



Central Pollution Control Board

Regional Directorate (South), A Block, Nisarga Bhavan,
I and II Floors, 7th D cross, Thimmaiah Road, Shivanagar,
Bengaluru - 560079

Tel: 080 -23233739, 23233827, Fax: 080-23234059

Email: cpcbszo@yahoo.com, zobangalore.cpcb@nic.in

Notice Inviting Tender Through Online: e-Portal

Ref: Tech-77/Stack/kit/RDS/ 2017-2018/

29th November 2017

Sub: Quotation for Supply of Portable Flue Gas Analyser and its Accessories

Dear Sir/ Madam,

1. Online bids are invited on single stage two bid system for Supplying of **Portable Flue Gas Analyser along with all Accessories** by Central Pollution Control Board (CPCB) Regional Directorate South, located at A Block, Nisarga Bhavan, I and II Floors, 7th D cross, Thimmaiah Road, Shivanagar, Bengaluru – 560079.
2. Bids shall be submitted in online only at CPPP website: <https://eprocure.gov.in/eprocure/app>. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document. One manufacturing unit with having business relationship shall submit not more than one tender.
3. Tenderer could download the tender from the CPCB website www.cpcb.nic.in or Central Public Procurement Portal (CPPP) website <https://eprocure.gov.in/eprocure/app>, shall not tamper/modify the tender form including downloaded price bid template in any manner. In case if the same is found to be tampered/modified in any manner, tender will be completely rejected.
4. Intending Tenderers are advised to visit regularly on CPPP website <https://eprocure.gov.in/eprocure/app> till closing date of submission of tender for any corrigendum /addendum/ amendment.
5. Tender documents may be downloaded from CPCB website www.cpcb.nic.in or CPPP site <https://eprocure.gov.in/eprocure/app> as per the schedule as given in **Critical Date Sheet** as under.

Sl.No.	CDS- Details of Schedule	Day	MM	Year	Hr	Mins
1.	Published Date	30	11	2017	12	00
2.	Bid Documents Down Load Start Date	30	11	2017	14	00
3.	Bid Documents Submission Start Date	30	11	2017	14	00
4.	Bid Documents Submission End Date	29	12	2017	17	00

5.	Bid Opening Date	03	01	2018	11	00
6.	Bid Opening Address	Central Pollution Control Board Regional Directorate (South) Nisarga Bhavan, 7th D cross Thimmaiah Road, Shivanagar Bengaluru - 560079				

6. The tender shall be submitted in Two Parts, viz., Technical Bid and Price Bid. The detailed technical specification of **Portable Flue Gas Analyser and its Accessories** are given in Annexure-I. Technical Bid is to be submitted as per Annexure –II and Financial Bid as per Annexure-III. All the pages of Technical Specifications, Supporting documents/ Brochures of bid is submitted must be signed and sequentially numbered by the bidder irrespective of nature of content of the documents before uploading. The offers submitted by Telegram/Fax/email shall not be considered.
7. The Tenderer shall also submit same documents of hard copies of technical bid, which have been uploaded in the e-portal to this office before the last date of submission as mentioned in the schedule of Critical Date Sheet.
8. For any technical clarification Sh. K Karunakaran, STS (Mob: 09844030141) may be contacted for further information.

Yours Sincerely

Handwritten signature and date
 29/11/2018
(S.Suresh)

Regional Director

Encl: Annexure-1 mentioning Technical specifications, Annexure-II Technical Bid Form and Annexure-III Financial Bid Form (Page No 3 to 8)

Copy To:

1. Notice Board, CPCB, Bengaluru -560079
2. Incharge and AD, IT Division, CPCB, Delhi – with a kind request to upload the document in online e-portal and CPCB website, pl.



Central Pollution Control Board

Regional Directorate (South), A Block, Nisarga Bhavan, I and II floors
7th D cross, Thimmaiah Road, Shivanagar, Bengaluru - 560079
Tel: 080 -23233739,23233827, Fax:080-23234059
Email: cpcbszo@yahoo.com, zobangalore.cpcb@nic.in

Technical Specification for Supplying of Portable Flue Gas Analyser

1. The analyser shall be supplied with temperature probe of at least one meter length having the range of measurement up to 1000°C.
2. Analyser shall have inbuilt data logging system and printer with RS232 facility for down loading the data both from main and handset.
3. Output of the Analyser shall be read in the following units: ppm, Mg/m³, ppm (Normal) & Mg/Nm³(Normal), and for temperature °C & °F.
4. Analyser shall work both in 230V A.C. Power & rechargeable batteries. The status of battery level also shall be displayed all the time
5. The analyser shall equip with user manual, calibration certificate, charging adopter, dust filters, water trap and water proof case.
6. The technical specifications are as below:

Sl. No	Sensors	Range	Resolution	Accuracy
1.	Oxygen (O ₂)	0 - 25%	0.1%	-0.1% +0.2%
2.	Carbon Dioxide(CO ₂)	20%	0.01%	±1% of reading,
3.	Carbon Monoxide(CO)	0 - 10,000 ppm	1 ppm	2ppm <400ppm, ±5% <2000ppm ±10% >2000ppm
4.	Carbon Monoxide(CO) (%)	10%	0.01%	±500ppm <1%, ±5% >1%
5.	Nitrous Oxide(NO)	0 - 5000 ppm	1 ppm	±5ppm <100ppm, ±5% >100ppm
6.	Nitrous Di oxide (NO ₂)	0 - 1000 ppm	1 ppm	±5ppm <100ppm, ±5% >100ppm
7.	Sulphur Dioxide (SO ₂)	0 - 5000 ppm	1 ppm	±5ppm <100ppm, ±5% >100ppm

8.	Hydro carbon(HC)	3000 ppm propane	10ppm	±5% of reading, ± 30ppmv
9.	Hydrogen Sulphide(H ₂ S)	1000PPM	1 ppm	±5ppm <100ppm, ±5% >100ppm

Note: At least CO, CO₂ and HC are to be measured by Infra-Red or by USEPA approved method

7. Other measurements to be made

CO/CO₂ : Calculated
Temp (In °C/°F) : 1000°C
Excess Air : Calculated
Combustion Efficiency: In percentage
Draught (Pressure Sensor): 0 - 150mmbar

Instrument shall also have following facilities:

8. The analyser shall have the facility to filter dust and separate removal system.
9. Carbon Monoxide Sensor shall be with Hydrogen Auto Compensation
10. Analyser shall have auto referencing with Oxygen for Zero with each measurement and facility for connecting gas span gas for calibration
11. The analysers have automatic moisture draining and flushing facility during Continuous Monitoring
12. Analyser shall be supplied with remote hand held facility for easy handling.
13. Analyser shall have facility to configure in accordance with real time, date and day and auto file generation for each measurement of data.
14. Analyser shall have preprogramed fuels along with its calorific values as to select the fuel during measurement by the consumer.
15. Analyser shall have the facility to calculate total loss, dry loss, wet loss & loss due to unburnt carbon.
16. There shall be display on the status of life of sensors and any other faults or alarms.
17. Analyser shall have the facility to control the flow of the inbuilt pump as and when required.

General Terms and Conditions

Sealed Quotation in two bid system are invited for the Supply of complete set of **Portable Flue Gas Analyser** along with all accessories to carry out the flue gas monitoring in the stack and the same should reach this office on or before 29th December, 2017, 17 Hrs.

1. Supplier shall quote all the accessories required to carry out flue gas monitoring and it will be treated as one single package and shall quote rates separately.
2. Submission of bid is through online e-portal only. The offers submitted by email, fax, post or any other mode other than e-portal submission shall not be considered.
3. Supplies of items, commissioning and demonstration of the functions have to be done at the office of Central Pollution Control Board, Regional Directorate South, Bengaluru.
4. Rates shall be quoted in Indian Rupees and applicable taxes and other charges shall be mentioned separately. No other charges will be accepted later other than the mentioned in the financial quote.
5. Specifications meeting the requirements shall be considered for technical comparison and preference will be given to the additional features and based on the product performance in the market/SPCBs/CPCB.
6. The warranty of each item should be mentioned clearly. The validity of bid is 120 days from the date of financial bid opened.
7. If any items found to be substandard or not meeting, the specification mentioned in the quote during the supply of material, the supply order shall be cancelled without any prior notice.
8. In the event of any dispute, the decision of Chairman, Central Pollution Control Board will be the final and binding upon both the parties.

ಶ್ರೀ. ಸುರೇಶ್
29/11/2017

(S.Suresh)
Regional Director

Technical Bid Submission Form for Flue gas Analyser

Sl.No	Items	Specification/Description of items			Statement of Compliance
1.	Base unit of Flue Gas analyser	Comprising of Electronic circuits, Battery backup, suction pumps, filters, Moisture trap, connectors Rs-232 for data and sampling			
2.	Digital Thermocouple	Thermocouple of K-type RTD capable to measure 0-1000°C with the accuracy of $\pm 0.5^\circ\text{C}$ The length of Thermocouple 1.0 meter and 2.0 meter			
	Sensors	Range	Resolution	Accuracy	
1.	Oxygen (O ₂)	0 - 25%	0.1%	-0.1% +0.2%	
2.	Carbon Dioxide(CO ₂)	20%	0.01%	$\pm 1\%$ of reading,	
3.	Carbon Monoxide(CO)	0 - 10,000 ppm	1 ppm	2ppm <400ppm, $\pm 5\%$ <2000ppm $\pm 10\%$ >2000ppm	
4.	Carbon Monoxide(CO) (%)	10%	0.01%	$\pm 500\text{ppm}$ <1%, $\pm 5\%$ >1%	
5.	Nitrous Oxide(NO)	0 - 5000 ppm	1 ppm	$\pm 5\text{ppm}$ <100ppm, $\pm 5\%$ >100ppm	
6.	Nitrous oxide (NO ₂) Di	0 - 1000 ppm	1 ppm	$\pm 5\text{ppm}$ <100ppm, $\pm 5\%$ >100ppm	
7.	Sulphur Dioxide (SO ₂)	0 - 5000 ppm	1 ppm	$\pm 5\text{ppm}$ <100ppm, $\pm 5\%$ >100ppm	
8.	Hydro	3000 ppm	10ppm	$\pm 5\%$ of	

	carbon(HC)	propane		reading, ± 30ppmv	
9.	Hydrogen Sulphide(H ₂ S)	1000PPM	1 ppm	±5ppm <100ppm, ±5% >100ppm	

Note: At least CO, CO₂ and HC are to be measured by Infrared or by USEPA approved method

Signature with date and stamp of the Bidder

Financial Bid Submission Form for Flue gas Analyser

Sl.No	Items	Quoted Unit Price Rs	Total Qty	Total cost Rs	Other applicable Taxes Rs
1.	Base unit of Flue gas analyser				
2.	Digital Thermocouple				
3.	Oxygen (O ₂)				
4.	Carbon Dioxide(CO ₂)				
5.	Carbon Monoxide(CO)				
6.	Carbon Monoxide(CO) (%)				
7.	Nitrous Oxide(NO)				
8.	Nitrous Di oxide (NO ₂)				
9.	Sulphur Dioxide (SO ₂)				
10.	Hydro carbon(HC)				
11.	Hydrogen Sulphide(H ₂ S)				
12.	All other Accessories				

Note: At least CO, CO₂ and HC are to be measured by Infrared or by USEPA approved method

Signature with date and stamp of the Bidder