

Dilution Extractive Probe, Model PRO2001WHP

Modular, external, low-flow probe for wet-basis measurement



Key Features

- Dilution extractive technology for wet-basis measurement
- Proven heated filter dilution eductor and heated probe barrel assembly
- Umbilical termination assembly included
- Simple design for easy component access
- Versatile and cost-effective

The Thermo Scientific Model PRO2001WHP is an external, low-flow probe utilizing dilution extractive technology for wet-basis measurement. Housed in a NEMA 4X enclosure to protect from harsh environments, this probe is highly durable and easily mountable to the stack or duct.

The PRO2001WHP dilution probe assembly draws, conditions and dilutes the sample of process emissions to be transported for analysis. Capable of extracting a sample from a stack or duct, through a heated probe barrel, and filtering out the sub-micron particles using a heated filter to dilute the sample for transport down the umbilical for analysis.

The PRO2001WHP dilution probe assembly includes the heated filter dilution eductor, heated probe barrel assembly and umbilical termination assembly.

The umbilical termination assembly also includes all the fittings necessary for connection to the tubing umbilical.

This low-flow, dilution probe meets US EPA requirements as defined in 40CFR Part 75 and 40CFR Part 60 for continuous emissions monitoring using dilution extractive technology for wet-basis measurement.

This assembly has been proven to be an accurate and reliable component in hundreds of applications, including but not limited to:

- Utility boilers
- Pulp and paper mills
- Waste to energy facilities
- Incinerators
- Turbines
- Refineries
- Petrochemical
- Cogeneration facilities

To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your air quality equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product lifecycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific air quality products.

Product Specifications

Power Requirements	120 VAC, (2010 Watts)
Power Connection	CSA/UL approved screw terminal Terminal wire capacity up to 10 AWG (w/ option package)
Ambient Operating Temperature Range	-40°F to 122°F (-40°C - 50°C)
Maximum Process Temperature	1000°F (538°C)
Calibration Gas Flow Rate	2.0 L/min. minimum 2.5 L/min. maximum
Enclosure Temperature	100°F +/- 5°F (37.7°C +/- 3°C)
Purge Air Supply	60 PSIG (400kPA minimum) 80 PSIG (500kPA maximum)
Instrument Air Requirements	Clean Dry Air at -40°F (-40°C) dew point, 60 PSI minimum
Dilution Air Supply	30 PSI nominal via 0.25" tubing .18" I.D. minimum
Diluted Sample	-35°F to +10°F (37°C to -12°C) dew point
Size and Weight	17" (43.2cm) W x 19" (48.3cm) H x 10.5" (26.7cm) D, 39lbs (17.7 kgs)
Eductor Flow Rates	
Sample Flow	Approx. 50-300 cc/min.
Dilution Flow	Approx. 5-10 L/min.
Heated Eductor/Filter Body	290°F (143.3°C) +/- 10°F (5.5°C)
Heated Probe Assembly	290°F (143.3°C) +/- 10°F (5.5°C)
Materials of Construction	
Enclosure	NEMA 4X Fiberglass - 18" (45.7cm) H x 16" (40.6cm) W x 10" (25.4cm) D
Sample Orifice	Quartz glass, temperature controlled at 290°F (143.3°C)
Eductor Jet	Torlon or suitable material
Orifice Holder Body	Torlon or suitable material
Eductor Body	Torlon
Heated Filter Body	Torlon or suitable material, temperature controlled at 290°F (143.3°C)
Probe Barrel	316 Stainless Steel, temperature controlled at 290°F (143.3°C)
Dilution Eductor	Torlon or suitable material
Sample Lines	Teflon
Calibration Lines	Teflon
Options	
Probe Barrel	Teflon-lined Hastelloy, C276 (applications below 275°F) or other, specify
Dilution ratio	< 20:1 or > 200:1 (requires multiple eductor stages)
Heated Filter Assembly	Special material for reactive gases (HCl, NH3, THC) or other, specify
Enclosure	Other, specify
Non-insulated Stack	Enclosure cooling, A/C or vortex cooler

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