

# H<sub>2</sub>S IN WATER ANALYZER

Model 204H | Clean Water, Dirty Water



## Product Features

- No consumables required for detector
- Completely solid state detector, no moving parts
- Accurate and continuous analysis
- Quantitative measurement in ppm & percent Levels
- Proven reliability
- Fast response time
- Remote & Web based monitoring/control of analyzer
- ATEX and IECEx certificates available



## Applications

- Waste water treatment facilities
- Industrial discharger
- Municipalities chlorine efficiency
- H<sub>2</sub>S in cooling water
- well water, pond water, holding water, ditch water
- Refining/processing industrial water
- Seawater fractioning towers

## Product Description

The ability to analytically quantify H<sub>2</sub>S in Water online is enhanced with the Sample Transfer Stripper™ (exclusive ASI Membrane Technologies) and the advanced electrochemical H<sub>2</sub>S sensor or rateometric-colorimetric H<sub>2</sub>S detector technologies offered by Analytical Systems Keco. Economic payout is increased because of this automated and continuous process monitor.

The most effective process for measuring H<sub>2</sub>S in water involves representatively stripping the H<sub>2</sub>S vapor from the water for precise measurement in the gas phase. Direct optical measurement of H<sub>2</sub>S in the water is plagued by high routine maintenance and recalibration procedures. Analytical Systems utilizes the state-of-the-art Sample Transfer Stripper (STS) with exclusive ASI Membrane Technologies to efficiently and reliably separate the H<sub>2</sub>S from the water sample for measurement by the advanced electrochemical sensor or rateometric-colorimetric H<sub>2</sub>S detector. The STS is a very simple device that provides an ultra-clean and dry sample to the detector for analysis. This results in radically reduced maintenance requirements when compared to direct optical measurement techniques. Analytical Systems is established as the world-wide leader in H<sub>2</sub>S in water analysis due to the benefits of this exclusive technology.

The principle of operation requires a continuous free flowing water sample into the heated compartment where the STS unit separates the H<sub>2</sub>S from the water sample. An H<sub>2</sub>S free air/gas then sweeps the H<sub>2</sub>S gas sample to the H<sub>2</sub>S detector for quantitative analysis in PPBw, PPMw, and up to saturation levels.

ASI offers two detection technology choices for H<sub>2</sub>S measurement in water: The ASTM approved rateometric-colorimetric tape detector (Model 205) and the Smart Electrochemical Cell (Model 204H).



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# Typical Specifications

## DISPLAY

- Alpha Numeric LCD
- Up to four concentration display digits
- Back-lit / color display
- Non-intrusive operation (remains explosion proof)

## AMBIENT TEMPERATURE RANGES

- 1°C to 55°C (operating) without ext. cooling/heating
- 0°C to 70°C (storage)

## ANALOG

- Isolated 4-20mA

## ANALYTICAL PERFORMANCE

- Resolution: <1 to 50 ppb (app. dependent)
- Accuracy:  $\pm 2\%$  of FS
- Repeatability:  $\pm 1\%$
- Linearity:  $\pm 2\%$
- Drift:  $< \pm 0.5$  to  $\pm 0.1$  ppm/year (conc. dependent)
- Temp. Coefficient: 0.01% / °C
- Response time: <55 second @ sensor (conc. dep.)
- Sensor life: >24 months

## DETECTION RANGES

- 0-1 ppm by wt.
- 0-10 ppm by wt.
- 0-50 ppm by wt.
- 0-100 ppm by wt.
- 0-500 ppm by wt.
- Customer specified (contact factory)

## SAMPLING SYSTEM

- Sample Pressure Regulator (400 or 1,500 psig max)
- Sample Needle Valve
- Sample Flow Meter
- Carrier Air/Gas Flow Meter
- Secondary filter or optional AutoClean primary filter

## WEIGHT

- ~280 lbs

## DIMENSIONS

- 3 ft X 4 ft X 1 ft

## UTILITIES/SETTINGS

- 110VAC or 220VAC
- 100 Watts normal, 700 Watts max
- Carrier Air/Gas: 180 ml/min (15 psig max)
- Sample flow: ~200 ml/min
- Sample pressure: 30 psig (400 or 1,000 psi max)

## AREA CLASSIFICATIONS OPTIONS

- Class 1 Division 1
- Class 1 Division 2
- Zone 1 or Zone 2
- ATEX, IECEx, certificates available

## AVAILABLE OPTIONS

- Concentration relay alarms
- Diagnostic/fault alarms
- Low flow relay alarms
- RS-485 Modbus
- Remote monitoring/control with PC
- AutoClean Sample Filter

## TECHNOLOGIES

- Sample Transfer Stripper™ (ASI Membrane Technology)
- Smart Electrochemical Cell
- Rateometric-Colorimetric Tape (Model 205)
- Other detection options available upon request



## Advantages

**Consumable Free** There are no costly consumables needed for analysis with Smart Electrochemical cell

**Dependable operation** ASI Membrane Technology eliminates liquid carry-over that plague **headspace stripping columns**

**Ultra low maintenance** The analyzer is completely solid state with no moving parts for sensor / transmitter

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