2014

GE Power & Water
Water & Process Technologies

Cartridge Filters & Housings

Contents

Capture More, Service Less

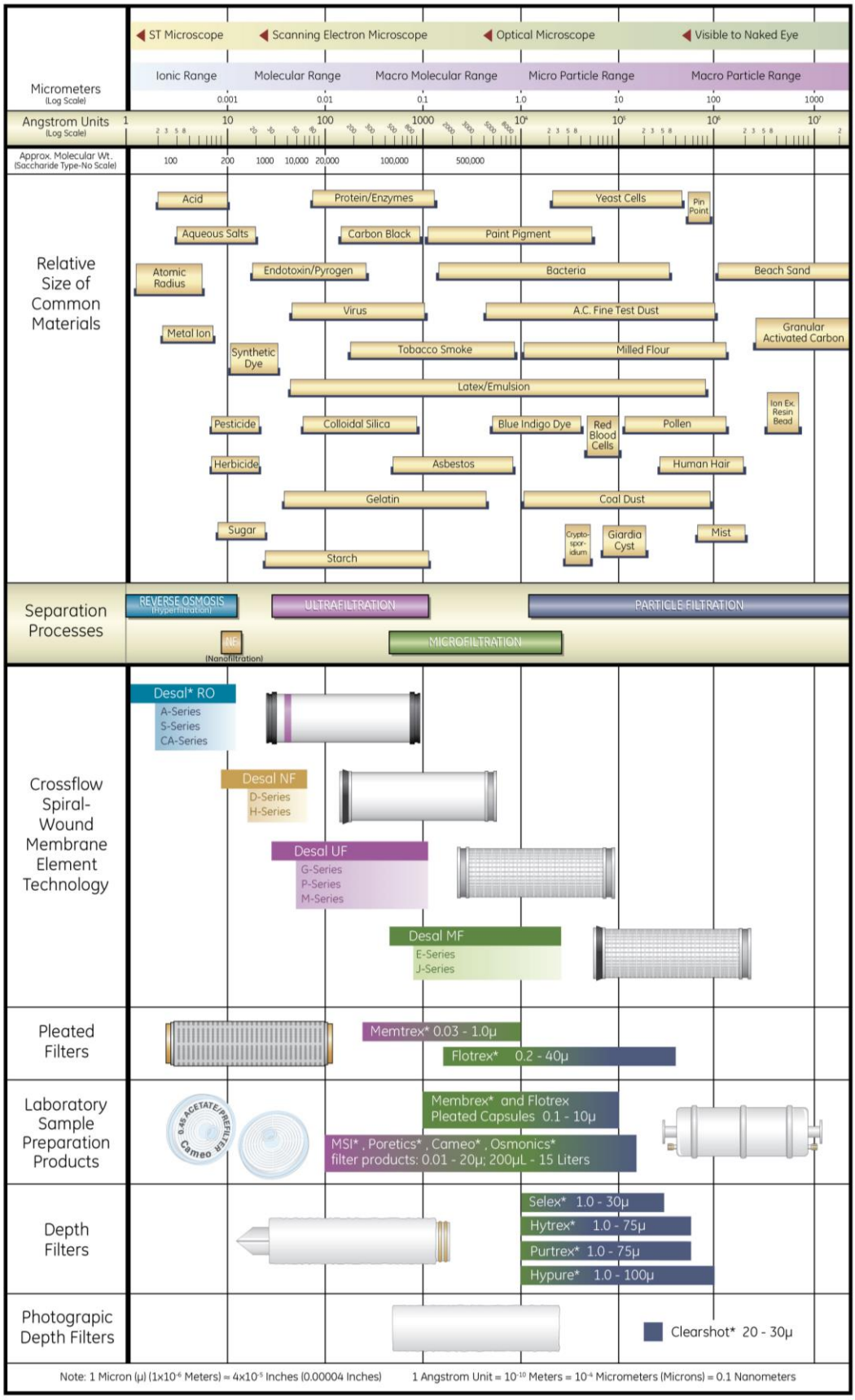
Membrane protection matters – to better protect your membrane treatment system, GE offers a line of the industry's best pre-filters. By providing the whole solution and not just portions of it, GE helps our customers extend membrane life and reduce operating costs. For more information on which GE filters to use with which GE membranes, talk with your GE representative.

Our complete filter line serves numerous industrial and process applications, such as:

- Particulate removal
- RO pretreatment
- Organics and pathogen removal in high-purity water systems

GE depth filters set new industry standards. Depth filters made with Z.Plex* technology deliver up to twice the dirt holding capacity at a 50 percent lower pressure drop than conventional filters. This combination provides filters that last up to twice as long as other filters and provides the lowest total operating cost. Graded density Hytrex* depth filters for process and pure-water applications trap larger particles near the surface and smaller particles near the center, maximizing service life. GE's extensive depth filter line includes products to meet all your filtration needs from potable water to chemical process applications.

Flotrex* and Memtrex* pleated filters combine precise micron ratings with exceptional particle holding capacity. A wide variety of membranes, construction materials and designs provides a filtration solution for high-purity and industrial uses. GE's extensive portfolio includes pleated filters for every stage of processing. Our ancillary products include a broad range of cartridge filter housings. No matter your industry, you can count on support from the global resources of the GE service network.


ST Microscope
Scanning Electron Microscope
Optical Microscope
Visible to Naked Eye
Micrometers (Log Scale)
Ionic Range
Molecular Range
Macro Molecular Range
Micro Particle Range
Macro Particle Range
0.001
0.01
0.1
1.0
10
100
1000
Angstrom Units (Log Scale)
Approx. Molecular Wt. (Saccharide Type-No Scale)
100
200
1000
10,000
20,000
100,000
500,000
Relative Size of Common Materials
Acid
Protein/Enzymes
Yeast Cells
Pin Point
Aqueous Salts
Carbon Black
Paint Pigment
Atomic Radius
Endotoxin/Pyrogen
Bacteria
Beach Sand
Virus
A.C. Fine Test Dust
Metal Ion
Granular Activated Carbon
Synthetic Dye
Tobacco Smoke
Milled Flour
Latex/Emulsion
Ion Ex. Resin Bead
Pesticide
Colloidal Silica
Blue Indigo Dye
Red Blood Cells
Pollen
Herbicide
Asbestos
Human Hair
Gelatin
Coal Dust
Sugar
Crypto-spor-idium
Giardia Cyst
Mist
Starch
Separation Processes
REVERSE OSMOSIS (Hyperfiltration)
ULTRAFILTRATION
PARTICLE FILTRATION
NF (Nanofiltration)
MICROFILTRATION
Crossflow Spiral-Wound Membrane Element Technology
Desal* RO
A-Series
S-Series
CA-Series
Desal NF
D-Series
H-Series
Desal UF
G-Series
P-Series
M-Series
Desal MF
E-Series
J-Series
Pleated Filters
Memtrex* 0.03 - 1.0µ
Flotrex* 0.2 - 40µ
Laboratory Sample Preparation Products
0.45 ACETATE/PREFILTER Cameo
Membrex* and Flotrex Pleated Capsules 0.1 - 10µ
MSI*, Poretics*, Cameo*, Osmonics* filter products: 0.01 - 20µ; 200µL - 15 Liters
Depth Filters
Selex* 1.0 - 30µ
Hytrex* 1.0 - 75µ
Purtrex* 1.0 - 75µ
Hypure* 1.0 - 100µ
Photograpic Depth Filters
Clearshot* 20 - 30µ
Note: 1 Micron (µ) (1x10-6 Meters) ≈ 4x10-5 Inches (0.00004 Inches)
1 Angstrom Unit = 10-10 Meters = 10-4 Micrometers (Microns) = 0.1 Nanometers

Reverse Osmosis (RO) SDI Water Test Equipment

Silt Density Index (SDI) testing quantifies the amount of particulate contamination in a water source. SDI is widely accepted for estimating the rate at which colloidal and particulate fouling will occur in water purification systems – especially in applications using reverse osmosis (RO) membranes. Water sources often change their water quality and this test often needs to be done weekly or monthly.

Fouling membranes and compromising water quality can be expensive. With the simple GE Auto/Manual SDI kits and a water source of 65 psi (4.5 bar) and at least 0.8 gpm (3.0 Lpm), membrane particulate fouling can be avoided and system performance optimized

Purchasing Information – SDI Test Kits

Part #	Model #	Description	Qty
1227473	SDIKIT220A	GE Auto SDI Tester Kit, 220 V Non CE-marked material	1
1227464	SDIKIT115A	GE Auto SDI Tester Kit, 115 V	1
1113664	SDIKIT4701	GE Manual SDI Kit	1
3052333		GE Auto SDI Booster Pump, 115 VAC, 120/240 VAC Non CE-marked material	1
1215281	E04WP04700	GE Nitrocellulose Mixed Esters Membrane 0.45 micron / 47 mm	100

Auto SDI test kit

Manual SDI test kit

High Flow Depth Cartridge Filters

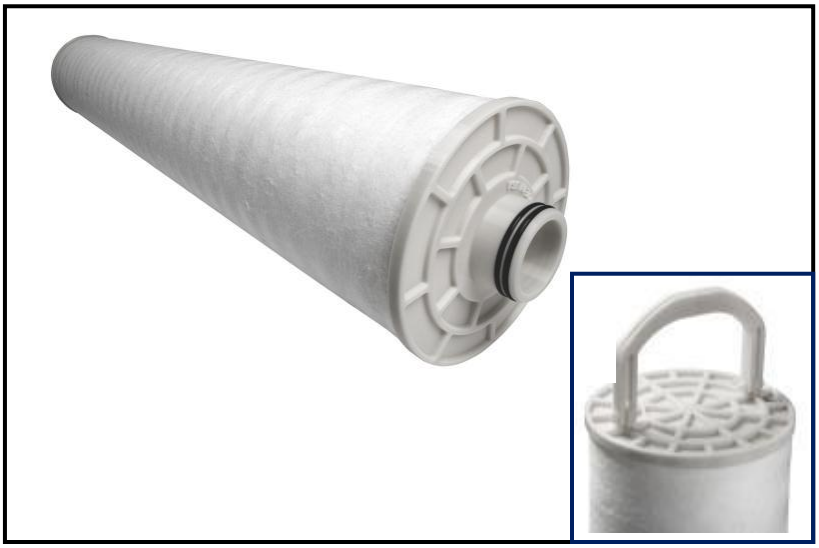
High Flow Z

True Depth High Flow Filters
Using Z.Plex Technology

- Small housing footprint
- Longer life, lower operating expense
- Greater dirt holding capacity
- Ease of maintenance, less downtime
- True depth filter performance with depth filter economy

High Flow Cartridges

The high flow filters are produced with GE's patented ZPlex technology which brings all of the benefits of ZPlex into a larger cartridge filter to minimize total cost of filtration operations.



HIGH FLOW CARTRIDGES

Cartridge Type	Filtration	Nominal ID Nominal OD inch (mm)	Characteristics	Applications/Industries
HF.Zs HF.Za	Nominal	3.0 (7.6) 6.5 (16.5)	- High Flow rates up to 100gpm (23m³/h) - Lower capital costs - Lower operating costs - Excellent dirt holding capacity, 15lbs (6.8kg) - Excellent temperature / oil resistance	- RO pre-filtration - Produced water filtration - Municipal water treatment (NSF 61 certified) - Amine filtration - Seawater filtration

ORDERING INFORMATION

Cartridge Type	Micron Rating (µm)	Cartridge Length Inches (cm)	End #1 Adapter	End #2 Adapter	O-ring Material
HF.Zs	Nominal 01=1 05=5	40 (101.6)	F=226 O-ring	S=Solid End	S=Silicone E=EPDM V=Viton B-Buna
HF.Za	Absolute 15=15 25=25				

Order number example: HFZ05-40 FSS

High Flow Z Housings

European Manufactured Models :

Sample Model Name : HSG,HFZ1R304SSHPED

NOMENCLATURE

High Flow Z Filter Housing	Number of Cartridges per Housing	Housing Material	Configuration	European Regulations
HSG,HFZ	1R 4R 7R	304SS or 316SS	Vertical Horizontal Horizontal	PED

ADDITIONAL INFORMATION

Quantity of filters	1 Round: 1 - 165 mm high flow Z, 226 O-ring cartridge, 0.99m cartridge length 4 Round: 4 - 165mm high flow Z, 226 O-ring cartridge, 0.99m cartridge length 7 Round: 7 - 165mm high flow Z, 226 O-ring cartridge, 0.99m cartridge length
Material	316 Series Stainless Steel or 304 Series Stainless Steel
Filter Connections	226 Connection SOE (Single Open End) with handle
Inlet/Outlet Connections	1 Round: Flange Dn 50 DIN 2633 4 Round: Flange Dn 100 DIN 2633 7 Round: Flange Dn 150 DIN 2633
Drain Port	Dn 25 DIN 2633
ID/OD Finish	Pickled and passivated Optional: electroplated
O-ring Material	EPDM standard Silicone and Viton optional
Pressure Ratings	250 psi (17.2 bar) @ 150°F (66°C) water

*Trademark acknowledgement:
Viton is registered trademark of DuPont Dow Elastomers.

NAM Manufactured Models :

Sample Model Name : HSG,HFZ1R304SSHPED

High Flow Z Filter Housing	Number of Cartridges per Housing	Housing Material	Configuration	NAM Regulations
HSG,HFZ	1R 4R 7R	304SS or 316SS or C = Carbon Steel	Vertical Horizontal Horizontal	ASME, "U" Stamped, Section VIII Div 1 Only, NR-13, CRN

ADDITIONAL INFORMATION	
Housing Size	1 Round: 8in diameter 4 Round: 18in diameter 7 Round: 24in diameter
Quantity of filters	1 Round: 1 - 6.5in high flow Z, 226 O-ring cartridge, 39in cartridge length 4 Round: 4 - 6.5in high flow Z, 226 O-ring cartridge, 39in cartridge length 7 Round: 7 - 6.5in high flow Z, 226 O-ring cartridge, 39in cartridge length
Material	316 Series Stainless Steel or 304 Series Stainless Steel or Carbon Steel on all wetted parts, Carbon Steel plated hardware
Filter Connections	226 Connection SOE (Single Open End) with handle
Inlet/Outlet Connections	1 Round: 2in ANSI 150 psi RFSO 4 Round: 4in ANSI 150 psi RFSO 7 Round: 6in ANSI 150 psi RFSO
Inlet/Outlet Configuration	Side In / End Out
Drain Port	1" 3000 psi FNPT
Vent / Gauge Port	0.5-in 3000psi FNPT
ID/OD Finish	304SS and 316SS: Electorpolished Vessel Inside/Out Standard black enamel pain external, bead blast internal
O-ring Material	EPDM standard Silicone and Viton optional
Seals	EPR Cover Seal
Pressure Ratings	150 psi (10.34 bar) @ 250°F (121°C) water

*Trademark acknowledgement:
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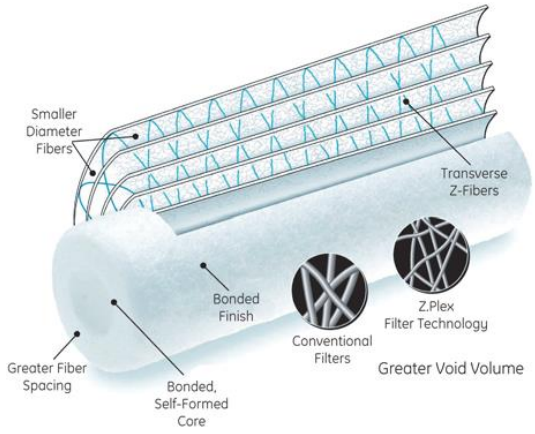
Depth Cartridges

Z.Plex Cartridges



Z.Plex technology

Media: melt blow polypropylene microfibers
Adapters: polypropylene

Z.Plex family cartridge filters are manufactured using patent pending Z.Plex filter technology. Z.Plex's proprietary filter matrix provides unmatched performance in these applications.

- Up to twice the life of conventional depth filters
- Up to 50% lower pressure drop
- Up to 100% greater dirt holding capacity
- Melt-bonded exterior and core ensures no media migration
- Provides lower total cost of filtration operations

All GE polypropylene depth filters are made from thermally bonded fibers of polypropylene. GE certifies that it uses no resin-binders, lubricants, anti-static or release agents or other additives in the manufacture of these cartridges, and that the resin used for manufacturing the filter media meets the food contact requirements of U.S. FDA 21CFR regulations. The filter incinerates to trace ash for easy disposal.

They meet the safety requirements of Article 3 of the EU framework regulation No. 1935/2004/EC and may be used as intended in all of the EU Member states in full compliance with the EU Plastics Regulation No. 10/2011.

Z. PLEX CARTRIDGES				
Cartridge Type	**Filtration**	**Nominal ID Nominal OD inch (mm)**	**Characteristics**	**Applications/Industries**
Purtrex Plus PXP.Zs	Nominal	1 (25) 2 ½ (64)	- Lower pressure drop - Bonding finish	- Potable water filtration - Commercial and residential filtration
WellPro.Zs WP.Zs	Nominal	1 (25) 2 ½ (64)	- Optimized exterior decreases premature loading - Excellent temperature / oil resistance	- Well water injection - Seawater - Gas and hydrocarbons
Rosave.Zs RO.Zs	Nominal	1 (25) 2 ½ (64)	- Low change-out frequency - Low pressure drop - NSF standard certified 42 (Drinking Water – Aesthetic Effects)	- Reverse osmosis prefiltration - Beverage - Electronics - Pre/post DI or active carbon
Muni.Z	Nominal	1 (25) 2 ½ (64)	- NSF 61 certified - *Dedicated to Americas*	- Surface water prefiltration - Ground water prefiltration
SWRO.Zs	Nominal	1 (25) 2 ½ (64)	- Longer filter lengths (>40in)	- Seawater prefiltration
Absolute.Za Abs.Za	Absolute	1.1 (28) 2.6 (66)	- Central tube in PP for enhanced mechanical resistance - NSF 61 certified	- Chemical process - Hydrocarbon processing - Pharmaceuticals - Semiconductor - Food and Beverage
Z.Core	Nominal	1.1 (28) 2 ½ (64)	- 90% efficiency - Sterizable in autoclave - Max forward pressure: 4 bar - Central tube in PP for enhanced mechanical resistance	- High temperature applications (Food & beverage, chemicals). - High viscosity fluids filtration

FILTERS									
		Code	RO.Zs	WP.Zs	PXP.Zs	Muni.Z	SWRO.Zs	Abs.Za	Z.Cor
Pore Size	0.5 micron	**95**						X	X
	1.0 micron	**01**	X	X	X	X	X	X	X
	3.0 microns	**03**			X			X	X
	5.0 microns	**05**	X	X	X	X	X	X	X
	7.0 microns	**07**							X
	10.0 microns	**10**		X	X				X
	15.0 microns	**15**							X
	20.0 microns	**20**		X					X
	25 microns	**25**							X
	30 microns	**30**							X
	40 microns	**40**							X
	50 microns	**50**							X
	75 microns	**75**							X
	100 microns	**100**							X
	120 microns	**120**							X
	150 microns	**150**							X
	200 microns	**200**							X
Length	4 7/8 in (12.4 cm)	**4 7/8**	X						X
	9 ¾ in (24.8 cm)	**9 ¾**	X						X
	9 7/8 in (25.1 cm)	**9 7/8**	X					X	X
	10 in (25.4 cm)	**10**	X		X				X
	19 ½ in (49.5 cm)	**19 ½**	X	X				X	X
	20 in (50.8 cm)	**20**	X	X	X			X	X
	29 ¼ in (74.3 cm)	**29 ¼**	X	X		X		X	X
	30 in (76.2 cm)	**30**	X	X	X	X		X	X
	39 in	**39**				X			
	40 in (101.6 cm)	**40**	X	X	X	X	X	X	X
	50 in (127.0 cm)	**50**	X				X		
	60 in (152.4 cm)	**60**	X				X		
	70 in (177.8 cm)	**70**	X				X		
	250 mm (9.8 in)	**250mm**	X	X	X	X	X	X	X
	500 mm (19.7 in)	**500mm**	X	X	X	X	X	X	X
	750 mm (29.5 in)	**750mm**	X	X	X	X	X	X	X
	1000 mm (39.4 in)	**1000 mm**	X	X	X	X	X	X	X
Adapter#1	Plain end (no gasket)	**X**	X	X	X	X	X	X	X
	Open end gasket	**Y**	X	X	X	X	X	A	X
	Extended core	**L**	X	X	X	X	X	X	X
	222 o-ring	**E**	X	X	X	X	X	X	X
	226 o-ring	**F**	X	X	X	X	X	X	X
Adapter#2	Plain end (no gasket)	**X**	X	X	X	X	X	X	X
	Open end gasket	**Y**	X	X	X	X	X	A	X
	Self-seal spring	**K**	X	X	X	X	X	X	X
	Fin adapter	**H**	X	X	X	X	X	X	X
	Solid end	**S**	X	X	X	X	X	X	X
Elastomer Material	Santoprene*	**P**	X	X	X	X		X	X
	Silicone	**S**	X	X	X	X	X	X	X
	EPDM	**E**	X	X	X	X	X	X	X
	Viton	**V**	X	X	X	X	X	X	X
	Buna-N	**B**	X	X	X	X	X	X	X

* Open End Gasket only

If you are ordering depth filters with standard ends (with no adapter on either end), select code for:

Filter name: RO.Zs, WP.Zs, PXP.Zs, Muni.Z, SWRO.Zs, Abs.Za

Pore size: 0.5 - 20

Length: 4 7/8 - 70

Your product order number will look like this: **RO.Zs 75-50.**

If you are ordering depth filters with end adapters, select code for:

Filter name: RO.Zs, WP.Zs, PXP.Zs, Muni.Z, SWRO.Zs, Abs.Za

Pore size: 0.5 - 20

Length: 4 7/8 - 70

Adapter #1: X - F

Adapter #2: X - S

Elastomer material: P -B

Your product order number will look like this: **WP.Zs 05-29 1/4-YYP.**

Hytrex Cartridges

Purtrex, Hytrex, Selex

Aquatrex LD

Media: melt blow polypropylene microfibers
Adapters: polypropylene

The Hytrex depth filter family is an exceptional value for general applications where long life, high purity and low change-out frequency are required. Produced through GE patented melt blown microfiber technology, Hytrex family is a 100% pure polypropylene depth filter (including adapters) with exceptional dirt-holding capacity.

Its true-graded density filter matrix (lower density at the surface of the filter with progressively higher density toward the center) captures particles throughout the entire filter depth. This translates to longer life and fewer change-outs than existing string-wound or resin-bonded filters.

Containing no wetting agents, solvents, antistatic agents or binders, and it meets the requirements of the FDA for food and beverage contact. The filter incinerates to trace ash for easy disposal.

HYTREX CARTRIDGES

Cartridge Type	Filtration	Nominal ID Nominal OD inch (mm)	Characteristics	Applications/Industries
Aquatrex **LD**	Progressive nominal density	1 (25) 4.75 (121)	- Large diameter filter - Greater lifetime - NSF 42 certified	- Household - Pools - Restaurants - Spa
Purtrex **PX**	Progressive nominal density	1 (25) 2 ½ (64)	- Wide chemical compatibility - NSF 42 certified	- General industrial use - Plating - Chemical filtration - Potable water
Hytrex II **GX**	Progressive nominal density	1 (25) 2 ½ (64)	- Fast rinse-up in high purity applications - NSF standard certified 42 (Drinking Water - Aesthetic Effects)	- General industrial use - Reverse osmosis prefiltration - High purity chemicals - Bottled water
Hytrex II **GX/PPC**	Progressive nominal density	0.96 (24) 2 ½ (64)	- Features a polypropylene central tube for higher mechanical resistance - Extended temperature up to 90°C	- High temperature applications - Chemical filtration
Hytrex II **RX**	Progressive nominal density	1 3/8 (25) 2 ¾ (70)	- Fit to PECO housings - NSF 42 certified	- Oil and hydrocarbon applications
Selex **SX**	Progressive absolute density	1 (25) 2 ½ (64)	- Fast rinse-up in high purity applications - Wide chemical compatibility - NSF 42 certified	- General industrial use - CMP slurry filtration - Microelectronics - Fine water filtration

FILTERS								
		Code	LD	GX	GX PPC	PX	RX	SX
Pore Size	1.0 micron	**01**	X	X	X	X	X	SXE
	3.0 microns	**03**		X		X	X	SXG
	5.0 microns	**05**	X	X	X	X	X	SXD
	10.0 microns	**10**	X	X	X	X	X	SXA
	20.0 microns	**20**	X	X	X	X	X	SXC
	30.0 microns	**30**	X	X		X	X	SXF
	40.0 microns	**40**						
	50.0 microns	**50**	X	X	X	X	X	
	75.0 microns	**75**		X	X	X	X	
	100.0 microns	**100**		X		X		
Length	4 7/8 in (12.4 cm)	**4 7/8**		X		X		X
	9 ¾ in (24.8 cm)	**9 ¾**		X		X		X
	9 7/8 in (25.1 cm)	**9 7/8**	X	X		X		X
	10 in (25.4 cm)	**10**		X		X		X
	19 ½ in (49.5 cm)	**19 ½**		X	X	X		X
	20 in (50.8 cm)	**20**	X	X	X	X		X
	29 ¼ in (74.3 cm)	**29 ¼**		X	X	X		X
	30 in (76.2 cm)	**30**		X	X	X		X
	36 in (91.4 cm)	**36**					X	
	40 in (101.6 cm)	**40**		X	X	X		X
	50 in (127.0 cm)	**50**		X		X		
	60 in (152.4 cm)	**60**		X		X		
	70 in (177.8 cm)	**70**		X		X		
	250 mm (9.8 in)	**250mm**		X	X	X		X
	500 mm (19.7 in)	**500mm**		X	X	X		X
	750 mm (29.5 in)	**750mm**		X	X	X		X
	1000 mm (39.4 in)	**1000 mm**		X		X		
Adapter#1	Plain end (no gasket)	**X**		X	X	X	X	X
	Open end gasket	**Y**		X	X	X		X
	Extended core	**L**		X	X	X		X
	222 o-ring	**E**		X	X	X		X
	226 o-ring	**F**		X	X	X		X
Adapter#2	Plain end (no gasket)	**X**		X	X	X	X	X
	Open end gasket	**Y**		X	X	X		X
	Self seal spring	**K**		X	X	X	X	X
	Fin adapter	**H**		X	X	X		X
	Solid end	**S**		X	X	X		X
Elastomer Material	Santoprene*	**P**		X	X	X		X
	Silicone	**S**		X	X	X		X
	EPDM	**E**		X	X	X		X
	Viton	**V**		X	X	X		X
	Buna-N	**B**		X	X	X		X

*Open end gasket only

If you are ordering depth filters with standard ends (with no adapter on either end), select code for:

Filter name: LD, GX, GX PPC, PX, RX, SX

Pore size: 1 -75

Length: 4 7/8 - 70

Your product order number will look like this: **GX 75-50.**

If you are ordering depth filters with end adapters, select code for:

Filter name: LD, GX, GX PPC, PX, RX, SX

Pore size: 1 -75

Length: 4 7/8 - 70

Adapter #1: X - F

Adapter #2: X - S

Elastomer material: P - B

Your product order number will look like this: **PX 05-29 1/4-YYP.**

Hypure Cartridges

The Hypure PF and AF filters are a resin-bonded, spiral wound filter cartridge suitable for a wide range of applications. Hypure utilizes phenolic resin impregnated, long-strand polyester fibers for efficiency and long life. Uses for Hypure include adhesives, coatings, and inks, and many more applications both water and solvent based.

Media: phenolic resins bonded polyester fibers

HYPURE CATRIDGES

Cartridge type	Filtration	Nominal ID Nominal OD inch (mm)	Characteristics	Applications/Industries
Hypure **HPF** **HAF**	Nominal, resin bounded cartridge	1 (25) 2 ½ (64)	- Faster flow rates - Higher strength	- High viscosity streams - Ink, Paints - Coating - Diesel fuel - Adhesive

NB: This list of application is none-exhaustive. For further information consult your GE representative.

FILTERS		Code	HPF	HAF
Pore Size	2.0 microns	**02**		X
	3.0 microns	**03**	X	
	5.0 microns	**05**	X	X
	10.0 microns	**10**	X	X
	15.0 microns	**15**	X	X
	25.0 microns	**25**	X	X
	50.0 microns	**50**	X	X
	75.0 microns	**75**	X	X
	100.0 microns	**100**	X	X
	125.0 microns	**125**		X
	150.0 microns	**150**		X
Length	9 ¾ in (24.8 cm)	**9 ¾**	X	X
	10 in (25.4 cm)	**10**	X	X
	19 ½ in (49.5)	**19 ½**		X
	20 in (50.8 cm)	**20**	X	X
	29 ¼ in (74.3 cm)	**29 ¼**	X	X
	30 in (76.2 cm)	**30**	X	X
	39 in (99.1)	**39**		X
	40 in (101.6 cm)	**40**	X	X
Adapter#1	Plain end (no gasket)	**X**	X	X
	222 O-Ring	**E**		X
	Extended core	**L**	X	X
Adapt#2	Plain end (no gasket)	**X**	X	X
	Solid End	**S**		X

If you are ordering depth filters with standard ends (with no adapter on either end), select code for:

Filter name: HPF

Pore size: 1 -75

Length: 9 ¾ - 40

Your product order number will look like this: **HPF 01-20**

If you are ordering depth filters with end adapters, select code for:

Filter name: HPF

Pore size: 1 -75

Length: 9 ¾ - 40

Adapter #1: X - L

Adapter #2: X

Elastomer material: S - B

Your product order number will look like this: HPF 05-29 1/4-LX

Adapters

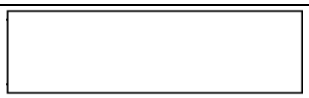
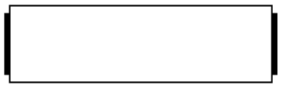
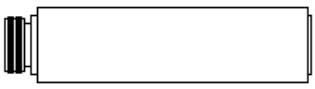
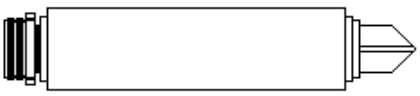
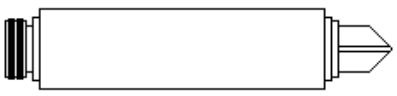
Molded polypropylene end fittings ensure a proper fit in all currently available filter housings. All fittings are thermally welded to the all-polypropylene end cap, creating a leak and bypass proof seal with the structural integrity of the total cartridge. Pure polypropylene materials maintain the broad chemical compatibility of the cartridge. The end adapters are manufactured with FDA acceptable materials that meet with Title 21 CFR Section 177.1520.

Y Open end elastomer gasket		**H** Fin adapter	
E 222 o-rings		**K** Self-seal spring	
F 226 o-rings		**L** Extended core	
A Open end elastomer gasket for Absolute.Za only		**S** Solid end cap	

FILTER LENGTHS WITH END ADAPTERS

End Adapter Code	Overall Product Length - inches (cm) When Adapters are Added to the Following Filter Lengths.					
	9-3/4 (24.8)	9-7/8 (25.1)	10 (25.4)	20 (50.8)	30 (76.2)	40 (101.6)
EHE	*	*	12.5 (31.8)	22.5 (57.2)	32.5 (82.6)	42.5 (108.0)
EHS	*	*	12.5 (31.8)	22.5 (57.2)	32.5 (82.6)	42.5 (108.0)
ESE	*	*	10.7 (27.2)	20.7 (52.6)	30.7 (78.0)	40.7 (103.4)
ESS	*	*	10.7 (27.2)	20.7 (52.6)	30.7 (78.0)	40.7 (103.4)
LX	*	*	11.0 (27.9)	21.0 (53.3)	31.0 (78.7)	41.0 (104.1)
XK	*	*	12.7 (32.3)	22.7 (57.7)	32.7 (83.1)	42.7 (108.5)
YYP	9.9 (25.1)	10.0 (25.4)	*	20.1 (51.1)	30.1 (76.5)	40.1 (101.9)

Equivalent codes

 Without adapters	 **YY** or **AA** – standard DOE (Code 1)
 **FS** – 226 o-ring / solid end (Code 2 (M2))	 **ES** – 222 o-ring / solid end (Code 3 (M3))
 **FH** – 226 o-ring / fin adapter (Code 7 (M7))	 **EH** – 222 o-ring / fin adapter (Code 8 (M8))

Shipping information

Air Shipments

Air shipments will always be loose boxes (not on pallets and not stretch-wrapped) unless clearly specified on the purchase order to ship via air using pallets. The added volume with pallets for air shipment will increase the freight cost an estimated 10-15% or more.

FOR ALL CARTRIDGE MODELS EXCEPT AQUATREX LD AND ABS.ZA

Cartridge Length	Quantity per Carton	Box Sizes - inches (cm)			Carton Shipping Weight	
		Width	Length	Height	kg	lb
4 7/8	80	N.D.	N.D.	N.D.	6.4 - 9.5	14.1 – 20.9
9 ¾	40	11 (28)	13 (33)	21 (53)	6.4 – 9.5 [1]	14.1 – 20.9
9 7/8	40	11 (28)	13 (33)	21 (53)	6.4 – 9.5 [1]	14.1 – 20.9
10 / 250mm	40	11 (28)	13 (33)	21 (53)	6.4 – 9.5 [1]	14.1 – 20.9
19 ½	20	11 (28)	13 (33)	21 (53)	6.4 – 9.5	14.1 – 20.9
20 / 500mm	20	11 (28)	13 (33)	21 (53)	6.4 – 9.5	14.1 – 20.9
29 ¼	20	11 (28)	13 (33)	31 (79)	9.1 – 13.6	20.0 – 30.0
30 / 750mm	20	11 (28)	13 (33)	21 (53)	9.1 – 13.6	20.0 – 30.0
36	20	11 (28)	13 (33)	41 (105)	12.7 – 17.2	28.0 – 37.9
39	20	11 (28)	13 (33)	41 (105)	14.5	32.0
40	20	11 (28)	13 (33)	21 (53)	12.2 – 18.6	26.9 – 41.0
50	20	11 (28)	13 (33)	52 (132)	15.0 – 22.7	33.0 – 50.0
60	20	11 (28)	13 (33)	62 (157)	18.2 – 27.5	40.1 – 60.6
70	20	11 (28)	13 (33)	72 (183)	21.0 – 32.3	46.3 – 71.2

[1]For RO.Zs models and lengths 9 3/4, 9 7/8, 10, carton weight is 4.3 kg

NB: Carton weights are approximate. For further information, consult your GE customer service representative.

AQUATREX LD CARTRIDGES

Cartridge Length	Quantity per Carton	Box Sizes - inches (cm)			Carton Shipping Weight	
		Width	Length	Height	kg	lb
9.875	10	11 (28)	13 (33)	21 (53)	5.0 – 5.4	11.0 – 11.9
20	5	11 (28)	13 (33)	21 (53)	5.0 - 5.4	11.0 – 11.9

ABS.ZA CARTRIDGES

Cartridge Length	Quantity per Carton	Box Sizes - inches (cm)			Carton Shipping Weight	
		Width	Length	Height	kg	lb
9 7/8	6	11 (28)	13 (33)	21 (53)	1.4	3.1
19 1/2	6	11 (28)	13 (33)	21 (53)	2.8	6.2
20	6	11 (28)	13 (33)	21 (53)	2.8	6.2
29 1/4	6	11 (28)	13 (33)	21 (53)	12.7	28.0
30	6	11 (28)	13 (33)	21 (53)	12.7	28.0
40	6	11 (28)	13 (33)	21 (53)	16.8	37.0

For consolidated ocean or overland freight, the filters are placed on pallets and stretch-wrapped with a plastic film. The dimensions of common loaded pallets are as follows:

LARGE-VOLUME OVERLAND SHIPMENTS

Product Nominal Length Inches (cm)	Quantity per Carton	Box Sizes - inches (cm)		
		Width	Length	Height
10 (25.4)	36	42 (107)	42 (107)	71 (180)
20 (50.8)	36	42 (107)	42 (107)	71 (180)
30 (76.2)	24	42 (107)	42 (107)	71 (180)
40 (101.6)	24	42 (107)	42 (107)	85 (216)

Container Shipments

A 20-foot ocean container holds 10 pallets.
A 40-foot ocean container holds 22 pallets.

US Truck Shipments

A standard 45-foot trailer holds 24 pallets.
A standard 48-foot trailer holds 26 pallets.
A standard 53-foot trailer holds 30 pallets.

The number of pallets and the Qty/Case per pallet is a guide to sizing containers or trailers. Total number of filters per container or trailer vary significantly depending on length. CSR and GE order planning will calculate order requirements and respond with the best container options. A 53-foot trailer or 40-foot ocean container has the best freight cost on a unit basis per TIE.

Pleated Cartridges

Flotrex Cartridges

The component materials of Flotrex filters are suitable for use in articles intended for repeated food contact as specified in the United States Code of Federal Regulations, Title 21. Flotrex filters meet the test criteria for USP24 class VI-121°C plastics and pass the MEM Elution Cytotoxicity

Test. Aqueous extracts from Flotrex-HR filters contains less than 0.25 EU/ml. The filters typically exhibit low levels of non-volatile residues.

Nominal Internal Diameter: 1.25 in (31 mm)
Nominal Outer Diameter: 2.75in (70 mm)

FLOTREX CARTRIDGES

Cartridge Type	Filtration	Material)	Characteristics	Applications/Industries
Flotrex AP **FAP**	Absolute Hydrophobic	Media: PP micro fibers Support: PP micro fibers Core and cage PP Adapters: PP	- Low pressure drop - Wide chemical compatibility - Sterilizable by steam or autoclave[1]	- Clarification - Prefiltration of pharmaceutical and biological fluids - Fine chemical prefiltration
Flotrex PN **FPN**	Nominal Hydrophobic	Media: PP micro fibers Support: PP micro fibers Core and cage PP Adapters: PP	- Economical solution - Wide chemical compatibility - Sterilizable by steam or autoclave[1]	- General Clarification and prefiltration - Polymers, viscous streams,
Flotrex GF **FGF**	Absolute Hydrophilic	Media: acrylic resin-bonded glass micro fibers Support: PP micro fibers Core and cage: PP Adapters: PP	- Sterilizable by steam or autoclave[1]	- Beverage clarification - Cosmetics - Vegetable oils and syrups - Pharmaceutical and biological prefiltration
Flotrex HR **FHR**	Absolute Hydrophobic	Media: Halar micro fibers Support: Halar Core and cage: Halar Adapters: Halar	- Broad chemical compatibility: aromatics, halogenated solvents, organics, ozone (9,000 ppm/hrs)	- Prefiltration and final filtration

PP = polypropylene
Halar = Ethylene chlorotrifluoro ethylene (ECTFE)
NB: this list of application is none-exhaustive. For further information consult your GE representative.
[1]Sterilization operating conditions: Filters may be autoclaved or in situ steam sterilized (up to 257°F [125°C] 30-minute cycles) for a maximum accumulated exposure of 10 hours. Alternatively, the filters may be sanitized with compatible chemical agents.

FILTERS						
		Code	FAP	FPN	FGF	FHR
Pore Size	0.2 micron	**92**		X		
	0.45 micron	**94**		X	X	
	0.65 micron	**96**	X			
	1.0 micron	**01**	X	X	X	
	2.0 microns	**02**	X	X		
	3.0 microns	**03**	X	X	X	X
	5.0 microns	**05**	X	X		
	10.0 microns	**10**	X	X		X
	20.0 microns	**20**	X			
	25.0 microns	**25**				X
	30.0 microns	**30**		X		
	40.0 microns	**40**	X			
Length	5 (12.7)	**05**	X	X	X	X
	10 (25.4)	**1**	X	X	X	X
	20 (50.8)	**2**	X	X	X	X
	30 (76.2)	**3**	X	X	X	X
	40 (101.6)	**4**	X	X	X	X
Adapter#1	Gasket	**A**	X	X	X	X
	120	**B**	X	X	X	
	213	**C**	X	X	X	
	222	**E**	X	X	X	X
	226	**F**	X	X	X	X
	020	**J**	X	X	X	
	222 w SS insert	**Q**	X	X	X	
	226 w SS insert	**Z**	X	X	X	
Adapter#2	Gasket	**A**	X	X	X	X
	120	**B**	X	X	X	
	213	**C**	X	X	X	
	Solid end	**G**	X	X	X	X
	Fin	**H**	X	X	X	X
Elastomer Material	Silicone	**S**	X	X	X	
	EPDM	**E**	X	X	X	
	Viton	**V**	X	X	X	X
	Buna-N	**B**	X	X	X	
	Teflon encapsulated[1]	**T**	X	X	X	X

If you are ordering pleated filters select code for:

Filter name: FAP, FPN, FGF, FHR

Pore size: 0.2 - 40

Length: 5 - 40

Adapter #1: A - Z

Adapter #2: A - H

Elastomer material: S - T

Your product order number will look like this: **FAP 05-29 1/4-ESS.**

Filters which are steam sterilized must have stainless steel insert supported o-ring adaptors (Q or Z).

Memtrex Cartridges

GE certifies that the material contained in its Memtrex pleated filters meet U.S. FDA requirements for food contact under the applicable regulations in 21 CFR. Memtrex filters meet the test criteria for USP class VI-121°C Plastics.

Aqueous extracts from Memtrex filters contain less that 0.25 EU/ml. The filters typically exhibit low levels of non-volatile residues.

GE filter cartridges are designed and manufactured for resistance to a wide range of chemical solutions. Conditions will vary with each application and users should carefully verify chemical compatibility.

Nominal Internal Diameter: 1.25 in (31 mm)
Nominal Outer Diameter: 2.75in (70 mm)

ABSOLUTE FILTRATION, HYDROPHOBIC MEDIA

Cartridge Type	Filtration	Material)	Characteristics	Applications/Industries
Memtrex FE **MFE**	Absolute, hydrophobic	Media: PTFE membrane Support: PP micro fibers Core and cage: PP Adapters: PP	- Highly resistant to aggressive fluids and gases - Broad chemical compatibility - Reliable particle retention and high purity, in harsh process conditions - Sterilizable by steam or autoclave[1]	- Vents/exhausts for autoclaves, fermentors, and storage tanks - High purity chemicals and water used in electronics - Manufacturing
Memtrex FE-S **MFE-S**	Absolute, hydrophobic	Media: PTFE membrane Support: PP micro fibers Core and cage PP Adapters: PP with SS insert	- Validation guide available upon request - Sterilizing grade filter - Sterilizable by steam or autoclave[1]	- Sterile chemical, air, gas and vent - Bioreactors, autoclaves and sterile piping - Final filtration for pharmaceutical fluids
Memtrex HFE **MHFE**	Absolute hydrophobic	Media: ePTFE membrane Support: Halar (ECTFE) Core and cage: Halar (ECTFE) Adapters: Halar (ECTFE)	- Higher temperature tolerance - Broad chemical compatibility (aromatics, halogenated solvents, oxidizers)	- Chemicals - Pharmaceuticals - Electronics - Ozonated water – 9,000 ppm/hr
Memtrex PM **MPM**	Absolute, hydrophobic	Media: thermally-bonded PP Support: PP micro fibers Core and cage: PP Adapters: PP	- Economical solution to PTFE - Broad chemical compatibility - Long service life - Sterilizable by steam or autoclave[1]	- Ultrapure chemicals filtration: solvents, acids, bases - Ultrapure vent, gas and air filtration

PP = polypropylene; PTFE = polytetrafluoroethylene
[1]Sterilization operating conditions: Filters may be autoclaved or in situ steam sterilized (up to 257°F [125°C] 30-minute cycles) for a maximum accumulated exposure of 10 hours. Alternatively, the filters may be sanitized with compatible chemical agents.

Absolute Filtration, Hydrophilic Media				
Cartridge Type	**Filtration**	**Material)**	**Characteristics**	**Applications/Industries**
Memtrex MP **MMP**	Absolute, hydrophilic	Media: PES membrane Support: PP micro fibers Core and cage: PP Adapters: PP	- Reliable particle retention at high flow - Low protein retention - Broad chemical and pH compatibility - Sterilizable by steam or autoclave[1]	- Broad range of applications in beverage, pharmaceutical and chemical industries - Ink filtration
Memtrex MP-B **MMP-B**	Absolute, Hydrophilic	Media: PES membrane Prefiltration media: PP micro fibers Support: PP micro fibers Core and cage: PP Adapters PP	- Specifically designed for beverage filtration - Sterilizable by steam or autoclave[1]	- Final filtration of wine, bottled water, fruit juices, beer
Memtrex MP-E **MMP-E**	Absolute, Hydrophilic	Media: PES membrane Support: Micro fibers PP Core and cage: PP Adapters: PP	- Pre rinsed cartridge - Sterilizable by steam or autoclave[1]	- Ultrapure semiconductor water
Memtrex MP-S **MMP-S**	Absolute, Hydrophilic	Media: PES membrane (2 layers) Support: PP micro fibers Central tube: PP Adapters: PP with SS insert	- Validation guide available upon request - Sterilizing grade filter - Sterilizable by steam or autoclave[1]	- Finale filtration of biological and pharmaceutical fluids - Pure water for dialyses, WFI
Memtrex NY **MNY**	Absolute, Hydrophilic	Media: Nylon 66 membrane (2 layers) Support: Polyester micro fibers Core and cage: PP Adapters: Polyester	- Prefiltration membrane for an enhanced service life - Compatible with organic solvent - Sterilizable by steam or autoclave[1]	- Fine chemicals - Beverage
Memtrex KM **MKM**	Absolute, Hydrophilic	Media: Nylon 66 membrane Support: PP micro fibers Core and cage: PP Adapters: PP	- Polypropylene hardware - Wide chemical compatibility	- Sensitive applications to polyester - Electronics
Memtrex PC **MPC**	Absolute, Hydrophilic	Media: PC track-etch membrane Support: PP micro fibers Core and cage: PP Adapters: PP	- Fast rinse up - Precise particle retention - Sharp cut-off	- Critical electronic, chemical and highly technical processes: - Ultrapure water - Ink and dyes - Plating solution

PP = polypropylene; PES = polyethersulfone; PC = polycarbonate

NB: this list of application is none-exhaustive. For further information consult your GE representative.

[1]Sterilization operating conditions: Filters may be autoclaved or in situ steam sterilized (up to 257°F [125°C] 30-minute cycles) for a maximum accumulated exposure of 10 hours. Alternatively, the filters may be sanitized with compatible chemical agents.

FILTERS													
		Code	MFE	MFE-S	MHFE	MMP	MMP-B	MMP-E	MMP-S	MNY	MKM	MPC	MPM
Pore Size	0.03 micron	**83**				X		X					
	0.05 micron	**85**	X		X							X	
	0.1 micron	**91**	X		X	X		X		X		X	X
	0.2 micron	**92**	X	X	X	X	X	X	X	X	X	X	X
	0.45 micron	**94**	X		X	X	X			X	X	X	
	0.65 micron	**96**				X	X			X	X		
	1.0 micron	**01**	X		X					X			
Length	5 in (12.7 cm)	**05**	X	X	X	X	X	X	X	X	X	X	X
	10 in (25.4 cm)	**1**	X	X	X	X	X	X	X	X	X	X	X
	20 in (50.8 cm)	**2**	X	X	X	X	X	X	X	X	X	X	X
	30 in (76.2 cm)	**3**	X	X	X	X	X	X	X	X	X	X	X
	40 in (101.6 cm)	**4**	X	X	X	X	X	X	X	X	X	X	X
Adapter#1	Gasket	**A**	X		X	X	X	X		X	X	X	X
	120	**B**	X			X	X	X		X	X	X	X
	213	**C**	X			X	X	X		X	X	X	X
	222	**E**	X		X	X	X	X		X	X	X	X
	226	**F**	X		X	X	X	X		X	X	X	X
	020	**J**	X			X	X	X		X	X	X	X
	222 w SS insert	**Q**	X	X		X	X	X	X	X	X		
	226 w SS insert	**Z**	X	X		X	X	X	X	X	X		
Adapter#2	Gasket	**A**	X		X	X	X	X		X	X	X	X
	120	**B**	X			X	X	X		X	X	X	X
	213	**C**	X			X	X	X		X	X	X	X
	Solid end	**G**	X	X	X	X	X	X	X	X	X	X	X
	Fin	**S**	X	X	X	X	X	X	X	X	X	X	X
Elastomer Material	Silicone	**S**	X	X		X	X	X	X	X	X	X	X
	EPDM	**E**	X	X		X	X	X	X	X	X	X	X
	Viton	**V**	X	X	X	X	X	X	X	X	X	X	X
	Buna-N	**B**	X	X		X	X	X	X	X	X	X	X
	Teflon encapsulated[1]	**T**	X	X	X	X	X	X	X	X	X	X	X

If you are ordering pleated filters select code for:
Filter name: MFE, MFE-S, MHFE, MMP, MMP-B, MMP-E, MMP-S, MNY, MKM, MPC, MPM
Pore size: 0.03 - 1
Length: 5 - 40
Adapter #1: A - Z
Adapter #2: A - H
Elastomer material: S - T
Your product order number will look like this: **MFE014FHS** or **MMP923QHS-S**

Filters that are steam sterilized must have stainless steel insert supported o-ring adaptors (Q or Z).

X-Pleat Cartridges

GE filter cartridges are designed and manufactured for resistance to a wide range of chemical solutions. Conditions will vary with each application and users should carefully verify chemical compatibility.

X-Pleat product family features very low pricing and equivalent performance to Memtrex cartridge filters but X-Pleat filters are not individually integrity tested before packaging and shipping.

Nominal Internal Diameter: 1.25 in (31 mm)
Nominal Outer Diameter: 2.75in (70 mm)

X-PLEAT CARTRIDGES

Cartridge Type	Filtration	Material)	Characteristics	Applications/Industries
Xpleat PES **XPLT-PES**	Absolute	Media: PES membrane Support: PP micro fibers Core and cage: PP Adapter: PP	- Wide chemical compatibility - Economical absolute filtration - Drop filtration	- Post DI filtration
Xpleat GF **XPLT-GF**	Nominal Absolute	Media: fiberglass micro fibers Support: PE micro fibers Core and cage: PP Adapter: PP	- Nominal (absolute) rating: 0.2 (1), 0.45 (2), 1 (4), 3 (8), 10 (15) - Wide chemical compatibility	- Water based adhesive

PP = polypropylene; PES = polyethersulfone; PE = polyester
NB: this list of application is none-exhaustive. For further information consult your GE representative.

FILTERS

		Code	XPLT GF	XPLT GF-T	XPLT PES
Pore Size	0.1 micron	**91**			X
	0.2 micron	**92**	X	X	X
	0.45 micron	**94**	X	X	X
	0.65 micron	**96**			X
	1.0 micron	**01**	X	X	
	3.0 microns	**03**	X	X	
	10.0 microns	**10**	X	X	
Length	10 in (25.4 cm)	**10**	X	X	X
	20 in (50.8 cm)	**20**	X	X	X
	30 in (76.2 cm)	**30**	X	X	X
	40 in (101.6 cm)	**40**	X	X	X
Adapter# 1	Gasket	**OEG**	X	X	X
	213	**213**	X	X	X
	222	**222**	X	X	X
	226	**226**	X	X	X
Adapter#2	Gasket	**OEG**	X	X	X
	213	**213**	X	X	X
	Fin	**FIN**	X	X	X
Elastomer Material	Silicone	**S**	X	X	X
	EPDM	**E**	X	X	X
	Viton	**V**	X	X	X
	Buna-N	**B**	X	X	X

If you are ordering pleated filters select code for:
Filter name: XPLT GF, XPLT GF-T, XPLT PES
Pore size: 0.1- 10.0
Length: 5 - 40
Adapter #1: OEG - 226
Adapter #2: OEG - FIN
Elastomer material: S - B
Your product order number will look like this: **XPLT GF 94-10 OEG-OEG-S**

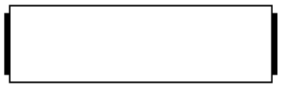
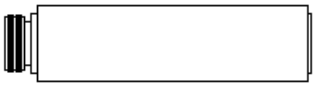
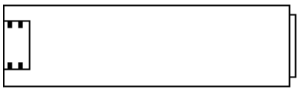
Adapters

Molded polypropylene end fittings ensure a proper fit in all currently available filter housings. All fittings are thermally welded to the all-polypropylene end caps, creating a leak and bypass proof seal with the structural integrity of the total cartridge. Pure polypropylene materials maintain the broad chemical compatibility of the cartridge. The end adapters are manufactured with FDA acceptable materials that meet with Title 21 CFR Section 177.1520. Silicone O-rings supplied as standard on all end adapters. The gaskets and o-rings are manufactured with FDA acceptable materials that meet with Title 21 CFR Section 177.2600 and 177.1210.

A Flat end gasket		**E** 222 o-rings **Q** [1] 222 o-rings w SS insert	
B 120 internal o-rings		**F** 226 o-rings **Z** [1] 226 o-ring with SS insert	
C 213 internal o–rings		**G** solid end cap	
J 020 internal o-ring	Not currently available	**H** Fin adapter	

[1] Q and Z adapters are recommended for high temperature applications

Equivalent Codes

 Without adapters	 **AA** – standard DOE (Code 1)
 **FS** – 226 o-ring / solid end (Code 2 (M2))	 **EG** – 222 o-ring / solid end (Code 3 (M3))
 **JG** – 020 internal o-ring / solid end (Code 6 (M6))	 **FH** – 226 o-ring / fin adapter (Code 7 (M7))
 **EH** – 222 o-ring / fin adapter (Code 8 (M8))	

Shipping information

Flotrex and Memtrex Cartridges

Five-inch cartridges are available with minimum quantity purchase of two cases (6 each/case). Only sold by the case.

PLEATED CARTRIDGES (EXCEPT HALAR)				
Nominal Length		Quantity per Carton	Shipping Weight	
inch	cm		kg	lb
10	25	18	6.8	15
20	51	16	10.9	24
30	76	6	5.9	13
40	102	6	7.7	17

HALAR PLEATED CARTRIDGES)				
Nominal Length		Quantity per Carton	Shipping Weight	
inch	cm		kg	lb
10	25	18	11.4	25.2
20	51	16	18.3	40.3
30	76	6	9.9	21.8
40	102	6	12.9	28.6

X-Pleat cartridges

Cartridges are sold by case only (6/case).

X-PLEAT CARTRIDGES				
Nominal Length		Quantity per Carton	Shipping Weight	
inch	cm		kg	lb
10	25	6	2.3	5
20	51	6	3.8	8
30	76	6	5.9	13
40	102	6	7.7	17

Capsule Filters

Flotrex and Memtrex Capsules

- Completely disposable, individually packed filtration units.
- Versatile - designed for the removal of particles or bacteria from aqueous or solvent solutions and gas streams.
- Ready to use - eliminating the need to disassemble, clean and reassemble filter housings
- Ideal for batch or small volume processes.
- Available connections: 3/8 hose barb, 1/4-1/2 inch stepped hose barb, 1/4 inch NPT Male, 1/2 inch NPT Male, 1.5 inch sanitary flange.

FLOTREX AND MEMTREX CAPSULES

Capsules Sizes (membrane surface)	Length, in (cm)1	Width, in (cm)
08 = small (0.8 ft²/0.07 m²)	3.5-5.0 (8.9-12.7)	3.5 (8.9)
30 = medium (3.0 ft²/0.28 m²)	7.6-9.4 (19.3-23.9)	3.5 (8.9)
59 = large (5.9 ft²/0.55 m²)	11.5-13.0 (29.2-33)	3.5 (8.9)

[1] Depends on adapter

Capsule filters may be sanitized with a variety of commonly used chemical agents. The capsules may be repeatedly autoclaved (121°C, 30 min) for up to 5 cycles. GE certifies that the materials contained in its Capsule filters meet U.S. FDA requirements for food contact under the applicable regulations in 21 CFR. For further information, contact the GE Technical Services Department. Capsule filters meet the test criteria for USP class VI-121°C Plastics.

Each Memtrex capsule filter is integrity tested during manufacturing.

Product Information – Product Selection Guide – Flotrex & Memtrex Capsules

Type	Filtration	Material	Characteristics	Applications/Industries
Capsule Flotrex **AP**	Hydrophobic	Media: PP Micro fibers Support layers: PP micro fibers Structural Components: PP	Broad chemical compatibility Economic alternative to membrane filters in selected applications Optionally available with opaque housings for use with light-sensitive materials	Fine chemicals used in electronics manufacturing Inks, dyes and coatings Pre-filtration of pharmaceuticals, biological and cosmetics Vent and process gas Point-of-use Eyeglass lens monomers
Capsule Flotrex **GF**	Hydrophilic	Media: Acrylic Resin-Bonded Glass Micro fiber Support layers: PP Micro fiber Structural Components: PP	Reliable particle retention Excellent service life in applications with severe particle loads Excellent protection for final membrane filters	Pre-filtration for serums, tissue culture media, and protein solutions. Pre- and final filtration of cosmetics, beverages Water for protozoan reduction Filtration of paints and coatings
Capsule Memtrex **FE**	Hydrophobic	Media: PTFE membrane Support layers: PP Micro fibers Structural components: PP	Ideal for aggressive chemicals, air and process gas filtration and vent uses	Acids, base, and oxidant Bulk chemical Sterile venting Electronics grade chemical Process air and gas
Capsule Memtrex **MP**	Hydrophilic	Media: PES Membrane Support layers: PP micro fibers Structural Components: PP	High throughput and precise retention characteristics Broad chemical compatibility Rinsed with DI water Low protein binding membrane	Acids, bases, and oxidants Serums and tissue culture media Pharmaceutical intermediates Fine inks and dyes Point of use
Capsule Memtrex **NY**	Hydrophilic	Media: Two Layers of Nylon66 Support layers: PE Micro fibers Structural Components: PE or PP	Utilizes high-purity Nylon66 membrane Rinsed with DI water	Beverages/Cosmetics / Electronics Fine and Bulk Chemicals Pharmaceuticals
Capsule Memtrex **PM**	Hydrophobic	Media: PP Membrane Support Layers: PP Micro fibers Structural Components: PP	Ideal for vent filtration Low extractables, high throughput, long service life	Etchants, photoresists, and developers Solvents, acids, and bases Fine chemicals Vent/process air

Purchasing Information – Memtrex MP (PES)

Pore size	Filtration	Adapters[1]									
Micron	Area ft² (cm²)	LL	LR	MM	MR	MW	MY	RR	WW	YW	YY
0.03	0.8 (0.074)	3044164									
0.03	3.0 (0.28)										
0.03	5.9 (0.55)										
0.1	0.8 (0.074)	1238427	1234303	1229512	1229548			1233368	1238284		
0.1	3.0 (0.28)				1264004			1237264	1269113		
0.1	5.9 (0.55)			3037374				1236256	1238308		1229896
0.2	0.8 (0.074)	1227703	1233573	1226879		3022450	3001470	1229965	1231767	3027850	1266162
0.2	3.0 (0.28)	1229946	1268345	1229507		1235555		1229513	1231768	3019425	1240647
0.2	5.9 (0.55)	1229008		1229508					1232190		1229897
0.4	0.8 (0.074)	1234204		1231160				1229930	1269112		1266997
0.4	3.0 (0.28)	1237041		3001190				1229415	1269114		1229550
0.4	5.9 (0.55)	1237040							1242119		1255032
0.6	0.8 (0.074)	1234203						1238826			
0.6	3.0 (0.28)			1267451					1229549		3027723
0.6	5.9 (0.55)										

[1] Adapters coding: L - ¼in -1/2 in stepped hose barb, M - 3/8in hose barb, R - 1/4 inch NPT Male, Y - 1.5 inch sanitary flange, W - ½ in NPT Male.

Purchasing Information – Flotrex AP (polypropylene microfibers)

Pore size	Filtration				Adapters[1]			
Micron	Area ft² (cm²)	LL	LR	LY	MM	RR	WW	YY
0.6	0.8 (0.074)	1238845				1264005	1235473	1268199
0.6	2.7 (0.25)	1237885			3109473	3021239	1240698	1265592
0.6	5.2 (0.48)							
1	0.8 (0.074)	1255175	3017897			1234726	1240699	1268200
1	2.7 (0.25)	1234392			1268108	1269511	1240700	1265593
1	5.2 (0.48)							1264723
2	0.8 (0.074)	1255176	1234512				3030208	1268201
2	2.7 (0.25)	3032791						
2	5.2 (0.48)	3030263					1234115	1264147
3	0.8 (0.074)	1255177				1231629	1243505	1268212
3	2.7 (0.25)				3031329			1267367
3	5.2 (0.48)					1236311	1231572	1264148
5	0.8 (0.074)	1255034				1232553	1236004	1234116
5	2.7 (0.25)				3025374	1236057	1231770	1234117
5	5.2 (0.48)				1256156		1231573	1263410
10	0.8 (0.074)	1266727			1264722	1232554	1235503	1239919
10	2.7 (0.25)	1235144		1239920	1267045	1236058	1233369	1232232
10	5.2 (0.48)					1269203	1233371	1239675
20	0.8 (0.074)	3014410			1237263	1232555		
20	2.7 (0.25)							3052273
20	5.2 (0.48)				3002929			1236965
40	0.8 (0.074)					1238272	1238519	
40	2.7 (0.25)					1239486		
40	5.2 (0.48)	3019216			3035599			1263411

[1] Adapters coding: L - ¼in -1/2 in stepped hose barb, M - 3/8in hose barb, R - 1/4 inch NPT Male, Y - 1.5 inch sanitary flange, W - ½ in NPT Male.

Purchasing Information – Memtrex FE (ePTFE)

Pore size	Filtration				Adapters[1]		
Micron	Area ft² (cm²)	LL	MM	MR	RR	WW	YY
0.1	0.8 (0.074)		3033303		1227251		
0.1	3.0 (0.28)	1229138			1234555	1229011	3042281
0.1	5.9 (0.55)				1232290	3027791	
0.2	0.8 (0.074)	1229602	1232672	3018764	1227222	1229010	1240697
0.2	3.0 (0.28)	1231915			1230329	1228060	1227623
0.2	5.9 (0.55)				1232288	1240707	3000401
0.4	0.8 (0.074)	1268477			1229898		
0.4	3.0 (0.28)				1229424		1236586
0.4	5.9 (0.55)				1265035	1239187	1255033
1	0.8 (0.074)				1233367	3050837	1229669
1	3.0 (0.28)						
1	5.9 (0.55)				1233866		1234010

[1] Adapters coding: L - ¼in -1/2 in stepped hose barb, M - 3/8in hose barb, R - 1/4 inch NPT Male, Y - 1.5 inch sanitary flange, W - ½ in NPT Male.

Purchasing Information – Flotrex GF (glass fibers)

Pore size	Filtration			Adapters[1]		
Micron	Area ft² (cm²)	LL	MM	RR	WW	YY
0.4	0.5 (0.046)	3001547		1243868		1268213
0.4	1.9 (0.18)					
0.4	3.7 (0.34)					
1	0.5 (0.046)			1236588		
1	1.9 (0.18)				3014947	
1	3.7 (0.34)			1240024		1268216
3	0.5 (0.046)		1239921	3001379		
3	1.9 (0.18)					
3	3.7 (0.34)					

[1] Adapters coding: L - ¼in -1/2 in stepped hose barb, M - 3/8in hose barb, R - 1/4 inch NPT Male, Y - 1.5 inch sanitary flange, W - ½ in NPT Male.

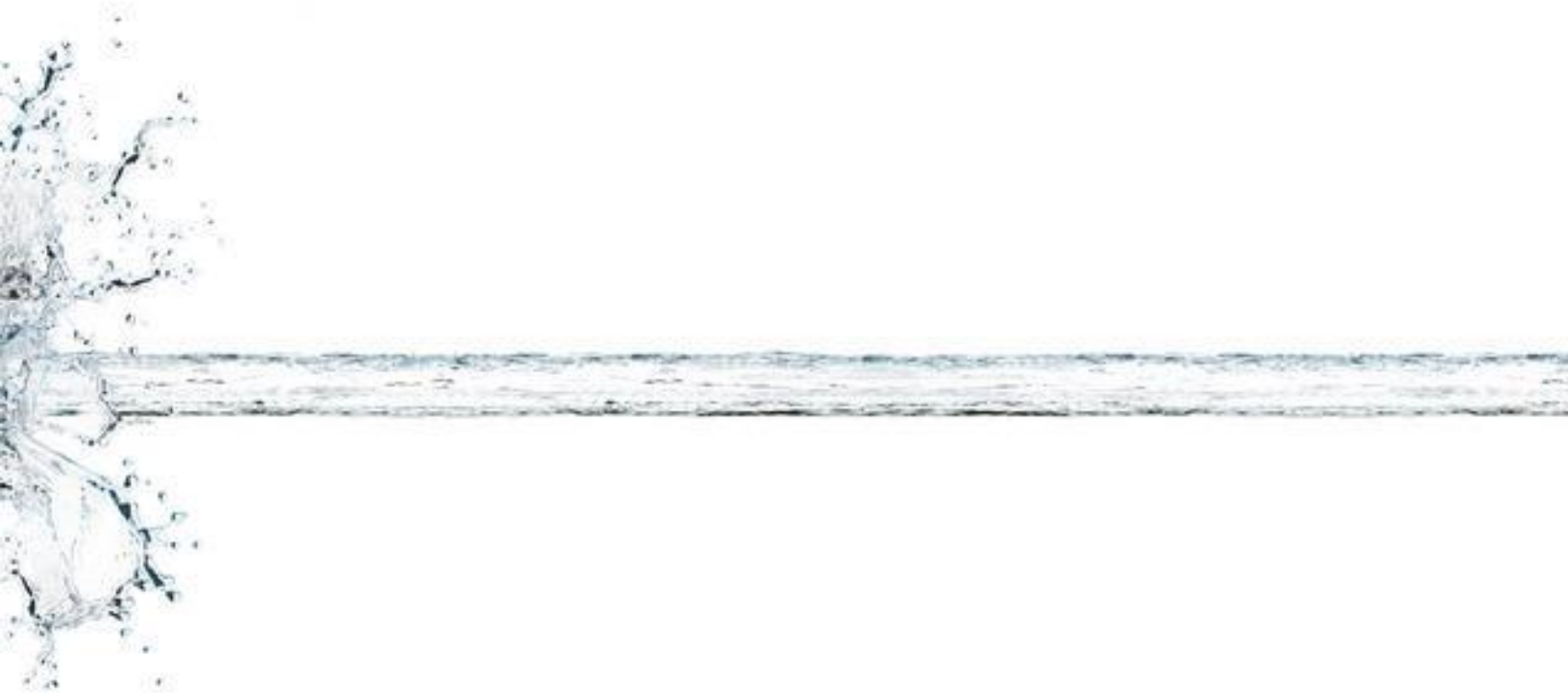
Purchasing Information – Memtrex NY (Nylon)						
Pore size	Filtration			Adapters[1]		
Micron	Area ft² (cm²)	LL	MM	RR	WW	YY
0.04	0.8 (0.074)					
0.04	3.0 (0.28)					
0.04	5.9 (0.55)			1237350		
0.1	0.8 (0.074)	3113471		3020065		
0.1	3.0 (0.28)					
0.1	5.9 (0.55)		3001057			
0.2	0.8 (0.074)	3000806	3038791	1231310		
0.2	3.0 (0.28)		3040111	1231313	1266641	1238827
0.2	5.9 (0.55)		1234243	1233577		1234244
0.4	0.8 (0.074)	1255844		1229899		
0.4	3.0 (0.28)		3040112			
0.4	5.9 (0.55)			1236353		3007101
0.6	0.8 (0.074)	1255845		1229601		
0.6	3.0 (0.28)					
0.6	5.9 (0.55)	1237887				
0.8	0.8 (0.074)			3051037		
0.8	3.0 (0.28)					
0.8	5.9 (0.55)			1235196		

[1] Adapters coding: L - ¼in -1/2 in stepped hose barb, M - 3/8in hose barb, R - 1/4 inch NPT Male, Y - 1.5 inch sanitary flange, W - ½ in NPT Male.

Purchasing Information – Memtrex PP (Polypropylene))						
Pore size	Filtration			Adapters[1]		
Micron	Area ft² (cm²)	LL	MM	RR	WW	YY
0.1	0.8 (0.074)					
0.1	3.0 (0.28)				1230065	
0.1	5.9 (0.55)					
0.2	0.8 (0.074)	1234893	1229509	1229968	1228241	1239466
0.2	3.0 (0.28)		1229510	1226880	1233174	3027724
0.2	5.9 (0.55)		1229511	1233578	1267861	1244759

[1] Adapters coding: L - ¼in -1/2 in stepped hose barb, M - 3/8in hose barb, R - 1/4 inch NPT Male, Y - 1.5 inch sanitary flange, W - ½ in NPT Male.

Mycelx - Hydrocarbon Cartridge Removal



Mycelx Cartridges

Mycelx filters are spunbound polypropylene plastic cartridges infused with patented chemistry that increases the hydrophobic nature of the material rendering it highly oil absorbent and water repellant. Filters are engineered to remove hydrocarbons from water in a single pass. Hydrocarbons form a tenacious bond to filter media surfaces throughout the depth of the filter to prevent the absorbed hydrocarbons from separating and reemulsifying in filter housing process streams.

Mycelx filters have been designed to maximize effective contact area and minimize weight. Filters absorb any oil contacted, with minimal water absorption, reducing disposal cost. Its surface contact area allows it to immediately absorb much more effectively than standard oil absorbing products.

Instantly absorb contacted oil
Triboelectrically inert and will not generate static charge
Non-shredding, durable
Environmentally safe
Minimizes waste

Mycelx filters are designed for use in standard DOE (double open end) filter housings.

ABSOLUTE FILTRATION, HYDROPHOBIC MEDIA

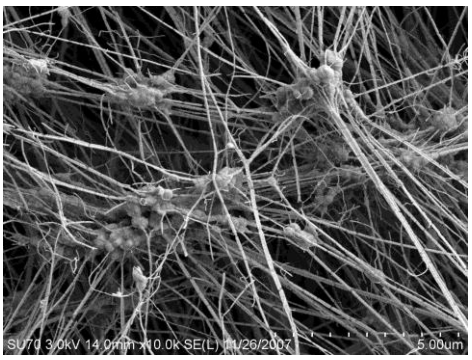
Cartridge Type	Nominal ID Nominal OD inch (mm)	Adsorption Capacity per TIE	Reference	Cartridge Length (inch)	Shipping Information	Part Number	Picture
GE EB Emulsion breaker	1 (25) 2 ½ (64)	120 g BTEX 300 g O&G	GE EB10-12 GE EB30-4 GE EB30-20	10 30 30	12 / box 4 / box 20 / box	2076773 2074013 2073926	
GE M Free oil removal	1 (25) 2 ½ (64)	120 g BTEX 300 g O&G	GE M10-12 GE M30-4 GE M30-20	10 30 30	12 / box 4 / box 20 / box	2073831 2075571 2073925	
GE MHT High temperature resistance	1 (25) 2 ½ (64)	120 g BTEX 300 g O&G	GE M10-30HT GE M30-15HT	10 30	30 / box 15 / box	2073928 2074014	
GE M30PCB PCB removal	1 (25) 2 ½ (64)	100 g PCB 120 g BTEX	GE M30PCB-4 GE M30PCB-15	30 30	4 / box 15 / box	2074055 2074056	
GE MBB Heavy duty oil removal	1 (25) 4.75 (121)	240 g BTEX 600 g O&G	GE MBB10-10 GE MBB20-5	10 20	10 / box 5 / box	2073833 2073834	

One-Pass

Candle Filters

Candle Filters are a specific type of pressure filter used to separate solids from liquids. They are typically comprised of a vertical pressure vessel with a conical bottom, dome top, a tube sheet and a number of vertically installed filter candles clamped between the vessel's shell and its dome. The term "candle" includes the filter media and the support element, which holds the media in place.
One-Pass candle filters are made of PTFE membrane laminated on PTFE or PP, with CPVC parts.

Polytetrafluoroethylene (PTFE) resin is expanded into a 3-dimensional web-like structure called ePTFE which creates billions of microscopic pores within the membrane film. PTFE is hydrophobic in nature, however, GE has developed a *hydrophilic* treatment to allow liquid to pass through the membrane, while allowing solids to agglomerate on the membrane's surface. The inherent non-stick quality of PTFE and its sub-micron apertures allow the particulate to be removed from the membrane's surface and the media to be regenerated.



One Pass vs. Conventional Clarification

- Conventional Clarification

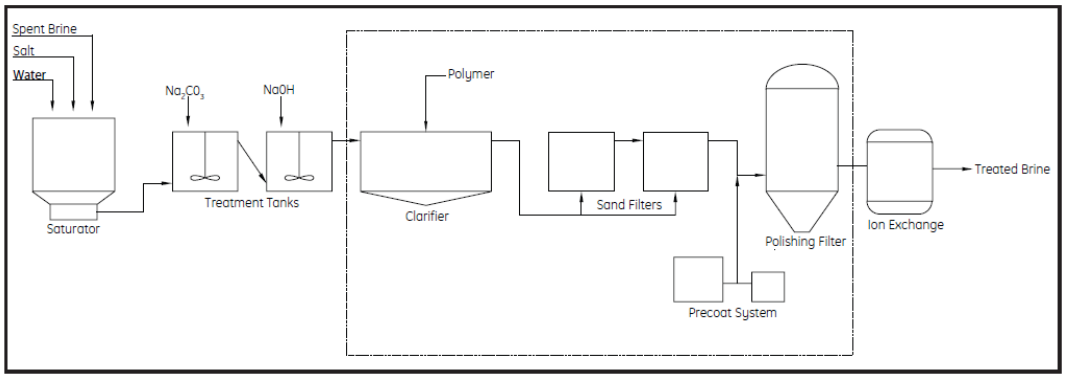
With conventional brine clarification, the contaminants (solids) are separated in multiple steps to produce a pure brine feedstock. Solids are initially precipitated with the use of chemicals in one or more treatment tanks and the bulk of these solids are separated in a clarifier, followed by a media (sand) filter. Finally this semi-clarified brine is polished to remove the remaining solids with the use of a pre-coat filter. The use of filter aids (pre-coat and body feed) is expensive and produces a significant amount of waste.

- One-Pass™ Membrane Filters for Brine Polishing Systems

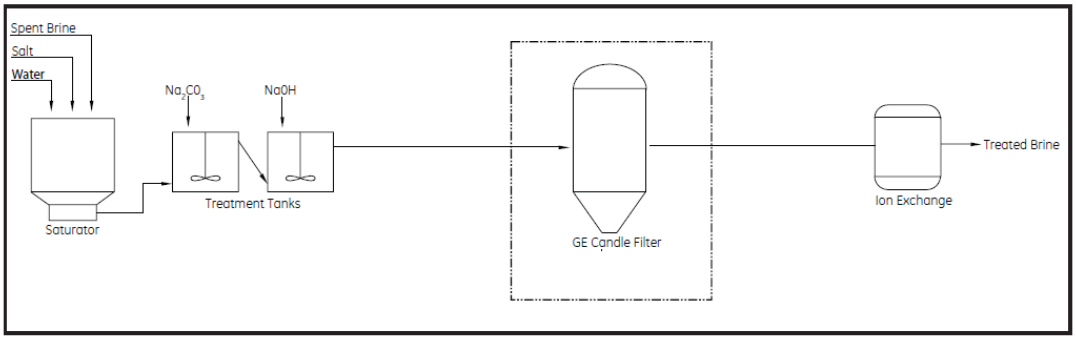
In contrast, the One-Pass membrane filter, utilizing GE's ePTFE membranes, is one of the most effective and economical means of brine polishing available. It not only eliminates the use of costly filter aids, but it can eliminate the need for expensive capital equipment such as clarifiers, sand filters, and pre-coat makeup equipment. In most cases, the chemically treated brine can be fed directly from the treatment tanks to the GE membrane filters, and automation can be accomplished with a small programmable logic controller (PLC). The potential cost savings in a brine polishing system realized with One-Pass membrane filters from GE, compared to conventional clarification, is shown below.

ONE PASS VS. CONVENTIONAL CLARIFICATION			
		Clarification	One Pass
Capital Equipment	Clarifier	$2.0 M	$0
	Sand filter system	$1.4 M	$0
	Pre-coat filters	$1.8 M	$0
	Membrane filters	$0	$1.8 M
	Savings	**$3.4 M**	
Operational Expense	Pre-coat and body feed	$100K	$0
	Waste disposal of feed aids	$30K	$0

Conventional Clarification System



Brine Polishing with GE's One-Pass™ Membrane Filters



Applications

Common applications for candle filters include:

- Brine clarification
- Chemical polishing
- Catalyst recovery.

The chloralkali industry (chlorine and caustic producers) utilizes brine as a feedstock, requiring extremely low solids content to protect equipment and optimize cell house efficiency. Other related chemical applications include sodium hypochlorite, sodium chlorate, and sodium hydroxide.

Advantages and Features

GE candle elements contain no metal parts (such as clamps), which eliminates traditional concerns about corrosive attack and damage to surrounding elements. Downtime associated with filter replacement can be reduced by 80% over other membrane systems.

- Eliminate clarifiers, sand filters and pre-coat systems
- Eliminate pre-coat and body feed costs
- Reduce overall waste disposal costs
- Optimize membrane cell house efficiency
- Eliminate risks associated with media bleed through
- Cleanable and backwashable (with air or water) for extended filter lifetime

PRODUCT SPECIFICATIONS

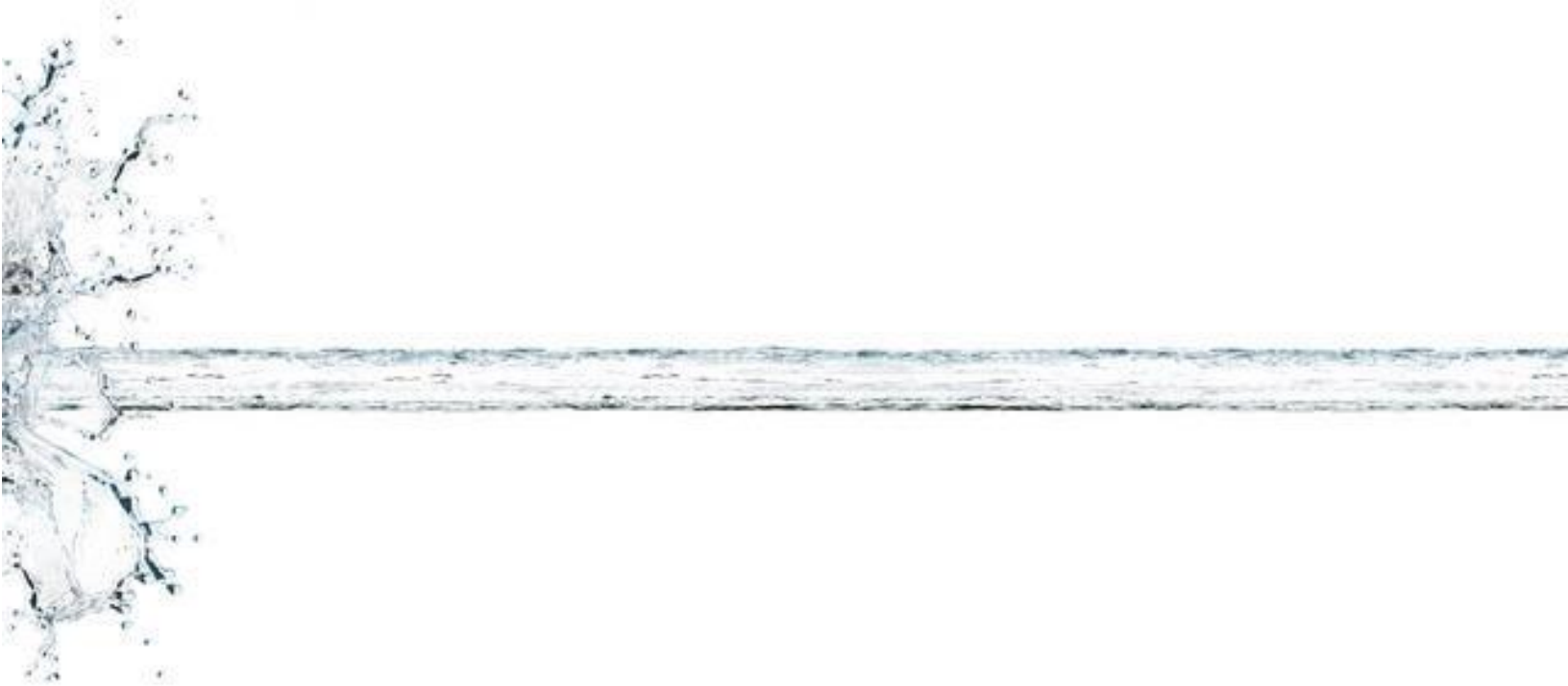
Description	Specification
Material	Hydrophilic ePTFE
Backer	Polypropylene or ePTFE
Pore sizes	0.5 or 1.5 micron
Candle material	CPVC
Dimensions	1.83 m x 7.44 cm (72 in x 2.9 in)
Candle surface	4 ft² (0.37 ft²)
Maximum pressure	60 psig (4.1 bar)
pH range	0.5 - 14
Maximum temperature	<180F (82°C)

ORDERING INFORMATION

Part #	Material	Pore size (micron)	Media
3043813	Candle	0.5	PTFE/PTFE
3043814	Candle	0.5	PTFE/PP
3043815	Sock	0.5	PTFE/PTFE
3043816	Sock	0.5	PTFE/PP

One-Pass candle filters are made of PTFE membrane laminated on PTFE or PP, with CPVC parts. Tables 1, 2 and 3 provide information on dimensions and material.
1.5-micron pore size socks and candles are also available. Please contact your GE representative for further information.

Cartridge Housings



Engineered for small to medium capacity, general-purpose filtration applications involving chemical systems, general pre-filtration, high-purity water and final product purification.

1 Round HX filter housings work well for small industrial applications where cost is the primary consideration.
The 3 Round HX filter housings are designed for small- to medium-flow industrial applications.
The 7 Round HX filter housings are designed for medium-flow industrial applications.

Standard housing includes:

- Corrosion-resistant 316 series stainless steel construction.
- All HX housings have satin outside finish and mill finish interior.
- Buna-N O-Ring standard. All other compounds available as options.

Our HX filter housing designs are fabricated in strict compliance with the American Society of Mechanical Engineers to Non-Code ASME for applications where cost is a primary consideration. (All HX housings are welded by ASME certified welders.)

1 Round Filter Housing

Nomenclature

Example: HX0120 – 0.75T – 316A – 222

NOMENCLATURE							
1	2	3	4	5	6	7	8
HX	01	20	.75	7	316	A	222
Series	Configuration	Cartridge length (in)	Inlet/outlet size (in)	Port Type	Housing material	Closure type	Cartridge adapters
HX	1 cartridge per housing	10 = 10in 20 = 20in	.75in	T = NMPT	316 SS	A = V-band closure clamp	Blank 222

ADDITIONAL INFORMATION	
Configurations	T-Style (Inlet and Outlet In-Line)
Housing Sizes & Filter Length	10in or 20in
Material	316 Series Stainless Steel
Filter Connections	DOE (Double Open End): flat gasket, plain end or solid end cap SOE (Single Open End): EH* (222 o-rings/fin end adapters)
Inlet/Outlet Connections	0.75-in. (3/4-in. 19mm) FNPT
Drain Port	0.25-in. (1/4-in. 6.4 mm) FNPT
Downstream Gauge Port	0.25-in. (1/4-in. 6.4 mm) FNPT
ID/OD Finish	Outside satin finish and inside mill finish
Closure Type	V-Band Clamp
Seals	Buna-N O-Ring standard. Other compounds available as options: Viton*, EPDM, Teflon*, silicon
Pressure Ratings	250 psi (17.2 bar) @ 150°F (66°C) water

*Trademark acknowledgement:
Viton is registered trademark of DuPont Dow Elastomers.
Teflon is registered trademark of E. I. DuPont de Nemours and Company.

Ordering Information

1. Filter housing choice:
If you need a 10in filter housing:

- With DOE (flat gasket, plain end or solid end cap) filters: 1154078
- With SOE (222 o-rings/fin end adapters) filters: 1157025

If you need a 20in filter housing:

- With DOE (flat gasket, plain end or solid end cap) filters: 1154081
- With SOE (222 o-rings/fin end adapters) filters: 1157027

2. Accessories
Accessories are packaged separately and need to be installed by the customer.
These housings can be only mounted on line. Clamp on stand is not an available accessory.

ACCESSORIES

Model Number Description	Specification	Material	Part #
Pressure Gauge, Bottom Mount	300 psig (20.7 bar)	316SS	1113394
T-Handle for V-Band Clamp		316SS	1154709

Spare Parts

SPARE PARTS

Model Number Description	Specification	Material	Part #
Wing Nut	1 per housing	18-8SS	1142572
Draw Bar, 10-inch (254 mm)	1 per housing	316SS	1143181
Draw Bar, 20-inch (508 mm)	1 per housing	316SS	1143182
Bottom Seal Cup, HX-DOE	1 per housing	316SS	1143776

Filter Housing Seal Kits

- Buna-N seals are standard and included with each housing assembly.
- Replacement seal kits with alternative materials are available for each style of housing.
- Each kit contains all the proper seals for sealing the housing.
- Replacement seal kits are packaged separately and need to be installed by the customer.
- HX-DOE and HX-222 seal kits contain seals for the housing only.
- Kits do not contain O-rings or gasket seals for cartridge filters.

Compatibility range temperature for o-ring/gasket materials:

FILTER HOUSING SEAL KITS

	Range Temperature		DOE	222
Buna-N	-40 to +250°F	-40 to +121°C	1157717	1161834
Viton[1]	-15 to +400°F	-26 to +204°C	1157722	1161836
Silicone[2]	-80 to +450°F	-62 to +232°C	1157727	1161837
EPDM, EPR	-65 to +300°F	-54 to +149°C	1157712	1161835
PTFE, Teflon[3]	-65 to +500°F	-54 to +260°C	1157743	1161839

Trademark acknowledgement:
[1]Viton is registered trademark of DuPont Dow Elastomers.
[2]Gasket and O-ring material are not available for the HX Series Housings.
[3]Teflon is registered trademark of E. I. DuPont de Nemours and Company.

3 Round Filter Housing

Nomenclature

Example: HX0320 1.5T – 316A

NOMENCLATURE						
1	2	3	4	5	6	7
HX	03	20	1.5	T	316	A
Series	Configuration	Cartridge length	Inlet/outlet size	Port Type	Housing material	Closure type
HX	3 cartridges per housing	20 = 20in 30 = 30in 40 = 40in 50 = 50in	1.5 in	T NMPT (standard) V Victaulic (option) F Flange (option)	316 SS	A = V-band closure clamp

ADDITIONAL INFORMATION	
Configurations	L-Style: Side inlet port, bottom outlet port
Housing Sizes & Filter Length	20, 30, 40, 50-in.
Material	316 Series Stainless Steel
Filter Connections	DOE, 222 (EH*/Code 8) or 120 o-ring end adapters
Inlet/Outlet Connections	1.5-in. (1-1/2-in. 19 mm) NPT male std. Victaulic connections or flanges optional.
Drain Port	1/2 in. NPT male
Vent Drain	1/4-in. (6.4 mm) NPT female
Downstream Gauge Port	1/4-in. (6.4 mm) NPT female ports for inlet and outlet pressure gauges
ID/OD Finish	Outside satin and inside mill finish.
Closure Type	V-Band Clamp
Seals	Buna-N O-Ring standard. Other compounds available as options: Viton*, EPDM, Teflon*
Pressure Ratings	150 psi (10.3 bar) @ 200°F (93°C) water
Cartridge Compatibility:	Handles included on 30, 40 and 50-inch housing domes

*Trademark acknowledgement:
Viton is registered trademark of DuPont Dow Elastomers.
Teflon is registered trademark of E. I. DuPont de Nemours and Company.

Ordering Information

1. Housing choice (independent of filter adapter.

HOUSING CHOICE			
Cartridge Length	I/O Connection (2in)		
	MNPT	Victaulic	Flange
20in	1148114	1148146	1151985
30in	1148116	1148148	1151986
40in	1148118	1148150	1151987
50in	1148120	1148152	1151988

2. Accessories

Housing Assembly includes only the housing assembly. Other accessories such as the clamp-on stand and the cup and spring assemblies must be purchased separately.

- **For all housings:** Clamp-On Stainless Steel Stand - floor-mounting stand allows adjustments of the housing height and level of the inlet and outlet. Height and be adjusted so that the outlet is lower than floor level. See P/N 1162553.

- **For DOE filters**: The cup and spring assembly is required to seal the top of the filter when using a DOE filter. See P/N 1119540 -> One cup is required per filter.

Or

- **FOR DOE filters:** Housing Accessory Kit housing includes a clamp-on stand, three cup-and-spring assemblies and a PVC vent valve in one discounted package. See P/N 1226014.

Accessories are packaged separately and need to be installed by the customer.

Accessories			
Model Number Description	**Specification**	**Material**	**Part #**
HX Housing Accessory Kit	Stand, cup & spring, valve		1226014
Cup-and-Spring Assembly	For DOE only, 3 per housing	316SS	1119540
Pressure Gauge, Back Mount	100 psig (6.9 bar)	316SS	1164157
Clamp-On Stand Kit HX03		316SS	1162553

[1] Housing Accessory Kit includes a clamp-on stand, three cup-and-spring assemblies and PVC vent valve

Spare Parts

Spare Parts			
Model Number Description	**Specification**	**Material**	**Part #**
Pressure Gauge, Back Mount	100 psig (6.9 bar)	316SS	1164157
Ball Valve, Vent	0.25-inch (6.35 mm)	PVC	1110425
3-Round Hold-Down Plate	1 per housing	316SS	1144598
Tie-Rod 20" (508 mm)	1 or 2 per housing	316SS	1119261
Tie-Rod 30" (762 mm)	1 or 2 per housing	316SS	1118090
Tie-Rod 40" (1016 mm)	1 or 2 per housing	316SS	1140866
Tie-Rod 50" (1270 mm)	1 or 2 per housing	316SS	1142018
Wing Nut	1 or 2 per housing	316SS	1143002
V-Band Clamp, 3-Round	1 per housing	304SS	1144638

Filter Housing Seal Kits

- Buna-N seals are standard and included with each housing assembly.
- Replacement seal kits with alternative materials are available for each style of housing.
- Each kit contains all the proper seals for sealing the housing.
- Replacement seal kits are packaged separately and need to be installed by the customer.
- Kits contain seals for the housing only.
- Kits do not contain O-rings or gasket seals for cartridge filters.

Compatibility range temperature for o-ring/gasket materials:

Filter Housing Seal Kits			
	Range Temperature		**DOE**
Buna-N	-40 to +250°F	-40 to +121°C	1144652
Viton[1]	-15 to +400°F	-26 to +204°C	1148052
EPDM, EPR	-65 to +300°F	-54 to +149°C	1148050
PTFE, Teflon[3]	-65 to +500°F	-54 to +260°C	1162139

Trademark acknowledgement:
[1]Viton is registered trademark of DuPont Dow Elastomers.
[3]Teflon is registered trademark of E. I. DuPont de Nemours and Company.

7 Round Filter Housing

Nomenclature

Example: HX0720 1.5T – 316A

NOMENCLATURE						
1	2	3	4	5	6	7
HX	07	20	1.5	7	316	A
Series	Configuration	Cartridge length	Inlet/outlet size	Port Type	Housing material	Closure type
HX	7 cartridges per housing	20 = 20in 30 = 30in 40 = 40in 50 = 50in	1.5 in	T NMPT (standard) V Victaulic (option) F Flange (option)	316 SS	A = V-band closure clamp

ADDITIONAL INFORMATION	
Configurations	L-Style: Side inlet port, bottom outlet port
Housing Sizes & Filter Length	20, 30, 40, 50-in.
Material	316 Series Stainless Steel
Filter Connections	DOE, 222 (Code 8) or 120 o-ring end adapters
Inlet/Outlet Connections	1.5-in. (1-1/2-in. 19 mm) NPT male std. Victaulic connections or flanges optional.
Drain Port	1/2 in. NPT male
Vent Drain	1/4-in. (6.4 mm) NPT female
Downstream Gauge Port	1/4-in. (6.4 mm) NPT female ports for inlet and outlet pressure gauges
ID/OD Finish	Outside satin and inside mill finish.
Closure Type	V-Band Clamp
Seals	Buna-N O-Ring standard. Other compounds available as options: Viton*, EPDM, Teflon*
Pressure Ratings	150 psi (10.3 bar) @ 200°F (93°C) water
Cartridge Compatibility:	Handles included on 30, 40 and 50-inch housing domes

*Trademark acknowledgement:
Viton is registered trademark of DuPont Dow Elastomers.
Teflon is registered trademark of E. I. DuPont de Nemours and Company.

Ordering information

1. Housing choice (independent of filter adapter).

HOUSING CHOICE						
Cartridge Length	I/O Connection (2in)			I/O Connection (3in)		
	MNPT	Victaulic	Flange	MNPT	Victaulic	Flange
20in	1148122	1148154	1151997	1148124	1148162	1152001
30in	1148126	1148156	1151998	1148128	1148164	1152002
40in	1148130	1148158	1151999	1148132	1148166	1152003
50in	1148134	1148160	1152000	1148136	1148168	1152004

2. Accessories

Housing Assembly includes only the housing assembly. Other accessories such as the clamp-on stand and the cup and spring assemblies must be purchased separately.

- **For all housings:** Clamp-On Stainless Steel Stand - floor-mounting stand allows adjustments of the housing height and level of the inlet and outlet. Height and be adjusted so that the outlet is lower than floor level. See P/N 1162552.

- **For DOE filters**: The cup and spring assembly is required to seal the top of the filter when using a DOE filter. See P/N 1119540 -> One cup is required per filter.

Or

- **FOR DOE filters:** Housing Accessory Kit housing includes a clamp-on stand, three cup-and-spring assemblies and a PVC vent valve in one discounted package. See P/N 1226015.

Accessories are packaged separately and need to be installed by the customer.

ACCESSORIES			
Model Number Description	**Specification**	**Material**	**Part #**
HX Housing Accessory Kit for 7 Rd[1]	Stand, cup & spring, valve		1226015
Cup-and-Spring Assembly	For DOE only, 7 per housing	316SS	1119540
Pressure Gauge, Back Mount	100 psig (6.9 bar)	316SS	1164157
Clamp-On Stand Kit HX07		316SS	1162552

[1] Housing Accessory Kit includes a clamp-on stand, three cup-and-spring assemblies and PVC vent valve

Spare parts

SPARE PARTS			
Model Number Description	**Specification**	**Material**	**Part #**
Pressure Gauge, Back Mount	100 psig (6.9 bar)	316SS	1164157
Ball Valve, Vent	0.25-inch (6.35 mm)	PVC	1110425
7-Round Hold-Down Plate	1 per housing	316SS	1143038
Tie-Rod 20" (508 mm)	1 or 2 per housing	316SS	1119261
Tie-Rod 30" (762 mm)	1 or 2 per housing	316SS	1118090
Tie-Rod 40" (1016 mm)	1 or 2 per housing	316SS	1140866
Tie-Rod 50" (1270 mm)	1 or 2 per housing	316SS	1142018
Wing Nut	1 or 2 per housing	316SS	1143002
V-Band Clamp, 7-Round	1 per housing	304SS	1142468

Filter Housing Seal Kits

- Buna-N seals are standard and included with each housing assembly.
- Replacement seal kits with alternative materials are available for each style of housing.
- Each kit contains all the proper seals for sealing the housing.
- Replacement seal kits are packaged separately and need to be installed by the customer.
- Kits contain seals for the housing only.
- Kits do not contain O-rings or gasket seals for cartridge filters.

FILTER HOUSING SEAL KITS			
	Range Temperature		**DOE**
Buna-N	-40 to +250°F	-40 to +121°C	1143060
Viton[1]	-15 to +400°F	-26 to +204°C	1148055
EPDM, EPR	-65 to +300°F	-54 to +149°C	1148053
PTFE, Teflon[3]	-65 to +500°F	-54 to +260°C	1162140

Trademark acknowledgement:
[1]Viton is registered trademark of DuPont Dow Elastomers.
[3]Teflon is registered trademark of E. I. DuPont de Nemours and Company.

Shipping information

SHIPPING INFORMATION					
Configuration	Cartridge length (in)	Flow Rate[1] gpm (lpm)	Length "A" (Overall housing height)[2] inch (cm)	Length "B" (Height required to remove cartridges)[2] inch (cm)	Empty Weight lb (kg)
1 Round	10	5 (19)	15.3 (39)	27 (69)	8 (4)
1 Round	20	10 (38)	25.3 (64)	47 (119)	11 (5)
3 Round	20	to 40 (151)	40 (102)	54 (137)	49 (22)
3 Round	30	to 50 (189)	50 (127)	68 (173)	55 (25)
3 Round	40	to 60 (227)	60 (152)	88 (224)	62 (28)
3 Round	50	to 70 (265)	70 (178)	108 (274)	69 (31)
7 Round	20	to 70 (265)	40 (102)	54 (137)	64 (29)
7 Round	30	to 105 (397)	50 (127)	68 (173)	72 (33)
7 Round	40	to 140 (530)	60 (152)	88 (224)	81 (37)
7 Round	50	to 175 (662)	70 (178)	108 (274)	90 (41)

[1] Flow rate is dependent upon cartridge filter selection, fluid properties, and maximum acceptable pressure drop.
[2] Based on B=5 inches (12.7 cm) on dimensional drawing (this dimension is adjustable).

Appendix 1: Chemical Compatibility Table

R - **Resistant**. No significant change was observed in flow rate or bubble point of the membrane following 48 hours exposure to the test fluid at 77°F (25°C).
LR – **Limited Resistance**. Moderate changes in physical properties or dimensions of the membrane were observed. The filter may be suitable for short term, noncritical use.
NR - **Not Resistant**. The membrane is basically unstable. In most cases, extensive shrinkage or swelling of the membrane occurs. The filter may gradually weaken or partially dissolve after extended exposure.
O - **Insufficient Data**. Testing on your own solution is recommended.

GE Water & Process Technologies filter cartridges are designed and manufactured for their resistance to a wide range of chemical solutions.
The compatibility data presented in this chart provides results when cartridge materials are exposed to the chemical under static conditions for 48 hours at 77°F (25°C).
This information, while current, is intended for general guidance only. Conditions will vary with each application and users should carefully verify chemical compatibility.
If questions arise about compatibility in specific applications, please contact GE.

CHEMICAL COMPATIBILITY TABLE

	Depth Filters						Pleated Filters								Elastomers						
	ROsave.Zs	WellPro.Zs	PURTREX	HYTREX	SELEX	FGF	FPN	FAP	FHR	MPC	MMP	MNY	MPM	MFE	VITON	BUNA-N	EP	NEOPRENE	SILICONE	FEP	HOUSINGS 316L (stainless steel)
ACIDS																					
Acetic Acid, Glacial	R	R	R	R	R	NR	R	R	R	LR	R	NR	R	R	NR	NR	LR	NR	LR	R	LR
Acetic Acid, 90%	R	R	R	R	R	NR	R	R	R	LR	R	NR	R	R	NR	NR	LR	NR	LR	R	LR
Acetic Acid, 30%	R	R	R	R	R	NR	R	R	R	R	R	LR	R	R	NR	NR	LR	NR	LR	R	R
Acetic Acid, 10%	R	R	R	R	R	LR	R	R	R	R	R	LR	R	R	LR	LR	R	LR	R	R	R
Hydrochloric Acid, Conc.	R	R	R	R	R	NR	R	R	R	NR	R	NR	R	R	R	LR	LR	NR	NR	R	LR
Hydrochloric Acid, 6N	R	R	R	R	R	NR	R	R	R	R	R	NR	R	R	R	LR	LR	NR	NR	R	LR
Nitric Acid, Conc.	R	R	R	R	R	NR	R	R	R	NR	R	NR	R	R	LR	NR	NR	NR	NR	R	R
Nitric Acid, 6N	R	R	R	R	R	NR	R	R	R	R	R	NR	R	R	R	NR	NR	NR	NR	R	R
Sulfuric Acid, Conc.	R	R	R	R	R	NR	R	R	R	NR	R	NR	R	R	R	NR	LR	NR	NR	R	NR
Sulfuric Acid, 6N	R	R	R	R	R	NR	R	R	R	R	R	NR	R	R	R	NR	LR	NR	NR	R	LR
Phosphoric Acid, Conc.	R	R	R	R	R	NR	R	R	R	NR	R	NR	R	R	R	LR	R	LR	NR	R	R
Chromic Acid, Conc.	R	R	R	R	R	NR	R	R	R	NR	R	NR	R	R	R	NR	NR	NR	NR	R	R
Hydrofluoric Acid, 6N	R	R	R	R	R	NR	R	R	R	R	R	NR	R	R	R	NR	NR	NR	NR	R	LR
ALCOHOLS																					
Amyl Alcohol	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	LR	NR	R	R
Benzyl Alcohol, 100%	R	R	R	R	R	R	R	R	R	NR	NR	R	R	R	R	NR	R	LR	LR	R	R
Benzyl Alcohol, 3%	R	R	R	R	R	R	R	R	R	NR	LR	R	R	R	R	R	R	R	R	R	R
Butanol	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	NR	R	NR	R	R
Ethanol	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Isopropanol	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Methanol	R	R	R	R	R	R	R	R	R	R	R	R	R	R	NR	R	R	R	R	R	R
BASES																					
Ammonium Hydroxide, 3N	R	R	R	R	R	NR	R	R	R	NR	R	R	R	R	R	R	R	R	R	R	R
Ammonium Hydroxide, 6N	R	R	R	R	R	NR	R	R	R	NR	R	R	R	R	LR	NR	R	R	R	R	R
Potassium Hydroxide, 3N	R	R	R	R	R	NR	R	R	R	NR	R	R	R	R	R	R	R	LR	LR	R	R
Sodium Hydroxide, 3N	R	R	R	R	R	NR	R	R	R	NR	R	R	R	R	R	R	R	R	R	R	R

Chemical Compatibility Table

	Depth Filters								Pleated Filters						Elastomers							
	ROsave.Zs	WellPro.Zs	PURTREX	HYTREX	SELEX	FGF	FPN	FAP	FHR	MPC	MMP	MNY	MPM	MFE	VITON	BUNA-N	EP	NEOPRENE	SILICONE	FEP	HOUSINGS 316L (stainless steel)
Sodium Hydroxide, 6N	R	R	R	R	R	NR	R	R	R	NR	R	R	R	R	R	R	R	R	R	R	R
ESTERS																					
Amyl Acetate	LR	LR	LR	LR	LR	NR	LR	LR	R	LR	R	LR	LR	R	NR	NR	LR	NR	NR	R	R
Butyl Acetate	LR	LR	LR	LR	LR	NR	LR	LR	R	LR	R	LR	LR	R	NR	NR	R	NR	NR	R	R
Cellosolve Acetate	R	R	R	R	R	NR	R	R	R	LR	R	O	R	R	NR	NR	R	NR	NR	R	R
Ethyl Acetate	LR	LR	LR	LR	LR	NR	LR	LR	LR	LR	NR	LR	LR	R	NR	NR	LR	NR	NR	R	R
Isopropyl Acetate	R	R	R	R	R	NR	R	R	R	LR	R	LR	R	R	NR	NR	R	NR	NR	R	R
Methyl Acetate	LR	LR	LR	LR	LR	NR	LR	LR	R	LR	NR	LR	LR	R	NR	NR	LR	NR	NR	R	R
Diethyl Ether	LR	LR	LR	LR	LR	NR	LR	LR	R	LR	NR	R	LR	R	NR	NR	NR	NR	NR	R	R
Diisopropyl Ether	R	R	R	R	R	NR	R	R	R	LR	R	O	R	R	O	O	O	O	O	O	R
Dioxane	R	R	R	R	R	NR	R	R	R	LR	R	R	R	R	NR	NR	R	NR	NR	R	R
Tetrahydrofuran	LR	LR	LR	LR	LR	NR	LR	LR	O	LR	R	R	LR	R	NR	NR	R	NR	NR	R	R
GLYCOLS																					
Ethylene Glycol	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Glycerine	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Propylene Glycol	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
AROMATIC HYDROCARBONS																					
Benzene	NR	NR	NR	NR	NR	NR	NR	NR	R	NR	LR	LR	NR	R	R	NR	NR	NR	NR	R	R
Toluene	NR	NR	NR	NR	NR	NR	NR	NR	R	NR	LR	NR	NR	R	R	NR	NR	NR	NR	R	R
Xylene	NR	NR	NR	NR	NR	NR	NR	NR	R	NR	LR	LR	NR	R	R	NR	NR	NR	NR	R	R
HALOGENTATED HYDROCARBONS																					
Carbon Tetrachloride	LR	LR	LR	LR	LR	NR	LR	LR	R	NR	LR	LR	LR	R	R	R	NR	NR	NR	LR	LR
Chloroform	LR	LR	LR	LR	LR	NR	LR	LR	R	NR	NR	LR	LR	R	R	R	NR	NR	NR	LR	LR
Chlorothene NU	LR	LR	LR	LR	LR	NR	LR	LR	R	NR	NR	O	LR	R	R	NR	NR	NR	NR	R	LR
Dowclene WR	LR	LR	LR	LR	LR	NR	LR	LR	R	NR	NR	O	LR	R	O	O	O	O	O	O	R
Freon TF	R	R	R	R	R	NR	R	R	R	R	R	R	R	R	R	R	NR	R	R	R	R
Freon TMC	LR	LR	LR	LR	LR	NR	LR	LR	R	R	R	LR	LR	R	O	O	O	O	O	O	R
Genosolv D	LR	LR	LR	LR	LR	NR	LR	LR	R	NR	R	LR	LR	R	O	O	O	O	O	O	R
Methylene Chloride	LR	LR	LR	LR	LR	NR	LR	LR	R	NR	NR	LR	LR	R	R	NR	NR	NR	NR	O	R
Perchloroethylene	LR	LR	LR	LR	LR	NR	LR	LR	R	NR	R	O	LR	R	R	R	NR	NR	NR	O	R
Trichloroethylene	LR	LR	LR	LR	LR	NR	LR	LR	R	NR	LR	LR	LR	R	R	R	NR	NR	NR	O	R
KETONES																					
Acetone	R	R	R	R	R	NR	R	R	R	LR	NR	R	R	R	NR	R	R	NR	NR	R	R
Cyclohexanone	R	R	R	R	R	NR	R	R	R	LR	NR	O	R	R	NR	NR	R	NR	NR	R	R
Methyl Ethyl Ketone	LR	LR	LR	LR	LR	NR	LR	LR	R	LR	NR	LR	LR	R	NR	LR	R	NR	NR	R	R
Methyl Isobutyl Ketone	LR	LR	LR	LR	LR	NR	LR	LR	R	LR	NR	LR	LR	R	NR	LR	LR	NR	NR	R	R
OILS																					
Cottonseed Oil	LR	LR	LR	LR	LR	LR	LR	LR	R	R	R	R	LR	R	R	R	LR	LR	R	R	R
Peanut Oil	R	R	R	R	R	LR	R	R	R	R	R	R	R	R	R	R	LR	LR	R	R	R
Sesame Oil	R	R	R	R	R	LR	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

Chemical Compatibility Table

	Depth Filters					Pleated Filters									Elastomers							
	ROsave.Zs	WellPro.Zs	PURTREX	HYTREX	SELEX	FGF	FPN	FAP	FHR	MPC	MMP	MNY	MPM	MFE	VITON	BUNA-N	EP	NEOPRENE	SILICONE	FEP	HOUSINGS 316L (stainless steel)
White Petroleum	R	R	R	R	R	LR	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
MISCELLANEOUS																					
Aniline	LR	LR	LR	LR	LR	NR	LR	LR	R	LR	NR	LR	LR	R	LR	NR	NR	NR	NR	R	R
Dimethyl Formamide	R	R	R	R	R	NR	R	R	R	LR	NR	R	R	R	NR	NR	R	NR	NR	R	R
Dimethyl Sulfoxide	R	R	R	R	R	NR	R	R	R	LR	NR	R	R	R	NR	NR	NR	NR	NR	R	R
Formaldehyde 37%	R	R	R	R	R	R	R	R	R	LR	R	R	R	R	NR	LR	LR	LR	R	R	R
Formaldehyde 4%	R	R	R	R	R	R	R	R	R	LR	R	R	R	R	R	LR	LR	LR	R	R	R
Gasoline	LR	LR	LR	LR	LR	NR	LR	LR	R	R	R	LR	LR	R	R	R	R	NR	NR	R	R
Hexane	LR	LR	LR	LR	LR	LR	LR	LR	R	R	LR	LR	LR	R	R	R	R	R	NR	R	R
JP-4	R	R	R	R	R	R	R	R	R	R	R	LR	R	R	R	R	R	NR	NR	R	R
Kerosene	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	NR	R	R
Phenol, Liquid	R	R	R	R	R	NR	R	R	R	R	NR	R	R	R	R	NR	NR	NR	NR	R	R
Pyridine	LR	LR	LR	LR	LR	NR	LR	LR	R	LR	NR	LR	LR	R	NR	NR	NR	NR	NR	R	R
Skydrol 500	R	R	R	R	R	O	R	R	R	R	O	O	R	R	NR	NR	NR	NR	NR	R	R
Turpentine	LR	LR	LR	LR	LR	LR	LR	LR	R	R	R	LR	LR	R	R	R	R	NR	R	R	R
Water	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Acetonitrile	LR	LR	LR	LR	LR	O	LR	LR	R	LR	LR	LR	LR	R	LR	LR	O	O	O	O	R
Nickel Sulfate	R	R	R	R	R	R	R	R	R	NR	R	R	R	R	R	R	R	R	R	R	R

Contact Customer Care

Please call our Customer Care line for immediate purchasing help:

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Brazil	55 11 2139 1111
Chile	56 2 3966017 0800396601
México	52 81 8152 7227
Peru	080053455
Venezuela	58 241 8385808 Ext. 136

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China	86 40 0884 8270
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Indonesia	001 803 440 871
Japan	81 3 5544 3789
Korea	82 5 223 5300
Malaysia	1800 813 798
New Zealand	0800 945 634
Philippines	1800 1441 0307
Singapore	65 6268 4366
Taiwan	88 62 2504 2101
Thailand – Rayong	66 3860 7456 (ext124)
Thailand – Bangkok	66 2751 3344 (ext143)

Have a water emergency?

Our fleet of water treatment trucks are available 24 hours a day, 7 days a week. If you need help fast, give us a call.

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EU	800-4300-0043
Latin America	+55 11 2139 2017
Middle East	+971 4 8101799

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