# **Indian Institute of Technology Delhi**

# **Chemical Engineering Department**

Hauz Khas, New Delhi-110016 (India)

## NOTICE FOR REINVITING QUOTATION

Date: 04-04-2012

**Due date: 16-02-2012** 

NIQ Ref. No.: IITD/BCHE/Store/M100808/2011-2012.

**General description**: Rotary vacuum evaporator (2NOS)

ITEM DETAILS WITH TECHNICAL SPECIFICATIONS:

# 1. SPECIFICATIONS FOR ROTAVAPOR

- 1 liter Evaporating Flask and Receiving Flask should be provided in standard scope of supply.
- Rotation speed up to 250 rpm or better with microprocessor control.
- Digital bath temperature display of both set and actual temperature simultaneously with an accuracy of  $\pm$  2 deg C upto 180 deg C.
- Automatic over heat cut-off protection.
- Corrosion resistive heating bath.
- Vertical Glass Assembly.
- All component parameters like water bath temperature, vacuum etc. should have a Display/Control panel preferably LCD display.
- Provisions for automatic lifting of the flask in case of power failure.

### 2. SPECIFICATIONS FOR VACUUM CONTROLLER

- Modular (not integrated) vacuum controller with control knob and large graphic display screen.
- Integrated solvent database (min 25) solvents for convenient setting of distillation conditions.
- Speed control for vacuum pump.
  - o Measuring range: 1400- 0 mbar.
  - o Control range: 1100-1 mbar.
- Integrated aeration valve and precision pressure sensor.
- Timer function for process termination after pre-specified time
- All controls for the Rotavapor e.g., lifting /lowering of the evaporating flask, Rotation start/stop should be controlled via the vacuum controller/ simple separate panel.

#### 3. SPECIFICATIONS FOR VACUUM PUMP

- Single stroke speed control vacuum pump with a flow rate of min 1.5 m<sup>3</sup>/h.
- Ultimate vacuum less than 10 mbar.
- 2 stage oil free diaphragm or any equivalent.

• Soundproofing with enclosed housing to minimize noise and vibrations.

## 4. SPECIFICATIONS FOR CHILLER

- Type of Circulation: Closed loop Integrated with Rotary Vacuum evaporator
- Temperature Range:-20<sup>o</sup>C-30<sup>o</sup>C

- Temperature Cange: 20 C 50 C
   Temperature Controller type :PID
   Accuracy:±1°C
   Cooling Capacity: Minimum 500W @ 10°C
- Pump Capacity: Pressure:1bar

Flow rate: 15 l/min

Suitable for bench top operations.

The equipment should be provided with all necessary accessories and spare parts for a fully functional unit. List of consumables and spare parts along with operation and service manuals should be provided along with the instrument.

Note: 1.Please specify the technical details in above given order.

### **TERMS and CONDITIONS:**

### 1.Two units should work independently

2. The quotation, in sealed envelope marked as "Ref: IITD/BCHE/Store/M100808/2011-2012 for Rotary vacuum evaporator" should reach the following address before 5 pm on 16-04-2012.

Dr. Sreedevi U., Room No. 209, Block I, Department of Chemical Engineering, IIT Delhi, Hauz Khas, New Delhi-110 016.

- 3. The prices quoted must include CIF New Delhi Airport charges.
- 4. **Technical and financial bids** should be enclosed in **separate sealed envelopes** and clearly marked.
- 5. Institute reserves the right to accept/ reject all/ any quotation without assigning any reason thereof.
- 6. List of users in India should be provided.
- 7. The delivery period should be clearly indicated in the quotation.
- 8. Submitted quotations should clearly mention the validity period, preferably for a minimum of 3 months.
- 9. Incomplete and conditional submitted tenders would be summarily rejected.
- 10. The mode of payment should be clearly indicated. For your kind information, IIT will not provide the advance payment. But IIT have fallowing Payment modes.1. After receiving the material or successful installation, trough RTGS to the vendors accounts directly.2.LC 3.wire transfer against the shippement of material.

- 11. In case the quotation is being submitted by authorized agent of the principal manufacturing company, the AUTHORISED SALES AGENCYSHIP certificate from the PRINCIPALS should be furnished along with the quotation. Quotations without this authorization certificate will be rejected.
- 12. The quotation should include comprehensive warranty for at least 3 years.
- 13. Special discount/rebate wherever admissible keeping in view that items are being procured for educational purpose in respect of Public Institution of national importance, may please be indicated.

Dr. Sreedevi U.

Associate Professor

Dept. of Chemical Engineering