ACU/PS/AHRC -Equip/Tender/ 705 /2020-21 Date: 17/12/2020

TENDER NOTIFICATION

Adichunchanagiri University is inviting **closed tender** for the supply of equipment/instruments to the various Departments of Adichunchanagiri Hospital and Research Centre from the competitive firms.

1	Name of the work	Supply of equipment/Instrument to the various Departments of AHRC.
2	Tender documents available for download	17-12-2020 to 04-01-2021 up to 5:00 PM

Sl. No.	Name of the Equipment/Instrument	Quantity (in No's)
1.	Auto clave machine for CSSD (Central sterile supply department)	1
2.	Transport Ventilator	2
3.	Impedance audiometer/Tympanometer	1

Note: Kindly send quotes in 2 bid formats (Technical and Financial bids sealed separately inside the main envelope for individual items) to be addressed to "The Registrar, Adichunchanagiri University, B.G. Nagara -571448, Nagamangala (T), Mandya (D)".

- Adichunchanagiri University (ACU) reserves all the rights to accept, reject, incorporate changes and re-tender without giving any reasons.
- The sealed cover must be duly superscripted with the name of the equipment along with the words "ACU/PS/AHRC -Equip/Tender/ (Name of the equipment)".
  e.g., "ACU/PS/AHRC -Equip/Tender/ Auto clave machine for CSSD".
- Provide Brochure, Certification of the product, Bank/account details, PAN and GSTIN. Kindly mention the details and mobile number of the contact person on the envelope.

B.G. Nagara - 571448, NH-75, Nagamangala Tq., Mandya Dist., Karnataka, India.
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Technical Specifications

1. Auto clave machine for CSSD

Horizontal, High Pressure, High Vacuum Steam Sterilizer, Rectangular type with Hinged Single Door, Electric Operated - Fully Automatic operation.	
Chamber	Size: 600mm x 600mm x 1200 mm depth or above Volume: 410 litres and above. Working pressure : 1.2 to 2.2 kg Working temperature: 121° to 135°C. Material : SS 316 Chamber is fabricated with full argon welding and is made in round corners for easy cleaning and is given a 2% slope for full drainage of the condensate. Chamber is provided with safety valve and compounding gauges on both sides. Chamber is provided with SS 316 railing of circular cross section and is easily removable for easy cleaning.
Chamber Baffles	SS 316
Jacket	Channelize S.S. Working pressure: 2.5 kg
Door & Door Safety Systems	SS 316 A Hinge type Manual SINGLE DOOR with radial locking using shooting bolts, having pressure locking safety facility. The unlocking is possible only when the chamber is exhausted.
Surface Treatment	Chamber & doors are buffed & polished to mirror finish surface finish & The internal corners are rounded off to facilitate efficient cleaning.
Insulation of shell	The entire equipment including door is insulated with 50mm thickness Resin Bonded Glass Wool & cladded with SS304 sheets. With this, the skin temperature of the equipment does not increase more than 55° C.
Steam Generator	SS 304 Steam Generator of capacity 18 KW is provided underneath the chamber which will generate and provide dry saturated steam to jacket and chamber through steam dryer. Special type of Copper Sensor will be provided to reduce the ELECTRIC and WATER consumption also safety valves, pressure switches, low water level controller and automatic water feeding system is provided.
Pipes, Valves and Components	All valves & pipe lines which are connected to chamber will be of SS 316 quality whereas non-contact will be of SS 304. All process valves are piston valves pneumatically actuated. All utility connections are brought to one point, at the corner of the equipment for easy operation to the customer. All exhaust, drains are connected to a common drain. A removable screen plug is provided in the drain line to prevent clogging of the drain pipes and fittings. Pneumatic lines are of copper tubes with Brass/SS connectors.
Required Compressed Air Connection	6 – 8 kg/sq.cm. **(Customer scope).**
Control System	**Automatic operated through Microprocessor** , Instead of manual operating valve, Provided with Microprocessor based PLC system with Touch Screen HMI.

Safety and alarms	- High Temperature & Pressure ,Utility failure ,Vacuum pump trips - Low water level, Evacuation fails ,Heat up fails - Opening of both doors simultaneously ,Opening of either door in process
Cycle Documentation Printer	Will be provided with Dot-matrix printer which will print date, batch/load number, program type selected and program parameters which include one point pressure and 1 point temperature print out.
Vacuum pump and condenser	An adequate capacity Water Ring Type Vacuum Pump is provided along with the equipment to create the highest degree of vacuum in the chamber for air removal & for drying purpose. The pump is mounted on the equipment along with SS304 steam condenser, having copper cooling coil. This will avoid the direct steam entry to the pump. A 0.2 micron vacuum break filter is provided on the sterile area to suck the sterile air for breaking the vacuum after drying stage.
Stand	Mild Steel with Anticorrosion paint.
Programmable Logic Controller	Password protection for password security is given. RS232 port is provided for data communication. Inbuilt real time clock is provided with date and time function.
Validation Port	2 nos. validation ports will be provided with special leak tight ferrules is provided to accommodate 16 flexible Temp. Sensors for the validation of the system.
Programs	5 pre-set program and one flexible program i.e. 6 programs will be provided. Other recipes as per user requirement will be provided. The automation is so designed that once the program is selected then no further intervention is required from the operator till the end of the program. The Sterilizer will be provided with following cycles 1. Instrument Cycle 2. Drying Cycle 3. Liquid Cycle 4. User defined, 5. Bowie Dick test, 6. Vacuum leak test Other recipes also available as per customer request
Manual Override	The manual operation facility would also be provided so that if the automation fails, the system can be controlled manually without the obstacle of work.
Electric supply	415 V, 3 ph., 50 Hz, AC. Total Electrical Load: 21 KW.
Standards	ISI 3829 / CE, GMP, EN ISO 13485:2012 (ISO 13485:2003)
Documentation	User manual in English, Warranty certificate and Hydraulic test certificate, IQ, OQ, DQ, PQ, Gauge calibration certificate, material test certificate
	1 No. Suitable Loading & Unloading SS 316 Carriage
	1 No. Suitable S.S. Transfer Trolley

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2. Transport Ventilator

1. Time-cycled ventilator operating on mains, battery or ambulance/car battery. Battery backup should be for minimum of 4 or more hours.
2. Ventilator should be of low weight and with operation range from-20 to +50 degrees centigrade.
3. Autoclavable breathing circuits (Both Adult and Pediatrics): 2 each.
4. Screen Size 5 inch or above.
5. Integrated display of set and expired data as below
a) Tidal volume: 50 ml to 800ml- 2 litres.
b) Rate:2-50 breaths/min.
c) PEEP (integrated in main unit):0 to 20 mbar/cmH2o
d) Inspiratory Pressure-20 - 60 cmH2o
e) Pressure Support:0 - 35 cmH2o
f) FiO2
6. Must have the following ventilation modes:
a) NIV
b) VCV
c) Assist Control
d) SIMV
e) CPAP
f) Pressure control
g) Pressure Support
7. Audio visual alarms for:
a) High & Low Pressure
b) Apnea
c) Setting errors
d) Low battery
e) Low oxygen supply
8. Standard scope of supply to include requirements
a) Main unit with inbuilt battery
b) Breathing hose set with expiratory valve and flow sensor
c) AC – DC adaptor
d) Oxygen high or low pressure hose
e)Test lung
f) Instruction Manual
9. Quality standards and support requirements
a) The offered unit should have CE with Medical Directive & European standard/ US FDA certificate
b) Vibration standard MIL STD 810F, method 514.5
10. The service provider should have the necessary equipment recommended by the manufacturer to carry maintenance manual.

3. Impedance audiometer/Tympanometry

Technical Specifications for Impedance audiometer/Tympanometry
• Tympanometry in one hardware
• Table Top Model with Wall Mount Facility
Impedance Measuring System
Probe tone:
• Frequency: 226 Hz pure tones; ±1%
• Level: 85 dB SPL (≈ 69 dB HL) ±1.5 dB
Air pressure:
• Control: Automatic.
• Indicator: Measured value is displayed on the graphical display.
• Range: -600 to +400 daPa. ±5%
• Pressure limitation: -750 daPa and +550 daPa.
• Pump speed: Automatic, Fast 300 daPa/s, Medium 200 daPa/s, Slow 100 daPa/s, Very slow 50 daPa/s.
Compliance:
• Range: 0.1 to 8.0 ml at 226 Hz probe tone (Ear volume: 0.1 to 8.0 ml) and 0.1 to 15 mmho at 678, 800 and 1000 Hz probe tone. All ±5%
Test types:
• Tympanometry: Automatic, where the start and stop pressure can be user-programmed in the setup function.
• Eustachian tube function 1 - Non perforated eardrum
• Eustachian tube function 2 - Perforated eardrum
• Reflex Test : Ipsilateral & Contralateral
• Reflex Decay
Reflex Functions
• Tone - Contra, Reflex: 250, 500, 1000, 2000, 3000, 4000, 6000, 8000 Hz, Wide
Band, High and Low pass.
• THD: Less than 5 until 110 dB, 5 % above 110 dB (supra-aural headphones), less than 5 % until 110 dB, 10 % above 110 dB (insert earphones or probe).
• Tone - Ipsi, Reflex: 500, 1000, 2000, 3000, 4000 Hz wide band, high and low pass.
• NB noise – Contra, Reflex : 250, 500, 1000, 2000, 3000, 4000, 6000, 8000 Hz
• ImNB noise – Ipsi, Reflex : 1000, 2000, 3000, 4000 Hz
• Stimulus duration: 750 ms
• Reflex Acceptance: Adjustable between 2 % and 6 %, or 0.05 – 0.15 ml change of ear canal volume.
• Intervals: Down to 1 dB step size.
• Intensity max: 90, 100, 120 dB HL.
Outputs:
• Contra Earphone: TDH39 earphone, DD45 earphone, CIR insert and/or EARtone 3A insert, IP30 for Reflex measurements.

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• Ipsi Earphone: Probe earphone incorporated in the probe system for Reflex measurements.
• Probe connection: Connection of the electrical and air system to the probe.

Dr. C.K. Subbaraya
Registrar
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