

DIRECT EXTRACTIVE FILTER PROBES

General Purpose Model 34C & Model 34C-R



Application

The Baldwin™-Series Model 34C Heated Filter Probe is designed to be mounted on a stack or duct for use in high particulate applications. Its primary function is to provide a heated environment to maintain sample gas temperatures above dewpoint and remove particulate material from the gas sample. Models 34C-Z and 34C-R-Z features a standard 10 micron sintered stainless steel filter element, an external (Model 34C) or self (Model 34C-R) regulated heater jacket, an integral calibration gas port on both sides of the filter element, a NEMA 4 enclosure, and a single direct blowback system to clean the filter element.



General Specifications

Probe	
Calibration	Integral calibration on both sides of filter element
Heater Jacket Temp Control	External regulated (Model 34C) Self regulated (Model 34C-R)
Connections	1¼" male pipe nipple mount; ½" male pipe thread adapter
Tube Connectors	3/8" sample line, 1/4" calibration gas, 3/8" blowback
Thermocouple	Type K
Blowback	Single direct; 2-way solenoid blowback / calibration valve
Blowback Tank	16 ga. SS, 4" x 8", leak checked, pressure tested
Heat-shrink Boot	7" length, 2.75" min expanded I.D. nose
O-rings	Viton®
Gaskets	Graphoil®
Dimensions	14 x 12 x 8 in. HWD (w/o Stinger probe) 36 x 30 x 20 cm HWD
Weight	34 lbs 15 kg

Operating Specifications

Calibration Gas Requirement	20 psig, 6-10 LPM
Probe Operating Temperature	375°F (190°C)
Blowback Duration	5 sec standard (30 sec maximum)
Blowback Valve	110 standard (220 optional) VAC, 50/60 Hz
Blowback Flowrate	14 scfh
Instrument Air for Blowback	Min 50 psig, Max 90 psig

Material Specifications

Enclosure Material	NEMA 4 Steel (standard); NEMA 4X Stainless Steel (optional)
Heater Type	Heater bands, 350W (standard on external temp regulated) Silicone rubber blanket w/ metal snap closures, 100W (standard on self regulated)
Enclosure Insulation Material	½" thick silicone, medium density
Filter Chamber Material	316 stainless steel
Filter Element Types	10 micron sintered SS (standard) 5, 20 micron sintered SS 2 micron ceramic 2 micron SS screen mesh



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Baldwin™ Series Cast Filter Probe with Integrated Wheel Wrench™

Perma Pure has redesigned the Baldwin™ series filter probe assembly for improved performance, reliability and ease of use. The entire filter probe body – from stinger port through to filter housing – is cast out of a solid piece of 316 stainless steel for improved temperature control and long-term reliability as compared with traditional heater bands or jackets. Heat is generated by two reliable cartridge heaters inserted into either side of the stainless core. Pre-drilled ports enable connections of a thermocouple and two thermostats for temperature sensing and control, which can be self-regulated or controlled externally. The combination is unbeatable for maintaining consistency of temperature and ensuring long term durability.

The new design features the proprietary Wheel Wrench™ for easy servicing of the filter element. The Wheel Wrench™ provides leverage to open a crusty filter cavity and then provides secure, leak-proof re-enclosure without tools. You can easily operate the Wheel Wrench™ with gloves and there are no parts to lose because the wrench arm swings open on one hinge while the other stays permanently attached, as shown in the diagram.

The Cast Filter Probe body is now featured on all Baldwin™ series probes, including Model 33C extractive without blowback, Model 34C extractive with blowback, Model 45 dilution probe as well as Model 33XP for Class I Div I and Model 34C-Z for Class I Div II applications. The Cast Probe Filter body is also used for Nafion Sample Conditioning Systems with integral probes such as Models GS-2040 and MG-1228.



New Wheel Wrench™ makes servicing filter elements easy



Model 34 C-C Probe Interior

Consider these features and benefits:

- Single piece 316 stainless steel casting for temperature maintenance
- Unibody construction with no welded features or possible leak paths
- Two reliable cartridge heaters provide reliable heat
- Wheel Wrench™ latch system removes filter element for easy replacement and then tightens securely
- Pre-drilled ports for thermocouple or thermostats for temperature sensing/control