



**RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY,
RATAPUR CHOWK, RAE BARELI 229 316 (UP)**

Telephone: +91 535 2217427, Tel +91 535 2704209 Fax: +91 535 2211888

Tender Ref: RGIPT/RBL/Ambulance/2011-12/02

November 03, 2011

TENDER DOCUMENT

**NAME OF JOB: PROCUREMENT OF 01 (ONE) ADVANCED LIFE SUPPORT
(ALS) AMBULANCE, FULLY LOADED WITH MEDICAL
EQUIPMENT, FOR RGIPT, RAE BARELI**

Pre Bid Meeting on this Tender: 16.12.2011 (Friday) at 4:30 PM

Last Date of Submission of Tender: 22.12.2011(Thursday) at 16:00 hrs.

Date of Opening of Tender: 22.12.2011(Thursday) at 16:00 hrs.

Place of Enquiry on Tender: Administration Department of Academic Campus at
Rajiv Gandhi Institute Petroleum Technology,
Ratapur Chowk, Rae Bareli (UP).

Place of Opening of Tender: First Floor, Conference Room, Academic Campus,
Rajiv Gandhi Institute Petroleum Technology,
Ratapur Chowk, Rae Bareli.



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NOTICE INVITING TENDER (NIT)

**FOR PROCUREMENT OF 01 (ONE) ADVANCED LIFE SUPPORT (ALS) AMBULANCE,
FULLY LOADED WITH MEDICAL EQUIPMENT, FOR RGIPT, RAE BARELI**

Introduction:

Rajiv Gandhi Institute of Petroleum Technology, Rae Bareli being set up by the Ministry of Petroleum and Natural Gas (MOP&NG), Government of India, as an apex level Educational Institute of National Importance in line with IIT's under an Act of Parliament. The Institute is empowered to award degrees in its own right. RGIPT is co-promoted as an energy domain specific institute by six leading Oil Public Sector Units (ONGC, IOCL, OIL, GAIL, BPCL and HPCL) in association with the Oil Industry Development Board (OIDB). The Institute is associating with leading International Universities/Institutions specializing in the domain of Petroleum Technology.

We will be pleased to receive your most competitive offer for “**Procurement of 01 No. Advanced Life Support (ALS) Ambulance fully loaded with Medical Equipment for Rajiv Gandhi Institute of Petroleum Technology, Rae Bareli**” as per the details enclosed. Your quoted rates shall be inclusive of all applicable taxes, duties, freight etc. and shall remain firm till completion of work. Your offer for ‘procurement of 01 no Advanced Life Support (ALS) Ambulance fully load with Medical Equipment’ shall be valid for a minimum period of 90 days.



The tender on the prescribed proforma shall be submitted in a single big size envelope containing Two envelopes one for “**Technical Bid,**” second for “**Financial Bid**”, in original” duly sealed and super-scribed as “**Procurement of 01 No. Advanced Life Support (ALS) Ambulance fully loaded with Medical Equipment**” and Addressed to: **The Director, RGIPT, Ratapur Chowk, Rae Bareli,** and should be dropped in the locked **Tender Box** kept in the Room No. 103 of **P.A. to Director’s Office** on ground floor at Rajiv Gandhi Institute of Petroleum Technology, Ratapur Chowk, Rae Bareli - 229316 between 11-00 hrs to 17-00 hrs on all working days.

The tender must accompany the stipulated **EMD of Rs. 75,000/- (Rupee Seventy Five Thousand Only)** in the form of demand draft drawn on a schedule /nationalized bank in favor of “**Rajiv Gandhi Institute of Petroleum Technology**” payable at **New Delhi**. The Tender without the Demand Draft of EMD will liable to be rejected.

Pre-Bid Meeting:

To brief the bidders and to answer their queries if any, a meeting is scheduled on **Friday, 16th December, 2011 at 4:30 PM** in the Administration Department of Academic Campus at RGIPT, Ratapur Chowk, Rae Bareli. For the visit, Mr. Sanjay Singh, Assistant Executive Engineer (Electrical) may be contacted on phone no. 0535-2217427 & Mobile No **09389537925** for necessary assistance.

The last date for submission of the tender is **22.12.2011(Thursday) at 16:00 hrs.**

The tenders will be opened on the same day by Tender Opening Committee-RGIPT at **17.00 hrs** in presence of the bidders who wish to remain present. The Bidders attending should carry letter of authority from their firm/agency.

Payment terms:

The following terms of payment will apply:

- a) RGIPT will not pay any mobilization advance
- b) “On Account” shall be paid based on actual work done and approved by RGIPT, after full and satisfactory completion of job.

Chairman,
Committee for Technical Specifications
of Advanced Life Support Ambulance
(On Behalf of Director, RGIPT, Rae Bareli)



Tender Ref: RGIPT/RBL/Ambulance/2011-12/02

November 03, 2011

TERMS & CONDITIONS
OF
TENDER FOR ADVANCE LIFE SUPPORT (ALS) AMBULANCE
FOR RGIPT RAE BARELI

1. The tender on the prescribed proforma shall be submitted in a single big size Envelope containing two envelopes one for **“Technical Bid”** and another for **“Item-Wise Financial Bid”** duly sealed. The Item-wise Financial bid must be submitted in a big envelope along with duplicate, super scribed as Tender for 01 No. Advance Life Support (ALS) Ambulance for RGIPT, Rae Bareilly, mentioning tender notice No. and Item No. in separate envelopes. The RGIPT will not be held responsible for any postal delay, if the tender is sent by post. Tenders not accompanied with the following latest documents along with other requisite documents at the time of submission of tenders shall be rejected at the appropriate level of the competent authority.
2. The bidders must enclose a detailed compliance sheet indicating compliance to the published technical specifications.
3. Wherever relevant for all the important medical equipments as well as ambulance accessories from any third party sources apart from the bidder the original manufacturer's name and brand must be specified in the bid document supported by adequate technical detailing and explanation. The customer may request for specific additional technical information if it wishes so and in all such cases the bidder must provide the requested details failing to which the bid will be treated as technically non-responsive.

4. The bidders must indicate in their bid the supply and manufacturing sources for the various Materials as well as the ambulance equipments and enclose necessary documents to this effect.
5. In case of all the ambulance equipments and other general devices the bidders must enclose detailed product brochures.
6. All the necessary quality standard certificates for the medical equipments and other devices as applicable as per the tender specifications must be enclosed in the bid, without which the bid will be treated as technically non-responsive.
7. The authority at its own discretion may appoint departmental / independent surveyor during the tender evaluation process to judge the capacity and technical abilities of the suppliers of the bidders to deliver a product including the appropriateness of various processes, engineering, manufacturing ability of the vendors and suppliers of the bidder. Hence detailed and descriptive drawings, photographs, pictures, drafts, concept sketches, samples should form the part of the bid.
8. All the bidders must enclose complete documentary data to indicate that the products offered by them, is in compliance with the specifications.
9. The Tenderer shall have to give a Power Point Presentation of the Quoted Advance life Support (ALS) Ambulance, showing all the key features with detailed Specifications before the committee constituted for the purpose. One CD of the Power Point Presentation given before the committee is to be deposited.
10. The Tenderer shall also arrange the display of fully loaded Advance Life Support Ambulance for the inspection of the committee for which the dates shall be communicated separately.
11. The supplier of the Medical Equipments must have a minimum experience of 2 years in the supplies of medical equipments and after sales.

12. Technical bid consists of the following documents:

- I. The Demand Draft of Earnest money deposits for Rs.75, 000/- (Rupee Seventy Five Thousand Only) shall be accompanied with the tender document. Please note that the tender Number, its due date and complete address of the firms should also be written **on the back side of the Demand Draft so as to ensure its safe** return to the unsuccessful or successful tenderers as the case may be.

- II. **The authority letter of the Principles (Original manufactures) where-ever applicable.** The Authority letters should be latest and provision of fake/false authority letters will be considered an offence and such supplier shall be blacklisted for providing any supplies in RGIPT, Rae Bareli.

- III. Sales Tax / VAT registration certificate.

- IV. Latest sales tax certificates (now called VAT) valid at the time of opening of the tender issued by the sales tax authority under relevant sales tax act and the amendments made thereafter from time to time.

- V. **Non- Blacklisting Declaration:** The tenderer shall furnish a non-black listing certificate that the firm has not been blacklisted in the past by any Govt./ Private institution. The tenderer has to give an affidavit on non-judicial stamp paper duly attested on Rs. 50/- that there is no vigilance/CBI case pending against the firm/ supplier and the firm has not been blacklisted in the past in any institution of country.

- VI. **The item wise technical specification compliance statement with detailed catalogues of the product** should be provided by the bidder.

The Eligibility criteria of the Bidders shall be as under:

The eligibility criteria shall be a minimum turnover of **Rs. 3.00 Crores** of the Principal/Original Manufacturer on whose written authority the bidder submits tender, duly authenticated by Income Tax Department/supported by balance sheet certified by the Chartered Accountant.

Financial Bid consists of following:

- i) **“Price-Bid”** (Financial bid) properly sealed separately super scribed as Tender for Advance Life Support Ambulance and shall mention details of the Items quoted with item Sr. No.
- ii) **Financial bids** (Price bid) of only those tenderers shall be opened who qualifies in Technical specification Compliance Statement supported by product catalogues on the basis of Technical Evaluation report submitted by the experts of respective discipline.

13. In case of any authority found forged/tampered, the firm is likely to face legal action against them under rules including forfeiture of their earnest money.

14. The tender documents should be page marked and bearing signature with seal on each and every page.

15. The rate quoted must be F.O.R. “Stores of the RGIPT, Rae Bareli”

16. The tenderer supplying indigenous goods or already imported goods shall quote in Indian Currency only.

17. For imported goods, prices shall be quoted in any freely convertible currency say Dollar, Euro, GBP or Yen. As regard price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only. If such services are to be performed/undertaken in India, Commission for Agent, if any and if payable shall be indicated in the space provided for the

price schedule and will be payable in Indian Rupees only. The prices for comparison (only) shall be taken as the prevailing rates on the day of opening of tenders.

18. Tender where prices are quoted in any other way shall be treated as non-responsive and rejected.

19. The rates quoted should be inclusive of all taxes, duties, other charges like packing, forwarding etc. including entry tax, if any. No separate Tax/ Levies will be allowed. The rates should be quoted in accordance with the enclosed Price Schedule showing all components of charges. Rates Quoted should be typed and free from fluiding/cutting and overwriting. No hand written quotation will be accepted. All pages of the documents submitted should be numbered & total number of pages indicated in the index. Transparent tape should be applied on each quoted rates.

20. Details of documents enclosed with the tender forms should be mentioned in Proper Index serial wise duly flagged on the front page of your tender.

21. The document submitted by the firm with the tender will be opened in public in the presence of tenderers/representatives of the firms and the officers opening the tender will sign the tender documents.

22. The tenderer/ authorized representatives should point out to the Chairman of the Committee, embitterment, if any, at the time of opening tenders; thereafter the tenderer/authorized representative will have no legal right to confer or to represent on one ground or the other.

23. All the documents attached with the tender should be signed and sealed by the bidder itself.

24. No conditional tender shall be accepted. The committee reserves the right to accept or reject any tender/ quotation without assigning any reasons thereof.

25. If the delivery is not effected on due date, the **“Chairman- Committee for Technical Specifications of Advanced Life Support Ambulance, RGIPT, Rae Bareli”** will have the right to impose penalty of the total cost of the supply order as under:

*In case of any delay in delivery of Ambulance fully loaded with Medical Equipment within the period stipulated in the supply order, **liquidated damages** at the rate of 0.50% of the order value per day of delay or part thereof, subject to a maximum of 5% of the order value shall be recovered from the party.*

26. Rates should be quoted for the superior quality material only with Nomenclature/catalogue with submission of samples (wherever required) duly marked with seal & signature of the firms.

27. In case any Tenderer charges higher rates for any item (items) more than the MRP, the action like forfeitures of earnest money/security money/ performance bank guarantee and removal of name from the list of the supplier shall be taken against the firm.

28. The Successful tenderer are bound to supply the material on the rates once quoted by them and approved by the Committee. However in the event of any revision in the existing rates of duties or introduction of any statutory duty and taxes imposed by the Government, the same will be paid extra on production of satisfactory documentary proof.

29. The approved supplier shall carefully examine the conditions, specifications, size, make and Catalogue/drawings etc. of the goods to be supplied wherever applicable. In case of any doubts, he shall before signing the contract refer to the **“Chairman- Committee for Technical Specifications of Advanced Life Support Ambulance, RGIPT, Rae Bareli”** and get clarifications.

30. If in any case it is noticed that any manufacturer, firm, authorized dealer, approved supplier or any other agency is supplying item of similar specification lower cost than that of tenderer and approved as per this tender notice, the firm should have to make the supplies at such lower rates and excess amount if any paid for supplies already made shall be recovered in lump sum.

31. If at any stage during the tenure of the tender the successful tenderer reduces the sales price lower than the quoted rates under agreement will forthwith notify such reductions of the sale price to the undersigned immediately.

32. All terms and conditions of tender notice shall conform part of the supply order/agreement.

33. Warranty: The Tenderers are required to provide the warranty of equipment as per their terms & conditions and three years extended CMC thereafter from the date of supply of the fully loaded Advance Life Support Ambulance and its successful operation at required site at RGIPT, Rae Bareli. The details of AMC and CMC after the warranty period shall be mentioned separately for next three years. Any condition mentioned against each item in the list of items in tender document shall also be the part of the terms & conditions.

34. Warranty on Vehicle as well as the in-built equipment shall be provided by the Vendor for which an agreement shall be executed.

35. The rate contract shall remain valid for a period of one year from the date of its issuance which can be extended for a period of 90 days or till such time the new rate contract is issued, whichever is earlier.

36. The successful tenderer should ensure immediate supplies if supply order is placed on them and they are bound to supply material strictly as per the conditions approved by the Committee. If at any stage it is found that material supplied by the firms is not according to, as approved by the Committee, the ACTION AS DEEMED FIT WILL BE TAKEN AGAINST THE FIRM.

37. The successful tenderer shall be responsible for execution of the supplies strictly in accordance with the contract in full and shall not in any case assign or sublet any part thereof. Suitable penalty up-to 10% of the total value of a contract shall be imposed for any deviation from contractual obligation on merits of each case, besides forfeiture of Earnest money,

withholding of other deposits in RGIPT, Rae Bareli as a whole or even black listing of the suppliers/ firms/ dealers/original manufacture.

i) If in case the tenderer fails to supply the material within the delivery period or extended delivery period as approved by the Committee RGIPT, Rae Bareli under penalty clause of Liquidated damage, the order will be liable to be treated cancelled and earnest money will be forfeited.

ii) The Successful tenderer who fails to supply material according to the specifications of the material as specified in supply order and as per the sample approved by the COMMITTEE, the earnest money shall be forfeited and the firm will be debarred for participating in future tenders of this Institute.

38. The “Chairman-Technical Committee for ALS Ambulance” shall also be competent to alter/ modify the specifications of any item/ items for purchasing in the best interest of the RGIPT, Rae Bareli during the process of finalization/ Placement of supplier order.

39. All the medical equipment supplied and installed in the Ambulance shall be of the best quality, specification, trade mark and in accordance with the approved standards, catalogue, samples if provided. In case of any articles supplied not being approved, same shall be liable to be rejected or replaced and any expenses as a result of rejection or replacement of supplies, shall be entirely at the cost of tenderer.

40. The tenderer shall be responsible for the proper packing, so as to avoid damage under normal conditions of transport by rail, road or air and delivery of ALS Ambulance in good condition to the consignee at the destination RGIPT, Rae Bareli. In the event of any loss, damage, breakage, leakage or any shortage, the tenderer shall be liable to make good such loss and shortage found at the checking/ inspection/ verification of the materials by the consignee, no extra cost on such account shall be admissible.

41. In case of failure of **L1** to execute the supplies the supply order shall be placed with **L2** and the cost of difference shall be recovered from the **L1**.
42. In case of any dispute/ difference or doubts between the purchasing officer and the approved suppliers arises; the orders of the “**Director, RGIPT, Rae Bareli**” and “**Chairman of the Technical committee for Advanced Life Support Ambulance, RGIPT, Rae Bareli**” shall be final.
43. Legal proceedings that may arise at any time shall be subject to the jurisdiction of Uttar Pradesh Courts at Rae Bareli only.
44. The payment shall be made to the supplier after the receipt/ verification of the fully loaded Advanced Life Support Ambulance as per the laid down specifications.
45. **90% payments** shall be made after receipt of Advanced Life Support Ambulance and its inspection report by **the committee** constituted for the purpose. Balance Payment of **10%** shall be made after successful operation of the ambulance and allied equipment after **three months**.
46. Either of the sales tax (only one tax) shall be payable i.e. Central or State.
47. Any other condition that is not indicated here can be incorporated in the supply order or agreement before execution of a contract if need be.
48. No separate conditions will be accepted and the conditional tenders will be out-rightly rejected.
49. “**Chairman of the Technical Committee of Advanced Life Support(ALS) Ambulance**” is competent and reserves the right to consider, ignore, or reject any tender at any stage without assigning any reason what so-ever.

50. All the ingredients of the Checklist and General instructions incorporated shall be treated as a part of conditions of the contract.

51. The rates should be quoted against each item of the tender in both words and figures without cutting, tampering and transparent tape should be applied on quoted rates.

52. In the event of any of mentioned dates being declared as holidays/closed day for the RGIPT, Rae Bareli, the tenders will be received/opened on the next working day at the appointed time.

53. The tender document is non-transferable.

(Signature with Seal)

(Of the tenderer in acceptance)

CHECK LIST FOR THE TENDERES

TO BE ENCLOSED WITH TECHNICAL BID

FOR ADVANCED LIFE SUPPORT (ALS) AMBULANCE FOR RGIPT, RAE BARELI

S. NO.	DOCUMENTS	ANNEXURE NO.	PAGE NO.
1.	Demand Draft (DD) issued from a Scheduled /Nationalized Bank towards the Earnest Money Deposit (EMD) for an Amount of Rs. 75,000/- (Seventy Five Thousand Only) drawn in favor of “ Rajiv Gandhi Institute of Petroleum Technology ” payable at New Delhi .		
2.	i) Item-wise Technical Specification Compliance Statement supported by the Catalogues ii) Item-Wise Price Bid		
3.	The Eligibility criteria shall be minimum annual Turnover of Rs. 03.00 crores of the Principal/Original manufacturer on whose written Authority the bidder submits tender, duly authenticated by Income Tax Department/supported by balance sheet certified by the Chartered Accountant.		
4.	Latest ISO Certificate (if Any)		
5.	Undertaking/ Letter of Acceptance		
6.	Non Blacklisting Declaration		
7.	Copy of Manufacturing License (if Any)		
8.	Copy of Valid Sales Tax/VAT clearance Certificate		
9.	Copy of PAN CARD and TIN		
10.	Manufacturer’s Authorization (The Letter of Authorization should be on the letter head of the manufacturing firm and should be sealed & signed by a competent person)		
	Total No. of Pages		

- i. The Tenderer may go through the checklist and ensure that all the documents/confirmations listed above are enclosed in the tender and no column is left blank. If any column is not applicable, it may be filled as NA
- ii. It is responsibility of the tenderer to go through the tender document to ensure furnishing all required documents in addition to above, if any.

- iii. The tenderer should furnish all the relevant information mentioned in the check list.
- iv. Wherever necessary and applicable, the tenderers shall enclose certified copy as documentary proof/evidence to substantiate the corresponding statement.
- v. In case a tenderer furnishes a wrong or evasive statement, his tender will be liable to be ignored/rejected.

With Seal & Signature

(Full Name, Designation & Address of Tenderer)

**UNDERTAKING/ LETTER OF ACCEPTANCE IN RESPECT OF TERMS &
CONDITIONS OF THIS TENDER FOR ADVANCED LIFE SUPPRT (ALS)
AMBULANCE FOR RGIPT, RAE BARELI**

Dear Sir,

1. I / we do agree for all clauses, terms and conditions of the tender documents.

2. I / we declare that our financial position is sound and we are competent to execute the supplies as & when allotted.

3. I / we declare that we will not ask/ expect any financial assistance from the RGIPT, Rae Bareli for honoring the Supply Order if given by it, and we will raise Bill/Claim for the Payment only after completion of job as per supply order to the satisfaction of Chairman of the Committee for Technical specification, RGIPT, Rae Bareli.

In acceptance

(Signature and seal of the tenderer)

**TECHNICAL SPECIFICATION FOR
ADVANCED LIFE SUPPORT (ALS) AMBULANCE
FOR RGIPT, RAE BARELI**

1. Base Vehicle for ALS Ambulance:

Force Tempo Traveler Ambulance, Model No TD-2650 FTI (BS-III), type 4 Cyl DI, TCIC, fuel type: Diesel with Power steering, Maximum output 80.4 HP @ 3200 RPM, front suspension : Parabolic Leaf Spring with Hydraulic Telescopic Shock Absorbers & Anti Roll bar, rear suspension: Parabolic Leaf Spring with Hydraulic Telescopic Shock Absorbers, Dimensions: Wheel Base 3350 mm, overall length 5415 mm, overall width 1975 mm, overall height 2550 mm, ground clearance 190 mm, Fuel Tank capacity: 70 Liter, with Temporary Registration including all taxes & duties F.O.R. RGIPT, RaeBareli and should meet the following Technical Specification:

- 1.1 Engine: Diesel, 4 Cylinder, 4 strokes, direct Injection/ Turbo Charged Inter cooled
- 1.2 Emission Norms : BS III
- 1.3 Maximum Output: Minimum 80.4 HP @ 3200 RPM
- 1.4 Transmission: Manual
- 1.5 Drive: Rear Wheel Drive
- 1.6 Wheel Base: 3350 mm
- 1.7 Tyres: 7.00X15or 215R15
- 1.8 Axles: Front: Dead rigid Beam, Rear: Live Rigid
- 1.9 Dimensions (Patient Cabin): Minimum Length: 3200 mm +/- 10%
Minimum Width: 1700 mm +/- 10%
Minimum Height: 1900 mm +/- 10%.
- 1.10 Body & Chassis : Integrated type
- 1.11 Ground Clearance: 190 mm Minimum
- 1.12 GVW: 3.0T Minimum
- 1.13 Suspension: (Front suspension) : Parabolic Leaf Spring with Hydraulic Telescopic Shock Absorbers & Anti Roll bar, (Rear Suspension): Parabolic Leaf Spring with Hydraulic Telescopic Shock Absorbers

- 1.14 I) **Rear Door:** Centrally Divided rear doors on high quality steel hinges ensuring 180 Degree opening for both the doors.
II) Both the rear doors should be provided with fixed windows made from toughened glass approved for automotive use.
- 1.15 **Warranty Terms:** Minimum 03 years or 3 Lac KM as per standard terms of the vehicle manufacturer
- 1.16 **Free Services:** 12 Free services excluding the cost of the consumables
- 1.17 **Color:** The Color shall be notified at the time of fabrication stage, concerning the painted color of the ambulance vehicle.
- 1.18 **Emblems and Markings:** All items in this section shall be of reflective quality and in contrasting color to the exterior painted surface of the ambulance.

1. There shall be a continuous blue stripe, of not less than 8cm on cab and 15 cm on patient compartment, to encircle the entire ambulance with the exclusion of the hood panel.

2. **Emblems and markings** shall be of the type, size and location as follows:

- a. **Front:** The word "AMBULANCE", minimum of 10 cm in height, shall be in mirror image (reverse reading) for mirror identification by drivers ahead, with a blue "Star of Life", minimum of 8cm height, to the left and right of the word "AMBULANCE." If vehicle design permits, there shall be a blue "Star of Life" of not less than 30 cm in height on the front section of the patient compartment.
- b. **Side:** Each side of the patient compartment shall have the blue "Star of Life" not less than 30 cm in height. The word "AMBULANCE", not less than 15 cm in height, shall be under or beside each star. The name of the Institute "Rajiv Gandhi Institute of Petroleum Technology, Rae Bareli (UP)" shall be of lettering not less than 8 cm in height.
- c. **Rear:** The word "AMBULANCE", not less than 15 cm in height, and two blue "Star of Life" emblems of not less than 30 cm in height.
- d. **Top (roof):** There shall be a blue "Star of Life" of not less than 60 cm in height.

2. Patient Compartment

2.1 Cabin Conversion

2.1.1 Complete interior paneling of the sidewalls, both sides of the partition wall between patient cabin and driver cabin, roof (of both patient and driver cabin) & back door panels should be made from polymethyl Methacrylate - Acrylonitrile Butadiene Styrene (PMMA ABS) Sheets. The PMMA ABS should be in semi-gloss/ matt finish and should be of high impact resistant and stiff ABS with a top layer of high-gloss, stress cracking resistant PMMA. The ABS sheets should be co-extruded and UV protected and should not be from recycled ABS sheets. The heat resistance of the sheets measured based on ISO 306B should be 94⁰C to 100⁰C. The panels must be suitably formed using the appropriate technology so that they match to the contour of the vehicle and look aesthetically pleasing.

2.1.2 The complete interior should be edgeless and suitable for easy cleaning / scientific fumigation / treatment of disinfectants.

2.1.3 The panels must be suitably formed to match to the contour of the vehicle and look aesthetically pleasing.

2.1.4 The panels for each of the surfaces should be produced as one single piece without any joints either along the length or the width of the panels.

2.1.5 The minimum thickness at any point of the panels should not be less than 2 mm.

2.1.6 The ceiling, both the side-walls, both sides of the partition wall should be produced in one single piece matching to the dimension of the patient compartment dimension of the ambulance.

2.1.7 The interiors should have reinforced fixtures for holding medical, communication and extrication equipments.

2.1.8 Partition wall between patient & driver cabin with sliding glass window having lock. The window should be made up of extruded aluminum profile in rounded rectangular shape (all the corner edges are curved so that there are no sharp corner edges along the window frame). There should be only one joint in the frame and the inner profiles must have synthetic sliders for smooth movement of the glass panes. The sliding glass should be of toughened glass as needed for automobile applications.

2.2 Flooring

2.2.1 The flooring should be made up of min. 12mm. thick marine grade ply, rigidly bolted to the steel base plate of the base vehicle construction.

2.2.2 On the top of the ply layer the floor should be coated with 3-4 mm thick solvent free, two components Polyurethane based top layer for highest class of hygiene for all the corner and angle joints, clean ability, anti skid and impervious to disinfectants.

2.2.3 The floor should be finished in mosaic finish with colored chips embedded to the flooring to break the monotony of look and add to the aesthetics of the floor.

2.2.4 The floor should be properly cured to ensure the right strength and finish

2.2.5 After complete drying core layer should be further coated with a minimum two layers of transparent anti-scratch layer to ensure longer life of the floor against heavy dirt and scratches.

2.2.5 The floor must withstand a distributed load of minimum 150Kg/m².

2.3 Seats

EMT / Doctor Seat

2.3.1 There should be a rear mounted foldable base EMT / Doctor seat as per the specifications below:-

The seat should have two foldable arm rests. When unfolded for sitting the backrest should offer a soothing angle (more than 95 degree) to the base offering optimum comfort and safety to the occupants, who sits in directions not in line with the movement of the vehicle. The back rest (without the head rest included) should be minimum 525 mm. in height. The seat should have an adjustable headrest and retractable seat belt. The seat should be aesthetically pleasing and ergonomically well designed. The seat base should be padded at least 450 mm wide and 350 mm. in depth and have the largest padded backrest with contoured support for the back. Padding should be furnished with polyester urethane foam of a medium to firm density and should be minimum 60 mm. on the base, backrest and headrest (at the thickest cross section of the head rest the headrest may be contoured to the lateral ends). Padding should provide ultimate comfort to the occupants. The upholstery should be of leather-match vinyl / polyurethanes / leatherette color in dark colors matching the interior color of the ambulance. The padding and upholstery should be fire retarded. Additionally the upholstery should be non-absorbent, washable and impervious to disinfectants. The seat should be fully foldable and rear mounted providing complete clean floor below the base without any framework for fixation.

2.3.2 Attendant Seats

There should be two attendant seats for the attendants on the co-driver side in the patient cabin. These seats should be single pivot point base mounted chairs with complete clean floor below the base without any framework for fixation. The seats should have integrated revolving mechanism by which these can be turned from facing the patient stretcher to the front of the vehicle with a single activation of the revolving control. This would enhance the safety of the occupants to align their position from a side way sitting to a front facing seating the ideal position in a moving ambulance. The seat should be completely foldable. The backrest should have integrated headrest means it should be tall enough beyond the shoulder

level in the sitting position. The seats should have retractable seat belts and foldable armrest. The seats should be aesthetically pleasing and ergonomically well designed. The seat base and backrest should be padded at least 440mm wide and have the largest padded backrest with contoured support for the back. The base should be at least 400 mm. in depth. Padding should be furnished with polyester urethane foam of a medium to firm density. Padding should provide ultimate comfort to the occupants. The upholstery should be of leather-match vinyl / polyurethanes / leatherette color in dark colors matching the interior color of the ambulance. The padding and upholstery should be fire retarded. Additionally the upholstery should be non-absorbent, washable in impervious to disinfectants.

2.4 Internal Storage compartments

2.4.1 All the internal storage compartments, surfaces and space provisions should be made to accommodate / fix the various medical life saving medical devices, trauma equipment for transportation and immobilization, medical glassware, medical disposables and consumables, fresh and dirty linens, infusion bottles, drugs, accessories, wastes, documents, records, files etc. as per requirement in the ambulances.

2.4.2 The storing consoles must designed keeping in consideration various storing requirements in an ambulance.

2.4.3 The patient compartment should be provided with storing console at the head end of the patient integrated to the partition wall of the driver cabin and patient cabin and overhead storing compartments on the driver side of the patient compartment along the roof.

2.4.4 All storage compartments should be aesthetically and ergonomically well designed.

2.4.5 To preclude injury in the event of an accident all cabinet will be firmly anchored / fixed to the base structure of the ambulance.

2.4.6 Storage cabinets, drawers and kits should be easily open-able but should never ever open during transit on account of the vehicle movement.

2.4.7 The overhead rack should be made from the same grade of material as the interior panels for the patient compartment and should be seamlessly finished to the sidewalls and ceiling.

2.4.8 The overhead rack should have two sliding glass window having lock for access from the front. The window should be made up of extruded aluminum profile in rounded rectangular shape (all the corner edges are curve so that there are no sharp corner edges along the window frame). There should be only one joint in the frame and the inner profiles must have synthetic sliders for smooth movement of the glass panes. The sliding glass should be of toughened glass as needed for automobile applications.

2.4.9 The head-end storing console should be produced from double side laminated moisture resistant plywood. The top surface of the head-end storing console should be made from the same grade of material as the interior panels or seamless mineral composites or acrylic / anti-bacterial plastic of minimum 3mm. thickness for the patient compartment and should be seamlessly finished to the side walls and the partition wall.

2.4.10 all the edges / joints / exposed surfaces should be appropriately finished to ensure that there are no sharp edges.

2.4.11 Storage compartments should be divided into various sections according to the different varieties of the medical items to be stored in it.

2.4.12 all the sliding as well as open-able doors should be provided with self-locking press type knobs. The locks should be push to lock and push to open type.

2.4.13 There should be no key type locks used anywhere in the internal furniture.

2.4.14 All the vertical flap doors with opening towards the topside should be latched at its fully open position using adequate capacity pneumatic lifters at both the horizontal ends to ensure proper load distribution of the door.

2.4.15 All the vertical flap doors with opening towards the bottom side will be latched at its fully open position using adequate capacity roller / friction / pneumatic supports at both ends to ensure proper load distribution of the door.

2.5 Wash Basin

2.5.1 The internal furniture layout must include a washbasin made up of same material as the top surface of the head end storing console / SS material matching to the color of the furniture.

2.5.2 The water tap of the washbasin should be operated with a foot / elbow switch at a convenient and safe place around the washbasin area, so that it is easy for the users to activate the switch and get water flow.

2.5.3 The tap should be operated using a submersible 12V DC IP classified water pump placed inside the water tank.

2.5.4 The capacity of the water tank as well as the waste water tank should be at least 20L.

2.6 AC System

2.6.1 The patient compartment must be provided with an engine driven air conditioning system of adequate capacity matching to the total heat load of the patient compartment when fully occupied and the patient loaded.

2.6.2 The compressor should be engine mounted and engine run.

2.6.3 All hoses should be machine crimped to avoid the leakages.

2.6.4 AC system should be certified for passenger vehicle usage.

2.6.5 Both the patient compartment as well as the driver cabin should be air conditioned.

2.7 Electrical

2.7.1 There must be adequate internal and external light matching to the requirements of an ambulance for the various purposes.

2.7.2 There must be Indian standard AC electrical sockets inside the patient compartment for connecting AC operated electrical gadgets.

2.7.3 There must be a weatherproof heavy duty external charging socket as well at an easily accessible position.

2.7.4 There must be emergency light bar cum siren and speaker system on the top at the front.

2.7.5 There should be side flashers and external lighting arrangements for evacuation in dark situations.

2.7.6 There should be integrated inverter system of at least 800VA as well.

2.8 Fire Extinguisher

2.8.1 The ambulance should be equipped with two fire extinguishers of 0.5 Kg capacity each.

2.8.2 The fire extinguisher should be secured in a bracket and located in full view and in an accessible place.

2.8.3 The fire extinguisher should bear a label of ISI / CE / UL/ NFPA showing a rating of 2 BC.

2.8.4 One fire extinguisher should be placed in the driver cabin and one inside the patient compartment.

2.9 Oxygen Supply System

2.9.1 The primary components of the oxygen supply system should comprise of:

2.9.1.1 Cylinder Fixture

2.9.1.2 Manifold Block

2.9.1.3 High Pressure Connecting Hose

2.9.1.4 Line Pressure Connecting Hose

2.9.1.5 Oxygen Status Display Panel

2.9.1.6 Oxygen Distribution Block

2.9.2 The facility to be provided for two nos. of 7M3 gas capacity (46.7L Water Capacity). High pressure oxygen cylinders manufactured as per IS: 7285, BIS-certified and approved by the Chief Controller of Explosives, Government of India, Nagpur.

2.9.3 The scope of supply should include the oxygen cylinders filled with gas.

2.9.4 The facility provided should be for cylinders fitted with bull-nose 5/8" BSP RH (f) outlet valve as per IS: 3224, BIS-certified. The seal should be by direct contact between the bull-nose connector of the high pressure hose (from the manifold block) and the cylinder valve.

2.9.5 The cylinders should be fastened to a special sliding platform to rigidly fix the cylinders in the horizontal position ensuring that the cylinder is absolutely safe all the time it is inside the ambulance.

2.9.6 The fastening points should preferably be easy and fast to open and close to replace cylinders.

2.9.7 The number of fixing points should be optimum (minimum two) as per the length of the cylinder.

2.9.8 The oxygen manifold block should comprise of two double-stage high-pressure regulators and a manual valve to switch from one regulator to the other in case there is failure of the regulator in operation.

2.9.9 The high-pressure regulator should be intended for reducing the cylinder pressure to the intermediate pressure level suitable for feeding to the medical oxygen terminal outlets as well as other inhalation and respiratory equipments in the ambulance.

2.9.10 there should be three windows digital status display panel indicating the pressure level of the duty oxygen cylinder, stand by oxygen cylinder as well as the line pressure level in the three separate windows.

2.9.11 the outlet of the high-pressure regulator should be connected to the terminal outlet block inside the patient compartment using high pressure flexible medical gas hoses. This should hose and should be crimped to the connectors at both end (outlet of high-pressure regulator and inlet of terminal outlet block assembly) using crimping ferrules.

2.9.12 The patient compartment must have an oxygen distribution block having three oxygen outlets, connected in parallel through one common feeding port.

2.9.13 the terminal outlets as well as the digital status display panel should comply with ISO 9170-1:2008 standards for medical gas supplies as well as medical device directives 93/42/EEC.

2.9.14 the outlets must have two completely distinguishable parking and operating positions. Both the parking and operating positions should have the facility of unlocking by means actuators.

2.9.15 the terminal outlets should operate at the standard distribution pressure level corresponding to the outlet pressure of the high-pressure regulator, which are 4 - 5 bars.

2.9.16 the terminal outlet should be in all metal (non-ferrous grade preferably brass, aluminum and stainless steel) construction, appropriately nickel or chrome plated or anodized in matt finish.

2.9.17 it must be possible to operate the outlets in one hand for the purpose of coupling and decoupling.

2.9.18 the terminal outlets should consist of a gas-specific basic block and a socket unit screwed with each other.

2.9.19 the gas specific basic block should be fitted with a non-return and service valve. The non-return valve should open up when the gas specific probe for the terminal outlet is inserted to the terminal outlet and it should close automatically when the probe is removed.

2.9.20 the servicing valve should be able to screw to the connecting thread in the rear part of the basic block there by interrupting the gas supply to the terminal block entirely. Thus ensuring a separate and gas tight shut-off of the terminal for any servicing work.

2.9.21 the gas specific socket unit must have gas specific geometrical profile so that only the gas specific probe can be plugged into the terminal outlets.

2.9.22 All the wear and tear parts (like o-rings seals) should be combined in one single sub-assembly group inside the terminal outlet, so that these can be replaced easily by removing one easy fix and remove sub-assembly. The total number of o-ring seals in the entire terminal outlet assembly should be as less as possible but in any case should not be more than three maximum.

2.9.23 all the sub-assemblies of the terminal unit should be clearly marked with the type of service (in this case oxygen) it is intended for use.

2.9.24 The actuator should be clearly marked with the type of service it is intended for (in this case oxygen) as well as a colored collar specific to the type of gas as per ISO 9170-

1:2008. The terminal outlets as well as the digital status display panel must be manufactured in an ISO 13485 certified facility.

3 Ambulance Equipment

3.1 Roll-in Patient Stretcher cum Trolley

3.1.1 The stretcher main framework should be fully devoid of any welding. The legs of the stretcher should not have any welding along its complete length.

3.1.2 The base frame should be modeled to consent more comfortable and effective operations on the patient.

3.1.3 The wheels must have diameter of minimum 200 mm, and should be made from plastic tyre compound to optimize bump absorption.

3.1.4 The backrest should be infinitely adjustable having pneumatic shock-absorbers and not with fixed point adjustments.

3.1.5 The stretcher must have two distinct fully folded and fully unfolded positions.

3.1.6 It should be possible to use the trolley as a stretcher with completely folded legs and unfolding of the legs deactivated temporarily if required so under certain evacuation requirements.

3.1.7 The stretcher must be supplied with its own fixture to rigidly fix the stretcher to the floor of the ambulance.

3.1.8 The fixture should be an integrated loading platform with three point anchorage activated automatically once the stretcher slides into position and all the three anchorage points deactivated by single latch when the stretcher to be released from the fixation platform. The locking of the stretcher should be fully automatic without any manual intervention or activation of any locks or latches. The unlocking of the stretcher should be possible with one hand.

3.1.9 The loading and unloading of the stretcher should be completely seamless and the loading wheels should not roll on the floor of the ambulance directly with the possibility to damage the floor.

3.1.10 The loading platform at 3.1.8 should have an integrated foldable flap to guide the stretcher in and out of the ambulance without any part of the stretcher (including the legs) striking any part of the ambulance body including the rear footstep.

3.1.11 the loading platform should have integrated space in it to firmly accommodate a full body length spine board or even a scoop stretcher inside it for ergonomic storing.

3.1.12 Once the loading is completed the foldable flap of the loading platform should be lifted and remain firmly in position not getting inadvertently opened when the vehicle is in move. This should be supported with pneumatic lifters.

3.1.13 The fixture should be manufactured as an original equipment accessory by the stretcher manufacturer complying with the same standards as that of the stretcher.

3.1.14 the stretcher should be made from high grade aluminum and should not be more than 40 Kg. in weight.

3.1.15 the stretcher must comply with Medical Device Directives (93/42/EEC) having the CE mark along with the four-digit code from the certifying agency.

3.1.16 the device must comply with EN 1789 standards

3.1.17 the device must be manufactured in an ISO 13485 certified facility.

3.2 Universal Head Immobilizer

3.2.1 The universal head immobilizer must ensure optimum head immobilization to trauma patients.

3.2.2 The immobilizer must have integrated universal belts for fixation with spine boards thereby allowing transportation of patients in critical conditions during long and uncomfortable journeys as well.

3.2.3 The immobilizer should have physiological shape supporting the brain and avoiding as much as possible further compression of cranium and completing the immobilization the rachis through the cervical collar.

3.2.4 The unit should comprise of two mono block shells made of a soft plastic and a base.

3.2.5 The mono block shells should be impermeable and should avoid absorption of any organic liquid (blood, vomit, mucous) and should be free from any seams and should have optimum thick protective film.

3.2.6 The mono block shells should not get damaged by routinely used chemical substances or solvents in the ambulance and should remain soft in varying temperature conditions.

3.2.7 The mono block shells should be positioned on the base using wide and stable Velcro system sewn to the base.

3.2.8 Both the mono block shells must have through holes allowing inspection of the aural pavilion also permitting verification of any loss of blood or liquids.

3.2.9 The holes also generously accommodate the aural pavilion there by allowing the rescuer to communicate with the patient.

3.2.10 the base should be able to accommodate two types of mono blocks for adult and pediatric patients by just removing an additional cushion in the centre of the base.

3.2.11 the device must comply with Medical Device Directives (93/42/EEC) having the CE mark along with the four-digit code from the certifying agency.

3.2.12 the device must be manufactured in an ISO 13485 certified facility.

3.2.13 Cervical Collar (hard) with option to adjust height

3.2.14 Splints with velcro, various sizes for upper Limb and lower limb.

3.3 Oxygen Flow-meter

3.3.1 The oxygen flow-meter should be fully compatible to the oxygen terminal outlets. These must be direct mounted and operated by oxygen supply inside the ambulance.

3.3.2 The adaptors of the oxygen flow-meters should comply with the DIN-13260-2.

3.3.3 The flow tube should be calibrated in the range of 0 to 15 litres per minute.

3.3.4 The flow tube must be calibrated in dual scale thereby allowing precision settings in low flow ranges as well.

3.3.5 The ultra accurate flow tubes must have extra accuracy in low flow ranges thereby ensuring high clinical efficiency to the end users.

3.3.6 The tubes should have accuracy not exceeding +/- 0.05 LPM for flow in the range of 1 LPM.

3.3.7 The Flow-meter body should be made of high quality chrome plated brass.

3.3.8 Both the inner and outer tubes should be made from special clear and impact resistant high-grade polycarbonate.

3.3.9 The float be made up of stainless steel and should rest on chrome plated solid brass, vitone rubber and plastic.

3.3.10 the humidifier must ensure moderate relative humidity to the breathing oxygen.

3.3.11 Bubble humidifier with porous diffuser should be designed to increase the humidity level with minimal noise.

3.3.12 the humidifier should be reusable and auto-claveable till 130 degree C and made of Polycarbonate.

3.3.13 the oxygen outlet should have integrated outlet Probes complying to DIN-13260-2 made up of stainless steel and manufactured as an original OEM either by the terminal outlet manufacturer or the oxygen flow meter manufacturer.

3.3.14 the scope of supply should include insufflation kits and nasal prongs.

3.3.15 the device must comply with Medical Device Directives (93/42/EEC) having the CE mark along with the four-digit code from the certifying agency.

3.3.16 the device must comply to the latest international standard ISO 15002:2008.

3.3.17 the device must be manufactured in an ISO 13485 certified facility.

3.4 Portable Suction Unit with Battery Back-up

3.4.1 The portable suction unit should be of highly rugged and modern design as well as it should be very compact and handy.

3.4.2 The unit must have integrated oil free no maintenance piston pump ensuring high level of functionality and dependability as a professional suction unit.

3.4.3 Capacity :Minimum 30 LPM

3.4.4 The unit should be equipped with a vacuum gauge to show the vacuum level. The vacuum level should be adjustable from 0 to 630 mm. of Hg by means of a control knob.

3.4.5 The unit should be supplied with a 1000 ml. Auto-clavable polycarbonate collection jar with overflow safety valve that, during operation, should prevent any liquid or secretion from reaching and damaging the vacuum pump.

3.4.6 The device must have integrated built-in lead batteries allowing minimum 1 hour autonomous operation. The unit should be able to work on 12V DC and 240V AC.

3.4.7 The total weight of the unit should not be more than 5 Kg.

3.4.8 The unit should be supplied with its own wall fixture to rigidly fix the unit to the ambulance wall.

3.4.9 The fixture should be manufactured as an original equipment accessory by the manufacturer.

3.4.10 the device must comply with Medical Device Directives (93/42/EEC) having the CE mark along with the four-digit code from the certifying agency.

3.4.11 the device must be supplied with EN1789 compliant ambulance wall mount.

3.4.12 the device must be manufactured in an ISO 13485 certified facility.

3.5 Intubation Kit

The contents of the kit should include the following:

3.5.1 Laryngoscope Handle : 2 Nos.

3.5.2 Laryngoscope Blade : 3 nos. complete set- i.e Small, Medium and Large

3.5.3 Guedel airway set (0, 1, 2, 3, and 4) : 1 No.

3.5.4 Endotracheal Tube set: complete set- plain i.e. non cuffed and cuffed (6, 7, 8, 9)

3.5.5 Adhesive Tape : 1 No.

3.5.6 Laryngeal Mask airways LMA : Proseal 3, 4, 5 Nos.

3.6 Emergency Kit

The contents of the kit should include the following:

3.6.1 Sphygmomanometer : 1 No.

3.6.2 Stethoscope : 1 No.

3.6.3 Oxygen bottle 0.5L: 1 no.

3.6.4 Oxygen pressure reducer : 1 No.

3.6.5 Connecting tube : 1 No.

3.6.6 Resuscitation Bag, Adult : 1 No.

3.6.7 Resuscitation Bag, Paediatric : 1 No.

3.6.8 Adult mask V : 1 No.

3.6.9 Paediatric mask III : 1 No.

3.6.10 Magill Forceps : 1 No.

3.6.11 Universal scissor : 1 No.

3.6.12 Tongue forceps : 1 No.

- 3.6.13 Tourniquet : 2 No.
- 3.6.14 Plastic penlight : 1 No.
- 3.6.15 Digital Thermometer : 1 No.
- 3.6.16 Disposable Delivery Kit : 1 No.
- 3.6.17 Glucometer : 1 No.

3.7- Scoop Stretcher

3.7.1 The stretcher should be designed allowing coupling and uncoupling of any of the ends and gently scoop up the patient using the two scoops of the stretcher.

3.7.2 The stretcher should be telescopic to accommodate the tallest patient and should be folded for compact storage.

3.7.3 The frame should be made of high quality anodized aluminum and blades should be made up of extruded aluminum.

3.7.4 The scooping blades should be fixed with aluminum frame by interposition of alloy fusions.

3.7.5 It should have an integrated handle to select the length of the distal part of the stretcher.

3.7.6 The scoop stretcher should be easily foldable in one swift movement.

3.7.7 It should have easy locking and unlocking nylon restraint belts to fix the patient to the stretcher.

3.7.8 The fixture should have two points of holding the stretcher but only one point of fastening. The fastening point should have a locking system operated by single hand with lockable twist with locking arrangement to protect any inadvertent use.

3.7.9 The device must comply with Medical Device Directives (93/42/EEC) having the CE mark along with the four-digit code from the certifying agency.

3.7.10 the device must be manufactured in an ISO 13485 certified facility.

3.8 Refrigerated Medicine Cabinet

3.8.1 The ambulance should be equipped with one mobile deep freezer running on 12V DC supply.

3.8.2 The capacity of the unit should be minimum 12L.

3.8.3 The freezer unit should be able to maintain internal temperature from +60°C to -5°C.

3.8.4 The unit should have adjustable temperature setting via two thermostats.

3.8.5 The unit should have minimal power consumption and the average power consumption should not exceed 75 Watt.

3.8.6 The device should be insulated with environment friendly cfc free polyurethane foam.

3.8.7 The device should have thermo-electric chip technology.

3.8.8 The empty weight of the unit should be 7.5 ± 1 Kg.

3.8.9 The device should be supplied with a suitable mounting.

3.9 Spine Board

3.9.1 The spine board should be extremely rugged in construction and should be built from high quality material thereby avoiding splintering and cracking.

3.9.2 The surface should be impervious to body fluids and secretions and should be completely seamless to eliminate ingress of fluid.

3.9.3 It should have a firm surface for CPR & immobilization.

3.9.4 It should have compact dimensions for easy maneuvering and should have provision for cervical collars or head immobilizers. It should have easy underside allowing easy lifting access.

3.9.5 It should be x-ray translucent.

3.9.6 The device must comply with Medical Device Directives (93/42/EEC) having the CE mark along with the four-digit code from the certifying agency.

3.9.7 The device must be manufactured in an ISO 13485 certified facility.

3.10 Transport Ventilator (with sufficient battery backup)

3.10.1 Time-cycled, volume controlled and pressure limited emergency ventilator for the controlled ventilation of patients.

3.10.2 Compact dimension of the ventilator should not exceed 225x100x225 mm. (WxHxD) and the weight not exceeding 3.2 Kg. maximum.

3.10.3 The ventilator must have integrated handle for lifting and carrying by hands as well as quick latching to all common rail and pole profiles.

3.10.4 Ventilation Mode: IPPV / CMV

3.10.5 Ventilation Frequency: 4 to 54 per minute

3.10.6 Minute Volume: 3 to 20 LPM

3.10.7 I:E Ratio: 1:1.5 Fixed

3.10.8 Maximum Airway pressure: 25 to 60 Mbar

3.10.9 Oxygen Concentration: Approx 60% in Air Mix and 100% in No Air Mix Modes

3.10.10 Gas consumption of control: Not exceeding 1 LPM

3.10.11 Pressure Gauge Display: -10 to 80 mbar

3.10.12 both audible and visual alarms for Supply Pressure Low, Airway Pressure High and Airway Pressure Low

3.10.13 the device should be supplied with the ambulance mount complying to the same standard as the ventilator as well as manufactured as an OE by the manufacturer not any retrofit item from any other sources.

3.10.14 the ventilator must be vibration tested and certified as per MIL STD 810 F standard.

3.10.15 The device must be manufactured in an ISO 13485 certified facility.

3.11 Integrated Cardiac Monitor & Defibrillator cum Pacer

3.11.1 The integrated unit should be manufactured as a 100% modular unit comprising of three physically modules for data acquisition, monitoring unit respectively.

3.11.2 The modularity of the unit should allow the doctor / emt to monitor the patient uninterrupted through the wireless connection to the data module thereby completely avoids all the wires and cable clusters from the patient to the monitor.

3.11.3 The data module should have fixtures to be ergonomically connected below the patient platform of the stretcher so that all the cables and hoses from the patient are limited to the stretcher only, thereby increasing the patient safety.

3.11.4 There should be uninterrupted wireless networking between the two modules as if the two modules are physically connected although both function separately or even together if connected physically.

3.11.5 Monitoring unit should have minimum 8.4” crystal clear TFT display to display up to 6 waveforms and all measured values of the vital parameter.

3.11.6 The monitoring unit should have a built-in thermal array printer for 100mm. wide paper with up to six simultaneous waveforms.

3.11.7 The data module should have the facility to provide 12 Lead Diagnostic Quality ECG as well as monitoring quality ECG, SpO2, and NIBP as the basic functions.

3.11.8 The data module should be up-gradable to have CO2 (Mainstream for both intubated and non-intubated patients), 2-Channel Temperature and up to 4-Channel IBP to ensure intensive care level of monitoring for the clinicians tracking the patient

3.11.9 The monitor should be available to the clinicians as a palm top screen not weighing more than 3kgs and should be IP 54 compliant.

3.11.10 the data module should not weight more than 1.5 Kg.

3.11.11 Both the modules should have integrated batteries inside each but when connected both the batteries should work like one battery bank source ensuring equal usage for both the batteries through intelligent battery management system.

3.11.12 the device should be supplied with the ambulance mount complying to the same standard as the ventilator as well as manufactured as an OE by the manufacturer not any retrofit item from any other sources.

3.11.13 the complete unit as well as both the modules must be vibration tested and certified as per EN 1789, RTCA standard.

3.11.14 the device must be manufactured in an ISO 13485 certified facility.

4 Rescue Tools:

4.1 12" Wrench, Adjustable, Open-end

4.2 12" Screw Driver Standard Square Bar

4.3 8" Screw Driver Philips Head #2

4.4 Hacksaw with 12" Carbide Wire Blade

4.5 Vice Grip Pliers 10"

4.6 5 lb Hammer with 15" Handle

- 4.7 Fire Axe Butt, 24" Handle
- 4.8 Wrecking Bar with 24" Handle
- 4.9 51" Crowbar Pinch Point
- 4.10 Bolt Cutter with 1" tip 1-1/4" jaw opening
- 4.11 Folding Shovel Pointed Blade
- 4.12 Tin Snips, Double Action 8" minimum
- 4.13 Gauntlets, Reinforced Leather covering past mid fore arm: One pair
- 4.14 Rescue Blanket
- 4.15 Ropes 5400 lbs Tensile Strength in 50' length in protective bags
- 4.16 Mastic Knife (able to cut seat belt webbings)
- 4.17 Spring Load centre punch
- 4.18 Pruning Saw
- 4.19 Heavy Duty 2"x4" and 4'X4" shoring cribbing blocks, various lengths

5. Additional Communication System to be provided in ALS Ambulance:

- 5.1 **Video Conferencing Facility** of make- Map my India or equivalent/reputed make and should be approved by RTO, Govt. of UP/India for use in Ambulance.
- 5.2 **GPS and Vehicle Tracking Facility**, Make Map My India or equivalent/reputed make approved by RTO, Govt. of UP/India

SPECIAL NOTE: Tenderers while Submitting **Item-Wise Price Bid** along with Technical Specification, Compliance Statement supported by the Catalogues as directed above, they have to take in to consideration the given below instruction:

“In addition to strictly follow the above Technical specifications (as given from 1- to -5 under Technical Specification for Advanced Life Support (ALS) Ambulance, Tenderers have also to ensure that they have considered and covered the equipment and specification as per below list (Part-A, Part-B, Part-C, and Part-D) without having the repeat/duplicity of equipment or items.”

PART-A: Base Vehicle and Fabrication for ALS Ambulance

S. No	Item Description	Short Technical Specification, Make, Model no
01.	Supply of 01 no. Force Tempo Traveler Ambulance, Model No TD-2650 FTI (BS-III), type 4 Cyl DI, TCIC, fuel type: Diesel with Power steering, Maximum output 80.4 HP @ 3200 RPM, front suspension : Parabolic Leaf Spring with Hydraulic Telescopic Shock Absorbers & Anti Roll bar, rear suspension: Parabolic Leaf Spring with Hydraulic Telescopic Shock Absorbers, Dimensions: Wheel Base 3350 mm, overall length 5415 mm, overall width 1975 mm, overall height 2550 mm, ground clearance 190 mm, Fuel Tank capacity: 70 Liter, Seating capacity 10 (01 patient+08 persons+01 Driver) with Temporary Registration including all taxes & duties F.O.R. RGIPT, Rae Bareli.	Traveler Ambulance, Model No TD-2650 FTI (BS-III), 3350 WB, Make: Force Motors
02.	Cost of Modification/Fabrication of Ambulance including required exterior paint, stickers, ambulance emblem/markings/graphics, doing patient compartment's Cabin Conversion, Supply and fitting/making of Flooring, EMT / Doctor Seat, Attendant Seats, Internal Storage compartments, Wash Basin, AC System, external/internal Electrical lighting system, Fire Extinguisher video conferencing facility, GPS and Vehicle Tracking Facility and fitting of Oxygen Supply System as per details given and Fitting of all Medical Equipment as per list in the Ambulance including all taxes & duties.	

PART-B: Medical Equipment and other items for ALS Ambulance

S. No.	Group of Equipment	Name of items/Equipment	Short General Specification	Qty.
1.	Ventilation and Airway Equipments	1. Transport cum ICU Ventilator with display for parameters	As per detail given in tender document	01 set

		2. Portable Auto Suction pump Apparatus	Wide – bore tubing, rigid pharyngeal curved suction tip; Tonsillar and flexible suction catheters, 5F – 14F	01 set
		3. Portable & Fixed Oxygen equipment with key wrench & trolley	Variable flow regulator	01 set
		4. Oxygen administration equipment	Adequate length tubing, mask (adult, child and infant sizes), transparent, non-rebreathing, venturi, and valve less nasal cannulas (adult, child and infant sizes)	01 set
		5. Pocket mask with one-way valve		01 set
		6. AMBU Resuscitation Bags (Adults & Paed.)	Hand operated, self re-expanding bag (adult & infant sizes), with Oxygen reservoir/accumulator, clear mask (adult, child, infant and neonate sizes); valve (clear, disposable, operatable in cold weather)	01 set
		7. Intubation equipments	Magill's forceps, Laryngoscope blades and other accessories, endotracheal tubes and connecting tubes etc.	01 set
		8. Airways	Nasopharyngeal, Oropharyngeal (adult, child and infant sizes)	
		9. Oxygen saturation monitor with different probes for adult and child		01 set
2.	Monitoring and Defibrillation	1. Automatic External Defibrillator		01 set
		2. Multi Parameter Monitor		01 set
		3. End Tidal CO2 Monitor		01 set
3.	Infusions	1. Syringe Pump (syringe infusion pump)		01 set
		2. IV Lines		01 set
4.	Immobilization Devices	1. Cervical Collars (including Nec Up Multi Size Collar)	Rigid for children aged 2 years or older, infant, child and adult sizes (small, medium,	01 set

			large and other available sizes)	
		2. Head Immobilization devices (not sand bags)	Firm padding or commercial device	01 set
		3. Lower extremity traction devices	Lower extremity, limb support slings, padded ankle hitch, padded pelvic support, traction strap (adult and child sizes)	01 set
		4. Upper and lower extremity immobilization devices (vacuum splint kit and Air splints))	To immobilize one joint above and joint below fracture (adult and child sizes), rigid support appropriate material (cardboard, metal, pneumatic, vacuum, wood or plastic)	01 set
		5. Radio-lucent backboards (long, short) and extrication device	Joint above and joint below fracture site (chin strap alone should not be used for head immobilization), adult and child sizes, with padding for children, hand holds for moving patients, short (extrication, head-to-pelvis length), long (transport, head to feet), with at least 3 appropriate restraint straps	01 set
5.	Stretchers and Splints	1. Collapsible chair cum trolley stretcher (01 Auto Loading Stretcher + 01 wheel chair stretcher(04 wheels) + Folding stretcher)		01 set
		2. Spine Board		01 set
		3. Pneumatic Splints		01 set
6.	Communication	Two-way radio communication (UHF, VHF) between EMT, dispatcher and medical direction (physician) or Cellular phone		01 set
7.	Obstetrical Kit *	1. (Separate sterile kit) Baby receiving tray with warmer		01 set
		2. Thermal absorbent blanket and head cover, aluminum foil roll, or		01 set

		appropriate heat reflective material (enough to cover new born)		
		3. Appropriate heat source for ambulance compartment		01 set
8.	Miscellaneous	1. Sphygmomanometer (infant, pediatric and adult - regular, large and extra large)		01 set
		2. Stethoscope (Pediatric and adult)		01 set
		3. Digital Thermometer		01 set
		4. Heavy duty scissors for cutting clothing, belts and boots		01 set
		5. Search Lights (Two)		01 set
9.	Injury Prevention Equipment	1. Appropriate restraints (Seat belt, air bags) for patient, crew and family members		01 set
		2. Child safety restraints		01 set
		3. Fire extinguisher		01 set
		4. Traffic signaling devices (reflective material triangles or other reflective, non-igniting devices)		01 set
10.	Rescue Equipments	1. Hammer, one four pound with 15 inch handle.		01 set
		2. One axe.		01 set
		3. Wrecking Bar, minimum 24-inch (bar and two preceding items can either be separate or combined as a forcible entry tool).		01 set
		4. Crowbar, minimum 48 Inches, with pinch point.		01 set
		5. Forced entry kit, emergency hammer, Burn kit, fire proof blanket		01 set

PART-C: Consumable Items (Total 44 nos.)

List of Consumable items	Qty.
Cotton, Bandage (a) 15cm (b) 10cm (c) 6cm, Savlon, Betadine , Leucoplast , Pain Spray, Mistdress Spray , Vinodine Spray, Coolex Spray , Face Mask (Disposable), Surgical Gloves ,LMA disposable , Wide bore needles , Disposable L.P. Needles, Syringes ABG (2 & 5 ml) , Three way stop cork , Extension I/V lines , Disposable suction pumps , ECG electrodes , Lighted Stylets of different sizes , Guedel’s airway 00-5 (00,0,1,2,3,4,5) , Nasal airways (all sizes) & catheters , Bi-nasal Cannula Combitube , Tracheostomy tube cuff & Plain (all sizes), Mini Tracheostomy kit , Ventimask facemask with nebulizer, Pressure Infusion Bags ,Right angled Shivel Connector , G.V. Paint , I.V. Fluids , Micro drip-set & Drip-set, Nasogastric Tubes ,Burn Pack: Standard package clean burn sheets (or towels for children) , Triangular bandages (Minimum 2 safety pins each), Dressings: (Sterile multi-trauma dressings (various large and small sizes) ABDs, 10”x12 ” or larger, 4”x4” gauze sponges, Cotton Rolls) , Gauze rolls Sterile (various sizes) , Elastic bandages Non-sterile (various sizes) , Occlusive dressing Sterile, 3”x8” or larger , Adhesive tape: Various sizes (including 2” or 3”) and Adhesive tape (Hypoallergenic): Various sizes (including 2” or 3”), Cold packs , Waste bin for sharp needles, etc. , Disposable bags for vomiting, etc. , Teeth guard , Sample collection kits <i>(Total Forty Four Items)</i>	01 set

PART-D: Emergency Drugs (Total 32 nos.)

List of Emergency Drugs	Qty.
Inj. Adrenaline , Inj. Atropine , Inj. Calcium Carbonate , Inj. Dopamine , Inj. Dobutamine , Inj. Noradrenaline , Inj. Nitroglycerine, Inj. Sodium Bicarbonate , Inj. Hydrocortisone , Inhaler Beclomethasone (250 micro/dose) , Inhaler Salbutamol (200 micrograms) , Inj. Frusemide , Inj. Diazepam/Midazolam , Inj. Deriphyllin , Inj. Phenytoin sodium , Inj. Avil, Inj. Metochlorpropamide , Inj. Ondansetrone , Inj. KC1 , Inj. Lignocaine 2% , Inj. Amiadarone (50 mg/ml) , Inj. Magnesium sulphate 25% 2ml, Inj. Mannitol 20 % , Inj. Morphine/Inj. Pethidine , Inj. Noradrenaline bititrate 4mg, 2 ml. Ampoule), Activated charcoal, Inj. Naloxone HC1 , Inj. Fentanyl, Bacteriostatic water for Injection, Inj. Sodium Valporate, Inj. Voveran, Inj. Paracetamol <i>(Total Thirty Two items)</i>	01 set

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