



**CENTRAL POLLUTION CONTROL BOARD**  
**(Ministry of Environment and Forests, Government of India)**

Parivesh Bhawan  
Regional Directorate (West), Opposite VMC Ward Office 10,  
Subhanpura, Vadodara-390023  
Tel.: 0265-2392831-33, 2392985-86 Fax: 0265-2392987

**ZOW/Tech-210/2017-18**

**Date: 11.05.2017**

**To**

**Sub.: Invitation of limited tender for supply, installation and commissioning of noiseless/silent Air Compressor along with air purification system, SS tubing, pure gas handling chamber and 19 inch rack for mounting ambient air quality analysers in Ring test & Static injection facility (Calibration lab) at CPCB, Regional Directorate, Vadodara.**

**Central Pollution Control Board (CPCB) Regional Directorate, Vadodara** is inviting two bid (One technical and One financial bid) sealed quotations for the supply, installation and commissioning of noiseless/ silent **Air Compressor** along with air purification system, SS tubing, pure gas handling chamber and 19 inch rack for mounting ambient air quality analysers for the Ring test & Static injection facility (Calibration lab) as per the specification provided and conforming to national standards. The specifications are provided in **Annexure-1** and the general terms and conditions are as follows:

**Terms and conditions:**

1. The rate quoted should be net i.e. inclusive of all taxes, freight charges, installation and commissioning, etc. No increase in rate shall be allowed. The rates should be quoted in figures as well as in words.
2. Specification given are generalised in nature and not exhaustive. However, the bidders should primarily adhere to the specifications given in **Annexure-1**. Any advanced feature should be highlighted in the format given in **Annexure-2** to improve the competitiveness of the bidder.
3. The entire items should be treated as single package and any sub-letting is not allowed. Therefore, the eligible bidders should quote for all the required items. The eligible bidder may visit the laboratory of CPCB Regional Directorate, Vadodara with prior information for better understanding of site and requirement suitability on any date before the submission of quote.

4. The installation, commissioning, leak check and performance testing of all specified items tendered herewith for ring testing & static injection facility will be within the scope of supplier. The bidder should also provide detailed manual of equipment wherever available like air compressor, etc. The bidder should be competent enough to supply all tendered items. They should also produce enough documents to prove their good track records in the field of manufacturing/ supply of similar equipment to other parties.
5. The rate quoted should be valid for at least three months from date of opening of the Technical Bid. Rate quoted for a shorter period i.e. less than three months from the date of opening of quotations will be rejected. However, the extension of the validity of the quotation beyond three months will be subjected to mutual agreement between competent Authority of CPCB and the supplier.
6. The price bid should clearly super scribe “**Financial Bid**” and the technical bid should be clearly super scribe “**Technical Bid.**” All the technical information related to tendered items shall be submitted alongwith technical bid. Both Financial and Technical bid should be sealed separately and then contained and sealed in an envelope super-scribing “**Limited tender for supply and installation of Noiseless/silent Air Compressor along with gas purification and handling chambers for calibration laboratory of CPCB RD (W) Vadodara**” and mentioning our letter number and last date of submission of quotation.
7. The Technical bid at a minimum should contain detailed specifications of **Air Compressor**, Brochure of product, List of clients using your similar equipment, etc. It should be noted that mere quoting of lowest rates will not entitle any bidder to get the order. All the terms and conditions such as specifications, validity, warranty period, post installation service provisions, taxes etc. will be used as parameter to shortlist/ evaluate the successful bidders.
8. Price bid should contain the unit price and summed up as cumulative price and inclusive of all Taxes/Octrai etc., in detail in figures as well as in words. All other supporting documents and salient features should be enclosed with Technical bid only as the financial bid will only be opened for the bidder whose quotation will match with the specification attached as **Annexure-1** and preference may be given to the supplier who quotes with additional features (if any) and product performance at the other places where the similar system is installed by the bidder. Bidders are advised to use the format given in **Annexure-2, Annexure-3 and Annexure-4** while bidding. Annexure-2 and Annexure-3 should be submitted in technical bid envelope.
9. The **last date of receipt of bid is 05/06/2017 upto 15:00 hours** and the technical bid will be opened on the same day at 16:00 hours. The bids received after the deadline will not be considered.
10. The date and time for submission of quotations or opening of bids is normally fixed but may be extended by Competent Authority at his/her sole discretion.
11. The competent authority of CPCB reserves the right to accept or reject any or all the bids and placing the purchase order.

12. **Material supply:** The noiseless/ silent **Air Compressor, air purification system, gas handling chambers, etc. all items** are required to be supplied, installed and commissioned **within 4 weeks** of date of placing of confirmed order by CPCB. Failure if any may be liable to cancel the order. However, on request of successful bidder, CPCB may or may not extend the timeline beyond four weeks for supply, installation and commissioning of Air Compressor at its sole discretion.
13. If the material is found to be substandard and not meeting the specification quoted, the supply order shall be cancelled without any prior information and or without any financial payment.
14. **Payment terms and conditions:** No advance payments will be made. All the payments will be made either through online transfer of amount to your account or through cheque only and in Indian currency (rupees) after satisfactory supply and installation of material and production of bills/invoice in duplicate along with CST/GST numbers. The 90% of payments will be released after supply, installation and leak check and balance 10% will be released after satisfactory performance of installed equipment after completion of one year. The one year period shall be reckoned from the date of installation of complete items. Therefore, only 90% of the total quoted price by the successful bidder should be claimed after satisfactory supply and installation. The balance 10% retaining amount will have to be claimed by invoice or bills after completion of one year and performance certificate from the relevant CPCB end user.
15. **Post installation Service:** The competent servicing engineer of the supplier will have to make two visits after installation and commissioning free of charges within one year period, if any operational issue arises. The copy of visit/ service report will have to be submitted along with invoice/ bills of the material at the time of claiming retention amount. The equipment should have at least one year warranty. The warranty period should be clearly specified in technical bid.
16. **Correspondences:** All the communication/ materials receipt should be in the name of **The Regional Director, Regional Directorate (West), CPCB, Near VMC Ward Office -10, Subhanpura, Vadodara-390023, Gujarat.**
17. All correspondences should be made either through courier or registered/ speed post. Transition loss of any kind in sending the quotations/materials will be the responsibility of bidders.
18. **Clarifications and dispute:** All typographical errors are subject to corrections. In case of any dispute the decision of Chairman, Central Pollution Control Board will be final and binding on both the parties.

Yours faithfully,

(B.R. Naidu)  
Regional Director

**SPECIFICATIONS FOR THE ITEMS**

**Scope of work:** Supply, installation and commissioning of noiseless/silent Air Compressor along with air purification system, SS tubing, pure gas handling chamber and 19 inch rack for mounting ambient air quality analysers in Ring test & Static injection facility (Calibration lab) at CPCB, Regional Directorate, Vadodara

**ITEM NO.-1. TECHNICAL SPECIFICATIONS FOR “AIR COMPRESSOR”**

1. **Equipment Name:** Scroll type, air cool and oil free oil free Air Compressor with Dryer (Noise Less)
2. **Quantity required:** One (01)
3. **Description:** Pure Oil-free Air, Energy efficient, low noise level (Maximum 57 dBA, Simple & Reliable.
4. **Capacity:** Minimum capacity for air compressor buffer tank should be 250 Litres.
5. **Working Pressure:** Working pressure should be 10 bar.
6. **Motor:** Air compressor should be driven by 5HP TEFC electric motor suitable for 230/440 volts, single 3- phase, 50Hz, AC supply.
7. **Noise Level:** With sound insulated canopy to ensure sound levels of about 57 dB.
8. **Air inlet filter:** High efficiency to eliminate dust and particles below 1 µm.
9. **Automatic Regulation:** Provision of automatic stop when the required pressure is reached avoiding unnecessary energy cost.
10. **Others required feature:** Anti-vibration pad, earth protection, horizontal air receiver mounting, etc.
11. Entire installation, commissioning and performance testing will be within the scope of the supplier

**ITEM NO.-2. TECHNICAL SPECIFICATIONS FOR “CHARCOAL FILTER”**

1. **Equipment Name:** Activated Charcoal Filter
2. **Quantity Required:** one (01)
3. **Dimension:** Activated charcoal should be filled in two feet long and 3” (inches) outer diameter.
4. **Description:** i) Acrylic Cylinder, acrylic cover on both sides with threading arrangement for closing and opening.  
ii) Arrangement of nozzles on both sides of acrylic covers (in and outside) for connection of flexible pipe/ rubber pipe of internal diameter 9mm for compressed air should be made.  
iii) The charcoal should be of superior quality to purify the compressed air.

**ITEM NO.-3. TECHNICAL SPECIFICATIONS FOR “REGENERATION DRIER”**

1. **Equipment Name:** Electronic Regeneration Dryer
2. **Quantity Required:** one (01)

3. **Description:** 2 Stages, Solenoid valve alternatively operated on  $230 \pm 10 \%$ , 50 Hz supply to remove the 100 % moisture in the compressed air.
4. Arrangement of nozzles of outer diameter 9mm on both sides of dryer (in and outside) for connection of compressed air and dry zero air should be made.

**ITEM NO. 4. TECHNICAL SPECIFICATIONS FOR “STAINLESS STEEL TUBING FOR CALIBRATION GAS FLOW”**

1. **Equipment Name:** Stainless Steel (SS) Pipes for Calibration Gas Flow
2. **Quantity Required:** As per actual measurements, after supply and fixing.
3. **Pipe Description:** One SS pipe of 6.3mm outer diameter on wall surface for flowing of various calibration gases such as SO<sub>2</sub>, NO, CO and Copper pipe of 12 mm outer diameter for N<sub>2</sub>, zero air with:
  - (i) **Colour Coding:** Colour coding/painting in laid SS tubes for individual gas identification.
  - (ii) **Control Valve:** Control valve on both sides of SS tube i.e. gas in and gas out sides.
  - (iii) **Pressure gauges:** Pressure gauges of the range of 0 to 150 bar at the out let / exit of the each calibration gases.

**Note: (to be mentioned in tendering):** *The tenderer may like to see the existing system in Air Laboratory of CPCB Head Office at Delhi for better understanding, if so desire.*

**ITEM No. 5. TECHNICAL SPECIFICATIONS FOR PURE GAS HANDLING CHAMBER: TYPE MODULAR AND CUSTOMISED FABRICATION**

Chamber of size 4×3×3 (H × W × D) feet close from all sides with laminated board of min. 1" (1 inch) thickness front side open with sliding of acrylic door with handle and locking arrangement should be equipped with following items:

1. Double tube light fitting of 20 W = 1 No.
2. 9" exhaust fan with proper hood for exhausting the gases outside the chamber and room where it is to be installed.
3. Cylinder holding arrangement for holding 02 nos. gas cylinders.
4. Inside proper space for keeping 1 no. gas cylinder, 1 no. gas vacuum pump etc. The base of the chamber should be sturdy to bear the load of these system/accessories.
5. The chamber shall be used for working with 100 % concentrated gases such as SO<sub>2</sub>, NO<sub>2</sub> etc.
6. The chamber shall be placed on a concrete slab/platform of at least a height of 4 feet. The design drawing of pure gas handling chamber shall be mutually agreed.
7. The design of the chamber shall be of modular type to accommodate at earmarked location or fabricated at site suitable to the requirement.

**ITEM No. 6. TECHNICAL SPECIFICATIONS FOR “RACKS (19”-INCH) FOR HOUSING ANALYZERS, CALIBRATORS, MFC CONTROLLER AND OZONE GENERATOR.”**

1. **Equipment Name:** Rack Cabinet
2. **Quantity Required:** 02
3. **Dimension:**
  - i). The dimensions of the rack without doors, with Aluminium section and rear of 2 mm steel sheet, one removable roof plate, fitted with 4 filling eyebolts.

ii). Four gland plate three part, one pair of 475 mm (19") mounting angles depth adjustable in 25 mm pitch pattern fitted on two fixing angle approximately 150 mm unit from the front standard.

**Width-600mm, Height-1400mm, Depth-800mm**

4. **Description:** Suitable 19" rack cabinet to accommodate all analyzers in one rack and Mass flow meters and other items in second rack, etc.
5. Rack should be wheel mounted with locking arrangement for easy movement within the room.
6. The rack should be powder coated.

#### **ITEM NO. 7. TECHNICAL SPECIFICATION FOR HIGH PRECISION PRESSURE CUM**

#### **VACUUM GAUGE (ANALOG)**

1. **Equipment Name:** High precision pressure cum vacuum gauge
2. **Resolution/ laser count:** 0.005 bar
3. **Accuracy:**0.1% of full scale
4. **Bourden Tube:** Beryllium Copper Alloy
5. **Socket material:** 316 LSS
6. **Case:** Aluminium black painted
7. **Dial:** Aluminium green with black marking and anti-Parallax (10 inch (250mm))
8. **Range:** -1.0 bar to 1.5 bar

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**APPLICATION FORM**

(To be filled by the bidder and submitted in technical bid envelope)

1.	Name and full address of the Bidder including Telegraphic Address/Telex No. and Fax No.	:	
2.	Name and Designation of the Head of the Firm/supplier and his Telephone No.	:	
3.	Name, Designation, Address, Telephone & Fax Numbers of the Authorized Person who may be contacted during the process of the purchase concerned under this document	:	
4.	Whether the items are quoted for complete facility	:	
5.	Whether the items as per specifications given (Any change should be highlighted in <b>Annexure-3</b> )	:	
6.	Validity of Tender	:	
7.	If the tender documents are accepted in full (Yes or No)	:	
	Income Tax Clearance Certificate attached (Latest) (Yes or No) with PAN Number	:	

Place:

Date :

Legally Binding Signature with stamp



**TECHNICAL BID FORM**

<b>Item No.</b>	<b>Name</b>	<b>Quantity</b>	<b>Specifications</b>	<b>Deviation if any</b>
1	Air Compressor 250 lit Capacity(Noise Less).	01	Scroll type, air cool and oil free oil free Air Compressor with Dryer, Pure Oil-free Air, Energy efficient, low noise level (Maximum 57 dBA, Simple & Reliable, Minimum capacity for air compressor buffer tank should be 250 Litres. Working pressure should be 10 bar. Air compressor should be driven by 5HP TEFC electric motor suitable for 230/440 volts, single 3- phase, 50Hz, AC supply. With sound insulated canopy to ensure sound levels of about 57 dB. It should have high efficiency filter to eliminate dust and particles below 1 µm. Provision of automatic stop when the required pressure is reached avoiding unnecessary energy cost. Anti-vibration pad, earth protection, horizontal air receiver mounting, etc. arrangements.	
2	Charcoal Filter	01	Activated charcoal should be filled in two feet long and 3” (3inch) outer dia. Acrylic Cylinder, acrylic cover on both sides with threading arrangement for closing and opening. Arrangement of nozzles on both sides of acrylic covers (in and outside) for connection of flexible pipe/ rubber pipe of internal dia 9mm for compressed air should be made. The charcoal should be of superior quality to purify the compressed air.	
3	Regeneration dryer	01	Electronic regeneration dryer, 2 stages, solenoid valve alternatively operated on 230V+_ 10%, 50 Hz supply to remove the 100% moisture in the compressed air. Arrangement of nozzles of outer dia 9 mm on both sides of dryer (in and outside) for connection of compressed air and dry zero air should be made.	
4	Supplying and fixing of Stainless Steel/Copper pipes for calibration gas flow	As per actual measurements, after	Supplying and fixing SS pipes of 6.3 mm outer dia on wall surface for flowing of various calibration gases such as SO <sub>2</sub> , NO, CO, & copper pipe of 12 mm outer dia for N <sub>2</sub> , zero air with:	



		supply and fixing.	<ul style="list-style-type: none"> <li>- Colour coding/painting in laid SS and copper pipes for individual gas identification.</li> <li>- Control valve on both sides of SS and copper pipe i.e. gas in and gas out sides.</li> <li>- Pressure gauges of the range of 0 to 150 bar at the out let / exit of the each calibration gases.</li> </ul> <p><b><u>The total quantity of SS, copper pipe and its associated accessories shall be calculated as per actual site requirement.</u></b></p> <p><b><i>Note (to be mentioned in tendering): The tenderer may like to see the existing system in Air Laboratory of CPCB Head Office at Delhi for better understanding, if so desire.</i></b></p>	
5	19” (inch) rack for housing Analyzers, calibrators, MFC Controller and Ozone Generator.	02	Suitable 19” rack cabinet to accommodate all analyzers, zero air generators etc. The dimensions of the rack without doors, with Aluminium section and rear of 2 mm steel sheet, one removable roof plate, fitted with 4 filling eyebolts. Four gland plate three part, one pair of 475 mm (19”) mounting angles depth adjustable in 25 mm pitch pattern fitted on two fixing angle approximately 150 mm unit from the front standard.	

**Note: Separate technical specification brochure / leaflet must be attached for justification.**

(Signature with Date & Stamp of the Bidder)

**FINANCIAL BID FORM**

Details showing quantity, specification and other details offered

(To be filled by the bidder and must be kept in separate envelope mentioning "Price Bid")

Sr. No.	Name of the equipment	Quoted Unit Price (in Rs.)	Total Quantity	Total Cost	Total Taxes (in Rs.)	Insurance Charges, if any (in Rs.)	Freight Charges (in Rs.)	Installation Charges, if any (in Rs.)	Net Total Price

**NOTE:-** If this sheet is not sufficient to accommodate the bid details, the additional sheets containing the same proforma (with seal and sign of bidder) may be used.

(Signature with Date & Stamp of the Bidder)