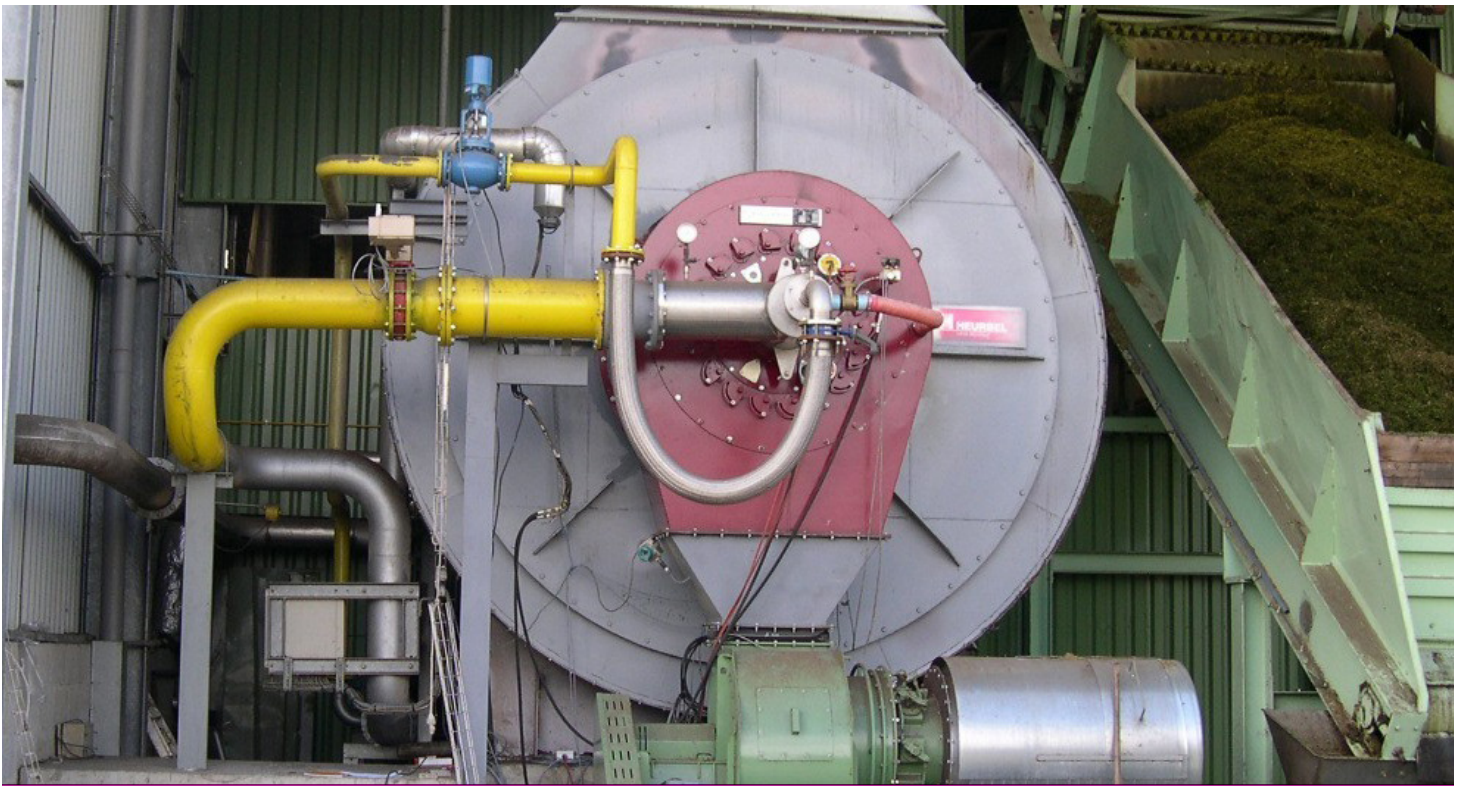


Pillard BIOFLAM™

High turndown biogas burner



The ultimate equipment to fire biogas containing water and H₂S

- Cost effective solution: 100% biogas firing without additional fuel
- Sustainable design ensuring low NO_x/CO emissions
- High thermal efficiency operation (O₂ ≤ 3%)
- Flame stability even at high turndown ratio (up to 1 to 20)

Pillard BIOFLAM™ is a Fives' flexible burner dedicated to urban waste and biogas recovery units

COST EFFICIENT

Pillard BIOFLAM™ burner has been especially developed by Fives to fire biogas without any additional fuel. Its design enables high flame stability, even for LHV variation and very low values (lower than 3000kcal/Nm³).

TOUCH DESIGN

Considering the components inside the biogas such as water, silica, H₂S, Pillard BIOFLAM™'s design - entirely made of stainless steel - is sturdy and sustainable.

HIGH TURNDOWN RATIO

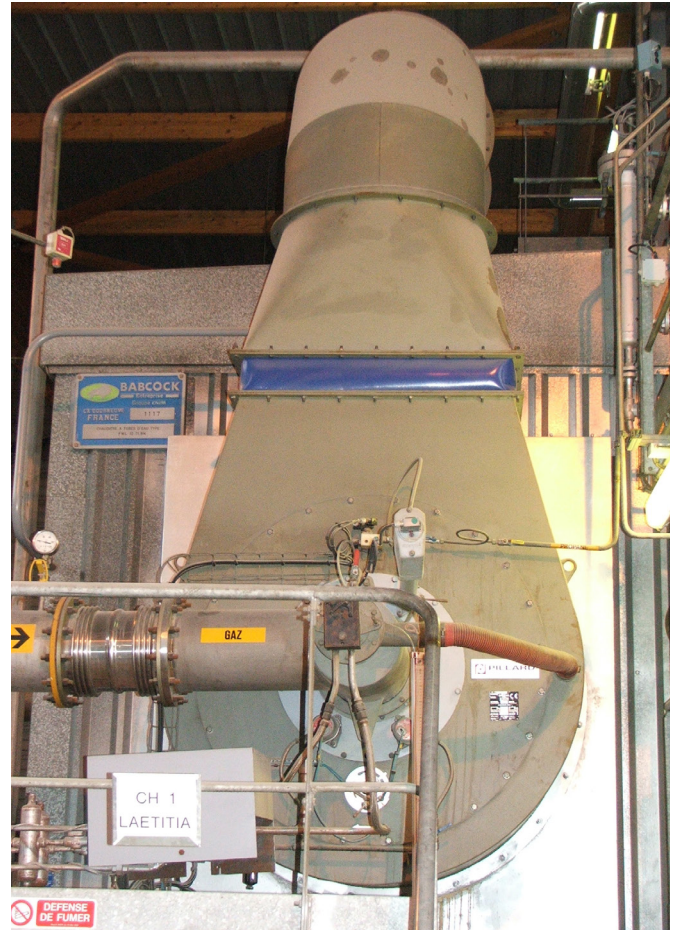
Pillard BIOFLAM™ is a flexible burner offering a possible turndown ratio of 1 to 12 in spite of very low gas pressure such as 150 mBar at burner inlet.

REDUCED ENVIRONMENTAL IMPACT

In addition to exclude CO₂ biogas emission from carbon dioxide quotas, Pillard BIOFLAM™ burner ensures NO_x and CO emissions lower than 50mg/Nm³ without external flue gas recirculation.

APPLICATION

- Water tube boilers
- Fire tube boilers
- Hot gas generators



Key features

Range of heat release	5 to 50MW
Turn down ratio	1 to 12 (1 to 20 possible, on demand)
Gas pressure	150 to 500mb (less or more on demand)
Combustion air temperature	Up to 200°C
Combustion air pressure drop	150 to 250 DaPa
Emissions	In compliance with European standards (2010/75/CE)
Fuels	Biogas, low LHV gas - fuel oil and natural gas (for back up)
Excess air	≤15% at MCR

Main references

CODEMA (Changé, France)	1 x 23MW burner on a hot gas generator
REP Energie (Plessis-Gassot, France)	3 x 25MW burner on 3 x 30t/h boilers
REP Environnement (Fresnes-sur-Marne, France)	3 x 23,70MW burner on 3 x 30t/h boilers

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CONTACT

fpi.sales@fivesgroup.com
T +33 (0)4 91 80 90 21

Fives Pillard
Marseille - France
www.fivesgroup.com


fives
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