BHOOMI®

# Agasthya 2013 Series
# Continuous Emission Monitoring System
# Model BI 7000


The Agasthya 2013 Series Continuous Emission Monitoring System BI 7000 is designed in compliance with emission norms to measure gas pollutants emitted by various process industry and to meet the needs of industries requiring cost effective and reliable multiple gas analyzer solutions.

**BI7000 is TUV certified for CE mark & Performance as per EN15267 standard.**

The technology employed are of maximum reliability and accuracy to ensure high degree of performance & long life.

BI7000 is ideal solution to protect initial investment & can adapt to any process application with modular design & can house up to eight gas sensors with scalable ranges for each gas. Manufactured for use in hostile or friendly environments the BI 7000 Continuous Emission Monitoring System maintains high levels of gas selectivity. All packed into a robust, attractive, industrial enclosure.


**Features**

- Tried and tested technology with proven reliability
- Wide range of gas selectivity & scalable ranges available for each gas
- 5.6” Smart Touchscreen Display
- The best price performance on the market - designed with user requirements foremost in mind
- Isolated 4-20 mA analog output for each gas
- RS 485, supports MODBUS protocol
- High / Low Gas, low flow & other programmable events available
- Highly efficient automatic purge & drain system

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## Specification:

| Parameter | Resolution | Accuracy | Scalable Range |
|---|---|---|---|
| **NDIR (Non Dispersive Infrared)** | | | |
| Carbon Monoxide | 1 ppm | ±1% FSD | 0-5000 ppm |
| Nitric Oxide | 1 ppm | ±1% FSD | 0-1000 ppm |
| Sulphur Dioxide | 1 ppm | ±1% FSD | 0-1000 ppm |
| Carbon Dioxide | 0.1% | ±1% FSD | 0-20% |
| Hydrocarbon | 0.1% | ±1% FSD | 0-5% |
| **NDUV (Non Dispersive Ultraviolet)** | | | |
| Nitrogen Dioxide | 1 ppm | ±1% FSD | 0-1000 ppm |
| Sulphur Dioxide | 1 ppm | ±1% FSD | 0-1000 ppm |
| Chlorine | 1 ppm | ±1% FSD | 0-30 ppm |
| Hydrogen Sulphide | 1 ppm | ±1% FSD | 0-50 ppm |
| **TDLS (Tunable Diode Laser Spectrometry)** | | | |
| Hydrogen Flouride | 1 ppm | ±1% FSD | 0-30 ppm |
| Hydrogen Chloride | 1 ppm | ±1% FSD | 0-200 ppm |
| Ammonia | 1 ppm | ±1% FSD | 0-500 ppm |
| Hydrogen Sulphide | 1 ppm | ±1% FSD | 0-200 ppm |
| **Zirconia** | | | |
| Oxygen | 0.1% | ±1% FSD | 0-30% |
| **FID (Flame Ionization Diode)** | | | |
| THC | 1 ppm | ±1% FSD | 0-1000 ppm |
| TOC | 1 ppm | ±1% FSD | 0-1000 ppm |
| VOC | 1 ppm | ±1% FSD | 0-1000 ppm |

## Analyzer Specification:

- Repeatability : 1% FS
- Zero Drift : <±1% per week of Span
- Span Drift : <±1% per week of Span
- Response : T90 < 200 sec
- Operating Temperature : 4°C to 65°C
- Analog output : Isolated and linear 4-20mA analog output for each gas
- Digital Communication : RS 485, Supports MODBUS Protocol
- Relay Output : 2 Nos. Potential free contact for alarms
- Power Supply : 110/230 VAC, 50 Hz
- Programmable events for High / Low Alarms
- Auto & semi auto calibration facilities

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## System Components

### ❖ Heated Sampling Probe

- ❖ Operating temperature : Max. 400ºC
- ❖ Mounting : Flange Type
- ❖ Max. working pressure : 6 bar
- ❖ Voltage : 110/230 V, 50 /60 Hz
- ❖ Heating : Self-regulating +180ºC
- ❖ Ambient temperature : -20 to +80ºC
- ❖ For dust concentration : Upto 5 $g/m^3$
- ❖ MOC : SS 316

### ❖ Heated Sample Gas Line

- ❖ Process Tube : PTFE / SS
- ❖ Process Tube Size : 1/4 inch OD
- ❖ Heating Element : Constant watt type
- ❖ Thermal Insulation : Non - Hygroscopic Fiber Glass
- ❖ Outer Sheath : Extruded UV Resistant FRLS PVC
- ❖ Operating Voltage : 230 V AC
- ❖ Watt Density : 45 W/m
- ❖ Length : To be specified by client
- ❖ Max. Operating Temperature : 200ºC
- ❖ Temperature Sensor : In built RTD
- ❖ Process Connection : Flanged Type
- ❖ Power/Control Connection : Lead cable (3 Wire), 2 Meter for both power & control

## Sample Conditioning Unit

### ❖ Smart unit

- ❖ Aspirator/Pump for sampling flue gas
- ❖ Pre and post cooler fine filters to remove drain, dust and mist in sample gas Auto drain and auto purging (blow back) facilities
- ❖ 2 way solenoid valves for switching, sampling, purging, draining and calibration Flowmeter to regulate and monitor the flow of sample gas
- ❖ Drain pump for continuous removal of condensate

### ❖ NOx Converter

High $NO_2$ conversion capability

- ❖ Enclosure: 19 inch Housing
- ❖ Working temperature: 400ºC
- ❖ Sample gas pressure: up to 1.5 bar
- ❖ Warm-up time : 30 min
- ❖ Sample gas flow: up to 120 l/h
- ❖ Sample gas temperature: 5 to 80ºC
- ❖ Ambient temperature : 5 to 50ºC
- ❖ Connection: 1/4"f NPT.
- ❖ Materials: SS316, PTFE, Viton

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- **Cabinet**
- Industrial Cabinet Meets IP 54 standard
- Inbuilt air conditioning system
- Automatic cabinet illumination when door open Earthing bar assembly
- 180 degree door opening
- Standard Dimension: 1500 (H) x 600 (W) x 800(D) mm

**** Purge Panel available on request for Hazardous Area.**

- **Remote Calibration System**

Panel with certified cylinders and automation for calibration Software with User Interface for remote calibration Compatible to interface with any Server

**Server Data Connectivity to CPCB & SPCB available**


**Process Management Pvt. Ltd.**
**(Sister Concern Company Bhoomi Analyzers)**

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