



SATYENDRA NATH BOSE NATIONAL CENTRE FOR BASIC SCIENCES
[Funded by the Department of Science & Technology, Government of India]
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Ref: SNB/ENQ/SKP/Pump/13-14/2066/WP

28.02.2013

Dear Sir,

Sealed quotations are hereby invited for the following items in two parts (Technical and Commercial bids). One large envelope containing two smaller envelopes containing Part A: Technical Bid and Part B: Commercial Bid need to be submitted separately – Two smaller envelopes should be super-scribed “**Technical Bid**”/“**Commercial Bid**” as the case may be.

| Sl. No. | PARTICULARS | Qty |
|---------|---|-------|
| 01. | Micro-fluidic Pump (Pl. find attached Annexure I & see below for detailed Technical Specification) | 1 no. |

Technical bid should contain complete technical information literature/working manual of the quoted item, & authorization certificate of the manufacturer.
Price Bid - In case of imported item CIF Kolkata airport price should be mentioned and for indigenous item FOR price up to S. N. Bose Centre may be quoted.

Note:

- 1) The quoted price should be inclusive of delivery and installation charges.
- 2) Validity should be for 90 days from the date of opening.
- 3) Minimum one year standard warranty is requisite from the date of installation.
- 4) Payment is subject to after delivery and satisfactory installation.
- 5) The date of delivery should be mentioned in the quotation.
- 6) Our ref. no. should be mentioned on top of the quotation envelope.
- 7) Quotation for the above items should reach this office by **14th March' 2013.**

Thanking you,
Yours faithfully,

S. K. Singh
AR(Purchase)

Detailed Technical Specification

| | |
|--|--|
| Pump Function | Infusion/Withdrawal |
| Flow Rate Maximum | 11.70 ml/min using 10 ml syringe |
| Flow Rate Minimum | 0.54 pl/min using 0.5 µl syringe |
| No of Syringes | 2 |
| Syringe Size Minimum | 0.5 µl |
| Syringe Size Maximum | 10 ml |
| Max Linear Force | 35 lbs @ 100% Force Selection |
| I O TTL Connectors | 15 pin D-Sub Connector |
| RS 232 Connectors | optional RJ-11 |
| USB Connectors | Type B |
| Accuracy | ±0.35% |
| Reproducibility | ±0.05% |
| Non Volatile Memory | Storage of all settings |
| Drive Motor | 0.9° Stepper Motor |
| Motor Drive Control | Microprocessor with 1/16 microstepping |
| Number of Microsteps per one rev of Lead Screw | 20,480 |
| Step Rate Minimum | 27.5 sec/µstep |
| Step Rate Maximum | 26 µsec/µstep |
| Pusher Travel Rate Minimum | 0.02 µm/min |
| Pusher Travel Rate Maximum | 159.8 mm/min |
| Display | 4.3" WQVGA TFT Color Display with Touchpad |
| Input Power | 12-30 VDC |
| Voltage Range | 100-240 VAC, 50/60 Hz |
| Dimensions Control Box LxDxH in cm | compact: e.g. ~9.0"x 7.0" x 6.0" |
| Net Weight should be | ~2.0 kg |
| Environmental Operating Temperature Metric | 4°C to 40°C |
| Environmental Operating Temperature English | 40°F to 104°F |
| Environmental Storage Temperatue Metric | -10°C to 70°C |
| Environmental Storage Temperatue English | 14°F to 158°F |
| Environmental Humidity | 20% to 80% RH, non condensing |
| Mode of Operation | Continuous |
| Warranty: 1 year | |