# Parameter of KBP2500(sludge dewatering belt press)

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| Model： | KBP2500 |
| No.： | 1 set |
| Capacity： | ≥30-60m3/h |
| Belt width： | 2500mm |
| Belt running speed： | |
| | 5-22m/min（thickner process） |
| | 0.7-5m/min（Press process） |
| Cleaning water pressure： | ≥0.5Mpa |
| Machine noise： | 80dB(A) |
| Inlet water content： | 99.2% |
| Water content of sludge cake： | ≤80% |
| Solid capture： | ≥97% |

Material

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| Frame | 10x10x4 SUS316L |

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| Belt | Polyester monofilament |
| hydraulic cylinder | 250*200—125*63 |
| Filtered water sump | SUS316L |
| Cleaning device | SUS316L |
| Pressure roll | Mild steel+coating |
| Drive roller | Mild steel+Lining |
| Bearing | SN310 |
| Fastener | SUS316L |

Structural and Technical Requirements

1. Unique filter belt automatic deviation correction and automatic tensioning device. When the filter belt is running normally, if the deviation from the center exceeds 15mm, the reversing valve will be triggered, and the deviation correction hydraulic cylinder will drive the deviation correction roller to move, so that the filter belt will return to its original position.

2. In order to ensure the water permeability of the filter belt, the filter belt is cleaned by fan-shaped high-pressure cleaning.

3. The driving motor of the filter belt is a variable frequency speed regulating motor, and its speed can be adjusted under manual intervention or online control instructions.

4. Manufacture requirements for drive rollers, press rollers and guide rollers

The main drive roller and the correction roller are lined with rubber on the outer surface (covered with a layer of rubber) to increase friction. In the low-pressure dehydration section, press rolls with a diameter greater than 900mm are used, which are generally rolled into noodles with steel plates. Due to the high moisture content of the sludge in this working section, holes are often drilled on the surface of the roller or grooves are made on the surface of the roller to facilitate the timely discharge of the squeezed water.

Except for the rubber-lined press roll, the general press roll is made of carbon steel-clad stainless steel. For rubber-lined metal rollers, the rubber layer should

closely adhere to the metal surface, be firm and not fall off.

In order to maintain the stability of the filter belt in operation, after the equipment is installed, the axes between all the rollers should be parallel, and the parallelism should not be lower than 10 grades of precision. For rollers with a diameter greater than 300mm, the center of gravity balance method is used for static balance inspection during processing and manufacturing. After the roller is installed, it is required to be in a static state at any position.

5. Production requirements of the rack

The frame is welded with stainless steel profiles. Its main function is to install the transmission device and various working parts, and play the role of positioning and supporting. The requirements for the frame, in addition to sufficient strength and rigidity, also have high corrosion resistance, because it always works in a water environment.

6. Manufacturing requirements for filter belt washing device

After the filter belt is unloaded by the unloading device to remove the filter cake, the upper and lower filter belts must be cleaned to maintain the water permeability of the filter belt, so as to facilitate the continuous operation of the dehydration work. For the mixed sludge, because of the high viscosity of the sludge, it is often blocked in the gap of the filter belt and is not easy to remove, so the flushing water pressure must be greater than 0.5Mpa. Equidistant nozzles should be installed on the cleaning water pipe, and the sprayed water is fan-shaped, which is beneficial to reduce the pressure loss of water. Some cleaning water pipes are equipped with copper brushes for cleaning the seasonal nozzles to avoid clogging.

7. Safety protection device

When a serious failure occurs and the normal and continuous operation of the machine cannot be guaranteed, it should automatically stop and give an alarm. The belt filter press should be equipped with the following protective devices:

When the flushing water pressure is less than 0.4Mpa, the filter belt cannot be flushed clean, which will affect the recycling, and the control system will automatically stop and give an alarm.

When hydraulic pressure is used for tensioning the filter belt, when the hydraulic pressure is less than 0.5Mpa, the tensioning pressure of the filter belt is insufficient, and it should automatically stop and give an alarm.

When the filter belt deviates from the center during operation and cannot be corrected beyond 40mm, it should automatically stop and give an alarm.

On the side of the machine and on the electrical control cabinet, an emergency stop button is set for stopping in an emergency.