



Ref. F69.V1/REG/1001-19

Date: 14.06.2019

## TENDER INVITED FOR CHEMISTRY LABORATORY EQUIPMENT

Sealed tenders are invited by the Registrar, Cooch Behar Panchanan Barma University from the reputed vendors for the supply of Rotary Evaporator with accessories as under for the Department of Chemistry, Cooch Behar Panchanan Barma University. The tender form complete in all respect should reach the Registrar, Cooch Behar Panchanan Barma University, Vivekananda Street, Cooch Behar-736101, West Bengal, India in duly sealed envelope super scribed with "Chemistry Laboratory Equipment" within 24.06.2019. The Registrar, Cooch Behar Panchanan Barma University reserves the right to amend or cancel the scope of the job as well as to modify the terms and conditions of the tender. Incomplete or conditional tenders are liable to be rejected.

FOR ANY CLARIFICATION REGARDING TENDER PLEASE CONTACT WITH COOCH BEHAR PANCHANAN BARMA UNIVERSITY E-MAIL ID – [INFO@CBPBU.AC.IN](mailto:INFO@CBPBU.AC.IN)

[TENDER FEE: Rs. 1000/- (RUPEES ONE THOUSAND ONLY), NAME OF THE A/C: COOCH BEHAR PANCHANAN BARMA UNIVERSITY, SAVINGS ACCOUNT NUMBER: 32741316141, IFSC CODE: SBIN0000058]

### Rotary Evaporator with accessories

#### 1) Rotary Evaporator

VERTICAL TYPE (MANUAL LIFT WITH DIGITAL BATH).....

Min. Flask size: 100ml Max. Flask size: 1800ml

Rotation Speed: 30 ~180 rpm

Temperature: 5~ 180° C

#### FEATURES:

- Unit base made of thick M.S sheet coated with a layer of EPOXY based polyester paint
- Geared drive unit provide a smooth speed rotation precisely controlled with Analog knob
- Double walled bath seamless inner vessel SS304 and outer AL provided with high grade insulation to eliminate heat loss
- Central processing unit is fitted at the rear of water bath
- Main ON/OFF switch is at the taper of the base unit
- Borosilicate glass parts set comprising of condenser, evaporating flask Kjeldhal shape, receiving flask with S-35 cup, vapour path tube B-24, feed tube with Teflon extension, gasket seal, standard joint clip, Ball joint clip, tube are standard parts of the supply.
- All borosilicate glass parts are interchangeable.

#### 2) Water chiller

##### Low Temperature bath (-80°C)

Temperature – 80°C ±1°C.

Digital display: Temperature controlled by high tech solid state digital temperature indicator cum controller (PID, Dual Display)

Liquid media Insulated by high grade insulating materials (POLY-URETHINE).

#### CONSTRUCTION:



Ref. F69.V1/REG/1001-19

Date: 14.06.2019

The inner chamber is made of high grade stainless steel sheet duly argon welded. Exterior is made of High Grade steel sheet finished with powder coated paint.

The unit is constructed on ANGLE IRON STRUCTURE and mounted on CASTER WHEELS for easy mobility.

**REFRIGERATION SYSTEM:**

By means of CASCADE TYPE – Two Hermetically sealed compressor make 'EMERSON' – Large air cooled condenser – copper cooling coils – copper tubing with C.F.C. FREE REFRIGERANT. PUF insulation.

TEMPERATURE:  $-80^{\circ}\text{C} \pm 1^{\circ}\text{C}$ .

MAGNETIC STIRRER: Fitted with magnetic stirrer system with RPM meter. Speed 10-80 rpm

SAFETY: Fitted safety thermostat for protecting over heating, pressure protector.

POWER: Electrically operated on 220/230 v, single phase, A.C. mains.

**CAPACITY: 6 Ltrs tank.**

Capacity: 10 Ltrs

Inner chamber: Polished Stainless Steel Sheet.

Outer chamber: Mild Steel Sheet finished with Powder coating paint.

Insulation: Duly insulated by high quality insulated materials. (Polyurethane)

Refri. Sys &: Hermetically sealed 'EMERSON' made compressor unit for cooling.

Cooling arrange. Copper cooling coils are on the entire portion of S.S. inner chamber with C.f.c. free refrigerant.

Low flow shut off and high/low temperature alarms

Fluid level indicator

Temp. Range:  $-10^{\circ}\text{C}$  to Ambient.

Precise temperature control of  $\pm 0.2^{\circ}\text{C}$  by DIGITAL

Temperature indicator cum controller, Dual Setting, PID.

Circulator: Water circulating pump (Reputed Brand) will be used for circulating purpose.

Pump flow rate: 6 Ltrs. /minute

Power: 220/230 Volts, single phase, A.C. mains.

**3) Pump**

a) Two stage rotary direct drive vacuum pump made from chemically resistant material.

Suction capacity in  $\text{m}^3/\text{hour}$ :  $2.0 \text{ m}^3/\text{h}$  or better.

Vacuum pump should have ultimate vacuum of 7mbar or better.

Power input in watt: 180 •Supply voltages (V/Hz): 230/50. Fitted with 2" vacuum dial gauge and vacuum relieve valve & Borosil glass trap with double coil vacuum tube.

b) Direct drive rotary vacuum pump suitable for power drive with  $\frac{1}{2}$  HP electric motor 220 volt A.C single phase, 1440 rpm fitted with electric motor and charged with vacuum oil and ultimate vacuum of 0.001mm of Hg 1 micron 0.001 Torr & oil capacity of 1.5 liter also fitted with Magnetic isolation cum air admittance valve electronically operated at 220V A.C suitable with the vacuum system.

  
REGISTRAR

COOCH BEHAR PANCHANAN BARMA UNIVERSITY

VIVEKANANDA STREET, COOCH BEHAR – 736101

Registrar

Cooch Behar Panchanan Barma University