MAXXFIL FILTRATION

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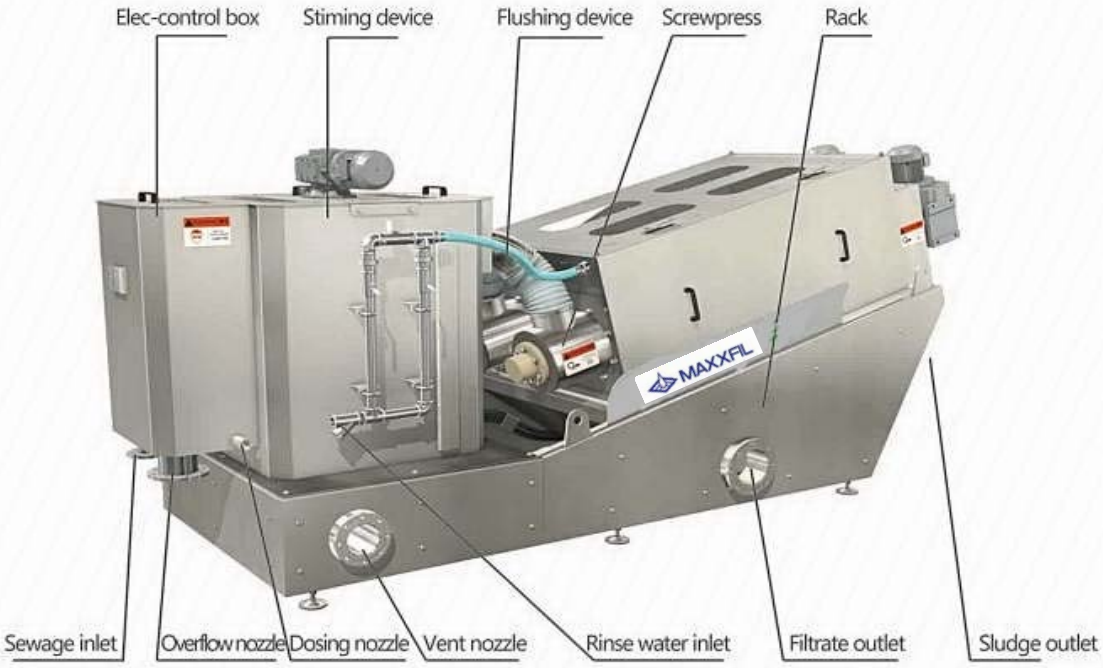
SCREW TYPE SLUDGE DEHYDRATOR

Introduction

The screw sludge dewatering machine is integrating with auto-control cabinet , sludge thickening &dewatering body liquid collection tank. Therefore, the high efficiency flocculation, continuous sludge concentration ,dewatering and filtrate collection can be automatically completed all-in-one, the collected liquid will be reflux or emissions finally.



Application and advantages

Application: municipal sewage petro-refining, leather making, printing and dyeing paper, coalification dressing, biochemical pharmacy, steel pickling and chemical sugar, food processing etc.

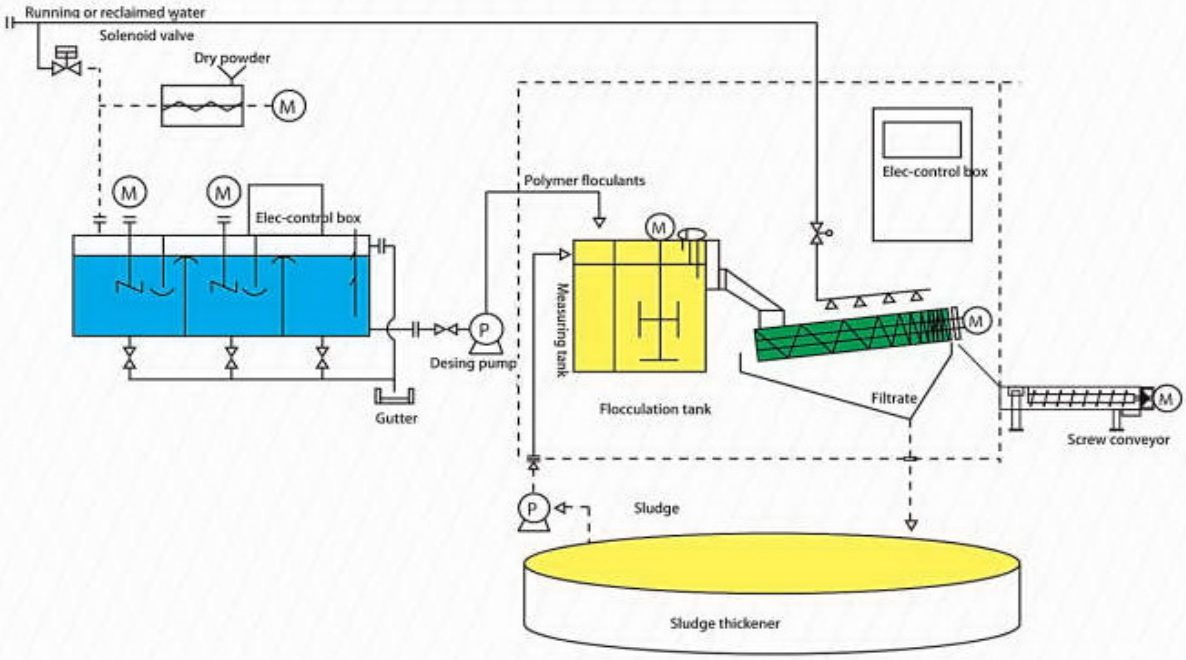
1. Low operation cost: below 40% of belt press and 20% of centrifuge.
2. Power-saving: less than 5% of centrifuge.
3. Water-saving: less than 0.1% of belt filter press.
4. Saving-drugs : saving around 60 %
5. Compact: saving more than 60% of the investment for dehydration room.
6. Non-clogging: processing the fats & oils and fiber sludge perfectly.

Key Features

- Simple processing,low investment,energy-efficient in High-efficient sludge dewatering
- System can be programmed to make the operation more convenient and accurate
- Unique flocculating agent make sludge dewatering easier
- Uniform and accurate dispensing, saving costs

Flow chart

SLUDGE THICKENER



This is the supplied parts, the others can be customized.

Sludge entering

Flocculating

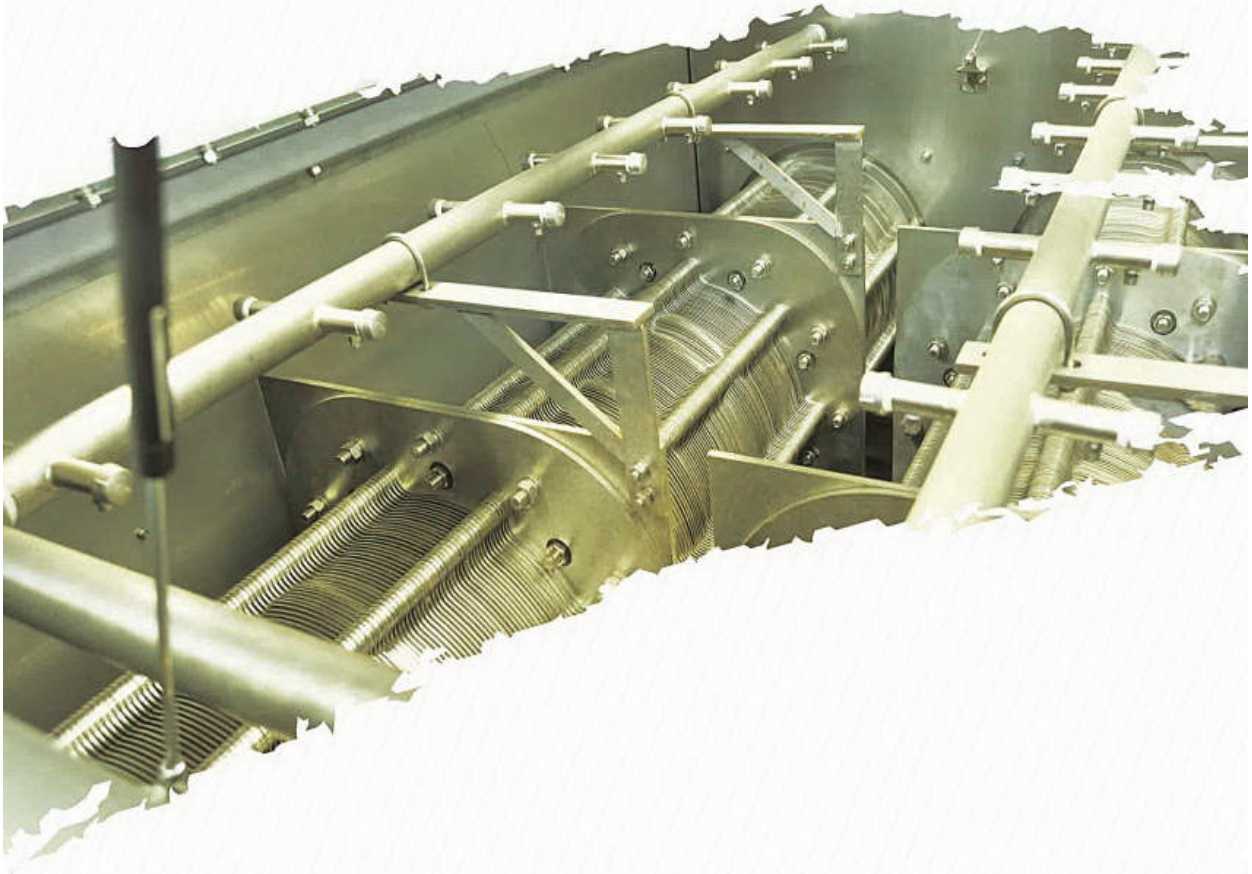
Dewatering

Compressing

Rinsing

Sludge discharging

Working principle



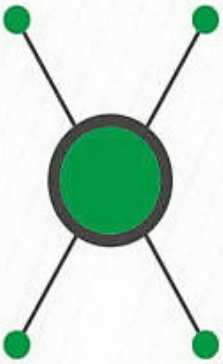
When the machine starts running, the sludge is pushed into the filter cartridge from the feed inlet and then moves to the sludge cake outlet under the pushing of the helical axis blades.Because the gaps between the helical axis blades will gradually become smaller, so the pressure to the sludge is becoming bigger. Under the differentiation of pressure, water comes out from the gaps between the fixed and moving plates. Relying on the self-cleaning function of the fixed plates and the moving plates, block can be well avoided. At last, the sludge cakes are pushed by helical axis after being fully dewatered and then discharged from the outlet.

FORCE & WATER CONCURRENT

The force and water work in the same direction to make the free water separated with the fastest speed

THIN-LAYER DEWATERING

Dewatering with thin layer makes the free water Separated by a shortest distance

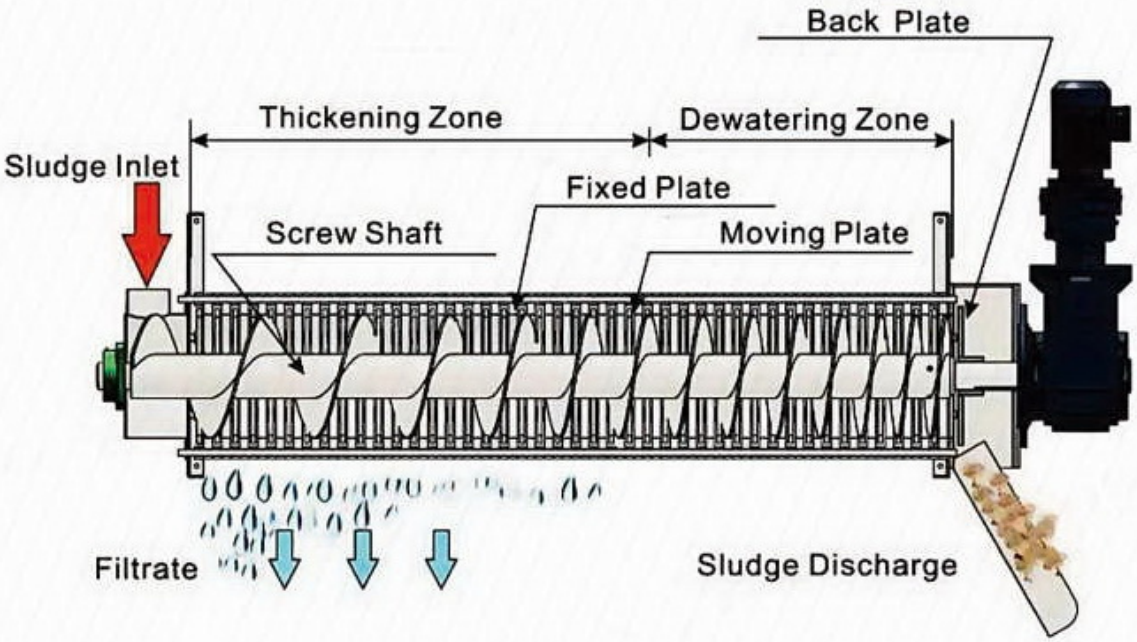


MODERATE PRESSURE

Mantain the lowest energy consumption and mechanical wear while ensuring the sludge dewatering effectively

EXTENSION THE DEWATERING PATH

To allow enough time and continuous operation in dewatering



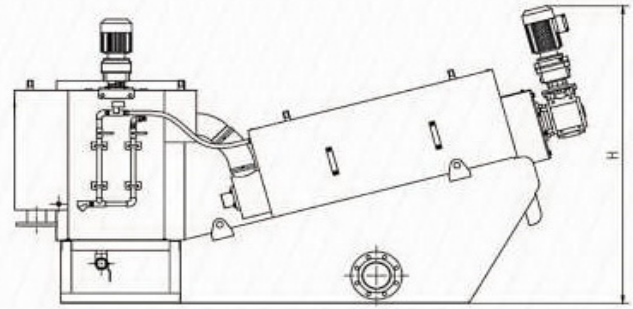
Screw advantages contrast

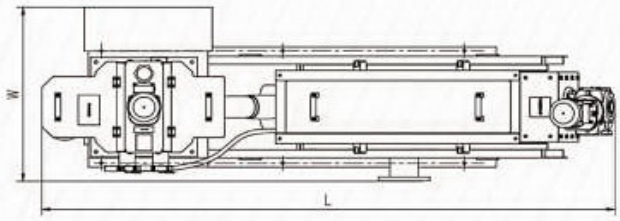
Model		Volute dehydrater	Belt dehydrater ttvt
Construction			
Dewatering principle	principle	Screw press	Gravity+sheardewatering
		The filter main part is formed by a screw axis with fixing and moving plates overlapping.It dewaters adquately by the gravity and the power from back pressure plate during the process of progradation,the filter comes out from the space between fixing and moving plates,the sludge cake discharged from the discharge outlet.	The sludge goes through barrels in regular "S" shape by two tension fitter Belt upper and down,the sludge dewaters rely on the force from the tension of filter belt.
Feature	Advantage	Self cleaning,never plugged,low concentration of sludge dewatering diretly.Low speed save electricity,noise and vibration.Realizing automatic,24 hour unmanned operation.	Lower price,widely used,mature technology.
	Disadvantage	Not good at big granular,and hardness sludge dewatering.Lower processing quantity.	Easily blocked,need lots of water cleaning,cause the secondary pollution.
sludge tank		No need	need
power consumption		Very little	Medium
Cleaning drench water quantity		Very little	Very big
Operating noise,vibration		Small	Big
Maintenance management		Short operating time,cheap	Long operating time
Sludge viscous requirements		Low	High
Flocculant		Use	Use
Mud cake water content		~80%	>80%
Sludge processing efficiency		>95%	90~ 95%
24 hour self-service running		Yes	No

Model		entrifugal dehydrater	plate dehydrater
Constructional drawing			
Dewatering principle	principle	Centrifugal dewatering	Press dewatering
		Composed by reshipment and hollow spiral conveyor,sludge pushes into the drum from hollow axis and dumps into convertible cavity with the centrifugal force from high speed production,solid-liquid separation as different weight.The sludge conveys to the end of convertible cavity and discharged from the port under the push of spiral conveyor,and filtrate overflows by gravity.	In a sealed condition,the sludge pushes in by high-pressure pump and it dewaters through the fitter doth under the pressure of sheet frame.
Feature	Advantage	Strong processing capacity	Low price ,good at inorganic sludge dewatering,mud cake' s water content is low
	Disadvantage	Severe vibration,noisy.Difficult maintenance manag-ement.Not suitable for with close proportion solid-liquid separation	Easily blocked,need to use high-pressure pump.Not apply suitable for oily sludge dewatering can' t do the continuous auto- operating.
sludge tank		Need	Need
power consumption		Big	Maximum
Cleaning drench water quantity		Small	Small
Operating noise,vibration		Big	Very big
Maintenance management		Long operating time	Long operating time
Sludge viscous requirements		Low	Medium
Flocculant		Use	Use
Mud cake water content		<80%	~80%
Sludge processing efficiency		85- 95%	90- 95%
hour self-service running		No	No

Selection reference

Model	DS Quantity (kg/h)		Profile Drawing
	low concentration	high concentration	
MVL 131	5	10	
MVL 132	10	20	
MVL 251	15	30	
MVL 252	30	60	
MVL 301	30	60	
MVL 302	60	120	
MVL 303	90	180	
MVL 304	120	240	
MVL 351	50	100	
MVL 352	100	200	
MVL 353	150	300	
MVL 354	200	400	
MVL 401	80	160	
MVL 402	160	320	
MVL 403	240	480	
MVL 404	320	640	





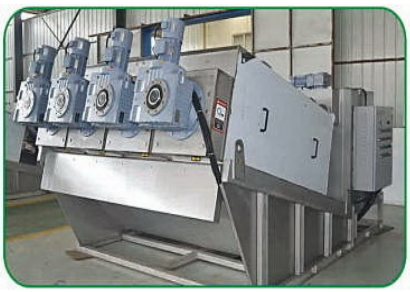
Note:Pre-concentration for the SS less than 10000mg/L, dilution for the SS more than 25000mg/L

Operation conditions

Model	Power (Kw)			Wash water pressure	Wash water quantity (L/h)	Maintenance frequency
	Screw motor power	Mixing motor power	Total			
MVL 131	0.18×1	0.18×1	0.36	>2kg/cm²	43	10min/day
MVL 132	0.18×2	0.18×1	0.54		86	
MVL 251	0.55×1	0.37×1	0.92		58	
MVL 252	0.55×2	0.37×1	1.47		116	
MVL 301	0.75×1	0.55×1	1.3		93	
MVL 302	0.75×2	0.55×1	2.05		186	
MVL 303	0.75×3	0.75×1	3		279	
MVL 304	0.75×4	0.75×1	3.75		372	
MVL 351	1.1×1	0.75×1	1.85		126	
MVL 352	1.1×2	0.75×1	2.95		252	
MVL 353	1.1×3	1.1×1	4.4		378	
MVL 354	1.1×4	1.5×1	5.9		504	
MVL 401	1.5×1	1.5×1	3		115	
MVL 402	1.5×2	1.5×1	4.5		230	
MVL 403	1.5×3	1.5×2	7.5		345	
MVL 404	1.5×4	1.5×2	9		460	

Specification of Each model

Model	Screw body size (mm)	Dimension(mm)			NW (kg)	Operation weight (kg)
		Length (L)	Width (W)	Height (H)		
MVL 131	DN130 × 1180	1870	730	1170	250	395
MVL 132	DN130 × 1180	2000	960	1230	350	595
MVL 251	DN250 × 1760	2690	880	1600	500	805
MVL 252	DN250 × 1760	2810	1120	1600	800	1320
MVL 301	DN300 × 2220	3310	1000	1700	750	1275
MVL 302	DN300 × 2220	3500	1300	1700	1340	2225
MVL 303	DN300 × 2220	3700	1650	1700	1750	3030
MVL 304	DN300 × 2220	4000	2050	1750	2150	4150
MVL 351	DN350 × 2480	3610	1100	1850	1150	1915
MVL 352	DN350 × 2480	3820	1490	1850	1950	3205
MVL 353	DN350 × 2480	4120	1770	1850	2800	4830
MVL 354	DN350 × 2480	4320	2290	1850	3700	6515
MVL 401	DN400 × 3100	4550	1180	2250	2050	3425
MVL 402	DN400 × 3100	4870	1710	2250	3850	6645
MVL 403	DN400 × 3100	4790	2550	2250	5400	9710
MVL 404	DN400 × 3100	4840	3140	2250	7000	12960


■ Professional Service Team

We have a professional and experienced service team,can provide valuable technical service and support.

■ Quick Response System

For any consults,feedbacks and questions,we will give a satisfactory responds arrangement at first time,solve technical problems during using process in time,to ensure the equipment operate continuously and effectively.

■ Strict manufacturing Quality Control

We has strong capacity of R&D.The production department has standardized workshops and has been equipped with advanced equipment,such as large lathes,milling bending press,cutting plate machine,laser cutting machine and argon arc welding.At present,our company is formed by completes manufacturing system including mechanical processing ,welding,heating processing,assembling,inspection,etc.

Meanwhile, We has a group of experienced environment engineers and mechanical engineers that grasp the improved process of control and management system,Moreover, We already possesses the ISO9001:2008 Certificate.