

XC Inline Exchanger

With a PFA tube-side fluid path the XC Series will meet the most stringent cleanliness requirements to support the next generation semiconductor node technologies.



FEATURES

Advanced Cleanliness

- Chemistry fluid path made from high grade PFA, PTFE or PVDF components
- No wetted o-ring seals eliminates source for contamination
- Assembled and tested in clean-room environment

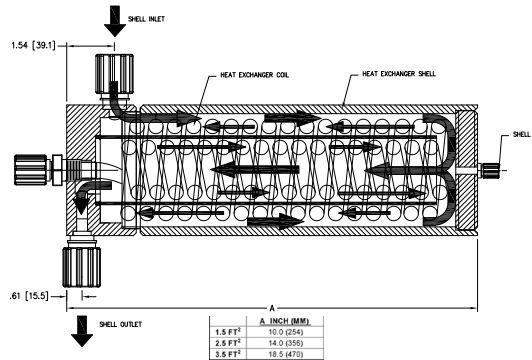
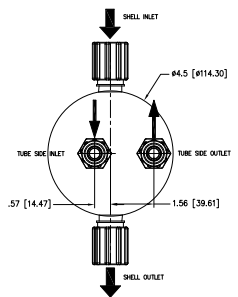
Low Mass Heat Exchanger

- Enables faster temperature response
- Allows for precise and stable temperature control

Compact Design

- Reduces tool design space requirements
- Facilitates retrofitting of existing tools
- Simplifies manufacturing complexity

DIMENSIONS



Temperature: -50°C (-60°F) to 150°C (302°F)	Pressure: PFA Tubing: 241kPa (34.9 PSI) at 120°C (248°F)
Exchange Area: .14m ² , .23m ² , .33m ²	PVDF Shell: 206kPa (29.8 PSI) at 135°C (275°F)

Compatibility

● YES	● YES	● YES	● YES	● NO
acids	water	bases	solvents	gases

APPLICATIONS

- Semiconductor wafer cleaning

XC In-line Exchanger

SPECIFICATIONS

Sizes	.14m ² (1.5 ft ²) of exchange area
	.23m ² (2.5 ft ²) of exchange area
	.33m ² (3.5 ft ²) of exchange area

Standard Features	13mm (0.5 inch) PFA tubing, 0.76mm (0.030 inch) wall thickness
	All welded construction (shell)
	114mm (4.5 inch) diameter polypropylene or PVDF shell
	Internally baffled for enhanced heat exchanger performance
	U" factor (depending on flow rate): 142-284 J/(s x m ² x °C) = 25-50 BTU/(hr x ft ² x F)
Shell-side drain connection	

Fluid Connections	Tube, Shell, & Drain: Flared connections standard, choose sizes and other options when ordering
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Maximum Pressure/ Temperature	PFA Tubing: 172kPa (25 PSI) at 135°C (275°F)
	Polypro Shell: 207kPa (30 PSI) at 82°C (180°F)
	PVDF Shell: 207kPa (30 PSI) at 135°C (275°F)

Options	6.4mm (0.25 inches) 19mm (0.75 inch) Super 300 Pillar Type connections
	Custom sizes based on application
	Heavy-wall PFA tubing, 15.7mm (0.062 inch) wall thickness
	121mm (4.75 inches) PTFE shell

MODEL NUMBER BREAKDOWN

XC P 1.5			A C A			
Series	Material	Exchanger Area	A Circuit Connection (Tube)	B Circuit Connections (Shell)	Drain Connection	Options
XC	P = Polypro Chamber	1.5 = 1.5 ft ²	A = 1/2" Flared	A = 1/2" Flared	A = 1/2" Flared	THK = .062" wall exchanger tubing
	K = Kynar PVDF Chamber	2.5 = 2.5 ft ²	B = 3/4" Flared	B = 3/4" Flared	B = 3/4" Flared	SS = 316SS FNPT union half
		3.5 = 3.5ft ²	C = 1" Flared	C = 1" Flared	C = 1" Flared	P = PFA Ferrule (standard is PVDF)
			S = 3/8" Flared	D = 3/8" FNPT (via union)	S = 3/8" Flared	
			T = 3/8" Super 300 Pillar	F = 1/2" FNPT (via union)	T = 3/8" Super 300 Pillar	
			V = 1/2" Super 300 Pillar	S = 3/8" Flared	V = 1/2" Super 300 Pillar	
			W = 3/4" Super 300 Pillar	T = 3/8" Super 300 Pillar	W = 3/4" Super 300 Pillar	
				V = 1/2" Super 300 Pillar	Y = 1/4" Super 300 Pillar	
				W = 3/4" Super 300 Pillar	Z = 1/4" Flared	
				O = 3/8" Pipe size stub	No drain = Blank	

EXCHANGE AREA ft ² /m ²	LENGTH in/(mm)	DIA. in/(mm)	POLYPROPYLENE SHELL	PVDF SHELL
1.5 (0.14)	10 (254)	4.5 (115)	XCP1.5-***	XCK1.5-***
2.5 (0.23)	14 (356)	(229)	XCP2.5-***	XCK2.5-**
3.5 (0.33)	18.5 (470)	14	XCP3.5-***	XCK3.5-**