

	<u>BHARAT HEAVY ELECTRICAL LIMITED</u>					
	<u>UNIT'S ADDRESS: BHOPAL</u>					
	<u>CONTACT PERSON'S NAME/DESIGN./PHONE NO./E-MAIL (FROM PURCHASE DEPTT.)</u>					
<u>SPECIFICATION CUM COMPLIANCE CERTIFICATION FOR</u> <u>" Source of Medical Air"</u>						
	NOTE:-					
	1. Vendor must submit complete information against clause no. 12 (Qualifying Condition). The offer meeting this clause would only be processed.					
	2. The "Offered" Column and the "Deviations" & "Remarks" Column, if applicable, of this format shall be filled by the Vendor and submitted along with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance .					
	3. The offer and all documents enclosed with offer should be in English language only.					
NAME & ADDRESS OF THE SUPPLIER :				NAME & ADDRESS OF THE INDIAN AGENT :		
TELEPHONE NOS.:				TELEPHONE NOS.:		
FAX NOS.:				FAX NOS.:		
E-MAIL ADDRESS :				E-MAIL ADDRESS :		

SCOPE: SUPPLY, ERECTION & COMMISSIONING OF "SOURCE OF MEDICAL AIR", SPECIFICATIONS AS BELOW:					
SNO	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY	OFFERED	DEVIATIONS	REMARKS
1.0	PURPOSE & WORKPIECE MATERIAL				
1.1	Purpose: Supply, Erection and Commissioning of Source of medical for testing of 8 Nos Ventilators simultaneously as per Annexure No. SCR/VENT/2021/TEST/02 (Set as per sketch 02)	Vendor to note			
1.2	WORK PIECE MATERIAL: Ventilators	Vendor to note			
1.3	Quantity: 1 Set	Vendor to confirm			
2.0	SCOPE OF WORK & SPECIFICATION: (Minimum requirements)				
2.1	Scope of Work:				
2.1.1	Source of medical air suitable for 8 Ventilators Testing 100% Oil-Free Compressed Air System Suitable for Medical / Hygienic & Critical Air Utilities	Vendor to note			
2.1.2	Supply, Installation & Commissioning of Medical/Instrument Compressed Air System with components and their detailed Technical Specifications given below.	Vendor to note			
2.1.3	The Scope of Work also includes all necessary piping, fittings, and interconnections, all Electrical Work, Material, Connections and other required material.	Vendor to note			
2.2	OIL FREE AIR COMPRESSOR WITH AIR RECEIVER (100 % Oil-Free, Oil Less, Non Lubricated, Reciprocating, Air Cooled)	1 Set	Vendor to confirm		
2.2.1	Make		Vendor to specify		
2.2.2	Model		Vendor to specify		
2.2.3	Mounting:	Base Frame Mounted with Vertical Air Receiver	Vendor to confirm		
2.2.4	Maximum Pressure	8.5 bar, 123 psi	Vendor to confirm		
2.2.5	Piston Displacement Capacity	35.9 CFM, 1016 LPM	Vendor to confirm		
2.2.6	FAD (Free Air Delivery)	25.1 CFM, 711 LPM	Vendor to confirm		
2.2.7	Number of Cylinder(s)	Two	Vendor to confirm		
2.2.8	Number of Stage(s)	Two	Vendor to confirm		
2.2.9	Motor Ratings	7.5 kW (10 HP), 3 Phase	Vendor to confirm		
2.2.10	Air Receiver:		Vendor to confirm		
2.2.10.1	Capacity	500 Liters (Vertical)	Vendor to confirm		
2.2.10.2	Design Code	ASME Section VIII Div. 1	Vendor to confirm		
2.2.10.3	Max. Allowable Working Pressure	10 bar, 145 psi	Vendor to confirm		
2.2.10.4	Hydrostatic Test Pressure	up to 15 bar, 218 psi	Vendor to confirm		

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2.2.11	Standard Equipment: A Base Frame mounted Oil Free Air Compressors containing Heavy Duty Cast Iron Pump with Efficient Intake Filters, Aerodynamically Designed and Balanced Compressor and Motor Pulleys set, Deep Finned Air Cooled Inter Stage Cooler and Inter Stage Safety Valves, Pressure gauge, Tank Safety valve, Non Return Valve, Suitable / Necessary Piping between Compressor & Air Receiver, Air Delivery Valve, Manual Condensate Drain Valve with fully Automatic On-Off Control, High Performance and Energy Efficient Electric Motor, Suitable Electric Starter, Motor Slide Rails, V Belt set, Belt Guard & necessary hardware items.		Vendor to note			
2.3	COMPRESSED AIR DRYER (Refrigeration type)	1 No	Vendor to confirm			
2.3.1	Compressed Air Inlet Capacity:	20 CFM	Vendor to confirm			
2.3.2	Pressure Dew Point:	3 Degree C	Vendor to confirm			
2.3.3	Max. Pressure:	10 bar	Vendor to confirm			
2.4	THREE STAGE FILTRATION SYSTEM / STATION (A High efficiency sub Micronics and coalescing three stage compressed air filters with differential pressure gauge for the removal of atmospheric contaminants from Compressed Air such as water and oil aerosols, solid particulates, some bacteria, some viruses, etc. Comes with an Float type Automatic Drain Valve.)	1 Set	Vendor to confirm			
2.4.1	Capacity	60 CFM	Vendor to confirm			
2.4.2	Flow Rate	Up to 60 CFM	Vendor to confirm			
2.4.3	Line Size	½"	Vendor to confirm			
2.4.4	Filtration	Suitable for Breathing Air and use with Compressed Air utilizing Medical Devices & Instruments	Vendor to confirm			
2.4.4.1	First Stage	5 µm	Vendor to confirm			
2.4.4.2	Second Stage	1 µm	Vendor to confirm			
2.4.4.3	Third Stage	0.01 µm	Vendor to confirm			
2.5	PRESSURE REGULATING STATION (Along with pressure gaudge)	8 Sets	Vendor to confirm			
2.5.1	Line Size	½"	Vendor to confirm			
2.5.2	Regulating Pressure Range:	0.5 ~ 10 bar	Vendor to confirm			
3.0	DOCUMENTATION : The following shall be supplied along with the system					
3.1	Instruction manual : 4 copies in hard form and in soft form also		Vendor to Confirm			
3.2	Maintenance manual along with circuit/block diagrams and schematics with troubleshooting instructions: 4copies in hard form and in soft form		Vendor to Confirm			
3.3	Test & Guarantee Certificate : One set		Vendor to Confirm			
3.4	List of customer where equipment has been supplied earlier : One set		Vendor to Confirm			

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4.0	SYSTEM INSPECTION:				
4.1	Inspection at BHEL works. Vendor representative has to demonstrate and comply the specification as per clause 2.1 to 2.2 at BHEL works during Inspection.	Vendor to Confirm			
5.0	INSTALLATION & COMMISSIONING				
5.1	Supplier have to take full responsibility for carrying out entire installation and commissioning of the equipment and GO LIVE of solution.	Vendor to Confirm			
5.2	Tools required for Installation and Commissioning of the system shall be brought by the supplier on returnable basis.	Vendor to Confirm			
5.3	Schedule for delivery, installation and Commissioning shall be submitted along with the offer.	Vendor to furnish			
6.0	ACCEPTANCE CRITERIA:				
6.1	Routine test reports given by supplier for tech. details (caluse 2.1 to 2.5) with material. Further vendor demonstrate all the technical parameters during commissioning.	Vendor to Confirm			
7.0	TRAINING:				
7.1	Training to BHEL user and maintenance person should be provided at BHEL, Bhopal in the area of working for 2 days (a) Use of all system Features, programming etc. (b) Electrical, Electronic & maintenance for system & other supplied equipments	Vendor to Confirm			
8.0	AMBIENT CONDITIONS:				
8.1	Total System and all supplied items should work trouble free and efficiently under following operating conditions and should give specified accuracies. Power Supply: 230V 1φ or 415 V, 3φ ± 10%, 50 Hz ± 3% Ambient Temperature = 2° to 50° C Relative Humidity = 95% max. Temperature Variation =20°C in 24 hrs. (Vendor to confirm that system is suitable for above and details of provisions on the system for the same are to be furnished by Vendor)	Vendor to confirm			
9.0	PACKING:				
9.1	Air worthy/Sea worthy & rigid packing for all items of complete system, all Accessories and other supplied items to avoid any damage/loss in transit. When system is despatched in containers, all small loose items shall be suitably packed in boxes	Vendor to confirm			
10.0	GUARANTEE :				
10.1	Minimum 12 months from the date of commissioning of the system.	Vendor to confirm			

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11.0	GENERAL : The vendor should submit the following information along with offer:				
11.1	Equipment Model & make	Vendor to submit			
11.2	Total weight of the equipment	Vendor to submit			
11.3	Vendor to submit, along with offer, the reference list of customers where similar systems have been supplied mentioning the customer, Machine Model, major specifications of the supplied system, Year of Supply etc.	Vendor to submit			
11.4	Detailed catalogues , sketch/ photographs of the m/c and accessories/ attachments should be submitted with the offer.	Vendor to submit			
12.0	QUALIFYING CONDITIONS :				
12.1	The supplier should either be an Original Equipment Manufacturer(OEM) or an authorised dealer of the OEM for the offered equipment. Dealers have to submit along with the offer, a valid Certificate of Authorisation from OEM for quoting the system, alongwith declaration for support from OEM during erection & commissioning, after sales service & necessary spares.	Vendor to specify and submit authorisation in case of Dealer			
12.2	The dealer or its OEM must have supplied and commissioned at least one equipments meeting specifications as per Clauses 2.1 to 2.5 in the past seven years (on the date of opening of Tender) and these equipments are working satisfactorily for more than one year after commissioning . Note: Item is related to public safety, as this will used for testing of Ventilators; hence relaxation to MSME and Startup bidders, shall not be allowed.	Vendor to note			
12.3	The following information should be submitted by the vendor about the companies where similar equipments have been supplied. This is required from all the vendors for qualification of their offer.	Vendor to submit			
12.3.1	Un-priced Purchase Orders for equipments supplied in line with Clause 12.2	Vendor to submit			
12.3.2	Complete postal address of the customer.	Vendor to submit			
12.3.3	Month & Year of commissioning.	Vendor to submit			
12.3.4	Details of equipment supplied & application for which it is used.	Vendor to submit			
12.3.5	Name and designation of the contact person of the customer.	Vendor to submit			
12.3.6	Phone, FAX no. and email address of the contact person of the customer.	Vendor to submit			
12.3.7	Vendor to self certify that the materials supplied, erected and ccommissioned against purchase order submitted for Clause 12.3.1, are working satisfactory.	Vendor to submit			
12.4	BHEL reserves the right to verify information submitted by vendor. In case the information is found to be false/incorrect, the offer shall be rejected.	Vendor to note			
12.5	The bidders shall submit the latest I.T.R/ Balance Sheet/ Profit & Loss Statement/ any other document certified by CA for evidance of turnover for last three years. Turnover should be minimum 1 Lakhs.	Vendor to submit			
13	POINTWISE CONFIRMATION:				
13.1	Vendor should confirm/clarify pointwise (all the points) as per specification and provide original technical leaflet, technical details, photographs, scope of supply etc. at the first instance.	Vendor to confirm			