



Working principle

This product is a shell-and-tube heat exchanger. The sample flows in and out from the top, while the cooling water enters from the bottom and exits from the top. Utilizing the principle of counter-current heat exchange, the cooling water on the shell side cools down the sample water or sample gas flowing through the tubes, thereby providing qualified samples for instrument analysis services.

Product feature

The **COOL-DT-45H-SS** Sample Cooler features a wall thickness of 2.11mm, compact structure, high heat transfer efficiency, easy cleaning. The sample coil adopts a double-layer spiral tube design with size 3/8*0.083", utilizing high-quality 316L stainless steel heat exchange tubes. This design offers excellent resistance to high temperatures, extended service life. A laminar flow design has ensured full contact between the sample coil and cooling water, thereby enhancing cooler efficiency. This product is specifically designed for primary cooling conditions 550°C to 600°C, samples. For above 600°C, 310S coil will be





recommended. If the sample or cooling water is corrosive, Inconel 625, or Hastelloy C276 will be recommended.

Specifications

Model	COOL-DT-45H
Heat exchange surface area	0.45m ²
Inner coil size/length	3/8"O.D.×0.083" /15.1 Meter
Coil design	600°C @30.3MPa
Alone Service Sample Conditions	≤400°C@30.3MPa
Service Cooling water Conditions	≤35°C 4-5barg
Body material	304SS
Inner coil material	SS316L
Weight	19kg

Note: The above materials are suitable for use when the sample is non-corrosive. If the sample is corrosive, the same dimensions can be made with 2205,904L,6MO,Monel 400, Inconel 625, or HC276 .If the cooling water is corrosive, the same dimensions can be made with 2205,904L,6MO,Monel 400.

Dimensional Drawing

