Rinsegard® HP and HPX Cartridge and Disposable Filters

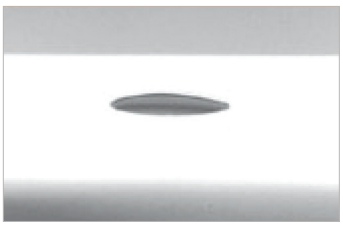
Simultaneously removes trace levels of positively charged ions and fine particles in ultrapure DI water

Rinsegard® HP/HPX filters optimize wafer quality by removing trace metallic ions, even from ultrapure water. Trace metals in ultrapure water — at the wet etch, clean process, and especially the rinse stages — can increase metal contamination of the wafer and decrease minority carrier lifetime measurement. Detection of low concentrations of trace metals presents a challenge as conventional resistivity monitoring equipment cannot accurately measure or monitor trace metallic ions in the low parts-per-trillion (ppt) range.

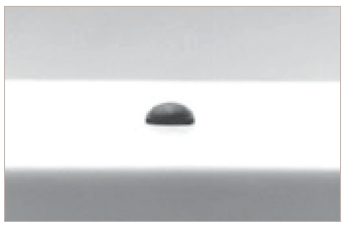
Rinsegard HP/HPX filters, utilize a patented, hydrophilic UPE membrane. The Rinsegard filters remove a finite mass of multi-valent metal ions and particles from ultrapure water and offer superior particle performance.

Simple Installation and Replacement

Rinsegard HP/HPX filters simplify filter changeout and minimize downtime. The patented hydrophilic membrane (UPE) eliminates the need for prewetting or flushing, and the large filtration area of the HPX filter enhances membrane retention and flow.



Aqueous chemicals instantly wet Rinsegard hydrophilic UPE membrane



PTFE membrane resists instantaneous wetting

FEATURES & BENEFITS

Hydrophilic, patented UPE membrane	Increases equipment uptime, and provides better, more consistent performance Eliminates prewetting and flushing. Saves time at changeout
Multifunctional membrane with the ability to eliminate ions and particles	Eliminates trace levels of ions and improves quality of ultrapure water Decreases metal contamination on wafer and reduces waste. Removes particles with greater than 99.9% efficiency at stated retention rating.
Available in retention ratings of 0.05 µm, 0.1, and 0.2 µm	Excellent small particle retention: ensures minimal particles on wafer
High membrane-area cartridge, with low pressure drop across the membrane	High flow and efficient particle removal: ensures rapid particle removal in one-pass and recirculating applications
All-polyethylene construction	Provides excellent chemical compatibility, long lifetime, reduced changeout and system startup times
Available in 4", 10", 20", and 30" cartridge sizes as well as disposable filter options	Designed to fit the flow and process needs and space constraints for wide variety of customers and original equipment manufacturing (OEM) suppliers.

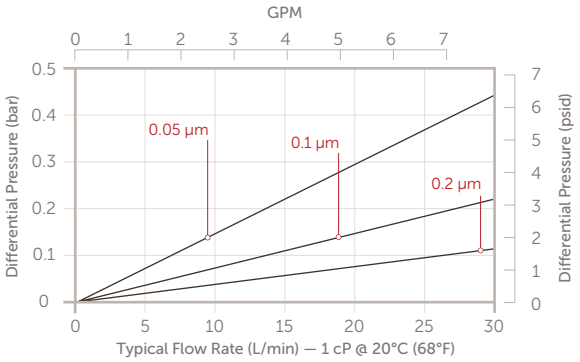
SPECIFICATIONS

		HP	HPX
Materials of construction	Membrane	Patented hydrophilic ultra-high molecular weight polyethylene (UPE)	
	Supports, sleeve, core, end caps	Nonwoven high-density polyethylene (HDPE)	
	Code O double 2-222 O-rings	Teflon® encapsulated Viton® (TEV), or EPDM	
	Chem-Line™ II disposables outer shell	N/A	Polypropylene
	Chem-Line I disposables outer shell	N/A	PFA
Retention rating		0.2, 0.1, 0.05 µm	
Membrane surface area		10": 0.85 m²	4": 0.5 m² 10": 1.1 m² 20": 2.2 m² 30": 3.3 m²
Maximum operating conditions		Maximum forward differential pressure: 0.35 MPa (3.5 bar; 50 psid) @ 25°C (77°F) Maximum reverse differential pressure: 0.35 MPa (3.5 bar; 50 psid) @ 25°C (77°F) Maximum operating temperature: Cartridges: 60°C (140°F) at the above conditions Disposables: 70°C (158°F) at the above conditions	
Cleanliness		<2 particles/mL >0.2 µm after 5-minute flush DI water @ 5 L/min	
Compatibility		Designed for ultrapure DI water. Not compatible with ozone.	

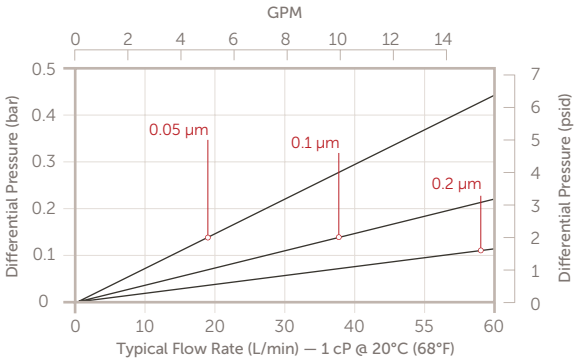
Rinsegard HP, HPX Cartridge Filters

PERFORMANCE DATA

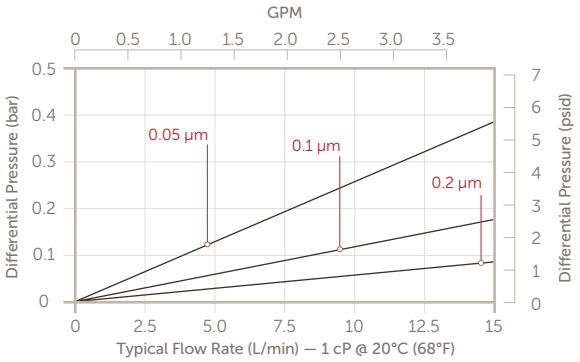
Guardian HP 10" Cartridges



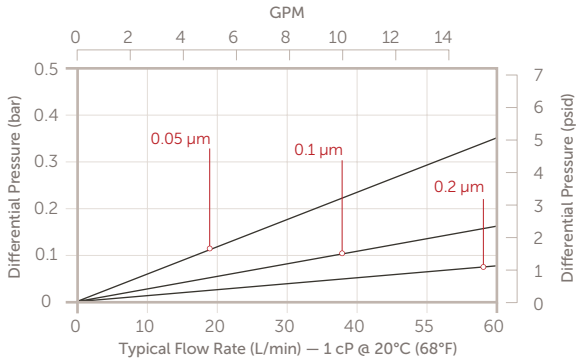
Guardian HP 20" Cartridges



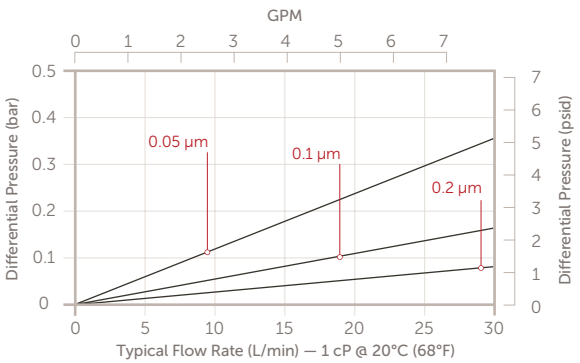
Guardian HPX 4" Cartridges



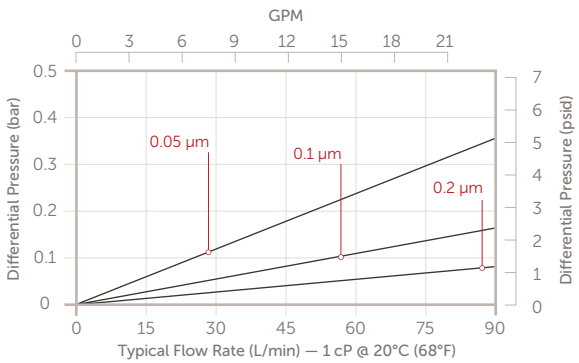
Guardian HPX 20" Cartridges



Guardian HPX 10" Cartridges



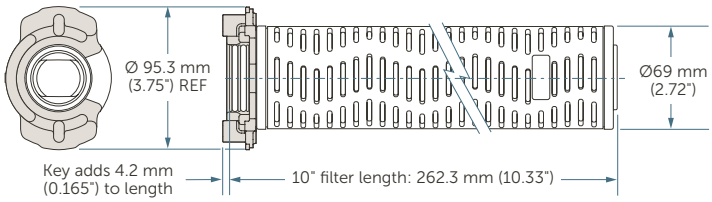
Guardian HPX 30" Cartridges



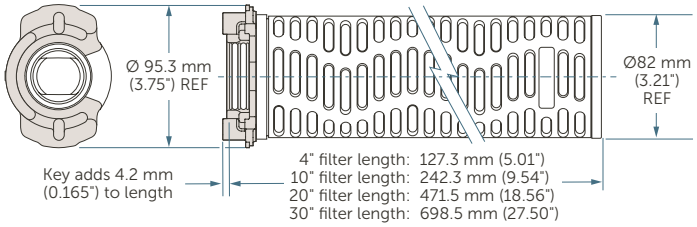
DIMENSIONS

Nominal Dimensions

Rinsegard HP Cartridge Filters



Rinsegard HPX Cartridge Filters



ORDERING INFORMATION

Rinsegard HP Cartridge Filters: part number

RGC__0__PLT__

- **Key**
  K = PFA Chemlock® key (optional) for use with Chemlock housing only
- **O-ring**
  PLT = TEV
- **Cartridge length**
  1 = 10"
  2 = 20"
  3 = 30"
- **Retention rating**
  Z = 0.05 µm
  V = 0.1 µm
  G = 0.2 µm

Rinsegard HPX Cartridge Filters: part number

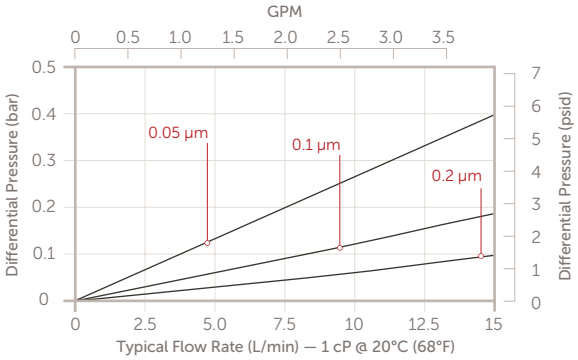
RGC__0_____

- **Key**
  K = PFA Chemlock key (optional) for use with Chemlock housing only
- **O-ring**
  P01 = TEV
  MT1 = TEV
- **Cartridge length**
  S = 4"
  1 = 10"
  2 = 20"
  3 = 30"
- **Retention rating**
  Z = 0.05 µm
  V = 0.1 µm
  G = 0.2 µm

Rinsegard Disposable Filters

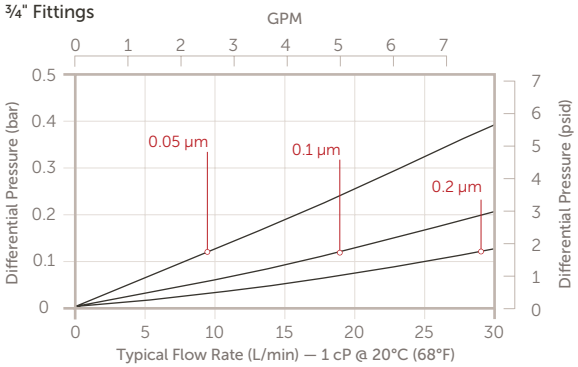
PERFORMANCE DATA

Rinsegard HPX 4" Disposable Filters



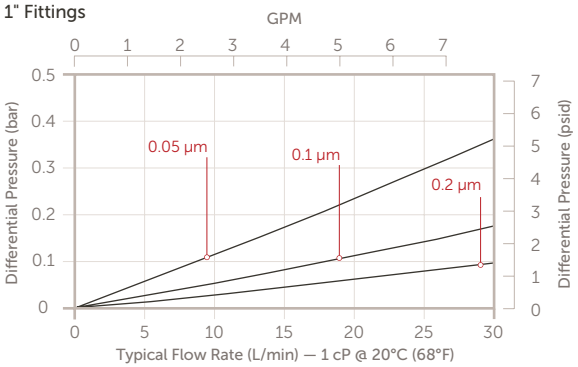
Rinsegard HPX 10" Disposable Filters

¾" Fittings



Rinsegard HPX 10" Cartridges

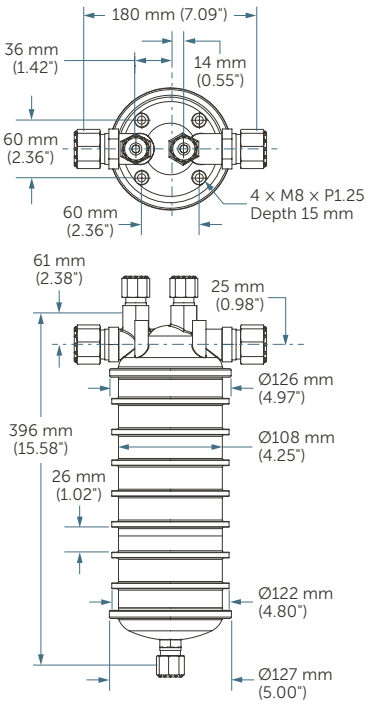
1" Fittings



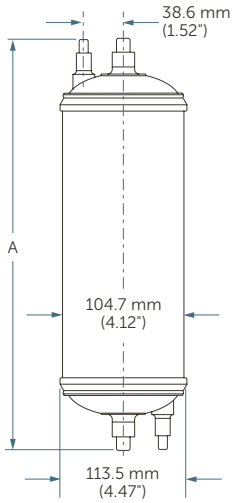
DIMENSIONS (NOMINAL)

Chem-Line I Disposable Filters

TH: T-Line ¾" Super Type Pillar® Fittings



Chem-Line II Disposable Filters



DIMENSION A		
Inlet/ outlet size	**4" Disposable filter with Flaretek® compatible fittings**	**10" Disposable filter with Flaretek compatible fittings**
¾"	247.9 mm (9.72")	359.9 mm (14.17")
1"	—	370.1 mm (14.57")

ORDERING INFORMATION

Rinsegard HPX Chem-Line II Disposable Filters:
part number

RGD__HP__ __

Fittings
0F = ¾" inlet/outlet, ¼" vent/drain
4F = 1" inlet/outlet, ¼" vent/drain

Device length
S = 4"
X = 10"

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

Rinsegard HPX Chem-Line I Disposable Filters:
part number

RGD__HPX TH

Fittings
TFH = ¾" inlet/outlet, T-line, ½" vent/drain, Super Type Pillar Fittings

Retention rating
Z = 0.05 µm
V = 0.1 µm

FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit entegris.com and select the Contact Us link to find the customer service center nearest you.

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Corporate Headquarters
129 Concord Road
Billerica, MA 01821
USA

Customer Service
Tel +1 952 556 4181
Fax +1 952 556 8022
Toll Free 800 394 4083