## **SPECIFICATIONS FOR ICU BEDS 4 MOTOR 5 FUNCTION**

### 4 Motor ICU bed Specification

## **Technical Specifications for ICU Beds**

- 1. The bed should have four motors with the function of back raise, knee raise, Hi-lo, Trendelenburg, and reverse Trendelenburg, One button cardiac chair, One button CPR
- 2. Each operation is activated using electric actuators.
- 3. Manual CPR (quick release) & Electric CPR function should be provided.
- 4. The back raise function should have retraction and extension motion to reduce pressure and shearing on the patient.
- 5. Low bed height should be 320- 370 mm (without mattress) with an indicator to see from a distance that the bed is at the lowest height.

#### **Measurement / Dimension**

- 1. Back Raise: 0-70 degrees
- 2. Knee Raise: 0-25 degrees
- 3. Trendelenburg/Reverse Trendelenburg:  $0 \pm 12$  degrees
- 4. Mattress base height: 320-760 mm Low bed height to minimize injury in case of patient fall.
- 5. Overall size: 990-1000 mm (W) x 2,200-2300 mm (L) +/- 10 mm
- 6. Safe working load: 230 kg

# Side rails

- 1. Split side rails with foot side open, foldaway movement with embedded control panel for patient & Caregiver. Side rails can bear a weight of 50 kg or more than that to provide better stability.
- 2. Side rails are to be swing away type and can be lowered so that side rails would not be in a way while caregiving or transferring a patient.
- 3. Side-rails are provided with stopper levers that can lock them when in use. The lock is constructed so that side rails cannot be unlocked when a load is applied in the downward direction of the side rail or the outward direction of the bed. FOR PATIENT SAFETY
- 4. The bed comes equipped with a buffering mechanism to soften shocks and impacts that occur when side rails are lowered.

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- 5. The outside of both side-rails at the head end comes with a recessed side-rail with a Bi-lateral integrated Control panel.
- 6. The inside of both side rails at the head end comes with a recessed control panel for the patient.
- 7. Both side-rails at the head end have a grip position and a shape so that patients can easily hold on to them when standing up after back raising.
- 8. There are angle indicators on the outside of both side rails at the head end to indicate the back raise angle.
- 9. There are angle indicators on the outside of both side rails at the foot end to indicate Trendelenburg angle.
- 10. To ensure the safety of the patient, the voltage for the Side-rail integrated panel and patient control panel should be 5 V.
- 11. The Side-rail integrated panel should have a switch to enable or disable the patient control panel to prevent operation errors.
- 12. The Side-rail integrated panel should be with a battery allowing the bed to be operated in case of power failure or lack of power supply.

#### Mattress base

- 1. The mattress base structure is divided into four areas, the back, hip, knee, and foot, and the main material is HDPE Plastic which should be removable for cleaning & housekeeping purposes.
- 2. There should be ventilation holes inserted into each surface of the HDPE base that is designed to allow proper ventilation to flow through the base.
- 3. The mattress base is provided with a mattress stopper to prevent the mattress from shifting out of place or sliding downward.
- 4. Good quality powder coating to be used for surface finishing on the main parts to prevent rusting of structural materials and maintain surface strength.
- 5. Each section base allows a urine bag to be hooked on.
- 6. Two accessory rails (one on each side) are provided on both side surfaces of the main frame.
- 7. Corner bumpers are attached to the four corners of the bed to prevent scratches to the bed, walls, and other objects.
- 8. Four IV pole attachment holes are provided, two on the head end and two on the foot end.

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#### Casters

- 1. Total locking system, single-wheel casters with a wheel diameter of 125 mm should be used for casters. The Caster operating step allows the user to switch between simultaneously locking and unlocking all four casters (swivelling and rotation), and steering (one wheel on head end only).
- 2. The caster wheels should be made of polyurethane resin with excellent abrasion resistance, ageing resistance, and oil resistance.
- 3. To improve transferability, one of the four casters should be a steering caster.

#### Head & Footboard

- 1. The headboard and footboard are made of chemical-resistant resin material and come with grips at the top that enable easy handling during transfer.
- 2. The headboard and footboard can be attached and detached easily and are provided with stoppers to prevent them from becoming detached at inopportune times.
- 3. In regards to hygienic management, the boards are to be with less unevenness, a flat shape to let wiping be easier

# Accessories and Warranty term:

- 1. Bed to be supplied with suitable size mattress. Having durable long-lasting, elastic, and non-skid mattress cover having antibacterial and anti-fungal properties (MRSA anti-bacterial cover)
- 2. Bed to be supplied with one IV poles
- 3. Should have CE conformity & ISO certifications, and other necessary certifications for ensuring quality.
- 4. Power input to be 220-240VAC, 50Hz as appropriate fitted with Indian plug.

# **Conditions for tenderer:**

- 1. All accessories should be from the same Original Equipment Manufacturer for the main unit.
- 2. Instruments must be ISO certified and a copy should be enclosed. (The ISO Certificate must be issued by any organization accredited by the Bureau of Indian Standard or accredited by the international accrediting forum "IAF" (Certificate to be attached).

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- 3. Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements and IEC-60601-2-25 Safety of Electrocardiograms. (Or equivalent BIS Standard).
- 4. Other necessary certifications if any required will be provided by the bidder for the smooth functioning of the machine.
- 5. Installation process should be performed by O.E.M trained service engineers/ service representatives on OEM letterhead or Service Report within 15 days of supply, with the mandatory provision of providing preventive services visit of OEM trained Service Engineer/ Service Representative quarterly per year till the completion of warranty period (i.e., 20 visits for the first 05 years) & further quarterly visits (04 visits/year) year till the completion of CMC period.
- 6. The equipment should have a Brand name/ Model Number embossed/etched on the equipment.
- 7. All the technical specifications in the compliance statement must be supported by Original Literature from the firm/ O.E.M with highlighting Numbering & flagging of all technical certificates.
- 8. Offered Equipment should have a strong Government Installation base.
- 9. Offered Equipment should have a Regional Sales Service Centre of the Original Equipment Manufacturer in the region for a 95 % uptime guarantee.
- 10. For the offered main unit, the essential, optional required consumables'/accessories' shelf life should be declared on the Original Equipment Manufacturer's letterhead.
- 11. In case of technical snag/failure/breakdown the response time for the inspection should be within 24 hours and repair within 05 days otherwise provide a service machine/ alternate arrangement to be made till the period of recovery of the breakdown of the unit, failing which attracts penal action as per the decision of institute/ hospital.
- 12. For offered equipment the Training of technical staff and users should be performed by Original Equipment Manufacturer trained Service Engineers at the proper designated place- at bidders' cost.
- 13. Company should quote their latest model and need to provide an affidavit for the same.
- 14. As a tendering process the Demonstration of the offered Equipment is Mandatory at hospital/institute premises or other designated places at the bidder's cost.
- 15. The bidder must comply with the General Financial Rules and their modifications if any issued by the Government of India- 2017.

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- 16. Any bidder from a country that shares a land border with India will be eligible to bid in the tender only if the bidder is registered with the Competent Authority (i.e., Registration certificate issued by the Ministry of Commerce and Industry (Department for Promotion of Industry and Internal Trade- DPIIT after October 2020). If any such bidder is not registered with DPIIT they will be liable for technical disqualification.
- 17. Principal (OEM) must authorize only one agent to be quoted in the bid otherwise multiple quotes through different agents in the same bid will be canceled.
- 18. The Bidder and its OEM both have to submit a notarized affidavit on the Indian Non-Judicial Stamp Paper of Rs.100/- that the bidder has not quoted the price higher than the current financial year and last financial year supplied to any government Institute/ Organization/ reputed Private Organization. OEM also has to submit that the price quoted by the bidder in the bid is on its behalf and the lowest in the current and last financial year in the country. Therefore, if at any stage it has been found that the supplier and its OEM have quoted lower rates than those quoted in this bid; the Institute (the purchaser) would be given the benefit of lower rates by the Supplier and any excess payment if any, will become immediately payable to the Institute (the purchaser). The bid will be outright rejected if such an affidavit is not submitted. (Part of technical bid).
- 19. Guarantee / Warranty Period: Separate offers of Comprehensive Maintenance Contract (CMC on main equipment) and Annual Maintenance Contract (AMC on main equipment) for further 5 years after expiry of 5 years of warranty (i.e., 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> years) in rupees only (and on basis of percentage of price) should be included in a financial bid in the absence of which the offer is liable to be rejected. Payment for CMC/AMC shall be made only after the warranty expiry of 5 years, in case the Institute (the purchaser) decides to avail of CMC/AMC services. Contract for CMC/AMC shall be decided on expiry of warranty but rates (not more than 5% inclusive of all taxes for 6<sup>th</sup> to 10<sup>th</sup> year) will be frozen at the price of an issued purchase order before the release of payment by the Institute (the purchaser). However, the Institute (the purchaser) may decide not to enter into any CMC/AMC contract without assigning any reason for the same, which shall be binding upon the bid.
- 20. Should provide 5-year CMC. CMC cannot be more than 5% of the contract value.
- 21. System configured application-specific educational video tutorials shall be provided as standard with the system.
- 22. Details of service outlet in India to render services during 5 years warranty period.

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23. The principals must give a certificate if the supplier/vendor is changed during the course of the guarantee/warranty period, the principals would be responsible for the upkeep/maintenance of the quote/supplied equipment, besides honouring all the terms and conditions of CMC/AMC in letter and spirit.

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