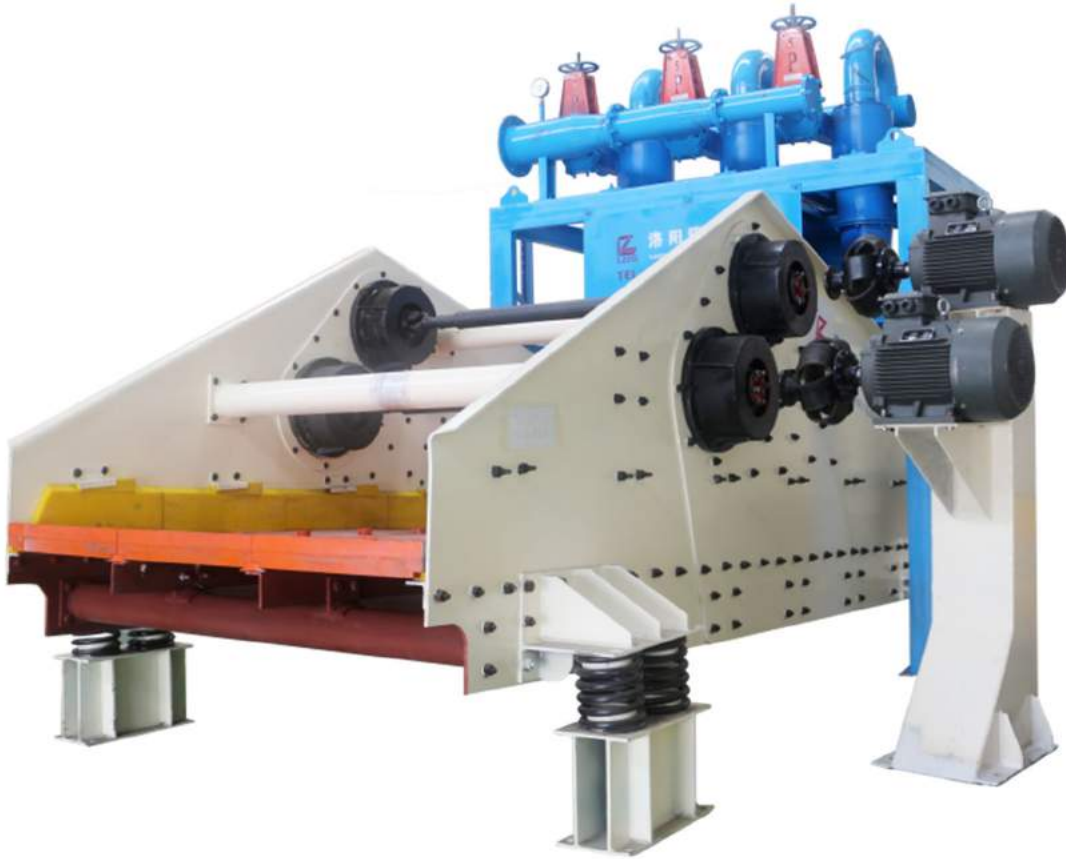


GP Tailing dewatering screen





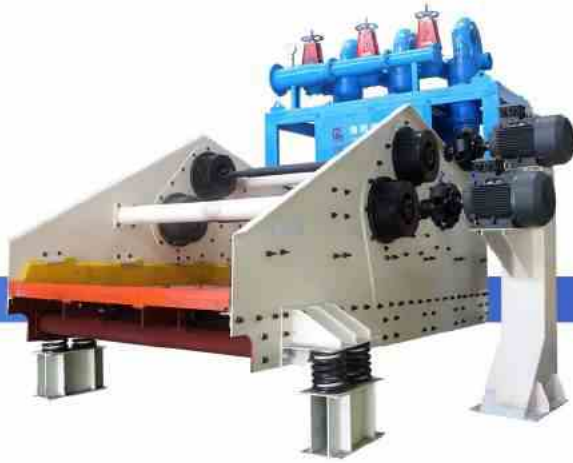
GP Tailing dewatering screen

There exists 12,718 tailing ponds in our country, of which there are 1526 under construction tailing ponds. Until 2007, the total amount of tailing is 8.05 billion tons. These tailing storage takes up a large amount of farmland, forest land, and it will cause huge environmental damage. In addition, the security issue is increasingly prominent.

There are variety methods of processing tailing, in order to solve the problem of tailing dehydration, we use concentrate (thickener or cyclone) + filter separator or filter press in the past, but it has some problems such as large area occupied, huge investment, high energy consumption, high usage cost and so on.

A new process of tailing disposal is rising gradually in domestic, it is after tailing slurry which output through beatification process is concentration, then disposed by dewatering screen, the water content of products in screen is less than 20%, it can be transferred to a fixed location to dry storage directly. The process have many advantages such as low investment, high efficiency, small area occupied, low consumption and so on. It is the most economic and practical way on the present market. If it is used together with filter separator or filter press, it can greatly reduce the area of the filter separator or filter press. Due to the prominent advantages of the process, it have rapid promotion and application in domestic.

GP series tailing recovery screening machine is specially designed for metal tailing recovery, which combines with the characteristics of metal tailing on the basis of GZ series high frequency sieve. It is mainly used for iron ore, copper, gold and aluminum ore tailing dehydration. It is a new type tailing recovery machine which is designed focus on solving problems exists in many tailing recovery screening machines in domestic.



GP Tailing dewatering screen

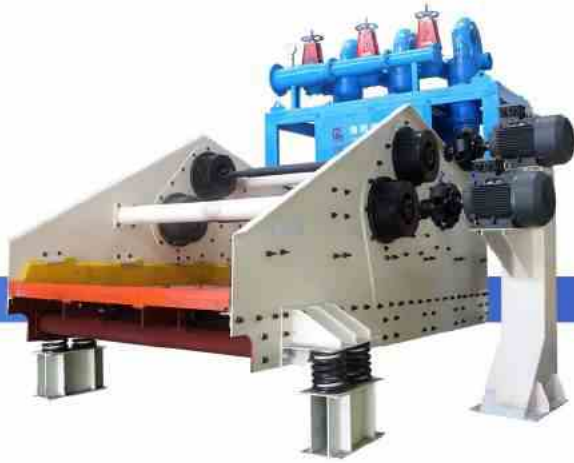


● Features:

1. High efficiency, strong vibrating force and large capacity.
2. Simple structure and easy operation and maintenance.
3. 45° angle install increases the dewatering area.
4. Vibrating frequency is adjustable to meet different ores.
5. Torsional shear type high strength bolts are used between side plates and beam, no weld gap that avoid side plates cracking during vibration.
6. Polyurethane screen with better elasticity and less blocks. The PU side push plates protect the equipment from the rushing material and guard the long life of the whole device.

● Specification:

| Model | Sieve width (mm) | Sieve length (mm) | Sieve square (m ²) | Sieve hole size (mm) | Power (kw) | Capacity (t/h) | Overall dimensions LxWxH (mm) |
|--------|------------------|-------------------|--------------------------------|--------------------------------------|------------|----------------|-------------------------------|
| GP1837 | 1800 | 3700 | 6.6 | 0.2, 0.25, 0.3, 0.35, 0.4, 0.5 | 2*5.5 | 50~100 | 3963*3013*1961 |
| GP1843 | 1800 | 4300 | 7.7 | | 2*5.5 | 60~110 | 4573*3013*1973 |
| GP2437 | 2400 | 3700 | 8.8 | | 2*7.5 | 80~130 | 3986*3745*1961 |
| GP2443 | 2400 | 4300 | 10.8 | | 2*7.5 | 90~150 | 4595*3745*2032 |

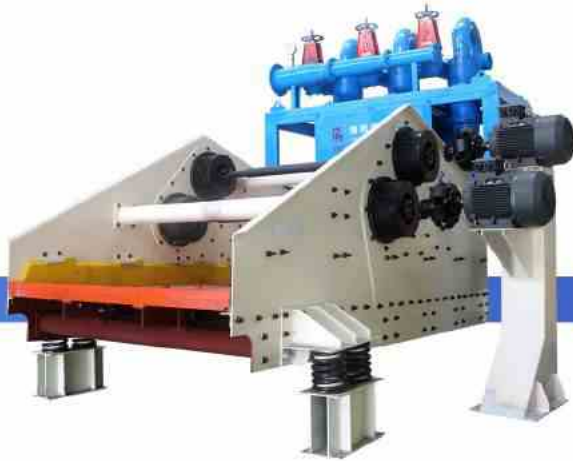


GP Tailing dewatering screen

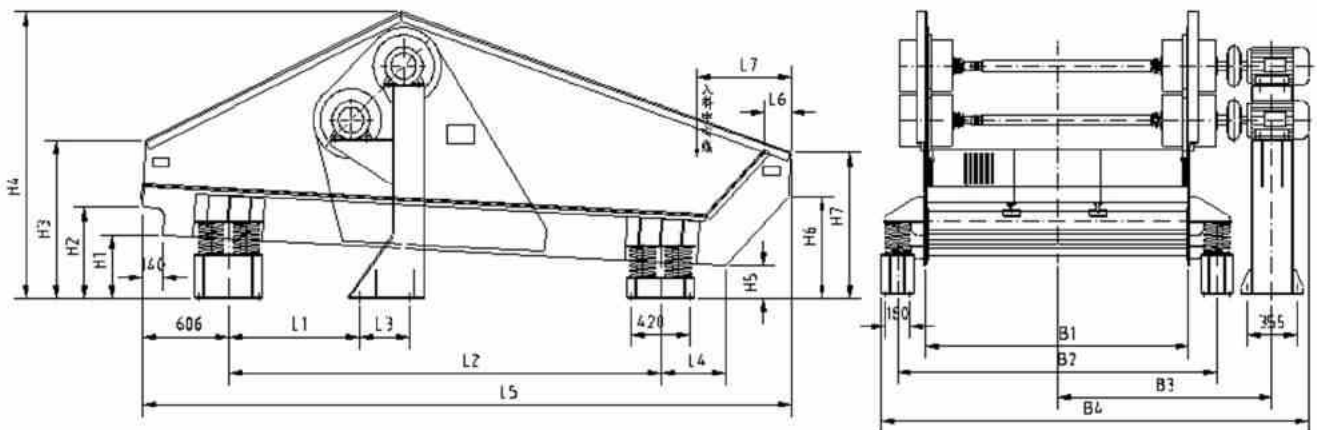
● Technical characteristics:

1. High working frequency, strong shockproofness, low moisture product, high processing capacity per unit and higher recovery rate.
2. Adopt self synchronization theory; simple structure, low working noise.
3. Negative incidence installation, make dehydration screen surface and horizontal form an angle of 45 degrees to install. Increasing dewatering area and dehydrating as soon as possible.
4. The amplitude of this screen can be adjusted by adjusting the angle of the eccentric block to meet dehydration requirements of different tailing.
5. Using high-strength bolt of torque shear bolt to connect lateral plate with beam.
6. Vibrator is in eccentric unit structure, which is easy to disassemble and maintain.
7. Bearing adopts special bearing vibration equipment, which avoids early damage caused by heat.
8. Screen surface adopts polyurethane mesh, high opening rate and resilience is convenient for dehydration.
9. Polyurethane screen with long lifetime, fixed and reliable screen, which can protect screen box side plate not affected by material.
10. Screen adopts rail type to install, which is convenient for maintenance and replacement.
11. The beam surface is coated with anti-wear coating, which can prevent beam premature from premature broken.
12. Adopt steel coil spring to reduce vibration, which minimizes the dynamic load.
13. Adopt finite element analysis software, which can ensure strength, stiffness and reasonable stress of screen frame. And it also has characters such as lightest weight and minimum energy consumption.

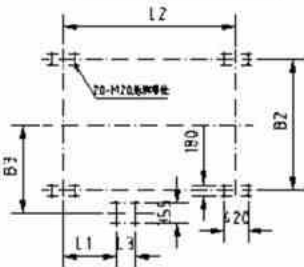
GP Tailing dewatering screen



● Installation dimensions:



地脚螺栓平面布置图



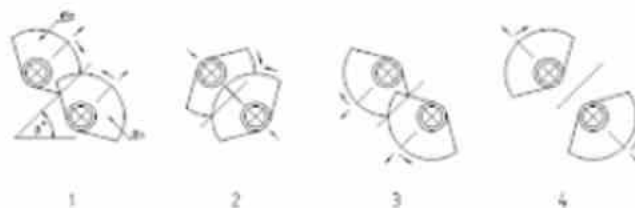
| 型号 | B1 | B2 | B3 | B4 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | H1 | H2 | H3 | H4 | H5 | H6 | H7 |
|--------|------|------|------|------|-----|------|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|------|
| GP1837 | 1856 | 2256 | 1515 | 3013 | 640 | 2437 | 350 | 460 | 3963 | 188 | 660 | 409 | 601 | 1062 | 1961 | 233 | 711 | 1009 |
| GP1842 | 1856 | 2256 | 1515 | 3013 | 924 | 3046 | 350 | 460 | 4573 | 188 | 660 | 437 | 629 | 1090 | 1973 | 229 | 707 | 1005 |
| GP2437 | 2490 | 2905 | 1903 | 3745 | 592 | 2437 | 400 | 472 | 3986 | 211 | 680 | 380 | 600 | 1061 | 1961 | 203 | 692 | 1000 |
| GP2442 | 2490 | 2905 | 1903 | 3745 | 892 | 3046 | 400 | 472 | 4595 | 211 | 680 | 468 | 688 | 1149 | 2032 | 259 | 749 | 1056 |

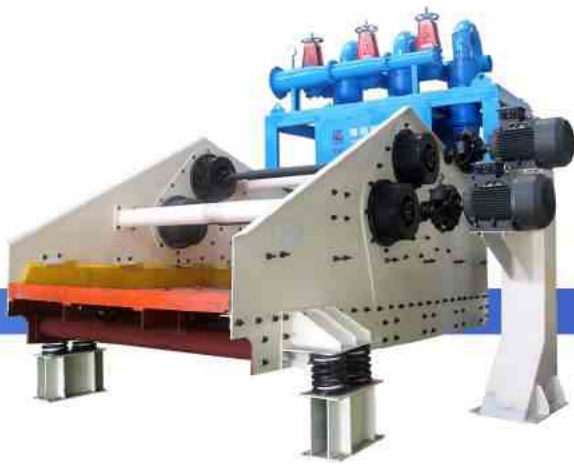
注：本图为不带底架和给料箱的安装尺寸图。若需要带底架和给料箱的总图，可来函索取。

It is composed by screen box, supporting device, motor frame, vibrator, universal drive shaft, tape coupler, motor, etc.

● Working principle:

1. Vibrating Screen working principle





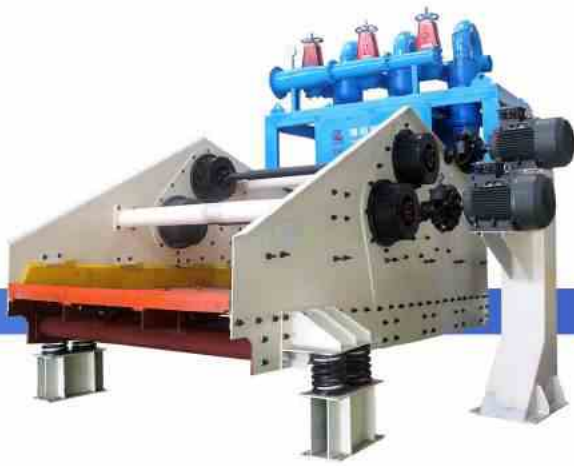
GP Tailing dewatering screen

Vibrating parts of vibrating screen are supported by 4 groups supporting device, exciting force produced by vibrating screen makes the screen box vibration, working principle is shown in chart 7. Two groups of eccentric mass $m_1=m_2$, rotation in reverse and self-synchronization. In each instantaneous position, centrifugal force produced by the two groups of eccentric mass along vibration direction, its force component is always superposition. While in its normal direction, force component of centrifugal force is always offset each other, then form exciting force that along vibration direction, makes the screen box being reciprocating linear vibration.

At position 1 and 3, centrifugal force fully stacks and the excitation reaches maximum; at position 2 and 4, centrifugal force is completely offset, excitation force is zero. Under the action of vibration force, materials make a continuous helical movement on the screen, and they become loose when thrown up, and then they collide with screen surface and through the screen mesh, thus realize the classification, dewatering, desliming and de-medium.

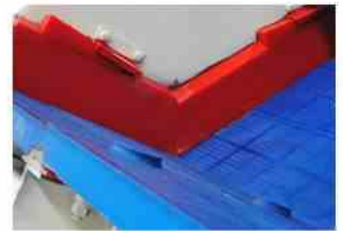
2. Dehydration principles

Filling tailing is evenly given to the inlet of screen by feed box. Firstly dehydrating about a third of the moisture at the position of drain sieve plate. After entering the connection part of plane tilted sieve plate and tilt sieve plate, material accumulation phenomenon occurs, which makes the filter layer gradually thickening. Water not through sieve formed a pool on the upper filter, because the filter layer is thinner. Water gradually take off under the strong movement. Due to the high frequency of low amplitude vibration state, the tailing becomes more and more dense. Materials form filter cake shape at the position of discharge port. The moisture in tailing, in addition to the part from the screen surface removal, the rest moisture emerges on the bed surface due to capillary action. Because the screen surface is installed with negative tilt angle, water wouldn't overflow through the discharge port and the surface water will flow to connective pool.



GP Tailing dewatering screen

● Part of the case:



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