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प्लाज्मा अनुसंधान संस्थान  
**INSTITUTE FOR PLASMA RESEARCH**  
परमाणु ऊर्जा विभाग, भारत सरकार का एक सहायता प्राप्त संस्थान  
**An Aided Institute of Department of Atomic Energy,  
Government of India**



इन्दिरा पुल के पास, भट, गांधीनगर - 382 428 भारत  
दूरभाष: (079) 2396 2020/2021/2028  
फैक्स: 91-079-23962277  
वेब: [www.ipr.res.in](http://www.ipr.res.in)

NEAR INDIRA BRIDGE, BHAT  
DIST. GANDHINAGAR - 382 428 (INDIA)  
Phone: (079) 2396 2000/2026/2332  
Fax : 91-079-23962277  
Web : [www.ipr.res.in](http://www.ipr.res.in)

## ENQUIRY

ENQUIRY NO : IPR/EQF/18-19/247  
Date : 28-03-2019

**Due on : 09-05-2019 by 1:00 PM IST**

Please send your offer in sealed envelope specifying Enquiry No, Date & Due Date, ALONG WITH your credentials for the following items which we are interested to import directly against Foreign Trade Policy 2015-2020.

### Important Note:

Please note that e-mail quotations are not acceptable however you may send your queries (if any) to [importpurchase@ipr.res.in](mailto:importpurchase@ipr.res.in)

Please ensure your sealed quotation reaches this office not later than above mentioned due date and time.

Kindly go through the following documents properly before quoting which are available on the IPR web portal i.e., [http://www.ipr.res.in/documents/tender\\_terms.html](http://www.ipr.res.in/documents/tender_terms.html) / attached herewith.

- 1) Instructions to the bidders & Terms and conditions (refer Form No: **IPR-FP-01.V3**)
- 2) Bidding format

**GST for Goods and Services (IGST/CGST/SGST TAX BENEFITS):** Please refer **clause no: 14** of Form No: **IPR-FP-01.V3**

### QUOTATION SHOULD BE ADDRESSED TO PURCHASE OFFICER ONLY

Sr No	Description	Quantity
1	Turbo-molecular pump based UHV pumping System	1.0 Nos.

Note: 1. Please quote with complete technical details (Technical compliance sheet and product data sheet).  
2. TDS as per CGST Act: As per provisions of section No. 51 of the CGST Act 2017, TDS @2% (IGST 2% or CGST 1% and SGST 1%) will be deducted while making payment to the suppliers where total value of orders/contracts/work orders exceeds Rs. 2.5 lakhs, in the event of order in Indian Rupees. Necessary TDS Certificate will be issued to the supplier after TDS deduction.

Encl: As per attached.

Sd/-

Mr. D. Ramesh

**Information to Vendors:** We are working towards a single platform for our future requirement. Hence, please refer IPR website i.e, <http://www.ipr.res.in/documents/tendersenq.html> for our future requirement.

## Turbo pump Based UHV pumping Station

### Specification

S/N	Entity	IPR Specification
1	Inlet Flange	DN 63 CF
2	Inlet pumping Speed l/s	
	N2	65
	Ar	65
	He	55
	H2	44
3	Compression Ratio	
	N2	$\geq 1 \times 10^{10}$
	Ar	$\geq 4 \times 10^9$
	He	$\geq 1 \times 10^5$
	H2	$\geq 1 \times 10^5$
4	Backing port	DN16 KF
5	Cooling	Air Cooling
6	Max. fore –Vacuum Pressure for N2	10 mbar or better
7	Ultimate Pressure	$\leq 1.0 \times 10^{-8}$ mbar
8	Max gs throughput at full rotational speed for N2	$\geq 1$ mbar l/s for N2
9	Input Voltage	AC 230 V $\pm 10\%$ , 50 Hz
10	Splinter shield	Require
11	Sound Pressure Level	$\leq 50$ dB (A)
12	Bearing	Maintenance free
13	Suitable controller for the above turbo pump with Digital I/O for controlling and monitoring of the TMP remotely	Require
14	TMP controller should have facility to control the speed of the rotor	Require
15	Venting Valve with vent control unit and connector	Require (venting control may be a part of S/N 14)
16	Facility for single switch operation to switch on TMP and Baking pump	Preferred
17	Automatic venting should be provided in case of power failure	Require
18	Suitable fore-vacuum (Diaphragm pump/ Dry pump) pump/ Dry Scroll Pump for above turbo pump, Input power 230V AC, 50 Hz	Require
19	Suitable Frame to accommodate all the necessities	Require

**Note:** (1) Quote with all essential and optional accessories required for the TMP as per model.  
(2) The vendor should have service center in India

**Acceptance tests to be carried out at IPR:** The following tests to be carried out on the Turbo molecular pumps at IPR.

- (1) Ultimate Vacuum  $\leq 1 \times 10^{-7}$  mbar.
- (2) Vent valve and automatic venting of TMP will be tested for its operation.
- (3) Detail information on operation, maintenance and troubleshooting should be provided.

Acceptance of the pumps will be subject to satisfactory performance of the final acceptance tests that will be carried out at IPR.

### Compliance Sheet

S/N	Entity	IPR Specification	Vendor Specification
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**Bidder's Official Stamp and Sign:**

**Date:**