

Ultramet-L[®] 4000 Series Filter Assembly



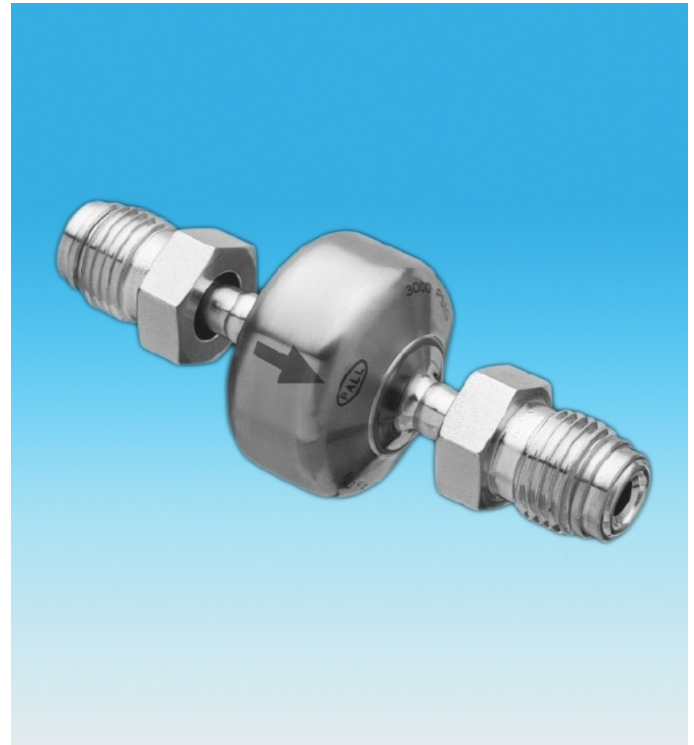
Data Sheet MEUL40EN

Description

The Ultramet-L[®] 4000 Series Filter Assembly is a unique, all 316L stainless steel filter designed for ≥ 3 nanometer ($0.003 \mu\text{m}$) filtration of semiconductor process gases.

Features & Benefits

- All 316L stainless steel construction
- State-of-the-art 316L stainless steel media
- Excellent particle removal efficiency vs. pressure drop
- Accommodates extremely high flow rates for the assembly size
- Excellent gas displacement and desorption characteristics
- High temperature and pressure capabilities
- Compact size for ease of installation
- Wide variety of fitting options available
- 100% helium leak tested
- Cleanroom manufactured and packaged



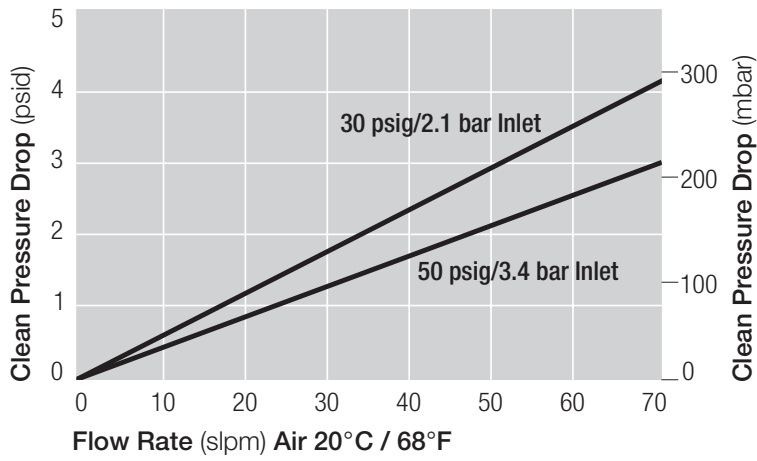
Specifications

Filter Medium	316L stainless steel
Internal Surface Finish	$\leq 7 \mu\text{in} / 0.18 \mu\text{m R}_a$
Housing	Electropolished 316L stainless steel Housing material meets or exceeds VIM / VAR specifications
Removal Rating	$\geq 3 \text{ nm}$
Particle Removal Characteristics	10^9 particle reduction up to 6 slpm / 0.2 scfm
	10^4 particle reduction up to 75 slpm / 2.6 scfm
Connections	$\frac{1}{4}$ " , $\frac{1}{2}$ " Gasket Seal, Male / Male (VCR ¹ or compatible)
	$\frac{1}{4}$ " Compression Seal, Male / Male (Swagelok ¹ or compatible)
	$\frac{1}{4}$ " Butt Weld (0.035" / 0.89 mm wall)

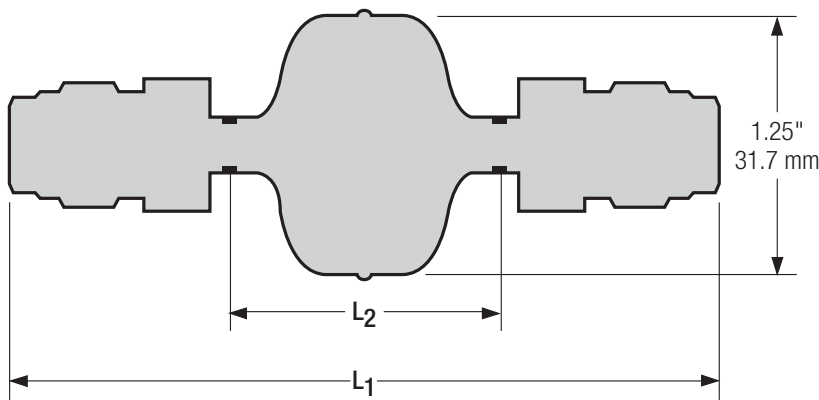
Leak Rating	100% helium leak tested to $10^{-9} \text{ atm}\cdot\text{cc/s}$
	Design validated to $10^{-11} \text{ atm}\cdot\text{cm}^3/\text{s}$
Maximum Operating Pressure	3000 psig @ 100 °F / 207 bar @ 38 °C 1685 psig @ 840 °F / 116 bar @ 450 °C
	Maximum Allowable Differential Pressure
EU pressure equipment directive	Assemblies have been evaluated and are CE marked per the European Union's Pressure Equipment Directive 2014/68/EU

¹ VCR and Swagelok are trademarks of Swagelok Co.

Pressure Drop vs. Gas Flow Rate



Dimensions



Part Numbers / Ordering Information

Part Number	Description	Length (L) (in / mm)
GLFF4000VM4	¼" Gasket Seal (VCR or Compatible) Male / Male	3.31 / 84 (L ₁)
GLFF4000SM4	¼" Compression Seal (Swagelok or Compatible) Male / Male	2.88 / 73 (L ₁)
GLFF4000BW4	¼" Butt Weld, 0.035" / 0.89 mm wall	1.75 / 45 (L ₂)
GLFF4000VMM8	½" Gasket Seal (VCR or Compatible) Male / Male	3.35 / 85 (L ₁)

Unit conversion: 1 bar = 100 kilopascals



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