

# Sample coolers

## For accurate sampling of boiler water

Spirax Sarco sample coolers are used to take samples of water or steam 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.

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.

### Key features



- Corrosion resistant materials (316L austenitic stainless steel) for long life and contamination-free samples.
- Counter-current flow for efficient cooling.
- Available with:
  - Hygienic sample inlet (Tri-clamp compatible).
  - Hygienic sample inlet (Tri-clamp compatible) and defined internal coil finish (SSC20).

### Benefits

- Safe and accurate sampling.
- Off-the-shelf availability for a complete system package (BSP connections).
- Compact and maintenance free design.



# Available sizes and pipe connections

 <b>Cooling water inlet and outlet connections</b>	BSP version	½" BSP
	NPT version	½" NPT
 <b>Sample tube inlet and outlet connections</b>	BSP version	6 mm O/D
	NPT version (A ¼" NPT male x 6 mm O/D stud coupling is provided)	6 mm O/D
	Clamp adaptor versions (hygienic)	½" Tri-clamp type

## 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.

### SCS20 (sample cooler system)

To facilitate purchasing and installation Spirax Sarco supply a packed sample cooler system (SCS20) . This includes:-

- SC20 sample cooler (BSP only).
- Cooling water inlet valve ½" BSP.
- Sample inlet valve ¼" BSP.
- Two compression fittings ¼" BSP x 6 mm O/D to suit the sample inlet valve.
- One compression fitting ¼" BSP x 6 mm O/D suitable for use at the sample take-off point.



Some of the products shown may not be available in certain markets

**We strongly recommend the use of sample coolers to ensure compliance with Health and Safety at Work regulations.**

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