

# BHOOMI<sup>®</sup>

## All Products Catalogue



Manufacturer of Gas & Liquid Analyzers

Jan 2026

# About Us



**GAS • LIQUID • PROCESS**

**We Cover It All!**



**1000+**

Happy  
Customers

**200+**

Applications

**50+**

Products &  
Solutions

**50+**

Engineers

**20+**

Years Of Experience

**12+**

Technology

**In-house**

R&D

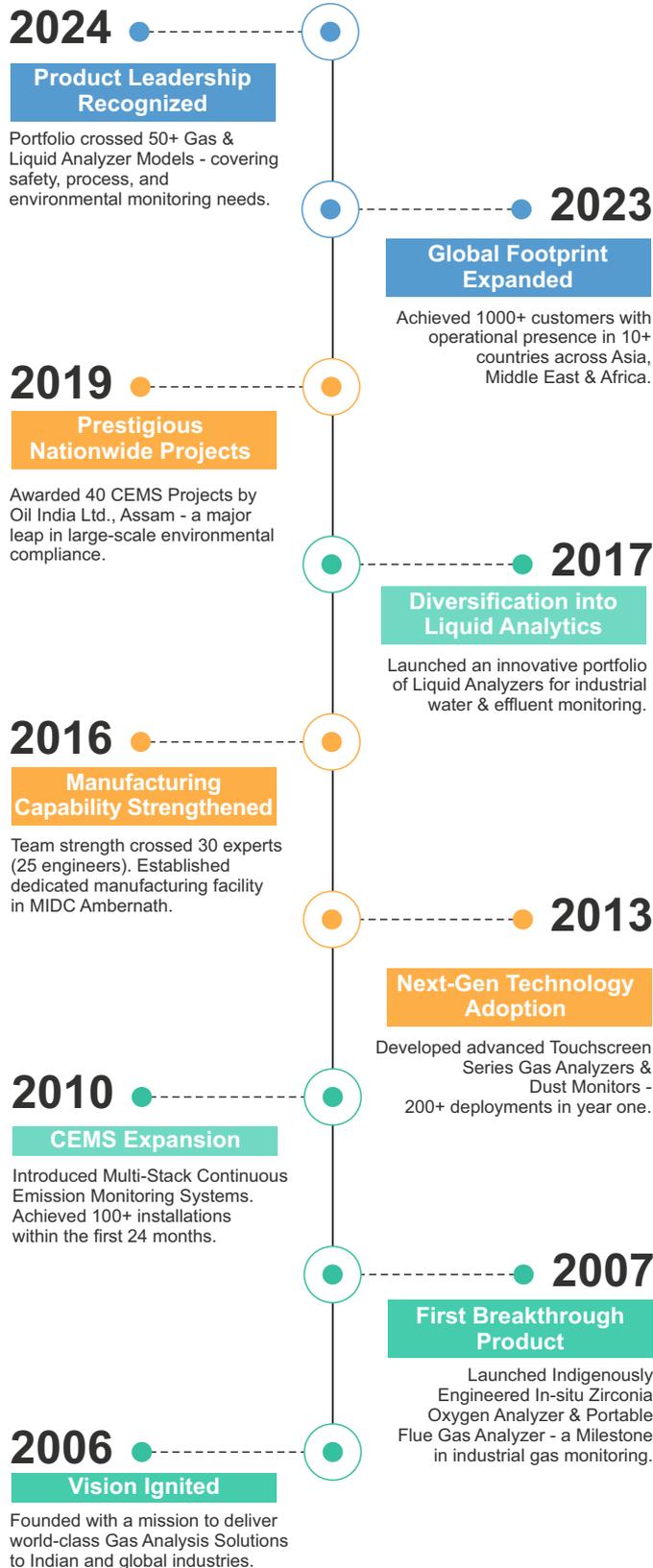
**Customization**

As Per Process Requirement

**Assured**

Service & Support In warranty

# Business Milestone



# Vision

Our vision is to be a global market leader in Process Analytical Instrumentation and Automation, by offering diverse range of products and customer centric solutions with superior quality in terms of consumer value, customer service and employee talent with consistent and predictable growth to add value to stakeholders and the environment.

# Mission

Our highest priority is to support our customers by providing superior products and services of exceptional value through continuous education and the application of new technologies and best business practices. We also aim to provide a pleasant, nurturing, and growth-oriented environment that encourages our employees to be highly productive and to grow personally and professionally.

# Service & Support

Our Technical Support Engineers and Business Partners are spread across the country to provide timely support. Customers can also contact our back office for technical assistance during office working hours.

As a manufacturer, we stock all consumables and critical spares at strategic locations to ensure they reach our customers on time.

Our support services include Annual Maintenance Contracts (AMC), calibration, and repair for our entire product range.

# Our Product Range

Gas Analyzer	
Application	Products
Emission	Continuous Emission Monitoring System Opacity Dust Monitor Triboelectric Dust Monitor Online Stack Flowmeter Ambient Air Quality Monitoring System
Combustion	In-situ Zirconia O2 Analyzer Portable Flue Gas Analyzer
Process	Purity Gas Analyzer Trace Gas Analyzer Headspace Gas Analyzer Multigas Analyzer
Renewable Energy	Biogas Analyzer Syngas Analyzer Biomass Analyzer Landfill Analyzer Producer Analyzer
Safety & Detection	Fixed Gas Detector

Water Analyzer	
Application	Parameters
Waste Water	COD/BOD/TSS/TOC pH Chlorine NH3/TN (Total Ammonical Nitrogen) Dissolved Oxygen Oil In Water TDS/Conductivity Turbidity
Process Water	COD/BOD pH ORP Oil In Water Chlorine TDS/Conductivity Dissolved Oxygen Fluoride
Raw & Drinking Water	Turbidity Chlorine pH Conductivity NH3/TN (Total Ammonical Nitrogen)
Measurement	Ultrasonic Level Transmitter Radar Level Transmitter Pressure Transmitter Inline Electromagnetic Flowmeter Open Channel Ultrasonic Flowmeter

# Our Technologies

<b>Electrochemical Sensor</b> O <sub>2</sub> , CO, SO <sub>2</sub> , NO, NO <sub>2</sub> , HCl, Cl <sub>2</sub> , NH <sub>3</sub> , H <sub>2</sub> S, HF 	<b>UV-DOAS</b> H <sub>2</sub> S, NO <sub>2</sub> , SO <sub>2</sub> 	<b>UV-VIS Absorption</b> COD, BOD, TSS 
<b>Zirconia Sensor</b> O <sub>2</sub> 	<b>TDLS</b> NH <sub>3</sub> , HF, HCl, O <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , CO 	<b>Electrode</b> Cl <sub>2</sub> , pH, ORP, TDS/Conductivity 
<b>Paramagnetic Sensor</b> O <sub>2</sub> 	<b>FID</b> <b>TOC</b> 	<b>Nephelometry</b> Turbidity, TSS 
<b>Thermal Conductivity Sensor</b> H <sub>2</sub> , He Binary Gases : N <sub>2</sub> , O <sub>2</sub> , AR, CO <sub>2</sub> , CH <sub>4</sub> 	<b>PID</b> <b>VOC</b> 	<b>Fluorescence</b> DO, OIW 
<b>NDIR Sensor</b> CO, CH <sub>4</sub> , SO <sub>2</sub> , NO, CO <sub>2</sub> , (Cl <sub>2</sub> ), HC 	<b>Pellistor</b> CH <sub>4</sub> , H <sub>2</sub> , LPG, Natural gas, Butanol 	<b>Ion Selective Electrode</b> Fluoride 
<b>NDUV Sensor</b> Cl <sub>2</sub> , NO <sub>2</sub> , SO <sub>2</sub> , NO 		

Note: Industry color codes are shown on Page 5

# Industry Applications

## Cement Plants

### Needs

- Combustion control • Emissions compliance
- Process optimization

### Solutions

- Zirconia O<sub>2</sub> • CEMS • Dust Monitor
- Process Gas Analyzers • Gas Detectors
- Water Quality Monitoring



## Power Plants (Coal / Biomass / Gas)

### Needs

- Boiler efficiency • Safety
- Stack compliance

### Solutions

- Zirconia O<sub>2</sub>
- Syngas/Producer Gas Analyzer • CEMS
- H<sub>2</sub> Purity • Gas Detectors • Water Quality



## Waste-to-Energy & Incineration

### Needs

- Combustion monitoring
- Emissions control

### Solutions

- CEMS • Zirconia O<sub>2</sub> • Dust Monitor
- Syngas Analyzer • Gas Detectors



## Refineries & Petrochemical

### Needs

- Safety • Purity verification
- Discharge compliance

### Solutions

- Gas Detectors
- Purity Analyzers (H<sub>2</sub>, He, O<sub>2</sub>)
- Water Quality Analyzers • CEMS



## Chemical Processing

### Needs

- Leak safety • Purity control
- Exhaust monitoring

### Solutions

- Purity Analyzers • Gas Detectors
- Process/CEMS • Water Quality



## Steel & Metallurgical

### Needs

- Furnace control • Safety gases
- Hydrogen purity

### Solutions

- Zirconia O<sub>2</sub> • H<sub>2</sub> Purity • Gas Detectors
- CEMS



## Distilleries & Boiler Industry

### Needs

- Combustion efficiency • Safety
- Stack compliance

### Solutions

- Zirconia O<sub>2</sub> • Gas Detectors
- Dust Monitor • CEMS • Water Quality



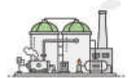
## Biogas / Landfill / Anaerobic Digestion

### Needs

- Gas quality tracking • Safety
- Renewable compliance

### Solutions

- Biogas Analyzers (CH<sub>4</sub>, CO<sub>2</sub>, H<sub>2</sub>S, O<sub>2</sub>)
- Gas Detectors • Flow & Pressure



## Pharmaceutical & Cleanrooms

### Needs

- Purity control • Water quality validation

### Solutions

- O<sub>2</sub> Purity • He Purity (leak testing)
- Water Quality



## Environmental Labs / Agencies

### Needs

- Audits • Reference monitoring
- Reporting

### Solutions

- CEMS (Lab/Portable) • Water Quality
- Gas Purity



## OEMs / System Integrators

### Needs

- Embedded sensors • Compact solutions

### Solutions

- Water Sensors • Controllers
- Gas Detectors



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# 01 | Continuous Emission Monitoring System BI 7000, BI 70XX Series

NDIR, NDUV, TDLS, FID  
Technologies



EMISSION (5)

COMBUSTION (2)

PROCESS (9)

RENEWABLE ENERGY (2)

SAFETY & DETECTION (1)



**CPCB  
Compliance**



**Different Technologies  
Under One Roof**



**Smart Remote  
Calibration**



**Direct Connectivity  
To Server**



**NPL, TUV, CE  
Certified**



**Zero Intervention  
Uptime**



**Automatic Blow Back  
System**



**Serviceable At  
Component Level**

## FEATURES

- Scalable ranges available for each gas
- All gas readings corrected with reference O2
- Manual / Auto / Remote calibration facility
- Diagnostic features usable, calibration, maintenance, faulty, zero and drift
- Analog output for each gas and digital output in Modbus protocol, 2-wire RS485 transmission
- Expression and display of measurements in ppm, mg/m3 or volume % as specified in standards (mg/Nm3 & kg/day optional)
- Efficient sample conditioning unit designed as per site conditions
- Heated probes for safe and hazardous area / heated sampling lines for safe and hazardous area
- Robust and reliable for optimal operation under extreme environment and conditions while maintaining its calibrated status
- Purged panel option is available for hazardous area
- In-situ / Extractive gas analyzers

Continued...

# BI 7000, BI 70XX Series

NDIR, NDUV, TDLS, FID  
Technologies



## APPLICATIONS

- Thermal Power Plants
- Steel & Metallurgical Plants
- Cement Plants
- Chemical & Fertilizer Plants
- Paper & Pulp Mills
- Waste Incineration / Waste To Energy
- Mining & Minerals
- Sponge Iron Plants
- Boilers & Captive Power Units
- Process Stacks
- DG Sets

BI 7000



Rack Mount  
Touchscreen

## TECHNICAL SPECIFICATIONS

Specifications	Details
Repeatability	1% FS
Zero drift	<±1% per week of span
Span drift	<±1% per week of span
Response	T90 < 15 sec
Analog output	Isolated and linear 4-20 mA analog output for each gas
Digital communication	2 x RS485 Modbus RTU protocol (for data transmission & scrolling display / SCADA-based utility)
Relay output	2 nos. potential free contact for alarms
Power supply	100/240 VAC, 50 Hz, 24 VDC
Operating temperature	4 to 65°C
Mounting options	Panel & rack mount

Parameter	Resolution	Accuracy	Scalable range
<b>NDIR (Non-dispersive Infrared)</b>			
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	0.10%	±1% FSD	0 - 20%
Hydrocarbon	0.10%	±1% FSD	0 - 5%
<b>NDUV (Non-dispersive Ultraviolet)</b>			
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
<b>TDLS (Tunable Diode Laser Spectrometry)</b>			
Hydrogen Fluoride	1 ppm	±1% FSD	0 - 30 ppm
Hydrogen Chloride	1 ppm	±1% FSD	0 - 200 ppm
Hydrogen Sulphide	1 ppm	±1% FSD	0 - 200 ppm
Ammonia	1 ppm	±1% FSD	0 - 500 ppm
<b>Zirconia</b>			
Oxygen	0.10%	±1% FSD	0 - 30%
<b>FID</b>			
Total Hydrocarbon / Total Organic Carbon	1 ppm	±1% FSD	0 - 1000 ppm

# 02 | Online Stack Dust Monitor - Opacity BI 7010

Dual Pass Accurate  
In-situ Measurement



2.4" TFT Display



**Auto Purge**  
Facility



**NPL/TÜV**  
Certified



**Fail Safe**  
Shutter



**Direct Server**  
Connectivity



**Zero Maintenance**  
Continuous  
Operation



**Component-Level**  
Repairability



**24/7 Spares**  
Availability

## FEATURES

- In situ - Direct measurement in exhaust flue gas flow
- Unit programmable in mg/m<sup>3</sup>, mg/Nm<sup>3</sup>, % opacity
- RS485, supports Modbus protocol
- Rugged design with no moving parts so low maintenance
- Green LED source for long lifetime stability
- Single & Dual Pass Transmissometer
- IP65 rating enclosure
- Pressure-temperature compensation

## TECHNICAL SPECIFICATIONS

Specifications	Details
Measuring range	0-100% Opacity, 0-1000 mg/m <sup>3</sup> user selectable
Units of measurement	mg/m <sup>3</sup> , mg/Nm <sup>3</sup> , % Opacity
Accuracy	±2% FSD
Resolution	0.1% Opacity & 0.1 mg/m <sup>3</sup>
Drift	±1% / month
Operating wavelength	510-540 nm Green LED
Stack temperature	Up to 300°C
Power	24 VDC or 230 V AC optional on request
Output	4-20 mA Analog Output & 2 Relays
Digital communication	RS485 Modbus RTU
Input normalisation for temperature, pressure, O <sub>2</sub> /CO <sub>2</sub> parameters	Provision for fixed keypad input
	Provision for analog input
	Provision for automatic measurement input

## APPLICATIONS

- Thermal Power Plants
- Steel & Metallurgical Plants
- Cement Plants
- Chemical & Fertilizer Plants
- Paper & Pulp Mills
- Waste Incineration / Waste-To-Energy
- Mining & Minerals
- Sponge Iron Plants
- Boilers & Captive Power Units

EMISSION (5)

COMBUSTION (2)

PROCESS (9)

RENEWABLE ENERGY (2)

SAFETY & DETECTION (1)

# 03 | Online Stack Dust Monitor - Triboelectric BI 7020 Tribo

Optimized For Low Dust  
In-situ Measurement



- Auto-purge Facility**
- Direct Server Connectivity**
- Zero-maintenance Continuous Operation**
- Component-Level Repairability**
- 24/7 Spares Availability**
- NPL/TÜV Certified**



1.8" TFT Display



Bhoomi Triboelectric technology unifies the measurement process by integrating both DC impaction and AC induction electrostatic signals, resulting in a more reliable and sensitive output. This innovative approach provides significant advantages for applications in environmental compliance and process control.

BI 7020 Tribo Dust Monitor is a single-point/basic functionality particulate monitor employing charge induction sensing for reliable continuous monitoring of particulate in stacks, ducts, and pipes. Applications include filter leak detection, cyclone overflow, and powder flow/no flow.

## FEATURES

- In-situ direct measurement in exhaust flue gas flow
- Unit programmable in  $\text{mg}/\text{m}^3$  &  $\text{mg}/\text{Nm}^3$
- Rugged design with no moving parts so low maintenance
- No manual adjustment / alignment required
- Automatic drift compensation
- Colour of particles will not affect the signal output
- Build-up of dust on the probe will not affect monitoring
- Vibration has no effect on the signal
- IP65 rating enclosure

## TECHNICAL SPECIFICATIONS

Specifications	Details
Measuring range	0-1000 $\text{mg}/\text{m}^3$
Units of measurement	$\text{mg}/\text{m}^3$ , $\text{mg}/\text{Nm}^3$
Accuracy	$\pm 2\%$ FSD
Resolution	0.1 $\text{mg}/\text{m}^3$ display resolution
Drift	$\pm 1\%$ / month
Stack temperature	$-20^\circ$ to $+121^\circ\text{C}$
Material of construction	SS316
Probe Insertion length	305, 457, 600, 762, 914 mm. Customized length on request
Positioning	90 degree to duct wall
Power	24 VDC or 230 VAC optional on request
Output	4-20 mA Analog Output
Digital communication	RS485 Modbus RTU

## APPLICATIONS

- Thermal Power Plants
- Steel & Metallurgical Plants
- Cement Plants
- Chemical & Fertilizer Plants
- Paper & Pulp Mills
- Waste Incineration / Waste-to-Energy
- Mining & Minerals
- Sponge Iron Plants
- Boilers & Captive Power Units
- Process Stacks
- DG Sets

EMISSION (5)  
COMBUSTION (2)  
PROCESS (9)  
RENEWABLE ENERGY (2)  
SAFETY & DETECTION (1)

# 04 | Online Stack Flow Meter BI 7300

Differential Pressure-Flow  
Measurement



EMISSION (5)

COMBUSTION (2)

PROCESS (9)

RENEWABLE ENERGY (2)

SAFETY & DETECTION (1)



1.8" TFT Display

BI 7300 Stack Flowmeter is used for continuous measurement of velocity in stack using Multiport Pitot Tube. It is based on differential pressure - flow measurement principle and compensated for pressure and temperature. In addition to velocity; temperature, static pressure and flow rate of emission gases can also be measured.



**Fully CPCB**  
Compliant System



**Extended**  
Autonomous Operation



**Seamless**  
Server Connectivity



**Auto Purge**  
Facility



**Component**  
Level Serviceability



**24/7**  
Spares Availability

## FEATURES

- Multiport Pitot Tube
- Also measure Temperature, Static Pressure and Flow rate of emission gases
- Compensated for Pressure and Temperature
- Fully automatic purge system for high dust concentrations in stack
- Guarantee maintenance free continuous operations

## TECHNICAL SPECIFICATIONS

Specifications	Details
Velocity	4 to 30m/s
Gas Temperature	550°C, High Temperature on request
Differential Pressure Sensor	Piezo-resistive type
Temperature Sensor	Pt100 type
Pitot Tube Length	0.5m, 1m, 1.5m, 2m
Pitot Tube MOC	SS316 / Inconel
Flange	ANSI Cl. 150 1.5". Other Flanges on request
Power	24 VDC or 230 V AC optional on request
Output	4-20 mA Analog Output & 3 Nos. Relay Output
Digital Communication	RS485 Modbus RTU

## APPLICATIONS

- Thermal Power Plants
- Cement Plants
- Steel & Metallurgy
- Chemical & Fertilizer Plants
- Waste To Energy & Incinerators
- Petrochemical & Refineries
- Pulp & Paper
- Boilers / Captive Power Plants

# 05 | Ambient Air Quality Monitoring System

## BI 9000

Electrochemical  
Infrared (IR) Technology  
Photoionization Detection (PID) Technology



**All In One**  
PM, Gas & Weather  
Monitoring



**High Accuracy**  
Real-time Data



**Cloud Enabled**  
Analytics



**IP65 Rugged**  
Outdoor Design



**Lower Power**  
Continuous Operation



**Wireless Connectivity**  
With GNSS



**Easy Pole &**  
Wall Mounting

### FEATURES

- Municipalities, Governments and people to make better environmental decisions by providing real-time reliable and valuable air quality information.
- Transfer the collected data information to the intelligent cloud platform Process and provide customers with various monitoring information.

### TECHNICAL SPECIFICATIONS

Specifications	Details
Particulates	PM 2.5: 0-1000 $\mu\text{g}/\text{m}^3$ ; Resolution: 1 $\mu\text{g}/\text{m}^3$ ; Accuracy: $\pm 10 \mu\text{g}/\text{m}^3$ PM 10: 0-1000 $\mu\text{g}/\text{m}^3$ ; Resolution: 1 $\mu\text{g}/\text{m}^3$ ; Accuracy: $\pm 25 \mu\text{g}/\text{m}^3$
Gas Measurement	NO2: 0.05-5 ppm; Resolution: 1 ppb; Accuracy: 1% of full scale SO2: 0.05-5 ppm; Resolution: 1 ppb; Accuracy: 1% of full scale CO: 0.1-10 ppm; Resolution: 10 ppb; Accuracy: 1% of full scale O3: 0.01-5 ppm; Resolution: 1 ppb; Accuracy: 1% of full scale CO2: 400-5000 ppm; Resolution: 1 ppm; Accuracy: $\pm 50 \text{ ppm} \pm 1\% \text{ FS}$ VOCs: 0.5-15 ppm; Resolution: 0.01 ppm; Accuracy: 3%
Weather	Temperature : 0-65°C; Resolution : 0.1°C; Accuracy : $\pm 0.5^\circ\text{C}$ Humidity : 0 to 100 % RH; Resolution : 1%; Accuracy : $\pm 3\%$ Pressure : 300-1100 hPa; Resolution : 0.18hPa; Accuracy : $\pm 0.6\text{hPa}$
Environmental	Operating temperature : -10°C to 60°C Humidity: 5 to 95% RH Pressure: $\pm 10\%$
Physical	Enclosure: IP65, Dimension : 225 x 140 x 170 mm
Mounting	Pole mount, Wall mount
Power	10-24 VDC Industrial supply, Average power consumption: 3W Input: 220- 240 VAC, 50 Hz Output: 12 VDC, 2A Ingress rating: IP65 (Optional)
Communication	Wi-Fi, GNSS, RS485 Modbus

### APPLICATIONS

- Government & Municipal Bodies
- Smart City Projects
- Industrial & Manufacturing Units
- Power, Oil & Gas Sector
- Construction & Infrastructure
- Mining & Metals
- Chemical & Pharmaceutical Industries

EMISSION (5)  
COMBUSTION (2)  
PROCESS (9)  
RENEWABLE ENERGY (2)  
SAFETY & DETECTION (1)

# 01 | In-situ Zirconia Oxygen Analyzer BI 2100, BI 2000

Zirconia

Wide Range (0.01 to 100% O<sub>2</sub>) | High Temperature Operation



BI 2100



BI 2000



**Display**  
2.4" TFT Display  
**MOC**  
SS 316L / Inconel / Alumina  
**Process Temperature**  
0-700°C, 0-900°C, 0-1600°C



**High-Precision Accuracy**



**Automated Purge System**



**24/7 Spares Availability**



**Multi-Point Calibration**



**Extended Autonomous Operation**



**High-Temperature Bypass Option**



**Ultra-Low Signal Drift**



**Component-Level Serviceability**



**HART Communication**

Specifications	BI 2100	BI 2000
Accuracy	±1%	±0.5%
Repeatability	±1%	±0.5%
Construction	Integrated sensor and heater	Separate sensor and heater
	Temperature controlled by regulating DC voltage and current	Inbuilt PID temperature controller with K type thermocouple
	Suitable for small to medium capacity boilers	Suitable for medium to large capacity boilers

In-situ Zirconia O<sub>2</sub> Analyzer provides accurate measurement of excess oxygen in flue gas of combustion processes. Optimal combustion efficiency is achieved by maintaining the ideal level of oxygen in the flue gas.

It is designed to integrate with various process & site conditions. With no moving parts or sampling apparatus, the analyzer is extremely reliable. Zirconia sensor is very rugged & can withstand high temperature & pressure with lifecycle more than 5 years.

Continued...

# BI 2100, BI 2000

## Zirconia

Wide Range (0.01 to 100% O<sub>2</sub>) | High Temperature Operation



### FEATURES

- Long Operational Life – Engineered with robust zirconia sensor technology to deliver reliable performance for years with minimal degradation.
- Low Measurement Drift – Ensures stable and accurate oxygen readings over long durations, reducing the need for frequent recalibration.
- Single-Point Calibration – Easy one-point calibration simplifies setup and minimizes downtime during routine checks.
- Zero Maintenance Design – Built for continuous operation without cleaning, replacement parts, or frequent service interventions.
- Thermal Shock Proof Construction – Withstands rapid temperature fluctuations in process conditions without affecting measurement accuracy or sensor life.
- Easy Field Repairability – Modular design allows quick on-site servicing, minimizing plant downtime and reducing maintenance cost.

### APPLICATIONS

- Power Plants (Boilers & Turbines)
- Cement Rotary Kilns
- Steel & Metallurgical Furnaces
- Petrochemical & Refinery Heaters
- Chemical Reactors
- Glass & Ceramic Furnaces
- Pulp & Paper Boilers
- Waste Incinerators

### TECHNICAL SPECIFICATIONS

Specifications	Details
Technology	Zirconia
Range	0.01-100% O <sub>2</sub> Programmable
Accuracy	BI 2000 : ±0.5% of FS, BI 2100 : ±1%
Resolution	0.01%
Repeatability	BI 2000 : ±0.5% of FS, BI 2100 : ±1%
Response Time	T <sub>90</sub> < 3 sec
Flange	ANSI Cl. 150 3RF. Other Flanges on request
Power	24 VDC or 230 VAC optional on request
Output	4-20 mA analog output & 1 x relay output (2 auto calibration & 1 purge)
Digital Communication	RS485 Modbus RTU, HART
Probe Length	0.5, 1, 2, 3 m Customized length on request

Model changes with respect to sample gas temperature, Probe MOC & probe length. Refer below table

Model No.	Sample Gas Temperature	Probe MOC
BI 2100-S	0 - 700°C	Stainless Steel SS 316
BI 2100-HL	0 - 900°C	Inconel
BI 2100-HH	0 - 1600°C	Alumina
BI 2000-S	0 - 700°C	Stainless Steel SS 316
BI 2000-HL	0 - 900°C	Inconel
BI 2000-HH	0 - 1600°C	Alumina

Note : Available for Hazardous Area on request

# 02 | Portable Flue Gas Analyzer BI 1XX, BI 2XX

Non-dispersive Infrared Absorption (NDIR),  
Electrochemical (EC)

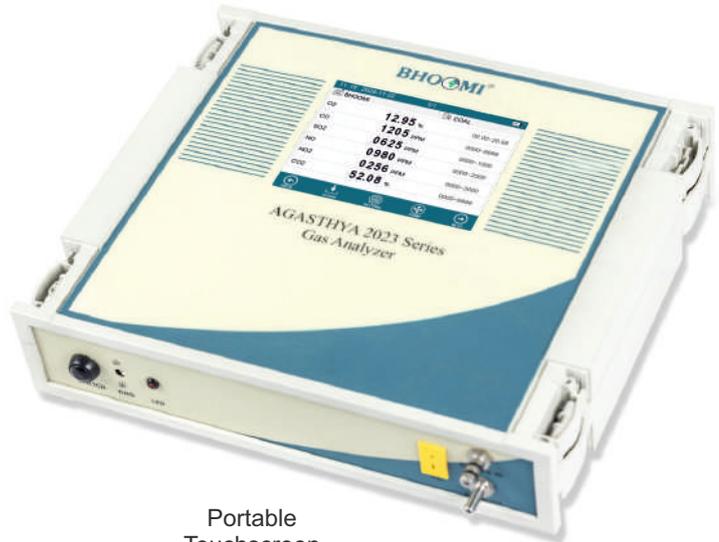
Multi-parameter Gas Sensor  
(CO, NO, NO<sub>2</sub>, SO<sub>2</sub>, CO<sub>2</sub>,  
O<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, HC)

1XX Series



Portable  
Handheld

2XX Series



Portable  
Touchscreen

Portable Flue Gas Analyzer is multigas analyzer which can measure up to four / six flue gases of any combination technology with temperature & flow velocity measurement simultaneously.



**Long-Life**  
Li-Ion Power



**SD Card**  
Expandable Storage



**Pitot Tube**  
Differential Pressure,  
Velocity, Flow Rate



**Round-the-Clock**  
Spares Access



**Tailored Probe**  
Configurations



**Versatile**  
4/6-Gas Options



**High-Temperature**  
1600°C Capability



**Bluetooth & Wi-Fi**  
Smart Connectivity



**Printer**  
Bluetooth

## FEATURES

- Automatic zeroing when the analyzer is switched ON
- Robust/Rugged design that is easy to operate and maintain
- Fast warm-up and response
- Rechargeable Li-Ion battery operation
- Battery lifetime up to 8 hours
- 500 set of data storage
- Built in sample pump, filter and flowmeter
- Condensate removal
- Stainless steel probe with sample hose
- USB for Charging & Data communication
- Powerful windows software for analyzer data communication
- Hydrogen compensated CO measurement

Continued...

# BI 1XX, BI 2XX

**Non-dispersive Infrared Absorption (NDIR),  
Electrochemical (EC)**

**Multi-parameter Gas Sensor  
(CO, NO, NO<sub>2</sub>, SO<sub>2</sub>, CO<sub>2</sub>,  
O<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, HC)**

## TECHNICAL SPECIFICATIONS

Specifications	Details
Sensor Technology	Non-dispersive Infrared Absorption (NDIR), Electrochemical (EC)
Measurement Gas	CO 0-10000 ppm scalable
	NO 0-5000 ppm scalable
	NO <sub>2</sub> 0-1000 ppm scalable
	SO <sub>2</sub> 0-5000 ppm scalable
	CO <sub>2</sub> 0-1%, 0-5%, 0-20%, 0-100% scalable
	O <sub>2</sub> 0-30% scalable
	H <sub>2</sub> S 0-500 ppm, 0-1000 ppm scalable
	NH <sub>3</sub> 0-500 ppm, 0-1000 ppm scalable
	HC 0-1%, 0-5%, 0-100% scalable
Process Parameter	Temperature: 0-600°C, Diff Pressure: ±150 mBar, Velocity: 0-50 m/s
Response Time (T-90)	≤30 seconds
Battery Capacity	Upto 10 hours, Upto 4 hours

## APPLICATIONS

- Thermal Power Plants
- Boilers (Industrial & Commercial)
- Steel & Cement Plants
- Petrochemical & Refinery Units
- Process Heaters & Furnaces
- DG Sets (Diesel Generator Emission Testing)
- HVAC & Combustion Maintenance
- Textile, Paper, Food Processing

## MODELS & PARAMETERS

2023 SERIES TOUCH SCREEN DISPLAY BASED MODELS	PARAMETERS
BI 210PV	O <sub>2</sub> , CO, Pressure, Velocity, Derived CO <sub>2</sub> , Flue gas temperature
BI 220	O <sub>2</sub> , CO, SO <sub>2</sub> , NO, Derived CO <sub>2</sub> , NOX, Flue gas temperature
BI 220PV	O <sub>2</sub> , CO, SO <sub>2</sub> , NO, Pressure, Velocity, Derived CO <sub>2</sub> , NOX, Flue gas temperature
BI 230	O <sub>2</sub> , CO, SO <sub>2</sub> , NO, HC, Derived CO <sub>2</sub> , NOX, Flue gas temperature
BI 230PV	O <sub>2</sub> , CO, SO <sub>2</sub> , NO, HC, Pressure, Velocity, Derived CO <sub>2</sub> , NOX, Flue gas temperature
BI FLEXI	Choice up to 6 sensors, Flue gas temperature

2017 SERIES KEYPAD DISPLAY BASED MODELS	PARAMETERS
BI 100	O <sub>2</sub> , Derived CO <sub>2</sub> , Flue gas temperature
BI 110	O <sub>2</sub> , CO, Derived CO <sub>2</sub> , Flue gas temperature
BI 110PV	O <sub>2</sub> , CO, Pressure, Velocity, Derived CO <sub>2</sub> , Flue gas temperature
BI 120	O <sub>2</sub> , CO, SO <sub>2</sub> , NO, Derived CO <sub>2</sub> , NOX, Flue gas temperature
BI FLEXI	Choice up to 4 sensors, Flue gas temperature
BI 130	O <sub>2</sub> , CO, SO <sub>x</sub> , NO <sub>x</sub> , HC, Derived CO <sub>2</sub>
BI 130 PV	O <sub>2</sub> , CO, SO <sub>x</sub> , NO <sub>x</sub> , HC, Derived CO <sub>2</sub> , Pressure, Velocity

# 01 | Multigas Analyzer BI 7400

NDIR, Zirconia, Paramagnetic, NDUV, UV DOAS,  
TDLS, Electrochemical, Thermal Conductivity,  
FID, PID, FTIR

Multi-gas Measurement  
O<sub>2</sub>, CO, NO, NO<sub>2</sub>, SO<sub>2</sub>, HCl,  
HF, H<sub>2</sub>S, H<sub>2</sub>, NH<sub>3</sub>, Cl<sub>2</sub>



Table Top  
Touchscreen



Rack Mount  
Touchscreen

Bhoomi make multi gas analyzers are used in research institutes, Industrial process, environmental monitoring, Health care and medical facilities, energy production and food & beverage industry. Multigas Analyzer is designed to meet the needs of various industrial process with combination of technologies.



**Process-Specific**  
Customization



**Component-Level**  
Repairability



**Integrated**  
Multi-Tech Platform



**24/7**  
Spares Support



**Remote Calibration**  
Enabled



**Cross-Sensitivity**  
Compensation



**Long-Term**  
Autonomous Operation



**Blowback**  
Cleaning System

## APPLICATIONS

- Engineering Colleges
- Research Laboratories
- Technical Training Institutes
- Food Technology Departments
- Chemical & Biotechnology Universities
- Environmental Science Institutes

Continued...

NDIR, Zirconia, Paramagnetic, NDUV, UV DOAS,  
TDLS, Electrochemical, Thermal Conductivity,  
FID, PID, FTIR

Multi-gas Measurement  
O<sub>2</sub>, CO, NO, NO<sub>2</sub>, SO<sub>2</sub>, HCl,  
HF, H<sub>2</sub>S, H<sub>2</sub>, NH<sub>3</sub>, Cl<sub>2</sub>

## TECHNICAL SPECIFICATIONS

Parameter	Resolution	Accuracy	Scalable Range
<b>GAS OPTION – NDIR</b>			
Carbon Monoxide	1 ppm	±1% FSD	0-1000 up to 10000 ppm
Nitric Oxide	1 ppm	±1% FSD	0-500 up to 5000 ppm
Sulphur Dioxide	1 ppm	±1% FSD	0-500 up to 5000 ppm
Nitrous Oxide	1 ppm	±1% FSD	0-100 ppm up to 1000 ppm
Carbon Dioxide	1 ppm, 0.1%	±1% FSD	0-50 ppm up to 100%
Methane	0.1%	±1% FSD	0-1% up to 100%
Hydrocarbon	1 ppm, 0.1%	±1% FSD	0-50 ppm up to 100%
<b>GAS OPTION – NDUV</b>			
Chlorine	1 ppm, 0.1%	±1% FSD	0-500 ppm up to 100%
Nitrogen Dioxide	1 ppm	±1% FSD	0-50 ppm up to 5000 ppm
<b>GAS OPTION – UV DOAS</b>			
Hydrogen Sulphide	1 ppm, 0.1%	±1% FSD	0-50 ppm up to 100%
<b>GAS OPTION – TDLS</b>			
Hydrogen Chloride	1 ppm	±1% FSD	0-50 up to 100 ppm
Hydrogen Fluoride	1 ppm	±1% FSD	0-10 up to 30 ppm
Ammonia	0.1 ppm	±1% FSD	0-15 up to 50 ppm
<b>GAS OPTION – Zirconia</b>			
Oxygen	0.1%	±1% FSD	0-30%
<b>GAS OPTION – Paramagnetic</b>			
Oxygen	0.1%	±1% of reading	0-25%, 0-100%
<b>GAS OPTION - Electrochemical</b>			
Oxygen	0.1%	±1% FSD	0-21% up to 100%
Carbon Monoxide	1 ppm	±20 ppm<500 ppm, ±5%>500 ppm	0-100 up to 10000 ppm
Carbon Monoxide	0.01%	±5% FSD	0-10%
Nitric Oxide	1 ppm	±5 ppm<100 ppm, ±5% FSD >100 ppm	0-500 up to 5000 ppm
Nitrogen Dioxide	1 ppm	±5 ppm<100 ppm, ±10 ppm<500 ppm ±5% FSD >500 ppm	0-1000 ppm
Sulphur Dioxide	1 ppm	±5 ppm<100 ppm, ±5% FSD >100 ppm	0-500 up to 5000 ppm
Hydrogen Chloride	1 ppm	±5 ppm	0-50 up to 200 ppm
Hydrogen Fluoride	1 ppm	±1 ppm	0-10 up to 30 ppm
Hydrogen Sulphide	1 ppm	±5 ppm<100 ppm, ±5% FSD >100 ppm	0-50 up to 5000 ppm
Hydrogen	1 ppm	±5 ppm<100 ppm, ±5% FSD >100 ppm	0-1000 up to 4%
Ammonia	1 ppm	±5 ppm<100 ppm, ±5% FSD >100 ppm	0-1000 ppm
Chlorine	1 ppm	±2 ppm<50 ppm, ±3% FSD >50 ppm	0-50 up to 400 ppm
<b>GAS OPTION – Thermal Conductivity</b>			
Hydrogen	0.01%	±1% FSD	0-100%
<b>FID</b>			
Total Hydrocarbon / Total Organic Carbon	1 ppm	±1% FSD	0 - 1000 ppm
<b>Fourier Transform Infrared spectroscopy (FTIR)</b>			
SO <sub>2</sub>	1 ppm	±1% FSD	0 - 100 ppm
NO <sub>2</sub>	1 ppm	±1% FSD	0 - 200 ppm
CO	1 ppm	±1% FSD	0 - 300 ppm
CH <sub>4</sub>	1 ppm	±1% FSD	0 - 500 ppm
HCl	1 ppm	±1% FSD	0 - 120 ppm
HF	1 ppm	±1% FSD	0 - 60 ppm
NO	1 ppm	±1% FSD	0 - 225ppm
CO <sub>2</sub>	0.01%	±1% FSD	0 - 20%
O <sub>2</sub>	0.01%	±1% FSD	0 - 25%
NMHC	1 ppm	±1% FSD	0 - 500 ppm
VOC	1 ppm	±1% FSD	0 - 1000 ppm
TOC / THC	1 ppm	±1% FSD	0 - 1000 ppm
<b>PID</b>			
VOC:	1 ppm	±1% FSD	0 - 1000 ppm

# 02 | Trace Oxygen Analyzer BI 3XX

Electrochemical, Zirconia  
Paramagnetic, Colorimetric

Trace O<sub>2</sub> in Inert &  
Process Gases



Rack Mount  
Touchscreen



Portable  
Touchscreen



Panel & Rack Mount  
TFT Display



Panel & Rack Mount  
LED Display



**Online or Intermittent**  
Measurement



**Explosion-Proof**  
System Options



**Mounting Options**  
Wall, Table top, Panel &  
Rack Mount



**Colorimetric**  
Trace Technology



**HART**  
Communication



**PPM and Percentage**  
Modes

EMISSION (5)

COMBUSTION (2)

PROCESS (9)

RENEWABLE ENERGY (2)

SAFETY & DETECTION (1)

## Electrochemical, Zirconia Paramagnetic, Colorimetric

## Trace O<sub>2</sub> in Inert & Process Gases

BI 3XX measures Traces of Oxygen in ppb, ppm & % level in process gas. For O<sub>2</sub> measurement Electrochemical, Zirconia & Paramagnetic technology is used. There are various models of oxygen analyzer depending on range, unit of measurement, technology & mounting.

### APPLICATIONS

- Power Plants (Boilers & Turbines)
- Cement Rotary Kilns
- Steel & Metallurgical Furnaces
- Petrochemical & Refinery Heaters
- Chemical Reactors
- Glass & Ceramic Furnaces
- Pulp & Paper Boilers
- Waste Incinerators

### TECHNICAL SPECIFICATIONS

Model No.	BI 300	BI 310	BI 320	BI 330	BI 360	BI 340
Technology	Electrochemical	Electrochemical	Zirconia	Paramagnetic	Colorimetric	Electrochemical
Range & Resolution	0-10 ppm, 0.1 ppm 0-100 ppm, 0.1 ppm 0-1000 ppm, 1 ppm	0-30 %, 0.01%	0-1000 ppm, 1ppm / 0-30%, 0.01%	0-30%, 0.01%	0-100 ppm, 0.1 ppm, 0-1000 ppm, 0.1 ppm, 0-10000 ppm, 0.1 ppm	0-10 ppm, 0.1 ppm 0-100 ppm, 0.1 ppm 0-1000 ppm, 1 ppm 0-30%, 0.01%
Accuracy & Repeatability	± 1% of FS		± 0.1% of FS	± 0.1% of FS	<± 3% of FS	± 1% of FS
Drift	<2% of full scale per month	1% of full scale six months		1% of full scale six months	Negligible	<2% of full scale per month
Response Time (T-90)	≤30 seconds	≤3 seconds		≤5 seconds	≤30 seconds	
Power	80 to 230 VAC 50 Hz					80-230 VAC, 50 Hz, Adaptor
Output	RS485 with Modbus Protocol, 4-20 mA, 2 nos. Relay					RS485
Enclosure	Wall, Panel, Rack & Tabletop					Portable

# 03 | Oxygen Purity Analyzer BI 4XX

Electrochemical, Zirconia,  
Paramagnetic, Ultrasonic Sensor

Oxygen (O<sub>2</sub>)  
Purity (% Vol.)



Rack Mount  
Touchscreen



Rack Mount  
TFT Display



Rack Mount  
LED Display



Portable  
Handheld



**Online or Intermittent**  
Measurement



**Electrochemical / Ultrasonic / Paramagnetic**  
Technologies



**Explosion-Proof**  
System Options



**HART**  
Communication



**Mounting Options**  
Wall, Table top, Panel &  
Rack Mount

Continued...

## BI 4XX

**Electrochemical, Zirconia,  
Paramagnetic, Ultrasonic Sensor**

**Oxygen (O<sub>2</sub>)  
Purity (% Vol.)**

BI 3XX measures Traces of Oxygen in ppb, ppm & % level in process gas. For O<sub>2</sub> measurement Electrochemical, Zirconia & Paramagnetic technology is used. There are various models of oxygen analyzer depending on range, unit of measurement, technology & mounting.

### APPLICATIONS

- Industrial Gas Manufacturing
- Pharma & Biotechnology
- Food Packaging & MAP
- Semiconductor & Electronics
- Specialty Gas Filling Stations
- Chemical Plants
- Glove Box & Inerting Systems
- Heat Treatment & Metallurgy
- Laboratory Gas Lines

### TECHNICAL SPECIFICATIONS

Model No.	BI 400	BI 410	BI 420	BI 430	BI 440	BI 450
Technology	Electrochemical	Paramagnetic	Electrochemical	Zirconia	Zirconia	Paramagnetic
Range & Resolution	0 - 100%, 0.01%	0-100%, 0.01% 95-100 %, 0.01%	0-100%, 0.01%	0.1-100%, 0.01%	0 .1-99.99 %, 0.01%	0-100%, 0.01% 95-100 %, 0.01%
Accuracy & Repeatability	± 1% of FS	<± 0.2% O <sub>2</sub> , <±0.02% O <sub>2</sub>	± 1% of FS	± 2% of reading ± 1%		± 1% of FS
Drift	<2% of full scale per month	<± 0.2% O <sub>2</sub> per month	<2% of full scale per month	1% of full scale six months		<± 0.2% O <sub>2</sub> per month
Response Time (T-90)	≤30 seconds	≤5 seconds	≤30 seconds	≤3 seconds		≤5 seconds
Power	80-230 VAC 50 Hz		5VDC, 2A Adaptor	80-230 VAC 50 Hz	24 VDC	80-230 VAC, 50 Hz, Adaptor
Output	RS485 with Modbus Protocol, 4-20 mA, 2 nos. Relay		-	RS485 with Modbus Protocol, 4-20 mA, 2 nos. Relay	4-20 mA	RS485 with Modbus Protocol, 4-20 mA, 2 nos. Relay
Enclosure	Wall, Panel, Rack & Tabletop		Portable	Wall, Panel, Rack & Tabletop	Panel, Rack	Wall, Panel, Rack & Tabletop

# 04 | Oxygen Purity Analyzer BI 480

Acoustic Technology

Oxygen (O<sub>2</sub>)  
Purity (% Vol.)



Table top



Panel Mount  
TFT Display



**Acoustic Sensing**  
Technology



**Fast**  
Response Time



**Low maintenance**  
Design



**Explosion-proof**  
System Options



**Modbus**  
Communication



**Corrosion-resistant**  
Materials



**HART**  
Communication

## FEATURES

- 32-bit cortex-M3 ARM processor
- Acoustic speed of sound technology
- RS485, supports Modbus protocol
- PTFE tubing and corrosion-resistant components for internal sample health
- Flow meter for flow regulation

## APPLICATIONS

- Oil & gas plants
- Petrochemical industries
- Chemical processing units
- Steel and metals
- Power generation plants
- Oxygen generation plants
- Industrial gas systems

## TECHNICAL SPECIFICATIONS

Specifications	Details
Gas	O <sub>2</sub>
Method of Detection	Acoustic
Range Available	0 to 100% scalable
Resolution	0.01%
Aging	< ± 10 ppm/year
Response Time (T-90)	≤ 10 seconds
Display	LCD
Power	80 to 230 VAC 50 Hz, 24 VDC
Power Consumption	8 Watts
Digital Output	RS485 with Modbus Protocol
Analog Output	4-20 mA (max load resistance upto 500 Ω)
Relay Output	2 nos. of potential free contacts
Humidity	5-95% RH

Specifications	Details
Ambient Temperature	4 to 50°C
Flow Meter	0.1-1 LPM
Enclosure	Rack
Sample Connection	1/4 inch S.S. Connection
Area Classification	General Purpose
Sensor Enclosure MOC	SS316
Sensor Filter Type	Sintered Filter
Cable Entries	2 Nos. M20
Manual / Auto Calibration	
Flow meter, Pressure regulator(14bar), Solenoid valves, Mist Filter	
Calibration Kit (Zero and span gas cylinder with accessories)	

# 05 | Hydrogen Purity Analyzer BI 600, BI 620

**Thermal Conductivity**  
Wide Range (0–100%) | Stable, Continuous Measurement

**Hydrogen (H<sub>2</sub>) Purity (% Vol.)**

BI 600

BI 620



Table Top  
2.4" TFT Display



Portable  
Handheld

Hydrogen Purity Analyzer measures Hydrogen purity in % level in process gas. For H<sub>2</sub> measurement Thermal conductivity technology is used.



**Explosion-Proof**  
Models Available



**Component-Level**  
Repairability



**HART**  
Communication



**Thermal Conductivity**  
Technology



**24/7**  
Spares Availability

## TECHNICAL SPECIFICATIONS

Specifications	Details
Method of Detection	Thermal Conductivity sensor for H <sub>2</sub>
Range Available	0-100% scalable
Resolution	0.01%
Accuracy & Repeatability	± 1% of FS
Drift	0.5% per year
Response Time (T-90)	≤ 10 seconds
Power	80 to 230 VAC 50 Hz
Digital Output	RS485 Modbus RTU protocol
Analog Output	4-20 mA (max load resistance up to 500 Ω)
Relay Output	2 nos. of potential free contacts

## APPLICATIONS

- Industrial Gas Manufacturing
- Pharma & Biotechnology
- Food Packaging & MAP
- Semiconductor & Electronics
- Specialty Gas Filling Stations
- Chemical Plants
- Glove Box & Inerting Systems
- Heat Treatment & Metallurgy
- Laboratory Gas Lines
- Hydrogen Generation Plant
- Electrolyzers, PSA & Process Streams

# 06 | Hydrogen Purity Analyzer BI 670

Acoustic Technology

Hydrogen (H<sub>2</sub>) Purity (% Vol.)



Table Top  
2.4" TFT Display



Portable  
Handheld



**Acoustic Sensing**  
Technology



**Fast**  
Response Time



**Low maintenance**  
Design



**Explosion-proof**  
System Options



**Modbus**  
Communication



**Corrosion-resistant**  
Materials

## FEATURES

- 32-bit cortex-M3 ARM processor
- Acoustic speed of sound technology
- RS485, supports Modbus protocol
- PTFE tubing and corrosion-resistant components for internal sample health
- Flow meter for flow regulation

## APPLICATIONS

- Power plant generators
- Hydrogen cooling systems
- Petrochemical industries
- Chemical processing units
- Industrial gas plants
- Hydrogen production units
- Electrolyzers, PSA & Process Streams

## TECHNICAL SPECIFICATIONS

Specifications	Details
Gas	H2
Method of Detection	Acoustic
Range Available	0 to 100% scalable
Resolution	0.01%
Aging	< ± 10 ppm/year
Response Time (T-90)	≤ 10 seconds
Display	LCD
Power	80 to 230 VAC 50 Hz, 24 VDC
Power Consumption	8 Watts
Digital Output	RS485 with Modbus Protocol
Analog Output	4-20 mA (max load resistance upto 500 Ω)
Relay Output	2 nos. of potential free contacts
Humidity	5-95% RH

Specifications	Details
Ambient Temperature	4 to 50°C
Flow Meter	0.1-1 LPM
Enclosure	Wall
Sample Connection	1/4 inch S.S. Connection
Area Classification	General Purpose
Sensor Enclosure MOC	SS316
Certification	CIMFR & PESO certified to Zone 1 & Zone 2, IIC,T6
Sensor Filter Type	Sintered Filter
Cable Entries	2 Nos. M20
Manual / Auto Calibration	
Flow meter, Pressure regulator(14bar), Solenoid valves, Mist Filter	
Calibration Kit (Zero and span gas cylinder with accessories)	

EMISSION (5)

COMBUSTION (2)

PROCESS (9)

RENEWABLE ENERGY (2)

SAFETY & DETECTION (1)

# 07 Helium Purity Analyzer BI 610, BI 630

**Thermal Conductivity**  
High Accuracy | Low Drift, Continuous Operation

**Helium (He) Purity (% Vol.)**

BI 610



Table Top  
LED Display

BI 630



Portable  
Handheld

Helium Purity Analyzer measures Helium purity in % level in process gas. For He measurement Thermal conductivity technology is used.



**Explosion-Proof**  
Models Available



**Component-Level**  
Repairability



**HART**  
Communication



**Thermal Conductivity**  
Technology



**24/7**  
Spares Availability

## TECHNICAL SPECIFICATIONS

Specifications	Details
Method of Detection	Thermal Conductivity sensor for He
Range Available	0-100% scalable
Resolution	0.01%
Accuracy & Repeatability	± 1% of FS
Drift	0.5% per year
Response Time (T-90)	≤ 10 seconds
Power	80 to 230 VAC 50 Hz
Digital Output	RS485 with Modbus Protocol
Analog Output	4-20 mA (max load resistance up to 500 Ω)
Relay Output	2 nos. of potential free contacts

## APPLICATIONS

- Industrial Gas Manufacturing
- Pharma & Biotechnology
- Food Packaging & MAP
- Semiconductor & Electronics
- Specialty Gas Filling Stations
- Chemical Plants
- Glove Box & Inerting Systems
- Heat Treatment & Metallurgy
- Laboratory Gas Lines
- Helium Generation Plant

# 08 Binary Gas Analyzer BI 8000

Thermal Conductivity (TCD)  
Fast Response | Low Drift, High Stability

H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, He, Ar, CO<sub>2</sub>, CH<sub>4</sub>  
(Binary Gas Mixtures)



Table Top  
TFT Display



Rack Mount  
5.6" Touchscreen

A thermal conductivity sensor for binary gas analysis works by measuring how well a gas conducts heat, leveraging the principle that different gases have unique thermal conductivities, allowing them to quantify binary gases by sensing changes in heat transfer around a heated element using a Wheatstone bridge with a reference cell.

A platinum heating element is kept at a constant temperature. The element's temperature changes based on the thermal conductivity of the surrounding gas. A second identical element in a reference cell with pure known gas provides a baseline. The difference in resistance between the measurement and reference elements is measured indicating the concentration of the target gas.

-  **Thermal Conductivity Technology**
-  **Binary Gas Analysis**
-  **Low Drift Sensor**
-  **Accuracy ±0.5 Of FS**
-  **Wide Measuring Range**
-  **Pressure Compensated**
-  **Continuous Operation**
-  **Explosion-Proof System Options**

## Comparison with Hydrogen Purity Analyzers

Specifications	BI 8000	BI 600	BI 620
Description	Binary Gas Analyzer	Hydrogen Purity Analyzer	Hydrogen Purity Analyzer
Mounting	Table Top, Rack Mount	Table Top	Portable, Handheld
Accuracy & Repeatability	±0.5% of FS	±0.5 - 1% of FS	±1% of FS
Power supply	230 VAC or 24 VDC		

Thermal Conductivity (TCD)  
Fast Response | Low Drift, High Stability

H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, He, Ar, CO<sub>2</sub>, CH<sub>4</sub>  
(Binary Gas Mixtures)

### RANGE OF GASES MEASURED

Measurement Component	Carrier Gas	Basic Range	Smallest Range	Smallest Range with suppressed Zero Point
H <sub>2</sub>	N <sub>2</sub> or Air	0 - 100%	0 - 0.5%	98 - 100%
O <sub>2</sub>	N <sub>2</sub>	0 - 100%	0 - 15%	85 - 100%
He	N <sub>2</sub> or Air	0 - 100%	0 - 0.8%	97 - 100%
CO <sub>2</sub>	N <sub>2</sub> or Air	0 - 100%	0 - 3%	96 - 100%
N <sub>2</sub>	Ar	0 - 100%	0 - 3%	97 - 100%
O <sub>2</sub>	Ar	0 - 100%	0 - 2%	97 - 100%
H <sub>2</sub>	Ar	0 - 100%	0 - 0.4%	99 - 100%
He	Ar	0 - 100%	0 - 0.5%	98 - 100%
CO <sub>2</sub>	Ar	0 - 60%	0 - 10%	-
Ar	CO <sub>2</sub>	40 - 100%	-	80 - 100%
CH <sub>4</sub>	N <sub>2</sub> or Air	0 - 100%	0 - 2%	96 - 100%
CH <sub>4</sub>	Ar	0 - 100%	0 - 1.5%	97 - 100%
Ar	O <sub>2</sub>	0 - 100%	0 - 3%	96 - 100%
N <sub>2</sub>	H <sub>2</sub>	0 - 100%	0 - 2%	99.5 - 100%
O <sub>2</sub>	CO <sub>2</sub>	0 - 100%	0 - 3%	96 - 100%
H <sub>2</sub>	He	20 - 100%	20 - 40%	85 - 100%
H <sub>2</sub>	CH <sub>4</sub>	0 - 100%	0 - 0.5%	98 - 100%
H <sub>2</sub>	CO <sub>2</sub>	0 - 100%	0 - 0.5%	98 - 100%
SF <sub>6</sub>	N <sub>2</sub> or Air	0 - 100%	0 - 2%	96 - 100%
NO <sub>2</sub>	N <sub>2</sub> or Air	0 - 100%	0 - 5%	96 - 100%
H <sub>2</sub>	O <sub>2</sub>	0 - 100%	0 - 0.4%	97 - 100%
Ar	Xe	0 - 100%	0 - 3%	99 - 100%
Ne	Ar	0 - 100%	0 - 1.5%	99 - 100%
Kr	Ar	0 - 100%	0 - 2%	96 - 100%
R125	N <sub>2</sub> or Air	0 - 100%	0 - 4%	98 - 100%
D <sub>2</sub>	N <sub>2</sub>	0 - 100%	0 - 0.5%	97 - 100%
D <sub>2</sub>	He	0 - 100%	0 - 20%	40 - 100%
CH <sub>4</sub>	CO <sub>2</sub>	0 - 100%	0 - 2%	98 - 100%
C <sub>3</sub> H <sub>8</sub>	C <sub>4</sub> H <sub>10</sub>	0 - 100%	0 - 10%	90 - 100%
N <sub>2</sub>	Ne	0 - 100%	0 - 1.5%	98 - 100%
C <sub>3</sub> H <sub>8</sub>	N <sub>2</sub> or Air	0 - 100%	0 - 4%	95 - 100%
*CO <sub>2</sub>	Ar	0 - 100%	0 - 8%	70 - 100%
*NH <sub>3</sub>	N <sub>2</sub>	0 - 70%	0 - 3%	55 - 70%
*C <sub>2</sub> H <sub>4</sub>	N <sub>2</sub>	0 - 100%	0 - 10%	60 - 100%
*H <sub>2</sub> O	N <sub>2</sub>	0 - 20%	0 - 4%	16 - 20%

\*Increased Measuring temperature

# 09 Headspace Analyzer BI 4000, BI 4100

Electrochemical & NDIR Sensors  
Quick Sampling | Non-destructive Testing

Residual O<sub>2</sub> / CO<sub>2</sub> in  
MAP & Food Packaging

BI 4000



Portable  
Handheld

BI 4100



Portable  
Touchscreen

Headspace Analyzer BI 4000 & BI 4100 is specifically designed to test for the presence of oxygen in food packaged under modified and controlled atmospheres.



**Economical**  
Performance Design



**24/7**  
Spares Availability



**Data Logging**  
500 Record Memory



**O<sub>2</sub> / O<sub>2</sub>-CO<sub>2</sub>**  
Options



**Compact System**  
Footprint



**Mini-B Type Micro USB**  
PC Connectivity



**Long-Life**  
Sensor Technology



**Foam Pads**  
For Better Stability

## TECHNICAL SPECIFICATIONS

Model No.	BI 4000	BI 4100
Technology	Electrochemical	Electrochemical
Range & Resolution	O <sub>2</sub> : 0.1 to 21%, 0.1%, 0.01%	O <sub>2</sub> : 0.1 to 21%, 0.1%, 0.01% CO <sub>2</sub> : 0.1 to 100%, 0.1%, 0.01%
Repeatability	± 1% of reading	
Response time (T90)	15 sec	
Battery life	6 Hours	
Data Storage	500 Set of data (SD Card option)	
Power	Battery operated system with adapter - 5VDC	5 VDC

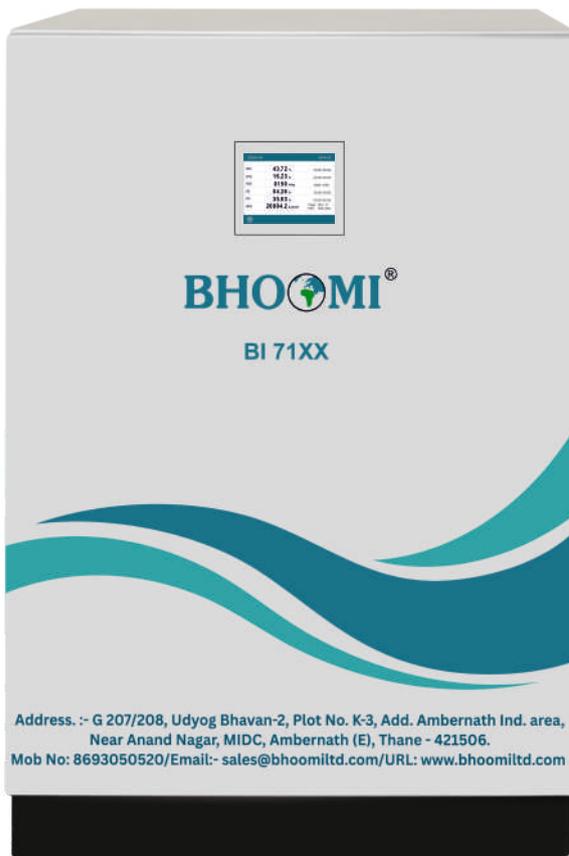
## APPLICATIONS

- Food & Beverage
- Dairy & Snacks Manufacturing
- Meat & Poultry Packaging
- Bakery & Confectionery
- Pharmaceutical Packaging
- Nutraceuticals
- Ready-to-Eat Packaging Units

# 01 | Landfill & Biogas Analyzer BI 71XX

IR, Electrochemical, UV-DOAS  
Paramagnetic Technologies

High-moisture & H<sub>2</sub>S - Resistant Biogas Monitoring  
CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub>, H<sub>2</sub>S



BI 7100 : Online Landfill  
BI 7110 : Online Biogas



BI 7120 : Portable Biogas, Touchscreen  
BI 7130 : Portable Landfill, Touchscreen



**Explosion-Proof**  
Models Available



**GCV monitoring**  
Enabled



**24/7**  
Spares Availability



**Component-Level**  
Repairability



**Automatic**  
Moisture removal



**Built-in**  
Pump/Rotameter



**HART**  
Communication

Continued...

## IR, Electrochemical, UV-DOAS Paramagnetic Technologies

## High-moisture & H<sub>2</sub>S - Resistant Biogas Monitoring CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub>, H<sub>2</sub>S

Biogas Analyzer is designed to measure the gases like CH<sub>4</sub>, H<sub>2</sub>S, CO<sub>2</sub> & O<sub>2</sub> recovered and processed from Biogas Plants and sites.

### FEATURES

- 32-Bit cortex-M3 ARM Processor
- Built-in sample pump, pre-filter, filters and flow meter
- Suction with maintenance free vacuum generation, option
- Relays for high & low alarms
- Long life Electrochemical O<sub>2</sub> sensor
- Automatic moisture removal system included
- RS485, supports Modbus protocol
- Temperature controlled sensors for maximum stability
- GCV Calculation
- Isolated 4-20 mA analog output for each gas
- Infrared sensor for reliable measurement of CO<sub>2</sub> and CH<sub>4</sub>
- Cabinet positive-pressure system to minimize the corrosive effects hydrogen sulfide (H<sub>2</sub>S) on cabinet electronics & sensors
- PTFE tubing and corrosion-resistant components for internal sample health

### APPLICATIONS

- Biogas Plants
- CBG (Compressed Biogas) / SATAT Projects
- Wastewater Treatment Plants
- Sewage Treatment Plants (STP)
- Food Waste Digesters
- Agro / Rural Biogas Units
- Landfill Gas Extraction Sites
- Distillery & Brewery Waste Digesters

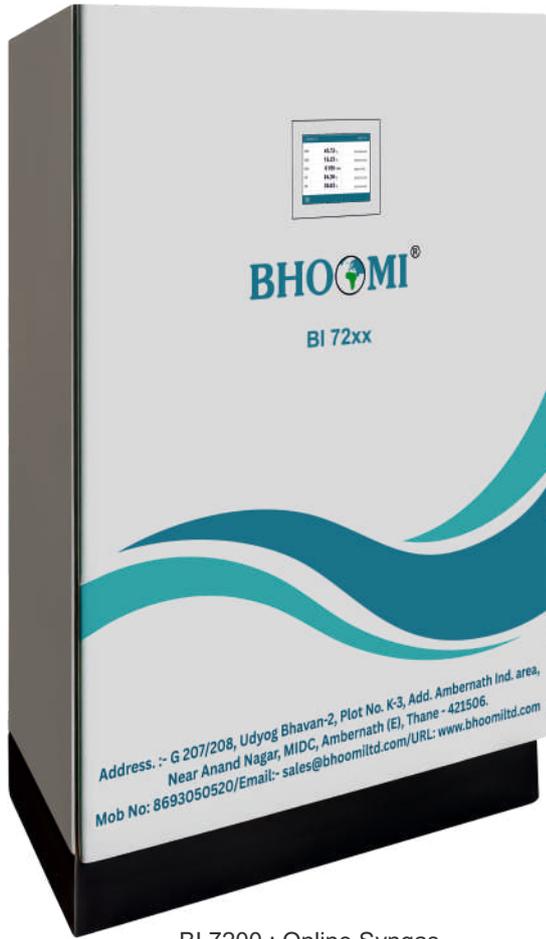
### TECHNICAL SPECIFICATIONS

Specifications	Details
Method of Detection	NDIR, Electrochemical, NDUV Online, UV-DOAS Paramagnetic
Range Available	O <sub>2</sub> : 0-25% CO <sub>2</sub> : 0-10%, 0-50%, 0-100% CH <sub>4</sub> : 0-50%, 0-70%, 0-100% H <sub>2</sub> S: 0-200 ppm, 0-2500 ppm, 5000 ppm
Power	80 to 230 VAC 50 Hz (Online)
Output	Isolated 4-20 mA standard RS485, supports Modbus protocol
Relay Output	2 nos. of potential free contacts

# 02 Syngas, Biomass, Producer Gas Analyzer BI 72XX

IR, Electrochemical, UV-DOAS  
Thermal Conductivity  
Paramagnetic Technologies

High CO & H<sub>2</sub> Concentration Gasification Analysis  
CO, H<sub>2</sub>, CO<sub>2</sub>, CH<sub>4</sub>, O<sub>2</sub>



BI 7200 : Online Syngas  
BI 7210 : Online Biomass  
BI 7220 : Online Producer Gas

BI 7230 - Portable Syn Gas  
BI 7240 - Portable Producer Gas  
BI 7250 - Portable Biomass



**Explosion-Proof**  
Models Available



**GCV Monitoring**  
Enabled



**24/7**  
Spares Availability



**Component-Level**  
Repairability



**Automatic**  
Moisture Removal



**Built-in**  
Pump/Rotameter



**HART**  
Communication

Continued...

**BI 72XX**

**IR, Electrochemical, UV-DOAS  
Thermal Conductivity  
Paramagnetic Technologies**

**High CO & H<sub>2</sub> Concentration Gasification Analysis  
CO, H<sub>2</sub>, CO<sub>2</sub>, CH<sub>4</sub>, O<sub>2</sub>**

Syngas Analyzer is designed considering the flexibility required in the environments that characterize Syngas and bio-mass applications.

**FEATURES**

- 32-Bit cortex-M3 ARM Processor
- 5.7" QVGA TFT Touch Screen Display
- Touch-screen display for gas reading
- Built-in sample pump or pressure regulator
- Tried and tested technology with proven reliability
- High range on each channel available (up to 100%)
- H<sub>2</sub> reading is compensated for the interference effect of the other gases measured
- Automatic moisture removal system included
- RS485, supports Modbus protocol
- Isolated 4-20 mA analog output for each gas
- Hi / Low gas, low flow and other alarms available
- Cabinet purge system available
- PTFE sample lines & sample components (where prudent)
- Optional - Suction with maintenance free vacuum generation

**APPLICATIONS**

- Biogas Plants
- CBG (Compressed Biogas) / SATAT Projects
- Wastewater Treatment Plants
- Sewage Treatment Plants (STP)
- Food Waste Digesters
- Agro / Rural Biogas Units
- Landfill Gas Extraction Sites
- Distillery & Brewery Waste Digesters

**TECHNICAL SPECIFICATIONS**

Specifications	Details
Method of Detection	NDIR, Electrochemical, NDUV Online, Thermal Conductivity, Paramagnetic
Range Available	O <sub>2</sub> : 0-25%, 0-50%, 0-100% CO: 0-10%, 0-50%, 0-100% CO <sub>2</sub> : 0-10%, 0-50%, 0-100% CH <sub>4</sub> : 0-50%, 0-100% H <sub>2</sub> : 0-5% 0-50%, 0-100%
Power	80 to 230 VAC 50 Hz (Online)
Output	Isolated 4-20 mA standard RS485, supports Modbus protocol
Relay Output	2 nos. of potential free contacts

# 01 | Smart Gas Detector

## BI 500, BI 510, BI 520, BI 540, BI 541

EC, Pellistor, NDIR, Solid State, PID Technologies

CIMFR / PESO / ATEX Certified

BI 500



Smart, 3-wire  
1.8" TFT Display

BI 510, BI 520



2-wire, Loop Powered  
3-wire in BI 520

BI 540, BI 541



2-wire, Loop Powered



**Economical**  
Performance Pricing



**Two-Wire / Three-Wire**  
Options



**24/7**  
Spares Availability



**Component-Level**  
Serviceability



**PESO / BIS / CSIR / ATEX**  
Approved



**Mini**  
Hooter-Flasher Option



**Controller Connectivity**  
Enabled



**HART**  
Communication

### APPLICATIONS

- Chemical & Petrochemical
- Oil & Gas (Upstream / Midstream / Downstream)
- Pharmaceuticals
- Food & Beverage
- Manufacturing Plants
- Water & Wastewater Treatment
- Laboratories & R&D Centers
- Storage Tank Farms
- Power Plants
- Automotive & Battery Manufacturing

Note : Multi-channel (8, 16, 32, 64) Controllers are available for displaying multiple "ON" status readings in the control room.

Continued...

# BI 500, BI 510, BI 520, BI 540, BI 541

EC, Pellistor, NDIR, Solid State, PID  
Technologies

CIMFR / PESO / ATEX  
Certified

## TECHNICAL SPECIFICATIONS

Model No.	BI 500	BI 520	BI 510	BI 540	BI 541
Power	15-28 VDC (Typically 24 VDC)		2-wire loop powered 24 VDC		
Display	TFT display	-	-	132x32 pixel graphic display	
Output	4-20 mA Analog Output & 3 Nos. Relay Output	4-20 mA Analog Output	4-20 mA Analog Output		4-20 mA Analog Output, HART
Digital Interface	RS485 Protocol Modbus		-	-	-
Mounting	Wall, Pole			Wall-mounted	Wall-mounted
Response Time	< 30 seconds	< 90 seconds	< 30 seconds	< 90 seconds	< 90 seconds
Certification	CIMFR/ PESO/ ATEX certified to Exd IIC T6, IP65	CIMFR / PESO / ATEX certified (Ex d IIC T6, IP66)		-	-

## GAS, RANGE & TECHNOLOGY

Gas Type	Gases	Range	Resolution	Technology
C2H2	Acetylene	0 - 100% LEL	1% LEL	Pellistor
CH2CHCN	Acrylonitrile	0 - 100 ppm	1 ppm	EC
NH3	Ammonia	0 - 100 ppm	1 ppm	EC
NH3	Ammonia	0 - 500 ppm	1 ppm	EC
NH3	Ammonia	0 - 1000 ppm	1 ppm	EC
C4H9OH	Butanol	0 - 100% LEL	1% LEL	Pellistor
CO2	Carbon Dioxide	0 - 5% V/V	0.01% V/V	NDIR
CO2	Carbon Dioxide	0 - 100% V/V	1% V/V	NDIR
CS2	Carbon Disulfide	0 - 100 ppm	1 ppm	EC
CO	Carbon Monoxide	0 - 100 ppm	1 ppm	EC
CO	Carbon Monoxide	0 - 500 ppm	1 ppm	EC
CO	Carbon Monoxide	0 - 1000 ppm	1 ppm	EC
Cl2	Chlorine	0 - 20 ppm	0.1 ppm	EC
CH2O	Formaldehyde	0 - 10 ppm	0.1 ppm	EC
C6H14	Hexane	0-100 LEL	1% LEL	Pellistor
C6H14	Hexane	0-100 LEL	1% LEL	NDIR
H2	Hydrogen	0 - 1000 ppm	1 ppm	EC
H2	Hydrogen	0 - 100% LEL	1% LEL	EC
H2	Hydrogen	0 - 100% LEL	1% LEL	Pellistor
HC	Hydro Carbon	50 - 1000 ppm	1 ppm	Solid State
HCN	Hydrogen Cyanide	0 - 100 ppm	1 ppm	EC
HCl	Hydrogen Chloride	0 - 20 ppm	0.1 ppm	EC
HF	Hydrogen Fluoride	0 - 10 ppm	0.1 ppm	EC
H2S	Hydrogen Sulphide	0 - 100 ppm	1 ppm	EC
CH4	Methane	0 - 100% LEL	1% LEL	Pellistor
CH4	Methane	0- 100% V/V	1% V/V	NDIR
	Mercaptan	0 - 20 ppm	0.1 ppm	EC
	LPG	0 – 100% LEL	1% LEL	Pellistor
	Natural Gas	0 – 100% LEL	1% LEL	Pellistor
NO2	Nitrogen Dioxide	0 - 20 ppm	0.1 ppm	EC
O2	Oxygen	0 - 25% V/V	0.1% V/V	EC
O3	Ozone	0 - 1 ppm	0.01 ppm	EC
PH3	Phosphine	0 - 10 ppm	0.01 ppm	EC
COCl2	Phosgene	0 - 1 ppm	0.01 ppm	EC
C8H8	Styrene	0 - 100 ppm	1 ppm	EC
SO2	Sulphur Dioxide	0 - 20 ppm	0.1 ppm	EC
C2H3Cl	Vinyl Chloro Monomer	0 - 100 ppm	1 ppm	EC
C4H8	VOC (Isobutylene)	0 - 1000 ppm	1 ppm	PID
C4H8	VOC (Isobutylene)	0 - 40 ppm	0.1 ppm	PID

# 01 | Multiparameter Water Quality Monitoring System BI 1000

Electrochemical, Photometric, Polarometric  
UV Absorption / Fluorescence, Pt100



ONLINE CEMS

WATER SENSORS

WATER CONTROLLER

MULTIPARAMETER CONTROLLER



-  **Explosion-proof**  
For Hazardous Zones
-  **Component-level**  
Repairable Design
-  **Plug-and-play**  
Operation
-  **Measures**  
Up To 9 Parameters
-  **Built-in**  
Data Logger
-  **USB Excel Report**  
Download
-  **TUV**  
Certified



Continued...

## Electrochemical, Photometric, Polarometric UV Absorption / Fluorescence, Pt100



### FEATURES

- Real-time water quality measurement
- All water quality sensors are digital sensors with RS485 Modbus interface
- Digital intelligent sensor can be arbitrarily combined, plug and play, and the controller can recognize automatically
- 7" touch screen display, easy to operate & interface
- Data logger function, all measured data will be recorded
- Multi-parameters water quality Analyzer is equipped with USB interface; user can download report in excel format
- Upto 12 parameters can be measured
- Supply - 230 VAC

### APPLICATIONS

- Effluent treatment plant
- Common effluent treatment plant
- Secondary water supply
- Aquaculture farming
- River water quality monitoring
- Sewage treatment plant
- Groundwater quality monitoring etc.

### CONTROLLER SPECIFICATIONS

Power Supply	110-230 VAC or 9-36 VDC
Digital Communication	RS485 Modbus protocol

### PARAMETERS & RANGE

Parameters	Range	Repeatability	Accuracy	Measurement Principle
Ammonium	0-1000 mg/l	±0.2 mg/l	±2%	UV Absorption
Nitrates ±2%	0-1000 mg/l	±0.1 mg/l	±2%	UV Absorption
Nitrites	0-20 mg/l	±0.1 mg/l	±2%	UV Absorption
COD	0-2000 mg/l	±1 mg/l	±2%	Correlation UV Absorption
BOD	0-1000 mg/l	±0.5 mg/l	±2%	Correlation UV Absorption
TOC	0-1000 mg/l	±0.5 mg/l	±2%	Correlation UV Absorption
Total Nitrogen	0-100 mg/l	±1 mg/l	±2%	Photometric
Sulphides	0-2 mg/l	±0.1 mg/l	±2%	UV Absorption
TSS	0-1500 mg/l	±1% of reading or ±2 mg/l	±2%	IR Nephelometry
MLSS	0-1500 mg/l	±1% of reading or ±2 mg/l	±2%	IR Nephelometry
Turbidity	0-1000 NTU	±1 NTU	±2%	IR Nephelometry
Chlorine	0-10 mg/l	±0.1 mg/l	±2%	Electrochemical
Chlorophyll A	0-100 µg/l	±0.1 µg/l	±2%	UV Fluorescence
Oil in Water	0-100 ppm	±0.1 ppm	±2%	UV Fluorescence
PAH (Aromatics)	0-10 mg/l	±0.01 mg/l	±2%	UV Fluorescence
Dissolved Oxygen	0-25 mg/l	±0.1 mg/l	±2%	UV Fluorescence
Dissolved Oxygen	0-25 mg/l	±0.1 mg/l	±2%	Polarographic
Conductivity	0-2000 µS	±1 µS	±2%	Electrochemical
pH	0-14 pH	±0.01 pH	±2%	Electrochemical
ORP	±2000 mV	±1 mV	±2%	Electrochemical
Temperature	0-80°C	±0.1°C	±2%	Pt100
Mercury	0-100 µg/l	±0.1 µg/l	±2%	-
Ozone	0-10 mg/l	±0.1 mg/l	±2%	UV Absorption

# 02 | Water Sensors

## BI 13XX Series

Industrial Water Sensing

pH, ORP, Conductivity, DO, Turbidity, TDS

### pH / ORP / Conductivity / TDS / TSS / Turbidity / Chlorine / Dissolved Oxygen Analyzer



pH/ORP System (BI 1310)

- Range : 0-14 pH
- Housing material : PPS
- Cable length : 3 meter
- Temperature range : 0-100°C
- Accuracy : 0.2 pH



NH3/TN System (BI 1320)

- Range : 0-1000 mg/L
- Housing material : PP + PVC
- Cable length : 10 meter
- Temperature range : 0-50°C
- Accuracy :  $\pm 2.5\%$



Conductivity/TDS/Salinity System (BI 1330)

- Range :  
Conductivity: 0-200 mS/cm (Range Programmable)  
TDS: 0-50000 ppm (Range Programmable)
- Housing material : SS316L
- Cable length : 5 m
- Temperature range : -10 to 150°C



Chlorine System (BI 1340)

- Range : 0-20 mg/L
- Housing material : PP, Glass
- Cable length : 5 m
- Temperature range : 0-50°C
- Accuracy :  $\pm 0.05$  mg/L



DO System (BI 1360)

- Range : 0-5/10/20 mg/l or ppm
- Housing material : SS316L
- Cable length : 10 m
- Temperature range : 0-50°C
- Accuracy :  $\pm 0.2$  mg/l or 1% F.S



Turbidity Sensor - Low Range / High Range

- Range : 0-100 NTU / 0-2000 NTU
- Housing material : ABS and POM plastic / POM
- Cable length : 2 m / 5 m
- Temperature range : -5 to 45°C / 0-50°C
- Accuracy : 2% or  $\pm 0.02$  NTU /  $\pm 5\%$  or 0.3 NTU, whichever is greater
- Self-cleaning sensor (with wiper)

Continued...

# BI 13XX Series

## Industrial Water Sensing

## pH, ORP, Conductivity, DO, Turbidity, TDS



COD/BOD/TOC Sensor



Oil in Water Sensor

- High Range : COD/BOD: 0-1500 mg/L, TOC: 0-600 mg/L, TSS: 0-500 mg/L
- Low Range : COD/BOD: 0-500 mg/L, TOC: 0-180 mg/L, TSS: 0-300 mg/L
- Housing material : SS316L
- Cable length : 10 m
- Temperature range : 0-50°C
- Accuracy :  $\pm 5$  % FS

- Range : 0 - 20 ppm
- Housing material : SS316
- Cable length : 10 m
- Temperature range : 0-50°C

## TECHNICAL SPECIFICATIONS

Power Supply	110-230 VAC
Output	4-20 mA Analog output, 3 Relay output
Digital	RS485 Modbus protocol

## APPLICATIONS

- Water & Wastewater Treatment
- RO Plant & Desalination
- Food & Beverage Processing
- Pharmaceutical & Biotech
- Chemical Processing
- Power Plants (Boilers & Cooling Towers)
- Pulp & Paper Industry
- Aquaculture & Fisheries

## PARAMETERS & RANGE

Parameters	Range	Repeatability	Accuracy	Measurement Principle
Conductivity	0-2000 $\mu$ s	$\pm 1$ $\mu$ s	$\pm 2$ %	Electrochemical
Dissolved Oxygen	0-25 mg/l	$\pm 0.1$ mg/l	$\pm 1$ %	UV Fluorescence
pH	0-14 pH	$\pm 0.01$ pH	$\pm 0.2$ %	Electrochemical
ORP	$\pm 2000$ mV	$\pm 1$ mV	-	Electrochemical
Temperature	0-80 °C	$\pm 0.1$ °C	$\pm 0.3$ %	Pt 100 - 1000
Nitrates	0-1000 mg/l	$\pm 0.1$ mg/l	-	UV Absorption
Nitrites	0-20 mg/l	$\pm 0.1$ mg/l	-	UV Absorption
Chlorine	0-10 mg/l	$\pm 0.1$ mg/l	$\pm 0.05$ %	Electrochemical
Ammonium	0-1000 mg/l	$\pm 0.2$ mg/l	$\pm 2.5$ %	UV Absorption
Total Nitrogen	0-100 mg/l	$\pm 1$ mg/l	$\pm 2.5$ %	Photometric
Sulphides	0-2 mg/l	$\pm 0.1$ mg/l	-	UV Absorption
TSS	0-1500 mg/l	$\pm 1$ % of reading or $\pm 2$ mg/l	$\pm 5$ %	IR Nepheolometry
MLSS	0-1500 mg/l	$\pm 1$ % of reading or $\pm 2$ mg/l	$\pm 5$ %	IR Nepheolometry
Turbidity	0-1000 NTU	$\pm 1$ NTU	$\pm 5$ %	IR Nepheolometry

# 03 | Single and Dual Channel Controllers BI 13XX Series

Microprocessor-Based Controller



BI 1317



BI 1310



Agasthya 2021 Series Single Channel Controller model BI 13X0 is designed to measure different water quality parameters such as pH, ORP, Conductivity, Chlorine, Oil in Water, Dissolved Oxygen, Turbidity, Ammonia Nitrate (NH3-N) and Total Nitrogen (TN)

## FEATURES

- 2.4" TFT display
- Intelligent menu operation
- Multiple automatic calibration function
- Manual and automatic temperature compensation
- High & low alarm and hysteresis control
- 4-20 mA & RS485 output
- Password protection function to prevent misoperation by non-staff

## TECHNICAL SPECIFICATIONS

Display	2.4" TFT
Power Supply	AC - 85 - 305VAC; DC - 9 - 36 VDC
Relay Output	One 5A-250VAC, 5A-30VDC
Current Output	Single Channel : One 4-20 mA, 20-4 mA, 0-20 mA Dual Channel : Two 4-20 mA, 20-4 mA, 0-20 mA
Digital Communication	RS485 Modbus RTU
Dimensions	96x96x96mm
Mounting Type	Panel, Wall
Enclosure	Dustproof, IP 65

# 04 | Multiparameter Controller BI 1000

Microprocessor-Based Multiparameter Control



Agasthya 2021 Series Multiparameter Controller model BI 1000-C is designed to measure different water quality parameters such as COD, BOD, TOC, TSS, pH, NH3, TN, Chlorine, TDS/Conductivity, Oil in Water Sensor. Any combination of Six Sensor can be measured.

## FEATURES

- Real-time water quality measurement
- All water quality sensor are digital sensor with RS485 Modbus interface
- Digital intelligent sensor can be arbitrarily combined, plug and play, and the controller can recognized automatically
- 7" touch screen display, easy to operate & interface
- Data logger function, all measured data will be recorded
- Multi-parameters water quality Analyzer is equipped with USB interface; user can download report in excel format
- Upto 9 parameters can be measured

## TECHNICAL SPECIFICATIONS

Display	7" touchscreen display
Sensor Input	RS485 Modbus
Power	230 VAC or 24 VDC
Digital Interface	RS485 Modbus
Data Logging	Through USB
Sensor IP Rating	IP68
Controller IP Protection	IP65
Electronic Enclosure Dimension	320 (L) x 270 (W) x 121 (H) mm

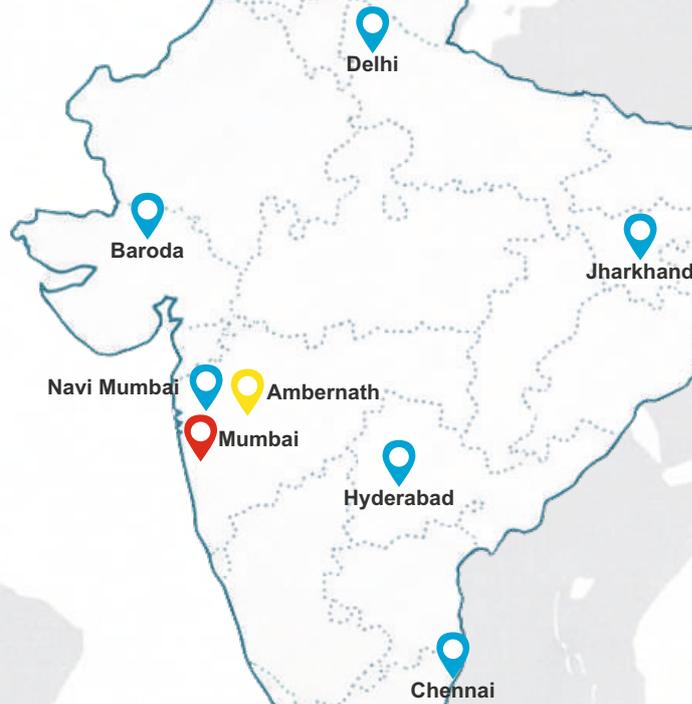
# Our Clients



# Our Clients



-  Head Office
-  Factory
-  Regional Office



Disclaimer : Images are indicative. Specifications may change without notice due to continuous R&D.

**Bhoomi Process Management Pvt. Ltd. (sister concern of Bhoomi Analyzers)**

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