Junyi filter

Vacuum Belt Press

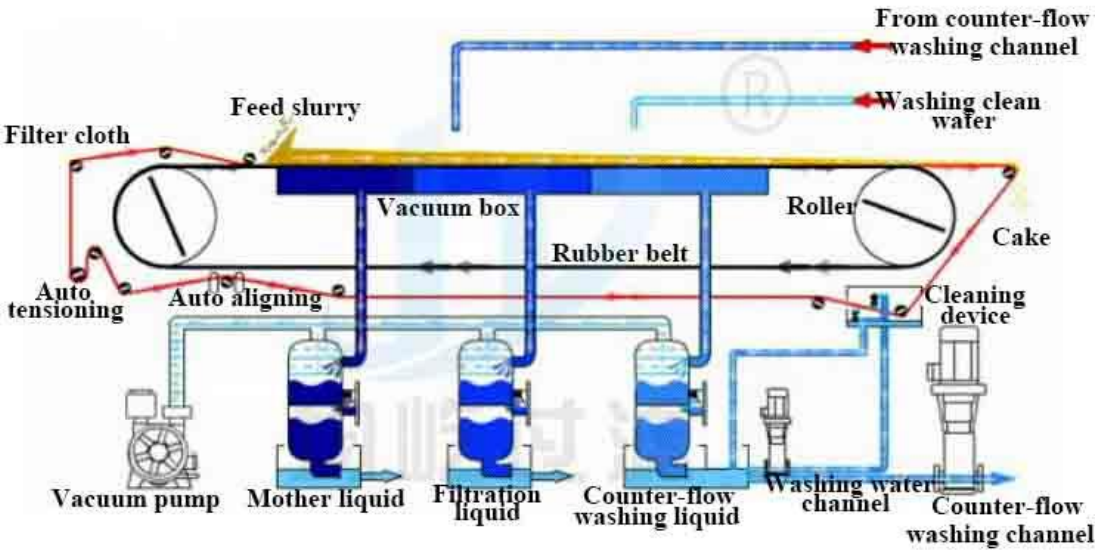
Product Description:

The Vacuum Belt Filter is a relatively simple, yet highly effective and continuous solid-liquid separation equipment with a new technology. It has a better function in the sludge dewatering filtration process. And the sludge can be easily dropped down from the belt filter press because of the special material of filter belt. According to different materials, the belt filter machine can be configured with different specifications of filter belts to achieve high filtration accuracy.

Filter Press Model Guidance					
Liquid name	Solid-liquid ratio (%)	Specific gravity of solids	Material status	PH value	Solid particle size (mesh)
Temperature (°C)	Recovery of liquids/solids	Water content of filter cake	Working hours/day	Capacity/day	Whether the liquid evaporates or not

Working principle:

The **Vacuum Belt Filter Press** uses a screen cloth and rubber vacuum carrier belt in combination. As the fishtail feeder deposits slurry onto the surface of the filter cloth, the belt moves in a horizontal linear direction under the dam roller to form a cake of varying thickness. As the belt travels, negative vacuum pressure draws free filtrate out of the slurry, through the cloth, along the grooves in the carrier belt and through the center of the carrier belt into the vacuum box. This process continues until the slurry has formed a solid filter-cake, which is then discharged at the head pulley end of the belt filter.



Application:

It is widely used in sludge dewatering treatment of urban domestic sewage, textile printing and dyeing, electroplating, papermaking, leather, brewing, food processing, coal washing, petrochemical industry, chemical industry, metallurgy, pharmaceutical industry, ceramics and so on, and it is also suitable for solid separation or liquid leaching process of industrial production.

Features:

* Higher Filtration rates with minimum moisture content.

* Lower operating and maintenance costs due to efficient & sturdy design.

* Low friction advanced air box mother belt support system, Variants can be offered with slide rails or roller decks support system.

* Controlled belt aligning systems results in maintenance free running for a long time.

* Multi stage washing.

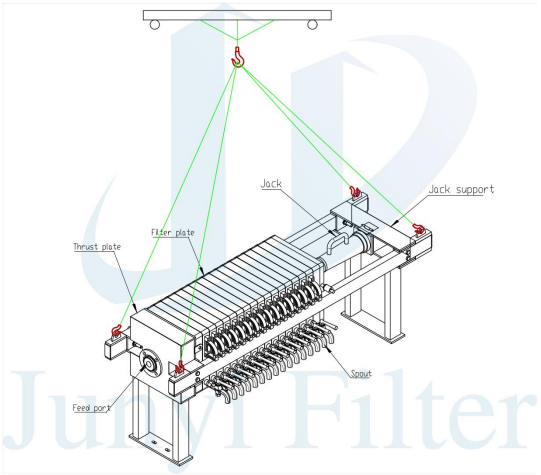
* Longer life of mother belt due to less friction of air box support.

* Drier filter cake output.

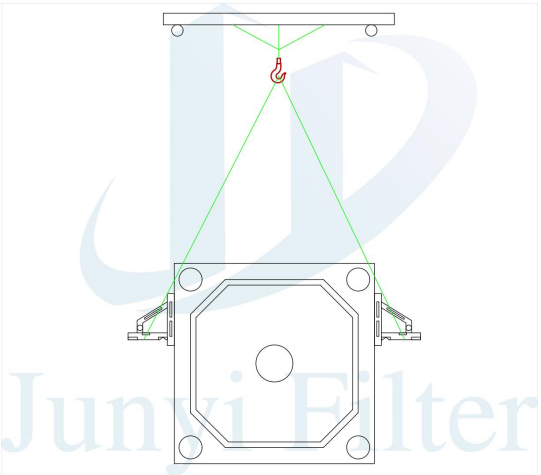
Belt filter parameter table

Model	treatment capacity m³/h	Motor power KW	leather bandwidth mm	Slurry feed concentration (%)	Discharge slurry concentration (%)	Overall dimensions		
						Length mm	Width mm	Height mm
JY-BFP -500	0.5-4	0.75	500	3-8	25-40	4790	900	2040
JY-BFP -1000	3-6.5	1.5	1000	3-8	25-40	5300	1500	2300
JY-BFP -1500	4-9.5	1.5	1500	3-8	25-40	5300	2000	2300
JY-BFP -2000	5-13	2.2	2000	3-8	25-40	5300	2500	2300
JY-BFP -2500	7-15	4	2500	3-8	25-40	5300	3000	2300
JY-BFP -3000	8-20	5.5	3000	3-8	25-40	5300	3500	2300
JY-BFP -4000	12-30	7.5	4000	3-8	25-40	5800	4500	2300

Hoisting diagram of filter press



Filter board hoisting diagram



Requirements for use of filter presses

1. According to the process requirements to make pipeline connection, and do water inlet test, detect the air tightness of the pipeline;
2. For the connection of the input power supply (3 phase + neutral), it is best to use a ground wire for the electric control cabinet;
3. Connection between control cabinet and surrounding equipment. Some wires has been connected. The output line terminals of the control cabinet are labeled. Refer to the circuit diagram to check the wiring and connect it. If there is any looseness in the fixed terminal, compress again;
4. Fill the hydraulic station with 46 # hydraulic oil, the hydraulic oil should be seen in the tank observation window. If the filter press operates continuously for 240 hours, replace or filter the hydraulic oil;

5. Installation of cylinder pressure gauge. Use a wrench to avoid manual rotation during installation. Use an O-ring at the connection between the pressure gauge and the oil cylinder;
6. The first time the oil cylinder runs, the motor of the hydraulic station should be rotated clockwise (indicated on the motor). When the oil cylinder is pushed forward, the pressure gauge base should discharge air, and the oil cylinder should be repeatedly pushed forward and backward (the upper limit pressure of the pressure gauge is 10Mpa) and air should be discharged simultaneously;
7. The filter press runs for the first time, select the manual state of control cabinet to run different functions respectively; After the functions are normal, you can select the automatic state;
8. Installation of filter cloth. During the trial operation of the filter press, the filter plate should be equipped with filter cloth in advance. Install the filter cloth on the filter plate to ensure that the filter cloth is flat and there are no creases or overlaps. Manually push the filter plate to ensure that the filter cloth is flat.
9. During the operation of the filter press, if an accident occurs, the operator presses the emergency stop button or pulls the emergency rope;

Main faults and troubleshooting methods

Fault phenomenon	Fault Principle	Troubleshooting
Severe noise or unstable pressure in the hydraulic system	1、The oil pump is empty or the oil suction pipe is blocked.	Oil tank refueling, solve suction pipe leakage
	2、The sealing surface of the filter plate is caught with misc.	Clean sealing surfaces
	3、Air in the oil circuit	Exhaust air
	4、Oil pump damaged or worn	Replace or repair
	5、The relief valve is unstable	Replace or repair
	6、Pipe vibration	Tightening or reinforcing
Insufficient or no pressure in the hydraulic system	1、Oil pump damage	Replace or repair
	2. Pressure adjusted incorrectly	recalibration
	3、Oil viscosity is too low	Replacement of oil
	4、There is a leak in the oil pump system	Repair after examination
Insufficient cylinder pressure during compression	1、Damaged or stuck high pressure relief valve	Replace or repair
	2、Damaged reversing valve	Replace or repair
	3、Damaged large piston seal	replacement
	4、Damaged small piston "0" seal	replacement
	5、Damaged oil pump	Replace or repair
	6、Pressure adjusted incorrectly	recalibrate
Insufficient cylinder pressure when returning	1、Damaged or stuck low pressure relief valve	Replace or repair
	2、Damaged small piston seal	replacement

	3、Damaged small piston "0" seal	replacement
Piston crawling	Air in the oil circuit	Replace or repair
Serious transmission noise	1、Bearing damage	replacement
	2、Gear striking or wearing	Replace or repair
Serious leakage between plates and frames	1. Plate and frame deformation	replacement
	2、Debris on sealing surface	Clean
	3、Filter cloth with folds, overlaps, etc.	Qualified for finishing or replacement
	4、Insufficient compression force	Appropriate increase in compression force
The plate and frame are broken or deformed	1、Filter pressure too high	turn down the pressure
	2、High material temperature	Appropriately lowered temperatures
	3、Compression force too high	Adjust the compression force appropriately
	4、Filtering too fast	Reduced filtration rate
	5、Clogged feed hole	Cleaning the feed hole
	6、Stopping in the middle of filtration	Do not stop in the middle of filtration
The replenishment system works frequently	1、The hydraulic control check valve is not tightly closed	replacement
	2、Leakage in the cylinder	Replacement of cylinder seals
Hydraulic reversing valve failure	Spool stuck or damaged	Disassemble and clean or replace the directional valve
The trolley can't be pulled back because of the back and forth impact.	1、Low oil motor oil circuit pressure	adjust
	2、The pressure relay pressure is low	adjust
Failure to follow procedures	Failure of a component of the hydraulic system, electrical system	Repair or replace symptomatically after inspection
Diaphragm damage	1、insufficient air pressure	Reduced press pressure
	2、Insufficient feed	Pressing after filling the chamber with material
	3、A foreign object has punctured the diaphragm.	foreign matter removal
Bending damage to main beam	1、Poor or uneven foundations	Refurbish or redo

Tel. +86 021-51863216 +86 13916593659
Email. junyifilter@junyigl.com
Address: Shanghai China
Shanghai Junyi filtration equipment Co., LTD