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14-002

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CONDENSATION WATER TRAP INSTALLATION FOR MODEL 602

I. PURPOSE:

To inform customers on the proper installation of the water condensation trap for the M602.

II. TOOLS:

Silicone Caulk

III. PARTS:

DU0000195 - CONDENSATION WATER TRAP, M602

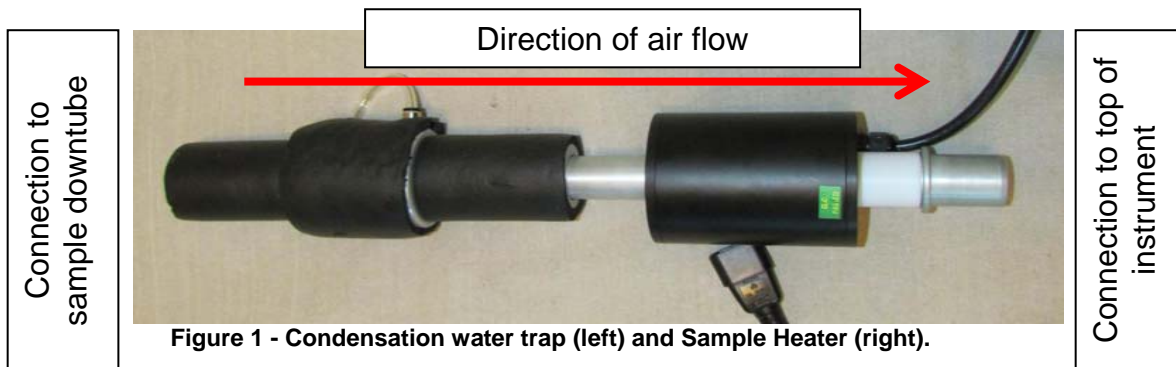
IV. PROCEDURE:

The Model 602 Beta^{PLUS} Particle Measurement System comes with condensation water trap and sample line heater designed to be connected to the sample inlet(s) at the top of the instrument. The condensation water trap is designed to catch water inside the sample tube before entering the instrument. Water inside of the sample tube is usually caused by condensation (if tubes are not well insulated, or if the tubes are placed in direct HVAC exhaust). Water inside of the sample tubes can also be caused by leaks if any of the tubing connections are made outside rather than inside of the shelter.

We highly recommend the following;

- All attachments of sample tube extensions are done inside of the shelter.
- All roof penetrations and tubing couplers outdoors including the roof flange kits are sealed with proper silicone caulk or other roof sealant.
- Insulate the sample tubes inside of the shelter.

The sample line heaters connect directly to the instrument inlet(s) at the top of the instrument box and the condensation water trap(s) are positioned above the sample line heater(s).



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Figure 2 – Proper orientation of the condensation water trap

The sample heater and condensation water trap are mated by a tubing coupler. This coupler is a stepped coupler, which means it has a slightly smaller inside diameter on one side versus the other. The smaller side connects to the sample heater, and the larger side connects to the bottom of the condensation water trap.

The coupler which connects the condensation water trap to the sample downtube is a straight through connector and can be used in either orientation. Proper installation and orientation of the condensation water trap is very important to avoid water entering the instrument. If the condensation water trap is inverted (installed upside down), then water can enter the instrument which will cause serious damage to the instrument.

When installed properly any condensation will be collected in the water trap and be visible in the clear tubing on the side of the trap. The trap should be drained and the cause of the water should be corrected (note recommendations above).