



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

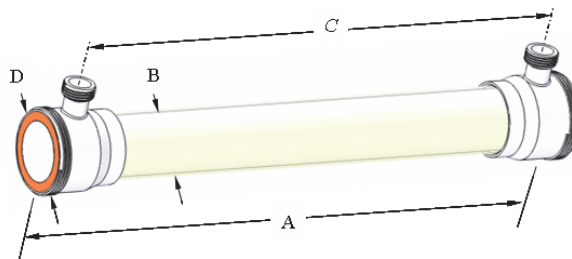
Part Number	Model	Fiber Inside Diameter mil (mm)	Active Membrane Area ft ² (m ²)
0720214	ISOCON 5043-106-20-PM10	20 (0.5)	106 (9.8)

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



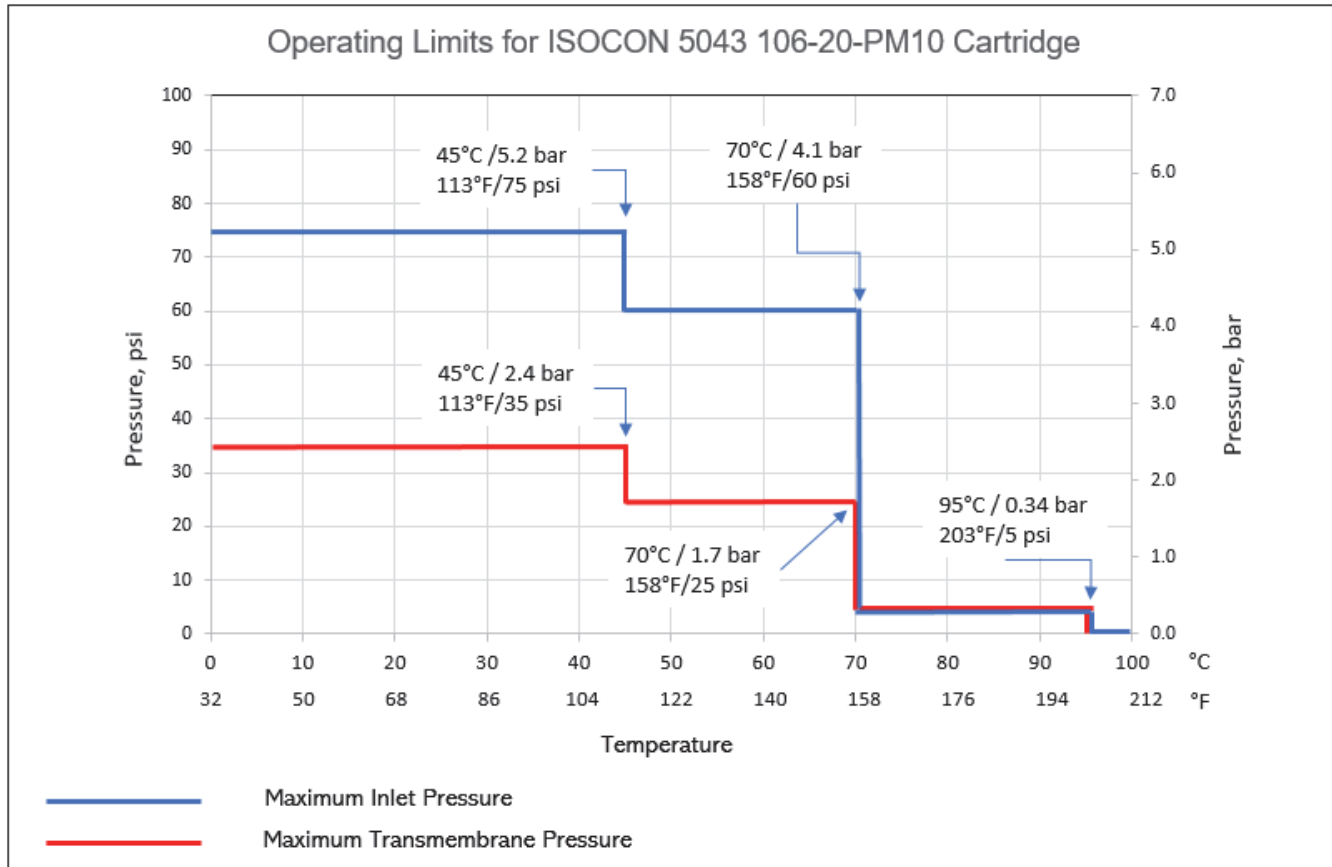
A		B		C		D		Permeate Connection	Process Connection
inches	(mm)	inches	(mm)	inches	(mm)	inches	(mm)		
43	(1092)	5.0	(127)	38 5/8	(981)	6.0	(152)	1 1/2" NPSM	6" NPSM



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

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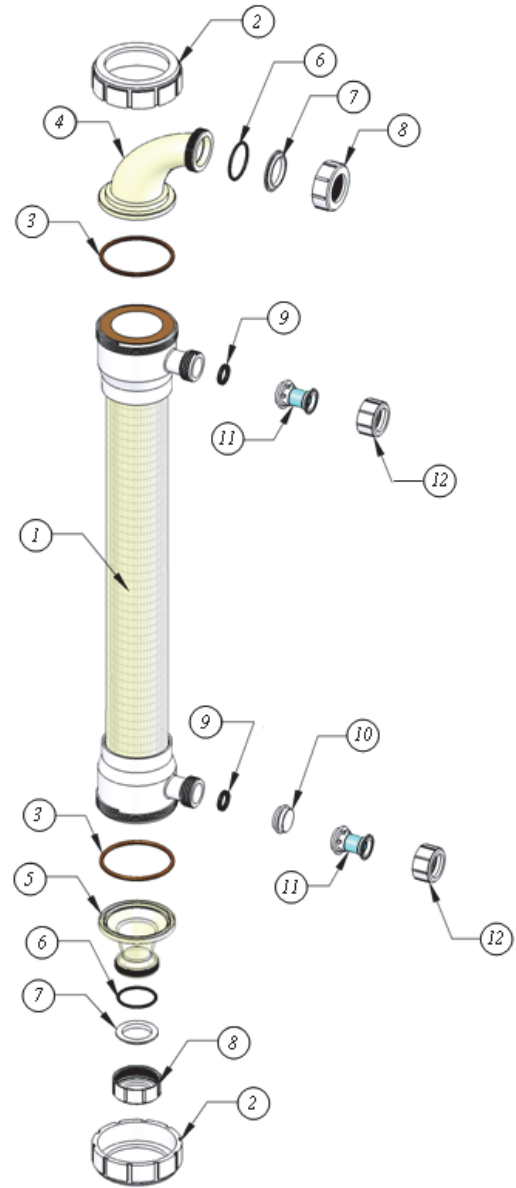


5" HOLLOW FIBER CARTRIDGE HARDWARE

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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