



Sanitary Shell & Tube Compact Heat Exchanger Design Features

- **Compact:** Kw for Kw, Approximately a quarter of the footprint of conventional Shell and Tube Heat Exchangers.
- **Efficient:** Large Heat Transfer Area in a greatly reduced geometry
- **Weld-Free:** Unique NiCr Brazed Tube Bundle Design eliminates welds and gaskets
- **Single-Pass:** Compact Single-Pass eliminates U-Tube design issues.
- **Lighter:** Greatly reduced weight – easier installation.
- **Versatile:** Reduced geometry allows for closer point-of-use location.
- Double Tube Sheet
- 316L, 1.4435, Titanium, Special Alloys
- ASME BPE compliant
- Fully drainable on tube side.

HX Performance Features:

- Heat transfer rates to 5,000,000 BTU/hr (1465 kW)
- Liquid flows to 250 GPM (946 LPM)
- Pressures up to 1,500 psi (104 bar)

Typical WFI Cooling Q Values (120 Series – 125mmØ x 1000mm)

Cooling	WFI Flow	CHW Flow	KW Rating (Q)
80-20°C	40 LPM	357 LPM	167 kw
80-25°C	50 LPM	358 LPM	190 kw
80-40°C	487 LPM	383 LPM	1,337 kw
80-60°C	869 LPM	257 LPM	1,192 kw

Client Application:

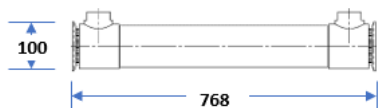
WFI Trim Cooling 25°C to 20°C - 302 LPM/CHW 7.2°C – 189 LPM

Exergy Compact Shell & Tube Sizing vs Conventional Shell & Tube Sizing *

Conventional U-Tube
Shell & Tube
Calculated Dimensions



Exergy Series 95
Compact Shell & Tube
Calculated Dimensions



* Dimensions in MM – Drawings Approximately to Scale

Application Summary: Exergy Compact Vs Conventional

- **Reduced CHW flow requirement:** (189LPM vs 252LPM on Conventional)
- **Versatile Installation:** Greatly Reduced Weight/Overall Geometry with Zero Maintenance provides greater flexibility of installation location.

Exergy Series 95 Model No: 02125-10 Compact Shell & Tube Heat Exchanger					
Item No:		HEX-A388487		Date: 4/23/2021	
Flow Direction:		Counter		Heat Transfer Area: 33.79 ft² / 3.139m²	
Empty Weight Kg		16.17		Tube Count/OD-WT: 481 / 3.2 Ø x 0.32 WT	
Performance Calculations					
Fluid Allocation			Shell Side		Tube Side
Fluid Name			Chilled Water		WFI
Flow Rate	lpm		188.63		302.83
	kg/h		11298.87		18087.78
Inlet Pressure barg			3.45		3.45
Temperature (In/Out) °C			7.2	16.1	25.6 20.0
Velocity m/s			2.09		2.37
Pressure Drop bar			0.61		0.32
Hold-up Volume cm³			2481.07		1594.64
Fouling Resist. (min) m²-K/W			0.0001		
Heat Exchanged			116849 Watts		LMTD 11.1°C
Transfer Rate			3372 W/(m²-K)		Effectiveness 0.48