

Mechanical Engineering Department Notice Inviting Quotations

Date: 09.03.2017

1. Quotations are invited from the original equipment manufacturers or their authorized representatives for supply and commissioning of Mass Flow Controller with accessories. This is to be used for measurement and control of flow rates of (i) Methane (CH_4) (ii) Air (iii) Methane-air mixtures (iv) Helium (v) Carbon dioxide (CO_2) (vi) Carbon Monoxide (CO) (vii) Oxygen (O_2) (viii) Ethane (C_2H_6) (ix) Propane (C_3H_8) and (x) Hydrogen (H_2). The technical specifications are given below. Interested parties are required to submit their offer. The technical bid and the financial bid should be submitted in separate sealed covers, with “technical bid for MFC” and “financial bid for MFC” respectively written on the covers. The Quotations should be addressed to: Prof. Anjan Ray, Department of Mechanical Engineering, IIT Delhi, Hauz Khas, New Delhi – 110016 **latest by 3:00 pm on 17th March**

2. Technical Specifications:

Sr No	Characteristics	Specifications
2.1	Flow measuring range required	0 to 50 SLPM
2.2	Controllable Operating Range	1 % to 100 % of full scale
2.3	Typical response time	Less than 150 milliseconds
2.4	Response time	Maximum 1 sec
2.5	Accuracy	At least $\pm(0.5\%$ of reading + 0.2% of full scale reading) or higher accuracy
2.6	Operating temperature range	-5 to 50°C
2.7	Humidity range	0 to 100 %
2.8	Maximum allowable operating pressure	Not less than 8 bar gauge
2.9	Display	Digital display which shows mass flow rate, Volume flow rate, Gas, pressure, temperature
2.10	Output Signal	Digital output signal communicating all the data
2.11	Software	Interactive user interface, Faster Control and monitoring of equipment through software, Compatibility with Windows or Similar operating system
2.12	Ingress protection	IP40 or higher
2.13	Turndown ratio	150:1 or higher

3. Flow rates and total number of MFC for each category

S.No.	Full scale flow rate	Gas	Number of MFCs required
3.1	50 SLPM	Gases mentioned above	1
3.2	Control Software and Connecting cables	Gases mentioned above	1

4.0 Information to be provided with the technical bid

- (a) Compliance table indicating adherence to each item of the technical specifications.
- (b) A company profile should be included in the technical bid. The profile should include the following at the minimum:
- A. The parent company's base in India, its customer list.
 - B. The Indian agent's profile highlighting its past experience
 - C. The Indian agent's plan on how the same shall be maintained, the capabilities of their maintenance team in India
 - D. List of customers to whom similar equipment/models have been supplied in the past five years. Please provide separate lists for supplies in India and abroad. Copies of purchase order may also be attached.
- (c) List of certified service centre (s) for the quoted model(s) in India with supporting authorization letter.
- (d) Relevant product brochure/leaflet for the model quoted. Details of interface and other hardware (including PC/laptop, if any) that are integral part of the system should be provided.
- (e) In case the bidder is quoting separate models, these should be submitted in separate sealed covers (each containing the separate Technical and Financial Bid covers), clearly stating the model/make on the cover.
- (f) Details of testing and certification processes, including process for compliance to international standards, traceability to NIST or equivalent standards, periodic calibration requirements and procedure for the same.
- (g) Requirements for power supply and data transfer to a PC/laptop.
- (h) In case the items are proprietary products of the company, a proprietary certificate stating the same should be provided.
- (i) All information regarding items in section 5 below that are marked with '★'.
- (j) On-site training and installation: The supplier shall be required to undertake to provide the technical training to the personnel involved in the use of the equipment at the Institute premises, immediately after completing the installation of the equipment.
- (k) In case the bid is a given through an agent, a valid agent-ship certificate should be attached.

5. Terms and Conditions

- (a) The validity of the quotation should be at least six (06) months from the last date for submission of quotations. A statement to this effect should be submitted. ★
- (b) The delivery schedule should be submitted. ★
- (c) Authorized agent/agency certificate if bidder is other than the manufacturer. ★
- (d) Each bidder must submit the NEFT mandate form for registering as a vendor at IIT Delhi.
- (e) Imported items should be quoted on FOB basis (Freight on Board) and FOB price be provided.
- (f) Prices quoted shall be firm for the bid validity period. ★
- (g) The price for options should be stated separately in the Financial Bid.
- (h) Special discount/rebate, wherever admissible keeping in view that the supplies are being made for educational purpose in respect of public institution of national importance, should be offered and stated clearly.
- (i) All applicable taxes should be clearly mentioned separately.
- (j) The institute/committee reserves the right to accept or reject any or all bid/quotations without assigning any reasons.
- (k) 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.
 - 1. Shipping details i.e. Master Airway Bill No. and House Airway No. (if exists)
 - 2. 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.
- (l) 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.
- (m) IIT Delhi is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which quotation with details of basic price, rate & amount on which ED is applicable are required.
- (n) Three years comprehensive warranty be provided and AMC price beyond 3 years should be mentioned separately. ★
- (o) The Quotation received after due date will not be considered.
- (p) The Institute reserves the right to reject any quotation without assigning any reasons.
- (q) Payment Options ★:

- i. For Indigenous supplies, 100% payment shall be made by the Purchaser against delivery, inspection, successful installation, commissioning and acceptance of the equipment at IITD in good condition and to the entire satisfaction of the Purchaser and on production of unconditional performance bank guarantee as specified in Clause 9 of tender terms and conditions.
- ii. For imported items Payment will be made through irrevocable Letter of Credit (LC). Letter of Credit (LC) will be established in favour of foreign Supplier after the submission of performance security. The letter of credit (LC) will be established on the exchange rates as applicable on the date of establishment. For Imports, LC will be opened for 100% FOB/CIF value. 80% of the LC amount shall be released on presentation of complete and clear shipping documents and 20% of the LC amount shall be released after the installation and demonstration of the equipment at the INST site of installation in faultless working condition for period of 60 days from the date of the satisfactory installation and subject to the production of unconditional performance bank guarantee as specified in Clause 8 of tender terms and conditions.
- iii. Indian Agency commission (IAC), if any shall be paid after satisfactory installation & commissioning of the goods at the destination at the exchange rate prevailing on the date of negotiation of LC documents, subject to DGS&D registration for restricted items.
- iv. All the bank charges within India will be borne by the Institute and outside India will be borne by the Supplier.

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