

Converter Cooling (for Q700 and Q500 systems)

Introduction:

Sonication will cause both the probe and sample temperature to increase. The heat will transfer up to the converter. If the converter overheats the internal crystals can crack and the converter will require replacement. Converter damage due to overheating is not covered under warranty. Cooling the sample with a chiller or ice is recommended.

Continuous processing applications (such as a Floccell or any probe used for over 15 minutes without pulse) require both chilling the sample and air cooling of the converter. Note a high intensity probe (#4205) always requires air cooling of the converter.

Converter Cooling Setup:

The following setup instructions shall be followed when converter cooling is required. The converter is shipped without the air cooling fittings exposed. Follow the instructions below to attach the air cooling hose to the converter.

Step	Description	Reference
1	The converter is shipped without the air inlet and outlet connections exposed.	
2	Position the converter with the label facing up and feel for the holes under the label. Use a razor to expose both holes (threaded ports) as shown. Note: The converter has 2 threaded ports for air cooling. One port is attached to the air source and the other port remains open as a vent.	
3	Attach the supplied barb fittings to each threaded port. Note: Hose barb fittings are included with the converter (replacement hose barbs are part #859-00067).	

Step	Description	Reference
4	<p>Attach a clean, dry, regulated compressed air source to one of the 1/4" Air Cooling hose barsbs.</p> <p>Note: The compressed air should be oil free and filtered with a 5 micron filter.</p>	

Cooling Air Regulation and Adjustment:

Adjust the regulated compressed air until the gauge indicates 10 ± 1 PSIG (approximately 3 to 4 CFM). The compressed air will flow into the converter and out through the outlet barb. Verify the compressed air is flowing out from the exhaust tube upon each use.

Note: An exhaust tube can be placed on the outlet barb to vent the cooling air from the work area. The exhaust tube is **not** shown in the picture below.

