

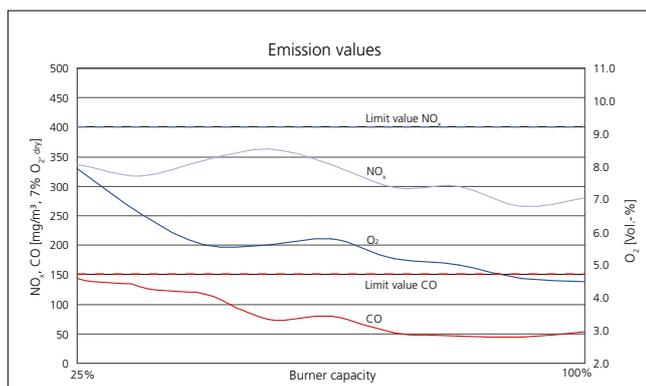


# Pulverized Fuels

Using dust to produce energy while lowering costs

The answer to rising oil and gas prices: Pulverized fuels, like dry, fossil and non-fossil by-products contain heat energy that can be exploited. Although pulverized fuels represent a very profitable alternative to natural gas or fuel oil, they have not attracted widespread attention. Low emissions and economic efficiency make pulverized fuels a genuine alternative

Dust in this context refers to a solid substance with a maximum grain size of up to 0.5 mm. Beyond this definition, however, dust may be categorized based on its water and ash content, its heat



Emission values of combustion of pulverized lignite

## Fuel

**Pulverized fuels with**  $\leq 0,5$  mm grain size

**Lower heating value** 10 – 30 MJ/kg

**Fuels** Pulverized lignite or anthracite, pulverized wood, petroleum coke, biogenic dust like rape extraction meal, coffee husks, etc.

value and its combustibility, which is directly related to the percentage of volatile ingredients.

In addition to ground coal, there are also numerous biogenic dusts that can be utilized to produce energy, thus providing for your budget:

- Wood dust / wood sanding dust
- Pulverized sugar beet cossettes
- Canola extraction scrap
- Fermentation substrate
- Coffee husks

The SSB-D swirl burner series can be used for all types of dust.

## SAACKE dust burners

The SSB-D burner represents a compact solution that cleanly burns pulverized lignite and anthracite as well as a broad spectrum of other pulverized fuels such as sawdust, pulverized wood and biomass alike. It not only offers a wide control range with maximum burnout, it can also be operated on both combustion chambers and water-tube boilers. It reliably meets even strict emission limit values and impressively demonstrates the possibilities of dust firing.

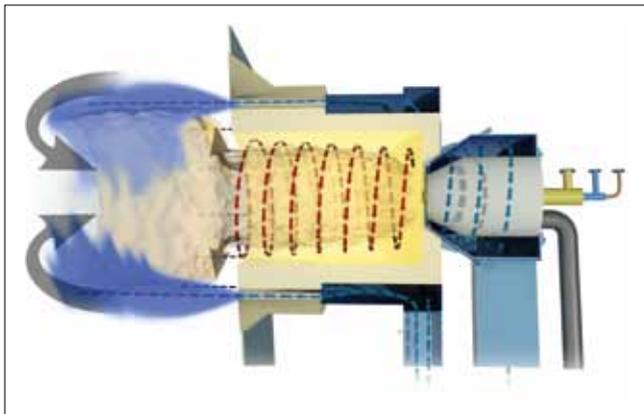
## The specific features at a glance

- Vast experience in exploitation of pulverized fuels
- Extremely low CO emissions at all load levels
- Optimal NO<sub>x</sub> emission values thanks to graduated combustion
- Very short flame with complete burnout, e.g. 8 m to 40 MW

### Two tasks, one solution

Verifiably versatile and rugged, the SAACKE dust burner is increasingly used with water tube boilers and hot gas generators. It can be operated as a combination burner with natural gas or fuel oil as the 2nd fuel.

The burner concept has a modular structure. This not only enables a smooth changeover to the 2nd fuel, but also a simple modification to any other fuel. Combined with a special burner muffle a reduction of 50 % NO<sub>x</sub> emission can be achieved. The SAACKE dust burner can be adapted to your individual needs and is available for an output from 4 to 60 MW.



Flows in SSB-D burner



SSBG-D flame

### Summary

Economical, robust and flexible, the SAACKE SSB-D represents a logical alternative. Wherever pulverized by-products are generated, they can be transformed directly into low-cost heat. A SAACKE SSB-D burns the materials efficiently and in an environmentally friendly manner in accordance with the latest standards and directives, related to safety and emissions.



40 MW SSBG-D for pulverised lignite, natural gas and biogas in a sugar factory

### Technical data

<b>Application</b>	Hot gas generator, steam boiler
<b>Burner model</b>	SSB-D
<b>Burner output</b>	4 – 60 MW
<b>Pulverized fuels</b>	Anthracite, pulverized wood, petroleum coke, biogenic dust like rape extraction meal, coffee husks, etc..
<b>Emissions value</b>	No <sub>x</sub> : 200 – 400 mg/m <sup>3</sup>
<b>Lower heating value (LHV)</b>	15 – 30 MJ/kg
<b>Control range</b>	1:4

For further information, please visit: [www.saacke.com](http://www.saacke.com)