# Energy Environmental  Protection

## Equipment & Systems

## Service & Distributor :

442/2 Chan Road, Thungwatdon Sub district,  Sathon District,
Bangkok Province,  Thailand 10120  www.7-mars.com
Office Call : +66 (02) 114 7145-9 Auto. 5Line Ext. Department ,  Email : info@7-mars.com
www.7-mars.com,  www,siamenergysaving.com,

Rayong Factory & Workshop :  +66 (097) 356 3675 English


## Company Profile

Botou Xintian Environmental Protection Equipment Co., Ltd has a superior geographical position, West 106 National Highway, North Shihuang Expressway, East 104 National Highway, Jingfu Expressway, Beijing–Shanghai Railway, Highway and Railway crisscross, and the traffic is very convenient. The formation of traffic network provides a time guarantee for the transportation and after–sales service of products.

Our company is a professional dust removal equipment and dust removal accessories manufacturer in collection of research and development, design, equipment manufacturing, field installation, and commissioning. Our company mainly produces: electric dust collector, high voltage electrostatic dust collector, rotary umbrella type high efficiency electrostatic dust collector, collecting high voltage electrostatic dust collector, tube pole type electrostatic dust collector, wide spacing electrostatic dust collector, pulse bag dust collector, long bag off–line pulse dust collector, high voltage off–line pulse bag dust collector, micro shock flat bag dust collector, rotary back blowing dust collector, bag type back blowing dust collector, single machine dust collector unit, single bag dust collector, single bag dust removal equipment, cyclone dust collector, coarse powder separator, wet vertical kiln dust collector, desulphurization dust collector , various types of electromagnetic pulse valve, YJD series (discharge valve), horizontal reducer, vertical reducer, planet cycloid pin wheel reducer, a variety of dust removal cloth bag series, a variety of bag cage series, pulse controller, cylinder, electric control cabinet and other dust collector accessories products, and we can also do non–standard design, modification and installation according to the requirements of users.

For many years, our company has designed and manufactured a lot of large and medium–sized dust removal equipment for kiln head, kiln tail, dryer, silo of cement plant, iron notch, roasting, mine trough, feed of steel industry, secondary soot of steel making, LF refining furnace and other dust removal systems.

Our company has successively undertaken the transformation project of dry–process dust removal of many multi–seat blast furnaces. At the same time, our company has also done renovation to reach the standard for many sets of dust collectors of lots users in the cement, aluminum industry of non–ferrous metals, metallurgical industry and the chemical industry. In recent years, the company has also developed the key technology of the uniform pressure–release valve dust collector of Maerz lime kiln and blast furnace to fill the blank in the domestic dust–removal industry.

In recent years, with the pace acceleration of industry, enterprises have also been greatly developed, which also gave our company a great opportunity to show technical strength. We have provided a large number of equipment and accessories for the national metallurgy, chemical, building materials, non–ferrous metal industries, especially for many mining enterprises in Southwest China, which has been trusted and generally praised by users.

The enterprise takes the service as the purpose, takes the contribution as the goal, makes the product quality as the first, views the reputation as the highest, regards the quality and the reputation as the lifeline, to pursue developing steadily.

The company adheres to the concept of "unceasing accumulation, continuous improvement, courage to innovate", in line with the principle of "abide by contract, high quality service", warmly welcome friends at home and abroad to cooperate with us. Let us jointly safeguard the blue water and blue sky of motherland to benefit future generations, and jointly protect our green home to contribute our own strength to the bright tomorrow of motherland.





## Production Scene

# Iron and Steel Plant Dust Collector

Dust Removal System Process and Main Technical Parameters.

1, Dust Removal System Process

The steel-making electric furnace dust collector of iron and steel company adopts the combination mode of smoke exhaust in furnace and smoke exhaust outside furnace to purify it more cleanly. The smoke exhaust outside the furnace is composed of closed canopy and roof canopy, which can be used interchangeably. The roof canopy is mainly used in the process of feeding and tapping, and the large closed canopy is mainly used in the smelting process.

The dust removal system of steel-making electric furnace of iron and steel company is mainly composed of smoke exhaust device, water cooling closely-spaced tube, forced blowing cooler, inner exhaust fan, buried scraper conveyor, bucket hoist, ash storage bin, main exhaust fan, muffler and so on. The structure is reasonable, and the performance is stable.

2, System Main Technical Parameters

Arc nominal capacity 100t

Smoke exhaust in furnace 27500m3/h(1400℃)

Smoke exhaust outside the furnace Closed canopy 400000m3/h(100℃)

Roof canopy 460000m3/h(100℃)

Smoke exhaust volume from LF furnace 8000m3/h(150℃)

Total air volume of dust removal system 854390m3/h

Dust Removal Equipment

At present, the electric furnace dust collector of iron and steel company is generally used to deal with electric furnace smoke dust in China. According to the fine and sticky characteristics of electric furnace soot dust, in order to ensure the normal operation of bag dust collector under the appropriate resistance level, the bag dust collector should have strong ash cleaning ability, and LCM long bag low pressure large pulse bag dust collector is selected by Yiheng Dust Removal. This kind of equipment has been widely used in electric furnace steelmaking, blast furnace coal injection, sintering, fire resistance, carbon black, cement and other industries, and good results have been obtained. Its main features are as follows:

The ability to clear ash is very strong. The ash cleaning strength reaches 60 – 200 g, which is several times or even dozens of times as much as that of the mechanical vibration bag dust collector. For the fine and sticky dust, a good ash removal effect can also be obtained.

The filtering load is higher, and the filtering wind speed is as high as 1.5m/min.

The filter bag can be up to 6 m long, which is 2–3 times of the traditional pulse bag type dust collector, and the floor area is smaller.

The injection device is equipped with "double film fast pulse valve", which has the advantages of fast opening and closing, smaller resistance, and stronger ash cleaning ability with lower injection pressure.

The maintenance workload is even smaller.

It is convenient to replace and install the filter bag. Because the filter bag is embedded on the chequered plate by the elastic ring sewn at the mouth of the bag , it does not need to tie up, nor does it need to be fastened by the connecting parts such as bolts. When changing the bag, it is carried out on the net air side above the chequered plate, and the contact time between the person and dust bag is short, which greatly reduces the labor intensity of operator when changing the bag.

Equipped with the DMK computer controller developed by Yiheng Dust Removal Equipment Co., Ltd. High reliability, complete functions, strong anti-interference ability to power supply voltage fluctuation, ambient temperature change, dust influence and other factors. It has been used in many electric furnace dust removal systems, so far working is normal.

Main Structure

The dust collector is divided into 24 compartments and is arranged in two rows, with the inlet and outlet main air ducts in the middle. There are partition plates between the storehouse rooms to be tightly separated to achieve off-line ash cleaning.

The wind board is set between the air inlet of each compartment and the filter bag, and the upper air inlet mode is taken in the box body.

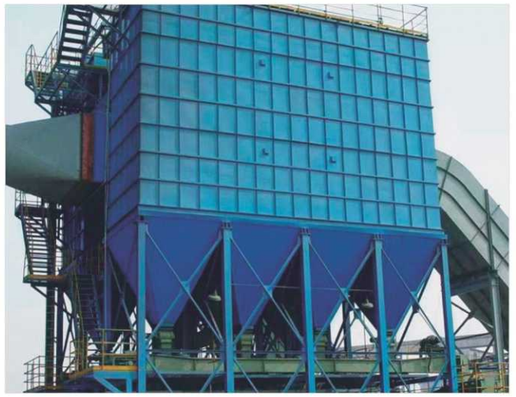
Manual butterfly valve is installed at the entrance of each compartment, and pneumatic air stop valve is arranged at the outlet. The off-line ash cleaning can be reached, and dust collector can realize the maintenance of a single compartment and the air volume distribution of each compartment without stopping.

There are 216 filter bags in each storehouse, and the size of the filter bag is 120mm x 6000mm. The total quantity of filter bag in 24 compartments is 5148 PCS, and the total filter area is 11716m2.

Compared with the circular section, the filter bag frame adopts octagonal star section, which can enhance the ash cleaning effect, reduce the wear between the filter bag and the frame, help to prolong the life of filter bag, and facilitate the extraction and insertion of the filter bag frame.

The material of filter bag selects polyester needle felt.

The air shutdown pulse ash cleaning mode is adopted, and a set of injection device is set up in each storehouse, and the injection pipe and the pulse valve outlet adopt plug-in mode to facilitate disassembly and assembly.



# Boiler Cloth Bag Dust Collector

### Structure Principle of Boiler Dust Collector

The structure of boiler dust collector is dust collector box, cloth bag, framework, pulse valve, cylinder, PLC control cabinet, cinder valve, injection combination and so on. Now let's talk about it in detail.

First, Box body of boiler dust collector: All welding of boiler dust collector is completed on workshop platform, which can not only ensure the leveling of dust collector drawing board, simplify the overall installation of dust collector, but also guarantee the installation quality. The boiler dust collector adopts the structure mode of large roof and double sealing canopy, which is convenient to repair the dust collector and effectively reduces the labor intensity of the workers.

Second, Cloth bag of boiler dust collector: this dust collector cloth bag adopts a kind of filter material made of PTFE filter material (polytetrafluoroethylene fiber) by three-dimensional needling. PTFE fiber is in macromolecular linear structure, so it has strong temperature resistance, wear resistance, corrosion resistance and chemical resistance stability, and is widely used in all kinds of bad flue gas filtration environment, such as iron and steel, electric power, waste incineration and so on.

Third, Framework of boiler dust collector : Dust removal framework adopts bag cage with conical mouth structure, which is self-parallel under the action of gravity. The distance between the filter bag and the filter bag is uniform, and the air flow in the whole bag room is more uniform. The manufacturing and welding of filter bag cage framework conform to the corresponding industry standards.

Fourth, Electromagnetic pulse valve of boiler dust collector : Electromagnetic pulse valve is the power element of filter bag ash cleaning, and its selection is related to the cost of dust collector and ash removal effect. The diaphragm of the pulse valve is durable and has a life of more than 1 million times, which meets the high efficiency operation requirements of the pulse electromagnetic valve and greatly reduces the maintenance workload.

Fifth, Cylinder of boiler dust collector : The actual production condition of boiler dust removal is very complex, and sometimes there will be a brief state of power outage and gas outage. For the safe operation of boiler and fan and other equipment, Jinzhu environmental protection coordinated cylinder manufacturers has jointly developed a joint protection device of self-locking cylinder drive mechanism and safety gas storage tank. The self-locking cylinder drive mechanism ensures that there is no signal control of the control system in the case of power outage, and the mechanism will remain in its original state and will not misoperate.

Sixth, PLC control cabinet of boiler dust collector : Boiler cloth bag dust collector is set up with PLC control cabinet, which can monitor the operating conditions of the system in real time by touching the display screen. The control cabinet has an output interface, which is convenient for remote monitoring.

Seventh, Cinder valve of boiler dust collector: The material temperature of ash discharge can reach 280 ℃, and the bearing at both ends can be isolated from the impeller, which can prevent the contact between ultra-fine powder and bearing. The temperature of conveying materials by high temperature resistant unloader can reach 500℃, which is connected by sprocket wheel. There is a certain distance between the reducer and the unloader shell. The automatic ash discharge of materials is guaranteed.

Sixth, Injection combination of boiler dust collector : The ash cleaning mode of boiler dust collector is fixed injection, and each filter room is equipped with 1 – 2 pieces of air bags. The pulse valve on the air bag is connected with the injection tube, and a injection tube clears ash for a row of filter bags. According to the properties of black liquor smoke from papermaking, stainless steel injection tube is used to improve the service life of the equipment.

### Notes in installation and use of centrifugal force dust collector

Installing dust collector needs to ensure sealing, and apply soap liquid to check after installation.

It should be repaired regularly in use to ensure efficiency, and the wear pattern of wear-resistant coating should be checked after operation for 3–5 years.

Attention should be paid to the sealing of ash discharge port (air lock) in operation.

The selection of dust collector should be considered in accordance with the smoke discharge volume of boiler, and the fan can overcome the smoke exhaust resistance.



# Boiler Cloth Bag Dust Collector

Production and Installation Site of 220 Ton Circulating Fluidized Bed Boiler Dust Collector

Heating Power 40t Fluidized Bed Boiler Cloth Bag Dust Collector

35 Ton Fluidized Bed Coal-fired Industrial Boiler Cloth Bag Dust Collector

8t/h Coal-fired Heat Conduction Oil Boiler Pulse Cloth Bag Dust Collector

4t/h Biomass Boiler Cloth Bag Dust Collector

6t/h Biomass Boiler Pulse Cloth Bag Dust Collector

10t/h Coal – fired Boiler Cloth Bag Dust Removal and Desulphurization equipment.

## Cement Plant Dust Collector

According to the characteristics of dust and flue gas produced in cement production process and the dust concentration, particle size, air volume and so on, the cement plant dust collector selects different filtration materials, and designs and operation schemes to reduce environmental pollution by purifying air.

The cement plant dust collector is composed of air inlet, upper and lower box body, filter device, ash cleaning device, ash discharging device, gas source, and air exhaust outlet, and has the characteristics of small airflow resistance, rigorous design of box body and good sealing performance and so on.

The working principle of cement plant dust collector: According to the flow direction of dust gas, the cement plant dust collector adopts two forms of down and lateral inlet air. The dust gas is filtered by dust removal cloth bag. The cement plant dust collector is divided into several rooms to finish injection clearing ash one by one. When the filter room needs to clear ash, the room stops the air and stops the filtration work, which realizes ash cleaning more thoroughly, and avoids the fine dust in falling process from being adsorbed again. At this time, other filter rooms are still in the filtration state, which does not affect the normal operation of cement plant dust collector.

As a kind of efficient dust removal equipment, cement plant dust collector has been widely used in various production links of cement manufacturers, and has gradually developed into one of the important equipment in cement plant production.

## Smelting Furnace Dust Collector

First, Technological Process of Dust Removal System

1, Generally Adopted Technological Process

The technological process for one-time smoke exhaust in electric furnace, secondary smoke exhaust in enclosed cover of electric furnace and proof of factory workshop, smoke exhaust in refining furnace and feeding system, flue gas collection combined with the main pipe of the electric furnace dust removal system under pressure of fan, dry dust removal method of filter bag filtration, and the technological process of negative pressure operation.

2, PLC Automatic Control

Pulse (set time or pressure difference) blowing ash back.

According to the smelting conditions, the air volume, wind pressure and fan power of each dust collecting point are automatically adjusted.

Second, Key Technical Problems

1, Quality of Filter Material for Dust Collector Cloth Bag

The quality selection of filter materials determines the operation resistance, operation cost and investment cost of dust collector, and directly affects the emission concentration of smoke and dust.

2, Ash Cleaning Technology

The ash cleaning performance directly affects the filtration efficiency and the life of cloth bag.

3, Flue-gas Temperature

Smoke temperature control directly affects the smoke exhaust effect of enclosed cover and roof of factory workshop, the formation of micro negative pressure in furnace and the life of cloth bag.


# Pulse Cloth Bag Dust Collector

Equipment Introduce:

HMC series pulse cloth bag dust collector is a single type bag dust collector. It adopts circular filter bag, self-contained air ventilation system with pulse injection ash cleaning mode, which has advantages of high dust removal efficiency, good ash cleaning effect, low operation resistance, long service life of filter bag, simple maintenance and stable operation, etc.

Operating Principle:

When the dust gas enters into the cloth bag dust collector from air induced system, due to the decrease of wind speed, the dust particles with a large proportion settle into the ash hopper, and the lighter dust depends on the air induction to reach the surface of dust removal filter bag. The filter bag of dust collector generally uses needle felt as the filter carrier, and the filtration accuracy can reach <1um. The dust is blocked on the surface by the filter bag, and the dust gas is purified through the filter bag. With the increasing of time, more and more dust is filtered on the surface of filter bag, so the resistance of the filter bag is gradually increased. In order to make the dust collector work normally, when the resistance rises to a limited range, the electronic pulse controller issues instructions to follow the order. The sequence triggers each control valve to open the pulse valve, and the compressed air in the gas storage bag of dust collector is sprayed into the corresponding filter bag by each injection hole of the injection pipe. The filter bag expands rapidly under the instantaneous reverse action of air flow, which makes the dust attached to the surface of the filter bag fall off and makes the filter bag achieve the most original air permeability filtration effect. The cleared dust falls into the ash hopper and drains out of the body through the ash removal system to complete the whole ash cleaning and filtration process.

## Technical Parameters of Equipment Selection:

| Equipment Model | | HMC-24 | HMC-32 | HMC-36 | HMC-48 | HMC-64 | HMC-80 |
|---|---|---|---|---|---|---|---|
| Total Filtration Area $m^2$ | | 20 | 25 | 30 | 40 | 50 | 64 |
| Filtration Velocity m/min | | 1.0-2.0 | | | | | |
| Air Volume $m^3/h$ | | 1200-2400 | 1500-3000 | 1800-3600 | 2400-4800 | 3000-6000 | 3840-7680 |
| Quantity of Filter Bag | | 24 | 32 | 36 | 48 | 64 | 80 |
| Specification and Material of Filter Bag | | 130×2000mm | | | | | |
| Air Outlet Dust Concentration $mg/m^3$ | | ≤30 | | | | | |
| Beard Negative Pressure Pa | | 5000 | | | | | |
| Equipment Running Resistance Pa | | 800-1200 | | | | | |
| Injection Pressure Mpa | | 0.4-0.6 | | | | | |
| Electromagnetic Pulse Valve | Specification | DMF-Z-25 ( G1" ) | | | | | |
| | Quantity | 4 | 4 | 6 | 6 | 8 | 8 |
| Induced Draft Fan Model | | 4-72-2.8A | 4-72-3.2A | 4-72-3.6A | 4-72-3.6A | 4-72-4A | 4-72-4.5A |
| Power of Motor | | 1.5kw | 2.2kw | 3kw | 4kw | 5.5kw | 7.5kw |



Equipment Model: HMC- 160B Pulse Cloth Bag Dust Collector

Application Field: Dust removal of combined grinder, grooving machine, grinding and cutting machine

Pulse Cloth bag Dust Removal Equipment and Noise Reduction Facilities

Installation and Commissioning of Mobile Polishing Room Dust Collector

## Technical Parameters of Equipment Selection:

| Equipment Model | | HMC-96 | HMC-100 | HMC-120 | HMC-160 | HMC-200 | HMC-240 |
|---|---|---|---|---|---|---|---|
| Total Filtration Area $m^2$ | | 77 | 80 | 96 | 128 | 160 | 192 |
| Filtration Velocity m/min | | 1.0-2.0 | | | | | |
| Air Volume $m^3/h$ | | 4620-9240 | 4800-9600 | 5760-11520 | 7680-15360 | 9600-19200 | 11520-23040 |
| Quantity of Filter Bag | | 96 | 100 | 120 | 160 | 200 | 240 |
| Specification and Material of Filter Bag | | 130×2000mm | | | | | |
| Air Outlet Dust Concentration $mg/m^3$ | | ≤30 | | | | | |
| Beard Negative Pressure Pa | | 5000 | | | | | |
| Equipment Running Resistance Pa | | 800-1200 | | | | | |
| Injection Pressure Mpa | | 0.4-0.6 | | | | | |
| Electromagnetic Pulse Valve | Specification | DMF-Z-25 ( G1" ) | | | | | |
| | Quantity | 12 | 10 | 12 | 16 | 20 | 20 |
| Induced Draft Fan Model | | 4-72-4.5A | 4-72-4.5A | 4-72-5A | 4-72-5A | 4-68-8C | 4-68-6.3C |
| Power of Motor | | 7.5kw | 7.5kw | 11kw | 15kw | 18.5kw | 22kw |

# Filter Cartridge Dust Collector Equipment

Equipment Introduce:

Pulse filter cartridge dust collector is mainly used in the centralized dust removal system of large factories, with large air volume treatment , small area, suitable for the whole workshop of large factories centralized dust removal, and all the dust from grinding, welding, sand cleaning, mixing, stirring, screening and other processes can be centralized treatment.

This series of filter cartridge dust collector is generally arranged outdoors and adopts oblique plug filter cartridge structure, which is convenient for maintenance and replacement of filter cartridge. The filter cartridge mostly adopts double filter cartridge combination structure, which can filter 0.2 μ m smoke dust, with filtration efficiency > 99.9%, and long service life.

It is suitable for flue gas treatment and dust removal system in industry, ironmaking plant, food factory, rubber factory, pharmaceutical factory, steelmaking plant, ferroalloy plant, refractory plant, foundry plant, power plant and some chemical industry and so on.

Advantages of filter cartridge dust collector:

1, The rigid filter material is evenly distributed in folding type to form the filter cartridge, which makes it have the smallest volume and the maximum filtration area effect.

2, In the outer layer of the ordinary filter material, a layer of ultra-fine fiber layer is covered, so that the filtration effect has been essentially improved. The filtered dust only stays in the appearance of the ultra-fine fiber layer of filter material, so the filtration resistance is greatly reduced, and the power consumption is saved by more than 30%, and the energy saving effect is remarkable, and also the ash cleaning is very thorough. At the same time, it also solves all kinds of problems, such as ultra-fine dust, fiber dust difficult to deal with and so on.

3, Seleted PTFE coated filter material is suitable for wet dusty gas. Because the contact angle between filter material and water is more than 108 degrees, the wet dust attached to the surface of filter material is not sticky and easy to blow off. Therefore, the problem of wet dust condensation adhesive is completely solved.

4, The filtration efficiency of filter cartridge dust collector: The dust collection ability of ordinary filter material with particle size above 5 μ m is 99%, and that of coated filter material with particle size over 0.5 μ m is 99%.

▲ Welding Fume Filter Cartridge Centralized Dust Removal System for Automobile Manufacturing Plant

▲ Grinding and Polishing Welding Flue Gas Filter Cartridge Dust Collector

▲ Grinding and Polishing Welding Flue Gas Filter Cartridge Dust Collector

## High Voltage Electrostatic Tar Catcher

According to the structure type of electric tar catcher, there are four kinds of vertical (concentric circular, tubular, cellular) and horizontal. The vertical electric tar catcher is mainly composed of shell, precipitating pole, corona pole, upper and lower hangers, gas redistribution board, steam blowing and washing tube, insulation box and feeder box and so on, which is mainly used for flue gas purification of gas generator with coke as raw material and coal as raw material. Horizontal electric tar catcher is widely used to recover tar from waste gas produced by roaster in carbon factory. It has the characteristics of small volume, direct recovery of tar, no secondary treatment and construction of sedimentation tank.

Working principle: When the gas containing tar droplets and other impurities passes through the electric field, the impurities of negative ions and electrons are adsorbed, under the action of coulomb force of electric field, and then the charge is released after moving to precipitating pole, and adsorbed on the precipitating pole, so as to achieve the purpose of purifying the gas, which commonly known as the charge phenomenon. When the impurity mass adsorbed on the precipitating pole increases to greater than its adhesion, it will automatically flow down and discharge from the bottom of electric tar catcher, and the net gas will leave from the upper part of electric tar catcher and enter into the next process.

Application Scope: This product is mainly used for chemical fertilizer, coking, gas, carbon, metallurgy, building materials, ceramics and other industries of gas purification, used to recover gas, tar in coke oven gas, while removing dust, water fog and other impurities, to achieve the dual effects of material recovery and gas purification.

Cellular Electric Tar Catcher

Horizontal Electric Tar Catcher for Carbon Plant



## Flue Gas Desulphurization and Denitrification Equipment

Desulphurization dust collector is a kind of cavitation liquid layer in which the flue gas to be treated in wind energy collecting cavitation room is collided with the desulphurization liquid at the upper end and bottom flow, and the gas-liquid two phases collide and cut each other in the form of microbubble mass transfer, and the cavitation liquid layer with the impurity of the arrested set thickens gradually. Part of the breakthrough smoke buoyancy falls to the bottom of the tower, and the purified smoke rises from the chimney.

The desulphurization rate is higher than 95%, and the outlet concentration of smoke is less than 50mg / Nm3.

There is no nozzle, which has no blockage, scaling and other problems.

The liquid-gas ratio is low, only about 20% of the air tower spray.

The failure rate is very low, as long as the induced draft fan and the liquid supply pump are normal, the device can operate stably and the operation is very simple.

The consumption of wind pressure is only 1200 – 1500 Pa.

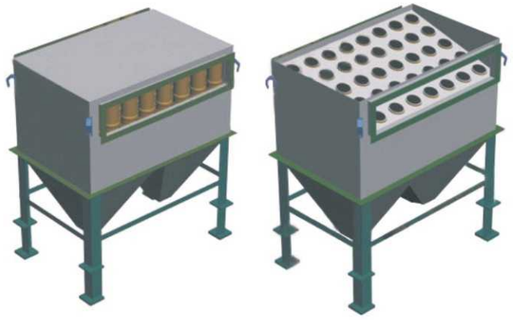
After treatment, the flue gas does not contain foggy water droplets.

Low operating cost and investment.

The limestone slurry, lime slurry, alkali liquor, waste water of alkali liquor and the like can be used as the desulfurizing agent.

For high concentration, it is difficult to deal with the standard flue gas by general method. The flue gas with contents of $SO_2$ higher than 10000mg/Nm3 can be purified below 100mg/Nm3.

## Cyclone Dust Collector



Ceramic multi-tube dust collector is a dust removal equipment composed of several parallel ceramic cyclone dust collector units (also known as ceramic cyclone). It can be composed of general ceramic cyclone dust collector unit or DC cyclone dust collector unit, these units are organically combined in a shell, with a total intake pipe, exhaust pipe and ash hopper. Ash removal of ash hopper can have many forms of automatic ash removal, because this equipment is composed of ceramic cyclone pipe, which is more wear-resistant than cast iron pipe, and the surface is smoother, with acid and alkali resistance, so it can also be wet dust removal.

Application Scope and Advantages:

It is suitable for dust control of various types and combustion modes of industrial boilers and thermal power station boilers. Such as chain furnace, reciprocating furnace, boiling furnace, coal throwing furnace, pulverized coal furnace, cyclone furnace, fluidized bed furnace and so on. For other industrial dust, the dust collector can also be used to treat, but also to use the dust collector for cement and other practical value of dust recovery.

Boiler Supporting Ceramic Multi-tube Cyclone Dust Collector

Ceramic Multi-tube Cyclone Dust Collector

Delivery Site of Cyclone Dust Collector

Multi-tube Combined Cyclone Dust Collector



## Electrically Controlled Pneumatic Element

High and Low Voltage Electrical Control Cabinet of Dust Collector

Specializing in production of dust collector switchgear, control cabinet, high voltage electrostatic precipitator low voltage control cabinet, PLC automatic control system, microcomputer automatic control system, single chip microcomputer automatic control system, industrial network remote control system.

SC, U Type Standard Cylinder.

SC Rod Cylinder

SU Pull Rod Inner Cylinder

Gas Source Processing Parts
(triple couplings, double couplings)


AC, BC Air Source Processing Parts

Purify compressed air, set pressure and add lubricating oil.
Adopt modular design, and it can be combined according to the needs of use.

# Electromagnetic Pulse Valve

DMF–Z Right Angle Electromagnetic Pulse Valve:

The DMF– Z electromagnetic pulse valve is a right angle valve with an angle of 90 degrees between the inlet and outlet, which is suitable for the installation and connection of the air bag and dust collector injection tube. The air flow is smooth and can provide the ash cleaning pulse air flow according to the requirements.

Model Meaning:

DMF — Z — X — S — X

| DMF | Z | X | S | X |
|---|---|---|---|---|
| Electromagnetic Pulse Valve | Right Angle Type | Nominal Diameter | Double Diaphragm | Temperature Class |

| Model No. And Specfication | Nominal Diameter | | Number of diaphragm | Intake Port Size | Air Outlet Connection Form | Weight ( kg ) |
|---|---|---|---|---|---|---|
| | Metric System mm | British System | | | | |
| DMF–Z–20 | Φ20 | 3/4" | 1 | G3/4" | G3/4" | 0.65 |
| DMF–20L–B | Φ20 | 3/4" | 1 | G3/4" | Φ27 | 0.75 |
| DMF–Z–25 | Φ25 | 1" | 1 | G1" | G1" | 0.80 |
| DMF–Z–40S | Φ40 | 1 1/2" | 2 | G1 1/2" | G1 1/2" | 1.40 |
| DMF–Z–50S | Φ50 | 2" | 2 | G2" | G2" | 2.40 |
| DMF–Z–62S | Φ62 | 2 1/2" | 2 | G2 1/2" | G2 1/2" | 3.50 |
| DMF–Z–76S | Φ76 | 3" | 2 | G3" | G3" | 4.30 |
| DMF–Z–102S | Φ102 | 4" | 2 | G4" | G4" | 7.30 |

DMF–T Straight–through Electromagnetic Pulse Valve

DMF–ZM Right Angle Electromagnetic Pulse Valve with Nut



Model Meaning:

DMF — Y — X — S — X

| DMF | Y | X | S | X |
|---|---|---|---|---|
| Electromagnetic Pulse Valve | Submerged type | Nominal Diameter | Double Diaphragm | Temperature Class |

DMF–Y Submerged Electromagnetic Pulse Valve:

DMF– Y electromagnetic pulse valve is a submerged valve (also known as embedded valve), which is directly installed on the gas distribution box and has better flow characteristics. The pressure loss is reduced, which is suitable for the work occassion with lower gas source pressure.

| Model No. And Specfication | Nominal Diameter | | Number of diaphragm | Air Outlet Connection Form | Weight ( kg ) |
|---|---|---|---|---|---|
| | Metric System mm | British System | | | |
| DMF–Y–25 | Φ25 | 1" | 1 | G1" | 0.80 |
| DMF–Y–40S | Φ40 | 1 1/2" | 2 | G1 1/2" | 1.20 |
| DMF–Y–50S | Φ50 | 2" | 2 | Φ60 | 2.50 |
| DMF–Y–62S | Φ62 | 2 1/2" | 2 | Φ75 | 3.50 |
| DMF–Y–76S | Φ76 | 3" | 2 | Φ89 | 3.70 |
| DMF–Y–90S | Φ90 | 3 1/2" | 2 | Φ102 | 5.00 |
| DMF–Y–102S | Φ102 | 4" | 2 | Φ114 | 5.65 |

4V–210/310/410 Electromagnetic Valve

Two–position Five–way Solenoid Valve

Electromagnetic Pulse Valve Diaphragm

# Filter Bag of Dust Collector

The filter bag is the key component to determine the dust removal efficiency and working temperature of the bag dust collector, and the cost of replacing the filter bag is the main maintenance cost of the bag dust collector. Therefore, the working life of the filter bag is related to the operation state and cost of the dust collector, so it is particularly important to select the appropriate filter material and design the reasonable structure.

The selection of filter material should be considered according to the temperature, humidity and chemical characteristics of the gas, the size, weight, shape, ponderability of particles, dust concentration, filtration speed, ash cleaning mode, emission concentration and the working system of bag dust collector. In general, the pulse spray bag filter uses needle felt, the chamber back blowing bag dust collector or the mechanical vibration bag filter selects the woven cloth.

## Polyester Needle–Punched Felt Bag

The bag has the advantages of high void, good air permeability, high dust collecting efficiency and long service life, which are peculiar to common felt filter bags. It has moderate high temperature resistance, and can reach 130℃ in an instant. It also has moderate acid and alkali resistance, and very good wear resistance.

Weight: 500g/m²
Material: Polyester/Polyester Filament Substrate
Thickness: 1.75mm
Permeability: 16m³/m² * min
Radial control force: > 1100N/5*20cm
Latitudinal control force: > 1400N/5*20cm
Radial control force: <25%
Latitudinal control force: <45%
Usage temperature: ≤130℃
Post–treatment: singeing, calendering, heat setting

## Polyester Antistatic Needle–punched Felt Bag

In the process of producing needle–punched felt, conductive fibers or conductive materials are mixed into chemical fibers. It is used in industries where flour dust, chemical dust and coal dust may explode in case of electrostatic discharge.

Weight: 500g/m²
Material: Polyester/Polyester Antistatic Substrate
Thickness: 1.8mm
Permeability: 15m³/m² · min
Radial control force: > 800N/5 × 20cm
Latitudinal control force: > 1200N/5 × 20cm
Radial control force: <35%
Latitudinal control force: <55%
Usage temperature: ≤130℃
Post–treatment: singeing, calendering, or Teflon coating

## Water–repellent and Oil–repellent Polyester Needle–punched Felt Bag

The filter cloth is rolled and impregnated with PTFE (waterproof agent), which is used in occasions with high moisture content. The filter material is not easy to block the paste bag, the service life of the cloth bag is prolonged, the gas flow rate is increased, and the maintenance cost is greatly saved.

Weight: 500g/m²
Material: Polyester/Polyester Antistatic Substrate
Thickness: 1.8mm
Permeability: 15m³/m² · min
Radial control force: > 800N/5 × 20cm
Latitudinal control force: > 1200N/5 × 20cm
Radial control force: <35%
Latitudinal control force: <55%
Usage temperature: ≤130℃
Post–treatment: singeing, calendering, or Teflon coating

## Polypropylene Needle–punched Felt Bag

With excellent acid and alkali resistance, low softening point, it can be used in flue gas temperature below 100℃ and high acidity and alkalinity occasions or in the field of liquid–solid separation with high acidity and alkalinity.

Weight: 500g/m²
Material: Acrylic polyester /polypropylene yarn
Thickness: 2.1mm
Permeability: 12.6m³/m² · min
Radial control force: > 980N/5 × 20cm
Latitudinal control force: > 1060N/5 × 20cm
Radial control force: <35%
Latitudinal control force: <55%
Usage temperature: ≤88℃
Post–treatment: singeing or calendering

## Fiberglass Needle–Punched Filter Felt Bag

It has the advantages of high temperature resistance, corrosion resistance, dimensional stability, minimal elongation and shrinkage, high strength. And the tapetum fiber bears single fiber, three–dimensional micro–porous structure, high porosity and low resistance to gas filtration. It is a kind of high–speed and high–efficiency high–temperature filtering material. It is widely used in high temperature flue gas filtration of industrial kilns such as chemical industry, iron and steel, smelting, carbon black, power generation, cement, etc.

Weight: 800g/m²
Material: Fiberglass
Thickness: 1.8mm
Permeability: 10m³/m² · min
Radial control force: > 1800N/5 × 20cm
Latitudinal control force: > 1800N/5 × 20cm
Radial control force: <10%
Latitudinal control force: <10%
Usage temperature: ≤280℃
Post–treatment: Teflon treatment



## Acrylic Medium Temperature Needle–punched Filter Felt Bag

Using non–woven needle–punching technology, the surface of fine fiber cloth with interlaced strong fibers and uniform void distribution is smoothed by hot rolling and singeing treatment, which is not easy to be blocked by dust. The filter material has large void, good permeability and strong chemical stability. It can not only filter atmospheric temperature gas, but also medium temperature gas. It is the ideal choice of filter materials under acid–alkali corrosive gas condition.

Weight: 500g/m²
Material: Acrylic/Acrylic Substrate
Thickness: 1.9mm
Permeability: 14m³/m² · min
Radial control force: > 800N/5 × 20cm
Latitudinal control force: > 1300N/5 × 20cm
Radial control force: <25%
Latitudinal control force: <45%
Usage temperature: ≤140℃
Post–treatment: singeing , calendering

## Metas Needle–punched Filtration Felt Bag at High Temperature

Metas is the generic name of Nomex produced by Dupont Company in the United States and Conex produced by Emperor Company in Japan. It is widely used in various high temperature flue gas filtration occasions, with excellent and reliable performance, and widely used in steel, electric power, asphalt mixing industry. The product adopts the optimized process, which improves the physical and chemical properties of the product and make the application more secure.

Weight: 500g/m²
Material: Metas / Metas Substrate
Thickness: 2.2mm
Permeability: 17m³/m² · min
Radial control force: > 800N/5 × 20cm
Latitudinal control force: > 1200N/5 × 20cm
Radial control force: <35%
Latitudinal control force: <55%
Usage temperature: ≤204℃
Post–treatment: singeing, calendering or Teflon coating

## High–temperature PPS Needle–punched Filter Felt Bag

PSS fibers have complete strength retention and inherent chemical resistance, which can maintain good filtration performance in harsh environments and achieve ideal service life. It is used to filter coal–fired boilers, garbage incinerators, dust collecting treatment of fly ash in power plants and pulse cleaning dust collectors.

Weight: 500g/m²
Material: PSS Filament Substrate
Thickness: 1.8mm
Permeability: 15m³/m² · min
Radial control force: > 1200N/5 × 20cm
Latitudinal control force: > 1300N/5 × 20cm
Radial control force: <30%
Latitudinal control force: <30%
Usage temperature: ≤190℃
Post–treatment: high temperature hot pressing and singeing

## Flumex (FMS) High Temperature Resistant Needle–punched Felt Bag

Compared with fiberglass cloth bags, its wear resistance, flexural resistance and peeling strength are obviously improved. The filtration speed can reach more than 1.0m/min and the running resistance is low. It is widely used in steel, non–ferrous smelting, chemical industry, carbon black, building materials, electric power and other industries.

Weight: 800g/m²
Material: Aramid, fiberglass/ fiberglass substrate
Thickness: 2.5mm
Permeability: 10m³/m² · min
Radial control force: > 2000N/5 × 20cm
Latitudinal control force: > 2000N/5 × 20cm
Radial control force: <10%
Latitudinal control force: <10%
Usage temperature: ≤260℃
Post–treatment: PTEF treatment, calendering

## P84 High Temperature Resistant Needle–punched Felt Bag

It has remarkable temperature resistance and good chemical resistance. It has certain advantages in filtration of acid waste gas and alkaline dust. It has low backwash pressure and high sludge cake efficiency. It is used in asphalt plants, cement plants, waste incinerators, liquid bed boilers and coal–fired boilers.

Weight: 500g/m²
Material: P84/P84 substrate
Thickness: 2.3mm
Permeability: 15m³/m² · min
Radial control force: > 700N/5 × 20cm
Latitudinal control force: > 1300N/5 × 20cm
Radial control force: <35%
Latitudinal control force: <55%
Usage temperature: ≤260℃
Post–treatment: high temperature hot pressing and singeing

## Three–proof Polyester Needle–punched Felt Bag (waterproof, antistatic, oil–proof)

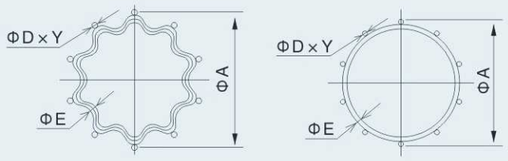
In the process of producing needle–punched felt, conductive fibers or conductive materials are mixed into chemical fibers. The filter cloth is rolled and impregnated with PTFE (waterproof agent), which is used in occasions with high moisture content. The filter material is not easy to block the paste bag, the service life of the cloth bag is prolonged, the gas flow rate is increased, and the maintenance cost is greatly saved.

Weight: 500g/m²
Material: Polyester/Polyester Antistatic Substrate
Thickness:1.8mm
Permeability: 11m³/m² · min
Radial control force: > 1100N/5 × 20cm
Latitudinal control force: > 1300N/5 × 20cm
Radial control force: <35%
Latitudinal control force: <45%
Usage temperature: ≤130℃
Post–treatment: singeing, calendering or Teflon coating

## Framework of Dust Collector

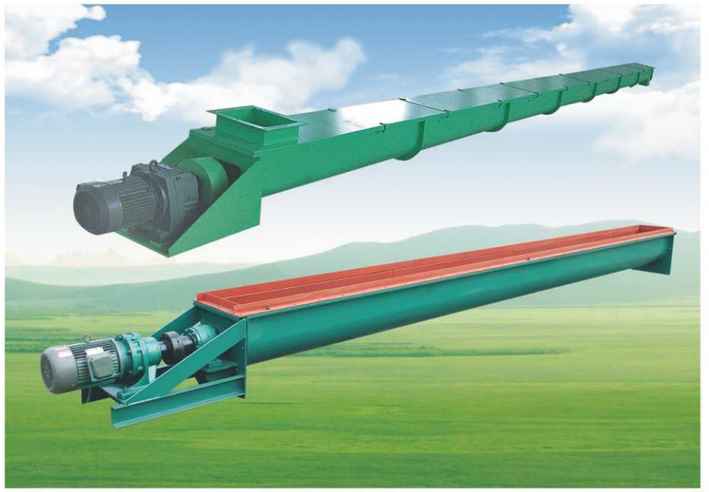
The framework is the "rib" of the filter bag. It is welded once by automatic welding equipment. The welding is firm and the appearance is smooth and straight, so that the filter bag is not damaged. It is light and easy to install and maintain. Zinc plating or plastic spraying process is used for surface post-treatment.

Frame outline of round cage filter bag:





## Screw conveyor series



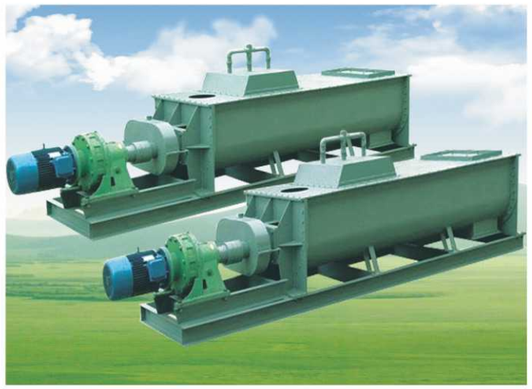
Screw conveyor series screw conveyor is divided into horizontal screw conveyor and vertical screw conveyor from the angle of displacement direction of conveying materials. It is mainly used for horizontal conveying and vertical lifting of various loose materials, such as powder, granular and small pieces. It is not suitable for conveying deteriorative, viscous, caking or high temperature, pressure-resistant and relatively high. Special materials with high corrosiveness. Screw conveyor is widely used in various industries, such as building materials, chemical industry, power, metallurgy, coal mine, grain and other industries. For example, coal mine, ash, slag, cement, grain, etc., the material temperature is less than 200 C.

LS series screw conveyor technical parameters:

Note: Ir = 47 ϕ D2.S.n. (the unit of P.S. is m)

| Technical data / Model Specification | | Helical diameter mm | Pitch mm | Speed r/min | Standard Volume Conveyance Iv(m³/h) | | | Speed r/min | Standard Volume Conveyance Iv(m³/h) | | | Speed r/min | Standard Volume Conveyance Iv(m³/h) | | | Speed r/min | Standard Volume Conveyance Iv(m³/h) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | n | Diameter | | | n | Diameter | | | n | Diameter | | | n | Diameter | | |
| | | | | | 0.45 | 0.33 | 0.15 | | 0.45 | 0.33 | 0.15 | | 0.45 | 0.33 | 0.15 | | 0.45 | 0.33 | 0.15 |
| Medium-sized | LS200 | 200 | 200 | 100 | 16.9 | 12.4 | 5.6 | 80 | 13.5 | 9.9 | 4.5 | 63 | 10.7 | 7.8 | 3.6 | 50 | 8.5 | 6.2 | 2.8 |
| | LS250 | 250 | 250 | 90 | 29.7 | 21.8 | 9.9 | 71 | 23.5 | 17.2 | 7.8 | 56 | 18.5 | 13.6 | 6.2 | 45 | 14.9 | 10.9 | 5.0 |
| | LS315 | 315 | 315 | 80 | 52.9 | 38.8 | 17.6 | 63 | 41.6 | 30.5 | 13.9 | 50 | 33.1 | 24.2 | 11.0 | 40 | 26.4 | 19.4 | 8.8 |
| | LS400 | 400 | 355 | 71 | 85.3 | 62.5 | 28.4 | 56 | 67.3 | 49.3 | 22.4 | 45 | 54.1 | 39.6 | 18 | 36 | 43.2 | 31.7 | 14.4 |
| Large | LS500 | 500 | 400 | 63 | 133.2 | 97.7 | 44.4 | 50 | 105.8 | 77.6 | 35.3 | 40 | 84.6 | 62.0 | 28.2 | 32 | 67.7 | 49.6 | 22.6 |
| | LS630 | 630 | 450 | 50 | 188.9 | 138.5 | 63.0 | 40 | 151.1 | 110.8 | 50.4 | 32 | 120.9 | 88.6 | 40.3 | 25 | 94.4 | 69.3 | 31.5 |
| Oversize | LS800 | 800 | 500 | 40 | 270.7 | 198.5 | 90.2 | 32 | 216.6 | 158.8 | 72.2 | 25 | 169.2 | 124.1 | 56.4 | 20 | 135.4 | 99.3 | 45.1 |
| | LS1000 | 1000 | 560 | 32 | 379.0 | 277.9 | 126.3 | 25 | 296.1 | 217.1 | 98.7 | 20 | 236.9 | 173.7 | 79.0 | 16 | 189.5 | 139.0 | 63.2 |
| | LS1250 | 1250 | 630 | 25 | 520.5 | 381.7 | 173.5 | 20 | 416.4 | 305.4 | 138.8 | 16 | 333.1 | 244.3 | 111.0 | 13 | 270.7 | 198.5 | 90.2 |

## Humidifying mixer series



SJ Double-Axis Dust Humidifying Mixer:

SJ double-axis dust humidifier uses two groups of spiral blades to mix, which has high mixing efficiency. The spiral blades are made of special alloy or composite ceramics with high wear resistance and long service life. It is mainly used in the dust collector of thermal power plant, and can also be used in chemical, metallurgical, mining, building materials and other industries.

BDSZ Single Shaft Cust Humidifying Mixer:

BDSZ series vibration type single shaft dust humidifier is another generation of advanced dust humidifier in our company after DS series humidifier. The vibration system is added to the original equipment, which not only has the characteristics of DS series single-axis dust humidifier, but also overcomes the problems of dust forming tube wall bonding and enhances the range of application of the humidifier.

### Technical parameters of dust humidifying mixer:

| | Model | Production capacity t/h | Main engine power kw | Feeder power kw | Power of vibration motor kw | Applicable temperature ℃ | Water pressure mpa | Water content% |
|---|---|---|---|---|---|---|---|---|
| Uniaxial dust humidifier | BDSZ-50 | 15 | 7.5 | 1.1 | 0.4 | ≤300 | ≥0.2 | 15~20 |
| | BDSZ-60 | 30 | 11 | 1.5 | 0.75 | ≤300 | ≥0.2 | 15~20 |
| | BDSZ-80 | 60 | 18.5 | 1.5 | 2.0 | ≤300 | ≥0.2 | 15~20 |
| | BDSZ-100 | 100 | 37 | 2.2 | 2.5 | ≤300 | ≥0.2 | 15~20 |
| | BDSZ-120 | 160 | 45 | 2.2 | 3.7 | ≤300 | ≥0.2 | 15~20 |
| | Model | Production capacity t/h | Main engine power kw | Helical diameter mm | Reducer Model | Speed r.p.m. | Water pressure mpa | Water content% |
| 双轴粉尘加湿机 | SJ-40 | 20 | 5.5 | 400 | XWD5.5-6-43 | 34 | 0.4~0.8 | 15~20 |
| | SJ-50 | 40 | 7.5 | 500 | XWD7.5-6-43 | 34 | 0.4~0.8 | 15~20 |
| | SJ-60 | 60 | 11 | 600 | XWD11-6-43 | 34 | 0.4~0.8 | 15~20 |
| | SJ-80 | 80 | 18.5 | 800 | XWD18.5-9-35 | 34 | 0.4~0.8 | 15~20 |
| | SJ-100 | 100 | 22 | 1000 | XWD22-9-35 | 34 | 0.4~0.8 | 15~20 |



## YJD series Star Unloader

YJD-A Electric Unloader

YJD-B Electric Unloader

Explosion-proof Electric Unloader

YJD-A/B series unloading device, also known as electric ash unloading valve and electric lock valve, consists of three parts: motor, tooth difference planetary reducer (X) or pinwheel cycloid reducer (Z) and rotary unloader. There are two series and 60 specifications.

The square flanges of import and export are type A, and the circular flanges are type B.

The device is a dust removal equipment, the main equipment for conveying, discharging ash, locking air and other equipment feeding. It is suitable for powder and granular materials. Installation size is consistent with all kinds of dust collectors, which is widely used in environmental protection, mining, metallurgy, chemical industry, grain, chemical and other industrial sectors.

Special motors, such as explosion-proof, frequency modulation, speed regulation and marine motors, can be configured according to needs of users in order to meet users' special requirements. The material can also be processed according to the needs of users, such as high humidity resistance, corrosion resistance, stainless steel, flexible blades, explosion-proof impellers, etc.

### Technical parameters of $\frac{A}{B}-\frac{X}{Z}$ YJD unloader

| Data / Name | Model | YJD 2 | YJD 4 | YJD 6 | YJD 8 | YJD 10 | YJD 12 | YJD 14 | YJD 16 | YJD 18 | YJD 20 | YJD 26 | YJD 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unloader L/r | | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 26 | 30 |
| Unloader $m^3/h$ | | 4.08 | 8.16 | 12.24 | 16.32 | 20.40 | 24.48 | 28.56 | 32.64 | 36.72 | 40.80 | 50.64 | 61.20 |
| Inner diameter mm | | 150 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 400 | 440 |
| r/min | Type Z | 25-40 (standard speed: 34r/min) | | | | | | | | | | | |
| Working temperature ℃ | | T≤80℃ T≤200℃ | | | | | | | | | | | |
| Materiel | | Powdery, granular | | | | | | | | | | | |
| Electric machinery | Model | Y801-4 | Y802-4 | | | Y90S-4 | | | Y90L-4 | | | Y100L1-4 | Y100L2-4 |
| | KW | 0.55 | 0.75 | | | 1.1 | | | 1.5 | | | 2.2 | 3 |
| | r/min | 1390 | | | | 1400 | | | | | | 1430 | |
| Weight kg | | 53 | 71 | 86 | 101 | 121 | 141 | 161 | 181 | 191 | 221 | 251 | 301 |

## Electric Removal Fittings Series

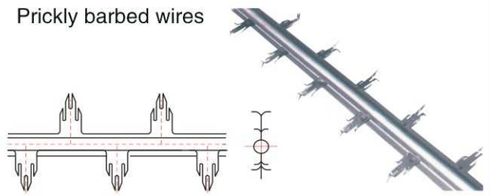

Polar plate
480C（A）


Polar plate
480C（B）

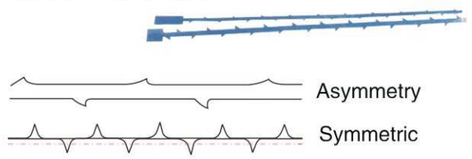

Polar plate
385Z 385C


Polar Plate
ZT-24 Wave

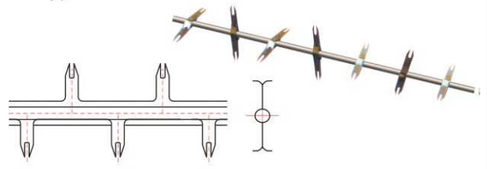
Prickly barbed wires



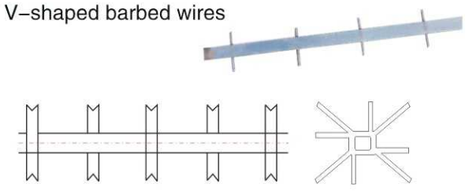
Sawtooth barbed wires



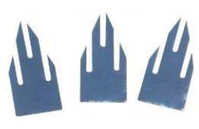

RS-type barbed wires



V-shaped barbed wires




Oblique Four-tooth barbed wires


Orthodontic Four-tooth barbed wires


Bidentate barbed wires


Bone spine barbed wires


V-shaped barbed wires


Barbed Wire Joint (Elliptical Hole)


Spiral rod joint with barbed wire


Barbed Wire Joint (Round Hole)


Anode Vibration Hammer


Cathode Vibration Hammer


Hammer


Vibrating drilling


Hoop


Dust cover


Dust cap


Up and down fork pulling


Anode baffle


Cathode baffle


Coupling

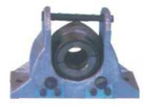

Drive Shaft of Cathode


Vertical Shaft Supporting Disk


Bearing seat


Dry-grinding Dust Bearing

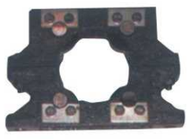

Vertical Shaft Bearing


Bearing in Center Dust


Dust Bearing


Three-wheel vertical bearing

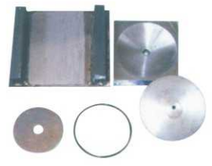

Four-wheel
vertical bearing


Bearing in Four-wheel Dust


Impact


Bearing Limitation in Dust


Universal Coupling


100T and 250T Guiding Support


100T, 250T Universal Support


Self-locking gasket


FT1 shell inner door