

TECHNICAL SPECIFICATIONS AND OTHER ALLIED REQUIREMENTS

PUR/369/SET/AP/E/2020-21		
Sl. No.	Item Description	Quantity
1	Supply of Vacuum Pump Double stage oil sealed, rotary vane vacuum pump for maintaining vacuum for laser metal deposition chamber of size: 1737 X 1237 X 1500 mm3 1. Pumping Speed @ 50Hz (L/min): 1000 2. Ultimate pressure (mbar) [gas ballast closed]: 2 X 10 (Detailed specifications are as per Annexure-I)	01 No.

1. QUALIFICATION CRITERIA:

1.1 N.A.

2. INSTALLATION & COMMISSIONING:

2.1 N.A.

3. WARRANTY

3.1. Comprehensive on-site warranty for a period of one year must be provided to be effective from the date of final acceptance of the items/equipment at the User's laboratory/Institute.

4. PERFORMANCE SECURITY:

4.1 N.A.

5. BID SECURITY DECLARATION:

5.1 Vendor should provide Bid Securing Declaration Form as per Annexure – 5F provided in the Tender Document.

6. OTHERS

6.1 Make & Model of the items should be provided in the bid.

Annexure – I

VACUUM PUMP

Technical Specifications

Double stage oil sealed, rotary vane vacuum pump for maintaining vacuum for laser metal deposition chamber of size 1750 x 1250 x 1500 mm³.

Sl No.	Item description	Parameters
1.	Pumping speed @ 50Hz (L/min)	1000
2.	Ultimate pressure (mbar) [gas ballast closed]	2×10^{-3}
3.	Rotational speed at no load @ 50 Hz (rpm)	1440
4.	Inlet connection (KF Flanges)	KF 40
5.	Outlet connection (KF Flanges)	KF 40
6.	Oil Capacity (Lts)	6
7.	Recommended oil	MD 504
8.	Electrical @ 50 Hz	3 phase, 380 – 440 V
9.	Three phase Motor (kW) IE2, 415V \pm 10%, 50 Hz	2.2
10.	Roots booster three phase motor (kW), IE2, 415V \pm 10%, 50 Hz	1.5
11.	Trolley	1 No.
12.	KF50 Clamp Assembly (Includes KF clamp & centering ring with neoprine O ring)	2 No.
13.	Pressure measurement and sensor	High pressure pirani gauge model DHPG-222 with 1 gauge head, pirani sensor and 2 mtr cable
14.	Ball Valve	2" SS 304 Manually Operated Ball Valve Flanged End, Three piece design, Full bore, without serrations
15.	Vacuum valves	Solenoid operated air admittance valve SAV50
16.	Warranty	The system should have One-year warranty.
17.	Adapter	Outlet and root inlet adapter
18.	Other Features	<ul style="list-style-type: none">• Robust and compact• Improved vapour handling performance

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		<ul style="list-style-type: none"> • Forced oil lubrication system with built-in oil vane pump enabling high performance down to 10^{-3} mbar • Lower noise level at 52 dBA • Minimal vibration • Increased inlet port path to give maximum flow • Lower oil consumption • All fluoroelastomer (FKM/Viton) seals • Performance testing in accordance with Pneurop 6602.
19.	Inspection	<p>Inspection and demonstration will be done at CSIR-CMERI Durgapur in presence of manufacturer/supplier's trained engineer.</p>

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