

BENEFITS OF LINKAGELESS CONTROLS



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VERTICAL SPIRAL RIB TUBELESS BOILERS

FULTON VERTICAL STEAM BOILERS USE LINKAGELESS CONTROLS AS STANDARD

Linkageless controls maximize safety, seasonal fuel savings and reliability

LINKAGELESS CONTROLS AS STANDARD = MAXIMUM PERFORMANCE AS STANDARD

		<p>SAFETY</p>		<ul style="list-style-type: none"> Fuel and air ratio set at multiple points to ensure safe burner operation with low CO emission
		<p>LOWER OPERATING COSTS</p>		<ul style="list-style-type: none"> Fuel air ratio optimized to reduce flue gas losses High turn-down burner can operate at their full potential Cyclic losses are minimized
		<p>EMISSION PERFORMANCE</p>		<ul style="list-style-type: none"> Fuel and air ratio is controlled to minimize NOx and CO emission
		<p>INCREASED RELIABILITY</p>		<ul style="list-style-type: none"> Independent ignition position maximizes reliability High precision fuel and air valve positions unfluende by mechanical wear or room pressure fluctuation
		<p>EASE OF USE</p>		<ul style="list-style-type: none"> Fast commissioning and tuning Combustion can be set for boiler panel without use of tools

BENEFITS OF LINKAGELESS CONTROLS ARE:

▼ SAFETY

Fuel and air ratio set at multiple points to ensure safe burner operation with low CO emission

▼ LOWER OPERATING COSTS

HIGH OPERATING EFFICIENCY BY MINIMIZING EXCESS AIR

High Operating efficiency by minimizing excess air

Each % of excess oxygen represents a 1% drop in efficiency

Linkageless controls can ensure O₂ levels are per spec at all operating points saving 3-4%

▼ LOWER OPERATING COSTS

HIGH OPERATING EFFICIENCY BY PERMITTING HIGH TURNDOWN BURNERS TO OPERATE AT THEIR FULL POTENTIAL MINIMIZING CYCLING

Servo motors are precise to 0.2° of their range of motion permitting fine tuning at low firing rates to achieve reliable performance.

When a burner minimum firing rate is higher than the system load the burner will cycle. During a burner cycle the following system losses occur:

- Boiler and piping stand by heat loss
- Purge cycle – air is passed through the boiler post and pre-combustion drawing heat from the boiler
- Boiler has to fire at a higher rate to recover after purge and idle time once it restarts

Cyclic losses can account for several % points of seasonal operating efficiency

▼ SUPERIOR EMISSION PERFORMANCE

Linkageless controls allow low emission burners to be reliably set within desired compliance limits. By controlling fuel and air ratio flame temperature, the main driver for NO_x emissions, can be controlled to minimize NO_x formation.

▼ RELIABILITY

Linkageless controls improve reliability by permitting an independent ignition position. Fuel input rate as well as fuel air ration can be tailored to site specific conditions.

▼ EASE OF USE

All controls are at the front of the boiler at head height. Combustion can be set quickly without the use of tools or ladders reducing start up and tune up times.



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