



GuardianTM AT and ATX Cartridge Filters

Hydrophobic filtration products that deliver protection for high-purity chemicals in ultra-clean chemical delivery systems, with superior filtration and high flow



ATX Cartridge

AT Cartridge

Cartridges shown with optional ChemlockTM Key.

Superior Filtration Efficiency and High Flow

Constructed with a high-quality, high-retention PTFE membrane, Guardian AT and ATX filters provide the best retention efficiency and the lowest particle counts in chemical delivery systems. Guardian AT and ATX filters are ideal for single pass and spray tool filtration applications and bulk chemical delivery.

Guardian Delivers Retention and Flow

A typical filtration system trades flow for retention. Guardian AT and ATX cartridges provide superior filtration efficiency *and* high flow by incorporating a high-efficiency PTFE membrane in a large filtration-area device. The combination delivers low particle counts without compromising flow rates, even with high-viscosity fluids such as sulfuric and phosphoric acids.

Guardian Delivers Outstanding Cleanliness

Rigorous flushing and cleaning during the manufacturing process ensure that Guardian AT and ATX products consistently meet the high-purity requirements of a demanding wafer fabrication environment. These filters minimize ionic and organic extractables and prevent contamination of ultra-pure chemicals.

Guardian Offers Superior Flexibility

Mykrolis offers Guardian AT and ATX filters in a variety of configurations designed to meet the needs of any manufacturing environment. Both filters are available in a 10-inch length; Guardian ATX filters are also available in 20-inch and 4-inch lengths. Each filter comes with a choice of retention ratings (0.05µm, 0.1µm and 0.2µm, and 0.03 µm for 10" ATX only,) for optimized performance in single-pass filtration systems.

Product Features

Highly retentive hydrophobic PTFE membrane made of Teflon[®] fluoropolymer resin

Large membrane area

All-fluoropolymer materials of construction

Product Benefits

Provides excellent removal of small, critical-size particles to ensure low particle counts in chemical delivery systems.

Produces high flow in chemical delivery systems to deliver process chemicals to the point-of-use rapidly and efficiently.

Provides a broad range of chemical compatibility. Suitable for a variety of chemicals and solvents.

Guardian AT Cartridge Filters

Materials	Membrane: Hydrophobic PTFE
	Supports: PFA supports, core sleeve and end caps O-rings: Viton® encapsulated with Teflon fluoropolymer resin (TEV), Chemraz® perfluoroelastomer, or Kalrez® perfluoroelastomer O-rings
Connections	Code 0, 2-222 double O-rings
Operating Conditions	Maximum Forward Differential Pressure: 0.45 MPa (4.5 bar, 64 psid) @ 25° C
	Maximum Reverse Differential Pressure: 0.35 MPa (3.5 bar, 50 psid) @ 25° C
	Maximum Operating Temperature: 150° C (302° F) @ 0.5 bar (7.3 psi)
Membrane Area	9,000 cm ² (9.69 ft. ²)
Cleanliness	Filter contributes < 2 particles/mL ≥0.2 μm after five-minute flush at 5 L/min.

Guardian AT Cartridge

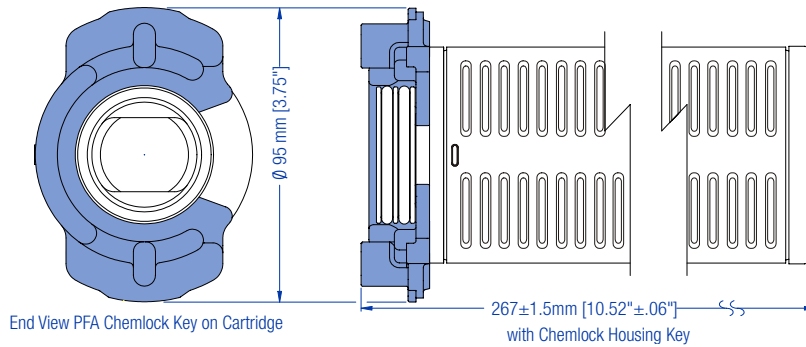
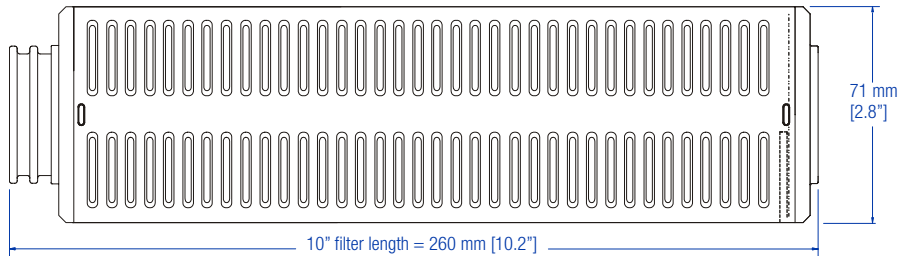
GDC **0** **T** **K**

Retention Rating
 Z = 0.05 μm
 V = 0.1 μm
 G = 0.2 μm

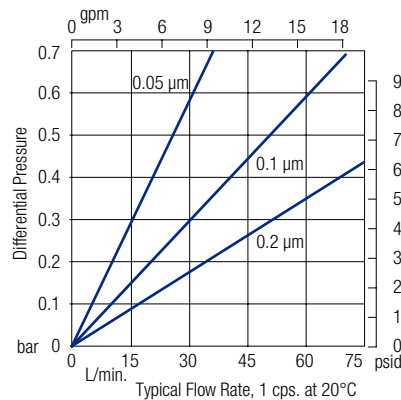
Length
 1 = 10"

O-rings
 O1 = TEV
 C1 = Chemraz
 K1 = Kalrez

K
 Optional Chemlock key attached to cartridge for use with Chemlock Housing ONLY.



Flow Rates

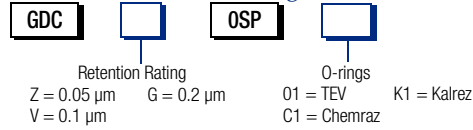


Guardian AT 10" Filter

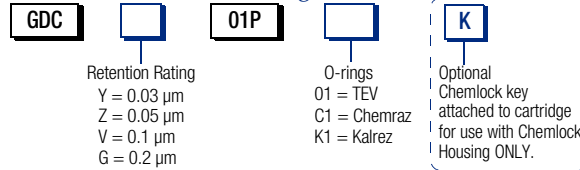
Guardian ATX Cartridge Filters

Materials	Membrane: Hydrophobic PTFE
	Supports: PFA supports, core sleeve and end caps
	O-rings: Viton encapsulated with Teflon fluoropolymer resin (TEV), Chemraz perfluoroelastomer, or Kalrez perfluoroelastomer O-rings
Connections	Code 0, 2-222 double O-rings
Operating Conditions	Maximum Forward Differential Pressure: 0.45 MPa (4.5 bar, 64 psid) @ 25° C
	Maximum Reverse Differential Pressure: 0.35 MPa (3.5 bar, 50 psid) @ 25° C
	Maximum Operating Temperature: 150° C (302° F) @ 0.5 bar (7.3 psi)
Membrane Area	20-inch ATX: 26,000 cm ² (28 ft ²) 10-inch ATX: 13,000 cm ² (14 ft ²) 4-inch ATX: 5,000 cm ² (5.4 ft ²)
Cleanliness	Filter contributes < 2 particles/mL ≥0.2 µm after five-minute flush at 5 L/min.

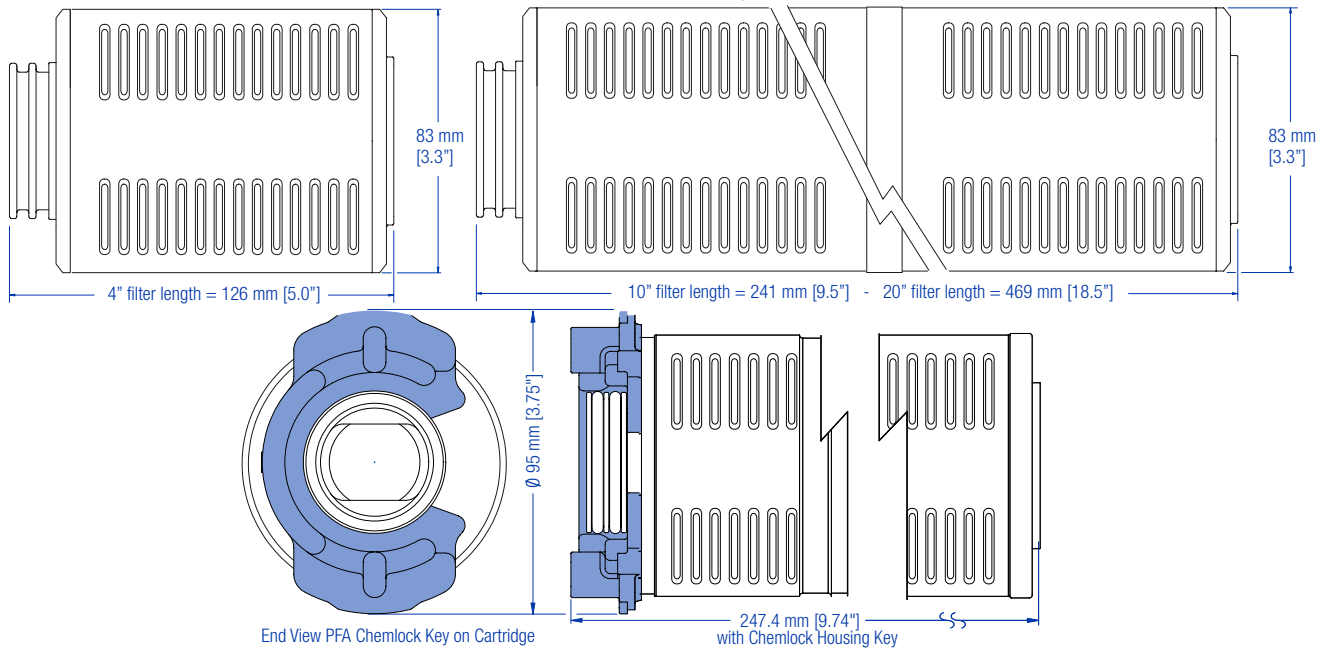
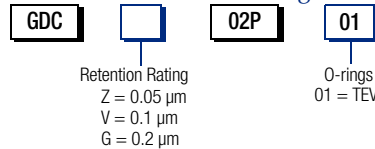
Guardian ATX 4" Cartridges



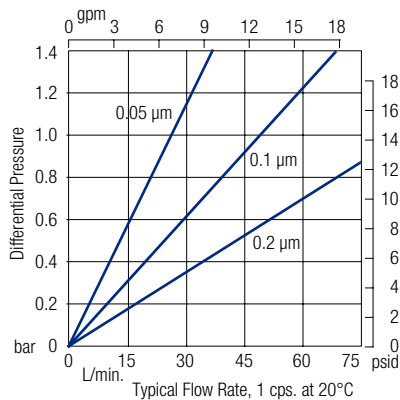
Guardian ATX 10" Cartridges



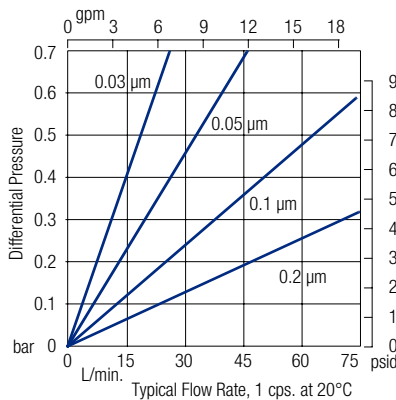
Guardian ATX 20" Cartridges



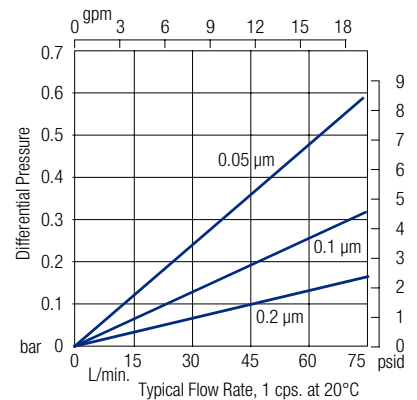
Flow Rates



Guardian ATX 4" Filter



Guardian ATX 10" Filter



Guardian ATX 20" Filter