



Government of India
Bhabha Atomic Research Centre
Electromagnetic Applications & Instrumentation Division



Tender No. : EmA&ID/JI/2020/OPA/117664

Date: 16th Nov, 2020

Sub: Fabrication, testing and supply of HMI based butterfly valve for precise vacuum control along with support stand as per Annexure-A

Dear Sir/Madam,

1. Quotations are invited for the *execution of subject work*.
2. Taxes and Excise Duties shall be quoted separately. Form AF / H whichever is applicable shall be provided, if required.
3. The suppliers are shall submit the cost for Design, fabrication, assembly and testing. All necessary tools, instruments have to be arranged by the supplier.
4. The quotation must reach the undersigned on or before **30th Nov, 2020** and must be sent in a sealed envelope super-scribed with the *reference number & the due date* given above.
5. The quotations must reach us on or before the aforesaid date by India post (by speed post or ordinary post) only.
6. The address on the envelop should read:
The Head,
Electromagnetic Applications Section,
Electromagnetic Applications & Instrumentation Division
RCnD Bldg., North Site,
B.A.R.C, Trombay,
Mumbai - 400 085.
(Attn: Shri. Janvin Itteera)
7. The finished components with the test certificates as mentioned in the enclosures shall be delivered by the manufacturer after the award of the contract at BARC, Trombay, Mumbai - 400 085.
8. Delivery, packing & forwarding charges, if any, must be clearly mentioned in the offer.
9. Drawings / Sketches (if any) must be returned along with the offer
10. Quotation must indicate the PAN and GSTIN no of the vendor. Minimum validity of 60 days is preferred.
11. The quotation has to be duly signed by *authorized person with company seal*. *Unsigned offers shall be treated as invalid*.
12. For any technical clarifications, Please contact us vide email: janvin@barc.gov.in; Tel: +912225591492

(Janvin Itteera)
Scientific Officer(E), B.A.R.C
For & on Behalf of the President of India
(The Purchaser)

Fabrication, testing and supply of HMI based butterfly valve for precise vacuum control along with support stand as per Annexure-A

1.0 Scope:

The tender is invited for the above work

2.0 Scope of work:

- 2.1) Supplier develop the servo/stepper-motor controlled variable conductance valve control.
- 2.2) Supplier shall procure the HMI with PLC controller for interfacing with the stepper motor drive
- 2.3) The programming and the interface with the drive is in the scope of the supplier.
- 2.4) Supplier is duty bound to demonstrate the opening of the valve as per the below the specification. It shall be demonstrated in a 60L vacuum vessel and 350L/m turbo-molecular pump backed with a oil free pump. Pressure control to be demonstrated with the help of this pump.
- 2.5) Supplier shall fabricate a plasma process chamber support stand which may be further epoxy powder coated

3.0 FREE ISSUE MATERIAL

NO free issue material will be issued to the contractor.

4.0 DELIVERABLE

The deliverables included in this tender are as follows:-

For the FIM supplied by the purchaser, the items highlighted under table-1.0 are to be delivered:

Sr. no	Description	Quantity
1	HMI based variable conductance valve with support stand	01 set

Table-1.0

5.0 Technical Specification

S No.	Parameters	Value
1	Plasma process support chamber	1850mm(L) x 1400mm(W) x 1160mm(H) Epoxy Powder coated carbon steel material
2	Valve type	Butterfly type
3	Valve mechanical Interface	ISO 100KF
4	Valve opening control	Stepper motor based, 0 to 100%, in steps of 0.1%
5	Stepper motor control	PLC based with HMI of 4.3" Recipe programming for specific process
6	Micrometer controlled needle valve with KF10 adaptors for pressure control during sputtering	Atleast 1 required

Table-2.0

6.0 PERFORMANCE OF THE CONTRACT

6.1 Fabrication and Delivery Schedule

- A) The purchaser representative shall be apprised of the changes incorporated in the vehicle compartments to do the needful.
- B) The entire work has to be completed in 3 months
- C) During testing, purchaser representatives shall be witness to verify the results.

6.2.3 Quality Control Records

The QCR shall contain:

Factory test certificates of the battery, material test certificates of the brake pads, structural material used shall be produced to the purchaser prior to the installation.

6.2.3.1 The system has to be tested with an Optical Emission Spectroscopy for its efficacy.

7.0) Warranty:

7.1) Supplier shall be duty bound to provide warranty and adequate after sales support to the entire power supply after the execution of the work for a period of 1 year.

8.0 GENERAL DESCRIPTION:

8.1 Supplier shall submit the offer including the fabrication, assembly and testing

8.2 Overall cost will be compared and include packaging, forwarding and safe delivery to purchaser site.
