

## PRODUCT DATA SHEET

# 900 Air Demand Analyzer (ADA)

## Extractive sulfur recovery tail gas analyzer

The 900 ADA uses our proprietary high-resolution ultraviolet (UV) technology in a dual-beam, multiple-wavelength configuration.

A resolution of better than 0.02nm is provided by high-intensity, line-source lamps. These sources emit at a fixed wavelength and provide great measurement stability. The high resolution enables unparalleled linearity over a wide dynamic range (<1% deviation over 4-5 orders of magnitude).

This unit is ideally suited for extreme climates where a shelter for personnel is required or where there are constraints to mount a 'top of the pipe' (AMETEK type 88) tail gas analyzer.

### Dual beam configuration

Combined with the reference measurement, the dual-beam configuration enables low noise performance with minimal baseline and span drift.

### ASR 900 probe

The ASR 900 probe incorporates a temperature-controlled sulfur condenser, providing sulfur vapor control at the sample point and ensuring that no plugging will occur in the sample lines and analyzer.

### Sample line type tail gas analyzer

The sample can be delivered up to 20m (60ft) or more from sample tap to analyzer shelter, which can be located at grade level.



## KEY BENEFITS

- Measures up to four species simultaneously
- Uniquely capable of monitoring off-ratio applications
- Reliable, trouble-free sampling
- Automated zero gas calibration
- Modbus serial interface
- Integrated shut-off valve allows servicing without removal of the probe
- Carbonyl sulfide (COS) and carbon sulfide (CS<sub>2</sub>) measurements for titanium dioxide (TiO<sub>2</sub>) promoted catalyst

## APPLICATIONS

- Conventional claus processes
- Selective oxidation processes
- Coke ovens

## KEY MARKETS

- Sulfur recovery

## PERFORMANCE SPECIFICATIONS

<b>Methodology</b>	Multiple-wavelength, high-resolution, non-dispersive UV		
<b>Measurement and scale chart</b>	<b>Species measured</b>	<b>Minimum full scale</b>	<b>Maximum full scale</b>
	H <sub>2</sub> S	5000 ppm	10%
	SO <sub>2</sub>	2500 ppm	10%
	CS <sub>2</sub>	5000 ppm	10%
	COS	5000 ppm	10%
<b>Accuracy</b>	Better than 1% full scale		
<b>Repeatability</b>	Better than 0.5% full scale		
<b>Linearity</b>	Better than 1% full scale		
<b>Response time</b>	Typically less than 30s to T90 (excluding sample system)		
<b>Number of gases</b>	Up to four simultaneously (refer to AMETEK for possible combinations)		
<b>Sample transport</b>	Air aspiration		
<b>Typical sample flow</b>	3 to 5 L/min (0.1 to 0.2 CFM)		
<b>Temperature control</b>	Independent control of four zones (oven, sample line, probe, vent line)		
<b>Ambient temperature</b>	5 to 50°C (41 to 122°F)		
<b>Instrument air</b>	Minimum 413.6KPa (60 psig), 120 L/min (4.24 CFM), instrument quality air		
<b>Power</b>	120 VAC ±10%, 47-63 Hz or 240 ±10%, 47-63 Hz; 600 W for analyzer only, excluding sample and vent line and ASR probe		
<b>Analog outputs</b>	4-20 mA self-powered (optional loop-powered), maximum of four		
<b>Approvals and certifications</b>	NEC/CEC: Class I, Division 2, Groups C & D ATEX: II 2G EEx pd IIB T3 Russian Ex Proof Certification: 1ExpydIIBT3 Russian Gosstandart Pattern Approval Complies with all relevant European Directives		

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