

Staitech



Sample Coolers

Sample Coolers

Staitech's range of sample coolers allow clean steam and high purity water samples to be taken quickly and easily whilst maintaining a sterile testing environment.

The HSC50 and HSC60 units are designed to be mounted at the sampling point, whilst the HSC30 is a free-standing, portable unit. All models can be operated with either mains or chilled water as the cooling medium.

Where the quality of the cooling water may cause fouling of the coil, the HSC50 can be easily disassembled to allow cleaning. A wide range of ancillary products are available for use with all models of sample cooler.

Product features

- 316/316L stainless steel construction
- High efficiency
- Free draining designs
- Fully sterilisable/autoclavable

Standards

- Where applicable, all sample cooler models comply with ASME BPE criteria.
- All sample cooler models are CE compliant under the SEP category of the PED directive.

Cleaning & Packaging

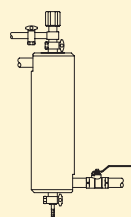
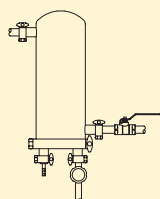
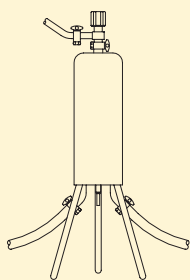
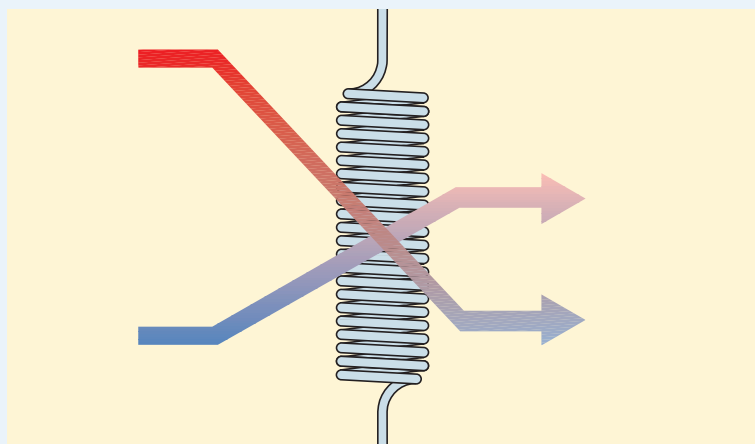
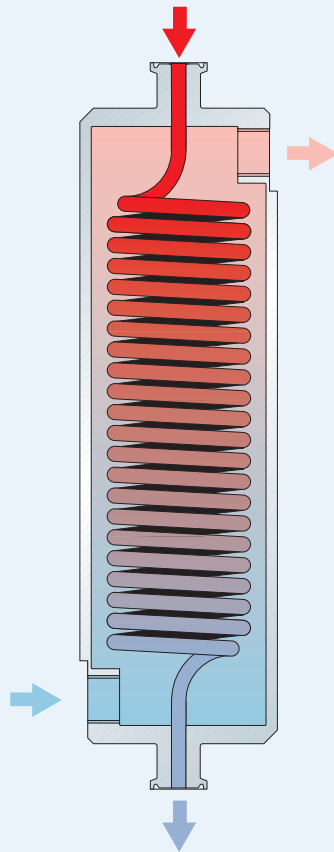
- All sample coolers are cleaned after manufacture, capped, sealed in a polythene bag and individually boxed.

Sample Cooler Operation

The medium to be cooled passes through the centre of the coil. Typically, a regulating valve will be used to throttle the sample medium flow. Cooling water is passed through the shell of the unit in an opposing direction to the sample medium in order to ensure optimum efficiency. The heat energy of the sample medium is absorbed by the flowing cooling water, resulting in a drop in the sample temperature.

Where steam is the sample medium, the cooling water will firstly absorb the steam's latent heat content, condensing it back to water. Further heat transfer as the condensate passes through the coil will reduce its temperature prior to discharge.

All sample cooler models will condense approximately 10 kg/h of steam from 3 barg to 30°C, with 0.1 l/s of cooling water increasing from 20°C to 45°C. Staitech can computer model typical testing conditions for all units upon request.



Typical Applications

- Steam sampling
- Point-of-use cooling
- In-line conductivity monitoring
- Cooling of pump seal water



HSC30

The HSC30 is a portable unit designed to allow samples to be taken quickly and safely at any point within a system. Cooling water connections are 3/4" Tri-Clamp®, compatible which enables the unit to be connected easily to a local water supply. The HSC30 is suitable for autoclaving.



HSC50

Designed for use in environments where the cooling water supply may lead to fouling of the coil, the HSC50 can be disassembled for cleaning. The orientation of the sample connections also makes the HSC50 suitable for continuous inline cooling applications such as conductivity monitoring in high purity water systems.



HSC60

The HSC60 is intended for permanent mounting. Utilising the same basic coil design as the HSC30 and HSC50 units, the HSC60 is ideal for obtaining samples at both the point of generation, and throughout a distribution system. The HSC60 can be sterilised in-situ, thus ensuring continuity of samples regardless of testing frequency.



Sample cooler accessories

Staitech offer a comprehensive range of ancillary products for use with all models of sample cooler.

These include:

- HSV60 steam rated sample valve
- PTFE lined sample hoses (HSC30)
- Cooling water adapter kits (HSC30)
- Isolation valves
- Hose adapter kits (HSC50 & HSC60)

Product specification

Materials

All components - 316/316L stainless steel

Connections

Sample inlet(all models) - 1/2" Tri-Clamp®, compatible

Sample outlet

HSC30 - 1/4" O.D. Tube

HSC50 & HSC60 - 1/2" Tri-Clamp®, compatible

Cooling water connections

HSC30 & HSC50 - 3/4" Tri-Clamp®, compatible

HSC60 - 1/2" BSP, NPT or 1/2" Tri-Clamp®, compatible

Surface finish

Sample medium connections - maximum 0.5 microns Ra

Coil formed from tube having an internal surface finish of 0.4 microns Ra

External body

HSC30 & HSC60 - satin polish

HSC50 - bright polish

Operating conditions

Coil - 8 barg@175°C, shell 6 barg@100°C.

Heat transfer duty - all models

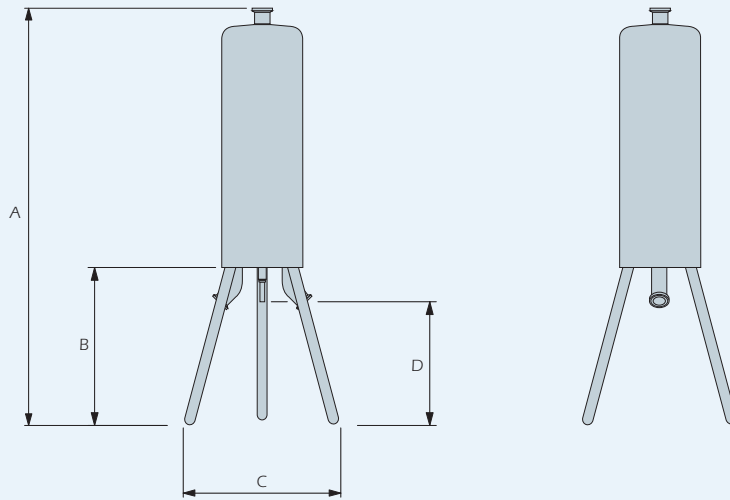
Heat transfer area - 0.08m²

Tube volume - 160ml

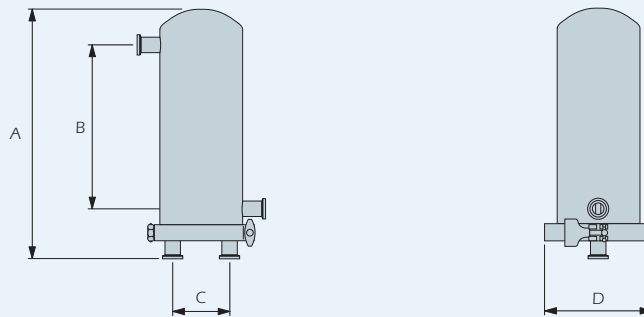
Certification

Material certification available covering all wetted parts

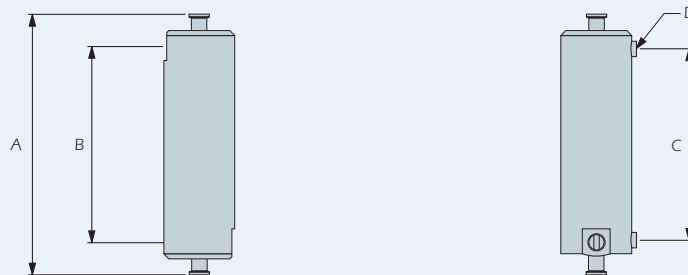
HSC30



HSC50



HSC60



Dimensions (mm)

	A	B	C	D	Weight(kg)
HSC30	500	205	160	180	4.5
HSC50	305	200	70	140	3.2
HSC60	320	240	235	M8	3.0

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