

## Supply and delivery of Hemodialysis Machines for Authority of Al.Thawra Hospital – Taiz

- Insert details of Medical equipment offered, including specifications and brand/model offered if applicable.
  - It is mandatory to send the

brochures/datasheet of the product

|     | Technical Requirements   | Qty. | Complies with PURE HANDS specifications (Yes/No) | Details of Medical equipment offered. Bidder to complete |
|-----|--|------|--|--|
| 1   | Hemodialysis machine   |      |  |  |
|     | Name of Manufacturer   |      | Please specify manufacturer                      |  |
|     | Model/ catalogue number  |      | Please specify model number                      |  |
|     | Country of Origin for the offered model  |      | Please specify country of origin                 |  |
|     | Equipment offered must be covered by at least a 2 years full warranty starting the date of installation and Final Acceptance |      | Required   |  |
|     | CE Or/& FDA Certificate  |      | Required   |  |
|     | If The Machine Have CE Certificate Product I<br>Clearance For Either: Australia, Canada, Eur<br>USA                          |      | Required   |  |
| 1.1 | Gereral Specifications   |      |  |  |
|     | Latest Technology  |      | □ Yes □ No                                       |  |
|     | Use for Adult & Pediatric patients   |      | □ Yes □ No                                       |  |
|     | Haemodiafiltration and Hemofiltration functions  |      | □ Yes □ No                                       |  |
|     | The equipment shall support all dialysis protocols currently implemented at the targeted hospital                            |      | □ Yes □ No                                       |  |
|     | Friendly Using   |      | □ Yes □ No                                       |  |
|     | Advanced dialysis fluid circuit with highly-precise volumetrically controlled ultrafiltration                                |      | □ Yes □ No                                       |  |
|     | Automatic Self-Test.   |      | □ Yes □ No                                       |  |
|     | Easy Cleaning, No sharp edges & Anti-Staining  |      | ☐ Yes ☐ No                                       |  |



|     | With fixed telescopic IV stand able to hold at least 3 kg.  | □ Yes □ No     |  |
|-----|---|----------------|--|
|     | Mobile on four breakable durable castors & able to  |                |  |
|     | rotate 360°   | ☐ Yes ☐ No     |  |
|     | Ultrafiltration controller  | □ Yes □ No     |  |
|     | Bicarbonate dialysis performing   | □ Yes □ No     |  |
|     | Ultrafiltration (UF), Bicarbonate (BIC), Sodium (Na) profiling/modelling performing   | □ Yes □ No     |  |
|     | KT/V Calculation  | □ Yes □ No     |  |
|     | Conventional and High flux dialysis.  | □ Yes □ No     |  |
|     | Able to use dry bicarbonate.  | □ Yes □ No     |  |
|     | Central delivery system of Bicarbonate and Acid Setting   | □ Yes □ No     |  |
|     | Calibrated Blood pump for different diameter of segment tubing  | □ Yes □ No     |  |
|     | Built in Automatic administration Heparin pump, (Several sizes syringe up to 50 mL), Flow rate from 0.1 -10 ml/hr (0.1 mL increments) | □ Yes □ No     |  |
|     | Colour coded Hanson Connectors  | □ Yes □ No     |  |
|     | Protection water proof machine IPX1 or better   | □ Yes □ No     |  |
|     | Onboard dialysate ultra-filter  | □ Yes □ No     |  |
|     | Essential Single pass dialysate flow  | □ Yes □ No     |  |
|     | Dialysate flow rate about 200-800mL/min   | □ Yes □ No     |  |
| 1.2 | Display & Monitoring (Values and  |                |  |
|     | information about the machine status &  |                |  |
|     | treatment Phases that need to the user):  |                |  |
|     | TFT LCD or LED display minimum 10.4" " Full Touch Screen "  | □ Yes □ No     |  |
|     | Blood volume monitor  | □ Yes □ No     |  |
|     | Blood temperature monitor   | □ Yes □ No     |  |
|     | Flow meter  | □ Yes □ No     |  |
|     | Display: Clearly visible for all Parameter, well lit, uncluttered   | □ Yes □ No     |  |
|     | Arterial pressure Value   | □ Yes □ No     |  |
|     | Venous pressure value   | <br>□ Yes □ No |  |
|     | Transmembrane pressure (TMP) Value  | □ Yes □ No     |  |
|     | System indicator light (Green, Yellow, Red)   | □ Yes □ No     |  |
|     | Graphic & tabulated trends all parameter for 20 minutes or more   | □ Yes □ No     |  |
|     | Ultrafiltration rate  | □ Yes □ No     |  |



|     | Ultrafiltration goal  | □ Yes □ No |  |
|-----|---|------------|--|
|     | Ultrafiltration time  | □ Yes □ No |  |
|     | Ultrafiltrate removed (Fluid that has been removed  | □ Yes □ No |  |
|     | from the patient)   |            |  |
|     | Blood flow rate   | □ Yes □ No |  |
|     | Dialysate Temperature   | □ Yes □ No |  |
|     | Heparin rate  | ☐ Yes ☐ No |  |
|     | Built in blood pressure monitoring including a cuff and tubing to measure BP  | □ Yes □ No |  |
| 1.3 | Sensor & Transducer   |            |  |
|     | Arterial transducer (pre-blood pump)  | ☐ Yes ☐ No |  |
|     | Venous chamber sensor (ultrasonic/level detector or better)   | □ Yes □ No |  |
|     | Optical detector (High sensing blood/air bubbles)   | □ Yes □ No |  |
|     | Essential Blood line clamp (venous & arterial )   | □ Yes □ No |  |
|     | Venous transducer ( Post Artificial Kidney), Predialyzer / artificial kidney transducer   | □ Yes □ No |  |
|     | Sensing Blood leak detector (Blood sensor in drain pathway), Drain facility   | □ Yes □ No |  |
|     | Sensors for air detector/ blood led detector/ venous pressure /art pressure   | □ Yes □ No |  |
|     | Dialysate proportioning system and capabilities (35x, 37x, 45x), at least two of the listed proportioning ratios                          | □ Yes □ No |  |
|     | Adjustable dialysate Temperature range of 35-39°C or better   | □ Yes □ No |  |
|     | Essential Bypass Valve (when dialysate is too hot or too cold, when dialysate is not proportioned correctly, it is diverted to the drain) | □ Yes □ No |  |
| 1.4 | Ultra filtration  |            |  |
|     | With Na, Bicarbonate and UF profiling   | □ Yes □ No |  |
|     | Variable conductivity setting between 12 to 15  | □ Yes □ No |  |
|     | mS/cm or better   |            |  |
|     | Ultra filtration 0.1 to 2.5 liters/hr in and out fluid  |            |  |
|     | circuit must be separated so that there is no   | □ Yes □ No |  |
|     | chance of contamination in the event of   |            |  |
|     | membrane rupture.  Accurate feedback control conductivity mixing  |            |  |
|     | technique.  | □ Yes □ No |  |



|     | Accurate UF control by flow measurement  | ☐ Yes ☐ No |  |
|-----|--|------------|--|
|     | technique.   |            |  |
|     | Extra facilities like Blood Volume sensor, Bicart  | □ Yes □ No |  |
|     | Select technique   |            |  |
|     | Easy to service, troubleshoot and calibrate  | ☐ Yes ☐ No |  |
|     | Blood pump rate from 20-2000 ml/min adaptable  |            |  |
|     | to all standard A-V blood lines, The blood pump  | □ Yes □ No |  |
|     | runs even in the absence of water or dialysate flow  |            |  |
| 1.5 | Disinfection:  |            |  |
|     | Hot water disinfection program (solution must be   | □ Yes □ No |  |
|     | heated to at least 85°)  |            |  |
|     | Hot water with citric acid program(solution must   | □ Yes □ No |  |
|     | be heated to at least 85°)   |            |  |
|     | Cold disinfection with chemical (peracetic acid, bleach)                                       | □ Yes □ No |  |
|     | All disinfectants must be supplied at the back of  |            |  |
|     | the machine  | □ Yes □ No |  |
|     | Not use formaldehyde (Carcinogen).   | □ Yes □ No |  |
|     | Easy to operate the disinfection process &   | ☐ Yes ☐ No |  |
|     | separately used.   | □ Yes □ NO |  |
|     | The machine is equipped with facilities for Acetate,   | □ Yes □ No |  |
|     | Bicarbonate, and Sequential dialysis (Isolated UF)   |            |  |
|     | The blood pump runs even in the absence of water   | □ Yes □ No |  |
|     | or dialysate flow  |            |  |
|     | Machine is equipped with two bacterial filter  |            |  |
|     | (Pyrogen filters) one at water inlet and one before  | □ Yes □ No |  |
| 1.0 | water going to dialyser  |            |  |
| 1.6 | Alarms   |            |  |
|     | Audioble & visable alarms on limit violation of  |            |  |
|     | conductivity, blood leak, air leak, transmembrane pressure alarms, Dialysis temperature alarm, |            |  |
|     | dialysis can empty alarm, end of disinfection alarm,   | ☐ Yes ☐ No |  |
|     | bypass alarm and blood pump stop alarm, reverse  |            |  |
|     | Ultra filtration.  |            |  |
| 1.7 | Power  |            |  |
|     | AC (single phase) 220 - 240V, 50Hz   | □ Yes □ No |  |
|     | Battery back-up for at least 30 minutes or more to   | <u></u>    |  |
|     | run complete machine with heater supply  | □ Yes □ No |  |
| 1.8 | System Configuration Accessories, spares   |            |  |
|     | and consumables  |            |  |



|     | System as specified, All consumables required for installation and standardization of system to be given free of cost ( Accessories & consumables for 20 Patints/ Machine ).   | □ Yes □ No |   |
|-----|--|------------|---|
|     | The bidder shall clearly specify the components of a single hemodialysis session, providing a detailed cost breakdown for each individual item, as well as the total cost per session.  This information is required for technical and financial evaluation purposes |            | "The components of a single hemodialysis session: 1 |
| 1.9 | General Requirements   |            |   |
|     | The proposed equipment must be fully compatible with the targeted hospital existing infrastructureincluding electrical, sewage, water supply systems, and the dialysis water treatment plant—without requiring any modifications or upgrades.                        | □ Yes □ No |   |
|     | The supplier is responsible for technical compatibility and must conduct a pre-installation site survey to ensure the equipment fits the existing infrastructure, including the dialysis water station.  | □ Yes □ No |   |
|     | 220-240V, 50Hz single-phase electrical source<br>Built-in protections against over-voltage and<br>over-current line conditions.  | □ Yes □ No |   |
|     | Copy of the above mentioned certificates shall be included in the offer  | □ Yes □ No |   |
|     | The estimated life span : 8 -10 years  | □ Yes □ No |   |
|     | The product to be supplied shall be new, unused and conform to the standards as specified in technical specifications.   | □ Yes □ No |   |
|     | Transport, handle and store all products and materials in accordance with the manufacturer's recommendations and in a manner that prevents damage or deterioration or excessive distortion.  | □ Yes □ No |   |



| The equipment proposed shall be of highest quality and produced by well known manufacturers. The equipment shall carry the name and quality label of the manufacturer  | □ Yes □ No |
|--|------------|
| and fulfill the standards in force.  Technical offers must include brochures, data sheets and technical complete technical specifications.   | ☐ Yes ☐ No |
| Upon delivery of the equipment, the supplier should show official documents showing the country of origin and the date of manufacturing the equipment as stated by the manufacturer, associated with the serial number.  | □ Yes □ No |
| All equipment to be brand new, and latest in design and technology   | □ Yes □ No |
| Supplier must include full installation, acceptance testing, safety checks and commissioning of the equipment for clinical use as per the manufacturer's recommended procedures. All the equipment and tools to be used in these steps shall be the responsibility of the supplier to provide. | □ Yes □ No |
| The staff training in operation and maintenance shall be provided  | □ Yes □ No |
| Supplier should deliver with the machines all operator manuals, service manuals, engineering schematics, and all documents and software media relevant to the machines   | □ Yes □ No |
| Submitting a duly notarized preventive maintenance schedule upon delivery of the equipment, and providing response within 48 hrs. should the existing equipment breaks down  | □ Yes □ No |
| The supplier must comply to provide Certificates of the Company engineer/s issued by the Manufacturer  | □ Yes □ No |