

Sample Cooler

Herpi® Type – F

Steam – Water – Process

Herpi® most high efficiency sample coolers are used to take samples of steam or water from boilers at high temperature and pressure. The counter-current flow through the shell and coil condenses the steam and cools hot fluids efficiently to enable safe sampling.

This spiral tube in shell heat exchanger is a spirally coiled tube fitted in a stainless steel shell. The coil 316 SS is standard with rating up to 540°C and 300 barg.

When hot pressurised liquids are being cooled the sample cooler prevents 'flashing-off' which can be dangerous and will result in an inaccurate sample. By utilising corrosion resistant materials for the cooler, contamination is minimised, and service life maximised. For use in industries such as power plants, nuclear power plants, chemical, petroleum refining, cement, mining, pharmaceutical, food and more.

Boiler water applications

It is necessary to take regular samples of boiler water to test that a boiler is operating at the required TDS (total dissolved solids) level. This should be done even if an automatic TDS control system is fitted since any automatic system should be checked at intervals. When a sample of water is taken from a boiler its pressure reduces and flash steam is formed. If this flash steam were to escape to atmosphere without being condensed the resulting sample would show higher TDS levels than actually existed in the boiler water. To obtain accurate and safe samples it is therefore essential that sufficient cooling is carried out to fully condense any flash steam. The sample cooler reduces boiler water temperature to around 25°C ready for immediate analysis.



Key features

- SS316L sample tube for long life and contamination-free samples.
- SS304L shell (heat sink treatment on request).
- Shell outside treated with powder coating.
- Including temperature fuse.
- Counter-current flow for efficient cooling.
- Removable shells easy for maintenance.
- Titanium model available special for seawater cooling!
- If the thermic charge of the sample is too high for the standard coil a double coil with 17m sample tube is available.

Specifications Sample Cooler Herpi® Type - F

Sample Tube Design 300 Barg @ 540°C

Shell Design 9 Barg @ 66°C

Sample tube 316/316L SS
Length 9,20 m, SS316 tube O.D. 10x2 mm

Sample flow 60 L/h (nominal)

Cooling water flow 1200 L/h (nominal)

Temperature fuse 66°C (on cooling water shell)

Shell SS304L and outside powder coating dark grey

Connections Sample G ½" with tube adapter 10 mm B.W.
Cooling water G ¾"

Dimensions Height 544 mm, diameter 250 mm

Weight Approx. 14 kg

Options

- Special double coil type with 17 m sample tube.
- Sample connections with tube adapter 6, 8, 10 or 12 mm O.D.
- Sample connections ½" NPTF.
- Sample tube material made of Duplex, Incoloy, Titanium, or other on request.
- Shell material in 316/316L SS or other on request.

Sample application components

- Sample stop and needle valves suitable for samples up to 540°C and 300 bar.
- Cooling water valves.
- Cationic columns.
- Secondary sample temperature shut-off valves.

Dimensions

