



An ISO 9001  
Company

# Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

## ENQUIRY

### NOTICE INVITING TENDER

Phone: +91 431 257 7653

Email : [skaruna@bheltry.co.in](mailto:skaruna@bheltry.co.in),

[ajay@bheltry.co.in](mailto:ajay@bheltry.co.in)

Web : [www.bhel.com](http://www.bhel.com)

TWO PART BID	Enquiry Number:	Enquiry Date:	Due date for submission of quotation:
Tender to be submitted in two Parts	2631700048	04.10.2017	27.10.2017

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 offer is reaching physically our office before 14.00 hrs on the Date of tender opening.

Item	Description	Quantity
10	High Pressure Breathing Air Compressor as per the technical specification & commercial conditions applicable (to be downloaded from web site <a href="http://www.bhel.com">www.bhel.com</a> or <a href="http://tenders.gov.in">http://tenders.gov.in</a> )	1 No.

### Important points to be taken care during submission of offer

1. Compliance Form No: TRY/ IND/ 06 to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
2. Delivery period required is 3 months from the date of P.O.
3. Commissioning and performance prove out shall be done at BHEL Trichy by the supplier
4. Time period required for commissioning and performance prove out shall be 2 weeks from the date of intimation by BHEL
5. EMD for this tender Rs.40,000/-
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/GENL/001- EMD), compliance form and technical specification can be downloaded from 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 Enquiry reference.

Tenders should reach us before 14:00 hours on the due date  
Tenders will be opened at 14:30 hours on the due date  
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,

For BHARAT HEAVY ELECTRICALS LIMITED

AJAY V. ASALKAR

Sr. MANAGER

MM / Capital Equipment  
Sr. Manager / Capital Equipment / MM  
Tiruchirappalli - 620 014.

**HIGH PRESSURE BREATHING AIR COMPRESSOR WITH CONTAINMENT FILL STATIONS – QTY.01.****PART A - QUALIFYING CRITERIA****SECTION 1: Qualifying Criteria**

The Bidder has to compulsorily meet the Qualifying criteria indicated in SECTION 1 to get qualified otherwise the technical offer will not be considered.

<b>Sl No.</b>	<b>PARTICULARS</b>	<b>VENDOR'S RESPONSE (With supporting documents)</b>
<b>1.1</b>	BIDDER /VENDOR shall have a minimum 5 years of continuous experience in the supply of High Pressure Breathing Air Compressor for industrial Fire Fighting activities. Bidder shall indicate the actual no. of years of experience in this field.	
<b>1.2</b>	BIDDER /VENDOR shall have supplied & commissioned at least 5 numbers of High Pressure Breathing Air Compressor range of 225 liters per minute or above Capacity, complying to EN 12021 standards. Bidder to indicate the Number of such High Pressure Breathing Air Compressor supplied & commissioned till date. Address, contact phone numbers and e- mail id of the vendors customers shall be provided.	
<b>1.3</b>	Year of launch of the Model quoted against this Enquiry	
<b>1.4</b>	At least one performance certificate from their customer for satisfactory performance of the offered model for a minimum period of one year (as on original date of tender opening) from the date of commissioning shall be submitted with the offer with full contact details. Suggested format is given as an Annexure.	
<b>1.5</b>	The vendor shall have 'in-house' or 'self-owned' or 'tied-up' facility for Manufacture and Testing of High Pressure Breathing Air Compressor. Dealers /Distributors offering shall have to submit the valid authorization from the OEM.	
<b>1.6</b>	Servicing facility to be available in India. Details on Service-After-Sales Set-Up in India (Address of Agents / Service Centers), to be furnished compulsorily. Is AMC undertaken?	
<b>1.7</b>	If required BHEL shall visit the equipment installed in the referred list of customer's vendor shall obtain necessary permission from their customers for the visit.	
<b>1.8</b>	BHEL reserves the right to verify the information provided by the Vendor. In case the information provided by Vendor is found to be false / incorrect, the offer shall be rejected.	

**SECTION 2:** The Bidder is requested to provide the following information:

<b>S No.</b>	<b>PARTICULARS</b>	<b>VENDOR'S RESPONSE (With supporting documents)</b>
<b>2.1</b>	Details of design Set-up / Codes & standard used and testing of High Pressure Breathing Air Compressor. Bidder to furnish the details of Testing Aspects of equipment.	
<b>2.2</b>	The BIDDER shall give details about supply of similar High Pressure Breathing Air Compressor to other BHEL units , if any with make, Model and year of supply & commissioning etc.	
<b>2.3</b>	Any additional data to supplement the manufacturing capability of the BIDDER.	

**SECTION 3:** The Bidder to comply with the following:

<b>S No.</b>	<b>PARTICULARS</b>	<b>VENDOR'S RESPONSE (With supporting documents)</b>
<b>3.1</b>	The Bidder shall submit the offer in Two Parts – Technical [with PART A & PART B] & Commercial and Price Bid.	
<b>3.2</b>	The VENDOR's RESPONSE column against each clause in PART A & B of the offer should be filled by the Bidder compulsorily with complete details.	
<b>3.3</b>	The Bidder shall assure a continuous support for Spares and Service for 10 Years, from the date of commissioning of the equipment at BHEL Works.	
<b>3.4</b>	The Technical Offer shall be supported by Product Catalogue and Data Sheets and complete technical details / literature on the quoted models.	
<b>3.5</b>	The Commercial Offer (given with the Technical Offer) shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation.	

**Annexure:**

The performance certificate should be produced on **Customer's letter Head**

*(On Customer's letter head)*  
**PERFORMANCE CERTIFICATE**

1. Supplier of the Equipment :
2. Make & Model of the Equipment :
3. Month & Year of Commissioning :
4. Quantity :
5. Equipment Details
  - a) Capacity per minute :
  - b) Operating Pressure :
6. Application of the High Pressure Breathing Air Compressor :
7. Performance of the Machine : Satisfactory / Good / Average / Not Satisfactory  
(Strike off whichever is not applicable)
8. After sales service : Satisfactory / Good / Average / Not Satisfactory  
(Strike off whichever is not applicable)
9. Any Other remarks :

Date:

Signature & Seal of the Authority  
Issuing the Performance Certificate

**HIGH PRESSURE BREATHING AIR COMPRESSOR WITH CONTAINMENT FILL STATION– QTY. 01 No.****PART B – TECHNICAL SPECIFICATION**

<b>Sl No.</b>	<b>BHEL REQUIREMENTS</b>		<b>VENDOR'S REPLY (With supporting documents)</b>
<b>1.0</b>	<b>Purpose</b>	High Pressure Breathing Air Compressor will be used for refilling the Air to self-contained Breathing Apparatus(SCBA) Air Cylinders used by fire fighters at the pressure of 200 Bar & 300 Bar. Containment fill stations provided to ensure safe refilling of cylinders	
<b>2.0</b>	<b>Equipment Description</b>		
<b>2.1</b>	The High pressure Breathing Air compressor with containment fill station must combine proven and tested technology ,robustness and most simple operation with high supply volumes and reliably ensure safe and quick supply of breathing air as per EN 12021		
<b>3.0</b>	<b>Ambient Temperature</b>	Max +45 degree °C	
<b>4.0</b>	<b>Free air delivery (FAD)</b>	Minimum 225litres/min	
<b>5.0</b>	<b>Maximum Operating pressure</b>	300 bar	
<b>6.0</b>	<b>Cylinder filling Pressure</b>	Two separate provisions for filling the Air at different Pressure of 200 bar and 300 bar	
<b>7.0</b>	<b>Motor</b>	3 phase, 50Hz, 415 V $\pm$ 10 % Motor rating vendor to specify (with in 6 KW).Motor shall be reputed make vendor to specify	
<b>8.0</b>	<b>Drive</b>	V-belt drive via electric motor	
<b>9.0</b>	<b>Dimensions</b>	Vendor to specify	
<b>10.0</b>	<b>Compressor system</b>		
<b>10.1</b>	The compressor will be 3 stage air cooled high pressure compressor with inter cooled between stages and after cooled after final stage, Inter cooler and after coolers made of stainless steel providing protection against corrosion		
<b>10.2</b>	Must have frame design that ensures easy access for maintenance and adequate mounting for absorbing vibration		
<b>10.3</b>	All the three stages to be equipped with safety Relief valve.		
<b>10.4</b>	The air should be sucked in via a suction filter to remove dust particles in air and then it should be compressed in the compressor.		
<b>10.5</b>	After compression the moisture should be separated and air should be filtered in the main filter cartridge to remove all impurities and to make it		

	suitable for breathing.	
<b>10.6</b>	The complete unit will be mounted inside an enclosed canopy for noise level not more than 90db.	
<b>10.7</b>	Vendor to provide details of the filtration system	
<b>10.8</b>	Piston ring to be durable and wear resistant vendor to provide details	
<b>10.9</b>	The engine must be designed for 8 hours continuous duty operation	
<b>10.10</b>	Vendor to provide details of oil pump with oil filter	
<b>10.11</b>	Automatic condensate drain with drain collection tank with level indicator. Vendor to specify the tank capacity and details of drain system.	
<b>11.0</b>	<b>CONTROL PANEL:</b> Following features are to be provided on the Control Panel	
<b>11.1</b>	START & STOP Switches	
<b>11.2</b>	Emergency stop switch	
<b>11.3</b>	Phase control switch to prevent reverse rotation	
<b>11.4</b>	Inter stage pressure gauge	
<b>11.5</b>	Final pressure gauge	
<b>11.6</b>	Pressure switch to set filling pressure and for automatic stop so that compressor stops when cylinder filled to desired pressure	
<b>11.7</b>	Hour Meter to show how many hours compressor has run	
<b>12.0</b>	<b>PURIFICATION FILTER SYSTEM</b>	
<b>12.1</b>	Air quality as per EN 12021 standard (suitable for breathing).	
<b>12.2</b>	Vendor to provide details of filter cartridge life in hours	
<b>12.3</b>	Display warning of filter cartridge change, maintenance requirement & operating hours.	
<b>13.0</b>	<b>CONTAINMENT FILL STATIONS</b>	
<b>13.1</b>	Fill Stations shall be built and tested as per current standards established by NFPA 1901, 2009 Edition	
<b>13.2</b>	Fill station shall be connected with compressor with sufficient length of hose /hoses, The hose shall be provided as per standard	
<b>13.2</b>	Containment fill stations with minimum two fill positions	
<b>13.3</b>	Should contain cylinder scuff guard, fill connection, fill hose and bleed valve	
<b>13.4</b>	Fill control panel with adjustable regulator, relief valve, manual control valve and pressure gauge for each fill position	
<b>13.5</b>	Safety door interlock with convenient door handle	
<b>13.6</b>	Mounting base with Provision for bottom venting	
<b>13.7</b>	Structure made of formed plate steel	
<b>13.8</b>	Door design for easy opening and closing with less force	
<b>14.0</b>	<b>CONTROL PANEL IN FILL STATION:</b> Following features are to be provided on the Control Panel of fill station	
<b>14.1</b>	Inlet pressure gauge	
<b>14.2</b>	Adjustable Pressure regulator	
<b>14.3</b>	Regulated pressure gauge	
<b>14.4</b>	Two fill control valves	
<b>14.5</b>	Two fill pressure gauges	
<b>14.6</b>	One relief valve for regulated fill pressure	

<b>14.7</b>	Provisions to allow a different fill pressure at each fill position		
<b>15.0</b>	<b>Tool Kit/Oil &amp; Instructions</b>		
<b>15.1</b>	Necessary tool kit for compressor along with first fill of oil and operating manual should be supplied with the compressor.		
<b>16.0</b>	<b>Spares Parts / Consumables</b> : The following spare parts / consumable to be provided by Vendor :- a) Suction Filter Element : 1 no. b) Main Filter Cartridges : 2 nos. c) Oil refill along with the compressor : 1 no. d) Filling hoses : 1 set		
<b>16.1</b>	Spare part availability to be ensured for minimum period of 10 years from date of commissioning .Vendor to confirm.		
<b>17.0</b>	<b>Pre –Dispatch Inspection (PDI)</b>		
<b>17.1</b>	The equipment shall be offered for inspection prior to dispatch with PDI Call Letter and factory Inspection test certificate. Equipment to be dispatched by the Supplier after the verification of the test certificate of the equipment and dispatch clearance given by BHEL.		
<b>18.0</b>	<b>General:</b>		
<b>18.1</b>	<b>O &amp; M manuals</b>	Three copies of the detailed Operation & Maintenance and safety instructions to be provided along with the equipment.	
<b>18.2</b>	<b>Supply, Erection &amp; Commissioning</b>	Supply, Erection, Testing & Commissioning and prove out test which Includes Capacity ,Quality of Air and Noise Level of the equipment to be done by Supplier& filling of 10 nos of cylinders at 200 bar and 10 nos of cylinders at 300 bar to be proved by Supplier at BHEL WORKS.	
<b>18.3</b>	<b>Training</b>	Training on operation, maintenance and trouble-shooting of the equipment should be provided to BHEL personnel by the supplier during commissioning.	
<b>18.4</b>	<b>Service</b>	Two free services (including preventive & breakdown maintenance) to be provided with in the guarantee period.	
<b>18.5</b>	<b>AMC</b>	Two years AMC charges to be furnished separately besides free services as mentioned above.	
<b>18.6</b>	<b>Certificate</b>	1. EN 12021 certificate for the air quality by authorised agent. 2. Proof testing certificate of filling station as per NFPA 1901:2009. 3. Safety valve test certificate. 4. Pressure Gauge calibration certificate to be provided along with Item supplied.	