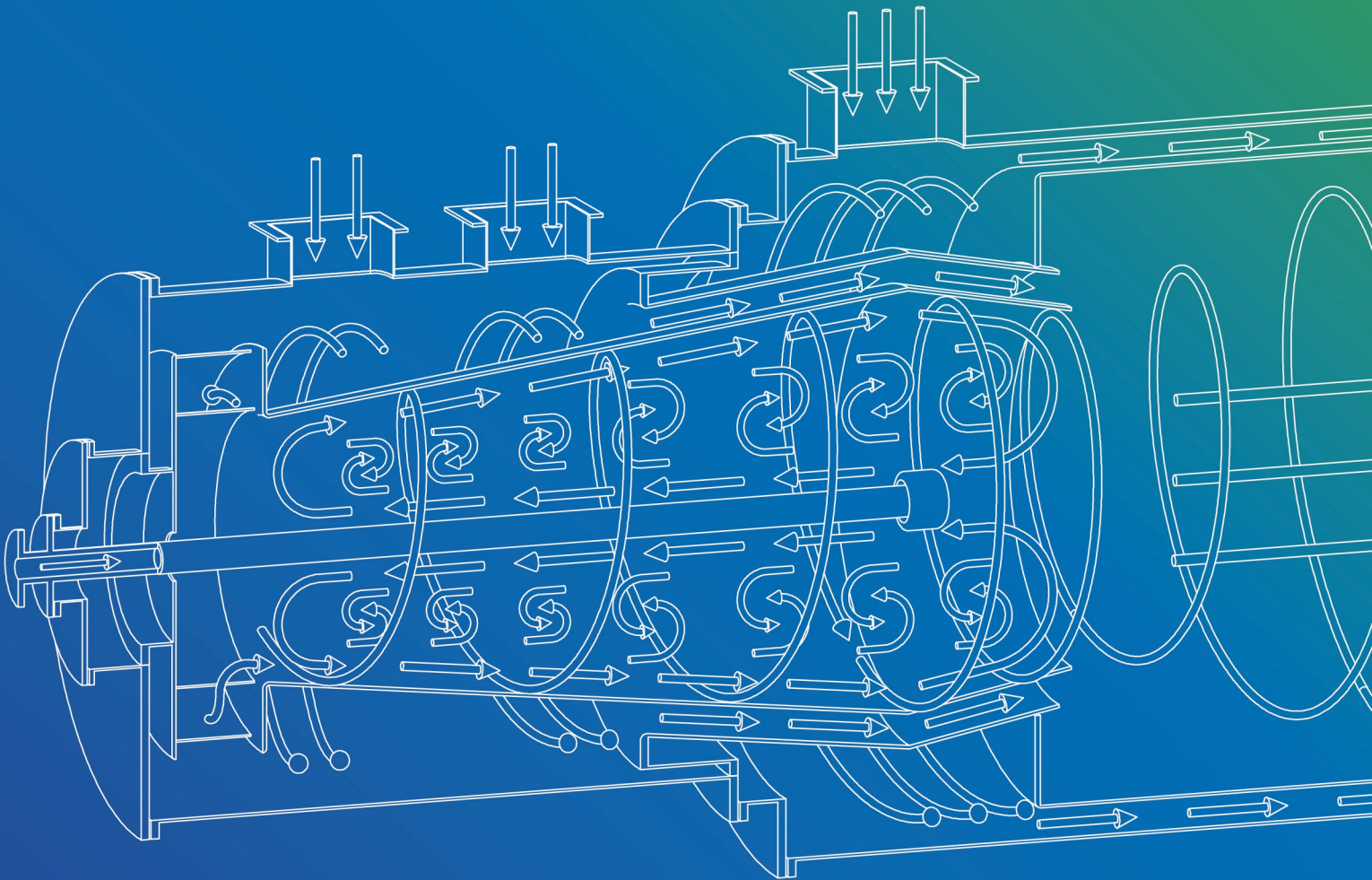


HOT GAS GENERATOR

With impulse burner without a firebrick lining for dust,
gaseous and liquid fuels



Areas of application

For the drying and firing processes of all kinds such as:

- Sand, lime and cement industry
- slag drying
- grinding dryings
- animal feed production
- calcination
- gasification
- inert gas

Advantages at a glance

- Free choice of fuel (atomized, gaseous, liquid) - also in combination
- Instant power demand and rapid load changes
- Compact design
- Position (horizontal/vertical) selectable
- Low-maintenance and high system availability
- Use of process air/return air for lower fuel costs and emissions
- Thermal disposal of climate-damaging waste gases
- Ensured shortfall of all emission limits

Design

- patented pulse heaters, and feeding and conveying system
- High efficiency due to very good mixing of air and fuel
- Construction without firebrick lining
- Operating without a supporting flame
- Combustion plant with silo, fuel dosage and conveying as a complete turnkey solution.
- Self-contained PLC control with data interface for BUS connection in an existing process control system

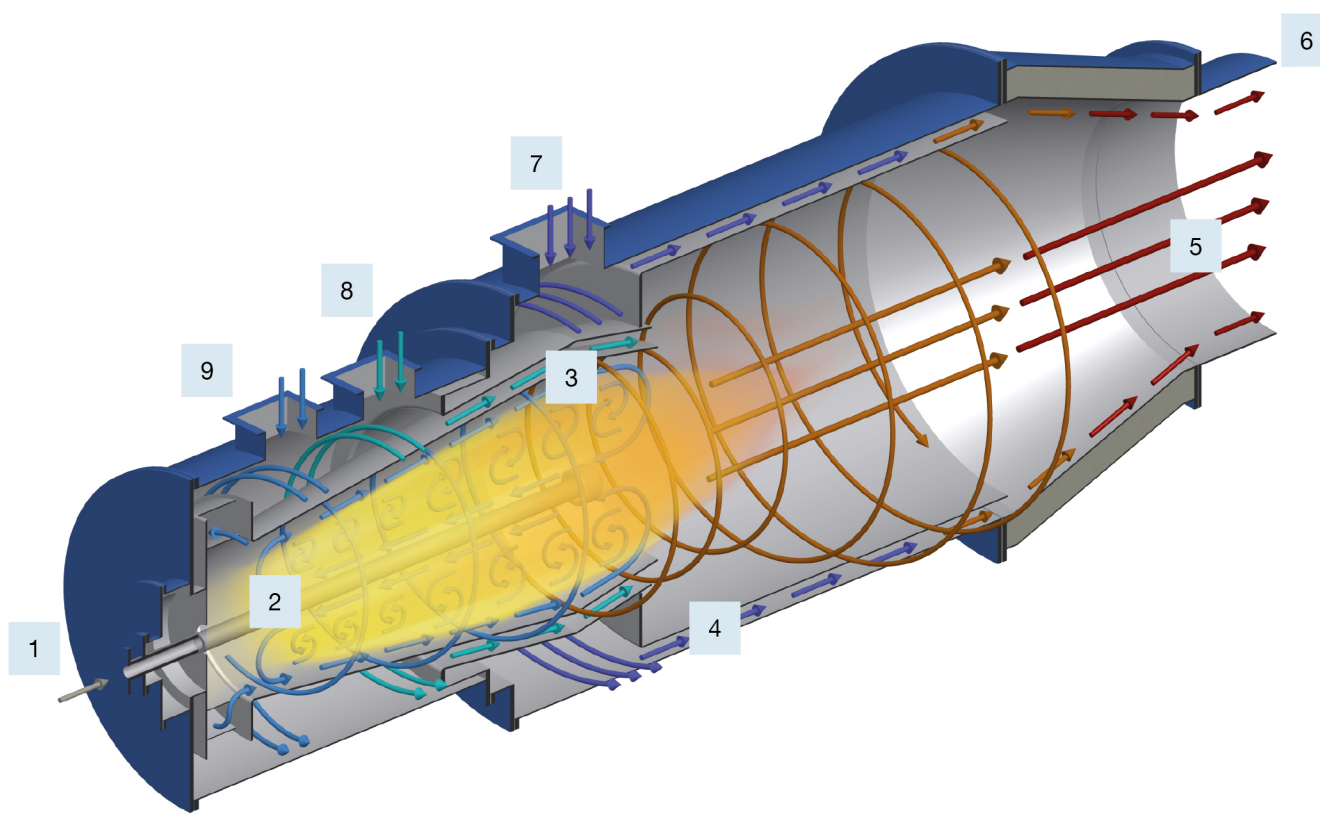
Functional description

The combustion air flows through a radial blade cascade helically towards the exit. Here, the combustion air returns about one half of the flow radially inwardly back to the inlet. The backflow juts to the faceplate outwards and flows with the fresh air further to the exit. By backflow an intense tubular turbulence forms, in which the fuel is introduced. The central backflow constantly brings hot flame gas to the fuel inlet and ensures constant post ignition. The flame is separated by a very stable cold air layer of the conical wall, whereby the outer wall remains cool. The combustion chamber is additionally cooled from the outside by the cool air blower. The system requires no firebrick lining.

The impulse burner used, because of its structure

and its flow pattern, ensures reliable combustion and high burnout already in the combustion chamber.

The downstream mixing chamber serves to increase the retention time and for setting the discharge temperature. The mixed air is fed via an annular gap to cool the mixing chamber and is first fed to the hot gas at the end. In combination with the burner and the design of the mixing chamber compliance with the Clean Air Act is ensured without secondary measures.



- 1 Fuel entry
- 2 Burner
- 3 Flow pattern
- 4 Mixing chamber
- 5 Hot gas

- 6 Feed for connection to channel, drum etc.
- 7 Mixed air
- 8 Cool air
- 9 Combustion air

Selection of possible fuels

- Lignite dust
- coal dust
- petroleum coke
- renewable fuels
- biogenic dusts
- gases
- oils

Technical details

The machines are designed and dimensioned according to the customer's requirements, so the following basic data is only intended as a guide.

Full load from a cold start:	approx. 1-2 min.
Hot gas temperature:	fuel and process-dependent
Performance range:	0.1 MW ≤ 50 MW
Control range:	1 : 3 ... 1 : 20
Under or over pressure:	-20 Mbar ≤ 1000 mbar Experiences up to 6 bar backpressure



CARBOTECHNIK
Engineering GmbH
Koblenz

Model	
Serial	
Year	
Ref. No.	

ALMACO 10/16 DM 2000

CARBOTECHNIK

The company

Burner and dosage systems for powdery fuels/goods of CARBOTECHNIK are characteristic of mature and proven applications.

CARBOTECHNIK uses the high-grade development of a patented technology comprised of fuel preparation, fuel transport and combustion in co-ordinated proportions.

Our team develops the specially tailored approach for our customers. Manufactures, delivers and erects the plant.

Competent engineering services under strict compliance with our quality assurance system; optimal work preparation and modern manufacturing methods guarantee highest quality technical products.



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