

CONTINUOUS GAS ANALYSER SYSTEM



MODEL CA 4000

APPLICATIONS

Analysis and Monitoring of source emissions for any combination of O₂, CO, CO₂, NO, NO₂, NO_x, SO₂ or hydrocarbons from furnaces, boilers, incinerators or any other types of industrial processes.

SPECIAL FEATURES

- Custom designed sample conditioning system
- Application specific principle of Analysis
- Infrared & Electrochemical detector for CO and CO₂ & NO_x, HC.
- Electrochemical/paramagnetic or zirconia detector for O₂
- Pellister or Thermal Conductivity detector for hydrocarbons & Hydrogen
- EPA preferred dry basis measurement
- Heated stack mounted filter optional
- Automatic calibration

OPTIONS

- Built in printer.
- Multipoint sampling system.
- RS-232/485 output for data. logging and further analysis.

DESCRIPTION

The ENDEE 4000 Series of continuous Gas Analyser system are designed for the unattended analysis of source emission for industrial process. The 4000 system may consist of several main components the primary filtering system, sample line, sample conditioning system, calibration gas cylinders and model CA 2000 series microprocessor controlled analyser, data acquisition system.

PRIMARY FILTERING SYSTEM

Sample gas is drawn in from the stack through the sampling probe. This probe can be supplied of any length or material to suit the application. From here, the sample gas directly enters a filter where it is filtered. Also, a probe blowback valve, either manual or automatic, can be provided if necessary.

SAMPLE CONDITIONING SYSTEM

After filtering, the gas flows to the analyzer cabinet and enters a heated chamber that also houses a heated pump head. After the gas leaves the pump, it enters the cooler where it is flashed cooled. Here, the moisture is condensed out with minimal loss of constituents. The collected condensate is removed automatically. The clean, dry gas then passes through a final filter, teflon liquid blocker and pressure regulator / flow meter on its way to the CA 2000 gas analyser for analysis. Calibration gases are introduced ahead of the cooler, to compensate for any loss of constituents in the cooler.

GAS ANALYSER

Model CA 2000 series microprocessor based analyser, a unique blend of proven technology with innovative hardware and software design possesses unsurpassed sensitivity, repeatability and specificity. It is a multi gas Analyser suitable for the continuous measurement of the concentration of gases such as CO, CO₂, SO₂, NO, O₂, CH₄, H₂ its versatile modular design permits configuration and up-gradation to suit specific needs of customer CA-2000 is available with highly up gradable microprocessor based electronics which is equipped with battery backup for RAM to retain the existing set modes in case of power failure. Any unacceptable deviation from the standard stored value is displayed 'FAULT'

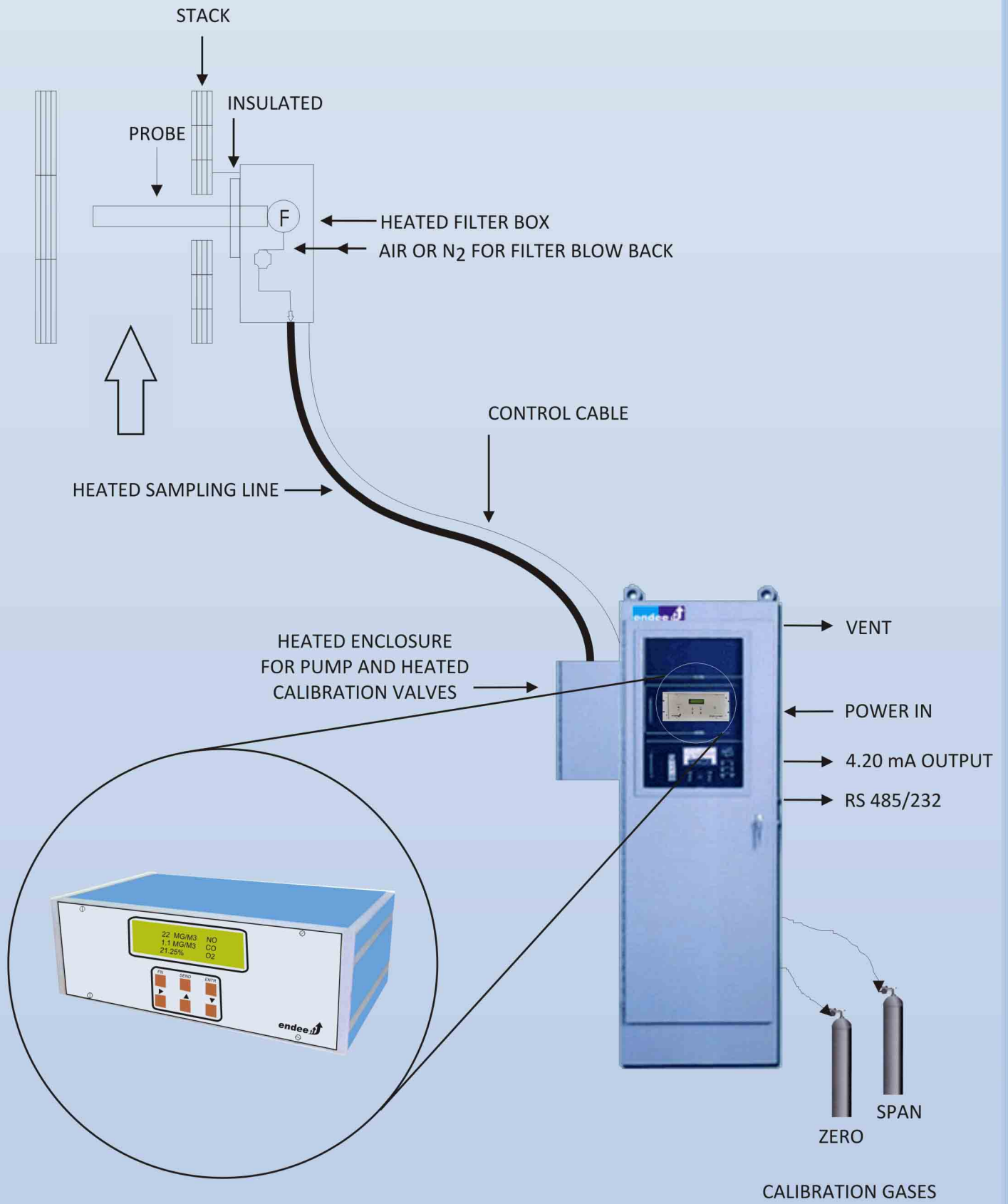
Standard features are alarm for low and high and specific fault, specific sensor as per the measuring gas range and application. Special features are complete automatic operation, 16 character, two line LCD display messages, self diagnostic check facility, a mere six key to operate the complete instrument. The powerful micro controller is capable of calculating various parameters.

ENCLOSURE

The Endee 4000 series Systems are provided with all assembly, wiring and tubing complete. The enclosure is usually a free standing NEMA 12 steel cabinet, with or without temperature control. The heated pre-filter is also supplied complete, ready for mounting on a 3" ANSI 150lb. flange. Other mounting methods are available. The heated sample line can be provided if desired.

ILLUSTRATIVE SYSTEM

EXACT SYSTEM IS DESIGNED AND SUPPLIED BASED ON SPECIFIC REQUIREMENT



SPECIFICATIONS

Measuring Gas & Range :	See range data.
Sensor & sampling :	Gas Ranges & Application dependent.
Display :	Digital Standard LED optional alphanumeric display
Power Supply :	110/220V AC, 50Hz
Ambient Temp. :	0-50° C
Enclosure :	Aluminium casing (power coated) for indoor application
Mounting :	Standard : 19" Rack mounted
Optional :	Flush on Panel/Table top
Warm up time :	Analysis Detector dependent
Output (Optional) :	4-20mA
Alarms :	Two Level (selectable range)
Sample Gas condition :	Temp: 0 - 50°C Pressure : Less than 1.5Kg/cm ² . The gas should be dry & clean. Other than this suitable sample
Calibration :	Conditioning system is required. Manual, On command in microprocessor based system.

MEASURING RANGE

S.No	Parameters	Sensors	Range	Resolution	Accuracy
1.	O ₂	Electrochemical Paramagnetic	100 PPM 25%, 100%	1PPM 0.1%	0.5 %
2.	CO	Electrochemical NDIR	200 PPM, 2000 PPM, 10% V/V	1PPM	+/-2 %
3.	CO ²	Thermal Conductivity NDIR	100% V/V 0 - 5000 PPM	0.1% 1PPM	+/-2 % +/-2 %
4.	NO/NO _x	Electrochemical NDIR	0.1999, 5000 PPM	1PPM	+/-2 %
5.	SO ²	Electrochemical NDIR	200 PPM, 2000 PPM	1PPM	+/-2 %
6.	CH ⁴	Catalytic NDIR	5% V/V 100% (LEL)	0.1%	+/-2 %
7.	H ²	Catalytic Combustion Thermal Conductivity	4% 100%		

Note : Specifications and Features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. Due to endee's commitment to research, design and product improvement, specifications are subject to change without notice.



ENDEE ENGINEERS PVT. LTD.

Office : 25/N, Laxmi Industrial Estate, Link Road, Andheri (W), Mumbai - 400 053.
Tel. : 6692 3081 / 82 | Fax : 2637 5973
Email : sales@endee-engineers.com | info@endee-engineers.com
Website : www.endee-engineers.com