

No. 3710/ABS/DM
Government of India,
Ministry of Home Affairs,
NATIONAL CIVIL DEFENCE COLLEGE
(RASHTRIYA NAGARIK SURAKSHA MAHAVIDYALAYA)
NAGPUR-440 001 Dated 8th February, 2011

Cost of Tender Documents	Rs. 2000=00
Earnest Money Deposit (EMD)	Rs. 1,28,000=00

To,

M/s.

Dear Sirs,

Sub: Tender Enquiry in TWO BID systems for supply of “Disaster Response Equipments”.

Tenders are invited in duplicate sets complying the requirement for this tender as detailed below to be submitted in your letterhead neatly printed / typed, duly signed by authorized person with Company’s seal of the tenderer.

All envelopes containing the tenders shall be properly sealed. Envelopes Stapled shall not be accepted. All envelopes must be super scribed with tender number and due date of tender opening. The name and address of the tenderer must also be indicated on each envelope.

SUBMISSION OF TENDER	IN TWO BID SYSTEM	
Last date of submission of Offer	<i>28 / 02 / 2011</i>	<i>Time:1400 Hrs.</i>
Due date for opening of tender	<i>28 / 02 / 2011</i>	<i>Time:1500 Hrs.</i>

(Under unforeseen circumstances and if the due date falls on holiday, the tender will be received and opened on the next full working day at the same time.)

Requirement:

Sl. No	Description of ITEM	Quantity
1	Float Fire Pump Annexure - I	01 no
2	Portable Fire Pump Annexure - II	01 no.
3	Inflatable Decontamination Shower Annexure - III	01 set
4	Inflatable Boat & OBM Annexure - VI	02 set
5	Inflatable Tent Annexure - V	01 set
6	Advanced Hoist System Annexure - VI	01 set
7	Thermal Imaging Camera Annexure -VII	01 no.

1. The offer shall be addressed to the Director, National Civil Defence College, Civil Lines, Nagpur and shall be submitted to the Head of Office, National Civil Defence College, 61/1, Temple Road, Civil Lines, Nagpur-440 001. The tender should be submitted in two parts i.e. Technical Bid and Commercial Bid. Both the envelopes should be sealed in separate covers before sealing in a common envelope marked "**TENDER FOR "Disaster Response Equipments"**"

2 A. Technical Bid should consist of:

- (i) All relevant information asked in the General conditions of contract and the specifications proposed to be supplied.
- (ii) The infrastructure available for up-keep of the system during contract period.
- (iii) Compliance statements in respect of technical specification.
- (iv) The catalogue, technical literature including drawing etc. should be enclosed along with tender.
- (v) Relevant test/approval certificate to be attached.
- (vi) **E.M.D./Security Deposit for an amount of Rs.1, 28,000/- (Rupees One Lakhs Twenty Eight Thousands only).**

B. The Commercial Bid should consist of:

- i) The price bid should include the item wise prices along with taxes, duties and discount offer, if any, quoted by the bidder. These details should be submitted on their letter pad.
- ii) The contract price shall also include Excise Duty, Sales Tax, any other State or Central Government Taxes, duties including supply; installation and commissioning as applicable at the time of the supply of goods should be indicated separately in the offer itself.
- iii) The post warranty, annual maintenance charges should be quoted separately.
- iv) The words "**COMMERCIAL BID**" should be written clearly and prominently on this envelope along with Tender Number, Name of Stores & Date of Opening.

Note: Full name and status of the person signing the tender documents must be clearly mentioned in the Tenders.

C. The technical tender will be opened in the presence of the bidders/ representatives. The commercial tenders of those whose technical bid is acceptable will only be opened at later date to be communicated to them in due course of time.

D. Octroi Charges:

The Department will issue the Octroi Exemption Certificate as the Government goods are exempted from the payment of Octroi Charges. The stores are required at Nagpur. As such Tender should be on F.O.R. Nagpur only.

E. Transit Insurance:

Transit insurance for the goods has to be arranged by the supplier and the insurance charges should be born by the supplier.

F. Validity:

The prices quoted must be firm during the tenure of the contract and the offer must remain valid for at least six months from the date of opening of the tender. Offer with a validity of less than **six** months will be liable for rejection without any further reference/correspondence.

G. Late Offer:

- a. A tender which has not been received on the due date and time will not be considered. No relaxation in this respect will be entertained.
- b. Tender sent through Telegram, Telex, Fax or Email will not be considered.

3. Earnest Money/Security Deposit: Earnest money as per Para 2 (A) (vi) should be deposited along with offer in the form of crossed Bank Draft/Bank Guarantee in favour of **the Director, National Civil Defence College**, and payable at **Nagpur** of any Nationalised Bank and should be accompanied with price bid in prescribed proforma otherwise the offer may be treated as invalid. Earnest money by way of cash deposit or in any other form will not be entertained. The Bank Draft/Bank Guarantee should be valid for six months.

Note: Any tender not accompanied with earnest money in any one of the approved Forms, acceptable to the Purchaser, shall be rejected.

- a. **Earnest Money Deposit:** The earnest money without interest will be returned to the unsuccessful tenderer(s) within the validity period. For successful tenderer, EMD will be converted to Security Money, which will be refunded to the firm within 30 days of satisfactory execution of the contract. i.e. after receipt of the goods in full and good condition and satisfactory installation/commissioning at purchaser's site.
- b. The value of Security Money to be deposited by the successful tenderer in the form of **Bank Draft / Bank guarantee of any scheduled bank** shall be 10% of the value of the awarded contract [**landed value**] without having any ceiling. For unsatisfactory performance and / or contractual failure, the security money shall be forfeited.
- c. **Performance Bank Guarantee:**

For indigenous Order: The supplier should furnish PBG valid for 18 months to cover the warranty & guarantee period. The PBG should be for 10% of the order value including taxes duties etc to the F.O.R. destination price of the material on order. No payment will be made without submission of the performance guarantee.

For Import Order: The supplier should furnish PBG valid for 18 months to cover the warranty & guarantee period. The PBG should be for 10% of the order value by adding estimated amount of freight, Insurance, port charges & custom duty etc. as applicable as on date of opening price – bid, to the FOB price of materials on order.

4. The offers submitted by down loading from NCDC Website shall be considered valid only when accompanied by a Demand Draft drawn in favor of the Director, National Civil Defence College, and payable at Nagpur towards the cost of Tender Documents indicated on the covering page of NIT. The bank draft should be enclosed with Bid-I i.e. Techno commercial Bid of Tender Documents. In case of non-submission of the tender fee as detailed above the tender shall be treated as non-responsive. The name of the party / person who downloaded the tender document on behalf of the tenderer is to be indicated by the tenderer.

5. Terms of Payment: 100% payment within 45 days against the pre-receipted bill after receipt of an item/equipment in full and good condition and their successful installation/commissioning at the purchaser's site.

6. Inspection: Inspection of the stores supplied shall be done at Manufacturer's/ Supplier's place as decided by the College Authority. Inspection Notes on the stores being found acceptable by

the Inspector, he shall furnish the supplier with necessary copies of inspection note duly completed, for being attached to the supplier's bill thereof. After the material is received at National Civil Defence College, Nagpur, it should be inspected again.

The Director shall have full power to reject all or any portion that he considered defective or inferior in quality. The seller at his expenses shall immediately replace any portion of the contract work so rejected. If in the opinion of Director, the said material can be rectified, the supplier shall rectify at his own expenses and resubmit the rectified material for inspection.

7. Dispatch Instruction: The consignment should be dispatched on door delivery and on freight paid basis to the Director, National Civil Defence College, Nagpur as per supply order. Unloading/handling and transport of consignment in storage shed of the purchaser has to be arranged by the supplier and not by the Department.

8. Delivery:

i) The time for and the date of delivery of the stores stipulated in the 'Purchase Order' shall be deemed to be the essence of the contract and delivery of the stores must be completed by the date specified.

ii) If the execution of the contract / supply order is delayed beyond the period stipulated in the contract / supply order as a result of outbreak of hostilities, declaration of any embargo or blockage, or fire, flood, acts of nature or any other contingency beyond the suppliers' control due to act of God then NCDC may allow such additional time by extending the delivery period, as it considers to be justified by the circumstances of the case and its decision shall be final. If and when additional time is granted by the NCDC, the contract / supply order shall be read and understood as if it had contained from its inception the delivery date as extended.

9. Liquidated Damages: In the event of failure to execute the contract within the stipulated period mentioned in the order and in the event of breach of any of the terms and conditions in the order NCDC has the right:

i) to recover from successful tenderer, as agreed liquidated damages, a sum not less than 0.5% of the contract value for delay in execution of the contract beyond the delivery schedule (for this purpose part of a unit supplied will not be considered) as aforesaid for each week or part of a week during which the execution may be in arrears limited to 10%. Where felt necessary the limit of 10% can be increased to 15% at the discretion of buyer

ii) to purchase from elsewhere, after due notice to the successful tenderer, on the account and at the risk of the defaulting supplier the stores not supplied or others of a similar description without canceling the supply order in respect of consignment not yet due for supply or

iii) to cancel the supply order or a portion thereof, and if so desired, to purchase the store at the risk and cost of the supplier and also

iv) to extend the delivery period with or without imposition of Liquidated Damages as may be considered fit and proper. The penalty if imposed shall not be more than the agreed liquidated damages referred to clause (i) above.

v) to encash any available Bank Guarantee / security deposit for recovery of the penalty.

vi) the supplier shall not be entitled to any gain under this clause.

10. Guarantee/Warranty:

Except as otherwise provides in the invitation to the tender the contractor hereby declares that the goods, stores, articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained/mentioned in the contract. The contractor hereby guarantee that the said

goods/stores articles would continue to conform to the description and quality aforesaid for a period of twelve months, from the date of delivery of the said goods/stores/articles to the purchaser and notwithstanding the fact that the Purchaser (Inspector) may have inspected and/or approved the said goods/stores/articles, if during the aforesaid period of twelve months the said stores/goods/articles be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the contractor and the purchaser shall be entitled to call upon the contractor to rectify the goods/stores/articles or such portion thereof as found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the contractor and in such an event, the above mentioned warranty period shall apply to the goods/stores/articles rectified from the date of rectification thereof. In case of failure of the contractor to rectify or replace the goods etc. within specified time, the purchaser shall be entitled to recover the cost with all expenses from the contractor for such defective stores.

- i) Guarantee that they will supply spare parts, if and when required on agreed basis for an agreed price. The agreed basis could be and including but without any limitation on agreed discount on the published catalogue or on agreed percentage of profit on the landed cost.
- ii) Warranty to the effect that before going out of production for the spare parts they will give adequate advance notice to the purchaser of the equipment, so that the latter may undertake the balance of the lifetime requirements.
- iii) Warranty to the effect that they will make available the blue prints of drawing of the spares if and when required in connection with the main equipment.

11. Other General Terms and Conditions:

- i) If the tenderers are the authorized distributors of the Manufacturers, they are requested to enclose Photostat copy of the letter of their manufacturer appointing them as authorized distributor for marketing their product, duly attested.
- ii) The tenderers should clearly state in their offer that they/their principles possess valid license required under the Industrial Development & Regulation Act, 1981, wherever applicable and necessary, for material offered by them.
- iii) Packing list must contain item wise list of contents of each package, case, carts, quantity dispatched etc. Each package shall be numbered consecutively to indicate individual and total packing i.e. 1 of 2.2, etc.
- iv) All fax, telex, telegram messages from suppliers to the Director shall be confirmed by registered post.
- v) Tenderers holding valid Industrial License(s) under the Industrial Development and Regulation Act, 1981 should furnish the particulars of Industrial Income Registration Certificate.
- vi) Each page of the offer is to be signed and stamped by the tenderer and process should be indicated in figures & words.
- vii) In case of conflict in interpreting the conditions of the documents forming part of this enquiry, the decision the Director, National Civil Defence College, Nagpur shall be final and binding and accepted by the vendor.
- viii) All questions, disputes or differences arising in connection with contract shall be subject to the executive jurisdiction of the courts at Nagpur.
- ix) NCDC reserves the right to reject or accept or withdraw the tender in full or part as the case may be without assigning reasons thereof. No dispute of any kind can be raised against this right of buyer in any Court of law or elsewhere.
- x) Cancellation: In addition to his right to determine the contract upon fault of the vendor, the Director reserves the right to cancel the contract any time in whole or in part without assigning any reasons and the purchaser also reserves the right either to

pay or not to the vendor either part of the contract work executed, if they are not according to purchaser's specifications and complete satisfaction.

xi) Income Tax and Sales Tax Clearance Certificate may be furnished with the tender.

xii) The vendor should indicate warranty period one/two year from the date of installation. Replacement of defective items will be born by the vendor at his own cost in case of any manufacturing defects. The vendors should also indicate post warranty annual maintenance contract service charges.

xiii) The price bid should indicate the details as per the enclosed bid sheet proforma.

xiv) Technical specification of the items required are given in ***Annexure-I to VII***

xv) On breach of any terms and conditions of the contract or, by the contractor/tenderer, the Director, National Civil Defence College, Nagpur shall have the right to terminate the contract and to forfeit the EMD/Security Deposit. Further in the event of termination of the contract, the contractor shall have no claim for any compensation for loss in respect of any article or material collected or arrangement made by them.

xvi) Discount: Rate of discount if any, applicable (on basic price / landed price etc), should be clearly spelt out both in figures and words. However, no conditional discount will be considered for the purpose of evaluation of the offer (ranking).

12. Additional Requirements:

- a) The supplier has to arrange operational and maintenance training of equipment at National Civil Defence College for staff at their own cost for period of at least one week.
- b) Detailed specifications should be furnished for the item offered.
- c) A complete list of option utilities along with specifications and cost should be given.
- d) Installation and satisfaction operation of the equipment will be the responsibility of supplier.
- e) Adequate provision in respect of free services, warranty, up-gradation, maintenance and other facilities should be specified along with the technical bid.
- f) Important Note: During the warranty period stand by unit shall have to be arranged by the supplier if the unit could not be repaired within 24 hours of breakdown of the equipment, failing which the amount of **Performance Bank Guarantee** shall be forfeited.

PERFORMANCE STATEMENT FOR LAST THREE YEARS

Name of Firm: _____

1	2	3	4	5	6	7	8	9
Contract No.	Description of Stores	Quantity	Value	Original Delivery Period	Quantity supplied with Original DP	Last supply Position	Extd. DP/ Final DP	Present Position with reasons for delay

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THE PRICE BID SHOULD INDICATE THE FOLLOWING DETAILS

Description of items	Quantity	Unit	Discount if any	Excise Duty	Sales Tax	Packing and Forwarding charges	Freight charges/door delivery basis, (including at site)	Other charges
1	2	3	4	5	6	7	8	9

Note:

Please note that in case, offer does not clearly spell out the taxes and duties and any other charges, it will be presumed that the prices quoted are inclusive of all taxes and duties and other charges. The Director in this regard will seek no clarification.

A Representative may be deputed at the time of opening of the tenders.

Technical Specification

FLOTO PUMP

1. Requirements:

The Floating Pump should be designed for the purpose of fire fighting and disaster management operations. The Floating Pump should be lightweight, self contained, driven by an air cooled, one cylinder, two-cycle petrol engine and capable of being carried by one (1) person. The complete unit shall be designed for continuous operation at maximum rated output and should be capable of running under load immediately after starting from a cold condition.

2. Dimensions:

The dimensions and weight of the Float Pump shall be as follows:

- Overall Height – not more than 420 mm (16")
- Overall Length – not more than 711mm (28")
- Overall Width – not more than 508mm (20")
- Dry Weight – not more than 20 kg.

3. Engine:

- The engine shall be of solid state electronic ignition type with the minimum engine power of at least 5.96 kW (8.0 horse power) and a piston displacement of at least 134 cubic centimeters (8.20 cu. in.)
- The engine must be of standard production for a minimum of 15 years.
- The pump shall be equipped with a suitable cooling system to permit the pump to run continuously at full capacity without overheating during extended run times.
- The float pump shall be self-priming type, durable, powerful and easy to maintain for quick response to emergency situations in inaccessible areas.
- A well designed and permanently attached recoil starting device shall be provided so that the pump can be started easily and safely by one person.
- The engine shall have a hard-chrome plated cylinder bore for long life.
- A fully enclosed waterproof crankshaft mounted magneto shall produce sufficient current to the ignition system upon pulling the recoil starter.
- The unit shall be capable of high speed running immediately after starting, even in abnormally cold atmospheric conditions.
- The engine cooling system shall be able to operate at high ambient temperatures running full throttle without overheating for extended periods of time.

4. Fuel and exhaust system:

The fuel tank shall be made of high density polyethylene and have a minimum capacity of 4.5 liters with a minimum run time of 1.25 hours at full power. The fuel tank shall be positioned as far away from the engine exhaust as possible. Throttle control must be controlled by automatic float system. The carburetor system shall be of diaphragm type with an integral fuel pump.

5. Pump:

- The pump shall be of the centrifugal type and direct coupled to the engine and driven via the crankshaft.
- The shaft seal shall be a face type mechanical seal. Requiring no adjustment.
- Impeller wear rings shall be of the reusable type.

- Built in stainless steel intake screen shall be provided.
- Water-resistant air cleaner and muffler shall be provided.
- The complete portable fire pump unit shall be capable of fulfilling the minimum duties as given below.

Standard Pressure model Float Pump shall be capable of:

- 2 bar @ 530 lpm with 18.8 meter of head.
- 5 bar @300lpm with 47.0 meter of head.
- 7 bar @ 115lpm with 67.0 meter of head.

The float pump shall be able to operate at maximum capacity in as little as 15 cm (6") of water level.

6. Control and Instruments:

The controls and instruments, which shall be grouped conveniently and situated adjacent to the pump delivery connections and shall include the following:

- Cold start choke control
- ON/OFF ignition switch
- Decompression release switch

7. Float Assembly:

The float assembly must be made of high density polyethylene shell filled with polyurethane foam (closed cell) for floatation buoyancy.

8. Warranty:

Engine shall carry minimum of a two (2) year warranty against defective parts. Pump and all other components must carry a five (5) year warranty against defective parts.

9. Operation and Maintenance Instruction

Each unit supplied shall include the following items as standard accessories:

- Two (2) copies of operation and maintenance instructions.
- One (1) spanner wrench
- One (1) video program outlining operational and maintenance procedures.

Technical Specification

Portable High Capacity Fire Pump

1. General Features:

- The unit shall be designed, constructed and tested in accordance with the latest applicable codes and standards.
- The unit shall be more compact, light weight and more powerful.
- The fire pump will be centrifugal pump driven by petrol driven I.C. Engine.
- The entire unit will be self content with all the necessary fitments so as the unit will be ready for fire fighting at the time of emergency.
- The unit shall be designed for efficient fire fighting with minimum water wastage.
- The fire pump shall meet Indian Standards and International Standards as well.
- It shall have low wear and tear, maintenance free service and good workmanship.

2. Overall Dimensions not exceeding:

- Overall length - not more than 766mm
- Overall height - not more than 605mm
- Overall width - not more than 501mm
- Weight of unit - not more than 125 kgs.

3. The pump unit consists of the following in assembled condition:

- a. 100% imported Japanese **Nissan** make engine.
- b. **Kirloskar** make highly reliable KPF-1600 model pump.
- c. Stainless steel fuel tank.
- d. Heat Exchanger.
- e. Exhaust gas ejector primer.
- f. Mounting cradle with spring loaded multi-position handles.
- g. Auxiliary hands start (recoil rope) assembly.
- h. Battery.
- i. Electronic ignition system.
- j. Suction and Delivery blank caps.
- k. Tool kit.
- l. Instrument panel consisting of:
 - Compound gauge
 - Pressure gauge
 - Engine cooling – water temperature gauge
 - Engine oil – pressure gauge
 - Battery condition meter

4. The pump unit shall be supplied with the following **accessories**:

- a. 4 x Suction hose 100 mm. diameter of 2.5 meter long with male and female round threaded G. M. couplings as per IS: 2410
- b. 1 x Copper suction strainer of 100 mm dia.
- c. 1 x Basket strainer of 100 mm dia.
- d. 1 x Pair of Suction wrenches.
- e. 1 x Hour meter.
- f. 1 x Flood lamp assembly.
- g. 1 x Quick detachable two wheels and axle assembly.

5. General data:

Pump data

1	Type of pump	Single stage, Centrifugal
2	Pump shaft seal	Spring loaded , self adjusting, carbon-faced gland
3	Discharge valve	Screw down type – 02 no.
4	Priming	Exhaust gas primer
5	Rated output.	Not less than 1600 LPM @ 7 Bar.

Engine data

1	Engine model	Nissan MA 10 (modified)
2	Type of engine	4 cylinder, O.H.C.
3	Firing order	1,3,4,2
4	bore	68 mm
5	stroke	68 mm
6	capacity	988 cc (60.29 cu.in.)
7	Rated power	37.3 KW (50 B.H.P.) @ 4750 RPM
8	Compression ratio	9.5 : 1
9	Valve clearance, Inlet, Cold	.22 mm
10	Valve clearance, Exhaust, Cold	.22 mm
11	Fuel	Petrol
	Valve Timing	
12	Inlet valve opens	11° B.T.D.C.
13	Inlet valve closes	45° A.B.D.C.
14	Exhaust valves opens	51° B.T.D.C.
15	Exhaust valves closes	7° A.T.D.C.
16	Ignition time @ idling and static	7° + or - 2° B.T.D.C. @ 800 RPM.
17	Spark plug type	B. P. 5SE
18	Spark plug gap	0.8 – 0.9 mm
19	Fuel pump	Mechanical
20	Carburetor	Weber make
21	Sump capacity	3.2 litres
22	Cooling	Water pump and heat exchanger
23	Cooling water capacity	5.7 litres
24	Fuel tank capacity	13.6 litres
25	Lubrication	Pressure
26	Starter	Electronic and Automatic recoiled rope

6. Rated performance:

The portable pump while working with 3 meter static suction lift at NTP, shall deliver rated performance of 1600 LPM at 7 bars. The pump shall have 100mm single suction and 63mm two delivery outlets.

7. Material:

Material used for construction/fabrication of fire pump will be adequately treated for corrosion resistance.

Technical Specification

PERSONAL DECONTAMINATION SHOWER UNIT

It should be made to meet the operational requirements of Emergency Front Line Responders that have to intervene in contaminated environments or hot zones, and need personal decontamination.

1. The large shower unit should support the decontamination procedure of personnel wearing Level A/B/C protective suits. Air beams and covers shall be made up of PU coated high tensile polyester

2. The cabin should be made of a stopped air, low pressure air beams structure. The beams should be joined to create a frame, to support the plumbing lines for a decontamination shower and provide an integrated waste water collection berm.

3. The lightweight textile cover and the berm, should be fixed to the beams by means of fast couplings, in order to allow easy removal and cleaning, or replacement.

4. There should be two ports to accommodate the waste water pump hose and electrical feed. Transparent panel on the cover should allow light to access to the unit interior. Eleven sprinklers and two hand held spray guns should be built into the plumbing lines to assure a thorough decontamination.

5. Two anchor bags should be attached to the lower part of the unit, to act as ballast, when filled with water, providing an alternative when pegging the unit is not feasible.

6. The complete unit should be easy to transport, carry and deploy.

7. The approx dimension should be

- Width = 276cm
- Length = 303cm
- Height = 287 cm.
- Door Dimension should be W= 159cm x H = 210cm
- Air Beam Diameter = 27cm
- Working Pressure = 0.2 Bar.
- Unit Weight should not be more than 36 kg Approx

8. A unit should be supplied with an electric blower. All Beam Seams should be High frequency welded.

9. A shower system water requirement should be 55 LPM at 4 Bar.

10 The tenderer should be authorised by the company and valid authorisation certificate pertaining to this tender has to be attached to assure after sales service.

11. Relevant test certificates of the product should be attached with the tender documents

Technical Specification

Inflatable Rescue Boat and OBM

1) Specifications of Heavy Boat with OBM CE approved NMMA & CE Certified

- It should have four separate air chambers – features 3 Separate Air chambers in the main hull and a fourth air chamber in the inflatable keel
- It should have Plastic Coated Transom - transom boats shall have wooden transom that are completely enclosed in PVC plastic, forming a waterproof cocoon, keeping the transom secure from the damaging effects of water seepage better than any paint or lamination possibly could.
- Dimension should be as given :
 - a) Exterior – 14' X 6'
 - b) Interior – 9'9" X 2'8"
 - c) Deflated – 46" X 26" X 14" – Hull & 31" X 38" X 6" – Floorboard
- **Capacity should be 10-12 Adults or 2000 lbs**
 - Four Chambers having Port, Starboard, Bow & Keel
 - Tube Diameter not less than – 19"
 - 7" inflatable keel should improve stability in sea & swift water & cuts the waves & provide excellent turning performance.
 - Material – 1000 & 2000 Denier Reinforced
 - The boat will have a 2000 Denier Floor (1.8 Millimeter thickness) In addition to the above; the boat should have a 1000 Denier (0.9 Millimeter thickness) Wrap for added protection.
 - The Seam should be Quadruple Overlap Seam
 - Engine Capacity should have 40HP Max
 - Air Valves should be Halkey – Roberts One Way Valves
 - Weight should not be more than 107 lbs.

2) Standard Features (NMMA & CE Certified)

- The Plastic Floorboards should be for easy assembly, long term durability and greater strength 5/8" Grab Line along sides for safety.
- The rounded rear pontoons should be for rapid planning.
- The Splash guards on transom, should be built in oarlocks for easy rowing
- Two stainless steel "D" ring should be provided for towing along with four carry handles and front lifting handle
- The Oarlocks pop up should be for instant use
- The rubbing strake around hull and under keel should be for extra protection
- The two layers of material on lower tubes should be for greatest abrasion and puncture resistant
- There should be one self bailing drain valves
- The boat carry bag should be included
- The wide beam hull design should be for stability.
- It should have the following accessories.
 - Boat Carry bag – 1 No
 - Repair Kit – 1 No
 - Foot Pump – 1 No

- Collapsible Oar Set – 1Pair
- Inter Locking polyethylene floorboard with carry bag –1 set
- Aluminum Bench Seat – 1 No
- Bow storage bag – 1 No
- It should have two stage pumping systems with a high speed fan to quickly inflate the boat with piston pump with desired pressure. To be connected with high capacity Battery of the vehicle capable to inflate minimum two large boats – 1 No

3) Specification for Out Board Motor

GENERAL	
Propshaft Rated Horsepower	40 HP (29.8kw)
Max RPM at Full Throttle	4500 - 5500
Cylinders	3
Displacement	42.5 cu in. (697cc)
Bore/Stroke	2.68 in. x 2.52 in. (68mm x 64mm)
Cooling System	Water cooled with thermostat and pressure controlled
Ignition	Modular CDI
Starting	Manual
Gear Ratio	2.00.1
Gear Shift	F-N-R
Steering	Tiller
Alternator System	11amp (30watt)
Trim Positions	3 on M, ML,& EL
Fuel Tank	Separate, 25 litres capacity
Weight	69 kg
Propeller Drive	Splined rubber hub
Recommended Boat Transom Height	Short 15" (381mm) Long 20" (508mm)
Prop Selection (Pitch)	8" - 19"
Induction System	Loop-charged (3 carb)

TECHNICAL SPECIFICATIONS

INFLATABLE SHELTER

The inflatable tent should be made from water proof Super quality textile, Supratex or PVC coated fabric preferably flame resistant as per relevant EN standards. It should be designed in such a way that it should be used as casualty protection, mess halls, on-site headquarter, decon enclosure, medical treatment centre etc. etc.

1. The material of the frame (inflatable part) should be made from a material which is cold as well as heat resistant and the material shall not break when the shelter is inflated with compressed air cylinders.

2. The tent shall have a suitably sized entrance one each in the front and rear side. A window with mosquito net and translucent cover should also be provided on the tent.

3. Knotted ropes shall be provided on the centre ridge inside the tent for hanging lamps and an opening shall be provided on the side cover for electric cables etc if required for illumination inside the tent.

4. The size of the tent should be 4 X 5 metres and the colour of the tent should be Red. It should have minimum 8 storm lines and 4 numbers carrying handles (one on each edge)

5. The inflation system should be quick set up type through a compressed air cylinder connected to the tent. The inflation time shall not be more than 40 seconds for quick deployment. The cylinder should be connected to the shelter (not a separate inflation device) with a short high pressure hose.

6. The tent should have a removable floor which can be connected with Velcro fasteners.

7. Dimension: External: 400 x 500 x 280
Internal: 400 x 460 x 260

8. The overall weight of the unit including the air cylinder shall not exceed 55 kgs.

9. The Shelter and inflation system should be one package and shall have no loose items and shall packed in one valise and ready for immediate use.

10. The tent should be provided with lighting set.

- Floor Area should be 20 sq. mtrs.
- Air requirement should be 1400 ltrs
- Working pressure should be 0.25 bar
- Inflation should be 1.6 ltrs/300 bar cylinder
- The overall packed dimensions should be 96 x 57 x 43 cm.

11. The tenderer should be authorised by the company and valid authorisation certificate pertaining to this tender has to be attached to assure after sales service.

12. Relevant test certificates of the product should be attached with the tender documents

Technical Specifications

Confined Space Entry and Rescue

(PORTABLE ADVANCED SERIES FIVE PIECE HOIST SYSTEM – CE/ANSI APPROVED)

1. Advanced Series Five-Piece Hoist System (Qty: 1 No.)

An advanced Five-Piece Hoist System should be designed for manhole and confined space entry/ retrieval applications. This unit should be constructed of lightweight materials including high-strength aluminum. The pivots for ease of rescue and has a limited adjustment for overhead clearance restrictions. The lower base adjusts to fit most standard entries. Many other bases are available. Options include lower masts to match overall height requirements.

- Proof Load of 5000 Lbs - Confirms to ANSI/OSHA Standards.
- Five-Piece Hoist System should be equipped with: 12" - 29" Adjustable Offset Mast
- 33" Lightweight Lower Mast
- Three-Piece Lightweight Base
- Width of Base adjustable from 37" to 63.5".(1.63 M)

2. Standard WINCH with 60 ft. Galvanized Steel Cable with mounting bracket and winch bag (Qty: 1 No.)

- Easy Operation; the winch is manually operated; simply rotate the handle to raise or lower personnel or materials. Gear ratio is 6:1 with an average lifting speed of 12.75 ft/min. (no power source is required)
- 60 ft. of 1/4" galvanized steel cable complete with carrying bag (60, 90 and 120 ft. lengths available in galvanized or stainless steel)
- Lightweight Design; 35 to 37 lbs. depending upon model for ease of use
- Quick-Mount System; incorporates a quick-mount bracket which mates with a bracket on all support structures allowing the user to attach/detach device with a detent pin and makes retrofitting easy (no additional hardware needed)
- Free-Wheel Mode; an operator activated free wheel mode allows the drum to rotate and cable to pay-out freely as the attached worker descends or moves about (handle remains stationary)
- Built-In Fall Protection; The free-wheel mode has a built-in over speed brake with energy absorbing capacity (similar to self retracting lifelines) which provides secondary fall protection and added security
- Overload Clutch; a built-in overload clutch automatically slips to prevent severe overloading or damage, it also helps prevent injury to entangled personnel during raising operations
- Housing Cover; constructed from a durable medium density polyethylene with a built-in ergonomic carrying handle. This housing material reduces weight and will not dent or corrode like metal housings
- Corrosion Resistant; complete with anodized aluminum side plates, zinc plated gears and shafts, stainless steel springs and aluminum drum for superior corrosion resistance
- Level Wind; the drum level wind mechanism aids in spooling the cable onto the drum evenly and prevents slack line

- Safety Hook; the swiveling self locking snap hook provides secure connection to the load and prevents the cable from twisting for smoother operation. Complete with impact indicator enabling user to visually check to see if device has been impact loaded
- Reserve Lifeline System; allows brake to activate and absorb energy if fall occurs at the end of the lifeline travel
- Meets or exceeds all industry regulations including OSHA and ANSI
- Whether raising, lowering or supporting personnel or materials, our confined space rescue and retrieval systems are designed for versatility and ease of use. They serve as true workhorses, providing routine work support and fall protection, and performing as perfectly engineered rescue/retrieval systems during emergencies in areas such as manholes, tanks, bins, vaults, etc.

3. Retractable Fall Arrester Device: Secondary line of Protection with following specifications: **(Qty: 1 No.)**

- Galvanized Steel Cable dia. 4 mm with 12 M range
- Strength of the cable 1200 daN
- Internal absorbing element : integrated brake system, Full Proof adjustment, double friction lining & impact force reduction to \square 4 KN
- Anti-impact, anti-corrosion composite material casing
- Blocking System : Double Locking Paws to stop fall by over speeding
- Snap hook on the Cable end
- Dual closure attachment Karabiner
- Approved under European Standard CE/ANSI

TECHNICAL SPECIFICATIONS

THERMAL IMAGING CAMERA.

A. Prequalification:

1. **The Camera** shall be hand held, portable & light weight with single hand operation, suitable for use in Fire fighting operation, for seeing through dense smoke and darkness and give temperature display.
2. **Warranty:** The vendor shall warrant the Thermal image camera free from defects for a period of 24 months from the date of delivery.
3. **Service:** The manufacturer has service facilities in India to provide for timely and efficient service related issues.
4. **Quality:** The camera must be manufactured to design and manufacturing standards equivalent to ISO 9001.
5. The tenderer should provide testimony of Supply of Thermal Imaging Camera for Fire Fighting in India to establish track record.
6. The tenderer should be authorised by the company and valid authorisation certificate pertaining to this tender has to be attached to assure after sales service.

B. Detailed Technical Spec:

1. **Physical Configuration:** The Thermal Imaging Camera shall be a hand held design with battery, viewing optics, side straps and a neck strap / lanyard. The dimensions of the thermal image camera should be approx 284mm x 144mm x 145mm. The weight of the camera excluding the battery shall weigh 1.2 kg. The shell material should be of heat resistant. The Hand strap material should Kevlar. The Camera shell should be in Orange & Black colour. In addition the camera shall be supplied in a weatherproof storage case.
2. The camera shall be equipped with an uncooled IR micro bolometer sensor in 160x120 resolution format. Each imaging element or pixel on the camera's imaging sensor shall be of 25 microns in size – this provides super clear images in all conditions such as dense smoke,
3. Spectral response: 8 µm to 14 µm.
4. The heat sensitivity of the detector shall be the minimum of 100mk for temperature definition.
5. The Lens shall have field of view of 54° with a fixed focus of 1m to infinity. The lens shall be protected by IR window made from germanium to avoid any direct contact with foreign matter.
6. Range / Sensitivity Ratio: 8800

7. The Camera should be operational with single on/off button located under viewing screen. Another button shall be used for all other functions such as image capture or transmitter mode (if fitted).

8. Display: Should have LCD display and the diagonal display size should be 64mm (2.5") with inbuilt magnifier- 6.5" equivalent. The internal display shall be configured for viewable up to the facemask such that image is visible without interruption from smoke or reflection from external source.

9. Visual Indicators: All thermal imaging units shall be equipped with the following on screen displays;

- i) 10 bar battery indicator with low battery warning.
- ii) Digital temperature read out (Numeric Display Preferred) up to 1000°C.
- iii) Transmitting icon

All indicators shall be visible on the Viewing screen.

10. The unit shall have minimum two Colours (Red &Yellow) to Highlight High temperatures in addition to the Black and White Colour.

11. Image capture: The unit should have an integral feature that allows up to 30 images to be taken and displayed locally on the camera.

12. Power Supply: Each unit should be supplied with two rechargeable NiMH batteries each having operating time of 5 hours excluding wireless transmission option (if fitted). The battery recharging time should be 2.5 hours (nominal).The operating time with wireless transmission in continuous operation must be at least 2 hrs. Each battery must be capable of a minimum of 1000 charges. Each unit should be supplied complete with a battery charger capable of operating on mains 100/240v, 50-60Hz nominal AC mains or 24V DC supply.

13. Video Output: The thermal image camera should have a video output BNC connector located under the Viewing screen – this shall be protected against ingress of moisture by a suitable rubber cap. Both PAL and NTSC line standard should be available as factory preset options.

14. The camera should have intelligent contrast enhancement feature to see hot objects and cooler surroundings simultaneously.

15. The camera shall conform to IP67 standards with ability to withstand complete immersion in water to a depth of 1 meter for one hour.

16. The camera shall withstand multiple drops from a distance of 1.8 meters on to a concrete surface without sustaining any degradation of performance.

17. The camera shall be able to sustain wireless communication compliance with CE regulations while operating at a frequency of 2.30 – 2.45 GHz, to a Standalone wireless receiver (if opted for).

18. Supplier's EC Declaration of conformity certificate to be submitted.

19. Relevant test certificates of the product should be attached with the tender documents
