min. 5 Tons Acceptable Make: Ramsay / Identifire and Rescue Solution / Warn / Miller	1
A15	Portable, electrically operated, circular saws, 220–250V, single phase min2500W,4500RPM,with Disc Diameter max-300mm[12"],Arborsize-22.2mm,Weight–not more than 12kg, With soft start technology built in with in electronic control box, Diamond Tip Blade of 12 diameter, 5000RPM,Arborsize-22.2mm,Thickness-3.5mm–2 Nos and Composite Blade of 12 diameter 5000RPM, Arborsize-22.2mm, Thickness-3.5 mm with a set of 5 blades having capability of cutting various material such as Rails, Air craft alloys, vehicle panels, metal roller doors, wooden frames, etc.	1
A16	Electric drill with spare bits Battery operated 2mm to 10mm(rechargeable)	1

8(B). LIGHTING, SIGNALING & POWER EQUIPMENTS:

	<u>DESCRIPTION</u>	<u>QTY</u>
B1	Solphin / Grand LED Light Bar	1
B2	Honda 5.5 KVA Petrol Driven Portable Generator model EU70IS	1
B3	Flood lights with handle 500W-220V	2
B4	Traffic Guide Cones	2
B5	Safety Torch	2
B6	Explosion Proof Cable Lamp with 20 m cable	1
B7	Pulling and Lifting machine, Lifting or pulling 5 tones complete with wire rope and hook sets	1

8(C) .FIRST AID & MEDICAL EQUIPMENTS:

	<u>DESCRIPTION</u>	<u>QTY</u>
C1	Basket stretcher	2
C2	First Aid Box for 20 persons	1
C3	Portable Folding Stretchers	2
C4	First Aid Kit for Burns	1
C5	Resuscitator	2

8 (D). PERSONAL PROTECTIVE EQUIPMENTS:

	<u>DESCRIPTION</u>	<u>QTY</u>
D1	Fire Retardant Blanket 2 x 2 m (In case)	2
D2	Chemical Protective Overall (PVC Suit)	4
D3	High Visibility Vest	4

D4	Self-Contained Breathing Apparatus (SCBA) (Annexure-I) Acceptable Make: Dragger / MSA / Scott	5 no.s with 5 spare cylinders
D5	Distress Signalling Unit (DSU)	4
D6	Rubber Hand Gloves	6
D7	Full Face Masks	2
D8	Fire Gum Boots as per IS 5557:2024 or Latest Version	15
D9	Goggles for Gas/Electrode welding, Gas/Chemicals resistant	6

8(E). SEARCH & RESCUE EQUIPMENTS:

	<u>DESCRIPTION</u>	<u>QTY</u>
E1	Battery Operated Rescue Tools (Annexure-II) Authorization letter from OEM shall be submitted at the time of Final Inspection.	1 Set
E2	Lifting Bags Set (Annexure-III) Authorization letter from OEM shall be submitted at the time of Final Inspection	1
E3	Portable Thermal Imaging Camera	1
E4	Jumping Cushions (Annexure-IV) Authorization letter from OEM shall be submitted at the time of Final Inspection	1
E4	Forcible Entry Kit shall comprise of 4 tools Hooligan Tool Axe Tool Cutting Plier Door Rammer The kit shall be portable that can be worn as a backpack and carried to the emergency site. Authorization letter from OEM shall be submitted at the time of Final Inspection Acceptable Make: Identifire and Rescue Solution / Lukas / Holmatro	1
E5	Reusable Magnetic Leak Sealing Patch (Annexure-V)	1

8(F).DETECTION & MEASURING INSTRUMENTS:

	<u>DESCRIPTION</u>	<u>QTY</u>
F1	Multi Gas Detector (Annexure-VI)	1

8(G). UTILITY TOOLS:

	<u>DESCRIPTION</u>	<u>QTY</u>
G1	Glass breaker with holder	1
G2	Sledgehammer - 10 pound with MS handle	1
G3	Hammer, 3 kg and 5Kg	1 each
G4	Taparia / Jhalani make Toolbox (Heavy Duty) – Mechanical consist of: 2 adjustable spanners, 300 mm and 450 mm, set of box spanners (up to 50 mm), still son wrenches of 150 mm and 450 mm, hacksaw frame, 12 hacksaw blades, cold chisels 12.5 mm and 25 mm, 1 hammer of 1 kg, 4 steel wedges, 1 pair of side cutting pliers, 180 mm with insulated handles, 1 breast drill, 3 twist drills - 6.35 mm, 12.7 mm and 19.0 mm, 1 bolster 100 mm, 2 centre punch, 1 hacksaw for corrugated iron, 1 screw driver, insulated 1 persuader, 1 pair tin men's shears, 1 Bolt Cutter	1
G5	Taparia / Jhalani make Electrical Toolbox kit consist of: Electrical current leak detector/meter – 1 No. Complete with Digital Multimeter-1 No. Testers – 1 Set Black Tapes -2 Sets Cutting pliers for wire cutting – 2 Nos. (1 Small, 1 Big) Solder machine with wax and wire – 1 No. Anchors make Extension box of 50 m wire – 1 No. Socket for testing – 1 No. Rubber Hand Gloves – 2 Pair Fuse Wire	1
G6	Carpenter Tool kit consisting of: Measure Tap – 2 Nos. (30 ft & 50 ft) Scissor – 1 No. Big Hand Drill- 1 No & Hand saw – 1 No.	1
G7	Telescopic Pole Saw (Annexure-VII) Acceptable Make: Milwaukee / Rosenbauer / E-One / Oshkosh / Zeigler	1
G8	Dewatering Pump (Annexure-VIII) Acceptable Make: Milwaukee / Godiva / Rosenbauer / Magirus	1

ANNEXURE-I	SELF CONTAINED BREATHING APPARATUS
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SCBA SET:

Self-Contained open circuit Compressed Air Breathing Apparatus (SCBA) Set Confirming to EN137:2006 Type 2/ IS 10245 (Part 2):2023 & CBRN approved, with 6 Liters /300 Bar Aluminium lined fully wrapped carbon composite material Compressed Air Cylinders. as per following specifications.

1. General requirement.

The set shall be self-contained open circuit type compressed air breathing apparatus set fully confirming to EN 137: 2006 Type 2/ IS 10245 (Part 2):2023 or its latest version and shall be approved as per CBRN standard for respiratory protection devices. Anti-Static Property ATEX II 1G IIC T6 II 1D IIIC –30°C ≤ Ta

$\leq +60^{\circ}\text{C}$.

- (a) The BA set shall contain air cylinder, back plate, facemask, lung demand regulator, pressure reducing valve, Pressure Gauges, hoses, standard carrying case to be provided.
- (b) The minimum duration of use of the set shall not be less than 45 minutes. The weight shall not exceed more than 11 kg.
- (c) The design of the set shall be such that there is no protruding parts or sharp edges likely to be caught on projections in narrow passages.
- (d) Original equipment manufacturer (OEM) name and CE/EN marking shall be visible, on the set. warranty 10 years.

Back plate with body Harness:

Back plate should be manufactured from Glass fibre reinforced polyamide, flame retardant and conducting surface material and it consists carrying straps, pneumatic system single line high pressure hose inside a medium-pressure hose, containing a cylinder connector, reducer, pressure gauge, whistle and lung demand valve. Pneumatics easy detachable. Back plate should contain a swivel waist pad, S Shaped shoulder straps Shoulder and waist straps should consist reflective elements for better visibility and must be constructed from a high abrasion resistant, high puncture resistant, light weight and water-resistant f Flame retardant polyethylene foam padding Outer shell: Coated aramid textile, flame retardant, tear resistant and conducting with layered band made from polyamide webbing coated with CR rubber material.

Full face mask:

Positive pressure Full face Material: Face blank and Head harness Rubber: Acrylonitrile and Butadiene rubber NBR , Lens frame : Nylon (PA), Lens Polycarbonate with hard coat APEC with hard coat and antifog, Neck strap : Rubber CR, Helmet adapters : Stainless steel mask assembly shall be big facial counter with a wide reflex seal, speech diaphragm, inner mask (nose cup), visor, rubber head band, good speech transmission and having flame resistance requirement meeting to EN 136 Class 3+ and Antistatic approval. Best protection for chemical resistance and permeation. With CE/EN marking, manufacturer name/symbol field of vision shall be more than 90% and it should upgradable with communication system in future

Full Automatic First Stage Pressure Reducer: The first stage pressure reducer shall be mounted in a protected position on the rear, lower portion of the back frame. The pressure reducer shall be of a fail-safe spring-loaded piston design, with an integral pressure relief valve, consisting of only two moving parts. The reducer shall be completely automatic, low maintenance and require no calibration. The reducer shall have flow characteristics that exceed 1000 Liters /min and be protected by a pressure relief valve that operates between 11.5 and 13.5 bar. The reducer shall be capable of reducing the pressure at first stage to minimum 7.5 bar and designed to function with either 200 or 300 bar cylinders.

Lung demand valve:

Lung demand valve should have a medium pressure hose, with quick release coupling. Lung demand Valve should contain a rubber membrane for better H₂S and other gases protection. Disconnection from the mask should occur by simultaneously pressing the buttons on the sides of the lung demand valve. Airflow should automatically shut off when disconnecting.

Low pressure warning whistle:

SCBA set should be provided with low pressure warning whistle when pressure drops to 55

bar $\pm$ 5 bar for a 300 Bar system. Warning signal should be located on the pressure gauge.

Pressure gauge:

SCBA should have a 300 Bar pressure gauge to monitor cylinder at the input of the first stage reducer. Manifold unit two medium pressure couplings.

Compressed air cylinder:

Cylinder shall be fully wrapped composite material and basically approved to EN 12245 or CE marked. The weight of the cylinder when fully charged shall not be more than 6.8Kg. The carbon composite material and it should be provided with Valve. Air cylinder shall have a water capacity of 6.8 Liters and free air capacity of min 1850 litres when filled at a pressure of 300 bar. Cylinder shall be approved by PESO (Petroleum and explosive safety organization) and certificate to that effect shall be submitted at the time of inspection. The cylinder shall be supplied with valve made from nickel plated brass and shall comply with EN 144-2 & CCE approved.

Enhanced HYGIENE

Set should be easy to clean and disinfect Dust and water-repellent harness material Simplified disassembly and assembly of components Entire SCBA is machine washable.

Preferable Make: MSA.

ANNEXURE-II	BATTERY OPERATED RESCUE TOOLS
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All tools / equipment shall be tested according to EN13204 (European standard) and for performance to NFPA 1960 (US standard).

The control handle must have two speed modes that allow to switch between the tool's high-speed and low-speed mode for optimal speed control during the rescue operation. The control handle must be centrally placed at the back of the tool and be accessible over 360 degrees without any obstruction.

The hydraulic pump flow and thus speed of the tool must be maximized at every load by a stepless mechatronic system inside the tool and not by means of pressure stages.

The tool must have an auto start/stop function. The motor/drive system should automatically stop when the tool is not operated or has reached its maximum pressure in order to save battery capacity. The tool should restart by turning the control handle again.

The tool must be equipped with a temperature management system that monitors and manages the tool and battery temperature to avoid overheating, enabling the tool to be used intensively even in hot weather conditions.

The tool must have an on-tool charge function. Possibility to charge the battery while mounted and connected to the tool to make sure the tool is always ready for use, equipped with battery.

The tool and on-tool charging cord should have a magnetic connector for quick and easy (dis)connection.

The charger should be able to charge the battery on a tool and an extra battery on the charger without the need to swap these batteries.

The Battery will be min. 8 Ah 28 V Lithium ion rechargeable battery Tool and battery must be suitable for underwater use. The protection rate tool shall be at least IP57. The Protection rate battery shall be at least IP67.

It must be possible to check the performance of the drive system of a tool through diagnostic software. It must be possible to read out detailed state of health percentage of the battery by means of diagnostic software. The charger should indicate the state of health of a battery.

A) TECHNICAL PARAMETERS REQUIRED FOR THE BATTERY OPERATED HYDRAULIC SPREADER

The spreader would be capable of spreading, squeezing and pulling with the combination of chains.

The spreader shall be provided with spreading tips made of fully hardened, high tensile tool steel with proper serrations outside and inside for a perfect grip during spreading as well as squeezing operation. The tool carrying handle shall have integrated LED lights powered from the main battery. The LED lights can be turned on or off by means of a switch.

The tips shall be mounted on the spreader arms by means of a quick locking system. This quick lock system shall provide the possibility to change the spreading tips for cutting tips or pulling adaptors single handed, without loose parts and without the need for extra tools. The tips shall have Interlocking profile on inside of spreading tips and a flat start of spreading profile on the outside for easy and deep insertion of tips in narrow gaps. It shall have taller middle row of teeth on spreading tips for immediate grip.

Pulling adaptors and pulling chains will be supplied as accessories. These shall be of the quick lock type. The pulling adaptors shall be equipped with shortening hooks which easily fit in each shackle of the pulling chains to assure quick connection. The pulling chains shall be equipped with the same shortening hooks in order to easily mount the chains to any object of whatever size or shape.

The spreader shall have following specifications:

Max. Spreading distance	Not less than 720 mm
Min. Spreading force measured at 25 mm from the tips as per EN 13204	Not less than 50 kn
Max. Spreading force (Theoretical)	Not less 850 kn

Max. Squeezing force	Not less than 125 kn
Max. Pulling distance	Not less than 600 mm
Max. Pulling force with pulling attachments	Not less than 65 kn
Weight including Battery	Not more than 22 kgs

Accessories

Pulling Chains Set 10 mm – 1.5m + 3.0m	1 set
Pulling Attachment Set	1 set
Mains Power connector to connect the tool to any 220 V source	1 No
Battery charger – 300 watts – with indication for the state of health of battery	1 No
On Tool Charging Cord	1 No
Tool diagnostic cord having Cable not less than 3.5 mtrs to connect the tool to a PC or laptop for battery and tool diagnostics through diagnostics software	1 No
Battery status diagnostic tool to check battery health	1 No
Spare Battery	1 No

B) TECHNICAL PARAMETERS REQUIRED FOR THE BATTERY OPERATED HYDRAULIC CUTTER

The cutter shall be capable of cutting of various sections such as solid ground bar, hollow round bar, flat section, square tube, rectangular tube etc. It would also cut the door pillars of new generation cars.

The tool carrying handle shall have integrated LED lights powered from the main battery. The LED lights can be turned on or off by means of a switch.

The blades shall be dropped-forged of high tensile tool steel, well grinded for optimum grip, fully hardened, surface treated, regrindable and easily replaceable. The cutter jaw shall be mounted at an angle of an inclination of not less than 30 deg in relation to the body of the tool for faster and easier cutting in critical situations and more ergonomics.

The blades shall be designed to set the material to be cut in the optimal cutting position and the material cutting process shall be as smooth as possible without mechanical impact. In fully open position the blades must have U-shape design allowing the blades to pull material into the cutting recess for better cutting performance.

The cutter shall have following specifications:

Blade opening	Not less than 180 mm
Cutting force (theoretical)	Not less than 11000 kn
Weight including Battery	Not more than 23 kgs.
Capable of cutting round bar	Not Less than 40 mm
The material of the steel profiles shall conform to	EN 10025-1-2000 table 5, type S 235 JR

Mandatory Compliance category of cutting performance as per NFPA 1936 -	A8,B8/B9,C7/C8,D9,E9
Mandatory Compliance category of cutting performance as per EN 13204 -	1K,2K,3K,4K,5K
Protection Class minimum	IP 54

Accessories

Mains Power connector to connect the tool to any 220 V source	1 no
Battery charger – 300 watts – with indication for the state of health of battery	1 no
On Tool Charging Cord	1 no
Tool diagnostic cord having Cable not less than 3.5 mtrs to connect the tool to a PC or laptop for battery and tool diagnostics through diagnostics software	1 no
Battery status diagnostic tool to check battery health	1 no
Spare Battery	1 No

C) TECHNICAL PARAMETERS REQUIRED FOR THE BATTERY OPERATED HYDRAULIC COMBI-TOOL:

The combi tool shall be capable of cutting of various sections such as solid round bar, hollow round bar, flat section, square tube, rectangular tube etc. It would also cut the door pillars of new generation cars and also be able to perform the spreading and pulling functions.

The blades shall be of shock resistant non corroding alloy steel, hardened and ground and shall be exchangeable and regrindable.

The tool carrying handle shall have integrated LED lights powered from the main battery. The LED lights can be turned on or off by means of a switch.

The combi tool shall have following specifications:

Spreading Distance	Not less than 375 mm
Spreading force measured at 25 mm from the tips as per EN 13204	Not less than 4 T
Max. Spreading force	Not less than 175 T
Cutting force	Not less than 65 T
Squeezing force	Not less than 8.5 T
Pulling distance	Not less than 250 mm
Pulling force	Not less than 10 ton
Weight including battery	Not more than 21 kgs
Capable of cutting round steel bar	Not less than 35 mm
The material of the steel profiles shall conform to -	EN 10025-1-2000 table 5, type S 235

Mandatory Compliance category of cutting performance as per NFPA 1936 -	A7,B8,C8,D8,E8
Mandatory Compliance category of cutting performance as per EN 13204 -	1J,2J,3K,4K,5K

Accessories

Pulling Chains Set 10 mm – 1.5m + 3.0m	1 set
Pulling Attachment Set	1 set
Mains Power connector to connect the tool to any 220 V source	1 no
Battery charger – 300 watts – with indication for the state of health of battery	1 no
On Tool Charging Cord	1 no
Tool diagnostic cord having Cable not less than 3.5 mtrs to connect the tool to a PC or laptop for battery and tool diagnostics through diagnostics software	1 no
Battery status diagnostic tool to check battery health	1 no
Spare Battery	1 No

D) TECHNICAL PARAMETERS REQUIRED FOR THE BATTERY OPERATED HYDRAULIC TELESCOPIC RESCUE RAM

The ram cylinder shall be double acting hydraulically operated device of light weight construction suitable for manual application with ease. A laser pointer shall be fitted inside the cross head for facilitating right and precise placement of the ram and it must be possible to install an extension pipe without having to remove a ram head. 2 nos Carrying / holding handles shall be fitted on the tool.

The tool carrying handle shall have integrated LED lights powered from the main battery. The LED lights can be turned on or off by means of a switch.

The telescopic ram shall have following specifications

Max. Spreading force 1st plug.	Not less than 13 T
Max. Spreading force 2nd plug.	Not less than 6.5 T
Length retracted	Not more than 580 mm
Stroke 1st plug.	Not less than 400 mm
Stroke 2nd plug.	Not less than 375 mm
Total stroke	Not less than 775 mm
Max. Length including extension piece	Not less than 1800 mm
Weight	Not more than 21 kgs

Accessories

Mains Power connector to connect the tool to any 220 V source	1 no
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Battery charger – 300 watts – with indication for the state of health of battery	1 no
Spare Battery	1 No
On Tool Charging Cord	1 no
Tool diagnostic cord having Cable not less than 3.5 mtrs to connect the tool to a PC or laptop for battery and tool diagnostics through diagnostics software	1 no
Battery status diagnostic tool to check battery health	1 no
Extension pipe min. 425 mm in length with automatic locking	1 no

E) TECHNICAL PARAMETERS REQUIRED FOR THE BATTERY OPERATED MINI CUTTER

The Tool must have a fully integrated hydraulic pump and electric motor.

The control shall be Push deadmans control mechanism with automatic neutral position

Tool must have variable speed modes to switch between high and low speed for optimal speed control during the rescue operation.

The tool must have an auto start/stop function. The motor/drive system should automatically stop when the tool is not operated in order to save battery capacity. The tool should restart by pushing the control button again.

The protection rate of the tool should be at least IP54.

It shall be Certified according to EN13204 and NFPA1936 norm by an independent test institute.

The tool must be labelled with an NFPA1936 compliance label with identifying mark of the independent test institute.

The cutter jaw shall be mounted at an angle of 18 degrees in relation to the body of the tool, to gain better access to car pedals.

The Central bolt head and nut shall be mounted directly to the steel blades resulting in less blade separation (optimum cutting performance) and flatter design for better access.

To improve durability the blades must be machined from high grade tool steel and not forged.

Sound emission at 1m under full load shall not exceed 74 dB(A).

Sound emission at 4m under full load shall not exceed 65 dB(A).

To assist the operator and increase safety while working in dark or poorly lit circumstances the tools shall have at least 1 integrated LED light which illuminates the blades. The LED light shall be powered from the main battery.

The cutting edge must have an elongated grip tooth to prevent materials from being pushed out of the blades and therefore maximizing cutting performance.

The Mini cutter shall have following specifications

Blade opening at the tips	Not less than 55 mm
Maximum cutting force	Not less than 22 T
capable of Cutting round bar (acc. to EN13204)	Not less than 22 mm

Mandatory Compliance category of cutting performance as per NFPA 1936 -	A4 B3 C2 D4 E4
Mandatory Compliance category of cutting performance as per EN 13204 -	1D 2D 3C
Maximum working pressure	Not less than 700 bar
Weight including battery	Not more than 5 kgs

F) Battery and charger for the mini cutter

The Li-Ion Battery shall be min. 18 VDC, 36 Wh and min. 2Ah capacity – 2 nos to be supplied Suitable battery Charger shall be provided having Input power not less than 190 W and Battery charging time with AC charger should be max 30 minutes.

ANNEXURE-III	AIR LIFTING BAGS
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AIR LIFTING BAGS

High Pressure Pneumatic lifting bags Vetter make shall be strictly as per below spec:

- High Pressure Pneumatic lifting bags working pressure shall not be less than 12 bar and burst pressure shall not be less than 48 Bar,
- It shall be made up of aramid reinforced rubber, non-slip design, capable of being interlocked when 2 bags are placed on each other, quick connection, reflecting labels, insertion height strictly not more than 25mm.
- Hoses provided with bags shall be of different colors for easy identification from long distance while operating the bags.

Lifting Capacity shall not be less than	Min. Inflation height shall not be less than	Dimensions shall not exceed	In any case weight shall not exceed	Air requirement @ 12 bar shall not be more than	Quantity
1 Ton	70 mm	140 x 130 mm	0.5 kg	6 litres	1
5 Tons	120 mm	255 x 200 mm	1.5 kg	25 litres	1
10 Tons	175 mm	320 x 320 mm	3 kg	125 litres	1
20 Tons	240 mm	440 x 440 mm	5 kg	255 litres	1
40 Tons	335 mm	610 x 610 mm	9.5 kg	605 litres	1
59 Tons	390 mm	790 x 690 mm	14 kg	1105 litres	1

The bags shall be certified for compliance with EN 13731 by either TUV Germany /UL USA/EIL India only. The air bags must supply with the following accessories:

- ❖ Pressure regulator 300 Bar to 12 Bar
- ❖ Control box shall be yellow in color with lever type joystick for operating 2 bags with pressure gauges and carrying strap
- ❖ Single Control Unit
- ❖ Dual Control Unit

- ❖ Air inflation Hose 5 Mtrs
- ❖ Air inflation Hose 10 Mtrs
- ❖ Shut off hose with safety valve
- ❖ Dual connector

ANNEXURE-IV	JUMPING CUSHIONS
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Make	Vetter
GENERAL	
Dimensions	Shall not exceed 4.6m x 4.6m x 2.4m
Folded size	Shall not exceed 1.1m x 0.63m x 0.45m
Weight approx..	Shall not exceed 81 kgs
Set up time max.	Not more than 60 secs.
Rescue Height	Up to 25m
Temperature resistance	-20°C to +70°C
APPLICATION	
Operating Pressure	0.5 bar, limited through integrated safety valve
Carrying handles	4 Units
Stability as per DIN 14151-1	Do not let jumping cushion tip over or roll over
TARPAULIN MATERIAL PROPERTIES	
Abrasion resistance as per DIN 53863 Part 2	All tarpaulins max. 50 mg / 100 cm ²
Oil and Fuel resistance, swelling behaviour as per DIN 53521 ASTM Oil No. 1 Fuel No.1	Floor and side wall: Max.+15% / 100 cm ² Max.-4% to +15%/ 100cm ² After drying, do not allow any permanent, perceptible or visible changes, decomposition or ablations or smearing
Fire behaviour after coating as per DIN 4102	All tarpaulins are pre-set flame-proof, no igniting
Burning behaviour as per DIN 54333-part 1	For all tarpaulins: the flame must not reach Mark 1
Rot and Extinguishant resistance	All tarpaulins resistant to rot and extinguishant
Fatigue creep behaviour as per DIN 53359	All tarpaulins ≥ 100,000 bends
Waterproof as per DIN 53386	All tarpaulins > 1,000 mm
Resistance to tearing	Floor and side wall tear resistant as per DIN EN ISO 1421: Warp and woof > 2,200 N / 50 mm Landing surface breaking force as per DIN 53354: Warp > 5750 N / 5 cm Woof > 5.100 N / 5 cm

Tear Propagation force	Floor and side wall tear propagation force:As per DIN 53363: Warp > 280 N, Woof > 250 N Landing surface tear propagation force as per DIN 53363: Warp > 800 N, Woof > 950 N
SUPPORTING FRAME MATERIAL PROPERTIES	
Material	Chloroprene-rubber (CR material)
Resistance to tearing	> 130 daN
Tensile Strength	≥ 300 daN / 5 cm

DESIGN	
Landing Surface	Psychologically perfected design: Circular, coloured blue (alternative: black cross)
Side wall	Neon yellow for good visibility
CERTIFIED SAFETY	
Compliance with standard DIN 14151 parts 1 & 3	Tested in conformity with DIN 14151 Part 1 and Part 3. A certificate from an independent institute is to be produced.
Factory test	Individual test with drop weight and dated seal of approval

ANNEXURE-V	REUSABLE MAGNETIC LEAK SEALING PATCH
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1. Ready to use, with tool-free application for immediate control of leakages.
2. The patches must be highly safe and effective way to control liquids and gaseous substances leaking out of objects.
3. The patches should have very flexible design and must mould to the shape of the object.
4. Leak sealing patch should be made of Urethane Patch with embedded Neodymium magnets.
5. Magnetic leak sealing patches must come in different sizes and should be easy to use and can be applied within seconds.
6. It should come with a strap for carrying the bag. There should be no other accessories required for using the patch.
7. Set of Bags must be provided in a nonmagnetic bag, such that the bags can be easily carried to different places without attaching to each other.
8. Different sizes of bags must be provided with single set of Teflon sheets.
9. Patch should be reusable and should have a life of a minimum of 10 Years.
10. OEM must have presence in INDIA.

Size	Packing Dimension (Not more than)
Medium	50 x 50 x 8 cm

Note:

- a) All the above equipment should be supplied with Operating, Technical/ Service manuals.
- b) All the above equipment should be supplied with essential/standard accessories.

- c) Suitable rear mudguards made from 16 SWG MS sheet with reinforcing ribs shall be provided and supported on MS brackets with hanging rubber sheets.
- d) Proper ventilation shall be made in the driver cabin near driver seat and nearby Officer seat.
- e) Gear oil filling access facility on side is to be provided for PTO gear box.
- f) The Tenderer shall hand over the Advance Water Tender with full tank of fuel after completion of Final Inspection.

The committee reviewed the earlier tenders floated through the GeM portal and observed that the quoted prices were excessively high, primarily due to the large number of accessories included in the tender. Hence, the committee has decided to reduce the number of accessories, after carefully evaluating the approximate cost of each item, and has finalized the revised specifications for re-tendering the fabrication of the Advance Water Tender through the GeM portal. Further, the committee recommends splitting the Purchase Order (P.O.) among more than one supplier to ensure timely delivery, as the award period under the 15th Finance Commission will be concluded by March 2026.

ANNEXURE-VI	MULTI GAS DETECTOR
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Characteristics	Multi-Gas Detector to measure four gases LEL, O2, H2S & CO
Size (LxWxH)	Handy, easy to carry, size should not exceed 4.5"x3"x1.5"
Weight	Not more than 250 gms.
Carrying Attachments	Should have Clip Attachments to Hard Hat/Belt/Lanyard/Pocket.
Usability	3 Button Operation, easy to use even with gloves put on
Operating Temperature Range	-40°C to +60°C
Operating Humidity Tolerance	Intermittent 15% - 90% non-condensing
Ingress Protection	IP68 (Waterproof to 6-ft (2m) for 1 hr)
Alarms	95dB @ 1 ft Supported with Visual (LED Lit) and Vibrations
Sensor Life	Expected sensor life is more than 5 years
Response Time T90	T90 <15 Seconds
Sampling	Diffusion Mode
Reading	High Contrast LCD with Backlit
Casing	Rugged Rubberized Armor
Warranty	4 Years for the complete instrument
Durability	C25-foot (7.5 m) drop protection MIL-STD-810G drop protection Certified
Safety Features	Should have features like Motion Alert and Instant Alert for applications like confined space entry
Motion Alert	The Motion Alert sensor activates within 30 seconds when a user becomes disabled and motionless, quickly alerting others to the disabled user's location
Instant Alert	with a simple push of a button, the Instant Alert feature enables users to manually alert others to potentially hazardous situations.
End-of-Sensor Life Indication	end-of-sensor warning cautions user when unit's sensor needs to be changed
Battery Type	Rechargeable Li-Polymer battery

Run Time	24 Hours run time
Charging Time	> 4 Hours charging time
Intrinsic Safe Approvals	ATEX & PESO Approval (suitable for Zone 0 applications)
Drop test (in house)	withstand a 7.5 m drop onto concrete
Calibration tools	Unit shall require no special tools for calibration other than calibration cap, cylinder, regulator, and tubing to supply gas to instrument.
Acceptable Make	MSA / Rosenbauer / Magirus

ANNEXURE-VII	TELESCOPIC POLE SAW
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- The tool should have powerful cutting performance chain speed of 25.4 m/s with high torque and 30 cm cutting length for fast results.
 - The tool should have a telescopic shaft with a square profile and a quick length adjustment collar, allowing for optimal length and adjustment of up to 400 cm.
 - The tool should have up to 70 cuts in 150 mm x 150 mm hardwood on one full charge of a 12.0 Ah battery pack.
 - It shall have no spill oil reservoir with easy to access tank and clear viewing window.
 - The side access shall have chain tensioner for easy chain adjustment.
 - It should have branch extracting hook, ideal for leverage and pulling cut branches out of the way.
 - It should also have a shoulder strap which shall be compatible for more user comfort.
 - The tool shall be based on cordless technology and shall run on lithium-ion battery and electronic intelligence delivering outstanding power, run time and durability.
 - The tool should also meet the following criteria:
 - Chain bar length (cm) : 30
 - Chain speed (m/s) : 25.4
 - Chain pitch (mm|") : 8.3 / .325
 - Chain gauge (mm|") : 1.1 / 0.043
 - Weight with battery pack (EPTA) (KG) : 8.3 (M 1 8 HB 1 2)
 - Kit Includes : 1x M 18 HB 12 Battery pack, M12-18
- FC Charger without kit box or bag supplied

ANNEXURE-VIII	PORTABLE DEWATERING PUMP
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DEWATERING PUMP

This pump should have filter system to prevent blocking of the inlet and allows the user to pump water at all times, regardless of the debris encountered. Pump should be capable of pumping more than 5000 l/hour perfect for emptying trenches, storm drains, outside meter boxes, rain barrels and various other applications. Pump should be suitable for white, grey and black water.

PUMP		
1	Battery Voltage	18V
2	Power	18Volt Platform 8Ah Red Lithium-Ion Single Battery
3	Battery pack capacity (Ah)	12Ah
4	Motor Type	Brushed Motor
5	Flow Rate (L/H)	min 5600
6	Continuous Run Time	1 h
7	Max. head height (m)	5
8	Max. water temperature (°C)	60
9	Air Temperature max. (°C)	40
10	Thread size (mm)	32 mm female thead
11	Pump Turn Off Protection When Dry Pumping	Yes
12	Auto Shut off Period of Dry Pumping	30 sec
13	Water depth to begin pumping	5 cm
14	Min. water level capacity to pump	2 cm
15	Inlet Design	360°
16	Self-Priming Impeller	Yes
17	Submersible Barrel length	107 cm
18	Submersible Barrel make	Aluminum
19	Weight (kg)	1.5
20	Weight with battery pack (EPTA) (kg)	6.6 kg with 18V Battery

BATTERY		
1	Voltage	18V Lithium Ion
2	Ampere	12Ah
3	Qty	2
4	Charging time of 6Ah	130 min.
5	Weight (kg)	2

CHARGER		
1	Voltage Range	220-240V
2	Quick Charge Current	6.0 A
3	Maintaining Charge	500 mA
5	Weight	850 g

2.SPECIFICATION FOR FABRICATION OF WATER TENDER WITH SEARCH & RESCUE EQUIPMENTS FOR THE USE OF ANDHRA PRADESH STATE DISASTER RESPONSE AND FIRE SERVICES,

1 CHASSIS:

1.1 The fabrication of Water Tenders with Search and Rescue Equipment with the following requirements shall be done on the Ashok Leyland 1920 20ft G45 FES Cowl Chassis WT fitted with BS-VI Diesel Engine supplied by the A.P. State Disaster Response and Fire Services, Vijayawada.

1.2 The fabricated vehicle should meet all the regulations with respect to the motor vehicle Act/ Rules in force in the State of Andhra Pradesh and no case the weight of the fully fabricated vehicle exceed the rated GVW of the chassis in fully loaded condition with water all equipment and crew.

1.3 Mild steel channel (s) of size 100 ISMC shall be fitted to the two long members throughout the length of the chassis using 12 mm balata packing and sufficient numbers of galvanized U-bolts of suitable size with washers & NY lock nuts. To these mild steel channels, the WT's mild steel structural cross channels, etc. shall be fitted.

1.4 All the above mild steel channels and other mild steel structural members, including chassis members shall be thoroughly cleaned and painted with two coats of red oxide primer and two coats of coal tar epoxy.

1.5 No part of the Chassis shall be cut or parts changed by the Successful Tenderer without the prior permission of the Director General of State Disaster Response and Fire Services, Andhra Pradesh, Vijayawada.

2. GENERAL REQUIREMENTS:

2.1. The appliance shall incorporate a fire Pump of Low/ Normal pressure- 2000 lpm($\pm$) @ 10 Kg/Cm² and High pressure 250 lpm($\pm$) @ 35 Kg/Cm² and a water tank of 5000 litres capacity. It shall carry Double section trussed type Aluminum Extension Ladder capable of extending up to 10.5 meters, and the Water Tender should have towing facility.

2.2 The water tender shall be fabricated in a manner so as to conform to the following characteristics

2.2.1 Gross vehicle weight : Not more than 18,500 Kgs. including crew, Water and equipment.

2.2.2 Maximum Speed on level : 100 KMPH Road, fully laden.

2.2.3 The appliance shall be capable of being started from rest on a gradient of 1 in 4.

(Contd....2)

2.2.4 When travelling at 48 Km/h on a level dry surface, the foot brake shall be capable of stopping the vehicle within a distance of 15 Meters from the point at which the brake is applied.

2.2.5 The hand brake shall be capable of holding the fully laden appliance on a dry surface gradient of 1 in 4 when in neutral gear.

2.2.6 The general requirement and broad specifications are stated in the following clauses. These specifications describe certain of the requirements to which the tender shall work but the fact that everything may not be fully specified and there may be errors and omissions from the specifications, shall not relieve the contractor (successful tenderer) from his obligation to execute the work completely in all respects, everything necessary to enable the WTs work satisfactorily shall be supplied.

2.2.7 The workmanship throughout shall be of the highest class and the materials used shall be of the best quality.

2.2.8 Tenderer shall have adequate facility to carry out the contract work, (if awarded). The tenderer shall submit along with their offers, all possible documentary evidence for the same. The details of the tenderer's own workshop facilities, testing facilities, manpower, etc. Shall invariably to be furnished.

3. MATERIALS :

3.1 The choice of the materials to be used in the construction of the appliance shall be made with a view to combining lightness with strength and durability.

3.2. All parts which form water ways or come into contact with the water shall be of corrosion resisting material –All metal parts exposed to atmosphere shall either be of corrosion resisting material or treated to resist corrosion.

3.3. Lubricating nipples shall be provided wherever necessary.

4. DESIGN AND CONSTRUCTION:

4.1 ENGINE:

4.1.1. The engine shall be provided with cooling system to permit its continuous stationery running without overheating. Indirect cooling system shall be incorporated, if necessary, which shall be of the open circuit type discharging water to the waste. Arrangement should be made to divert the cooling discharge water to water tank, if necessary.

(Contd....3)

- 4.1.2 The operating temperature of the Engine cooling water shall preferably be thermostatically controlled.
- 4.1.3 The oil in the oil sump shall be prevented from overheating.
- 4.1.4 Suitable gauge for cooling water and grow lamp for lubricating systems shall be provided in the driver's cab and on the pump panel. This shall be marked with operating temperature.
- 4.1.5 External filter shall be provided for the lubricating system and a tubular dip-stick to gauge the level of oil in the oil sump shall be provided.

5.1 ELECTRICAL SYSTEM

- 5.1.1 A trickle type battery charger shall be provided for recharging the battery in-situ. A red pilot lamp, indicating when the batteries are being charged from an external supply, shall be provided.
- 5.1.2 All important electrical circuits shall have separate fuses suitably indicated and shall be grouped into a common fuse box located in an accessible position in driver's cab and fitted with means for carrying spare fuses. The wiring shall be single pole and shall not be exposed to the atmosphere. Conduits shall be used, wherever necessary.

5.2. (a) WATER TANK:

- i. The water tank shall have a capacity of 5,000 Litres when fully filled and made from SS-304 sheet, and Rectangular in shape with round corners. The tank shall be mounted on the chassis behind the driver's cabin. The detailed design drawing of the tank with its mounting shall be submitted before start of the fabrication work and submitted to Department for approval.
- ii. The water tank shall be mounted behind the driver cabin with a gap of min.450 mm (detachable to driver cabin).
- iii. The mounting of tank shall be directly on the chassis and as per the design approved by the Chassis manufacturer.
- iv. The tanks shall be rectangular, with inbuilt forming (reinforced ribs) on both the sides.
- v. The sheet thickness shall be as follows Bottom: 6mm Sides/ Front/ Rear / Top: 4mm Baffles: 4mm.
- vi. The tank construction shall be such that there shall be no leakage and shall have overlapped joints of 25.4 mm between the bottom sheet and side sheets. The bottom sheet corner shall be rolled upward up to a minimum of 300 mm height and shall be welded to side sheets.

- vii. All the welding shall be by TIG (Tungsten Inert Gas) welding process only. The welding of the tank shell shall be in such a manner that the first beading is from inside the shell and subsequent bead from outside the shell. The welded surface shall be cleaned of all slags, scale etc. There shall be minimum joints in the tank shell and hence plates used for fabrication of tank shall be of maximum size.
- viii. The tank shall be mounted on the chassis with minimum of four saddle supports placed as per the availability of bolt holes in the chassis frame. These supports shall be fabricated from M.S. plate of minimum 10 mm thick with a reinforcement plate of 6 mm thick welded to tank shell from outside to the bottom sheet up to with continuous welding.
- ix. M.S. plate of suitable size and thickness shall be welded to the tank mounting pedestal for mounting the tank on mounting brackets provided in the chassis frame as per chassis manufacturer's Recommendation. The plates/brackets fitted to chassis frame shall also be provided with suitable gusset plates for reinforcement.
- x. The tank shall be fitted on the chassis with the help of 5/8" dia. High tensile bolts with N lock (Unlock) nuts.
- xi. The tank shall be mounted slightly sloping towards the rear so as to decant the tank completely.
- xii. There shall be one Circular manhole of 600 mm dia. mounted on top of the tank.
- xiii. The water tight manhole cover with good quality of rubber gasket shall be bolted to the collar of manhole. The manhole cover shall be provided with round threaded blank cap with lugs of 10" dia. With rubber gasket.
- xiv. The tank shall be provided with suitable arrangement of baffle plates to prevent the surge of water when the vehicle is in motion and accelerating, braking in speed and covering. The arrangement of baffle plates shall be clearly shown in the drawing.
- xv. The baffle shall be arranged in a manner to facilitate the movement of a person throughout the tank for cleaning and welding purposes.
- xvi. Suitable eyes shall be provided on the shell of water tank to enable it to be lifted from the vehicle for repairs/replacement as and when required.
- xvii. The locker of suitable size shall be provided with doors and locking arrangement on both sides. The location and size shall be shown in the drawing. These lockers will be used for keeping delivery hoses accessories and high pressure hose reel.
- xviii. The structure of the locker shall be made from 40 x 40 x 4 mm thick M.S. angles with 16 SWG aluminum paneling from outside and 16 SWG aluminium plate from inside. The floor paneling of locker shall be 10 SWG aluminium chequered plates.
- xix. Suitable rear mudguards made from 16 SWG M.S. sheet with reinforcing ribs shall be provided and supported on M.S. brackets.

- xx. A suitable towing hook shall be provided at the rear of vehicle.
- xxi. An additional draw pipe of 100 mm dia. of 'C' class Galvanized Iron incorporating 100 mm butterfly Valve with gun metal, female suction hose coupling shall be provided to the rear side of the vehicle.
- xxii. A suitable size recess shall be provided in the tank in the lower front side to accommodate the fire pump. The volumetric capacity of the tank shall not be reduced due to this recess and shall remain 5000 ltrs.
- xxiii. To ensure proper load distribution on both the rear and front axles, thereby maintaining the vehicle's equilibrium while moving across different terrains.
- xxiv. Suitable locker provision shall be made at a convenient place to carry 10 Nos Delivery Hoses and 5 Nos Branch pipes.
- xxv. The tank shall be fitted with a 50 mm bore overflow pipes. A 63mm instantaneous hydrant connection, incorporating a strainer, shall be provided close to the pump panel control for filling the tank through 75 mm bore pipe work or feeding the hose reel equipment. An 100 mm bore pipe line shall be taken from the tank to the suction inlet of the pump incorporating an 100 mm quick action Spherical type valve. Separate valve(s) for performing the function given in 5.3.6 shall be provided to control the flow of water to the hose reel equipment. Drain plugs or drain cocks shall be provided wherever necessary.
- xxvi. The tank shall be connected with the pump and hose reel and valve(s) shall be provided in such a way that any of the following operations are possible:
 - a) Hydrant tank;
 - b) Hydrant reel;
 - c) Tank-pump — high and low pressure hose reels;
 - d) Hydrant-pump — low pressure hose reel; and
 - e) Off.
- xxvii. The tank should be tested by compressed air 5 PSI (0.3447 bar) with 90% full soapy water. The duration of the test should be 30 minutes. All weld seams will be checked for leakage on the outside. This test shall be conducted before the inspecting officers and before mounting the tank.

(b): **FOAM TANK**

- (i) A foam compound tank of 500 l capacity shall be mounted on the chassis in addition to the water tank and as a separate and distinct unit which can be removed separately for replacement.
- (ii) The foam compound tank shall be of rigid type and shall preferably be constructed out of stainless steel 304 grade with overall thickness of 4 mm. The tank shall have a filling orifice of not less than 150 mm diameter with a removable strainer fitted to it. The strainer shall be of such material as shall not be affected by constant contact with foam compound and its total screening area shall be adequate to permit quick filling of foam compound into the tank. The filler cap shall be clearly marked 'FOAM' preferably by pressing, casting or embossing.
- (iii) The tank shall have its top dished tunnelling arrangement and a trough provided to enable easy filling from 20 litre drums. Suitable sharp-edged tin opener may also be provided at the foam tank filling mount for puncturing the foam compound drum for facilitating quick filling of the foam compound directly from the drums into the tank. The tank shall be suitably baffled to prevent surge while the vehicle is in motion or standing on uneven ground or brakes are applied to the moving appliance. The design of the tank shall incorporate a removable sump fitted with a drain valve. The foam compound draw off tube shall be positioned in the centre of the sump in such a manner that foreign matter or sludge shall not pass into the compound line. The draw-off tube shall be fitted with a gauge strainer of suitable material, mesh, size, and adequate straining area. The tank top shall be removable, and it shall be ensured that the joint between the top and the body of the tank is leakproof.
- (iv) Means shall be provided for automatic venting of the foams compound tank when the foam is being produced or the tank is being filled. This shall not be incorporated with the cap. The device employed shall be as simple as possible and shall not get clogged easily during normal use of the appliance. The draw-off tube shall be connected to the foam compound proportionator/inductor and pump, as necessary, and automatic flow control valve shall be incorporated in it so as to maintain a constant induction rate of not more than 6 percent with varying foam output. The plumbing for this purpose shall have a clear and unobstructed passage of not less than 50 mm throughout.
- (v) Provision shall also be made for drawing foam compound into the foam producing system from an external source through a pick-up tube while producing foam. Foam compound proportionator or inductor automatic proportionating arrangement shall be provided where the induction ratio of foam compound / water solution and flow of water are automatically varied as desired merely by opening and closing the monitor.

5.3 AUTO REWIND HOSE REELS

HOSE REELS HOSE:

5.3.1 The Two high-pressure hose reel to facilitate operation of the high-pressure section of the fire pump shall be provided and mounted so as to be accessible for use from either side of the appliance. The hose shall be prevented from kinking. The hose shall be light weight PVC nylon braided hose and the working pressure of hose shall not be less than 40 Kg/Cm² and Burst Pressure testing of hose shall not less than 100 Kg/Cm² and the water jet through shall be not less than 25 meters.

5.3.2 The high-pressure hose reels shall hold not less than 60 m of hose in one length, terminating in high pressure fog/jet trigger type of gun (AWG / Akron / Rosenbauer / Zeigler) connected by quick connect coupling.

5.3.3 The inlet connection shall be of 20 mm and shall have a leak proof rotating type hose connector. The gun shall be of constant flow type and shall have a discharge capacity of 150 litre/min approximately. Provision shall be made in the gun controls to achieve combat mode (straight jet) or a fog shield in split second. The gun shall have the ability to work on pressure for 40 Kg/Cm² without affecting discharge pattern. The weight of the gun assembly shall not be more than 4 kg. The provision shall be made in the gun controls to achieve combat mode (straight jet) or a fog shield in split second. The gun shall have the ability to work on pressure for 2 to 4 MPA without effecting discharge pattern. Plumbing between the pump and hose reel shall have clean and unobstructed water way of not less than 19.05 mm throughout rewinding of the hoses shall be fully electrically operated.

The OEM letter (or) OEM authorization letter from OEM shall be submitted by the successful bidder before awarding the Tender Supply Order .

Preferable Make: COSMOTECH / AKRON / POKE.

5.4 PUMP

The pump shall be a CE & UL certified and shall be made up of GM with SS pump shaft having output capacity of min 2000 LPM at 10 kg/cm² and 250 LPM at 40 kg/cm² at 3 meters suction lift at NTP condition. Pump shall be rear mounted pump with automatic reciprocating piston primer as per specifications. The low-pressure side will be of single stage and the high-pressure side also with single stage having regenerative type impeller. The original manufacturers certificate indicating the serial no., batch no., date of manufacturer etc. should be furnished during the inspection. **The pump shall be of Godiva / Rosenbauer / Firefly / Magirus / Zeigler / Hale / Morita make only.**

(Contd....8)

- i. The overall pump shall be constructed from Gunmetal.
- ii. The normal (low) pressure impeller shall be made from gun metal confirming to Gr. II of IS: 318/1981 and the regenerative type high pressure impeller shall be of Stainless Steel.
- iii. The pump shaft shall be made from stainless steel.
- iv. The bearing housing will be made of CI and all the stud and bolt coming in contact with water shall be of stainless steel.
- v. The wearing of pump shall be made of high strength plastic type material of FITR-N in order to protect impeller.
- vi. The bearing used in the pump shall be reputed make.
- vii. The normal and high-pressure impeller shall be mounted on a single shaft and normal (low) pressure impeller shall be dynamically balanced.
- viii. The pump shall be provided with self-adjusting mechanical carbon seal assembly. The mechanical seal shall be capable to withstand dry running of the pump for 15 minutes. After 15 min test the mechanical seal shall remain intact and there shall be no impact of the dry run.
- ix. The pump shall be provided with an inbuilt filter of easily removable type, which shall filter the water before entering into the high-pressure stage impeller.
- x. Operation of low pressure to high pressure or Vice-a-versa shall be possible by actuation of single lever.
- xi. The pump shall have facility to operate low-pressure and high-pressure mode simultaneously or individually. While high-pressure mode is in operation and delivering 250 LPM at 40 Bar, the pressure in low pressure side shall not fall below 9 Bar.
- xii. The pump shall be provided inbuilt (integrated in the pump outlet manifold) pressure relief valve (PRV) which shall operate automatically and shall not allowed the high pressure to increase beyond 45 Bar.
- xiii. The size of high-pressure outlets shall be 32 mm connected to high pressure hose reel. The thermal relief valve (TRV) shall be provided and fitted in the pump housing, which will open when both deliveries (HP & LP) are shut off for long time to control the temperature of the pump water.

- xiv. The thermal relief valve (TRV) should open at 600 C and set shall reset automatically when the temperature of water within limit. The thermal relief valve (TRV) should be of FITR-V type.
- xv. The pump design shall be modular type and shall not have gasket / packing. The arrangement shall be such that the mechanical carbon seal CLT-8 type which can be attended / removed without removing the pump body. The suction tube shall be directly connected to the pump casing without any interfacing flanged pieces to avoid chances of leakages and the same shall be single cast unit with a 100 mm suction hose connection with internal removeable strainer and a blank cap chained with the pump body. There shall be two delivery outlets with 63mm quick release GM couplings as per relevant IS.
- xvi. The pump shall be provided with one suction inlet of 100 mm dia. having round threads confirming to IS: 902 Of 1974 and four number of 63 mm delivery outlets having GM screw down type valve fitted with GM instantaneous couplings as per IS: 903 of 1993.
- xvii. The pump shall be provided with two GM delivery valves for the 2000 LPM pump having 63 mm GM standard hose couplings (IS 903) with screwed wheel type quick closing clack valve (IS 4928).
- xviii. Blank caps fastened with chains and incorporating means to relieve pressure between the valve and the cap shall be provided one for each delivery valve.
- xix. The efficiency of the pump shall be such that the power required shall not be more than available with chassis at max 3200 safe RPM for continuous operation.
- xx. Pump shall be Red in colour with special GOCORO coating internally on the volute.

Table: 1: The pump shall comply to the following performance parameters:

Normal Pressure output	about 2,000 LPM at 10 kg/cm ²
High pressure output	about 250 LPM at 40 kg/cm ²
Maximum pressure in	about 17 kg/cm ² (shut off Normal pressure mode pressure)
Maximum pressure in	54.5 Bar (high pressure mode) 17 Bar (low pressure mode)
Simultaneous operation LP & HP	LP- ≥ 1700 lpm@ 10 bar Plus HP- ≥ 250 lpm@ 30bar
Deep lifting capacity of Pump	30 cm/sec max. up to 7 meters in 30 sec at NTP Condition

(Contd....10)

PUMP TEST

- i. The pump fitted on the fire engine is subjected to endurance test as detailed Below:
- ii. The pump shall be run for a period of four hours, non-stop. The first three hours pump shall be delivering the rated output of i.e. 2000 LPM at 10 kg/cm² (Normal Pressure) and next 1 hr. will be 250 LPM at 40 kg/cm² (High Pressure) with a lift of 3 meters.
- iii. The pump shall be subject to dry running for 15 minutes. After the dry run test the pump seal shall be tested for leakages or visual damages. There shall be no signs of leakages or visual damages.
- iv. During the test the water shall not be replenished for the cooling system and the temperature of the cooling water and engine oil should not exceed the manufacturer's recommended standards for the continuous operation and engine should not show sign of stresses.
- v. The pump casing and impeller subjected to a hydraulic pressure of 21 kgs/cm² to detect Leakage or perforation etc.
- vi. The pump shall give performance as given in table 1 as above.

PUMP'S PRIMER

The pump should prime from rear side of low-pressure impeller by utilizing internal passages within the high-pressure pump body and without using any external pipe work from suction side.

The priming system shall be fully automatic Reciprocating type which shall not require any operation whatever from the pump operator other than throttling the engine to the required RPM. The primer shall get automatically disengaged once the pump is registered the pressure. The primer shall be capable of lifting the water in 30 second from the depth of 7 mtrs. (up to pump inlet) at NTP condition. The reciprocating pistons shall be made up of stainless steel / Gun Metal. The cylinder and priming valve housing shall be made from gunmetal.

The OEM letter (or) OEM authorization letter from OEM shall be submitted by the successful bidder at the time of 2nd stage Inspection by the Department Officers.

5.5 COOLING SYSTEM:

Indirect cooling system of open circuit type consisting of special heat exchanger shall be provided to the vehicle to enable full power output to be maintained during pumping duty without overheating.

(Contd....11)

5.6 POWER TAKE OFF (P.T.O) UNIT:

The PTO will be of heavy-duty capable of transmitting the full power of engine to the pump. The PTO unit will match the engine and pump characteristics, with suitable ratio. A separate lever in the main cabin will engage PTO. PTO Engagement mechanism shall be pneumatic based, with a stand-by mechanical over-ride lever provision. Necessary support for PTO units, propeller shaft couplings, universal joints etc. shall be provided. There shall be locking device on manual PTO lever to prevent accidental engagement/disengagement. The propeller shaft for connecting the pump shall be dynamically balanced as per requirement of chassis manufacturer. The drive assembly component (shaft, couplings) will be dynamically balanced. PTO shall have the following features:

5.6.1 The pump shall be coupled to the prime mover of the chassis through a POWER TAKE-OFF (P.T.O.), with power ratio of 1:1.27 capable of full torque developed by vehicle and engine used for the appliance.

5.6.2 Illuminated signal control indicators shall be provided in driver cabin as well as on rear control panel to indicate shift gear-shift from road-to-pump mode and vice-versa.

5.6.3 Mechanical linkage assembly for PTO – Prime mover – Pump, shall be supplied by OEM of pump/ PTO and shall be acceptable to (As per the standards of) the chassis manufacturer. Preferable Make: VAS / Firehawk / OMSI / Kozmaksan.

5.7 SUCTION INLET AND DELIVERY VALVES:

5.7.1 The pump shall have suction inlet having 100 mm standard suction connection (see IS 902) with internal strainer and blank cap. The strainer shall be retained firmly when in use but shall be easily removable. The mesh size of the pump inlet screen shall be smaller than the outlet size of the impeller.

5.7.2 The pump shall be provided with two delivery valves for pump having 63 mm standard hose couplings (see IS 903) with screwed wheel type quick closing clack valve (see IS 4928). Blank caps fastened with chains and incorporating means to relieve pressure between the valve and the cap shall be provided delivery valve.

5.8 PIPELINES AND VALVES:

5.8.1 All pipelines shall be of stainless steel and all valves up to 5 mm size shall be 3 piece design stainless steel ball valves. All valves above 5 mm shall be standard butterfly valves.

5.8.2 All piping shall be sized so as to have minimum pressure drop and achieve the required pressure and flow at various locations.

(Contd....12)

- 5.8.3 All piping shall be seamless and designed for 10 percent over the maximum pressures encountered in the pipe.
- 5.8.4 The piping shall be flanged for ease of maintenance. However, flange joints shall be kept to minimum.
- 5.8.5 All lines shall be hydraulically tested at 1.5 times of the design pressure and pressure shall be held for 2 h. In no case the lines shall be tested below 25 Kg/Cm².
- 5.8.6 All lines shall be suitably supported so as to provide rigidity and avoid vibrations.
- 5.8.7 All lines less than 5 mm size can be socket welded to matching rating fittings.
- 5.8.8 All lines above 5 mm size shall be butts welded with full penetration welds.
- 5.8.9 All bolts, nuts and washers used shall be of stainless steel.

5.9 BS-VI ELECTRONIC THROTTLE CONTROL PANEL FOR FIRE WATER TENDER with Search and Rescue

The pump shall be fitted with electronic components comprising of following features:
Vehicles RPM should be displayed through its canbus network along with pumps low pressure indication using pressure transmitter. It should have 9 step LED bar type display of tank level marked with "E, 1/4, 1/2, 3/4 and F". The bar type display shall have Red colour for low level, Amber colour for mid-level and green colour high level. It shall have buzzer alert for low level below 10% and also display vehicles battery voltage. It should have 3 push buttons marked with 'RPM+', 'RPM-', 'IDLE' to control the pump pressure in step-wise manner with an interlock of maximum operable RPM for pump gearbox protection. The unit shall have a low water level interlock which should automatically reduce the RPM to IDLE at or below 5% of water level to avoid pump running dry at high RPM. The unit shall be IP65 (waterproof) and SAE J575 (vibration test) certified from a NABL accredited lab. The panel shall have configurable brightness levels. The OEM letter (or) OEM authorization letter from OEM shall be submitted by the successful bidder at the time of 2nd stage Inspection by the Department Officers.

5.9.1 The following shall also be provided at a convenient position near the control panel(s):

- a) Water level indicator and
- b) Control valve hydrant connection.

(Contd....13)

5.10 WATER CUM FOAM MONITOR

The monitor shall be accompanied with a nozzle on its tip that shall meet the following parameters. Also note that the monitor and nozzle shall be of the same manufacturer and an undertaking for the same is to be given by the fabricator.

- a) Nozzle should have excellent straight stream performance and a wide, dense, fully adjustable fog pattern.
- b) Should be of Pyrolite Material.
- c) Should have Manual Pattern Control
- d) Should have 1000 LPM flow at 7 bar.
- e) Should have 2 1/2" (63 mm) Inlet.
- f) Shall be having Spinning Teeth.
- g) Shall provide the discharge nozzle.
- h) Water monitor through should not be less than 50 Meters.

The OEM letter (or) OEM authorization letter from OEM shall be submitted by the successful bidder at the time of 2nd stage Inspection by the Department Officers.

Acceptable Make: Akron / AWG / Rosenbauer / Magirus

5.11 BODY WORK AND STOWAGE

5.11.1 CABIN:

5.11.1.1 Enclosed accommodation for six persons shall be provided in the driver cab-cum-crew compartment including the driver and the in-charge of the crew. Both the seats shall be independent. The driver's seat shall be adjustable and comfortable. The rear compartment of driver's cabin shall have one removable seat for full width of cab for 5 (five) crew members. The cab floor shall be covered with 3 mm thick aluminum chequered plate rigidly fixed to the frame cross members by means of nuts and bolts or riveting. Trap doors for topping up oil, etc, wherever necessary shall be provided.

5.11.1.2 One roof light shall be provided in the driver's cabin dwell vision and external rear view mirrors shall be fitted to the cab.

5.11.1.3 The driver-cum-crew cabin shall be provided with full four doors, one for driver, one for officer and two at the crew compartment. The doors shall be generously sized for easy embarking/disembarking of crew members. All the doors shall be fitted on the super structural members, each hung upon three invisible coach type mild steel stout hinges and fitted with best quality handles.

5.11.1.4 The door handle on outside of driver seat shall have a locking arrangement. Other doors shall be lockable from inside. In addition to the door lock, aluminum tower bolt of 20 mm shall be provided for all the doors from inside, adequate grab rails shall be provided for easily boarding and alighting from the appliance.

5.11.1.5 The windscreen glass shall be provided in the two halves and shall be flat in shape. Each glass shall be fitted in E.P.D.M. rubber beading. The glasses shall be 5 mm thick toughened safety glass. The rubber beading used for fitting glasses and window frame shall be E.P.D.M. rubber.

5.11.1.6 Extinguishers Brackets: At least two numbers of brackets for fixing the extinguishers of 4.5 Kg Co² type should be provided near the officer's seat.

5.11.1.7 Six aluminum hooks for keeping the uniform clothing shall be provided in crew compartment.

5.11.1.8 Wireless Set Box: Box made from 2mm gauge aluminum sheet with lid shall be provided just behind the officer seat with 13mm wooden plank for fitting the wireless Set Bracket. The design and mounting will be shown at the time of fabrication work.

5.11.1.9 Breathing Apparatus (B.A) Set locker: The breathing Apparatus (B.A) Set 02 Nos. locker shall be provided just behind the crew compartment. The opening of this locker shall be from inside the cabin with aluminium rolling shutter(s)/door.

5.11.1.10 Cabin Ventilation: To provide top ventilation with appropriate size having hydraulic operated door for easy opening and closing. It should not allow any water leakage.

5.11.2 SEATS:

5.11.2.1 The driver seat shall be adjustable type vertically, forward and backward. The officer seat shall be fixed type. Both the seats shall be rigidly fixed to the flooring by means of nuts and bolts. The seat cushion shall be of latex foam rubber 75 mm thick upholstered in good quality foam leather cloth. The back seat shall be of latex foam rubber 50 mm thick upholstered in good quality foam leather cloth.

5.11.2.2 Below the crew seat, two lockers shall be provided. One locker for battery box to accommodate two 12 V 13 plates batteries and another for keeping accessories and Tool kit container. The extra length of battery cable shall be provided by manufacturer.

5.11.2.3 The crew seat shall be rigidly fixed to floor by means of nuts and bolts, running full width of the vehicle suitable for sitting five firemen, covered with 75 mm × 50 mm cushion latex foam rubber upholstered in good quality foam leather of approved shade.

(Contd....15)

5.11.3 SUPER STRUCTURE:

5.11.3.1 The super structural of the cabin shall be constructed out of 2 mm Mild Steel (M.S) 45 mm × 45 mm × 2 mm pressed 'Top Hat' sections. The super structure shall be strengthened specifically on the members with the lockers doors frames are to be fitted and also the other members by providing brackets and gussets of 2 mm Mild Steel (M.S) plate securely welded.

The details of super structure are as follows:

Under frame cross members	: 100 mm × 50 mm member's × 5 mm Floor
longitudinal members	: 50 mm × 50 mm member's × 6 mm Vertical
members on even side	: 45 mm × 45 mm × 2 mm
Skirt member	: 45 mm × 45 mm × 2 mm
Waist member	: 45 mm × 45 mm × 2 mm
Top deck longitudinal	: 45 mm × 45 mm × 2 mm

5.11.3.2 The cab and lockers shall be of composite construction with sufficient rigidity and reinforcement and shall be kept as light as possible.

5.11.3.3 The structure/frame work shall be of welded constructions and made from 2 mm thick **Galvanized steel pressed sections and square tubes. The angles and channels used shall be of minimum 3 mm thickness.** The complete structure material shall be treated for anti-corrosion by zinc plating. The plating thickness shall not be less than 20 microns. Two coats of epoxy paint shall be applied to the completely welded structure.

5.11.3.4 The structure shall be so designed so as to avoid any vibration/ratting/deformation in the intended usage of the vehicle.

5.11.3.5 The interior paneling shall be done from 1.22 mm thick aluminum sheets and the exterior paneling shall be done from 1.60 mm thick aluminum sheets.

5.11.3.6 The entire roof of the vehicle, cabin floor and locker floor shall be covered with minimum 1.60 mm thick aluminum chequered plates. All the lockers sides and complete rear of the vehicle shall be covered with minimum 1.22 mm thick aluminum chequered plates.

5.11.3.7 Lockers shall be provided for secure stowage of all equipment given in Annexure. The height of the lockers from the bottom to the top of the opening shall be not less than 600 mm and the depth shall be not less than 600 mm. All lockers shall be provided with internal automatic lighting arrangement with the master switch in the cab.

5.11.3.8 All lockers shall be provided with internal automatic lighting arrangement with the master switch in the cab. The doors of the lockers shall have efficient means for holding them closed by efficient flush fitting spring loaded locks. The doors of all the lockers shall be hinged so as to move up-wards. All lockers handles should be opened to the right only with Aluminum sticker indicator. The doors of the lockers shall have sufficient means for holding them open and efficient flush fitting spring loaded locks. All locker-handles should be of good quality of Aluminum material.

NOTE: All the hinges and locks used should be of heavy duty and strong. In the cabin the back rest cushion lining should be provided and back panel should be 18 gauge Aluminum sheet duly painted. All internal paneling for doors in the cabin shall be 16 gauge Aluminum sheet.

5.11.3.9 Two vertical lockers, just after the crew cabin on left and right side. Out of these lockers, the locker just behind the crew cabin on the left side shall be designed with sliding tray to carry the Portable Pump of the following dimensions:

Length : 65 cms (Not less than)

Breadth : 60 cms (Not less than)

Height : 70 cms (Not less than)

Weight : Not exceeding 105 kgs.

5.11.3.10 Provision to carry ASKA light of the following dimensions shall be made just behind the crew cabin on the right side with sliding tray.

Length : 90 cms (Not less than)

Breadth : 66 cms (Not less than)

Height : 66 cms (Not less than)

Weight : Not exceeding 60 kgs.

5.11.3.11 Suitable storage space shall be provided to store four 2.5 m lengths of suction hoses in convenient location.

5.11.4 PROVISION FOR STOWAGE OF EQUIPMENT:

For all water fittings like branch pipes, etc, quick release type couplings and other accessories as mentioned below are provided which enables the operator to locate the desired equipment instantly and thereby save valuable time at the time of fire. These couplings also ensure that none of the item damage the internal paneling and thereby increase the life of the vehicle. Suitable clamps, brackets, holders, etc, are provided for all other items.

5.12 MISCELLANEOUS:

5.12.1 A suitable bumper shall be provided at the rear rigidly fixed to the super structural members by means of nuts and bolts, fabricated from 100 mm × 50 mm × 5 mm mild steel channel.

5.12.2 Two cat ladders made out of stainless steel round or square pipe of 25 mm diameter shall be provided.

5.12.3 Two numbers of 25 mm diameter aluminum pipe railing with sufficient number of aluminum double socket brackets shall be provided to the rear body over the deck.

5.12.4 A heavy duty towing hook shall be provided and fitted the rear bumper by means of nuts and bolts.

5.12.5 Quick removable type wire mesh guard made from 25 mm × 25 mm size mild steel wire mesh of 1.6 mm covered in mild steel angle frame shall be provided to all the glasses of driver- cum-crew cabin.

5.12.6 Foot rests are to be provided at the bottom of the front mudguards on either side of the vehicle to enable the Driver and Officer to mount into the vehicle. One more additional foot rest shall be provided on either side of the vehicle by lowering the existing foot rests by about 25 Cms. on either side.

5.12.7 Rear foot board and rear bumper should be very strong to take the load of the standing crew and equipment and also with heavy duty towing assembly to enable for towing a large trailer pump.

5.13 TRUSSED TYPE ALLUMINIUM EXTENSION LADDER WITH IS:4571(latest Version):

The extension ladder shall be trussed type in construction and made of high tensile strength reasonably rigid strong and free from sway when pitched against the wall with the base at 2 Meters from it and two men or ascending on speed or one man is carrying another while descending the ladder. The metal should be corrosion resistant. The ladder should have extension dual action long and short pawls and following sizes of the different parts.

a)	Extended Length	-	10.5 Metres.
b)	Closed Length	-	6.23 Metres.
c)	Overall width	-	525 MM.
d)	Weight range	-	50 to 55 Kgs.
e)	Steps spacing	-	250 MM.
f)	Deflection at 76 Kgs	-	Not more than 5 Cms.
g)	Deflection at 114 Kgs.	-	Not more than 8 Cms.
h)	Side Deflection	-	Not more than 10 Cms.

NOTE: The mounted ladder should not obstruct the full opening of the water tank lid cap. The supplier shall give a test certificate issued by the manufacturer.

5.13.1 LADDER GALLOWS

Gallows shall be provided to carry a 10.5 m, aluminum trussed type extension ladder. The design shall be such that the ladder can be released without difficulty from a reasonably accessible position and shall embody rollers to permit easy withdrawal by one man. Means shall also be provided for locking the ladder when stowed.

5.13.2 STABILITY:

The stability of the appliance shall be such that when under fully equipped and loaded conditions (but excluding crew), if the surface on which the appliance stands is tilted to either side, the point at which over-turning occurs is not passed at an angle of 30 degrees from the horizontal.

6. WORKMANSHIP AND FINISH

- 6.1. All parts of the appliance shall be of good workmanship and shall have streamlined finish.
- 6.2. The appliance shall be painted Fire Red Colour confirming to shade No.536 of IS: 5. The Paint shall confirm to IS 2932.

7 INSTRUCTION BOOK – ACCESSORIES AND EQUIPMENT

7.1 INSTRUCTION BOOK (OR) BOOKS

Instruction book(s) for the guidance of the user(s), including both operating and normal maintenance procedure shall be supplied. The book(s) shall include an itemized and illustrated spare parts list giving reference numbers of all the wearing parts.

7.1.1 GENERAL INSTRUCTIONS:

The following description of the pump shall be included in the instruction handbook:

- a) General description;
- b) Range of usable ambient temperature;
- c) Design and function of the pump, including important data (for example number of Stages, shaft seal, primer materials, drainage, lubrication points);
- d) Range of usable fluid temperatures;
- e) Maximum operating pressure;
- f) Information of operating controls;
- g) Design, function and use of safety protection devices;
- h) Shut off valves and pump connections;
- i) Additional descriptions for accessories;
- j) Additional descriptions for accessories;
- k) Cross-sectional drawing of the pump or exploded diagram; and
- l) Maximum angle of inclination of operation.

(Contd....19)

7.1.2 INSTALLATION/ASSEMBLY:

The following instructions for installation/assembly shall be included in the installation handbook:

- a) Instructions for installer/fabricator to make a complete risk assessment for the final fire tender.
- b) Initial installation instructions.
- c) Data on installation site including
 - 1) Space requirements for operation and maintenance.
 - 2) Inspection instruction before start of installation.
 - 3) Details of base/foundation.
 - 4) Installation of pump assembly.
 - 5) Correct installation of safety devices and control system.
 - 6) Correct installation of pressure relief valve, thermal relief valve or other devices in accordance with pressure containing parts and components of the pump, if not supplied the pump Manufacturer.
 - 7) Adjustable safety devices shall be contained in enclosures that can only be opened by use of Tools.

7.1.3 MAINTENANCE AND SERVICING

The following instruction for maintenance and servicing of the pump shall be included in the instruction handbook:

- a) Maintenance intervals and scope.
- b) Maintenance procedures and inspections, including,
 - 1) Consumable items list of spare parts and special tools;
 - 2) Monitoring during operations;
 - 3) Dry preventive action to be taken (for example regarding parts subject to wear Lubrication, sealing medium
 - 4) Warning on risks arising from incorrect adjustment of safety devices;
 - 5) Warning on risks arising from removing the pump inlet screen; and
 - 6) Tightening of fasteners.

7.2 ACCESSORIES

7.2.1 The following accessories shall be provided in addition to those normally fitted on modern commercial vehicles:

- a) Fire bells — 250 mm diameter fire bell shall be mounted externally and shall be capable of being operated from within the driving compartment. The bell shall be of the hand operated type.
- b) Head lamps — Two.
- c) Fog lamps — Two.
- d) Reversing light — Lamp suitably situated to assist reversing.
- e) Amber blinkers lights — Situated on the head of the driving compartment.
- f) Trafficators — illuminated with indicating lights on instrument panel or in any other prominent position in driving compartment.
- g) Wind screen wipers.
- h) Tools — all tools required for normal routine maintenance of the appliance which are not included in the kit for the chassis.

(Contd....20)

- i) Siren — Electrical siren of 1 mile range 12 volts D.C. of reputed make or equivalent or better with BIS marking shall be provided and fitted at suitable place with two controlling buttons one on Officers side and another at Driver side. On the Officers side it shall be push button and on the driver's side it shall be of toggle or slide switch type.
- j) Charging Point — There should be provision for multiple mobile charging's in the cabin.
- k) Inspection lamp — protected type on wander lead with plug. A socket shall be provided in the control panel in the driver's cab for plugging in the lamp.
- l) Tail lamps — Two of combined stop and tail.
- m) Rear reflectors.
- n) Cab, instrument panel and locker, light.
- o) A spot light not less than 50 W (LED) power shall be provided at the rear portion of appliance near the pump which can be rotated horizontally by 180°.
- p) Two – tone hooter cum PA system having 25 Watts capacity with speaker, LED light bar with Red, Blue and White flasher lights of minimum 75-100 Watts and not less than 1000mm size shall be mounted on the cabin roof with amplifier in the cabin.
- q) One pair of additional electric horn shall be provided.
- r) Reverse gear and indicator buzzers shall be provided.
- s) LED mini light bar (Flasher) shall be provided on both sides (3 No.s each on both sides). They shall be fitted integrally to the body.
- t) Two adjustable spot lights not less than 50 Watts.(LED) power shall be mounted on the top of Driver cabin on two sides which is foldable type and shall be able to rotate 360° angle.
- u) Rear view mirror shall be of the size 25 Cms X 15 Cms with extended arms.

8. MARKING:

- 8.1. Each appliance shall be clearly and permanently marked with the following information:
 - a) Manufacturer's name or trade-mark if any;
 - b) Capacity of the pump in liters /minutes, and of the water tank in liters, and
 - c) Year of manufacture.
 - d) The crew cabin shall be painted cream. Necessary anti corrosion and primer coat in pink colour shall be applied before painting. The body shall be painted FIRE RED in colour confirming to shade No.536 of IS 5:2007. The paint shall conform to IS 2932:2003. The whole vehicle shall be painted internally and externally with one coat of zinc chromate and an under coat, two finishing coats and clear coat. Phosphating and painting of the chassis shall be carried out to withstand Seasonal climate effects.

The words "ANDHRA PRADESH STATE DISASTER RESPONSE AND FIRE SERVICES" shall be painted in letters of 15 cm height on one side of the body of vehicle in golden yellow colour paint. Same text in" TELUGU FONT"ఆంధ్ర ప్రదేశ్ రాష్ట్ర విపత్తుల స్పందన మరియు అగ్నిమాపక సేవలు" shall be painted over the other side in same manner. The name of the department "ANDHRA PRADESH STATE DISASTER RESPONSE AND FIRE SERVICES" in form of sticker in fluorescent red letters with 10cm.s in yellow background shall be affixed on the top of the front wind screen glass.

Emblem of the department shall be affixed on either side of the cabin side Door (Model shall be provided by the department) 'DIAL 101' shall be written on all the four sides of the vehicle on yellow background in black letters

e) Engine No.

f) Chassis No.

9. INSPECTION:

The successful tenderer shall have the work inspected and approved at the following stages by the Director General of State Disaster Response and Fire Services along with authorized agencies to be selected by the Department among the following .

i) Specialized agencies approved by the Government in the similar field.

The acceptance of the items is subject to inspection by officers of A.P. State Disaster Response and Fire Services Department and the representatives of the one of the above agencies, in stages as suggested above and in the Specification.

9.1 FIRST STAGE INSPECTION:

9.1.1 Structural work and Measurements, Structural framework, Paneling work, tank shall be ready and not mounted (for hydraulic pressure testing), Pump shall be ready and not mounted (for Hydraulic pressure testing), platform of water tank, pump and PTO ready for mounting.

9.1.2 All the piping shall be subjected to hydraulic test pressure of 15 Kg/ Cm² for a period of min 10 minutes.

9.1.3 The pump casing shall be subjected to a hydraulic test pressure of a minimum 52.5 Kg/ cm². Tank shall be hydro tested at a minimum pressure of 0.3447 bar (or) 5PSI with 90% full of Soapy Water. The duration of the test, should be 30 minutes. All weld seams will be checked for leakage on the outside.

9.1.4. The First Stage Inspection will conduct by the Department Officers and basing on the satisfactory performance, the next stage of fabrication work will commence by the bidder.

(Contd....22)

9.2 SECOND STAGE INSPECTION:

9.2.1 STABILITY TEST : Stability of application will be such that when fully equipped & laden, if the surface on which the appliances stands is tilted to either side at an angle of 30° from horizontal it will not overturn.

9.2.2 GRADIENT TEST: The vehicle will be tested on a gradient test ramp at an angle of 1:4 as per BIS.

9.2.3 ENDURANCE TEST: The pump will be tested for a continuous period of four hours nonstop & the water will not be replenished during this test & the engine will not show signs of overheating. The testing charges for the same shall be borne by the vendor.

9.2.4 PRIMING / DEEP LIFTING TEST: The Priming shall be tested as per the latest standards & the system shall be subjected to a test at a suction of 7 Mtrs. It should be achieved in less than 24 seconds.

9.2.5 ARTICULATION TEST: The vehicle shall be tested for articulation and shall not show any signs of stress during this test. The clearance in the wheel wells shall be checked for tolerance.

9.3 FINAL STAGE:

Final Inspection and Road Test of the Vehicle shall be done at State Stores, C/o. District Fire Officer, Near Collectorate compound, Guntur District. The Manufacturing shall depute sufficient technicians for rectification of defects as per spec. requirements & training of usage of equipments.

- NOTE:**
- i. Importance shall be given to provide a good workmanship and finish.
 - ii. Any Suggestion/ minor Modifications suggested during the Stage Inspections and also at the time of Final Inspection, apart from the specification laid down above, must be incorporated at the time of Final Delivery/acceptance.

(Contd....23)

ANNEXURE-A

List of Mandatory Accessories to be supplied along with Water Tender with Search and Rescue

Sl.No.	ITEM	Quantity
1.	Heavy Duty Spiral PVC Suction Hose size 100mm specially for Fire Brigade each use. Fitted With Gun Metal couplings with 2.5 m length	4 Nos.
2.	Suction strainer for 100 mm suction hose – brass as per IS: 907: 1984	1 No
3.	Suction wrenches for 100 mm suction hose couplings as per IS: 4643: 1984	2 Nos
4.	Hose ramp (rubber) as per IS standard 20 ton capacity suitable for 2 lines	4 Nos
5.	Branch with revolving head, GM, 63mm size as per IS: 906: 1988	1 No
6.	• Adopter for 100 mm suction female screw coupling and 63 mm male instantaneous (G.M). • Adopter double female instantaneous pattern 63 mm (GM). • Adopter double male instantaneous pattern 63 mm (GM). • Adopter for 100 mm suction female screw coupling and 75 mm male screw coupling.	1 each
7.	Long Beam LED Search Lights: • High intensity precision spot beam, operating range upto 1000 Mtrs. Water proof LED Search Light . • Maintenance free, rechargeable sealed Li ion battery with charger. • Highly efficient deep parabolic mirror back reflector with shock resistant glass. • Heavy duty molded unbreakable plastic/super tough nylon/ABS body. • Light weight, portable with shoulder pad & proper gripped handle and water proof. • Not less than 8 hrs working time. • Not more than 350 grams weight.	5 Nos.
8.	Gunmetal short & Copper long branch pipes complete with 63mm size male instantaneous connection with gunmetal detachable nozzle as per IS:903.	1 + 1
9.	Collecting and Dividing Breaching instantaneous pattern 63 mm (IS:905-1965) steel G.M	1 + 1
10.	Foam branch – FB5X type with pick up tube, GM as per IS: 2097: 1983.	2 Nos.
11.	Rope kern mantle rope 14mm diameter length 50meters, Sewn thimble eye at one end, Sewn end stop termination at other end and appropriate harness with carabiner(SS) shall be provided.	6 Nos.
12.	Rope polyamide 18mm diameter for long line of 30 meter long with sealed ends	6 Nos
13.	Wheel Stoppers	4 nos.
14.	Rubber gloves as per IS 4770-1991 for 25000Volts	6 pairs
15.	Leather gloves IS 6994 – 1977 PART 1	6 pairs
16.	Canvas gloves with anti skid palm	6 pairs
17.	Spanner adjustable, 30cm long	1 No
18.	Jack Hydraulic for 20 ton capacity with handle	1 No
19.	Hydraulic Grease Gun	2 nos
20.	The fire blanket shall be utilized for any vehicle fire including electric vehicles or bike fires. It shall be manufactured from specialized quartz material with a silicon polymer coating. This combination of this fabric engineering shall provide continuous high temperature resistance. The fire blanket shall have a fire rating of Class 0 and third party certificate confirming to BS 476: Part 6:1989+A1:2009 and BS 476: Part 7: 1997, NFPA 701 and ASTM D 6413-22. Note: The OEM letter (or) OEM authorization letter from OEM shall be submitted by the successful bidder at the time of Final Inspection by the Department Officers.	01
21.	Tyre lever	2 nos
22.	Engineering Toolkit Preferable Make: BOSCH/Taparia	1 no

(Contd....24)

23.	Bolt Cutter a) Size : Length 30 " b) cutting jaws : made of high tensile solid alloy steel, specially heat treated with center cut head c) Handle : With sufficient grip of rubber for a length of 6 to 8 inches d) Application : Suitable for cutting hard material viz. bolt, iron rod of 10 to 14 mm diameter e) Preferable Make: BOSCH/Taparia	1 No
24.	Nozzle spanner as per IS standard	1 No
25.	Synthetic fibre circular woven jacketed rubber lined fire Delivery Hose of Burst Pressure @38Kg/Cm ² and working pressure @14 Kg/Cm ² , bearing IS: 636-88 type A mark, in 15 Mtrs and 22.5 Mtrs Length , 63mm dia. Duly S.S.Wire instantaneous type and Heavy G.M. male and Female Couplings bearing 63mmX63mm	30 + 10 nos.
26.	Light weight Multipurpose Nozzle: The Nozzle should be adjustable gallonage with multiple flow settings & 63 mm BIM inlet hand nozzle. The nozzle should have selectable flow setting of 115-360-475-550-750 LPM @ 7 bar with flush mode without shut off the nozzle made of Pyrolite material, with pistol grip. The nozzle shall have feature for straight stream & spray pattern. It should be NFPA 1964 compliant & FM approved. • Type: Selectable Gallonage • Material: Pyrolite • Length: Shall not exceed 11" • Weight: Shall not exceed 3.5 kg • Inlet: 2.5" Instantaneous male (BIM) • Great stream performance • Should be capable of simultaneous water jet cum water curtain operation. • Standard instantaneous male Inlet 2 1/2" (63 mm) • Shall have spinning teeth & at least five flow settings 30-95-125-150-200gpm (115- 360- 475-550-750 LPM lpm) @ 100 psi (7 bar) • Simple to operate pattern control (1/4 turn from straight stream to fog) • Raised lug marks straight stream for limited visibility operations • Shall also have a minimum 110° angle at wide fog • Shall flushing without shutting down. • Shall have effective reach of not less than 50 meters @ 7 bars • FM Approved & Complies NFPA 1964 • Acceptable Make: Akron / AWG / Rosenbauer / Magirus / Zeigler	2 nos.
29	<u>PORTABLE PUMP: (As per IS 942 - 1982)</u> 1. SCOPE 1.1 This standard lays down the requirements regarding material and design of 275 l/min portable pump set for fire fighting. 2.GENERAL REQUIREMENTS 2.1 The unit shall consist of the pump having an output of not less than 275 l/min at a pressure of 4 kgf/cm², fitted on a tubular steel frame and with anti-vibration coils/pads. The complete unit shall be of lightweight construction, so that it can be easily carried by two men.	01 No.

3. MATERIAL

3.1 The pump comprising volute, body (casing) impeller and one delivery outlet shall be manufactured from light aluminium alloy conforming to IS : 617-1975*.

3.1.1 The mild steel tubes used for the fabrication of tubular frame shall conform to IS

: 3601- 1966.

3.1.2 The spindle of the delivery valve shall be made of stainless steel conforming to 07CR18Ni9 Grade of IS : 6603-1972

3.2 All parts which form waterways, or come into contact with water, shall be of corrosion resisting material or treated in a suitable manner. All metal parts exposed to atmosphere shall be either corrosion resisting or treated in a suitable manner.

4. DESIGN

4.1 The components of the unit shall comply with the following requirements.

4.1.1 Engine

4.1.1.1 The engine shall be a single cylinder four-stroke diesel driven.

4.1.1.2 The engine shall be air-cooled.

4.1.1.3 A well designed hand starting device shall be provided to ensure reliable and quick starting engine.

4.1.2 Pump

4.1.2.1 The pump shall be of single stage centrifugal type, directly mounted on the extension of the crankshaft of the engine.

4.1.2.2 The pump casing shall be so designed as to afford easy access to the impeller and facilitate erection and inspection. The outer face of the pump casing shall carry the suction and delivery connections and their fittings and priming device

4.1.2.4 The pump shall be fitted with mechanical gland of self adjusting type.

4.1.2.4 The pump shall be tested for the performance of its duties (see 4.1.2.5) at 27" & 2°C and at pressure of 760 mm of mercury. The following allowances (deductions) shall be made

a)Output –

i) One percent of every 2 °C rise in water temperature;

ii) 4 percent for every 300 mm elevation above mean sea level; and

iii) No allowance shall be made for humidity up to 75 percent. However, deductions at the rate of 1 percent of every 5 percent change in humidity shall be made when the humidity ranges from 75 to 95 percent.

c) Lift -i) 30 cm every 300 m elevation above mean sea level, and One percent for every 2*5°C rise in water temperature.

4.1.2.5.

The pump shall be tested with suction strainer fitted continuously for 4 hours shall be with a lift of 3 m for the following duties

Output 1/Min	Pressure Kgf/cm ²
545	2.5
365	3.5
275.	4.0

4.1.2.6 The pump suction shall be fitted with 75 mm male round threads and female blank cap. The round threads shall confirm to Table 3 of IS : 902-1974*.

4.1.2.7 The delivery valve shall be of screw down type and fitted with 63 mm female instantaneous coupling and blank cap. The delivery valve shall confirm to IS : 4928- 19687

	4.1.3 Primer - The primer shall be capable of lifting water at least through 7 m in not more than 45 seconds and shall be exhaust ejector. 4.1.4 Framework - It shall be of a cradle design made of tubular steel and provided with anti-vibration coils/pads. 4.1.4.1 The cradle shall be fitted with 4 folding handles of spring loaded type. The handles shall be capable of being used for tying the ropes for slinging the pump down in the well. 4.1.5 Suction Hose - The lengths of 75 mm suction hose shall be 4 of 2.5 m or 2 of 4.5 m conforming to IS : 2410-1963*. The suction hose shall be fitted with 75 mm suction hose coupling conforming to IS : 902-19747 4.1.6 Fuel Tank - The fuel tank shall continuous running. 4.1.7 The control panel shall include: - Hand trottle, - Pressure gauge calibrated from 0 to 10 kgf/cm², and - Compound gauge with pressure calibrated from 0 to 6kgf/cm² in black and vacuum 0 to 75 cms of mercury in red 4.2 Tools and Instruction Book - A tool kit comprising all essential tools required for normal maintenance, shall be provided with each pump along with a fully illustrated booklet and item wise spare parts list. 4.3 Weight - The total weight of the unit with fuel shall not exceed 110 kgs. 5 WORKMANSHIP AND FINISH 5.1 All parts of the unit shall be of good workmanship. 5.2 The cradle shall be painted in Fire Red (see Shade No. 536 of IS : 5-1978 +). The paint shall conform to IS :2932-1974. 6 MARKINGS 6.1 Each pump set shall be clearly and permanently marked with the following information: - Manufacturer's name or trade-mark; - Type of engine and pump; - The output of the pump in l/min; - Weight of the pump set; - Year of manufacture; and - Instructions for operation of the pump. 7 . Preferable Make-Godiva/Rosen Bauer/Firefly/Firex	
30.	SCBA SET: Self-Contained open circuit Compressed Air Breathing Apparatus (SCBA) Set Confirming to EN137:2006 Type 2/ IS 10245 (Part 2):2023 & CBRN approved, with 6 Liters /300 Bar Aluminium lined fully wrapped carbon composite material Compressed Air Cylinders. as per following specifications. 1. General requirement. The set shall be self-contained open circuit type compressed air breathing apparatus set fully confirming to EN 137: 2006 Type 2/ IS 10245 (Part 2):2023 or its latest version and shall be approved as per CBRN standard for respiratory protection devices. Anti-Static Property ATEX II 1G IIC T6 II 1D IIIC -30°C ≤ Ta ≤ +60°C. (a) The BA set shall contain air cylinder, back plate, facemask, lung demand regulator, pressure reducing valve, Pressure Gauges, hoses, standard carrying case to be provided. (b) The minimum duration of use of the set shall not be less than 45 minutes. The weight shall not exceed more than 11 kg.	02 Nos.

	(c) The design of the set shall be such that there is no protruding parts or sharp edges likely to be caught on projections in narrow passages. (d) Original equipment manufacturer (OEM) name and CE/EN marking shall be visible, on the set. warranty 10 years. Back plate with body Harness: Back plate should be manufactured from Glass fibre reinforced polyamide, flame retardant and conducting surface material and it consists carrying straps, pneumatic system single line high pressure hose inside a medium-pressure hose, containing a cylinder connector, reducer, pressure gauge, whistle and lung demand valve. Pneumatics easy detachable. Back plate should contain a swivel waist pad, S Shaped shoulder straps Shoulder and waist straps should consist reflective elements for better visibility and must be constructed from a high abrasion resistant, high puncture resistant, light weight and water-resistant f Flame retardant polyethylene foam padding Outer shell: Coated aramid textile, flame retardant, tear resistant and conducting with layered band made from polyamide webbing coated with CR rubber material. Full face mask: Positive pressure Full face Material: Face blank and Head harness Rubber: Acrylonitrile and Butadiene rubber NBR , Lens frame : Nylon (PA), Lens Polycarbonate with hard coat APEC with hard coat and antifog, Neck strap : Rubber CR, Helmet adapters : Stainless steel mask assembly shall be big facial counter with a wide reflex seal, speech diaphragm, inner mask (nose cup), visor, rubber head band, good speech transmission and having flame resistance requirement meeting to EN 136 Class 3+ and Antistatic approval. Best protection for chemical resistance and permeation. With CE/EN marking, manufacturer name/symbol field of vision shall be more than 90% and it should upgradable with communication system in future Full Automatic First Stage Pressure Reducer: The first stage pressure reducer shall be mounted in a protected position on the rear, lower portion of the back frame. The pressure reducer shall be of a fail-safe spring-loaded piston design, with an integral pressure relief valve, consisting of only two moving parts. The reducer shall be completely automatic, low maintenance and require no calibration. The reducer shall have flow characteristics that exceed 1000 Liters /min and be protected by a pressure relief valve that operates between 11.5 and 13.5 bar. The reducer shall be capable of reducing the pressure at first stage to minimum 7.5 bar and designed to function with either 200 or 300 bar cylinders. Lung demand valve: Lung demand valve should have a medium pressure hose, with quick release coupling. Lung demand Valve should contain a rubber membrane for better H2S and other gases protection. Disconnection from the mask should occur by simultaneously pressing the buttons on the sides of the lung demand valve. Airflow should automatically shut off when disconnecting. Low pressure warning whistle: SCBA set should be provided with low pressure warning whistle when pressure drops to 55 bar $\pm$ 5 bar for a 300 Bar system. Warning signal should be located on the pressure gauge.	02 Nos. with 02 spare cylinders
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	<u>Pressure gauge:</u> SCBA should have a 300 Bar pressure gauge to monitor cylinder at the input of the first stage reducer. Manifold unit two medium pressure couplings. <u>Compressed air cylinder:</u> Cylinder shall be fully wrapped composite material and basically approved to EN 12245 or CE marked. The weight of the cylinder when fully charged shall not be more than 6.8Kg. The carbon composite material and it should be provided with Valve. Air cylinder shall have a water capacity of 6.8 Liters and free air capacity of min 1850 litres when filled at a pressure of 300 bar. Cylinder shall be approved by PESO (Petroleum and explosive safety organization) and certificate to that effect shall be submitted along with the tender. The cylinder shall be supplied with valve made from nickel plated brass and shall comply with EN 144-2 & CCE approved. Enhanced HYGIENE Set should be easy to clean and disinfect Dust and water-repellent harness material Simplified disassembly and assembly of components Entire SCBA is machine washable. Preferable Make: MSA.	
31.	Portable Ground Monitor having min. discharge of 1400 LPM. The OEM letter (or) OEM authorization letter from OEM shall be submitted by the successful bidder at the time of Final stage Inspection by the Department Officers. Preferable Make: Shawbhogilal / Akron / AAAG	1 No.
32.	FIRE GUMBOOTS: AS PER IS 5557 : 2024 or latest version. Preferable Make: Etche Securite / Rosen Bauer / Identifire / Bristol. FIRE HELMET: As per IS 2745:1983 (latest version reviewed in 2020) or latest version. The OEM letter (or) OEM authorization letter from OEM shall be submitted by the successful bidder at the time of Final stage Inspection by the Department Officers.	30 + 30
33.	Sledge Hammer Long Handle 7 lbs, 10 lbs	1 + 1
34.	Rain Coats	15 Nos.
35.	Fireman Axe - Insulated 25000 Volts	2 Nos.
36.	Crowbar 1.5 mtr	2 Nos.
37.	Fire Ceiling Hook	2 Nos.
38.	Spade & Shovel	2 Nos.
39.	Bill Hook	1 Nos.

(Contd....29)

ANNEXURE-B

SEARCH & RESCUE EQUIPMENTS TO BE SUPPLIED ALONG WITH WATER TENDER with Search and Rescue:

40. HYDRAULICALLY OPERATED RESCUE TOOLS	ONE SET
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(i) HYDRAULIC CUTTER:

The tool is a designed hydraulically activated piston with two equal, opposite blade arms that are symmetrically opened/closed by mechanical joints for the purpose of cutting.

The body of the tool shall be anti-corrosive light aluminum alloy for its lightweight, strength and long life. The cutter will be of a unique blade geometry with a slightly curved blade design for pulling the debris away and to the center with a long cutting edge providing maximum cutting performance.

The blades shall be made of investment cast dropped-forged steel which has a glass-pearl blasted finish and are regrind able. The blades of the tool should be attached to the piston rod via removable links for ease of repair, efficient power transmission and smooth operation. The pivot points of the blades shall have a rubber boot hand guard for safety purposes. The specification of Hydraulic Cutting Tool shall be strictly as below:

- Max. Cutting Force shall not be less than 65 Ton
- Capable of cutting round steel bar of diameter not less than 35mm as per NFPA standards.
- Blade Opening not less than 158 mm
- Weight shall not exceed 15 Kg
- Operating temp shall be -20°C to +55°C
- Oil requirement shall not be more than 110cm³
- Max Working pressure shall not exceed 700 Bar
- Shall be as per NFPA Class A7/ B8/ C7/ D8/ E7
- Shall comply EN cutting performance 1I - 2I - 3I -4J - 5J
- The tool shall have a dead man handle with accurate spring return to neutral position preferably with a star grip control. The tool shall have a quick coupler connected to the tool with a pig tail hose. The hoses used to connect the tool with the hydraulic power pack shall be in a pair running side by side and not "Hose in Hose" type or coaxial hoses in any case.
- The tool shall be new and duly certified for compliance with EN standards as well as NFPA standard from TUV Germany/FM USA/EIL Delhi only.
- Preferable make: Holmatro / Lukas / Hurst

(ii) HYDRAULIC SPREADER:

The tool is a designed hydraulically activated piston with two equal, opposite spreader arms that are symmetrically opened by mechanical joints, thereby spreading objects. Closing the spreader arms is also carried out hydraulically and mechanically by reverse order of the piston. The body of the tool shall be made of anti-corrosive light aluminum alloy for its lightweight, strength and long life.

The specification of Hydraulic Spreader Tool shall be strictly as below:

- Spreading distance shall not be less than 590 mm
- Spreading force at 25mm from tips when the arms are closed shall not be less than 4 Tons
- Squeezing force shall not be less than 14 tons
- Max spreading force shall not be less than 80 tons
- Pulling length shall not be less than 430 mm

(Contd....30)

- Pulling force not less than 5 tons
- Weight shall not exceed 14 Kg
- Operating temp shall be -20°C to +55°C
- Oil requirement shall not be more than 150 cm³
- Max Working pressure shall not exceed 700 Bar
- Shall have squeezing plates built into the arm
- The tool shall have a dead man handle with accurate spring return to neutral position preferably with a star grip control. The tool shall have a quick coupler connected to the tool with a pig tail hose. The hoses used to connect the tool with the hydraulic power pack shall be in a pair running side by side and not "Hose in Hose" type or coaxial hoses in any case.
- The spreader tool shall be supplied with all accessories like pulling chains, chain adapters etc. The tool shall be new and duly certified for compliance with EN standards as well as NFPA standard either from TUV Germany/FM USA/EIL Delhi only
- For spreading, the tool shall be equipped with removable heads with innovative "shark-tooth tips" ensure a slip-proof "bite" at all times.
- One (1) set of chain and shackle package for pulling operations.
- Preferable make: Holmatro / Lukas / Hurst

(iii) HYDRAULIC COMBI TOOL

The tool is a designed hydraulically activated piston with two equal, opposite blade arms that are symmetrically opened/closed by mechanical joints, thereby spreading, squeezing, pulling or cutting objects. The body of the tool shall be made of anti-corrosive light aluminium alloy for its lightweight, strength and long life. The blades of the tool shall be of a straight serrated edge design for maximum cutting performance. The blades shall have integral tips for spreading applications. The blades of the tool shall contain shackle holes for pulling applications. The blades of the tool should be attached to the piston rod via removable links, for ease of repair, efficient power transmission and smooth operation. The blades shall be coated with GOCORO anti corrosive coating. The blades are regrindable. The pivot points of the blades shall have a rubber boot hand guard for safety purposes. The specification of Hydraulic Combi Tool shall be strictly as below:

- Spreading distance shall not be less than 365mm
- Max Spreading force not less than 150 ton
- Spreading force at 25mm from tips when the arms are closed shall not be less than 3.5 Ton
- Pulling length not less than 380 mm
- Pulling force not less than 6 Ton
- Max cutting force shall not be less than 48 Ton
- Capable of cutting round steel bar of diameter not less than 35mm as per NFPA standards.
- Weight shall not exceed 15 Kg
- Operating temp shall be -20°C to +55°C
- Oil requirement shall not be more than 110cm³
- Max Working pressure shall not exceed 700 Bar
- Shall be as per NFPA Class A7/ B8/ C7/ D8/ E7
- Shall comply EN cutting performance 1I - 2J - 3I - 4J - 5J
- The tool shall have a dead man handle with accurate spring return to neutral position preferably with a star grip control. The tool shall have a quick coupler connected to the tool with a pig tail hose. The hoses used to connect the tool with the hydraulic power pack shall be in a pair running side by side and not "Hose in Hose" type or coaxial hoses in any case.

- The combi tool shall be supplied with all accessories like pulling chains, chain adapters and door opening tips.
- Preferable make: Holmatro / Lukas / Hurst

(iv) HYDRAULIC RAM JACK:

The rescue ram is a double-acting hydraulic cylinder. Extension and retraction is carried out hydraulically. The tool cylinder shall be made of forged 7075 T6 – 83,000 lbs tensile strength aviation grade anti-corrosive light aluminium alloy for its lightweight, strength and long life. The rescue ram is a one-stage cylinder for applying pressure with a constant pressure force along the entire stroke. The tool shall include heat-treated, investment-cast steel ram claw feet on the piston side and on the cylinder side for durable gripping and minimizing slippage.

The specification of Hydraulic Telescopic Ram shall be strictly as below:

- Lifting force of piston shall not be not less than 13 ton
- Retracted length shall not be more than 700 mm
- Extended length shall not be less than 1170 mm
- Stroke length of piston shall not be less than 500mm
- Weight shall not exceed 18 Kg
- Operating temp shall be -20°C to +55°C
- Oil requirement shall not be more than 800 cm³
- Max Working pressure shall not exceed 700 Bar
- The ram shall have rotating cross head for easy positioning & perfect grip. The tool shall have a Dead Man handle with accurate spring return to neutral position preferably with a star grip control. The tool shall have a quick coupler connected to the tool with a pig tail hose. The hoses used to connect the tool with the hydraulic power pack shall be in a pair running side by side and not "Hose in Hose" type or coaxial hoses in any case.
- Preferable make: Holmatro / Lukas / Hurst

(v) HYDRAULIC POWER PACK:

- The power unit shall be driven by an internal 4 stroke gasoline engine with both a low pressure and a high-pressure circuit.
- The hydraulic pump shall be of two-stage radial piston pump.
- Shall have Turbo function to double speed during rescue work.
- The unit shall be equipped with a simultaneous operation control valve block which provides two (2) individual oil flows to each individual two pressure circuits allowing the connection of up to two (2) tools. The individual circuit lines can be operated simultaneously and will be able to obtain full pressure and flow without interrupting or decreasing the performance of the other circuits. The capability of switching from simultaneous two (2) operations to single turbo mode with increased flow shall be achieved with a shift lever located between the two outlets. Supplying double the quantity of fluid increases the operating speed of the connected device.
- The unit shall be equipped with two mono-coupling connections.
- Operating temp shall be -20°C to +55°C.
- The unit shall be protected by a heavy-duty tubular steel roll cage frame & power unit is to have anti- vibration isolators to limit unwanted movement.
- The pump shall have capacity to allow the ram to reach full extension since Rams use more hydraulic fluid during operation than spreader-cutters.
- All the hot parts of the power pack shall be properly shielded to avoid possibility of injury to the operator.

- Fuel capacity shall not be less than 0.77 liters. The petrol tank capacity shall be such that, it shall allow the engine to run for minimum one hour when the tools are in continuous operation.
- Shall be supplied with Male Mono Coupler with dust caps to modify the existing hose at one end The other end of hose will remain with male/female couplers so as to match existing working tools
- All ferrous parts shall be GOCORO coated for extra corrosion resistance.

Hydraulic Power unit for the operation of two rescue tool strictly as per the following specs:-

Engine	4-stroke petrol
Operating Pressure	Maximum 700 Bar
Engine Speed	3800 RPM or better
Low Pressure Flow Rate	2 x 3.0 L/min
High Pressure Flow Rate	2 x 0.7 L/min
Output	2.4 kW
Hydraulic Oil Capacity Not more than	3 Liter
Usable Oil Volume not more than	2.2 Liter
Max Load Noise Pressure Level not more than	80 dB
Weight	Not more than 25 Kg
Dimensions of equipment shall not exceed than	500 x 360 x 450 mm

The bid shall be submitted by OEM (Original Equipment Manufacturer) of Hydraulic cutter and spreader or similar* items OR 100% Indian Subsidiary of OEM OR Firm Manufacturing under license/Technology collaboration agreement with phased indigenization as defined under Public Procurement Policy (Preference to Make in India), Order 2017 and subsequent revision thereof who is "Class-I Local supplier or Class-II Local supplier as defined under Public Procurement Policy (Preference to Make in India), Order 2017 dated 16.09.2020" or amended up to date, notified by Government of India, Ministry of Commerce and Industry, Department of Promotion of Industrial and Internal Trade (Policy Procurement Section) vide letter No. P- 45021/2/2017-PP (BE-II) dated 16th Sep 2020 or amended up to date.

(OR)

Joint Venture Firm as per Para 13A of DPIIT order no. P-45021/2/2017-PP (BE-II) defined under Public Procurement Policy (Preference to Make in India), Order 2017 and subsequent revision thereof. The agreement between the firms should clearly indicate the increase in local content in phased manner.

The OEM must have NFPA compliant manufacturing facility for Rescue Tools in India. Manufacturing facility shall be certified by TUV Germany / FM USA / EIL Delhi and relevant document in support to this shall be submitted at the time of bidding. Factory shall have capability of manufacturing and servicing and testing of Hydraulic Hose line and Battery- operated Rescue tools and shall support spares availability for at least 5 years.

Preferable make: Holmatro / Lukas / Hurst

(vi) **HYDRAULIC HOSE REEL:**

Light weight high pressure hydraulic hoses of 20 m long with quick coupler. The hoses made from thermoplastic material and have safety ratio of 1:4. The hose reel made from SS carrying frame and drum for hoses.

Preferable make: Holmatro / Lukas / Hurst

41. AIR LIFTING BAGS	ONE SET
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VETTER AIR LIFTING BAGS MODEL S.TEC

High Pressure Pneumatic lifting bags shall be strictly as per below spec:

- High Pressure Pneumatic lifting bags working pressure shall not be less than 12 bar and burst pressure shall not be less than 48 Bar,
- It shall be made up of aramid reinforced rubber, non-slip design, capable of being interlocked when 2 bags are placed on each other, quick connection, reflecting labels, insertion height strictly not more than 25mm.
- Hoses provided with bags shall be of different colours for easy identification from long distance while operating the bags.

Lifting Capacity shall not be less than	Min. Inflation height shall not be less than	Dimensions shall not exceed	In any case weight shall not exceed	Air requirement @ 12 bar shall not be more than	Qty
1 Ton	70 mm	140 x 130 mm	0.5 kg	6 litres	1
5 Tons	120 mm	255 x 200 mm	1.5 kg	25 litres	1
10 Tons	175 mm	320 x 320 mm	3 kg	125 litres	1
20 Tons	240 mm	440 x 440 mm	5 kg	255 litres	1

- The bags shall be certified for compliance with EN 13731 by either TUV Germany /UL USA/EIL India only. The air bags must supply with the following accessories:
- Pressure regulator 300 Bar to 12 Bar
- Control box shall be yellow in colour with lever type joystick for operating 2 bags with pressure gauges and carrying strap
- Single Control Unit
- Dual Control Unit
- Air inflation Hose 5 m
- Air inflation Hose 10 m
- Shut off hose with safety valve
- Dual connector

42. JUMPING CUSHION	ONE SET
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Make	Vetter
GENERAL	
Dimensions	Shall not exceed 4.6m x 4.6m x 2.4m
Folded size	Shall not exceed 1.1m x 0.63m x 0.45m
Weight approx..	Shall not exceed 81 kgs
Set up time max.	Not more than 60 secs
Rescue Height	Up to 25m
Temperature resistance	-20°C to +70°C
APPLICATION	
Operating Pressure	0.5 bar, limited through integrated safety valve
Carrying handles	4 Units
Stability as per DIN 14151-1	Do not let jumping cushion tip over or roll over
TARPAULIN MATERIAL PROPERTIES	
Abrasion resistance as per DIN 53863 Part 2	All tarpaulins max. 50 mg / 100 cm ²
Oil and Fuel resistance, swelling behaviour as per DIN 53521 ASTM Oil No. 1 Fuel No.1	Floor and side wall: Max.+15% / 100 cm ² Max.-4% to +15%/ 100cm ² After drying, do not allow any permanent, perceptible or visible changes, decomposition or ablations or smearing
Fire behaviour after coating as per DIN 4102	All tarpaulins are pre-set flame-proof, no igniting

(Contd....34)

Burning behaviour as per DIN 54333-part 1	For all tarpaulins: the flame must not reach Mark 1
Rot and Extinguishant resistance	All tarpaulins resistant to rot and extinguishant
Fatigue creep behaviour as per DIN 53359	All tarpaulins $\geq 100,000$ bends
Waterproof as per DIN 53386	All tarpaulins $> 1,000$ mm
Resistance to tearing	Floor and side wall tear resistant as per DIN EN ISO 1421: Warp and woof $> 2,200$ N / 50 mm Landing surface breaking force as per DIN 53354: Warp > 5750 N / 5 cm Woof > 5.100 N / 5 cm
Tear Propagation force	Floor and side wall tear propagation force: As per DIN 53363: Warp > 280 N, Woof > 250 N Landing surface tear propagation force as per DIN 53363: Warp > 800 N, Woof > 950 N
SUPPORTING FRAME MATERIAL PROPERTIES	
Material	Chloroprene-rubber (CR material)
Resistance to tearing	> 130 daN
Tensile Strength	≥ 300 daN / 5 cm
DESIGN	
Landing Surface	Psychologically perfected design: Circular, coloured blue (alternative: black cross)
Side wall	Neon yellow for good visibility
CERTIFIED SAFETY	
Compliance with standard DIN 14151 parts 1 & 3	Tested in conformity with DIN 14151 Part 1 and Part 3. A certificate from an independent institute is to be produced.
Factory test	Individual test with drop weight and dated seal of approval

43. REUSABLE MAGNETIC LEAK SEALING PATCH	ONE SET
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1. Ready to use, with tool-free application for immediate control of leakages
2. The patches must be highly safe and effective way to control liquids and gaseous substances leaking out of objects.
3. The patches should have very flexible design and must mould to the shape of the object.
4. Leak sealing patch should be made of Urethane Patch with embedded Neodymium magnets
5. Magnetic leak sealing patches must come in different sizes and should be easy to use and can be applied within seconds.
6. It should come with a strap for carrying the bag. There should be no other accessories required for using the patch.
7. Set of Bags must be provided in a nonmagnetic bag, such that the bags can be easily carried to different places without attaching to each other.
8. Different sizes of bags must be provided with single set of Teflon sheets.
9. Patch should be reusable and should have a life of a minimum of 10 Years.
10. OEM must have presence in INDIA.

Size	Packing Dimension (Not more than)
Medium	50 x 50 x 8 cm

NOTE:

- a) All the above equipment should be supplied with Operating, Technical/ Service manuals.
- b) All the above equipment should be supplied with essential/standard accessories.
- c) Suitable rear mudguards made from 16 SWG MS sheet with reinforcing ribs shall be provided and supported on MS brackets with hanging rubber sheets.
- d) Proper ventilation shall be made in the driver cabin near driver seat and nearby Officer seat.
- e) Gear oil filling access facility on side is to be provided for PTO gear box.
- f) The Tenderer shall hand over the Water Tender with full tank of fuel after completion of Final Inspection.

3. TECHNICAL SPECIFICATION FOR DESIGN FABRICATION AND SUPPLY OF BREATHING APPARATUS VAN ALONG WITH CHASSIS

1. **Scope of Work:** The bidder has to fabricate the B.A. Van on the chassis. The vehicle shall be fabricated as per specification. This specification lays down the requirement regarding the material, design, construction, workmanship, finish, accessories and acceptance test. Also, bidder has to supply B.A. Set, B.A compressor with filling station, diesel generator and telescopic light mast etc.

2. **Chassis Details:**

- a. This tender calls for design, fabrication and supply of B.A. Van on the following requirements shall be done on the Ashok Leyland 1920 20ft G45 FES Cowl Chassis WT fitted with BS-VI Diesel Engine supplied by the A.P. State Disaster Response and Fire Services, Vijayawada.
- b. The successful tenderer will have to complete the fabrication work including supply of the equipment and its accessories as per specifications stipulated below and complete the vehicle in all respect to put into operation and ready to use.
- c. Bidder shall take delivery of the chassis from the Assistant Equipment Officer, A.P. State Disaster Response and Fire Services Department at State Stores, Collectorate Compound, Guntur , Guntur District.
- d. Bidder shall arrange transit insurance for the chassis from State Stores, Collectorate Compound, Guntur, Guntur District up to bidder's work place.
- e. Successful Bidder shall arrange blanket insurance for the chassis which is essential during fabrication period.
- f. Bidder shall arrange transit insurance for the fabricated vehicle from bidder's work place up to the department with valid temporary registration. Permanent RTO registration of vehicle is in the scope of successful bidder.

3. **GENERAL REQUIREMENTS:**

- a. This specification lays down the requirements regarding the material, design, construction, workmanship, finish, equipment, accessories and acceptance test.
- b. The vehicle shall be designed to be as compact as possible with ease of accessibility to all parts.
- c. The vehicle shall be capable of performing all the normal operations in emergency.
- d. The fabrication of BA Van has two sections: Section A i.e. Driver cum Crew Cabin &

Section B i.e. Rear Body (Stowage Area) with storing space for 12 BA sets, 30 BA set spare cylinders, BA air compressor, Filling cabinet, DG set, airline trolley system, BA set telemetry system and service table with seat for 2-3 firemen.

- e. RTO Requirements: The vehicle shall conform in all respect of the provisions contained in the MV Act 1988 and MV rules 1989 or to any other statutory modifications or replacements thereon from time to time. All the equipments and marking necessary for R.T.O.'s passing shall be provided on vehicles.

4. Chassis (Cowl):

- a. The actual gross weight shall not exceed the maximum permissible limit of chassis as specified by manufacturers and approved by RTO. Increase axle payload should be applicable for this chassis as per the Gazette of India vide no. RT11028/11/2017- MVL of dated 16/07/2018 as amended by notification dated 06/08/2018 and as amended from time to time.
- b. The weight shall be distributed as equally as practical over the axles and tyres of the B.A. Van. The center of gravity shall be kept as low as possible under all conditions of loading.

5. SECTION A

5.1 DRIVER CUM CREW CABIN

- a. Driver cum crew cabin shall be mounted on the forward part of the vehicle and shall be designed for better and wide vision and to have adequate working facility inside the cabin.
- b. The cabin is adequately insulated against noise, vibrations and extreme temperature. Certificate of the same shall be submitted at the time of bidding and inspection.
- c. The Driver cum crew cabin shall have arrangement to accommodate 6 persons including Driver and Crew incharge.
- d. The BA Van shall be constructed such that a seated driver shall be able to see the ground ahead of the BA Van and above the horizontal without leaving his seat. The vision in the horizontal plane shall be atleast 90 degree on each side from the straight position on a full forward control.
- e. The provision of separate seats for Driver and Crew incharge shall be made.
- f. The driver seat & Crew incharge seat shall be adjustable type both vertical upward and downward, forward and backward with proper leg space. Both the seats shall be rigidly fixed to the cabin flooring with proper nuts and bolts and anti-vibration pads.

- g. The rear compartment of the Driver cabin shall have one seat of full width of cabin to accommodate Four (4) crew members comfortably. All seats shall be equipped with safety seat belts. The complete super structure of the cabin shall be constructed out of MS profile or square tube of 30 x 30 x 1.6 mm or better. The superstructure shall be strengthened specifically on the members where the doors & window frames are to be fitted & also on the other members by providing the brackets & the gusset plates securely fitted.
- h. The flooring of the crew cabin shall be fabricated out of MS angles of 40 X 40 X 3 mm or better. Which shall be properly welded/bolted of the cross member. The complete external & internal panelling of Driver cabin, including doors shall be of at least **10 SWG** aluminium sheet with all joints riveted & bided except the roof, which shall be made up of at least 1.6 mm thick aluminium sheets.
- i. The cabin floor and roof should be covered with at least **3 mm thick** Aluminium chequered plate rigidly fixed with under frame M.S cross members with nuts and bolts. The mudguards, arches shall be covered by at least 1.6 mm thick Aluminium chequered plate. Opening and closing arrangement to fill fuel, oil and coolant etc. with lock and key arrangement wherever necessary shall be provided. The Driver cum crew cabin shall be provided with full size four doors, (one for Driver, one for cabin crew incharge side and two at crew compartment side). The doors shall open outward upto 90° and hung forward for easy ingress and egress of crew and shall be supported by 3 or more hinges.
- j. Provision of wind screen glass, **(in case not provided by the chassis manufacturer)** shall be of semi curved type single vision glass. Glass shall be fitted with EPDM (Ethylene Propylene Diene Monomer) rubber bidding. The glass shall be of minimum 5 to 7 mm thickness toughened safety glass. The wind screen glass shall be fixed so that the driver's view should not be blocked by the fixtures fitted at the bottom. The bottom fixtures shall be as small as possible.
- k. All windows shall have safety glasses of at least thickness 4 mm or more and all glasses be fitted with winding type regulator. Two number sun visors shall be provided one on each side.
- l. The BA Van cabin shall be constructed from material of adequate strength to ensure a high degree of safety for crew under all operating conditions including excess heat exposure and in the event of a vehicle rollover accident. The cabin shall be of the unitized rigid body and frame structure type or it may be a separate unit flexibly mounted on the main vehicle frame.

- m. The driver cabin shall be fabricated by the bidder as per the requirement. The driver cabin shall be fitted with doors with windows and single piece safety wind screen Glass, two roof lights (5 W or more) with all other lights as per M.V. Act, wiper system, dual vision external rear view mirrors, safety belts, instrument panel with all gauges and switches.
- n. Dash Board should be equipped with necessary instruments, Gauges, warning lights, pilot lamp and switches for the operation **as per chassis manufacturer's standards**.
- o. Provision of sun visor for driver and co-driver mechanically operated on front glass. Control Panel located on the dash board for the operation comprising of control including pilot lamps for light bars and electronic siren on/off and Pilot lamp for open doors.
- p. A battery main switch for disconnecting all power from the battery shall be provided in the driver's cab on the dashboard. All doors shall be fixed on M.S structural cross members with 3 or more invisible heavy duty coach type hinges with suitable internal and external handles.
- q. The driver side door handle shall have key locking arrangement. The other doors shall be provided with internal locking and pulling arrangement. In addition to door lock, each door shall be provided with additional SS Tower bolt (3 inch or better) for internal locking of the cabin. The adequate length non slip grab rail handle shall be provided to assist the driver, crew member in charge and crew members to get in and out from the appliances.
- r. The seats cushions shall be of latex foam rubber, with atleast 75 mm thickness, and back cushion shall be atleast 50 mm thickness upholster with PU leather cloth or better. Below the crew seat, two lockers should be provided to accommodate battery, tools etc.
- s. The construction of cabin shall be such that the roof shall support the weight of 160 kg or more without damage and other equipment's shall be provided as per M.V.Act 1988 and C.M.V.R. 1989 latest amendments as on date.

6. SECTION B (REAR BODY)

6.1 Superstructure

- a. The rear body shall be fabricated inline and in continuation of driver cum crew cabin.
- b. The structure/ frame shall be of welded construction and made from atleast 2 mm thick **GI/zinc plated** press section and square tube.
- c. The structure shall be fabricated so as to avoid any vibration/ gratings/ deformation in the intended uses of the vehicle. The outside panelling shall be fixed by means of rivets. To avoid the dumping noise, felt strip shall be fixed in between skeleton and outer Aluminium

sheets.

- d. Corrosion protection and easy maintenance, the lockers beds, locker side as well as the top of the body and rear of the body shall be paneled with atleast **14 SWG** Aluminum checker plates.
- e. The under frame cross members shall be fabricated from M.S. rolled channel section of 100 x 50 x 5 mm or better.
- f. A full-length runner fabricated from MS rolled channel section of 100 x 50 x 5 mm thick or better shall be provided and fixed on the chassis frame by means of atleast 6 mm thick MS plate bolted to the chassis frame as per the available bolt holes.
- g. Atleast 5/8" dia 'U' clamp shall be provided where the fixing plate cannot be provided due to non-availability of bolt holes on chassis frame. Each cross members shall be secured to the runner with suitable plates and atleast 5/8" dia bolt with nylock nut or better.
- h. The super structure of the body shall be constructed from SS 304 Square tube of 30 x 30 x 1.6 mm or better. The angles and channels used shall be minimum 3 mm thickness.
- i. The complete structural materials shall be duly hot deep galvanized/electro plated treated for anti-corrosion by zinc plating. The plating thickness shall not be less than 20 microns. Two coats of epoxy paint shall be applied to the completely welded structure.
- j. The super structure shall be adequately strengthened specifically at the members where the doors are fitted and also other members by providing brackets and gussets securely fitted. The details of the super structure members shall be submitted along with the offer.
- k. The flooring of the lockers shall be fabricated from SS angles of 40 x 40 x 4 mm thick or better. All the under frame cross members and other Mild Steel members shall be painted with three coats of rust preventive paint. The complete external panelling of the rear body, lockers, doors shall be of atleast 16 SWG aluminium sheet with all joints riveted and beaded. The side panelling of lockers shall be made of atleast 16 SWG aluminium chequered sheet and the flooring shall be made from atleast 10 SWG chequered aluminium sheet. The complete inside panelling of all doors and lockers shall be atleast 16SWG aluminium chequered sheet duly fixed to the super structure members by means of riveting. The rear bumper shall be provided.
- l. Two cat ladders made out of MS pipe of atleast 1" dia shall be fixed at the rear. Strong grab rails support (SS) at rear of the vehicle should be provided. The entire rear portion including foot board should be covered with atleast 2 mm or better gauge Aluminium chequered plates.

6.2 Stowage

- a. Independent lockers/racks of proper stowage of ready to use 12 No. of B.A sets on left/right side of the vehicle with provision of easy and immediate access to breathing apparatus equipment shall be provided. All the B.A equipment should be stowage.scientifically and symmetrically in vertical position in the lockers/racks with facility to locate to remove each set easily and early. Each lockers/racks shall be labelled (atleast $\frac{3}{4}$ inch text height) with the name and no. of equipment. The locker shall be provided thermal insulation to protect BA set from atmospheric heat by providing insulating material between the outer and inner panelling. Certificate for the same shall be submittedat time of bidding and at the time of inspection.
- b. Each B.A equipment in the stowage shall be properly clamped and strapped, to prevent the shifting and rolling of the sets during the vehicle movement, and while negotiating the curves.
- c. Provision of the lockers/racks inside the stowage area to accommodate 30 numbers spares BA cylinder preferably on the rear side of BA set locker and behind the driver cum crew cabin from inside with proper clamping with rubber cushion.
- d. The lockers / racks shall be fabricated using atleast 10 SWG aluminium sheets and shall have self-locking system to prevent accidental opening, while the vehicle in motion and negotiating the curves.
- e. All the four sides of the lockers and racks shall be constructed from aluminium angles of minimum 100 mm x 4 mm thickness and bottom floor of the lockers/rack shall be made from minimum 3 mm thick aluminium sheet and then covered with Neoprene rubber sheets/PU foam sheet.
- f. The bottom edges of the lockers/racks shall be covered SS 304 angle of minimum 3 mm thickness. Footsteps and foot boards shall be provided for easy reach to all the B.A. sets and accessories.
- g. Sufficient no. of Aluminium shutters with locking arrangement to be provided in the locker.
- h. The aluminium shutters should be made of extruded aluminium sections duly powder coated, proper anodized. The shutter shall be only roller type. The aluminium shutters shall be of dust and water proof. Certificate for the same should be submitted at the time of bidding.
- i. The locker or suitable compartment with shutters should be provided preferably on the

right/left side of the vehicle for BA air compressor, BA cylinder filling station, DG set and airline trolley system. These compartments should also be accessible from inside to carry out BA set refilling operation. Provision of suitable foundation with anti-vibration pads to be made wherever necessary. Suitable arrangement should be provided to take out heavy equipment like DG set, air compressor from the locker/compartment.

- j. The locker should be arranged in such a manner that load distribution shall be equal on both side of the vehicle.
- k. The footsteps and footboard (shall carry atleast 300 kg without damage) should be provided for all the lockers for easy reach to all the BA sets and other equipments.

6.3 Service cum Serving Compartment

- a. This space will be used for carrying out on site servicing of B.A. sets and also serving of ready to use B.A. sets to firemen on call.
- b. There shall be working cum serving table on one side of this layout with sufficient number of drawers for keeping tools and spares.
- c. The working cum serving table shall be made from water proof marine grade plywood of atleast 15 mm thickness with handles (atleast 5 inch length), hinges (atleast 3 inch) etc.
- d. The working cum serving table shall be covered with wood finished laminated sheet and table top shall be provided with 5 mm thick Neoprene rubber sheet.
- e. The section shall have the provision for Laptop/Desktop, printer electric sockets(atleast 3 nos 6A and atleast 2 Nos 15A).
- f. This section shall have the provision of space for **Airline trolley system**.
- g. There shall be full width door at the rear side of this compartment in two halves with sliding windows in both the doors.
- h. The footsteps and footboard shall be provided for easy accessibility to this compartment.
- i. The aluminium anodized at least 1 inch diameter grab handles shall be provided inside the compartment and wherever necessary.

Successful bidder has to submit fabrication drawing with the detailed layout of the stowage area and obtain approval from the department at time of issuing work order.

Breathing Apparatus set with cylinder and accessories 10 nos. (In the scope of Bidder)

SCBA SET:

- i. Self-Contained open circuit Compressed Air Breathing Apparatus (SCBA) Set Confirming to EN137:2006 Type 2/ IS 10245 (Part 2):2023 & CBRN approved, with 6 Liters /300 Bar Aluminium lined fully wrapped carbon composite material Compressed Air Cylinders. as per following specifications.
- ii. 1. General requirement.
- iii. The set shall be self-contained open circuit type compressed air breathing apparatus set fully confirming to EN 137: 2006 Type 2/ IS 10245 (Part 2):2023 or its latest version and shall be approved as per CBRN standard for respiratory protection devices. Anti-Static Property ATEX II 1G IIC T6 II 1D IIIC -30°C ≤ Ta ≤ +60°C.
- iv. (a) The BA set shall contain air cylinder, back plate, facemask, lung demand regulator, pressure reducing valve, Pressure Gauges, hoses, standard carrying case to be provided.
- v. (b) The minimum duration of use of the set shall not be less than 45 minutes. The weight shall not exceed more than 11 kg.
- vi. (c) The design of the set shall be such that there is no protruding parts or sharp edges likely to be caught on projections in narrow passages.
- vii. (d) Original equipment manufacturer (OEM) name and CE/EN marking shall be visible, on the set. warranty 10 years.
- viii. **Back plate with body Harness:** Back plate should be manufactured from Glass fibre reinforced polyamide, flame retardant and conducting surface material and it consists carrying straps, pneumatic system single line high pressure hose inside a medium-pressure hose, containing a cylinder connector, reducer, pressure gauge, whistle and lung demand valve. Pneumatics easy detachable. Back plate should contain a swivel waist pad, S Shaped shoulder straps Shoulder and waist straps should consist reflective elements for better visibility and must be constructed from a high abrasion resistant, high puncture resistant, light weight and water-resistant f Flame retardant polyethylene foam padding Outer shell: Coated aramid textile, flame retardant, tear resistant and conducting with layered band made from polyamide webbing coated with CR rubber material.
- ix. **Full face mask:** Positive pressure Full face Material: Face blank and Head harness Rubber: Acrylonitrile and Butadiene rubber NBR , Lens frame : Nylon (PA), Lens Polycarbonate with hard coat APEC with hard coat and antifog, Neck strap : Rubber CR, Helmet adapters : Stainless steel mask assembly shall be big facial counter with a wide reflex seal, speech diaphragm, inner mask (nose cup), visor, rubber head band, good speech transmission and having flame resistance requirement meeting to EN 136 Class 3+ and Antistatic approval. Best protection for chemical resistance and permeation. With CE/EN marking, manufacturer name/symbol field of vision shall be more than 90% and it should upgradable with communication system in future
- x. **Full Automatic First Stage Pressure Reducer:** The first stage pressure reducer shall be mounted in a protected position on the rear, lower portion of the back frame. The pressure reducer shall be of a fail-safe spring-loaded piston design, with an integral pressure relief valve, consisting of only two moving parts. The reducer shall be completely automatic, low maintenance and require no calibration. The reducer shall have flow characteristics that exceed 1000 Liters /min and be protected by a pressure relief valve that operates between 11.5 and 13.5 bar. The reducer shall be capable of reducing the pressure at first stage to minimum 7.5 bar and designed to function with either 200 or 300 bar cylinders.
- xi. **Lung demand valve:** Lung demand valve should have a medium pressure hose, with quick

release coupling. Lung demand Valve should contain a rubber membrane for better H₂S and other gases protection. Disconnection from the mask should occur by simultaneously pressing the buttons on the sides of the lung demand valve. Airflow should automatically shut off when disconnecting.

- xii. **Low pressure warning whistle:** SCBA set should be provided with low pressure warning whistle when pressure drops to 55 bar $\pm$ 5 bar for a 300 Bar system. Warning signal should be located on the pressure gauge.
- xiii. **Pressure gauge:** SCBA should have a 300 Bar pressure gauge to monitor cylinder at the input of the first stage reducer. Manifold unit two medium pressure couplings.
- xiv. **Compressed air cylinder:** Cylinder shall be fully wrapped composite material and basically approved to EN 12245 or CE marked. The weight of the cylinder when fully charged shall not be more than 6.8Kg. The carbon composite material and it should be provided with Valve. Air cylinder shall have a water capacity of 6.8 Liters and free air capacity of min 1850 litres when filled at a pressure of 300 bar. Cylinder shall be approved by PESO (Petroleum and explosive safety organization) and certificate to that effect shall be submitted along with the tender. The cylinder shall be supplied with valve made from nickel plated brass and shall comply with EN 144-2 & CCE approved.
- xv. **Enhanced HYGIENE:** Set should be easy to clean and disinfect Dust and water-repellent harness material Simplified disassembly and assembly of components Entire SCBA is machine washable.
- xvi. **Preferable Make: MSA.**

Note: Certificate as per relevant standards shall be enclosed at the time of final inspection.

7.1 TEST OF ACCEPTANCE:

Acceptance test should include a visual inspection, performance test, leakage test, flow test, safety device functional test and low-pressure warning test.

7.2 WORKMANSHIP AND FINISH:

It is essential that the standard of workmanship and finish of all parts is such that replacement parts can be supplied and that they will fit correctly and without difficulty. Exposed metal parts would have a finish which can be kept up without the use of metal polish or any other special preparation.

7.3 TOOLS:

Tools necessary for routine testing and servicing must be provided with each set along with one kit of consumable spares viz. 'O' rings.

xvii. B.A . Set Spare Cylinder :

Note: Procurement of 10 no.s of BA set spare cylinders shall be provided by the bidder, storage space of minimum 30 no.s of Cylinders shall be provided by the bidder.

- a. Seamless, super light, carbon composite cylinder confirming to EN 12245:2009, BIS or equivalent standard having 6.8 ltr. water capacity, free air capacity of minimum 1800 ltrs, filling pressure not exceeding 300 bar & duly hydro-tested to 1.5 times of filling pressure. Capacity should be sufficient to allow atleast 35 mins working duration & atleast 10 mins safety margin at a breathing rate of 40 lpm or more.
- b. Should have test certificate from NABL lab or authorized lab of the country from where it has been imported/manufactured.
- c. It must have approval from PESO, Nagpur and should be painted as per latest cylinder rules.
- d. The cylinder should be marked with photo luminescent strip in such a way that when set is assembled it is visible from back side to trace / follow the BA wearer in smoke filled compartment.
- e. Cylinder should have minimum 15 years' service life

xviii. B.A. Air compressor (In the scope of bidder):

Make: Bauer / Poseiden/ Burkhardt / Kaesar / Coltri brand meeting the norms of technical specification.

- a. The BA air compressor shall be electrically driven. The unit will be provided with air outlet manifold to connect 2 or more cylinders at a time with level type shut of valves and at least 1.2 m long hose each.
- b. The compressor shall be suitable to fill the air cylinder of self contained breathing apparatus cylinders with purified air that meets the requirement as stipulated in the standard and safe for human respiration. It should meet ANSI / CGA G-7.1 commodity specifications for air, grade E for respirable air. BIS, EN or any equivalent standard.
- c. The compressor manufacturer shall have quality management system certificate which complies with the requirements of ISO 9001 for design, manufacture and inspection.
- d. The breathing air compressor shall be supplied on steel based frame of welded construction. The frame shall be designed for both the static and dynamic loads of the

- systems and to adequately accommodate all the components. The system shall not get damaged due to jerks and vehicle movements.
- e. The compressor, purification system, fill stations and all tubing shall be incorporated in to an enclosure complete with sound attenuation. The enclosure panels shall be equipped with a slam action latches and lift of hinges for easy inspection and maintenance.
 - f. The enclosure and the base frame shall be finished with baked on polyester powder coat paint for durability and corrosion resistance, certificate to be enclosed at the time of bidding.
 - g. All system instrumentation, controls and access to the containment fill stations shall be located at the front of the station for easy operation.
 - h. The air compressor shall be designed for continuous duty operation in the varying room temperature (5 to 55 °C or better). All the piping and tubing shall be properly supported and protected to prevent damage from vibration while in use. All the instrument tubing shall be of 300 series stainless steel or better.
 - i. The air compressor shall be able to deliver free air delivery of at least 10 SCFM $\pm$ 10% and at 300 bar with P5 secure purification system or better. Air compressor shall be able to fill 2 or 3 cylinders at a time.
 - j. The compressor shall be air/water cooled, oil lubricated, 3/4 stage, 3/4 cylinder, single acting, reciprocating compressor and MoC as per OEM design. The crank case of the compressor shall be made from high strength aluminium alloy with single piece forged steel crank shaft. The crank shaft shall be supported in the crank case with at least 3 roller bearings. The connecting rods shall be single piece designed and constructed from high strength aluminum alloy. The pistons of the compressor shall be made from aluminum alloy with cast iron cylinder construction with deep cooling fins on the external surface of the cylinder.
 - k. The lubrication system for the compressor shall be combination of splash/mist system with pressurized lubrication to final stage to ensure proper lubrication all over the compressor block during continuous running. There shall be replaceable oil filter provided to lubrication system with easily oil level checking system. The oil drainage system should be easy and shall be provided with pipe outside the frame.
 - l. The compressor shall be provided with inlet filter with replaceable particulate element.
 - m. The compressor shall be driven by three phase electric motor which is totally enclosed fan cooled (TEFC). The voltage of the motor and frequency shall be as per Indian

- standards and shall meet all safety standards for electrical appliances applicable in India.
- n. The compressor and motor shall be mounted on same frame and shall be arranged in vertical/horizontal manner. The power from motor to compressor via V belt. V belt shall be tensioned automatically.
 - o. The compressor control panel shall include electric starter motor, power supply industrial type and PLC controller. The control panel shall be built as per OEM design.
 - p. The control panel shall provide various controls and display but not limited to following.
 - i. Emergency stop Button
 - ii. Compressor On/Off switch
 - iii. Compressor high temperature shutdown and alarm (90 db or more)
 - iv. Auto condensate drain
 - q. The compressor shall have oil pressure monitoring system and shall be active at all the time when compressor is running. The compressor shall be shut down and fault should be shown on display when the oil pressure drops below acceptable limit.
 - r. The cut in and cut out pressure sensors shall be sealed and shall be tampered proof.
 - s. The purification system shall purify the high-pressure air to a quality that meets or exceed the requirements of CGA Pamphlet G-7, compressed air for human respiration, ANSI/CGA G-7.1, commodity specifications for Air, Grade E and EN12021 or equivalent standards for breathing air.
 - t. The purification of air is achieved by mechanical separation of condensed oil and water droplet, absorption of vaporous water by a desiccant, absorption of oil vapour and elimination of noxious odors by activated carbon and conversion of carbon monoxide to respirable levels of carbon dioxide by catalyst.
 - u. The high-pressure purification chambers should have very high working pressure and system should utilize replaceable cartridges. The cartridge can be replaced without disconnecting the pipes. There shall be bleed down valve to the purification system to facilitate the replacement of cartridge.
 - v. The purification system shall include Securus Electronic Moisture Monitoring system to monitor the moisture levels in the air. The display should show the status of secures cartridge when the compressor is running. The secures system should give warning about the saturation of filter cartridge.
 - w. The moisture monitoring system shall be fail safe type and no manual override system shall be provided for this.
 - x. The weight of compressor unit shall not be more than 300 kg and power of engine shall

not be more than 10 kW.

10.B.A. Cylinder Filling Station/Containment fill station (In the scope of Bidder)

Make: Bauer / Poseiden/ Burkhardt / Kaesar / Coltri brand meeting the norms of technical specification. This should be from the same manufacturer of B.A. set compressor for proper integration.

- a. The fill containment station should be designed to protect the user from fragments of a cylinder blast, in case the same fails or bursts by containing the fragments inside a special containment station / directing debris away from the operator.
- b. The Containment fill station should be built and tested as per NFPA 1901:2016 Standard or equivalent standard.
- c. Manufacturer should submit test report from an authorized test lab stating that offered Containment fill station was type tested at a designed as per pressure on a B.A. Cylinder and capable of holding air not less than 2800 Litres.
- d. The test result should prove that air refill station is capable of containing all fragments of a failed cylinder, the cylinder of adjacent do not rupture and venting provisions direct the air-concussive release away from the operator.
- e. It should be able to fill two or more B.A. cylinders of capacity 6.8 litres or 9 litres at 300 bar pressure.
- f. It should be supplied with atleast 2 filling hoses to connect atleast two Nos 300 bar cylinders.
- g. This containment should have all steel construction made off heavy grade steel structure hardware.
- h. The front-loading, atleast two position containment fill station should totally enclose the SCBA cylinders during the refilling process.
- i. Venting of rapidly expanding air from a ruptured cylinder should be provided in the bottom/back of the containment fill station for safety in case of fragmentation.
- j. The fill station door and cylinder holder assembly should tilt out towards the operator in order to provide unobstructed access to the cylinder holder to load and unload the cylinders.
- k. Preset safety Relief Valve (shall be activated at 330 bar or less pressure) to protect the cylinder from over filling.
- l. Containment fill station should be provided with handle and heavy-duty gas spring to allow opening and closing the fill station door by the operator with less than 5 kgs of

force and without hyper-extended hand and wrist movements.

- m. Material of construction of each cylinder holder should be thick walled polymer / ceramic fibre / plastic or metal.
- n. Cylinder holders should be provided with Cylinder Riser to accomodate SCBA cylinder of different length in two predetermined positions
- o. The Containment fill station should include a mechanical safety interlock system that will prevent refilling SCBA cylinders unless the fill station door is closed and secured in the locked position.
- p. Two Retainers should be provided on containment fill station to anchor at least twofill hoses when not in use.
- q. The control panel of containment fill station shall include Inlet pressure gauge. Adjustable pressure regulator, Regulated pressure gauge. At least Two fill control valves, at least Two fill pressure gauges and relief valve.
- r. Dimension of Containment fill station should be as compact as possible.
- s. Containment fill station weight shall not be less than 300 kgs

DIESEL DRIVEN GENERATOR CAPACITY NOT LESS THAN 20 KVA (IN THE SCOPE OF BIDDER) MAKE: -KIRLOSKAR /KOEL I GREEN
STANDARD meeting the following specifications

Technical Parameter	Remarks
GENSET	
Frequency (Hz)	50
Power Factor (Lagging)	0.8 or better
Voltage V	230 (1 ϕ) & 415 (3 ϕ)
Governing Class	G2 or better
Noise Level (db)	<75
Fuel Consumption (Ltrs/Hr)	5.5 or better
Fuel Tank Capacity (Ltrs.)	65 or more
Weight of Genset with Canopy (kg)	700-900
Overall Dimension of Genset (mm)	2200 x 950 x 1300 (Approx.) or better
Electrical Battery Starting Voltage (Volts-DC)	12/24 or as per OEM
ENGINE	
Rated output (kW)	Not less than 20

No. of Cylinder (Number)	2 or more
Cubic Capacity (Ltrs.)	2 or better
Rated Speed (RPM)	1500 (Approx.) or as per OEM
Lube Oil Change Period (hrs)	500 or better
Lube Oil Sump Capacity (Ltrs.)	5.5 or better

Coolant Capacity (Ltrs.)	14.5 or better
ALTERNATOR	
Insulation Class	Class H or better
Alternator Efficiency (at 100% load) 0.8pf	88 (Approx.)
Max Voltage Dip at Full Load 0.8 pf Lag	≤ 16 %

Note:- The bidder should clearly mention the make & model of the equipment for the above application along with technical literature at the time of bidding along with OEM authorization letter otherwise bid shall be liable to be rejected.

11. Airline trolley system with 4 nos. Cylinder one unit:

- a. The storage space to accommodate air trolley system is approx. 1000 mm x 700 mm.
- b. The system should consist of a mobile source of compressed air.
- c. The system shall meet the requirements of IS 10245 Part 3 latest.
- d. The unit shall have a Two-stage system of pressure reducer.
- e. The trolley system contain, a SS 304 trolley, 4 no. 6.8 lit x 300 bar light weight compressed air cylinder, Hose reel, 2 Facemask (Plug in type), 2 lung demand regulator, pressure reducing valve, Pressure Guage for high-pressure & low-pressure, 2 Waist belts with one way manifold with quick release coupling, brass Y piece, High pressure warning unit on the trolley and medium pressure warning whistle on the waist belt.
- f. Trolley should be mounted on four heavy duty Rigid Rubber / Castor wheels with Brakes.
- g. The Hose reel system to have with 30 m length plus 2 x 30m length after Y connection for two persons use.
- h. The hose shall be of nylon reinforced PVC tubing (transparent / Black) antistatic with bursting pressure in excess of 50 bar.
- i. Trolley wheel size: diameter 6 inch or more with brake. Rear wheel two tyres shall be revolving type for free movement.
- j. The trolley should be designed to carry atleast 4 no. Light weight carbon composite compressed air Cylinders each of 6.8 L of 300 bar pressure approved to PESO, Nagpur.

- k. Manifold for connecting atleast 4 cylinders to be mounted on the trolley. Individual non return valve (NRV) for each cylinder. Each cylinder connection to provide with a 'Bleed valve', in line of NRVs to release pressure in the line for dismantling the cylinder.
- l. The Hose reel should be equipped with handle, for ease of retracting the uncoiled hose. The compressed air cylinders should be secured to the trolley frame webbing and Velcro, ensuring maximum grip to the cylinder.
- m. Cylinder resting cup shall have rubber padding or better padding.
- n. The system should have suitable Pressure reducer suitable upto 300 bar pressure & second stage Lung Demand Valve.
- o. The facemask should have double reflex sealing, speech diaphragm, inner mask, five-finger headband with quick fitting plug in type connection to lung demand valve from the front port. The mask should have ISI marking and approved to IS 14166 latest.
- p. The trolley should also have provision for use with plant airline or any other BA set storage system / Cascade.

Note: - The bidder should clearly mention the make & model of the equipment for the above application along with technical literature along with OEM authorization letter at the time of 1 st stage inspection.

12. ELECTRICAL SYSTEM:

- a. All the important electrical circuit shall have separate fuses suitably indicated and shall be grouped into a common fuse box located at an accessible position. The wiring shall be single pole with negative earth. The suitable size wire shall be selected for different circuits considering the current consumption for that circuit.
- b. One no flat LED light bar integrated with hooter cum PA system with amplifier meeting the requirements of latest C.M.V.R. shall be provided over the top of driver's cabin. LED Light bar (12/24 V, Frequency: 2-4 Hz, Material: Polycarbonate & Aluminium, Length: 760 mm or more and Waterproof), Siren (fast [yelp] and slow [wail] sound modes, 12V, 120-130 dB measured on the forward axis at a distance of $2 \pm 10\%$ m from the acoustic center), PA System Speaker (power output: 50 W or more, 90-130 dB, 12 V).
- c. There should be a provision of Corner Sensing Light, 2 No.s at front and 2 No.s at rear (400 lumen or more).
- d. The other lights, cabin light, locker lights shall be of Philips/Syska/Bajaj or equivalent make and have atleast 10 lux.
- e. All the controlling switches of lights on dashboard shall be of ISI mark or equivalent.

- f. Two fog lamps of Lumax/Hella/Koito or equivalent make shall be provided and fitted on front bumper with controlling switch on dashboard (Power input-9 W or more, Color temperature-6000 K or better, Luminous flux-720 or more and Lifespan-5000 h or more).
- g. All the lockers shall be provided lamps (400 lumens or more) with ISI mark or equivalent Piano switches near the lamp.

13. PAINTING:

- a. The cross members of driver cum crew cabin, rear body shall be painted with two coats of Anticorrosive paint.
- b. The complete external and internal aluminium panelling of driver cum crew cabin and rear body shall be painted with two coats of Primer.
- c. The complete exterior of the vehicle shall be painted with two finish coats of “FIRE RED (IS-5 CODE 536)” polyurethane paint of Nerolac/Asian/Dulux or equivalent.
- d. The internal painting of cabin lockers etc. shall be done with two coats of Grey Synthetic enamel paint of Nerolac/Asian/Dulux or equivalent make.
- e. The following given matter shall be pasted on both sides of vehicle in golden yellow color adhesive vinyl letters in Hindi and English.

ANDHRA PRADESH STATE DISASTER RESPONSE AND FIRE SERVICES DEPARTMENT (English and Telugu on each side)	Radium Details	- 3-inch height - 4-inch height - 6-inch height
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- f. The “EMBLEM” of the college shall be pasted in adhesive vinyl on both sides of vehicle in natural colours at suitable place in consultation with the department. The size of EMBLEM shall be 300 mm (width).

14. ACCESSORIES:

The following accessories shall be provided.

- a. Six aluminum hooks for keeping the uniform clothing shall be provided in crew compartment (with diameter 5 mm or more).
- b. Quickly removable wire mesh guards (Mesh Size- 50 x 50 mm or better and Wire thickness: 3 mm or better) shall be provided to wind screen glass and all the windows of driver cum crew cabin.
- c. 4 Nos metallic chokes.

Size	15 inch or better
Material	Polyethylene

Design & Construction	One-piece moulding, non-slip, water & oil-resistant,
	Lightweight, floats on water, Having high friction factor
Allowable Strength	100 kg/cm ² in all directions or better.

- d. Hydraulic jack (25 ton or more) with tools kit and atleast one complete spare wheel.

15. WIRELESS SET BOX:

Box made from atleast 14-gauge aluminium sheet with lid shall be provided just behind the crew incharge seat with atleast ½ inch wooden plank for fitting the wireless set bracket.

16. WORKMANSHIP AND FINISH:

- a. The Breathing Apparatus Van shall be fabricated, painted etc. with standard workmanship, acceptable to Department.
- b. Workmanship executed shall be of the highest order. All rivets and bolt holes shall have a coat of Asian/Dulux/Nerolac or equivalent paint on both surface before riveting or bolting or welding. All steel screws, bolts, nuts, rivets etc. shall be zinc coated or shall have rust proof coats by recognized process.
- c. All the material to be used in the fabrication of the body work shall be of indigenous make and good quality. All equipment and material shall comply with the requirements of the latest relevant I.S. specifications. The structure of vehicle shall be rattle free and noiseless while in motion.
- d. The roof joints shall be subjected to rigid water test at manufacturers workshop, in the presence of inspecting officers of this department.
- e. All directions & instructions on all points related to the fabrication shall be executed whenever given by the inspecting officers for quality workmanship.

17. INSPECTION:

The successful tenderer shall have the work inspected and approved at the following stages by the Director General, State Disaster Response and Fire Services Department, or his authorized representative.

- i) Successful bidder has to submit fabrication drawings with the detailed layout of driver cum crew cabin & rear body and technical details of all equipment before start of the fabrication work as per the technical bid to the Director General, State Disaster Response and Fire Services Department for approval, in order to cross

check the compliance as per commitment made in the bid.

- ii) First Stage Inspection: Fabrication Works including Structural work, Panelling work and cabin/locker work etc. Purchase certificate from the manufacturer for the major items/accessories should be submitted by the bidder at the time of inspection.
- iii) Final Inspection: Final inspection including acceptance test, road test, stability test, fitment of accessories, electrical equipment/fittings, painting and other testing parameters as per the relevant standard shall be performed at location of State Stores, Collectorate Compound, Guntur District.

Material test certificate for all the raw material used for body work, shall be issued from govt. recognized testing laboratory. All OEM and vendor manuals/ test certificates/fitness certificate etc. pertaining to the vehicle and accessories shall be provided with the vehicle. The cost towards inspection will be borne by the bidder.

18. WARRANTY:

- a. The complete vehicle along with the chassis shall be under warranty for a period of 24 calendar months from the date of supply of the vehicle against any manufacturing defects.
- b. The successful tenderer shall submit an undertaking that entire spare parts for the super structure and equipments supplied by the bidder will be available in India for the period of 10 years from the date of supply of the vehicle.

19. OPERATION AND MAINTENANCE MANUAL:

The bidder shall supply two sets of operations and maintenance manual with vehicle to include complete operating instructions, maintenance procedure, spare part list, vendor manual and complete electrical schematics etc.

4. TECHNICAL SPECIFICATION OF HAZMAT VAN FOR THE USE OF ANDHRA PRADESH STATE DISASTER RESPONSE AND FIRE SERVICES

1. This Vehicle should be designed to cater the needs of emergency created due to road accident and many other Disaster. The Hazmat Vehicle shall conform to the specifications listed below & will be fabricated on a suitable 18.5 Ton Ashok Leyland 20ft G45 FES Cowl Chassis with BS –VI emission norms to be supplied by the department. The Rescue Vehicle must be designed to effectively & efficiently carry all the equipment as per the following specifications, which must be fixed in a compact & ergonomic manner & must be readily accessible for use during emergencies. Due care should be taken to ensure that all aggregates are designed for comfort of the operator.

2. CABIN, BODY WORK & STOWAGE:

- 2.1) Enclosed accommodation for six persons shall be provided in the driver cab cum-crew compartment including the driver and the in-charge of the crew. Both the seats shall be independent. The driving compartment shall be of two doors and designed to provide protection for the driver and co-driver in the event of an accident and at the same time afford maximum possible vision for the driver. The driver's seat shall be of the "bucket" type and adjustable, both horizontally and vertically. Provisions shall be made to store a BA set in the back rest of the co-driver seat. Provision shall be made to store the driver's BA set near the driver's seat provided with an extension hose to accommodate breathing while driving. BA sets shall be provided suitable clamps and brackets where the BA sets (single cylinder) would rest and shall not be kept in a hanging condition.
- 2.2) The rear compartment of driver's cabin shall have one removable seat for full width of cab for 5 (five) crew members. The cab floor shall be covered with 3 mm thick aluminum chequered plate rigidly fixed to the frame cross members by means of nuts and bolts or riveting. Trap doors for topping up oil, etc, wherever necessary shall be provided. The Crew cabin shall be designed to provide protection for the crew in the event of an accident. The cabin shall accommodate at least four crew members and shall have two doors. The crew cabin may be integrated in the superstructure or driver's cabin (as best possible). If crew cabin is integrated in the superstructure, it shall have communication opening with the driving compartment with minimal dimensions of L X H = 1500 X 500 mm. The communication opening shall be sealed from the outside against weather and noise. Provisions shall be made to store BA in the back rest of the crew seats with suitable clamps and brackets where the BA sets (single cylinder would rest and shall not be kept in a hanging condition.
- 2.3) The driver and crew cab shall be fully air-conditioned. The driver-cum-crew cabin shall be provided with full four doors, one for driver, one for officer and two at the crew compartment. The doors shall be generously sized for easy embarking/disembarking of crew members. All the doors shall be fitted on the super structural members, each hung upon three invisible coach type mild steel stout hinges and fitted with best quality handles.
- 2.4) The door handle on outside of driver seat shall have a locking arrangement. Other doors shall be lockable from inside. In addition to the door lock, aluminum tower bolt of 20 mm shall be provided for all the doors from inside, adequate grab rails shall be provided for easily boarding and alighting from the appliance.
- 2.5) The windscreen glass shall be provided in the two halves and shall be flat in shape. Each glass shall be fitted in E.P.D.M. rubber beading. The glasses shall be 5 mm thick toughened safety glass. The rubber beading used for fitting glasses and window frame shall be E.P.D.M. rubber.

- 2.6) The driver seat shall be adjustable vertically, forward and backward. The officer seat shall be fixed type. Both the seats shall be rigidly fixed to the flooring by means of nuts and bolts. The seat cushion shall be of latex foam rubber 75 mm thick upholstered in good quality foam leather cloth. The back seat shall be of latex foam rubber 50 mm thick upholstered in good quality foam leather cloth. Below the crew seat, two lockers shall be provided. One locker for battery box to accommodate two 12 V 13 plates batteries and another for keeping accessories and Tool kit container. The extra length of battery cable shall be provided by manufacturer. The crew seat shall be rigidly fixed to floor by means of nuts and bolts, running full width of the vehicle suitable for sitting five firemen, covered with 75 mm × 50 mm cushion latex foam rubber upholstered in good quality foam leather of approved shade.
- 2.7) The doors shall be fitted with safety glasses and be of horizontally sliding type window. The glasses on all the windows and doors shall be fixed in aluminum sections powder coated. The sliding glasses shall be provided with spring loaded locks operated from inside the cabin.
- 2.8) The super structural of the cabin shall be constructed out of 2 mm Stainless Steel (SS-304) 45 mm × 45 mm × 2 mm pressed 'Top Hat' sections. The super structure shall be strengthened specifically on the members with the lockers doors frames are to be fitted and also the other members by providing brackets and gussets of 2 mm Stainless Steel (SS 304) plate securely welded. The details of super structure are as follows:
Under frame cross members (MS): 100 mm × 50 mm member's × 5 mm
Floor longitudinal members (MS): 50 mm × 50 mm member's × 6 mm
Vertical members on even side (MS): 45 mm × 45 mm × 2 mm
Skirt member (MS): 45 mm × 45 mm × 2 mm
Waist member (MS): 45 mm × 45 mm × 2 mm
Top deck longitudinal (MS): 45 mm × 45 mm × 2 mm
- 2.9) The cab and lockers shall be of composite construction with sufficient rigidity and reinforcement and shall be kept as light as possible. The structure/framework shall be of welded constructions and made from 2 mm thick stainless steel 304 pressed sections and square tubes. The angles and channels used shall be of minimum 3 mm thickness. The complete structure material shall be treated for anti-corrosion by zinc plating. The plating thickness shall not be less than 20 microns. Two coats of epoxy paint shall be applied to the completely welded structure. The structure shall be so designed so as to avoid any vibration/ratting/deformation in the intended usage of the vehicle. The interior paneling shall be done from 1.22 mm thick aluminum sheets, and the exterior paneling shall be done from 1.60 mm thick aluminum sheets. The entire roof of the vehicle, cabin floor and locker floor shall be covered with minimum 1.60 mm thick aluminum chequered plates. All the lockers sides and complete rear of the vehicle shall be covered with minimum 1.22 mm thick aluminum chequered plates. Lockers shall be provided for secure stowage of all equipment given in Annexure. The height of the lockers from the bottom to the top of the opening shall be not less than 600 mm and the depth shall be not less than 600 mm. All lockers shall be provided with internal automatic lighting arrangement with the master switch in the cab. All lockers shall be provided with internal automatic lighting arrangement with the master switch in the cab. The doors of the lockers shall have efficient means for holding them closed by efficient flush fitting spring loaded locks. The doors of all the lockers shall be hinged so as to move upwards. All lockers handles should be opened to the right only with Aluminum sticker indicator. The doors of the lockers shall have sufficient means for holding them open and efficient flush fitting spring loaded locks. All locker-handles should be of good quality of Aluminum material.
- NOTE:** All the hinges and locks used should be heavy duty and strong. In the cabin the back rest cushion lining should be provided and back panel should be 18-gauge Aluminum sheet duly painted. All internal paneling for doors in the cabin shall be 16-gauge Aluminum sheet.

- 2.10) A light bar of 1000 mm long operated on 12/24 volts battery having 2 nos. rotating red beacon lights, 4 nos. strobe lights, hooter shall be mounted on the roof of the cabin and PA system with external 100 W horn in built amplifier and a microphone shall be provided in front of officer's seat in the driver's cabin.
- 2.11) An additional red beacon light shall be installed on the rear part of the roof.
- 2.12) All pilot lamps for indicators and warning lamps for safe travel shall be installed in the cabin.
- 2.13) One floodlight of a minimum 250 wat power shall be installed on the front right side of the vehicle.
- 2.14) All illumination and warning lamps necessary for fire vehicles and required by Indian traffic regulations shall be installed on the vehicle.
- 2.15) Towing hooks able to pull the deadweight of the vehicle shall be installed at both the front and rear of the vehicle.
- 2.16) The vehicles shall conform in all respect of the provisions contained in the Indian Motor Vehicle Act 1988 and Motor Vehicle Rules 1989 or to any other statute modifications or re-enactments thereon from time to time. The vehicle shall be also approved by ARAI or VRDE.
- 2.17) All the equipment necessary for R.T.O.'s clearance shall be provided on vehicles.

3. LOCKERS FOR STOWAGE OF EQUIPMENT

All equipment inside the lockers would be stowed very scientifically and systematically in the drawers and each piece of equipment will have its designated location so that at the time of Emergency the required equipment can be very easily located and removed for use. Location of equipment (labels) must be provided on each locker compartment for immediate identification. Each equipment would be properly clamped and strapped in the drawers to prevent shifting of the equipment while the vehicle is in motion. The lockers shall have smooth operation. The aluminium shutters must be of excellent quality and made of extruded aluminium sections. The shutters must be of roller type only and not sliding type. Each enclosure / space for equipment must be provided with a lighting system which must be centrally operated with separate switches for right and left lockers. All the space on sides of the vehicle, below the chassis frame level must be utilized for stowing Equipment's and must be covered with rollers shutters. Suitable folding / removable arrangement must be made for access to the lockers at height and removal of equipment from lockers.

Acceptable Make: MCD / Rosenbauer / E-One / Oshkosh

4. WORKMANSHIP AND MATERIAL

Workmanship executed must be of the highest order. All the material used in the fabrication of the body work must be of good quality or approved make & type. All equipment & material shall comply with the requirements of the latest relevant IS specifications.

5. ELECTRICAL EQUIPMENT

Adequate lighting arrangement must be made in all compartments. All equipment lockers will have internal lighting arrangement automatically switched on and off by opening/closing of doors/shutters. All the wiring will be properly fixed in position & will be protected against heat, oil & physical injury. To the extent possible all wiring will pass through conduits. All wires used in the vehicle must be stranded copper or copper alloy conductors of a gauge rated to carry at least 125 percent of the maximum current for which the circuit is protected & must be uniquely identified by colour coding or permanent marking. Voltage drops in all wiring from the power source to the using device shall not exceed 10 percent. All the electrical circuits will have their own separate fuses, suitably marked & grouped in a common fuse box, located in an easily accessible position. Provision will be made for min. 4 spare fuses in the box which must be provided in driver's cabin. All the controls for electrical system will be provided near the driver's seat. The battery will be placed in a totally enclosed box. Arrangement must be made on dashboard opposite to the fire officers' seat to fix a mobile wireless set.

6. ACCESSORIES

The vehicle will be provided with the following accessories in addition to those normally fitted to the chassis. All the accessories will be suitably fixed in position or will be kept in lockers or other suitable place on the tender.

LED Light Bar on top & blinker light on rear side	1
Adjustable Spotlight	2
Perimeter & Underbody Lighting System	1 Set

7. PAINTING & MARKING

The entire appliance will be painted in "FIRE RED" (IS-536) paint using double coat spray painting on the outside. Also, on either side of the vehicle (logo of Client & name) monogram will be painted or stickered in golden yellow colour at suitable places as advised by the client. The chassis and wheel arches will be painted black. Two coats of anticorrosion & one zinc phosphate-priming coat will be applied before final painting of Emergency Rescue Tender. Lastly, the following details is to be provided on the vehicle at a suitable place before the dispatch of the vehicle.

- ↳ Manufacturer's Name or Trademark.
- ↳ Year of Manufacture.
- ↳ Engine & Chassis Nos.
- ↳ All Instrument Controls will be Identified with nameplates.

8. General Equipments:

- a. A reading table/ working top (may be foldable) for referring chemical books, using a laptop with printer (all in one type printer, scanner, fax, copier, phone etc.) with adequate lighting shall be provided in the crew cabin. A proper storage for books, laptop and printer etc. shall be provided.
- b. A set of hazardous chemical data software shall be provided and one (1) set of chemical reference books shall be also provided.
- c. One (1) pair of binoculars with built-in compass with magnification of 7 X 50 and with optical electron beam coating which enables user to view images under low light conditions - dusk, dawn, overcast or at night and built to U.S. military specifications. Housing shall be made of lightweight aluminum alloy. Binoculars will be filled with dry nitrogen to prevent internal oxidation. This should be robust and able to withstand temperature (+50 to -20° C) and humidity extremes, waterproof and shockproof. Size not more than 80 X 180 X 180 mm, and weighing not more than 1.45 kg.

- d. One (1) handheld megaphone-pistol grip type with variable sound siren up to 1,000 min open air with built-in battery indicator.
- e. One (1) compass, prismatic type with mill and degree reading, anti-magnetic system and luminous in the dark.
- f. One (1) digital camera with minimum resolution of 10 Megapixel and 2 GB memory card.
- g. One (1) infrared non-contact thermometer, portable gun type. Maximum range (sensor to object) shall exceed 30 m. Temperature range shall be -30° to 1200° c with ±% accuracy of reading or 1.0° C whichever is greater. Response time must be less than 750 msec. with ambient operating temperature 0° to 50° C. Temperature read-out are to be displayed by multi-function 4-digit LCD and are in °C and °F with built-in low battery indicator.
- h. Two (2) Megaphone , Minimum 20 Watt, hand held type.
- i. Two (2) Rechargeable flashlight, "ex-proof with charger 12 /24 V.
- j. Two (2) Head lamp "ex-proof including hard head (helmet).
- k. Four (4) 500 meter rolls of yellow and black barrier tape HAZMAT imprinted.

9. CABLE WINCH

Electric cable winch of 6.5 ton capacity shall be provided. The winch unit shall be complete with minimum 5.5 HP 12/24 volt DC series wound electric reversible motor for increased pulling power, rope drum, and 90 feet. Heavy duty galvanized EIPS wire rope with replaceable self-locking hook and shall be mounted on the front bumper of the vehicle with suitable strong support.

Acceptable Make: Ramsay / Identifire and Rescue Solutions / Warn / Miller

10. GENERATOR WITH CONTROL PANEL

A generator of minimum 6.5 KVA shall be provided. The control panel shall have the following:

- 2 sockets (plugs) & switches with 3 phase connections
- 4 sockets (plugs) & switches (MCB's) with single phase connections of min. 20 AMP capacity
- 4 sockets (plugs) & switches (MCB's) with single phase connections of min. 10 AMP capacity
- RPM Meter digital
- KW meter
- Ampere meter separate for each phase
- Frequency meter
- 32 Amps. TPN MCB
- 60 m 4 core cable on reel
- 60 m 3 core cable on reel
- 60 m 2 core cable on reel

11. REMOTE CONTROL OPERATED TELESCOPIC PNEUMATIC LIGHT MAST

Rear Mounted Light Mast, pneumatically operated through the vehicle air tank should be fixed rigidly on suitable side of the vehicle in such a manner that it should not be damaged due to any jerks.

- ❖ It should be extendable up to a steady height of approx. 4-6 m from ground level and fitted with 4 x 50 W LED Lights through a Fixed Light Support Head.
 - ❖ Permanent connections for taking power supply from a power source set through spiral wire in protective sleeve must be provided along with the earthed sockets at Light Supports.
 - ❖ Mast must be made of extruded seamless Aluminium construction, anodized in natural colour. The LED Lamp must have integrated electronic thermal management (ETM) which reduces LED Temperature for long life and reliability.
 - ❖ A wired remote control should be supplied for the operations of the Mast.
- OEM should have a proper workshop/service centre for light masts provided in India for better after sales support. Photographs should be submitted as evidence for the same, if required.

Acceptable Make: Teklite / Rosenbauer / Cosmotech / Willburt / Nightscan / Command Light

ANNEXURE-A

LIST OF EQUIPMENT TO BE STOWED IN THE HAZMAT VEHICLE

Sl. No.	Description	Qty
1	FIRST AID EQUIPMENT/STRETCHER	
1.1	First Aid Kit for 50 people	1
1.2	Rescue Line, 30 m with carrying bag	2
1.3	Folding Scoop Stretcher	2
1.4	Floating Stretcher	1
1.5	Spin Board Stretcher	1
2	SPECIAL EQUIPMENT	
2.1	VETTER Decon Shower (Annexure-I)	1
2.2	Multi Gas Detector, HC Detector, Radiation Detector, Chemical Detector, Gas Detectors (Annexure-II)	1
2.3	VETTER Pneumatic Collection Container for Hazardous Material (Annexure-III)	1
2.4	VETTER Pneumatic Collection Tub (Annexure-IV)	
2.5	Infrared Thermometer for measuring temperature ranges 0° C to 600° C	1
3	SPECIAL RESCUE TOOLS	
3.1	VETTER Pneumatic Lifting Bag Set (Annexure-V)	1
3.2	Battery Operated Rescue Tools (Annexure-VI)	1 Set
3.3	VETTER Gully Sealing Bags • 2 Universal Gully Sealing Bags, Type 10/15, 2.5 Bar • 2 Universal Gully Sealing Bags, Type 15/30, 2.5 Bar • Positioning Rod, Interchangeable, V2A (L: 1.5 m / 58.5 inch) • Foot Pump with Safety Valve, 2.5 Bar • Transport Case, 800 x 600 x 220 mm	1 Sets
3.3	VETTER Leak Sealing Bags (Annexure-VII)	1 Set
3.4	VETTER Leak Sealing Lance (Annexure-VIII)	1 Set

3.5	VETTER High Pressure Leak Sealing System The set shall contain one (1) hose and (1) sealing plate and one (1) pressure regulator. It shall also contain the following: - Sealing Hose, 2.5 m - Inflation Valve and Inflation Hose - FKM Sealing Plate, 150 x 310 x 3 mm - Bleed Valve - Transport Case, 400 x 300 x 183 mm	1 Set
3.6	VETTER Leak Sealing Bandages The set shall include one (1) bandage, one (1) hose, one (1) foot pump and a single controller	1 Set
3.7	VETTER Leaking Sealing Paste	8 Cans of 500 ml each in a Box
3.8	One (1) Electrically Operated Wood Cutting Saw: A wood cutting saw having 0.25hp single phase motor, 15 inch bar length and 1.5 kw power capacity is to be provided. One (1) Electrically Operated Iron/ Concrete Cutter: An eclectic saw with 2KW capacity, single phase motor and disc diameter capacity of 300 mm is to be provided.	1 1
3.9	One (1) Electric Concrete Breaker: Capacity : 11 kg Power Input : 1.5 K W Impact Rate : 1100-2200 BPM Impact Force : 6 - 25 Joules	1
3.10	One (1) Power Saw: Steel Cutting Depth : 20 mm Power Input : 800W Stroke : 28 mm Rate : 500 - 2600 RPM Weight : 3.5 kg	1
3.11	One (1) Circular Cutter - 0125 mm	1
4	FLOOD EVACUATION RESCUE EQUIPMENTS	
4.1	LIFE JACKET IRS / MMD approved	3
4.2	LIFE BUOY IRS / MMD approved	3
4.3	VETTER Inflatable Medical Tent (Annexure-IX) Authorization letter from OEM shall be at the time of Final Inspection. Acceptable Make: Vetter / Hurst / Lukas	1
4.4	VETTER Jumping Cushion (Annexure-X) Authorization letter from OEM shall be at the time of Final Inspection. Acceptable Make: Vetter / Hurst / Lukas	1
5	PROTECTION CLOTHES & EQUIPMENTS	
5.1	Rain Protection Coat, Yellow with Hood	10
5.2	Light Warning Jackets (Suitable Colour)	5
5.3	Gloves with Protection up till 25,000 V	2
5.4	Heat Protection Gloves, Aluminized	2
5.5	Fire Proximity Suits as per EN standards (Annexure-XI) Authorization letter from OEM shall be submitted at the time of Final Inspection. Acceptable Make: Deepak Exports / Rosenbauer / Magirus	4

5.6	Self-Contained Breathing Apparatus SCBA (Annexure-XII) Authorization letter from OEM shall be submitted at the time of Final Inspection. Acceptable Make: SCOTT / MSA	2
5.7	Water Gel Blanket Size 8'x6'	2
5.8	Chemical Protective Suit (Annexure-XIII) Authorization letter from OEM shall be submitted at the time of Final Inspection. Acceptable Make: Deepak Exports / Rosenbauer / Magirus	4
5.9	Chemical Protection Gloves	2
5.10	Gauntlets	2
5.11	Eye Wash Unit	1
5.12	Acid Decanting Pump	1
5.13	Oil Resistant Delivery Hose, 15 m long having 52 mm dia.	2
5.14	Nitrile Rubber Oil Resistant Delivery Hose, 10 m long	2
5.15	Corrugated Stainless Steel Hose, 10 m long	1
5.16	Decanting Funnel Light Alloy, dia. 250 mm	1
6	ILLUMINATION SIGNAL AND COMMUNICATION UNIT	
6.1	Traffic Guide Cones	2
6.2	Safety Torch	2
7	ROPES, BODY HARNESS & PULLING LIFTING MACHINE	
7.1	Manhole Cover Lifting Hook	1
7.2	Parapet Wall Anchorage 32 m	1
7.3	Chain Lifting 3 Ton complete with end rings and shackles with 6 m chain	1
7.4	Pulling and Lifting machine 5 Ton capacity complete with wire rope and hook	1
7.5	Pulling and Lifting machine 3 Ton capacity complete with wire rope and hook	1
7.6	Safety Belt with hook full body harness	5
7.7	Longline 30 m size 50mm circumference	1
7.8	Lowering Line 30 m size 50mm circumference	1
7.9	Manila Rope 30 m size 50mm circumference	1
8	TOOLS	
8.1	Wooden Sealing Wedges A set of wooden sealing wedges, made of soft wood having length of 300 mm consisting of 5 wedges 200/70 mm 5 Wedges 150/70 mm 5 Wedges 100/70 mm 5 Wedges 50/70 mm	1 Set
8.2	Wooden Stoppers A set of wooden sealing stoppers, made of soft wood having length of 300 mm consisting of 5 Stoppers 90/25 mm 5 Stoppers 60/10 mm 5 Stoppers 30/10 mm 5 Stoppers 25/10 mm	1 Set
8.3	Oil Binding Shovel	1
8.4	Broom made of Piassava material	1
8.5	Rubber Plastic Hammer	1

8.6	Lead Hammer	1
8.7	PTFE Sealing Tape, 10 m	1
8.8	Round Point Shovel	1
8.9	ADZE Railroad	1
8.10	Fireman Axe	1
8.11	Sledgehammer, 5 kg	1
8.12	Universal Pliers, 450 mm long	1
8.13	Hose Coupling Wrench	1
8.14	Double Open-End Wrench The Double open-end wrench Set 6-46 mm, shall consist of 6 x 7 mm, 104 mm long 8 x 9 mm, 104 mm long 10 x 12 mm, 135 mm long 10 x 14 mm, 135 mm long 13 x 15 mm, 159 mm long 16 x 18 mm, 198 mm long 17 x 19 mm, 198 mm long 20x 22 mm, 232 mm long 21x 23 mm, 279 mm long 24x 27 mm, 313 mm long 25x 28 mm, 313 mm long 30 x 32 mm, 356 mm long 36 x 41 mm, 400 mm long 41 x 46 mm, 460 mm long	1 Set
8.15	Tool Kit The Toolbox shall consist of 1 pc. Flat chisel 200 mm long 1 pc. Hand pointed chisel 310 mm long 1pc. Swedish pliers adjustable from 55 mm up to 560 mm 1 pc. Punch 3 mm 1 pc. Punch 6 mm 1 pc. Hammer 500 g 1 pc. Pliers groove joint 250 mm long, 1 pc. universal pliers 200 mm 1 set (8 pcs) double end wrenches (8 x 10, 12 x 14, 13 x 15, 16 x 18, 17 x 19, 20 x 22, 24 x 27, 30 x 32) 1 pc. Screwdriver 4 x 70 1 pc. Screwdriver 8 x 150 1 pc. Screwdriver 10 x 200 1 pc. Phillips screwdriver type 2 1 pc. Phillips screwdriver type 4, 1 pc. Wrench, bung, for barrels	1 Set
8.16	Universal Toolbox The Universal toolbox shall come complete with the following tools 4 Screwdriver (2,5 mm, 4 mm, 6,5 mm and 8 mm) 3 Phillips-Screwdriver (No. 1, No. 2 and No. 3) 1 Cranked wrench PH 1x2 1 Set of socket wrenches 1 Key for switch cabinets 1 Machinists hammer 500 g 1 Splint pin driver unit 4 mm 1 Cutting plier 250 mm 1 Diagonal cutting plier 160 mm	1

	1 Combination plier 160 mm VDE 1 Long nose plier with cutter 200 mm 1 Locking plier 250 mm 1 Groove joint plier 250 mm 1 Corner work pipe-wrench plier 1-1/2" 1 Metal saw bow 10 Saw blades 300 x 25 x 32 1 Pinch bar 400 mm 1 Flat chisel 200 mm 1 Cutter 1 Measuring stick 1 Pair of goggles	
8.17	Electrician Toolbox The Electrician toolbox shall be made of light alloy box with compartment shall be with the following tools: 1 Voltage checker VDE 0680 5 Screwdriver insulated VDE (0.5x3.5, 0.8x5.5, 1.0x6.5, 1.2x8.0, 1.6x10) 1 Flat round nose plier 200 mm VDE 1 Side cutter 200 mm VDE 6 Single open end wrench VDE (10 mm, 11 mm, 12 mm, 13 mm, 14mm, 1S mm) 1 Safety release for fuses 1 Roll of insulating tape 1 Piece of chalk 1 Set of warning signs 100 cable ties 3 Phillips-Screwdriver (No. 1, No. 2, No. 3) 1 Key for switch cabinets 1 Pair of insulated gloves	1
8.18	Pike with Wooden Pole	1
8.19	Grab Hook 32" with D-Handle	1
8.20	Spade	1
8.21	Folding Spade	1
8.22	Crowbar	1
8.23	Metal Sheet Hack Saw	1
8.24	Bolt Cutter, Electrician Type	1
8.25	Wire and Cable Cutter	1
9	OTHER EQUIPMENT	
9.1	Salvage Sheet 10x10 ft	1
9.2	Ambu Bags for children and Adult	2+2
9.3	Fire Hook	1
9.4	Snake Catcher	1
9.5	Empty Drum 10 l cap.	1
9.6	4 l clean agent fire extinguisher	1
9.7	Stand for Warning Sign	1
9.8	Barrier Tape	1
9.9	Megaphone	1
9.10	Plastic Box 40 l cap. In Yellow and Red Colour	1+1
9.11	Leakage Current Detector	1

ANNEXURE-I	DECON SHOWER
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The pneumatic shower shall be set up in just 40 seconds and shall be instantly operational. They will be used as an emergency decontamination position or applied in combination with shelters.

The showers constructed shall be easily and quickly integrated into the shelters. Consequently, the functional radius shall be extended by a cloth changing area. In addition to this, the decon shower shall have an additional frontal outside basin. This capability should enable subsequent cleaning of boots and avoid any splashing of contaminated water on the floor. It shall be Vetter make.

Basic Equipment

- Shower curtain and the insertion basin exchangeable
- Raised support frame for feet positioning (ergonomic position)
- Abrasion protection on the underside
- Shower hose exchangeable
- 8 moveable shower heads positioned at different heights
- Facility for additional fitting of a decontamination hand shower

Technical Data

Weight:	32 kg
Air requirement at working pressure [l]:	738
Capacity [l]:	770
Flow rate [l/min]:	25
Outer size:	278 x 156 x 220 cm / 109,45 x 61,42 x 86,61 inch
Packing dimensions:	110 x 72 x 30 cm / 43,31 x 28,35 x 11,81 inch
Tub height [inch]:	7,87
inner size:	240 x 120 x 220 cm / 94,49 x 47,24 x 86,61 inch
set up time [sec]:	40

ANNEXURE-II	MULTI GAS DETECTOR
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Characteristics	Multi-Gas Detector to measure four gases LEL, O2, H2S & CO
Size (LxWxH)	Handy, easy to carry, size should not exceed 4.5"x3"x1.5"
Weight	Not more than 250 gms.
Carrying Attachments	Should have Clip Attachments to Hard Hat/Belt/Lanyard/Pocket.
Usability	3 Button Operation, easy to use even with gloves put on
Operating Temperature Range	-40°C to +60°C
Operating Humidity Tolerance	Intermittent 15% - 90% non-condensing

Ingress Protection	IP68 (Waterproof to 6-ft (2m) for 1 hr)
Alarms	95dB @ 1 ft Supported with Visual (LED Lit) and Vibrations
Sensor Life	Expected sensor life is more than 5 years
Response Time T90	T90 <15 Seconds
Sampling	Diffusion Mode
Reading	High Contrast LCD with Backlit
Casing	Rugged Rubberized Armor
Warranty	4 Years for the complete instrument
Durability	C25-foot (7.5 m) drop protectionMIL-STD-810G drop protection Certified
Safety Features	Should have features like Motion Alert and Instant Alert for applications like confined space entry
Motion Alert	The Motion Alert sensor activates within 30 seconds when a user becomes disabled and motionless, quickly alerting others to the disabled user's location
Instant Alert	with a simple push of a button, the Instant Alert feature enables users to manually alert others to potentially hazardous situations.
End-of-Sensor Life Indication	end-of-sensor warning cautions user when unit's sensor needs to be changed
Battery Type	Rechargeable Li-Polymer battery
Run Time	24 Hours run time
Charging Time	> 4 Hours charging time
Intrinsic Safe Approvals	ATEX & PESO Approval (suitable for Zone 0 applications)
Drop test (in house)	withstand a 7.5 m drop onto concrete
Calibration tools	Unit shall require no special tools for calibration other than calibration cap, cylinder, regulator, and tubing to supply gas to instrument.
Acceptable Make	MSA / Rosenbauer / Magirus

ANNEXURE-III	PNEUMATIC COLLECTION CONTAINER
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The easy solution for temporary storage. Contaminated and hazardous liquids must be stopped in their tracks straight away. Vetter's pneumatic collection containers can be set up in seconds, buying you valuable time. They create secure reservoirs, which your team can simply pump out at a later stage.

Length:	1100 mm
Width:	720 mm
Height:	300 mm
Weight:	33 kg
Air requirement at working pressure [l]:	705
Capacity [l]:	3000
Height [mm]:	950
Test pressure :	0,65 bar / 9,43 psi
inner diameter :	225 cm / 88,58 inch
operating pressure:	0,5 bar / 7,25 psi
outer diamter :	265 cm / 104,33 inch

ANNEXURE-IV	PNEUMATIC COLLECTION TUB
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With pneumatic collection tubs from Vetter you can be sure you are using the latest technology and that you are fully prepared even for major emergencies, such as epidemics. In emergency scenarios, you will be able to decontaminate trucks and emergency vehicles, for example, in a safe and controlled way. Stop hazardous substances before they cause environmental damage and store them temporarily until further action can be taken. In the case of a leaking tanker, for instance, push the collection tub directly under the vehicle at the scene of the accident. Vetter's pneumatic collection tubs can be set up in seconds and buy you valuable time to put measures in place to seal leaks.

Height:	200 mm
Weight:	17 kg
Air requirement at working pressure [l]:	404
Capacity [l]:	720
Outer size:	250 x 250 cm / 98,43 x 98,43 inch
Test pressure:	0,39 bar / 5,66 psi
inner size:	190 x 190 cm / 74,8 x 74,8 inch
operating pressure:	0,3 bar / 4,35 psi

ANNEXURE-V	PNEUMATIC LIFTING BAG SETS
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High Pressure Pneumatic lifting bags Vetter make shall be strictly as per below spec:

- High Pressure Pneumatic lifting bags working pressure shall not be less than 12 bar and burst pressure shall not be less than 48 Bar,
- It shall be made up of aramid reinforced rubber, non-slip design, capable of being interlocked when 2 bags are placed on each other, quick connection, reflecting labels, insertion height strictly not more than 25mm.
- Hoses provided with bags shall be of different colors for easy identification from long distance while operating the bags.

Lifting Capacity shall not be less than	Min. Inflation height shall not be less than	Dimensions shall not exceed	In any case weight shall not exceed	Air requirement @ 12 bar shall not be more than	Quantity
1 Ton	70 mm	140 x 130 mm	0.5 kg	6 litres	1
5 Tons	120 mm	255 x 200 mm	1.5 kg	25 litres	1
10 Tons	175 mm	320 x 320 mm	3 kg	125 litres	1
20 Tons	240 mm	440 x 440 mm	5 kg	255 litres	1
40 Tons	335 mm	610 x 610 mm	9.5 kg	605 litres	1
59 Tons	390 mm	790 x 690 mm	14 kg	1105 litres	1

The bags shall be certified for compliance with EN 13731 by either TUV Germany /UL USA/EIL India only. The air bags must supply with the following accessories:

- ❖ Pressure regulator 300 Bar to 12 Bar
- ❖ Control box shall be yellow in color with lever type joystick for operating 2 bags with pressure gauges and carrying strap
- ❖ Single Control Unit
- ❖ Dual Control Unit
- ❖ Air inflation Hose 5 Mtrs
- ❖ Air inflation Hose 10 Mtrs
- ❖ Shut off hose with safety valve
- ❖ Dual connector
- ❖ It shall be Vetter / Hurst / Lukas make

ANNEXURE-VI	BATTERY OPERATED RESCUE TOOLS
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All tools / equipment shall be tested according to EN13204 (European standard) and for performance to NFPA 1960 (US standard).

The control handle must have two speed modes that allow to switch between the tool's high-speed and low-speed mode for optimal speed control during the rescue operation. The control handle must be centrally placed at the back of the tool and be accessible over 360 degrees without any obstruction.

The hydraulic pump flow and thus speed of the tool must be maximized at every load by a stepless mechatronic system inside the tool and not by means of pressure stages.

The tool must have an auto start/stop function. The motor/drive system should automatically stop when the tool is not operated or has reached its maximum pressure in order to save battery capacity. The tool should restart by turning the control handle again.

The tool must be equipped with a temperature management system that monitors and manages the tool and battery temperature to avoid overheating, enabling the tool to be used intensively even in hot weather conditions.

The tool must have an on-tool charge function. Possibility to charge the battery while mounted and connected to the tool to make sure the tool is always ready for use, equipped with battery.

The tool and on-tool charging cord should have a magnetic connector for quick and easy (dis)connection.

The charger should be able to charge the battery on a tool and an extra battery on the charger without the need to swap these batteries.

The Battery will be min. 8 Ah 28 V Lithium ion rechargeable battery Tool and battery must be suitable for underwater use. The protection rate tool shall be at least IP57. The Protection rate battery shall be at least IP67.

It must be possible to check the performance of the drive system of a tool through diagnostic software. It must be possible to read out detailed state of health percentage of the battery by means of diagnostic software. The charger should indicate the state of health of a battery.

A) TECHNICAL PARAMETERS REQUIRED FOR THE BATTERY OPERATED HYDRAULIC SPREADER

The spreader would be capable of spreading, squeezing and pulling with the combination of chains.

The spreader shall be provided with spreading tips made of fully hardened, high tensile tool steel with proper serrations outside and inside for a perfect grip during spreading as well as squeezing operation. The tool carrying handle shall have integrated LED lights powered from the main battery. The LED lights can be turned on or off by means of a switch.

The tips shall be mounted on the spreader arms by means of a quick locking system. This quick lock system shall provide the possibility to change the spreading tips for cutting tips or pulling adaptors single handed, without loose parts and without the need for extra tools. The tips shall have Interlocking profile on inside of spreading tips and a flat start of spreading profile on the outside for easy and deep insertion of tips in narrow gaps. It shall have taller middle row of teeth on spreading tips for immediate grip.

Pulling adaptors and pulling chains will be supplied as accessories. These shall be of the quick lock type. The pulling adaptors shall be equipped with shortening hooks which easily fit in each shackle of the pulling chains to assure quick connection. The pulling chains shall be equipped with the same shortening hooks in order to easily mount the chains to any object of whatever size or shape.

The spreader shall have following specifications:

Max. Spreading distance	Not less than 720 mm
Min. Spreading force measured at 25 mm from the tips as per EN 13204	Not less than 50 kn
Max. Spreading force (Theoretical)	Not less 850 kn
Max. Squeezing force	Not less than 125 kn
Max. Pulling distance	Not less than 600 mm
Max. Pulling force with pulling attachments	Not less than 65 kn
Weight including Battery	Not more than 22 kgs

Accessories

Pulling Chains Set 10 mm – 1.5m + 3.0m	1 set
Pulling Attachment Set	1 set
Mains Power connector to connect the tool to any 220 V source	1 No
Battery charger – 300 watts – with indication for the state of health of battery	1 No
On Tool Charging Cord	1 No
Tool diagnostic cord having Cable not less than 3.5 mtrs to connect the tool to a PC or laptop for battery and tool diagnostics through diagnostics software	1 No
Battery status diagnostic tool to check battery health	1 No
Spare Battery	1 No

B) TECHNICAL PARAMETERS REQUIRED FOR THE BATTERY OPERATED HYDRAULIC CUTTER

The cutter shall be capable of cutting of various sections such as solid ground bar, hollow round bar, flat section, square tube, rectangular tube etc. It would also cut the door pillars of new generation cars.

The tool carrying handle shall have integrated LED lights powered from the main battery. The LED lights can be turned on or off by means of a switch.

The blades shall be dropped-forged of high tensile tool steel, well grinded for optimum grip, fully hardened, surface treated, regrindable and easily replaceable. The cutter jaw shall be mounted at an angle of an inclination of not less than 30 deg in relation to the body of the tool for faster and easier cutting in critical situations and more ergonomics.

The blades shall be designed to set the material to be cut in the optimal cutting position and the material cutting process shall be as smooth as possible without mechanical impact. In fully open position the blades must have U-shape design allowing the blades to pull material into the cutting recess for better cutting performance.

The cutter shall have following specifications:

Blade opening	Not less than 180 mm
Cutting force (theoretical)	Not less than 11000 kn
Weight including Battery	Not more than 23 kgs.
Capable of cutting round bar	Not Less than 40 mm
The material of the steel profiles shall conform to	EN 10025-1-2000 table 5, type S 235 JR
Mandatory Compliance category of cutting performance as per NFPA 1936 -	A8,B8/B9,C7/C8,D9,E9
Mandatory Compliance category of cutting performance as per EN 13204 -	1K,2K,3K,4K,5K
Protection Class minimum	IP 54

Accessories

Mains Power connector to connect the tool to any 220 V source	1 no
Battery charger – 300 watts – with indication for the state of health of battery	1 no
On Tool Charging Cord	1 no
Tool diagnostic cord having Cable not less than 3.5 mtrs to connect the tool to a PC or laptop for battery and tool diagnostics through diagnostics software	1 no
Battery status diagnostic tool to check battery health	1 no
Spare Battery	1 No

C) TECHNICAL PARAMETERS REQUIRED FOR THE BATTERY OPERATED HYDRAULIC COMBI-TOOL:

The combi tool shall be capable of cutting of various sections such as solid round bar, hollow round bar, flat section, square tube, rectangular tube etc. It would also cut the door pillars of new generation cars and also be able to perform the spreading and pulling functions.

The blades shall be of shock resistant non corroding alloy steel, hardened and ground and shall be exchangeable and regrindable.

The tool carrying handle shall have integrated LED lights powered from the main battery. The LED lights can be turned on or off by means of a switch.

The combi tool shall have following specifications:

Spreading Distance	Not less than 375 mm
Spreading force measured at 25 mm from the tips as per EN 13204	Not less than 4 T
Max. Spreading force	Not less than 175 T
Cutting force	Not less than 65 T
Squeezing force	Not less than 8.5 T
Pulling distance	Not less than 250 mm
Pulling force	Not less than 10 ton
Weight including battery	Not more than 21 kgs
Capable of cutting round steel bar	Not less than 35 mm
The material of the steel profiles shall conform to -	EN 10025-1-2000 table 5, type S 235
Mandatory Compliance category of cutting performance as per NFPA 1936 -	A7,B8,C8,D8,E8
Mandatory Compliance category of cutting performance as per EN 13204 -	1J,2J,3K,4K,5K

Accessories

Pulling Chains Set 10 mm – 1.5m + 3.0m	1 set
Pulling Attachment Set	1 set
Mains Power connector to connect the tool to any 220 V source	1 no
Battery charger – 300 watts – with indication for the state of health of battery	1 no
On Tool Charging Cord	1 no
Tool diagnostic cord having Cable not less than 3.5 mtrs to connect the tool to a PC or laptop for battery and tool diagnostics through diagnostics software	1 no
Battery status diagnostic tool to check battery health	1 no
Spare Battery	1 No

D) TECHNICAL PARAMETERS REQUIRED FOR THE BATTERY OPERATED HYDRAULIC TELESCOPIC RESCUE RAM

The ram cylinder shall be double acting hydraulically operated device of light weight construction suitable for manual application with ease. A laser pointer shall be fitted inside the cross head for facilitating right and precise placement of the ram and it must be possible to install an extension pipe without having to remove a ram head. 2 nos Carrying / holding handles shall be fitted on the tool.

The tool carrying handle shall have integrated LED lights powered from the main battery. The LED lights can be turned on or off by means of a switch.

The telescopic ram shall have following specifications

Max. Spreading force 1st plug.	Not less than 13 T
Max. Spreading force 2nd plug.	Not less than 6.5 T
Length retracted	Not more than 580 mm
Stroke 1st plug.	Not less than 400 mm
Stroke 2nd plug.	Not less than 375 mm
Total stroke	Not less than 775 mm
Max. Length including extension piece	Not less than 1800 mm
Weight	Not more than 21 kgs

Accessories

Mains Power connector to connect the tool to any 220 V source	1 no
Battery charger – 300 watts – with indication for the state of health of battery	1 no
Spare Battery	1 No
On Tool Charging Cord	1 no
Tool diagnostic cord having Cable not less than 3.5 mtrs to connect the tool to a PC or laptop for battery and tool diagnostics through diagnostics software	1 no
Battery status diagnostic tool to check battery health	1 no
Extension pipe min. 425 mm in length with automatic locking	1 no

E) TECHNICAL PARAMETERS REQUIRED FOR THE BATTERY OPERATED MINI CUTTER

The Tool must have a fully integrated hydraulic pump and electric motor.

The control shall be Push deadmans control mechanism with automatic neutral position

Tool must have variable speed modes to switch between high and low speed for optimal speed control during the rescue operation.

The tool must have an auto start/stop function. The motor/drive system should automatically stop when the tool is not operated in order to save battery capacity. The tool should restart by pushing the control button again.

The protection rate of the tool should be at least IP54.

It shall be Certified according to EN13204 and NFPA1936 norm by an independent test institute.

The tool must be labelled with an NFPA1936 compliance label with identifying mark of the independent test institute.

The cutter jaw shall be mounted at an angle of 18 degrees in relation to the body of the tool, to gain better access to car pedals.

The Central bolt head and nut shall be mounted directly to the steel blades resulting in less blade separation (optimum cutting performance) and flatter design for better access.

To improve durability the blades must be machined from high grade tool steel and not forged.

Sound emission at 1m under full load shall not exceed 74 dB(A).

Sound emission at 4m under full load shall not exceed 65 dB(A).

To assist the operator and increase safety while working in dark or poorly lit circumstances the tools shall have at least 1 integrated LED light which illuminates the blades. The LED light shall be powered from the main battery.

The cutting edge must have an elongated grip tooth to prevent materials from being pushed out of the blades and therefore maximizing cutting performance.

The Mini cutter shall have following specifications

Blade opening at the tips	Not less than 55 mm
Maximum cutting force	Not less than 22 T
capable of Cutting round bar (acc. to EN13204)	Not less than 22 mm
Mandatory Compliance category of cutting performance as per NFPA 1936 -	A4 B3 C2 D4 E4
Mandatory Compliance category of cutting performance as per EN 13204 -	1D 2D 3C
Maximum working pressure	Not less than 700 bar
Weight including battery	Not more than 5 kgs

F) Battery and charger for the mini cutter

The Li-Ion Battery shall be min. 18 VDC, 36 Wh and min. 2Ah capacity – 2 nos to be supplied Suitable battery Charger shall be provided having Input power not less than 190 W and Battery charging time with AC charger should be max 30 minutes.

ANNEXURE-VII	LEAK SEALING BAGS
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Every minute counts when hazardous liquids escape from tanks, pipes or drums. Vetter leak sealing bags are quick and easy to inflate using a foot pump. Thanks to even pressure distribution, the structures around the liquid discharge area are protected and the danger that the leak gets bigger is reduced. The Set shall be consisting of:

- Foot pump with safety valve 1.5 bar
- Inflation hose 1.5 bar, 10 m, blue
- Leak Sealing Bag, LD 50/30 W 1.5 bar, with swivel eyes
- Ratchet belt, 2 m, orange
- Ratchet belt, 2 m, blue
- Belt attachment, 5 m, orange
- Belt attachment, 5 m, blue
- Tensioning and extension belt, 10 m, orange, with ratchet
- Tensioning and extension belt, 10 m, blue, with ratchet
- Sealing plate, 600x300x30 mm
- Acid cover for leak sealing bag LD 50/30
- Transport- and storage case, grey (800 x 600 x 220 mm)

ANNEXURE-VIII	LEAK SEALING LANCE
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When you're the first person on the rescue site, the Vetter leak sealing lance enables you to act quickly. With no assistance required, you can seal small leaks in storage tanks, tank trucks or wagons in seconds and from a safe distance. By using the wedge and cone bags at the tip of the leak sealing lance, you will effectively reduce the volume flow rate at cracks measuring 15 - 60 mm (0.6 - 2.3 inch) and holes measuring 30 - 90 mm (1.2 - 3.5 inch). Anti-slip profiles on the bags ensures a good grip. The device with its simple design provides an invaluable quick fix which will buy you time to put further measures in place. Pl note the following:

- Working pressure: 1.5 bar (21.75 psi)
- Test pressure: 1.95 bar (28.5 psi)
- Length with coupling + 6 cm

	Size (L x W x H) in cm / inch	air requirement at 1,5 bar in lt / cu. ft.	weight approx. in kg / lbs	leak opening size in cm / inch	Width in cm / inch
Wedge bag 6	23 x 6 x 5 9 x 2,4 x 2	1,5 0,05	0,2 0,4	1,5-45 0,59-1,77	6-9 2,36-3,54
Wedge bag 8	23 x 8 x 5,5 9 x 8 x 2,2	3,5 0,12	0,3 0,7	1,5-4,5 0,59-1,77	8-12 3,15-4,72
Wedge bag 11	23 x 11 x 7 9 x 4,3 x 2,8	7,8 0,28	0,4 0,9	3-6 1,8-2,36	11-17 4,33-6,69
Cone bag 7	23 x Ø 7 9 x Ø 2,8	3 0,11	0,2 0,4	3-9 1,8-3,54	-

ANNEXURE-IX	INFLATABLE MEDICAL TENT
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GENERAL

- 1.1 Manufacturer : Vetter GmbH
 1.2 Country of manufacture : Germany

APPLICATION

Vetter tents are used universally. They can serve as weather-protective changing tents when accidents have happened involving hazardous materials, as weather protection tents when recovering hazardous materials or carrying out bomb disposal, as screening during police investigations or as a control centre for aid organizations. Other areas of application: use as medical tents, catering centres for large scale operations or for temporary patient care centres.

TECHNICAL DATA

Dimensions, external (in mm)

↺ Width	:	4360
↺ Length	:	5010
↺ Height, from ridge	:	2800
↺ Height, from side	:	1830

Useable area, internal (in mm)

↺ Width	:	4000
↺ Length	:	5010
↺ Height, to ridge	:	2620
↺ Height, side	:	1780
↺ Operating pressure	:	0.3 bar
↺ Test pressure	:	0.45 bar
↺ Air capacity at 0.5 bar	:	1830 l
↺ Packing dimensions	:	110 x 85 x 60 cm
↺ Inflation time, approx.	:	120 sec.
↺ Hold time, approx.	:	a number of days
↺ Weight of the tent, approx.:	:	60 kg
↺ Operation temperature:	:	- 40° C to + 50° C

BASIC EQUIPMENT

- ↺ 1 Tent frame
- ↺ 1 Tent awning
- ↺ 1 Tent floor
- ↺ 1 Packing bag
- ↺ 8 Tension lines, 3000 mm long
- ↺ 8 Pegs, 300 mm long
- ↺ 1 Peg bag
- ↺ 1 Repair kit

ACCESSORIES OF INFLATION

- ↺ Inflation hose for the blower
- ↺ Tent blower 0.3 bar
- ↺ Pressure regulator with connection hose for the compressed air bottle
- ↺ The IT 20 must be inflated with one compressed air bottle.

DESCRIPTION OF TENT

General

- ↪ Detachable floor.
- ↪ Tension ropes and pegs/grounding nail for anchoring purposes.
- ↪ 1 door on each front side.
- ↪ Windows with Velcro fasteners including gauze (fly screen).
- ↪ A short assembly and disassembly time with low staff expenditure (maximum of 4 persons) is ensured.
- ↪ Colour of the tent shall be white.
- ↪ It should be a pitched roof.

TENT AWNINGS – FLY SHEETS

1.1.1 Description

The tent awning is glued with the frame.

1.1.2 Material

The awning consists of a polyurethane coated polyester structure and must be watertight. The area weight must not exceed 240 g/m² (± 10 %). Confirmation of this must be attached by the manufacturer.

1.1.3 Tear resistance of the tent awning according to ISO 5081

K 1800 N/5 cm

S 1300 N/5 cm

1.1.4 Further test resistance of the tent awning according to ISO 4674-1977 method A2

K 70 N

S 80 N

1.1.5 Flame resistance of the tent awning according to DIN 4102 B 1

Must be stated. Confirmation is to be attached.

DOORS AND WINDOWS

1.1.6 Description

As a standard, the IT 20 must be fitted with a total of 2 windows.

One window on the doors. All windows must have a fly screen as well as a blind made of awning material with Velcro fasteners. The doors are opened and closed with zip fasteners. They must also be rolled and be able to be secured to the tent awning.

1.1.7 Dimension of door (L x W), mm

2000 x 1100 mm

1.1.8 Dimension of window (L x W), mm

600 x 400 mm

SEPARATION WALLS

1.1.9 Description

As an option, transverse separation walls as well as longitudinal separation walls, including securing devices, can be attached in the tent (these must be ordered separately!!!)

1.1.10 Material

The separation walls consist of a polyurethane coated polyester structure and must be watertight. The area weight must not exceed 240 g/m² (± 10 %). Confirmation of this must be attached by the manufacturer.

- 1.1.11 Tear resistance of the separation walls according to ISO 5081
 K 1800 N/5 cm
 S 1300 N/5 cm
- 1.1.12 Further rear resistance of the separation walls according to ISO 4674-1977
 method A2
 K 70 N
 S 80 N
- 1.1.13 Flame resistance of the separation walls according to DIN 4102 B 1
- 1.1.14 Must be stated. Confirmation is to the attached.

TENT FRAME

- 1.1.15 Description
 The standard construction consists of a pneumatic support frame with an inflation connection enabling inflation using a blower or a compressed air bottle.
 The diameter of the rail of the support frame must be approximately 270 mm ($\pm 10\%$).
 A safety valve must be integrated into the support frame which is designed to blow when the permitted operating pressure is exceeded.
- 1.1.16 Material
 PVC – coated polyester structure

TENT FLOOR

- 1.1.17 Description
 The floor of the IT 20 must be completely detachable.
 In addition to this, the floor must be easy to clean and quickly replaceable.
- 1.1.18 Material
 PVC coated polyester structure.
 The area weight must not exceed 550 g/m² ($\pm 10\%$).
 Confirmation of this by the manufacturer is to be attached.
- 1.1.1 Tear resistance of the floor according to EN ISO 1421 meth 1
 K 2500 N/50 mm
 S 1800 N/50 mm
- 1.1.2 Further tear resistance of the floor according to DIN 53363
 K 250 N
 S 250 N

INFLATION CONNECTION

Must be suitable for inflation with blower and compressed air bottle/pressure regulator.

ANNEXURE-X	JUMPING COUSHION
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Make	Vetter
GENERAL	
Dimensions	Shall not exceed 4.6m x 4.6m x 2.4m
Folded size	Shall not exceed 1.1m x 0.63m x 0.45m
Weight approx..	Shall not exceed 81 kgs

Set up time max.	Not more than 60 secs.
Rescue Height	Up to 25m
Temperature resistance	-20°C to +70°C
APPLICATION	
Operating Pressure	0.5 bar, limited through integrated safety valve
Carrying handles	4 Units
Stability as per DIN 14151-1	Do not let jumping cushion tip over or roll over
TARPAULIN MATERIAL PROPERTIES	
Abrasion resistance as per DIN 53863 Part 2	All tarpaulins max. 50 mg / 100 cm ²
Oil and Fuel resistance, swelling behavior as per DIN 53521 ASTM Oil No. 1 FuelNo.1	Floor and side wall: Max.+15% / 100 cm ² Max.-4% to +15%/ 100cm ² After drying, do not allow any permanent, perceptible or visible changes, decomposition or ablations or smearing
Fire behavior after coating as per DIN 4102	All tarpaulins are pre-set flame-proof, no igniting
Burning behavior as per DIN54333-part 1	For all tarpaulins: the flame must not reach Mark 1
Rot and Extinguishant resistance	All tarpaulins resistant to rot and extinguishant
Fatigue creep behavior as per DIN 53359	All tarpaulins ≥ 100,000 bends
Waterproof as per DIN 53386	All tarpaulins > 1,000 mm
Resistance to tearing	Floor and side wall tear resistant as per DIN EN ISO 1421: Warp and woof > 2,200 N / 50 mm Landing surface breaking force as per DIN 53354: Warp > 5750 N / 5 cm Woof > 5.100 N / 5 cm
Tear Propagation force	Floor and side wall tear propagation force: As per DIN 53363: Warp > 280 N, Woof > 250 N Landing surface tear propagation force as per DIN 53363: Warp > 800 N, Woof > 950 N
SUPPORTING FRAME MATERIAL PROPERTIES	
Material	Chloroprene-rubber (CR material)
Resistance to tearing	> 130 daN
Tensile Strength	≥ 300 daN / 5 cm
DESIGN	
Landing Surface	Psychologically perfected design: Circular, coloured blue (alternative: black cross)
Side wall	Neon yellow for good visibility
CERTIFIED SAFETY	

Compliance with standard DIN 14151 parts 1 & 3	Tested in conformity with DIN 14151 Part 1 and Part 3. A certificate from an independent institute is to be produced.
Factory test	Individual test with drop weight and dated seal of approval

ANNEXURE-XI	FIRE PROXIMITY SUITS
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1. COAT

- 1.1 General Description: Coat with a high central zip closure, covered with suitable storm flap. The coat should have full-length sleeves and a stand up collar with adjustable throat tab.
- 1.2 Standard : The coat must meet the IS 16890:2018 standards or their latest applicable version. The Suit should bear ISI marking with supporting Test Reports.

1.3 Construction

- 1.3.1 The coat should have a three-layer construction:
- 1.3.2 Outer Cloth: The outer shell fabric should be made from inherently flame resistant meta aramid fibre with requisite blend of antistatic fibres. The colour of the outer shell fabric shall be 93% p-aramide + 5% m-aramide + 2% Antistatic in Blue / Royal Blue or Dark Navy shade.
- 1.3.2 Moisture Barrier: Moisture Barrier shall be Fire resistant and breathable in nature. The construction should be micro porous in nature like non woven substrate/ felt / PU / spun lace aramid - suitably laminated with PTFE / PU like membrane or treated with compound to ensure that no water ingress from outside besides allowing perspiration and heat to escape from inside.
- 1.3.4 Thermal Barrier: The Thermal Barrier should consist of two integrated or quilted layers. The innermost layer facing the Moisture Barrier should be made from inherently flame resistant fibres in non woven felt / corded lane construction.
- 1.3.5 – The Coat should be detachable i.e., it should be able to be used as a single layered Coat or multiple layered Garment and should be detachable by buttons from inside.
- 1.4 Seams: All sewing to be done using para-aramid or equivalent strong inherently FR thread. The seams on the outer layer should be stitched with strong thread overlock,
- 1.5 Pockets: Coat should be provided with 3 pockets as standard. 2 waist pockets on the lower fronts with flap closure and 1 patch pocket inside the coat.
- 1.6 Collar: The collar of the Coat should be designed so that the neck portion is doubly secured and covered by means of a throat tab, fitted with fire retardant Velcro for secure fastening across the neck. A hanger loop, centrally placed on outer collar or inside section to be provided to facilitate hanging
- 1.7 Front Closure
The coat should have a heavy-duty moulded zip beneath a full length catch flap, closing with fire retardant Velcro.
- 1.8 Sleeves & Cuffs: The sleeve should be designed to have an additional gusset (all 3 layers) in the underarm or any other design innovation to allow the arms to move freely without raising the hem of the coat. An aramid rib-knitted internal cuff to be provided for suitable wrist protection.

1.9 Reflective Tape: The Coat should have a high quality reflective tape provided at the following places

- Single row 50 mm width, around hem/ waist (including across front flap)
- Single row 50 mm width, around lower sleeves

The tape should be premium quality and the quality should comply with the length and test parameters stipulated in the corresponding NFPA/ EN standards

1.10 Sizing: Size chart should be provided along-with the offer. The size should be suitable for fitting on person of 5'-8" height & 70 kg. weight. Length of the jacket should be 32 inch.

1.11 Labels: A large clear label should be permanently attached (sealed) or stitched inside the lining of the fire suits. This label should give full details of compliance to international standards, manufacturer's contact details, sizing, wash/care information, style and date of manufacture and traceability coding.

2.0 TROUSER

2.1 General Description: Trouser should have standard 36 inch waist size and adjustable crossover braces, with the knees suitably padded and reinforced with an extra layer of outer cloth. The waist of the Trouser should be elasticized at both sides to provide a comfortable flexible fit.

2.2 Standard : The coat must meet the IS 16890:2018 standards or their latest applicable version. The Suit should bear ISI marking with supporting Test Reports.

The Suit should bear UL marking (for NFPA certified suit) with supporting certification or should bear CE marking (for EN certified suit) with supporting EC Type certification.

2.3 Shape – Construction: The trousers should fit on the natural waistline (36 inch) , ankle length and constructed with following 3 layers:

2.3.1 Outer Cloth: The outer shell fabric should be made from inherently flame resistant para aramid fibre material with requisite blend of antistatic fibre. The colour of the outer shell fabric shall be 75% p-aramide + 23% m-aramide + 2% Antistatic in Blue /Royal Blue or Dark Navy shade.

2.3.2 Moisture Barrier: Moisture Barrier shall be Fire resistant and breathable in Nature. The Construction should be micro porous in nature like non woven substrate/ felt / PU/ spun lace aramid - suitably laminated with PTFE / PU like membrane or treated with compound to ensure no water ingress from outside besides allowing perspiration and heat to escape from inside.

2.3.3 Thermal Barrier: The Thermal Barrier should consist of two integrated or quilted layers. The innermost layer facing the Moisture Barrier should be made from inherently flame resistant fibres in non woven felt / corded lane construction.

2.3.4 – The Trouser should be detachable i.e., it should be able to be used as a single layered Coat or multiple layered Garment and should be detachable by buttons from inside.

2.4 Seams All sewing to be done using para-aramid or equivalent strong inherently FR thread. The seams on the outer layer should be stitched with strong thread overlock,

2.5 Knee Construction The knee should have an extra layer of outer cloth as reinforcement or alternately an aramid enforcement. The knee region should be shaped or designed suitably for comfort and flexibility

2.6 Pockets The Trouser should have 1 internal patch pocket inside the right or left hip

- 2.7 Reflective Tape: The Trouser should have single row of 50 mm wide reflective tape around lower leg. The tape should be premium quality and should comply with test parameters stipulated in the corresponding NFPA/ EN standards.
- 2.8 Sizing Size chart should be provided alongwith the offer. The size should be suitable for fitting on person of 5'-8" height & 36 inch waist.
- 2.9 Labels A large clear label should be permanently attached (sealed) or stitched to the inside pocket/ section of the Trouser. This label should give full details of compliance to international standards, manufacturer's contact details, sizing, wash/care information, style and date of manufacture and traceability coding.
- The Coat & Pant should have been tested as per EN 13506:2017 with inner Garments and should have a Burn Injury of less than 5% for 2nd degree and 3rd Degree. A Reports from a Third Party Independent Lab should be produced. The Garment should be supplied as per the Manikin Report.

3.0 ACCESSORIES

3.1 Boots: STANDARDS: Certified to EN 15090:2012 HI3, F3A SRC or NFPA 1971: 2007.

CONSTRUCTION: Light Weight Premium quality Leather or treated Rubber having flame retardant upper and waterproof characteristics

FEATURE: Rubber Boot should have the following features and Test certificate/ reports confirming the following operational requirements are required to be furnished:

- a. Outer sole of the Boot should be Heat and Oil resistant & Upper of the Boot should be Heat, Flame and Oil Resistant.
- b. Outer sole should also have electrical resistance.
- c. Sole should be slip resistant even on ceramic tiles & Steel Tiles.
- d. Sole should have penetration resistance against sharp objects and should have Composite Anti perforation mid sole.
- e. Toe should be protected with Polymer Toe Cap and no Steel Toe Cap should be used.
- f. Size should be equivalent to size 8 (Europe) and the weight should be maximum 2.5 Kgs for size 8(Europe size).
- g. The entire Boot should be made of Compression Moulding Procedure i.e. should be One piece for sole and upper and no stick on process should be used.
- h. The Boots should be certified to EN 374-3 against resistant to dangerous chemicals i.e. n-Heptane, Sodium Hydroxide, Sulfuric Acid and EN 943-2 against chlorine, Hydrogen Chloride, Ammonia or equivalent NFPA Standards.
- i. The Boots should have excellent resistance to Fuels, Oils & Greases, Solvents, Weak and Diluated acids.

3.2

Helmet Specs

STANDARD: Certified to EN 443: 2008 or NFPA 1971: 2007 standards

COLOUR : Yellow / Lime Green / Red

CONSTRUCTION: Helmet should be constructed of composite fibre glass capable of providing full protection even against shorter flash over flames temperature exposures of upto 1000 deg C. Test certificate for the same should be provided.

FEATURES: Helmet should have the following features and Test certificate/ reports confirming the following operational requirements are required to be furnished, as required in below parameters :

- Helmet with visor should have a modular design whereby the face and neck is also protected against flames. The minimum Height of the Helmet should be 26 cms.
- Visor should be provided capable of withstanding extreme heat and impact and should be Gold Plated.
- Visor should be capable of being closed - housed within the inner shelf of the Helmet, when not in use.
- The Helmet should have a possibility of fixing 4 attachments together whether Torches, Communication System, etc.
- The Helmet should have Electrical Isolation certification certified to E2E3C Standards and Test Report for the same should be attached with the Tender.
- The Helmet should have a possibility of wearing goggles OR Breathing Mask with the visor pulled down.
- Weight of the Helmet complete with visor should not exceed 1.6 Kgs
- Interior shock absorption layer to be provided for head protection.
- Head size adjustable feature should be available for fitting various head size circumference minimum 47-65 cm of fireman or larger.

3.3 Gloves

STANDARDS: Certified to IS 16874:2018 or EN 659:2003 + A1:2008. The Gloves should bear ISI Marking or CE Marking alongwith the Module C2 / Module D.

FEATURES: Five fingered, Chrome Leather, soft, supple 2-3 layered Glove for hand and wrist protection. The Glove should incorporate knitted wrists made of FR Heat resistant material. All threads used for stitching the gloves should be inherently Flame retardant.

The Gloves should also pass minimum requirements of EN 388 as below :

Abrasion:Level3

Blade Cut Resistant: Level 2

Tear Resistant : Level 4

Puncture Resistant : Level 3

Resistant to Liquid & Chemical Penetration should be 0% as per EN ISO 6530.

3.4 Anti Fire Hoods

STANDARDS: Certified to EN 13911:2004 in connection with EN 340:2003 or NFPA1971 and 70E Standards.

FEATURES : The Hood should be off white colour.

The Face opening should be Fit and Flat

The Neck Protector should be fit and properly covering the shoulders.

The Hood should be double layered having each layer of the Fabric of about 230 GSM, inset collar and face opening with elastic.

SCBA SET:

Self-Contained open circuit Compressed Air Breathing Apparatus (SCBA) Set Confirming to EN137:2006 Type 2/ IS 10245 (Part 2):2023 & CBRN approved, with 6 Liters /300 Bar Aluminium lined fully wrapped carbon composite material Compressed Air Cylinders. as per following specifications.

1. General requirement.

The set shall be self-contained open circuit type compressed air breathing apparatus set fully confirming to EN 137: 2006 Type 2/ IS 10245 (Part 2):2023 or its latest version and shall be approved as per CBRN standard for respiratory protection devices. Anti-Static Property ATEX II 1G IIC T6 II 1D IIIC -30°C ≤ Ta ≤ +60°C.

(a) The BA set shall contain air cylinder, back plate, facemask, lung demand regulator, pressure reducing valve, Pressure Gauges, hoses, standard carrying case to be provided.

(b) The minimum duration of use of the set shall not be less than 45 minutes. The weight shall not exceed more than 11 kg.

(c) The design of the set shall be such that there is no protruding parts or sharp edges likely to be caught on projections in narrow passages.

(d) Original equipment manufacturer (OEM) name and CE/EN marking shall be visible, on the set. warranty 10 years.

Back plate with body Harness:

Back plate should be manufactured from Glass fibre reinforced polyamide, flame retardant and conducting surface material and it consists carrying straps, pneumatic system single line high pressure hose inside a medium-pressure hose, containing a cylinder connector, reducer, pressure gauge, whistle and lung demand valve. Pneumatics easy detachable. Back plate should contain a swivel waist pad, S Shaped shoulder straps Shoulder and waist straps should consist reflective elements for better visibility and must be constructed from a high abrasion resistant, high puncture resistant, light weight and water-resistant f Flame retardant polyethylene foam padding Outer shell: Coated aramid textile, flame retardant, tear resistant and conducting with layered band made from polyamide webbing coated with CR rubber material.

Full face mask:

Positive pressure Full face Material: Face blank and Head harness Rubber: Acrylonitrile and Butadiene rubber NBR , Lens frame : Nylon (PA), Lens Polycarbonate with hard coat APEC with hard coat and antifog, Neck strap : Rubber CR, Helmet adapters : Stainless steel mask assembly shall be big facial counter with a wide reflex seal, speech diaphragm, inner mask (nose cup), visor, rubber head band, good speech transmission and having flame resistance requirement meeting to EN 136 Class 3+ and Antistatic approval. Best protection for chemical resistance and permeation. With CE/EN marking, manufacturer name/symbol field of vision shall be more than 90% and it should upgradable with communication system in future

Full Automatic First Stage Pressure Reducer:

The first stage pressure reducer shall be mounted in a protected position on the rear, lower portion of the back frame. The pressure reducer shall be of a fail-safe spring-loaded piston design, with an integral pressure relief valve, consisting of only two moving parts. The reducer shall be completely automatic, low maintenance and require no calibration. The reducer shall have flow characteristics that exceed 1000 Liters /min and be protected by a pressure relief valve that operates between 11.5 and 13.5 bar. The reducer shall be capable of reducing the pressure at first stage to minimum 7.5 bar and designed to function with either 200 or 300 bar cylinders.

Lung demand valve:

Lung demand valve should have a medium pressure hose, with quick release coupling. Lung demand Valve should contain a rubber membrane for better H₂S and other gases protection. Disconnection from the mask should occur by simultaneously pressing the buttons on the sides of the lung demand valve. Airflow should automatically shut off when disconnecting.

Low pressure warning whistle:

SCBA set should be provided with low pressure warning whistle when pressure drops to 55 bar $\pm$ 5 bar for a 300 Bar system. Warning signal should be located on the pressure gauge.

Pressure gauge:

SCBA should have a 300 Bar pressure gauge to monitor cylinder at the input of the first stage reducer. Manifold unit two medium pressure couplings.

Compressed air cylinder:

Cylinder shall be fully wrapped composite material and basically approved to EN 12245 or CE marked. The weight of the cylinder when fully charged shall not be more than 6.8Kg. The carbon composite material and it should be provided with Valve. Air cylinder shall have a water capacity of 6.8 Liters and free air capacity of min 1850 litres when filled at a pressure of 300 bar. Cylinder shall be approved by PESO (Petroleum and explosive safety organization) and certificate to that effect shall be submitted at the time of inspection. The cylinder shall be supplied with valve made from nickel plated brass and shall comply with EN 144-2 & CCE approved.

Enhanced HYGIENE

Set should be easy to clean and disinfect Dust and water-repellent harness material Simplified disassembly and assembly of components Entire SCBA is machine washable.

Preferable Make: MSA.

Technical requirements

The required TYPE 1 gas tight chemical protective suits shall be used during work in incidents where there are liquid chemical substances / gases leakage.

Characteristics:

- ❖ The Gas tight should be fully encapsulating Type 1 level A gas tight suit covering both the wearer and the breathing apparatus. It should have the latest technology in both fabric and suit design and should be compatible with any manufacturers breathing apparatus.
- ❖ The suit shall be gas tight and approved as per EN 943-1-2002 Type 1 and EN 943-2-2002 Type 1a- ET
- ❖ The fabric of the suit should be of high visible color HIGH PERFORMANCE CHEMICAL BARRIER material which is puncture resistant, high strength, high tear resistant and 100% non woven and should be CE marked to the latest standard {EN 943- 2, Protective clothing against liquid and gaseous chemicals, including liquid aerosols and solid particles –part 2: Performance requirement for “gas – tight” [Type 1 chemical protective suits for emergency teams (ET)] used by emergency teams.
- ❖ The fabric should be tested to the Finnabel Test method for protection against gases used as chemical warfare agents for the duration of 24 hours (1440 mins) as stated in the test method.
- ❖ All tests with regard to the suit should be conducted by a third party testing laborator / vendor and the company manufacturing the said chemical protection suits should not have any kind of equity ownership in the company conducting the tests on the said garment.
- ❖ The suit shall be lightweight and flexible multi layer high performance chemical barrier fabric.
- ❖ The suit shall have wide chemically resistant and mechanically strong visor providing clear undistorted vision.
- ❖ The suit should be sewn and double taped for maximum performance with adjustable internal support belt
- ❖ The suit should be one-piece protective suit with sewn seams taped on both inside and outside for a very strong chemical and stress resistant seam. The tape used should be developed from the key outer layer of the garment fabric to ensure seams maintain a sufficient level of barrier
- ❖ The suit should include a back pod to accommodate the wearing of self contained breathing apparatus [SCBA] The suit should include 2 nylon 6/6 exhalation valves with SBC flappers. One should be placed at the back of the hood. The other on the lower back.
- ❖ Two-layer face-shield constructed of an outer layer of 10 mil Teflon and an inner layer of 40mil PVC for superior chemical barrier. PTFE seals for permanent sealing the visor into the suit with no sewing involved so that liquids can't penetrate the visor edge
- ❖ The protective temperature range of the fabric should be -70 degree centigrade to 60 degree centigrade. The breakthrough time in Chlorine and Ammonia Gas should be 480 min at minus 70 Deg centigrade.

- ❖ Each suit must be individually identified with an internal unique suit code to facilitate audit and tracking during its' lifetime. The suit must be capable of being supplied with external markings to identify the wearer and service if requested by the purchaser.
- ❖ The suit should have heavy duty gas tight zip fitted on back side of the suit, closing at top shrouded by double outer storm flaps with a Velcro closure
- ❖ The suit shall have five fingered Two layered glove system comprising of Butyl outer gloves providing a high level of mechanical strength with bonded silver shield chemical barrier laminate gloves on the inside.
- ❖ The Tear Resistance of the Suit should be minimum Class 6.
- ❖ The Abrasion Resistance of the Fabric / Suit should be minimum Class 6.
- ❖ The Fleck cracking resistance of the Suit / Fabric at -30°C should be minimum Class 6.
- ❖ The Trapezoidal tear resistance of the Suit / Fabric should be minimum Class 6.
- ❖ The suit should have internal fitting adjustable internal support belt to enable wearers of varying sizes to comfortably use the suit.
- ❖ Every suit shall be accompanied with a storage bag made as to secure the proper handling and storing, a users manual, storing, Maintaining and repairing in English language.
- ❖ The Boots should be external removable Boot as per EN 13832-3 Boots highly resistant to chemicals :
N-Heptane (J)
Hydrogen peroxide (P)
Isopropanol (Q)
- ❖ The Weight of the Boots should not be more than 2.60 Kgs and should pass SRC Test levels.
- ❖ The colour of the Suit be Blue / Orange colour.
- ❖ The suit should have the shelf life of 5 years.
- ❖ A sample should be called as and when required for evaluation purpose.

5. TECHNICAL SPECIFICATION OF MINI WATER TENDER WITH WATER MIST TECHNOLOGY

1. OVERVIEW

This standard lays down the requirements regarding material, design and construction, workmanship and finish, accessories and equipment of Mini Water Tender with Water Mist Technology incorporating a water tank capacity of 3000 litres for fire brigade use.

2. GENERAL REQUIREMENTS

The appliance shall incorporate a water mist plunger pump of 38-42 lpm at 100 bar capacity. The appliance shall carry a water tank of 3000 litre capacity upon min. 11 Ton GVW chassis.

3. CHASSIS

The fully built-up vehicle shall be fabricated on min. 11 Ton cabin chassis to be supplied by Andhra Pradesh State Disaster Response and Fire Services, Vijaywada.

4. WATER TANK

- 4.1) The capacity shall be **3000 litres** depending upon the type of chassis used. The tank body shall be made out of 4mm and baffles of min. 2mm thick Stainless Steel 304 plates. A tank of required capacity shall be suitably mounted on the chassis in a manner keeping in view the proper load distribution on the axles. A full-length runner from behind the driver cabin till end of chassis frame shall be provided and made out of mild steel channel suitably fixed to the chassis frame with mild steel plate and bolted to chassis frame wherever holes are available in the chassis frame and also with 16mm 'U' bolts and nuts. The tank shall be suitably baffled and fitted transversely to prevent surge when the vehicle is breaking, cornering or accelerating. The baffles shall be arranged in a manner to facilitate the passage of a man throughout the tank for cleaning purpose. The tank shall be mounted on cross members to counter act the stresses caused by chassis flexion and shall be so secured that it can be easily removed. Suitable eyes shall be provided on the shell of the tank to enable it to be lifted from the vehicle for repairs/replacement as and when required.
- 4.2) The tank shall be fitted with a 50mm bore overflow pipe. A 63mm instantaneous hydrant connection incorporating a strainer shall be provided close to the pump panel control for filling the tank and feeding the hose reel equipment.
- 4.3) The stainless steel 304 plates used for the tank shall be given adequate anti-corrosive treatment of epoxy consisting of one coat of primer with one coat of finish after preparing the surface. The open end of the overflow pipe shall be taken down to a point well below the chassis without affecting the effective ground clearance when fully loaded and shall discharge away from the wheels.
- 4.4) Dial gauge water level indicator for the tank shall be provided or a visual level gauge of the glass tube shall be provided at the control panel calibrated 1/4th, half, 3/4th and full (preferably calibrated in litre).
- 4.5) The tank shall have a bolted manhole of 450mm diameter minimum and shall have a threaded ring and cap for filling the water tank from the top. A cleaning hole of at least 250mm diameter shall also be provided at the bottom. The tank shall be connected with the pump and hose reel and valve(s) shall be provided.

5. AUTO REWIND HIGH PRESSURE HOSE REEL:

Two auto rewind high pressure hose reel of 30m is to be mounted on the rear of the vehicle beside the water mist plunger pump or any other convenient place of the vehicle for operating the mist pump. The reel shall be coupled with a gun which should be able to make both fog and jet pattern. Plumbing between the pump and hose reel shall have clean and unobstructed water ways throughout. The rewinding of the hoses shall be fully electric along with a provision of geared winding mechanism.

ACCEPTABLE MAKE – AKRON / IDENTIFIRE AND RESCUE SOLUTIONS / AWG / ROSENBAUER

6. WATER MIST PLUNGER PUMP:

The pump shall have a suitable pressure release valve or a safety valve capable of suction of water from tank or open source and to maintain adequate discharge rate and pressure for operation of nozzle at optimum efficiency.

Max. Pressure	-	100-120 Bars
Min. flow	-	38-42 l/min

ACCEPTABLE MAKE – ANNOVI REVERBERI / INTERPUMP / SPECK TRIPLEX

7. POWER TAKE OFF:

The power for driving the pump shall be taken from the vehicle engine with the help of a side power take off & shall be of suitable ratio for the rated output of the pump. The lever/switch for engaging the PTO will be provided in driver's cabin. Necessary supports for PTO Unit, propeller shaft coupling, universal joints etc. for power input to output from PTO Unit shall be provided by vendor. The drive assembly components (shafts, coupling etc.) shall be dynamically balanced vibration at any of the rotary parts shall be minimized.

8. CONTROL PANEL

Adequately illuminated control panel shall be provided and positioned as follows and include the following:

- Pressure gauge
- Water level indicator
- Control valve for hydrant connection

9. BODY WORK AND STOWAGE:

9.1) DRIVER CUM CREW CABIN

Enclosed accommodation for driver and officer in charge is provided in a single compartment OEM provided factory-built cabin. Driver will be provided with large size rear view mirrors on both sides of the cab & convex round mirrors for overall rear view of the vehicle from top to bottom & left to right. A First aid box shall be mounted in the cabin at easily accessible location.

9.2) REAR SUPERSTRUCTURE

The rear superstructure shall be fabricated from MS sections / angles / channels & lockers for keeping the accessories shall be panelled with aluminium plates by means of glue or riveting. The roof shall be strong enough for being walked-on. Intermediate walls shelves of the lockers shall be constructed from aluminium sheets, which are to be panelled to the structure by means of glue or riveting. The outer panelling of the lockers & crew cabin shall be done from 1.6 mm aluminium sheets. Inner panelling will be done from 1.2mm aluminium sheets. Complete flooring of locker cabin shall be done with 2 mm aluminium chequered or padded plates. Sheets of outer panelling will be glued or riveted to framework.

9.3) ROLLER SHUTTERS:

For the easy operation of the vehicle, good quality roller-shutters covering equipment lockers shall be installed on both sides. These shutters shall be rolled inwards underneath the roof giving unobstructed access to the equipment lockers & the equipment / accessories fitted in the vehicle. Roller shutters shall be made of hollow rectangular shaped aluminium links which will be interconnected with the help of plastic / rubber profiles. They would be durable, weather & corrosion resistant & capable of opening in every position of the vehicle even in rough terrain. The shutters shall have a locking mechanism to prevent accidental opening during movement of the vehicle. A master switch for isolating locker lighting circuit shall also be fitted in the driver's cabin. The lights shall be controlled by a magnetic switch which is embedded into the profile. The shutter shall be fitted with pull down straps.

9.4) ELECTRICAL EQUIPMENT:

Adequate lighting arrangement shall be made in all compartments. All equipment lockers will have internal lighting arrangement automatically switched on and off by opening or closing of doors/shutters. All wiring will be properly fixed in position & will be protected against heat, oil & physical injury. To the extent possible all wiring will pass through conduits. All wires shall be stranded copper or copper alloy conductors of a gauge rated to carry at least 125 percent of the maximum current for which the circuit is protected & shall be uniquely identified by colour coding or permanent

marking. Voltage drops in all wiring from the power source to the using device shall not exceed 10 percent. All electrical circuits will have their own fuses, suitably marked & grouped in a common fuse box, located in an easily accessible position. Provision will be made for min. 4 spare fuses in the box. The battery will be placed in an enclosed box. Power supply shall be provided from vehicle battery.

9.5) LIGHT BAR & PERIMETER LIGHTING :

One LED light bar with min. three colour patterns shall be installed on the roof of the driver cum crew cabin. The Bar shall have LED lights. All beacons shall sync with each other and provide seamless flash patterns. The LED shall be suitable for outdoor use. The light bar shall be accompanied by a PA system which shall be of minimum three tones & 120 decibels. The PA system shall have an integrated mic with volume control.

FITTINGS & ACCESSORIES

Following accessories will be provided on the appliance:

- Two high intensity Strobe lights in front grill
- Two Blinker type Traffic Indicators
- Two flashers on each side of the vehicle at appropriate place

9.6) LADDER WITH GALLOWS:

The vehicle shall be installed with gallows on the vehicle roof which shall be suitable for fixing a 7.5m aluminium extension ladder in such a way that the firemen shall have ease of operation to unmount and mount the ladder at the time of need and emergencies including the trussed aluminium ladder of 7.5 mtrs.

10. MISCELLANEOUS

- i. A suitable bumper shall be provided at the rear by means of nuts and bolts, fabricated out of mild steel channel and duly painted with black colour.
- ii. One cat ladder made out of mild steel round or square pipe of 25mm diameter shall be provided and should be coloured with white or yellow colour.
- iii. Two numbers of min. 25mm dia. aluminium pipe railing with sufficient number of aluminium double socket brackets or MS pipe duly bended shall be provided to the rear body over the deck and at the rear.
- iv. A heavy-duty towing hook shall be provided and fitted at the rear bumper by means of nuts and bolts.

11. PROVISION FOR STOWAGE OF EQUIPMENTS:

For all water fittings like branch pipes, etc, quick release type couplings are provided which enables the operator to locate the desired equipment instantly and thereby save valuable time at the time of fire. These couplings also ensure that none of the item damage the internal panelling and thereby increase the life of the vehicle. Suitable clamps, brackets, holders, etc, are provided for all other items.

12. PAINT AND WORKMANSHIP

Once the fabrication is completed, all the outside surfaces shall be painted with a good quality paint such as Dupont, Asian Paints or Equivalent etc. This shall be polyurethane (PU) based paint. The complete vehicle (all exterior surfaces) shall be painted with at least two coats of zinc phosphate primer & two coats of polyurethane paint. The colour for the outside will be as per the latest international & Indian norms for fire brigade vehicles and shall be either Fire Red or PO Red.

The username will be written or stickered on both-sides with yellow or white colour. Water lines will be epoxied with zinc phosphate epoxy primer & two coats of polyurethane finished paint. Water lines shall be painted red in colour. Reflective stripe(s) shall be affixed to the perimeter of the apparatus. The inside of lockers shall be painted in grey colour. Under frame of chassis shall be painted with chlorinated rubber paint. The appliance shall clearly have the following marks at suitable locations.

- ▲ Manufacturer's name & trademark
- ▲ Year of manufacture
- ▲ Pump serial numbers & capacities

- ▲ Capacity of water tank in litres
- ▲ Engine & chassis number
- ▲ All instrument control & valves shall be identified with properly itched metallic name plates

13.SCHEDULE OF EQUIPMENT TO BE STOWED IN THE APPLIANCE

Following equipment is to be supplied with the vehicle which shall be ergonomically placed and easy to take out at the time of emergencies and need.

<i>Sr. No</i>	<i>Description</i>	<i>Qty</i>
1.	Axe, Large	2
2.	Crowbar	2
3.	Sledgehammer	1
4.	Engineering Toolkit Preferable Make: BOSCH/Taparia	1
5.	SCBA SET: Self-Contained open circuit Compressed Air Breathing Apparatus (SCBA) Set Confirming to EN137:2006 Type 2/ IS 10245 (Part 2):2023 & CBRN approved, with 6 Liters /300 Bar Aluminium lined fully wrapped carbon composite material Compressed Air Cylinders. as per following specifications. 1. General requirement. The set shall be self-contained open circuit type compressed air breathing apparatus set fully confirming to EN 137: 2006 Type 2/ IS 10245 (Part 2):2023 or its latest version and shall be approved as per CBRN standard for respiratory protection devices. Anti-Static Property ATEX II 1G IIC T6 II 1D IIIC -30°C ≤ Ta ≤ +60°C. (a) The BA set shall contain air cylinder, back plate, facemask, lung demand regulator, pressure reducing valve, Pressure Gauges, hoses, standard carrying case to be provided. (b) The minimum duration of use of the set shall not be less than 45 minutes. The weight shall not exceed more than 11 kg. (c) The design of the set shall be such that there is no protruding parts or sharp edges likely to be caught on projections in narrow passages. (d) Original equipment manufacturer (OEM) name and CE/EN marking shall be visible, on the set. warranty 10 years. Back plate with body Harness: Back plate should be manufactured from Glass fibre reinforced polyamide, flame retardant and conducting surface material and it consists carrying straps, pneumatic system single line high pressure hose inside a medium-pressure hose, containing a cylinder connector, reducer, pressure gauge, whistle and lung demand valve. Pneumatics easy detachable. Back plate should contain a swivel waist pad, S Shaped shoulder straps Shoulder and waist straps should consist reflective elements for better visibility and must be constructed from a high abrasion resistant, high puncture resistant, light weight and water-resistant f Flame retardant polyethylene foam padding Outer shell: Coated aramid textile, flame retardant, tear resistant and conducting with layered band made from polyamide webbing coated with CR rubber material. Full face mask: Positive pressure Full face Material: Face blank and Head harness Rubber: Acrylonitrile and Butadiene rubber NBR , Lens frame : Nylon	1no. with 1 spare cylinder

(PA), Lens Polycarbonate with hard coat APEC with hard coat and antifog, Neck strap : Rubber CR, Helmet adapters : Stainless steel mask assembly shall be big facial counter with a wide reflex seal, speech diaphragm, inner mask (nose cup), visor, rubber head band, good speech transmission and having flame resistance requirement meeting to EN 136 Class 3+ and Antistatic approval. Best protection for chemical resistance and permeation. With CE/EN marking, manufacturer name/symbol field of vision shall be more than 90% and it should be upgradable with communication system in future

Full Automatic First Stage Pressure Reducer: The first stage pressure reducer shall be mounted in a protected position on the rear, lower portion of the back frame. The pressure reducer shall be of a fail-safe spring-loaded piston design, with an integral pressure relief valve, consisting of only two moving parts. The reducer shall be completely automatic, low maintenance and require no calibration. The reducer shall have flow characteristics that exceed 1000 Liters /min and be protected by a pressure relief valve that operates between 11.5 and 13.5 bar. The reducer shall be capable of reducing the pressure at first stage to minimum 7.5 bar and designed to function with either 200 or 300 bar cylinders.

Lung demand valve:

Lung demand valve should have a medium pressure hose, with quick release coupling. Lung demand Valve should contain a rubber membrane for better H₂S and other gases protection. Disconnection from the mask should occur by simultaneously pressing the buttons on the sides of the lung demand valve. Airflow should automatically shut off when disconnecting.

Low pressure warning whistle:

SCBA set should be provided with low pressure warning whistle when pressure drops to 55 bar $\pm$ 5 bar for a 300 Bar system. Warning signal should be located on the pressure gauge.

Pressure gauge:

SCBA should have a 300 Bar pressure gauge to monitor cylinder at the input of the first stage reducer. Manifold unit two medium pressure couplings.

Compressed air cylinder:

Cylinder shall be fully wrapped composite material and basically approved to EN 12245 or CE marked. The weight of the cylinder when fully charged shall not be more than 6.8Kg. The carbon composite material and it should be provided with Valve. Air cylinder shall have a water capacity of 6.8 Liters and free air capacity of min 1850 litres when filled at a pressure of 300 bar. Cylinder shall be approved by PESO (Petroleum and explosive safety organization) and certificate to that effect shall be submitted along with the tender. The cylinder shall be supplied with valve made from nickel plated brass and shall comply with EN 144-2 & CCE approved.

Enhanced HYGIENE

Set should be easy to clean and disinfect Dust and water-repellent

	harness material Simplified disassembly and assembly of components Entire SCBA is machine washable. Preferable Make: MSA.	
6.	The manually operated combi tool model SC250 M shall be used mainly for rescue operations. Operation of tool shall be completely independent of external power sources and shall be capable of operating manually by an single operator. It shall be handy and light in weight & shall be integrated with a hand pump. The hand pump shall have automatic switchover from Low Pressure mode to high Pressure mode. Blades shall have GO CORO Coating for corrosion resistance. Also, the tool should be Make in India. Combi tool shall be fitted with a tool head that can rotate through 360° to allow optimum application of the blade arms. The tool shall be capable to rotate 360° so that it is always in the ideal working position. Cutting force shall not be less than 25 Tons Manual combi tool shall be capable of cutting round bar not less than 25mm Spreading distance shall not be less than 305 mm Spreading force shall not be less than 40 Tons Maximum cutter opening shall not be less than 225mm Dimensions in mm (Lx W x H) shall not exceed 850 x 200 x 160 Weight including hydraulic fluid shall not exceed 12 kg Operating temp range shall be in the range -20 °C to +55 °C Max working pressure shall not exceed 700 Bar Manual combi tool must be in accordance with NFPA 1936 cutting class A6/B6/C6/D7/E7 Test certificate of same shall be submitted along with offer Authorisation Letter from OEM is to be submitted at the time of Inspection. Preferable make: Holmatro (or) Lucas	1
7.	Reusable Magnetic Leak Sealing Patch Ready to use, with tool-free application for immediate control of leakages. The patches must be highly safe and effective way to control liquids and gaseous substances leaking out of objects. The patches should have very flexible design and must mould to the shape of the object. Leak sealing patch should be made of Urethane Patch with embedded Neodymium magnets. Magnetic leak sealing patches must come in different sizes and should be easy to use and can be applied within seconds. It should come with a strap for carrying the bag. There should be no other accessories required for using the patch. Set of Bags must be provided in a nonmagnetic bag, such that the bags can be easily carried to different places without attaching to each other. Different sizes of bags must be provided with single set of Teflon sheets. Patch should be reusable and should have a life of a minimum of 10 Years. OEM must have presence in INDIA. Authorisation Letter from OEM is to be submitted at the time of Inspection. Acceptable Make: Vetter / Lancier / Hurst	1
8.	Aluminium Extension ladder of 7.5 mtrs length.	1
9.	Long Beam LED Search Lights: • High intensity precision spot beam, operating range upto 1000 Mtrs. Water proof LED Search Light. • Maintenance free, rechargeable sealed Li ion battery with charger. • Highly efficient deep parabolic mirror back reflector with shock resistant glass. • Heavy duty molded unbreakable plastic/super tough nylon/ABS body.	1 No.

	• Light weight, portable with shoulder pad & proper gripped handle and water proof. • Not less than 8 hrs working time. Not more than 350 grams weight.	
10.	FIRE GUMBOOTS: AS PER IS 5557 : 2024 or latest version. Preferable Make: Etche Securite / Rosen Bauer / Identifire / Bristol. FIRE HELMET: As per IS 2745:1983 (latest version reviewed in 2020) or latest version. The OEM letter (or) OEM authorization letter from OEM shall be submitted by the successful bidder at the time of Final stage Inspection by the Department Officers.	10+ 10

14. INSPECTION:

The successful renderer shall have the work inspected and approved at the following stages by the Director General of State Disaster Response and Fire Services

The acceptance of the items is subject to inspection by officers of A.P. State Disaster Response and Fire Services Department in stages as suggested above and in the Specification.

14.1) FIRST STAGE INSPECTION:

14.1.1) Structural work and Measurements, Structural framework, Paneling work, tank shall be ready and not mounted (for hydraulic pressure testing), Pump shall be ready and not mounted (for Hydraulic pressure testing), platform of water tank, pump and PTO ready for mounting.

14.1.2) All the piping shall be subjected to hydraulic test pressure of 15 Kg/ Cm² for a period of min 10 minutes.

14.1.3) The pump casing shall be subjected to a hydraulic test pressure of a minimum 52.5 Kg/ cm². Tank shall be hydro tested at a minimum pressure of 0.3447 bar (or) 5PSI with 90% full of Soapy Water. The duration of the test, should be 30 minutes. All weld seams will be checked for leakage on the outside.

14.1.4) The First Stage Inspection will be conducted by the Department Officers and basing on the satisfactory performance, the next stage of fabrication work will commence by the bidder.

14.2. Final STAGE INSPECTION:

- 14.2.1) STABILITY TEST : Stability of application will be such that when fully equipped & laden, if the surface on which the appliances stands is tilted to either side at an angle of 30° from horizontal it will not overturn.
- 14.2.2) GRADIENT TEST: The vehicle will be tested on a gradient test ramp at an angle of 1:4 as per BIS.
- 14.2.3) ENDURANCE TEST: The pump will be tested for a continuous period of four hours nonstop & the water will not be replenished during this test & the engine will not show signs of overheating. The testing charges for the same shall be borne by the vendor.
- 14.2.4) ARTICULATION TEST: The vehicle shall be tested for articulation and shall not show any signs of stress during this test. The clearance in the wheel wells shall be checked for tolerance.
- 14.2.5) Final Inspection and Road Test of the Vehicle shall be done at State Stores, C/o. District Fire Officer, Near Collectorate compound, Guntur District. The Manufacturing shall depute sufficient technicians for rectification of defects as per spec. requirements & training of usage of equipment.

NOTE: i. Importance shall be given to provide a good workmanship and finish.

ii. Any Suggestion/ minor Modifications suggested during the Stage Inspections and also at the time of Final Inspection, apart from the specification laid down above, must be incorporated at the time of Final Delivery/acceptance.

NOTE:

- a) All the above equipment should be supplied with Operating, Technical/ Service manuals.
- b) All the above equipment should be supplied with essential/standard accessories.

- c) Suitable rear mudguards made from 16 SWG MS sheet with reinforcing ribs shall be provided and supported on MS brackets with hanging rubber sheets.
- d) Proper ventilation shall be made in the driver cabin near driver seat and nearby Officer seat.
- e) Gear oil filling access facility on side is to be provided for PTO gear box.
- f) The Tenderer shall hand over the Advance Water Tender with full tank of fuel after completion of Final Inspection.

6.Fire Retardant Coverall

Technical Specifications

<u>Sl. No</u>	<u>Parameters</u>	<u>Specification</u>
1	Colour Of Protective FR Rescue Suit	The garment should be made of 200 GSM (+/- 5GSM) fabric, in Khakhi / Orange / Red Colour.
2	Constructional Features Of The Protective IFR Suit	The protective IFR Rescue Suit made from inherently flame retardant fabric.
3	Fabric Requirements And Features	The fabric is comfortable, breathable for reduced heat stress and ability to wick away moisture (anti sweating), The fabric of the FR Recue Suit is soft comfortable finish, durable and capable of washing as well be colour fast. The Fabric should be Sweat Absorbent Fabric, Moisture Absorbency and Quick Drying Fabric. Made from a blend of inherent Fibers + 2-3% anti static Yarn. The fabric shall be made from a blend of meta araamide + paraaramide +permanently flame resistant fibres + 2-3% anti static yarn. The presence of Cotton, Nylon and Wool shall not be acceptable.
4	Design And Features Of IFR Overall	Front Closure: The Rescue Coverall has a heavy-duty moulded zip beneath a full length catch flap, closing with fire retardant Velcro meeting requirement stipulated in clause no 6.2.1 of BS EN ISO 11612 2015 or ISO 11612:2015(E)
5	Design And Features Of IFR Overall-1	High protective collar with throat guard of height 10 cm Epaulettes (Flap) on each shoulder.
6	IFR Overall (Dangri) Pockets Requirements	1st Pocket-Radio pocket on left chest with Velcro on flap closure. 2nd Pocket - Right chest, flap style with Velcro Closure. 3rd Pocket Open Pen Pocket on shoulder. 4th & 5th Pocket- Trouser cargo pocket at outer side of knee level (each side) with flap secured with Velcro closure.
7	Reflective Tape Requirements	The Rescue Suit has a high quality Fire Retardant reflective flame retardant tape provided with Single row minimum 50 mm width, on shoulder, forearms and below knee area.
8	Sizes & Markings/Stamping	The Department will be informed to the successful Bidder at the time of awarding the contract.
9	Compliance of the Protocols	Compliance to Anti Static property as per EN 1149-5
10	Performance Tests	Tensile strength as per ISO 13934-1 -> 750 Newton, Tear strength as per ISO 13937-2-≥ 75 Newton, Limited flame spread as per ISO 15025-level AI, A2, B1 and C1 as per EN ISO 11612 after testing as per EN ISO 6330 Standards. The Fabric should have a minimum Arc Rating of 8 cal/cm2 as per ASTM F1959 Standards. Colour Fastness to Light : Minimum 4 Colour Fastness to Rubbing : Minimum 4 The Shrinkage of the Fabric should not be more than 2% in Warp & Weft (Lower is preferred)

11	Testing Requirements	i) Limited flame spread as per ISO 15025-level A1, A2, B1 and C1 as per EN ISO 11612 after testing as per EN ISO 6330 Standards. ii) The Heat Resistance of the Fabric should be tested as per EN ISO 11612 after 5 washes as per ISO 6330:2012 Standards. iii) Contact Heat as per ISO 12127 -- level F1. iv) Tensile strength as per ISO 13934-1 > 750 Newton. v) Tear strength as per ISO 13937-2 > 75 Newton. vi) Electrical resistance as per EN 1149-2 -- Pass class 2 vii) Impact of spatter drop as per ISO 9150 – Pass class 2 viii) The Fabric should have a minimum Arc Rating of 8 cal/cm2 as per ASTM F1959 Standards. ix) Colour Fastness to Light : Minimum 4. x) Colour Fastness to Rubbing : Minimum 4. xi) The Shrinkage of the Fabric should not be more than 2% in Warp & Weft (Lower is preferred).
12	Others	i) Garment should be able to withstand atleast Permanent Wash cycle without losing the Fire retardant properties. (ii) At the Back side of Rescue Suit, Semi circle for <u>AP Fire</u> Reflective Yellow colour FR Strip of 2 inch wide to be provided. (iii) Embroidery of Logo on Left sleeve and Velcro on right chest for Name/ Tag etc. (iv) Different sizes will be confirmed at the time of the order.
13	Certification	i) Compliance as per Para-11. Test certificate from an NABL ILAC Third Party Independent lab shall be provided for total type examination of all part of the prepared/finished Dangri/ overall. ii) The Fabric should be a double Layered Structure Weaving Fabric. iii) The Fabric should be highly Breathable and Comfortable and be tested as per EN ISO 9237 for a minimum rating of >275mm. iv) The Fire Fighting Coat & Trouser should be accompanied by a currently valid BIS license as per IS 16890:2024 (Protective clothing for Fire fighters). The successful bidder shall have the same BIS license as per IS 16890:2024.
14	Colour	Postal Red.
15	Procurement Procedure	Through GeM Portal.
16	Bid Technical Documents	i) Certificates as mentioned in Para-13. ii) Certificates of Testing Parameters as mentioned in Para-11. iii) The bidder shall provide sample piece at the time of Technical Bid either by the bidder or any authorized person on behalf of him. The bidder who fails to produce the sample piece will disqualify in Technical Evaluation.

7.Fire Proximity Suit (PPE)

Technical Specifications

1.	GENERAL REQUIREMENTS:	
1.1	The Fire Proximity Suit (PPE):- 1) Coat & Trouser as per EN 469-2005 or latest, Level 2 certified, 2) Hand Gloves as per EN 659-2008 or latest certified and 3) Hood as per EN 13911-2004 or latest certified, 4) Helmet as per EN 443-2008, type B or latest certified 5) Fireman Boot as per EN 15090-2012 or latest certified. Tenderers who fulfill the qualification criteria below are eligible to Tender for this work.	
1.2	This specification covers in general the design of Fire Fighting Suit level2, Gloves, Hood and Helmet, the minimum performance levels of the materials used and the methods of test for determining the performance levels. The PPE mentioned herein are used as the "Basic Turnout Gear" by the fire fighters for tackling incidents of fire. The intended purpose of this type of PPE is to provide maximum coverage to the wearer from heat and flash fire while fighting fire. The Structural Fire suit shall be worn over normal working clothes.	
1.3	The Fire Fighter Coat shall be certified to EN 469:2005 level 2 or latest, CE marked & approved with article 11 (B) certification as per the European Union council Directive on Personal Protective Equipment (PPE) 89/686/EEC.	
1.4	The Fire Fighter Trouser shall be certified to EN 469:2005 level 2 or latest, CE marked & approved with article 11 (B) certification as per the European Union council Directive on Personal Protective Equipment (PPE) 89/686/EEC.	
1.5	Fire Fighter Gloves shall be certified to EN 659:2008 or latest, CE marked & approved with article 11 (B) certification as per the European Union council Directive on Personal Protective Equipment (PPE) 89/686/EEC.	
1.6	Fire Fighter Hood shall be certified to EN 13911:2004 or latest, CE marked & approved with article 11 (B) certification as per the European Union council Directive on Personal Protective Equipment (PPE) 89/686/EEC.	
1.7	Fire Fighter Helmet shall be certified to EN 443 : 2008, type B or latest, CE marked & approved with article 11 (B) certification as per the European Union council Directive on Personal Protective Equipment (PPE) 89/686/EEC.	
1.8	The PPE articles shall be brand new, unused and of recent manufacture. Manufacturing date of PPE articles shall not be more than one year old at the time of inspection.	
1.9	This specification is the guidelines for Fire Proximity Suits and generalized in nature, however the manufacturer shall comply all the requirements stipulated in the relevant EN standards.	
1.10	The front and back of the coat shall display letters and logos in photo luminescent paint duly printed on fire retardant outer shell material. Suitably fastened with Velcro or sewn with the outer fabric patch. Size of letter AP FIRE shall be proportionate with dimensions. On front of the coat the logo shall be printed. Actual print size to be submitted with QAP before supply of order.	
	GOVERNING STANDARDS :	
2.1	Coat and Trousers	
	Standard	Title
	EN 469 : 2005 or latest version	Protective clothing for Fire Fighters –Performance requirements for protective clothing for Fire Fighting.
2.2	Gloves	
	EN 659 : 2008 or latest version	Protective Gloves for Fire Fighters
2.3	Hood	
	EN 13911 : 2004 or latest version	Standard for Fire Fighter Hood
2.4	Helmet	
	EN 443-2008, type B or latest certified	Standard for Helmet
2.5	Fireman Boot	
	As per EN 15090 : 2012 or latest version for Fireman Boot	
	Colour	Yellow
	Size Range	38 to 48

	Material	Rubber compounds containing fire extinguishing additives, mixed FR cotton fabric lining giving increased abrasion resistance, sock lining increasing antistatic properties.
	Outsole	With steel anti-perforation insert, resistant to oil, fuels, acids and temperature to 250 Degrees C and antistatic construction.
	Insole	With anatomic replaceable innersole washable in water at 40 Degrees C, absorbing treads energy in heel.
	Weight	Approximately 2.4 kg per pair
2.6	<u>Certificate:</u> The boot should be CE certified meeting the requirements of EN 15090 Type,. The Test report for the compliance should be attached with the product.	
	It should also pass through Ralph Manikin Testing as per ISO 13506 : 2008. Necessary Test Report to be enclosed. The burn injury test report should be less than or equal to 10% for 1 st , 2 nd & 3 rd Degree Burn for the acceptance.	
	Module D Certificate as per PPE Regulation (EU) 2016/425, showing name of the Manufacturer and complete Address of the place of Production Certifying PPE Category III Compliance is Mandatory.	
	Fireman Boot as per EN 15090-2012 or latest certified.	Fireman Boot for fire fighting in building and other structures.
3.	Technical Parameters :	
3.1	The Structural Fire Fighting Suit shall be designed so as to provide maximum protection to the wearer upper and lower torso, neck, arms, legs and shall meet all the requirement of EN-469: 2005 for Level-2 suit or Latest standard for Structural Fire Fighting.	
3.2	The Structural Fire fighting suit shall be easy to wear over the normal clothing without any help from others.	
3.3	In a non fire situation, the wearer shall be able to remain in the Structural Fire fighting Suit for prolonged periods and shall not feel any discomfort in environmental conditions.	
3.4	The complete Fire suit shall be water proof type and the design of the ensemble shall provide protection from ingress of water.	
3.5	The coat and trouser shall be designed to promote ease of cleaning and shall be capable of machine wash. Manufacturer should specify cleaning instructions/procedures in the user manual.	
3.6	The weight of the PPE articles i.e., Coat and Trouser shall not be more than 3.5Kg for the largest size.	
3.7	Gloves designed as per EN 659 : 2008 or latest version	
3.8	Hood designed as per EN 13911 : 2004 or latest version	
3.9	Helmet designed as per EN 443 : 2008 Type B or latest version	
3.10	Fireman Boot designed as per EN 15090-2012 or latest certified	
	Colour	Yellow
	Size Range	38 to 48
	Material	Rubber compounds containing fire extinguishing additives, mixed FR cotton fabric lining giving increased abrasion resistance, sock lining increasing antistatic properties.
	Outsole	With steel anti-perforation insert, resistant to oil, fuels, acids and temperature to 250 Degrees C and antistatic construction.
	Insole	With anatomic replaceable innersole washable in water at 40 Degrees C, absorbing treads energy in heel.
	Weight	Approximately 2.4 kg per pair
4.	Constructional Features :	
4.1	The Structural Fire fighting Suit shall be designed to minimize restriction of movement. It shall be compatible with other equipment normally worn/carried by the fire fighter e.g. boots, helmet, gloves, belt for carrying fireman's axe and other equipment etc.	
4.2	The Structural Fire fighting Suit set should be supplied in 1 carry bag containing following 4 components	
	(i) Coat (ii) Trousers (iii) Gloves pair (iv) Hood (v) Fireman Boot	
5.	Standard and test parameters for the Fire Fighter Coat and Trouser:	
5.1	The Standard which governs coat and trouser shall be EN 469 : 2005/A1: 2006/AC: 2006 or latest with Level 2 performance Xf2, Xr2, Y2, Z2.	
5.2	Test reports to be provided proving the performance level 2 for following test parameters.	
	Heat Transfer flame Xf2	

	Heat transfer radiation Xr2
	Resistance to water penetration Y2
	Water vapour resistance Z2.
5.3	Additional Test to be performed on Outer shell fabric for Anti static test as per EN 1149-3:2004 & EN 1149-5:2008 certificate needs to be provided.
5.4	<u>Mannequin Test:</u> Burn Mannequin Testing of RALPH mannequin test Stoll skin model to be performed on Fire suit model offered as per ISO:13506: 2008 to ascertain the heat transfer performance of clothing system and burn injury prediction analysis as per acceptable norms. Burn Injury prediction test report showing consolidated 2 nd and 3 rd degree burns results not exceeding 10% should be submitted along with the tender.
5.5	<u>Certification :</u> Coat and Trouser certified to EN 469:2005 level 2 or latest with following certifications. EN 469:2005 Certificate level 2 (EC Type Examination Certificate) CE certificate with Article 11 B certificate for ensuring EC Quality of Production. The Fire Fighting Coat & Trouser should be accompanied by a currently valid BIS license as per IS 16890:2024 (Protective clothing for Fire fighters). The successful bidder shall have the same BIS license as per IS 16890:2024.
6.	Design of Coat and Trouser
6.1	The minimum overlap of the coat with the trouser shall be 30 cm for all sizes.
6.2	The efforts shall be made to reduce the weight to barest minimum possible without sacrificing its utility & protection.
6.3	Two cargo pockets are required to be provided to the coat at the bottom in front portion with closure flaps fastened with fire retardant Velcro. Small sized drainage holes are required to be provided to drain accumulated water in the pockets.
6.4	The coat shall have a radio pocket of suitable size with a fire retardant Velcro flap on the left chest. The radio pocket shall also be provided with small sized drainage holes for drainage of accumulated water and capable of housing Walkie talkie available with fire brigade or as advised at time of PO). MFS logo also to be printed/embroidered on the radio pocket.
6.5	The coat shall be zip fastened with a heavy-duty corrosion resistant zipper extending from throat tab till the bottom of the coat. The zip shall be overlapped with a protective flap made from the same fabric used for outer layer of the coat.
6.6	The height of the coat collar shall be minimum 80 mm and will also have a closure strap (fire retardant Velcro) at the front to ensure complete protection to the neck
6.7	The trouser and coat shall incorporate 1 mm thick neoprene coated aramid blend (for example paramide/meta-aramide) reinforcement to the knees, elbows and bottom portion of the trouser respectively for additional protection against wear and tear.
6.8	The suit (coat and trouser) shall incorporate heat reflective & retro-reflective tape as per fire brigade design for better visibility in smoke filled/dimly lit spaces.
6.9	The width of the heat reflective & retro-reflective tape shall not be less than 5 cm with triple reflective trim of fluorescent yellow/silver/yellow colour for staff and orange/silver/orange colour for officers.
6.10	The quality of reflective tape to be used in the coat & trousers should comply with the relevant EN standards requirements preferably of 3M quality.
6.11	Hardware such as buttons clips should be fixed only on the fabric layers and should not be any direct contact with the wearer body when the coat or trouser worn with closures fastened.
6.12	The trouser shall be made from the similar three layers of construction as used in the coat. Further the trouser should be provided with flexible & extendable FR suspender system which can be worn securely over the shoulder of the wearer. The trouser shall be provided with one cargo pockets on each thighs with closure flaps fastened with fire retardant Velcro. Small sized drainage holes are required to be provided to drain accumulated water in the pockets.
6.13	The trouser shall be provided with zipper, concealed by a flap of the outer shell.
6.14	The trouser shall be provided with concealed FR elastic at the waist level for firm fit with FR button.
6.15	The seams of the trouser and coat shall be stitched from inherent flame retardant sewing thread in such a manner that the seams are not exposed from outside flame. Further, the seams should be sealed from inside with suitable moisture barrier tape to ensure no ingress of water.
6.16	An integral wristlet with thumb loop is required to be provided at the end of the coat sleeves and shall be designed primarily to prevent entry of burning debris and shall also provide limited thermal protection to the wrist. The wristlet shall not hinder donning of the coat and shall be compatible with wearing of protective gloves.

	Design of Gloves :
7.1	The Standards which governs Gloves shall be EN 659 : 2008 or latest CE marked and approved with article 11 (B) certification. The Fire Fighting Gloves should be accompanied by a currently valid BIS license as per IS 16874 :2018 (Protective Gloves for Fire fighting)
7.2 (i)	The gloves shall be made of materials in multilayer (4 layers) offering good protection and designed to provide protection to the hands with elastic closure mechanism at the wrist.
7.2 (ii)	The outer layer shall be made from Heat resistant Leather or Neoprene coated Para-aramide in front and Meta-aramide at the back portion.
7.2(iii)	The second layer shall be made from Aramide knit fabric.
7.2(iv)	The third layer shall be made from membrane
7.2(v)	The fourth layer shall be Non-woven meta-aramid thermal layer.
7.3	The gloves shall have a Kevlar/Aramid /Nomex knitted wristlet.
7.4	The Gloves shall be provided with Reflective tape as per EN standards preferably of 3M make.
7.5	The Glove shall offer resistant against heat, water and abrasion and it shall also ensure maximum sensitivity and comfort for work.
7.6	The gloves shall be of five fingers
7.7	The Gloves should carry the requisite label showing model name, EN 659:2008 with Test House No, CE logo, OEM information and size offered.
7.8	The size of the gloves shall be as per individual size of the employee which will be collected by the supplier.
7.9	<u>Certification:</u> The Gloves shall be certified to EN 659 : 2008 or latest with following
8.	<u>Certification for Hood:</u> The Hood should be EN approved as per EN 13911 and CE marked. Module D certificate as per PPE Regulation (EU) 2016/425 for the Hood showing the place of manufacture.
9.	<u>Pre-Dispatch Inspection:</u> Pre-Dispatch Inspection shall be carried out by the representative from Andhra Pradesh State Disaster Response and Fire Services Department.

8. TECHNICAL SPECIFICATIONS OF T-SHIRT AND BERMUDA (OUTDOOR SUIT)

(OPERATIONAL UNIFORM)

I. T-SHIRT (COLOUR: BRIGHT RED)

1.0 SCOPE

- 1.1 The specification prescribes the requirement of “T-Shirt Colour Bright Red” herein referred as “T-Shirt”.
- 1.2 This specification does not specify general appearance; feel etc of the “T-Shirt”.

2.0 MANUFACTURE AND FINISH

- 2.1 The T-Shirt shall be manufactured as per standard manufacturing techniques with raglan sleeve. Mandarin collar T shirt shall have the front zipper opening. The sizes will be informed by Department to the successful bidder after awarding the tender. The design and shape of the T-shirt shall be as per Figure 1 to 2.
- 2.2 **Bright Red knitted Fabric:** This fabric shall be used to manufacture “T-Shirt”. The knitted fabric shall be made using 100% polyester multifilament yarns. The fabric used for “T-Shirt” shall be well singed, ‘Heat set’ and fully shrunk. The knitted fabric shall be treated with water repellent finishes. The treatment is given in such a way that the water when sprayed over the outer side (surface) fabric of the T-shirt, it should spread fast on the outer surface. Due to faster spreading, the evaporation of water from the surface will be fast. Beside this, water should not penetrate into the inner surface of fabric used in the T-Shirt. In case of water penetrates through the outer side of the fabric it should be able to push out the water from inside to the outer surface of the fabric with or without rubbing on the fabric. It will give dry feel to the wearer. The water repellent finishing should not affect the air permeability property of the fabric and after finishing it should be maintained

The water repellency, on face side (Spray test), Rating will be made as per IS:390:1975 method. Observations shall be done on same test specification on back side and rated as per the following:

- | | | |
|-----|----------------|------------|
| i) | Face Surface - | 50 Maximum |
| ii) | Back Surface - | 90 Minimum |

AP FIRE should be written on the back side of the T-Shirt with silver colour retro reflective tape as shown in the Figure-2. The size of the AP FIRE in length should be 20 cm and 6.5 cm in height. For more clarification, AP FIRE Service Department may be contacted.

Fig. 1: Front of T-Shirt

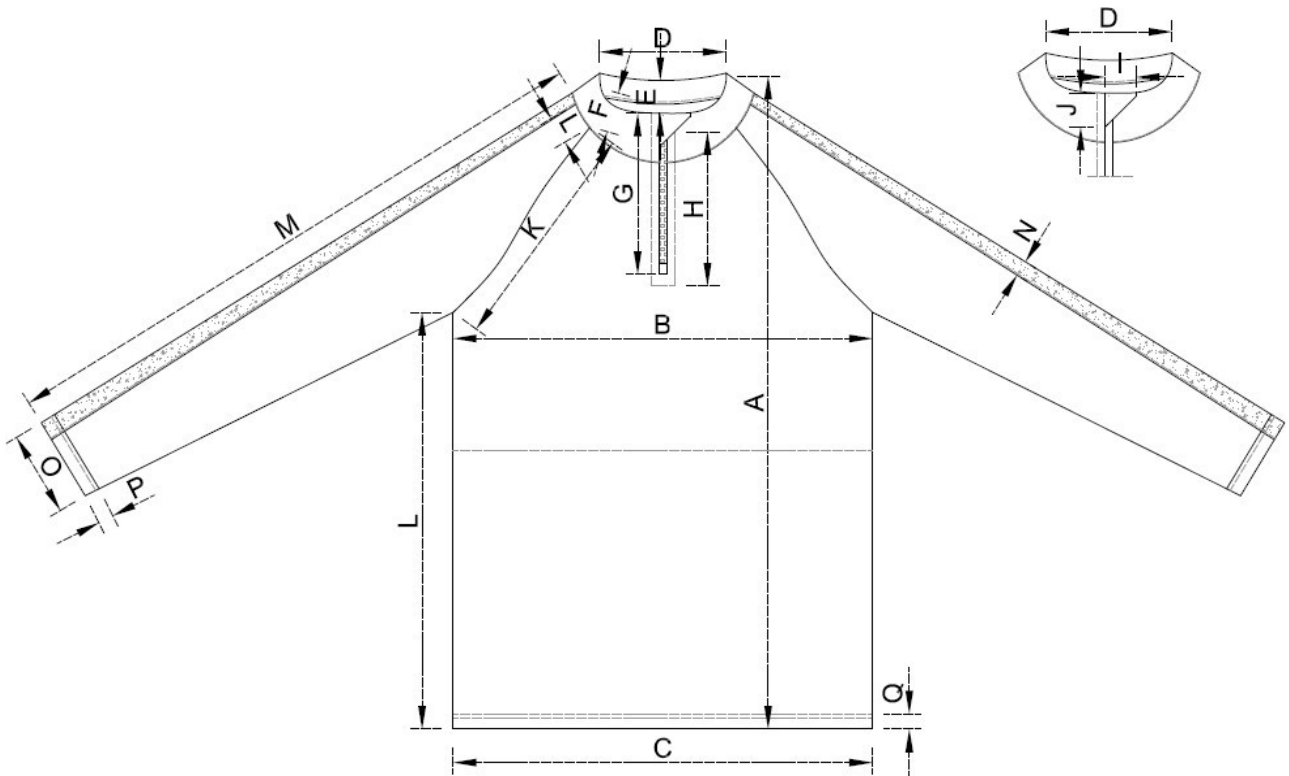
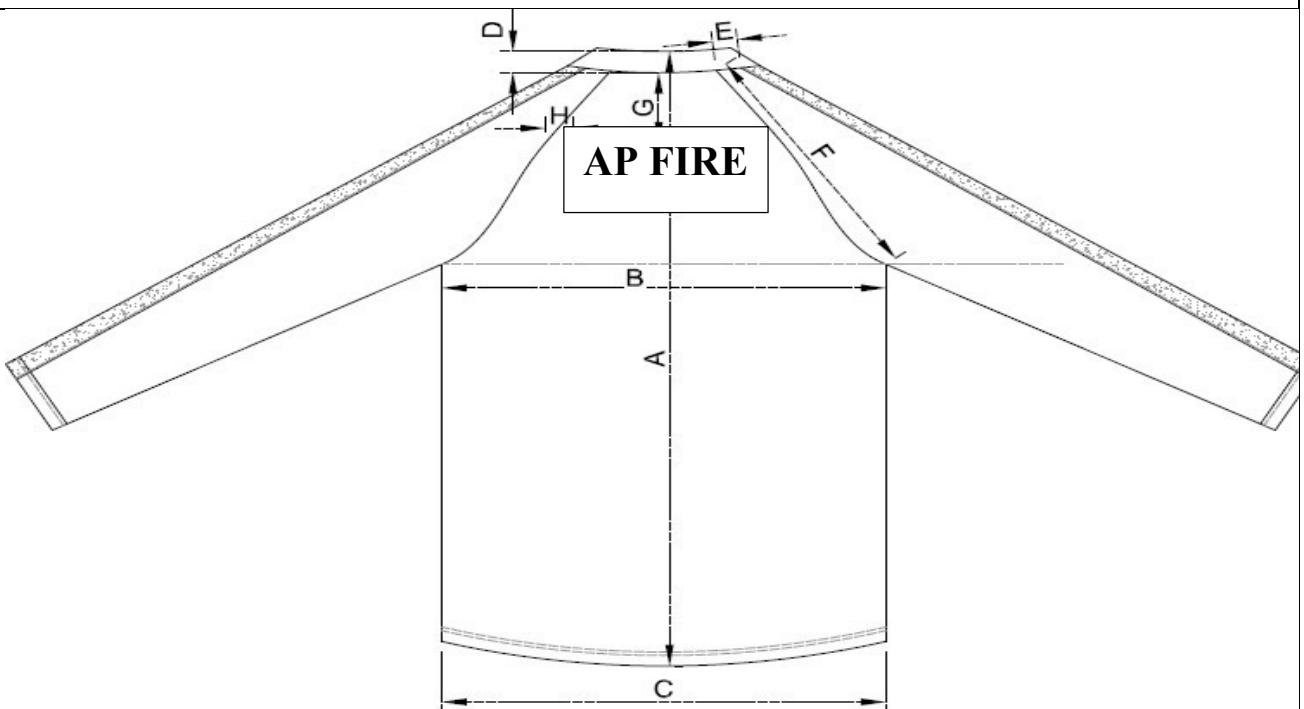


Fig. 2: Back of T-Shirt



Note: The measurement as indicated above A,B,C,D....etc will be given to the successful tender before issue of work order.

- 2.3 **Freedom from Defect:** The '*T-Shirt*' shall be visually examined. It shall be evenly stitched, free from missed stitches, holes, cuts and puckering defects. The colour of the sewing thread used for stitching shall not bleed or stain. The '*T-Shirt*' shall be free from dyeing defects such as uneven dyeing, streaks, stains.

The '*T-Shirt*' shall be free from any other defect which may significantly mark the appearance or serviceability.

3.0 STITCHING

4±0.5 stitches per cm shall be employed for assembling the "T-Shirt". The stitching shall be done with even tension and all loose ends shall be securely fastened off. Polyester Sewing thread shall be used. The colour of swing threads shall match with the colour of "T-Shirt" cloth.

4.0 WORKMANSHIP AND FINISH

The "T-Shirt" shall be free from workmanship defects i.e. texture, knitting, weaving and dyeing flaws. The "T-Shirt" shall not have missed stitches, hole, cut, oil stains or any other defect which may significantly affect the appearance or serviceability of "T-Shirt".

5.0 SEALED SAMPLE

In order to illustrate or specify the indeterminable characteristics such as general appearance luster and feel of the "T-Shirt", a sample has been agreed upon and sealed; the supply shall be conformity with the sample in such respects. The custody of the sealed sample shall be a matter of prior agreement between the buyer and seller.

6.0 MARKING

A suitable cloth label shall be securely stitched on the inner side of the waist (back side) of each 'T-Shirt'. Care labeling instruction shall be given and it shall be fastened at the place of the 'T-Shirt' as per the buyer instructions.

Following shall be marked on the cloth label:

- (a) Name of the material, namely, 'T-Shirt'
- (b) Size in cm
- (c) Any other information required by the buyer.

NOTE: The Indication on the cloth label shall be such that the colour from the label shall not bleed on the 'T-Shirt' during storage or use.

8.0 PACKAGING & PACKING

The 'T-Shirt' shall be packed in polyethylene or polypropylene bags and or in box, as required by the buyer. However, on each box the following shall be indicated:

- (a) Name of material
- (b) Size in cm
- (c) Quantity per box
- (d) Indication of the source of manufacture and
- (e) Any other information as required by the buyer or the law in force.

The boxes containing 'T-Shirt' shall be packed as agreed to between the buyer and seller.

9.0 SAMPLING AND CRITERIA FOR CONFORMITY

Sampling and criteria for conformity of the lot shall be as per the requirement of AP Fire Service Department.

10.0 REQUIREMENTS:

The “T-Shirt” shall conform to the requirements given in Table 3 . The slide fastener shall be Bright Red in colour. The length of slide fastener shall be 20±1 cm. The other requirement of the slide fasteners shall be as given in the Table 3. The vendor shall supply extra raw materials for testing purpose, if required.

TABLE 3: Requirements of Bright Red knitted fabric of T-Shirt

Sl. No.	Characteristics	Requirements	Test Method
1	Approximate count of yarn (For guidance only),	150 Denier (100% multifilament Polyester, Around 100 filaments)	IS 3442:1980
2	Blend composition, %	100% Polyester	IS 667: 1981 and IS 3416 (pt-1) :1988 (Dry mass basis)
3	Mass, gm/m ²	200±20	IS 1964:1970
4	Bursting Strength, Newton/cm ²	150±10	IS 1966: 1976
5	Colour fastness to washing - Change in colour - Staining on adjacent fabric	4 or better 4 or better	IS/ISO 105 C10 C(3) :2010
6	Colour fastness to perspiration - Change in colour - Staining on adjacent fabric	4 or better 4 or better	IS 971:1983
7	Colour fastness to rubbing - Dry - Wet	4 or better 4 or better	IS 766:1988
8	Colour fastness to light	4 or better (on Blue wool)	IS 2454:1985
9	Dimensional Change due to relaxation, both directions, percentage, maximum	2.0	IS 2977:1989

10	pH value of aqueous extract	6.0-8.5	IS 1390:1983 (Cold method)
11	Colour	$\Delta E_{cmc} \leq 2.5$	See Table 4
Slide fastener			
12	Designation	Medium - Chain width: 6.00±0.3 mm - Thickness: 2.60 mm (min.)	IS 14181: 2002 (Part-1)
13	Type	Closed end	IS 14181: 2002 (Part-1)
14	Colour	Bright Red	Visual
15	Security of interlocking of textile chain to cross wise strength	650N	IS 14181: 2002 (Part-1)
16	Security of attachment of puller to slider	250N	IS 14181: 2002 (Part-1)
17	Security of slider lock holding	40N	IS 14181: 2002 (Part-1)
Retro reflective Material			
18	Colour	Silver	Visual
19	Co-efficient of retro reflection for separate performance material (Normal state-without wash), cd/(lx.m ²), Minimum	330 (Coefficient of retro reflection at two rotation angles $\epsilon_1=0^\circ$ and $\epsilon_2=90^\circ$ should not differ) 15%	BS EN ISO 20471: 2013 (Observer angle 12', Entrance angle 5°)

II. TRUNK WEAR BERMUDA HALF & FULL TRACK (COLOUR BRIGHT RED)

1.0 SCOPE

- 1.1 The specification prescribes the requirement of “Trunk Wear Bermuda (**Bright Red colour**)” herein referred as “Bermuda”
- 1.2 This specification does not specify general appearance; feel etc of the “Bermuda”

2.0 MANUFACTURE AND FINISH

- 2.1 The design and shape of the ‘*Bermuda*’ shall be as per Figure 1, 2.
- 2.2 **Bright Red Knitted Fabric:** This fabric shall be used to manufacture “Bermuda”. The knitted fabric (for guidance of knitted structure, Annexure-C may be referred) shall be made using 100% polyester multifilament yarns. The fabric used for “Bermuda” shall be well singed, ‘Heat set’ and fully shrunk. The knitted fabric shall be treated with water repellent finishes. The treatment is given in such a way that the water when sprayed over the outer side (surface) fabric of the Bermuda, it should spread fast on the outer surface. Due to faster spreading, the evaporation of water from the surface will be fast. Beside this, water should not penetrate into the inner surface of fabric used in the Bermuda. In case of water penetrates through the outer side of the fabric it should be able to push out the water from inside to the outer surface of the fabric with or without rubbing on the fabric. It will give dry feel to the wearer. The water repellent finishing should not affect the air permeability property of the fabric and after finishing it should be maintained.

One Set of Half Bermuda and Full Track should be packed together in one Bag with the T-Shirt.

The water repellency, on face side (Spray test), Rating will be made as per IS: 390:1975 method. Observations shall be done on same test specification on bode side and rated as per the following:

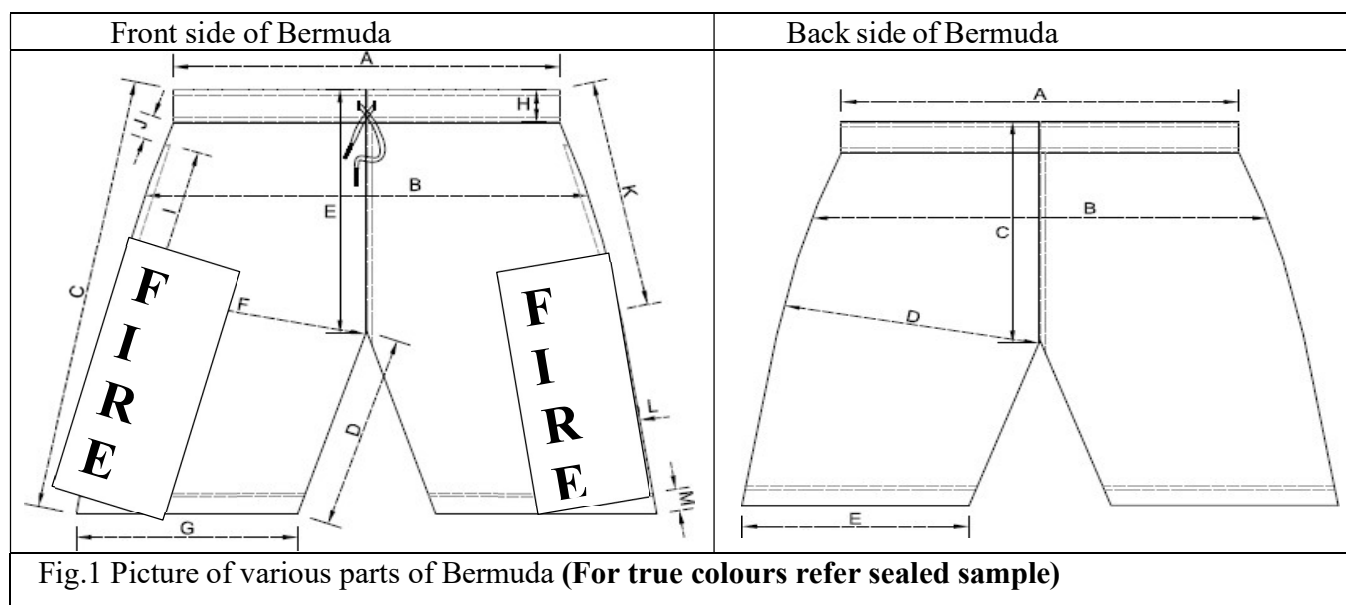
- i) Face Surface - 50 Maximum
- ii) Back Surface - 90 Minimum

- 2.3 **Drawstring:** To tight and loose Bermuda, an Bright Red colour 100% round polyester string (suitable diameter and 1540mm $\pm$ 20 mm length) shall be used. The both end of the string shall be finished with plastic/metal aglets. For more information about the round string and aglet, sample held in the custody of AP Fire Service Department may be referred.
- 2.4 **Pockets:** Bermuda shall have two side pockets. Pocket bags shall be made with same fabric and color like waistband and Bermuda. Raw edges of pocket bag shall be finished with over edge stitch.

One small packet shall be stitched at the front waist level inside the Bermuda. For more clarification, sample held in the custody of AP FIRE SERVICE DEPARTMENT may be referred.

- 2.5 The raw fabric edges at the bottom portion of the 'Bermuda' shall be folded and sewn to form a hem of 25 ± 3 mm width.
- 2.6 Waist of the 'Bermuda', shall be finished with elasticized band and draw string. Edge of the fabric shall be turned into of 55 ± 2 mm (i.e width of the waist band) and stitched with 55 ± 2 mm wide elastic tape throughout the waist band. For more clarification, sample held in the custody of AP FIRE SERVICE DEPARTMENT may be referred.
- 2.7 In the front side of Bermuda (Fig. 1 and Fig. 2), AP FIRE SERVICE DEPARTMENT shall be written using Retro reflective tape. The size of the AP FIRE SERVICE DEPARTMENT should be 20 cm in length and 6.5 cm in height. For more clarification, sample held in the custody of AP FIRE SERVICE DEPARTMENT may be referred.
- 2.8 **Dimensions:** The dimensions of 'Bermuda' when measured shall conform to the requirements given in Table 1A , Table 1B and Table 1C. Dimensions of the Bermuda shall be measured as per Annex B. For the measurement of 'Bermuda', take a 'Bermuda'; lay it flat on a horizontal surface. Remove all creases and wrinkles without distorting it. Measure corrects to the nearest millimeter the dimensions given in Table 1A, Table 1B and Table 1C.
- 2.9 **Freedom from Defect:** The 'Bermuda' shall be visually examined. It shall be evenly stitched, free from missed stitches, holes, cuts and puckering defects. The colour of the sewing thread used for stitching shall not bleed or stain. The 'Bermuda' shall be free from dyeing defects such as uneven dyeing, streaks, stains.

The 'Bermuda' shall be free from any other defect which may significantly mark the appearance or serviceability.



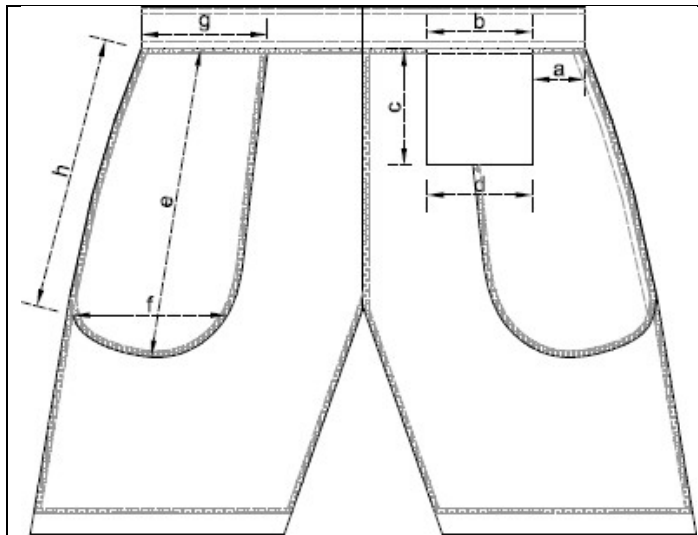


Figure 2: Inside view of the ‘Bermuda’

Note: The measurement as indicated above A,B,C,D....etc will be given to the successful tender before issue of work order.

3.0 STITCHING

Over Lock stitch having at least 4 ± 0.5 stitches per cm shall be employed for assembling the “Bermuda”. The stitching shall be done with even tension and all loose ends shall be securely fastened off. Sewing thread colour shall match with the “Bermuda” cloth.

4.0 WORKMANSHIP AND FINISH

The “Bermuda” shall be free from workmanship defects i.e. texture, weaving, dyeing flaws etc. The “Bermuda” shall not have missed stitches, hole, cut, oil stains or any other defect which may significantly affect the appearance or serviceability of “Bermuda”.

5.0 SEALED SAMPLE

In order to illustrate or specify the indeterminable characteristics such as general appearance luster and feel of the “Bermuda”, a sample has been agreed upon and sealed; the supply shall be conformity with the sample in such respects. The custody of the sealed sample shall be a matter of prior agreement between the buyer and seller.

6.0 MARKING

A suitable cloth label shall be securely stitched on the inner side of the waist (back side) of each ‘Bermuda’. Care labeling instruction shall be given and it shall be fastened at the place of the ‘Bermuda’ as per the buyer instructions.

Following shall be marked on the cloth label:

- (a) Name of the material, namely, ‘Bermuda’
- (b) Size in cm
- (c) Any other information required by the buyer.

NOTE: The Indication on the cloth label shall be such that the colour from the label shall not bleed on the ‘Bermuda’ during storage or use.

7.0 PACKAGING & PACKING

The 'Bermuda' shall be packed in polyethylene or polypropylene bags and or in box, or as agreed between the buyer and seller. However, on each box the following shall be indicated:

- (a) Name of material
- (b) Size in cm
- (c) Quantity per box
- (d) Indication of the source of manufacture and
- (e) Any other information as required by the buyer or the law in force.

8.0 SAMPLING AND CRITERIA FOR CONFORMITY

Sampling and criteria for conformity of the lot shall be as per the requirement of AP FIRE SERVICE DEPARTMENT.

9.0 Conditioning of test specimens and atmospheric conditions for testing:

The test specimen shall be tested in prevailing atmospheric conditions. In case of dispute, the sample shall be conditioned and tested in the standard atmosphere as given in IS 6359.

10.0 REQUIREMENTS:

The "Bermuda" shall conform to the requirements given in Table 3. The vendor shall supply extra raw materials for testing purpose, if required.

TABLE 3: Requirements of Bermuda

Sl. No.	Characteristics	Requirements	Test Method
Bright Red Knitted Fabric			
1	Approximate count of yarn (For guidance only),	150 Denier (100% multifilament Polyester, around 100 filaments)	IS 3442:1980
2	Blend composition, %	100% Polyester	IS 667: 1981 and IS 3416 (pt-1) :1988 (Dry mass basis)
3	Mass, gm/m ²	200±20	IS 1964:1970
4	Bursting Strength, Newton/cm ²	150±10	IS 1966: 1976
5	Colour fastness to washing - Change in colour - Staining on adjacent fabric	4 or better 4 or better	IS/ISO 105 C10 C(3) :2010
6	Colour fastness to perspiration - Change in colour - Staining on adjacent fabric	4 or better	IS 971:1983

		4 or better	
7	Colour fastness to rubbing - Dry - Wet	4 or better 4 or better	IS 766:1988
8	Colour fastness to light	4 or better (on Blue wool)	IS 2454:1985
9	Dimensional Change due to relaxation, both directions, percentage, maximum	2.0	IS 2977:1989
10	pH value of aqueous extract	6.0-8.5	IS 1390:1983 (Cold method)
11	Colour	$\Delta E_{cmc} \leq 2.5$	See Table 4
Retro reflective Material			
12	Colour	Silver	Visual
13	Co-efficient of retro reflection for separate performance material (Normal state-without wash), cd/(lx.m ²), Minimum	330 (Coefficient of retro reflection at two rotation angles $\epsilon_1=0^\circ$ and $\epsilon_2=90^\circ$ should not differ) 15%	BS EN ISO 20471: 2013 (Observer angle 12', Entrance angle 5°)

Table:4:



It is decided to procurement of OUTDOOR SUITS of Bright Red Colour consisting a pair of T-Shirt, Half-Bermula & Full Track (3 pieces).

ADDITIONAL TERMS & CONDITIONS

1.Fabrication of Mini Rescue Tender	
A	All bidders are required to submit their offers as follows: -
1.	Documents Only those Bidders who are in the line of fabrication and are in a position to complete the supplies within the 90 days time should quote. 2. The Bidder should possess experience in fabrication of at least 30 Nos. Water Tenders/ Water Bousers/Foam Tenders/Multi Purpose Water Tenders or similar type of Fire Fighting Appliances during the last 05 Years. They should also have facility for vehicle stability test as per relevant I.S. Codes. The Bidder having the above experience and test facility need only submit their offers. The Bidder shall furnish the details in the relevant schedule along with documentary evidence along with their offer for the above-mentioned conditions.
3.	The Bidders must submit the following documents pertaining to the Firm along with the Tender: i. Company/Firm Registration Certificate. ii. Minimum Average Annual Financial Turnover for the last 3 years. iii. GST Registration Certificate. iv. NFPA Certificate, if applicable. v. NSIC/UDYAM Certificate, if applicable. vi. EMD payment details. vii. Certificates/Orders regarding Previous performance. viii. Supply Orders regarding similar items supplied elsewhere together with satisfactory certificate. Note: The Bidder should ensure to sign and seal on each page of Bid Specification and Additional Terms and Conditions (ATC) and submit.
4.	<u>COMMERCIAL/ PRICE BID:</u> a. Bidders are required to quote rates on free delivery at Consignee location basis only. Bids received on far Destination Stations/ Station of dispatch basis or different rates for different destinations shall be summarily rejected. Rates should be quoted in figures and words clearly INCLUSIVE OF GST, ALL TAXES, DUTIES, DISCOUNTS, TRANSPORTATION COST if any etc., ON SITE WARRANTY as mentioned in the tender. b. The decision of Director General of State Disaster Response and Fire Services, Andhra Pradesh shall be final as regards the acceptability of tendered articles and goods to be supplied by the Bidders.
5.	<u>SUPPLY ORDER:</u> Quantity: The Purchase Order will be issued to the lowest quoted price (L1) bidder, subject to the availability and release of funds by the Government.

(Contd...2)

6.	<u>INSPECTION :</u> The successful Tenderer shall have the work inspected and approved at the following stages by the Officers nominated by the Director General of State Disaster Response and Fire Services along with one of the following authorized agencies to be selected by the Department. i. Under writers Laboratories Inc. (UI India Private Limited) ii. Indian Register of Shipping (IRS Inspection services) iii. Any other specialized Organized agencies approved by the Government. The firm should meet the inspection charges and travel expenses of the officers of the above agencies. The acceptance of the items is subject to inspection by officers of Andhra Pradesh State Disaster Response and Fire Services Department and the representatives of the one of the above agencies, in stages as suggested in the Technical Tender Specification.
7.	<u>DELIVERY:</u> a. The Fire Vehicles supplied shall strictly conform to the approved drawings and specifications. Any deviation shall render the vehicles liable for rejection, and they shall be returned to the bidder at their own cost for replacement within 30 days. Simultaneously, appropriate action may be initiated, which may include a reduction in the payable rate by up to 10%, blacklisting of the firm, forfeiture of the Earnest Money Deposit and/or Security Deposit, and procurement of the items from alternative sources at the risk and cost of the bidder. b. The goods should be delivered to the Assistant Equipment Officer, State Stores, C/o District Fire Officer, Guntur, Near Collectorate Compound, Guntur District. c. The date mentioned in the Purchase Order for arranging supplies should be construed as date on or before which supplies should be received by the Consignee and should not be taken as the date for dispatching stores. d. Unless and until prior extension in delivery period is applied for and granted, the execution of the supplies after the delivery date mentioned in this order shall be deemed to constitute breach of contract and shall attract condition No. (a) above e. The goods on their receipt will be inspected by the committee of the Department. The goods not as per the sample/specification/damaged shall be rejected by the line committee duly recording the reasons for rejection. f. Liquidated Damages: In case the Firm does not complete the supply within delivery period, liquidated damages will be charged @ 5% of the total cost of items ordered on the Bidder and if required, action will be taken against the Firm to Blacklist it and also for forfeiture of its ePBG. g. Advance delivery prior to issue of Purchase Order will not be accepted. h. Dispatch Instructions: • All the supplies should be delivered to the consignee in the manufacturer's original packing and original markings. • The bill of cost inclusive of all taxes, transport etc., should be submitted in triplicate to this office for arranging necessary payment i. The Bidders should affix stamp clearly of the concerned Firm on each item supplied by them after issue of Purchase Order while making delivery to this office Central Stores.
8.	<u>GENERAL CONDITIONS</u>
I	The Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh reserves himself the right to reject any tender which does not comply with the conditions
II	The Director General reserves the right to obtain the performance reports from the Government organizations to whom the Tenderer supplied the goods previously and reserves the right to reject the Tender.

III	The Bids will be received by the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh through GeM as per the particulars given in the Tender Schedule in two phases, i.e. Technical and Financial bid.
IV	If the date originally scheduled for opening of the Bids gets declared by Government at a later stage as public holiday, the Bids will be opened on the next working day at the same time.
V	Failure to abide by any of the conditions stated above will result in the Bid being rejected without notice.
VI	If any dispute arises as to the quality of stores supplied, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, shall be final and furnish the reasons in writing for rejection of the supplies to that effect. Rejected goods or materials shall be removed at the expenses of bidder within seven days, after the notice has been given to the bidder. If not removed, the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, may cause the goods or materials to be removed and penalize the bidder with all expenses incurred in such removal.
VII	In case of any breach of contract, Terms of Agreement and Purchase Order and its conditions, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, is final and binding on the bidder.
VIII	The contract or any part of it shall not to be transferred or assigned by the bidder directly or indirectly to any other agencies whom-so-ever without the written consent of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh,.
IX	In case of any dispute, the matter can be referred to competent Court at Vijayawada city only and not anywhere else.
9.	GUARANTEE/WARRANTY
I	Except as otherwise provided in the invitation to the tender, the bidder shall declare that the goods, stores, articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained/mentioned in the contract.
II	The bidder hereby guarantees that the said stores would continue to conform to the description and quality aforesaid for a period 24 calendar months of warranty from the date of delivery of the said stores to the purchaser notwithstanding the fact that the purchaser (Inspecting Authority) may have inspected and/or approved the said stores.
III	If during the aforesaid period of warranty, the said stores be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the bidder and purchaser shall be entitled to call upon the bidder to rectify the stores or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the bidder and in such an event, the above mentioned warranty period shall apply to the stores from the date of rectification thereof.
IV	In case of failure of the bidder to rectify or replace the goods etc. within specified time, the purchaser shall be entitled to recover the cost with all expenses from the bidder for such defective stores.
V	In the event of contract being cancelled for any breach committed and the purchaser affecting re-purchase of the stores at the risk and the cost of the bidder, the purchaser is not bound to accept the lower offer of allied or sister concern of the bidder.
VI	Purchaser will not pay separately for transit insurance and the supplier will be responsible till the entire stores contracted for, arrive in good condition at the destination. The consignee, as soon as possible but not later than 30 days of the date of arrival of the stores at destination, notify to the bidder any loss or changes to the stores that may have occurred during the transit.
VII	Bidders who are past suppliers of the item as per T/E Specification should submit their performance statement in enclosed Proforma. In case, it is found that information furnished is incomplete or incorrect, their tender will be liable to be ignored.

VIII	GOVT. POLICY The purchaser reserves the option to give a purchase/price preference to offers from the public sector units and / or from other Firms in accordance with the policies of the Govt. from time to time.
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CHECKLIST FOR TECHNICAL BID

Name of Firm/Dealer/Supplier: _____

S. No.	Details	Remarks of the Bidder
1	Company/Firm Registration Certificate.	
2	Minimum Average Annual Financial Turnover for the last 3 years.	
3	GST Certificate	
4	NSIC/UDYAM Certificate, if applicable	
5	NFPA Certificate, (if applicable)	
6	EMD payment details.	
7	Certificates/Orders regarding Previous Purchase orders.	
8	Supply Orders regarding similar chassis supplied elsewhere other State Fire Services.	
9	Authorization Letter of OEM, if applicable.	
10	Should ensure to sign and seal on each page of Bid Specifications & Additional Terms and Conditions(ATC).	
11	Any other documents, as required.	

Signature of the Bidder

ADDITIONAL TERMS & CONDITIONS

2. Water Tender with Search and Rescue Equipment	
A	All bidders are required to submit their offers as follows: - 1. Documents Only those Bidders who are in the line of fabrication and are in a position to complete the supplies within the 90 days time should quote. 2. The Bidder should possess experience in fabrication of at least 30 Nos. Water Tenders/ Water Bousers/Foam Tenders/Multi Purpose Water Tenders or similar type of Fire Fighting Appliances during the last 05 Years. They should also have facility for vehicle stability test as per relevant I.S. Codes. The Bidder having the above experience and test facility need only submit their offers. The Bidder shall furnish the details in the relevant schedule along with documentary evidence along with their offer for the above-mentioned conditions.
3.	The Bidders must submit the following documents pertaining to the Firm along with the Tender: i. Company/Firm Registration Certificate. ii. Minimum Average Annual Financial Turnover for the last 3 years. iii. GST Registration Certificate. iv. NFPA Certificate, if applicable. v. NSIC/UDYAM Certificate, if applicable. vi. EMD payment details. vii. Certificates/Orders regarding Previous performance. viii. Supply Orders regarding similar items supplied elsewhere together with satisfactory certificate. Note: The Bidder should ensure to sign and seal on each page of Bid Specification and Additional Terms and Conditions (ATC) and submit.
4.	<u>COMMERCIAL/ PRICE BID:</u> a. Bidders are required to quote rates on free delivery at Consignee location basis only. Bids received on far Destination Stations/ Station of dispatch basis or different rates for different destinations shall be summarily rejected. Rates should be quoted in figures and words clearly INCLUSIVE OF GST, ALL TAXES, DUTIES, DISCOUNTS, TRANSPORTATION COST if any etc., ON SITE WARRANTY as mentioned in the tender. b. The decision of Director General of State Disaster Response and Fire Services, Andhra Pradesh shall be final as regards the acceptability of tendered articles and goods to be supplied by the Bidders.
5.	<u>SUPPLY ORDER:</u> Quantity: The Purchase Order may be split among multiple bidders in accordance with the lowest quoted price (L1), subject to the availability and release of funds by the Government. Bidders other than L1 may be considered for allocation after matching the L1 price. The distribution among the bidders will be at the discretion of the Store Purchase Committee

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6.	<u>INSPECTION :</u> The successful Tenderer shall have the work inspected and approved at the following stages by the Officers nominated by the Director General of State Disaster Response and Fire Services along with one of the following authorized agencies to be selected by the Department. - Under writers Laboratories Inc. (UI India Private Limited) - Indian Register of Shipping (IRS Inspection services) - Any other specialized Organized agencies approved by the Government. The firm should meet the inspection charges and travel expenses of the officers of the above agencies. The acceptance of the items is subject to inspection by officers of Andhra Pradesh State Disaster Response and Fire Services Department and the representatives of the one of the above agencies, in stages as suggested in the Technical Tender Specification.
7.	<u>DELIVERY:</u> - The Fire Vehicles supplied shall strictly conform to the approved drawings and specifications. Any deviation shall render the vehicles liable for rejection, and they shall be returned to the bidder at their own cost for replacement within 30 days. Simultaneously, appropriate action may be initiated, which may include a reduction in the payable rate by up to 10%, blacklisting of the firm, forfeiture of the Earnest Money Deposit and/or Security Deposit, and procurement of the items from alternative sources at the risk and cost of the bidder. - The goods should be delivered to the Assistant Equipment Officer, State Stores, C/o District Fire Officer, Guntur, Near Collectorate Compound, Guntur District. - The date mentioned in the Purchase Order for arranging supplies should be construed as date on or before which supplies should be received by the Consignee and should not be taken as the date for dispatching stores. - Unless and until prior extension in delivery period is applied for and granted, the execution of the supplies after the delivery date mentioned in this order shall be deemed to constitute breach of contract and shall attract condition No. (a) above - The goods on their receipt will be inspected by the committee of the Department. The goods not as per the sample/specification/damaged shall be rejected by the line committee duly recording the reasons for rejection. - Liquidated Damages: In case the Firm does not complete the supply within delivery period, liquidated damages will be charged @ 5% of the total cost of items ordered on the Bidder and if required, action will be taken against the Firm to Blacklist it and also for forfeiture of its ePBG. - Advance delivery prior to issue of Purchase Order will not be accepted. - Dispatch Instructions: - All the supplies should be delivered to the consignee in the manufacturer's original packing and original markings. - The bill of cost inclusive of all taxes, transport etc., should be submitted in triplicate to this office for arranging necessary payment - The Bidders should affix stamp clearly of the concerned Firm on each item supplied by them after issue of Purchase Order while making delivery to this office Central Stores.
8.	<u>GENERAL CONDITIONS</u>
I	The Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh reserves himself the right to reject any tender which does not comply with the conditions
II	The Director General reserves the right to obtain the performance reports from the Government organizations to whom the Tenderer supplied the goods previously and reserves the right to reject the Tender.

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III	The Bids will be received by the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh through GeM as per the particulars given in the Tender Schedule in two phases, i.e. Technical and Financial bid.
IV	If the date originally scheduled for opening of the Bids gets declared by Government at a later stage as public holiday, the Bids will be opened on the next working day at the same time.
V	Failure to abide by any of the conditions stated above will result in the Bid being rejected without notice.
VI	If any dispute arises as to the quality of stores supplied, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, shall be final and furnish the reasons in writing for rejection of the supplies to that effect. Rejected goods or materials shall be removed at the expenses of bidder within seven days, after the notice has been given to the bidder. If not removed, the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, may cause the goods or materials to be removed and penalize the bidder with all expenses incurred in such removal.
VII	In case of any breach of contract, Terms of Agreement and Purchase Order and its conditions, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, is final and binding on the bidder.
VIII	The contract or any part of it shall not to be transferred or assigned by the bidder directly or indirectly to any other agencies whom-so-ever without the written consent of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh.
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II	The bidder hereby guarantees that the said stores would continue to conform to the description and quality aforesaid for a period 24 calendar months of warranty from the date of delivery of the said stores to the purchaser notwithstanding the fact that the purchaser (Inspecting Authority) may have inspected and/or approved the said stores.
III	If during the aforesaid period of warranty, the said stores be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the bidder and purchaser shall be entitled to call upon the bidder to rectify the stores or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the bidder and in such an event, the above mentioned warranty period shall apply to the stores from the date of rectification thereof.
IV	In case of failure of the bidder to rectify or replace the goods etc. within specified time, the purchaser shall be entitled to recover the cost with all expenses from the bidder for such defective stores.
V	In the event of contract being cancelled for any breach committed and the purchaser affecting re-purchase of the stores at the risk and the cost of the bidder, the purchaser is not bound to accept the lower offer of allied or sister concern of the bidder.
VI	Purchaser will not pay separately for transit insurance and the supplier will be responsible till the entire stores contracted for, arrive in good condition at the destination. The consignee, as soon as possible but not later than 30 days of the date of arrival of the stores at destination, notify to the bidder any loss or changes to the stores that may have occurred during the transit.
VII	Bidders who are past suppliers of the item as per T/E Specification should submit their performance statement in enclosed Proforma. In case, it is found that information furnished is incomplete or incorrect, their tender will be liable to be ignored.

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VIII	GOVT. POLICY : The purchaser reserves the option to give a purchase/price preference to offers from the public sector units and / or from other Firms in accordance with the policies of the Govt. from time to time.
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CHECKLIST FOR TECHNICAL BID

Name of Firm/Dealer/Supplier: _____

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6	EMD payment details.	
7	Certificates/Orders regarding Previous Purchase orders.	
8	Supply Orders regarding similar chassis supplied elsewhere other State Fire Services.	
9	Authorization Letter of OEM, if applicable.	
10	Should ensure to sign and seal on each page of Bid Specifications & Additional Terms and Conditions(ATC).	
11	Any other documents, as required.	

Signature of the Bidder

ADDITIONAL TERMS & CONDITIONS

3.Fabrication of Breathing Apparatus (BA) VAN	
A	All bidders are required to submit their offers as follows: -
1.	Documents Only those Bidders who are in the line of fabrication and are in a position to complete the supplies within the 90 days time should quote. 2. The Bidder should possess experience in fabrication of at least 30 Nos. Water Tenders/ Water Bousers/Foam Tenders/Multi Purpose Water Tenders or similar type of Fire Fighting Appliances during the last 05 Years. They should also have facility for vehicle stability test as per relevant I.S. Codes. The Bidder having the above experience and test facility need only submit their offers. The Bidder shall furnish the details in the relevant schedule along with documentary evidence along with their offer for the above-mentioned conditions.
3.	The Bidders must submit the following documents pertaining to the Firm along with the Tender: i. Company/Firm Registration Certificate. ii. Minimum Average Annual Financial Turnover for the last 3 years. iii. GST Registration Certificate. iv. NFPA Certificate, if applicable. v. NSIC/UDYAM Certificate, if applicable. vi. EMD payment details. vii. Certificates/Orders regarding Previous performance. viii. Supply Orders regarding similar items supplied elsewhere together with satisfactory certificate. Note: The Bidder should ensure to sign and seal on each page of Bid Specification and Additional Terms and Conditions (ATC) and submit.
4.	<u>COMMERCIAL/ PRICE BID:</u> a. Bidders are required to quote rates on free delivery at Consignee location basis only. Bids received on far Destination Stations/ Station of dispatch basis or different rates for different destinations shall be summarily rejected. Rates should be quoted in figures and words clearly INCLUSIVE OF GST, ALL TAXES, DUTIES, DISCOUNTS, TRANSPORTATION COST if any etc., ON SITE WARRANTY as mentioned in the tender. b. The decision of Director General of State Disaster Response and Fire Services, Andhra Pradesh shall be final as regards the acceptability of tendered articles and goods to be supplied by the Bidders.
5.	<u>SUPPLY ORDER:</u> Quantity: The Purchase Order will be issued to the lowest quoted price (L1) bidder, subject to the availability and release of funds by the Government.

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6.	<u>INSPECTION :</u> The successful Tenderer shall have the work inspected and approved at the following stages by the Officers nominated by the Director General of State Disaster Response and Fire Services along with one of the following authorized agencies to be selected by the Department. - Under writers Laboratories Inc. (UI India Private Limited) - Indian Register of Shipping (IRS Inspection services) - Any other specialized Organized agencies approved by the Government. The firm should meet the inspection charges and travel expenses of the officers of the above agencies. The acceptance of the items is subject to inspection by officers of Andhra Pradesh State Disaster Response and Fire Services Department and the representatives of the one of the above agencies, in stages as suggested in the Technical Tender Specification.
7.	<u>DELIVERY:</u> - The Fire Vehicles supplied shall strictly conform to the approved drawings and specifications. Any deviation shall render the vehicles liable for rejection, and they shall be returned to the bidder at their own cost for replacement within 30 days. Simultaneously, appropriate action may be initiated, which may include a reduction in the payable rate by up to 10%, blacklisting of the firm, forfeiture of the Earnest Money Deposit and/or Security Deposit, and procurement of the items from alternative sources at the risk and cost of the bidder. - The goods should be delivered to the Assistant Equipment Officer, State Stores, C/o District Fire Officer, Guntur, Near Collectorate Compound, Guntur District. - The date mentioned in the Purchase Order for arranging supplies should be construed as date on or before which supplies should be received by the Consignee and should not be taken as the date for dispatching stores. - Unless and until prior extension in delivery period is applied for and granted, the execution of the supplies after the delivery date mentioned in this order shall be deemed to constitute breach of contract and shall attract condition No. (a) above - The goods on their receipt will be inspected by the committee of the Department. The goods not as per the sample/specification/damaged shall be rejected by the line committee duly recording the reasons for rejection. - Liquidated Damages: In case the Firm does not complete the supply within delivery period, liquidated damages will be charged @ 5% of the total cost of items ordered on the Bidder and if required, action will be taken against the Firm to Blacklist it and also for forfeiture of its ePBG. - Advance delivery prior to issue of Purchase Order will not be accepted. - Dispatch Instructions: - All the supplies should be delivered to the consignee in the manufacturer's original packing and original markings. - The bill of cost inclusive of all taxes, transport etc., should be submitted in triplicate to this office for arranging necessary payment - The Bidders should affix stamp clearly of the concerned Firm on each item supplied by them after issue of Purchase Order while making delivery to this office Central Stores.
8.	<u>GENERAL CONDITIONS</u>
I	The Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh reserves himself the right to reject any tender which does not comply with the conditions
II	The Director General reserves the right to obtain the performance reports from the Government organizations to whom the Tenderer supplied the goods previously and reserves the right to reject the Tender.

III	The Bids will be received by the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh through GeM as per the particulars given in the Tender Schedule in two phases, i.e. Technical and Financial bid.
IV	If the date originally scheduled for opening of the Bids gets declared by Government at a later stage as public holiday, the Bids will be opened on the next working day at the same time.
V	Failure to abide by any of the conditions stated above will result in the Bid being rejected without notice.
VI	If any dispute arises as to the quality of stores supplied, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, shall be final and furnish the reasons in writing for rejection of the supplies to that effect. Rejected goods or materials shall be removed at the expenses of bidder within seven days, after the notice has been given to the bidder. If not removed, the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, may cause the goods or materials to be removed and penalize the bidder with all expenses incurred in such removal.
VII	In case of any breach of contract, Terms of Agreement and Purchase Order and its conditions, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, is final and binding on the bidder.
VIII	The contract or any part of it shall not to be transferred or assigned by the bidder directly or indirectly to any other agencies whom-so-ever without the written consent of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh,.
IX	In case of any dispute, the matter can be referred to competent Court at Vijayawada city only and not anywhere else.
9.	GUARANTEE/WARRANTY
I	Except as otherwise provided in the invitation to the tender, the bidder shall declare that the goods, stores, articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained/mentioned in the contract.
II	The bidder hereby guarantees that the said stores would continue to conform to the description and quality aforesaid for a period 24 calendar months of warranty from the date of delivery of the said stores to the purchaser notwithstanding the fact that the purchaser (Inspecting Authority) may have inspected and/or approved the said stores.
III	If during the aforesaid period of warranty, the said stores be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the bidder and purchaser shall be entitled to call upon the bidder to rectify the stores or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the bidder and in such an event, the above mentioned warranty period shall apply to the stores from the date of rectification thereof.
IV	In case of failure of the bidder to rectify or replace the goods etc. within specified time, the purchaser shall be entitled to recover the cost with all expenses from the bidder for such defective stores.
V	In the event of contract being cancelled for any breach committed and the purchaser affecting re-purchase of the stores at the risk and the cost of the bidder, the purchaser is not bound to accept the lower offer of allied or sister concern of the bidder.
VI	Purchaser will not pay separately for transit insurance and the supplier will be responsible till the entire stores contracted for, arrive in good condition at the destination. The consignee, as soon as possible but not later than 30 days of the date of arrival of the stores at destination, notify to the bidder any loss or changes to the stores that may have occurred during the transit.
VII	Bidders who are past suppliers of the item as per T/E Specification should submit their performance statement in enclosed Proforma. In case, it is found that information furnished is incomplete or incorrect, their tender will be liable to be ignored.

VIII	GOVT. POLICY The purchaser reserves the option to give a purchase/price preference to offers from the public sector units and / or from other Firms in accordance with the policies of the Govt. from time to time.
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CHECKLIST FOR TECHNICAL BID

Name of Firm/Dealer/Supplier: _____

S. No.	Details	Remarks of the Bidder
1	Company/Firm Registration Certificate.	
2	Minimum Average Annual Financial Turnover for the last 3 years.	
3	GST Certificate	
4	NSIC/UDYAM Certificate, if applicable	
5	NFPA Certificate, (if applicable)	
6	EMD payment details.	
7	Certificates/Orders regarding Previous Purchase orders.	
8	Supply Orders regarding similar chassis supplied elsewhere other State Fire Services.	
9	Authorization Letter of OEM, if applicable.	
10	Should ensure to sign and seal on each page of Bid Specifications & Additional Terms and Conditions(ATC).	
11	Any other documents, as required.	

Signature of the Bidder

ADDITIONAL TERMS & CONDITIONS

4.Fabrication of HAZMAT Vehicle	
A	All bidders are required to submit their offers as follows: -
1.	Documents Only those Bidders who are in the line of fabrication and are in a position to complete the supplies within the 90 days time should quote. 2. The Bidder should possess experience in fabrication of at least 30 Nos. Water Tenders/ Water Bousers/Foam Tenders/Multi Purpose Water Tenders or similar type of Fire Fighting Appliances during the last 05 Years. They should also have facility for vehicle stability test as per relevant I.S. Codes. The Bidder having the above experience and test facility need only submit their offers. The Bidder shall furnish the details in the relevant schedule along with documentary evidence along with their offer for the above-mentioned conditions.
3.	The Bidders must submit the following documents pertaining to the Firm along with the Tender: i. Company/Firm Registration Certificate. ii. Minimum Average Annual Financial Turnover for the last 3 years. iii. GST Registration Certificate. iv. NFPA Certificate, if applicable. v. NSIC/UDYAM Certificate, if applicable. vi. EMD payment details. vii. Certificates/Orders regarding Previous performance. viii. Supply Orders regarding similar items supplied elsewhere together with satisfactory certificate. Note: The Bidder should ensure to sign and seal on each page of Bid Specification and Additional Terms and Conditions (ATC) and submit.
4.	<u>COMMERCIAL/ PRICE BID:</u> a. Bidders are required to quote rates on free delivery at Consignee location basis only. Bids received on far Destination Stations/ Station of dispatch basis or different rates for different destinations shall be summarily rejected. Rates should be quoted in figures and words clearly INCLUSIVE OF GST, ALL TAXES, DUTIES, DISCOUNTS, TRANSPORTATION COST if any etc., ON SITE WARRANTY as mentioned in the tender. b. The decision of Director General of State Disaster Response and Fire Services, Andhra Pradesh shall be final as regards the acceptability of tendered articles and goods to be supplied by the Bidders.
5.	<u>SUPPLY ORDER:</u> Quantity: The Purchase Order will be issued to the lowest quoted price (L1) bidder, subject to the availability and release of funds by the Government.

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6.	<u>INSPECTION :</u> The successful Tenderer shall have the work inspected and approved at the following stages by the Officers nominated by the Director General of State Disaster Response and Fire Services along with one of the following authorized agencies to be selected by the Department. - Under writers Laboratories Inc. (UI India Private Limited) - Indian Register of Shipping (IRS Inspection services) - Any other specialized Organized agencies approved by the Government. The firm should meet the inspection charges and travel expenses of the officers of the above agencies. The acceptance of the items is subject to inspection by officers of Andhra Pradesh State Disaster Response and Fire Services Department and the representatives of the one of the above agencies, in stages as suggested in the Technical Tender Specification.
7.	<u>DELIVERY:</u> - The Fire Vehicles supplied shall strictly conform to the approved drawings and specifications. Any deviation shall render the vehicles liable for rejection, and they shall be returned to the bidder at their own cost for replacement within 30 days. Simultaneously, appropriate action may be initiated, which may include a reduction in the payable rate by up to 10%, blacklisting of the firm, forfeiture of the Earnest Money Deposit and/or Security Deposit, and procurement of the items from alternative sources at the risk and cost of the bidder. - The goods should be delivered to the Assistant Equipment Officer, State Stores, C/o District Fire Officer, Guntur, Near Collectorate Compound, Guntur District. - The date mentioned in the Purchase Order for arranging supplies should be construed as date on or before which supplies should be received by the Consignee and should not be taken as the date for dispatching stores. - Unless and until prior extension in delivery period is applied for and granted, the execution of the supplies after the delivery date mentioned in this order shall be deemed to constitute breach of contract and shall attract condition No. (a) above - The goods on their receipt will be inspected by the committee of the Department. The goods not as per the sample/specification/damaged shall be rejected by the line committee duly recording the reasons for rejection. - Liquidated Damages: In case the Firm does not complete the supply within delivery period, liquidated damages will be charged @ 5% of the total cost of items ordered on the Bidder and if required, action will be taken against the Firm to Blacklist it and also for forfeiture of its ePBG. - Advance delivery prior to issue of Purchase Order will not be accepted. - Dispatch Instructions: - All the supplies should be delivered to the consignee in the manufacturer's original packing and original markings. - The bill of cost inclusive of all taxes, transport etc., should be submitted in triplicate to this office for arranging necessary payment - The Bidders should affix stamp clearly of the concerned Firm on each item supplied by them after issue of Purchase Order while making delivery to this office Central Stores.
8.	<u>GENERAL CONDITIONS</u>
I	The Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh reserves himself the right to reject any tender which does not comply with the conditions
II	The Director General reserves the right to obtain the performance reports from the Government organizations to whom the Tenderer supplied the goods previously and reserves the right to reject the Tender.

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III	The Bids will be received by the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh through GeM as per the particulars given in the Tender Schedule in two phases, i.e. Technical and Financial bid.
IV	If the date originally scheduled for opening of the Bids gets declared by Government at a later stage as public holiday, the Bids will be opened on the next working day at the same time.
V	Failure to abide by any of the conditions stated above will result in the Bid being rejected without notice.
VI	If any dispute arises as to the quality of stores supplied, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, shall be final and furnish the reasons in writing for rejection of the supplies to that effect. Rejected goods or materials shall be removed at the expenses of bidder within seven days, after the notice has been given to the bidder. If not removed, the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, may cause the goods or materials to be removed and penalize the bidder with all expenses incurred in such removal.
VII	In case of any breach of contract, Terms of Agreement and Purchase Order and its conditions, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, is final and binding on the bidder.
VIII	The contract or any part of it shall not to be transferred or assigned by the bidder directly or indirectly to any other agencies whom-so-ever without the written consent of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh.
IX	In case of any dispute, the matter can be referred to competent Court at Vijayawada city only and not anywhere else.
9.	GUARANTEE/WARRANTY
I	Except as otherwise provided in the invitation to the tender, the bidder shall declare that the goods, stores, articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained/mentioned in the contract.
II	The bidder hereby guarantees that the said stores would continue to conform to the description and quality aforesaid for a period 24 calendar months of warranty from the date of delivery of the said stores to the purchaser notwithstanding the fact that the purchaser (Inspecting Authority) may have inspected and/or approved the said stores.
III	If during the aforesaid period of warranty, the said stores be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the bidder and purchaser shall be entitled to call upon the bidder to rectify the stores or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the bidder and in such an event, the above mentioned warranty period shall apply to the stores from the date of rectification thereof.
IV	In case of failure of the bidder to rectify or replace the goods etc. within specified time, the purchaser shall be entitled to recover the cost with all expenses from the bidder for such defective stores.
V	In the event of contract being cancelled for any breach committed and the purchaser affecting re-purchase of the stores at the risk and the cost of the bidder, the purchaser is not bound to accept the lower offer of allied or sister concern of the bidder.
VI	Purchaser will not pay separately for transit insurance and the supplier will be responsible till the entire stores contracted for, arrive in good condition at the destination. The consignee, as soon as possible but not later than 30 days of the date of arrival of the stores at destination, notify to the bidder any loss or changes to the stores that may have occurred during the transit.
VII	Bidders who are past suppliers of the item as per T/E Specification should submit their performance statement in enclosed Proforma. In case, it is found that information furnished is incomplete or incorrect, their tender will be liable to be ignored.

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VIII	GOVT. POLICY The purchaser reserves the option to give a purchase/price preference to offers from the public sector units and / or from other Firms in accordance with the policies of the Govt. from time to time.
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CHECKLIST FOR TECHNICAL BID

Name of Firm/Dealer/Supplier: _____

S. No.	Details	Remarks of the Bidder
1	Company/Firm Registration Certificate.	
2	Minimum Average Annual Financial Turnover for the last 3 years.	
3	GST Certificate	
4	NSIC/UDYAM Certificate, if applicable	
5	NFPA Certificate, (if applicable)	
6	EMD payment details.	
7	Certificates/Orders regarding Previous Purchase orders.	
8	Supply Orders regarding similar chassis supplied elsewhere other State Fire Services.	
9	Authorization Letter of OEM, if applicable.	
10	Should ensure to sign and seal on each page of Bid Specifications & Additional Terms and Conditions(ATC).	
11	Any other documents, as required.	

Signature of the Bidder

ADDITIONAL TERMS & CONDITIONS

5. Mini Water Tender for Water Mist Technology	
A	All bidders are required to submit their offers as follows: -
1.	Documents Only those Bidders who are in the line of fabrication and are in a position to complete the supplies within the 90 days time should quote. The Bidder should possess experience in fabrication of at least 30 Nos. Water Tenders/ Water Bousers/Foam Tenders/Multi Purpose Water Tenders or similar type of Fire Fighting Appliances during the last 05 Years. They should also have facility for vehicle stability test as per relevant I.S. Codes. The Bidder having the above experience and test facility need only submit their offers. The Bidder shall furnish the details in the relevant schedule along with documentary evidence along with their offer for the above-mentioned conditions.
3.	The Bidders must submit the following documents pertaining to the Firm along with the Tender: i. Company/Firm Registration Certificate. ii. Minimum Average Annual Financial Turnover for the last 3 years. iii. GST Registration Certificate. iv. NFPA Certificate, if applicable. v. NSIC/UDYAM Certificate, if applicable. vi. EMD payment details. vii. Certificates/Orders regarding Previous performance. viii. Supply Orders regarding similar items supplied elsewhere together with satisfactory certificate. Note: The Bidder should ensure to sign and seal on each page of Bid Specification and Additional Terms and Conditions (ATC) and submit.
4.	<u>COMMERCIAL/ PRICE BID:</u> a. Bidders are required to quote rates on free delivery at Consignee location basis only. Bids received on far Destination Stations/ Station of dispatch basis or different rates for different destinations shall be summarily rejected. Rates should be quoted in figures and words clearly INCLUSIVE OF GST, ALL TAXES, DUTIES, DISCOUNTS, TRANSPORTATION COST if any etc., ON SITE WARRANTY as mentioned in the tender. b. The decision of Director General of State Disaster Response and Fire Services, Andhra Pradesh shall be final as regards the acceptability of tendered articles and goods to be supplied by the Bidders.
5.	<u>SUPPLY ORDER:</u> Quantity: The Purchase Order may be split among multiple bidders in accordance with the lowest quoted price (L1), subject to the availability and release of funds by the Government. Bidders other than L1 may be considered for allocation after matching the L1 price. The distribution among the bidders will be at the discretion of the Store Purchase Committee.

6.	<u>INSPECTION :</u> The successful Tenderer shall have the work inspected and approved at the following stages by the Officers nominated by the Director General of State Disaster Response and Fire Services along with one of the following authorized agencies to be selected by the Department. i. Under writers Laboratories Inc. (UI India Private Limited) ii. Indian Register of Shipping (IRS Inspection services) iii. Any other specialized Organized agencies approved by the Government. The firm should meet the inspection charges and travel expenses of the officers of the above agencies. The acceptance of the items is subject to inspection by officers of Andhra Pradesh State Disaster Response and Fire Services Department and the representatives of the one of the above agencies, in stages as suggested in the Technical Tender Specification.
7.	<u>DELIVERY:</u> a. The Fire Vehicles supplied shall strictly conform to the approved drawings and specifications. Any deviation shall render the vehicles liable for rejection, and they shall be returned to the bidder at their own cost for replacement within 30 days. Simultaneously, appropriate action may be initiated, which may include a reduction in the payable rate by up to 10%, blacklisting of the firm, forfeiture of the Earnest Money Deposit and/or Security Deposit, and procurement of the items from alternative sources at the risk and cost of the bidder. b. The goods should be delivered to the Assistant Equipment Officer, State Stores, C/o District Fire Officer, Guntur, Near Collectorate Compound, Guntur District. c. The date mentioned in the Purchase Order for arranging supplies should be construed as date on or before which supplies should be received by the Consignee and should not be taken as the date for dispatching stores. d. Unless and until prior extension in delivery period is applied for and granted, the execution of the supplies after the delivery date mentioned in this order shall be deemed to constitute breach of contract and shall attract condition No. (a) above e. The goods on their receipt will be inspected by the committee of the Department. The goods not as per the sample/specification/damaged shall be rejected by the line committee duly recording the reasons for rejection. f. Liquidated Damages: In case the Firm does not complete the supply within delivery period, liquidated damages will be charged @ 5% of the total cost of items ordered on the Bidder and if required, action will be taken against the Firm to Blacklist it and also for forfeiture of its ePBG. g. Advance delivery prior to issue of Purchase Order will not be accepted. h. Dispatch Instructions: • All the supplies should be delivered to the consignee in the manufacturer's original packing and original markings. • The bill of cost inclusive of all taxes, transport etc., should be submitted in triplicate to this office for arranging necessary payment i. The Bidders should affix stamp clearly of the concerned Firm on each item supplied by them after issue of Purchase Order while making delivery to this office Central Stores.
8.	<u>GENERAL CONDITIONS</u>
I	The Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh reserves himself the right to reject any tender which does not comply with the conditions
II	The Director General reserves the right to obtain the performance reports from the Government organizations to whom the Tenderer supplied the goods previously and reserves the right to reject the Tender.

III	The Bids will be received by the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh through GeM as per the particulars given in the Tender Schedule in two phases, i.e. Technical and Financial bid.
IV	If the date originally scheduled for opening of the Bids gets declared by Government at a later stage as public holiday, the Bids will be opened on the next working day at the same time.
V	Failure to abide by any of the conditions stated above will result in the Bid being rejected without notice.
VI	If any dispute arises as to the quality of stores supplied, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, shall be final and furnish the reasons in writing for rejection of the supplies to that effect. Rejected goods or materials shall be removed at the expenses of bidder within seven days, after the notice has been given to the bidder. If not removed, the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, may cause the goods or materials to be removed and penalize the bidder with all expenses incurred in such removal.
VII	In case of any breach of contract, Terms of Agreement and Purchase Order and its conditions, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, is final and binding on the bidder.
VIII	The contract or any part of it shall not to be transferred or assigned by the bidder directly or indirectly to any other agencies whom-so-ever without the written consent of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh,.
IX	In case of any dispute, the matter can be referred to competent Court at Vijayawada city only and not anywhere else.
9.	GUARANTEE/WARRANTY
I	Except as otherwise provided in the invitation to the tender, the bidder shall declare that the goods, stores, articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained/mentioned in the contract.
II	The bidder hereby guarantees that the said stores would continue to conform to the description and quality aforesaid for a period 24 calendar months of warranty from the date of delivery of the said stores to the purchaser notwithstanding the fact that the purchaser (Inspecting Authority) may have inspected and/or approved the said stores.
III	If during the aforesaid period of warranty, the said stores be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the bidder and purchaser shall be entitled to call upon the bidder to rectify the stores or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the bidder and in such an event, the above mentioned warranty period shall apply to the stores from the date of rectification thereof.
IV	In case of failure of the bidder to rectify or replace the goods etc. within specified time, the purchaser shall be entitled to recover the cost with all expenses from the bidder for such defective stores.
V	In the event of contract being cancelled for any breach committed and the purchaser affecting re-purchase of the stores at the risk and the cost of the bidder, the purchaser is not bound to accept the lower offer of allied or sister concern of the bidder.
VI	Purchaser will not pay separately for transit insurance and the supplier will be responsible till the entire stores contracted for, arrive in good condition at the destination. The consignee, as soon as possible but not later than 30 days of the date of arrival of the stores at destination, notify to the bidder any loss or changes to the stores that may have occurred during the transit.
VII	Bidders who are past suppliers of the item as per T/E Specification should submit their performance statement in enclosed Proforma. In case, it is found that information furnished is incomplete or incorrect, their tender will be liable to be ignored.

VIII	GOVT. POLICY The purchaser reserves the option to give a purchase/price preference to offers from the public sector units and / or from other Firms in accordance with the policies of the Govt. from time to time.
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CHECKLIST FOR TECHNICAL BID

Name of Firm/Dealer/Supplier: _____

S. No.	Details	Remarks of the Bidder
1	Company/Firm Registration Certificate.	
2	Minimum Average Annual Financial Turnover for the last 3 years.	
3	GST Certificate	
4	NSIC/UDYAM Certificate, if applicable	
5	NFPA Certificate, (if applicable)	
6	EMD payment details.	
7	Certificates/Orders regarding Previous Purchase orders.	
8	Supply Orders regarding similar chassis supplied elsewhere other State Fire Services.	
9	Authorization Letter of OEM, if applicable.	
10	Should ensure to sign and seal on each page of Bid Specifications & Additional Terms and Conditions(ATC).	
11	Any other documents, as required.	

Signature of the Bidder

ADDITIONAL TERMS & CONDITIONS

6.Fire-Retardant Coverall	
A	All bidders are required to submit their offers as follows: -
1.	Documents Only those Bidders who are in the line of manufacturing and supply of Fire-Retardant Coverall in a position to complete the supplies within the 30 days' time should quote. 2. The bidder must have prior experience in the manufacturing and supply or OEM authorized dealer of Fire Retardant Coverall during the last five (05) years. A sample of Fire Retardant Coverall, along with a demonstration, must be provided at the time of opening of the technical bid i.e next day of bid submission last date. Failure to provide the required sample and demonstration shall result in disqualification of the bid.
3.	The Bidders must submit the following documents pertaining to the Firm along with the Tender: i. Company/Firm Registration Certificate. ii. Minimum Average Annual Financial Turnover for the last 3 years. iii. GST Registration Certificate. iv. NSIC/UDYAM Certificate, if applicable. v. EMD payment details. vi. Certificates/Orders regarding Previous performance. vii. OEM Authorization Letter, if applicable. Note: The Bidder should ensure to sign and seal on each page of Bid Specification and Additional Terms and Conditions (ATC) and submit.
4.	<u>COMMERCIAL/ PRICE BID:</u> a. Bidders are required to quote rates on free delivery at Consignee location basis only. Bids received on far Destination Stations/ Station of dispatch basis or different rates for different destinations shall be summarily rejected. Rates should be quoted in figures and words clearly INCLUSIVE OF GST, ALL TAXES, DUTIES, DISCOUNTS, TRANSPORTATION COST if any etc., ON SITE WARRANTY as mentioned in the tender. b. The decision of Director General of State Disaster Response and Fire Services, Andhra Pradesh shall be final as regards the acceptability of tendered articles and goods to be supplied by the Bidders.
5.	<u>INSPECTION :</u> i. The acceptance of the items is subject to inspection by officers of Andhra Pradesh State Disaster Response and Fire Services Department. ii. Final Inspection shall be done by the Department Officers at State Stores, C/o District Fire Officer, Near Collectorate Compound, Guntur, Guntur District .

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6.	<u>DELIVERY:</u> a. The Fire Retardant Coverall supplied shall strictly conform to the approved drawings and specifications. Any deviation shall render the coverall liable for rejection, and they shall be returned to the bidder at their own cost for replacement within 30 days. Simultaneously, appropriate action may be initiated, which may include a reduction in the payable rate by up to 10%, blacklisting of the firm, forfeiture of the Earnest Money Deposit and/or Security Deposit, and procurement of the items from alternative sources at the risk and cost of the bidder. The goods should be delivered to the Assistant Equipment Officer, State Stores, C/o District Fire Officer, Guntur, Near Collectorate Compound, Guntur District. b. The goods should be delivered to the Assistant Equipment Officer, State Stores, C/o District Fire Officer, Guntur, Near Collectorate Compound, Guntur District. c. The date mentioned in the Purchase Order for arranging supplies should be construed as date on or before which supplies should be received by the Consignee and should not be taken as the date for dispatching stores. d. Unless and until prior extension in delivery period is applied for and granted, the execution of the supplies after the delivery date mentioned in this order shall be deemed to constitute breach of contract and shall attract condition No. (a) above. e. The goods on their receipt will be inspected by the committee of the Department. The goods not as per the sample/specification/damaged shall be rejected by the line committee duly recording the reasons for rejection. f. Liquidated Damages: In case the Firm does not complete the supply within delivery period, liquidated damages will be charged @ 5% of the total cost of items ordered on the Bidder and if required, action will be taken against the Firm to Blacklist it and also for forfeiture of its ePBG. g. Advance delivery prior to issue of Purchase Order will not be accepted. h. Dispatch Instructions: • All the supplies should be delivered to the consignee in the manufacturer's original packing and original markings. • The bill of cost inclusive of all taxes, transport etc., should be submitted in triplicate to this office for arranging necessary payment. • The Bidders should affix stamp clearly of the concerned Firm on each item supplied by them after issue of Purchase Order while making delivery to this office Central Stores.
7.	GENERAL CONDITIONS
I	The Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh reserves himself the right to reject any tender which does not comply with the conditions
II	The Director General reserves the right to obtain the performance reports from the Government organizations to whom the Tenderer supplied the goods previously and reserves the right to reject the Tender.
III	The Bids will be received by the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh through GeM as per the particulars given in the Tender Schedule in two phases, i.e. Technical and Financial bid.
IV	If the date originally scheduled for opening of the Bids gets declared by Government at a later stage as public holiday, the Bids will be opened on the next working day at the same time.

(Contd...3)

V	Failure to abide by any of the conditions stated above will result in the Bid being rejected without notice.
VI	If any dispute arises as to the quality of stores supplied, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, shall be final and furnish the reasons in writing for rejection of the supplies to that effect. Rejected goods or materials shall be removed at the expenses of bidder within seven days, after the notice has been given to the bidder. If not removed, the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, may cause the goods or materials to be removed and penalize the bidder with all expenses incurred in such removal.
VII	In case of any breach of contract, Terms of Agreement and Purchase Order and its conditions, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, is final and binding on the bidder.
VIII	The contract or any part of it shall not to be transferred or assigned by the bidder directly or indirectly to any other agencies whom-so-ever without the written consent of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh.
IX	In case of any dispute, the matter can be referred to competent Court at Vijayawada city only and not anywhere else.
9.	GUARANTEE/WARRANTY
I	Except as otherwise provided in the invitation to the tender, the bidder shall declare that the goods, stores, articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained/mentioned in the contract.
II	The bidder hereby guarantees that the said stores would continue to conform to the description and quality aforesaid for a period 24 calendar months of warranty from the date of delivery of the said stores to the purchaser notwithstanding the fact that the purchaser (Inspecting Authority) may have inspected and/or approved the said stores.
III	If during the aforesaid period of warranty, the said stores be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the bidder and purchaser shall be entitled to call upon the bidder to rectify the stores or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the bidder and in such an event, the above mentioned warranty period shall apply to the stores from the date of rectification thereof.
IV	In case of failure of the bidder to rectify or replace the goods etc. within specified time, the purchaser shall be entitled to recover the cost with all expenses from the bidder for such defective stores.
V	In the event of contract being cancelled for any breach committed and the purchaser affecting re-purchase of the stores at the risk and the cost of the bidder, the purchaser is not bound to accept the lower offer of allied or sister concern of the bidder.
VI	Purchaser will not pay separately for transit insurance and the supplier will be responsible till the entire stores contracted for, arrive in good condition at the destination. The consignee, as soon as possible but not later than 30 days of the date of arrival of the stores at destination, notify to the bidder any loss or changes to the stores that may have occurred during the transit.
VII	Bidders who are past suppliers of the item as per T/E Specification should submit their performance statement in enclosed Proforma. In case, it is found that information furnished is incomplete or incorrect, their tender will be liable to be ignored.
VIII	GOVT. POLICY The purchaser reserves the option to give a purchase/price preference to offers from the public sector units and / or from other Firms in accordance with the policies of the Govt. from time to time.

CHECKLIST FOR TECHNICAL BID

Name of Firm/Dealer/Supplier: _____

S. No.	Details	Remarks of the Bidder
1	Company/Firm Registration Certificate.	
2	Minimum Average Annual Financial Turnover for the last 3 years.	
3	GST Registration Certificate.	
4	NSIC/UDYAM Certificate, if applicable	
5	EMD payment details.	
6	Certificates/Orders regarding Previous performance.	
7	OEM Authorization Letter, if applicable.	
8	Should ensure to sign and seal on each page of Bid Specifications & Additional Terms and Conditions(ATC).	

Signature of the Bidder

ADDITIONAL TERMS & CONDITIONS

7. Fire Proximity Suits	
A	All bidders are required to submit their offers as follows: -
1.	Documents Only those Bidders who are in the line of manufacturing and supply of Fire Proximity Suits in a position to complete the supplies within the 60 days' time should quote. 2. The bidder must have prior experience in the manufacturing and supply or OEM authorized dealer of Fire Proximity Suits during the last five (05) years. A sample of Fire Proximity Suits, along with a demonstration, must be provided at the time of opening of the technical bid i.e next day of bid submission last date. Failure to provide the required sample and demonstration shall result in disqualification of the bid.
3.	The Bidders must submit the following documents pertaining to the Firm along with the Tender: i. Company/Firm Registration Certificate. ii. Minimum Average Annual Financial Turnover for the last 3 years. iii. GST Registration Certificate. iv. NSIC/UDYAM Certificate, if applicable. v. EMD payment details. vi. Certificates/Orders regarding Previous performance. vii. OEM Authorization Letter, if applicable. Note: The Bidder should ensure to sign and seal on each page of Bid Specification and Additional Terms and Conditions (ATC) and submit.
4.	<u>COMMERCIAL/ PRICE BID:</u> a. Bidders are required to quote rates on free delivery at Consignee location basis only. Bids received on far Destination Stations/ Station of dispatch basis or different rates for different destinations shall be summarily rejected. Rates should be quoted in figures and words clearly INCLUSIVE OF GST, ALL TAXES, DUTIES, DISCOUNTS, TRANSPORTATION COST if any etc., ON SITE WARRANTY as mentioned in the tender. b. The decision of Director General of State Disaster Response and Fire Services, Andhra Pradesh shall be final as regards the acceptability of tendered articles and goods to be supplied by the Bidders.
5.	<u>INSPECTION :</u> i. The acceptance of the items is subject to inspection by officers of Andhra Pradesh State Disaster Response and Fire Services Department. ii. Final Inspection shall be done by the Department Officers at State Stores, C/o District Fire Officer, Near Collectorate Compound, Guntur, Guntur District .

(Contd...2)

6.	<u>DELIVERY:</u> a. The Fire Retardant Coverall supplied shall strictly conform to the approved drawings and specifications. Any deviation shall render the coverall liable for rejection, and they shall be returned to the bidder at their own cost for replacement within 30 days. Simultaneously, appropriate action may be initiated, which may include a reduction in the payable rate by up to 10%, blacklisting of the firm, forfeiture of the Earnest Money Deposit and/or Security Deposit, and procurement of the items from alternative sources at the risk and cost of the bidder. The goods should be delivered to the Assistant Equipment Officer, State Stores, C/o District Fire Officer, Guntur, Near Collectorate Compound, Guntur District. b. The goods should be delivered to the Assistant Equipment Officer, State Stores, C/o District Fire Officer, Guntur, Near Collectorate Compound, Guntur District. c. The date mentioned in the Purchase Order for arranging supplies should be construed as date on or before which supplies should be received by the Consignee and should not be taken as the date for dispatching stores. d. Unless and until prior extension in delivery period is applied for and granted, the execution of the supplies after the delivery date mentioned in this order shall be deemed to constitute breach of contract and shall attract condition No. (a) above. e. The goods on their receipt will be inspected by the committee of the Department. The goods not as per the sample/specification/damaged shall be rejected by the line committee duly recording the reasons for rejection. f. Liquidated Damages: In case the Firm does not complete the supply within delivery period, liquidated damages will be charged @ 5% of the total cost of items ordered on the Bidder and if required, action will be taken against the Firm to Blacklist it and also for forfeiture of its ePBG. g. Advance delivery prior to issue of Purchase Order will not be accepted. h. Dispatch Instructions: • All the supplies should be delivered to the consignee in the manufacturer's original packing and original markings. • The bill of cost inclusive of all taxes, transport etc., should be submitted in triplicate to this office for arranging necessary payment. • The Bidders should affix stamp clearly of the concerned Firm on each item supplied by them after issue of Purchase Order while making delivery to this office Central Stores.
7.	GENERAL CONDITIONS
I	The Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh reserves himself the right to reject any tender which does not comply with the conditions
II	The Director General reserves the right to obtain the performance reports from the Government organizations to whom the Tenderer supplied the goods previously and reserves the right to reject the Tender.
III	The Bids will be received by the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh through GeM as per the particulars given in the Tender Schedule in two phases, i.e. Technical and Financial bid.
IV	If the date originally scheduled for opening of the Bids gets declared by Government at a later stage as public holiday, the Bids will be opened on the next working day at the same time.

(Contd...3)

V	Failure to abide by any of the conditions stated above will result in the Bid being rejected without notice.
VI	If any dispute arises as to the quality of stores supplied, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, shall be final and furnish the reasons in writing for rejection of the supplies to that effect. Rejected goods or materials shall be removed at the expenses of bidder within seven days, after the notice has been given to the bidder. If not removed, the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, may cause the goods or materials to be removed and penalize the bidder with all expenses incurred in such removal.
VII	In case of any breach of contract, Terms of Agreement and Purchase Order and its conditions, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, is final and binding on the bidder.
VIII	The contract or any part of it shall not to be transferred or assigned by the bidder directly or indirectly to any other agencies whom-so-ever without the written consent of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh.
IX	In case of any dispute, the matter can be referred to competent Court at Vijayawada city only and not anywhere else.
9.	GUARANTEE/WARRANTY
I	Except as otherwise provided in the invitation to the tender, the bidder shall declare that the goods, stores, articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained/mentioned in the contract.
II	The bidder hereby guarantees that the said stores would continue to conform to the description and quality aforesaid for a period 24 calendar months of warranty from the date of delivery of the said stores to the purchaser notwithstanding the fact that the purchaser (Inspecting Authority) may have inspected and/or approved the said stores.
III	If during the aforesaid period of warranty, the said stores be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the bidder and purchaser shall be entitled to call upon the bidder to rectify the stores or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the bidder and in such an event, the above mentioned warranty period shall apply to the stores from the date of rectification thereof.
IV	In case of failure of the bidder to rectify or replace the goods etc. within specified time, the purchaser shall be entitled to recover the cost with all expenses from the bidder for such defective stores.

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V	In the event of contract being cancelled for any breach committed and the purchaser affecting re-purchase of the stores at the risk and the cost of the bidder, the purchaser is not bound to accept the lower offer of allied or sister concern of the bidder.
VI	Purchaser will not pay separately for transit insurance and the supplier will be responsible till the entire stores contracted for, arrive in good condition at the destination. The consignee, as soon as possible but not later than 30 days of the date of arrival of the stores at destination, notify to the bidder any loss or changes to the stores that may have occurred during the transit.
VII	Bidders who are past suppliers of the item as per T/E Specification should submit their performance statement in enclosed Proforma. In case, it is found that information furnished is incomplete or incorrect, their tender will be liable to be ignored.
VIII	GOVT. POLICY The purchaser reserves the option to give a purchase/price preference to offers from the public sector units and / or from other Firms in accordance with the policies of the Govt. from time to time.

CHECKLIST FOR TECHNICAL BID

Name of Firm/Dealer/Supplier: _____

S. No.	Details	Remarks of the Bidder
1	Company/Firm Registration Certificate.	
2	Minimum Average Annual Financial Turnover for the last 3 years.	
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4	NSIC/UDYAM Certificate, if applicable	
5	EMD payment details.	
6	Certificates/Orders regarding Previous performance.	
7	OEM Authorization Letter, if applicable.	
8	Should ensure to sign and seal on each page of Bid Specifications & Additional Terms and Conditions(ATC).	

Signature of the Bidder

ADDITIONAL TERMS & CONDITIONS

8. T-Shirt & Trunk wear Bermuda half & Full track (Outdoor Suit)	
A	All bidders are required to submit their offers as follows: -
1.	Documents Only those Bidders who are in the line of manufacturing and supply of T-Shirt & Trunk wear Bermuda half & Full track (Outdoor Suit) in a position to complete the supplies within the 30 days' time should quote.
2.	The bidder must have prior experience in the manufacturing and supply or OEM authorized dealer of T-Shirt & Trunk wear Bermuda half & Full track (Outdoor Suit) during the last five (05) years. A sample of T-Shirt & Trunk wear Bermuda half & Full track (Outdoor Suit), along with a demonstration, must be provided at the time of opening of the technical bid i.e next day of bid submission last date. Failure to provide the required sample and demonstration shall result in disqualification of the bid.
3.	The Bidders must submit the following documents pertaining to the Firm along with the Tender: i. Company/Firm Registration Certificate. ii. Minimum Average Annual Financial Turnover for the last 3 years. iii. GST Registration Certificate. iv. NSIC/UDYAM Certificate, if applicable. v. EMD payment details. vi. Certificates/Orders regarding Previous performance. vii. OEM Authorization Letter, if applicable. Note: The Bidder should ensure to sign and seal on each page of Bid Specification and Additional Terms and Conditions (ATC) and submit.
4.	<u>COMMERCIAL/ PRICE BID:</u> a. Bidders are required to quote rates on free delivery at Consignee location basis only. Bids received on far Destination Stations/ Station of dispatch basis or different rates for different destinations shall be summarily rejected. Rates should be quoted in figures and words clearly INCLUSIVE OF GST, ALL TAXES, DUTIES, DISCOUNTS, TRANSPORTATION COST if any etc., ON SITE WARRANTY as mentioned in the tender. b. The decision of Director General of State Disaster Response and Fire Services, Andhra Pradesh shall be final as regards the acceptability of tendered articles and goods to be supplied by the Bidders.
5.	<u>INSPECTION :</u> i. The acceptance of the items is subject to inspection by officers of Andhra Pradesh State Disaster Response and Fire Services Department. ii. Final Inspection shall be done by the Department Officers at State Stores, C/o District Fire Officer, Near Collectorate Compound, Guntur, Guntur District .

(Contd...2)

6.	<u>DELIVERY:</u> a. The T-Shirt & Trunk wear Bermuda half & Full track (Outdoor Suit) supplied shall strictly conform to the approved drawings and specifications. Any deviation shall render the coverall liable for rejection, and they shall be returned to the bidder at their own cost for replacement within 30 days. Simultaneously, appropriate action may be initiated, which may include a reduction in the payable rate by up to 10%, blacklisting of the firm, forfeiture of the Earnest Money Deposit and/or Security Deposit, and procurement of the items from alternative sources at the risk and cost of the bidder. b. The goods should be delivered to the Assistant Equipment Officer, State Stores, C/o District Fire Officer, Guntur, Near Collectorate Compound, Guntur District. c. The date mentioned in the Purchase Order for arranging supplies should be construed as date on or before which supplies should be received by the Consignee and should not be taken as the date for dispatching stores. d. Unless and until prior extension in delivery period is applied for and granted, the execution of the supplies after the delivery date mentioned in this order shall be deemed to constitute breach of contract and shall attract condition No. (a) above. e. The goods on their receipt will be inspected by the committee of the Department. The goods not as per the sample/specification/damaged shall be rejected by the line committee duly recording the reasons for rejection. f. Liquidated Damages: In case the Firm does not complete the supply within delivery period, liquidated damages will be charged @ 5% of the total cost of items ordered on the Bidder and if required, action will be taken against the Firm to Blacklist it and also for forfeiture of its ePBG. g. Advance delivery prior to issue of Purchase Order will not be accepted. h. Dispatch Instructions: • All the supplies should be delivered to the consignee in the manufacturer's original packing and original markings. • The bill of cost inclusive of all taxes, transport etc., should be submitted in triplicate to this office for arranging necessary payment. • The Bidders should affix stamp clearly of the concerned Firm on each item supplied by them after issue of Purchase Order while making delivery to this office Central Stores.
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IV	If the date originally scheduled for opening of the Bids gets declared by Government at a later stage as public holiday, the Bids will be opened on the next working day at the same time.

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VI	If any dispute arises as to the quality of stores supplied, the decision of the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, shall be final and furnish the reasons in writing for rejection of the supplies to that effect. Rejected goods or materials shall be removed at the expenses of bidder within seven days, after the notice has been given to the bidder. If not removed, the Director General of State Disaster Response and Fire Services, Vijayawada, Andhra Pradesh, may cause the goods or materials to be removed and penalize the bidder with all expenses incurred in such removal.
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III	If during the aforesaid period of warranty, the said stores be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the bidder and purchaser shall be entitled to call upon the bidder to rectify the stores or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the bidder and in such an event, the above mentioned warranty period shall apply to the stores from the date of rectification thereof.
IV	In case of failure of the bidder to rectify or replace the goods etc. within specified time, the purchaser shall be entitled to recover the cost with all expenses from the bidder for such defective stores.

V	In the event of contract being cancelled for any breach committed and the purchaser affecting re-purchase of the stores at the risk and the cost of the bidder, the purchaser is not bound to accept the lower offer of allied or sister concern of the bidder.
VI	Purchaser will not pay separately for transit insurance and the supplier will be responsible till the entire stores contracted for, arrive in good condition at the destination. The consignee, as soon as possible but not later than 30 days of the date of arrival of the stores at destination, notify to the bidder any loss or changes to the stores that may have occurred during the transit.
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Signature of the Bidder