

# Intercept<sup>®</sup> Liquid Filters

*Advanced dual-retention, liquid filtration for critical DHF/BOE cleaning applications*

Intercept<sup>®</sup> liquid filters enable best-in-class filtration for critical dilute, aqueous, and low-neutral pH cleaning applications at 10 nm or greater technology nodes. The 7 nm filter type ensures tighter particle retention and ultraclean filtration with consistently good flow rates.

Intercept's dual-capture mechanism utilizes both sieving and nonsieving retention technologies to retain fine particles, reduce on-wafer defects, and provide low metal, chloride, and particle counts. The hydrophilic membrane prevents sudden flow loss caused by membrane dewetting and eliminates the need for prewetting. Intercept filters meet various process requirements to deliver yield-enabling filtration for advanced applications with long filter life and improved process stability.

## APPLICATIONS

- Weak acid-based process chemicals such as BOE and DHF
- Bulk chemical delivery and distribution systems
- DI water
- Single wafer tools
- Recirculating etch baths



## FEATURES & BENEFITS

<b>Retention ratings from 0.1 µm to 7 nm</b>	Provides superior filtration for critical dilute, aqueous, and low-neutral pH cleaning applications at advanced technology nodes
<b>Advanced membrane technology</b>	<p>Clean, dual-capture membrane improves process performance with fewer on-wafer defects</p> <p>Asymmetric membrane (7 nm [UC], 10 nm, 20 nm) ensures tighter particle retention while maintaining high flow rates</p> <ul style="list-style-type: none"> <li>• Hydrophilic membrane – no prewetting or flushing required</li> <li>• Increases process uptime</li> <li>• Prevents risk of chemical interactions</li> <li>• Minimizes risk of dewetting (and loss of flow)</li> <li>• M-pleat membrane area (HPM and HSM configurations)                             <ul style="list-style-type: none"> <li>– Enables increased flow rates for critical applications</li> </ul> </li> </ul>
<b>Clean filtration</b>	<p>Low metals, chlorides, particles</p> <p>Intercept UC 7 nm provides even lower metals and chlorides than previous filters</p>

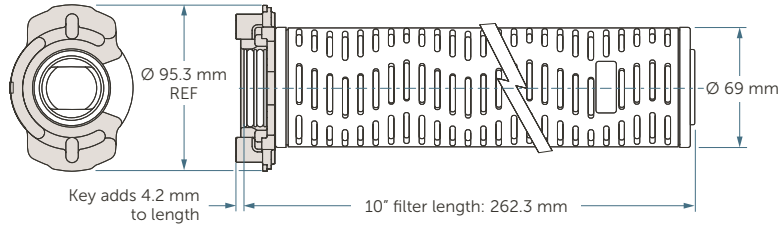
## SPECIFICATIONS

TYPE	HP	HPX	HPM	HSM
<b>Materials</b>	Membrane	Hydrophilic ultra-high molecular weight polyethylene (UPE)		Hydrophilic polysulfone (PS)
	Supports, sleeve, core, end caps	Nonwoven high-density polyethylene (HDPE)		
	Code 0 double 2-222 o-rings	Encapsulated fluoropolymer (E-FKM) or Kalrez® 4079 and 6375		
	Chem-Line™ II disposable outer shell	N/A	Polypropylene and PFA	
	Chem-Line I disposable outer shell	N/A		PFA
<b>Retention rating</b>	0.1, 0.05 µm	0.1, 0.05 µm	0.05 µm, 30 nm, 10 nm	20, 7 nm
<b>Membrane surface area</b>	10": 0.85 m <sup>2</sup> (9.15 ft <sup>2</sup> )	4": 0.5 m <sup>2</sup> (5.38 ft <sup>2</sup> ) 10": 1.1 m <sup>2</sup> (11.84 ft <sup>2</sup> ) 20": 2.2 m <sup>2</sup> (23.68 ft <sup>2</sup> )	10": 1.9 m <sup>2</sup> (20.45 ft <sup>2</sup> ) 20": 3.8 m <sup>2</sup> (40.90 ft <sup>2</sup> ) 30": 5.7 m <sup>2</sup> (61.35 ft <sup>2</sup> )	4": 0.6 m <sup>2</sup> (6.46 ft <sup>2</sup> ) 10": 1.2 m <sup>2</sup> (12.92 ft <sup>2</sup> ) 20": 2.4 m <sup>2</sup> (23.83 ft <sup>2</sup> )
<b>Maximum operating conditions</b>	Maximum forward differential pressure	0.34 MPa (3.4 bar; 50 psid) @ 25°C (77°F)		
	Maximum reverse pressure	0.21 MPa (2.1 bar; 30 psi) @ 25°C (77°F)		
	Maximum operating pressure	0.58 MPa (5.8 bar; 84 psi) @ 25°C (77°F)		
	Maximum operating temperature	70°C (158°F) @ 30 psi	70°C (158°F) @ 23 psi	

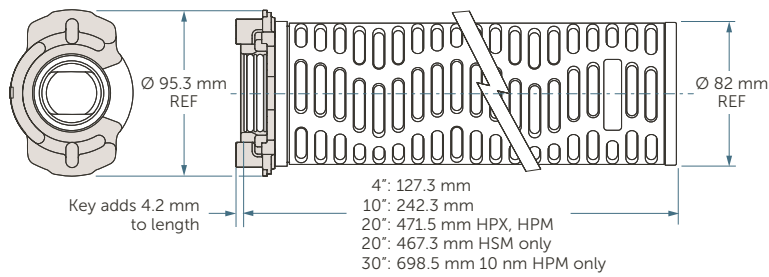
# Intercept HP, HPX, HPM and HSM Cartridge Filters

## DIMENSIONS

### Intercept HP Cartridge Filters

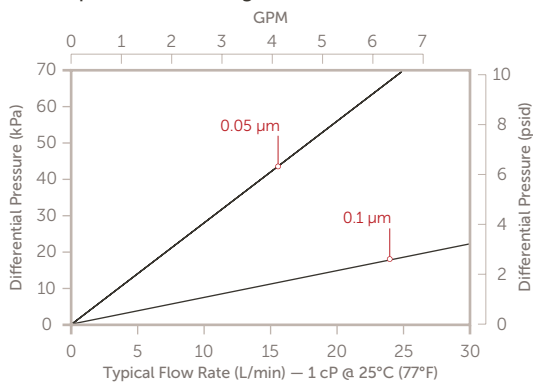


### Intercept HPX, HPM and HSM Cartridge Filters

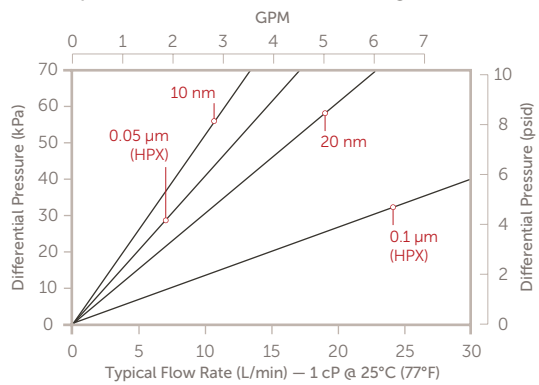


## PERFORMANCE DATA

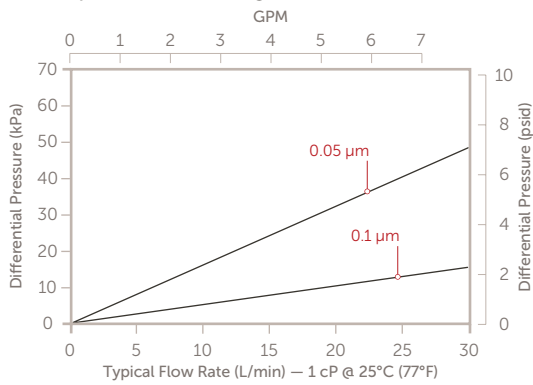
### Intercept HP 10" Cartridges



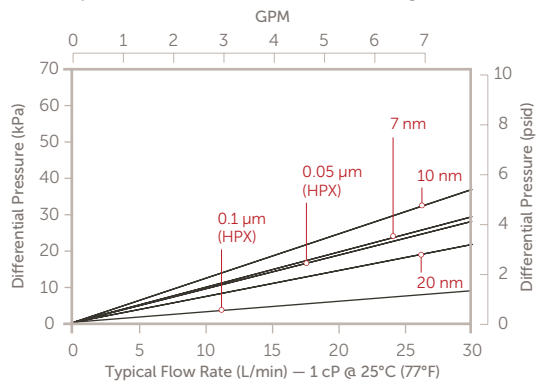
### Intercept HPX, HPM and HSM 4" Cartridges



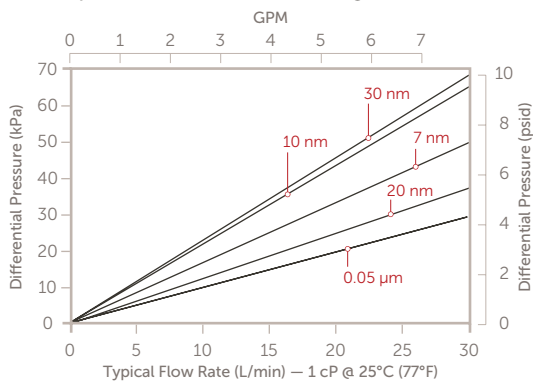
### Intercept HPX 10" Cartridges



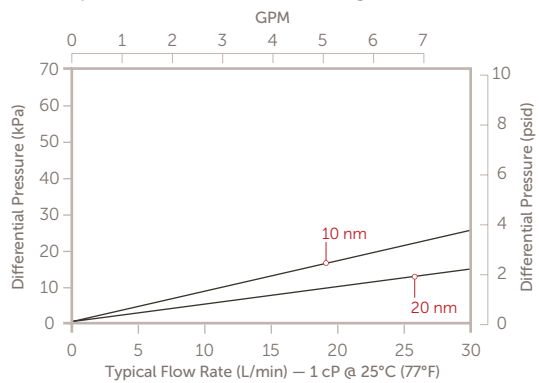
### Intercept HPX, HPM and HSM 20" Cartridges



### Intercept HPM and HSM 10" Cartridges



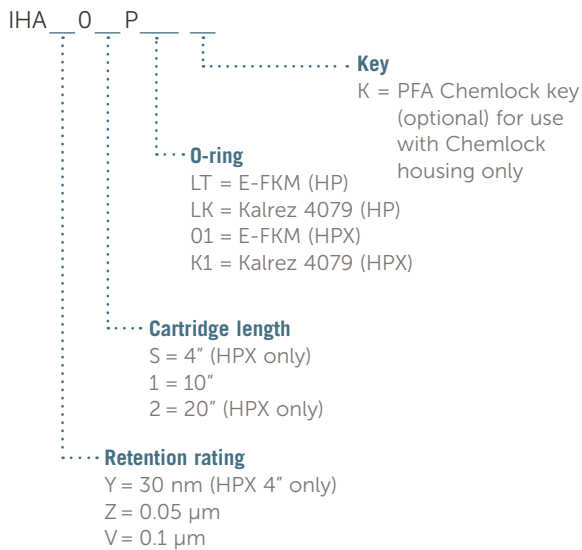
### Intercept HPM and HSM 30" Cartridges



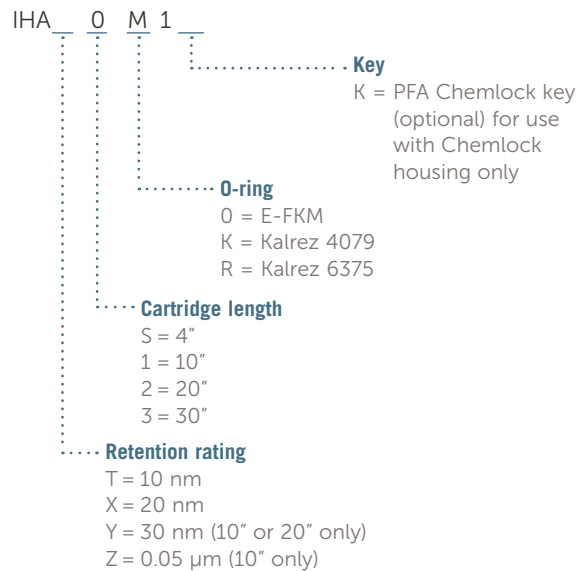
## ORDERING INFORMATION

This information serves as a guide. Please contact your local representative to confirm part numbers.

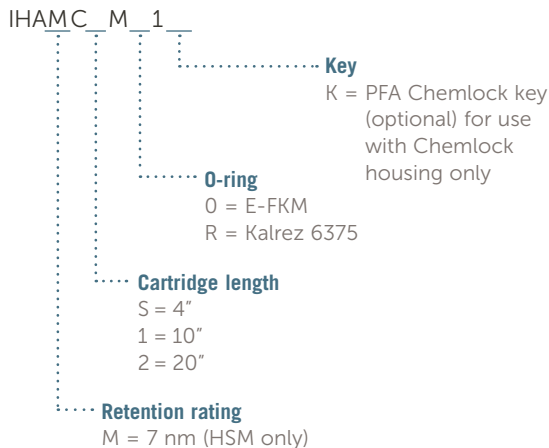
### Intercept HP and HPX Cartridge Filters: part number



### Intercept HPM and HSM Cartridge Filters: part number



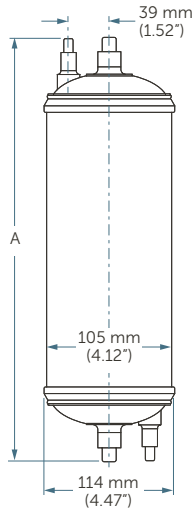
### Intercept UC Cartridge Filters: part number



# Intercept Disposable Filters

## DIMENSIONS

### Chem-Line II (PP) Disposable Filters

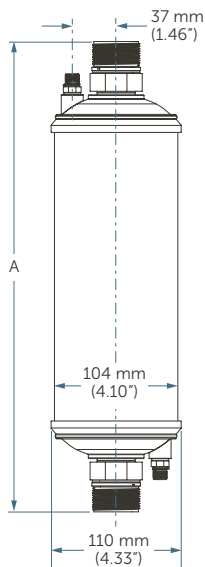


A		
Inlet/outlet size	4" disposable filter with Flaretek® fittings	10" disposable filter with Flaretek fittings
3/8"	237 mm (9.32")	350 mm (13.77")
1/2"	247 mm (9.72")	360 mm (14.17")
3/4"	247 mm (9.72")	360 mm (14.17")
1"	257 mm (10.12")	370 mm (14.57")

Vent/drain all versions: 1/4"

### Chem-Line II (PFA) Disposable Filters

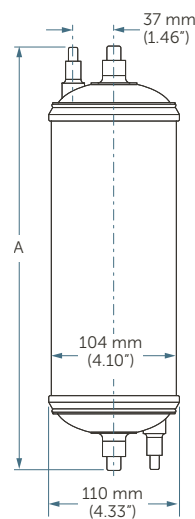
#### Super 300 Type Pillar® Fittings



Inlet/outlet size	10" filter
1/2"	355 mm (13.96")
3/4"	364 mm (14.31")
1"	397 mm (16.62")

Vent/drain all versions: 1/4"

#### Flaretek Fittings

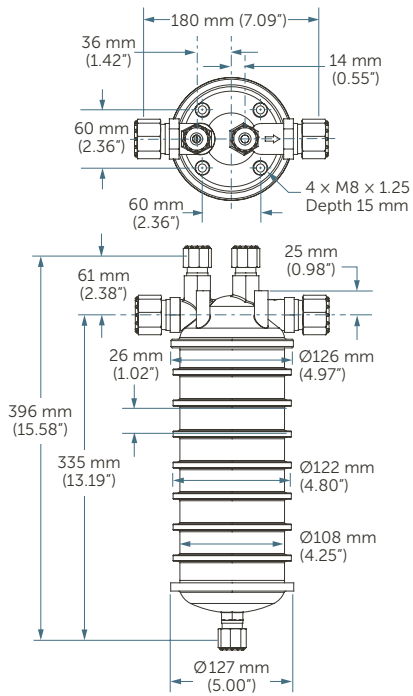


Inlet/outlet size	10" filter
1/2"	370 mm (14.58")
3/4"	373 mm (14.68")
1"	382 mm (15.02")

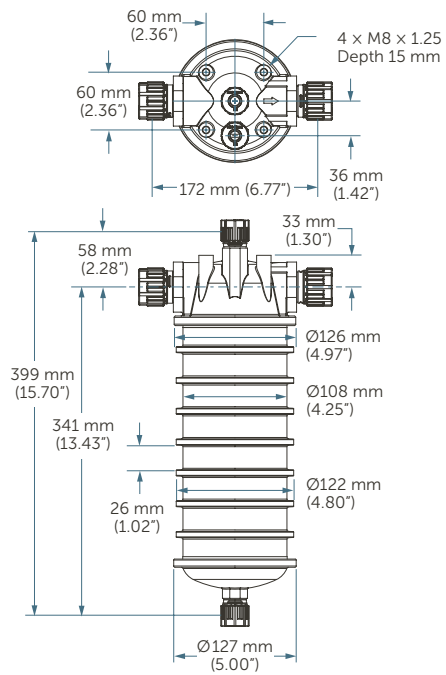
Vent/drain all versions: 1/4"

# Chem-Line I Disposable Filters

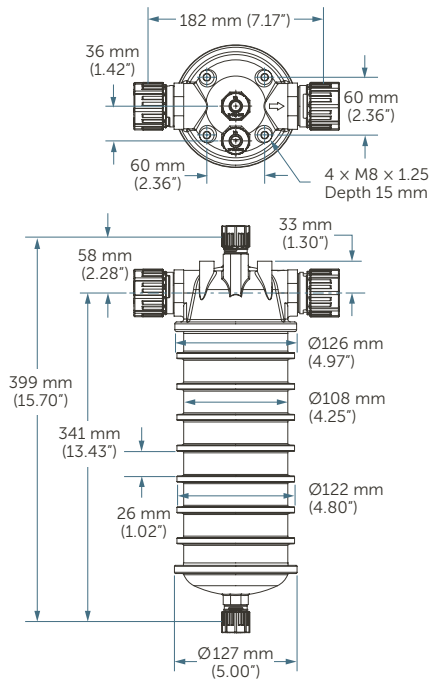
**TH: T-line 3/4" Super Type Pillar Fittings**



**3S: T-line 3/4" Super 300 Type Pillar Fittings**



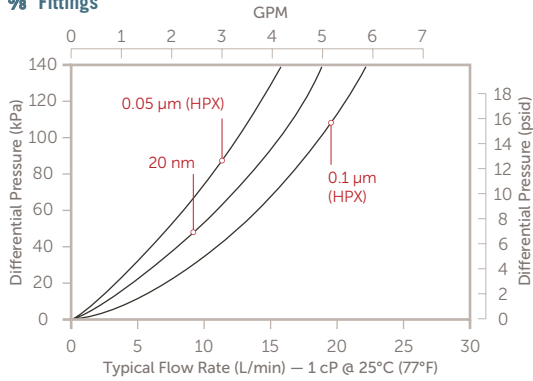
**4S: T-line 1" Super 300 Type Pillar Fittings**



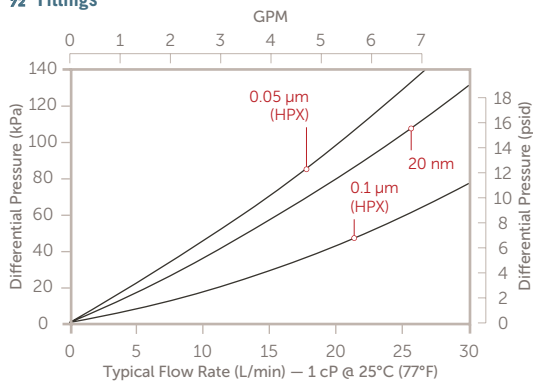
**PERFORMANCE DATA**

**Intercept HPX and HSM 4" Disposable Filters**

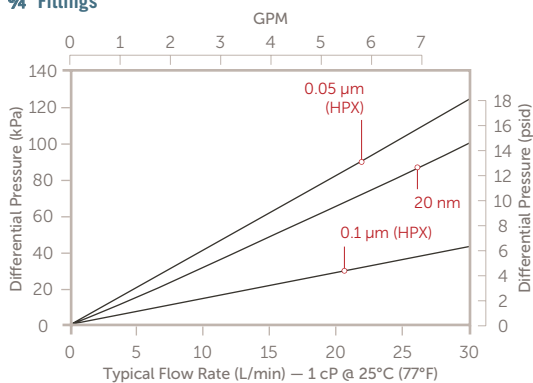
**3/8" Fittings**



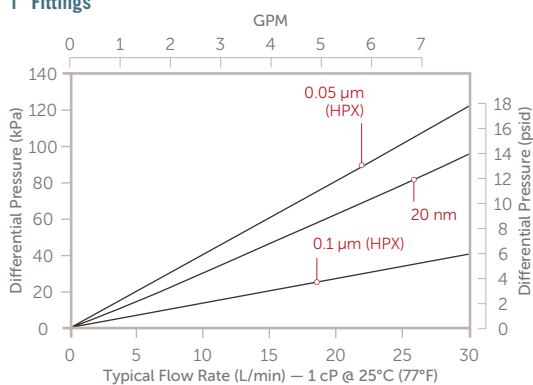
**1/2" Fittings**



**3/4" Fittings**

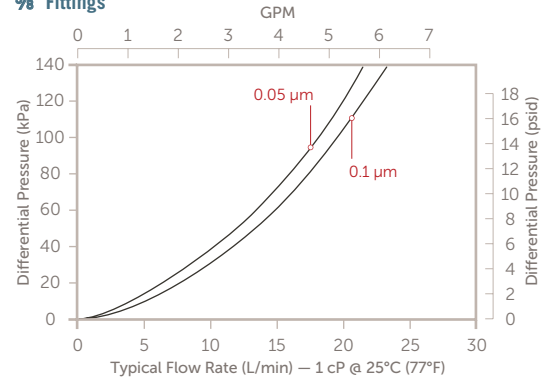


**1" Fittings**

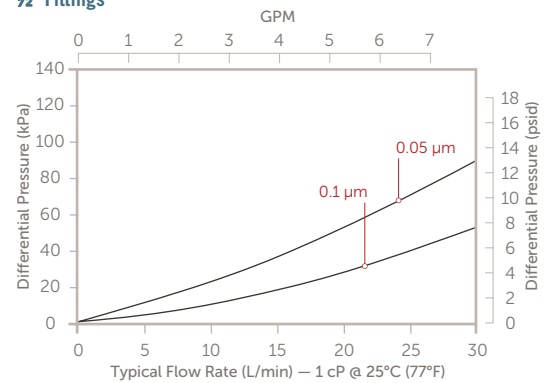


**Intercept HPX 10" Disposable Filters**

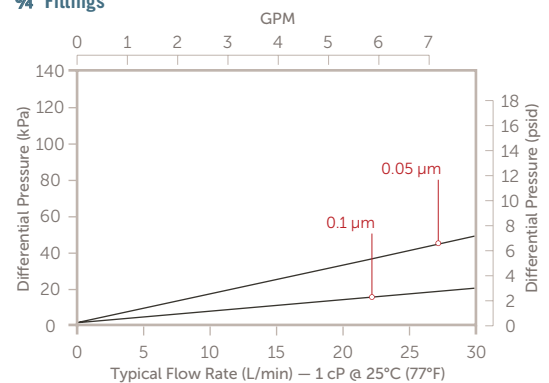
**3/8" Fittings**



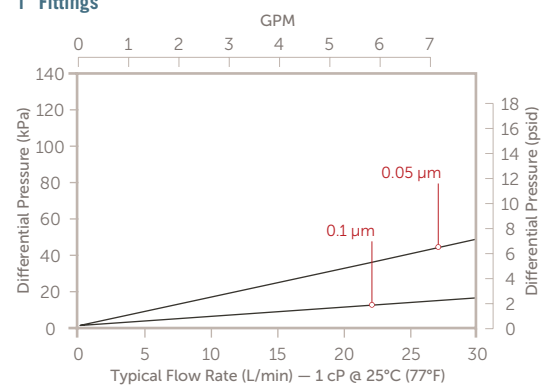
**1/2" Fittings**



**3/4" Fittings**



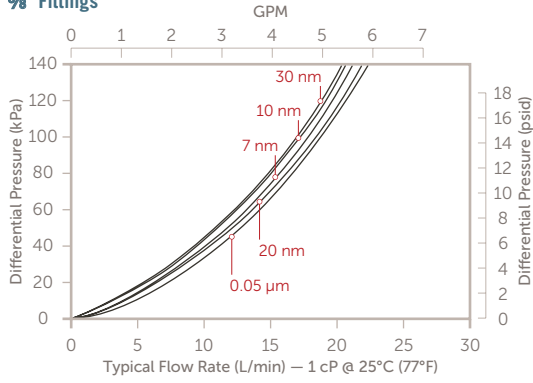
**1" Fittings**



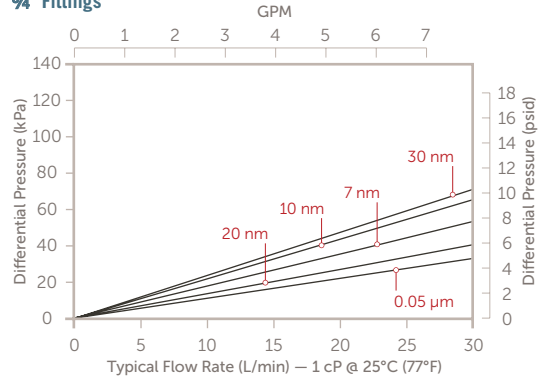


# Intercept HPX and HSM 10" Disposable Filters

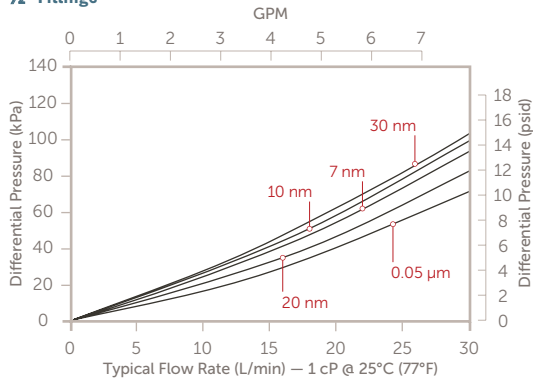
**3/8" Fittings**



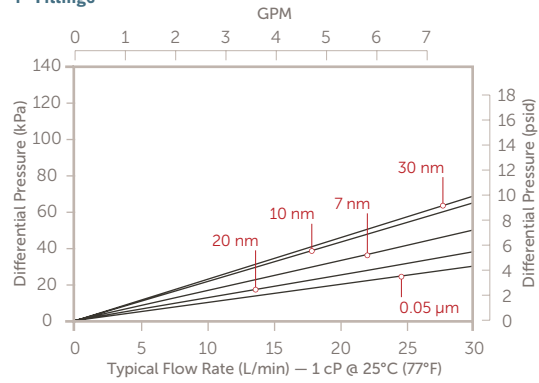
**3/4" Fittings**



**1/2" Fittings**



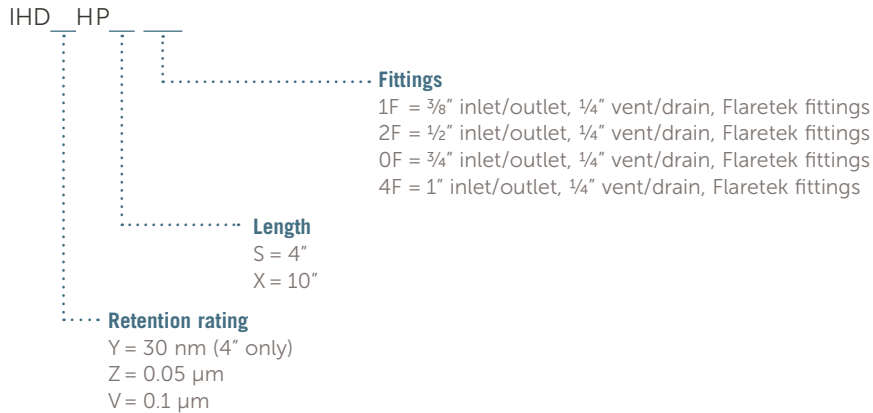
**1" Fittings**



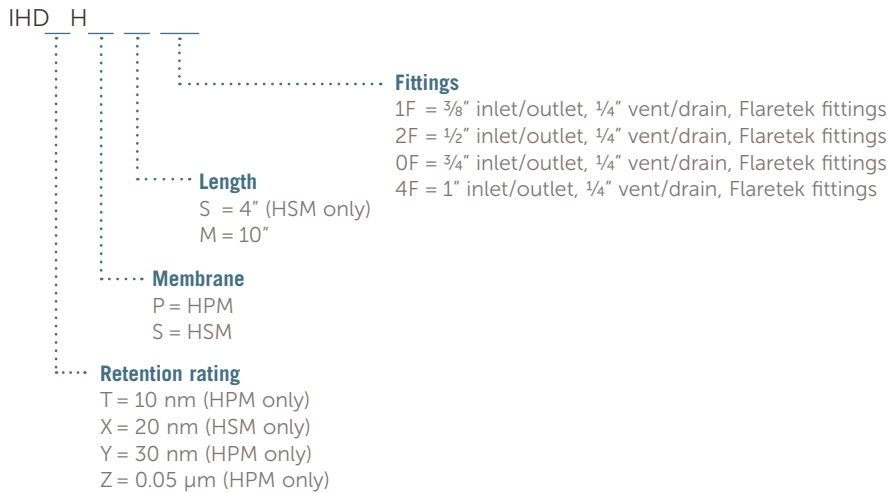
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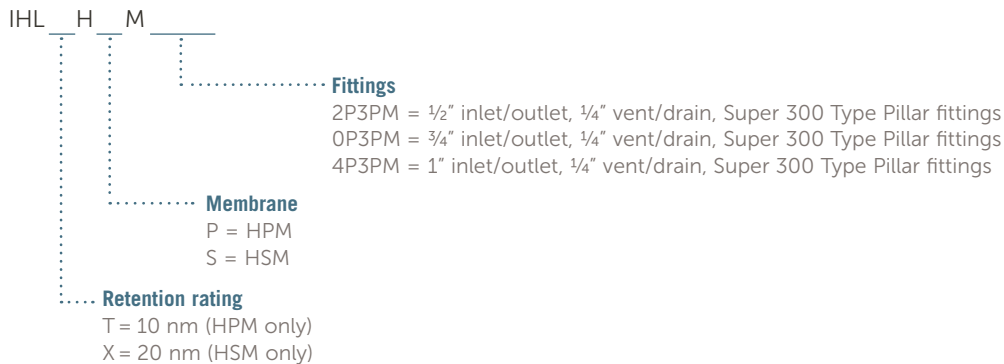
### Intercept HPX Chem-Line II (PP) Disposable Filters: part number



### Intercept HPM and HSM Chem-Line II (PP) Disposable Filters: part number

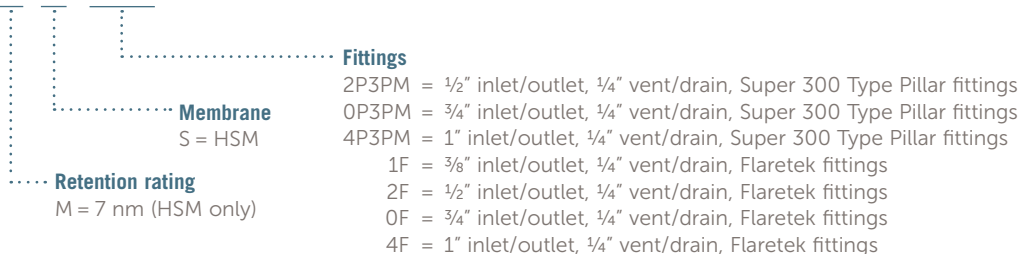


### Intercept HPM and HSM Chem-Line II (PFA) Disposable Filters: part number



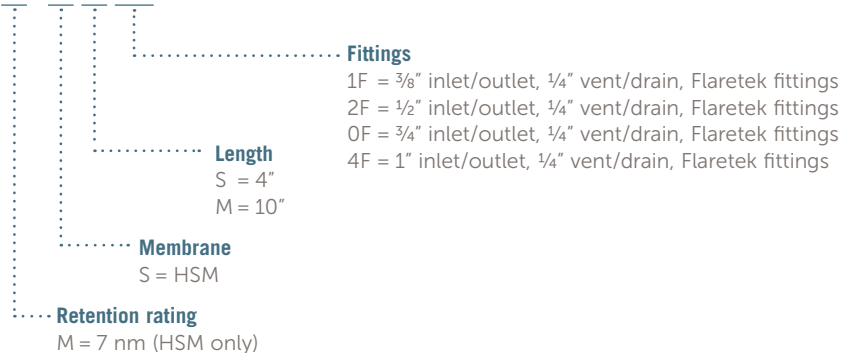
Intercept UC Chem-Line II (PFA) Disposable Filters: part number

IHL M C S M



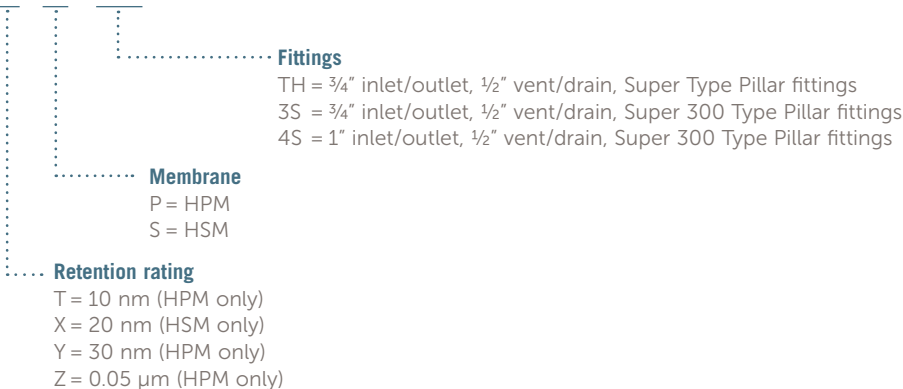
Intercept UC Chem-Line II (PP) Disposable Filters: part number

IHD M C S



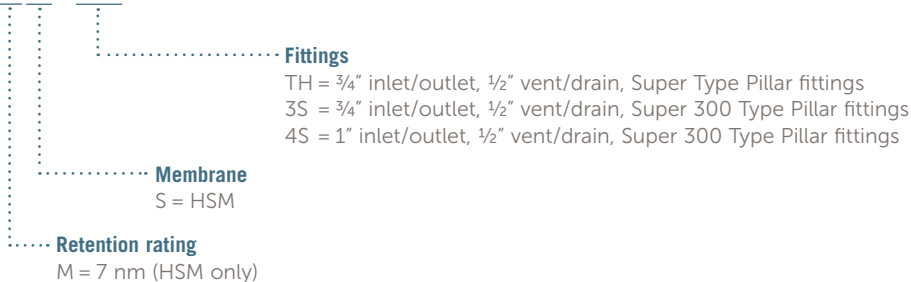
Intercept HPM and HSM Chem-Line I (PFA) Disposable Filters (10" only): part number

IHP H M



Intercept UC Chem-Line I (PFA) Disposable Filters (10" only): part number

IHP M C M



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