Technical Bulletin - E-TES SD Low-Profile Setup

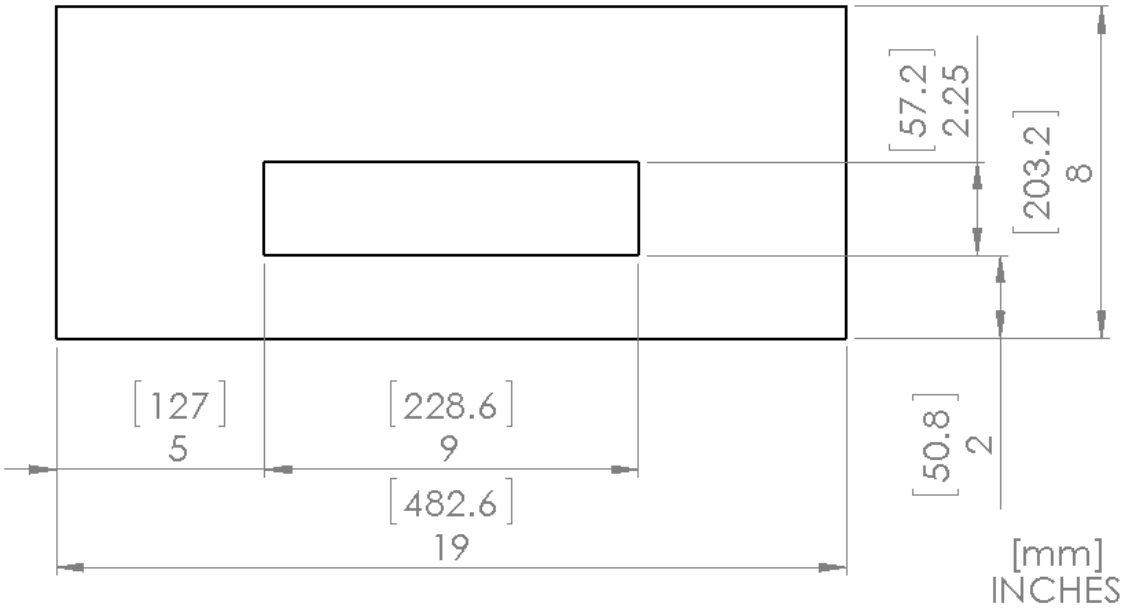
Test Method and Procedure for Calibrating E-TES SD Low-Profile Systems

Calibration Purpose:

The E-TES SD Low-Profile system is made up of a heating element, a control module, and system sensors (both internal & external). For the system to function properly, the control module must have reliable input from the system sensors. To avoid overheating, the air flow sensor (located internal to the unit) must be given a zero point which will allow the unit to operate properly while at the same time limiting the heating when too little air flow is present.

Materials:

A calibration air Restrictor Plate should have been provided. If this is not available, it can be re-created by cutting a square hole into a thin, rigid material such as cardboard or plywood to the dimensions shown below.



Procedure:

1. Locate the unit where there is adequate space and such that the display panel is readily accessible.
2. Start testing without the restrictor plate – Do not install restrictor plate until instructed to do so in Step #9.

3. Install an air mover unit which has an air flow in the range of approximately 900-1000 CFM on low speed, into the E-TES SD LP. Make sure E-TES SD LP gasket seals around snout of air mover.

   Note: Do not apply power to the air mover until Step #8.

4. Attach all cords to proper power receptacles (see the operator's manual for details).
5. Turn on the E-TES SD LP unit.

   Note: Do not apply power to the air mover at this time.

6. Once the E-TES SD LP boots up and advances to the main screen, press the **DOWN** button eight times to get to the Air Flow Setup screen and press **SELECT**.

Main Screen

Air Flow Setup Screen

7. With the air mover OFF, the three digit number on the screen should be between 15 and 55 as shown below. **Record this number (OFF Set Point)** for later use and press the **DOWN** button on the E-TES SD LP once.

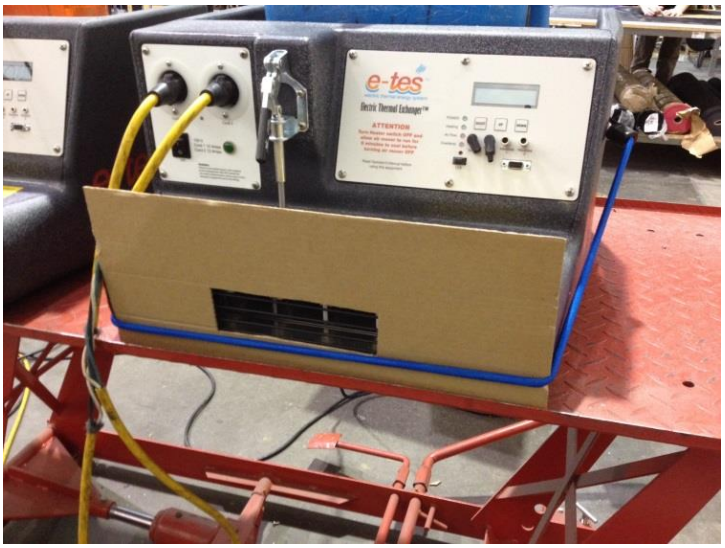
   Note: If the number is outside this range, turn OFF the E-TES SD LP unit and repeat steps 3-7. If the number is again outside this range contact technical support at the number below.

8. Turn **ON** the air mover unit to its low setting (about 900-1000 CFM) and watch the three digit number. It should increase rapidly and stabilize somewhere above 200.

   Note: If the number does not stabilize above 200 with no restriction to air flow, check the seal between the air mover and E-TES SD LP for leaks. If the problem cannot be resolved, contact technical support using the number below.

9. Add the Restrictor Plate to the outlet nozzle of the E-TES SD LP as shown below so that the plate is in full contact with the nozzle and air is flowing only through the hole in the plate.

   Note: A bungee cord or string can be helpful in holding the Restrictor Plate in place.



10. With the Restrictor Plate in place, the three digit air flow indicator should drop to about half its value.
    a. **Air Flow >150:** If the flow indicator displays a number greater than 150, verify that the Restrictor Plate is in contact along the perimeter of the nozzle opening and air is only flowing through the Restrictor Plate hole. Make sure air mover is still on low speed. Correct and re-test. Otherwise, contact technical support at the number below.
    b. **Air Flow <(OFF Set Point + 40):** If the flow indicator displays a number less than your original "OFF Set Point"(recorded from Step 7) plus 40 points, contact technical support at the number below. (Example: OFF Set Point = 33 then 33+40=73. 73 is your lowest allowable restricted value.)
11. With the Restrictor Plate in place, the air mover ON, and the air flow indicator stabilized in the range acceptable in Step 10, press the **DOWN** button once to set the "Air Flow Trigger" point.
12. Press **SELECT** once to accept the new Air Flow Trigger and exit the Air Flow Setup screen. Press **SELECT** a second time to re-enter Air Flow Setup so you can observe the air flow indicator numbers.
13. Turn **OFF** the air mover. The three digit air flow indicator should drop and the light indicator labelled "Air Flow" should illuminate as shown below. This indicates that the calibration was completed successfully.

NOTE: If the air flow indicator does not illuminate, check to make sure that the air mover is off and no air is flowing. If this does not resolve the issue, repeat steps 9-13. If the problem cannot be resolved, contact technical support at the number below.

Technical Support Contact Information
1-800-658-5314 ext. 217