

No.1/RDM/TENDER/2011/1
GOVERNMENT OF MANIPUR
SECRETARIAT: RELIEF & DISASTER MANAGEMENT DEPARTMENT
Imphal dated 12th September' 2011

Tender Document

for

Supply of Equipment

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No.1/RDM/TENDER/2011/1

GOVERNMENT OF MANIPUR

SECRETARIAT: RELIEF & DISASTER MANAGEMENT DEPARTMENT

Imphal dated 12th September' 2011

SECTION-I

1.0 NOTICE INVITING TENDER (NIT):

Under Secretary, Relief & Disaster Management Department, Govt. of Manipur invites sealed Technical & Financial Bids from Original Equipment Manufacturers (OEM) or Authorised Dealers for supply and installation of equipment with 3 years comprehensive warranty for the State Disaster Response Force under Relief & Disaster Management Department, Govt. of Manipur. The list of equipment is at Annexure- III.

Tender documents shall be available from the office of Relief & Disaster Management Department, Govt. of Manipur, Room No. 71, New Secretariat, Imphal-795001, Manipur on payment of non-refundable fee of Rs. 1,000/- (Rupees One Thousand only) by Demand Draft in favour of "Director, Disaster Management Institute, Govt. of Manipur" payable at Imphal. Complete tender documents are also available on the following website:

<http://www.manipur.gov.in>

The documents downloaded by the parties from the website shall be valid for participation in the tender process. Those making use of the tender documents downloaded from the website shall have to pay the non-refundable fee of the document i.e. Rs. 1,000/- (Rupees One Thousand only) in the form of a demand draft along with the tenders. Tenders received without the requisite fee shall be considered as invalid ab-initio.

1.1 ELIGIBILITY CRITERIA

1. The bidder should be either Original Equipment Manufacturer (OEM) or Authorised Dealer. (Please submit manufacturer's authorization letter on the OEM's letter head duly signed by authorized signatory).
2. The bidder should submit Annual Report (Balance Sheet and Profit & Loss Account) duly certified by a Chartered Accountant and Copy of Income Tax Returns filed for the last three financial years ending 31st March '2011.

3. Bidder should have experience of having successfully completed similar supplies during the last two years ending 31 March' 2011. (Please submit attested copy of supply order/completion certificate).
4. The Bidder should not have been barred by any PSU/Govt. Department in doing business with them. (Please submit self declaration).

Interested and eligible Bidders are required to submit the Technical and Financial Bids in 2 (two) separate sealed envelopes. The Technical Bid should be accompanied by an EMD as specified in this Bid Document by the prospective Bidder. The EMD should be included in the same envelope containing the Technical Bid, while the Financial Bid along with the detailed terms and conditions will have to be furnished in the second sealed envelope. The Technical and Financial Bid together should be put in a separate third envelop and must be delivered to the Under Secretary, Relief & Disaster Management Department, Govt. of Manipur, Room No. 71, New Secretariat, Imphal-795001, Manipur, on the date specified below.

The envelope containing the Technical Bid and the EMD will be opened on the specified date and time in presence of Bidders or their authorized representative who choose to attend. In the event of the date specified for bid receipt and opening being declared as a holiday, the due date for submission and opening of bids will be the following working day at the appointed times.

1.2 TIME SCHEDULE

The summary of various activities with regard to this invitation of bids are listed in the table below:

| 1. | BID REFERENCE | Date & Time |
|----|---|---|
| 2. | Date of commencement of issue of Tender documents | 15 th September' 2011 |
| 3. | Last date and time for purchase of Tender documents | 30 th September' 2011 |
| 4. | Last date & Time for submission of Bids | 6 th October'2011 4.00 PM |
| 5. | Date & Time of opening the Technical Bid | 10 th October' 2011 11.00 AM |

| | | |
|----|---|--|
| 6. | Date & Time of opening of Financial Bid | Will be intimated to the qualified bidders by the Purchaser on the day of opening of technical bid or subsequently either through fax or through letter. |
| 7. | Place of issue of Bid Document; Bid submission, and opening of Technical and Financial Bids | Office of Under Secretary, Relief & Disaster Management Department, Govt. of Manipur, Room No. 71, New Secretariat, Imphal, Manipur-795001. |
| 8. | EMD | 2% of the Total Bid amount quoted by the bidder. |

1.3 EXCLUSIVE RIGHT OF RELIEF & DISASTER MANAGEMENT DEPARTMENT, GOVT. OF MANIPUR

The Relief & Disaster Management Department, Govt. of Manipur does not bind itself to accept lowest or any other tender/bid and reserves the right to cancel the bidding process and reject all bids at any time prior to award of the contract without assigning any reasons whatsoever and without thereby incurring any liability to the affected bidder on the grounds for the Purchaser's action. The Department also reserves the right at the time of award of the contract to increase the quantity of the equipment and services specified in the schedule of requirements without any change in unit price of the ordered quantity.

1.4 ADVANCE PAYMENT

Normally, no advance payment shall be made. However, if in any exceptional case, the Relief & Disaster Management Department agrees to a Bidder's request for advance payment, such payment shall only be made against equivalent Bank Guarantee to be provided by the Bidder, as per norms of the Finance Department, Govt. of Manipur.



Under Secretary,
Relief & Disaster Management Department,
Govt. of Manipur Imphal.

SECTION-2

2.0 INSTRUCTIONS TO BIDDERS

2.1 DEFINITIONS

- 2.1.1 "Purchaser" means Relief & Disaster Management Department, Govt. of Manipur.
- 2.1.2 "Bidder" means the Original Equipment Manufacturer/Authorized Dealer that participates in the tender and submits its bid.
- 2.1.3 "Equipment/Products" means all the hardware equipments and software including consumables which the supplier is required to supply to the Purchaser under the Purchase Order.
- 2.1.4 "Letter of Intent (LOI)" means the communication of the intention of the Purchaser to the Bidder to place the Purchase Order for the former's offered equipment/services.
- 2.1.5 "Purchase/Work Order (PO)" means the order placed by the Purchaser on the Supplier duly signed by the Purchaser's authorized representative to purchase certain equipment & services from the vendor/contractor.
- 2.1.6 "Contract" means the Agreement entered in between the Purchaser and the Supplier, together with the contract documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- 2.1.7 "Contract Document" means the document listed in the Agreement, including any amendments thereto.
- 2.1.8 "Contract Price" means considerations payable to the supplier/contractor as stipulated in the Purchase or Work Order for performance of specified contractual obligations.

2.2 BIDDER TO BEAR COST OF PURCHASE OF TENDER

The Bidder shall bear all costs associated with the preparation and submission of the bid. The Purchaser in any case will not be responsible or liable for these costs regardless of the conduct and outcome of the bidding process.

2.3 BID DOCUMENTS

2.3.1 Bid Documents include:-

| | |
|-----------|------------------------------------|
| Section 1 | Notice Inviting Tender |
| Section 2 | Instructions to Bidders |
| Section 3 | General Conditions of the Contract |

| | |
|---------------|--|
| Section 4 | Special Conditions of the Contract |
| Annexure-I | Format of Performance Bank Guarantee (PBG) |
| Annexure-II | Format for Service Level Agreement |
| Annexure -III | List of Equipment with quantity required. |
| Annexure- IV | Technical Specifications of the Equipment |
| Annexure-V | Datasheet |
| Annexure -VI | Price Bid schedule |
| Annexure-VII | Form of Contract Agreement |

2.4 AMENDMENT TO BID DOCUMENTS

- 2.4.1 At any time, prior to the date of submission of bids, the Purchaser may for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bid documents by amendments.
- 2.4.2 The amendments/Corrigendum will be notified on the website of Relief & Disaster Management Department, Govt. of Manipur and these amendments will be binding on them. Bidders are advised to visit the website of Relief & Disaster Management Department, Govt. of Manipur regularly for updates on this Tender at:

<http://www.manipur.gov.in>

2.5 EXTENSION OF TIME

In order to give prospective bidders required time in which to take the amendments into action in preparing their bid, the Purchaser may at its discretion extend the deadline for submission of bid suitably.

2.6 BID PRICE

Price indicated in the schedule shall be F.O.R. destination at Imphal (Manipur) basis. Prices should be inclusive of all taxes and duties including but not limited to Excise Duty, Sales Tax/VAT and other taxes, transit insurance, freight and Service Tax etc. However rate of taxes and duties included in the price offer should also be given separately from the basic price. The prices quoted by the bidder shall remain firm during the entire period of the contract and shall not be subject to variation on any account. The bid submitted with a variation clause (unless asked by the Purchaser) will be treated as non-responsive and rejected.

2.7 BIDDERS' ELIGIBILITY AND QUALIFICATIONS

Bidder shall furnish as a part of bid documents establishing the bidder's eligibility to supply the equipment. The bidder shall also submit documentary evidence in the form of literature, drawing, data on the equipment offered.

2.8 EARNEST MONEY DEPOSIT (EMD)

- 2.8.1 The Bidder shall submit EMD amounting to 2% of the total bid amount quoted by the bidder. The EMD shall be in one of the following forms:-
- a. A Bank Guarantee issued by any Nationalised bank in favour of "Director, Disaster Management Institute, Govt. of Manipur, Imphal" valid for a period of 150 days from the date of tender opening.
 - b. Demand Draft from a Nationalised Bank in favour of "Director, Disaster Management Institute, Govt. of Manipur", payable at Imphal.
- 2.8.2 The bid not secured in accordance with the above shall be rejected by the Purchaser as non-responsive.
- 2.8.3 The EMD of the unsuccessful bidder will be discharged/ returned as promptly as possible but not later than 30 days after expiry of the bid validity period prescribed by the Purchaser.
- 2.8.4 The successful bidder's EMD will be discharged upon the bidder's submission of the Performance Bank Guarantee.
- 2.8.5 The EMD may be forfeited under the following circumstances:-
- a. If a bidder withdraws his bid during the period of bid validity specified by the bidder on the bid form.
 - b. In case of a successful bidder, if he fails to submit the Performance Bank Guarantee within the time prescribed or
 - c. If he fails to supply the equipment in terms of the conditions of contract.
- 2.8.6 No interest is payable on EMD.
- 2.8.7 In case of inadequacy or non-submission of prescribed EMD, the tender shall be deemed to be disqualified and shall be summarily rejected in the technical evaluation.

2.9 VALIDITY PERIOD OF BID

Bid shall remain valid for 150 days after the date of bid opening. The bid valid for a shorter period shall be rejected by the Purchaser as non-responsive. In exceptional circumstances, the purchaser may request the consent of the bidder for an extension to the period of bid validity. The EMD provided under clause 2.8.1 (a) shall also be suitably extended. A bidder accepting the request and granting extension will not be permitted to modify his bid.

2.10 FORMAT OF SIGNING OF THE BID

- 2.10.1 The bidder shall prepare two copies of the bid clearly marking one copy as "Original Copy" and the other as "Duplicate Copy" & also provide softcopy of technical bid on CD-ROM in MS-Word format.
- 2.10.2 In the event of any discrepancy between them, original copy shall prevail.
- 2.10.3 The original copy of the bid shall be typed and shall be signed by the bidder or a person duly authorized by the bidder. The Letter of Authorization shall be accompanied by a written Power of Attorney accompanying the bid.
- 2.10.4 All pages of the original bid except printed literature shall be initialed by the person signing the bid.
- 2.10.5 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the bidder in which case such corrections shall be initialed by the bidder signing the bid.

2.11 DEADLINE FOR SUBMISSION OF BID

Bid must be received by the Purchaser at the address specified and not later than the date and time specified in the NIT.

2.12 LATE BID

Any bid received late by the Purchaser after the deadline for submission of the bid shall be rejected and returned un-opened to the bidder.

2.13 MODIFICATION AND WITHDRAWAL OF BIDS

- 2.13.1 The bidder may modify or withdraw his bid provided that written notice of modification

or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of bids.

2.13.2 No bidder may modify or be allowed to withdraw bid subsequent to the deadline for submission of bids.

2.14 SUBMISSION OF BID

Bids are to be submitted in two bid form comprising of 1) Technical Bid and 2) Financial Bid. Each of the bid documents is to be sealed. The documents to be placed under each of the sections are as follows:

1) Technical Bid: The Technical Bid will comprise of the following bidding documents

- Documentary evidence in respect of the eligibility criteria mentioned In Section-1.
- EMD.
- Demand Draft for INR 1,000/- in favour of "Director, Disaster Management Institute, Govt. of Manipur" payable at Imphal if the tender document is downloaded from the website or copy of the receipt for payment of Rs. 1000/- by DD if document has been purchased from the Relief & Disaster Management Department, Govt. of Manipur.
- Data Sheet (Annexure-V) mentioning complete technical specifications, make, model, names of supplier/manufacture and commercial terms etc. of the equipment offered. It may specifically be mentioned whether the quotation is strictly as per bid technical specifications. If not, deviations must be spelt out specifically. In the absence of this, the quotation may be rejected.
- Power of Attorney / Authorization with a seal of the company, of person signing the bid documents. All the pages of the Bid (original & copy) must be serially numbered, and kept in a file. Each page must indicate the page number of that page/the total number of pages the bid contains. For example, if the bid contains 99 pages in total, the marking on page 1 shall be "1/99", on page 2 it will be marked as "2/99" and so on.

2) Financial Bid: Financial Bid shall contain the Price Bid Schedule as per the format given in Annexure- VI of the Bid Document.

2.14.1 A single sealed envelope containing both the envelopes (i.e. Technical Bid Envelope 1 & Price Bid Envelope 2 sealed separately) shall be addressed to the purchaser at the following address:

To,
The Under Secretary
Relief & Disaster Management Department,
Govt. of Manipur, Room No. 71, New Secretariat,
Imphal-795001, Manipur.

The envelopes should be superscribed "TENDER FOR SUPPLY OF EQUIPMENT TO RELIEF & DISASTER MANAGEMENT DEPARTMENT, GOVT. OF MANIPUR: DO NOT OPEN"

The tender box shall be sealed at the stipulated deadline for submission.

The tender box shall be opened at the stipulated time of opening in the presence of intending bidders.

For any queries/ information the bidder can contact on the address mentioned below:

L. Ibobi Singh,
Under Secretary, Relief & Disaster Management Department,
Govt. of Manipur, Room No. 71, New Secretariat,
Imphal-795001, Manipur.
Telephone No. 09089425796

- The inner and outer envelopes shall indicate the name and address of the bidders to identify the bid and to enable the bid to be returned unopened in case it is declared 'late' or 'rejected'.
- VENUE OF TENDER OPENING: Tender shall be opened in the office of Relief & Disaster Management Department, Govt. of Manipur, Room No. 314, Annexe Building, New Secretariat, Imphal-795001, Manipur at the time on the due date mentioned in the N.I.T. If due to administrative reasons the venue of Bid opening is changed it will be duly intimated.

- Offers received through Fax/E-mail or through open letter shall be ignored.

2.15 OPENING OF TECHNICAL BID

- 2.15.1 The Purchaser shall open the Technical Bid in the presence of authorized bidder's representatives who choose to attend at date and time specified in the NIT. The bidder's representatives who are present shall sign the Attendance Register.
- 2.15.2 A maximum of two representatives for any bidder shall be permitted and authorized to attend the bid opening.
- 2.15.3 The date fixed for opening of bids, if subsequently declared as holiday by the State Government, the revised date of schedule will be notified. However, in absence of such notification, the bids will be opened on next working day, time and venue remaining unaltered.

2.16 OPENING OF FINANCIAL BID

Price offer of only those bidders will be opened whose Technical offers are found to be qualified and acceptable to Relief & Disaster Management Department, Govt. of Manipur. Bidder's representative may attend the Price Offer opening. The qualified parties shall be notified with the date, time & venue of the opening of the Price Offer.

2.17 EVALUATION OF BIDS

- 2.17.1 Tenders will be evaluated based on **Technical** and **Financial** Bid.

In case of Technical bid tenders will be evaluated on the following basis

- 1) Original Equipment Manufacturer/Authorized Dealer Certificate
- 2) Annual Report (Balance Sheet and Profit & Loss Account) duly certified by a Chartered Accountant and Copy of Income Tax Returns filed for the last three financial years ending 31st March '2011.
- 3) EMD
- 4) Tender document fee for those who have downloaded the tender document from Govt. of Manipur website/ Receipt of the Fee.
- 5) Substantive Responsiveness of the Bid i.e. a substantially non-responsive bid shall be rejected by the Purchaser.
- 6) Attested copy of supply order/completion certificate of similar supplies during the last two years.
- 7) Self Declaration certificate that the bidder is not barred by any PSU/Govt. Department

- 2.17.2 The Purchaser may waive any minor infirmity or non-conformity or irregularity in the bid which does not constitute a equipment deviation.
- 2.17.3 **Financial Bid** of only those bidders who qualify the Technical Bid shall be opened at the time and date to be notified separately.
- 2.17.4 The Financial bid will be evaluated on the ranking that shall be carried out on the landed price of equipment offered inclusive of all taxes
- 2.17.5 The Purchaser does not bind himself to accept the lowest or any tender and reserves to himself the right to accept the whole or any part of the tender and altering the quantities offered and tenderer shall supply the same at the rate quoted.
- 2.17.6 The distribution of tendered quantity amongst the technically and commercially complied bidders, if required, shall be based on merits of each case.
- 2.17.7 Relief & Disaster Management Department, Govt. of Manipur shall have the sole discretion in deciding the number of parties on whom the orders shall be finally placed.

2.18 PURCHASER'S RIGHT TO VARY QUANTITIES

- 2.18.1 The Purchaser reserves the right at the time of award of the contract to increase the quantity of the equipment and services specified in the schedule of requirements without any change in unit price of the ordered quantity.
- 2.18.2 In case of division of order among number of parties, the distribution of quantity will be accordingly done by the Purchaser on an individual tender.

2.19 PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Purchaser does not bind himself to accept lowest or any other tender/bid and has the right to cancel the bidding process and reject all bids at any time prior to award of the contract without assigning any reasons whatsoever and without thereby incurring any liability to the affected bidder on the grounds for the Purchaser's action.

2.20 NOTIFICATION OF SUCCESSFUL BIDDER

- 2.20.1 Prior to the expiration of the bid period, the Purchaser will notify the successful bidder in writing by registered letter or fax or e-mail, to be confirmed in writing by registered letter that its bid has been accepted.

- 2.20.2 The notification of the award will constitute the formation of the contract.
- 2.20.3 The successful bidder will furnish the Performance Guarantee within 10 days of the notification.
- 2.20.4 Upon successful bidder furnishing the Performance guarantee, the Purchaser will notify each unsuccessful bidder and will discharge its bid bond.

2.21 SIGNING OF CONTRACT

- 2.21.1 At the time as the Purchaser notifies the successful bidder that its bid has been accepted, the Purchaser will send the Bidder the contract form provided in the bidding documents, incorporating all agreement between the parties.
- 2.21.2 Within 7 (seven) days of receipt of the contract form, the successful bidder shall sign and date the contract and return it to the Bidder.

2.22 CANCELLATION OF LETTER OF INTENT

- 2.22.1 Failure of the successful bidder to comply with the requirement of submission of Performance Guarantee in time shall constitute sufficient ground for the cancellation of the acceptance of bid and forfeiture of the bid bond, in which case Purchaser may make the offer to any other bidder at the discretion of the Purchaser or call for new bids.

2.23 POST BID CLARIFICATIONS

No post bid clarification at the initiative of the bidders shall be entertained and any effort by the bidders to influence the Purchaser in the Purchaser's bid evaluation, bid comparison or award of the contract shall result in rejection of the bid.

2.24 DELIVERY

Delivery of the equipment shall be made by the supplier in accordance with the terms specified by the Purchaser in the Special conditions of the contract and equipment shall remain at the risk of the supplier until delivery have been completed in full. The Schedule of delivery shall be the essence of the contract.

SECTION – 3

3.0 GENERAL CONDITIONS OF THE CONTRACT

3.1 PRICE APPLICABILITY

Prices quoted by the bidder in the Price Bid Schedule (Annexure VI) shall remain valid for a period of 1 (one) year from the date of signing the contract between the Purchaser and the Supplier.

3.2 STANDARDS

The equipment supplied under the contract shall conform to the standards mentioned in the Technical Specifications (Annexure IV).

3.3 PATENT RIGHTS

The Supplier shall indemnify the Purchaser against all third party actions/claims of infringement of patent, trademark or industrial design rights arising from the use of equipment or any part thereof.

3.4 PERFORMANCE BANK GUARANTEE

- 3.4.1 Within 10 days of the Supplier's receipt of Letter of Intent (LOI)/Purchase Order, the Supplier shall furnish a Performance Bank Guarantee amounting to 10% of the contract/Purchase Order value issued by a Nationalised Bank in the prescribed format given in this tender(Annexure-I).
- 3.4.2 The proceeds of the Performance Bank Guarantee shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the contract.
- 3.4.3 The Performance Bond will be discharged by the Purchaser after completion of the Supplier's obligations including any warranty obligations under the contract.
- 3.4.4 As regards validity of Performance Bank Guarantee, please refer to Special Conditions of the contract (Section-4).

3.5 INSPECTION AND TESTS

- 3.5.1 The Purchaser or its representatives shall have the right to inspect and test the equipment for their conformity to the specifications. The Purchaser may also appoint an agency for this purpose. Where the Purchaser decides to conduct such tests on the premises of the

Supplier, all reasonable facilities and assistance like testing instruments and other test gadgets including access to the drawings and production data shall be furnished to the Inspector free of costs. In case the tested equipment fail to conform to the specifications, the Inspector may reject them and the Supplier shall either replace the rejected equipment or make alteration necessary to meet the specifications requirements free of cost to the Purchaser.

- 3.5.2 Notwithstanding the pre-supply tests and inspections, the equipment on receipt in the Purchaser's premises shall also be tested and if any equipment or part thereof is found defective, the same shall be replaced free of cost to the Purchaser.
- 3.5.3 If any equipment before it is taken over is found defective or fails to fulfill the requirements of the contract, the Purchaser shall give the Supplier notice setting forth details of such defects or failures and the Supplier shall make the equipment good or alter the same to make it comply with the requirements of the contract and in any case within a period not exceeding 2 months of the initial report. These replacements shall be made by the Supplier, free of the all charges, at the site(s).
- 3.5.4 As regards Inspecting Authority and other details please refer to Special Condition of the Contract (Section-4).

3.6 TRAINING

- 3.6.1 If the purchaser decides that prior training is necessary to operate a particular equipment(s), the bidder shall provide such necessary onsite training free of cost to the personnel indicated by the purchaser for those equipment (s).
- 3.6.2 The Bidder shall also provide all training equipments and documents and aids

3.7 WARRANTY

- 3.7.1 The Supplier shall give warranty that equipment to be supplied shall be new and free from all defects and faults in equipment, workmanship, and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards for equipments of the type ordered and shall perform in full conformity with the specifications and drawings. The Supplier shall be responsible for any defects that may develop under the conditions provided by the supplier and under proper use, arising from faulty equipments, design or workmanship such as corrosion of the equipment, inadequate contact protection, deficiencies in circuit design and or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who

shall state in writing in what respect equipment are faulty. This warrantee shall survive inspection or payment for, and acceptance of equipment after the equipment has been taken over.

- 3.7.2 However if there is a warranty period specified in the Special Conditions of Contract (Section - 4) the same shall rule.
- 3.7.3 If it becomes necessary for the supplier to replace or renew any defective portion/portions of the equipment under this clause, the provisions of the clause shall apply to the portion/portions of equipment's replaced or renewed or until the end of the warranty period. If any defect is not remedied within a reasonable time, the Purchaser may proceed to get the work done at the Supplier's risk and expenses, but without prejudice to any other rights which the Purchaser may have against the Supplier in respect of such defects.
- 3.7.4 Replacement under warranty clause shall be made by the Supplier free of all charges at site including freight, insurance and other incidental charges.

3.8 CHANGE OF ORDERS

- 3.8.1 The Purchaser may at any time by written order given to the Supplier make changes within the general scope of the contract in any one or more of the following:-
 - a) Drawings, designs or specifications where equipment to be furnished under the contract are to be specifically manufactured for the Purchaser.
 - b) Method of transportation or packing.
 - c) Place of delivery.
 - d) Services to be provided by the supplier.
- 3.8.2 If any such change causes an increase or decrease in the cost or the time required for the execution of the contract, an equitable adjustment shall be made in the contract price or delivery schedule or both and the contract shall accordingly be amended.

3.9 SUB-LETTING

The Bidder cannot assign or transfer and sub-contract its interest/ obligations under the contract without prior written permission of the Purchaser.

3.10 LIQUIDATED DAMAGES

- 3.10.1 The date of the delivery of the equipment/services stipulated in the acceptance of tender should be deemed to be the essence of the contract and the delivery must be completed not later than the dates specified therein. Extension in delivery period will not be given

except in exceptional circumstances. Should, however, deliveries be made after expiry of the contract delivery period and accepted by the consignee, such deliveries will not deprive the Purchaser of the right to recover Liquidated Damages.

3.10.2 In case the Supplier fails to supply the equipment/services against the order, the same shall be procured from other suppliers at the cost and risk of the Supplier and the excess money will be recovered from any dues of the party.

3.10.3 For late deliveries, as liquidated damages, a sum equal to 2% of the price of any equipment/services not delivered or total order value in case where part delivery is of no use to the Purchaser, for a week or part of a week subject to maximum limit of 10% of the total order will be recovered from the Supplier. The Purchaser also reserves the right to cancel the order in such cases and forfeit the Performance Bank Guarantee and may also debar the Supplier for future purchases.

3.10.4 Liquidated Damages can be recovered from any dues of the supplier.

3.11 ARBITRATION

In the event of any dispute arising between Relief & Disaster Management Department, Govt. of Manipur and the Supplier in any matter covered by this contract, the tribunals and courts in Imphal will have the exclusive jurisdiction in respect of all matters and the provisions of the Indian Arbitration Conciliation Act, 1996 shall apply to such arbitration.

3.12 RISK PURCHASE

In the event of Supplier's failure to execute the contract to the satisfaction of the Purchaser, the Purchaser reserves the right:

- To reject any part of the Contract executed and withhold payment for such portion of the Contract till such time the defects are rectified to the satisfaction of the Purchaser.
- To terminate the Contract by giving two weeks notice in writing without assigning any reason and to get the Contract executed by other agency at the risk and cost of the Supplier.

3.13 GENERAL LIEN

Whenever under this contract any sum of money is recoverable from and payable by the Supplier, the Purchaser shall be entitled to recover such sum by appropriating in part or

in whole the Performance Guarantee of the Supplier. In the event of the Performance Guarantee being insufficient, the balance or the total sum recoverable, as may be, shall be deducted from any sum due to the Supplier or which at any time thereafter may become due to the Supplier under this or any other contract with the Purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Supplier shall pay to the Purchaser on demand the remaining balance due.

3.14 PACKING

The supplier shall ensure that the Equipment/Equipment is securely and adequately packed to ensure safe arrival at the destination fully withstanding all hazards such as rough handling etc. during transit.

3.15 REPLACEMENT OF DEFECTIVE EQUIPMENT

- 3.15.1 If any equipment or any part thereof, is found defective or fails to meet the requirements of the contract before, it is accepted, Relief & Disaster Management Department, Govt. of Manipur shall give the Supplier a notice setting forth details of such defects or failures and the Supplier shall forthwith arrange to set right the defective equipment or replace the same by the good one to make it comply with the requirements of the contract. This in any case shall be completed within a period not exceeding one month from the date of the initial report pointing out the defects. The replacement or rectification shall be made at site by the Supplier free of cost. Should the Supplier fail to do the needful within this stipulated time frame, the purchaser reserves the right to reject the equipment in full or in part and get it replaced at the cost of the Supplier. The cost of any such replacement made by the Purchaser shall be deducted from the amount payable to the Supplier against this purchase order.
- 3.15.2 If any equipment or part thereof is lost or rendered defective during transit, pending settlement of the insurance claim, fresh order shall be placed on the Supplier for such loss or defective equipment and the Supplier shall arrange to supply the same within three months of such order at the same prices and on the same general terms and conditions as mentioned in this purchase order.

3.16 FORCE MAJEURE

If any time, during the continuance of this contract, the performance in whole or in part by either party under obligation as per this contract is prevented or delayed by reasons of

any war or hostility, act of the public enemy, civil commotion, sabotage, fire, flood, explosion, epidemic, quarantine restrictions, strike, lockout or acts of God (hereinafter referred to as "eventuality"), provided notice of happening of any such eventuality is given by either party to the other within 21 days of the date of occurrence thereof, neither party shall by reason of such an "eventuality" be entitled to terminate this contract nor shall either party have any claim or damages against the other in respect of such non-performance or delay in performance and deliveries under the contract. The contract shall be resumed as soon as practicable after such "eventuality" has come to an end or ceased to exist. In case of any dispute, the decision of Relief & Disaster Management Department, Govt. of Manipur, shall be final and conclusive, provided further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such eventuality for a period exceeding 60 days, either party may at its option, terminate the contract. Provided also that if the contract is terminated under this clause the Purchaser shall be at liberty to take over from the Supplier at a price to be fixed by the Purchaser, which shall be final, all unused, undamaged and acceptable equipments, bought out components and other stores in the course of manufacture which may be in the possession of the Supplier at the time of such termination, or such portion thereof as the Purchaser may deem fit except such equipment, as the Supplier may, with the concurrence of the Purchaser, elect to retain.

3.17 TERMINATION FOR DEFAULT

3.17.1 The Purchaser, may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the Supplier, terminate this contract in whole or in part:

- if the supplier fails to deliver any or all the equipment within the time period (s) specified in the contract, or any extension thereof granted by the Purchaser.
- if the Supplier fails to perform any other obligation(s) under the contract; and
- if the Supplier, in either of the above circumstances, does not remedy his failure within a period of 15 days (or such longer period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.
- On a notice period of 30 days.

In the event the Purchaser terminates the contract in whole or in part pursuant to above para the Purchaser may procure, upon such terms and in such manner as it deems appropriate, equipment similar to those undelivered and the Supplier shall be liable to the

Purchaser for any excess cost for such similar equipment. However, the Supplier shall continue the performance of the contract to the extent not terminated.

3.18 TERMINATION FOR INSOLVENCY

The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, without compensation to the supplier if the supplier becomes bankrupt or otherwise insolvent as declared by the competent court provided that such termination will not prejudice or effect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

3.19 ADD ON/ REPEAT ORDER

Relief & Disaster Management Department, Govt. of Manipur reserves the right to place Add on/ Repeat order for additional quantity upto 100% of the original quantity at the same rate and terms & conditions of the purchase order within one year from the date of issue of purchase order.

SECTION – 4

4.0 SPECIAL CONDITIONS OF CONTRACT

The following special conditions of the contract shall supplement the general conditions of the contract. Whenever there is a conflict, the provision herein shall prevail over those in the general condition of the contract.

4.1 PRICE BASIS

F.O.R. Destination Imphal (Manipur) basis.

4.2 PAYMENT TERMS

Payment will be released by the Relief & Disaster Management Department, Govt. of Manipur in Indian Rupees as follows:

- 90% payment within 90 days from the date of supply and installation at the F.O.R destination.
- 10% within 90 days of successful installation and commissioning at each F.O.R destination, subject to certificate from the inspecting agency that equipment has been successfully installed and commissioned, and working satisfactorily.

No payment will be made for equipment rejected on testing.

4.3 PAYING AUTHORITY

Relief & Disaster Management Department, Govt. of Manipur.

4.4 CONSIGNEE

Relief & Disaster Management Department, Govt. of Manipur.

4.5 INSPECTION AUTHORITY

Inspection Authority will be nominated at the time of issue of Purchase Order.

4.6 DELIVERY SCHEDULE

Within 6 weeks from the date of issue of purchase order.

4.7 LIQUIDATED DAMAGES (LD)

Shall be applicable @ 2% per week subject to a maximum of 10% of the Purchase Order value.

4.8 PERFORMANCE BANK GUARANTEE (PBG)

The bidder is required to submit PBG for an amount equivalent to 10% of the Purchase Order value valid up to end of Warranty Period.

4.9 WARRANTY

Comprehensive onsite warranty for 3 (three) years for all equipment. Services and Spares under warranty will be provided free of cost at sites. After expiry of the warranty period the supplier shall enter into an Annual Maintenance Contract (AMC) with the purchaser for a period of 2 years for equipment in respect of which such AMC is required by the purchaser.

4.10 SERVICE LEVEL AGREEMENT (SLA)

No Equipment should be down for more than 3 Calendar days in a month. Otherwise, penalty of Rs100/- per day per equipment is liable to be imposed upon the Supplier. The successful bidder shall be required to sign the Service Level Agreement (Annexure-II) with the purchaser based on the operation requirements.

4.11 ADVANCE PAYMENT

Normally, no advance payment shall be made. However, if in any exceptional case, the Relief & Disaster Management Department agrees to a Bidder's request for advance payment, such payment shall only be made against equivalent Bank Guarantee to be provided by the Bidder, as per norms of the Finance Department, Govt. of Manipur.

FORMAT OF PERFORMANCE BANK GUARANTEE (PBG)

To,

The Under Secretary
Relief & Disaster Management Department,
Govt. of Manipur, Imphal.

OUR LETTER OF GUARANTEE No. : _____

In consideration of " Relief & Disaster Management Department, Govt. of Manipur, Imphal.",
having its office at Room No. 71, New Secretariat, Imphal-795001, Manipur and having
entered into an agreement dated----- / issued Purchase Order
No.-----dated----- with/on
M/S-----
(hereinafter referred to as "The Supplier");

WHEREAS the Supplier having unequivocally accepted to supply the equipment as per
terms and conditions given in the Agreement dated-----/ Purchase
Order No. -----dated-----
and Relief & Disaster Management Department, Govt. of Manipur having agreed that the
Supplier shall furnish to Relief & Disaster Management Department, Govt. of Manipur a
Performance Bank Guarantee for the faithful performance of the entire contract, to the extent
of 10% (ten percent) of the value of the Purchase Order i.e. for Rs.-----
We, ("The Bank") which shall include OUR successors, administrators and executors
herewith establish an irrevocable Letter of Guarantee
No.-----dated----- in your favour on
account of----- (The Supplier) in
cover of performance guarantee in accordance with the terms and conditions of the
Agreement/Purchase Order.

Hereby, we undertake to pay upto but not exceeding Rs.-----
(say-----only) upon receipt by us
of your first written demand accompanied by your declaration stating that the amount

claimed is due by reason of the Supplier having failed to perform the Agreement and despite any contestation on the part of above named supplier.

This Letter of Guarantee will expire on----- (after the completion of the warranty period) including 30 days of claim period and any claims made hereunder must be received by us on or before expiry date after which date this Letter of Guarantee will become of no effect whatsoever whether returned to us or not.

Authorized Signature
Manager
Seal of Bank

FORMAT FOR SERVICE LEVEL AGREEMENT

Terms of the Service Level Agreement would be as under:

1. All the supplied equipment under Lot-I and Lot-III should be under THREE YEARS on site comprehensive warranty including replacement of defective spare parts.
2. Bidder guarantees an uptime of 95% for the entire system failing which a penalty of Rs. 100/- (Rs. One hundred) per day per equipment will be recovered from the Bank Guarantee or the Payment due to the Vendor.
3. The response time for maintenance call of equipment should not exceed 24 hours. The Service down time should not exceed 48 hours from the time at which the complaint was made. If the down time is more than the stipulated period, the Supplier will provide a stand by Service. In case the Service is not provided or an alternative Service not arranged within the stipulated period from the time of failure report then the Purchaser may choose to get the same Serviced from any other agency and the cost and expenditure incurred therein shall be recoverable from the Supplier.
4. In case the equipment is not made operational within 21 days (three weeks) from the lodging of the complaint, Bank Guarantee provided by the bidder to Relief & Disaster Management Department, Govt. of Manipur shall be invoked in respect of equipment during warranty period.
5. All other suitable terms & conditions from the above tender would be made part of this.

The Downtime of the equipment starts from the time Relief & Disaster Management Department, Govt. of Manipur's complaint is logged in at the bidder address as provided by the bidder for entertaining complaints. Any delay in this shall be excluded from the availability calculations. The complaint can be logged during working hours (9.00 AM - 6.00 PM on all working days, excluding Sundays & National Holidays).

List of Equipment with quantity required

| 1 | CSSR Items | |
|-----------|---|-----------------|
| SN | Name of Equipment | Quantity |
| 1 | 2 | 3 |
| 1. | Plier 8 Inches | 2 |
| 2. | Vise Grip 10 Inches | 2 |
| 3. | Bolt Cutter 30 Inches | 1 |
| 4. | Screw Driver Set | 1 |
| 5. | Hack Saw 12 Inches Tubular | 1 |
| 6. | Tin Snip 12 Inches | 1 |
| 7. | Claw Hammer | 1 |
| 8. | Sledge Hammer 10 Kg | 1 |
| 9. | Shovels Round 8 Inches | 4 |
| 10. | Spade Shovels 12 Inches X 10 Inches | 4 |
| 11. | Spades | |
| 12. | Crow Bar 3 Feet (34) | 4 |
| 13. | Pick Mattock | 2 |
| 14. | Axe Mate Kit | 1 |
| 15. | Hand Saw | 1 |
| 16. | Brick Hammer | 1 |
| 17. | 8 Penny Nails (Kgs)-2,3,4, Inches Assorted | 2 |
| 18. | 16 Penny Nails (Kgs)-2,3,4, Inches Assorted | 2 |
| | | |
| 2 | <u>Lighting & Power Equipment</u> | |
| 1 | Extension Cord 8 Mm Dia 100 Metres Long | 2 |
| 2 | Working Lamps With 50 M Lead | 4 |
| 3 | Fuel Containers 20 Liters (Plastic) | 2 |
| 4 | Inflatable Lighting Tower | 2 |
| 5 | Portable Generator 10.5 Kva | 2 |
| 6 | Portable Generator 2.5 Kva | 2 |
| | | |
| 3 | <u>Miscellaneous Utility Equipment</u> | |
| 1. | Tarpaulin 6ms X6m | 4 |
| 2. | Meghaphone | 2 |
| 3. | Buckets Large | 6 |
| 4. | Spray Paint Orange 400 CC | 2 |
| 5. | Scene Tape 100 M Rolls | 2 |
| 6. | Traffic Cones | 20 |
| | | |

| | | |
|----------|--|----|
| 4 | <u>Personnel Protective Gear Individual Kit- CSSR</u> | |
| 1. | Safety Helmet | 50 |
| 2. | Safety Vest Fluorescent Waterproof | 50 |
| 3. | Heavy Duty Work Gloves (74) | 50 |
| 4. | Face Shield (106) | 50 |
| 5. | Safety Goggles (73) | 50 |
| 6. | Head Light (107) | 50 |
| 7. | Boots Hard Toe Steel Shank | 24 |
| 8. | Dust Mask | 50 |
| 9. | Earplug Corded | 50 |
| 10. | Knee Pad Cushion 1 Inches | 50 |
| 11. | Water Bottle Light Weight | 45 |
| | | |
| 5 | <u>Mountain Rescue Equipment</u> | |
| 1. | Ropes Climbing 100 Mtr Bundle | 2 |
| 2. | Ropes Rappelling 100 Mtr Bundle | 2 |
| 3. | Carabiners | 30 |
| 4. | Ruck Sack | 24 |
| 5. | Rock Piton | 30 |
| 6. | Full Body Harness | 4 |
| 7. | Body Harness Half | 4 |
| 8. | Foldable Stretcher | 2 |
| 9. | Line Thrower (Vertical & Horizontal) (One Each) | 2 |
| 10. | Auto Ascender & Descender Set | 4 |
| 11. | Jumars | 4 |
| 12. | Pully With Accessories | 4 |
| 13. | Sleeping Bag | 12 |
| 14. | Warm Jacket/ Coat Parkas | 12 |
| 15. | Ground Sheet | 12 |
| | | |
| 6 | <u>Extrication & Access Equipment</u> | |
| 1. | Rotary Rescue Saw 16" With Diamond Tipped Blade | 2 |
| 2. | Bullet Chain Saw 16" | 2 |
| 3. | Diamond Chain Saw | 2 |
| 4. | Combination Cutter And Spreader | 1 |
| 5. | Ramset With Matching Foot Pump | 1 |
| 6. | Come Along (Tripod Type) | 1 |
| 7. | Hammer Drill Concrete | 1 |
| 8. | Nail Gun | 1 |
| 9. | Air Lifting Bag Set With 04 Air Cylinders | 1 |


| | | |
|-----|--|----|
| 10. | Multi Cable Winch | 1 |
| 11. | Drill Bit Set | 1 |
| 12. | Electric Wrench | 1 |
| 13. | Cordless Hammer Drill | 1 |
| | | |
| 7 | <u>Power Tools</u> | |
| 1. | Reciprocating Saw | 2 |
| 2. | Chipping Hammer | 1 |
| | | |
| 8 | <u>Pumps</u> | |
| 1. | Floating Pump | 1 |
| 2. | Portable Light Weight High Pressure Pump | 1 |
| | | |
| 9 | <u>Fire Fighting Equipment</u> | |
| 1. | Fire Extinguisher Portable | 1 |
| 2. | Breathing Apparatus Set With Spare Cylinders | 4 |
| 3. | Distress Signal Unit | 6 |
| 4. | Ventilator & Air Tube 7 Metres Long | 1 |
| | | |
| 10 | <u>Diving Equipments</u> | |
| 1. | Personal Diving Kit (Diving Suit, Breathing Apparatus, Weight Belt, Gloves, Dive Fins) | 4 |
| 2. | Complete Breathing Apparatus, Oxygen Cylinder With Accessories | 5 |
| 3. | High Pressure Breathing Air Compressors | 1 |
| 4. | Under Water Communication Set | 4 |
| 5. | Under Water Torch | 4 |
| 6. | Life Rope 100 Mtr Bundle | 1 |
| 7. | Anchor (40-50 Kgs) | 1 |
| | | |
| 11 | <u>Water Rescue & Flood Relief Equipments</u> | |
| 1. | Inflatable Boat 25 Hp Engine | 4 |
| 2. | Portable Air Filling Pump(Battery & Electric Operated) | 2 |
| 3. | Life Jackets | 30 |
| 4. | Life Buoys | 20 |
| 5. | Life Saving Ropes 100 Mtr Bundle | 2 |
| 6. | Anchor With Rope | 4 |
| | | |
| 12 | <u>Detection & Location Equipment</u> | |
| 1. | Life Detector Type-II | 1 |
| 2. | Victim Locating Camera | 1 |

| | | |
|-----------|---|----|
| 3. | Thermal Imaging Camera | 1 |
| 4. | Walkie Talkie Sets | 12 |
| 5. | Portable Radio Sets | 12 |
| | | |
| 13 | MFR Items. | |
| 1 | Allis Tissue Forceps Size 15 Cm | 4 |
| 2 | Pad Suction Unit | 1 |
| 3 | Little Man Classic Stethoscope | 6 |
| 4 | Mercurial B P Apparatus Deluxe | 6 |
| 5 | Dressing Drum Size 27.5/27.5 Cm | 6 |
| 6 | Artery Forceps Straight Size 15 Cm | 4 |
| 7 | Artery Forceps Curved I 15 Cm | 4 |
| 8 | Surgical Tray With Cover 30/2.5 | 1 |
| 9 | Surgical Tray With Cover 30/37.5 | 1 |
| 10 | Sponge Holding Forceps | 2 |
| 11 | Sinus Forceps | 2 |
| 12 | Tailor Scissors | 2 |
| 13 | Mayo Scissor Straight 16.5 Cm | 2 |
| 14 | Digital Thermometer Flexible | 4 |
| 15 | Kidney Tray S S Size 20 Cm | 1 |
| 16 | Tongue Depressor Straight | 6 |
| 17 | Tongue Depressor I Shaped | 6 |
| 18 | Surgical Gloves Medium | 6 |
| 19 | Surgical Gloves Large | 6 |
| 20 | Surgical Gloves X Large | 6 |
| 21 | Dressing Scissor S/B Curved 15 Cm | 2 |
| 22 | Collar Stiff Neck Regular/Large | 20 |
| 23 | Collar Stiff Neck Short/Medium | 6 |
| 24 | Collar Stiff Neck Pediatric/Small | 6 |
| 25 | Bandage Elastic 3" A C E(27.5) 8 Cm x 4 Meter | 9 |
| 26 | Urinal Females | 4 |
| 27 | Urinal Males | 4 |
| 28 | Knee Hammer Big Round | 2 |
| 29 | Bowl S/S Small | 6 |
| 30 | Bag Valve Mask Adult Silicon | 6 |
| 31 | Bag Valve Mask Child Silicon | 6 |
| 32 | Bag Valve Mask Silicon Infant | 6 |
| 33 | Oxygen Cylinder 680 Oxidize | 2 |
| 34 | Suction Unit With Accessories(Manual) | 1 |
| 35 | Triage Ribbon Green 50 Mtr Roll | 2 |
| 36 | Triage Ribbon Red 50 Mtr Roll | 2 |


| | | |
|----|--|----|
| 37 | Triage Ribbon Black 50 Mtr Roll | 2 |
| 38 | Triage Ribbon Yellow 50 Mtr Roll | 2 |
| 39 | Face Mask Universal Roll Size | 2 |
| 40 | Bp Apparatus Digital | 4 |
| 41 | Oxygen Cannula Nasal | 6 |
| 42 | Torch | 6 |
| 43 | Band Aid | 2 |
| 44 | Tape Dermical Cloth 1" | 2 |
| 45 | Tape Dermical 2" | 2 |
| 46 | Gluco Meter | 4 |
| 47 | Bandage Killing 6" (5mtr Roll) | 10 |
| 48 | Bandage Killing 3" (5 Mtr Roll) | 10 |
| 49 | Dressing Scissors | 2 |
| 50 | Cup Paper Hot/Cold 100 No Pkt | 2 |
| 51 | Sponge Sterile 4"X4" | 4 |
| 52 | Glass Eye Protection | 12 |
| 53 | Blood Pressure Cuff | 6 |
| 54 | Pocket Mask | 20 |
| 55 | Infantry Pack C P R Manikin | 1 |
| 56 | Squadron Plus C P R Manikin | 1 |
| 57 | Flexible Splint Set | 2 |
| 58 | Pneumatic Splint Set | 2 |
| 59 | Light Weight Oxygen Cylinder | 2 |
| 60 | Stretcher Spine Board With Accessories | 4 |
| 61 | Dressing Abdominal 7-1/2x7.5 | 4 |
| 62 | Gauge Dressing Vaseline | 4 |
| 63 | Dressing Multi Trauma 12"X3" | 12 |
| 64 | Obstetrician Kit Portable | 2 |
| 65 | Pen Light | 6 |
| 66 | Delivery Kit | 2 |
| 67 | Canvas Water Tank 200 Ltr Cap | 1 |
| 68 | Padded Board Splint Wooden Large | 2 |
| 69 | Padded Board Splint Wooden Medium | 2 |
| 70 | Padded Board Splint Wooden Short | 2 |
| 71 | Bandage Elastic 6 Inch A C E 2.7 M | 4 |
| 72 | Triangular Bandage 4"X5" | 20 |
| 73 | Manikin Face Shield | 2 |
| 74 | Bag Valve Mask Adult Disposable | 12 |
| 75 | Bag Valve Mask Child Disposable | 12 |
| 76 | Blanket | 12 |
| 77 | Laryngoscope Adult (3 Blade) | 1 |

| | | |
|-----------|--------------------------------------|----|
| 78 | Disaster Management Kit | 1 |
| 79 | Ecg Machine With Analyzer | 1 |
| 80 | Emergency Accident Kit | 1 |
| 81 | Emergency Rescue Stretcher | 1 |
| 82 | Portable Anesthesia Apparatus | 1 |
| 83 | Portable Defibrillator With Recorder | 1 |
| 84 | Portable Suction Equipment | 1 |
| 85 | Laryngoscope Infant (2 Blade) | 1 |
| 86 | Bed Sheet White | 12 |
| 87 | Pillow With Cover | 12 |
| 88 | Patient Dress | 12 |
| 89 | Towel Big | 6 |
| 90 | Towel Small | 6 |
| 91 | Cheatles Forceps | 2 |
| 92 | Blood Pressure Cuff Adult With Dial | 2 |
| 93 | Stethoscope Ordinary | 4 |
| 94 | Deluxe Ob Mannequin | 1 |
| 95 | Scissors Suture Cutting | 3 |
| 96 | B.P. Handle | 3 |
| | | |


TECHNICAL SPECIFICATIONS OF THE EQUIPMENT**1. COLLAPSE SEARCH STRUCTURE RESCUE (CSSR KIT)****1. Pliers 8 Inches**

| Qualitative Requirements | BIS Code no |
|--|--|
| a) Size : Length 8" b)Material: made of forged steel with insulated handle c) Teeth/cutting edge: One jaw having cutting edge & other have teeth BIS Specifications d) The pliers should have insulated handle. The insulating material shall be PVC or any other suitable material. e) The insulation shall cover the whole of the handle and insulating material shall adhere firmly to the handle f) The pliers shall pass various tests described in IS 2615 | IS-3650  |

2. Vise Grip 10 inches


| Qualitative Requirements | BIS Code no |
|--|---|
| a) size : Length 10" b)Material: made of forged steel c)Teeth : On both jaws |  |

3. Bolt cutter 30 inches


| Qualitative Requirements | BIS Code no |
|--|---|
| a) Size : Length 30" b) cutting jaws : made of high tensile solid alloy steel, specially heat treated with centre cut head c)Handle : With sufficient grip of rubber fro a length of 6 to 8 inches |  |

| | |
|---|--|
| d) Application : Suitable for cutting hard material viz. bolt, iron rod of 10 to 14 mm diameter | |
|---|--|


4. Screw Driver Set

| Qualitative Requirements | BIS Code no. |
|---|---|
| a) Size: One complete set of eight sizes of bits | |
| b) Type: Flat tip/square tip including star shaped screw driver | IS-844 |
| c) Handle: Insulated handle tested at 3000 volts | (PART-I) |
| BIS Specifications |  |
| d) The blades shall be made from suitable steel which is heat treated | |
| e) Plastic handle shall be solid and made of cellulose acetate. | |
| f) The ferrules shall be made of steel conforming to IS 513 | |


5. Hacksaw 12 inch TubularS

| Qualitative Requirements | BIS Code no. |
|--|---|
| a) Size : Adjustable length 250 mm to 300 mm with handle | |
| b) Blade Type: High speed steel blade, size 300 mm x 12.5 mm x 0.63 mm | IS-5169 |
| c) Body: Tubular frame body | |
| d) Provision: for tightening & loosening of blades | |
| BIS Specification |  |
| Hack Saw frame | |
| e) Type : Open grip adjustable flat hacksaw frame | |
| f) Nominal size: 250-300 mm. | |
| g) Impact test: Dropped on a concrete floor from a height of 3 meters | |

6. **Tin Snip 12 inches**


| | |
|--|---|
| Qualitative Requirements | BIS Code No. |
| a) Size : Length 300 mm b) Application: For cutting tin sheets of small thickness |  |

7. **Claw hammer**


| | |
|---|---|
| Qualitative Requirements | BIS Code no. |
| a)Weight : 1 lbs b)Type : Nag ore type c)Size : Width 4" d)Provision : ¾" head dia at one side of hammer & claw on the other side to remove nail e) Handle : Wooden handle | IS-6546  |
| BIS Specifications f) Striking face harness : 46 to 58 HRC g) Hammer shall be cleanly forged & free from flaws, seams, & other forging defects. h)The claw hammer shall be made of steel conforming to designation T-55 of IS-1570 i)The handle shall confirm to IS-4953 & shall be shaped before fitting to suit the eye of the hammer. | |

8. **Sledge Hammer 10 Kg**

| | |
|--|--------------|
| Qualitative Requirements | BIS Code no. |
| a)Weight : 10 KG b) Provision: Iron head c) Handle : Wooden handle | IS-841 |


| | |
|---|---|
| <p>d)Application: To break concrete & drive stacks</p> <p>BIS Specifications</p> <p>e) The hammer heads shall be made from fully killed forging quality steel.</p> <p>f) The hammer heads shall be hardened & tempered on the striking faces & pains only.</p> <p>g)The striking face shall have hardness between 46 to 58 HRC.</p> <p>h) The hammer heads shall be cleanly forged in one piece.</p> |  |
|---|---|

9. **Shovels Round 8 inch**


| Qualitative Requirements | BIS Code no. |
|--|--|
| <p>Size: length 8", width 8", of almost round shape</p> <p>Material: made of wrought iron</p> <p>Handle: Provision of wooden handle to be incorporated</p> <p>Application: Suitable for various types of earth work</p> <p>BIS Specification</p> <p>The shovel blade shall be made of suitable quality sheet steel as such T-50, T-55.</p> <p>Each blade shall be made in one piece without any welded or riveted joint.</p> <p>Shovels to be supplied with handles complete.</p> <p>The blades shall be well formed & cleanly made.</p> <p>The blades shall be free from seams, splits, cracks.</p> | <p>IS -274</p>  |

10. **Spade Shovels 12 x 10 inches**


| Qualitative Requirements | BIS Code no. |
|--|---------------|
| <p>a) Size : Length 12", width 10", of rectangular shape</p> <p>b)Material: made of wrought iron</p> | <p>IS-274</p> |

| | |
|---|---|
| <p>c)Handle: Provision of wooden handle to be incorporated</p> <p>d)Application: Suitable for various types of earth work</p> <p>BIS Specifications</p> <p>e) The shovel blade shall be made of suitable quality sheet steel as such T-50, T-55.</p> <p>f) Each blade shall be made in one piece without any welded or riveted joint.</p> <p>g)Shovels to be supplied with handles complete.</p> <p>h) The blades shall be well formed & cleanly made.</p> <p>i)The blades shall be free from seams, splits, crack</p> |  |
|---|---|

11. **Spades**


| | |
|---|---|
| <p>Qualitative Requirements</p> | <p>BIS Code No.</p> |
| <p>Spades should be of rectangular shape with provision to incorporate wooden handle. The material used for fabrication should be iron of suitable grade.</p> |  |

12. **Crow Bar 3 feet**


| | |
|---|---|
| <p>Qualitative Requirements</p> | <p>BIS Code no.</p> |
| <p>a) Size : Length 36 “</p> <p>b) Diameter of rod: 1”</p> <p>c) Material: made of tempered steel</p> <p>d)Attachment: Claw attachment for removing nails</p> <p>BIS Specifications</p> <p>e) The bars shall be heat treated to obtain a minimum hardness value of 320 HV.</p> <p>f)The material shall be suitable quality steel such as wrought steel</p> | <p>IS-704</p>  |

| | |
|---|--|
| g) The bars shall be forged clean & in one piece. | |
| h) Cutting ends of the bars may be rounded off & finished ground. | |

13. **Pick Mattock**


| Qualitative Requirements | BIS Code no. |
|---|---|
| a) Size : 2” wide, 9” long b) Weight: 3 Kg c) Ends : One prong end blunt point headed 9” long & other prong flat headed |  |

14. **Axe Mate Kit**


| Qualitative Requirement | BIS Code No. |
|---|---|
| <p>GENERAL</p> <p>Designed for Emergency workers, fire fighters and in disasters and consists of Axe with fibre glass reinforced, thermoplastic handle, forged steel/tested for at least 22000 volts with different attachments i.e. shovel, mattock, hoe, fire rake, narrow pick, board pick, quality leather axe sheath, canvas carry case & heavy duty cardboard with handles.</p> <p>TECHNICAL SPECIFICATION:</p> <p>WEIGHT : 05 Kg to 07 Kg</p> <p>CONSTRUCTIONS: The axe head, pick, chisel and mattock are made of grade EN 8 steel or better than EN 8 steel. The shovel, rake cum hoe are made from steel and the blades should be hardened for long life. The hitch pins are of high-grade steel hardened and plated. The axe head is fixed with the handle and preferably bonded with the best epoxy resins. The composition of the handle is of protruded fibreglass insert moulded on the outside with PPCP and EPDM, giving tremendous elasticity and shock absorbent, to avoid blisters or sore palms even after having chopped quite some wood.</p> <p>DESIGN: The axe head is designed to chop wood effectively.</p> <p>HARDNESS: Of the blade ensures to cut or strike against rock or steel.</p> |  |

| | |
|---|--|
| <p>APPROVAL: Tested at 22000 volts at least.</p> <p>NOTE TO TENDERER:</p> <p>1.The tendered shall indicate the make/model in their offer.</p> <p>2.The tendered shall furnish the clause-by-clause compliance statement. In case there is any deviation the same should be clearly brought out in the offer.</p> <p>3. They shall mention the relevant BIS/EN/DIN/UL certificate of the product offered.</p> <p>4. Technical manual comprising of servicing details shall be supplied with system</p> <p>5. Relevant Test certificates shall be provided from a Govt. approved laboratory or from the manufacturer, along with their offer.</p> | |
|---|--|


15. **Hand Saw**

| Qualitative Requirements | BIS Code No. |
|--|---|
| <p>a)Size : Length 600 mm with wooden/ plastic handle</p> <p>b) Shape: Trapezium shape, width at one end 125 mm & 45 mm on the other</p> <p>c) Thickness : 0.80 mm</p> <p>d)Cutting edge: It should be straight</p> <p>e)Material: Blade made of hardened & tempered spring steel strips</p> |  |


16. Brick Hammer

| Qualitative Requirements | BIS Code no. |
|---|---|
| <p>a) Weight: 1 lbs</p> <p>b) Provision: One end square shaped & the other flat chisel shaped</p> <p>c) Material & Handle: Iron alloy with Wooden Handle</p> <p>d) Size : Width 4"</p> <p>e) Application : Used for breaking bricks</p> <p>BIS Specification</p> <p>f) The hammer heads shall be made from fully killed forging quality steel</p> <p>g) The hammer heads shall be hardened & tempered on the striking faces & pains only.</p> <p>h) The striking face shall have hardness between 46 to 58 HRC.</p> <p>i) The hammer heads shall be cleanly forged in one piece.</p> | <p>IS-841</p>  |

17. 8 Penny nails {Kgs} -2, 3, 4 inches assorted


| Qualitative Requirements | BIS Code no. |
|--|---|
| <p>a) Size & Material : 14 no nails of size 1", 2" (Mixed), made of iron</p> <p>b) Application : To join wooden members</p> <p>BIS Specification</p> <p>As per IS-725</p> | <p>IS-725</p>  |

18. 16 Penny nails {Kgs}-2, 3, 4 inches assorted


| Qualitative Requirements | BIS Code no. |
|--|---|
| <p>a) Size & Material : 10 no nails of size 3", 4" (mixed), made of iron</p> <p>b) Application : To join wooden members</p> <p>BIS Specification</p> <p>As per IS-725</p> | <p>IS-725</p>  |

2. LIGHTING & POWER EQUIPMENT


1. Extension Cord 8 mm dia 100 mtrs. Long

| Qualitative Requirements | BIS Code no |
|---|---|
| <p>a) Type: With one 15 amp & two 5 amp switch socked fixed on wheel of diameter 1 feet with handle.</p> <p>b) Handle: Insulated handle of 6" to provide manual grip</p> <p>c) Cord: PVC wire 8 mm, 25 meter length with 2//3 pin plug, with wrapping arrangement on wheel.</p> |  |

2. Working Lamps with 50mm dia 100 Mtrs Long


| Qualitative Requirements | BIS Code no |
|--|--|
| <p>a) Type : With bulb holder, wire mesh protection for bulb.</p> <p>b) Handle : Fully Insulated handle to provide manual grip.</p> <p>c) Cord: PVC wire of 6 mm, 50 meter length with 2/3 pin plug.</p> |  |

3. Fuel Containers 20 Liters

| Qualitative Requirements | BIS Code no. |
|--|--|
| <p>a) Type : Eco friendly thermo setting plastic</p> <p>b) Capacity : 20 liter</p> <p>c) Application : To store & transport small amount of fuel</p> <p>d) Accessories: With keep & pipe of filling the fuel</p> <p>BIS Specification.</p> <p>e) The containers shall be made from the following grades of HDPE</p> <p>Containers HDPE 42 BB</p> <p>Closures HDPE-43 MB</p> | <p>IS-7394</p>  |


| | |
|---|--|
| f) The containers shall be provided with a handle having a comfortable grip. | |
| g) The minimum thickness of the containers shall not be less than 0.20 mm at any point. | |

4. **Inflatable Light Tower**


| Qualitative Requirements | BIS Code no |
|---|--|
| <p>This shall be capable to provide instant light as a first responder in shortest possible time to illuminate wide area of approx. 10,000 sq. meters. It shall be easy to operate by an individual and safe as well as reliable. It shall be supplied with matching generator. It shall not take more than 60 sec to inflate and minutes to achieve its best operating level.</p> <p>Technical Data</p> <p>a) Dimension (folded) : Not more than 580 x 440 x 520mm</p> <p>b) Weight (including generator) : Not more than 50 kg.</p> <p>c) Total Height : 3 to 5 meters</p> <p>d) Light Source : 400W metal halide or any suitable source to illuminate 10,000 Sqr meter areas</p> <p>e) Brightness : Not less than 4000 Lumen.</p> <p>f) Time for Max light efficiency : Not more than 3 Min.</p> <p>g) Generator : 4 stroke engine (petrol)</p> <p>Capacity-1200 VA (rated)</p> <p>Fuel consumption-Not more than 1 liter/hr</p> <p>Tank capacity- Not less than 7 liters.</p> <p>h) Storage box suitably designed to accommodate the tower and other spares and easy handling. Proper locking arrangement.</p> <p>i) Rain protection cover for generating set and control gear box made of water proof cloth with air vent arrangement.</p> |  |

| | |
|---|--|
| <p>j) General cover made of water proof cloth to ensure safe storage outside.</p> <p>k) Wind support suitable stay wire ropes (preferably 3 Nos) which can be tied to tower (balloon) and grouting hooks in case of extra wind velocity).</p> <p>l) Tool kit necessary tool required for operation of emergency lighting system.</p> <p>m) Trolley wooden/suitable material trolley with wheels to move the erect tower within a reasonable distance.</p> | |
|---|--|

5. **Portable Generators 10.5 KVA**

| Qualitative Requirement | BIS Code |
|--|--|
| <p>Rated output-2100-2300 Watt</p> <p>b) Maximum output 2400 watt</p> <p>c) Fuel :kerosene/petrol</p> <p>d) Rated current : 10.5 amp</p> <p>e) Over load protector for AC & DC earthlings</p> <p>f) Other provision : provision for battery charging, pull manual start facility</p> <p>g) Rated voltage : 220 volts</p> <p>h) Rated frequency-50 Hertz</p> <p>i) DC output- Only for charging 12 volts automotive batteries, Maximum charging output 8.3</p> <p>j) Dimension : (LXWXH) 605mm x 425mm x 550mm (+20% margins)</p> <p>k) Dry weight : 60-65 kg</p> <p>l) Engine type : 4 stroke, 1 cylinder</p> <p>m) Cooling System : Forced air cooling</p> <p>n) Ignition system : transistorize coil ignition</p> <p>o) Oil capacity 1 to 1.5 liters</p> <p>p) Fuel tank capacity : 1to 1.5 liters</p> |  |


6. Portable Generator 2.5 KVA

| Qualitative Requirement | BIS Code |
|---|--|
| a) Rated out put - 2100-2300 watt b) Maximum Out put 2400-2600 watt c) Fuel: Kerosene/ Petrol d) Rated Current: 10.5 amp e) Over load protector: for AC & DC Earthing f) Other Provision: Provision for battery charging, pull cord manual start facility g) h) Rated Voltage: 220 volts i) Rated Frequency: 50 Hertz j) DC out put: Only for charging 12 volts automotive batteries, Maximum charging out 8.3 amp k) Dimension: (LXWXH) 605 mmx425 mmx550 l) (+20% margines) Dry Weight: 60 to 65 Kgs Engine Type: 4 stroke, 1 cylindre | IS-2646 & IS -2635  |
| m) Cooling System: Forced air cooling n) Ignition System: Transistorized coil ignition o) Oil Capacity: 1 to 1.5 Liters p) Fuel tank Capacity: 12 to 15 liters | |


3. MISC UTILITY EQUIPMENT

1. Tarpaulin 6 m x 6m

| Qualitative Requirements | BIS Code no. |
|---|--------------|
| a) Size :- 6 meter x 6 meter | |
| b) Material: - made of water proof canvas cloth, its edges should | IS-2089 |


| | |
|---|---|
| <p>be secured by stitching a strip of similar cloth or otherwise of 1” width along the periphery of Tarpaulin.</p> <p>c) Color :- Green/Navy blue</p> <p><u>BIS Specifications</u></p> <p>Basic fabric: shall be made from cotton duck or cotton canvas. Common proofing shall be prepared with the ingredients consisting essentially of paraffin wax, a suitable pigment and aluminum separate.</p> <p>Resistance to microbial attack- The Material shall be rendered resistant to microbial attack treating with suitable rot-proofing agent.</p> <p>Sweating test- The common proofed canvas/duck shall not stain the blotting paper when tested as prescribed.</p> <p>Breaking strength not less than 90 % of specified value prescribed for the basic fabric. (As per IS: 2089-1977 Page No.-4&5)</p> |  |
|---|---|

2. Megaphone


| Qualitative Requirements | BIS Code no. |
|---|--|
| <p>a) Power output; 16 watt rated, 20 watt maximum</p> <p>b) Voice range : 0.40 km(1 km in quiet area)</p> <p>c) power source : 12 volts DC, 8 x UM-2 CELLS</p> <p>d) Microphone: Unidirectional, with volume control & press to talk switch</p> <p>e) Dimension: Horn diameter 220 mm, length 370 mm</p> <p>f) Weight: 2 kg (approximate)</p> <p>g) Operation: Dry cell & car battery operation</p> <p>h) Body: Sturdy & light weight with inbuilt siren</p> | <p>IS-7136</p>  |
| <p><u>BIS Specification</u></p> <p>a The megaphone shall be able to withstand the following climatic severities:</p> <p>Dry heat : + 70C</p> <p>Cold heat : - 10C</p> | |

| | |
|--|--|
| Damp heat: 2 cycles | |
| b)Weight : No more than 2 kg. | |
| c)Harmonic distortion: should be less than 10% at 1000 Hz | |
| d) Frequency Response: Overall frequency response shall be within plus minus 3 db from 30to 3000 Hz. | |


3. Buckets Large

| Qualitative Requirements | BIS Code no. |
|---|--|
| a) Size : 25 Liter capacity b)Provision: With handle to carry c) Material : Made of plastic <u>BIS Specification</u> d) The bucket shall be molded from natural or colored HDPE(High density polythene bucket) e) The HDPE used for injection moulding of buckets shall be of grade 45/55 MA. f)The buckets shall have smooth surface finish without any blemishes. g) The handle shall be rigid and made of metal, coated metal or HDPE. | IS -3730  |


4. Spray paint Orange 400 cc

| Qualitative Requirements | BIS Code no. |
|--|---|
| a)Weight/Volume:- 300 gm/400 cc b) Color:- Color must be of high contrast, durable & fluorescent c) Knob arrangement:- Press knob for release of paint, the release of paint should be in the form of spray jet. |  |

5. Scene Tape 100 m rolls


| Qualitative Requirements | BIS Code no. |
|--|---|
| <p>Size : Length 100 meter, width 3” Material : PVC tape roll with red & white strips (Red color preferably in fluorescent color) with DANGER written in bold letters</p> |  |

6. Traffic Cones


| Qualitative Requirements | BIS Code no. |
|---|---|
| <p>The traffic cones should be made by suitable & durable plastic, the base of which should be heavy rectangle to provide stand alone Stability with conical body of height not less than 2 ft. It should be painted with orange fluorescent paint with retro reflective strip of 1 to 2 inch width around the conical body at suitable height.</p> |  |

4. PERSONNEL PROTECTIVE GEAR Individual Kit CSSR


1. Safety Helmets

| Qualitative requirements | BIS Code |
|---|---|
| <p>a) ISI MARKED : IS : 2925 OF 1984 b) SHELL MATERIAL : HIGH DENSITY POLYETHYLENE (HDPE) c) ADJUSTABLE AND DETACHBLE HEAD BAND WITH NAPE d) STRAP MATERIAL : LOW DENSITY POLYETHYLENE (LDPE) e) ADJUSTABLE CHIN STRAP : NYLON CHINSTRAP AND RACHET TYPE HEAD BAND f) SLOT FIX DESIGN : PROVISION FOR EASY CLIP ON ACCESSORIES LIKE FACE SHIELDS AND MUFFS COLOUR : YELLOW COST : Rs.250/-</p> |  |


2. Safety Vest Fluorescent water proof

| Qualitative Requirements | BIS Code no. |
|---|---|
| <p>a) Material : Sleeveless jacket made of red fluorescent color cloth with white strips</p> <p>b) Size : Extra large</p> |  |

3. Heavy Duty work gloves


| Qualitative Requirements | BIS Code no. |
|---|---|
| <p>a) Material:- Made of fine leather, flexible</p> <p>b) Application :- Capable to work with hand held machine</p> <p>c) Size :- Medium, Large and Extra Large</p> |  |

4. Face Shield

| Qualitative Requirements | BIS Code no. |
|--|--|
| <p>MANNIKIN FACE SHIELD (100 PCs)</p> <p>Rectangular Barrier device used by rescuer when giving mouth-mouth/mouth –nose ventilation in patients.</p> <p>Size 7”x12” outer synthetic layer and 5”x7” central rectangular sieve like filter of non absorbent white plastic;</p> <p>The outer layer has a central hole of 1.5” diameter in the area of contact with patient mouth/nose and rescuer mouth with intervening filter layer</p> <p>Package: Single use disposable in sterile packing</p> |  |

5. Safety Goggles

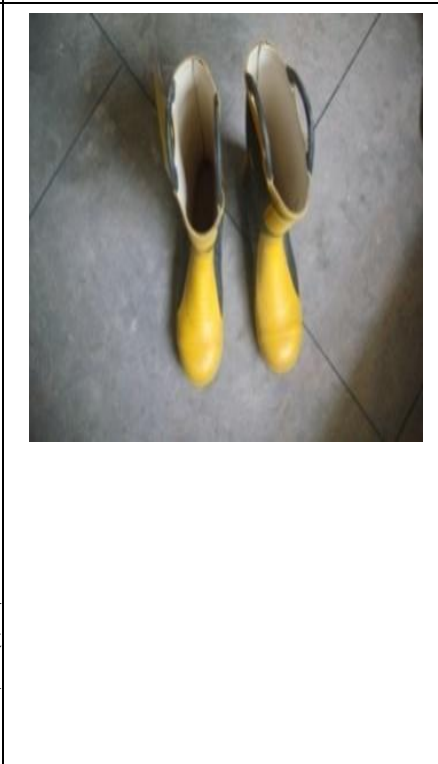
| Qualitative Requirements | BIS Code no. |
|------------------------------|--------------|
| <p>a) Color :- Grey/blue</p> | |

| | |
|---|---|
| <p>b)Material:- Light weight & safe to wear with impact resistant plastic</p> <p>c) Provision:- Adjustable according to the size of the head, loose enough to pass the sweat.</p> |  |
|---|---|


6. Head Light

| Qualitative Requirements | BIS Code no. |
|--|--------------|
| <p>Purpose of this head light to provide adequate light in the night etc at disaster site so that gas cutting etc. done for rescue operation. Minor caped lamp assembly (incorporation led acid type battery conforming to IS : 5679/1986</p> | |


7. Boot Hard toe Steel shank

| Qualitative Requirements | BIS Code |
|---|---|
| <p>a) Scope</p> <p>This document covers specifications for the fighter's thermal protective gear providing protection to the fire fighter's feet and shall comprise of boots.</p> <p>b) Boots</p> <p>The fire fighters boot shall be CE market and to meet the requirement of EN 345 or equivalent International standards. Boots should have outer shell of Flame Retardant Rubber/ Leather and shall have lining for better in solution and head resistant. Loops for assisting the wearing shall be provided. The size of the boot shall be provided at the time of supply ord</p> <p>*Note: Boot shall meet the requirements of the standard specified and certificate to this effect from an independent laboratory/test house of International repute shall be furnished along with the technical offer.</p> |  |


8. Dust Mask

| Qualitative Requirements | BIS Code no. |
|---|---|
| <p>a) Size : 4"</p> <p>b) Provision: Having two elastic straps to fasten above & below the ear to prevent the dust</p> <p>c) Material: The cloth used for fabricating dust mask should be able to prevent entry of dust</p> |  |

9. Earplug Corded

| Qualitative Requirements | BIS Code no. |
|---|---|
| <p>a) Material :- Made of soft eco friendly fiber material, corded</p> <p>b) Provision:- With a lace or same type of other arrangement to keep units of both the ear together</p> <p>c) Application :- To prevent entry of dust & loud sound in the ear</p> | <p>IS -9167</p> |
| <p><u>BIS Specification</u></p> <p>d) Material coming into contact with the body shall not cause irritation</p> <p>e) It shall be resistant to skin oil, hair oil and ear wax.</p> <p>f) Ear protector shall be made of material which is capable of being cleaned and sterilized.</p> <p>g) Ear Plug should be elastic to the ear canal</p> <p>h) Ear plug should be made so that no deleterious changes occur between (-) 25 and + 55 degree centigrade.</p> |  |

10. Knee Pad Cushion 1 inch

| Qualitative Requirements | BIS Code no. |
|---|---|
| <p>a) MATERIAL:- made of hard plastic with 1” sponge cushion inside with pair of straps for securing knee pads</p> <p>b) Application :- To fasten on the knees to protect from injury</p> |  |

11.. Water Bottle Light wt. with Protective Carrier Element

| Qualitative Requirements | BIS Code No |
|---|-------------|
| <p>a) Designed to carry on the pack</p> <p>b) It should have Illuminate panels for improved visibility and safety</p> <p>c) It should have a fuel window for bladder level</p> <p>d) It shall have extra wide bladder port and quick connect access.</p> <p>e) It must have Insulated bladder compartment for keeping water cool.</p> <p>f) Ergonomic back panel w/ perforated foam for improved ventilation.</p> | |

5. MOUNTAIN RESCUE EQUIPEMENT

1 &2. Ropes (climbing/ rappelling)

Related specification & availability: the following will be related specifications

- a) IS -678 Method for determination of colour fastness of textile materials to washing test no 1
- b) IS – 2454 Method for determination of colour fastness of textile materials to artificial light.
- c) IS- 6590 Braided nylon rope for mountain ring purpose.
- d) IS – 397 – Kraft paper
- e) IS – 1912 Country jute twine

f) IS – 3751 – Heavy cloth

g) IS – 2508- Low density polyethylene film

h) Indian standard specification are obtainable on payment from the secretary (ADM) BIS Manak Bhawan 9 Bahadur shah zafar marg N/DLI or from their regional office.

SEALED SAMPLE :- The climbing rope will confirm to every respect to the terms of this specification in workmanship finish and in all other respects not defined in this specifications it will confirm to the sealed sample held in custody of controlling authority.

MATERIAL : The rope will be made from continuous 140 TEX (1260 d) high tenacity nylon 6 or 66 multifilament yarn and be given heat treatment. The required breaking strength of the rope may be achieved by use of nylon yarn having tenacity 63 g/tex (7g/d) count/denier of the yarn can be varied suiting to the construction and finish of the rope.

CONSTRUCTION PARTICULAR : particular of construction of the rope as under.

Sheath – No of spindles- 24 (yellow-12) scarlet-11 Blue-1)

Core- No of stands in each core end -12 count (denier)-1260x2x10 twisted together.

No of stands in each cre end -2

No yarns in each stand -10 of core.

Turns/dm -15 (Min)

The construction details of the rope will be varied to suit the manufacturing conditions provided the finish and requirement as given in clause 7 are successfully.

3 Carabineer

General purpose carabineer for mountain ring as per BIS cat is 8533 : 1977 reaffirmed-2001

4. Ruck Sack

| Qualitative Requirements | BIS Code No. |
|---|--------------|
| a) Adjustable back system with frame. b) Large main compartment. c) Bottom compartment d) Front loading system e) Water proof with rain cover. f) Made from high quality of polyester. | |

| | |
|---|--|
| <ul style="list-style-type: none"> g) Easy access to adjust all gears h) Total weight of rucksack up to 02 Kg; i) Padded shoulder straps j) Aluminum frame weight up to 01 kg k) Thermo formed HIP belt with flexible suspension. l) Volume - 70 ltrs m) Ht. of Rucksack - 70 to 95 cms. n) Width of Rucksack - 35 to 37 cms o) 1 ZIP top LID pocket - size 13¹/₂ x 6" x 3" p) Side pockets -04 <ul style="list-style-type: none"> i) Size of upper pocket (2) = 11¹/₂ x 6" x 3" ii) Size of lower pocket (2) = 6" x 6" x 3" q) 2 side straps on upper side pocket of 2 to 3 cm width for support r) Colour: Orange. | |
|---|--|

5. Rock Piton

AS per IS : 8905: 1987 (Reaffirmed 1996)

The piton consists of spike or blade and ahead having a hole of having a loosely welded ring of such dimension as to follow to passage of one or two carabineers (see IS 8533-1977) specification for general purpose carabineers for mountain ring the loads that may be applied to various tyoe of pitons depends on their designee and the angle between the body pitch and rope delay.

TERMINOLOGY :- for the purpose of is slandered the following definition shall apply.

Piton, Horizontal : pitch on which the direction of the loaded on the eye is parley to the working adge of the piton.

6. Full Body Harness

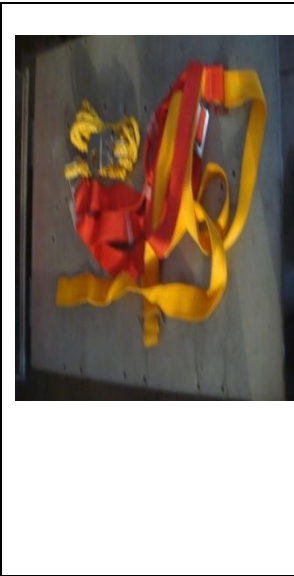
| Qualitative Requirements | BIS Code no. |
|--|--------------|
| It should be useful for safe working on Heights & protection against | |

fall. The shoulder and thigh straps should be easily identified by two different colors. It should be fabricated for high shock absorbing and impact dispersing capacity while working-before, during and after a fall. It should have a specially designed seat strap for optimum comfort. It should have Energy Absorbing Dorsal ID.

SPECIFICATION:- Its Anchor point should be by means of 2 chest attachment triangular-ring and a dorsal attachment triangular -ring. It should have adjustable shoulder and thigh straps.

ACCESSORIES


If required it should be available with accessories like Kinetic Energy absorbers, Lanyards, Karabiners.



NOTE TO TENDERER:

1. The tendered shall indicate the make/model in their offer.
2. The tendered shall furnish the clause-by-clause compliance statement. In case there is any deviation the same should be clearly brought out in the offer.
3. They shall mention the relevant BIS/EN/DIN/UL certificate of the product offered.
4. Technical manual comprising of servicing details shall be supplied with system
5. Relevant Test certificates shall be provided from a Govt. approved laboratory or from the manufacturer, along with their offer.

8. Emergency Rescue Stretcher

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>The Stretcher should have following features:-</p> <p>a)Foldable and compact with built-in flotation.</p> <p>b)Color coded patient restrain straps with double locking Quick release safety buckles and built in head restraints system.</p> <p>c)Corrosion resistant stainless steel frame with cover and case.</p> <p>d)Vertical hoisting sling.</p> <p>e)Individual replacement components.</p> <p>f)Weight should not be more than 20 Kgs.</p> |  |

13. Sleeping bag: This items available on rate contract (DGS & D)
14. Warm jacket/ coat parkas: Available on rate contract (DGS &D)
15. Ground Sheet: This Items available on Rate contract (DGS&D)

6. EXTRICATION & ACCESS EQUIPMENT


1. Rotary (Circular) Rescue Saw 16” with diamond tipped blade

| S.N | SPECIFICATION OF ROTARY (CIRCULAR) RESCUE SAW 16” WITH DIAMOND TIPPED BLADE |
|-----|--|
| 1 | Minimum 60 CC, 2 stroke petrol driven engine |
| 2 | Air cooled engine |
| 3 | Minimum Output Power up to 4HP at 9000 Motor RPM |
| 4 | With adjustable blade guard. |
| 5 | RPM above 4000-5500. |
| 6 | Provision of wet cutting of materials by providing connection with water line. |
| 7 | Accelerator lock for continuous use and safety inter lock must be provided. |
| 8 | It should be capable of running 16” Dia blade. |
| 9 | Minimum cutting depth = 100 mm. |
| 10 | Fuel tank of capacity = 0.8 Ltr to 1.2 Ltr. |
| 11 | Should be capable of cold manual pull cord start. |
| 12 | Noise level should be less than 120 db in one Mtr around the equipment. |
| 13 | Ignition = Electronic type. |
| 14 | Should be provided with choke arrangement. |
| 15 | Machine holding handle should be rubber coated/robust coating providing cushion for getting good grip. |
| 16 | Weight Not more than 15 kg with blade and full tank fuel. |
| 17 | With rugged protective carry case. |
| 18 | Rust proof. |

| | |
|----|--|
| 19 | International certificate on product quality. |
| 20 | <p>Accessories</p> <p>a) Diamond Tipped blades (Spare) carbadite type blade and abrasive blade.</p> <p>b) 5 liters fuel container.</p> <p>c) Spare air filter</p> <p>d) Pressure water tank with capacity of minimum 8 Ltr alongwith 5 Mtr rubber pipe.</p> <p>e) Complete tool kit.</p> |
| | <p>TECHNICAL EVALUATION : Shall be subject to the following:-</p> <p>a) Meeting the requirements as mentioned from Srl No 01 to 20 above</p> <p>b) Design in conformity to EN/DIN/US or equivalent standards and certificate to be submitted along with the bid.</p> <p>c) The bidder shall have to demonstrate the performance of their product by cutting the following:-</p> <ul style="list-style-type: none"> - A piece measuring 400 mm X 400 mm X 100 mm made of reinforced cement concrete slab (ratio 1:2:3) with four steel bars of 12 mm diameter placed equidistant and the time shall be recorded for cutting of the sample in following way. While cutting, slab shall be erected in standing position and time taken to cut only 100 mm thickness shall be noted for each machine across the thickness of the slab. Numbers of steel bars encountered shall be same for all machines. -A piece of iron rod of dia 2” (Quality of iron shall be the same which is utilized in iron bars used for buildings and constructions) - A piece of bullet proof glass of thickness 12m minimum. - A piece of stone slab of dimensions of 14X 12” X 4” Thickness of slab shall be 4” and the same shall be cut across its cut thickness completely. <p>d) Speed of cutting: - Speed of cutting shall be tested in cutting of concrete slabs as mentioned above. Subject to compliance in all respects, the Rotary Rescue Saw shall be listed in descending order quickest on top and the financial bid shall be opened in respect of all the bidders who have demonstrated cutting time not more than 50% of the quickest cutting time and the lowest financial offer shall be selected.</p> <p><u>(NOTE:- Simple glass can be broken and eliminated with the help of hammer and so Rotary rescue saw should not be tested for cutting of simple glass)</u></p> |

| <u>DIAMOND TIPPED BLADE</u> | |
|------------------------------------|---|
| 1 | Diamond blade. |
| 2 | Blade RPM – above 4000-5500 |
| 3 | Diameter 16” |
| 4 | Minimum cutting depth of 100 mm. |
| 5 | Type of blade- Multipurpose (For cutting concrete, metal, bullet proof glass, wood) |
| 6 | Internationally certified on quality standards. |

4. Combination Cutter and Spreader

| Qualitative Requirements | BIS Code No. |
|--|--|
| <p><u>Purpose</u></p> <p>Combination tools are double acting hydraulic tools primarily for cutting and spreading but may be used, with suitable attachments as necessary for pushing, pulling and pressing or squeezing. They are used for rescue work following vehicle, tanker or rail accidents, in factories or construction site accidents and in natural disasters particularly for collapsed shelter search and rescue. Although specialist and heavier individual function cutters and spreaders are available combi-tools offer a solution providing multiple functions in a single piece of equipment and its versatility makes it useful in post disaster rescue work.</p> <p><u>Scope of Supply</u></p> <p>Each Kombi tool set will be supplied with a power unit and accessories and spares indicated later.</p> <p><u>Specifications of Kombi-tool</u></p> <p>1. General- The kombi -tool should have a light weight, balanced and ergonomic design with anti slip twist grip handle and safety control. The blades should be made of tempered tool steel. They should be straight, serrated, regrind able and easily exchangeable. The cylinder body and housing could be made of high strength aluminum alloy or equivalent material.</p> |  |

Pigtail(s) should be fitted with anti-kink springs or some form of kink protection, have quick connect couplings and automatic locking.

2. Working Pressure 630 to 720 bars
3. Opening (spreading) width More than 300 mm
4. Minimum spreading force at 2.5cm from tip of blades 35 KN
5. Spreading force at 630 to 720 bars More than 100 KN
6. Cutting force at 630 to 720 bars More than 200 KN
7. Pulling force More than 50 KN
8. Weight :Not more than 17 Kgs without hoses. Should cut round steel bars (as per current EN
9. Standard or equivalent) More than 25 mm diameter
10. The hoses should be of 10 m length and of different colours, if two hoses are to be used. Factor safety should be of the order of four
11. Operating Temperature -20 to +80 degrees Celsius.

SPECIFICATIONS OF PUMP

1. Engine type Four stroke petrol engine
2. Pump type two stage radial piston or alternative
3. Equivalent design with max output
4. Exceeding 2 liters per minute.
5. Operating pressure 630 to 720 bars
6. Fuel Tank Capacity Adequate for minimum three hours Running.
7. Oil Tank Capacity Minimum 2 liters
8. Weight Not more than 16 Kgs.
9. Operating temperature-20 to +80 degrees Celsius
10. Sound level Less than # 70 dB at 1m instance.

Accessories to be Supplied :


1. Maintenance set
2. Set of spare blade arms and tips
3. Toolkit to change blades
4. Set of pulling chains
5. Set of pulling adaptors
6. Carry case for kombi-tool.
7. Carry box for power unit.

5. **Ramset with matching foot pump**

| Qualitative Requirements | BIS Code No. |
|--|--------------|
| <p><u>Purpose</u></p> <p>RAMs are hydraulic tools used for pushing apart and staying two masses of material in order to create space for extrication of victims following vehicle crashes, earthquakes or rail and industrial accidents. They can be single or multistage (telescopic) and operated by hydraulic pumps which may be based on IC engine power or on hand/foot pumping. The oil from the pump is used with either a two hose connection to the RAM or by a single hose with two concentric chambers.</p> <p><u>Scope of Supply</u></p> <p>Two stages telescopic RAM with foot pump.</p> <p>RAM support</p> <p>Maintenance set</p> <p><u>Specifications</u></p> <p>Max. Working pressure</p> <p>Max. Spreading force</p> <p>1st plunger</p> <p>2nd plunger</p> <p>Length retracted</p> <p>Total stroke</p> <p>Max. Length (incl. Cross heads) : <130 cm</p> <p>Weight, ready for use</p> <p>Temperature reach</p> <p>Safety factor</p> <p>Tool, hydraulic</p> <p>Safety factor extension hoses :</p> <p>Accessories</p> | |

| | |
|---|--|
| <p>Spare hose(s) (not less than 2 mtrs)</p> <p>Maintenance set</p> <p>Cross head</p> <p>Ram support</p> <p><u>Specifications of Hand pump</u></p> <p>Operating pressure</p> <p>Weight (ready for use)</p> <p>Temperature reach</p> <p>Accessories</p> <p>Maintenance set</p> <p><u>Standards</u></p> <p>Equipment must conform to prEN 13204 and/or NFPA 1936 standards for hydraulic tools and certifications will be submitted with tender.</p> | |
|---|--|

6. Come Along 1.5 tones

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>Come Along system should be of steel or hard Aluminum Alloy consisting three major parts i.e. Base, Mast & Boom. The system should provide a safe secure anchorage for confined space entry, exit and rescue work. The system should be completely collapsible and portable for advantage of easy transportation. The system should be completely collapsible and portable for advantage of easy transportation. The system should be corrosion resistant. All adjustment should be on key plugs easy to assemble and dismantle without any tools. The rated capacity in terms of working load should be more than 200 Kg. The complete system should have compliance of European standard or should have certification from NABL approved Lab for safety factor.</p> <p>2. Tendered should supply ascending descending device/winch, accessory handle, rope, rescue stretcher and Full body Harness along with system. Ascending descending device/winch should work on principle of wrap or contract friction.</p> |  |

| | |
|---|--|
| <p>Ascension handle should be made up of light forged aluminum Alloy. The handle grip should be comfortable with thermal insulation. Rope should be made of polyamide. The breaking load of rope should be more than-24 KN (with out end connection) and more than-18 KN (with end connection). The rope diameter should be 9 mm to 12 mm only. Rescue stretcher should be made up of Fiber/Light weight Aluminium Alloy. It should be in bucket shape with sufficient number of straps to hold casualty. It can be lifted vertically up & down. Full body Harness should be complied with EN 361/ 358.</p> | |
|---|--|

7. Rotary Hammer Drill (BIS/DIN/EN/IS or EQUIVALENT)

Voltage - 220 – 250 V

Power input - 600 W - 800 W

Impact rate (ipm) - 0-4500

Chisel adjustment - 36 position (min.)


With Mode Selector Switch for Drilling / Chiseling or Both selection

Noise Level : <100db

Light weight , shock proof body electrical cord of not less than 5 mtr. in length with 5 amp three/two pin plug. With compatible Drill Bit Of 30 CM length -2 Nos

With suitable Protective carry case.

9. Air Lifting Bag set with air cylinders

| Qualitative Requirements | BIS Code No. |
|--|---|
| <p>1. Airlifting bags are pneumatics appliance used for a variety of lifting purposes in rescue works in the wake of vehicle and railroad accidents, collapsed shelters or road clearance works amongst other situations. They can be slid into spaces below loads where normal jacks cannot be positioned. They can be used over uneven ground surfaces where again normal jacks will be unstable and dangerous. They can be used to relocate, topple, align and enable lifting by cranes or chain lifting systems. Whereas normal jacks concentrate the lifting energy over a small area, airlifting bags provide lifting pressure over a much larger area. They are easy in maintenance effort, durable and light weight.</p> |  |

SCOPE OF SUPPLY

2. Each set of high pressure airlift bags will an air-jacking system comprising two bags each on 10 sizes in term of maximum lift capacities, i.e. a total of 20 bags, with accessories as indicated in Para 3 below. The totaled maximum lift capacity of one bag from each size should be in the range of 245 to 270 metric tons. The individual sizes should range between the maximum lifting capacities indicated below:

- 1 to 1.5 tons
- 2.5 to 3.5 tons
- 5 to 6.5 tons
- 9.5 to 11 tons
- 17 to 21 tons
- 23 to 26 tons
- 30 to 33 tons
- 38 to 42 tons
- 52 to 56 tons
- 65 to 70 tons

3. Each set will be provided with the following accessories to operate up to eight bags at a time:-

- 8 inflation hoses 5 m long in four different colours (two each) with push lock couplers.
- 8 inflation hoses 10 m long in four different colours (two each) with push lock couplers.
- 2 dual control box/unit, 8 bar, dead man
- 4 Single control units, 8 bar
- 4 pressure reducers for air cylinders 200/300 bars
- 8 shut of houses with safety valve and 0.5 m hose
- 6 compressed air cylinder 300 bar, 5 to 6 liters
- 4 connection pieces for air cylinders
- One air bag testing device per three sets of air bags(to be quoted for separately)

SPECIFICATIONS

4. The bag should be of multiple layers of Kevlar. Armed construction. While bags up to 26 tons max lift capacity should be square in shape, higher sizes may be rectangular or square in shape. The thickness of the bags should not exceed 30 mm. The set of bags should provide lifting options from a minimum of 7 cm for the smallest size to more than 50 cm for the highest size.

5. They should have anti-slip surfaces to provide good grip and high traction between the bag and surface of object to be lifted as well as when stacked on top of each other. Markings for

| | |
|---|--|
| centering should be provided along with fluorescent labels at corners for recognition in the night. Each bag should have its own storage bag. | |
| 6. Operating pressure 8.0 bars. Bursting pressure should not be lower than 32 bars. Testing pressure to be flowed will be 1.5 times the operating pressure. | |
| 7. Operating temperature -20 to 80 degrees centigrade. | |

10. Multi Cable Winch

| Qualitative Requirements | BIS Code No. |
|---|---------------------|
| The Multi Cable Winch should be required for small rescue work, the 4 to 5 hp rated Motor, which should provide at least pulling power of tons. It should have line retrieval speed not less than 6 meters/minutes at full pull. This compact winch shall complete with handle/mounting system for a class III two inch receiver, hawse fairlead, remote control with minimum 3.6 meters, and free spool clutch and battery cable with mounting kits. | |

NOTE OF TENDERER

1. The tendered shall indicate the make/model in their offer.
2. The tendered shall furnish the clause by clause compliance statement. In case there is any deviation the same should be clearly brought out in the offer.
They shall mention the relevant BIS/EN/DIN/UL certification of the product offered.
Technical manual comprising of servicing details shall be supplied with system

11. Rotary Hammer Drill Bit (BIS/DIN/EN/IS or EQUIVALENT)

Bit type: Metallic bits used for drilling in concrete, metal

Bit length : 25.4 Cms & 46 Cms.

Bit diameter : 14 mm & 18 mm

Compatibility : Compatible with Rotary Hammer drill equipment.

The distance between the center of diameter and center of rod shall not exceed 0.8 mm.

The eccentricity between shank and rod shall not exceed 0.8 mm.

Material – high tensile steel with minimum 55% carbon.

Hardness – 230 to 340 HV.

13. Cordless Hammer drill

Operating voltage : 08 volt DC powered by NIMH/Li-ION battery or equivalent with a rating go not less than 2.5 (A.h)

2. Max torque : not less than 60 NM or equivalent
3. Should have at least as two speed transmission with no load speeds of 0-400 and 0-1500 rpm of higher and an impact rate 0-45600 and 0-18000 blows per minute.
4. The tool should have a keyless single sleeve not less than 1.27 Cms chuck with carbide jaws and a ricketing mechanism for easy tightening on bit.
5. Carbon brushes should be externally accessible for easy and quick replacement.
6. The cordless hammer drill should not more than 3.25 kgs in weight.
7. The tool should be able to metric drill more than 1.27 Cms in steel 1.58 Cms in masonry and 5.08 Cms in wood.
8. The toll should be provided with support handle and both the tool and support handle should have soft, vibration absorbent grips for operator comfort.

ACCESSORIES : The following accessories will be provided with each drill set

Two spare battery (in addition to one integral to the drill.)

Battery charger, which should fully charge the battery in less than one hour.

Two spare bi sets including driver bit.

Tool case

7. POWER TOOLS

1. Reciprocating saw

Rated power:- Not less than 900 watt at 220 -240 volts

Stroke rate (at no load): Not less than 2700/min.

Stroke length : Not less than 28 mm

Cutting depth(wood)- Above 165 mm

Cutting depth(steel sheet) – More than 20 mm

With required accessories and electrical cord of minimum 5 mtr length with 5 amp

three/two pin plug alongwith an extension cord of 10 Mtr.

Rate current- Not more than 6 amp

Noise level < 100 db

Spare blades for metal & wood cutting 10 Nos with suitable protective carry case.

Weight- Not more than 5 Kg with blade.

The starting current drawn by the motor should be limited to prevent the electric supply fuse blowing. This also prevents the tool starting with a jolt.

Air cooled.

Rust proof.

Internationally certified on standards.

Saw must be capable of cutting a variety of materials like- all kind of wood and metal.
Firm should give live demonstration in above regard on the samples provided by NDRF.

RECIPROCATING SAW BLADE WOOD CUTTING

Blade type- Metal (high carbon steel) blade used for wood cutting

Blade length- 230 mm (minimum)

Compatibility- Compatible with reciprocating saw equipment

TPI ;- Not less than 05 tooth per 2.54 CMS

Blade width :- Not less than 19 mm

Thickness : - Not less than 1.20 mm

Material – Low alloy cold rolled steel strips in hardened, tempered and polished condition having carbon, silicon, manganese, chromium, nickel, sulphur and phosphorous

Rust proof.

Marking – The saw blades shall be marked with the size and manufacturer`s name and trade mark at equal spaced intervals over the bands.

Internationally certified on quality standards.

RECIPROCATING SAW BLADE METAL CUTTING

Blade type – Metal blade of bi-metal blades have a teeth of high speed steel and body material out of high carbon steel used for metal cutting

Blade length- Not less than 150 mm.

Compatibility- Compatible with reciprocating saw equipment

TPI- Not less than 09 tooth per 2.54 cms

Blade width- Not less than 16 mm

Thickness- Not more than 1.6 mm

Material – The low alloy cold rolled steel strips in hardened, tempered and polished condition having carbon, silicon, manganese, chromium, nickel, sulphur and phosphorus

Tooth setting – the provision of the rake setting of the tooth shall be at the discretion of the manufacturer.

Rust proof.

Marking – The saw blades shall be marked with the size and manufacturers name and trade mark at equal spaced intervals over the bands.

Internationally certified on quality standards.

Note:- (i) The confirmation that the stores is meeting the specification should be supported by documents/ literature etc.

(ii) These documents of all stores offered be numbered and attached after all appendices and the numbering may be in continuation.

2. Chipping Hammer

| Qualitative Requirements | BIS Code No. |
|---|---------------------|
| With adjustable bits. Chiseling Impact rate - 900 - 1800 Per min or more. Single impact force. 6j-25j Power input. 1000W-1900 W. Light in weight, shock proof body. With required accessories, lubricants and electrical cord of not less than 4 m. in length with 5 amp three/two pin plug. Voltage Require : 220V-240 V. Rated Current : Not more than 6.5 AMP. | |

| | |
|--------------------------------------|--|
| Weight : Not more than – 12 Kg. | |
| Noise level : Not more than 120 db. | |
| Bits : Pointed & flat type. | |
| With suitable Protective carry case. | |

Chipping Hammer bit pointed

| Qualitative Requirements | BIS Code No. |
|--|---------------------|
| a) Bit length : Not less than 28 Cms & 41 Cms. | |
| b) Bit diameter : Not less than 19 mm | |

Chipping Hammer bit

- a) Bit length : Not less than 28 Cms & 41 Cms.
- b) Bit diameter : Not less than 18 mm
- c) Material : High tensile steel with minimum 55% carbon, SDS Type

SPARE BATTERY FOR CORDLESS HAMMER DRILL.

Purpose

1. Cordless Hammer drills are light weight, battery operated, ergonomically designed power tools that combine high speed, high torque and a hammer action to enable drilling, driving and fastening in metal, steel and wood.

Specifications.

2. Operating Voltage: 18 Volts DC. Powered by a NIMH / Li-ION battery or equivalent with a rating of not less than 2.5 (Ah).
3. Max Torque : Not less than 60 Nm or equivalent.
4. Should have at least a two speed transmission with no load speeds of 0-400 and 0-1500 rpm or higher and an impact rate of 0-4500 and 0-18000 blows- per minute (BPM) or higher. The tool should provide a minimum of 10 clutch settings.
5. The tool should have a keyless single sleeve not less than 1.27 Cms. chuck with carbide jaws and a ratcheting mechanism for easy tightening on bit.

6. Carbon brushes should be externally accessible for easy and quick replacement.
7. The cordless hammer drill should not be more than 3.25 kgs in weight.
8. The tool should be able to metric drill more than 1.27 Cms. in steel, 1.58 Cms. in masonry and 5.08 Cms. in wood.
9. The tool should be provided with a support handle and both the tool and support handle should have soft, vibration absorbent grips for operator comfort.

Accessories

The following accessories will be provided with each cordless hammer drill set:

Two spare batteries (in addition to one integral to the drill).

Battery charger, which should fully charge the battery in less than one hour.

Two spare bit sets including driver bit. Tool case

8. PUMPS

1. Floating Pump



GENERAL PUMP AND ENGINE SPECIFICATIONS

Casing : Anodized Aluminum

Impeller : Bronze impeller

Other standard pump equipment

Water resistant air cleaner and muffler.

Engine Specification

6 to 8 hp or more, air cooled.

Recoil starter with handle

Solid state ignition

Use unleaded gasoline/ petrol and oil mixed

Minimum 2 years parts and service warranty

Automatic float controlled throttle

Compression release valve for easier starts.

FUEL TANK

Appropriate for continuous run of at least 1 hrs.

FLOAT ASSEMBLY

High Density polyethylene shell filled with polyurethane foam (closed cell).

WEIGHT


Dry weight not more than 30 Kgs.

9. FIRE FIGHTING EQUIPMENT

1. **Fire Extinguisher Portable:** Specifications as per BIS “IS 13849:1993”



2. Breathing apparatus set with spare cylinders.

| Qualitative Requirement | BIS Code No. |
|---|---|
| <p>1. GENERAL: The self contained, Positive pressure and open circuit air breathing apparatus shall be certified for use by the fire fighters for use by the fire fighters for 45 minutes total working duration.</p> <p>2. TECHNICAL SPECIFICATION:</p> <p>a) Back Plate and Body Harness: This shall be made of non - metallic, antistatic, impact, chemical & fire resistant material and orthopedic ally designed and manufactured in conformity to EN/ DIN/ US standards and certified for use by the fire fighters, It shall facilitate mounting of air cylinder through cam lock. The body harness shall be wearer friendly and safe for carrying load while all buckles shall be quick release type.</p> <p>b) Pressure reducer: This shall be so designed so as to meet the air demand for two users simultaneously at a stable pressure on the outlet with inlet pressure varying from 300 ars to 20 bars and shall confirm to provisions in prEN 137-2002 class II.</p> <p>c) Face Mask: These shall be reverted edge seal type and made of flame resistant material confirming to EN 136. The reflex seal on the outer mask shall be so designed so as to facemask to reduce dead space, speech transmitter for clear voice reproduction and a wide angle panoramic vision visor made of Polycarbonate material and shall e self - de- misting type. The head straps shall be easy to tighten and quick to release.</p> <p>d) Demand valve: The lung operated demand valve design shall either be titling diaphragm type or piston type. This shall be provided on the facemask and connected o the pressure reducer with the help of rubber hose through quick connector. The demand valve shall be rated for minimum 500 Lpm airflow and shall activate with the first breath.</p> <p>e) Pressure gauge: This shall be bourdon pressure gauge with luminescent dial with reassure making in bar and encased in fire resistant rubber cover. The gauge shall be connected to pressure reducer through non-metallic rubber hose.</p> <p>f) Hoses: The low pressure hoses shall be flexible and non-kinking type and suitably reinforced to with stand 30 bar air pressure while the high - Pressure hoses shall either be flexible or</p> |  |

rigid metallic tube suitably secured to the back plate so as not to obstruct the movement of the wearer.

g) Warning Whistle: This shall be fitted either on the back plate or provided along with the pressure gauge assembly and shall be automatic in operation giving audible alarm of minimum 90 dB intensity at 1 meter distance of low cylinder pressure in the range of 50+ 5 Bar.

h) 'Y' manifold for additional connections: This set shall have provision through suitably placed ' Y' manifold to facilitate receiving air from a different source and supplying air for additional facemask.

i) Air Cylinder: This shall be corrosion and impact resistant and made of light alloy fully wrapped. The size of the cylinder shall be such that it can hold sufficient quantity of air [Not less than 1800 liters] for providing 45 minutes total working duration when charged at 300 bars pressure. The cylinder shall be provided with cross flow valve and EN 144+2 compliant. The cylinder shall be duly approved by the Chief Controller Explosive Nagpur and shall be capable of with standing a minimum hydraulic testing pressure of 450 bars.

j) Weight "The weight of the ready to use set shall not be more than 12.5 kg."

3. APPROVAL: The complete set shall have relevant EN or equivalent approval and certificate to this effect shall be furnished along with the offer.

TECHNICAL EVALUATION:-

The technical evaluation of the SCBA shall be subjected to the following:-

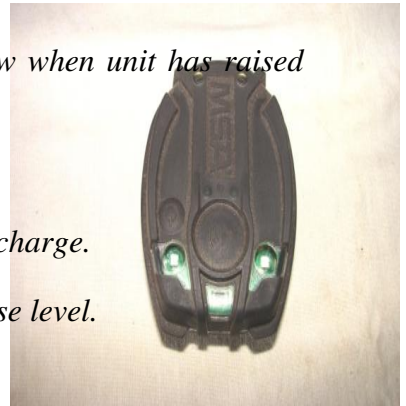
a) Meeting the requirement as mentioned from Sl. No. 1 to 3 above.

b) Designed in conformity to EN/NIN/US standards, conformity certificate and CCOE certificate to be submitted along with the offer.

3. Distress Signal Unit

The DSU shall meet the following requirement

- a. Size: Small and compact that could be attached to the waist belt with on/off key.
- b. Audio output: Not less than 90 dB at 3 meter distance.
- c. Led indicator : Green LED show unit is on and Red LED to show when unit has raised distress alarm.
- d. Battery : Compatible with DSU
- e. Stand by Battery life : Minimum 100 hours stand by life after full charge.
- f. Distress Alarm : Not less than 2 audio signals per second at full noise level.
- g. weight : Not more 350 grams



APPROVAL


The DSU shall carry national /international certification for use by the emergency service personnel and the relevant document shall be submitted along with the offer.

Warranty :-The DSU offered shall carry warranty for not less than 01 years.

Technical evaluation :The Technical evaluation of DSU shall be subject to the following.





- a) Meeting the requirement as mentioned from SL no 1 to 4 above.
- b) Design in conformity to EN/DIN/US standards and certificate to be submitted along with the offer and .
- c) Weight of DSU subject to compliance in all other respect the units shall b listed in descending order lightest on top and the final bid shall be opened in respect of first five bidders and he lowest financial offer would be selected.

4. Ventilator & Air Tube 7 Meters Long

| Qualitative requirement | BIC Code No. |
|--|---|
| Motor having at least 0.5 hp motor. Exhaust pipe-300 mm dia, flexible corrugated pipe with push back folding arrangement, 20-22 meter long, used to provide ventilation/exhaust of air from confined spaces or outside environment vise-versa. |  |

10. DIVING EQUIPMENT

1. Personal Diving Kit (Diving suit, breathing apparatus, weight belt, gloves, dive fins)

| Name of Item | |
|---------------------|---|
| Breathing Apparatus | |
| Diving Suit |  |
| Weigh Belt |  |
| Dive Fins |  |
| Gloves |  |

SPECIFICATION OF BREATHING APPARATUS SET (DIVING KIT)

1. ROLE: The self-contained underwater breathing apparatus (SCUBA) proposed is for carrying out under diving.

2. GENERAL: The apparatus should be rugged, lightweight suitable for carrying by a signal person. The set should have its standard and optional equipments and should comprise of following:-

- a) Compressed air cylinder pack
- b) Harness (Basic structure on which the cylinder are mounted and other accessories for donning the set are fitted)
- c) Face mask with breathing/demand valve
- d) A regulator unit
- e) Air supply system
- f) Pressure indicating gauge

g) Buoyancy compensating device if any

h) Test Kits

i) Tools Kits

3. **DIMENSIONS:** A variation of 5% to 10% is acceptable.

a) As far as possible the set to have a wide vision full-face mask. The straps provided should form an effective seal on to the face.

b) Re-breathing of carbon dioxide enriched exhaled air must be eliminated and the breathing resistance must be as low as possible whilst the equipment must have sufficient capacity to cater for even an extremely hard work rate.

c) In case the diver does not want to use the full-face mask then the breathing valve with mouthpiece should suffice for the use underwater.

d) Mouth piece to have separate inhale and exhale channels so that the moisture from the driver cannot get deposited in the inlet section of the breathing valve. This avoids risk of valve freezing in open positions.

e) There should be a mechanism to have a reserve air in the set and indication to that effect available.

f) As far as possible the set should be designed for use in temperatures range of minus 10 degree Celsius to 50 degree Celsius.

g) The set should withstand sea state up to 5

5. **SPARES:**

a) Complete list of one year on Board Spares to be provided

b) Complete list of five year spares to be provided

c) Documentation of full range of spare along with paper particulars.

DOCUMENTATIONS:

The following documents are to be provided:-

a) General Arrangement drawing giving overall and all-important dimension and with sufficient details so that all standard equipment can be identified.

b) Operational Manual giving details of maintenance and repair instructions.

c) Test and trail report, if any along with inspection certificate.

7. **PRESERVATION:** - Firm is to furnish preservation procedure of the diving set if any.

SPECIFICATION OF DIVING SUIT(DIVING KIT)

| Sl. No. | Technical Specification |
|---------|---|
| 1 | <p>The diver wet suit proposed is for use by the divers operating underwater, which can be easily seen whilst on the surface of water.</p> <p>The basic design should be of one piece with sleeves up to the length of arm and the portion below torso up to ankle level (Below Knee)</p> |
| 2 | The wet suit provided should be without hood. As far as possible the suit to have a cut designed to avoid under arm-seams. |
| 3 | The lower part of the suit is to be entirely non- magnetic. |
| 4 | As far as possible, the suit is to be entirely non-magnetic. |
| 5 | The diver should be able to don the suit very easily and feel comfortable. |
| 6 | The above wet suit should be made from macro cellular neoprene with |
| 7 | <p><u>Quantity</u></p> <p>a) Wet suit smallest (Extra Small) : 04</p> <p>b) Wet suit Medium : 04</p> <p>c) Wet suit Large : 04</p> <p style="text-align: right;">-----</p> <p style="text-align: right;">Total : 12</p> <p style="text-align: right;">-----</p> |
| 8 | <p>DESCRIPTION OF BOOT DIVER NEOPRENE (DIVER'S SOCKS)</p> <p>The socks used in conjunction with above - mentioned wet suit should be made from double lined neoprene with non-slip sole, which reduces, wear and prevents sliding on wet or slippery surfaces. Thickness of the socks should be 3 mm.</p> |
| 9 | <p>QUANTITY</p> <p>a) Boot diver neoprene (Diver Socks) Smallest (Extra small) : 04</p> <p>b) Boot diver neoprene (Diver Socks) Medium : 04</p> <p>c) Boot diver neoprene (Diver Socks) Large : 04</p> |

| | |
|--|-------------------|
| | Total : 12 |
|--|-------------------|

SPECIFICATION OF WEIGHT BELT, DIVE FINNS, GLOVES

1. WEIGHT BELT

ROLE

1. To attached lead weights of 1 Kg (04 numbers) to a diver to adjust buoyancy during a diving operation.

2. Main Feature

i) Waist belt made of polypropylene/ nylon fabric should have a quick release non-breakable buckle of plastic / fiber / non-corrosive soft metal of adjustable size of tightening.

ii) Four polypropylene fabric pouched molded to the weight belt to put weights of 1 Kg (04 numbers) inside. The pouch opening independently on top to have button mechanism/Velcro.

iii) The belt should be of adjustable 30" - 45" range in length, 3 mm thick and 2" broad (approx).

iv.) Colour: Black

v) Weight - Kg lead (04 numbers).

2. SPECIFICATION OF FINNS SWIM (DIVE FINNS)

1. ROLE

Assist Diver in hands free swimming on surface and underwater. These fins are for use during Combat / long distance/ against current.

2. MAIN FEATURES

i) **Description** - Colour black. Length not less than 17", Width not less than 4" (top) and 8.8" (Bottom). Dimension tolerance \pm

ii) **Material** - Thermoplastic rubber/ Natural rubber. Should not skid even on a wet metal deck.

iii) **Hydrodynamic shape** - The shape of the fin to facilitate :-

a) Max propulsion whilst swimming in water using flutter and frog kick.

b) Suitable for swimming for long duration without causing undue fatigue.

iv) **Shoe Pocket** - Pocket should be 7" - 8" deep with an adjustable back strap (not less than 1.5 inch in width). Inner part should be made of soft rubber for use with bare feet. One additional back strap should be supplied with the fins.

v) **Buoyancy** - Approximately 10% negatively buoyant.

SPECIFICATION OF GLOVES (DIVING KIT)

3. **GLOVES**

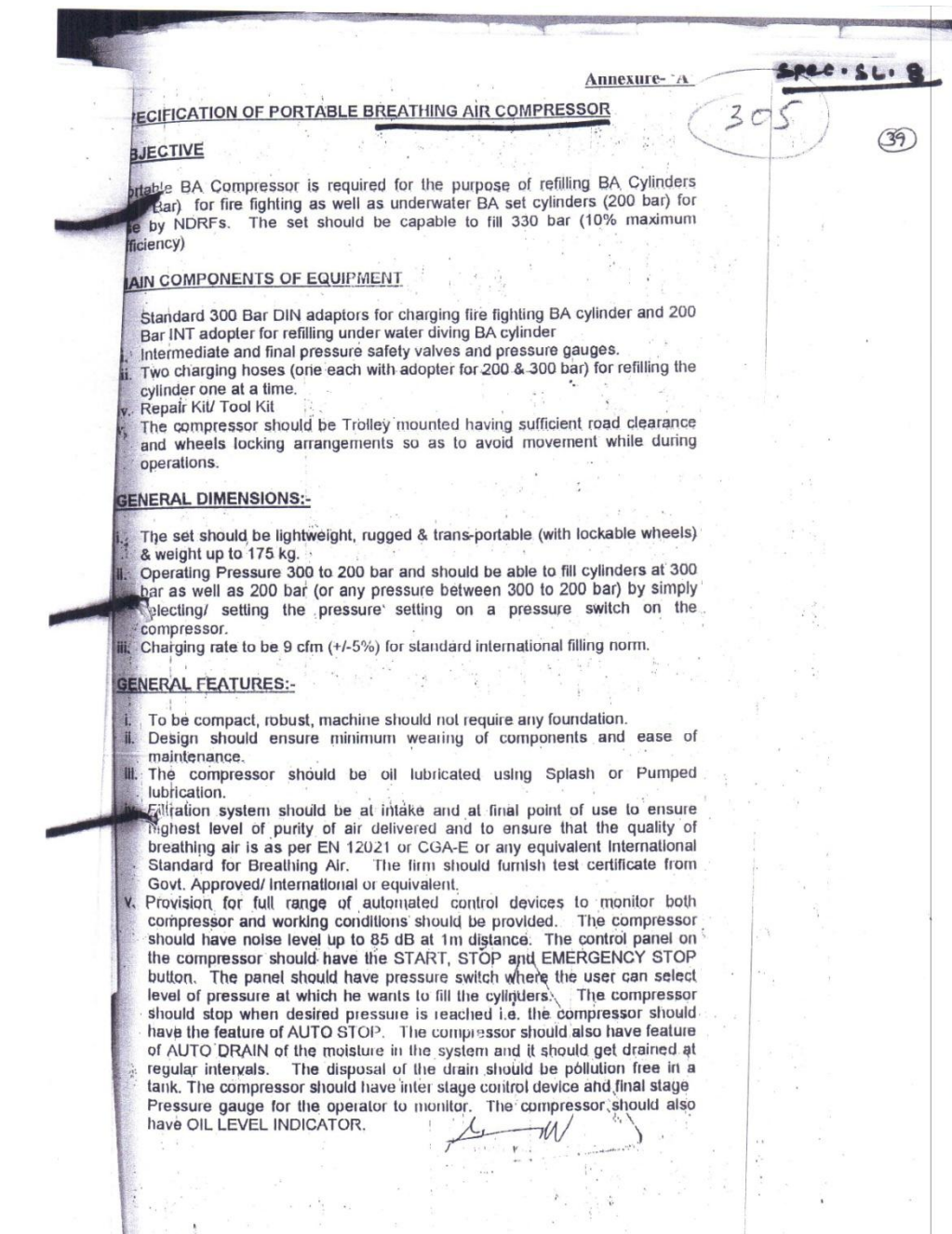
i) Gloves should be made of neoprene

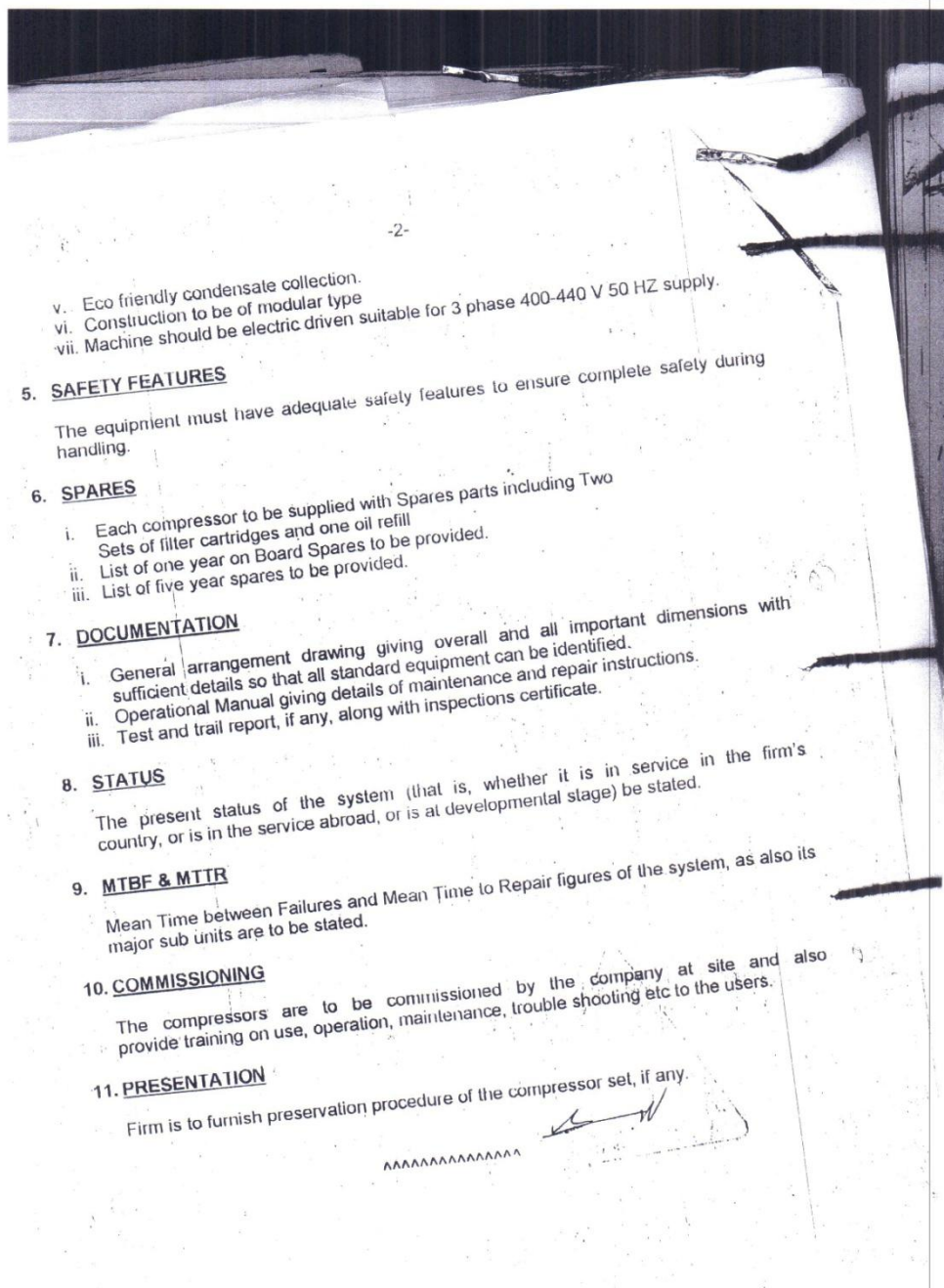
ii) The Palm of the Gloves should be not less than 5 mm

iii) The thickness should be not less than 5 mm

iv) Gloves should be suitable at a depth of not less than 50 Mtrs.

3. High Pressure Breathing Air Compressors





3. **Under Water Communications set (WIRELESS)** **Essential Parameters**

1. **Introduction:** The equipment should have a carrying case for ease of handling and should be rugged and reliable for continuous use for more than 2 hours and meet the specifications mentioned in the succeeding paragraphs.
2. **Roll:** Wireless communication during diving operations between divers and surface team.

3. **General:** The apparatus should be rugged, lightweight suitable for carrying by a single person. The set should comprise of following:-

- a) Should allow clear voice communication between the surface supervisors and at least 4 divers as well as between the divers.
- b) The Surface panel should have volume control and squelch facility.
- c) Communication should be of wireless with a minimum range of 400 mtrs.
- d) Should be battery powered with an endurance of at least 05 hours before recharge is needed.
- e) Surface unit should have a head set and microphone. It should also held mike for supervisor.
- f) The surface unit should have a head set and microphone. It should also have hand held mike for supervisor.
- g) The Equipment should work up to depth of 10 mtrs in water

4. **Supervisor Head Set and Panel:** The supervisor headset should permit hands free use of the headset on the diving site and permit free movement in a radius of at least 01 meter on the diving site.

5. **Scope of Supply:** The composition of each WUCS are as follows:-

- a) Surface Headset and Microphone -01
- b) Portable Surface Unit with Transducer and Cable-01
- c) Diver Receiver with Microphone-04

6. **Technical Specification:**

| | | |
|-----|---------------------------------|--------------------------|
| (a) | Weight of Diver Unit | Less than 1 Kg \pm 10% |
| (b) | Diver Unit pressure compensated | 10 mtrs \pm 10% |
| (c) | Weight of Surface panel | 6 Kgs \pm 10 % |

7. **Documentation** - Operational and technical manual should be supplied with the equipment.

SPECIFICATION OF UNDER WATER COMN SET (WITH WIRE)

1. **ROLE:** The equipment should establish and maintain voice communication between the Divers under water and the Attendant/ Supervisor of the surface during a diving operation to a depth of 10 meters.

2. **ESSENTIAL PARAMETERS:**

- a) Should be able to maintain continuous voice communication between surface team and the divers under water to a depth of 10 mtrs with 02 channels.
- b) Should be rugged.
- c) Have mechanism to prevent water from entering the system
- d) The supervisor set should permit hands free use on the diving site.
- e) Length of the umbilical provided should be 50 meters with strength min 1500 N

3. **GENERAL PARAMETERS:**

- a) The system should be reliable for continued use of at least 02 hours under water.
- b) Type of components/ connectors used should not be of fragile material and compatible with each other with quick removal system.
- c) Comn set should operate 10 - 50 degree centigrade.

4. **WATER RESISTANCE MATERIAL:** The panel and other exposed parts should be of water resistant material and incorporate water proof switches that avoid the ingress of water.

5. **CLARITY OF SPEECH:** High fidelity of the speech should be there in between surface attendant and under water diver.

6. **PRINCIPAL COMPONENTS OF EQUIPMENT:** The Diver Under water communication system (DUCS) should consist of under mentioned components:-

- a) Diver unit with bone conductor and speaker with attachment to the diving set mask.
- b) Communication cable of at least 50 mtrs length with connectors.
- c) Surface unit with speaker, amplifiers and headphone.
- d) Rechargeable cells/ batteries for divers unit and surface units.
- e) Charger for the batteries.
- f) Carrying case.
- g) Repair Kit/Tools Kit.
- h) Operational and technical manual.

5. Under Water Torch

1. **ROLE:** The Hand Held Divers Lamp System is to provide variable intensity lighting to NDR force divers Undertaking Rescue Ops.



Essential Parameters

2. **GENERAL:** The Divers Lamp Search System should be rugged, lightweight with low volume suitable for carrying by a single person and designed specially for under water work. The torch should have following characteristics:-

- i) Should have an integrated handle for ease of underwater handling.
- ii) The Divers Lamp search system should be self contained system with its own inbuilt RE-Chargeable Battery Pack.
- iii) Should be well insulated to ensure that the Diver should not get any electrical shock.
- iv) Should capable to be used on surface
- v) Lanyard and carbineer should be provided for attaching it with belt of the diver.
- vi) Should have a safety/ mechanism to prevent accidental short circuit with the battery during transportation or in storage condition.

3. **DIMENSIONS-**

- a) Nominal Wt of Torch in air should not be more than 1200 gm
- b) Torch should operate at the depth of 10 mtrs in water.
- c) Beam - Narrow Beam, Halogen/ Xenon/ LED Bulb of 10 watt to 20 watt with min 400 lux
- d) Battery Charging Time - Not more than 5 hrs
- e) Weight in water - Neutral buoyancy
- f) Batterie Type - Ni Mh/ Ni- Cd Rechargeable
- g) Torch should work at least 2 hours before recharging the battery.
- h) Torch should be able to illuminate the object placed under water at 2 meters distance from torch.

4. **U/W diver Special Forces Lamp each consisting of:-**

- i) Hand Held Lamp with Battery -01

- ii) Battery Charger -01
- iii) Compatible bulb - 05
- iv) Lens - 02

5. DOCUMENTATION - Operational and technical manual should be supplied with the eqpt.

11. WATER RESCUE AND FLOOD RELIEF EQUIPMENT

1. Inflatable Motor Rescue Boat with OBM

| SN | Specification |
|-----|---|
| 01. | Make-Fibroplast |
| 02. | Model - LOTUS -420 |
| 03. | The boat shall be inflatable with air pressure by foot pump and Electric pump (12 volts DC) |
| 04. | The boat shall be suitable for 7-10 (seven to ten) Persons, or for 2000 lbs weight |
| 05. | The boat shall have reinforced strips under air chamber and keel rubbing strake for extra strength, under the main air chamber |
| 06. | The design of the boat shall be such that, it shall have minimum four separate air chambers, out of which three air chamber shall be in main hull, and fourth air chamber, shall be in the inflatable keel. |
| 07. | The hull, air tuber (chambers), keels shall be made from Hyplon with 1670 DENIER. The fabric to carry an approval of BSMA (British standard Manufacturer Association) 16 or IMO (International Maritime Organization) LSA (Life Saving Appliances) regulation or equivalent. |
| 08. | The boat shall be provided with plastic coated Transom to form a water proof cocoon. |
| 09 | The exterior size of the boat shall be min. 4200 mm x 1800 mm |
| 10. | The interior size of the boat shall be min. 2925 mm x1000 mm |
| 11. | The deflated size hull shall be approx 1150 X 650 X 350 mm, and floor board shall be 775 X 1000 X 150 mm |
| 12. | The diameter of the tube shall be min, 19" |

| | |
|-----|--|
| 13. | Three shall be inflatable keel of 7" diameter for stability in sea and swift water rescue. |
| 14. | The seams of the boat shall be quadruple overlap. |
| 15. | The air valves shall be one way type of approved type and make. |
| 16. | There shall be 5/8" grab line along sides for safety. |
| 17. | The weight of boat without floor board & OBM shall not be more than 187 lbs. |
| 18. | The floor board shall be inter-locking type of polyethylene material/ marine plywood with fiber glass reinforced plastic coating with carry bag. |
| 19. | The boat shall have round/conical pontoons for rapid planning |
| 20. | There shall have built in oarlocks for easy rowing |
| 21. | There shall be two stainless steel "D" rings for towing. |
| 22. | The boat shall have four carrying handles, and front lifting handle. |
| 23. | There shall be strake around hull and under keel for extra protection. |
| 24. | There shall be two layers of material on lower tubes for better abrasion and puncture resistance. |
| 25. | There shall be two self bailing drain valves. |
| 26. | The design of the hull shall be wide beam type for better stability. |
| 27. | The boat shall be supplied with carrying bag. |
| 28. | The boat shall be supplied with Bow storage bag and repair kit. |
| 29. | The boat shall have quick attachment for OBM. |
| 30. | There shall be two paddle provided for emergency rowing. |
| 31. | The Colour of boat shall be orange. |

OBM


| Sl.No. | Specification |
|--------|-------------------------|
| 01. | Make MERCURY MARINE |
| 02. | Model 25 HP Four Stroke |

| | |
|-----|--|
| 03. | The boat shall be provided with outboard motor which can be quickly attached whenever required. |
| 04. | The OBM shall be of reputed make. |
| 05. | The engine of the outer board motor shall be four strokes, three cylinders in -line gasoline engine. |
| 07. | The RMP of the engine shall be 5000-6000 |
| 08. | The engine shall have electronic fuel injection system |
| 09. | The engine cooling system shall be water cooled type with Thermostat. |
| 10. | The gear ratio shall be 2.00:1 or better |
| 11. | The trim system shall be manual type |
| 12. | The exhaust system shall be through prop |
| 13. | The lubrication system shall be wet sump with pressure |
| 14. | The engine shall be Ultra low emission ratings |
| 15. | The length of engine shaft shall be 15-20" |
| 16. | The engine and drive line shall be fitted in enclosed housing to protect fro sea water |
| 17. | The dry weight shall not be more than 75 kgs. |

3. Life Jackets

Specifications:No. DMSRDE/TEX-4/2005/LJ(b) Dec 2007 (CAT-NIV)


4. Life Buoys

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>General</p> <p>It should be useful in Deep Sea, in case of Flood, Safety measures for sea vessels & sea Mishap. It should be totally moisture proof and non-inflammable. It should be manufactured from durable High visibility</p> |  |

| | |
|--|--|
| <p>orange synthetic material, which requires no maintenance. The Retro reflective Tape used should be SOLAS approved, which helps to identify victims in distress. Its inner diameter should be at least 45 Cms, and outer diameter should be at least 70 cms.</p> <p>Having width : at least 10 cms. Floatability : more than 17 Kgs.</p> <p>Testing :</p> <p>It should be prototype Tested i.e. Flotation Test, Strength Test. It should be 24 hrs water Immersion tested.</p> <p>Weight: 2.3 Kg to 3.5 Kgs.</p> <p>Weight test: 50 Kg.</p> | |
|--|--|

12. DETECTION & LOCATION EQUIPMENT

1. HUMAN LIFE DETECTOR TYPE-II

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>1. The human Life Detection System will be used by Rescue Workers to determine, without risking lives by entering; whether anyone is trapped inside a burning or collapsed building. It should help to locate trapped or marooned victims in a disaster area. Reducing both search times and danger to rescuers and to find lost or injured people faster in hostile terrain, bad weather, collapsed trenches, even underwater. The system should have the discrimination capability for detecting only living human beings and not deceased humans or living animals. The principle of working is based on the equipment's capability of detecting living human beings by detecting the distinctive electro-magnetic field created by their heartbeat. This is achieved by use of the special hand held equipment.</p> <p><u>Required Capabilities and specifications</u></p> <p>The instrument should be in full compliance with following specifications:-</p> <p>1. It should be capable of passively detecting the presence of living humans behind thick barriers such as concrete walls,</p> |  |

| | |
|--|--|
| <p>steel gates, trees, and © 500 meters in the open air.</p> <p>2. It should be capable of passively detecting the non-uniform electric fields of living humans. It should not detect animal life.</p> <p>3. Field of view:</p> <p>Horizontal plane: at least -2 to + degrees</p> <p>Vertically plane: • At least - 60 to + 60 degrees in open air.</p> <ul style="list-style-type: none"> • At least - 40 to + 40 degrees in composite air. • - 20 to + 20 degrees on and all-metal grounded platform. • Detection range: It will come with two range adjustment devices (RADs) as follows: <ul style="list-style-type: none"> - All metal RAD © 500 meters - Composite RAD © 20 meters <p>* Target tracking - in detection mode, once the Life detector has fixed on target, even if it is moving, the life detector will continue tracking the target.</p> <p>D) It will have a built - in Red laser (used to show direction in dark areas) and Environmental parameters for optimum performance will be:-</p> <ol style="list-style-type: none"> 1. Operating temperature: -10 to + 45 degrees Celsius 2. Storage temperature : -40 to + 85 degrees Celsius <p>* Instrument will be water resistant.</p> <p>(E) Power: (Internal)- rechargeable 8.4 V DC battery for the laser.</p> <p>Operating time: 3 hours in continuous operation.</p> <p>Charging time : 14 to 16 hours-charge should be provided.</p> <p>* Weight: < 1kg</p> <p>* Hard carrying case or bag for accommodating the instrument will be provided.</p> <p>(F) Instrument environmental parameters for optimum performance</p> <ol style="list-style-type: none"> 1. Operating temperature : - 40 to 85 degrees Celsius 2. Storage temperature : _ 40 to 85 degrees Celsius <p>(G) The supplier will provide full training on the set to the user for a minimum of three days. This training will include on day in house classroom training on theoretical aspects including troubleshooting and maintenance and tow days of field training and techniques to ease</p> | |
|--|--|

detection.

SPECIFICATION FOR HUMAN LIFE DETECTOR TYPE-I

GENERAL

Life detector a seismic/acoustic listening device, light weight and easy to carry, designed specially to detect and locate trapped, live victims in collapsed structures caused by earthquakes, explosion, landslides, construction cave-ins or mine disasters and should include the control unit, sensors, sensors spikes, connecting cables and spools, Magnetic Clamps, Headphones, intercom probe, AC power supply battery pack and carry bag (for control unit) with all required accessories.

The Life Detector should be provided with 4/6 sensors.

TECHNICAL SPECIFICATIONS

(F) MAIN UNIT

INPUT OF SENSOR/INTERCOM/PROBE

Seismic sensor input impedance : $\geq 6K$ Ohms

Intercom probe input impedance : $\geq 3 K$ Ohms

HEADSET OUTPUT

For headphones : $\frac{1}{4}$ " stereo jack

Output power, variable : 0.13 W/60 Ohms

FREQUENCY RANGE

1 Hz to 3000 Hz

FILTERS (FIXED SWITCH ABLE)

"Rumble" : High pass 100 Hz

"PWR" : Notch 50 Hz and 60 Hz

"Hiss" : Low pass 600 Hz

SIGNAL DISPLAY

LED Bar graph any 2 channels or sum of all channel, range 60 db.

(I) SESMIC/ ACCOUSTIC SENSOR (POSITION INSENSITIVE)


Frequency Range : 1 Hz to 300 Hz

| | |
|---------------------------------------|--------------------------------------|
| Shock resistant | : > 1000 g |
| (J) © <u>POWER SUPPLY</u> | |
| Battery operated, low battery alert | |
| Alkaline battery type | : Appropriate |
| Operating time at approx. 20 deg. C | : > 20 hrs. |
| Ext. DC Input | : 10.8 to 28.8 VDC |
| AC/DC converter, | |
| AC line frequency | : 47 to 63 Hz |
| Nominal AC line voltage | : 100 to 240 VAC |
| (K) <u>AMBIENT TEMPERATURE</u> | |
| Storage and transport | : -20 degree to + 70 degree C |
| Nominal | |
| operating range | : -15 degree to + 60 degree or more. |

NOTE TO TENDERER:-

1. The tendered shall indicate the make/ model in their offer.
2. The tendered shall furnish the clause -by clause compliance statement. In case there is any deviation the same should be clearly brought out in the offer.
3. They shall mention the relevant BIS/EN/ DIN/ UL certificate of the product offered.
4. Technical, manual comprising of servicing details shall be supplied with system.
5. Relevant Test Certificates shall be provided from a Govt. approved laboratory or from the manufacturer, along with their offer.

2. Victim Location Equipment and Breaching System

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p><u>Purpose</u></p> <p>Victim location systems to be acquired are designed for location and rescue of victims trapped under debris during natural calamities or in mine collapses or confined space disasters. They enable insertion below the debris of a telescopic probe which mounts, at its head, a sensitive articulable video camera,</p> |  |

supported by appropriate illumination, whose images can be viewed by the operator and other rescue personnel on remote display monitors. The system also integrates a two – way audio system which can pick up life sounds from the victim and also permits the passage of spoken instructions or assurances to him from the rescue team. Since a rigid telescopic probe has limitations on how far it can be inserted, the camera, light and sound system can also be mounted on one end of a cable which can be used to reach greater depths. The required Breaching System is a heavy duty drill used for making an entry hole for the probe of the victim location system through debris at the disaster site, or other overlaying material required to be breached to enable the search camera to access underlying void spaces. It should allow rescue teams to breach most common construction materials with only one system. It coring bits, carbide tipped diamond studded should be able to bore through wood, nails, sheet metal and roofing materials and reinforced concrete. The system Should have a collar for attachment of coring bits as well as for cooling water to be delivered to the spinning carbide tipped diamond studded bits when used.

Capabilities Required (Victim Location System)

The system's primary configuration will be based on a video camera mounted at one end of a rigid telescopic probe which can reach out into depths and void spaces up to a distance greater than 9ft. The colour video camera should be minimum, 1/3"

double scan colour CCD with 4, 70,000 pixel or more with low light sensitivity to better than 0.1Lux. The camera head should have travel articulation of 180° total, right to left, with a viewing area not less than 120°. Illumination to be provided by a 16 element LED/xenon lamp integrated into the camera head which can illuminate up to 6m or more in total darkness. The system will be provided with two display monitors, one at the operator level and the second for remote viewing by other rescue personnel at a distance not less than 20 m from the operator position. The

monitors should be flat screen LCD active matrix of minimum size 6" measured diagonally. The system will be provided with a two-way audio system. Maximum Gain will be better than 90 dB. The camera will also house a speaker . The operators' headset will incorporate noise attenuating earphones and a boom microphone through which messages or instructions may be passed to the victim through the speaker housed in the camera piece.



The system should not require more than two persons to operate, one operator to handle and control the probe and the second operator for the system functions, as well as viewing of the monitor. The probe operator will be provided ergonomic controls.

The probe should not weigh more than 5 kgs. Two rechargeable dry batteries and a charger should be provided. The batteries should enable 3 hours continuous use and the charger should recharge these to 90% in less than two hours. The system should be capable of operation in a temperature range of -10° to 50° C.

Storage temperature - 0° -(4 ° to 36 ° c) Humidity - 10 % to 90% relative Water resistant- High water resistant

Capabilities Required (Breaching System).

Power head weight- not more than 12 kgs.

Boring speed- not less than 5 cms per minute in standard

construction grade concrete. Breaching depth - 150 cm Bits- carbide tipped diamond stubbed bits(min.dia-52mm) capable of coring holes of minimum diameter of 55 mm (55mm). Cooling- pressurized water can, 2 gallon capacity with not less than 3 m hose with quick connect fittings. Field service kit- Canvas storage pouch, spare fuel tank cap, starter recoil assembly, Allen key set for starter assembly, spare spark plug, spark plug wrench, copper washer, garden hose to water collar adaptor.

Scope of Supply

Complete victim location system with camera mounted on rigid telescopic frame extendable to length > 6 m along with video display monitor, two-way audio system incorporating search microphone and communication speakers in camera housing and under-helmet headset with earphones and boom microphones,

Operator consoles all packed in an appropriate water tight, dust proof carry case. Separate remote hard-wired display monitor with extension cable to 20 m. Two batteries and charger.

Complete Breaching System in appropriate carry case with two additional diamond and coring bits each.

NOTE TO TENDERER

1. The tenderer shall indicate the make/model in their offer.

2. The tenderer shall furnish a clause-by-clause compliance statement. In case there is any deviation the same should be clearly brought out in the offer.
3. The tenderer may recommend additional accessories and spares separately along with their costs.
4. They shall produce the relevant BIS/EN/DIN/UL certificate of the product offered if applicable.
5. Technical manual comprising of servicing details shall be supplied with system.

3. **Thermal Imaging Camera**

| Qualitative Requirements | BIS Code No. |
|---|--------------|
| <p>THERMAL IMAGING CAMERA SHOULD BE CAPABLE OF VIEWING OBJECT AND PERSONS IN TOTAL DARKNESS OR SMOKE FILLED CONDITIONS SUCH AS DURING NIGHTS AND FIRE/DISASTER CONDITIONS. IT SHOULD ALSO HAVE INTEGRATED TEMPERATURE MEASUREMENT WITH DIGITAL DISPLAY.</p> <p><u>WARRANTY :-</u>The vender should warrant the entire thermal image camera free from defects for a period of 24 months from date of delivery.</p> <p><u>SERVICE-</u>The bidder should have service facilities in India to provide for timely and efficient service related issues.</p> <p><u>QUALITY:-</u>The camera must be manufactured by an ISO 9001 organization.</p> <p><u>WATER RESISTANCE & ELECTOR MAGNETIC COMPATIBILITY:-</u></p> <p>Documentation should be submitted illustrating tests that have been conducted to certify water resistance and electro-magnetic compatibility.</p> <p><u>PHYSICAL CONFIGURATION:-</u></p> <p>The thermal image camera should be a hand held design with battery, viewing optics , side straps, neck strap lanyard and the optional choice of grips.</p> <p>Weight of camera should not exceed 2 kgs.</p> <p>(The camera should be supplied in a storage case)</p> <p><u>TURN ON TIME :-</u></p> | |

The camera should provide an image within nominally five (5) seconds of power being applied.

TECHNOLOGY:-

The imaging technology should be amorphous silicon 320 x 240 or better micro bolometer free of export restrictions into India. The heat sensitivity of the detector should be the minimum of 0.05 degree Celsius for temperature definition. The imager should exhibit an ability to avoid with out or blooming conditions when subjected direct to flame or sun. Clarity of the image must not deteriorate by either type of exposure during normal operation. The imager should have Minimum three color to aid clear identification of the burning matter. The unit should have a Direct Temperature Measurement facility with a digital read-out. Temperature measurement to be from 0-500 (Minimum) Degree Centigrade.

OUTER SHELL CASE:

The imaging unit should be ergonomically designed with heat resistant material of construction. The unit colour should be yellow or bright colour The unit should be capable of withstanding a 1.5 meter drop.

VIEW OPTICS :

By high resolution not less than 90 mm (3. inch) colour Liquid Crystal Display LCD.

LENS:

The unit should have a lens fabricated of germanium with a diagonal field of view of not less than 50 degree. The lens focus range should be 1.0m to infinity.

VISUAL INDICATORS :

All thermal imaging unit shall be equipped with the following on screen displays:

- Battery level indicator
- Digital temperature read out.
- All indicators shall be visible on the viewing screen.

SWITCHES:

(A single ON/OFF switch)

SIDE STRAPS/LANYARD:

The die straps and lanyard should be of sturdy fire retardant construction and be field replaceable. Side straps should be on both sides of the unit enabling it to be used by both left and right handed operators. The Lanyard should be attached to the unit by a “D” ring. An optional removable pistol grip handle or action grip should be available.

POWER SUPPLY:

Each unit should be supplied with two rechargeable dry batteries each having a continuous operating time of 3 hours. Each unit should be supplied complete with a battery charger capable of operating on both mains 220/240 AC or 12V DC. The unit shall have automatic variable dynamic range control management.

VIDEO OUTPUT:

The thermal image camera should have a video output or BNC connector.

TRAINING :

Product familiarization should be available through the manufactures distributor. Each unit shall be shipped with a user manual. Authority letter from OEM should be attached with the bid.

NOTE TO TENDERER

- (a)The tenderer shall indicate the make/model in their offer.
- (b)The tenderer shall furnish the clause by clause compliance statement. In case there is any deviation the same should be clearly brought out in the offer.
- (c)They shall mention the relevant BIS/EN/DIN/UL certification of the product offered.
- (d)Technical manual comprising of servicing details shall be supplied with system.
- (e) Relevant Test certificate shall be provided from a Govt approved Laboratory or the manufacturer along with their office.

from

4. Walkie Talkie Sets

Specification: This items available on DG&D Rate Contract

01 General

- 1. Frequency Range 66-68 Mhz

| | | |
|----|---------------------|--|
| 2. | No of channel | 99 Synthesized channels |
| 3 | Frequency stability | 5 PPM or better for 12.5 khz |
| 4 | Emission | 11KOF3 |
| 5. | Channel spacing | 12.5 khz |
| 6 | Weight | 500gms max with battery |
| 7 | Duty cycle | 1:1:8 for 10 min cycle |
| 8 | Type of operation | Simple, semi-duplex, press to talk with built in speaker |
| 9 | Type of Antenna | Helical antenna |
| 10 | Speaker impedance | 8 Ohms |
| 11 | Output impedance | 50. Ohms |
| 12 | Power supply | 12 V 1000 MAH Rechargeable Battery pack test voltage 12.V DC |

TRANSMITTER

| | | |
|---|------------------------|--|
| 1 | RF Power output | Selectable in three levels from front panel key pad : Low : 1.0 watt + 1 db, Medium : 2.0 watt -1db, High : 5.0 watt +db |
| 2 | Frequency deviation | + 2.5 khz max.(fro 100% at 1 khz.) |
| 3 | Frequency | Complete frequency band (degradation with RF power specification) |
| 4 | Spurious and harmonics | 60db or better |
| 5 | Modulation fidelity | + 1-3 db of 6 db/octave preemphasis characteristics from 3600 |
| 6 | Modulation distortion | Less than 5% at 1 khz reference |
| 7 | Modulation sensitivity | 1 to 10mv at 1 at mic input for + 1.5 khz std deviation. |

RECEIVER

| | | |
|----|-----------|--|
| 01 | Sensitive | Better than 0.25 u V for 12db SINAD and 0.4uv for 20 db quieting |
|----|-----------|--|

| | | |
|----|-------------------|---|
| 02 | Squelch Sensitive | 0.2 uv or better at threshold 60 db or better at + 12.5 khz |
| 3 | Image rejection | Better than 65 db |
| 4 | Audio out put | 250 mw min across 8 ohms Speaker with less than 5% Distraction at 1 khz reference with test deviations. |
| 5 | Frequency spread | Complete frequency band coverage |

POWER SUPPLY

12 VNI Battery pack of 1000 MAH

OTHER FEATURES

- | | |
|--|-----------------------------------|
| 1. Simple Pc based programming | 2. Transmitter time out timer. |
| 3. Low battery indication. | 4. Low battery indication |
| 5. Priority channel | 6. Channel skip (hiding facility) |
| 7. Selection of power 1/2/5 watt from front panel. | |
| 8. Channel busy indicator | 9. Cloning facility |
| 10. MIL 810 C.D.E | |

NOTE TO TENDERER

1. The tender shall indicate the make/model in their offer
2. The tender shall furnish the clause by clause compliance statement. In case there is any deviation the same should be clearly brought out in the offer.
3. Relevant test certificate shall be provided from a govt approved, laboratory or the manufacturer along with their offer.

5. Portable Radio Sets

Specification: This item available on DGS & D rate contract.

1. General
 - (i) Range 1.5000 to 29.9999 MHz
 - (ii) Channels 2,850,000 at 10 Hz spacing


| | | |
|-------|-------------------------|---|
| (iii) | Frequency management | Fixed frequency dual frequency Best call or ALE (the optimal AJ frequency hopping (Built) |
| (iv) | Modulation | USB,LSB , AM(optional) |
| (v) | Information types | Voice CW Flash Message Data (up to 4800 bps) |
| (vi) | Role | Can be used in Man Pack, vehicular and static |
| 2. | Special Function | Digital Squelch (Active Squelch) Selective Call Flash (brust) Transmission |
| 3. | Preset Parameters | Minimum 100 Channel Parameter Sets & 180 BEST CALL Groups (tables) |
| 4. | Built-in Test | On line & Operator Initiated |
| 5. | Power Source | 12 V DC nominal (LI-ion battery with charger) Built in provision or AC adopter for 220V AC input |
| 6. | Environmental Condition | MIL Grade JSS 55555 or MIL-STD-810E or other relevant defence standards (certificate from accredit lab in India or from OEM) |
| (i) | Operating Temperature | -30 ⁰ C to +55 ⁰ C |
| (ii) | Water resistance | 1 meter immersion |
| 7. | EMC/EMI | MIL-STD-461/462 or equivalent (certificate from accredit lab in India or from OEM) |
| 8. | Receiver | |
| (i) | Sensitivity | SINAD \geq 10db for -110 dbm RF input |

| | | |
|-------|--------------------------|--|
| (ii) | IF Rejection | 80 db min |
| (iii) | Image Rejection | 80 db min |
| (iv) | Audio Output | $\geq 10\text{m W}$ across 600Ω (earphone) $\geq 220\text{ m W}$ across $50\ \Omega$ loudspeaker |
| (v) | Squelch | Active, Digitally-coded |
| (vi) | Front-end Protection | Should be activated at 1 W input or before |
| 9. | Transmitter | |
| (i) | Power Output | Variable power output preferably on following step $5\text{W}(37\text{ dBm})$ (+2.5 db/-2db) 10 w (40 dBm) (+2.5 dB/-2dB) 20 W (43 dBm) (+1.5 dB/-1.5dB) |
| 10 | Antenna Tuning | Automatic |
| 11 | Selective calling | |
| (i) | Type | Digital FSK, Coding |
| (II) | Addresses | Min individual address & Broadcast facility |
| 12 | Digital Squelch | |
| (i) | Type | Digital FSK |
| 13 | Best Call | |
| (1) | Frequency group | 180 min |
| (ii) | Frequency group content | 10 min |
| (iii) | Link establishment | Less than 5.5 sec for first frequency |
| 14 | Data Communication | |
| (i) | Optional Built –in modem | MIL-STD-188-110A Single Tone or equivalent |
| (ii) | Data Rates | Single Type 75,150,300,600,1200,2400,4800 |
| (iii) | Mode of operation | Fixed frequency |


- 15 Flash Built in Data Terminal (optional)
- (i) Data type Pride fiend messages
- 16 Frequency Hopping
- (i) Communication Type Voice
- (ii) Hop Rate Min 10 hops/second
- 17 Cosmic
- (i) Synchronization Fast and automatic
- (ii) Voice Vocoder base digital encryption
- 18 Dimensions Approx not exceed 90X2255x250 mm (HxWxD)(without Battery) preferably easy to carry in man pack role
- 19 WEIGHT Less than 5 kg (without Battery)
- 20 OTHER CONDITION
- A Vender has provided user manual and technical service manual with necessary circuit diagram.
- B Specifically quote and demonstrate the additional accessories required during technical evaluation
- C Vender has to quote and offer parameter loading or frequency management or configuration software if any required for the radio during technical evaluation.

13. MEDICAL FIRST RESPONDER KIT


1. Tissue Holding Forceps

| Qualitative Requirements | BIS Code No. |
|---|---|
| AS PER IS-8175) Material : Stainless steel Size : 6" Features with two fingers holds of equal size and 6" long parallel arms with central, hinge and overlapping tips with serrations for locking on to tissues. |  |


3. Stethoscope (Littman/Tycas/ Welch an)

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>Classic II Adult type Cardio tone : with silent feature of triple auscultators components Standard tube length and versatile in extreme of temp. Spare pair, of ear plugs, diaphragm with mention of warranty period.</p> |  |


4. B.P. Apparatus Mercury

| Qualitative Requirements | BIS Code No. |
|--|--|
| <p>(Adult)Standard Calibration of 09-30 mm Hg and fitted with locking device to prevent Mercury leak. ISI Marked . Cuff of synthetic material 5”-6” Tube length 20-22” Cuff to be fixed by metal clip and right and left side to be indicated.</p> |  |


5. Sterilizing Drum

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>Stainless steel, seamless Size 11” x 9” Compatible with latest pressure cooker, type autoclave of 12” x 19”.</p> |  |


6. Artery Forceps Straight

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>Material : Stainless Steel size : 6” Features with two fingers holds of equal size and 6” long arms with central locking ridges, for holding arteries, tissues with tip straight for 0.5 “</p> |  |


7. Artery Forceps Curved

| Qualitative Requirements | BIS Code No. |
|---|---|
| AS PER IS-8175) Material Stainless Steel Size “6” Features : with two fingers holds of equal size and 6” long arms with central locking ridges for holding arteries , tissues with tip straight for 0.5” |  |


8. Emergency tray with lid ss

| Qualitative Requirements | BIS Code No. |
|--|---|
| Material SS: Rectangular Tray with lid for holding emergency sterile instruments and dressing size 12 “x 15 “. Lid with central handle for easy opening and closure. |  |


9. Tray with Lid ss

| Qualitative Requirements | BIS Code No. |
|--|--|
| Material Stainless steel Rectangular tray on LID to contain medicine and instruments. Size: 8”x 10 “Lid with central handle for easy opening and closure |  |


10. Sponge Holding Forceps

| Qualitative Requirements | BIS Code No. |
|---|---|
| Material : Stainless Steel Size : 10” Features with two fingers holds at one end and 10” long parallel arms tips of arm with flat ring like design to hold sponges for cleaning with firm grip. |  |


11. Sinus Forceps

| Qualitative Requirements | BIS Code No. |
|---|---|
| Material : Stainless Steel Size 6” Features 2 finger holds, central hinge with parallel arms and end of arms blunt and to dilate chemicals on opening the finger holds. |  |


12. Scissors Paramedical

| Qualitative Requirements | BIS Code No. |
|--|---|
| a) Length 6” to 9”, width 3 mm b) Stainless steel body c) Plastic unsheathed finger slots. |  |


14. Thermometer Digital

| Qualitative Requirements | BIS Code No. |
|--|---|
| Battery Operated ISI Marked digital thermometer with reading in both centigrade and Fahrenheit DED display with day night visibility Beep Alerts, Memory for limited number of readings. |  |


15. Kidney Tray s.s.

| Qualitative Requirements | BIS Code No. |
|--|---|
| Material : Stainless Steel Size 8” Features for easy collection of draining fluids, kidney shaped with one side indented and concave and other side convex. |  |


16. Depressor- Tongue

| Qualitative Requirements | BIS Code No. |
|--|--|
| Soft wood of 0.5” wide and 6” length Adult size; Sterilized and packed to maintain sterilization |  |


18. Gloves Sterile Latex Medium

| Qualitative Requirements | BIS Code No. |
|--|--|
| Size: Medium Material: natural rubber Latex, single use disposable powder free; Sterilized sealed packs Should meet emergency medical glove requirements of NFPA 1999 standard on protective clothing for emergency medical operations, 1997 edition |  |


19. Gloves Sterile Latex Large

| Qualitative Requirements | BIS Code No. |
|--|---|
| Size: Large Material: natural rubber latex, single use disposable ; powder free; Sterilized sealed packs Should meet emergency medical glove requirements of NFPA 1999 standard on protective clothing for emergency medical operations, 1997 edition. |  |


20. Gloves Sterile Latex XL

| Qualitative Requirements | BIS Code No. |
|--|---|
| Size : Extra Large Material natural rubber latex, single use disposable; powder free; Sterilized sealed packs Should meet emergency medical glove requirement of NFPA 1999 standard on protective clothing for emergency medical operations, 1997 edition. |  |


21. Scissors sharp

| Qualitative Requirements | BIS Code No. |
|--|--|
| Material : Stainless steel 6" scissor for cutting bandages and gauze. |  |


22. Collar Stiff Neck Regular

| Qualitative Requirements | BIS Code No. |
|--|---|
| <p>COLLAR STIFF NECK REGULAR (AS PER IS: 11569)</p> <p>a) Rigid cervical collar-extrication type</p> <p>b) Material: soft plastic rigid enough to avoid 70% of neck movement and lined inside with soft cushion.</p> <p>c) Padded chin rest for application by sweep technique.</p> <p>d) Colour coded and measure holes for easy identification and measurement of measured of correct size.</p> <p>e) Velcro for easy fixation.</p> <p>f) MRI/CT Scan compatible; radio lucent</p> <p>g) Tracheal access opening for advanced airway procedure;</p> <p>h) Rear panel opening for cervical spine palpation</p> <p>i) Latex free and durable</p> <p>j) This size of finished c-collar should not be less than 6 cm when measurement as per prescribed procedure.</p> |  |

23. **Collar Stiff Neck Short**


| Qualitative Requirements | BIS Code No. |
|---|--|
| <p>CERVICAL COLLAR SHORT (IS: 11569)</p> <p>a) Rigid cervical collar-extrication type</p> <p>b) Material: soft plastic rigid enough to avoid 70% of neck movement and lined inside with soft cushion.</p> <p>c) Padded chain rest for application by sweep technique.</p> <p>d) Colour coded and measure holes for easy identification and measurement of correct size.</p> <p>e) Velcro for easy fixation.</p> <p>d) MRI/CT Scan compatible; radio lucent</p> <p>e) Tracheal access opening for advanced airway procedure;</p> <p>f) Rear panel opening for cervical spine palpation</p> <p>g) Latex free and durable</p> <p>h) The size of finished c-collar should not be less than 4.5 cm when measurement as per prescribed procedure.</p> |  |

24. **Collar Stiff Neck Pediatric**


| Qualitative Requirements | BIS Code No. |
|---|--|
| <p>(AS PER IS: 11569)</p> <p>a) Rigid cervical collar- extrication type</p> <p>b) Material: soft plastic rigid enough to avoid 70% of neck movement and lined inside with soft cushion.</p> <p>c) Padded chain rest for application by sweep technique.</p> |  |

| | |
|---|--|
| <p>d) Colour coded and measure holes for easy identification and measured of correct size.</p> <p>e) Velero for easy fixation.</p> <p>f) MRI/CT Scan compatible; radiolucent</p> <p>g) Tracheal access opening for advanced airway procedure;</p> <p>h) Rear panel opening for cervical spine palpation</p> <p>i) Latex free and durable.</p> | |
|---|--|


25. **Bandage Elastic 3" Ace**

| Qualitative Requirements | BIS Code No. |
|---|---|
| Material: elastocrepe bandages of good quality; fabricated from Synthetic fibers and of good elasticity; Dimensions: 15 cm x 2.7 meters |  |


27. **Urine Can s.s.**

| Qualitative Requirements | BIS Code No. |
|---|---|
| Material : Stainless Steel Flask shaped device with narrow upper end and flat-bottomed lower end for collection of urine in male bed ridden patients with non-spill shape and handholds. |  |


28. **Reflex Hammer**

| Qualitative Requirements | BIS Code No. |
|--|---|
| <p>a) 15 cm long stainless steel arm with hammer hold also in Stainless steel.</p> <p>b) Hammer of good quality rubber. Rear portion of the instrument having brush and pin enconcesed in screw pattern, detachable stainless steel part</p> <p>c) Used for testing sensation and reflexes of patient.</p> |  |


29. Bowl Small

| Qualitative Requirements | BIS Code No. |
|--|---|
| <p>Small Material Stainless Steel</p> <p>Features: 4,1/2 diameter . 2.5 to 3” base, depth 2” well fitting lid with central hold. Snugly fitting lid with central hold for opening and closing.</p> |  |


30. Bag Valve Mask Adult (Silicon, Steam Autoclavable)

| Qualitative Requirements | BIS Code No. |
|---|--|
| <p>Material texturized silicon, and autoclavable.</p> <p>Size Adult, compressible, reusable silicon bag of 1600 ml capacity.</p> <p>Component- Self-inflating silicon bag of 1600 ml capacity</p> <p>One way inflating valve, facemask, Oxygen reservoir, Oxygen port connecting tube.</p> <p>Transparent soft pre inflated plastic facemask. Good quality connecting tube of 3 m lengths.</p> <p>Standardized 15/22 mm fitting. Adjustable book and loop handle. Collapsible body and reservoir.</p> <p>PEEP Valve/elbows included non-jam valve with max Oxygen flow of 15 L /min. Carry case to be provided.</p> |  |

31. Bag Valve Mask Child (Silicon)

| Qualitative Requirements | BIS Code No. |
|--|---|
| <p>Material texturized silicon, and autoclavable.</p> <p>Size CHILD , compressible, reusable silicon bag of 500 ml capacity.</p> <p>Component- Self-inflating silicon bag of 500 ml capacity</p> <p>One way inflating valve, facemask, Oxygen reservoir, Oxygen port connecting tube.</p> <p>Transparent soft pre inflated plastic facemask. Good quality connecting tube of 3 m lengths.</p> <p>Standardized 15/22 mm fitting. Adjustable book and loop handle. Collapsible body and reservoir.</p> <p>PEEP Valve/elbows included non-jam valve with max Oxygen flow of 10 L /min. Carry case to be provided.</p> |  |

32. **Bag Valve Mask Infant (Silicon)**

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>Material texturized silicon, and autoclavable. Size INFANT, compressible, reusable silicon bag of 1600 ml capacity. Component- Self-inflating silicon bag . One way inflating valve, facemask. Oxygen reservoir, Oxygen port connecting tube. Transparent soft pre inflated plastic facemask. Good quality connecting tube of 3 m lengths. Standardized 15/22 mm fitting. Adjustable book and loop handle. Collapsible body and reservoir. PEEP Valve/elbows included non-jam valve with max Oxygen flow of 8 L /min. Carry case to be provided</p> |  |


33. **Oxygen Cylinder 680L (Ox dose) Light weight with accessories**

Specifications


Not avialabe




34. **Suction Unit with accessories (Manual)**

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>a) Model : Hand Operated , manual unit b) Performance : Maximum suction pressure of 328mm hg c) Peak flow : 70L/minute d) Light weight and compact e) No clog suction tip & intake valve f) Rescue handle with replicable cartridges g) Double male connector & short suction cat here for easy fixation and effective suctioning.</p> |  |

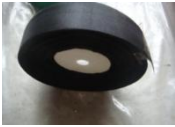
35. **Triage Ribbon Green Tape 50 M Roll**

| Qualitative Requirements | BIS Code No. |
|--|--|
| Material: satin and color fast Width: 2.5 cm Length: 50 meters |  |


36. **Triage Ribbon Red Tape 50 M Roll**

| Qualitative Requirements | BIS Code No. |
|--|---|
| Material: satin and color fast Width: 2.5 cm Length: 50 meters |  |


37. **Triage Ribbon black 50 M Roll**

| Qualitative Requirements | BIS Code No. |
|---|---|
| Material: satin and color fast Width: 2.5 cm Length : 50 meters |  |


38. **Triage Ribbon Yellow Tape 50 M Roll**

| Qualitative Requirements | BIS Code No. |
|---|---|
| Material: satin and color fast Width: 2:5 cm Length 50 meter. |  |


39. **Mask Universal size**

| Qualitative Requirements | BIS Code No. |
|--|---|
| Size: Adult universal size Material: Disposable, single use layer filter face mask with nose clip; N95/HEPA Respirator type Should have 2 straps one to secure above ear level and other below ear level. Package: in packets of 50/100; sterile |  |


40. **B.P. Apparatus Digital**

| Qualitative Requirements | BIS Code No. |
|--|---|
| <p>Large screen crystal display Automatic with built in pump Pressure Detection Mechanical Capacitance Pressure Sensor. Measurement range – 30-280 mm lg Additional Function Pulse meter – 20-255 beats /minutes 120 sets of memory, weight – 400 gm Dimensions- 163 mm(W) x 138 mm (D) x 62 mm(H) Arm cuff with air tube 70 cm</p> |  |


41. **Oxygen Cannula Nasal**

| Qualitative Requirements | BIS Code No. |
|--|--|
| <p>Oxygen delivery device compatible with oxygen regulator(light weight Material: soft transparent good quality plastic of 2-3 mm diameter Tube length: 3 meters Nasal prongs in closed loop which is adjustable and of ultra soft, Non-irritant pliable plastic and about 5-10 mm in length; Head straps(elastic and adjustable) for securing Package: disposable sterilized individual packs Should provide safe comfortable low flow oxygen in concentration of 24-44% with 1 to 6 litter flow per minute.</p> |  |

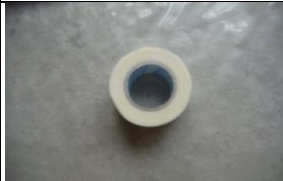
42. **Torch**

| Qualitative Requirements | BIS Code No. |
|--|---|
| <p>Stainless steel body. Snap; lock for hooking to belt of the user 3 large cell capacity, Durable, waterproof and durable On/Off switch.</p> |  |


43. **Band Aid 1" x 3" packets**

| Qualitative Requirements | BIS Code No. |
|--|---|
| a) Dimensions: 2 cm x 7 cm rectangular with central medicated pad b) Containing Benzalkonium chloride BP 0.5 % W.W c) Wash proof and hypoallergenic adhesive bandage d) Sterilized single packs |  |


44. **Tape Dermical cloth 1"**

| Qualitative Requirements | BIS Code No. |
|--|--|
| a) Dimensions: 2.5 cm x 9 metre b) Hypoallergenic surgical micro pore adhesive tape |  |

45. **Tape Dermical Cloth 2"**


| Qualitative Requirements | BIS Code No. |
|--|--|
| a) Dimensions: 2.5 cm x 9 meter b) Hypoallergenic surgical micro pore adhesive tape |  |

46. **Glucometer**


| Qualitative Requirements | BIS Code No. |
|--|---|
| Monitor with lancing system, coding chip, glucose strips, and controls. Principle Glucose dye oxidoreductase mediator reaction (0.7U) Monitor, light weight, waterproof, and screen size 5x3 cm with coding chip insert. Reading time 05 sec, Range 10-600 mg/dl accuracy deviation |  |

| | |
|---|--|
| error with in 4%. Limit of Detection 10 mh/dl Sample compatibility fresh capillary/arterial or EDTA venous blood. Memory up to 400 readings Temperature of compatibility : 10 degree to 40 degree Centigrade | |
|---|--|


47. **Bandage Kling 3'' (5m Roll)**

| Qualitative Requirements | BIS Code No. |
|---|---|
| a) Dimensions:7 cm x 5 meter length b) Gauze bandage of superior quality, cross net weaving fabricated from cotton fibers. c)Sterilized packs |  |


48. **Bandage Kling 6'' (5m Roll)**

| Qualitative Requirements | BIS Code No. |
|---|--|
| Dimensions: 15 cm x 5 meter length Gauze bandage of superior quality, cross net weaving fabricated From cotton fibers Sterilized packs |  |

49. **Scissors cutting**

| Qualitative Requirements | BIS Code No. |
|---|---|
| Material : Stainless steel 6'' scissor for cutting of tissue during minor surgical procedures. |  |


50. **Cup Paper Hot/Cold 8 Oz. (packet of 100)**

| Qualitative Requirements | BIS Code No. |
|---|--|
| Material: Disposable paper cups of Styrofoam with smooth rounded upper edge Capacity 200ml Versatile for both hot and cold liquids. |  |


51. Sponge Sterile 4" x 4"

| Qualitative Requirements | BIS Code No. |
|---|--------------|
| <p>a) Dimensions: 10 x 10 cm</p> <p>b)Material: 12 ply, good absorbent quality</p> <p>c) Package: packet of 4 swabs sterilized and ready to use packs</p> <p>d) Thickness : 1 to 1.5”</p> <p>e) Operating temperature of 0°C to 50°C and water resistance as per</p> <p>IEC 60529/en 60529 IP 44</p> | |


52. Glasses Eye Protection

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>UVEX- scratch resistant lens of unbreakable Polycarbonate with Maximum UV protection and frosted brow guard to block Overhead glare Side shields, which are adjustable. Adjustable temple length in four positions Overall shape should be so as to prevent any splash of Bodily fluid entering the eye.</p> |  |

54. Pocket Masks (CPR)

| Qualitative Requirements | BIS Code No. |
|--|--|
| <p>a) Face mask with one way valve and filter</p> <p>b) Used as physical barrier for mouth to mouth ventilation</p> <p>c) Ventilation tube length 1-1-.25”</p> <p>d) Pre inflated cuff for effective and good seal with transparent mask</p> <p>e) Oxygen delivery inlet</p> <p>f) Hard case for carrying mask and one microbial wipe.</p> |  |

55. **Infantry Pack (CPR Mannequin) 5 pieces pack with Lungs Bag**

| Qualitative Requirements | BIS Code No. |
|---|--|
| <p>Infant mannequin set for CPR training with provision of Manoeuvring airway opening skills, air ventilation and chest compression. It should be made up of good quality of rubber and plastic. It composed of three parts</p> <p>MAIN BODY:-</p> <p>It is made up of rubber and is without head with provision to attach head in the neck.</p> <p>It should clearly landmark with hands and feet having grooves over upper torso to fix chest part.</p> <p>Length from neck to toe- 48 to 55 cms</p> <p>Length of the neck - 08 to 12 cms.</p> <p>HEAD</p> <p>It should be made of good quality of plastic fixed with neck.</p> <p>With a facility for extension of Head 1-1.5 cm for inserting lung bag, through mouth.</p> <p>Mandible or lower Jaw should be movable;</p> <p>Eye ear nose should be well land marked.</p> <p>CHEST</p> <p>It should be made up of good quality of rubber.</p> <p>It should be compressed by 1-1.5 cm</p> <p>It should contain impression of navel and nipple.</p> <p>The chest should be such that it can be adjusted over the grooves of the main body.</p> <p>LUNGS BAGS</p> <p>Pendulum in shape, made up of polythene.</p> <p>Length: 29-32 Cm</p> |  |

MOUTH:

Rectangle in shape with two flaps that can be fixed over the mouth to prevent air entry from out side.

Length: 11-12 cms

Width: 4-7 cms

The mouth will lead in to wind pipe

WINDPIPE:

Spherical in shape when inflated.

Length: 15-17 cm

Circumference: 6 to 7 cm

LUNG

Spherical in shape when inflated.

Radius: 3-3.5 cms

LUNG INSERTER

Made up of plastic for inserting lung bag in place.

Length: 30-35 cms

Width: 2-2.5 cm.

MAIN BODY:-

It is made up of rubber and is without head with provision to attach head in the neck.

It should clearly landmark with hands and feet having grooves over upper torso to fix chest part.

Length from neck to toe- 48 to 55 cms

Length of the neck - 08 to 12 cms.

HEAD


It should be made of good quality of plastic fixed with neck.

With a facility for extension of Head 1-1.5 cm for inserting lung bag, through mouth.



| | |
|---|--|
| <p>Mandible or lower Jaw should be movable;</p> <p>Eye ear nose should be well land marked.</p> <p>CHEST It should be made up of good quality of rubber.</p> <p>It should be compressed by 1-1.5 cm</p> <p>It should contain impression of navel and nipple.</p> <p>The chest should be such that it can be adjusted over the grooves of the main body.</p> <p>LUNGS BAGS</p> <p>Pendulum in shape, made up of polythene.</p> <p>Length: 29-32 Cm</p> <p>MOOUTH:</p> <p>Rectangle in shape with two flaps that can be fixed over the mouth to prevent air entry from out side.</p> <p>Length: 11-12 cms</p> <p>Width: 4-7 cms</p> <p>The mouth will lead in to wind pipe</p> <p>WINDPIPE:</p> <p>Spherical in shape when inflated.</p> <p>Length: 15-17 cm</p> <p>Circumference: 6 to 7 cm</p> <p>LUNG</p> <p>Spherical in shape when inflated.</p> <p>Radius: 3-3.5 cms</p> <p>LUNG INSERTER</p> <p>Made up of plastic for inserting lung bag in place.</p> <p>Length: 30-35 cms</p> <p>Width: 2-2.5 cm.</p> | |
|---|--|

56. **Squadron Plus (CPR Mannequin) 5 pieces pack with Lungs Bag**

| Qualitative Requirements | BIS Code No. |
|--|---|
| <p>Adult Manikin set for CPR training with provision of maneuvering airway opening skills, air ventilation and chest compression. It should be made up of good quality of rubber and plastic. It should be composed of 05 parts:</p> <p>Length of the mannequin: 50 –70 Cms</p> <p>Width of the Chest: 30-40 Cms</p> <p>The mannequin should be in 5 parts:-</p> <p>1. HEAD</p> <p>Head should be made up of a good plastic quality.</p> <p>Size: Length: 19 –25 cms</p> <p>Width: 12-15 Cms</p> <p>It should be screwed with the neck with a facility for extension.</p> <p>Mouth should be opened by 2.5 cm to 4 cm for inserting lung bag</p> <p>If possible mandible or lower jaw should be movable.</p> <p>Nose should be made up of such material that can be pinched.</p> <p>Eye ear should be well impressed.</p> <p>2. MAIN BODY (BACK)</p> <p>It is the posterior portion of the body to which head and chest portion is fixed.</p> <p>Should be made up of good quality of plastic with a circular hole in the center of the torso to place the piston.</p> <p>At the end of the neck there should be a provision to screw the head.</p> <p>There should a provision to attach chest part over the upper portion of back.</p> <p>Length of the back + 48-68 cms</p> |  |


| | |
|---|--|
| <p>Width: 28-40 cms</p> <p>Length of the neck: 16cms – 18 cms.</p> <p>3. CHEST</p> <p>Should be made up of good quality of rubber</p> <p>Can be compressed by 4-7 cms</p> <p>Clavicle, xyphoid process, sternum, navel and ribs should be with proper landmarks.</p> <p>Left right chest should be well impressed.</p> <p>There should be cleft in the center of the chest so that airway system (lung) can be inserted. Length of the chest 30-45 cms, Width 28-38 cms.</p> <p>4. PISTON</p> <p>Should be made up of good quality of sponge.</p> <p>Should properly fit over the hole of the back</p> <p>Dia of the piston 12 to 15 cms (Subject to fit over the hole on the back)</p> <p>Height of the piston: 7-10 cms.</p> <p>5. LUNG BAG:</p> <p>Should be made up of good quality of polyethylene.</p> <p>It will be in three parts</p> <p>MOUTH</p> <p>Rectangle in shape in shape with two flaps that be fixed over the mouth to prevent air entry from out sides.</p> <p>Size : Length ; 12 –13 cms</p> <p>Width : 4-7 cms</p> <p>The mouth leads into windpipe. Windpipe : should be spherical in shape when inflated.</p> <p>Circumference; 10-12 cms</p> <p>LUNG : Spherical in shape when inflated.</p> | |
|---|--|

| | |
|---|--|
| Radius; 6-7 cms | |
| 6. INSERTER: | |
| A flat plastic strip for inserting lung bag through of the mannequin into cleft of the chest. | |
| Length: 48-52 cms | |
| Width: 3-4 cms | |

57. **Flexible Splints Large/ Medium/ Small**


| Qualitative Requirements | BIS Code No. |
|---|--------------|
| Material light weight , radio lucent, moldable Water Proof and body fluid poof. Portable light weight padded flexible splints of three sizes and reusable, Standard and junior sets with all three sizes Velero strapped for easy application and removal | |

58. **Pneumatic Splints Set**


| Qualitative Requirements | BIS Code No. |
|---|---|
| Material radio lucent, light quality plastic. With inflation valve and closing clamp, fixing by radio lucent zipper. Set of six sizes hand and wrist half arms, full arms, foot and Ankle, half leg and full leg, reusable sots with carry bag. |  |

59. **Regular Oxygen LSP# 170-020 with light weight oxygen cylinders**


| Qualitative Requirements | BIS Code No. |
|---|--------------|
| <u>Oxygen cylinder</u> | |
| a) The medical Oxygen cylinder should be made of high quality | |

| | |
|---|---|
| <p>* Strength of aluminum alloy with heat sensitive coating.</p> <p>* Capacity: 425 liters</p> <p>b) It should be duly approved by the Chief controller of Explosive (CCE) at Nagpur.</p> <p>d) The system should be rust proof.</p> <p>e) The refilling procedure should be risk free & simplex, with the help of portable refilling station complete with pressure gauge to show filling pressure.</p> <p>f) All fittings should be leak proof.</p> <p>g) A built pressure gauge system to be provided with the cylinder.</p> <p>h) The medical Oxygen cylinder & all other fittings should be hygienic & free from contamination.</p> <p>i) Finishing should be standard seamless aluminum with clear coat of heat sensitive powder paint.</p> <p><u>Regulator</u></p> <p>j) Accessories: high pressure regulator, flow meter, connecting tube of 3 meter length, nasal cannula and non rebreather mask-adult and infant sizes, carry pack with back harness;</p> <p>k) Compatible with light weight oxygen cylinder</p> <p>l) Flow regulation of 0- 20 L/minute</p> <p>m) Outlet compatible with nasal cannula/non rebreather mask</p> <p>n) Control valve should be designed to provide calibrated flow of oxygen at a pressure of 16 PSIG to 70 PSIG depending on the application.</p> <p>o) The regulator must be made of anodized aluminum composite material.</p> <p>p) The pressure indicator on the valve must be protected by rubber- o – ring.</p> <p>q) The weight of the regulator inclusive flow meter system should not exceed 310 gms.</p> <p>r) The length of the regulator should not exceed 10 cm & diameter not to be more than 4 cm.</p> <p>s) Hypoallergenic surgical micro pore adhesive tape</p> |  |
|---|---|


60. Stretcher/Spine Board with Accessories

| Qualitative Requirements | BIS Code No. |
|---|---|
| 1. Dimension : 1830 mm (L) , 420 mm (W) 2. Weight : 5 Kg 3. Capacity : 200 kg 4. CT/MRI Compatible and radio lucent 5. Material : Carbon fiber or fiber glass material 6. Separate hand holds and restraint holds with smooth edges for easy and comfortable lifting with Velcro straps. |  |


61. Dressing Abdominal 7 1/2"

| Qualitative Requirements | BIS Code No. |
|--|--|
| a) Size 7 1/2" x 7 1/2" b) Strength : 12 ply with good absorbent quality gauze and cotton c) Layer in between d) Package: pre sterilized ready to use individual packs. |  |

62. Gauze Dressing Vaseline


| Qualitative Requirements | BIS Code No. |
|--|---|
| a) Non adherent dressing U.S.P. impregnated with b) U.S.P. white Petrolatum c) Size: 10 x 10 cm d) Package: sterilized 10 pieces/pack |  |

63. Dressing Multi Trauma 12" x 3"


| Qualitative Requirements | BIS Code No. |
|---|---|
| i) Size 12" x 3" ii) Layers: of 16 ply of good absorbent quality gauze with cotton in between. |  |

| | |
|--|--|
| iii) Thickness: at least of 5 cm. | |
| iv) Package: Presterilized packs of 3 pieces/pack; ready to use. | |


64. Obstetrical Kit Disposable

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>Sterilized disposable kit with the following.</p> <p>i) Plastic apron - 1 nos</p> <p>ii) Cap dispo sable - 1 nos</p> <p>iii) Face mask - 1 nos</p> <p>iv) latex gloves - 1 pair</p> <p>v) Shoe cover - 1 pair</p> <p>vi) Plastic drapes - 2 nos</p> <p>vii) Stérile ombilical cordé clamps - 1 nos</p> <p>viii) Baby towel - 1 nos</p> <p>ix) Blade SS - 1 nos</p> <p>x) Maturity pads - 2 pads</p> <p>xi) Stérilise gauge pad 10x 10cm; 12 ply - 4 nos(towe lettes)</p> <p>xii) Dispo sable stérilise suçotions bulb (infant) - 1 nos</p> <p>xiii) Sterilize under pad - 1 nos</p> <p>xiv) Plastic bag to hold placenta and waste - 2 nos</p> <p>xv) Twist ties for use with plastic bag - 2 nos</p> |  |

65. **Penlight**

| Qualitative Requirements | BIS Code No. |
|---|---|
| a) Medi – torch to check pupil b) Length: 10- 15 cm; light weight c) Focus: sharp d) Material: durable plastic mould e) Operated with 2 batteries of 1.5 V; durable f) Provided with belt hook (press click mechanism) |  |

66. **Delivery set**

| Qualitative Requirements | BIS Code No. |
|---|--|
| Components, Episiotomy scissors 6” : 01 No. Tisctic cutting forceps 6” : 01 No. Vuslarlium forceps 10” : 01 No Suture cutting scissors 10” : 01 No Cold clamping forceps 12” : 02 Nos Needle holder 8” : 01 No. Alleys issue forceps 8” :0 2 Nos. Sims vaginal speculum :01 No. Sponge holding forceps 12” : 01 No. Toothed forceps 6” : 01 No. Non toothed forceps 6” : 01 No Artery forceps curved 6” : 02 Nos. BP Handle : 01 No. |  |

67. **Canvas Water tank 200 ltrs**

Special QRs for canvas water tank are not available but QRss as canvas water bucket is as per IS 8857 : 1989 reaffirmed -2001

68. **Padded Board Splint (Wooden)- Large**

| Qualitative Requirements | BIS Code No. |
|---|--------------|
| Material: Rigid splint of light weight material/wood; durable and Radio lucent Thickness: 1 cm Length: 135 cm | |


69. **Padded Board Splint (Wooden)- Medium**

| Qualitative Requirements | BIS Code No. |
|---|--------------|
| Material: Rigid splint of light weight material/wood; durable and Radio lucent Thickness: 1 cm Length: 90 cm Width : 7 cm Padded by equal thickness foam of superior quality and enclosed By water proof, hypoallergenic, ultra thin synthetic layer | |


70. **Padded Board Splint (Wooden)- Short**

| Qualitative Requirements | BIS Code No. |
|--|--------------|
| Material: Rigid splint of light weight material/wood; durable and Radio lucent Thickness: 1 cm Length: 35 cm Width: 7 cm Padded by equal thickness foam of superior quality and enclosed By water proof, hypoallergenic, ultra thin synthetic layer | |


71. **Bandage Elastic 6" Ace**

| Qualitative Requirements | BIS Code No. |
|---|---|
| Material: elastocrepe bandages of good quality; fabricated from Synthetic fibers and of good elasticity; Dimensions: 15 cm x 2.7 meters |  |


72. **Bandage Triangular 40" x 40"**

| Qualitative Requirements | BIS Code No. |
|---|--|
| Dimensions: 90 x 90 x 120 cm size bandage Material: good quality calico material |  |


73. **Mannequin Face shield packets (100 pcs per packet)**

| Qualitative Requirements | BIS Code No. |
|--|---|
| <p>Rectangular Barrier device used by rescuer when giving mouth-mouth/mouth –nose ventilation in patients.</p> <p>Size 7”x12” outer synthetic layer and 5”x7” central rectangular sieve like filter of non absorbent white plastic;</p> <p>The outer layer has a central hole of 1.5” diameter in the area of contact with patient mouth/nose and rescuer mouth with intervening filter layer</p> <p>Package : Single use disposable in sterile packing.</p> |  |

74. **Bag Valve Mask- Adult (Disposable)**


| Qualitative Requirements | BIS Code No. |
|--|--|
| <p>Size : Adult; disposable rubber vinyl bag of 1600 ml capacity</p> <p>Components: self inflating compressible rubber/ vinyl bag of 1600 ml capacity, one way inflation valve, face mask, oxygen reservoir,</p> <p>Oxygen port and connecting tube</p> <p>Material: high quality plastic/vinyl transparent and for single use;</p> <p>Transparent soft pre inflated plastic face mask</p> <p>Good quality connecting tube of 3 meter length</p> <p>Standardized 15/22 mm fittings</p> <p>Adjustable hook and loop handle</p> <p>Collapsible body and reservoir</p> <p>PEEP valves/elbows included; non jam valve with maximum Oxygen flow of 15 L/minute</p> <p>Single use sterilized and disposable pack</p> |  |

75. **Bag Valve Mask- CHILD(Disposable)**

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>Size: Child; disposable rubber vinyl bag of 500 ml capacity</p> <p>Components: self inflating compressible rubber/vinyl bag of 500 ml capacity, one way inflating valve, face mask, oxygen reservoir, oxygen port and connecting tube.</p> <p>Material: high quality plastic/vinyl transparent and</p> |  |

| | |
|--|--|
| for single use; Transparent soft pre inflated plastic face mask Good quality connection tube of 3 meter length Standardized 15/22 mm fittings Adjustable hook and lop handle Collapsible body and reservoir PEEP valves/elbows included; non jam valve with maximum Oxygen flow of 8-10 L/minute or more Single use sterilized and disposable pack | |
|--|--|

77. **Laryngoscope**

| Qualitative Requirements | BIS Code No. |
|---|--|
| <ol style="list-style-type: none"> 1. Stainless Steel body for battery compartment as well as detachable blades with light sources 2. Length of battery compartment : 15 cm for holding 02 medium cells. 3. 1.5 V two medium size cells , which are extra durable Blade Sizes Adult, Child and Infant. |  |

79.. **ECG Machine with analyzer**

Specifications

- 1) Multi channel ECG recording.
- 2) Storage memory for storing ECGs for later printing.
- 3) Automatic and manual recording models.
- 4) Dual power supply-Mains and battery operation.
- 5) Built in rechargeable battery.
- 6) Power supply rage –AC 230 V \pm 10%
- 7) Power consumption –less than 12W
- 8) Battery (built-in)-rechargeable Ni MH batteries 10x1.2 volts, 1500 mah
- 9) Battery capacity – Minimum 01 hrs
- 10) Battery indicator- Yes



- 11) Battery low indicator- Yes
- 12) Operating temperature – 10 to 40 Deg. C
- 13) Safety standard – Complaint to class 1 type CF, CE 0470.
- 14) ECG Acquisition - 11 bits, 1000 samples/sec/channel printing and filters.
- 15) ECG leads- Standard 12 leads.
- 16) Recording sensitivity – Manual mode 2.5-05-10-20 mm/m V \pm 5%.
- 17) Filters – Main and muscle interference modified digital notch 50- 60Hz.
- 18) Anti Drift filter- Digital 0.5 Hz anti Drift high pass linear phase filter
- 19) Input Dynamics \pm 300m V@ 0Hz \pm 5mV in the pass band.
- 20) Input impedance > 100 M ohms.
- 21) Time constant > 3.2 seconds.
- 22) CMRR > than 100 db @ 50 Hz.
- 23) DF Protection- Built in.
- 24) Recording system- Thermal parinter.8 dots/mm 110 mm usable print width.
- 25) Thermal paper compatible with system- 100 Nos.
- 26) Paper transport speed- 5-25-50 mm/sec \pm 05 sec.
- 27) Patient cable – 01 Nos.
- 28) Chest electrodes- 06 Nos.
- 29) Limb electrodes- 04 Nos.
- 30) Gel Battle- 25 Nos.
- 31) User Manual- 01 Nos
- 32) Battery charger- 01 Nos.
- 33) Full system Guarantee (comprehensive plan onsite)- 05 years.
- 34) To Quote AMC rates for next – 05 years.

80. **Emergency Accident Kit**

| Qualitative Requirements | BIS Code No. |
|---|---------------------|
| Thermometer 96F-107 F Bandage Scissors Splinter Forceps Insect Repellent 20cc. Irrigation Syringe Wound Closure Strips (10) Povidone Iodine (1oz) Tincture of Benzoin (2) Double Antibiotic Ointment (4) Antiseptic Towel letters (6) Moleskin' Nitrite Examination Gloves (2) Antimicrobial Hand Wipes Infectious Control Bag Dressing (8) Non-adherent sterile dressing (2) 5"x9" Trauma Pad Conforming Gauze Bandage Adhesive Tape, 10 yards Strips and knuckle bandages (15) Cotton Tipped Applicators (4) Oral Dehydration Salts Extra strength Tyleno ® (8) Motrin ® (8) | |

| | |
|--|--|
| <p>Antihistamine (4)</p> <p>Advil Cold ® (4)</p> <p>Diamode (immodium ®) (6)</p> <p>Aloe vera gel</p> <p>5-0 nylon suture w/cutting Needle</p> <p>1cc syringe with needle</p> <p>3cc syringe</p> <p>25 gauge x 5/8” needle</p> <p>18 Gauge x 1.5” Needle</p> <p>21 Gauge x 1.5 “Needle</p> <p>Angiocatheter 18 g</p> <p>Safety Pin (3)</p> <p>Accident Report & Pencil</p> <p>Emergency Accident Kit Specification.</p> <p>Prefilled Syringes :</p> <p>Atropine 10 ml o.1 mg/ml protected needle (2)</p> <p>Dextrose 50% , 50 ml 500 mg/ml protected needle (1)</p> <p>Diazepam 2ml 5mg/ml carpuments ® (2)</p> <p>Epinephrine 10 ml 1:10, 000 20ga protected needle (3)</p> <p>Lidocaine 2% 5 ml 20 mg/ml 20 ga protected needle (2)</p> <p>Sodium Bicarbonate 8.4 %</p> <p>50 ml 50 m Eq 18 ga protected needle (1)</p> <p>AMPULES :</p> <p>Diphenhydramine 1 ml 50 mg/ml (2)</p> <p>Epinephrine 1 ml 1:1,000 (1mg/ml) (3)</p> <p>Lanoxin 2ml , 25 mg/ml (1)</p> | |
|--|--|


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|---|--|
| <p>Naloxone 1 ml 0.4 mg/ml (2)</p> <p>Phenergan 1 ml 25 mg/ml (2)</p> <p>VIALS:</p> <p>FUROSEMIDE 2 ML 10 MG/ML (2)</p> <p>PROCAINAMIDE 10 ML 100 MG/ML Vial (1)</p> <p>Solu_Cartef 250 mg 125 mg/ml act o-vial (1)</p> <p>CAPSULES & TABLETS</p> <p>Aspirin Tablets (4)</p> <p>Clonidine Tablets 0.1 mg (2)</p> <p>Diphenhydramine 25 mg Tablets (4)</p> <p>Nitroglycerin Tabs 25 tabs 0.4 mg 1/150 gr (1)</p> <p>MISCELLANEOUS</p> <p>Activated charcoal 25 gr (1)</p> <p>Albuterol Inhaler 17 gr (1)</p> <p>Ammonia Inhalant spiral 0.3 ml (2)</p> <p>SAFETY SYRINGES & NEEDLES :</p> <p>10 cc w/21 ga x 1 1/2" (1)</p> <p>10 cc w/22 ga x 1 1/2" (1)</p> <p>2 cc w/20ga x 1 1/2" (1)</p> <p>3 cc w/21ga x 1 1/2" (1)</p> <p>3 cc w/22 ga x 1" (1)</p> <p>3 cc w/25 ga x 5/8" (1)</p> <p>I.V. EQUIPMENTS:</p> <p>0.9% Sodium chloride, 500 ml (1)</p> <p>I.V. Administration Tubing (1)</p> <p>I.V.Catheter 20ga x 1" (2)</p> | |
|---|--|

| | |
|---|--|
| <p>SURGICAL INSTRUMENTS :</p> <p>Alcohol Sponges (2)</p> <p>Gauze 3x3 (2)</p> <p>Gloves, Nitrile (1 pair)</p> <p>Hemostat (2)</p> <p>Needle Holder (1)</p> <p>Scalpel (1)</p> <p>Scissors (1)</p> <p>Sutures</p> <p>Proline (1)</p> <p>Vicryl (1)</p> <p>Tape (1)</p> <p>Thumb Forceps (1)</p> <p>Tourniquet (1)</p> <p>AIRWAYS EQUIPMENTS:</p> <p>End tracheal Tubes w/style</p> <p>3mm (1)</p> <p>5mm (1)</p> <p>7mm (1)</p> <p>Laryngoscopes</p> <p>Large (1)</p> <p>Small (1)</p> <p>Interchangeable light source (1)</p> <p>Air ways</p> <p>Small (1)</p> <p>Medium(1)</p> | |
|---|--|

| | |
|---|--|
| <p>Large (1)</p> <p>Micro shield Mask (1)</p> <p>(included in model 700 only)</p> <p>MONITORING EQUIPMENTS:</p> <p>Sphygmo (1)</p> <p>Stethoscope (1)</p> <p>ORGANIZATIONAL MATERIALS</p> <p>American Heart Assn. Algorithms (1)</p> <p>Quarterly Inspection Record (1)</p> <p>Plastic Seals (4)</p> <p>Reorder Form (1)</p> <p>Treatment Tag (1)</p> <p>DIMENSIONS OF THE STAT KIT 700:</p> <p>1/8" X 17 1/4" X 19 7/8"</p> <p>Weight: 16 pounds</p> <p>STATS KIT 900 ADDITIONAL CONTENTS</p> <p>Resuscitation Equipments</p> <p>Resuscitator w/Adult Mask (1)</p> <p>RES-Q-VAC Suction Unit (1)</p> <p>OXYGEN EQUIPMENT</p> <p>Aluminium "C" cylinder w/toggle handle (1)</p> <p>Oxygen Mask, w/strap & non-re breathing bag b (1)</p> <p>Oxygen Tubing (1)</p> <p>OPTIONAL ACLS DRUGS:</p> <p>Amiodarone 3ml 50 mg/ml ampule (2)</p> <p>Vasopressin 10ml 20 units vial (2)</p> | |
|---|--|

| | |
|------------------------|--|
| Portable carrying case | |
|------------------------|--|

81. Emergency Rescue Stretcher

| Qualitative Requirements | BIS Code No. |
|---|---|
| <p>The Stretcher should have following features:-</p> <p>a) Foldable and compact with built-in flotation.</p> <p>b) Color coded patient restrain straps with double locking Quick release safety buckles and built in head restraints system.</p> <p>c) Corrosion resistant stainless steel frame with cover and case.</p> <p>d) Vertical hoisting sling.</p> <p>e) Individual replacement components.</p> <p>f) Weight should not be more than 20 Kgs.</p> |  |

82. Portable Anesthesia kit

- 1) The machine has to be a complete portable anesthesia machine with all accessories built on a light weight metal frame foldable built in stand .
- 2) Provision for halothane vaporizer with glass bottle.
- 3) Flow meter unit for oxygen & nitrous oxide.
- 4) Oxygen & nitrous oxide regulators with pin-index system separately for each.
- 5) Brains circuit complete with bag mount corrugated tube minimum 40 inch length.
- 6) Re-breathing bags of all sizes.
- 7) Face mask padded of all sizes (pediatric to adult)
- 8) catheter mounts.
- 9) Pediatric circuit with T-piece arrangements.
- 10) Facility for emergency oxygen with blow.
- 11) “A” type gas cylinders for oxygen & nitrous oxide.



- 12) Nitrous oxide tube 9inch (230mm) with fine adjustment control.
- 13) Max connection for “B” & “C” type gas cylinder.
- 14) Tools kits.
- 15) Carrying case for anesthesia machine with accessories.

83. Portable Defibrillator with recorder

1. The AED should have automated voice prompts with CG display, light weight, weighing less than 03 Kgs.
2. Should have bi-phasic technology and should deliver shocks with energy of 150 joules for all shocks.
3. Should confine to latest slandered of AHA or equivalent body.
4. Should have options to connect 03-lead ECG cable.
5. Long life disposable battery should be slandered with the unit with life of atleast 300 shocks or 04 years on stand –by- mode.
6. Should be supplied with rechargeable battery compatible to the uni7 with accessories to charge it in addition to the disposable battery.
7. Should do self test automatically. In case of any fault with the unit it should automatically indicate.
8. Easy availability of multifunction disposable pads and other spares and disposables.
9. Should have a data card as memory tool.
10. Should have international testing certificate with large installation base in India.
11. Should provide onsite training to our para Medical staff and doctors.

84. Portable Suction Equipment


| S.N | Technical specification |
|-----|---|
| 01 | Mobile, electronic membrane suction pump for removal of mucous, blood and solid food particles from emergency patients. |
| 02 | The pump should have a sturdy housing, which is easy to clean and having storage for the suction hose. |

| | |
|----|--|
| 03 | The base should be of non-tip type. |
| 04 | It should have a stable and ergonomic handle. |
| 05 | It should have pre-selected suction levels with quick-selection buttons for easy operation. |
| 06 | The pump should be chargeable via both 230V and 12V. |
| 07 | It should have rechargeable Nickel Cadmium (2.8 Ah) batteries. |
| 08 | LED display for indication charge level of rechargeable battery. |
| 09 | It should operate for at least 02 hrs, 30 minutes at maximum suction of full charge. |
| 10 | The battery should have a service life of about 400 charge/discharge cycles in 03 years. |
| 11 | Suction capacity at 12 V should be more than 20 l/min with maximum vacuum of more than 75 kPa. |
| 12 | Weight of the entire unit should not be more than 06 Kgs. |
| 13 | It should not measure more than 400(W) x 300(H)x 150(D) in mm. |
| 14 | 50 W motor output. |
| 15 | Maximum current consumption should not be more than 4 A. |
| 16 | It should be operable in temperature range of -18 to +40 °C. |
| 17 | Product class for suction pump as per 93/42/EEC: IIb. |
| 18 | The reusable canister must have capacity of more than 750 ml and should have hydrophobic bacterial filter with 1 µm filtration grade. |
| 19 | Option for connection of disposable collection canister system. |
| 20 | The aspiration tube should be of 10mm diameter and at least 1200mm length. |
| 21 | It should have a wall-mounting set (including installation set) with an integrated charger and complying with EN1789 norms. |
| 22 | The unit should conform to EN 10079-1, EN 1789, and Directive 95/54 /EC norms. Classification according to EN 60601-1 with class II protection against electric shock with charger: class I. |
| 23 | Accessories should include: |
| | a) Accessory bag for suction pump accessories. |


| | |
|--|---|
| | b) Wall mounting with integrated charging device. |
| | c) Power cable |
| | d) 12 Volt connection cable and charger(Plug charging device) |

85. Same as Laryngoscope at 77 above.


91. Cheatles Forceps

| Qualitative Requirements | BIS Code No. |
|--|---|
| <ol style="list-style-type: none"> 1. Material : Stainless Steel 2. Size : 10" 3. Features with two holds at parallel arms with flattened tips for holding and transferring sterile instruments with good grip. |  |


92. Blood Pressure Cuff adult with Dial

| Qualitative Requirements | BIS Code No. |
|--|---|
| <ol style="list-style-type: none"> a) Type Adult –Dial type b) Tube length: 20 - 22" c) Cuff width: 5" – 6" d) Bladder insides cuff should fit in properly e) Material synthetic cloth with non Velcro fixing; Hook; and durable bulb inflator. f) ISI market and standard calibration of 0-300 mm |  |

93. Stethoscope Ordinary


| Qualitative Requirements | BIS Code No. |
|--|---|
| <ol style="list-style-type: none"> a) High quality tubing of standard length b) Earpieces: soft pliable with one pair spare c) Diaphragm: with good acoustic resonance d) Single unit as ear pieces adjunct with conduction tube |  |

94. Deluxe OB Mannequin


| Qualitative Requirements | BIS Code No. |
|--|--|
| <p>It is used to impart training of normal delivery and childbirth complications. It should have a model of female abdomen with abdomen layer as a non transparent flap, which should have an arrangement to attach with the remaining portion of the model by press button.</p> <p>Consists of 07 parts:-</p> <p>1. MAIN BODY</p> <p>Should be made up of rubber showing the landmark of lumber, sacrum, spine, pubic symphysis , pelvic girdle, with oval shaped perineum opening with a dia of 13-15 cms.</p> <p>Both the thigh should be upward raised and apart.</p> <p>The main body should be covered from abdomen to perineum.</p> <p>Length of the main body – 35 to 40 cms</p> <p>Depth of the main body showing abdomen 10 to 12 cms.</p> <p>2. ABDOMEN LAYER</p> <p>It should be meant to cover the hollow abdominal space of the main body .</p> <p>It should be made up of non-transparent rubber flap, which should have an arrangement to attach with the main body with press buttons.</p> <p>It must have the provision for the cavity so that uterus and foetus can be placed in abdominal layer to simulate the pregnancy.</p> <p>3. UTERUS</p> <p>It should be a hollow plastic bag containing a fetus shaped baby made up of rubber.</p> <p>It should be a shape that it could be placed inside the abdominal layer to look like a pregnant lady.</p> <p>There should be preservative inside the uterus.</p> <p>4. INFANT</p> <p>It will be used to show simulated delivery.</p> |  |

| | |
|--|--|
| <p>It should be hollow.</p> <p>Made up of rubber with a facility for filling air with an air valve attach with foot.</p> <p>A provision to attach umbilical cord over navel point.</p> <p>A separate manual air-filling pump should be provide to fill air in the infant</p> <p>Length of the infant- 50 to 60 cms.</p> <p>5. UMBILICAL CORD</p> <p>It should be made up of flexible plastic tube.</p> <p>Length of the tube: 65 to 75 cms</p> <p>Dia of the tube: 2 to 2.5 cms</p> <p>It should contain a facility to attach with the navel of the infant at one end and to attach with placenta at the other end.</p> <p>6. PLACENTA</p> <p>A disc shaped placenta should be made up of good quality of rubber</p> <p>Having its colour and impression with a provision to attach the umbilical cord with it.</p> <p>7. PERINEUM FLAP</p> <p>It should be made up of rubber for covering perineum opening with a facility to attach and detach with perineum.</p> <p>Perineum should have an cut (Vaginal Opening) so that could show the impression of vaginal opening.</p> | |
|--|--|

95. **Scissors suture cutting**

| Qualitative Requirements | BIS Code No. |
|--|---|
| Material : Stainless Steel Size 6” Tips sharp and tapering to cut stitches in tissue. |  |

96. B.P. Handle

| Qualitative Requirements | BIS Code No. |
|---|---|
| <ol style="list-style-type: none">1. Material : Stainless Steel,2. Feature : 6-8 cm long, handles with serrated flat limb at one end and other end tapering and designed to hold 11” surgical blade. |  |

DATASHEET

| SN | Item | Make | Model No. | Specifications | Quantity |
|-----------|-------------|-------------|------------------|-----------------------|-----------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

PRICE BID SCHEDULE

| SN | Item | Make | Model No. | Quantity | Unit Price (in INR) | Sales Tax /VAT (in INR) | Service Tax /VAT (in INR) | F.O.R. Destination Price (Where Applicable) | Total Cost (in INR) |
|-----------|-------------|-------------|------------------|-----------------|----------------------------|--------------------------------|----------------------------------|--|----------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |

Form of Contract Agreement

AGREEMENT

This Agreement, made the _____ day of _____ 2011, by and between

(name and address of Purchaser hereinafter called "the Purchaser")

and-----

(name and address of Supplier hereinafter called "the Supplier") of the other part.

Whereas the Purchaser is desirous that the Supplier execute

(name and identification number of Contract hereinafter called "the Contract") and the Purchaser has accepted the Bid/Quotation submitted by the Supplier for the execution and completion of such Contract.

Now this Agreement witnesses 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 hereafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. 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 execute and complete the Contract in conformity in all respects with the provisions of the Contract.
3. The Purchaser hereby covenants to pay the Supplier in consideration of the execution and completion of the Contract 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.
4. The General Conditions and Special Conditions of the contract document (enclosed) as contained in the Tender Document No. 1/RDM/TENDER/2011/1 of Relief &

Disaster Management Department, Govt. of Manipur dated 12th September' 2011 constitute part of this contract agreement and terms and conditions contained therein will be binding on the Purchaser and the Supplier.

In Witness whereof the parties hereto have caused this Agreement to be executed on _____, 2011.

Signed By _____

(the Purchaser)

Signed By _____

(the Supplier)