Gaskleen® IV Series Filter Assembly

Data Sheet MEGK4EN

Description

The Gaskleen® IV Series Filter Assembly is specifically designed for ≥ 3 nanometers (0.003 µm) filtration of ultra-high purity semiconductor process gases.

This assembly provides additional features over those normally associated with all fluoropolymer element point-of-use process gas filters. These include:

Features & Benefits

- No downstream (wetted surface) weld
- No elastomeric seals
- Rotatable VCR[1] nuts for ease of installation
- Excellent gas displacement characteristics (low internal volume)
- High purity 316L stainless steel electropolished housing
- All fluoropolymer element
- High temperature and pressure capabilities
- Compact size (1.13˝ / 28.8 mm dia.) for ease of installation
- 100% integrity tested
- Cleanroom manufactured and packaged

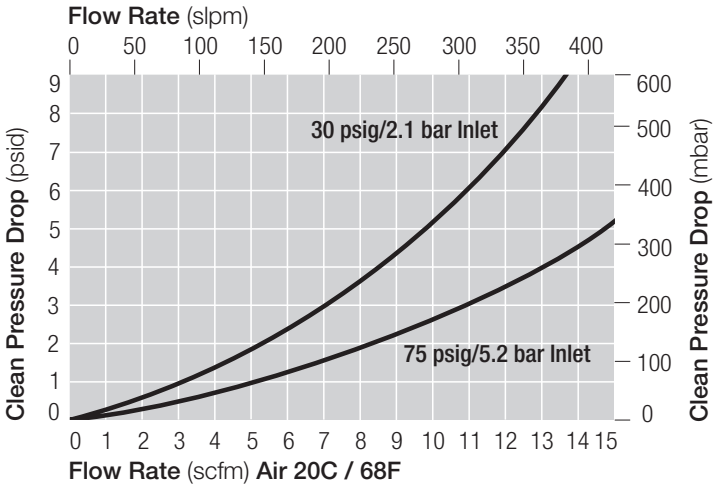
Specifications

Filter Medium	PTFE
Support	TFE / FEP
Core and end caps	PFA 440HP
O-ring	none
internal surface finish	≤ 7 µin / 0.18 µm R_a
Housing	Electropolished 316L stainless steel VAR PLUS housing meets or exceeds typical VIM / VAR specifications
Removal Rating[2]	≥ 3 nm
Preconditioned Cleanliness	< 10 ppb moisture contribution (Qualified per SEMASPEC test method #90120397B-STD)
	< 10 ppb THC contribution (Qualified per SEMASPEC test method #90120396B-STD)
	< 10 ppb O_2 contribution (Qualified per SEMASPEC test method #90120398B-STD)
	< 1 particle/(ft³) contribution above background
Connections	¼" Gasket seal, male (VCR or compatible)
	¼" Butt Weld (0.035" / 0.89 mm wall)
	⅜" Gasket Seal, male (VCR or compatible)
	⅜" Butt Weld (0.035" / 0.89 mm wall)
	½" Butt Weld (0.049" / 1.24 mm wall)

Leak Rating	100% helium leak tested to 10^{-9} atm·cm³/s
	Design validated to 10^{-11} atm·cm³/s
Maximum Operating Pressure	750 psig @ 284 °F / 52 bar @ 140 °C
Maximum Forward Differential Pressure	100 psid @ 100 °F / 7 bar @ 38 °C
Maximum Reverse Differential Pressure	50 psid @ 100 °F / 3.5 bar @ 38 °C
Packaging	Double bagged
	Outer bag: aluminized mylar[3]
	Inner bag: polyethylene
	N_2 purged

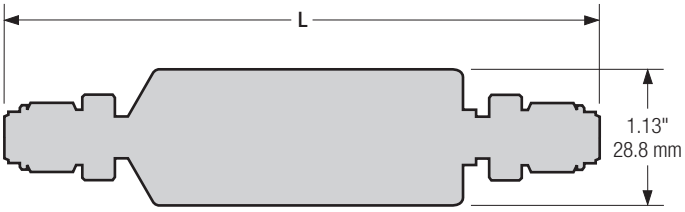
[1] VCR is a trademark of Swagelok Co.
[2] Particle rating based on laboratory testing with NaCl aerosol.
[3] Mylar is a registered trademark of Dupont Teijin Films.

Pressure Drop vs. Gas Flow Rate[4]

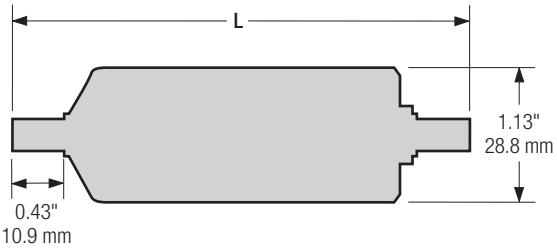


[4] For ¼" connections

Dimensions



VCR Connection



Butt Weld Connection

Part Numbers / Ordering Information

Part Number	Description	Length (L) (in / mm)
SGLFPF6402VMM4	¼" Gasket Seal, (VCR or Compatible) Male Inlet / Male Outlet	5.00 / 127
GLFPF6402BW4	¼" Butt Weld, 0.035" / 0.89 mm wall	3.87 / 98
SGLFPF6402VMM6 / 8	⅜" Gasket Seal, (VCR or Compatible) Male Inlet / Male Outlet	5.00 / 127
GLFPF6402BW6	⅜" Butt Weld, 0.035" / 0.89 mm wall	3.87 / 98
GLFPF6402BW8	½" Butt Weld, 0.049" / 1.24 mm wall	3.87 / 98

Unit conversion: 1 bar = 100 kilopascals

PALL CORPORATION

Microelectronics
25 Harbor Park Drive
Port Washington, NY 11050
+1 516 484 3600 telephone
+1 800 360 7255 toll free US

Nihon Pall Ltd.
6-5-1, Nishishinjuku,
Shinjuku-ku
Tokyo 163-1325 Japan
+81 3 6901 5700 telephone
+81 3 5322 2109 fax

Visit us on the Web at www.pall.com/microelectronics
Contact us at www.pall.com/contact

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