DEPARTMENT OF BIOCHEMICAL ENGINEERING AND BIOTECHNOLOGY

INDIAN INSTITUTE OF TECHNOLOGY DELHI

HAUZ KHAS, NEW DELHI – 110016

23.10.2013

Subject: Notice Inviting Quotation (NIQ) for purchase of Peristaltic pumps

Sealed quotations are invited for supply of **4 (four) low flow rate and 1 (one) high flow rate Peristaltic pumps** in the DBEB, addressed to **Head (Attention: Dr. Z. A. Shaikh), DBEB, IIT Delhi** on or before **07. 11. 2013 by 2.00 P.M.** All the interested parties are requested to read the specifications given below carefully before submitting the quote. The quotation must include all taxes, handling, shipping and installation charges. Also all details of guarantee/warranty should be clearly mentioned. The Technical and Financial bids should be in separate sealed envelopes and both should be placed inside a large sealed envelope inscribed with "**Quotation for purchase of Peristaltic Pumps**". The Technical bid must provide all information about the components asked in the sections "Essential Technical Specifications for Low Flow Rate Peristaltic Pump", "Essential Technical Specifications for High Flow Rate Zero Pulsation Peristaltic Pump" and "Technical specifications of optional items". Financial bid must provide the price separately for essential items and optional items.

Item Name: **Peristaltic Pumps**

Quantity: 05 (Five)

NOTE: Kindly do not send any unnecessary documents, like advertisements containing the product range list of vendors/distributors etc., copies of recent PO's of supplies made by vendor, along with the bids.

Prof. T.R. Sreekrishnan

(DBEB, IIT Delhi)

ESSENTIAL TECHNICAL SPECIFICATIONS FOR LOW FLOW RATE PERISTALTIC PUMP

1. High performance, having capacity to run non-stop continuous run for 24 hrs x 365 days, fully programmable, four independent programmable channels controlled by PC/microprocessor with an USB interface. Among four heads, two heads can be mounted on the same panel and should have easy detachment facility of the panel containing two heads from the four head assembly. There must be a provision to use assembly of two heads separately (should have facility of separate power supply and computer control for a unit of two heads). Common power supply can be there for only two heads but not for four heads. Front control panel should have intuitive user interface for setting the flow rate, speed direction control and should have auto calibration facility with inbuilt timer.
2. Speed of the motor should be of 0.1 to 50 rpm or better with a precision of ± 0.1 rpm and can rotate in both directions (reversible). Set point control can be done by keypad (local) and remotely using computer.
3. Pump head should have 3 or more rollers with automatic tube retention facility inbuilt in the head. Should hold suitable tube having 0.8 – 1.0 mm thickness and ≤ 3.0 mm inner diameter.
4. Pump should have a capacity to deliver liquid at a flow rate of 0.001 – 20 ml/min.
5. Power supply 110-220 V AC, 50 Hz
6. Operating condition: temperature 0^{o}C to 55^{o}C, relative humidity ≤80 %
7. Application: precise dosing in bioreactors of different scales for dispensing and filling and transfer of fluids
8. Should have memory function to auto start with user defined settings during resume of power supply after power cut.
9. Safety features should comply at least IP 31.

ESSENTIAL TECHNICAL SPECIFICATIONS FOR HIGH FLOW RATE ZERO PULSATION PERISTALTIC PUMP

10. High flow rate (0.1 to 2280 ml/min) single channel, variable speed peristaltic pump having dual heads with 120 degree phase out arrangement to nullify pulsation, producing max pressure 30 psi and minimum occlusion. The peristaltic pump should deliver consistent, precise and repeatable flow rates with suitable pump head made of high temperature (150^{o}C) resistant material. The pump utilizes high-torque DC Geared motor as drive for delivering different process fluids. Should be operated at power supply of 110-220 V AC, 50 Hz. Speed of the motor should be of 0.1 to 100 rpm or better with a precision of ± 0.1 rpm and can rotate in both directions (reversible). Set point control can be done by keypad (local) and remotely using computer. Pump head should have 3 or more rollers with automatic tube retention facility inbuilt in the head. Front control panel should have intuitive user interface for setting the flow rate, speed direction control and should have auto calibration facility with inbuilt timer.

11. Both the types of pumps should be supplied with 5 meter Marprene/ PharMed BPT tubing.
12. Both the types of pumps should be supplied with Microsoft Windows 7 compatible software to control the pumps.
13. Comprehensive warranty with spares for 3 years from the date of installation of the instrument.
14. The quotation should include the details of service back up (manpower and technical facility) in Delhi for maintenance of the instrument.
15. Comprehensive on-site training to the users after installation.
16. Catalogue in original with all technical specifications printed on the catalogue. Principal needs to declare the year of launch of the quoted model.

TECHNICAL SPECIFICATIONS OF OPTIONAL ITEMS

Medium flow rate pump head:

The pump head housing should be made of PSF (high temperature ~150^{o}C resistant) with SS (chemical resistant) roller rotor assembly (3 or more) to adapt different size tubes (1.6 -2.5 mm wall thickness) Medium flow rate (0.06 – 2280) with fixed occlusion. Should have facility to use as multiple stacking pump heads. Should have easy tube loading mechanism and automatic tube retention facility.

Tubes:

Tube made of long life thermoplastic elastomer with resistance to a wide range of chemicals (oxidising agents such as ozone, peroxides and sodium hypochlorite) and having low wear and tear loss. (PharMed BPT/Marprene and platinum cured silicone tubes separately) 15 meter roll of 1mm ID x 1mm thickness and 15 meter roll of 5mm ID x1.6 mm thickness, high pressure tubing.

NECESSARY TERMS AND CONDITIONS

1. IIT Delhi is exempted from paying custom duty under notification No.51/96 (partially or fully) and necessary "Custom Duty Exemption Certificate" can be issued after providing following information.
    a. Shipping details i.e. Master Airway Bill No. and House Airway No. (if exists)
    b. Forwarder details i.e. Name, Contact No., etc.

    Custom Duty Exemption Certificate will be issued to the shipment in the name of the Institute and Bills of Entry should be submitted to IIT Delhi later on.

2. Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender. If an agent submits

bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

3. If the bidder is an authorized dealer of any manufacturer, the authorized Indian dealership certificate from the principles should be enclosed. Similarly, proprietary certificate for proprietary items should be provided.

4. IIT Delhi is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which following information are required. a. Quotation with details of Basic Price, Rate & Amount on which ED is applicable.

5. Please quote prices of imported items at FOB (Freight on Board) IIT Delhi inclusive of all taxes, freight, delivery, installation and onsite training charges. The quotation should provide the total price of the system including all taxes and transportation charges.

6. In case IIT Delhi is imposed with demurrage charge due to import on CIF, the entire demurrage charge has to be borne by the Indian Agent of foreign supplier.

7. A special discount/rebate wherever admissible keeping in view that supplies are being made for educational purpose in respect of public institution of national importance may please be indicated.

8. Payment Options (any one to be chosen by the Department)
    - Letter of Credit: 90% payment against shipping documents & balance 10% after satisfactory installation. For large purchase i.e. costing over Rs. 1 crore, 100% payment be made through LC.
    - Sight Draft: Payment against documents through bank.
    - Against Delivery: Payment by wire transfer after receipt of material.
    - Advance payment: pre-payment by wire transfer (for orders less than Rs. 5 lakh)
    - Against Delivery: Payment by wire transfer after receipt and installation of material.

9. Delivery period: within 1 month from the issue of supply order.

10. Warranty: at least 3 years comprehensive onsite warranty should be provided. AMC price beyond 3 years should be mentioned separately.

11. The quotations must have validity of at least three months.

12. Authority of IIT Delhi reserves the right to reject any or all quotations without assigning any reasons.