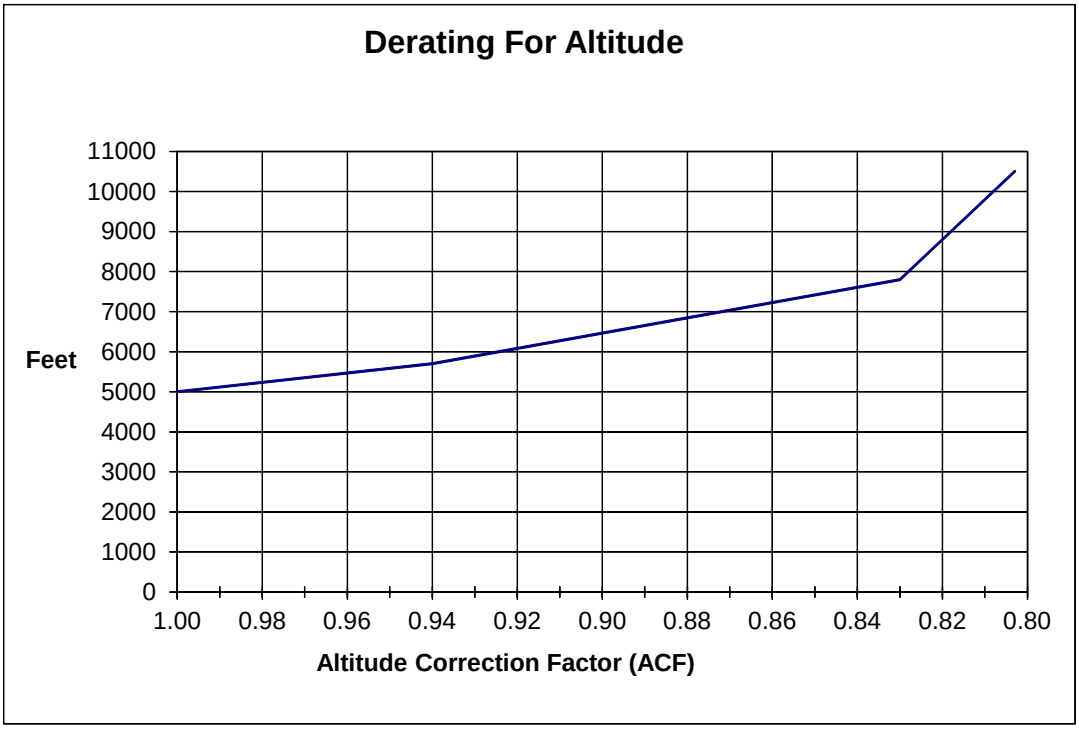
Natural Gas Altitude De-Rate Factor
Benchmark 750/1000 Boilers
(High altitude units are not available in propane)

Due to the reduced density of air at higher altitudes, the output of the Benchmark Boilers must be de-rated at elevations 5000 feet and above. Please contact your local AERCO Sales Representative for details.

The following illustration determines the Altitude Correction Factor (ACF) to be applied to de-rate the Benchmark Boilers. The ACF values are based on 950 BTU/cu.ft. gas BTU content. The ACF should be multiplied by the BTU/H input at sea level to determine the corrected input. For installations with lower gas BTU content, multiply the ACF by (Actual gas BTU content / 950). Sizing of the equipment is then performed utilizing the corrected input multiplied by the full load efficiency.



Examples:

A) Benchmark 1000 Boiler applied at an altitude of 7,800 ft and the gas BTU content is 850 BTU/cu.ft.

ACF * (Actual gas BTU content / 950) * 1,000,000 BTU/H input
= .83 * (850 / 950) * 1,000,000 BTU/H input = <u>742,631 BTU/H corrected input</u>
741,631 BTU/H * .87 (87% full load efficiency) = <u>646,090 BTU/H corrected output</u>

B) Benchmark 1000 Boiler applied at an altitude of 10,000 ft and the gas BTU content is 850 BTU/cu.ft.

.81 ACF * (850 / 950) * 1,000,000 BTU/H input = <u>724,737 BTU/H corrected input</u>
724,737 BTU/H * .87 (87% full load efficiency) = <u>630,521 BTU/H corrected output</u>