

Pre-heating Technology



Energy Saving 8-10%
Gas pre-heating up to 400°C
Oxygen pre-heating up to 450°C
Low Maintenance
Adjustable Temperature control

The pre-heating system is designed to heat up the cold fuel and oxygen after the burner control skids to temperatures of 400°C / 450°C.

By installation of a recuperator on the furnace exhaust gas channel, hot exhaust air will be used to heat up clean fresh air to 600°C as heat transport media. The hot air will pre-heat the fuel and the oxygen supply of every single Burner. Each Burner has got a compact pre-heating module with all relevant measurement and control functions inbuilt for safe and automatic operation.

Installing a pre-heating system replaces the installation of a separate system to cool down the hot exhaust gas before entering the chimney.

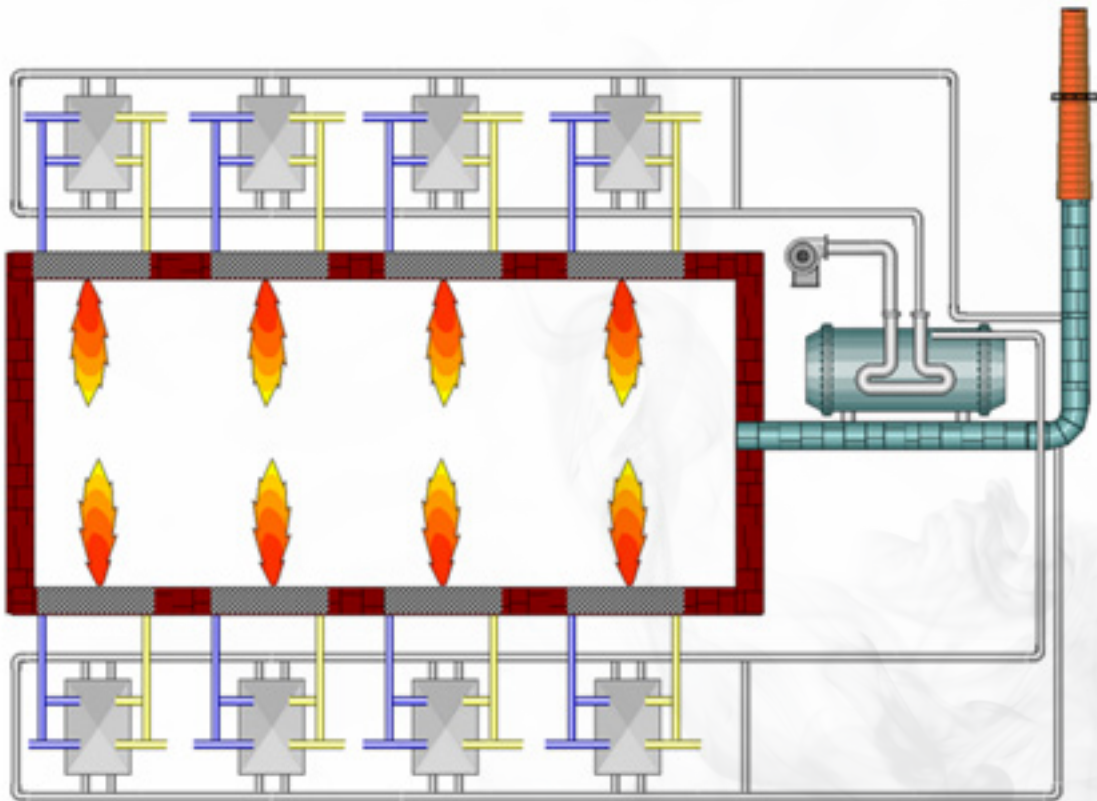
Each pre-heater module is equipped with a separate adjustable bypass valve, allowing precise heating capacity and outlet temperature control for fuels and oxygen. Furthermore each module is equipped with two adjustable bypass systems (one oxygen, one fuel) to shut down the pre-heating system without interruption of the gas and oxygen supply for the combustion process.

The control system of the pre-heating system, based on Siemens PCS7 will be integrated in the main skid control cabinet.

Hotwork and UAS specialised in supply of auxiliary equipment, including full gas control stations, furnace control system (DCS), full automation, exhaust gas analysis and Oxygen probes as well as tuning, supervision and commissioning services worldwide.



Pre-heating Principe sketch



Pre-heating modules are available pre-mounted including pre-heater, high temperature valves, high temperature bypass valves, measurement and control equipment, signal connection box, compressed distribution board for control, pipeline and connection, thermal insulation.

**Energy saving potential:
Fuel only: 3% and more
Fuel and Oxygen: 8-10% and more**

Contact us for a free study of your existing furnace. Our engineers will evaluate your energy saving potential as well as the payback time.

Swiss Quality and German Reliability complete engineering and supply



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