Supply of equipment for ferrous metallurgy enterprises of the Russian Federation from the PRC

Product Catalog products

Equipment for ferrous metallurgy enterprises

- Equipment and technology projects for sinter production
- Sintering carts for sinter production

- Equipment and technology projects for blast furnaces

- Cone-less charging devices for blast furnaces
- Metallurgical valves (system of air heaters, grate, dust removal, heat recovery) for blast furnaces with volume from 179 to 5800 m3.

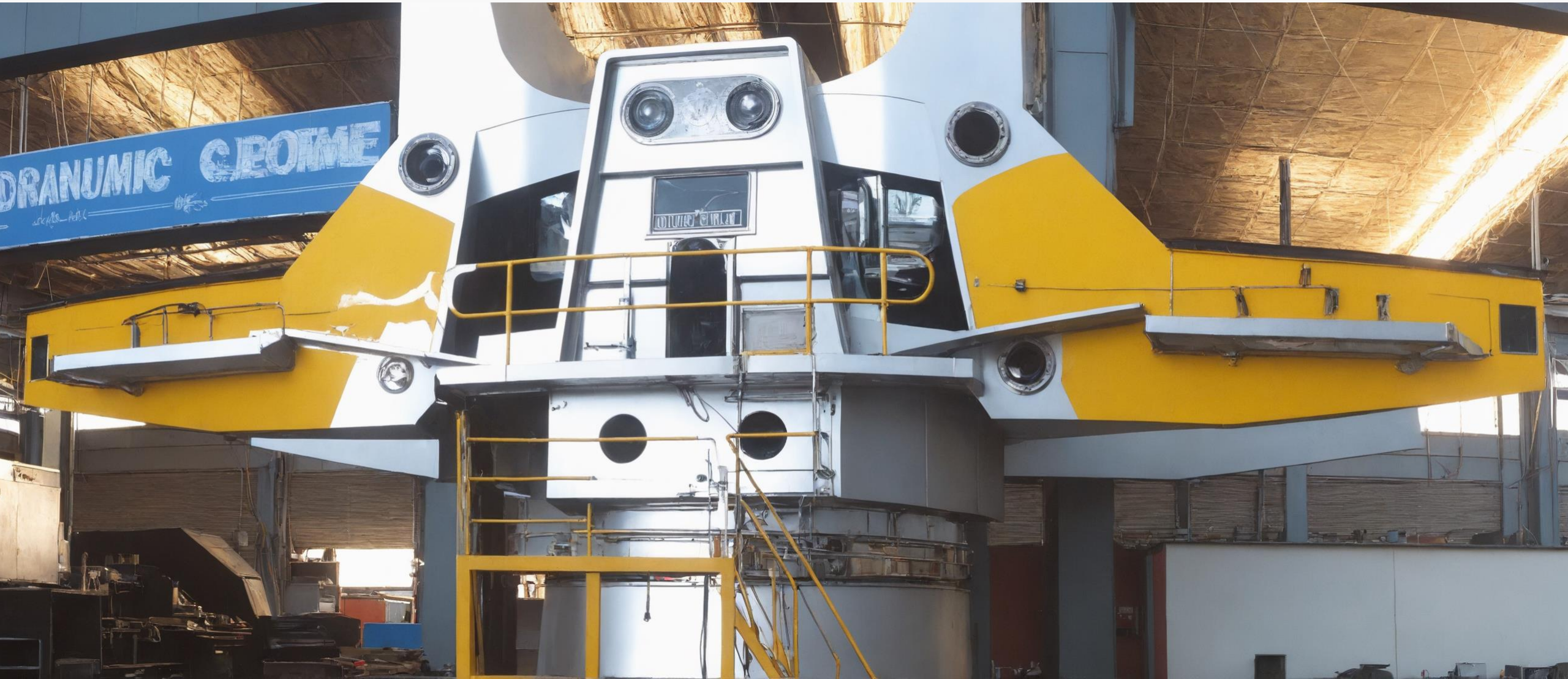
- Design and manufacture of equipment sets of coke dry quenching plants with capacity from 75 to 260 t/hour.
- Bulldozers with remote control up to 200 m for work in especially dangerous places for personnel.

- Water-cooled copper tuyere for blast furnaces
- Tools for disassembly and assembly of lances
- Refractory materials for blast furnaces

- Iron ladles from 50 to 450 tons and carts, mixer trucks from 150 to 450 tons
- Cast iron and steel ladles from 20 to 397 tons
- Solid slag ladles from 5 to 40 m3, slag trucks

- Special vehicles for transportation and rolling of slag bowls
- Special equipment for transportation of buckets with pig iron, liquid metal, coils, slabs

- Hulls and equipment for converters from 30 to 150 tons
- Refractories for iron ladles, steel ladles and converter maintenance materials
- Furnace ladle covers
- Steel casting turntables up to 520 tons



- Slab and billet continuous casting plants
- Equipment for casting pig iron

Flue gas cleaning equipment and technology

First-class technologies and services in flue gas desulfurization and denitrification, high-efficiency electrostatic dust removal, fine dust suppression, blast furnace pressure equalization, gas recovery during venting and ultra-low environmental emissions.

Additional information

Cone-less charging devices for blast furnaces

Tandem boreless blast furnace loading system

The barrel-less bell-type roof equipment of tank type is the upper sealing valve, material reservoir, material flow control valve, etc. D. Between the hopper and the lower sealing valve in the feeding equipment, and the upper and lower furnace roof equipment.

Its characteristics:

- The bunker and pressure tank are on the center line of the blast furnace, the web is homogeneous and not segregated (that is, there is no tank sealing effect), and the gas curve at the top of the furnace more easily meets the requirements of the iron making process, which is conducive to the smooth movement of the blast furnace;
- For blast furnaces with the same effective volume equipment, for the string tank furnace roof occupies less space in the upper platform structure than the parallel tank furnace roof equipment.

Blast furnace volume = 500-6000 m^3
Central pipe diameter DN = 500 ~ 800 mm
Upper working pressure ≤ 0.33 MPa
Operating temperature:
Normal = 150 ~ 350 °C
Abnormal = 600 °C
Maximum = 900 °C
Trough inclination range = 0 ~ 50°

Chute slope velocity:
Normal = 0 ~ 3 °/s
Maximum = 6 °/s
Chute tilt accuracy = ±0.1 °
Chute rotation speed:
Frequency conversion 0 ~ 12 rpm
Normal 8 rpm

Parallel boreless loading system of tank-type blast furnace

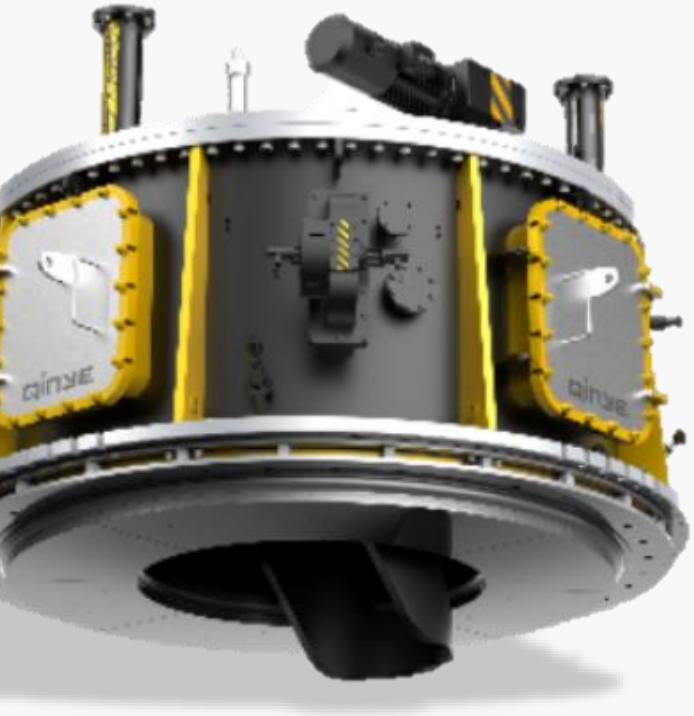
Parallel barrelless tank furnace roof equipment is a parallel connection of the upper sealing valve, tank, material flow control valve, etc. D. Between the hopper and the lower sealing valve in the loading equipment.

Characterized by:

- Two groups of top sealing valves, reservoirs and flow control valves are symmetrical to the blast furnace center line, and in blast furnace production, the two reservoirs work alternately, that is, in this case, one reservoir is loaded into the furnace, the other reservoir receives the loading system for charging, and the flow capacity of the thrashing line is stronger than the top equipment of the tandem reservoir without socket.

Blast furnace volume = 2500-6000 m^3
Central pipe diameter DN = 500 ~ 800 mm
Upper working pressure ≤ 0.33 MPa
Operating temperature:
Normal = 150 ~ 350 °C
Abnormal = 600 °C
Maximum = 900 °C
Trough inclination range = 0 ~ 50°

Chute slope velocity:
Normal = 0 ~ 3 °/s
Maximum = 6 °/s
Chute tilt accuracy = ±0.1 °
Chute rotation speed:
Frequency conversion 0 ~ 12 rpm
Normal 8 rpm



Spacer

The spreader is suitable for top loading equipment of barrelless bell-shaped furnace, installed on the steel ring of furnace roof in the blast furnace head, and the fabric chute is suspended and driven to rotate and tilt to realize the role of ring, spiral, fixed point, fan, central coking and other forms of fabric.

Function:

- Provides power to rotate and tilt the fabric chute to perform the fabric function (ring, spiral, fixed point, fan, center focus).

Function parameters:

- Rotation speed: 0 ~ 12rpm stepless speed control, recommended normal speed 8rpm
- Recommended normal working angle: 5 ~ 45 °
- Chute maintenance and replacement angle: 30 ° ~ 45 °
- Traditional use of nitrogen sealing and circulating water cooling, better sealing and high temperature resistance, stable and reliable performance, easy to maintain and operate.

Center pipe diameter DN = 500 ~ 800 mm

Upper working pressure ≤ 0.33 MPa

Operating temperature:

Normal = 150 ~ 350 °C

Abnormal = 600 °C

Maximum = 900 °C

Trough inclination range = 0 ~ 50°

Chute tilt rate:

Normal = 0 ° ~ 6 °/s

Maximum = 6 °/s

Chute tilt accuracy = ±0.1°

Chute rotation speed:

Frequency conversion 0 ~ 12 rpm

Normal 8 rpm

Loading chute

The loading chute is suitable for top loading of furnace equipment without bell, hanging on the rotating body of the distributor and acting with it, playing the role of receiving the charge and evenly distributing the charge to the required part of the furnace throat.

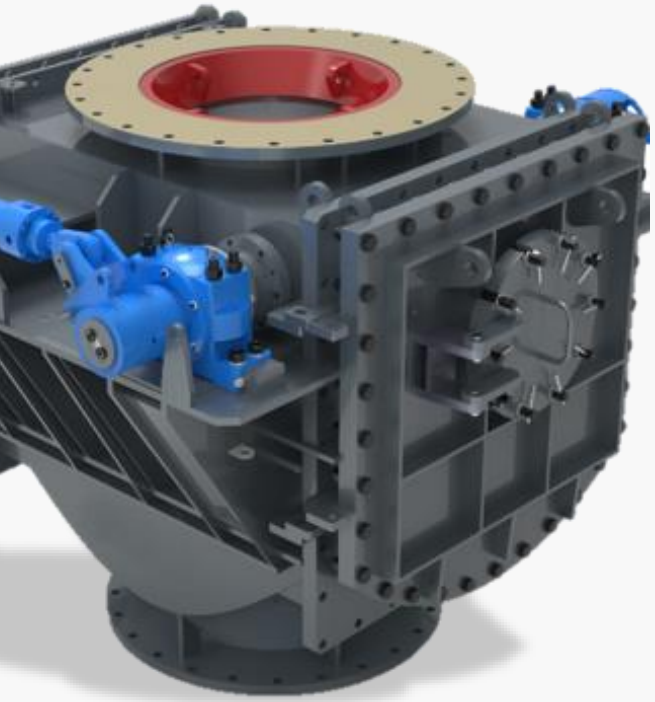
Function:

Receive ore and coke transferred by the furnace roof equipment above the distributor, move with the rotating distributor body and perform the distribution function to the blast furnace according to the requirements.

Feature:

- High temperature resistance, anti-wear;
- According to the requirements of iron manufacturing process, it can be made into round or square export;
- Snap-on design, the chute is equipped with collapsible wear-resistant liner, which is convenient and quick to repair and replace;
- It can be turned into an anti-fall structure, which is firmly installed and not easy to fall off.

Length= 1.6 ~ 5 m
Series = 730、940、1090mm
Operating temperature
normal 150 ~ 350 °C
abnormal 600 °C
maximum 900 °C



Lower sealing valve

Bottom sealing valve is suitable for top loading of furnace equipment without material socket, installed below the material flow control valve and above the corrugated compensator on the distributor, and seals the roof of the furnace when the tank takes charge to prevent pressurized gas leakage in the furnace.

Function:

When the top sealing valve is open and the tank is loaded with materials, the furnace roof is sealed to prevent pressurized gas from leaking into the furnace.

Feature:

It adopts the sealing structure of disk valve plate opening and closing, and the sealing is reliable.

Nominal diameter DN = 500 ~ 1000 mm

Blast furnace top pressure, ≤ 0.33 MPa

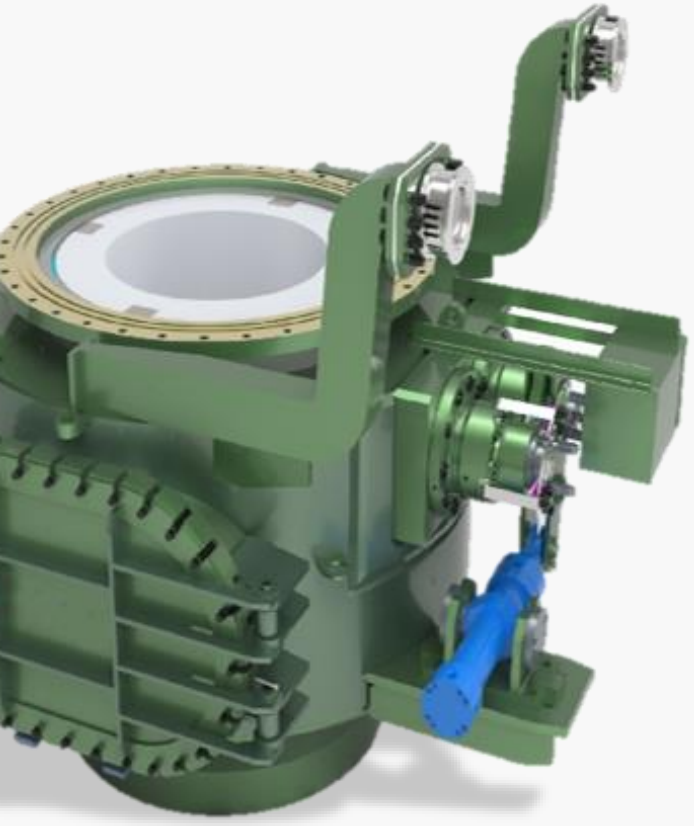
Operating temperature ≤150 °C

Differential opening and closing pressure ≤0.01 MPa

Valve plate opening/closing time (time):

Single action type 3

Double action type 8



Material flow control valve

The material flow control valve is suitable for the upper feeding equipment of barrelless furnace, installed under the tank and above the lower sealing valve, and plays the role of regulating the charge flow when the tank feeds the charge into the blast furnace.

Function:

When the charge in the tank is fed into the blast furnace, adjust the injection speed or time to control the charge flow.

Feature:

- According to the needs of iron making process, the feed mouth area can be adjusted at any time
- High precision control
- Wear resistance

Nominal diameter DN = 550 ~ 800 mm

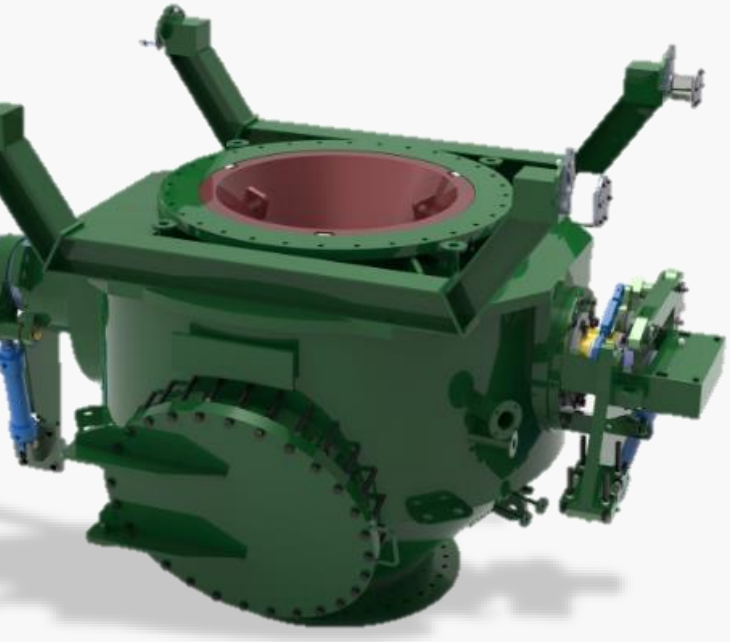
Blast furnace top pressure, ≤ 0.33 MPa

Operating temperature ≤150 °C

Valve plate open/close time = 3 s

Valve plate start/stop positioning accuracy ±0.1 °

Lower valve housing



The lower valve box fits the upper charging equipment of the barrelless furnace, installed under the tank and above the corrugated compensator on the distributor, and has the functions of lower sealing valve and material flow control valve at the same time. When the tank receives the charge, it plays the role of sealing the roof of the furnace; When the tank feeds the charge into the blast furnace, it plays the role of regulating the charge flow.

Function:

When the top sealing valve is open and the tank receives the charge, the furnace roof is sealed to prevent pressurized gas from leaking into the furnace; When the charge in the tank is fed into the blast furnace, adjust the injection rate or time to control the charge flow.

Feature:

- It has the functions of bottom sealing valve and material flow control valve at the same time, and has a compact structure;
- It adopts the sealing structure of disk valve plate, opening and closing, and the sealing is reliable;
- According to the needs of iron production process, the area of the passage port can be adjusted at any time, and the control accuracy is high;
- Wear resistance.

Nominal diameter DN 500 ~ 1000 mm

Blast furnace top pressure, ≤ 0.33 MPa

Operating temperature ≤150 °C

Differential opening and closing pressure ≤0.01 MPa

Full stroke flow valve plate open/close time 3 s

Opening/closing time of the bottom sealing valve plate 8 s

Tanks

The tank is suitable for top loading equipment of barrelless kiln, installed under the retaining valve or top sealing valve, above the material flow control valve or bottom valve box, and plays the role of storing the charge under normal pressure and feeding the charge into the blast grate under the set pressure

Function:

Store charge and maintain top pressure when shipping charge to the blast furnace.

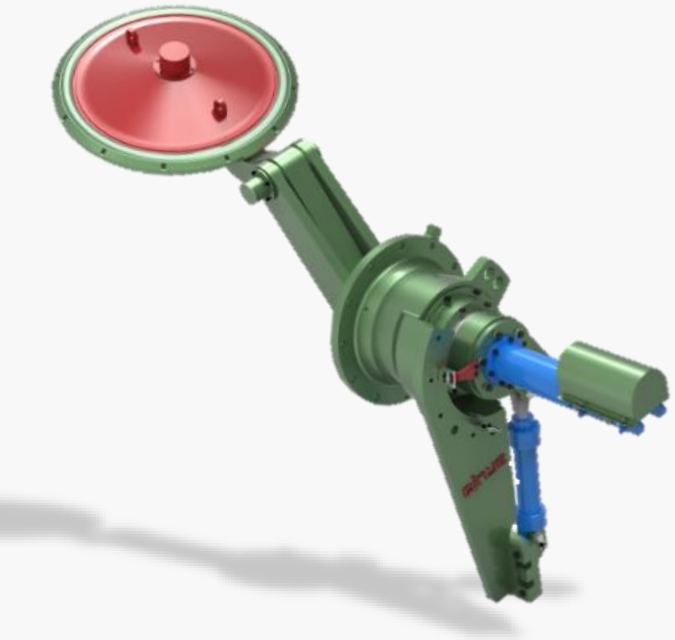
Feature:

- Good strength, inner wall wear
- Excellent structure and large effective volume
- The tank can be integrated with top sealing valve, with compact structure and reduced height of furnace roof equipment
- Tandem tank can be equipped with receiving trays and inserts to improve tank performance
- Weighing, radar and other material level detection devices can be configured according to the needs.

Volume = 10 ~ 110 m3

Blast furnace top pressure, ≤ 0.33 MPa

Operating temperature ≤150 °C



Upper sealing valve

The top sealing valve is suitable for top loading equipment of barrelless furnace, installed under the retaining valve and above the tank, and plays the role of sealing the upper mouth of the tank when the tank is leveled and the charge is fed into the blast furnace.

Function:

The upper mouth of the tank is sealed when a pressure equalization operation is performed to increase tank pressure before loading the tank into the blast furnace.

Feature:

- It adopts the sealing structure of disk valve plate opening and closing, and the sealing is reliable
- According to the needs of the site, it can be made into one valve and component integrated with the tank.

Nominal diameter DN = 700 ~ 1600 mm

Blast furnace top pressure, ≤ 0.33 MPa

Operating temperature ≤150 °C

Differential opening and closing pressure ≤0.01 MPa

Valve plate opening/closing time:

Single action type 3

Double action type 8

Shut-off valve

Retention valve (also known as top gate) is suitable for the top loading equipment of barrelless furnace, installed under the hopper, above the tank and the top sealing valve, and plays the role of sealing and dumping the charge into the hopper.

Function:

The charge in the locked hopper automatically opens and closes according to process requirements, and the charge in the hopper is periodically loaded into the pressure bearing tank.

Feature:

- One hydraulic cylinder drives the connecting rod mechanism to realize the opening and closing of two ball valve plates around one axis
- According to users' needs, it is divided into two forms: the connecting rod mechanism is divided on both sides and concentrated on one side (see figure for form). In which the connecting rod mechanism is concentrated on one side of the retaining valve, and the two valve plates are driven by coaxial solid shafts and hollow shafts.

Nominal diameter DN = 650 ~ 1450 mm
Working pressure = atmospheric pressure
Operating temperature = room temperature
Valve plate open/close time (time) = 3 sec

Hopper

The hopper is suitable for top loading equipment of barrelless furnace, installed under the bend of charge belt conveyor or wagon material, and above the material retention valve, and plays the role of receiving and storing the charge under normal pressure.

Function:

Receives and stores the charge transferred by blast furnace equipment for raw material transportation.

Feature:

- Excellent structure, large effective volume, inner wall wear;
- The hopper can be equipped with receiving chute and guide to improve the performance of the hopper.

Volume, = 10 ~ 110 m3

Working Pressure = Atmospheric

Operating temperature = Room temperature

Top gutter design

The upper chute fits the parallel tank of the barrelless furnace charging equipment, installed under the charge belt head wheel cover, above the tank and the upper sealing valve, and plays the role of charging the said tank.

Function:

The rotor chute is driven by hydraulic cylinder, and the charge transferred by raw material handling equipment is loaded into the designated tank.

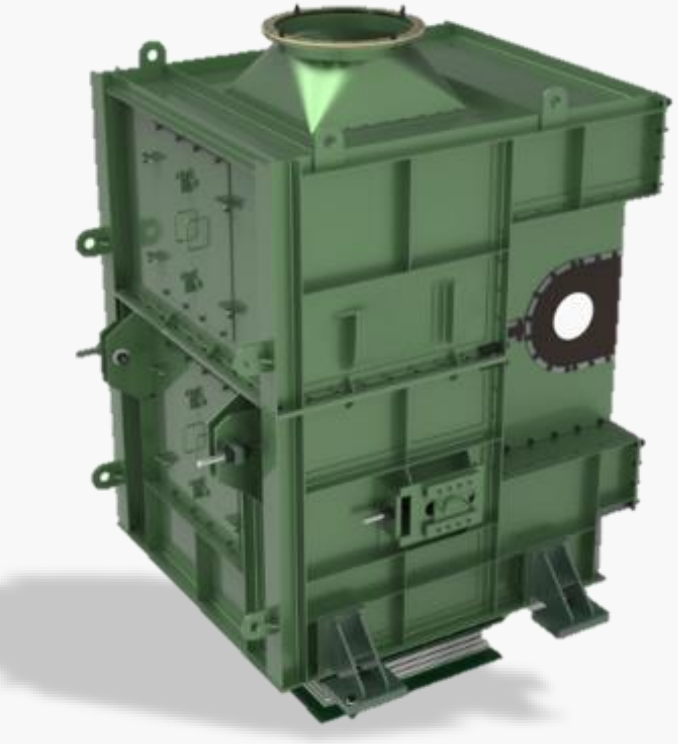
Feature:

- Meeting the process requirements of two tanks for separate loading;
- The inner lining plate of the rotary chute is wear-resistant, and there are two material structures of feed type liner and ceramic liner are optional.

Nominal diameter DN = 900 ~ 1250 mm

Working Pressure = Atmospheric

Operating temperature = Room temperature



Head wheel cover

The head wheel cover is suitable for top loading equipment of barrelless furnace, installed on the head wheel of charge belt conveyor, covering the head wheel and covering the connection with furnace roof equipment to reduce dust.

Function:

Cover the head wheel of conveyor belt charge and close the connection to the furnace roof equipment to reduce dust.

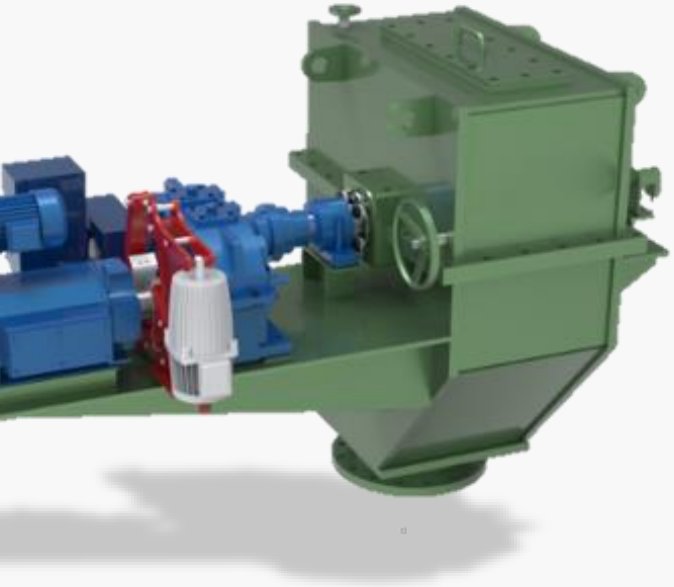
Feature:

Angled retaining wall directs the charge to fall into the furnace roof equipment on a reasonable trajectory.

Applicable width of head wheel belt = 1400；1600、2000、2200 mm

Working pressure = Atmospheric

Working temperature = Room temperature



Ruler

The test ruler is suitable for top loading equipment of barrelless furnace, installed in the top of the blast furnace body, and plays the role of detecting the depth of the material line in the furnace.

Function:

In blast furnace production, the depth of the feed line in the furnace is determined.

Feature:

- Reliable sealing and safe to use;
- High detection accuracy;
- Compact structure and easy to operate.

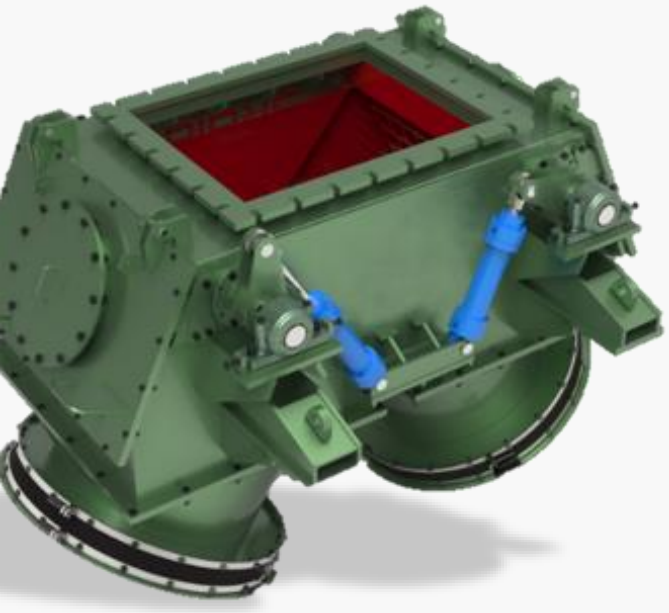
Detection line depth = 6, 10, 24 m

Working pressure = 0.2 ~ 0.33 MPa

Main operating temperature ≤250 °C

Ruler lifting speed ≤0.6 m/sec.

Ruler descent speed ≤0.3 m/s



Flap valve

The shut-off valve is suitable for parallel barrelless furnace roof loading equipment installed under the hopper, above the tank and the upper sealing valve, to receive charge and charge the said tank.

Function:

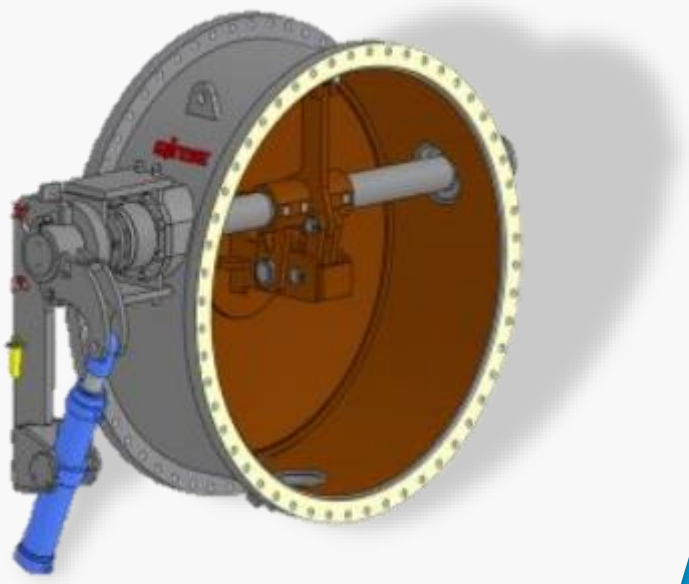
Through the hydraulic cylinder to drive the rotary valve plate, the hopper can store the charge transported by the raw material transportation equipment, and also has the function of loading the charge transferred by the raw material transportation equipment into the designated tank.

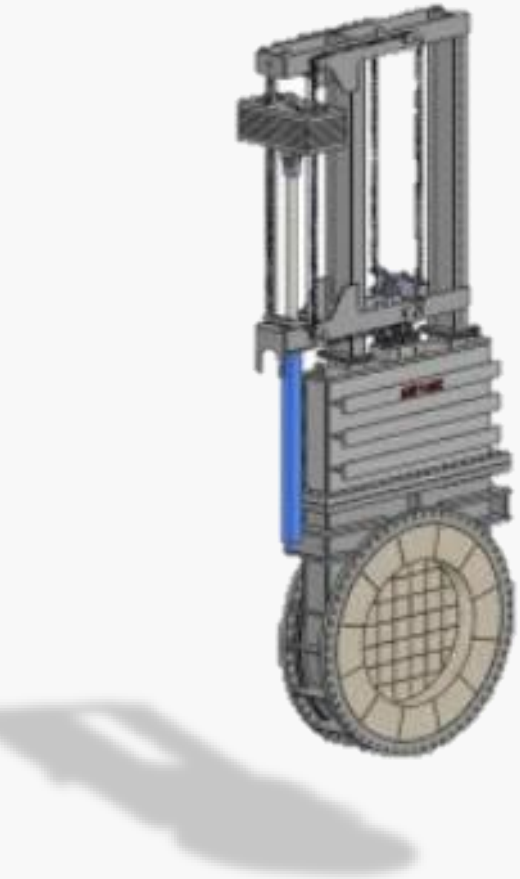
Feature:

- A composite hopper can store a specific process charge;
- Meeting the technological requirements of two tanks for separate loading;
- The valve plate liner is wear-resistant, and there are three structures of feeding material liner, ceramic liner and wetting welding cemented carbide.

Nominal diameter DN = 1250 mm
Working pressure = atmospheric
Operating temperature = room temperature
Valve plate open/close time = 3 sec

Metallurgical valves for blast furnaces





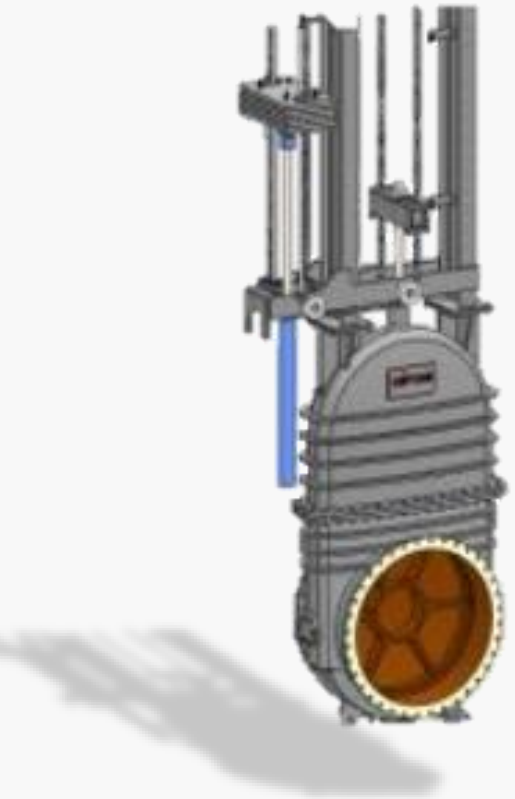
Hot air damper

Suitable for hot blast furnace blast furnace system, plays the role of cutting, used as hot air valve, backflow prevention valve.

Actuator mode:

- Hydraulic actuator (single hydraulic cylinder actuator or double hydraulic actuator), electric actuator, pneumatic actuator.
- Valve body, valve plate sealing surface is inseparably forged with internal lining, thermal insulation materials and can be combined with cooling water monitoring and testing instruments.
- Main materials: high quality carbon structural steel, pressure vessel steel, stainless steel, special heat resistant steel.

Nominal bore DN800 ~ DN2200 mm
Working pressure ≤0.55 MPa
Opening and closing pressure ≤0.01 MPa
Applicable temperature ≤1450 °C
Hot applicable media
Cooling water pressure 0.4 ~ 0.8 MPa
Cooling water volume:
Valve body 25 ~ 60 t/h
Valve plate: 15 ~ 60 t/h



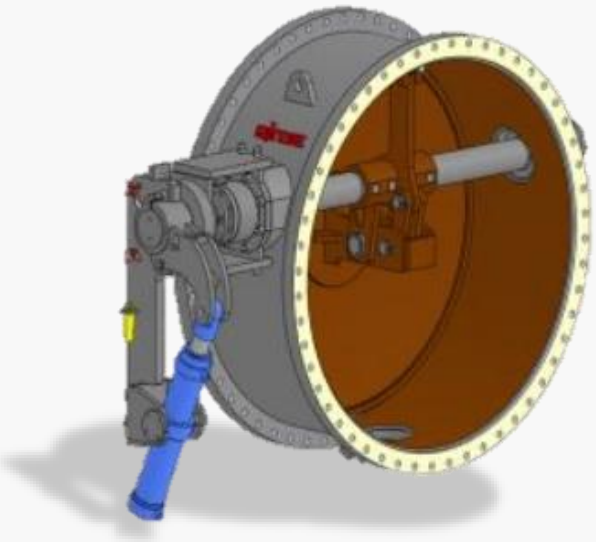
Latch

Suitable for bypass pipes such as chimney and cold air of blast furnace hot blast furnace system.

Drive Mode:

- Manual device drive, hydraulic drive, electric device drive or customization according to customer requirements.
- Carbide sealing surface.
- Vertical installation.
- Basic material: ZG230-450, high quality alloy steel.

Nominal bore DN150 ~ DN2400 mm
Working pressure ≤0.6 MPa
Opening and closing pressure ≤0.01 MPa
Applicable temperature ≤500 °C
Test pressure:
Body 1.5 times working pressure,
Seal 1.1 times working pressure
Applicable media
Gas, air, flue gases



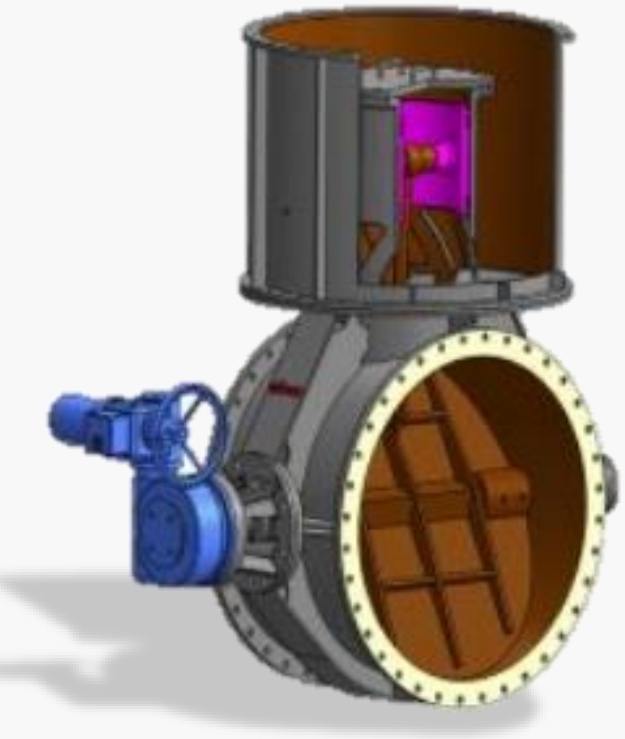
Throttle connecting rod

Mainly suitable for hot blast furnace blast furnace system (including preheating furnace), as cold air valve, gas shut-off valve, gas combustion valve, combustion air shut-off valve, smoke valve, in the system to play a shut-off role, can replace the gate valve of the same purpose.

Actuator mode:

- Hydraulic actuator, electric actuator drive.
- Due to its own characteristics, the valve has no relative sliding between seal pairs during the opening and closing process, and the seal pairs are frictionless, which ensures the durability and reliability of the seal.
- Welded design is adopted, which better reflects the general characteristics of butterfly valves: small size, light weight, convenient maintenance and other advantages.

Nominal bore DN700 ~ DN3000 mm	Differential opening and closing pressure ≤0.02 MPa
Working pressure ≤0.6 MPa	Applicable temperature (°C)
Opening and closing pressure ≤0.01 MPa	Type of seal pair
Applicable temperature -29 ~+530 °C	Type X (≤ 250°C), Type H (≤ 530°C)
Test pressure:	Applicable media
Body 1.5 times working pressure,	Gas, air, flue gases
Seal 1.1 times working pressure	



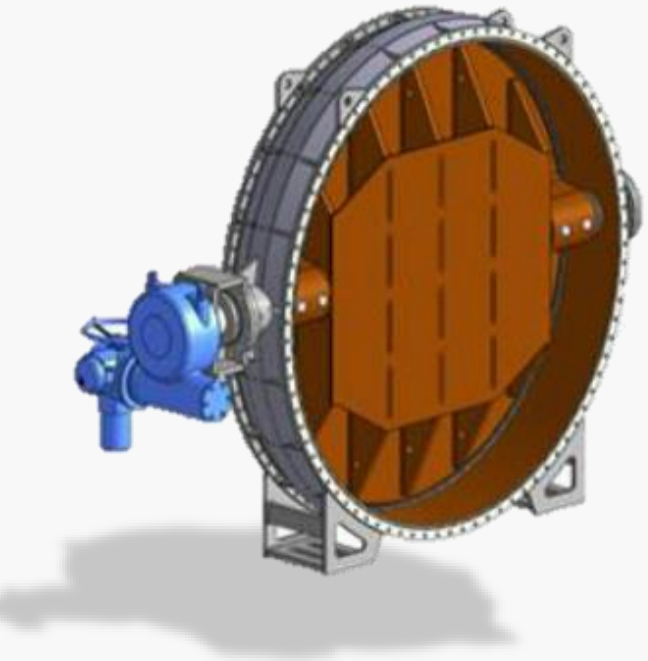
Cold air ventilation valve

It is mainly suitable for the cold air main pipe of blast furnace cold air system of blast furnace and plays the role of dispersing cold air.

Drive Mode:

- Hydraulic drive, fly-by-wire unit drive. The drive unit has an automatic signal adjustment function.
- The air outlet of the ventilation unit can be equipped with a silencer.
- The eccentric cold air vent has new energy saving characteristics.
- Basic material: high quality carbon structural steel.

Nominal bore DN500 ~ DN2000 mm
Working pressure ≤0.25 ~ 0.50 MPa
Applicable temperature ≤250 °C
Test pressure:
Body 1.5 times working pressure,
Seal 1.1 times working pressure
Body Material:
High quality carbon steel



Eccentric throttle valve

Suitable for high temperature gas (gas, air, flue gas, etc.) Piping system in metallurgy, mining, cement, medicine, chemical industry, power, city heating and other industries, and used as opening and closing equipment.

Actuator mode:

- Hydraulic drive, electric drive.
- It adopts the shape of metal composite O-ring surface sealing structure, the sealing effect is good, and the sealing test can achieve ordinary invisible leakage.
- It adopts integral welding structure, which has the advantages of small size, light weight and convenient maintenance.

Nominal bore

Nominal pressure ≤ 0.6 MPa, DN200 ~ DN1000 mm

Nominal pressure ≤ 0.25 MPa, DN700 ~ DN4000

Working pressure

Nominal pressure ≤ 0.6 MPa, is ≤0.6

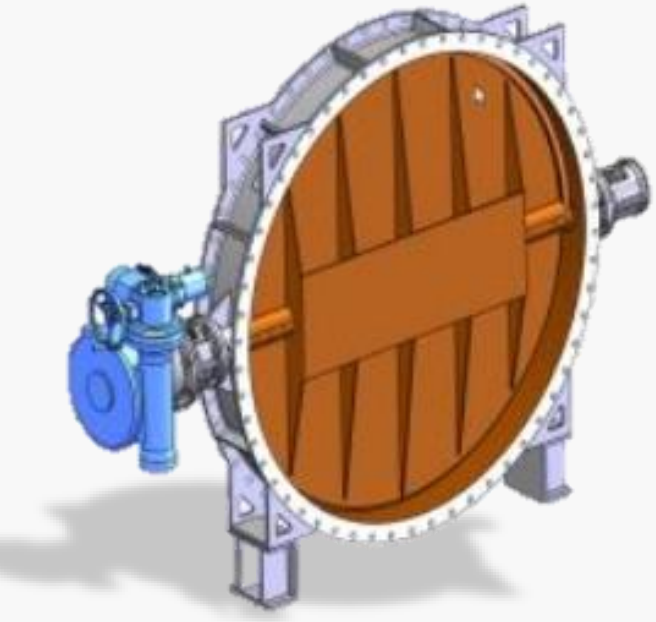
Nominal pressure ≤0.25 MPa, is ≤0.02

Applicable temperature ≤500 °C

Test pressure:

Body 1.5 times working pressure,

Seal 1.1 times working pressure



Ventilated throttle valve

Mainly suitable for gas (gas, air, flue gas, etc.) Piping system in metallurgy, mining, cement, medicine, chemical industry, power, city heating and other industries, and used as opening and closing or flow control equipment.

Actuator Mode:

- Manual actuator of the device, hydraulic actuator, electric actuator.
- The valve body and door panel have integral welded structure, with short structural length, light weight, good rigidity and small flow resistance.
- When the valve is used as an automatic throttle control valve, if the actuator is electric, Denso has 4-20mA input and output signals; If the actuator is hydraulic, the hydraulic cylinder has a displacement sensor, and its input and output signals are 4-20mA or with digital signals.

Nominal bore

Nominal pressure ≤ 0.6 MPa, DN500 ~ DN2000 mm

Nominal pressure ≤ 0.25 MPa, DN500 ~ DN6000

Test pressure:

Body 1.5 times working pressure,

Seal 1.1 times working pressure

Applicable temperature ≤250 °C

Applicable media:

Gas, air, flue gases

Ventilation valve

Suitable for the top of gas lift pipe on the roof of blast furnace and used for gas dispersion valve in the top of furnace.

Actuator mode:

- Hydraulic actuator.
- The valve has no counterweight, and the valve seal and pipeline pressure are controlled by a disk spring.
- The valve hinge point adopts lubricant to ensure flexible operation.
- It adopts cemented carbide and rubber double seal, and the valve plate has self-centering function, and the seal is reliable.
- Main material: high quality carbon structural steel.

Nominal bore DN250 ~ DN1000 mm

Working pressure = 0.2 ~ 0.3 MPa

Applicable temperature ≤500 °C

Applicable media = coal gas

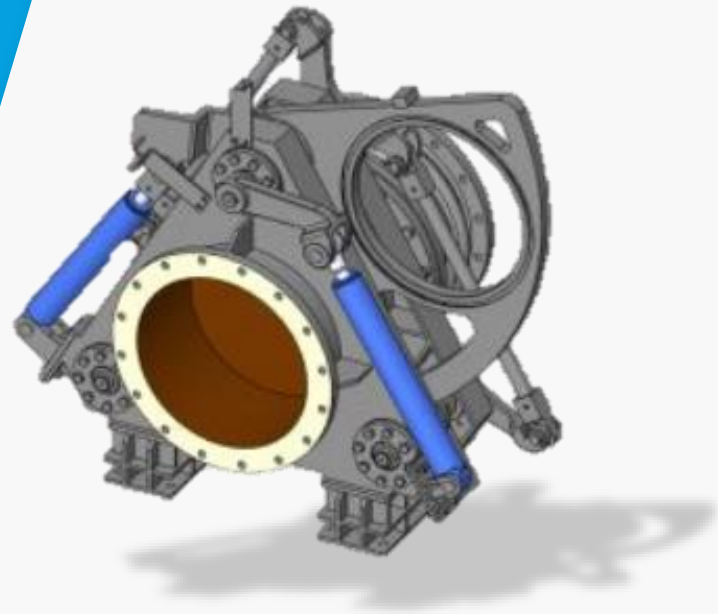
Angle inclusion = 1404

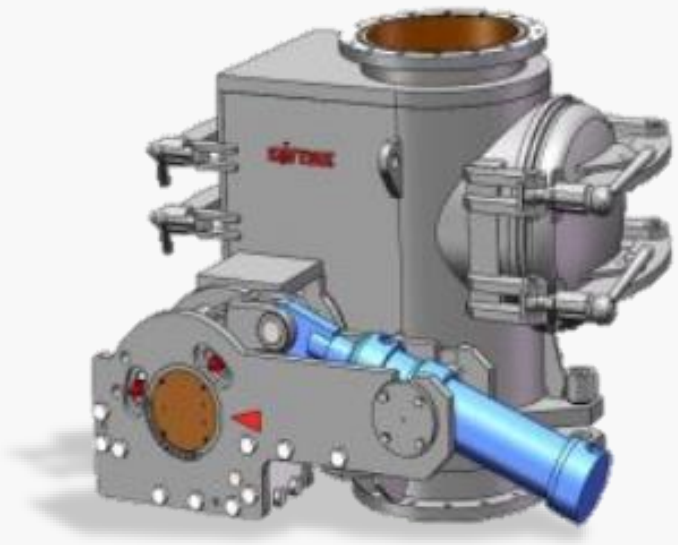
Applicable temperature ≤250 °C

Applicable media:

Gas, air, flue gases

Metallurgical valves for blast furnaces from 179 to 5800 m3





Equalizing safety relief valve

Suitable for blast furnace roof pressure equalization system and used as a furnace roof pressure equalization outlet valve.

Actuator mode:

- Hydraulic Drive.

Main material:

- High quality carbon structural steel. It adopts soft and hard double seal of cemented carbide and silicone rubber, and the valve plate has self-centering function, and the seal is reliable.
- When the valve is closed, it is sealed by the pressure of the medium and the action of the hydraulic cylinder, and the valve plate can be flushed out of the medium after the valve is opened.

Nominal bore

DN250 ~ DN650 mm

Working pressure ≤0.3 MPa

Test pressure:

Body 1.5 times working pressure;

Seal 1.1 times working pressure;

Sealing grade A

Differential pressure ≤0.3 MPa

Applicable temperature ≤250 °C

Applicable media:

Semi-pure gas

Aasot

Shut-off valve

Suitable for blast furnace gas dust extraction system, which plays the role of media cut-off and is used as dust extraction shut-off valve.

Movement mode: electric winch.

- Double bell type equipped with vapor seal.
- Tungsten carbide sealing surface.
- Basic material: ZG230-450, high quality alloy steel.

Nominal bore DN1100 ~ DN4000 mm

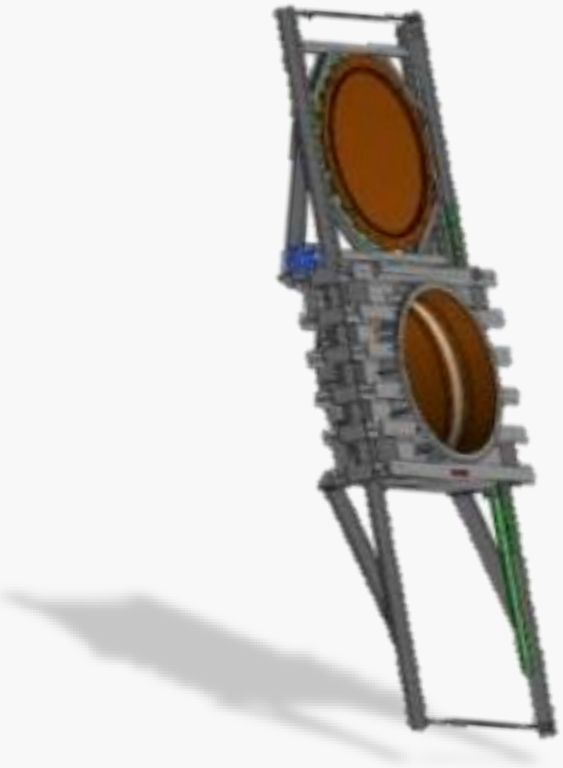
Medium pressure ≤0.25 MPa

Differential opening and closing pressure ≤0.01 MPa

Applicable temperature ≤450 °C

Applicable media:

Desert gas



Dust collector valve

Suitable for the exhaust gas pipeline of cyclone dust extraction system, which can replace the traditional blocking valve of bell dust collector and can be used as gas isolation valve.Small footprint, reliable sealing, electro-hydraulic control.

Actuator mode:

- Electric walking and hydraulic clamping.

Base material:

- The valve plate consists of a through hole and a blind plate, the stroke of the insert plate is electric, and the seal of the insert plate is hydraulic. The sealing surface is a rubber soft seal, which is controlled by a spring cylinder to achieve sealing.
- The movement of the insert plate must be carried out when the seal is loosened.

Nominal bore

DN2600 ~ DN3000 mm

Working pressure ≤0.3 MPa

Test pressure:

Body 1.5 times working pressure;

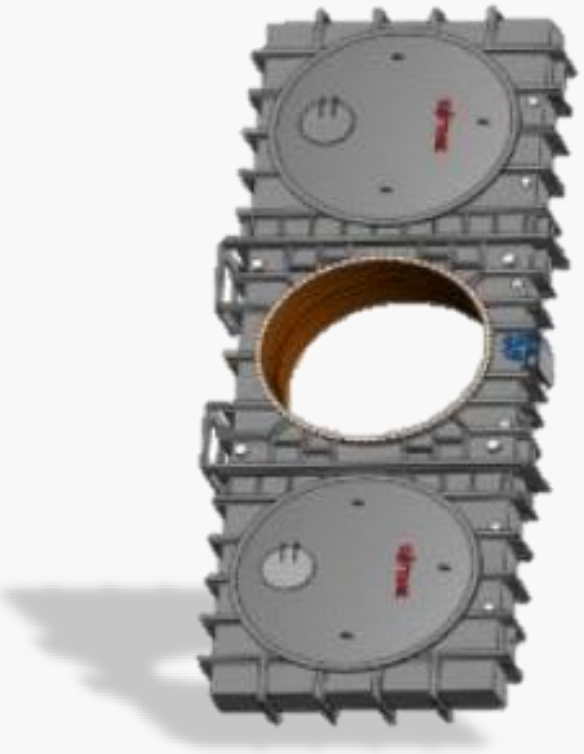
Seal 1.1 times working pressure;

Sealing grade A

Differential pressure ≤≤0.03 MPa

Applicable temperature ≤250 °C

Applicable media: Coal gas



Insertion valve

Insertion valve is suitable for blast furnace gas pipeline, used as gas isolation valve. The design forms are fully closed and open, fully enclosed, no external gas leakage, can be installed indoors, safe and reliable; The open type has external leakage and is suitable for outdoor installation.

- Drive mode: full hydraulic drive, full electric device drive, electric walking and hydraulic clamping.
- The valve plate consists of through hole and blind plate, using rubber soft seal, the walking and sealing of the valve plate are controlled by the driving device respectively and sequential action. The movement of the valve plate should be carried out when the seal is loosened.
- Basic material: High quality carbon structural steel.

Nominal bore DN700 ~ DN3400 mm

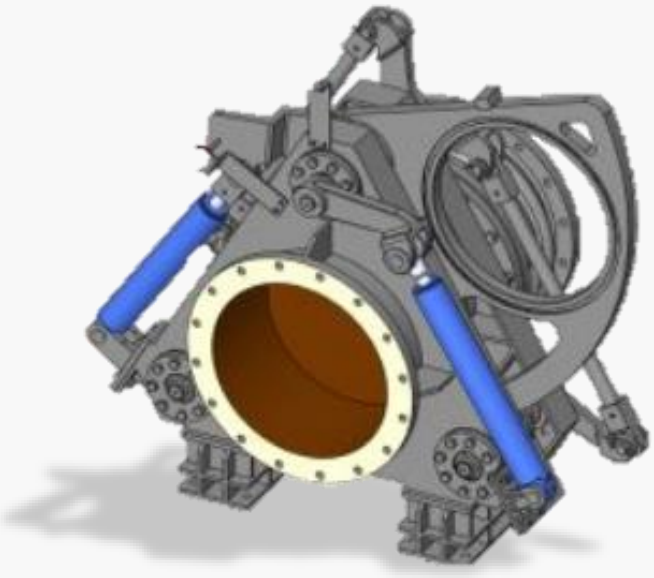
Working pressure ≤0,25 MPa

Sealing degree A

Differential pressure ≤≤0.03 MPa

Applicable temperature ≤250 °C

Applicable media: Coal gas



Sector blind valve

Suitable for blast furnace gas pipeline, used as gas isolation valve.

- Actuator mode: manual actuator of the device, hydraulic actuator, electric actuator.
- Valve opening is realized by converting the position of the through hole and blind plate on the plug plate, and the conversion of the insertion plate should be done in the case of loosening the seal, and sequential action.
- Adopt rubber soft seal.
- Can only be installed vertically.
- Basic material: carbon steel.

Nominal bore DN700 ~ DN3400 mm

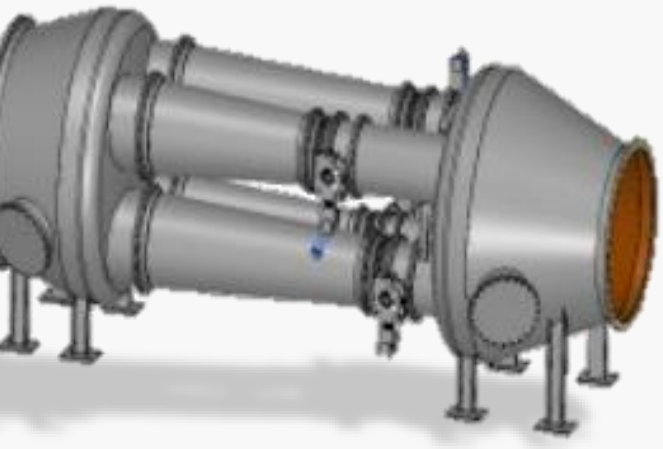
Working pressure ≤0,25 MPa

Sealing degree A

Differential pressure ≤≤0.03 MPa

Applicable temperature ≤250 °C

Applicable media: Coal gas

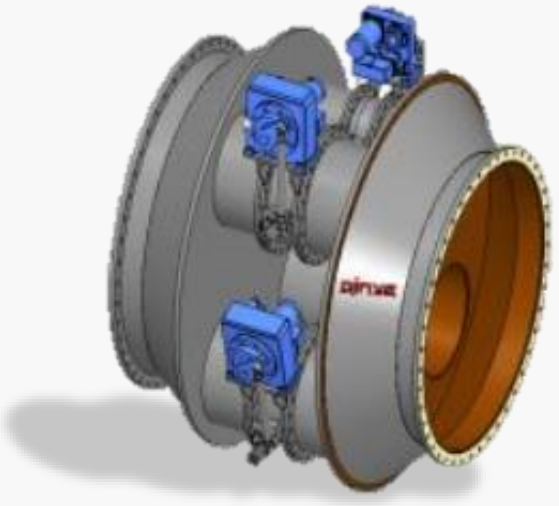


Pressure control valve group

Suitable for pipeline gas recovery system after blast furnace gas dust removal system and is the key equipment to control the pressure in the furnace roof and ensure high pressure operation.

- Actuator mode: hydraulic actuator, electric actuator drive.
- The pressure reducing valve group consists of several sealed eccentric butterfly valves, each of which is driven by an independent actuating device.
- A compensation connection may be mounted on a spigot of the reducing valve group, which is convenient for replacing the throttle valve on the spigot.
- The anechoic reduction valve group consists of front and rear heads, progressive pipes, compensators and other components which have damping and noise reduction effects.

Nominal bore DN1600 ~ DN3000 mm
Working pressure ≤0.25 MPa
Differential pressure ≤≤0.03 MPa
Applicable temperature ≤250 °C
Applicable media: Coal gas

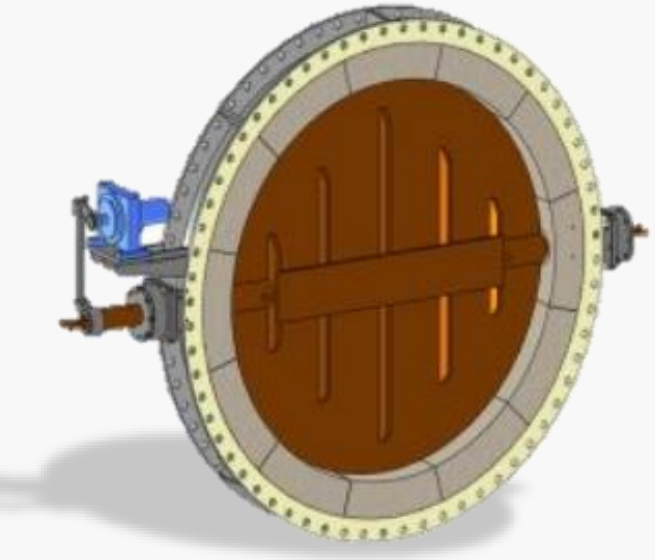


Pressure control manifold

Suitable for pipeline gas recovery system after blast furnace gas dust removal system and is the key equipment to control the pressure in the furnace roof and ensure high pressure operation.

- Actuator mode: hydraulic actuator, electric actuator drive.
- The pressure reducing valve group consists of several sealed eccentric butterfly valves, each of which is driven by an independent actuating device.
- A compensation connection can be installed on the branch pipe of the pressure reducing valve group, which is convenient for replacing the throttle valve on the branch pipe.

Nominal bore DN1600 ~ DN3000 mm
Working pressure ≤0.25 MPa
Differential pressure ≤≤0.03 MPa
Applicable temperature ≤250 °C
Applicable media: Coal gas

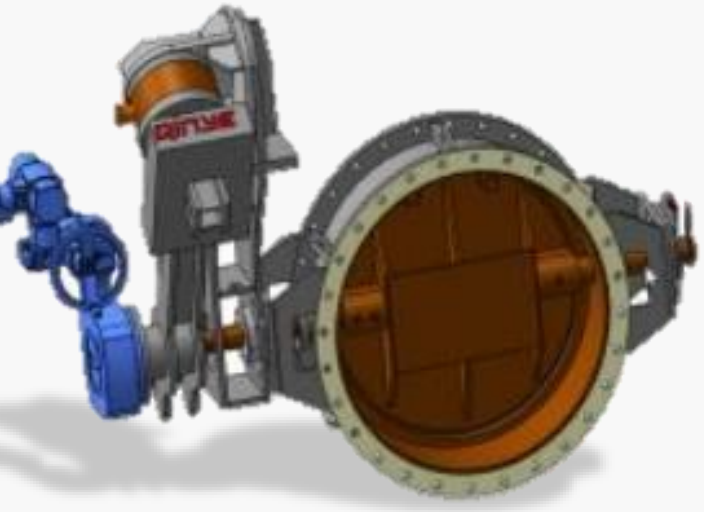


High temperature throttle valve

Suitable for high-temperature piping systems in metallurgy, mining, cement, medicine, chemical industry, power, city heating and other industries, and used as opening and closing or flow control equipment.

- Actuator mode: actuator mode: manual actuator of the device, hydraulic actuator, electric actuator.
- The valve body and valve plate of this series butterfly valve have integral welded structure with short structure length and light weight.
- The main body of this series butterfly valve is made of heat-resistant steel material and designed with water-cooled structure, which can meet different temperature needs.
- When this series valves are used as automatic control butterfly valves, the electric valve can transmit digital or analog signals by adjusting electric devices; The hydraulic cylinder valve with displacement sensor can output digital or analog signals.
- Basic materials: choose suitable materials according to different working conditions.

Nominal bore DN500 ~ DN6000 mm	Cooling water pressure 0.25 ~ 0.8 MPa
Nominal pressure ≤0.25 MPa	Cooling water quality
Test pressure:	Service water
Body: 1.5 times working pressure	Applicable media
Seal: 1.1 times working pressure	Smoke, air
Applicable temperature ≤1200 °C	
Cooling water volume 0.5 ~ 5 t/h	



Quick cut throttle valve

Suitable for TRT system, gas pipeline system, gas power generation system and other gas pipeline systems, and also used as quick opening and closing equipment in emergency conditions.

- Actuator mode: pneumatic actuator, hydraulic actuator, electric actuator.
- The actuating device is equipped with a buffer mechanism, which can quickly eliminate the impact of the valve when it opens and closes.
- The valve can be operated in conjunction with the control system, and when the system is in a tight state (such as power failure), the valve can be opened and closed quickly.
- The basic structure of the valve can be selected eccentric throttle and connecting rod throttle.
- It adopts integral welding structure, which has the advantages of small size, light weight and convenient maintenance.

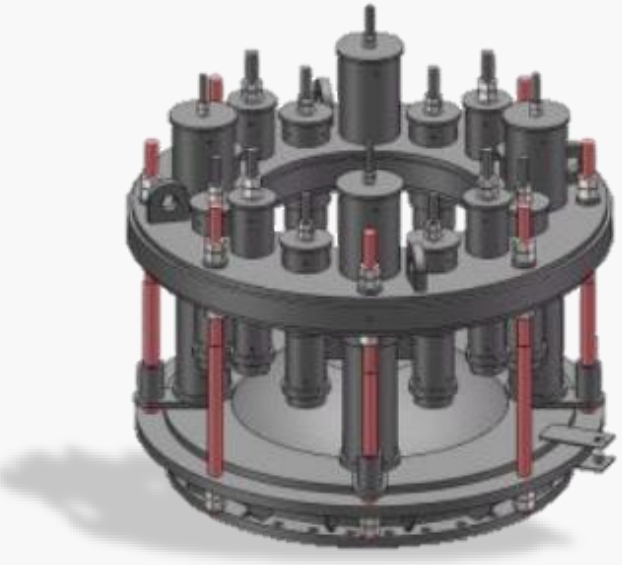
Nominal passage DN500 ~ DN2000 mm
Opening and closing time ≤3C
Nominal pressure ≤0.6 MPa
Test pressure
Body: 1.5 times working pressure;
Seal: 1.1 times working pressure;
Sealing degree: A or B
Applicable temperature ≤500 °C
Applicable media: coal gas

Cup valve

Suitable for gas recovery and gas exhaust pipeline of gas switching station of converter gas dry dust extraction system, and plays the role of switching and controlling the medium flow rate. Includes dispersing cup valve and recovery cup valve.

- The valve is equipped with a deflector that can guide the movement of the valve plate, and at the same time control the gas flow to keep the flow curve in perfect condition.
- The sealing surface is clad with cemented carbide to increase the service life of the valve.
- It adopts integral welding structure, which has the advantages of small size, light weight and convenient maintenance.

Nominal bore DN1000 ~ DN2800 mm
Nominal pressure 0.25 MPa
Working pressure 0.05 MPa
Sealing level: A or B
Applicable temperature ≤200 °C
Applicable media: coal gas



Explosion-proof valve

Suitable for gas purification and recovery system of blast furnace, steel converter, coke oven and gas generator, and plays a safe role in gas explosion. Equipped with limit switch to indicate the opening and closing position of the valve.

- The opening and resetting of the valve are determined by the set elastic load and realized automatically.
- The valve adopts soft and rigid double seal, and the soft O-ring is easy to replace.
- The valve adopts integral welding structure, which has the advantages of small size, light weight, stable and reliable performance and convenient maintenance.

Nominal bore DN800 ~ DN1600 mm
Working pressure 0.05 MPa
Nominal pressure 0.25 MPa
Sealing level: A
Applicable temperature ≤200 °C
Applicable media: coal gas

Reference sheets

Valve supplies

№	Customer	Product Description	Pcs.	Date
1	JSW, India	2300 m^3 BF 1# Revamping	1	2014
2	POSCO, Brazil	New built 3800 m^3 BF(repeat order)	1	2013
3	POSCO, Indonesia	New built 3800 m^3 BF	1	2012
4	Eastern Steel, Malaysia	450 m^3 BF 1# Revamping	1	2012
5	ArcelorMittal Poland	New built 1763 m^3 5#BF, 4# Hot Blast Stove	1	2012
6	Hoa Phat Steel Limited, Vietnam	New built 450 m^3 BF	1	2012
7	POSCO, Korea	5500 m^3 BF Valve spares (Incl. hot blast valve, cold blast shut-off valve, etc)	1	2011
8	TISCO, Vietnam	New built 450 m^3 BF	1	2010
9	MIEL, India	New built 550 m^3 BF	1	2010
10	Hyundai Steel, Korea	Valve spares for 1# & 2# 5500 m^3 BF, Incl. hot valve	2	2010
11	Shougang Steel, India	New built 2280 m^3 BF	1	2009
12	EIL, India	New built 350 m^3 BF	1	2009
13	Siemens-VAI(Dragon Steel Corp)	New built 3200 m^3 BF	1	2008
14	Algoma Steel, Canada	Valve spares (Goggle valves)	1	2008

№	Customer	Product Description	pcs	Date
15	BIL-SAIL, India	New built 1780m3BF	1	2008
16	Uttam Galva Steels,India	New built 450m3BF	1	2008
17	Lion Steel, Malaysia	New built 2580m3BF	1	2008
18	Novolipetsk Steel (Russia) Through Kalugin	New built 3800m3BF	1	2008
19	ESSAR, India	New built 2200m3BF	1	2008
20	EIL,India	New built 1080m3BF	2	2008
21	N.T.S. Steel,Thailand	New built 450m3BF	1	2008
22	Thermax,India	Valve spares	1	2007
23	JSW,India	New built 3# 4019m3BF	1	2007
24	ISDEMIR,Turkey	New built 4# 2500m3BF	1	2007
25	KARDEMIR,Turkey	New built 4#, 450m3BF	1	2007
26	KARDEMIR,Turkey	1#450m3BF , Revamping	1	2007

№	Customer	Product Description	pcs.	Date
27	PT Growth Sumatra Steel Group, Indonesia	New built 450m3BF	1	2007
28	Anyang Steel, China	2800m3BF	1	2006
29	JINDAL Group, India	1680m3BF	2	2005
30	ACOMINAS, Brazil	1750m3BF	1	2005
31	BHUSHAN Steel, India	1681m3BF	3	2005
32	ERDEMIR Steel, Turkey	2000m3BF	1	2005
33	SOUTHERN Steel, India	420m3BF	1	2005
34	COSIPAR, Brazil	320m3BF	2	2005
35	ESFANGHAN, Iraq	1500m3BF	1	2004
36	COSIPAR, Brazil	380m3BF	1	2004
37	HAMADAN Steel,Iraq	350m3BF	1	2003
38	MEYBOD Steel,Iraq	520m3BF	1	2000

Supply of mixer trucks

№	Customer	Country	Product Description	pcs	Date
1	ALGOMA Steel Limited	Canada	240t TLC	2	2007
2	Handan steel company	China	320t TLC	2	2008
3	Hyundai Steel	South Korea	350t TLC	22	2008
4	KARDEMIR	Turkey	180t TLC	14	2008
5	Bokaro Steel Limited	India	340t TLC	8	2008
6	SUMITOMO	Japan	150t TLC	2	2008
7	Liuzhou Steel	China	230t TLC	2	2009
8	Baogang Wuhai wanteng	China	320t TLC	4	2009
9	Bhilai Steel Plant	India	350t TLC	12	2010
10	Cangzhou Zhongtie	China	260t TLC	5	2010
11	Bao Steel Wuhaiwanteng	China	320t TLC	4	2010
12	Arcelor-Mittal	Poland	150t TLC	9	2011
13	Hyundai Steel	South Korea	350t TLC	19	2011
14	Bhushan Steel Limited	India	380t TLC	5	2011
15	Bao Steel Wuhaiwanteng	China	320T TLC	2	2011
16	Isdemir	Turkey	320t TLC	2	2012
17	ARCELOR-MITTAL	Romania	300t TLC	1	2012
18	Shanxi Wenshuiaiwei	China	320t TLC	6	2012
19	Hyundai Steel	South Korea	350t TLC	19	2012
20	Baotou Steel,	China	320t TLC	2	2013
21	Cangzhou Steel, China	China	260t TLC	5	2013
22	JSPL	India	280t TLC	12	2014
23	BPSL	India	250TLC	8	2014

Supply of buckets and carts

№	Customer	Country	Product Description	pcs.	Date
1	MEYBOD Iron& Steel	Iran	2 sets of 16 m^3 slag ladle car, 3 sets of 65t hot metal ladle car	1	2004
2	Benxi Iron & Steel	China	120 t converter bottom car, 220 t hot metal tilting car, 250t LF steel ladle& transfer car, 250t RH steel ladle car	2	2004
3	ISDEMIR Iron& Steel	Turkey	10 sets of 130t slag ladle car	3	2005
4	Anshan Iron & Steel	China	3 sets of 450t hot metal tilting car	4	2006
5	ESSAR Steel Limited	India	8 sets of 140t hot metal ladle& car	5	2007
6	ESSAR Steel Limited	India	2 sets of 225t hot metal desul furing ladle& car	6	2007
7	Electro Steel Limited	India	1 set of 100T hot metal weighing car, 2 sets of 130T steel ladle &car, 2 sets of 8m^3 slag ladle transfer car, 1 set of pan-cross car, 4 sets of 65t hot metal ladle transfer car.	7	2008
8	Essar Steel Limited	India	22 sets of 220T steel ladle, 4 sets of 200T emergency steel ladle, 6 sets of 310T steel ladle transfer car, 3 sets of 30m^3 slag pot.	8	2008
9	JSW Steel Limited	India	22 sets of 16m^3 slag ladle	9	2009
10	NTS	Thiland	4 sets of 45T hot metal ladle	10	2009
11	JFE	Japan	1 set of 330t electrical flat transfer car	11	2009
12	Qatar Steel Limited	Qatar	16 sets of 12.5m^3 slag pot	12	2010
13	Eramet	France	6 sets of 18T Steel Ladle	13	2010
14	JSW Steel Limited	India	5*140T Hot Metal Ladle Cars	14	2011
15	Qatar Steel Limited	Qatar	2*80t Steel ladle	15	2012
16	UMECC	USA	2*100t Electric flat car	16	2012
17	JFE	Japan	1 set of 330t electrical flat transfer car (Repeat order)	17	2013

CDQ equipment supplies

№	Customer	Country	Product Description	pcs	Date
1	Bao Steel	China	75t/h coke rotary discharge valve	1	2002
2	Ma Steel	China	125vh Coke Bucket and TransferCar	1	2002
3	Laiwu Steel	China	140vh Coke Bucket andTransfer Car	1	2004
4	Tonghua Iron & Steel	China	100t/h Rotary Valve	1	2005
5	Hunan Valin Xiangtan Iron andSteel	China	100th Rotary Valve	1	2005
6	Tang Steel	China	Charging Device	1	2005
7	Echeng Iron&steel	China	140t/h Coke Bucket	1	2006
8	Tang Steel	China	160v/hRotary Valve	1	2006
9	Nippon Steel	Japan	140vh Charging Device, Coking Bucket and Transfer Car	1	2007
10	Laiwu Steel	China	140t/h Rotary Valve, Coking Bucket and Transfer Car	1	2007
11	Chongqing Steel	China	140vh Coking Bucket and Transfer Car	1	2008
12	Benxi Steel	China	190th Coking Bucket and TransferCar	1	2008
13	Tong hua Steel	China	180t/h Coking Bucket	1	2009
14	Weifang Steel	China	125v/hCharging Device	1	2009
15	Liuzhou Steel	China	110t/h Rotary Valve	1	2010
16	Anyang Steel	China	Coking Bucket	1	2010
17	Jiugang Hotel	China	140v/hRotary Valve	1	2011
18	Handan Coking Plant	China	150th Coking Bucket and TransferCar	1	2011
19	Sinosteel	China	190t/h Rotary Valve	1	2012
20	MCC (ACRE)	China	190/h Rotary Valve	1	2012
21	Nippon Steel	Japan	140v/hCharging Device, Coking Bucket and Transfer Car (Repeat order)	1	2012

Supply of sintering carts

№	Customer	Product Description	pcs	Date
1	Arcelor Mittal Poland	75t/h coke rotary discharge valve	145	2019
2	Arcelor Mittal Zenica	125vh Coke Bucket and TransferCar	50	2018
3	Hoa Phat, Vietnam	140vh Coke Bucket andTransfer Car	50	2018
4	Hoa Phat. Vietnam	100t/h Rotary Valve	80	2017
5	Arcelor Mittal Dabrowa, Poland	100th Rotary Valve	145	2015
6	Russia Heavy Industries Group	Charging Device	138	2014
7	Vietnam Kunming Iron & Steel Holdings Co.,Ltd,	140t/h Coke Bucket	140	2012
8	Vietnam, Lao cai steel plant	160v/hRotary Valve	133	2011
9	ArcelorMittal Dabrowa, Poland	140vh Charging Device, Coking Bucket and Transfer Car	138	2011
10	Bhushan Steel Co. td, India	140t/h Rotary Valve, Coking Bucket and Transfer Car	145	2011
11	ArcelorMittal Romania	140vh Coking Bucket and Transfer Car	4	2011
12	ArcelorMittal Kazakstan	190th Coking Bucket and TransferCar	90	2010
13	Hoa Phat, Vietnam	180t/h Coking Bucket	6	2009
14	Kardemir Steel, Turkey	125v/hCharging Device	20	2008
15	Jinan Steel, China	110t/h Rotary Valve	80	2008
16	Nippon Steel, Japan	Coking Bucket	138	2007
17	Irkutsk Heavy Industry, Russia	140v/hRotary Valve	8	2007
18	Hyundai steel, Korea	150th Coking Bucket and TransferCar	10	2007

№	Customer	Bucket capacity	Date	Maximum resistance	Guaranteed durability	Processing type
	Steel ladles					
1	PJSC Severstal	380	2015	115	101	LF,VD
		380	2019	117	103	LF,VD
		380	2012	102	90	LF,VD
		130	2017	73	71	LF
2	AMK	300	2017	94	75	LF,VD
3	EMZ	160	2017	70	65	LF
4	REMZ LTD.	90	2012	101	90	LF
5	Amurstal LLC	130	2015	139	95	LF
6	CJSC Faroz	50	2015	96	50	LF
7	OJSC BMZ	130	2019	67	60	LF,VD
8	PJSC CMP	160	2020	87	87	LF,VD
9	MMK	385	2019	91	85	LF,VD
10	SHOUGANG JINGTANG	30	2019	103	95	LF,RH
11	BENXI IRON & STEEL GR	180	2019	120	110	LF,RH
12	BAOTOU STEEL	90	2019	95	85	LF,VD
13	XINTAI IRON & STEEL	80	2019	80	70	LF,VD
14	ANYANG STEEL	170	2019	110	100	LF,VD
15	SHIJIAZHUANG	70	2019	55	50	LF,VD
	Steel ladle fittings					
1	AMK	300	2017	1100	800	LF,VD

№	Customer	Bucket capacity	Date	Maximum resistance	Guaranteed durability
	Concrete of the control layer of the bottom of the steel casting ladle				
1	PJSC Severstal	380	2012	618	>606
	Concrete for steel ladle lining				
1	PJSC Severstal	380	2012	53	50
2	AMK	300	2017	50	45
	Cast iron ladles				
1	AMK	300	2017	1002	1000
2	PJSC Severstal	340	2014	1006	1000
	Concrete of the control layer of the bottom of the iron casting ladle				
1	PJSC Severstal	340	2014	1000	>1000
	Converter				
1	AMK	300	2017	5479	3000
2	EMZ	160	2017	2656	2500
3	NLMK	160	2020	5600	5000
	Fused pereclase powder				
1	OJSC MMK		2012		
2	TH SOYUZ		2018		
3	Keralit Ltd.		2017		

№	Customer	Bucket capacity	Date	Maximum resistance	Guaranteed durability
	Erasers for the steel envelope opening				
1	«AMK»	300	2017	160	91
2	«EMZ»	160	2017	169	90
3	PJSC SEVERSTAL	350	2019	186	150
	CHIPBOARD				
1	OOO “AMURSTAL”	130	2017	456	350
2	JSC BMZ	130	2019	570	500
3	LLC REMZ	90	2012	856	650
4	CJSC Faroz	50	2015	450	300
	Stuffing mass for the performance of the subline of the DNS				
1	OOO “AMURSTAL”	130	2017	456	350
2	ULO “BMZ”	130	2019	570	500
3	LLC REMZ	90	2012	156	650
4	CJSC Faroz	50	2015	450	300
	Converter nesting blocks				
1	PJSC SEVERSTAL	350	2019	1246	1000
2	«AMK»	300	2017	5479	3000
4	«EMZ	160	2017	2502	2500
	Mixer				
1	«AMK»	360	2017	1115	900
2	PJSC SEVERSTAL	600	2019	In the work	1200
	Mixer armature				
1	«AMK»	350	2019	In the work	2700

Thank you for your attention

If you have any questions about the proposals, please contact us by tel/fax: +7 (928) 333-77-11

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