

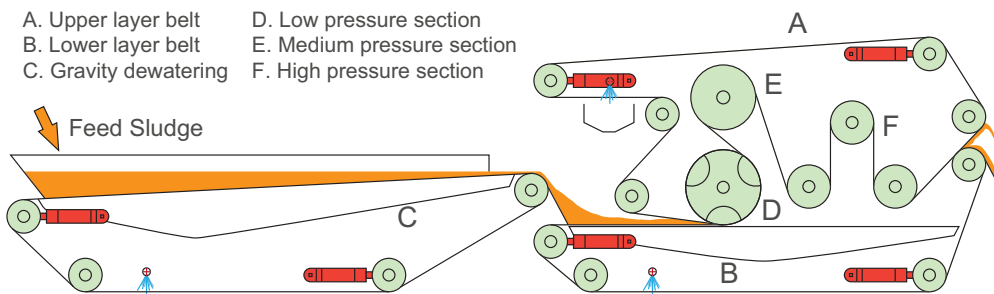
BELT PRESS

Belt press type polluted sludge dryer is a kind of solid-liquid separating technology that integrates modern science. Due to the advantages of high efficiency in polluted sludge treatment, low maintenance fee, safe and reliable automatic operation brought by the belt filter type sludge dryer, it has drawn a lot of attention from worldwide technicians and engineers to complete its research and development.

The principle

The principle to design a Belt press type polluted sludge dryer is mainly to conglomerate the sludge by polymer coagulant and apply the combination of squeezing and shearing effects to destroy the interface between polluted sludge and water molecules, so as to achieve the goal of dewatering. Its dewatering speed and moisture rate depend on the application design of roller pressure and the know-how of the shearing angle of mud entry.

Belt Filter Press treatment process

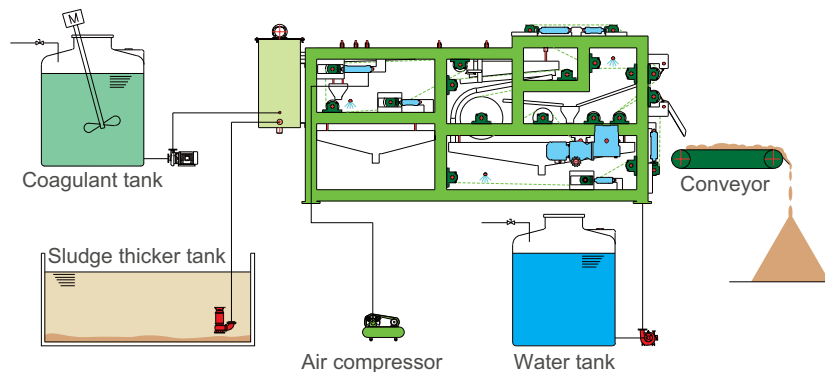


Operating procedures

The process of dewatering includes mixing of the entering sludge, gravitational dewatering, wedge preloading, low-pressure roller, medium-pressure roller, and high-pressure roller for squeezing out of water.

- (1) **Mixing of the entering sludge:** a unique design of tank mixing the polluted sludge and chemical agents at a constant speed for sufficient conglomerating reactions.
- (2) **Gravitational dewatering:** a particular design of guiding plates and separators with appropriate mesh can remove a major portion of the water at the surface without destroy the conglomerate structure of the sludge.
- (3) **Wedge preloading:** a method which applies the simple harmonic preload to incrementally increasing the pressure for stabilizing the entry of sludge and avoiding the lateral leakage of sludge.
- (4) **Low-pressure roller:** uniform distribution of the holes on the surface is helpful for draining of a large amount of free water. By the effects of the relative velocity and the shear stress between filter clothes and roller, the slight rubbing will recombine the sludge.
- (5) **Medium-pressure roller:** the key point is how to decrease the shearing surface on the small roller to increase the pressure gradually, so as to remove the capillary coupled water among sludge particles.
- (6) **High-pressure roller:** increases the filter clothes pressure and shearing force to the maximum to completely destroy the structure of the sludge and the membrane of the water molecules, and also press them up to the surface of the filter clothes to remove the colloidal water. The sludge is peeled off by a squeegee under shearing condition as well.

Belt Filter Press Flow Chart



Belt Press Out View



Product Characteristics

- (1) **Great capacity:** continuous operation of high floe rate.
- (2) **Simple operation:** automatic produced sludge.
- (3) **Tension controller for filter clothes:** cranks are used to provide equal tension at both ends of the filter clothes, and also maintain a certain amount of pressure for filter clothes.
- (4) **Sludge equalizer:** control the thickness and uniformity of the polluted sludge entering the low-pressure roller.
- (5) **Adaptable cleaning:** adjust the amount of cleaning water depending on the sludge condition. Save 50% or above of cleaning water.
- (6) **Pneumatic adjustment:** pneumatic cylinders at two lateral sides accurately compensate the deviating movement of the filter clothes to avoid zigzagging and keep it flat and folded.
- (7) **Wide application:** any kind of sludge water can be treated by adding coagulants.

Double Belt Press Size

Model	Belt Width W (mm)	Machine Dimension (mm)			Weight (kg)	Capacity Water content 80% (M ³ /hr)	Waste Water SS 3% (M ³ /hr)	Belt Powered (HP)	Wash Water (m ³ /hr)
		Length	Width	Height					
BD600	600	3000	1200	2000	1600	1-3	4.5-14	1.0	1.0
BD1000	1000	3000	1700	2000	2800	1.8-4.0	8.4-18.7	2.0	2.0
BD1500	1500	3000	2200	2000	4000	3-8	14-37.4	3.0	3.0
BD2000	2000	3000	2750	2000	5200	6-12	28.1-56.2	3.0	3.0
BD2500	2500	3000	3350	2000	6200	10-15	46.8-70.2	5.0	5.0

Three Belt Press Size

Model	Belt Width W (mm)	Machine Dimension (mm)			Weight (kg)	Capacity Water content 80% (M ³ /hr)	Waste Water SS 3% (M ³ /hr)	Belt Powered (HP)	Wash Water (m ³ /hr)	Filtering (HP)
		Length	Width	Height						
BT1000	1000	5750	1800	1600	3200	2.5-6	11-28	2.0	3.0	0.5
BT1500	1500	5750	2300	1600	4600	4-10	18-46	3.0	3.0	0.5
BT2000	2000	5750	2800	1600	6200	8-14	37-65	5.0	5.0	1.0
BT2500	2500	5750	3300	1600	7200	12-18	56-84	5.0	5.0	1.0

Applications

- (1) Household wastewater
- (2) Textile mill wastewater
- (3) Pig farm wastewater
- (4) All kinds of industrial wastewater