



## HYDROGEN BURNER AND COMBUSTION SYSTEMS



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Regenerative combustion is the most used system in Europe for reheating furnaces. It provides fuel savings up to 30% compared to the recuperator giving a temperature of 400 °C and up to 50% compared to cold weather. The purpose of the regenerative system is to use the maximum temperature from the chimney. For this, acting as a chimney in the system; are the cases behind regenerative burners. The burners pass the air in the furnace over itself and transmit it to the cases containing ceramic balls. The balls heated here heat the cold air coming after the change and give it to the burner as combustion air. The exhaust temperature thrown into the chimney at the exit of the casings is around 70 °C - 150 °C. With regenerative burners, it can reach 1000 °C combustion air temperature with hot air efficiency up to 90% at 1250 °C operating temperature. In this way, it saves up to 50% energy.

### **BENEFITS;**

- \* Low carbon footprint
- \* High combustion efficiency
- \* Increase in production quality
- \* Decrease in CO and CO<sub>2</sub> emissions
- \* Can be applied in low tonnage furnaces
- \* Lower NO<sub>x</sub> value compared to heating and cold air

***The first application of regenerative burners in Turkey's iron and steel reheating furnace is owned by our company.***

