

Thermo Scientific Model PRO902C

Modular External Low-Flow Dilution Probe



Key Features

- CitiTechnology O₂ fuel cell for oxygen measurement at the probe site
- Automatically purges the probe filter and barrel in the event of a PLC failure
- Filter temperature is controlled by dedicated rack mounted PID probe controllers
- O₂ levels are displayed and adjusted from the rack location
- Heated sample line is not required

The Thermo Scientific Model PRO902C modular external low-flow dilution probe is for the use of dry-basis measurement. The modular design is capable of handling the toughest stack environments while offering significant advantages over typical in-stack dilution probes.

The PRO902C chills the sample stream via a thermoelectric cooler to remove the moisture in the sample. Once the sample has been conditioned dry air dilution lowers the sample dew point. The conditioned sample can then be transported via an unheated umbilical to the gas analyzer. The PRO902C also features an automatic purge at the filter and barrel to prevent PLC failure.

The filter temperature and heat traced umbilical temperature are controlled and alarmed by dedicated rack mounted PID probe controllers.

Regulations or permits may require the reporting of emissions in terms of concentration (e.g., ppm) rather than a mass-emission rate (e.g., lbs./hr.), the PRO902C is capable of both reporting functions. In addition, the PRO902C meets EPA requirements as defined in 40 CFR Part 75 and 40 CFR Part 60 for continuous emission monitoring, using the dilution-extractive technology for dry-basis measurement.

Typical applications include:

- Utility boilers
- Paper mills
- Waste-to-energy facilities
- Incinerators
- Turbines
- Refineries
- Petrochemical plants
- Gas plants
- Co-generation facilities

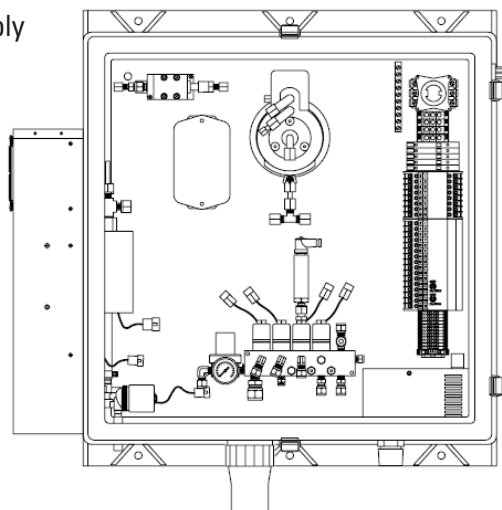
Product Specifications

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 life cycle. 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.

Model PRO902C

Probe Barrel	Corrosion resistant material. Consult Thermo Scientific for lengths over 6'
Heated Filter	0.1-micron glass fiber element, temperature controlled at 300°F (149°C)
Sample Orifice	Quartz glass, temperature controlled at 300°F (149°C)
Dilution Eductor	Torlon, stainless steel, or suitable material. Sample flow rate of approximately 100 cc/min. dilution air-flow rate of approximately 5 liters/minute, heated eductor temperature 300°F +/- 2°F (149°C), eductor vacuum greater than 15" Hg
Calibration Line	0.64 cm (1/4") OD Teflon
Mounting Method	4 each 1/2 - 13 X 2" SS bolts. Mates to customer's 4" - 150# flange
Probe Assembly Weight	73lbs. (33kg)
Diluted Sample Dew Point	-20°F to 20°F (-28°C to -6°C) depending on dilution ratio
Dilution Ratios	Between 20:1 and 200:1 are standard
Instrument Air Requirement	Clean, dry air at - 40°F (- 40°C) dew point , 70 PSI minimum
Power Requirements	120 VAC, 1200 Watts
Operating Ambient Temp Range	-4°F to 122°F (- 20°C to 50°C) or see options
Maximum Process Temperature	662°F (350°C)
Modular Heat Exchanger	Thermo electrically cooled 35°F to 45°F (2°C to 7°C)
Modular TE O2 Analysis System	Electrochemical oxygen sensor
Modular Remote PID Control	Single loop controllers for temperature control +/- 2°F Remote O ₂ meter display, O ₂ zero & span request control
Enclosure	Fiberglass, NEMA 4 X (17" (H) x 19" (W) x 10.5" (D))
Pressure Transducer	Loop powered 0-15 PSIA w/316 SS diaphragm and housing
Options	
<i>Probe Barrel</i>	Operation > 500°F, Length > 6' specify, Teflon lined (Applications below 275°F), Other, specify
<i>Dilution Ratio</i>	< 20:1 or > 200:1 (Requires multiple eductor stages)
<i>Customer's Mounting Flange</i>	Other than 4", specify, Orientation, Other, specify - 22.5° offset

Simplified Probe Assembly



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This product is manufactured in a plant whose quality management system is ISO 9001 certified.

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