



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

ENQUIRY

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Fax :

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NOTICE INVITING TENDER

TWO PART BID

Tender to be submitted in two Parts

Enquiry
Number:

2631600042

Enquiry
Date:

29.07.2016

Due date for submission
of quotation:

30.08.2016

You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.

Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the tender should be submitted online on or before the due date by 14.00 Hrs (IST). Tenders received after 14.00 Hrs (IST) will not be considered for evaluation.

Item	Description	Quantity
10	500 CFM Electrically Operated Screw Compressor as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in or https://bheleps.buyjunction.in)	1.00 No.

Important points to be taken care during submission of offer

1. Material shall be delivered to
Indigenous Vendors:
FOR, BHEL, Stores
Power Plant Piping Unit
Thirumayam, Pudukkottai Dist.
2. Delivery required 4 months from the date of purchase order.
3. Erection & Commissioning period required 2 Weeks from the date of intimation by BHEL to vendor for deputation of their Engineers for E&C.
4. EMD for this Tender will be (INR) : 40,000.00
5. Checklist No: TMM/IND/07 to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
6. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.

BHEL's General guidelines / instructions (refer MM / CE / EPROC / GENL / 001-EMD) including bank guarantee formats and list of consortium banks, commercial terms check-list can be downloaded from <https://bheleps.buyjunction.in> or BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under above Enquiry reference.

Tenders should be submitted online at our above indicated web portal before 14:00 hours on the due date
Tenders will be opened online at 14:30 hours on the due date.

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

DGM / Capital Equipment / MM

Qualifying criteria (Part-A) : "500 CFM PORTABLE TYPE SCREW AIR COMPRESSOR UNIT"				
SCOPE	SUPPLY, ERECTION & COMMISSIONING OF 1 NO. "PORTABLE TYPE SCREW AIR COMPRESSOR UNIT" COMPLYING WITH SPECIFICATIONS AS BELOW :			
	QUALIFYING CONDITIONS:-			
1	Only those vendors, who have supplied and commissioned at least two nos. "Screw type Air Compressor" of same or higher capacity (Air delivery rate) in the past five years (on the date of opening of tender) and such Compressors are presently working satisfactory for more than 12 months after commissioning (on the date of opening of tender), should quote. The following information should be submitted by the vendor about the company (s) where similar compressors have been supplied. This is required from all the vendors for qualification of their offer.	Vendor to comply and submit with offer		
1.1	Name of the customer / company where similar Compressors are installed.	Vendor to provide details.		
1.2	Complete postal address of the customer.	Vendor to provide details.		
1.3	Month & Year of commissioning.	Vendor to provide details.		
1.4	Broad specification of the machine (s).	Vendor to provide details.		

1.5	Name and designation of the contact person of the customer.	Vendor to provide details.		
1.6	Phone, FAX no. and e-mail address of the contact person of the customer.	Vendor to provide details.		
1.7	Performance certificate from the customer regarding satisfactory performance of machine supplied to them (Original Certificate or Through e-mail directly from the customer). The original performance certificate may be returned after verification by BHEL, if required.	Vendor to provide details.		
1.8	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 confirm		

NOTE: Simply stating YES / NO / ACCEPTED / CONFIRMED will not be accepted and vendor has to provide details with respect to each parameter.

TECHNICAL SPECIFICATIONS OF "500 CFM PORTABLE TYPE SCREW AIR COMPRESSOR UNIT"				
SCOPE	SUPPLY, ERECTION & COMMISSIONING OF 1 NO. "PORTABLE TYPE SCREW AIR COMPRESSOR UNIT" COMPLYING WITH SPECIFICATIONS AS BELOW :			
SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION
1.0	PURPOSE:			
1.1	"Mobile Type Screw Air Compressor Unit" consisting of Screw Type Air Compressor, Air Dryer, Air Filters, Air Receiver and Valves etc. as per the following specifications is required to supply dry and clean compressed air in manufacturing shop, for the operation of different equipments.	Vendor to offer		
2.0	SPECIFICATIONS: "Screw Type Air Compressor Unit" consists of following with specifications given against each.	Vendor to offer		
2.1	SCREW TYPE AIR COMPRESSOR:	Vendor to offer		
2.1.1	Air delivery (minimum)	500 CFM		
2.1.2	Maximum Pressure	7.5 Kg. / Sq. Cm.		
2.1.3	Working Pressure (adjustable)	4.5 to 7.5 Kg./Sq. Cm.		
2.1.4	No. of stages	One (or more)		
2.1.5	Motor Power	Vendor to specify		
2.1.6	Operating Voltage	3 Phase, 415 V		
2.1.7	Electric Motor should be energy efficient (EFF-1) and IP-55 Class F.	Vendor to confirm		
2.1.8	Suitable for continuous duty	Vendor to confirm		
2.2	AIR DRYER: Refrigerated type Air Dryer, suitable for application of the above Compressor to deliver dry compressed air of the required quality. Stand alone Air dryer mounted on a common platform to be supplied.	Vendor to offer and submit details		
2.3	AIR FILTERS: Set of suitable Air Filters consisting of Pre-Filter, Fine Filter and Carbon Filter for application of the above Compressor to deliver dry and clean compressed air of the required quality	Vendor to offer and submit details		

SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION
2.4	AIR RECEIVER:			
2.4.1	Capacity (minimum)	1000 Litres		
2.4.2	Max. Working Pressure	10 Kg / Sq. Cm.		
2.4.3	Confirming to ASME Section VIII, Div.1 / IS 2625 Norms or equivalent	Vendor to confirm		
2.5	ACOUSTIC ENCLOSURE			
2.5.1	Suitable Acoustic Enclosure to cover Air Compressor and Drier to reduce noise level below 70 db.	Vendor to offer		
2.5.2	Acoustic enclosure should be designed such that no pressure drop at suction filter and avoids entry of dust particles.	Vendor to offer		
2.5.3	Suitable Anti vibration mounts to be provided.	Vendor to confirm		
2.5.4	Size and details of Acoustic Enclosure	Vendor to submit details		
2.6	FIRST FILLING OF OILS / REFRIGERANT			
2.6.1	First filling of all required Oil, Grease and Refrigerant etc. required for the Compressor and other items like Air Filter, Air Drier and Air Receiver etc., to be supplied by vendor. Makes of such items / codes to be submitted by the vendor.	Vendor to offer		
2.7	Zero Air Loss Automatic Drain Valve:			
2.7.1	Zero Air Loss Automatic Drain Valve for draining condensed air from the Dryer.	Vendor to offer		
2.8	OTHER ITEMS:			
2.8.1	Necessary Hoses and Pipes in required length and size, Connectors and Valves required between Compressor, Air Dryer and Filters to be supplied with the equipment	Vendor to offer		

SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION
3.0	QUALITY OF DELIVERED AIR: Compressor unit should deliver compressed air according to ISO - 8573-1, having the following parameters of compressed air.	Vendor to confirm		
3.1	Pressure Dew Point	3 - 4 Degree Celsius		
3.2	Max. outlet air Temperature	50 Degree Celsius		
3.3	Solid Particle / Dust	Class - I		
3.4	Humidity	Class - IV		
3.5	Oil Content	Class - I		
4.0	REQUIREMENT FOR ELECTRICAL EQUIPMENT			
4.1	Voltage = 415V +10% / -10%, Frequency = 50Hz +3/ -3, No. of phases = 3 phase with neutral. Power Supply source, as above, will be provided by BHEL at a single point near the machine. The machine should be terminated with suitable capacity Electrical Isolator, as part of the machine and a 10 m x 4 core cable of suitable capacity to be supplied along with the machine. All types of cables, connections, circuit breakers etc. required for connecting BHEL's power supply point to different parts of the machine / control cabinets including Transformer & Air-Compressor etc. shall be the responsibility of vendor.	Vendor to confirm		
5.0	Power Control Panel			
5.1	Power panel incorporating: 1. Suitable Star- Delta starter with contractors, relays etc 2. Single phasing preventer ensures safety of compressor by tripping in case of single phasing and phase sequence relay to avoid reverse rotation 3. Emergency stop button	Vendor to offer		

SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION
6.0	Control Panel			
6.1	Electronic microprocessor for surveillance, management and monitoring of compressors	Vendor to offer		
6.2	Functions of electronic microprocessor system:			
	1. Load unload control 2. Accurate pressure control 3. Programmable start stop 4. Delayed second stop 5. Dual pressure band setting 6. Multi logic control 7. Multi mode control (local / remote/ LAN) 8. Intelligence shutdown protections 9. Automatic restart after voltage failure	Vendor to offer		
6.3	Keys			
	1. Start 2. Stop 3. Cancel	Vendor to offer		
6.4	Luminous indications			
	1. Power supply indications 2. Automatic function mode 3. Error	Vendor to offer		
6.5	LCD display			
	1. Operational status at a given instance 2. Maintenance messages(alarms and faults) 3. Setting parameters of the compressor	Vendor to offer		
6.7	Compressor warning and shut down indications			
	1. Emergency stop 2. Air outlet temperature 3. Main motor overload 4. Fan motor overload 5. General fault indication	Vendor to offer		

SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION
7.0	ENVIRONMENTAL PERFORMANCE OF THE MACHINE: The Machine should conform to following factors related to environment			
7.1	If any safety / environmental protection enclosure is required it should be built in the machine by the vendor.	Vendor to confirm		
7.2	Paint of the machine should be oil / coolant resistant and should not get peeled off and mixed up with coolant.	Vendor to confirm		
7.3	Colour of the machine unit shall be mutually agreed between the vendor and BHEL after placement of order.	Vendor to confirm		
8.0	POWER SUPPLY / ENVIRONMENT CONDITION			
8.1	The machine should be suitable for operation in the following conditions: Power supply for the machine: 415 V +10 % / -15 %, 3 phase, 50 Hz +/-3 % - Ambient Temperature range : 5 deg celsius to 45 deg celsius - Relative humidity: 95 % max. - Other conditions: Similar to tropical country. - Dust laden atmosphere during some part of the year.	Vendor to confirm		
9.0	SPARES :			
9.1	Vendor to offer their recommended mechanical, electrical and hydraulic spares for 2 years of trouble free operation of Compressor and other items like Air Filter, Air Drier and Air Receiver etc. Itemised breakup of the offered spares should be offered by vendor. Unit Price of each item of spare should be offered.	Vendor to offer		

SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION
10.0	O & M MANUALS:			
10.1	Three sets of Operation & Maintenance Manuals in English language and its soft copies in CD should be supplied along with the equipment. Manuals should contain the following information in it.	Vendor to offer		
10.2	Operating manuals of Compressor including other items like Air Filter, Air Drier and Air Receiver etc.	Vendor to offer		
10.3	Detailed Maintenance manual of Compressor including other items like Air Filter, Air Drier and Air Receiver etc. With the help of drawings of main assemblies/sub-assemblies/parts including Electrical / Coolant / Hydraulic circuit diagrams.	Vendor to offer		
10.4	Catalogues, Operation & Maintenance Manuals of all bought out items including drawings, wherever applicable.	Vendor to offer		
11.0	Quality plan	Vendor to offer		
11.1	Vendor to submit quality plan for BHEL approval after placement of order.	vendor to confirm		
12.0	PRE DESPATCH INSPECTION:			
12.1	Pre dispatch inspection will be carried out by BHEL representative at vendor's works. Vendor should arrange for complete run test during the inspection at vendor's works. Final acceptance will be done at BHEL, Power Plant Piping Unit, Thirumayam during the commissioning of the Compressor.	Vendor to offer		

SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION
13.0	ERECTION & COMMISSIONING			
13.1	Supplier to take full responsibility for carrying out the assembly and commissioning of Compressor alongwith its all accessories at BHEL - Thirumayam plant. Electrical power shall be provided by BHEL at only one point to be indicated by supplier in their layout drawings. Other requirements like crane shall also be provided by BHEL. During commissioning, vendor will have to demonstrate proper operation / functioning of the Compressor and all other items like Air Drier, Air Filter and Air Receiver etc.as per their specifications. Quality of outlet air from the Compressor Unit will also to be demonstrated as per the technical specifications.	Vendor to offer		
13.2	The charges for E&C to be quoted seperately.	Vendor to offer		
14	GENERAL			
14.1	Total Space required (Length, Width, Height) for complete Compressor including all items like Filter and Drier etc. should be sent along with the offer.	Vendor to provide details.		
14.2	The supplier is to submit a clause wise deviation statement against each clause of this technical specification along with the offer.	Vendor to provide details.		
15	GUARANTEE PERIOD			
15.1	The manufacturer shall provide guarantee for the entire supply for a period of minimum 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier.	Vendor to confirm		

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