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प्लाज्मा अनसधान संस्थान **INSTITUTE FOR PLASMA RESEARCH**

परमाण् ऊर्जा विभाग, भारत सरकार का एक सहायता प्राप्त



An Aided Institute of Department of Atomic Energy, **Government of India**

इन्दिरा पुल के पास, भाट, गांधीनगर - 382 428 भारत दरभाष: (079) 2396 2020/2021/2028 फैंक्स: 91-079-23962277 वेब: www.ipr.res.in

NEAR INDIRA BRIDGE, BHAT DIST. GANDHINAGAR - 382 428 (INDIA) Phone: (079) 2396 2020/2021/2028 Fax : 91-079-23962277 Web : www.ipr.res.in

ENQUIRY

ENQUIRY NO Date

: IPR/EQL/18-19/055 : 29-05-2018

: 21-06-2018 by 1:00 PM IST Due on

Please send your offer in sealed envelope specifying Enquiry No, Date & Due Date, ALONG WITH your credentials for the following items:

Important Note:

Please note that e-mail quotations are not acceptable however you may send your queries (if any) to localpurchase@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 / attached herewith.

1) Instructions to the bidders & Terms and conditions (refer Form No: IPR-LP-01.V4)

2) Bidding format

GST for Goods and Services (IGST/CGST/SGST TAX BENEFITS): Please refer clause no: 8 of Form No: IPR-LP-01.V4

QUOTATION SHOULD BE ADDRESSED TO PURCHASE OFFICER ONLY

Sr No	Description	Quantity
1	Development, Fabrication and Deliverable of one sided air cooled vacuum Scroll Pump	1.0 Nos.
Note:	Please quote with complete technical details (Technical compliance sheet and product data sheet).	
Encl:	As per attachment.	d /

Sd/-

Mr. D. Ramesh Purchase Officer-II

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/tenderseng.html for our future requirement.

Technical specification

- Item: Development, Fabrication and Deliverable of one number single sided air cooled vacuum scroll pump.
- Displacement capacity : 100 L/min
- Ultimate vacuum (Total Pressure): ≤ 5x10⁻² mbar
- Nominal rotational speed: 1450 rpm (50 Hz)
- Operating temperature: 10-40 °C
- Max Inlet/Outlet pressure (MPa): 0.1/0.13
- Inlet and Outlet connection : 25 kF
- Long-time operation running of pump
- Pump operating condition: From 1000 m bar (Atmospheric pressure in evacuating chamber)
- Lubricant-free with in vacuum envelope
- Totally clean and dry vacuum
- In-built Gas ballast function allows pumping of condensate vapours, water, solvent etc.
- Voltage 220 V, Single phase, 50 Hz
- Leak tightness (Static): <1x10⁻⁶ mbar l/s
- Noise level: 60-70 dB
- Bearing are completely isolated.
- Smooth running and Low maintenance expanses
- Low weight and compact size

Pre-dispatch inspection of Roots pumping unit at vendor site

- Physical inspection
- The ultimate vacuum of the pumping unit
- Motor Power test
- Noise level measurement
- All interlocks of the pumping unit should be checked
- All accessories of the pumping unit checks

Acceptance tests to be carried out at IPR:

The following tests to be carried out on the Scroll vacuum pump at IPR.

(1) Ultimate Vacuum $\leq 5 \times 10^{-2}$ mbar

- (2) Ultimate Vacuum with gas ballast opening is less than >5x10⁻²mbar
- (3) Pump should run continuously for 8 hours and not get overheat during 8 hours running.

(4) The all accessories should also be tested along with the pump for vacuum and leak.

(5) Acceptance of the pump will be subject to satisfactory performance of the final acceptance tests that will be carried out at IPR.

Terms, Conditions and Scope of Work:

- (1) The values given in above specification may vary of final developed product. The final product will be accepted as per the performance tests done at IPR.
- (2) The vendor will be preferable if they have experience and knowledge of manufacturing and fabrication of vacuum components and systems, CNC machining work job and supply system to R & D institutes.
- (3) The vendors will have to fabricate vacuum pump and its internals in repeated manner till the desired performance results and accepted by IPR.
- (4) The design of the pump is under IPR scope with support from vendor.
- (5) Any changes in the pump and its internals parts should be approved by IPR.
- (6) No extra charges will be applicable for fabrication of pump and its parts other than work order.

- (7) The vendors have to provide their payment terms and conditions, the part payment toward this work order is recommended.
- (8) The development task and final product of scroll type vacuum pump should be completed within 3-4 month or suggested by the vendor.
- (9) By mutual understanding with vendor that all the technical information of scroll vacuum pump should be known to IPR and it is recommended not to disclose any manufacturing details to others.
- (10)The patent and sale of final developed product could be done by mutual agreement with IPR, rules, regulations and norms of the company.

Sr.	Particulars	IPR Requirement	Vendor's Specification
No.			
1.	Development,	1. Displacement capacity : 100 L/min	
	Fabrication and	 Ultimate vacuum (Total Pressure): ≤ 5x10-2 mbar 	
	Deliverable of one	3. Nominal rotational speed: 1450 rpm (50 Hz)	
	number single sided	4. Operating temperature: 10-40 °C	
	air cooled vacuum	5. Max Inlet/Outlet pressure (MPa): 0.1/0.13	
	scroll pump	6. Inlet and Outlet connection : 25 kF	
		7. Long-time operation running of pump	
		8. Pump operating condition: From 1000 m bar (Atmospheric pressure in evacuating chamber)	
		9. Lubricant-free with in vacuum envelope	
		10. Totally clean and dry vacuum	
		11. In-built Gas ballast function allows pumping of condensate vapours, water, solvent etc.	
		12. Voltage 220 V , Single phase, 50 Hz	
		13. Leak tightness (Static): <1x10-6 mbar l/s	
		14. Noise level: 60-70 dB	
		15. Bearing are completely isolated.	
		16. Smooth running and Low maintenance expanses	
		17. Low weight and compact size	
		18. The vendor should have experience and knowledge of manufacturing and fabrication of vacuum components and systems, CNC machining work job and supply system to R & D institutes., Please provide the reference if any:-	
		(Since it is the development work, the values given in above specification may vary of final developed product. The final product will be accepted as per the performance tests done at IPR)	

Technical Compliance Form

Pre-dispatch inspection of Roots pumping unit at vendor site	
 Physical inspection The ultimate vacuum of the pumping unit Motor Power test Noise level measurement All interlocks of the pumping unit should be checked All accessories of the pumping unit checks 	
 Acceptance tests to be carried out at IPR: The following tests to be carried out on the Scroll vacuum pump at IPR. (1) Ultimate Vacuum ≤ 5x10⁻² mbar (2) Ultimate Vacuum with gas ballast opening is less than >5x10⁻²mbar (3) Pump should run continuously for 8 hours and not get overheat during 8 hours running. (4) The all accessories should also be tested along with the pump for vacuum and leak. (5) Acceptance of the pump will be subject to satisfactory performance of the final acceptance tests that will be carried out at IPR. 	

(Bidder's Sign with Official Stamp)