

A WIRTGEN GROUP COMPANY



BENNINGHOVEN

BURNER - WOOD DUST



STILL BURNING IN THE FUTURE.

BENNINGHOVEN EVO JET BURNER | WOOD DUST BURNER



Innovative burner technology

BENNINGHOVEN is a world market leader in burners for asphalt mixing plants and a manufacturer of multi-fuel burners with up to 4 fuels. The complete know-how and wealth of experience from over 70 years of burner competence support the development of unique burners with excellent properties.

01 Unique burners with excellent properties

- > Modular design with good retrofit options
- > Compact and clearly structured design
- > Easy maintenance
- > Reliable performance
- > Long service life, low wear
- > Highly efficient consumption (frequency controlled)
- > Minimum emissions output thanks to state-of-the-art control technology
- > Inspection openings on both sides
- > Movable burner for better accessibility
- > Internal fan (exclusive to BENNINGHOVEN)
- > Combination of in-house manufacturing and proven components from renowned manufacturers
- > Everything from one source - engineered + made in Germany



WOOD DUST BURNER

High level of flexibility and economic efficiency

02 Solid burner

The features the solid burner offer the advantage that coal dust as well as wood dust can be used as fuels.

When a new burner is purchased, it can be adapted to coal dust as well as to the future-proof wood dust material.

As there are already bottlenecks in the coal dust supply, wood dust as a carbon neutral fuel is becoming increasingly more attractive.

03 Wood dust burner periphery

The complete periphery includes the burner and the dosing unit. The interface to the customer systems is the inlet to the dosing unit. The wood mill and the wood silo are provided by the customer.

Burner

The wood dust is fed into the burner with precision dosing by means of the feed fan and the dosing unit. In the burner head, a separate auxiliary flame then ignites the material. The control range for wood dust with pilot flame is 1:6; the calorific value of wood dust is approx. 18 MJ/kg depending on the type of wood.

The secondary fuel is used for the pilot flame, for example heating oil EL, liquid gas or natural gas.



01. Burner head
02. Wood dust feed
03. Gas feed
04. Atomising air
05. Control air, heating oil
06. Heating oil feed
07. Propane ignition gas
08. Circulating air valve
09. Frequency-controlled fan

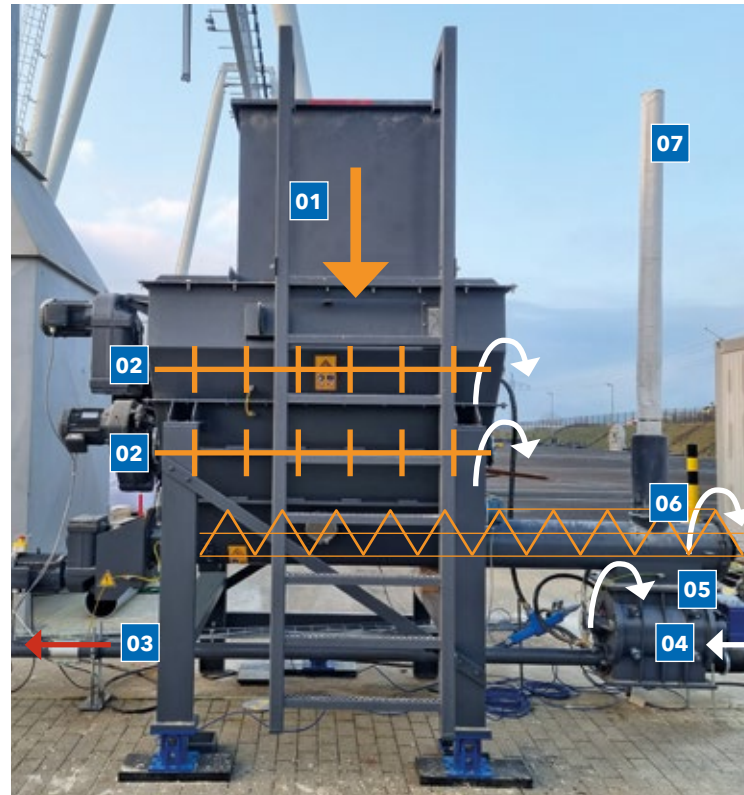
Optimum supply

04 Dosing system for dust-type solid fuel

The wood dust dosing system with storage tank has a capacity of 2.5 m³ and is installed at the discharge of the wood dust silo. In the tank, two agitators prevent the formation of bridges in the wood dust. A speed-controlled dosing screw releases the fuel in accordance with the required burner output and transports the wood dust into a blow-through rotary valve, which forms the interface to the conveying pipe. From there, the wood dust is blown into the head of the burner with a feeder fan and pipe.

Starting material on the asphalt mixing plant

> Wood pellets > wood chips > wood dust



- 01. Mass flow, wood dust
- 02. Agitators
- 03. Feed air with wood dust
- 04. Feed air
- 05. Rotary valve
- 06. Dosing screw
- 07. Air filter



Everything considered

05 Comprehensive customer support - always on the safe side

The owner is obligated to ensure that the overall plant (for example the coal dust silo with the coal dust dosing system) is checked as part of a regular inspection as per the German industrial safety regulations (BetrSichV). Outside of Germany, the systems are subject to mandatory testing - the applicable national laws and directives must be observed.

- > Explosion protection (ATEX) especially for coal dust and wood dust
- > The coal dust and wood dust dosing system is manufactured in accordance with the new ATEX Directive 2014/34/EU and has type approval - TÜV 19 ATEX 8337
- > The coal dust and wood dust dosing systems are approved for use in zone 21



Fuels of the future

When it comes to operating asphalt mixing plants in the most environmentally friendly and sustainable way possible, burner technology combined with a choice of fuels offers the greatest potential.

Many markets are phasing out coal as a fuel, while systems running on oil are subject to increasingly more stringent regulations and restrictions.

These were all good reasons for BENNINGHOVEN to further develop the EVO JET multi-fuel burner for additional, more promising fuels: biomass to liquid and wood dust. When it comes to modernising existing systems and optimising them economically and ecologically, the EVO JET burner is therefore the number one choice as a retrofit solution.



BENNINGHOVEN
SUSTAINABILITY





BENNINGHOVEN

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