



CHEMVAST™ ABSOLUTE-RATED FILTERS

PTFE filters for low-temperature, high-purity chemical filtration

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PTFE FILTERS FOR LOW TEMPERATURE, HIGH-PURITY CHEMICAL FILTRATION

Cobetter Chemvast™ filter series are available in three different PTFE membranes including hydrophobic PTFE, hydrophilic PTFE or non-dewetting PTFE.

With a HDPE support structure, the filter is highly compatible with most lower temperature, dilute semiconductor process chemistries. Chemvast is available in a wide range of retention ratings and pore sizes to meet customer's requirements.

Non-dewetting PTFE resists dewetting by increasing the surface energy of the membrane which results in higher flow rates and filtration efficiency. With its HDPE cage, core, and high purity membrane, Chemvast is a lower cost alternative compared to the all-fluoropolymer Chemrapid® Filter Series. Chemvast Hydrophilic PTFE membrane can be used to filter dilute acidic and alkaline chemistries, as well as polar solvents without pre-wetting.

FEATURE	BENEFIT
HDPE Cage/Core	Good chemical compatibility
	Low metal extractables
	Lower cost compared to all-fluoropolymer filters
Non-dewetting PTFE membrane option	Resists dewetting in lower temperature outgassing chemistries
	Enhanced retention of particles
Hydrophilic PTFE membrane option	No prewetting
	Good performance in dilute HF solutions and some polar solvents
Prewet option	Reduces pre-operation time
	Easy start up with aqueous-based chemicals
100% integrity tested	Ensures highly efficient particle retention every time



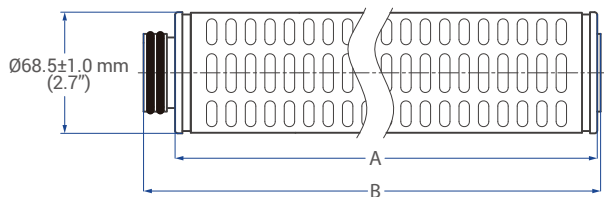
Typical Applications

- Low temperature wet etch and clean
- Bulk chemicals distribution
- High-purity chemical manufacturing

SPECIFICATIONS

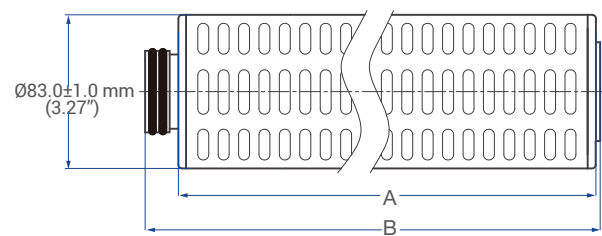
Filter media	Hydrophobic PTFE / Hydrophilic PTFE / Non-dewetting PTFE				
Supports/core/cage/end caps	HDPE				
O-rings (cartridge only)	TEV or EPDM				
Shell (disposable only)	HDPE				
Max. operating temperature	Cartridge: 70°C; Capsule: 38°C				
Max. operating pressure	Capsule: 0.34 MPa (3.4 bar, 49 psi) at 25°C				
Cartridge max. differential pressure	Forward: 0.4 MPa (4.0 bar, 58 psi) at 25°C				
	Reverse: 0.3 MPa (3.0bar, 43.5 psi) at 25°C				
Effective filtration area	X1	X2	Z1	Z2	Z3
	(ø68mm)	(ø68mm)	(ø83mm)	(ø83mm)	(ø83mm)
10"	0.9m ² (9.7ft ²)	1.3m ² (14.0ft ²)	1.3m ² (14.0ft ²)	1.9m ² (20.5ft ²)	2.2m ² (23.7ft ²)

CHEMVAST X1, X2 CARTRIDGE FILTERS (2-222/FLAT)



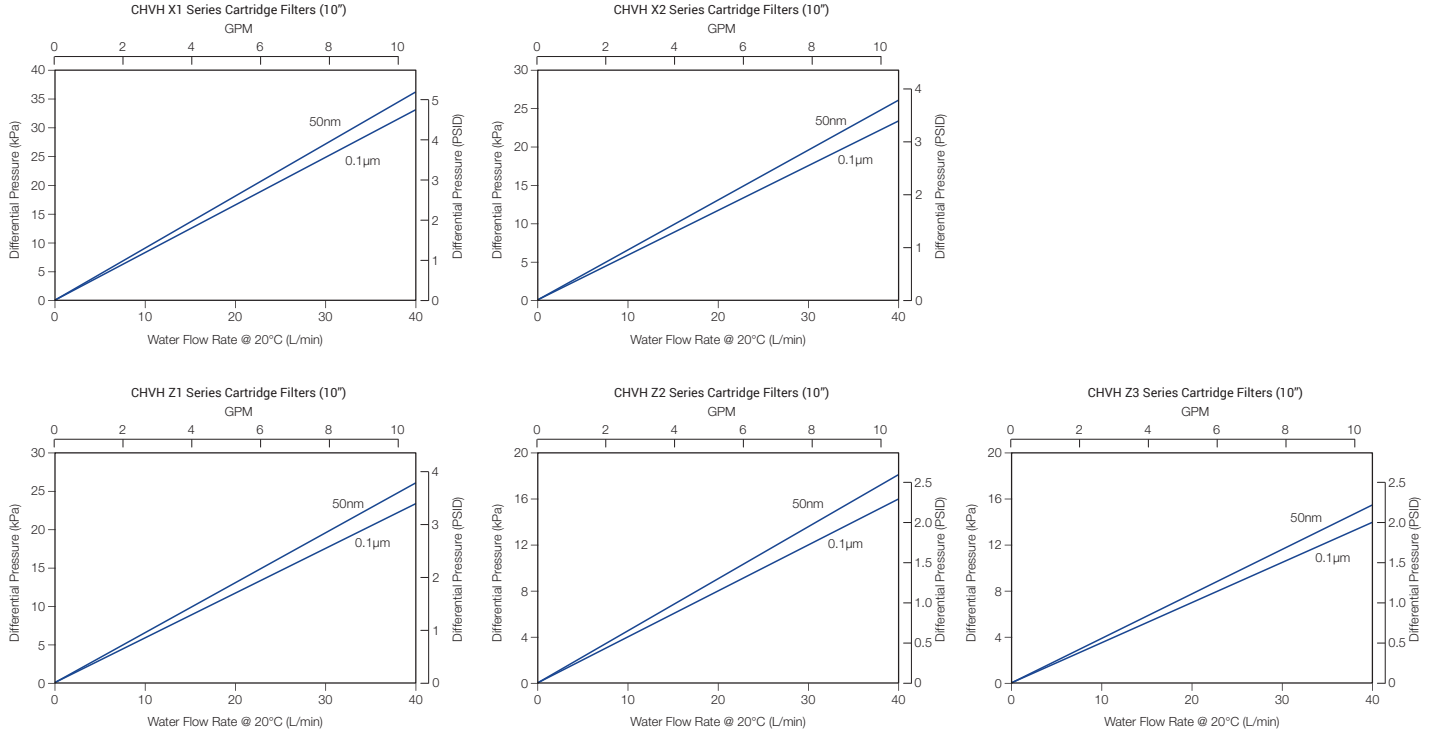
Length Code	A	B
04P	102.0 ±1 mm (4.0")	122.0 ±1 mm (4.8")
09P	229.0 ±2 mm (9.0")	249.0 ±2 mm (9.8")
10P	254.0 ±2 mm (10.0")	274.0 ±2 mm (10.8")
20P	508.0 ±3 mm (20.0")	528.0 ±3 mm (20.8")
10	242.5 ±2 mm (9.5")	262.5 ±2 mm (10.3")
20	488.0 ±3 mm (19.2")	508.0 ±3 mm (20.0")
20C	478.0 ±3 mm (18.8")	498.0 ±3 mm (19.6")
30	734.0 ±4 mm (28.9")	754.0 ±4 mm (29.7")

CHEMVAST Z1, Z2, Z3 CARTRIDGE FILTERS (2-222/FLAT)



Length Code	A	B
04	110.0 ±1 mm (4.3")	130.5 ±1 mm (5.1")
10	225.0 ±2 mm (8.9")	247.0 ±2 mm (9.7")
20	452.0 ±3 mm (17.8")	472.0 ±3 mm (18.6")

CARTRIDGE FLOW RATES



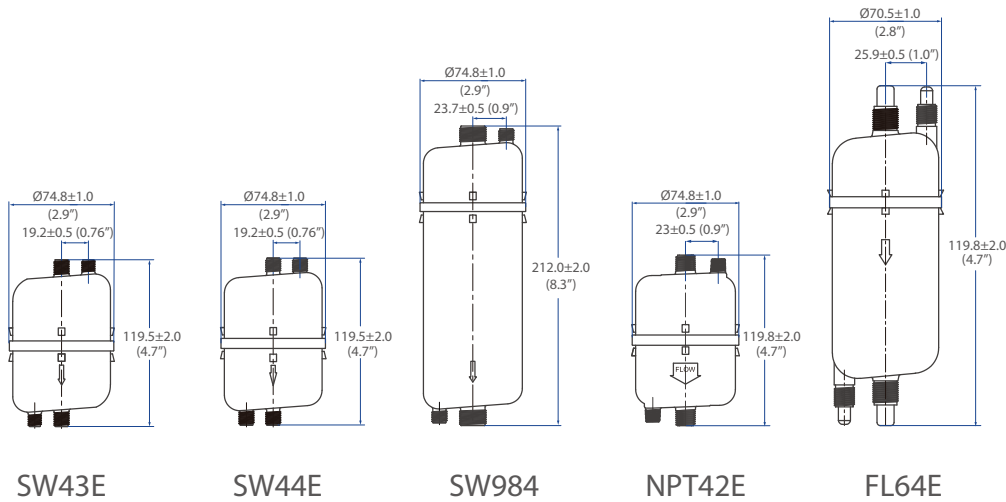
CARTRIDGE ORDERING INFORMATION¹

EXAMPLE: **CHVRX1NM30OTC10EMW** = HDPE cage/core, non-dewetting, 2.7"W, 30nm, 10" length, M grade, pre-wet

<p>CHV</p> <div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> <p style="text-align: center;"> </p> <p>Membrane T = Hydrophobic H = Hydrophilic 50 nm/0.1/0.2/0.5/1.0/3.0/5.0/10 µm R = Non-dewetting 7/10/15/20/30/50nm/0.1 µm</p>	<p>Diameter X1 = Ø68 (2.7") X2 = Ø68 (2.7") Z1 = Ø83 (3.27") Z2 = Ø83 (3.27") Z3 = Ø83 (3.27")</p>	<p>Removal Rating NM07 = 7 nm NM10 = 10 nm NM15 = 15 nm NM20 = 20 nm NM30 = 30 nm NM50 = 50 nm 0010 = 0.1 µm 0020 = 0.2 µm 0050 = 0.5 µm 0200 = 1.0 µm 0300 = 3.0 µm 0500 = 5.0 µm 1000 = 10 µm</p>	<p>OTC</p> <div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> <p style="text-align: center;"> </p> <p>Nominal Length 04 = 04" 10 = 10" 20 = 20" 30 = 30" 09P = 9" 10P = 10" 20P = 20" P ABD Type</p>	<p>O-ring P = TEV E = EPDM</p>	<p>Cleanliness M = < 25 µg/device H = < 40 µg/device E = Electronic grade</p>	<p>Package D = Dry W = Prewet, UPW</p>
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¹ Not all combinations of surface area options and removal ratings are available. Please contact Banner Industries with any questions about part number availability.

CHEMVAST CAPSULE FILTERS



SW43E

SW44E

SW984

NPT42E

FL64E

CARTRIDGE ORDERING INFORMATION¹

EXAMPLE: **CHVHNM50SW44EED** = Hydrophilic, 50 nm, compression 1/4" IO, 1/4" VD, electronics grade, dry

CHV



Membrane

T = Hydrophobic
 H = Hydrophilic 50 nm/0.1/0.2/0.5/1.0/3.0/5.0/10 µm
 R = Non-dewetting 7/10/15/20/30/50nm/0.1 µm



Removal Rating

NM07 = 7 nm
 NM10 = 10 nm
 NM15 = 15 nm
 NM20 = 20 nm
 NM30 = 30 nm
 NM50 = 50 nm
 0010 = 0.1 µm
 0020 = 0.2 µm
 0050 = 0.5 µm
 0200 = 1.0 µm
 0300 = 3.0 µm
 0500 = 5.0 µm
 1000 = 10 µm



Connection Type

PSW43E = Compression
 SW44E = Compression
 SW984E = Compression
 NPT42E = NPT Flare Type
 FL64E = NPT Flare Type



Cleanliness

M = < 25 µg/device
 H = < 40 µg/device
 E = Electronic grade



Package

D = Dry
 W = Prewet, UPW

Connection Type	Inlet/Outlet	Vent/Drain
PSW43E = Compression	1/4"	4 mm
SW44E = Compression	1/4"	1/4"
SW984E = Compression	1/2"	1/4"
NPT42E = NPT Flare Type	1/4"	1/4"
FL64E = NPT Flare Type	3/4"	1/4"

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