

O₂ Trim Control System for Steam and Hot Water Boilers

Causes of Combustion Efficiency Fluctuation

Combustion Air Temperature

Air temperatures may fluctuate within a range of -10°C to +30°C in extreme cases. This causes a change of 0.3 to 0.6% O₂ per 10°C

Air Pressure Fluctuations

The O₂ content changes at a rate of +/- 0.2% to every 10 mbar air pressure fluctuation.

Pressure Fluctuations in the Combustion Chamber

Pressure fluctuations on flue gas side and chimney.

Calorific Value Fluctuations

According to regulations for gas composition (e.g. G260), gas nominal calorific values may fluctuate and change the O₂ value in the flue gas. For example, a calorific value fluctuation of approximately 7.5% causes a change in the O₂ value of up to 1.5%.

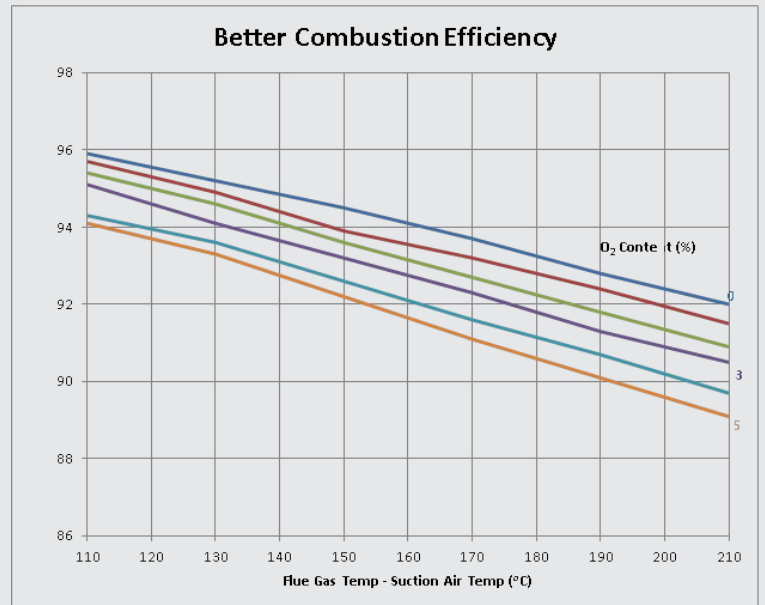
Why O₂ Trim Control?

Additional Fuel Savings of up to 3% - mechanical burners are typically adjusted with fixed excess air levels to compensate for the varying ambient and atmospheric conditions. With the advance burner controller, the O₂ trim control system automatically adjust the O₂ levels to constantly optimise the excess air levels.

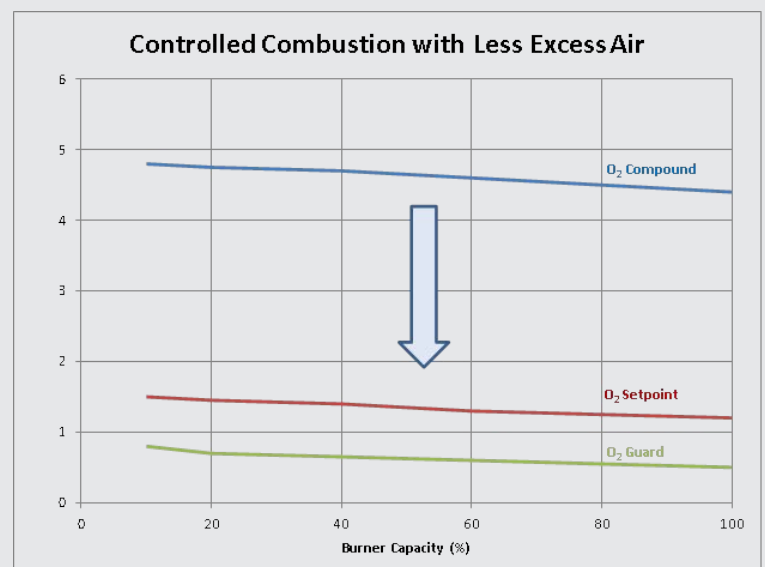
Increased Safety - constant monitoring of the O₂ levels in the exhaust gas and an adjustable O₂ alarm curve ensure constant safe fuel-air mixtures.

Reduced Emissions - O₂ trim reduces the excess air levels resulting in a better fuel to air ratio thus reducing the production of harmful emissions.

Combustion Efficiency - the system will allow the display of the combustion efficiency on the display unit, offering you better monitoring of the boiler's performance.



The O₂ trim control system provides continuous adjustment of the fuel to air ratio by constantly monitoring the O₂ levels in the exhaust gas, resulting in additional fuel savings.



Continuous O₂ level adjustments make the operation of combustion installations more economical and safe.

For enquiries on O₂ Trim Control please contact our sales department:
1300 771 759 or sales@obrien-energy.com