

## Altitude Correction

When our heaters are installed at altitudes above 2000' ASL, corrections must be made in the ratings and testing of the unit to account for the effects of reduced density of the air. All fans and burners are rated at the standard conditions of 70°F and sea level. When the air stream being handled is not at standard conditions, corrections to the burner and fan ratings must be made.

The procedure for re-rating burners is included in the S-Series and M-Series Specifications.

The procedure for re-rating blowers is performed by Cambridge in-house when the blower speed is selected. The first step in this process requires an estimate of the static pressure associated with any inlet or discharge accessories or ductwork.

The next step is to correct this static pressure to the elevation of our plant in St. Louis. Air density correction factors are determined for both locations. For example, the factor @ 5000' ASL and 100°F is 0.78. The factor @ sea level and 100°F is 0.95. If the static pressure selected in step #1 is 0.5" WC, then the static pressure the heater is actually tested against would be:  $0.5" \times (0.95 \div 0.78) = 0.6" \text{ WC}$ . Therefore, if the heater is required to supply 5000 cfm @ 0.5" WC, it will be tested at 5000 cfm @ 0.6" WC.

During this shop testing, we actually measure the air flow discharging from the heater rather than depending completely on fan curves and to estimate the air flow. This helps to insure that we will produce the actual air flow required under job site conditions.