

# 叠螺污泥脱水机

## Screw sludge dewaterer

The company's production and manufacture of the removal of snail mud dewatering machine, has now formed 21 types of specifications and models to adapt to different sludge treatment and different needs of customers.

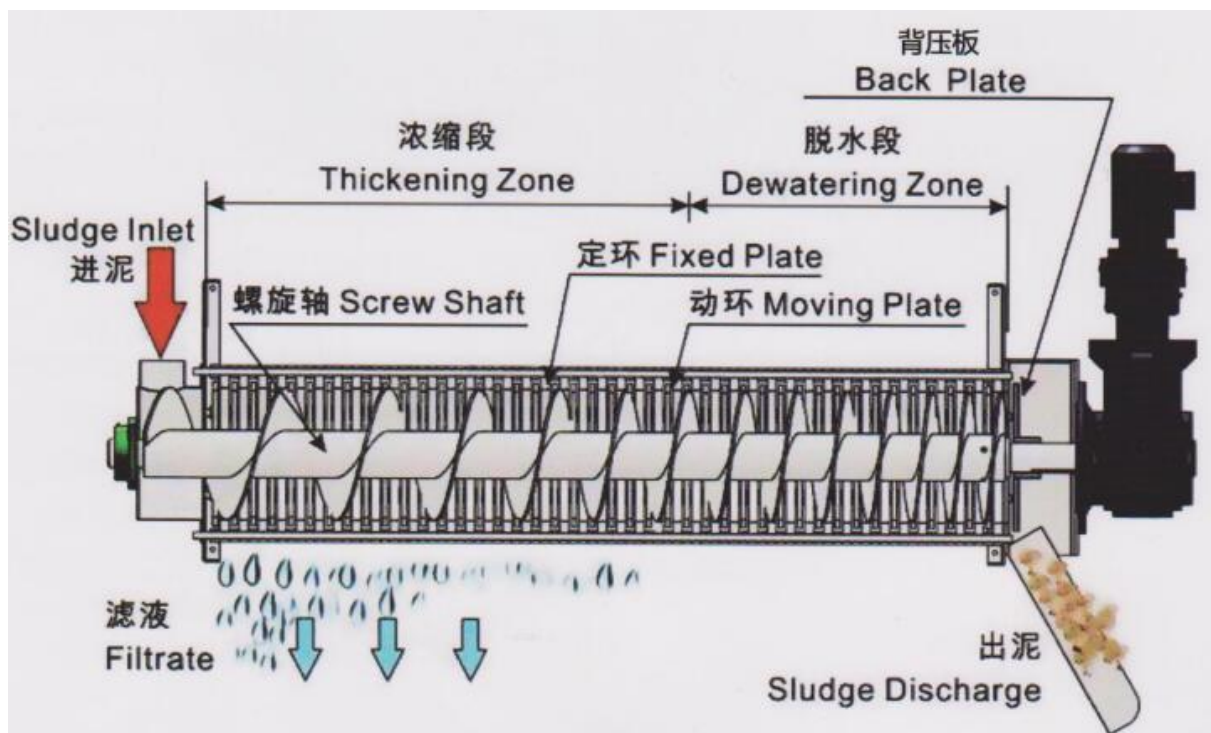
Sludge dewatering machine integrates automatic control cabinet, sludge thickening dewatering body and collecting liquid in body. It can realize high-efficiency flocculation under fully automatic operation sacrificial parts, and continuously complete sludge thickening and jade pressing dewatering.



## Working principle

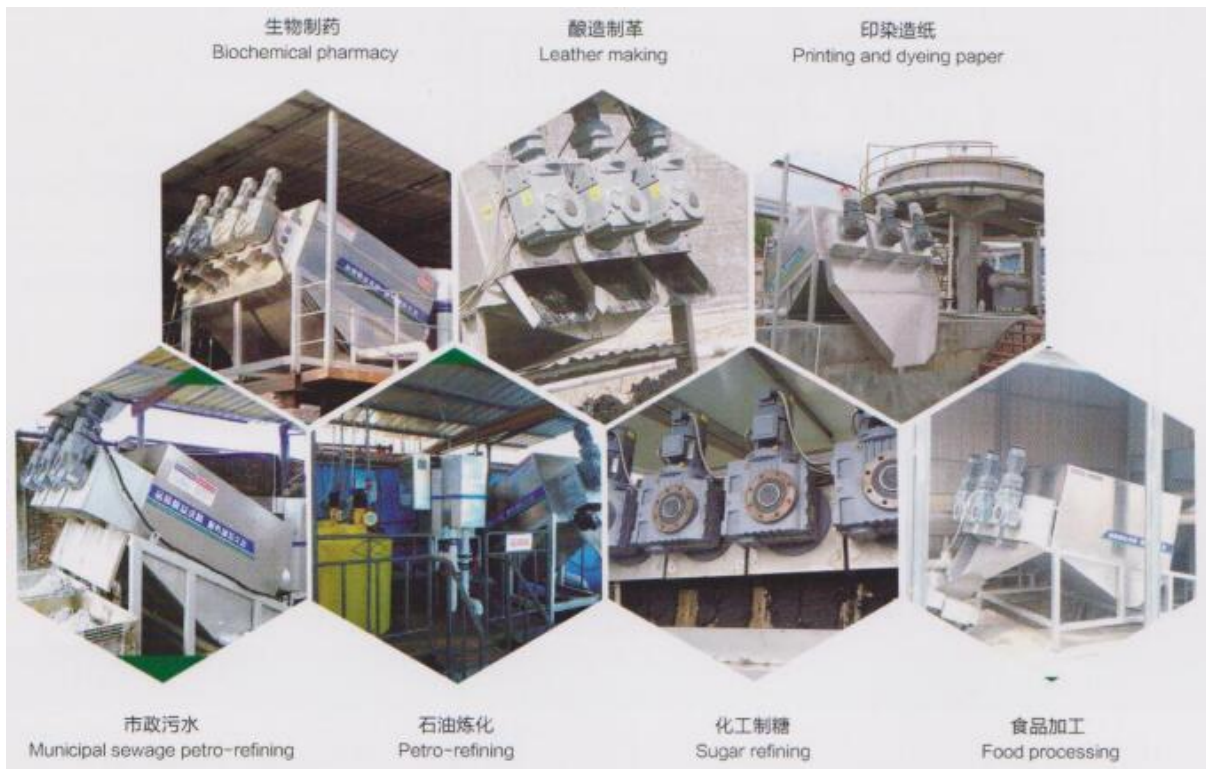


When the equipment is running, the sludge is pushed into the filter barrel from the inlet to the discharge outlet by the spiral spindle. As the pitch between the spiral spindles is gradually reduced, the pressure on the sludge increases and dewatering begins under the action of pressure difference. Water flows out from the filter gap between the fixed plate and the movable plate. At the same time, the equipment relies on the self-cleaning function between the fixed plate and the movable plate. Clean the filter clearance to prevent clogging. After sufficient dehydration, mud cake is discharged from the discharge outlet under the push of the screw shaft.

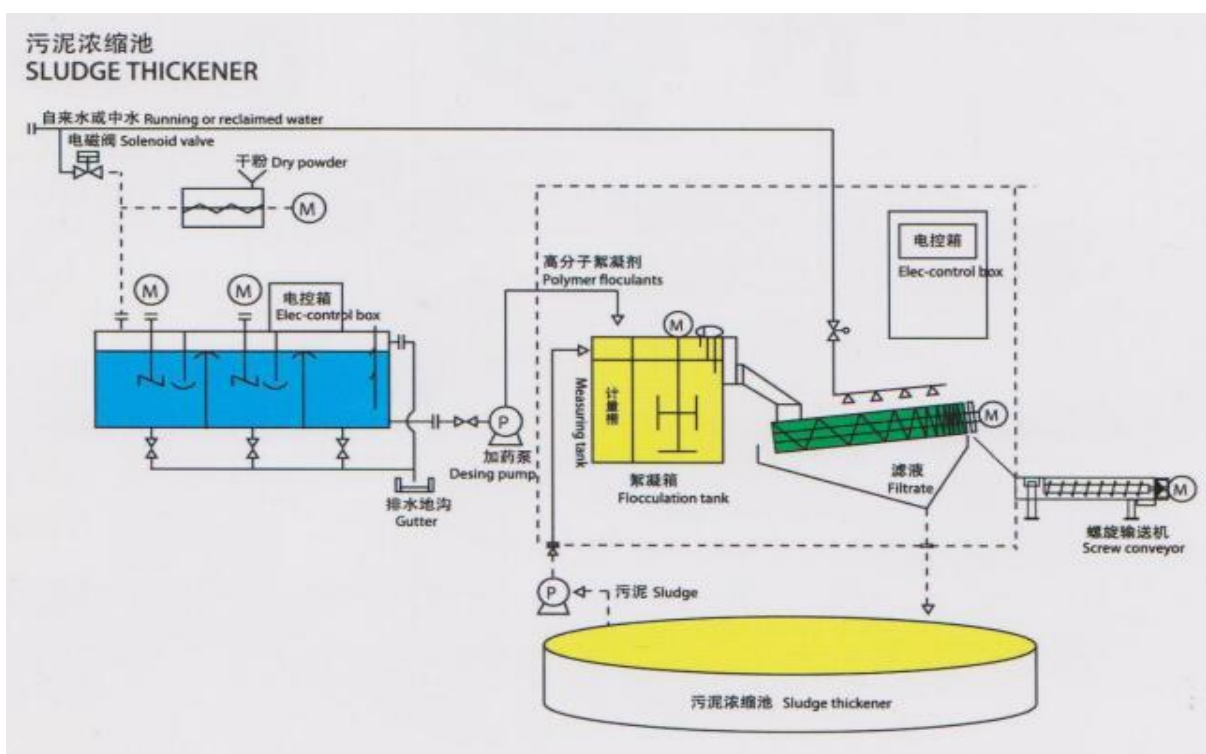


## Main features



1. Simple process flow, high efficiency and energy saving of sludge dewatering, low system investment.
2. The system can be programmed to make the operation convenient and accurate.
3. Unique flocculant makes sludge dewatering easier.
4. Equitable and accurate dispensing, saving operation cost.



## Flow chart



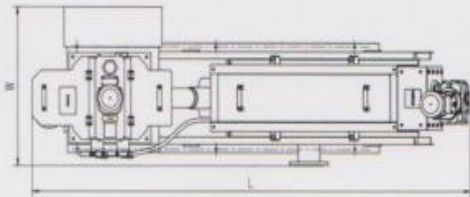
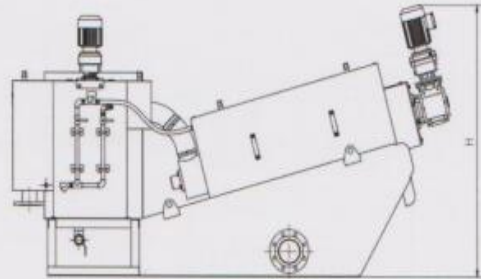
# Contrast of Superiority of Laminated Oncomelania

机种 (Model)		叠螺脱水机 (Volute dehydrater)	带式脱水机 (Belt dehydrater)
构造图 Construction			
脱水原理 Dewatering principle	原理 principle	Fixed rings and swimming rings overlap with each other, and spiral axes run through them to form the main body of the filter. Full dehydration is achieved by gravity concentration and internal pressure of sludge formed by back pressure plate in the process of propulsion. The filtrate is discharged from the filter gap formed by fixed rings and movable rings, and the mud cake is drained from the end of the dehydration section.	Sludge layer is entrained by two tensioned filter belts, which pass through a series of regularly arranged rollers in the shape of S. The pressure and shear force on the sludge layer are formed by the tension of the filter belt itself, and the capillary water in the sludge layer is squeezed out to realize sludge dewatering.
特点 Feature	优点 Advantage	Self-cleaning, non-blocking, low concentration sludge dewatering directly, slow speed, power saving, no noise and vibration. Fully automatic control is realized for 24 hours without operation.	The price is relatively low, the current use is widespread, and the technology is relatively mature.
	缺点 Disadvantage	They are not good at sludge dewatering with large granules and high hardness and small treatment capacity.	Easily clogged, need a lot of water cleaning, resulting in secondary pollution
泥饼含水率 Mud cake water content		~80%	>80%
污泥处理率 Sludge processing efficiency		>95%	90- 95%

机种 (Model)		离心式脱水机 (Centrifugal dehydrater)	板框式脱水机 (plate dehydrater)
构造图 Constructional drawing			
脱水原理 Dewatering principle	原理 principle	The sludge is fed into the drum by the hollow rotating shaft, and is immediately thrown into the drum chamber under the centrifugal force produced by the high-speed rotation. Therefore, the proportion is different, forming a solid-liquid separation of birds. Driven by screw conveyor, sludge is transported to the cone end of the drum and discharged continuously from the outlet. The liquid in the liquid ring layer is discharged continuously from	In a closed state, the sludge pumped by high-pressure pump is extruded by the plate and frame, so that the water in the sludge is discharged through the filter cloth to achieve the purpose of dewatering.
特点 Feature	优点 Advantage	处理能力大 Strong processing capacity	Low price, good at dewatering of inorganic sludge, low moisture content of mud cake.
	缺点 Disadvantage	Noise is high, vibration is intense, maintenance and management is difficult, and it is not suitable for solid-liquid separation with	It is easy to plug and need to use high-pressure pump. It is not suitable for dewatering oily sludge, and it is difficult to realize
泥饼含水率 Mud cake water content		<80%	~80%
污泥处理率 Sludge processing efficiency		85- 95%	90- 95%

# Equipment Selection

Model	Mud outlet height (mm)	Profile size (mm)			Profile (L*W*H)
		长 (L)	宽 (W)	高 (H)	
TMDS101	215	1860	750	1080	
TMDS131	250	1860	750	1080	
TMDS132	250	1960	870	1080	
TMDS201	350	2440	860	1380	
TMDS202	350	2650	960	1380	
TMDS301	495	3370	940	1670	
TMDS302	495	3570	1260	1670	
TMDS303	495	3830	1620	1670	
TMDS304	495	4020	1980	1670	
TMDS351	585	3900	1160	2190	
TMDS352	585	4240	1550	2190	
TMDS353	585	4460	2100	2190	
TMDS354	585	4460	2650	2190	
TMDS401	800	4356	1170	2400	
TMDS402	800	4900	1640	2400	
TMDS403	800	5030	2240	2400	
TMDS404	800	5350	2900	2400	
TMDS451	800	5600	1460	2400	
TMDS452	800	5600	1850	2400	
TMDS453	800	5600	2450	2400	
TMDS454	800	5600	3000	2400	



Note: Sewage concentration is less than 10 000 mg/L. It is suggested that sedimentation and concentration should be carried out, while sewage concentration is more than 25 000 mg/L. It is suggested that dilution should be carried out.



## Operating Conditions

Selection parameter table								
Model	Processing capacity of DS standard parts		Motor Power (Kw)			Flushing water pressure	Flushing water volume (L/h)	Maintenance frequency
	Low concentration	high concentration	Driving motor	Stirring motor	Total power			
TMDS101	3kg/h	6kg/h	0.18 × 1	0.18	0.36	>2Kg/cm <sup>2</sup>	24	10m/d
TMDS131	6kg/h	12kg/h	0.37 × 1	0.37	0.74		24	
TMDS132	12kg/h	24kg/h	0.37 × 2	0.37	1.1		48	
TMDS201	12kg/h	20kg/h	0.37 × 1	0.37	0.74		32	
TMDS202	24kg/h	40kg/h	0.37 × 2	0.37	1.11		64	
TMDS301	30kg/h	60kg/h	0.55 × 1	0.37	0.92		40	
TMDS302	60kg/h	120kg/h	0.55 × 2	0.37	1.47		80	
TMDS303	90kg/h	180kg/h	0.55 × 3	0.37	2.02		120	
TMDS304	120kg/h	240kg/h	0.55 × 4	0.37	2.57		160	
TMDS351	60kg/h	120kg/h	0.75 × 1	0.37	1.12		144	
TMDS352	120kg/h	240kg/h	0.75 × 2	0.37	1.87		288	
TMDS353	180kg/h	360kg/h	0.75 × 3	0.75	3		432	
TMDS354	240kg/h	480kg/h	0.75 × 4	0.75	3.75		576	
TMDS401	100kg/h	170kg/h	1.1 × 1	0.75	1.47		80	
TMDS402	200kg/h	340kg/h	1.1 × 2	0.75	2.95		160	
TMDS403	300kg/h	510kg/h	1.1 × 3	0.75	4.05		240	
TMDS404	400kg/h	680kg/h	1.1 × 4	0.75	5.15		320	
TMDS451	120kg/h	240kg/h	1.5 × 1	0.37	1.87		115	
TMDS452	240kg/h	480kg/h	1.5 × 2	0.75	3.75		230	
TMDS453	360kg/h	720kg/h	1.5 × 3	0.75	5.25		345	
TMDS454	480kg/h	960kg/h	1.5 × 4	0.75	6.75	460		

## Application occasions and advantages

It is suitable for municipal sewage, petroleum refining, leather brewing, printing and dyeing, animal husbandry, coal chemical beneficiation, biochemical pharmaceuticals, steel pickling, chemical sugar making, food processing, etc.

1. Low operating cost: equivalent to less than 40% of belt filter press, equivalent to less than 20% of centrifugal dehydrator.
2. Power saving: less than 5% of centrifuge
3. Water saving: less than 0.1 of belt filter press
4. Provide medicine: save medicine by 60% on average.
5. Small size: investment in dewatering machine room saves more than 60% of mud.
6. No clogging: the negatives of greasy fibre sludge.