

Empire Pumps specialise in the manufacture of fluoroplastic heat exchangers. Our diverse product range is constructed from PTFE, FEP and PFA. These high quality rated plastics are ideal for use with high temperature aggressive metal finishing and chemical processes. The advanced texture of the plastics ensures the surface of the heat exchanger remains smooth, thus reducing the potential scaling of sludge producing processes.

The Empire range of heat exchangers are manufactured using pure fluoroplastics with an increased wall thickness. This robust design allows steam and thermal fluids to be transferred through the heat exchanger at increased pressures up to 6 bar. The higher the pressure capability, the quicker the heat is transferred into the process solution and the faster the tank is heated.

The range can be manufactured in circular, horizontal or vertical designs. Our thicker tube technology offers increased surface area within the same physical size of alternative products. This increased surface area ensures quicker heating of process tanks.

We offer flexible design solutions to suit specific customer requirements. The heat exchangers can be manufactured with floor mounted feet or with a mounting bracket for positioning on the inside of the tank wall. The inlet and outlet ports can be flanged or screwed connections. Extended flexible risers can be fitted to overcome large tank freeboards.



FEATURES AND BENEFITS

-  Materials of Construction: PTFE, FEP, PFA
-  Operating Media: Thermal fluid, saturated steam, hot water, chilled water
-  Pressure: Pure PTFE offers increased pressure capabilities up to 6 bar
-  Surface Area: Thicker tube providing increased surface area
-  Tube thickness: Achieves quicker heat up times
-  Materials: Smooth non-stick materials reducing scaling
-  Dimensions: Standard available and bespoke models available
-  Connections: Flanged or threaded, MBSP or FBSP
-  Mounting: Floor mounted with legs
-  Bracket: Available for side of the process tank mounting
-  Riser: Flexible extended risers to suit increased tank freeboard

MODEL NUMBER

Empire EPX range of PTFE heat exchanger standard design has Polypropylene frame, flexible PTFE sleeve and SS316 flange connection as shown on the left drawing.

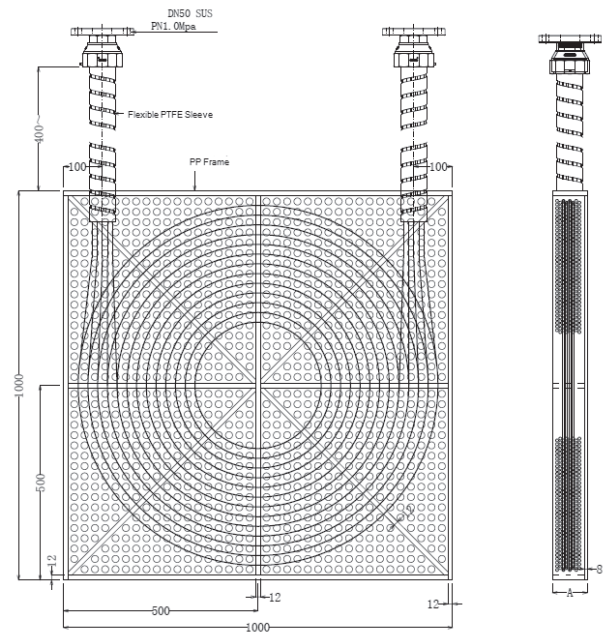
Options:

PTFE flanges opposed to 316 stainless steel

Mounting bracket for inside tank mounting

Mounting feet manufactured at the heat exchanger base to aid with tank positioning

Model Number	Surface Area (sq/m)	Dimensions		Connections Flange	Tube OD (mm)
		Length	Width		
EPX500	1 to 3	500	500	DN20	5.6
EPX1000	3 to 8	1000	1000	DN50	5.6
EPX1500	8 to 15	1500	1500	DN50	5.6



TYPICAL DESIGNS



PTFE rectangle heat exchanger with flexible connections terminating SS316 flanges



PTFE vertical heat exchanger with flexible connections terminating SS316 flanges



PTFE heat exchanger with 90 deg arms over the side of the tank wall terminating SS316 flanges



PTFE heat exchange manufactured with opposite facing arms enabling the connections to be distanced from the surface of the process tank

METALLIC HEAT EXCHANGERS

Empire's metallic heat exchangers have the following benefits:

- Vertical or horizontal configurations
- Various materials available for use in heating or cooling applications for alkaline or acid solutions and rinse tanks
- 100 PSI working pressure (steam or water)
- Different riser sizes, fittings, lengths and configurations to meet customer needs
- 1" diameter tubing with wide coverage of heat exchanging area

