



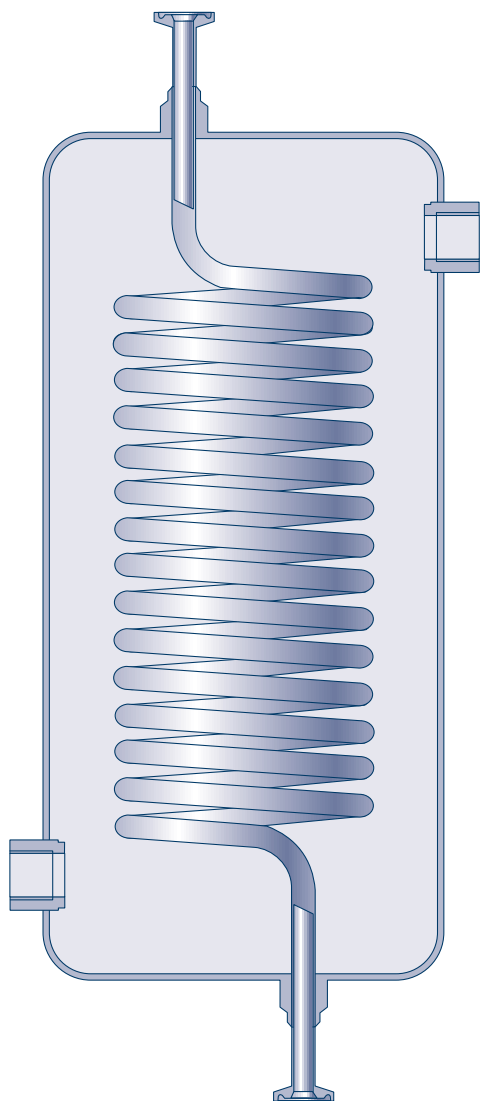
Point-of-use Heat Exchangers

The HSC70 and HSC90 point-of-use heat exchangers are designed to offer a cost effective solution for heat transfer applications typically associated with high purity de-ionised water and Water For Injection (WFI) systems.

The HSC70 is manufactured in 316L stainless steel and utilises a one-piece coil terminating in 1/2" Tri-Clamp compatible® connections. The coil-to-fitting welds are external to the shell of the unit, thus providing a simple and cost effective alternative to more typical double tube sheet designs. The HSC70 is designed to be free draining and is suitable for low flow cooling and heating duties in water and process fluid systems. The HSC70 may also be used as a steam condenser for sampling or WFI generation.

The HSC90 series of heat exchangers utilise a compact series of polished tubes within a shell to achieve heat transfer duties typically associated with larger units. Manufactured in 316L stainless steel, the HSC90 is designed to be free draining, and is suitable for both cooling and heating duties in water and process fluid systems. The HSC90 is available with a range of connection and surface finish options to meet individual system requirements.

HSC70



The HSC70 unit is suitable for heat transfer duties up to 7 KW and medium flow rates up to 5 l/m. The HSC70 coil is formed from 9.5mm O.D tube. A coil bend radius of 110mm ensures that the internal surface finish is retained during manufacture. Process medium connections are 1/2" Tri-Clamp® compatible with 1/2" threaded or 3/4" Tri-Clamp® compatible cooling medium connections.

Heat transfer duty

- Heat transfer area - 0.15m²
- Tube volume - 0.2 dm³

The maximum achievable heat transfer will be based on the variables highlighted in the sizing checklist. Staitech will be pleased to model individual units upon request.

Operating conditions

- Maximum operating pressure
Shell side - 6 barg
Tube side - 8 barg
- Maximum operating temperature - 175°C

Materials of construction

- Coil and sample connections - 316L stainless steel
- Body and fittings - 316/316L stainless steel

Surface finish

- Sample medium connections - maximum 0.5 microns Ra
- Coil formed from electropolished tube having a maximum internal finish of 0.25 microns Ra
- External body and fittings - bright polish

Connections

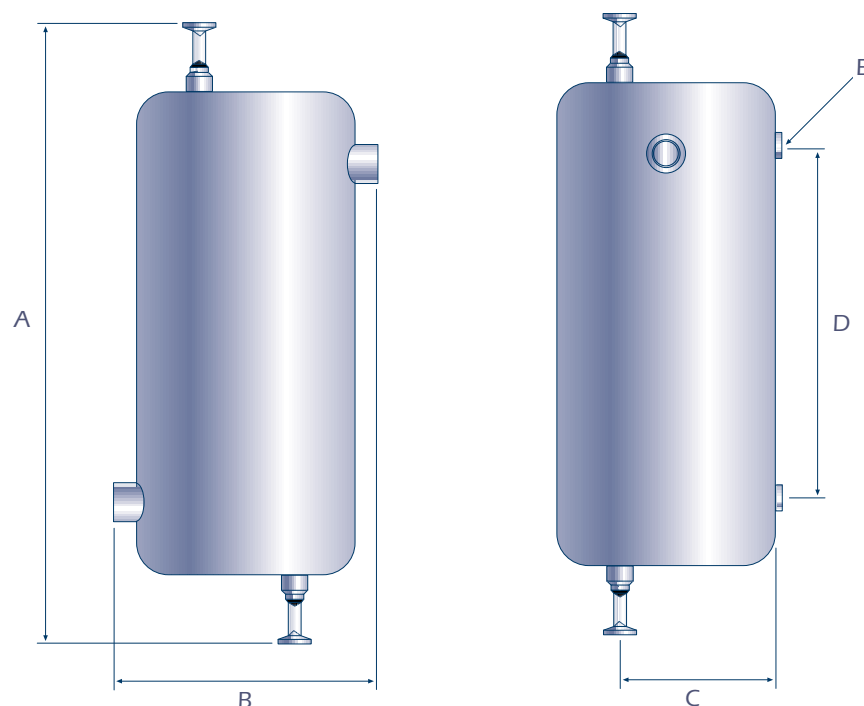
- Process medium - 1/2" Tri-Clamp® compatible
- Cooling medium - 1/2" BSP or 3/4" Tri-Clamp® compatible

Certification

- Material certification covering wetted parts - standard

Dimensions(mm)

A	B Threaded	B Tri-Clamp®	C	D	E	Weight(kg)
450	200	225	120	270	M10	5.5



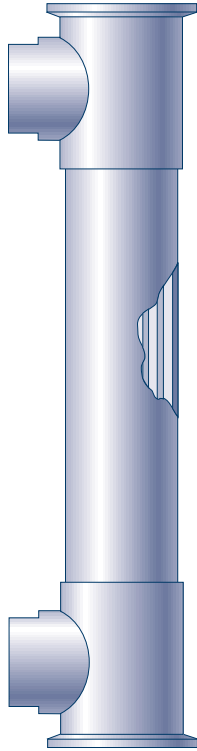
Key features

- Simple design
- 316L stainless steel construction
- Low installation cost
- Free draining
- Zero maintenance
- Full material certification

Required data for sizing:

- ✓ Application
- ✓ Process medium inlet/outlet temperatures
- ✓ Cooling medium inlet temperature
- ✓ Cooling and process medium pressures
- ✓ Process medium flow rate
- ✓ Allowable process medium pressure loss
- ✓ Cooling medium connection type

HSC90



Key features

- Compact design
- 316L stainless steel construction
- Large heat transfer area
- Free draining
- Zero maintenance
- Full material certification

Required data for sizing:

- ✓ Application
- ✓ Process medium inlet/outlet temperatures
- ✓ Cooling/heating medium inlet temperature
- ✓ Cooling/heating and process medium pressures
- ✓ Process medium flow rate
- ✓ Allowable process medium pressure loss
- ✓ Cooling/heating medium connection type
- ✓ Surface finish

The HSC90 unit is available in a range of sizes to suit heat transfer duties up to 30 KW and medium flow rates up to 120 l/m. Heat transfer is via a series of 3.2mm O.D. tubes having a wall thickness of 0.32mm. Process medium connections are either 1-1/2" or 2-1/2" Tri-Clamp® compatible. Threaded or Tri-Clamp® compatible cooling medium connections allow units to be removed from service quickly and easily for cleaning or inspection. The HSC90 is also suitable for heat transfer duties where the heating medium is steam.

Product selection

- Six sizes of HSC90 are available. Product selection is dependent on the variables highlighted in the sizing checklist. Staitech will be pleased to model individual units upon request.

Model	Heat transfer area - m ²	Tube count	Tube volume - dm ³
HSC90-01	0.133	55	0.09
HSC90-02	0.203	55	0.12
HSC90-03	0.272	55	0.16
HSC90-04	0.394	163	0.26
HSC90-05	0.601	163	0.36
HSC90-06	0.806	163	0.47

Operating conditions

- Maximum operating pressure
 - Shell side - 55 barg
 - Tube side - 80 barg
- Maximum operating temperature - 425°C
- Maximum steam pressure - 8 barg

Materials of construction

- 316L stainless steel
- Nickel alloy brazed joints

Surface finish

- Wetted surfaces
 - Maximum 0.5 microns Ra or
 - Maximum 0.25 microns Ra including electropolishing
- External surfaces - bright polish

Connections

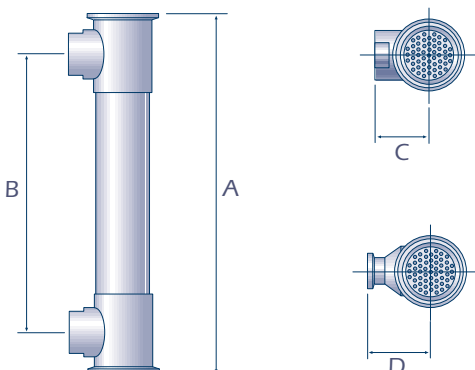
- Models HSC90-01, 02 & 03
 - Process medium - 1-1/2" Tri-Clamp® compatible
 - Cooling/heating medium - 1/2" Threaded NPT or 3/4" Tri-Clamp® compatible
- Models HSC90-04, 05 & 06
 - Process medium - 2-1/2" Tri-Clamp® compatible
 - Cooling/heating medium - 1" Threaded NPT or 1-1/2" Tri-Clamp® compatible

Certification

- Material certification covering wetted parts - standard

Dimensions(mm)

Model	A	B	C	D	Weight(kg)
HSC90-01	255	197	38	44	1.1
HSC90-02	380	324	38	44	1.4
HSC90-03	510	452	38	44	1.8
HSC90-04	255	180	57	64	3.5
HSC90-05	380	324	57	64	4.2
HSC90-06	510	452	57	64	5.0



All specifications subject to change without notice

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