

# TOTAL SULFUR + H<sub>2</sub>S GAS ANALYZER

## ON-LINE PROCESS GENERAL PURPOSE

Series 1600-150



### FEATURES

- ASTM METHOD REFERENCES
- ONLY REQUIRES 4-6 TAPE CHANGES PER YEAR
- CONTINUOUS ANALYSIS
- AUTOMATIC CALIBRATION
- GENERAL PURPOSE
- DIRECT READ LCD
- SINGLE LED LIGHT SOURCE
- DUAL PROCESSOR 100% ANALYSIS
- 24-BIT A/D CONVERSION FOR FASTER RESPONSE, LOWER DETECTION LIMITS & LESS TAPE CONSUMPTIONS
- FAULT DIAGNOSTICS
- SPECIFIC TO SULFUR ONLY

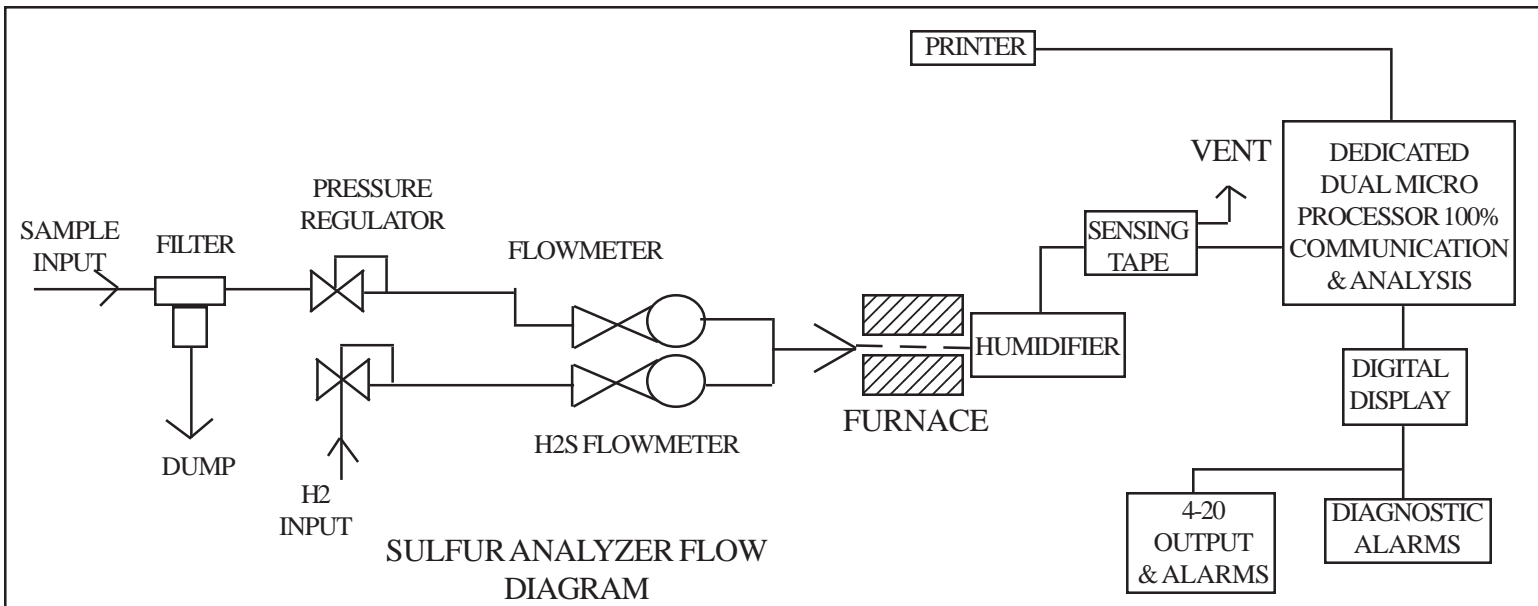
General Purpose Total Sulfur + H<sub>2</sub>S Analyzer

### Description & Principle of Operation

The petrochemical, gas processing, & gas pipeline industry has for many years required an accurate, dependable, low maintenance, and cost effective sulfur analyzer for quality and process control purposes. With over twenty years of experience in developing and manufacturing sulfur analyzers and associated parts and supplies, Analytical Systems International has met these requirements with a unique & proven microprocessor based analyzer, which provides continuous on-line analysis based on the only absolutely specific lead acetate principal of operation. The Model 1600 system measures H<sub>2</sub>S & total sulfur by hydrogenation, similar to that as described in ASTM Method D3031, D4084-82, D4468-85, & 4045-81. The sulfur sample is precisely metered into a continuous flowing stream of hydrogen gas. The sample and hydrogen are heated in the furnace up to 1,315 degrees C resulting in thermal cracking of the sulfur which are reduced to short chain hydrocarbons. These reactions result in the formation of H<sub>2</sub>S. After complete humidification of the sample the H<sub>2</sub>S comes in direct contact with the lead acetate tape which produces a darkening of lead sulfide immediately measured by the photodiode/LED optics & rate-of-reaction digital electronics to provide an accurate and reproducible total sulfur and H<sub>2</sub>S analysis with PPB or PPM sensitivity up to 100%. The LCD display provides the current reading, any alarm condition, procedure prompts (such as calibration procedure), and failure indicators (local and remote capability). Quality materials are selected for their compatibility and are utilized throughout fabrication. Special attention is given to wetted parts that come in contact with the process stream and are selected to be non reactive with H<sub>2</sub>S/Sulfur.



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## SERIES 1600-150 TYPICAL SPECIFICATIONS

### POWER INPUT -CUSTOMER SPECIFIED

110/240 VAC 50/60 Hz

### TEMPERATURE

5 C to 50 C (operating)

-0 C to 70 C (storage)

### PERFORMANCE

Range: Customer Specified

ppb thru ppm Up to Sulfur

Resolution: 1 ppb

Accuracy:  $\pm 2\%$  of Full Scale

Repeatability:  $\pm 1\%$  of Full Scale

Linearity:  $\pm 1\%$  of Full Scale

Drift: Less than 1% of FS

Temp. Coefficient: .01% / C

Analysis Time: Less Than 1 Second

Interference: None

### AREA CLASSIFICATION

Class I, Div II Series 1700-150

Class I, Div I Series 1700-150

### DISPLAY

Alpha Numeric LCD

Pixel Graphics 128x64

### ANALOG

4 - 20ma Isolated (optional)

4-20ma (standard)

### ALARM OPTIONS

Solid State 30ma 24V

Mechanical Relay 5a 220V

Normally Opened / Normally Closed

Diagnostic & Concentration

### DIMENSIONS & WEIGHT

30"X50"X12" or 76cmX127cmX30cm

100 lbs. or 90 kg appx.

### ACCESSORY OPTIONS

Automatic Calibration

Sample Probe and Regulator

Fugitive Emissions Control

Chart Recorder

Heater & Thermostat

RS-232/485

Modem Communications

### Quotation Information:

Analytical Systems International provides design and application engineering assistance for the User's analyzer requirements. For a quotation, please complete ASI Analyzer Quote Request Form at [www.ASIKECO.com](http://www.ASIKECO.com)