



Sample System Specialists for Gas Analysis

# 270 Series

## Gas Sample Probe

### General Description

The Universal Analyzers Model 270S heated sample probe is designed for continuous use in extractive gas sampling systems. The modular design is used to filter dust and particulate from a wide variety of gas streams in exhaust stacks and duct applications. The sample probe is designed with the end user in mind and comes with a unique no-tools design for filter replacement. This versatile probe is available in a number of configurations with many options to customize it to specific applications.

These options include:

- ▶ Corrosion Resistant Wetted Materials
- ▶ Choice of Flange Sizes (2, 3, 4, 6 inch)
- ▶ Self or DIN Controlled Filter Heat
- ▶ Filter Blowback (*for low maintenance*)
- ▶ Location Compliant Supply and Control Voltages
- ▶ Stainless Steel or Fiberglass Enclosures for Environmental Protection.
- ▶ Optional Hazardous Area FM Approval for Class I, Div.2 areas.

To avoid sample condensation in the probe, a heater is used to keep the filter chamber, element and tube connections hot and above the dew point. Temperature is controlled up to 340°F standard or 600°F in the “HiTemp” configuration.

For continuous operation in low to moderate dust loading environments, it is important to provide filter blowback for periodic cleaning of the filter chamber and probe tube. High-pressure plant air is stored in an accumulator tank and then released through a Hi-flow solenoid valve.

Optional ANSI flanges, standard and corrosion resistant probe tubes and probe tip filters are also available.



**270S Within Fiberglass Enclosure**  
(Oring removal tool optional)

### Applications

- ◆ Gas Turbine
- ◆ Refinery
- ◆ Boiler
- ◆ Chemical Process
- ◆ Heater Units
- ◆ Other Moderate Dust Environments

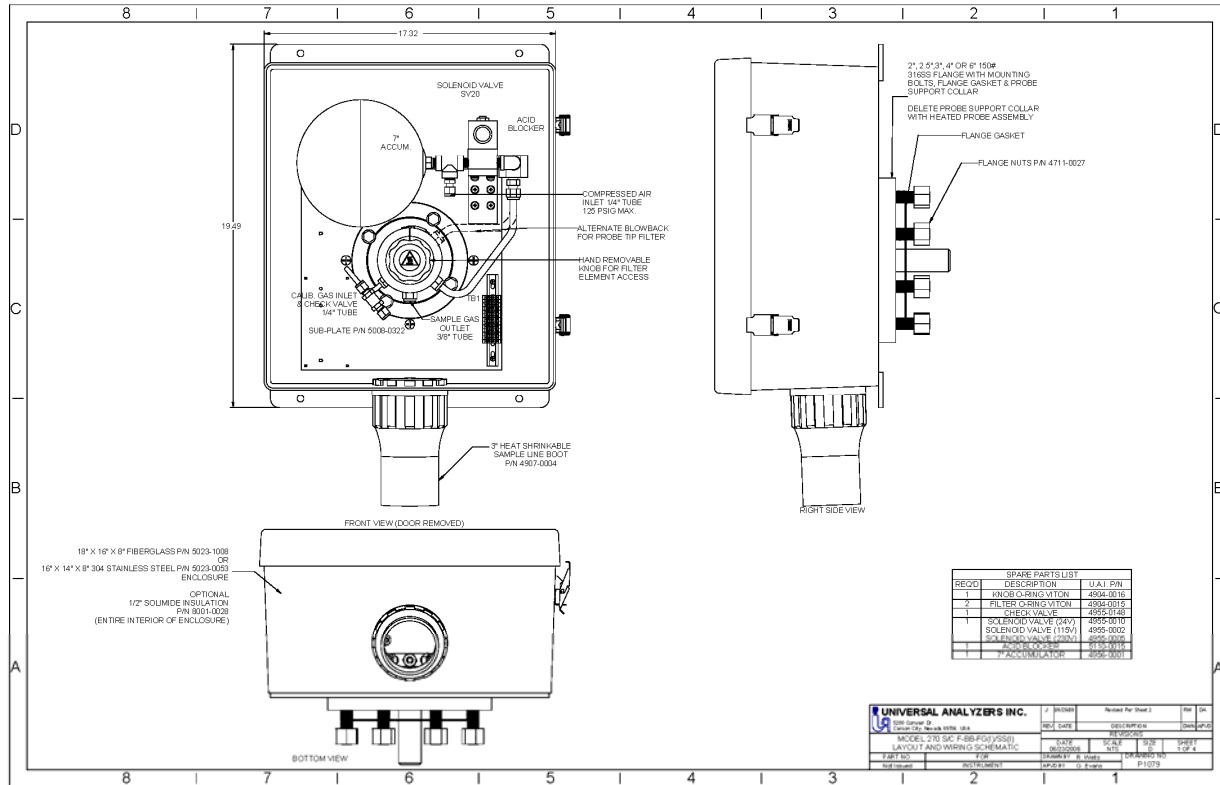
### Features

- ▶ Easy filter element replacement
- ▶ Efficient Blowback
- ▶ User-Friendly design
- ▶ Self regulating temperature control
- ▶ Hazardous area options
- ▶ Sub flange for easy removal of probe tube/filter
- ▶ Assembly operated valves to eliminate electrical power in the area or with explosion proof solenoid valves.
- ▶ Heated Filter Chamber
- ▶ Rugged Construction
- ▶ Ease of Maintenance
- ▶ Corrosion Resistant wetted parts
- ▶ Stainless Steel or Fiberglass Environmental Protection

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### Model 270



### Technical Specifications

- ▶ Sample Flow Rate: 0 to 20 LPM
- ▶ Calibration Gas Requirement: Sample flow rate plus 10%
- ▶ Operating Pressure Drop at 10 LPM: 12" water column
- ▶ Maximum Stack Gas Temperature: 700°F STD (Higher with optional extension spool)
- ▶ Oven and Vaporizer Temperature: 340°F (Optional 500°F)
- ▶ Dimensions (Varies w/Model FG/SS/C): 16" x 14" x 8" with fiberglass box
- ▶ Weight: 40-45 LB (18-20 KG) (depending on options included)
- ▶ Input Power Requirement: 150 WATTS  
250 WATTS with heated blowback
- ▶ Input Voltage Requirement: 115 or 230 VAC at 50/60 HZ
- ▶ Blowback Tank Volume: 0.1 SCF or 2.9 liters
- ▶ Blowback Duration: Two (2) seconds
- ▶ Blowback Timer Period: Exterior control (without timer card)  
15 minutes to 24 hours (with timer card)
- ▶ Blowback Solenoid Valve Voltage: 12/24V or 115/230V (without timer card)  
115/230V (with timer card)