

MULTI FUEL BURNERS

MST COMBUSTION SYSTEMS

MULTI FUEL BURNERS TYPE GOD

Our multi-fuel burners are specifically designed for burning of combustible dusts, such as wood dust or coal dust combined with one or two or alternative fuels. As alternative fuels various types of gas and light or heavy oils are used.

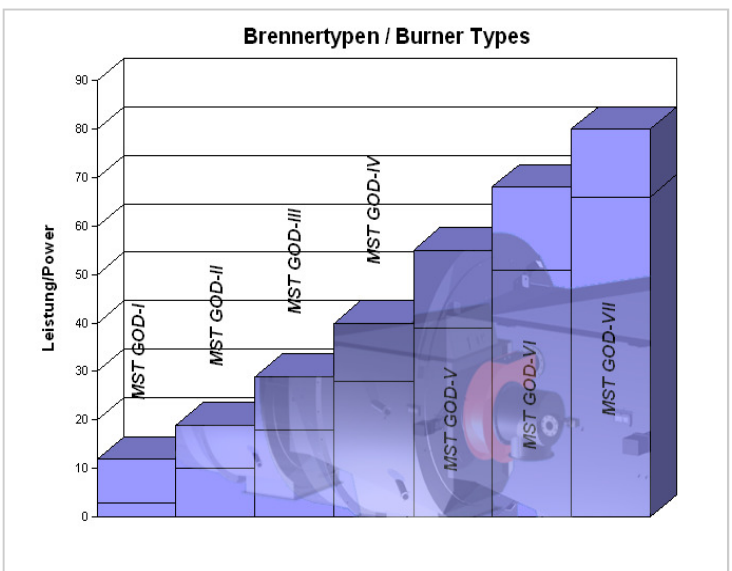
Our burners can be run with each fuel alone (solo mode) or be run in combination with each other. Especially in dust-solo mode our burner does not need a support flame by an alternative fuel. The burner design provides a true solo mode with dust.

In a combined mode, the shares of fuels can be set freely in a wide range (typically 1/10) and regulated automatically or manually.

With many automatic settings, these large industrial burners can achieve optimal combustion throughout the entire power range and in a variety of fuel combinations.

Especially in emission-critical

applications there is no way around the multi-fuel burners series GOD with automatic O₂ or CO regulation.



Sizes of MST Multi Fuel Burners Series GOD, 3-80 MW

PRODUCTS

- **Series GOD**
Multifuel burner for maximum performance and emission requirements from page 2
- **Series C**
Compact burners for wood dust or fibers with gas or oil support flame in the power range from 2-18 MW

MULTI FUEL BURNERS SERIES C, THE COMPACT

On popular demand, we expanded our product range in 2009 with a compact series of multi-fuel burners.

With these we use the same proven components as in the series GOD. In a compact body, they burn a primary fuel (gas or light oil) reliably with sawdust or wood fibers. This

type of burner is applied mainly as additional or auxiliary firing in grate firing or emission-critical systems, where dust is not present in sufficient quantities to cover the entire heat demand.

We offer the multi fuel burner Series C in a power range of 2-18 MW total power per burner

unit as a cost effective alternative to simple dust or fibre injectors often used in furnace systems.

APPLICATION

The modular multi fuel burner MST series GOD are ideal for demanding industrial applications. They are mainly used in industries which have a high production-related energy demand coupled with a significant accumulation of residual dust, such as wood processing and chipboard industry. With multiple possibilities for influencing the flame geometry, the burner enables the use of single- or multi-pass-boilers as well as in thermal oil systems, hot gas

generators and drying plants.

The modular design offers customers maximum flexibility and optimum adaptation to the operational requirements. In contrast to the mono-block design, the separation of burner housing and air blowers provides various possibilities to employ primary and secondary air flows from different operating resources. The burners are suited to feed polluted air streams from production facilities in

the flame or close to the flame.

Expensive filter systems can be saved, or exhaust from other parts of the plant will not need additional thermal processing.

To increase the efficiency it is also possible to feed up to 250 ° C pre-heated combustion air to the burner. If necessary, we can effectively integrate the required exhaust gas / air heat exchanger into the overall concept and deliver.

The high flexibility of our

burner design needs minimal adjustments of our customers existing systems and thus allows to modernize very cost effective. Many existing facilities can be converted into energy efficient and low emission plants, by replacing old burners and an optimization of control and regulation systems.

FUEL

Different nozzle and lance systems, which can be combined in the burner enable a wide range of fuels. Weak or landfill gases are part of the usable fuels as well as the usual fuels like as natural gas, liquefied gases or other highcaloric gases.

Diesel, fuel oil or vegetable oils can be used at any time as the main fuels. Reacting to different fuel qualities, the burner can be adjusted and optimized during operation without shutdown. Even with dust in varying qualities and grades, an optimal combustion can

always be realized with the modulating restrictor plate, the numerous graduations of air flow together with the integrated precombustion chamber.

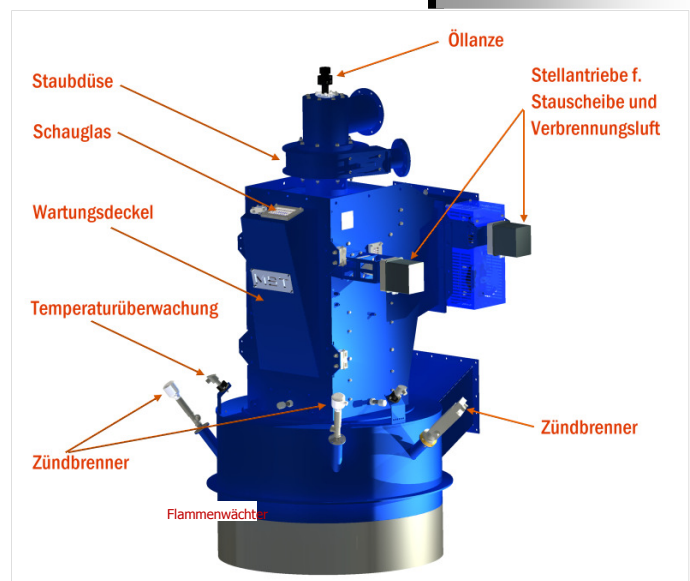
Series GOD: 3-80 MW Power for

- Single- and multi pass boilers
- Thermal oil systems
- Hot gas generators
- Driers
- Brick lined and unlined combustion chambers

COMPONENTS

A range of proven accessories offers customers maximum availability and reliability of the plant. We only use proven-products from German manufacturers for our accessories such as flame sensors, ignition burners, actuators, pressure and temperature sensors. We also do not compromise when choosing the brick

lining of our precombustion chambers. Subjected to high temperatures, this component is manufactured in Germany and, before leaving the factory, pre-dried. Time-consuming heating curves and the associated risk of the destruction of the lining during commissioning can usually be dispensed with.



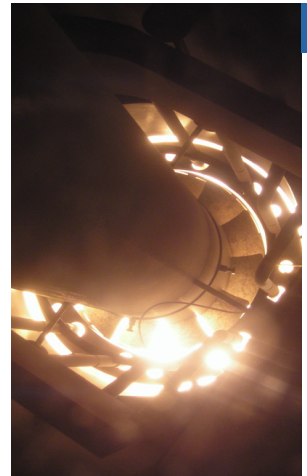
Components of Multi Fuel Burner series GOD

CONSTRUCTION

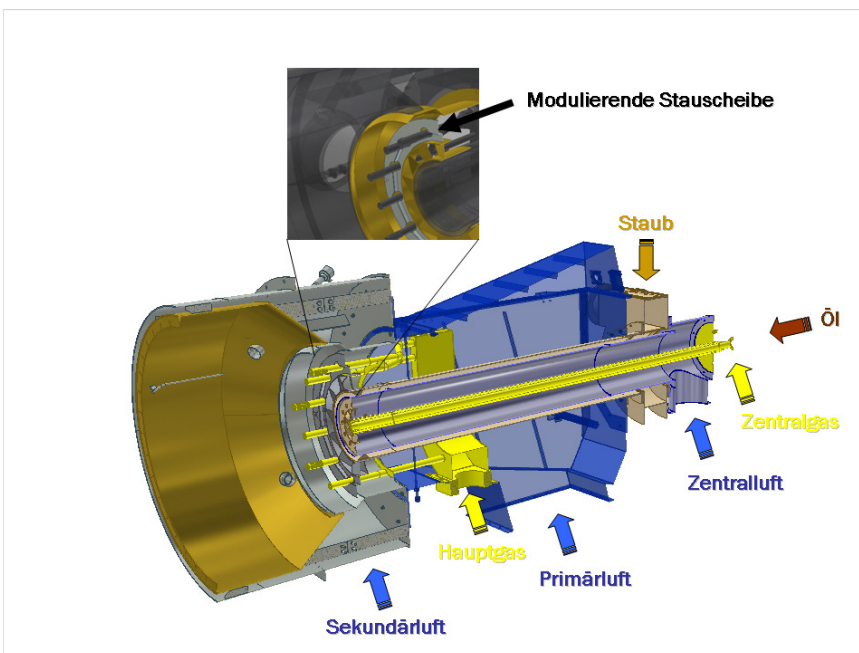
.Key to an efficient and low-emission combustion is a graduated air supply in the way it's used in the modern multi-fuel burners. This is complemented by the modulating diffusor plate, which allows us to influence the flame geometry and the temperature profile without quantitative changes in the

fuel / air ratio. The combination of these technologies permits an optimal use of the supplied fuel with minimal emissions. Aside from the aforementioned primary combustion modifications, we can continuously ensure the combustion and emissions quality of a once commissioned plant

through appropriate measurement technology. By means of a multi-stage diagnostic system we provide not only safety and operational-related messages as well as alarms in plain text, but also necessary component-specific service and maintenance alerts.



Inside view of a burner while in use



MST Multi Fuel Burner—Construction

Features

- Multi level air supply
- Multi level fuel supply
- Modulating diffusor Plate
- Peripheral components configurable freely

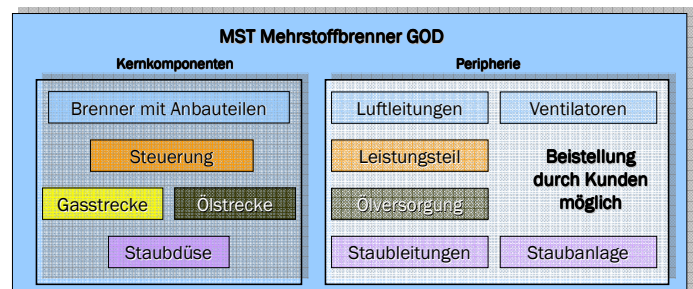
CONFIGURATION BY CUSTOMER

While the precisely matching core components of the GOD-burners are necessarily part of our deliveries, the peripheral parts of the plant can be supplied at any time by our customers.

Possible provision of material by our customers would e.g. be air lines between the burner and fans, fans, power section of the switch-gear, oil supply facilities

such as loop pumps, tanks and associated fittings, dust and dust management systems.

If necessary, you will receive a detailed specification of the needed system components in new acquisitions. Alternatively, our technicians are happy to assist in deciding the usability of already existing components.



Core components and peripherals

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FURTHER INFORMATION

Before, during and after the project completion, our technicians and engineers are available to offer advice and assistance.

If you have questions about our products or services please contact our staff

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For further information please see our homepage

www.MST-Burners.de

Presented by / Local sales representative

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