

**Operation and maintenance instructions
non-metallic mesh plate bar screen for
strong alkali wastewater, PH > 12**



KHN WATER TREATMENT EQUIPMENT CO.,LTD.

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Warning:

- 1. Before starting the machine, all manual valves on the flushing pipeline must be opened and kept fully open when the grille machine is running! !**
- 2. In manual mode, the backwash pump valve must be opened before the backwash pump is turned on.**
- 3. The grille system must be placed under the monitoring state of the central control room to work, and it can be restored in time when a fault is shut down.**

1. Main purpose and scope of application

KFS auto mechanical fine screens is a high-efficiency fine-screens decontamination equipment that combines fouling and decontamination. Suitable for large, medium and small pumping stations as fine screens to intercept and remove floating objects in the water, such as weeds, paper, cigarette butts, melon seeds, fibers, hair, etc. This model has a high dirt capture rate , Which can ensure the effective implementation of subsequent treatment processes.

2. Main structure and features

Auto mechanical fine screens are mainly composed of driving device, frame, traction chain, screen with lifting steps, washing system and electronic control system. The drive motor is installed on the main shaft of the frame, and the screen is driven by the drive chain to extract the trapped dirt upwards from bottom to top. When it reaches the upper part, it is flushed with the flushing water of the overhead flushing device through the turning function of the sprocket. Under the action, the unloading work is automatically completed. After the slag water is discharged into the slag discharge port, it flows into the slag collecting bucket.

The drive device of auto mechanical fine screens is located on the upper part of the frame, which is an imported brand SEW shaft-mounted reducer. Spiral adjusting devices are installed on the front and rear sides of the frame to adjust

the tightness of the transmission chain.

The frame of auto mechanical fine screens is an integral cuboid rigid structure assembled and welded by stainless steel plate and section steel. Water enters at the water-facing end of the lower part of the frame, and the side walls block the ditch, allowing garbage to concentrate on the rake teeth. The front and rear wall panels of the frame are provided with guide rails, and an internal slag brusher is also provided on the upper part of the rack. The frame is installed in the center of the screens well, and the gap between the two sides of the frame and the screens well should be sealed. Diversion baffles are arranged on both sides of the water-incoming end of the rack, which can prevent floating garbage from passing through while diversion.

The traction sprocket and guiding device for transmission are respectively placed on the upper and lower parts of the frame. The stepped mesh plate is made of nylon material to meet the environment of high alkaline water. The mesh surface is regularly arranged with small holes, which have the functions of water passing and dirt interception, and the step surface can intercept larger dirt. Auto mechanical fine screens are equipped with a reliable screen washing system. The medium pressure washing system starts and stops at the same time as the grille, which effectively removes most of the dirt trapped by the screen. The high-pressure flushing system removes some difficult-to-remove dirt and ensures mesh regeneration.

The main technical parameters

Equipment name	auto mechanical fine screens
Model	KFS2000
Channel width	2000mm
Channel depth	2000mm
Water level	1000mm
Screens length	4500mm
Installation angle	40°

Screens gap	5mm-10mm
Capacity	6000GPM
Maximum water level difference	300 mm
Motor reducer	SEW
Lifter motor power	1.1Kw,460V, 60hz
Backwash pump power	3Kw,460V, 60hz
Brush motor power	0.75Kw,460V, 60hz
Water Consumption	200m ³ /d

3. Electric control

3.1 All electrical systems are set in an electrical control cabinet, which includes the control of the lifting motor, brush motor, and backwash pump, which can be controlled individually or automatically. In the auto control, the lifting motor and the brush motor start at the same time, running for 3 hours, stop for 10 minutes, and backwash pump run for 30 minutes to stop for 10 minutes. If you need to adjust the stop and running time, you can adjust the time relay; the electrical control of the mechanical fine screens has the functions of manual, automatic, manual automatic switching, cut off, and alarm. Manually used for on-site short-time control operation of the fine screens. When the grille machine is in the stop time period, if the water level in front of the grille exceeds the set value and the mechanical grille torque exceeds the load, it will be electrically stopped. The electrical control cabinet of the mechanical fine grille has an interface for remote centralized (PLC) control. When the mechanical fine screens is left unattended, turn the operating knob to the automatic position, and the fine screens will operate automatically in the specified working mode.

3.1.1 Automatic running:

Turn on all power



Turn the control button to automatic



3.1.2 Run manually

Turn on the power (as pictured above)

Adjustment control method is manual



Press the green button



3.1.3 Adjust the time interval

Adjust the time interval of lifting motor and brush motor, using a time relay

The time interval of the backwash pump, using a time relay



3.1.4 The use of frequency modulator

It is not recommended to adjust the frequency modulator. Improper operation will cause the motor to burn out.

If you need to adjust, you can contact the manufacturer to adjust.

3.2 Fault

If the screens main motor or the water pump motor is overloaded, the system will automatically stop. When the motor is overloaded, the fault indicator light is on. Once the flushing water supply is interrupted, the flushing system will stop working, and it should be ensured that the flushing water is continuously supplied.

4. Maintenance

4.1 The area around the grille should be kept clean, inspected and cleaned up at least once a day. It is strictly forbidden to throw wooden blocks, planks and other sundries into the front pool of the grille!

4.2 Frequently check whether the oil seal of the reducer is leaking, and the damaged oil seal should be replaced in time. If the oil level is insufficient, add oil in time and replace it regularly. The reducer should be lubricated and

maintained according to the SEW random instructions.

4.2 The four bearings on the wall of the frame must be regularly lubricated, and the oil is lithium-based grease. Inject once every 30 days. In addition, the oil cup on the bearing seat at the end of the press is injected every 30 days.

4.3 The machine should avoid long-term shutdown to ensure that all parts of the equipment are in good working condition. When the machine is shut down for more than 7 days, the sewage must be drained, and the grille must not be soaked in stagnant sewage for a long time.

4.4 Electrical maintenance should be carried out by professionals, and the power supply should be cut off during maintenance.

5 Simple observation method of equipment operation

5.1 In front of the screens: Observe the filter screen at the inlet of the water inlet, the left side is the upward filter screen, and there is a lot of garbage on the screen surface. On the right is the downward filter screen, and the screen surface should be clean and free of slag.

5.2 Behind the screens: Observe the water flow in the outlet channels on both sides of the screens. When the screens is operating, the water flow is tumbling and the flow velocity is high. When it stops, the water output gradually decreases, the flow rate decreases, and the liquid level behind the screens gradually stabilizes.

5.3 Observe whether the grille machine runs for a period of time, whether there is any abnormal sound, and listen to whether the impact sound emitted by the medium pressure washing is loud and powerful.

6. After sales service: service@khnwatertreatment.com

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