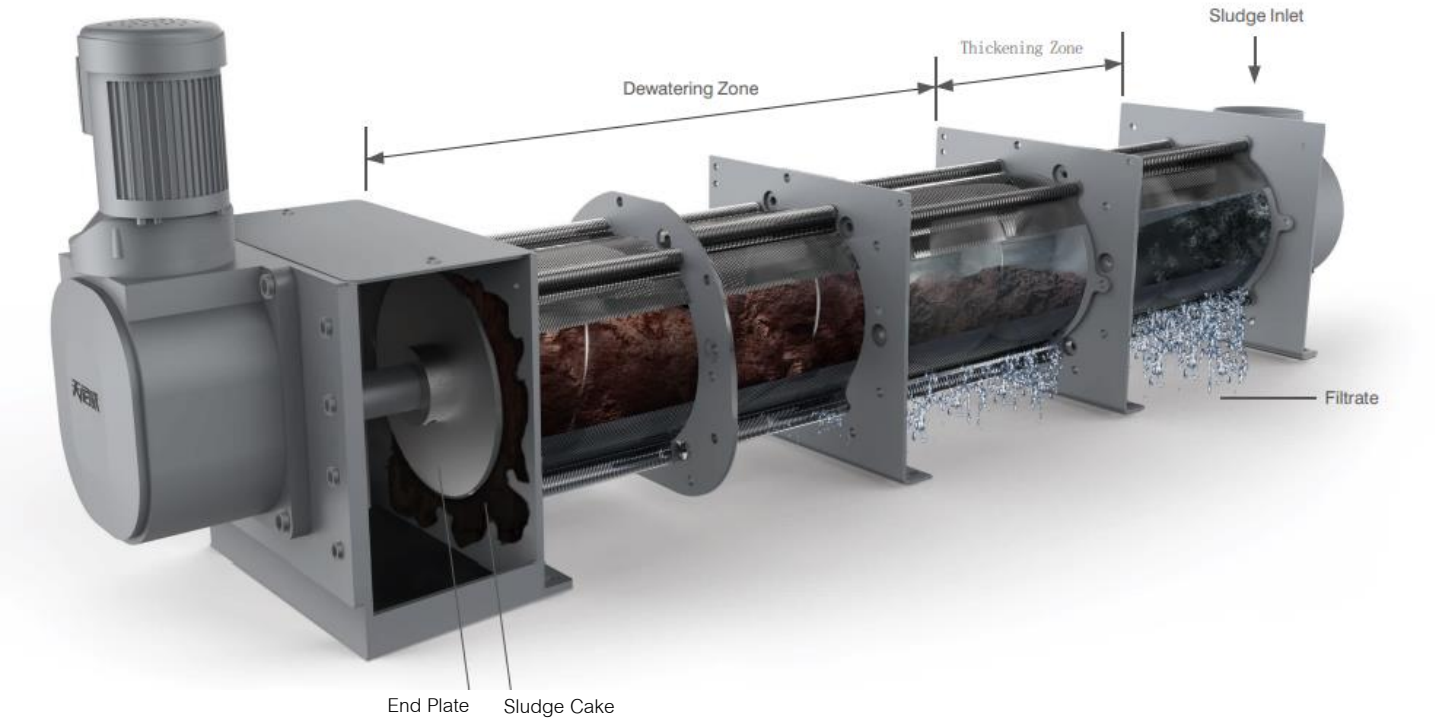
Great Oriental Corporation Co.,Ltd
www.gotcorp.coth

Sludge Dewatering

WASTEX

SCREW

press



I Working Principle

Screw type sludge dewatering press (Screw Press) is structured with a filter element that consists of two types of Rings: a Fixed Ring and a Moving Ring; and a screw that thrusts the filter element and transfers and pressurizes the sludge. The gaps between the Rings and the screw pitch are designed to gradually get narrower towards the direction of sludge cake outlet and the inner pressure of the filter element increases due to the volume compression effect, which thickens and dewaters the sludge.

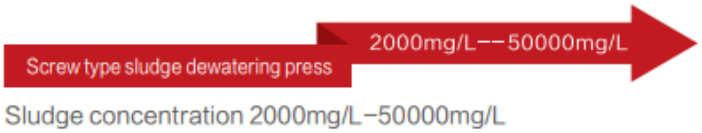
SCREW

press

I Technology Advantage 1

Equipped with pre-thickening tank and better at dealing with low concentration sludge.

> Improved gravity thickening shortcomings and realized high efficient thickening.Flocculation and thickening are integrated, dewater becomes easier.
>
> Combine with regulating end plate, sludge concentration can be optimized.



Sludge concentration 2000mg/L–50000mg/L

I Technology Advantage 2

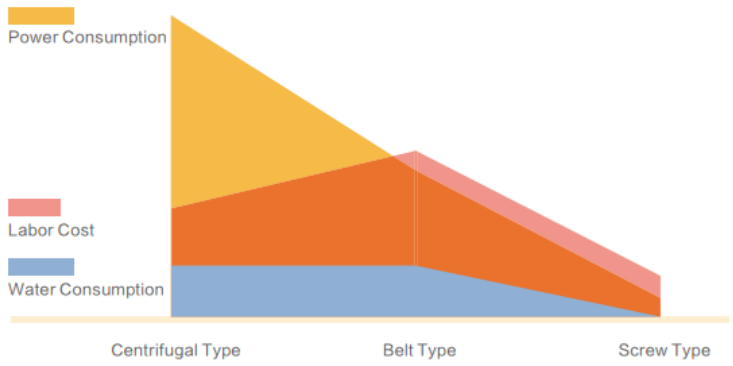
Fixed and Moving rings replace filter cloth.

> The rotation of screw shaft pushes the detaching of Moving rings from Fixed rings, which brings self-cleaning process continuously and automatically. This enables stable and constant dewatering to take place without depending on high pressure flushing water to prevent clogging. This also enables being ideal for oily sludge, which easily causes clogging and is difficult to treat with other types of dewatering equipment

I Technology Advantage 3

Low noise, low vibration, power saving, water saving.

> The rotation of screw shaft pushes the detaching of Moving rings from Fixed rings, which brings self-cleaning process continuously and automatically. This enables stable and constant dewatering to take place without depending on high pressure flushing water to prevent clogging. This also enables being ideal for oily sludge, which easily causes clogging and is difficult to treat with other types of dewatering equipment



I Technology Advantage 4

Reduce infrastructure investment cost, improve treatment effect.

> Screw press can directly treat the sludge from aeration tank and second sedimentation tank so no need sludge thickening and sludge storage tank. The infrastructure investment can be greatly saved and the phosphorous release problem is well avoided. Thus the sewage treatment system dephosphorization can be enhanced.

I Technology Advantage 5

Fully automatic control, simple operation and management.

> Screw press doesn't have any components like filter cloth or filter pore which are easily clogged. The operation is safe and easy. The machine also can be operated automatically by control cabinet.Save infrastructure investment also on mixer, air compressor, washing pump and other related corollary equipment. Less footprint occupy, less dewatering plant infrastructure investment.

I Technology Advantage 6

Wide range of application.

> Can be widely used in municipal sewage, food, slaughtering breeding, printing and dyeing, oil chemical industry, paper making, leather, pharmaceutical and other industrial of sludge dewatering.

Special designed Screw Press has wide range of models, the capacity covers from 0.5Kg-DS/h to 1320-1360Kg-DS/h. We can also provide the most suitable technical proposal based on the actual need.

I Specifications

Model	Discharge Height (mm)	Dimension (mm)			N.W (Kg)	Operating Weight (Kg)	Power (Kw)	Water Consumption (L/H)
		L	W	H				
WT-SP131	250	1860	700	915	205	300	0.2	24
WT-SP132	250	1905	830	915	275	425	0.3	48
WT-SP201	350	2555	920	1465	320	470	0.74	32
WT-SP202	350	2615	960	1465	470	730	1.11	64
WT-SP301	495	3325	870	1760	910	1320	1.5	40
WT-SP302	495	3455	1135	1760	1350	2130	2.25	80
WT-SP303	495	3670	1560	1760	1820	2880	3	120
WT-SP351	585	3475	905	1820	1610	2210	1.1	72
WT-SP352	585	3570	1285	1820	2300	3400	2.75	144
WT-SP353	585	3645	1725	1820	3350	4850	3.85	216
WT-SP354	585	4130	2180	1820	4500	6100	4.95	288
WT-SP401	759	3905	1070	2210	2500	3400	1.85	80
WT-SP402	759	4240	1570	2210	3480	5200	2.95	160
WT-SP403	759	4465	2060	2210	4550	7050	4.05	240
WT-SP404	759	4670	2630	2210	6550	9660	5.15	320

I Model Reference

Model	Raw Wastewater Waste Activated Sludge Chemical Precipitated Sludge		Dissolved-air Flotation Sludge		Mixed Raw Sludge Aerobic Digestion Sludge Sewage Sludge
Sludge Concentration(TS)	0.2%	1.0%	2.0%	5.0%	3.0%
WT-SP131	~4kg-DS/h (~2.0m³/h)	~6kg-DS/h (~0.6m³/h)	~10kg-DS/h (~0.5m³/h)	~20kg-DS/h (~0.4m³/h)	~26kg-DS/h (~0.87m³/h)
WT-SP132	~8kg-DS/h (~4.0m³/h)	~12kg-DS/h (~1.2m³/h)	~20kg-DS/h (~1.0m³/h)	~40kg-DS/h (~0.8m³/h)	~52kg-DS/h (~1.73m³/h)
WT-SP201	~8kg-DS/h (~4.0m³/h)	~12kg-DS/h (~1.2m³/h)	~20kg-DS/h (~1.0m³/h)	~40kg-DS/h (~0.8m³/h)	~52kg-DS/h (~1.73m³/h)
WT-SP202	~16kg-DS/h (~8.0m³/h)	~24kg-DS/h (~2.4m³/h)	~40kg-DS/h (~2.0m³/h)	~80kg-DS/h (~1.6m³/h)	~104kg-DS/h (~3.47m³/h)
WT-SP301	~20kg-DS/h (~10m³/h)	~30kg-DS/h (~3.0m³/h)	~50kg-DS/h (~2.5m³/h)	~100kg-DS/h (~2.0m³/h)	~130kg-DS/h (~4.33m³/h)
WT-SP302	~40kg-DS/h (~20m³/h)	~60kg-DS/h (~6.0m³/h)	~100kg-DS/h (~5.0m³/h)	~200kg-DS/h (~4.0m³/h)	~260kg-DS/h (~8.67m³/h)
WT-SP303	~60kg-DS/h (~30m³/h)	~90kg-DS/h (~9.0m³/h)	~150kg-DS/h (~7.5m³/h)	~300kg-DS/h (~6.0m³/h)	~390kg-DS/h (~13m³/h)
WT-SP351	~40kg-DS/h (~20m³/h)	~60kg-DS/h (~6.0m³/h)	~100kg-DS/h (~5.0m³/h)	~200kg-DS/h (~4.0m³/h)	~260kg-DS/h (~8.67m³/h)
WT-SP352	~80kg-DS/h (~40m³/h)	~120kg-DS/h (~12m³/h)	~200kg-DS/h (~10m³/h)	~400kg-DS/h (~8.0m³/h)	~520kg-DS/h (~17.3m³/h)
WT-SP353	~120kg-DS/h (~60m³/h)	~180kg-DS/h (~18m³/h)	~300kg-DS/h (~15m³/h)	~600kg-DS/h (~12m³/h)	~780kg-DS/h (~26m³/h)
WT-SP354	~160kg-DS/h (~80m³/h)	~240kg-DS/h (~24m³/h)	~400kg-DS/h (~20m³/h)	~800kg-DS/h (~16m³/h)	~1040kg-DS/h (~34.68m³/h)
WT-SP401	~70kg-DS/h (~35m³/h)	~100kg-DS/h (~10m³/h)	~170kg DS/h (~8.5m³/h)	~340kg-DS/h (~6.5m³/h)	~442kg-DS/h (~16m³/h)
WT-SP402	~135kg-DS/h (~67.5m³/h)	~200kg-DS/h (~20m³/h)	~340kg-DS/h (~17m³/h)	~680kg-DS/h (~13.6m³/h)	~884kg-DS/h (~29.5m³/h)
WT-SP403	~200kg-DS/h (~100m³/h)	~300kg-DS/h (~30m³/h)	~510kg-DS/h (~25.5m³/h)	~1020kg-DS/h (~20.4m³/h)	~1326kg-DS/h (~44.2m³/h)
WT-SP404	~266kg-DS/h (~133m³/h)	~400kg-DS/h (~40m³/h)	~680kg-DS/h (~34m³/h)	~1360kg-DS/h (~27.2m³/h)	~1768kg-DS/h (~58.9m³/h)

- The capacities above are for reference only. Different sludge type will have different capacity. More detailed issues please consult our sales engineers.
- Throughput of each model is based on sludge cake with 85% water content.
- There is no upper limitation on inlet sludge concentration. However, the target sludge must be flowable.
- Throughput of DAF sludge is based on sludge containing much fat, oil and grease such as meating processing applications etc...
- Throughput of mixed sludge (Primary Sludge and Waste Actived Sludge) and Aerobically Digested sludge is based on sludge containing more than 30% fiber (200 mesh) against Total Solids.

MOBILE SLUDGE

reduction (MSR) system

I Product Introduction

Mobile Sludge Reduction System (MSR system) is equipped with solid-liquid separation, polymer preparation, independent power generation, pumping and drainage. Dehydration is completed in a relatively closed system, which is skid-mounted, and easy “plug and play” system. MSR systems for sludge dewatering or thickening can be installed for long-term use or simply serve as a temporary solution for a few weeks or months.

The rear door can be opened, and the sludge cake is discharged automatically. The double wings can be opened over the entire width of the container in summer to ensure sufficient fresh air. The wings can be opened simply and safety by a single person using a manual hydraulic lift mechanism. Its walls and roof can be insulated for alpine region upon request. Air conditioner is also optional to ensure freeze-proof operation and a high degree of comfort.

I- Compact design, small footprint

All the system parts installed are optimized for the limited space available in the mobile container, such as the specially designed polymer system. The equipment can be installed on 4.5 m,6.8 m, 7.8 m, 13 m and other types of transport vehicles, in line with the transport size standard of ordinary vehicles, the equipment is highly intensive and easy to move.

II- Large capacity and save cost

A wide variety of sizes and infrastructure variants. Capacity varies from 10m3/h to 50m3/h. MSR system highly improves working efficiency, and saves much manpower, also the transportation cost of ordinary sewage suction trucks.

III- One-man operation

In addition to placing and lifting of the MSR systems, the connection of the intake lines can also be done without a crane by a single person. All lines are fixed plumbing up to the wall of the container. On site, only the intake and discharge lines have to be connected and the sys tem supplied with power. It can then go into operation immediately.

The entire system can be controlled inside the container using the operator panel on the control cabinet. Each module has rig orous PLC programming, with scientific and reasonable logic, realizing automatic operation. Installation, commissioning, and maintenance can be operated by one person.

I Process Flow