

ISOCON Hollow Fiber Cartridge

Hollow Fiber Crossflow Cartridges for Ultrapure Water Filtration

PRODUCT DESCRIPTION

Membrane Type:	PM10 with Molecular Weight Cutoff of 10,000 Daltons
Membrane Material:	Polysulfone
Construction:	Polysulfone shell and end caps; polypropylene fiber support netting
Regulatory Status:	Compliant with US FDA CFR Title 21; Compliant with EC Reg. No. 1935/2004, and EU Reg. No. 10/2011

SPECIFICATIONS

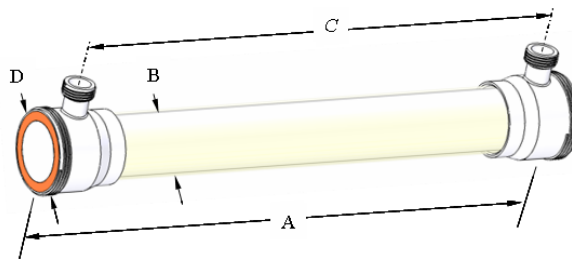
Part Number	Model	Fiber Inside Diameter mil (mm)	Active Membrane Area ft ² (m ²)
0720214	ISOCON 5043-106-20-PM10	20 (0.5)	106 (9.8)

OPERATING AND DESIGN INFORMATION*

Normal Operating Temperature Range:	34 - 113°F (1 - 45°C)
Short Term Operating Temperature Range*:	113 - 158°F (45 - 70°C)
Allowable pH:	4.0 - 10.0
Operating Pressure:	Refer to OPERATING ENVELOPE FOR ISOCON CARTRIDGES section next page
Maximum Feed Side Pressure Drop:	30 psi (2.1 bar) below 113° F (45°C)
Maximum Backflush Pressure:	20 psi (1.4 bar) above 113° F (45°C)
Hot Water Sanitization Temperature Range:	158 - 203°F (70 - 95°C)
Maximum Inlet Pressure:	5 psi (0.3 bar)
Maximum Allowable Sanitation Cycles:	100
Cleaning Information:	
Maximum Inlet Pressure:	30 psi (2.1 bar)
Maximum Temperature:	113°F (45°C)
Maximum Total Chlorine:	200 ppm @ pH 10.5-12.5; 0 ppm below pH 9
Allowable pH:	1.5 – 13.0 @ 113° F (45°C)
Maximum Temperature Ramp Rate Above 140°F (60°C):	9°F (5°C) per minute

*Consult KSS Process Technology Group for details.

NOMINAL DIMENSIONS

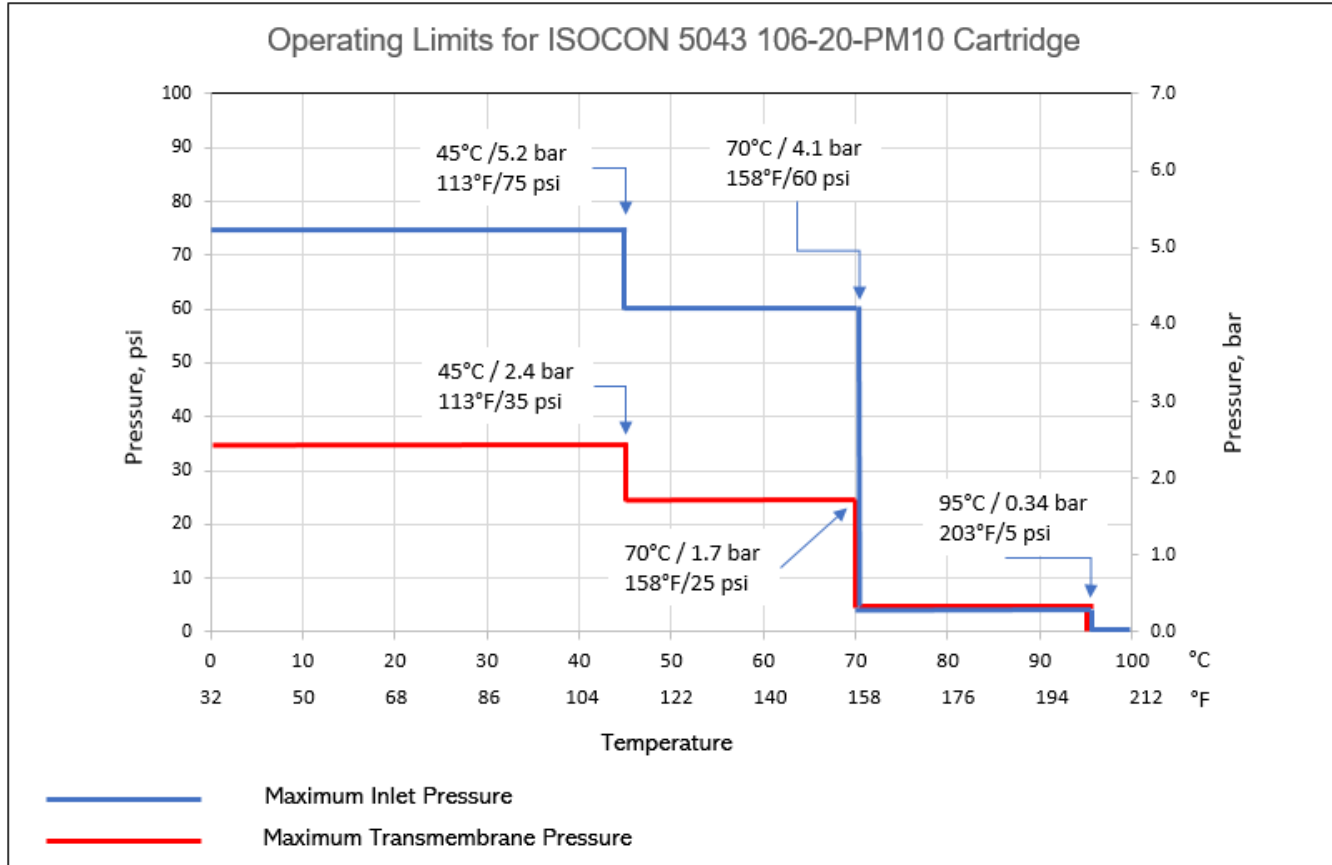


A		B		C		D		Permeate Connection	Process Connection
inches	mm	inches	mm	inches	mm	inches	mm		
43	1092	5.0	127	38 5/8	981	6.0	152	1 1/2" NPSM	6" NPSM

OPERATING ENVELOPE FOR ISOCON CARTRIDGES

Operating Envelope for Isocon Cartridges

It is important to follow the pressure - temperature relationship guidelines, in order to prevent irreversible damage and performance deterioration. The following diagram should be used as an operation guideline:



Hot Water Sanitization Procedure

- Operate the cartridges in recirculation mode
- Reduce cartridge inlet pressure to 5 psig (0.3 bar) at maximum rate of 6 psig/sec (0.4 bar/sec)
- Increase feed water temperature to a maximum of 203°F (95°C) at maximum rate of 9°F (5°C) per minute
- Circulate at the desired temperature for 60 minutes or less
- Reduce feed water temperature to normal operating temperature at maximum rate of 9°F (5°C) per minute
- Resume normal operating mode

Lubricants

For cartridge installation, use only water or glycerin to lubricate seals. The use of petroleum, vegetable-based oils or solvents may damage the cartridge.

Exposure to Oxidants

Exposure to chemical oxidants for thorough cleaning and sanitization may prove necessary and useful.

- Chemical oxidants commonly used in food applications include peracetic acid, hydrogen peroxide, and sodium hypochlorite. Consult KSS for more recommendations.

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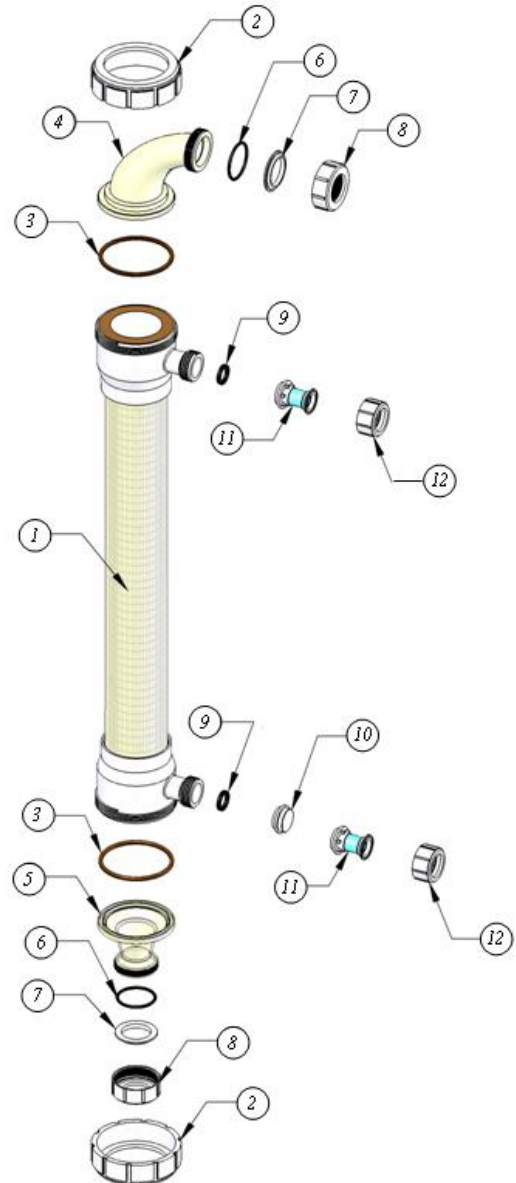
- Sodium or Potassium metabisulfite (without catalyst such as cobalt) is the preferred chemical to eliminate residual chlorine or other oxidizers from the feed stream.

5" HOLLOW FIBER CARTRIDGE HARDWARE

Item	Description	KPN
1	5" HF Cartridge	0720214
2	Process Cap Nut	0040364
3	Cartridge Gasket Silicon	0211095
4	Cartridge Reducing Elbow	0040365
5	Cartridge Straight adapter (threaded)	0040376
6	Manifold Gasket EPDM	0090439
	Manifold Gasket BUNA	0090432
7	Cartridge Backup Ring	0040368
8	Manifold Cap Nut	0040367
9	Permeate Port Gasket	0090448
10	Permeate Plug	0040375
11	Permeate Adapter Sanitary (4.25" L)*	0211787
11a	Permeate Port adapter (not shown)**	1017464
11b	Permeate Adapter Sanitary (not shown)**	1017465
12	Permeate Cap Nut (for part 11)	0040377

*Also available in other lengths. Consult KSS as required.

**Parts 11a and 11b are required for high temperature operation (>122°F / >50°C) instead of part 11. Maximum temperature using parts 11a and 11b is 185° (85°C). Consult KSS if higher temperature operation is required.



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