

pHasor[®] X Heat Exchanger

Absolute fluid purity with maximum heat transfer

pHasor[®] X heat exchanger provides a thermally stable fluid transfer solution with precision control and high throughput performance in heating and cooling applications.

Constructed of ultraclean, all-PFA materials, pHasor X is designed for processes requiring the highest level of purity and precision fluid transfer. The fully bonded, chemically inert structure includes two independent fluid streams that enable excellent chemical resistance and also extend filter lifetime. What's more, the compact, corrosion-resistant design requires low maintenance and minimal tool space without the need for o-rings.

APPLICATIONS

- Photochemical temperature control
- Hot DI water cooling
- DI water temperature control for immersion lithography (Entegris LiquidLens[®])
- Single wafer process fluid temperature control
- Recirculated bath temperature control
- Waste chemical drain cooling
- Corrosive gas heating or cooling
- Process equipment heating or cooling
- CMP slurry loop temperature control



FEATURES & BENEFITS

Ultraclean, all-PFA materials of construction	Delivers the highest level of purity and thermally sound fluid transfer with precision control
	Achieves high throughput performance in heating and cooling applications.
Two independent fluid streams in fully bonded, chemically inert structure	Enables excellent chemical resistance
	Extends filter lifetime
Compact, corrosion-resistant design	Requires low maintenance and minimal tool space without the need for o-rings

SPECIFICATIONS

Materials	Shell, tube, and end caps	PFA
Exchange media area	PHX03 = 0.3 m ² (3.2 ft ²)	PHX08 = 0.8 m ² (8.6 ft ²)
Heat transfer efficiency*	>568 w/m ² , °K (>100 Btu/hr.f ² , °F)	
Trace ionic metals**	<10 µg/unit	
Total organic contaminants	<1 ppb	

*Efficiency ratings between 4 –12 L/min @ 20 psi line pressure

**Extracted in 10% HCl for 24 hours

Note: Specifications are subject to change without notice.

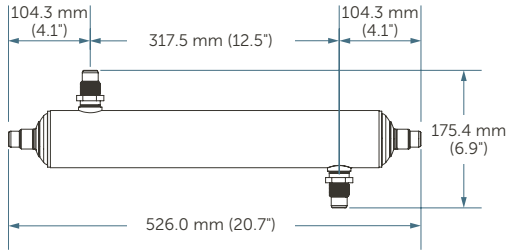
Please consult the factory for the most current information.

DIMENSIONS

These drawings show pHasor X configured with Flaretek® or Pillar® fittings.

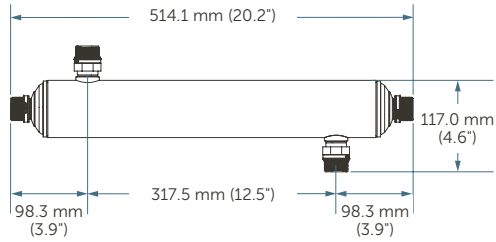
Flaretek 3/4" I/O Fittings

S-line Flow Path Configuration PHX08S00F



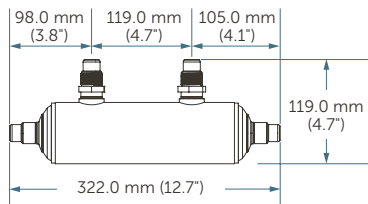
Super 300 Type Pillar 3/4" I/O Fittings

PHX08S00P

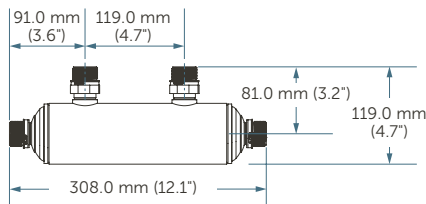


U-line Flow Path Configuration

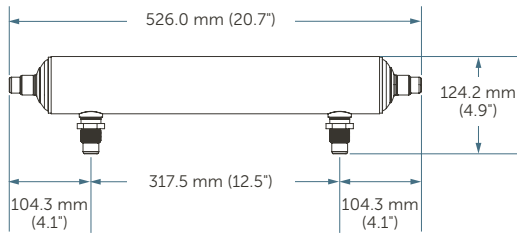
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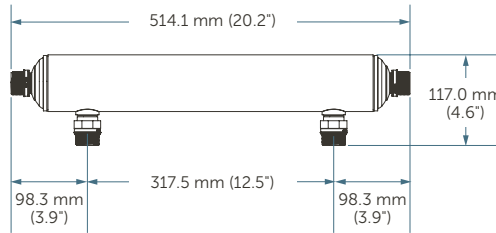
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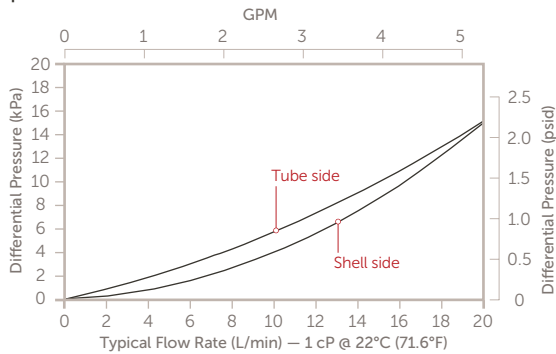


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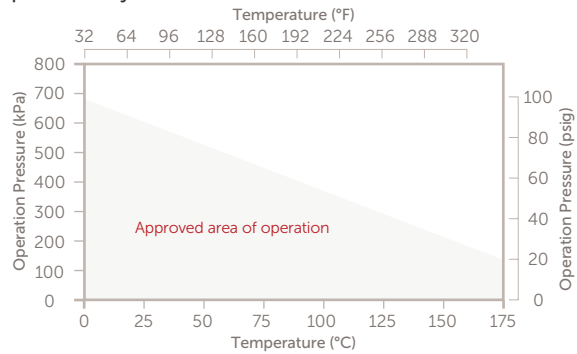


PERFORMANCE DATA

pHasor X Performance



pHasor X Hydraulic Performance



ORDERING INFORMATION

Part number	Media exchange area	Flow path configuration	Inlet/Outlet fitting size	Fitting Style
PHX03U00F	0.3 m ²	U-line flow path	¾"	Flaretek flare tube fitting
PHX03U00P	0.3 m ²	U-line flow path	¾"	Super 300 Type Pillar fitting
PHX08S00F	0.8 m ²	S-line flow path	¾"	Flaretek flare tube fitting
PHX08S00P	0.8 m ²	S-line flow path	¾"	Super 300 Type Pillar fitting
PHX08U00F	0.8 m ²	U-line flow path	¾"	Flaretek flare tube fitting
PHX08U00P	0.8 m ²	U-line flow path	¾"	Super 300 Type Pillar fitting

Note: Other connection sizes are available. Please consult the factory for more information.

RECOMMENDATIONS FOR USE

1. Install upstream filtration on both the chemical and the shell side.
2. Maintain a flow rate no greater than 20 L/min.
3. Maintain a differential pressure less than 0.4 MPa.
4. Consider periodic maintenance or replacement.

FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit entegris.com and select the Contact Us link to find the customer service center nearest you.

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