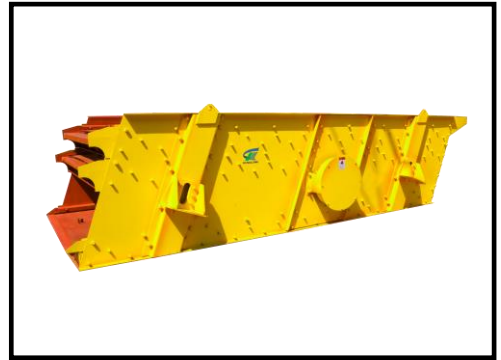




使用说明书
Operating Instruction



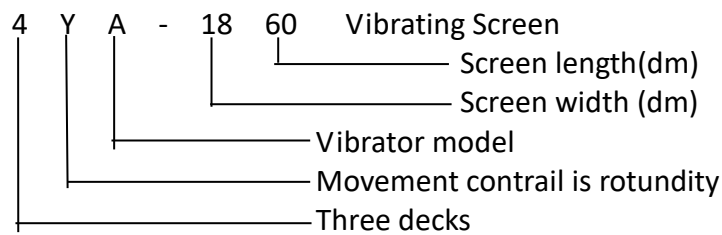
振动筛
Vibrating Screen

上海秦路实业有限公司
SHANGHAI KINGLINK INDUSTRY CO., LTD

I. Foreword:

This machine is three decks type circular Vibrating Screen. Mainly uses in the quarry, as the crusher supplementary equipment. The screening mesh size is smaller than the 250mm. It is widely used for each kind of building materials, stone material, also used as product graduation in the coal and mill run, the electric power and the chemical department and so on.

II. Specification and Instruction:



III. Main technical parameter:

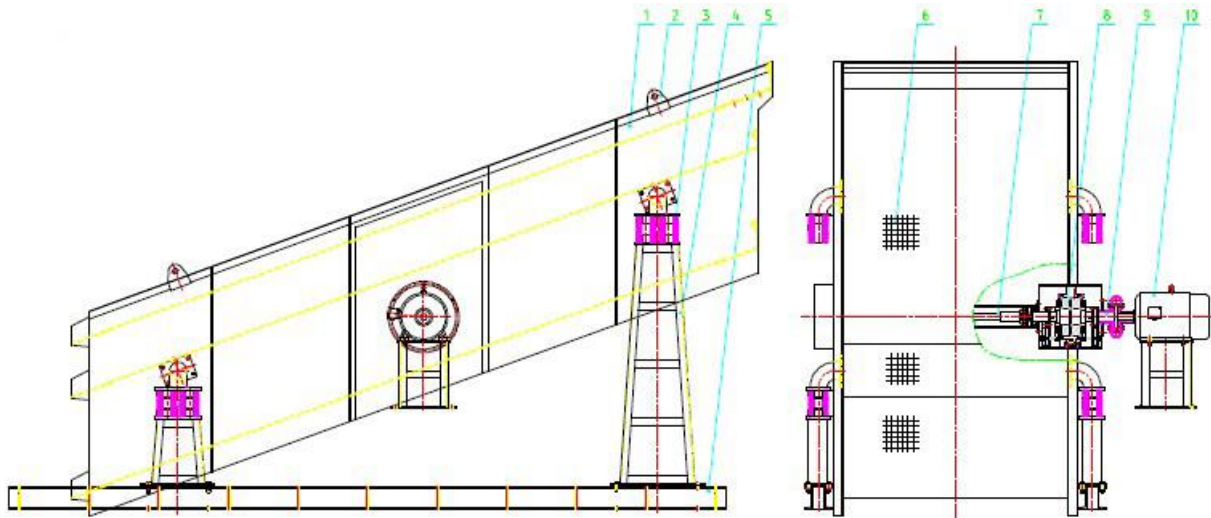
1. Screen size (length × width)	1800×6000 mm
2. Screen deck	4
3. Sieve pore size	5-100mm
4. Double swing	8mm
5. Vibrating frequency	16.2Hz
6. Screen obliquity	20 °
7. Max feeding size	250mm
8. Capacity	50-300t/h
9. Motor Power:	30 kW
10. Overall dimension (L×W×H)	7401×2554×2130mm
11. Gross weight (not including motor)	8300kgs

IV. The principle of work and the structure characteristic:

4.1 The principle of work

The 4YA-1860 circular vibrating screen: takes vibrating box and other movable parts as heavy mass, takes helical spring as elastic part, takes vibrator as excitation organization. Running in simple direction forced oscillation. The electrical motor actuates the driver through the wheel-type shaft coupling. The eccentric block in high speed revolving brings the formidable centrifugal force, causes the frame to make the compulsive continual circulation. The material does continual movement in the inclined screening surface, throws when the lamination, falls when passes by the pellet sieves, completed the granularity graduation process again and again.

Figure 1: The structure



- 1.screen box frame 2. Lifting ring 3.Spring 4.Supporting device 5.beam
6. screen sieve 7.transmission shaft 8.bearings 9. Coupling 10. motor

4.2. Structure character

This screen is composed by the frame, the supporting setting, the vibrator, the shaft coupling, the electric motor and so on as Figure 1.

The screening surface is the screen prime task component, has the punch holes screening surface, the ripple screening surface and so on many kinds of patterns. Mainly depends on its hole size to control the gradation granularity, the width (square) of the pass screening surface can control the granularity strictly, thus achieves the gradation goal.

The frame is the sieve machine maximum portion .It is composed by feeding box, the side bar, the supporting, the screening surface, the dump trough and so on the primary member to tie up welds the structure, also the main component to continues the material, the transmission exciting force, finally grades the material, the this machine uses the ordinary steel products, the overall carriage, reliable working, simple service, overcomes the problem of overall frame too big, welding stress high.

V. The Lifting, transportation and storages:

5.1 Lift: When the whole screen lifts, using the steel noose on the shackle of the frame, after the lift it should be maintain the level, hang other places is not allowed.

5.2 Transportation: The screen transportation should defer to the railroad and the road related stipulation, generally, it's not allowed directly haulage in the ground, when needs the short distance haulage because of installation, must to fill up certain rollers under the frame, pulls tows the steel cable to be supposed to wrap up sieves lower part the frame the fulcrum arrangement.

5.3 Storages: After the equipment arrived, the user should check the goods according to delivery document by item, if discovers the missing and damage because of transports and so on should be make a record .The storages place should be level, the screen should be under using the sleeper, when open-air storage should have the cover, avoid be drenched .The electrical machinery, the spring and so on the dismantlable part should put in the room to deposit, prevents the loss.



VI. The installation, debugging and trial run:

6.1 Lift installation, should be above the screen. When no lift equipment, should establish lift girder or the suspension loop. The set place of lift girder should above the screen, its axes should parallel with the screen vertical axes, the place of suspension loop should in the line of the vertical axes above screen supporting, it lifts burden should be bigger than the entire screen weight.

6.2 Chutes: The screen feeding, the discharge hopper and the funnel is the screen's accessory system (prepared by customer at site) which should set the gap to be supposed to more than 80mm between the frame. In order to use the screen working area effectively, extent screening surface operating life, the feed chute should guarantee the material to be distributed on the screen surface overall width, and causes the material to enter the screen in the initial velocity to reduce to slightly. The fall distance between the hopper and screen surface should be supposed to be less than 200mm, in order to prevent damaging the surface.

6.3 Installation: The machine has been assembled in the factory, passed through the trial run, after receives goods the user should inspect carefully, exclude the question which creates by the transportation, depositing and so on. The order of installation as follows:

6.3.1 Supporting installation: first fastening the adjusting rack or the support on the foundation bolt, about the foundation and the place foot bolt arrangement please see the attached figure (**Foundation Drawing**), which foundation item only for reference. The user could design by himself according to need.

6.3.2 Install the electricity rack in the foundation.

6.3.3 Install the compound spring on the support.

6.3.4 The installation of the frame: hang the frame to the place above install position, first put the material end spring holder on the compound spring, then lay down the screen slowly, then install the discharge end spring holder load into the compound spring.

6.3.5 Inspects the frame horizontal side level and adjusts verticality of the regulating spring, the adjustment may through add or reduce the gasket support and moves the supporting, guarantees the height difference of four groups springs not beyond 5mm.

6.3.6 Install the electrical machinery: pay attention to the rotate direction of vibrator, should accord with the regulation of assembly drawing.

6.3.7 Inspect the frame and the chute, distance between the funnel should keep more than 80mm.

6.3.8 Make sure concreted the foot bolt after inspect and fasten all bolts,

6.3.9 Inspect the agility of vibrator, rotates the shaft coupling enable the vibrator eccentric to leave the position of equilibrium suddenly to drop again, the eccentric should appear swings several times. If the revolution does not work or transfers motionless, then should find the reason, and solve it. If the date of screen delivery surpasses for half year, or because storage causes to rust, the lubricant deterioration and so on, it should disassemble completely the vibrator and clean it, before use. Please put into the new lubricant.

6.3.10 Connect the motor and the vibrator.

6.4 Empty Trial run

6.4.1 Before trial run, should make sure the install finished, inspect no problem.

6.4.2 Empty trial run time should not less than 4 hours, before load trial run should accord with the following requirement.

6.4.2.1 Starts steadily, the vibration is stable, no abnormal noise.

6.4.2.2 Swing not lower than 8mm.

6.4.2.3 Bearing temperature rise should be not higher than 35°C, the maximum temperature should be not higher than 75°C.

6.4.2.4 Vibration frequency is 16.2Hz (if the motor accord with the drawing, it also can skip this check).



6.5 Load trial run

Load trial runs besides conform to the empty trial run also should to test the following index:

- 6.5.1 The composition of feeding and the size of products.
- 6.5.2 Hourly production capacity.
- 6.5.3 Screening efficiencies.

VII. Operation instruction:

7.1 Starting preparatory works:

- 7.1.1 Reading duty record, solve the last shift issue.
- 7.1.2 Inspect and remove the sundry goods between the frame and the chute, funnel and so on that influence sieves movement.
- 7.1.3 Carefully inspect all fasteners whether fasten completely or not, specially tie bolt of tire shaft coupling flexible.
- 7.1.4 Inspect if there are damages or not on the screening surfaces
- 7.1.5 Inspect vibrator bearing does oil on time with the clean.

7.2 Start:

- 7.2.1 Passes through the inspection normally, then starts.
- 7.2.2 Screens start should carry on steadily.
- 7.2.3 If something abnormal, should stop immediately and find out the reason, after solve all the problems only then again to start, run.

7.3 Use:

- 7.3.1 Machine could be loaded after pass through the only normal empty trial run only.
- 7.3.2 Materials should be given even in the screening surface; if there are partial carries, should inspect the chute whether stops up and the sieve machine whether breaks down.
- 7.3.3 In the normal condition, the bearing temperature rise should not surpass 35°C, highest should not surpass 75°C, otherwise should verify the reason to eliminate promptly.
- 7.3.4 Stop machine should along to carry on according to the craft order, with the material stop or continues feeding the material after stopped is forbidden.
- 7.3.5 When get off the work, should eliminate the stemming between the screen and around environment.

VIII. Maintenance and safety work:

The frequent maintenance and the overhaul will lengthen the screen life, guarantee the screen normal work.

8.1 Lubrication:

- 8.1.1 This vibrator uses the drying oil lubrication, pours into 3# lithium grease lubricant through the lubricate cap.
- 8.1.2 The quantity of lubricants for bearing space is about 1/2 volume, each month one time, every 3-6 month cleans machine one time, disassemble clean every year one time. In order to wash, can pour the gasoline through the lubricate cap in the bearing, rotates the vibrator, removes the clear wash oil through the oil drain hole so to circulate two to three, then pours into the new grease lubricants.
- 8.1.3 If it is the dry screening, the dust is big, should increase the clean times.

8.2 Rules for safe operation:

- 8.2.1 The operator must pass through the safety work education.



- 8.2.2 Forbid strictly in touching the bearing box inspection bearing temperature with the hand.
- 8.2.3 Forbid strictly in the revolution carrying on any work and so on adjustment, cleaning up and overhaul to the machine.
- 8.2.4 Electric appliance equipment should touch the earth, the electric wire should insulate reliably, and installs in the flexible metal conduit.
- 8.2.5 When electric welding repairs, the grounding does not have to join in the electrical machinery, on the vibrator part, does not have to cause the electric current through the electrical machinery, the bearing and so on to rotate the part.
- 8.2.6 Knocked-down and assemble vibrators and so on do not have to use the steelyard weight rap, but should use pulls presses and so on the methods.
- 8.2.7 High strength bolt fastenings need the torque wrench or the alternative means carry on, guaranteed its torque M16 is 25kg.m, M20 is 55kg.m, M22 is 75kg.m, M24 is 90kg.m

IX. Troubleshooting

Troubles	Reason	Solution
The screen machine is unable to start or the vibration is not enough	<ol style="list-style-type: none"> 1. The electronic motor damages 2. The electronic component in controlling circuit is damaged. 3. The voltage is insufficient. 4. Supplies and pilling up on the surface of screen is too much. 5. The vibrator breaks down. 6. The lubricating grease becomes thick and lumps in the vibrator. 7. The strap skids. 	<ol style="list-style-type: none"> 1. Change the electrical machinery. 2. Change the electric component. 3. Change the power to supply. 4. Clear up supplier on the surface. 5. Overhaul the vibrator. 6. Wash the vibrator, upgrade or add the suitable lubricating grease. 7. Make the strap be tight
The flow of mineral run unusually	<ol style="list-style-type: none"> 1. The horizontal level of the case of screen and has not been looking for 2. The rigidity of spring supporting are difference much or damaged 3. The surface of screen is damaged. 4. Supplies are not balance. 5. The screen mesh bracket ruptures 	<ol style="list-style-type: none"> 1. Adjust the height of the support. 2. Change the spring 3. Change the screen mesh 4. Operate proportionally, give the material steadily. 5. Change the Bracket of screen mesh.
There is unusual noise	<ol style="list-style-type: none"> 1. Defy the bearing of the shaking device to be damaged. 2. Vibration is sifted and the bolt to become flexible. 3. The bracket of Screen mesh is fracture. 4. The angle iron than are supporting screen mesh or underprop are fracture. 	<ol style="list-style-type: none"> 1. Change the spring. 2. Fasten the bolt. 3. Change the bracket of screen mesh. 4. Change the angle iron or under prop.
The temperature of bearing is high	<ol style="list-style-type: none"> 1. The lubricating grease is not enough. 2. The lubricating grease is too much. 3. The lubricating grease is dirty and alterative. 4. The bearing is damaged 	<ol style="list-style-type: none"> 1. Add lubricating grease. 2. Reduce lubricating grease 3. Wash and change 4. Change bearing
The components, such as board crossbeam of side etc. are damaged.	<ol style="list-style-type: none"> 1. The Material are wear-out seriously. 2. The time for work in critical frequency is too long. 3. Gas cutting or solder accessories else. 	<p>Try to protect it adopt rubdown or transferring to the hole. Pay attention to clicking.</p>

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上海秦路实业有限公司
Shanghai KingLink Industry Co., Ltd.

地址:中国上海市浦东新区沈梅路 123 弄

Add: Lane 123, Shenmei Road, Pudong New District, Shanghai, China

电话(Tel): +86-21-20958317 邮编(P.C.): 201318

传真(Fax): +86-21-20959271 网址(Web): www.kinglink-china.com

邮箱(Email): info@kinglink-china.com