

# Sludge Dewatering Press

## Introduction

Sludge Dewatering Press, which uses the screw extrusion principle, is a new type of solid-liquid separation device. It reaches the goal of extrusion dewatering sludge by the powerful extrusion pressure of changing the screw diameter and distance and the small spacing between movable annular plates and fixed annular plates.

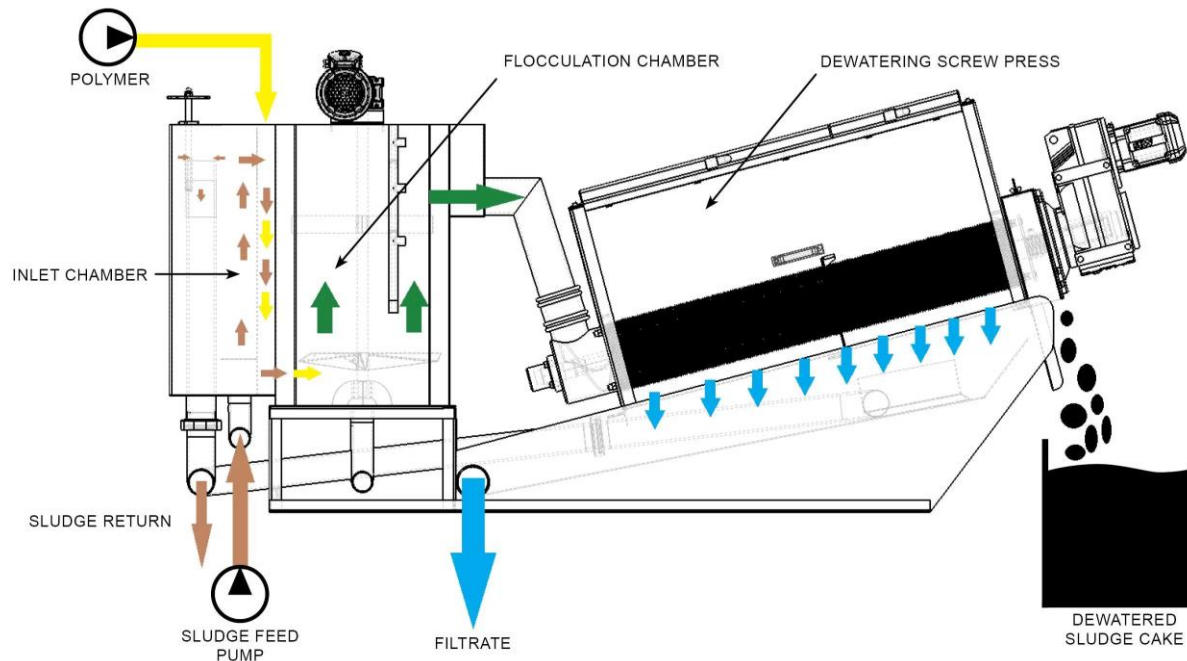
## Structure Principle

The sludge dewatering press's main body comprises multiple fixed annular plates and moveable annular plates with the screw shaft running through it. The front part is a thickening dewatering department. It can thicken and dewater sludge in one box and have taken the traditional filter clothes and centrifugal filtration method for its distinctive filter model.



## Dewatering Principle

Sludge will be transported to the dewatering department after being thickened in the thickening department. In the advancing process, significant pressure has been produced because of the gradually decreasing filter spacing and screw distance and the back platen clogging. Then the volume decreases continuously, and the purpose of fully dewatering will be achieved.



## JX Filtration Advantages

### 1. Using scope widely

It can be widely used to dewater sludge of municipal administration wastewater, food, drink, slaughtering and breeding, printing, petrochemical engineering, paper making, tannery, and pharmaceutical.

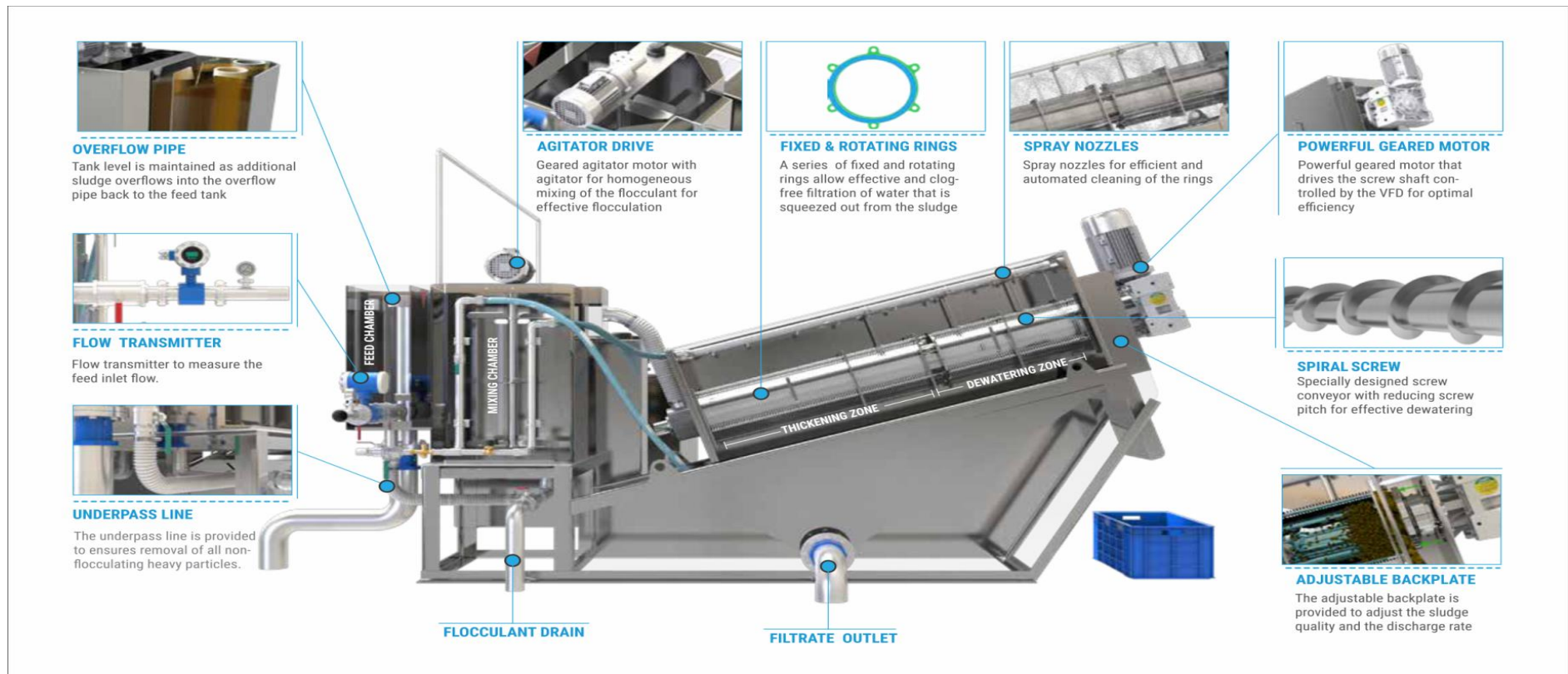
The distinctive dewatering principle makes it possible for the device to be used for high or low-density sludge, from 2000mg/L on, which has become the foundation of the low-density sludge direct dewatering.

The innovative structure design makes it possible for the device to be applied in all kinds of sludge with high or low density, especially the sludge with oil. It can be named the invincible opponent to dewater the sludge with oil.



## 2. The device cannot be clogged easily

Unique dynamic and static rings make the widget not easily blocked. Then there is no need to wash abundantly for preventing filter spacing from being clogged. So it has reduced the number of water for washing and the burden of inside circling and solves the clogging problems that the traditional dewatering devices bring to the company.



### 3. Operating continuously and automatically

Sludge dewatering press can automatically control its operation, including pumping out sludge, putting in fluids, and discharging sludge. The device can operate through the teamwork of an electrical cabinet, chemical feeder, mud pump, and dosing pump without manual operation. The device will be clogged, filters running irregularly, or other solutions that can affect the safety cannot occur during the whole procedure. Daily maintenance of the machine can be done quickly and conveniently. And it can work all day continuously without manual operation.

### 4. Operation costs can be saved

The overall integration design, compact design, saving operation costs significantly;

Low-speed spiral pressing technology makes power consumption reduced greatly;

The device cannot be clogged, which can minimize cleaning water supply;

Operation automatically all day can reduce manual costs significantly;

So, screw sludge dehydrator is a new type of energy-saving and environmental protection device that can be truly consistent with national policy.

### 5. No secondary pollution

The rotation speed of the screw shaft is about 2-3 revolutions per minute, and the rotation has no vibration and little noise. The screw dehydrator has a self-cleaning function, cannot be clogged, need a little water to clean, and has no secondary pollution. The sludge is dewatered in such a slow



state, and the bad smell is not diffused, which can create a very comfortable operation surrounding.

## 6. Flexible and durable frame

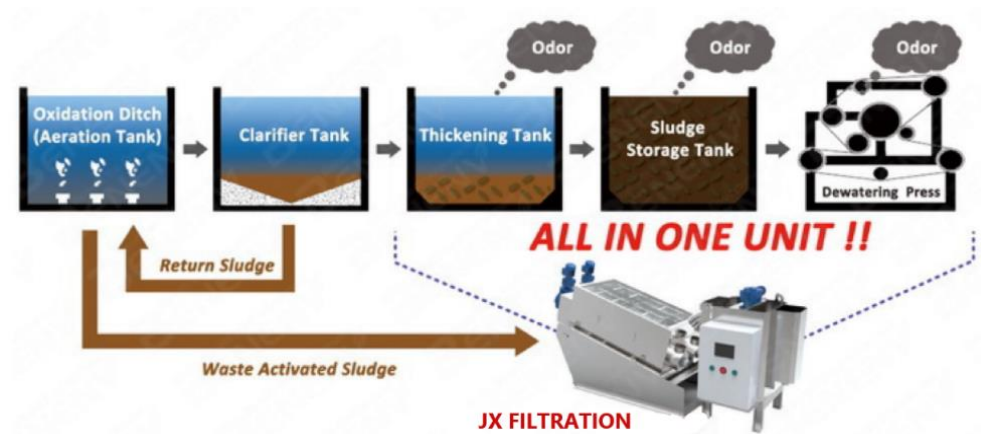
The machine's design is quite flexible because it uses machinery for extrusion dewatering directly and does not need a large drum frame. Almost all the frame is made of stainless steel, and only the screw shaft and moveable annular plates should be replaced, which can contribute to long service life and durable in use.

## 7. Saving engineering investment

Sludge dewatering press has the function of thickening sludge. It can deal with the aerobic sludge in the aeration tank directly. So it does not need a thickening storage unit, which can reduce the floor space of sewage treatment facilities and construction costs.

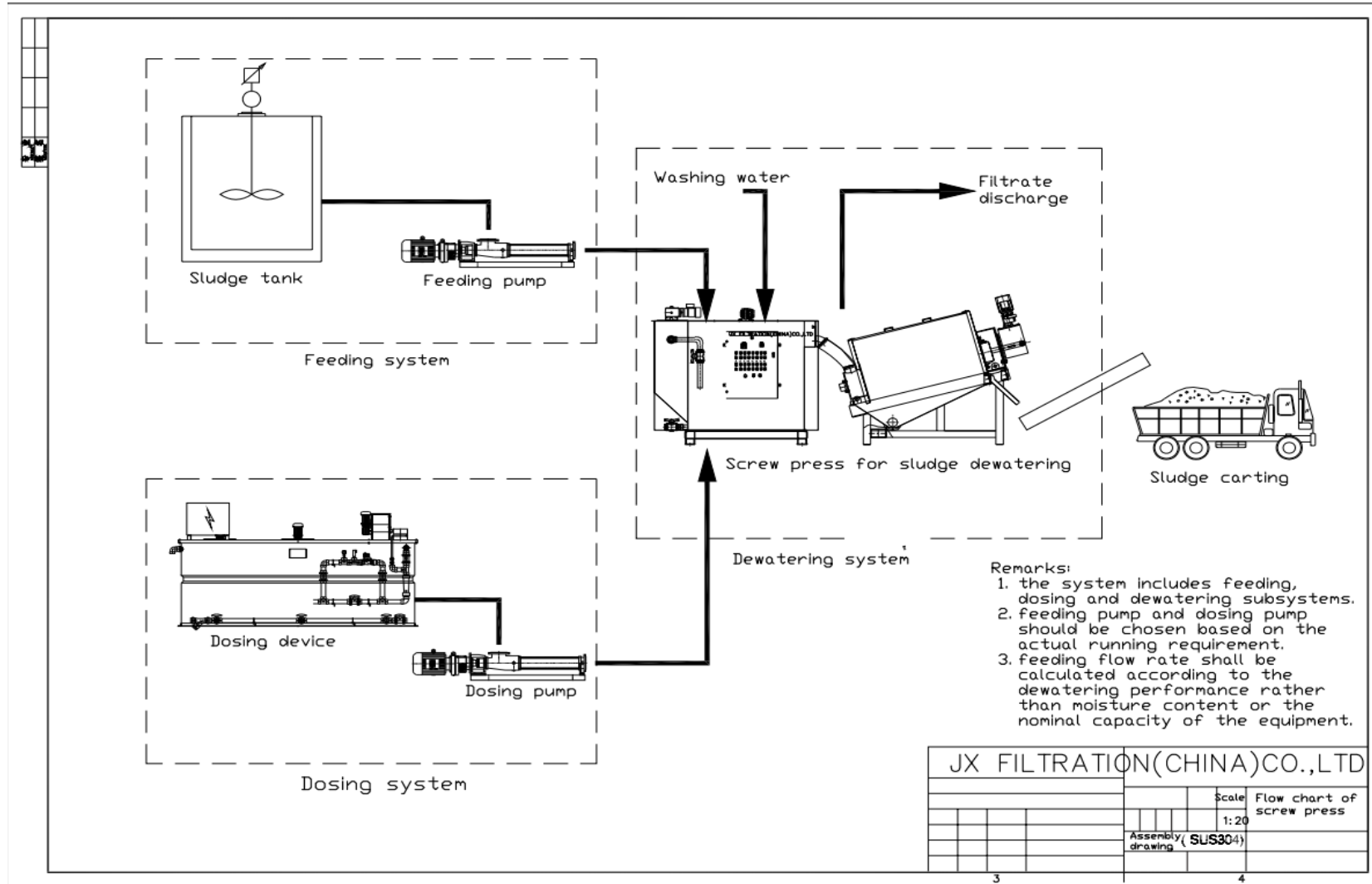
## 8. Improving phosphorus removal function

Sludge will be dewatered in the aerobic situation, so in the sludge thickening tank or storage tank, traditional phosphorus sludge outlet of anoxic or anaerobic conditions cannot happen. Then the phosphorus removal function of the sludge treatment system will be improved.





## Process Flowchart



Model	Motor power (KW)			Treatment capacity (L/h)	Wearing parts replacing cycle (years)	
	Screw shaft	Motor	Total		Screw axis	Active ring
JXDL131	0.18	0.18	0.36	28	5	3
JXDL201	0.37	0.18	0.55	32	5	3
JXDL203	1.11	0.55	1.66	96	5	3
JXDL301	0.75	0.75	1.3	40	10	5
JXDL303	2.25	0.18	3.35	120	10	5
JXDL304	3	0.18	4.1	160	10	5
JXDL351	1.1	0.18	1.85	60	10	5
JXDL353	3.3	0.18	4.8	180	10	5
JXDL401	1.5	1.18	2.6	80	10	5
JXDL403	4.5	1.1+1.1	6.7	240	10	5
JXDL404	6	1.1+1.1	8.2	320	10	5