



FLOX® - Burners for Energy Technology

www.e-flox.de



e-flox GmbH is market leader in combustion of low calorific value (LCV) gas using FLOX® technology. It enables thermal treatment of small volumes of lean gases. FLOX® technology has been honored with the "Deutscher Umweltpreis" (German environment award) in 2011.

Advantages

- burner integrated heat recovery for off gases with low calorific value
- metallic and ceramic heat exchanger for a wide range of application
- complete combustion by high temperature oxidation
- no thermal NO_x
- high fuel flexibility (in quantity and quality)
- manifold waste heat utilization is possible
- to be mounted inside, outside, or container integrated
- customized burner development
- extremely robust combustion process without catalyst, ceramic bed, or flame holders etc.



Product line

Complete facilities:

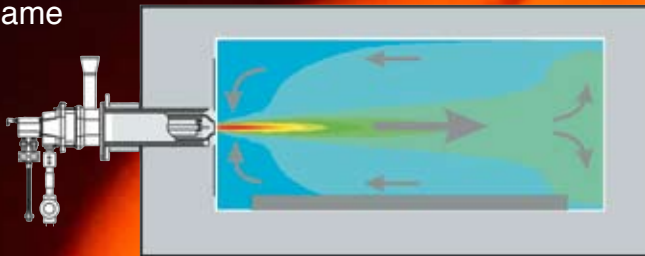
- LCV combustion
- mini thermal post combustion
- landfill gas combustion
- producer gas combustion

Components:

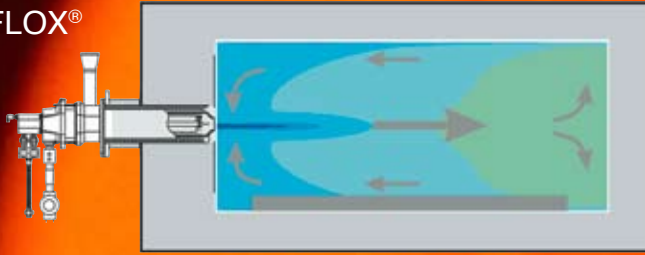
- combustion chamber
- FLOX® burner
- waste heat recovery boiler
- peak load boiler
- heat storage tank
- gas buffer storage tank
- certified fuel gas compressors



flame



FLOX®



Types of burners



Characteristics

heat exchange performance
 athermal combustion point,
 CH_4 in CO_2 (approx.)
 athermal combustion concentration,
 CH_4 in air (approx.)
 chemical resistance
 fouling tendency
 max. temperature of combustion

Rekumat C
 medium

6 Vol%

4,5 Vol%

high

low

1200°C

Rekumat M
 high

3,6 Vol%

3 Vol%

medium

low

1000°C

Rekumat S
 very high

2,5 Vol%

2 Vol%

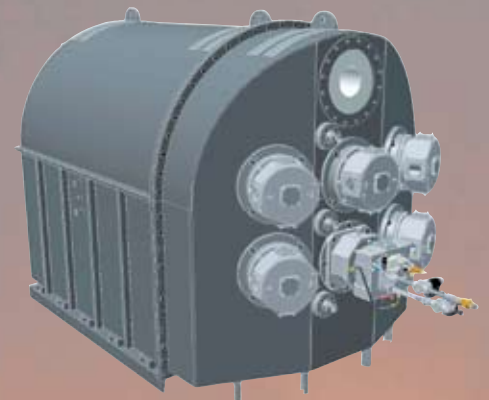
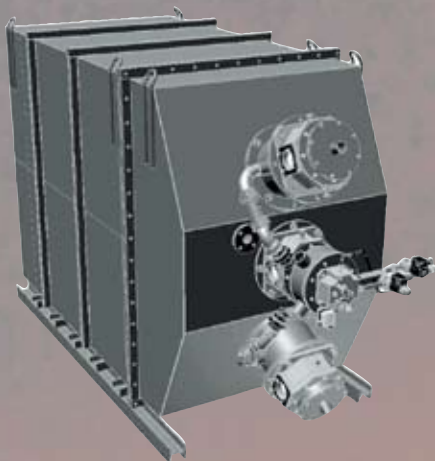
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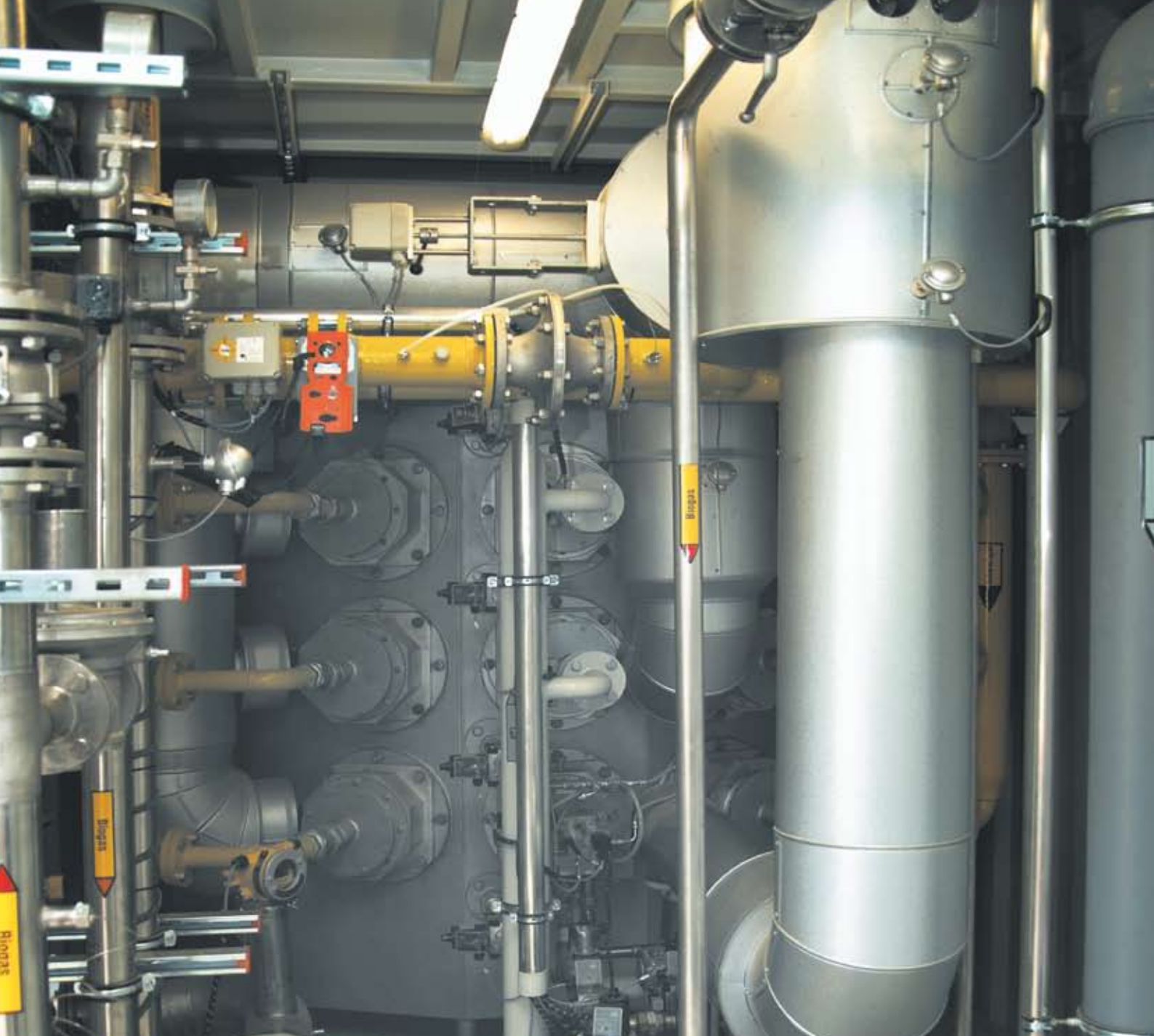
medium

1000°C

Principle of FLOX® combustion

In FLOX® combustion the fuel gas burns (oxidizes) without developing a visible flame. Flameless combustion (FLOX®) is defined as “stable combustion without flame and with defined recirculation of hot combustion products” (Wünning 2007). FLOX® combustion works for gaseous, liquid, and solid fuels. The number of the used burners depends on volume flow and required heat.





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Our services:

- development and engineering of new plants
- adaption of plants to the given infrastructure
- modification of facilities to FLOX®-technology
- plant commissioning on site
- maintenance and repair
- automatic control and optimization
- customized solutions
- consulting

