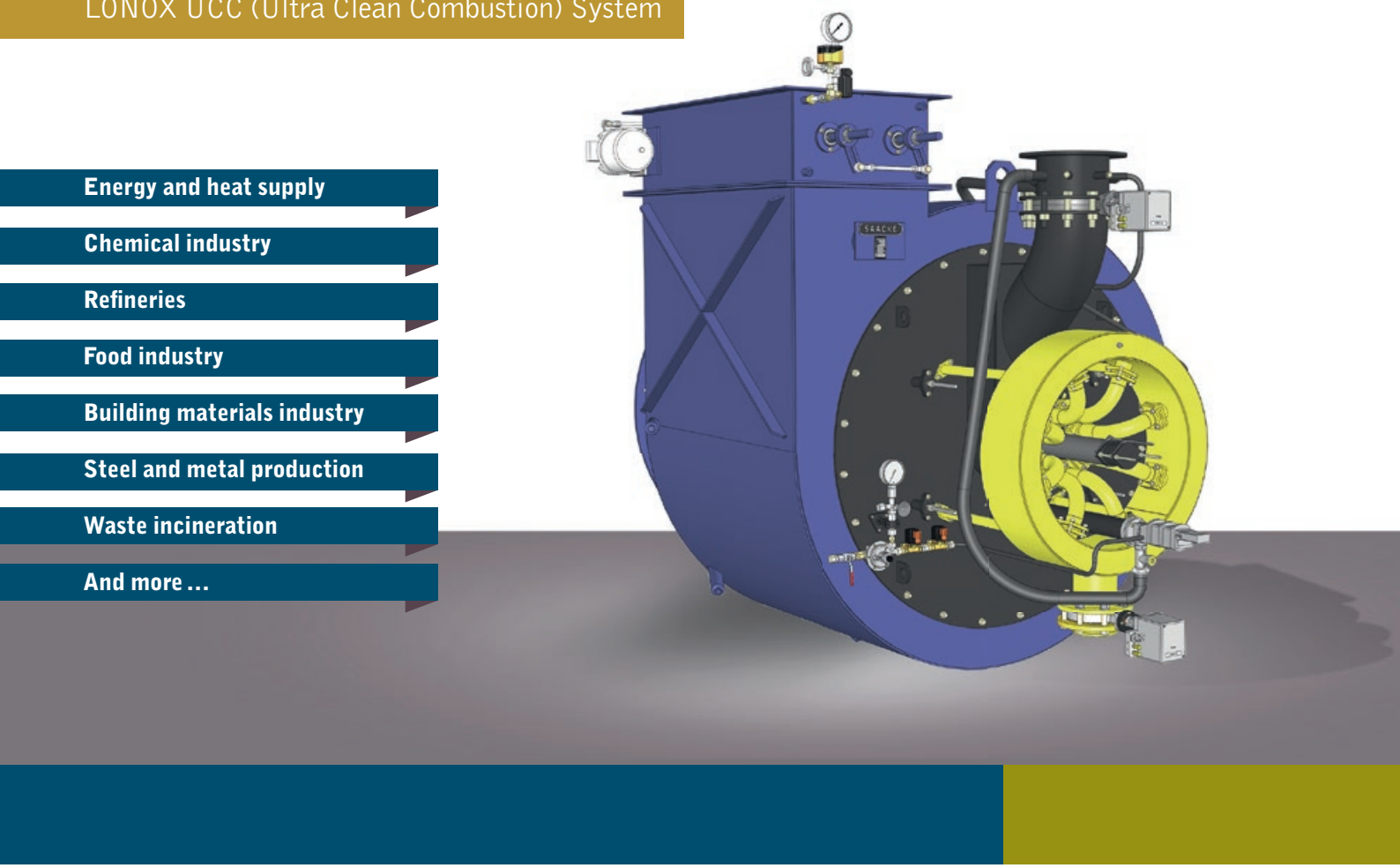
Technical data sheet
LONOX UCC (Ultra Clean Combustion) System

- Energy and heat supply
- Chemical industry
- Refineries
- Food industry
- Building materials industry
- Steel and metal production
- Waste incineration
- And more ...



LONOX UCC (Ultra Clean Combustion) System

The SAACKE LONOX UCC System complies with even the strictest international NO_X Emission values, such as the 2017 limit values of 30 mg/m³ based on 3% dry O_2 in Chinese urban areas.

NO_X reduction measures often lead to a high amount of excess O_2 or a high level of CO. The reduction of these values often results in expensive and complex secondary measures or additional additives. In contrast, the LONOX UCC System is based on SAACKE burner technology that has proven its worth over decades. Thanks to a special, swirled flame geometry as well as a specially-engineered flame control, the burner avoids any necessary additional measures. This decreases fuel consumption as well as material costs and ensures compliance with emissions values, while maintaining a low flue gas recirculation rate of < 25%.

The burner is designed for very low pressure resistance in the burner windbox, which is helpful for energy saving. It is equipped with one gas train.

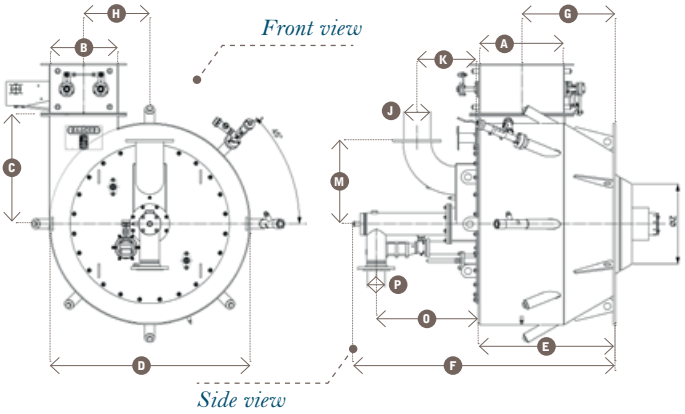
Suitable for different boiler design

The burner is suitable for different boiler design, different refractory arrangement in firing chamber and different firing chamber geometry. Moreover the system is covered for different fuel gas supply pressure. The burner draft loss of the combustion air is lower than 25 mbar (depending on the burner design).

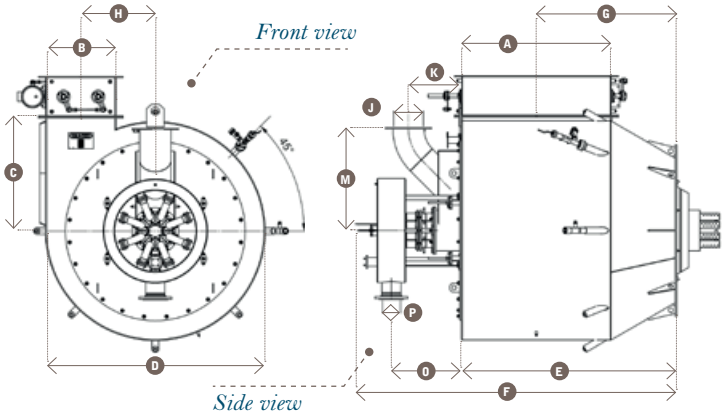
Technical data: LONOX UCC System

Applications	Shell boilers and water-tube boilers in a capacity range of 10 - 80 t/h
Burner capacity (max.)	8 - 64 MW (other sizes on request)
Fuels	All standard gaseous fuels
NO_X emissions	< 30 mg/m³ (depends on boiler design) based on 3% O_2, dry
Control range	Up to 1:10 (depends on burner size)

Burner dimensions LONOX 80/120/160



Burner dimensions LONOX 320/640



Burner weight (kg)

Size	80	120/160	320	640
	780	1,350	2,400	3,500

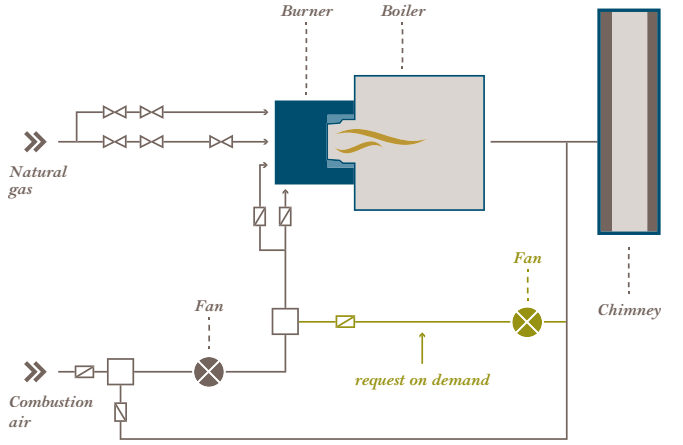
Operating data

Size	80	120	160	320	640
Maximum thermal capacity (MW)	8	12	16	32	64
Boiler capacity (t/h)	10	15	20	40	80

Burner size (mm)

Size	80	120/160	320	640
A	500	800	1,300	2,000
B	400	500	600	800
C	650	800	1,000	1,350
D	1,200	1,500	1,916	2,600
E	819	1,205	1,890	2,844
F*	1,570	2,050	2,820	– **
G	559	795	1,230	1,834
H	394	494	650	892
J	DN150	DN200	DN250	DN400
K	354	470	450	– **
M	500	740	900	– **
O	510	575	615	750
P	DN100	DN125	DN150	DN250

P+I diagram



* Plant-specific dimensions can deviate ** Depends on plant and burner design

Product notes

- Extremely low NO_x emissions (< 30 mg/m³) based on 3% O_2, dry
- Control range up to 1:10**
- Excess air ratio under 15% at 100% MCR
- Also suitable for extremely short furnaces
- TÜV-certified emissions without secondary measures or additional additives
- Suitable for shell boilers and water-tube boilers
- Reduced operating costs due to high-efficiency combustion technology and low auxiliary power requirement
- Less maintenance time and exceptionally long life
- Conforms with European and Chinese guidelines

0-0750-0122-02

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