



Sample System Specialists for Gas Analysis

Model 275HD

Dilution Gas Sample Probe

General Description

The Universal Analyzers type 275HD heated Dilution Gas Sample Probe is designed for continuous use in applications that require Dilution of a Sample Gas stream whether for Compliance, Safety or Process Gas Analysis Applications

The critical orifice and eductor are configured outside the stack along with the heated filter chamber for easy access and maintenance. The sapphire orifice is fully protected in a Stainless Steel holder with its own protection filter. Both the orifice and eductor are completely isolated from the main filter element to prevent damage during routine maintenance. Dilution air entering the eductor manifold is pre-heated to avoid any resulting dew point changes. Connections are available for entering calibration gas through the filter chamber and for measuring vacuum off the eductor manifold. If required, the 275HD can also be configured with an optional Fast-loop eductor to speed up the response time and there is also a non-diluted sample connection available.

The modular design is used to filter particulate prior to the sample entering the critical orifice. The sample probe is designed with the end user in mind and comes with a unique no-tools design for filter replacement. To avoid cold spots, an insulated wrap is included along with a high wattage heater to keep the filter element and tube connections hot and above the acid dew point. Temperature can be controlled up to 375°F standard or up to 600°F optionally. A unique over-sized 2µm Stainless Steel filter element comes standard and optional temperature control schemes, ANSI flanges, heated and non-heated probe tubes and probe tip filters are available.



Applications

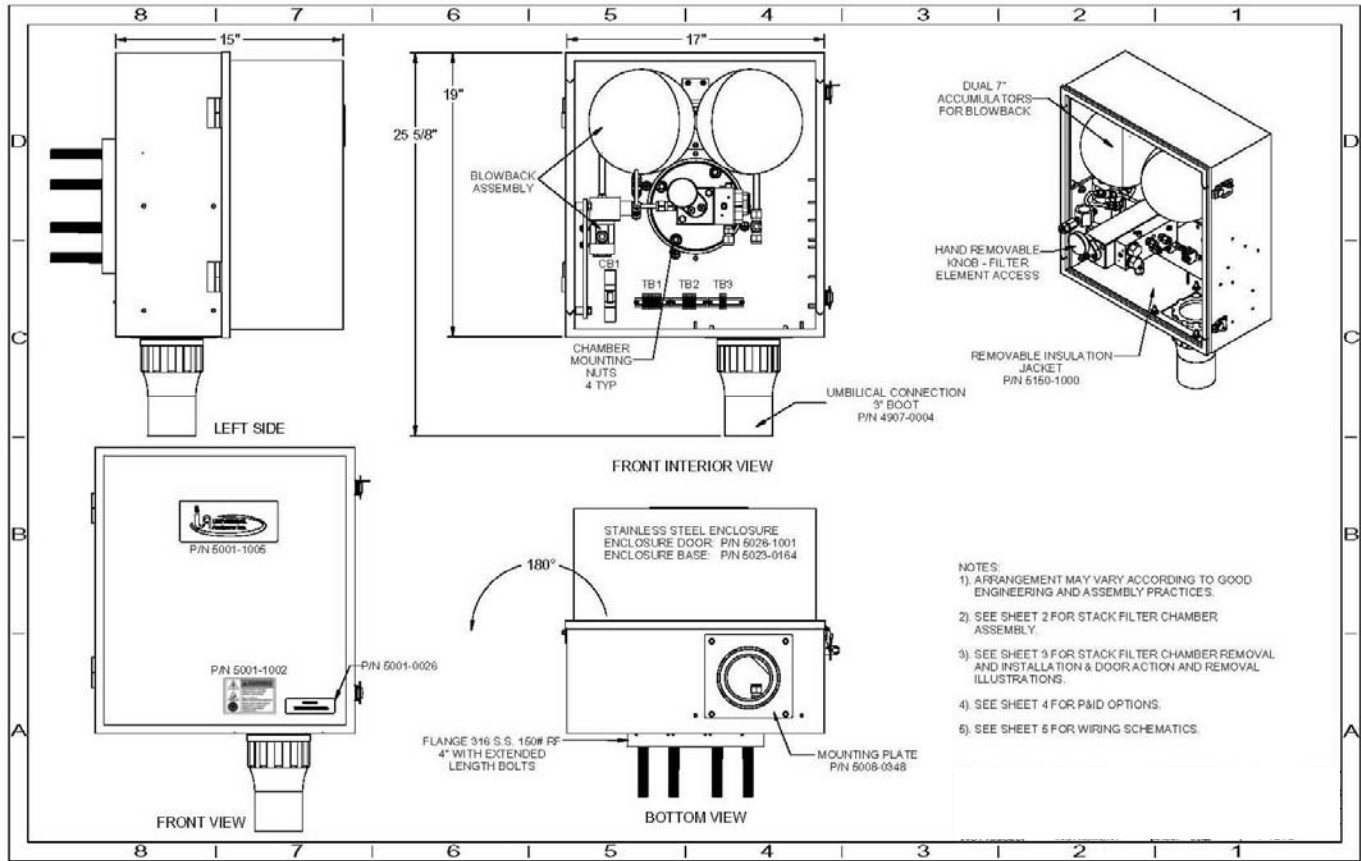
- ◆ Power Plants
- ◆ Pulp & Paper
- ◆ Process Safety
- ◆ Reduce Hazardous Gas Streams
- ◆ Laboratory Testing

Features

- ▶ Out-of-stack orifice and eductor
- ▶ Dilution ratio: 10:1 – 500:1
- ▶ NEMA type Stainless Steel enclosure
- ▶ Pre-heat of incoming dilution air
- ▶ Easy filter element replacement
- ▶ Sapphire Orifice in unique protective holder with secondary protection filter
- ▶ Square Filter Chamber / Better heat distribution
- ▶ Rugged Construction
- ▶ Ease of Maintenance with user friendly design
- ▶ Corrosion resistant wetted parts
- ▶ Non-Diluted Sample Connection
- ▶ Sub flange for easy removal of filter chamber/probe tube assembly

01/08

Model 275HD



Technical Specifications

- ▶ Power Supply: 120/240 VAC 50/60Hz
- ▶ Power Consumption: 300 Watts (2.4 amps @ 120v; 1.25 amps @ 240v)
- ▶ Power Protection: 10amp circuit breaker integrated
- ▶ Temperature Control: Remote via T/C, RTD or optional electronic control
- ▶ Ambient Temperature: -20°F - 135°F
- ▶ Filter Element: 2µm Stainless Steel – 9”
- ▶ Dilution Ratio: 10:1 to 500:1 with Sapphire Critical Orifice
- ▶ Operating Temperature: Up to 375°F (optional 600°F)
- ▶ Dilution Air Pressure Requirement: 20-85 psig @ dependent upon orifice size and desired ratio
- ▶ Dilution Air Flow Requirement: 5 - 15 l/m dependent upon orifice size and desired ratio
- ▶ Fast Loop Air Pressure Requirement: 5 psig
- ▶ Fast Loop Air Flow Requirement: 3 l/m
- ▶ Dilution Air Quality: Oil Free, CO₂, Particulate Free at -40°F Dew Point
- ▶ Process Operating Pressure / Vacuum: 1.5 psig / 5”Hg maximum allowed
- ▶ Wetted Material: 316 Stainless Steel, Sapphire, Viton
- ▶ Tubing Connections: 3/8” & 1/4” tube connections standard
- ▶ Area Classification: General Purpose
- ▶ Enclosure / Dimensions / Weight: NEMA 4 304 Stainless Steel; 19”h x 17”w x 15”d, ~85lbs
- ▶ Mounting Flange: 3”, 4” or 6” ANSI 150# (others available upon request)
- ▶ Probe Tube Options: Non heated / Heated Stainless, Hastelloy, Inconel or others