



Gas



Liquid & Slurry



Solid & Powder



Steam & Water

# SENTRY USC SINGLE HELICAL TUBE Sample Coolers

## SAMPLE CONDITIONING

The Sentry® USC sample cooler series consists of two sample coolers designed and rated for ultra-supercritical plant applications, the Sentry TLR and Sentry FLR sample coolers. Both are optimized for steam condensing service.

Both cool 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

TLR-42B5USC | FLR-62B5USC

### BENEFITS

The Sentry TLR sample cooler is the most efficient and cost-effective sample cooler available. It offers optimal service for flows below 1800 cc per minute for single phase and below 1000 cc per minute for condensing heat transfer. Standard tube side materials are Alloy 625.

The Sentry FLR sample cooler is designed for efficient and cost-effective sample cooling where higher flow or low pressure drop is required. It offers optimal service for flows below 3500 cc per minute for single phase and 2000 cc per minute for condensing heat transfer. Standard tube side materials are Alloy 625.

### FEATURES

- Seamless Alloy 625 tube
- Rated for the newest ultra-supercritical power plants (5175 psig at 1150°F [357 barg at 621°C])
- Higher temperatures available depending on process pressure
- Double-wound helical coil design
- Minimizes cooling water needs
- Retained shellside gasket reduces reassembly time
- Mounting bracket can be installed without removing flange bolts
- ASME U stamp and MTRs standard



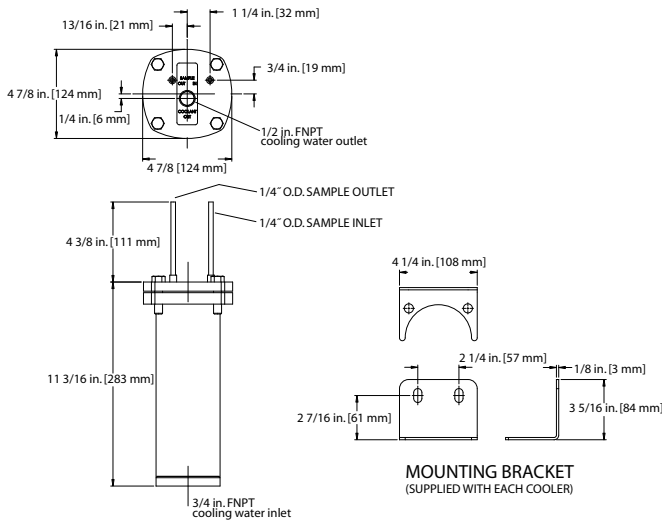
Sample. Monitor. Measure.



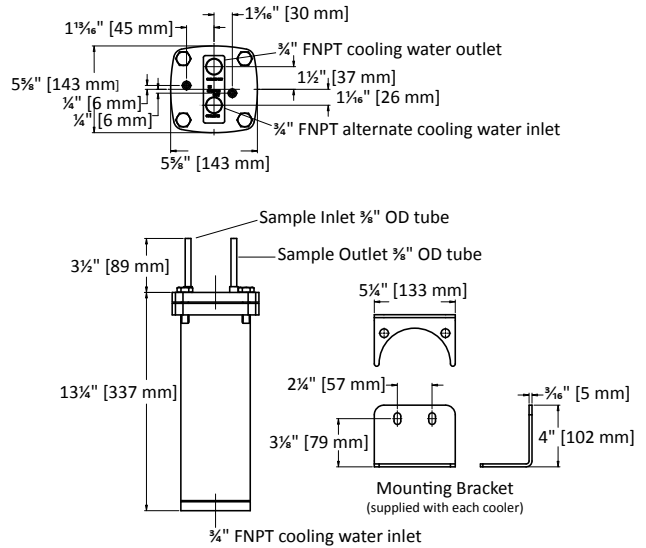
# SENTRY

Any Application. Anywhere.

**SENTRY TLR SAMPLE COOLER**



**SENTRY FLR SAMPLE COOLER**



**SPECIFICATIONS**

models	shell design	tube design	tube material	shell material	area	shipping weight
TLR-42B5USC	450 psi at 650°F (31 bar at 343°C)	5175 psi at 1150°F (357 bar at 621°C)	Alloy 625 1/4 in OD x 0.035 in AW seamless	304 SS	2.4 ft <sup>2</sup> (0.22 m <sup>2</sup> )	17 lb (8 kg)
FLR-62B5USC	300 psi at 650°F (20 bar at 343°C)		Alloy 625 3/8 in OD x 0.065 in AW seamless		3.5 ft <sup>2</sup> (0.33 m <sup>2</sup> )	29 lb (13kg)

- NOTES:**
- U in model number denotes ASME stamped model.
  - Canadian Registration Number available for ASME stamped models only. Consult factory for CRN and other options and information.
  - 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.

[sentry-equip.com](http://sentry-equip.com)

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QUALITY SYSTEM  
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