



河南中基机械设备有限公司
HENAN ZOOMLINE MACHINERY CO.,LTD.

Tel: +86-371-65825035
Fax: +86-371-65825607
E-mail: info@zoomline.biz
Web: www.zoomline.com.cn
Factory Location: No.3 Western North Section of Road 01, Longsheng Industrial Park, Nanyang, Henan, China.

煤粉燃烧器 PULVERIZED COAL BURNER

公司简介 About us

Henan ZOOMLINE Machinery Co., Ltd. is a professional manufacturer of pulverized coal burners. The coal burner made by our company is mainly used in asphalt plant, boiler, dryer (such as brick kiln), metallurgy and other industries. Nowadays, our coal burner products have been sold to Pakistan, Thailand, Georgia, South Africa, India, Taiwan etc. Our products have got CE, ISO, EAC certification.

CONTENTS 目录

- 01 About Us
公司简介
- 03 MFR Type Rotary Pulverized Coal Burner
MFR 型旋转式煤粉燃烧器
- 06 MFR-S Multiple Duct Versatile Coal Burner
MFR-S 新型多风道煤粉燃烧器
- 11 Pulverized Coal Burner For Boiler
锅炉燃烧器
- 15 Pulverized Coal Production Line
煤粉生产线
- 17 Service
服务

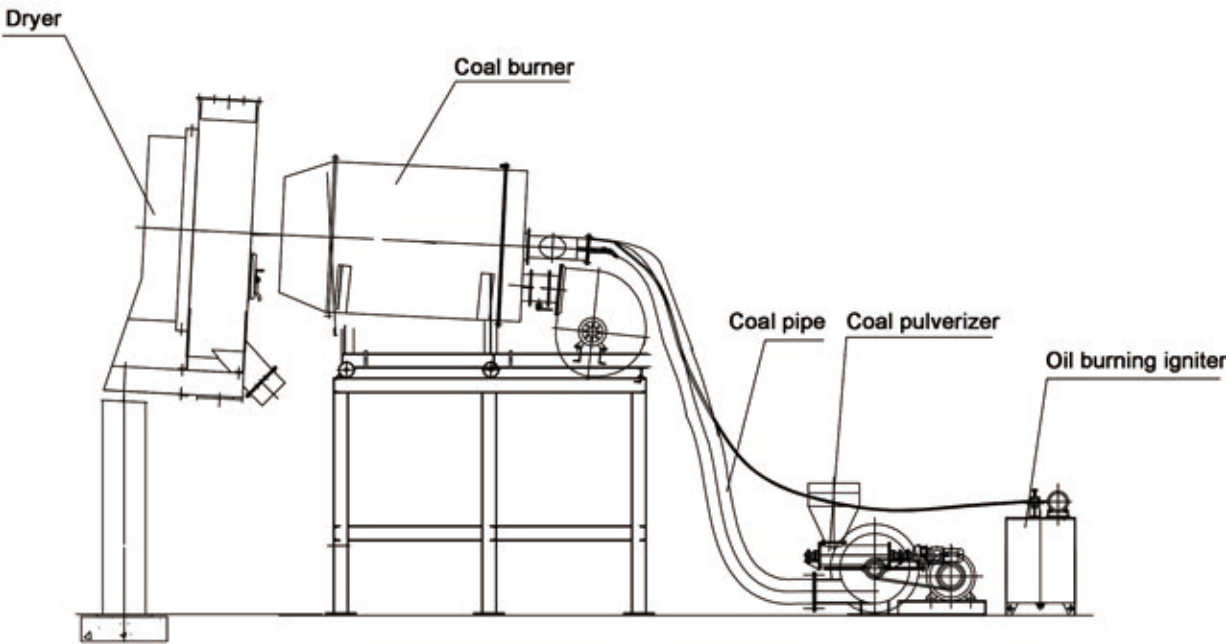


MFR 型旋转式煤粉燃烧器

MFR TYPE ROTARY PULVERIZED COAL BURNER

Working principle

The coal of particle size less than 20 mm is pulverized by coal pulverizer, then injected into the main burning chamber through a metal hose nozzle, and ignited by the oil gun. At the same time, the air blower blows into the main burning chamber through the circular rotary wind pathway of the rear cover. The wind rotates against the inner wall of chamber, meanwhile the high-temperature airflow is mixed with the coal powder to burn strongly, and the high-temperature flame sprays into the drying drum to heat the cold aggregate.



Features of MFR series coal burner

- Adopting new structure and changing the traditional burner mechanism, exclusively uses rotary combustion chamber to solve the problems of easy slag-bonding and incomplete burning of traditional burners.
- High flame temperature, energy saving and completely burning.
- Adopting the exclusive ingredients of firebrick of high performance prolong service life.
- Continuous production, has no need to clean cinder everyday.
- Lower production cost, only the 1/3 of oil burner.
- highly automatic, convenient to control aggregate temperature and discharge aggregate through dry mixing drum.
- Port temperature measuring equipment return signal to the frequency changer of coal machine , change the aggregate temperature through frequency changer automatically control the volume of coal.
- Igniting is simple and easy, auto and manual ignition are optional. Ignition oil gun nozzle is designed with special structure, atomization effect, kerosene combustion.

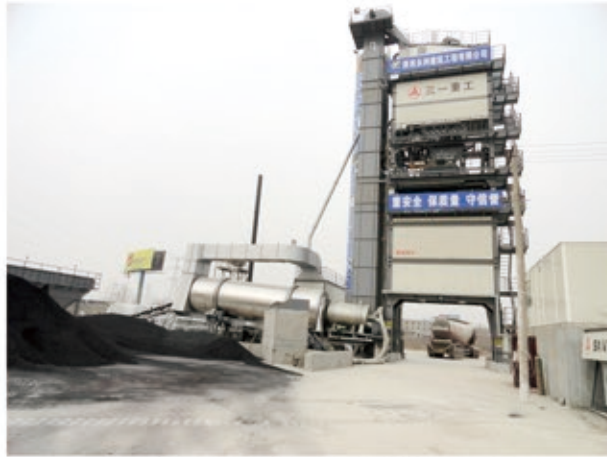
技术参数

TECHNICAL PARAMETERS

Model	Coal Consumption (kg/h)	Power(kw)	Coal Pulverizer	Asphalt Temperature(℃)	Plant Capacity(tph)
MFR20	180-280	16.95	MFJ20	130-180	15-30
MFR40	370-560	31.25	MFJ40	130-180	25-50
MFR60	560-840	32.75	MFJ60	120-180	25-55
MFR80	720-1120	41.25	MFJ80	130-180	70-85
MFR120	1120-1680	73.75	MFJ120	130-180	100-125
MFR160	1490-2240	80.25	MFJ80+MFJ80	130-180	140-170
MFR200	1850-2800	105.25	MFJ120+MFJ80	130-180	160-220
MFR240	2240-3360	138.45	MFJ120+MFJ120	130-180	200-250
MFR320	2980-4480	194.95	MFJ120+MFJ120+MFJ120	130-180	280-340
MFR400	3730-5600	254.95	MFJ150+MFJ150+MFJ150	130-180	360-400

配套设备

COROLLARY EQUIPMENT



Coal Burner For SANY Asphalt Mixing Plant



Coal Burner For Rotary Kiln



Coal Mine Drying



Coal Burner For 200t/h Asphalt Plant



Coal Burner For ZOOMINE 160t/h Asphalt Mixing Plant

MFR-S 新型多风道煤粉燃烧器

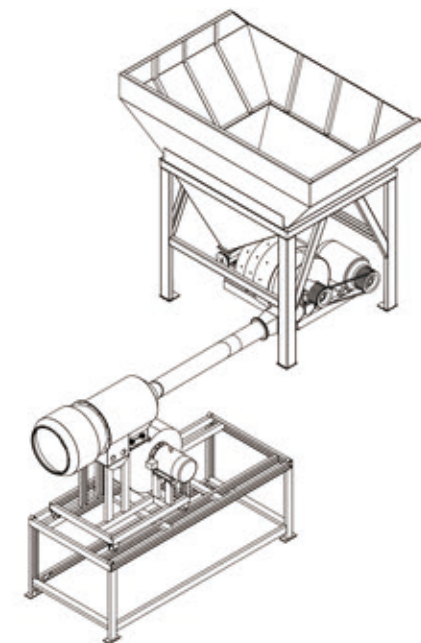
MFR-S MULTIPLE DUCT VERSATILE COAL BURNER

Conventional pulverized coal burner used in asphalt mixing stations is always very big, short service life, high maintenance cost and many accessories. This brings many operation and maintenance problems to customer. After years of research and practice, our company adopts German most advanced "semi-open pulverized coal combustion" technology and developed new type product without any firebricks and other quick wear parts. The combustion chamber is made of import heat-resisting steel sheet and plate. The service life of the whole machine is greatly improved.

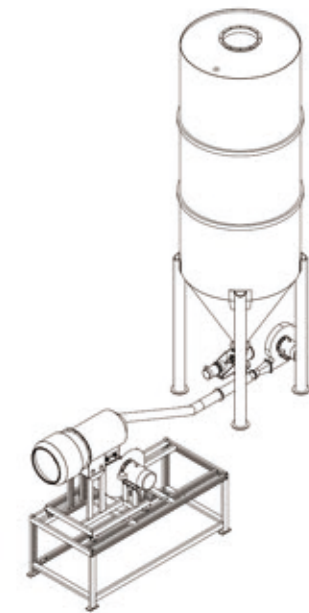
As for traditional coal burner, the coal pulverized has to grinder coal into 200mesh, it can fire completely, but our new type coal burner can make 100 mesh coal power fire completely. Without using firebricks and make 100 mesh coal power burning completely, currently only our company have this technology in China.

MFR-S coal burner composition:

Coal Storage System, Coal Conveying System, Coal Burner, Control System.



Common type pulverized coal combustion device



Environmental protection type pulverized coal combustion device

Features of MFR-S series pulverized coal burner

- Concentrated separation of combustion, reduce NOx emissions.
- Air-staged combustion, Reducing the emission of NOx.
- Flue gas recirculation, Reducing the emission of NOx.
- Secondary Air Multi-stage adjustable, the flame can be flexible adjusted, better matching the boiler.
- Good adaptability to different coal, even inferior coal.
- Compact structure, easy installation.

Main characteristics:

- Adopting most advanced German coal combustion technology reduces, Ablation and erosion of combustion chamber walls, Occasionally, the thickness of the slag is only 1-2 mm, which has no adverse effect on the combustion effect and the whole life.
- Combustion chamber adopts special structure with reasonable wind tunnel layout and rational air distribution, which helps the coal burn continuously and steadily.
- The door can be adjusted remotely, and the length and thickness of the flame can be adjusted in real time according to the actual condition, so as to achieve the best heating effect.
- Combustion chamber is manufactured with imported refractory steel, with no brick or perishable materials such as refractory castable, the service life is several times longer than the conventional burner with refractory lining. It needs less maintenance in daily use.



Multi-fuel applicability

1. Coal and Oil Dual Use--Independent combustion of coal / oil; Two kinds of fuel free to switch.
2. Coal and Gas Dual Use--Independent combustion of coal / Gas; Two kinds of fuel free to switch.

MFR-S煤燃烧器 VS MFR煤燃烧器:

MFR-S COAL BURNER VS MFR COAL BURNER:

Item	Model	Coal consumption	Outer diameter(mm)	Inner diameter(mm)	Remark
1	MFR-S1000	1000kg/h	780	618	Stainless Steel
1-1	MFR80	1000kg/h	1040	800	Firebrick
2	MFR-S2000	2000kg/h	900	700	Stainless Steel
2-1	MFR160	2000kg/h	1376	1136	Firebrick
3	MFR-S3000	3000kg/h	1000	790	StainlessSteel
3-1	MFR240	3000kg/h	1500	1250	Firebrick
4	MFR-S4000	4000kg/h	1080	870	Stainless Steel
4-1	MFR320	4000kg/h	1550	1300	Firebrick

25-35% smaller diameter, more convenient installation, the use of a more extensive range.

施工方案

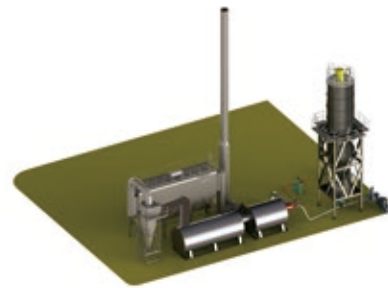
CONSTRUCTION PROGRAM



Coal bunker+Burner



Coal mill+Burner



Boiler+Burner

技术参数

TECHNICAL PARAMETERS

Model	Coal Consumption(kg/h)	Power(kw)	Coal Pulverizer	Asphalt Temperature (°C)	Plant Capacity(tph)
MFR-S500	370-560	29.75	MFJ40	130-180	25-50
MFR-S1000	720-1120	44.75	MFJ80	130-180	70-85
MFR-S1500	1120-1680	54.75	MFJ120	130-180	100-125
MFR-S2000	1490-2240	92.75	MFJ80+MFJ80	130-180	140-170
MFR-S2500	1850-2800	108.75	MFJ120+MFJ120	130-180	160-220
MFR-S3000	2240-3360	115.75	MFJ120+MFJ120	130-180	200-250
MFR-S4000	2980-4480	194.95	MFJ120+MFJ120 +MFJ120	130-180	280-340
MFR-S5000	3730-5600	254.95	MFJ150+MFJ150 +MFJ150	130-180	360-400



Supporting SANY 320t/h asphalt plant



Supporting AMMANN 320t/h asphalt plant



Supporting 240t/h asphalt plant



Supporting Pakistan 120t/h asphalt plant



Supporting LINTEC 320t/h asphalt plant

锅炉燃烧器

PULVERIZED COAL BURNER FOR BOILER

Mechanism of pulverized coal burner:

The combustion characteristics of the multi-duct dense-thin swirl pulverized coal burner are: Separation of dense and thin: stable combustion effect, not easy to flame out, suitable for types of coal; Compound swirl: strengthen combustion and full burning; Wind-coated pulverized coal: anti-slagging, protecting the furnace bricks; Adjustable flame: The length and thickness of the flame can be adjusted as requirements to achieve the desired flame shape. This kind of burner is designed to achieve five effects of high efficiency, stable combustion, low pollution, anti slagging and anti high temperature corrosion. It can overcome the defects such as unstable combustion in the chamber, less adaptation of coal, serious slagging, high pollution, vulnerability of the brick and so on.



The advantages of the multi-duct dense-thin swirl pulverized coal burner are:

- 1.The coal can be used instead of oil, then fuel cost is saved and operating cost is reduced greatly.
- 2.Due to the special structure and reasonable air duct layout in the chamber, the pulverized coal can be stably and fully burned, and no ash residue is accumulated.
- 3.Due to the interaction between the primary wind dense-thin swirl and the regulation of the direct wind, the combustion is not only high efficient and stable but also adaptable to various coals from low volatile to high volatile.
- 4.Convenient online adjustment: according to the different coal quality and the structural characteristics of boiler furnace, the flame length, diameter, strength and weakness can be randomly adjusted, and the adjustment range is large.



New type multiple duct coal burner is made up of coal burner, coal powder storage system, automatic control system and accessory. It has the following features compared with similar product.

1.Slight slag formation and easy maintenance

The burner adopted the most advanced "semi-open pulverized coal combustion" form.

The pulverized coal flame is fully burned under the outer duct air package, which reduces the ablation and scouro f the inner wall of the combustion chamber by the flame, and the slagging on the inner wall is only 1-2mm thick.

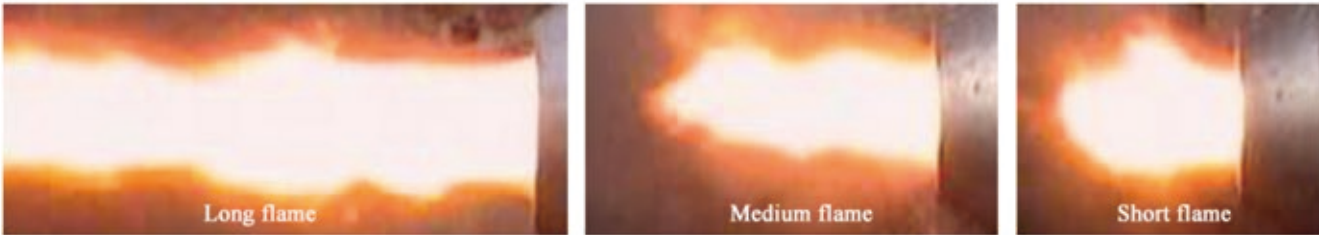


2.Full combustion with high thermal efficiency

Special structure is adopted in the combustion chamber, and the air duct layout is reasonable. The proportion of each air duct to the air is calculated scientifically. Pulverized coal airflow forms a large reflux area in the combustion chamber, which is easy to ignite and burn stably.

3.Flame shape is adjustable and heating effect is good

The damper is controlled by an intelligent valve controller, which can be adjusted remotely according to the combustion requirements, so as to keep the ratio of wind-coal at an appropriate ratio and achieve the best combustion effect. At the same time, the flame length and thickness can also be controlled remotely to adapt to different drying cylinder combustion zone and improve heating efficiency.



4.High reliability and long service life

The combustion chamber is made of imported heat-resistant steel, no longer using any firebrick or refractory castable materials and other vulnerable materials, and the special internal air duct layout facilitates the slag formation of the combustion chamber inner wall is only 1-2mm thick, the service life of the whole machine is several times than the traditional burner with firebrick lining, almost no need for maintenance in daily use.

5.High level of automation

There are two options for the new type coal burner.
Basic type: the damper and coal feeding are manually adjusted through the operation panel in the control room
Automatic type: Adopt "PC+PLC" mode control, according to the setting temperature can automatically adjust the coal powder supply, air distribution and other main parameters affecting the combustion effect, so as to accurately control the asphalt mixing station discharge temperature within the range of construction specifications.



煤粉成分要求
PULVERIZED COAL COMPOSITION REQUIREMENTS

1. Calorific Value(Qnet)	5500-6500Kcal/kg
2. Total Moisture	≤7%
3. Volatile Component	≥30%
4. Ash Content	≤7%
5. Sulphur Content	≤0.4%
6. Pulverized Coal Particle Size	The screening rate of mesh200 is over 80%

技术参数
TECHNICAL PARAMETERS

Model	Fuel	Regulating mode	Output power (kw)	Coal consumption(kg/h)
MFR-S200B	Pulverized coal	Electronic proportional control	240-1400	50-200
MFR-S500B			1050-3500	150-500
MFR-S1000B			2800-7000	400-1000
MFR-S1500B			3500-10000	600-1500
MFR-S2000B			4200-14000	700-2000
MFR-S3000B			6300-21000	900-3000
MFR-S4000B			8400-28000	1200-4000



煤粉生产线

PULVERIZED COAL PRODUCTION LINE

Low investment cost

Due to the combination of crushing, drying, grinding, grading and conveying, the system is simple, the layout is compact, the floor space is about 50% of the ball mill system, and it can be arranged in the open air, so the investment cost can be greatly reduced.

Low operating cost

High efficiency: the grinding roller directly grinds the material on the grinding disc, which has low energy consumption and saves energy consumption by 30% to 40% compared with the ball mill system.

Less wear: Since the grinding roller does not directly contact the grinding disc during work, and the grinding roller and the lining plate are made of high-quality materials, then the service life is long and the wear is small.

High drying efficiency

The hot air that is introduced into the mill from the outside is directly and repeatedly contacted with the powdery material in the mill. The drying ability is strong, which can save a dryer for the mill system and save energy. It can meet the requirements of different humidity materials by adjusting the hot air temperature.

Eco-friendly clean

The vibration is small, the noise is low, and the equipment is sealed as a whole. The system works under negative pressure without dust overflow. The environment is clean and can meet the national environmental protection requirements.

Easy operation and maintenance

- 1. Equipped with automatic control system, which can realize remote control. Easy operation.
- 2. Equipped with a device to prevent direct contact between the roller sleeve and the disc liner, avoiding damaging shock and severe vibration.
- 3. It is convenient and quick to replace the roller sleeve and the lining plate by overhauling the oil cylinder and turning the rotating arm. The downtime loss is reduced.

Stable product quality

- 1. Due to the short residence time of the material in the mill, it is easy to detect and control the particle size and chemical composition of the product, reduce repeated grinding and stabilize product quality.
- 2. The product contains very little iron, and the mechanical wear iron contained in the product is easy to remove. When used to grind white or transparent materials, the product has high whiteness and clarity.



技术参数

TECHNICAL PARAMETERS

Model	ZM 6	ZM 10	ZM 15	ZM 20	ZM 25	ZM 30	ZM 40	ZM 50
Capacity(t/h)	6-8	7-10	10-17	15-22	20-30	25-40	35-50	45-60
Moisture of Raw Coal	≤15%							
Feeding Size (mm)	≤25	≤30			≤40		≤45	
Finish Fineness	200 mesh with passing rate 80-95%							
Finish Moisture	≤1-5%							



服务

SERVICE

Pre-Sales Service

Our service began when the customers contact with us for our asphalt mixing plant. We would like to know their detailed technical requirements by a customer questionnaire, then work out an effective solution accordingly. For example, their project type would help to decide which kind of asphalt mixing plant is more suitable, and their local environment requirement would help us to know which kind of burner would be need, and so on.

Besides, we would provide products literature to help customers understand the value of our solution. For example, we may offer the coal burner working video, the on-site asphalt plant pictures and so on. If the customer has special requirement, we would even design a 3D model for them.

After-sales Service

Our after-sales team would follow up the whole process (Transport----Foundation treatment----Installation----Debugging----Staff training----Technical support----Spare parts supply) after you purchased whether our whole asphalt plants or just auxiliary. We would supply regular technical support and training according to the actual situation of our asphalt mixing plant.

Whenever there is any accidental technical problem, it could be feedback to our engineers at first time.

Whatever you need technical support on the construction site, or purchase ZOOMLINE plants&accessories, we will serve you wholeheartedly.

Service 7x24 hours on line:

Email: info@zoomline.biz

Skype:zoomlinemachinery

You can also contact our distributor in your location

