





-  Gas
-  Liquid & Slurry
-  Solid & Powder
-  Steam & Water

SENTRY TSR-SPECIAL SINGLE HELICAL TUBE

Sample Coolers

SAMPLE CONDITIONING

The Sentry® TSR sample cooler cools a sample from a process stream. It may seem simple, but it is a uniquely designed small tube in a shell heat exchanger. The sample to be cooled flows through the tube side of the cooler, and the cooling fluid, usually water, flows through the shell side. The cooled sample then is taken to a laboratory for analysis or piped to in-line process instrumentation for continuous monitoring of properties such as conductivity, pH or other chemical constituents.

MODELS

TSR-42D3 | TSR-4261 | TSR-4275 | TSR-4281

BENEFITS

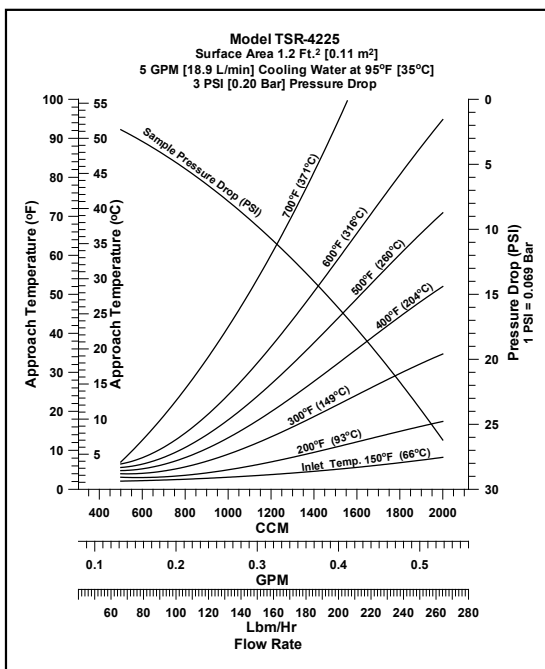
The Sentry TSR sample cooler is compact and provides broad application flexibility through the use of a variety of sample tube materials. It offers optimal service for flows below 1200 cc per minute for single phase heat transfer. Special materials include Alloy 20, titanium, Hastelloy C and Monel alloys. Standard tube side materials are 316/316L stainless steel and Alloy 625. See the standard materials information sheet for other materials available.

FEATURES

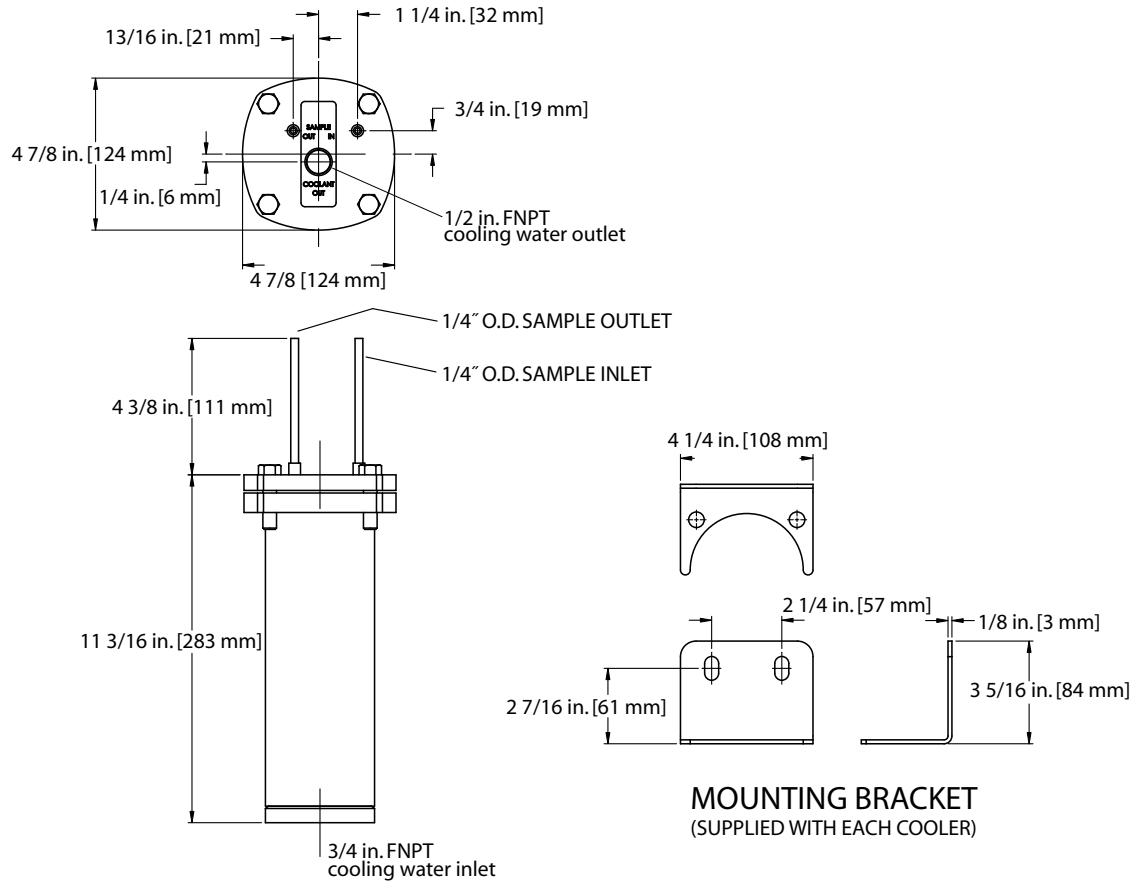
- Single helical coil design
- Minimize cooling water needs
- Wide variety of exotic alloys for corrosion resistance
- Retained shellside gasket reduces reassembly time
- Formed shell eliminates top shell flange weld interfaces
- Mounting bracket can be installed without removing flange bolts



NOTE: Not recommended for steam condensing service. See TLR, FLR, FXR series sample coolers for steam applications.



PERFORMANCE CURVE (Water)



SPECIFICATIONS

models	shell design	tube design	tube material	shell material	area	shipping weight	
TSR-42D3	450 psi at 650°F (31 bar at 345°C)	3000 psi at 650°F (206 bar at 345°C)	Alloy 20 1/4 in OD x 0.035 in AW	304 SS	1.2 ft ² (0.11 m ²)	14 lb (6 kg)	
TSR-4261	450 psi at 600°F (31 bar at 315°C)	1000 psi at 600°F (69 bar at 315°C)	Titanium 1/4 in OD x 0.035 in AW				7-03952N
TSR-4275	450 psi at 650°F (31 bar at 345°C)	5000 psi at 800°F (345 bar at 427°C)	Hastelloy C276 1/4 in OD x 0.035 in AW				7-03952G
TSR-4281	450 psi at 600°F (31 bar at 315°C)	1000 psi at 600°F (69 bar at 315°C)	Monel 400 1/4 in OD x 0.035 in AW				7-03952H

NOTE: Vessels are exempt from CE marking per PED 2014/68/EU, TÜV. Vessels are below or equal to the limits set forth in Article 4, Sections 1(a), 1(b), 1(c) and Section 2 as applicable, and are designed and manufactured in accordance with sound engineering practice (meets the general requirements of the ASME Section VIII, Division 1, Boiler And Pressure Vessel Code). Nameplate will bear the Sentry name and safety instructions will be included per Article 4, Section 2.

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