


N. (e) 163/2015
 (Mgr, Maint-NBS)

 BHARAT HEAVY ELECTRICAL LIMITED UNIT'S ADDRESS: HEEP, RANIPUR HARIDWAR - 249403 UTTARANCHAL, INDIA		Indent No.: Enquiry No.: Due Date : Supplier Contact. No.:	Dated:
CONTACT PERSON FROM PURCHASE DEPTT.: NAME: MR. K ROY DESIGNATION: Manager (PPX-CAP) PHONE NO.: 0091 - 1334 - 285291 E-MAIL: kroy@bhelhwr.co.in FAX NO.: 0091 - 1334 - 226462		Date :	
SPECIFICATION CUM COMPLIANCE CERTIFICATE FOR AIR COMPRESSOR 4 NO.			
NOTE :-			
1. Vendor must submit complete information against clause No. 24 (Qualifying Criteria) of the offer. Only the offers complying this clause, would be considered.			
2. The vendor should fill the Offered Column in compliance to specified requirements and also Deviations Column, where there is deviation from the requirement. In case any clause is not applicable to the vendors machine, it should be mentioned clearly next to said clause along with explanation for the same. Duly filled specification cum compliance certificate should be 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. Any changes made to the clauses of the specification cum compliance certificate may be considered as grounds for non compliance and rejection of offer. Under no circumstances should any changes be made in the clauses of the specification cum compliance certificate.			
3. The offer and all documents enclosed with offer should be in English language only.			
ADDRESS OF THE SUPPLIER : TELEPHONE NOS.: FAX NOS.: E-MAIL ADDRESS :		ADDRESS OF THE INDIAN AGENT(S) : TELEPHONE NOS.: FAX NOS.: E-MAIL ADDRESS :	
SCOPE: SUPPLY, ERECTION AND COMMISSIONING OF AIR COMPRESSORS 4 NO.			
S. No.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	DEVIATION
1.00	PURPOSE		REMARKS
1.01	Air compressor, air cooled, silenced and rotary screw type, capable of supplying continuous compressed, dust and moisture free air at 7 bar or more and at a capacity of 91 CFM FAD or more.	Vendor to confirm	
2.00	The compressor should be single stage type.	Vendor to confirm	
3.00	The quality of air supplied should be as per ISO 8573-1 with the following 1. for dirt - class 6 or better (particle size<=5micron) 2. for water - pressure dewpoint<=+5 deg celcius or better 3. for oil - class 4 or better (total oil concentration<=5mg/m cubed)	Vendor to confirm	
4.00	DRIVE SYSTEM	Vendor to confirm	

Ratnesh Kumar
 (SE, Maint-E)
 30/05/13

S. S. KUMAR
 30/5/13

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 30/5/13
 Saniya Kumar (Dy. Mgr., TBM-PEB)

S. No.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION	REMARKS
4.01	Details of the motor(make, specifications, etc)used in the system to be provided by the vendor.	Vendor to confirm and submit necessary details.			
5.00	AIR SUPPLY SYSTEM	Vendor to confirm			
5.01	The Air supply system of the compressor should comprise of the following elements :-	Vendor to confirm			
5.02	Heavy Duty Air Intake Filter	Vendor to confirm			
5.03	Air Intake Valve	Vendor to confirm			
5.04	Compression Element	Vendor to confirm			
5.05	Non return valve	Vendor to confirm			
5.06	Air/oil separator vessel & oil separator	Vendor to confirm			
5.07	Minimum pressure valve	Vendor to confirm			
5.08	Aftercooler	Vendor to confirm			
5.09	Air to Air heat exchanger	Vendor to confirm			
5.10	Air receiver as describes in clause 6	Vendor to confirm			
6.00	AIR RECEIVER	Vendor to confirm			
6.01	The system should have an air receiver with the following features:-	Vendor to confirm			
6.02	Volume of air receiver - 500 lt or more	Vendor to confirm			
6.03	Safety Valve	Vendor to confirm			
6.04	Isolation Valve	Vendor to confirm			
6.05	Auto Drain Valve	Vendor to confirm			
6.06	digital pressure gauge	Vendor to confirm			
6.07	Supporting stand	Vendor to confirm			
7.00	LUBRICATION SYSTEM	Vendor to confirm			
7.01	Lubrication system of the compressor should consist of the following :-	Vendor to confirm			
7.02	Oil Cooler	Vendor to confirm			
7.03	Thermostatic Bypass Valve	Vendor to confirm			
7.04	Oil Filter	Vendor to confirm			
7.05	Lube Oil - specifications of the lube oil to be used is to be provided by the vendor along with names of minimum 2 products of INDIAN make which can be used in the system.	Vendor to confirm and submit necessary details.			
7.06	Compressor oil - 100 liters	Vendor to confirm & offer			
8.00	AIR DRYER SYSTEM	Vendor to confirm			
8.01	The air dryer system of the compressor should be regirgant type and consist of the following:-	Vendor to confirm			
8.02	Refrigrant compressor	Vendor to confirm			
8.03	Condensor	Vendor to confirm			
8.04	Liquid refrigrant dryer filter	Vendor to confirm			
8.05	Thermostatic Expansion Valve	Vendor to confirm			
8.06	Evaporator	Vendor to confirm			
8.07	Hot gas bypass valve	Vendor to confirm			

Sanjiv Kumar
(Dy. Mgr., TBW: PEB)

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Sanjiv Kumar
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(Mgr, Maint-NBS)

S. No.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION	REMARKS
8.08	Accumulator	Vendor to confirm			
9.00	CONTROL SYSTEM	Vendor to confirm			
9.01	Control System for air compressor should consist of the following :-	Vendor to confirm			
9.02	Fan motor overload relays	Vendor to confirm			
9.03	Fully Automatic Star-Delta Motor starter of suitable rating with built in single phasing & overload protection relay conforming to IS-13947 & IEC-60947. (Make acceptable : Siemens, L&T, ABB)	Vendor to confirm & inform make/model/rating			
9.04	Transformers	Vendor to confirm			
9.05	Start / Stop button	Vendor to confirm			
9.06	Automatic startup and shutdown operation.	Vendor to confirm			
9.07	Finger Protection for buttons of the control panel	Vendor to confirm			
9.08	Indicator for automatic operation	Vendor to confirm			
9.09	Dryer ON/OFF button	Vendor to confirm			
9.10	digital pressure gauge	Vendor to confirm			
9.11	Dew Point Indicator	Vendor to confirm			
9.12	Hour-meter to indicate total hrs of operation.	Vendor to confirm			
9.13	Electronic control, regulation, safety and indication panel (display type)	Vendor to confirm			
9.14	All necessary wiring & Power supply cable of suitable rating & length for connecting Compressor with main power supply.	Vendor to confirm			
9.15	Provision to be made for compressor to be connected in parallel with existing main supply line. The system should detect if the main supply pressure is below 6 bar and then automatically start-up to supply air. Also the system should be capable of detecting when the main air supply is back to 6 bar and corresponding automatically shutdown.	Vendor to confirm			
9.16	The control system should have easy access for service and maintenance activities.	Vendor to confirm			
10.00	The compressor should not require any kind of foundation for installation.	Vendor to confirm			
11.00	The vendor should be manufacturing the compressor as a standard, catalogue item and should mention their yearly turnover from this product. Also the vendor should be ISO 9000 (or equivalent foreign standard) certified for this product.	Vendor to confirm & give necessary details.			
12.00	DOCUMENTS AND MANUALS	Vendor to confirm			

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(SE, Maint-E)

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Santv Kumar
(Dy. Mgr., TBM-PEB)

S. No.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION	REMARKS
12.01	3 sets of all operational and maintenance manuals containing all assembly/ sub assembly drawings, circuit diagrams with proper identification no. and descriptions and electrical system shall be supplied. The manuals should also contain detailed spare part list along with specification, part number and address of manufacturers.	Vendor to confirm			
12.02	Basic Machine operation and maintenance/ service manual - 3 copies	Vendor to confirm			
12.03	Electrical schematic of the machine- 3 copies	Vendor to confirm			
12.04	All Documentations in CD - 1 set	Vendor to confirm			
12.05	Complete list of parts used in the compressor along with specification, part/ ordering numbers and address of manufacturer in case of purchased item- 3 copies.	Vendor to confirm			
12.06	Spare part list along with specification, part number and address of manufacturers (including Brought out items) - 3 sets.	Vendor to confirm			
12.07	Service and user manuals of all bought out items, if any- 3 sets.	Vendor to confirm			
13.00	TOOLS FOR ERECTION, OPERATION & MAINTENANCE	Vendor to confirm			
13.01	Tools and Equipment required for erection of the compressor shall be brought by the vendor. Necessary tools for operation and maintenance of the machine should also be supplied by the vendor. List of such tools should be submitted with offer.	Vendor to confirm & give necessary details.			
14.00	ERECTION & COMMISSIONING	Vendor to confirm			

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30/10/13

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N. Tarzin
(Mgr., Maintenance)

S. No.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION	REMARKS
	Supplier to take full responsibility for carrying out the erection, start up, testing of compressor, it's control & all types of other supplied equipment, etc. Service requirement like power, air & water shall be provided by BHEL at only one point if required. The each compressor is to be located at a maximum distance of 35m (can be less) from the target machines to which air is to be supplied. 4 no. air compressors will be connected to 9 target machines (3 compressors will be connected to 2 machines each while 1 compressor will be connected to 3 machines) with suitable valve arrangement to ensure that at any given time one compressor is supplying to one machine only. It should be possible to select the machine to which air is to be supplied using valves. Piping for air from equipment to target machines, any required valves to switch air flow from one machine to another as well as electric cables for the same distance to be provide for and erected by the vendor. Helping personnel shall be provided by BHEL for erection and commissioning activities. Details of these requirements should be informed by vendor in advance.	Vendor to confirm & give necessary details.			
15.00	PROVEOUT AND ACCEPTANCE	Vendor to comply			
15.01	After successful erection and commissioning at BHEL, Hardwar supplier shall carry out field testing to prove the system. Supervision of two days (2 working days) routine operation after satisfactory commissioning is required. Final acceptance shall be made by BHEL at BHEL, Hardwar after successful completion of erection, commissioning, testing and supervision.	Vendor to comply			
16.00	SPARES				
16.01	Spares for atleast 2 years, three-shift trouble free operation of compressor should be offered. The spares's offer should contain individual item wise list along with price breakup, specification and source of supply. The following spares should be necessarily included.				
16.02	Fully Automatic Star-Delta Motor starter (as stated in point 9.03 above)- 2 Nos.	Vendor to confirm & offer			
16.03	Main Motor (as stated in point 4 above) - 1 No.	Vendor to confirm & offer			

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Ramesh Kumar
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N. Terbit
(Mgr, Maint-NRS)

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