

MADDEN ENGINEERED PRODUCTS, LLC.

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Type 2 Sample Cooler Installation and Operation Instructions

Installation:

- Mount unit securely with two 3/8" diameter bolts through the mounting holes of the mounting bracket. This bracket is on the top of the sample cooler. The sample cooler should be installed in a vertical orientation for best performance.
 - These units can be installed in a horizontal orientation but the operator should be aware this can reduce cooling capacity due to air being trapped in the shell, thereby reducing available cooling water. Throttling down the sample flow can help offset this potential issue.
- Install cooling water supply line and a control valve into the bottom of the sample cooler shell. Standard connection is 3/8" FNPT. (See diagram to the right).
 - Up to 1" FNPT couplings can be installed for cooling water. If your unit has couplings on the sidewalls of the sample cooler shell, the "inlet" for cooling water is the bottom connection. The outlet is the top.
- Install sample valve and sample supply line to 1/4" FNPT threaded inlet connection on top of the cooler. See diagram to right for the inlet side vs. outlet side. Note: sample inlet vs. outlet is not critical on Type 2 coolers.
- Confirm material and pressure rating of ancillary piping and valves are appropriate for your sample medium and matches your sample cooler's ratings.
- Test piping connections for leaks. All sample coolers are bench tested at the factory, but some can "creep" during transit. Minor leaks can be fixed by lightly tightening bolts. If your cooler appears to have damage please contact the factory before installing.

Operation:

- Open cooling water supply valve. **Cooling water must be flowing before opening the sample line and continue running during the entire sampling operation.**
- Open valve on sample supply line. Let this line run free for a brief period to flush the supply line and the sample cooler so the sample being drawn will be fresh.
- Adjust the sample supply valve until the sample flow is low enough to cool the sample adequately for safe handling of the sample, as well as cool enough for your tests or testing equipment.
 - The lower the rate of sample flow the more the sample will be cooled.
- After drawing the fresh sample, **close the sample valve FIRST**, and then the cooling water valve.

Part Number	Max PSI	Description	Weight Lbs.	Dim A
SC101	300	Type 2, 1.3 Sq. Ft of HX capacity, Copper coil, 1/4" OD	25	13.38"
SC102	3,850	Type 2, 1.3 Sq. Ft of HX capacity, 316SS coil, 1/4" OD	25	13.38"
SC103	250	Type 2, 1.9 Sq. Ft of HX capacity, Copper coil, 3/8" OD	30	17"
SC105	2,500	Type 2, 1.9 Sq. Ft of HX capacity, 316SS coil, 3/8" OD	30	17"
SC106	2,500	Type 2, 3.8 Sq. Ft of HX capacity, 316SS coil, 3/8" OD	55	34"
SC107	4,925	Type 2, 3.8 Sq. Ft of HX capacity, 316SS coil, 3/8" OD	61	34"
SC108	4,925	Type 2, 1.9 Sq. Ft of HX capacity, 316SS coil, 3/8" OD	35	17"

