

20:1 Without All the Excess Air

Reliable turndown without the gimmicks. No more wasteful and performance robbing amounts of excess air at low fire for mixing or multiple burner systems with twice the issues. Tru-O₂ high turndown combustion system is available on Thermal Solutions Arctic Condensing Series which provides unprecedented condensing efficiency that lights on every call.

The proof is in the settings. Our O2's remain constant at high and low fire. Why is this important? Tru-O2 maintains the proverbial "condensing sweet spot of 130°F across the entire firing range. Competitive high turndown models commonly use 50% or more excess air at low fire thus lowering the dew point temperature by 15 or more degrees. These systems must now return 115°F water or lower to condense vs. Tru-O2 at the 130°F "sweet spot". Get your O2's at lowest setting for high turndown comparisons.

Ignition with Tru-O₂ is not dictated by low fire setting - the key to reliability the other systems can't meet. When you go low, competitive models decrease fan speeds, diminish good air-fuel mixture and have less pressure to monitor & sense for reliable light off. Nuisance with start-up linked to this lowest input lead reps and contractors to limit turndown above advertised levels.

Butterfly gas valve, air valve and blower speed provides 9 points of adjustment over entire firing range forming the "band of adaptability". Have a rough spot? We can tune settings to achieve desired turndown and quiet operation.

High turndown is nothing new, but how it should be done is. For more information on high turndown and effects of excess air, Google "turndown & condensing boilers".

- Constant O2 at highest & lowest fire setting
- Consistent dew point throughout turndown range
- Independent ignition position
- 9 point curve for adjustment

140 200 Condensing 135 180 130 160 <u>ا</u> 125 140 t Temperature (112 120 100 110 PG Dew Point 105 80 60 100 40 95 20 11 12 14 10 13 -Xair (%) — Dew Point (F)

%O2 (Excess Air) vs Flue Gas Dew Point (Natural Gas)

TRU-O₂ changes everything you know about turndown...

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