

Type 1



Type 2



Madden Sample Coolers are miniature heat exchangers designed to reduce high temperature liquid samples to safe, usable temperatures for analysis.

FEATURES:

- Available in Copper and 316 stainless steel tube coil material.
- Available in CS (\$) and 304SS (\$\$) outer shells.
- All designs can be disassembled with standard tools for easy cleaning or replacement of damaged coils.
- Madden's wide variety of cooler designs offer solutions at many price points without compromising on material quality.

TYPE 1 (Compact): These sample cooler models have all the piping connections for the sample and the cooling water on the threaded cap on the top of the sample cooler. All coils are 1/4" OD tubing, and all piping connections are 1/4"NPT. Cooling water enters on the left and exits opposite on the right. Sample inlet connection is vertical on the top, and the cooled sample exits from the spout.

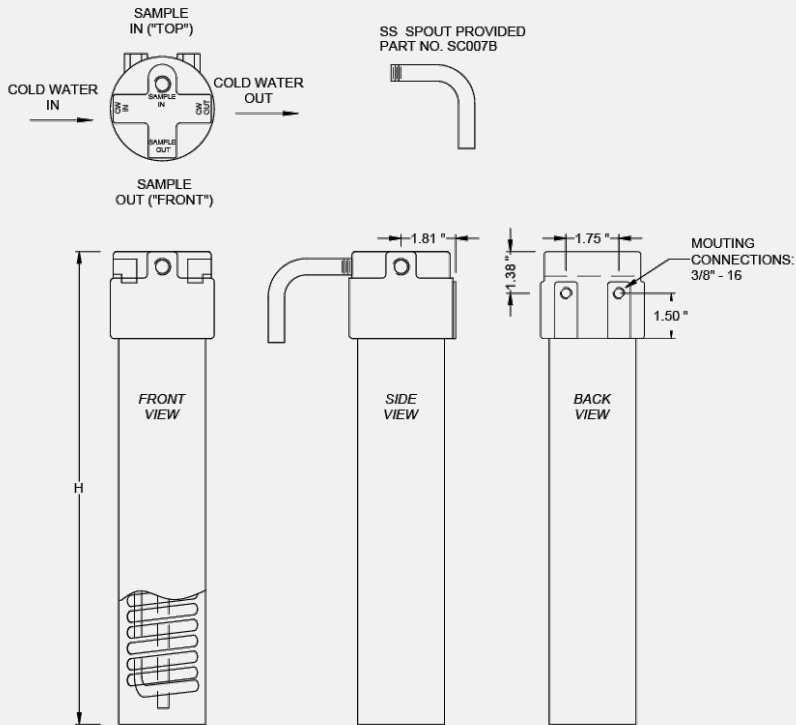
TYPE 2 (More Cost Effective & Larger Capacities): These sample coolers offer both 1/4" and 3/8" OD tubing coils. Sample connections are 1/4" FNPT and are made on the top plate. Cooling water connections are 3/8" FNPT located on both top and bottom plates. Madden's Type 2 design can offer up to 1" FNPT cooling water connections.

SELECTION GUIDE: Typically, liquid grab samples can be cooled with 1.3 square foot coil surface area models. For continuous cooling, or for steam grab samples, 2.6 sf or larger coil surface area is recommended.

Model Number	Type	Coil Material	Coil Pressure (PSI)	Coil Size and Heat Exchanging Surface Area	Shell & Cap Material	Overall Height	Lbs.
SC0001	1	Copper	300 @ 400°F	1/4" OD - 1.3 Sq. Ft.	CS & CI	17.25"	15
SC0002	1	Copper	300 @ 400°F	1/4" OD - 2.6 Sq. Ft.	CS & CI	31.50"	25
SC0003	1	316SS	3,000 @ 1,000°F	1/4" OD - 1.3 Sq. Ft.	CS & 316SS	17.25"	15
SC0003A	1	316SS	3,000 @ 1,000°F	1/4" OD - 1.3 Sq. Ft.	304 & 316SS	17.25"	15
SC0004	1	316SS	3,000 @ 1,000°F	1/4" OD - 2.6 Sq. Ft.	CS & 316SS	31.50"	25
SC0004A	1	316SS	3,000 @ 1,000°F	1/4" OD - 2.6 Sq. Ft.	304 & 316SS	31.50"	25
SC101	2	Copper	300 @ 400°F	1/4" OD - 1.3 Sq. Ft.	CS	12.125"	25
SC102	2	316SS	3,850 @ 1,000°F	1/4" OD - 1.3 Sq. Ft.	CS	12.125"	25
SC102A	2	316SS	3,850 @ 1,000°F	1/4" OD - 1.3 Sq. Ft.	304SS	12.125"	25
SC103	2	Copper	250 @ 400°F	3/8" OD - 1.9 Sq. Ft.	CS	15.75"	30
SC104	2	Copper	250 @ 400°F	3/8" OD - 3.8 Sq. Ft.	CS	32.75"	55
SC105	2	316SS	2,500 @ 1,000°F	3/8" OD - 1.9 Sq. Ft.	CS	15.75"	25
SC105A	2	316SS	2,500 @ 1,000°F	3/8" OD - 1.9 Sq. Ft.	304SS	15.75"	25
SC106	2	316SS	2,500 @ 1,000°F	3/8" OD - 3.8 Sq. Ft.	CS	32.75"	55
SC106A	2	316SS	2,500 @ 1,000°F	3/8" OD - 3.8 Sq. Ft.	304SS	32.75"	55
SC107	2	316SS	4,925 @ 1,000°F	3/8" OD - 3.8 Sq. Ft.	CS	32.75"	61
SC107A	2	316SS	4,925 @ 1,000°F	3/8" OD - 3.8 Sq. Ft.	304SS	32.75"	61
SC108	2	316SS	4,925 @ 1,000°F	3/8" OD - 1.9 Sq. Ft.	CS	15.75"	35
SC108A	2	316SS	4,925 @ 1,000°F	3/8" OD - 1.9 Sq. Ft.	304SS	15.75"	35

Notes: (1) All shell side pressure ratings are 300 PSI. (2) See second page for connection and dimension details.

DIMENSIONS & SPECIFICATIONS



TYPE 1 MADDEN SAMPLE COOLERS

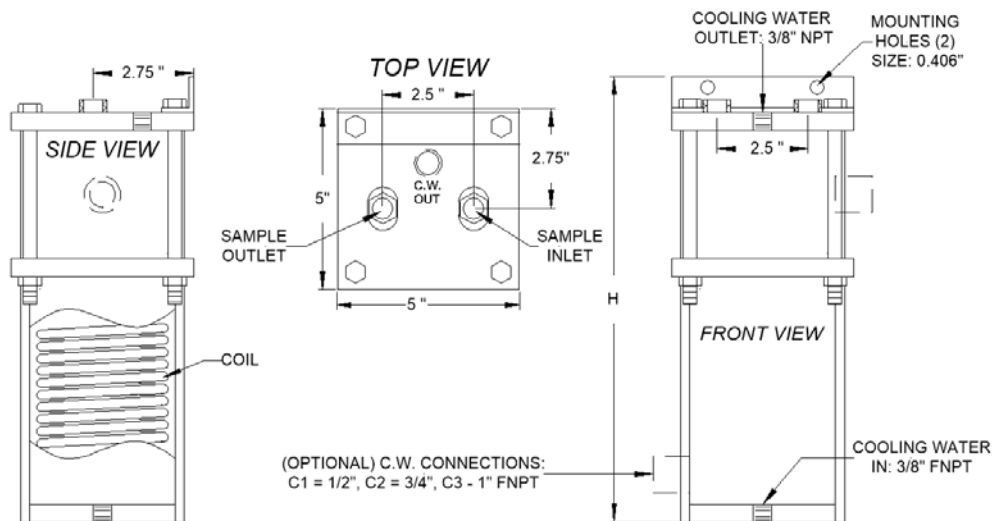
Connection Sizes: (All) 1/4" FNPT

Height, Weight, PSI: SEE PAGE 1

Copper Coil Spec's: All copper coils are 1/4" OD, continuous single coil length, refrigerant type tubing.

316SS Coil Spec's: All 316LSS coils are 1/4" OD x 0.035" wall (20 Ga.), continuous single coil length.

Note: Madden sample coolers are a bolted or threaded construction and utilize ≤ 4 " shell pipe diameters. They can be disassembled for maintenance or repairs, and therefore do not require an ASME stamp.



TYPE 2 MADDEN SAMPLE COOLERS

Connection Sizes: (All Sample) 1/4" FNPT, Cooling water - standard is 3/8" FNPT - 1/2", 3/4", 1" FNTP optional.

Height, Weight, PSI: SEE PAGE 1

Copper Coil Spec's: All copper coils are 1/4" or 3/8" OD, refrigerant type tubing.

316SS Coil Spec's: All 316LSS coils are 1/4" or 3/8" OD x 0.035" wall (20 Ga.) or 0.065" wall (16 Ga.)

Note: Madden sample coolers are a bolted or threaded construction and utilize ≤ 4 " shell pipe diameters. They can be disassembled for maintenance or repairs, and therefore do not require an ASME stamp.