

BANANA SCREEN BROCHURE

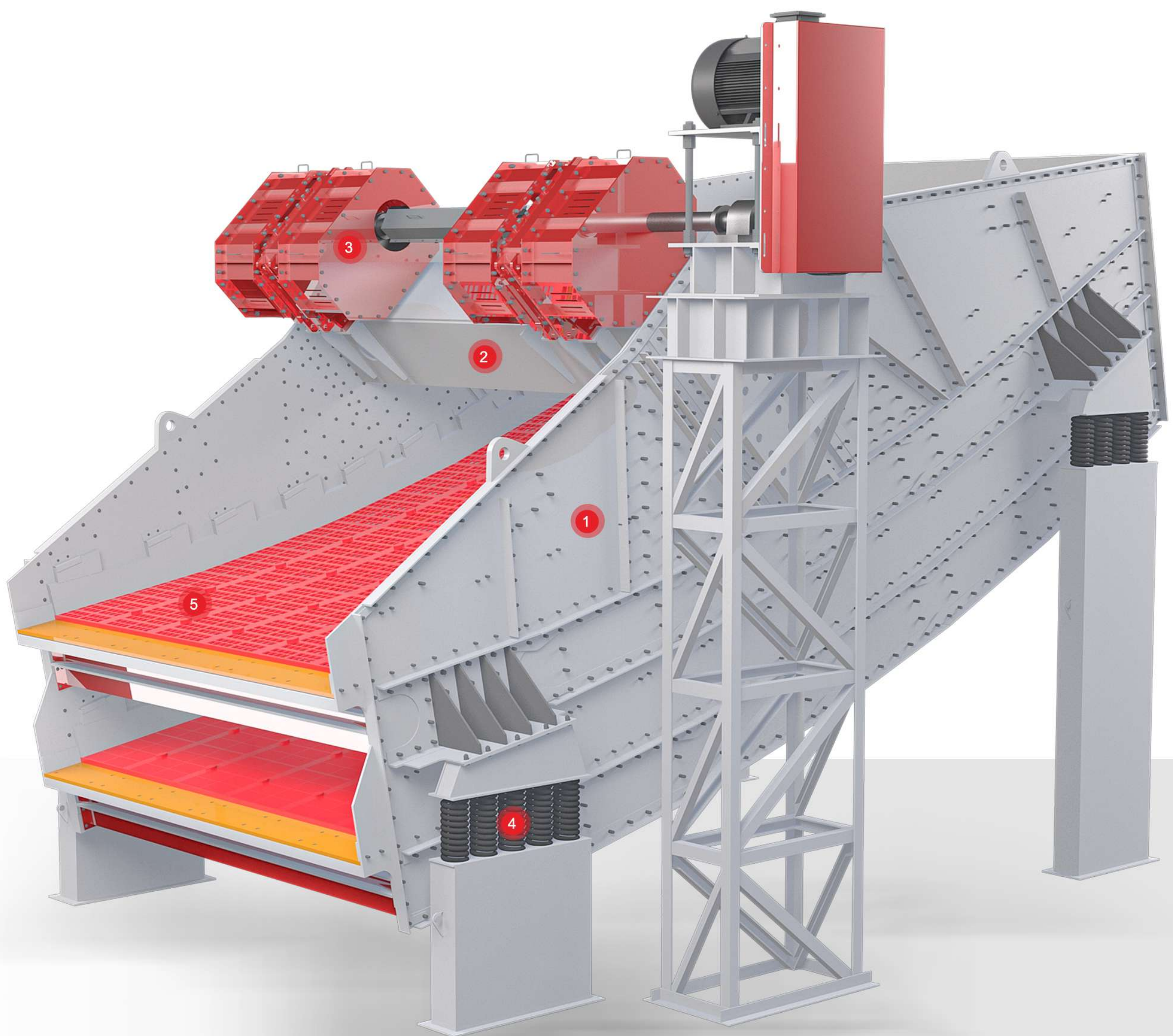
Henan Excellent Machinery Co.,Ltd.

BANANA SCREEN

INTRODUCTION

The banana screen uses the latest technology of multi-angle machines, which can achieve special throughput in a relatively small screening area. The screen includes many different screen angles, a variety of deck types and apertures to meet specific process requirements.

Banana screen is sometimes called multi-angle screen or multi-slope screen. will accept most types of deck systems, including polyurethane, perforated steel plate and wedge wire. Banana screen achieves good separation accuracy under extremely high feeding speed and material that is difficult to screen. Its operational characteristics make it a high-speed screen.



3 Vibration Exciter

1 Side Plate

4 Vibration isolation system

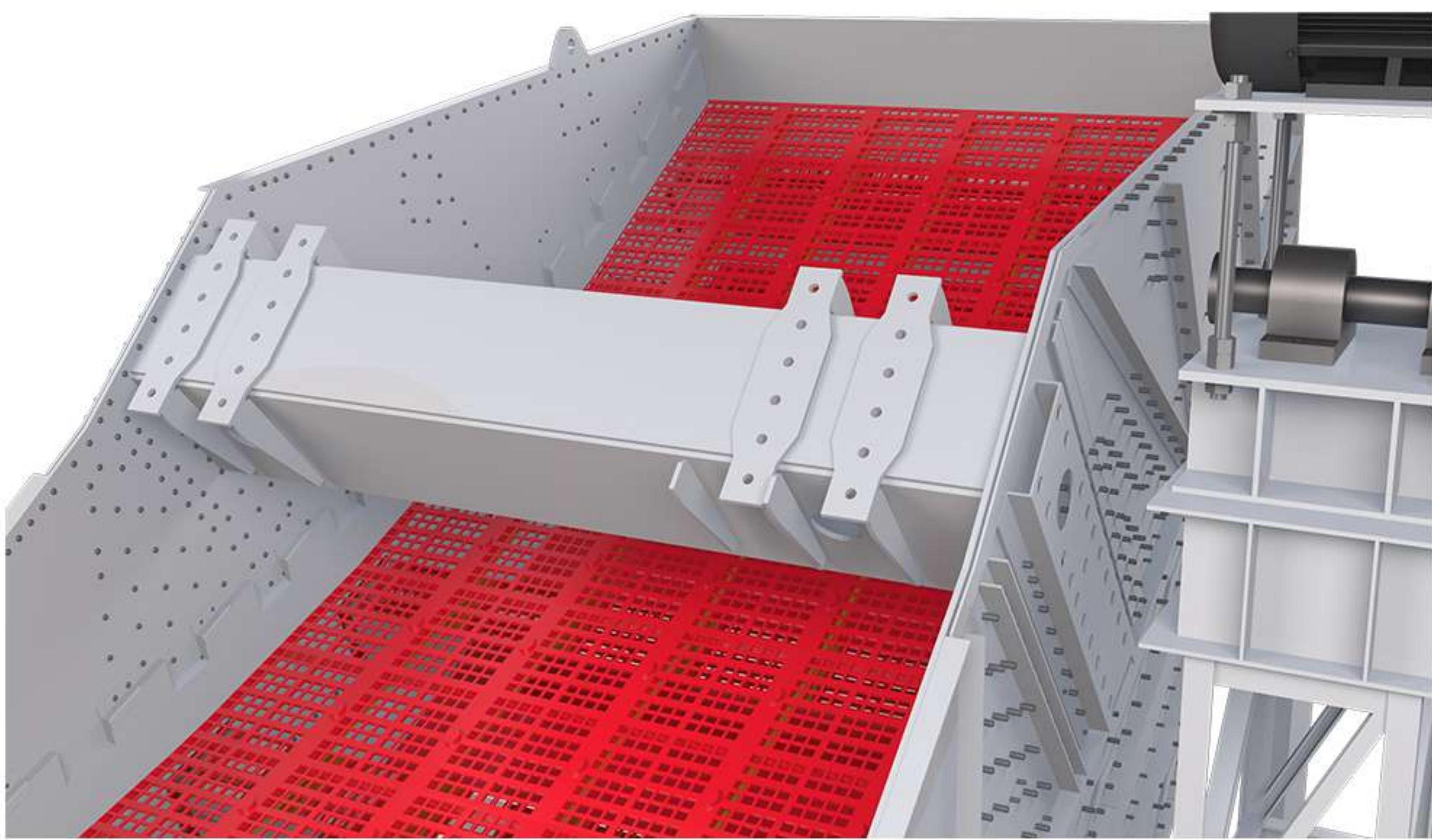
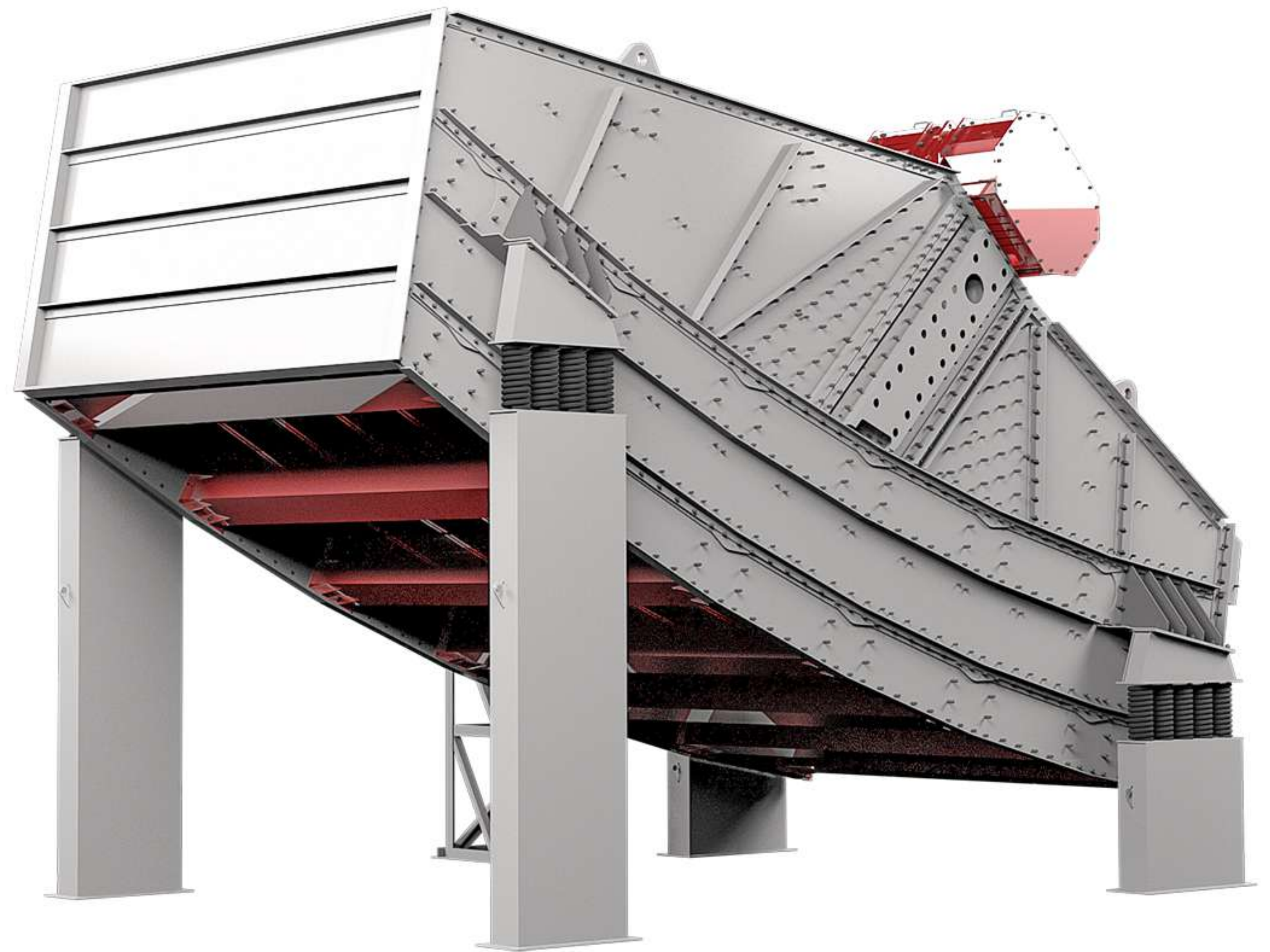
2 Sprocket

5 Screen Plate

01

Side Plate Of Frame

The side plate is made of high quality low alloy and high strength structural steel plate. The high precision laser cutting machine is used to complete the feeding and drilling of the whole steel plate at one time, without splicing, and the appearance is smooth and beautiful. In the area where the force of the side plate is large, the strengthening plate, the protection plate and the strengthening Angle steel are reasonably arranged to effectively increase the strength of the side plate, so that the load of the side plate is evenly distributed, so as to prevent elastic deformation



02

Side Plate Of Frame

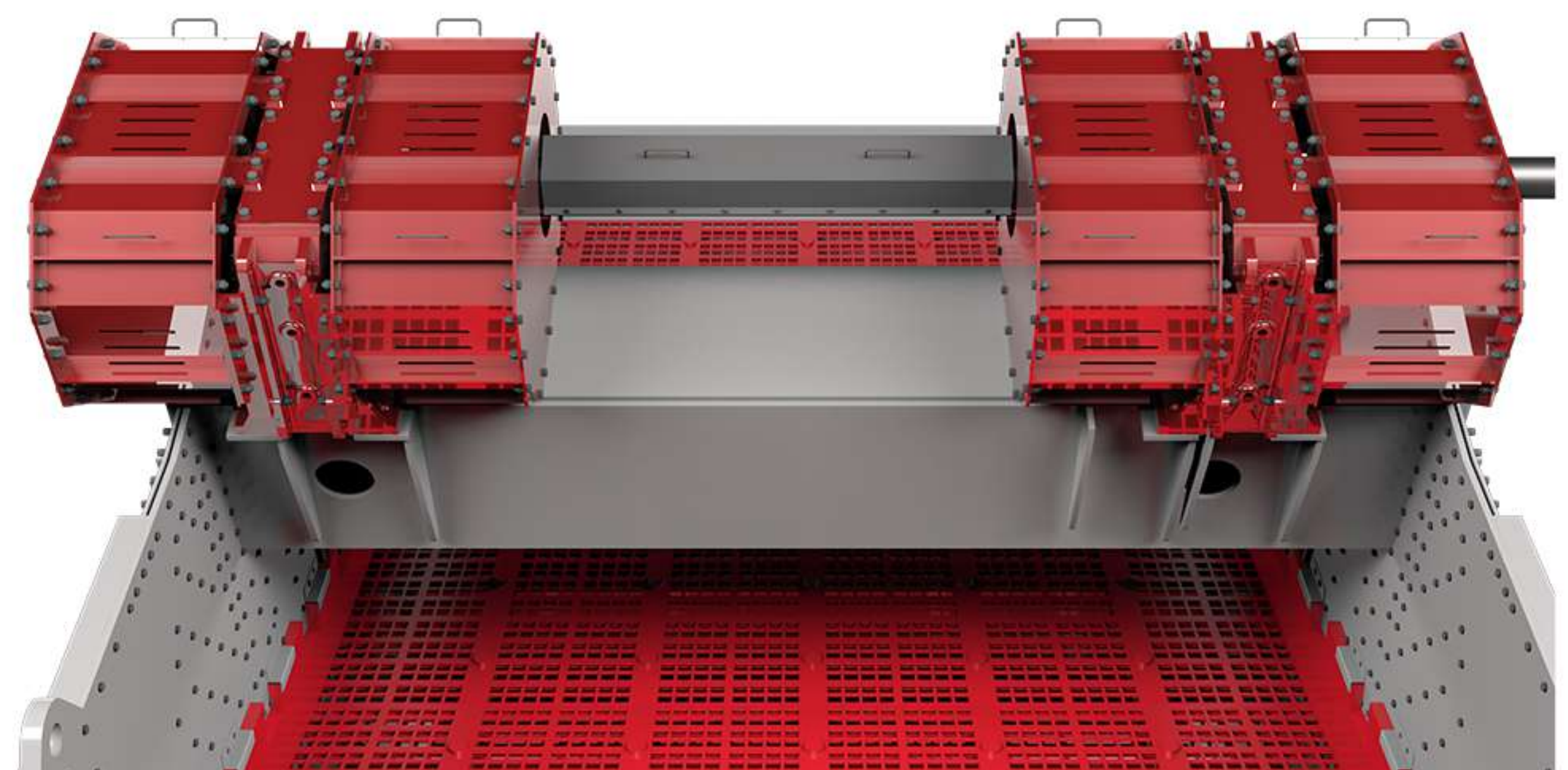
Banana screen beam is a rectangular hollow structure with high rigidity and light weight, and completely eliminates splicing in the vertical direction. This structural design has a high safety factor and is suitable for complex working conditions.

The base beam of the vibration exciter plays a vital role in the operation of the banana screen. It adopts a box-shaped cross-section design and is equipped with reinforced plates, which are high in stiffness and light in weight. The special design of the reinforced flange can effectively improve the strength of the banana screen.

03

Vibration Exciter

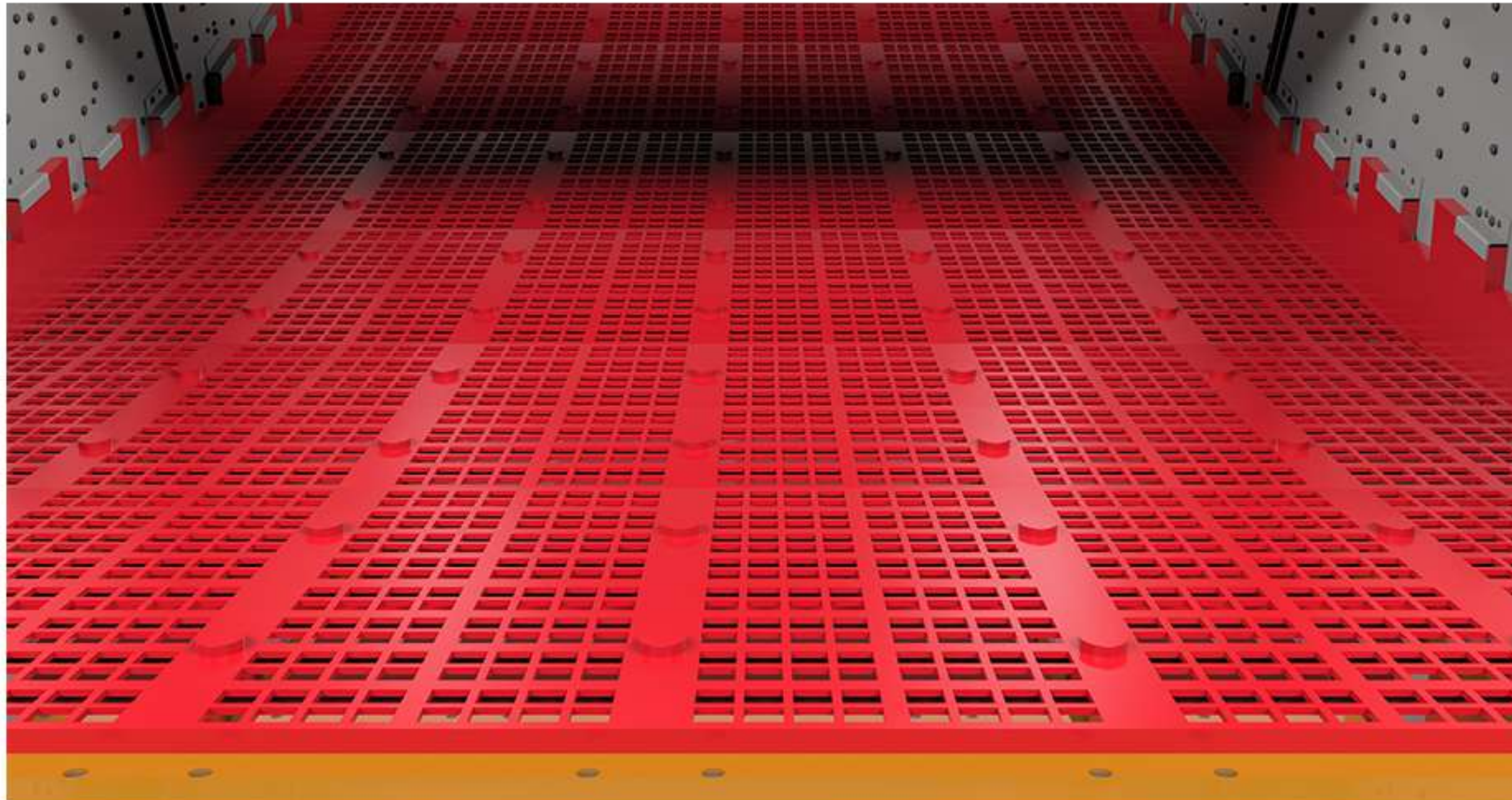
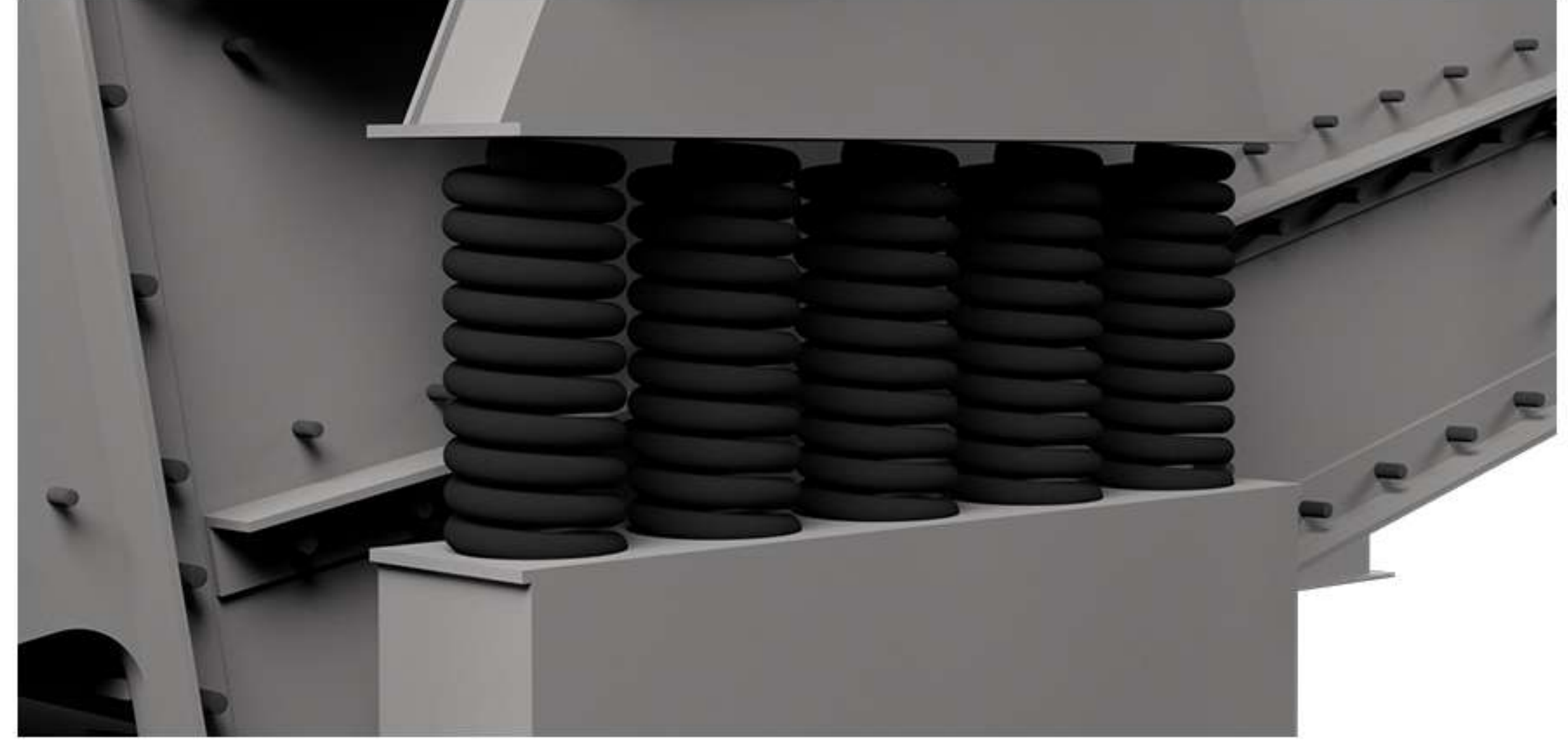
The vibration exciter adopts the ZYQX series high-efficiency gear-driven thin oil lubricated box-type vibration exciter independently developed and manufactured by ourselves. It is equipped with imported SKF large clearance vibration machinery special bearings. The specially designed special sealing structure of the shaft end can ensure that dust or other foreign matter cannot enter the inside of the vibration exciter. The eccentric torque of the vibration exciter eccentric wheel is adjustable to meet the different amplitude requirements of the equipment for materials.



04

Vibration Isolation System

Screen using steel cylindrical spiral compression spring shock absorption, using special parameters design, large bearing capacity, long service life, excellent shock absorption effect.



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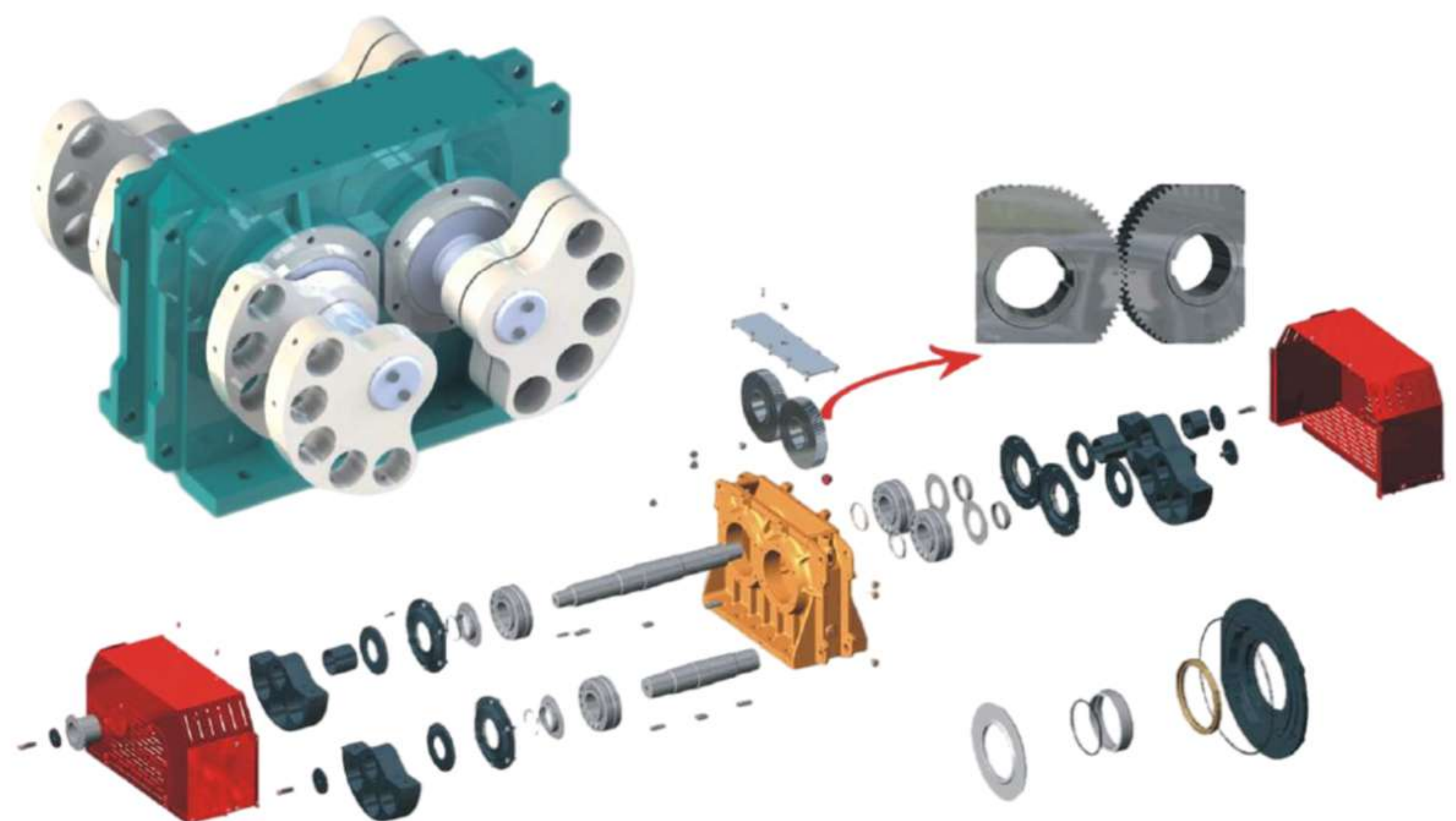
Screen Plate

The screen plate is made of foreign advanced technology, modular design, high degree of universality, and the screen plate can be completely interchangeable between different models. It is fixed by polyurethane card slot, easy to install and disassemble. The two sides of the screen plate are mounted with polyurethane side bar and polyurethane wedge, which can fix the screen plate, effectively prevent the material from wearing the screen machine side plate, and extend the service life of the screen frame.

VIBRATION EXCITER INTRODUCTION

◦ Structural Features

The ZYQX series of high-efficiency gear transmission oil-lubricated box-type exciter independently developed and manufactured by our company is adopted; it is equipped with imported SKF large-clearance vibration machinery special bearings; high-precision heavy-duty helical gears, splash lubrication, and magnetic oil drain plugs are used to absorb iron filings in the lubricating oil; the gas and heat in the exciter can be freely exchanged through the special seal at the shaft end, and the lubricating oil will not leak out. This specially designed structure can ensure that coal dust or other foreign matter cannot enter the interior of the exciter;



The eccentric torque of the exciter eccentric wheel can be adjusted to meet the different amplitude requirements of the material for the equipment.

◦ Processing technology control of core parts of vibration exciter

A. Casing

The casing is made of Q400-18 ball mill cast iron precision casting, which has good machinability, high impact toughness at room temperature, and high plasticity. The brittleness transition temperature is low, and the toughness is good at low temperature.

Before processing the casing, our company will do natural aging treatment or artificial aging treatment on the casing to eliminate the internal stress, stable structure and size, improve mechanical properties.

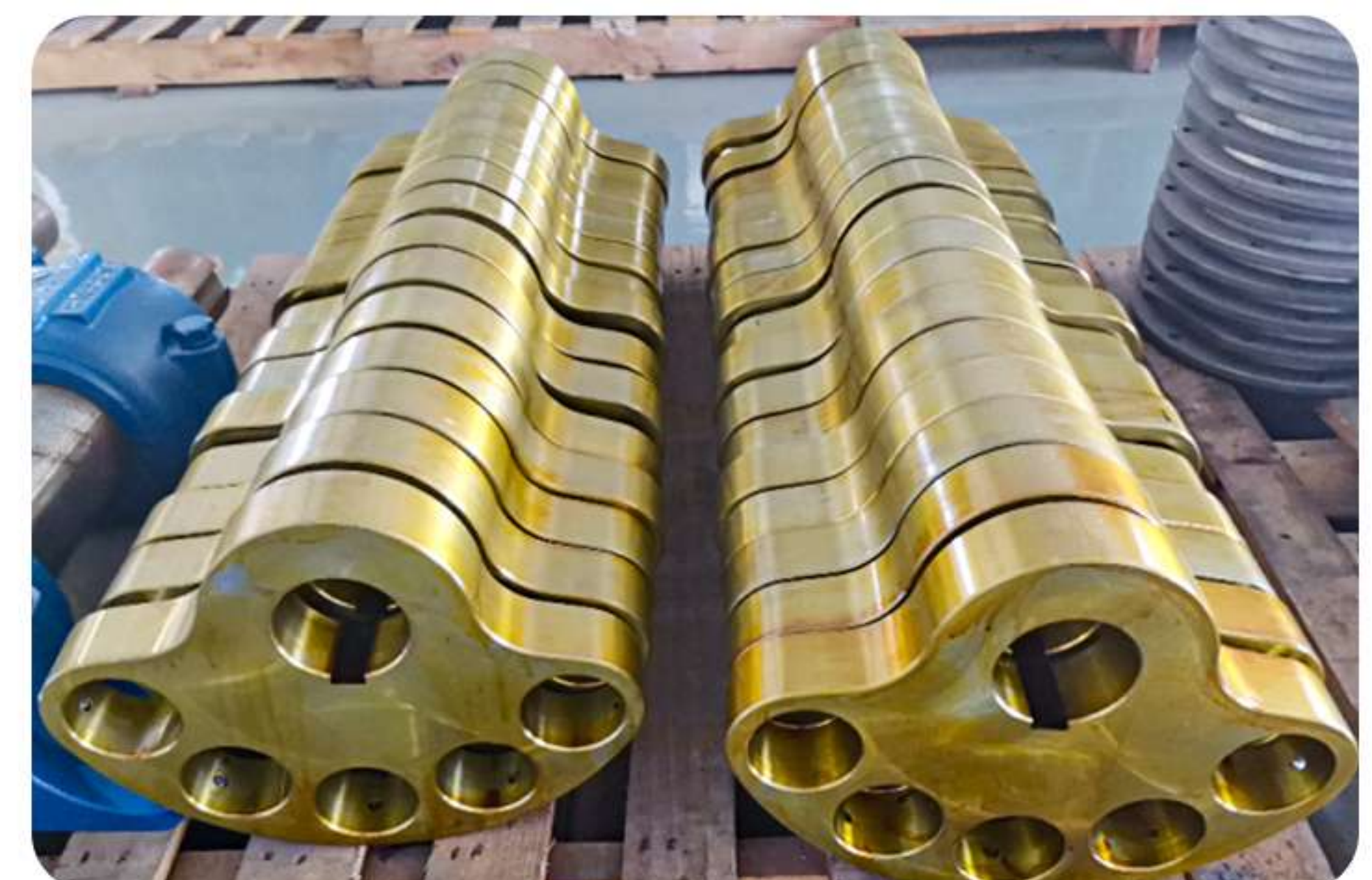
After the aging treatment is completed, the 3 axis 5 hedral large gantry processing center to complete multiple surface processing in order, as well as complete the milling, boring, drilling, tapping and other processes of processing, reduce clamping quantity and correction times, effectively ensure the accuracy of the shape and position tolerance of each surface. Vibration exciter bearing seat hole center line coaxiality tolerance in line with 6 level accuracy requirements in GB/T 1184.

Before the casing assembly, the processing iron chips and burrs are removed, and the casing is comprehensively cleaned by shot blasting, high pressure blowing and other methods. After completion, anti-rust oil is applied on the processing surface and placed in the dust-free assembly workshop for reserve.



B. Shaft

The shaft is made of 40Cr, and it is conditioned after rough turning. It has good comprehensive mechanical properties and low temperature impact toughness. Then it is finished to ensure the tolerance and precision of shape and position; And grinding the bearing position to ensure the good surface finish. Finally, apply anti-rust oil and place it in the dust-free assembly workshop for reserve.



C. Eccentric block

The eccentric block is made of HT200 precision casting and processed by a 3 axis 5 hedral large gantry processing center. It is positioned by special tooling to ensure that the keyway and the mounting hole of the counterweight column meet the requirements of shape and position tolerance and dimensional accuracy.

◦ Assembly and test of vibration exciter

There is a special workshop for the assembly of the vibration exciter to ensure that the assembly of the vibration exciter is carried out in a dust-free environment.



There is a special vibration exciter test bed, each vibration exciter is assembled and debugged in the factory, test the performance indicators, we must ensure it fully qualified before assembly on the vibrating screen;

The vibration exciter test bed adopts intelligent monitoring system:

- ① In the process of the vibration exciter test, the monitoring indicators are displayed and recorded in real time, and the data is accurate and reliable;
- ② With indicator abnormal alarm device, according to the test situation timely alarm;
- ③ The monitoring results are automatically generated by the computer.



BANANA SCREEN

FEATURES

High Strength And Good Rigidity

01

The main beam of the exciter and the beam of the screen frame adopt the box beam structure. Internal reinforcing ribs enhance the rigidity and strength of the screen and reduce the weight of the machine, thus improving efficiency and reducing power consumption.

High Performance Exciter

02

The eccentric block of the exciter is arranged outside the exciter box, so that the amplitude can be adjusted by changing the counterweight setting, ensuring high performance operation of the banana screen.

Maximum Service Life

03

The combination of screen box with strong wear resistance and low stress ensures the reliability of banana screen operation and greatly extends the service life of the equipment.

Easy Maintenance

04

Banana screens are designed with modular components to facilitate quick and timely replacement of parts, reducing downtime and maintenance costs.

A Variety Of Screen Plates Are Available (Variety Screen Plates Option)

05

Banana screen plates are available in a variety of materials, such as woven/wedge wire, polyurethane modular panels and rubber modular panels, to meet the screening needs of different customers.

APPLICATION

Processes

- Dewatering screening
- Dry Classification
- Wet screening
- Fine wet screening
- Fine removal/Desliming
- Discharge Screening
- Secondary screening
- Tertiary screening

Mining industry:

- coal
- coke
- coal gangue
- bituminous coal
- lignite
- Gold
- copper
- bauxite
- rare earth
- gypsum
- diamond

Aggregate industry:

- sand
- pebbles
- gravel
- shale
- slag
- iron slag
- powder slag

BANANA SCREEN

TECHNICAL SPECIFICATIONS

| Model | Layers | Screen Spec W×L(m) | Screen Area (m ²) | Feeding Size (mm) | Handling Capacity (t/h) | Power (Kw) |
|-----------|--------|-----------------------|----------------------------------|--|----------------------------|---------------|
| BMVS 1861 | 1 | 1.8×6.1 | 10.98 | ≤400 | 50–100 | 22kw |
| BMVS 2461 | 1 | 2.4×6.1 | 14.64 | ≤400 | 150–280 | 30Kw |
| BMVS 2473 | 1 | 2.4×7.3 | 17.52 | ≤400 | 150–300 | 30Kw |
| BMVS 3061 | 1 | 3.0×6.1 | 18.3 | ≤400 | 180–330 | 37Kw |
| BMVS 3073 | 1 | 3.0×7.3 | 21.9 | ≤400 | 240–380 | 37Kw |
| BMVS 3661 | 1 | 3.6×6.1 | 21.96 | ≤400 | 240–400 | 37Kw |
| BMVS 3673 | 1 | 3.6×7.3 | 26.28 | ≤400 | 290–480 | 45 Kw |
| BMVS 2461 | 2 | 2.4×6.1 | 29.28 | Upper screen: ≤400 Lower screen: ≤150 | 180–520 | 37Kw |
| BMVS 3061 | 2 | 3.0×6.1 | 36.6 | Upper screen: ≤400 Lower screen: ≤150 | 250–800 | 55Kw |
| BMVS 3073 | 2 | 3.0×7.3 | 43.8 | Upper screen: ≤400 Lower screen: ≤150 | 300–1000 | 55Kw |
| BMVS 3661 | 2 | 3.6×6.1 | 43.92 | Upper screen: ≤400 Lower screen: ≤150 | 300–1000 | 55Kw |
| BMVS 3673 | 2 | 3.6×7.3 | 52.56 | Upper screen: ≤400 Lower screen: ≤150 | 350–1200 | 75Kw |





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