

Close Loop Air Circulation Sludge Dryer

Screw conveyor is the new generation product that replaced of the GX type screw conveyor .

Description

1.KSAC serial

KSAC serial products are suitable for organic sludge with high water content. Sludge is displayed on the belt type conveyor without stirring in order to dry the surface of sludge mass quickly. It is adjustable the belt conveyor speed by motor frequency in order to avoid sludge mass reform and get final dryness. The KSAC series flow diagram is shown as Figure 1.

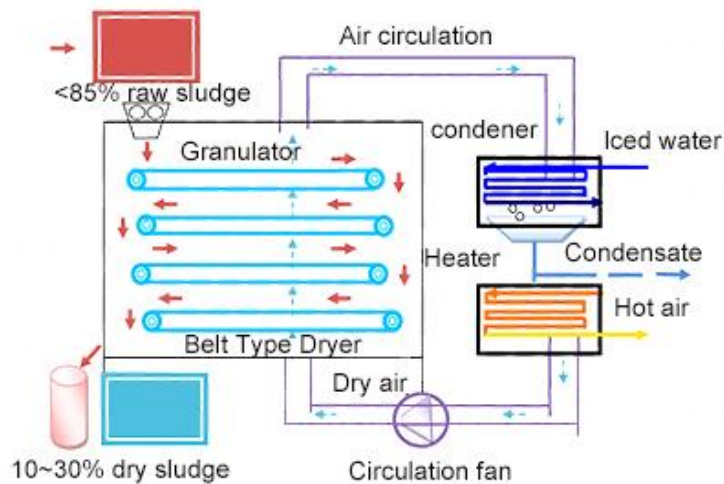


Fig.1 KSAC Belt Type Dryer and Air Close Loop Circulation

2.KSWW serial

KSWW serial products are suitable for inorganic sludge chunk or organic sludge cake with low water content. Sludge is moved and stirred by scraping arms in order to enhance drying efficiency. It is adjustable the scraping arm speed by motor frequency in order to control final dryness. The KSWW series flow diagram is shown as Figure 2.

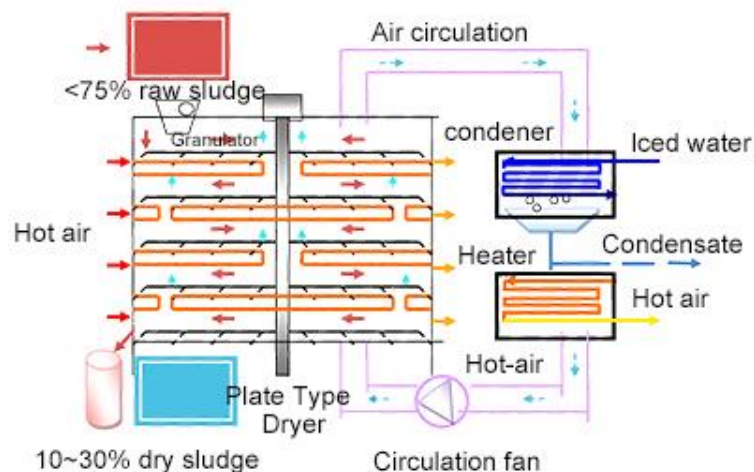


Fig.2 KSWW Plate Type Dryer and Air Close Loop Circulation

System Process



◆ Sludge Process ◆

70~85% water content sludge is fed from the top of the indirect heating dryer. There are several layers of dryer. The function of scraping arms of each layer is moving sludge to next layer until dryer discharge port at lowest layer. There could be a storage bag for temporary storage at discharge port or it is delivered to treated sludge storage tank. During sludge moving procedure, sludge is stirred by scraping arms. It is dramatically increased sludge drying efficiency by combined heat, mass transfer and stirring physical reactions.

◆ Air Circulation Process ◆

Dry air is fed into the bottom of the dryer. It goes from the bottom layer to the discharge vent of upper layer of the dryer. When dry air passes through the sludge surface of each layer, the moisture inside sludge is quickly vaporized into air as humidity of air increased. The near saturated air from the discharge vent of dryer is boosted pressure by fan. The dehumidification function is occurred in condenser. The air will be dried again after leaving condenser. Due to reduce the dew point temperature, vapor molecules move together to form condensation droplets collected in condensate tank. Dry air could directly go to dryer or pass air heater before go to dryer due to different sludge characteristics. The air has been continuous circulating in the system. Since there is no exhaust released to environment during CLADSD process. It is not necessary to do odor or exhaust treatment.

◆ Water Circulation Process ◆

Iced water is pumped into condenser and taken out the heat of the air. It becomes the cold water after leaving condenser. The cold water is pumped through heat pump which adsorbed heat and make cold water to be iced water again. The iced water is circulating back to condenser. Hot water is pumped into the air heater and release heat to air before it is fed into dryer. After leaving air heater, hot water becomes warm water. The warm water is pumped through heat pump which release heat and make warm water to be hot water again. The hot water is circulating back to air heater.

Main Features



1. Due to recovering the latent heat of vapor concept, a thermal energy recycling system was designed to reduce energy consumption significantly.
2. To achieve the goal which 70~85% water content of raw sludge directly reduce to 10~30% in one system without any chemical dosage.
3. To achieve zero air emissions goal which air is continuously circulated in a closed loop system. There is no VOC (volatile organic gases), odor gas (hydrogen sulfide, ammonia, methyl mercaptan, etc.) discharged to the environment.
4. To achieve the goal which the mobile service system is designed in a 20-foot container with capacity up to 10 tons of sludge per day.
5. To achieve the goal which electricity plays as a sole heat source. Steam or hot water is not necessary.
6. Air temperature range inside the system is 20~80°C.
7. If there is enough waste hot water or waste steam with low pressure supplied by the client, we can reuse it as an auxiliary heat source in order to lower the energy consumption rate.

Equipment Selection

model	KSAB-1	KSAC-1	KSAB-3.6	KSAC-4.2
Dehumidification capacity/day	900kg	1100kg	3600kg	4200kg
Total power	18kw	20kw	63kw	66kw
Refrigerant	R134a	R134a	R134a	R134a
COP	3.9	3.9	3.9	4
power supply	380V/50HZ	380V/50HZ	380V/50HZ	380V/50HZ
Drying temperature	40-70°C	40-70°C	40-70°C	40-70°C
Control System	Touch screen+PLC	Touch screen+PLC	Touch screen+PLC	Touch screen+PLC
Application range	Sludge Moisture 70-90%	Sludge Moisture 70-85%	Sludge Moisture 70-90%	Sludge Moisture 70-85%

Moisture of dried sludge	<30%(adjustable)	<30%(adjustable)	<30%(adjustable)	<30%(adjustable)
Dimension,m	4.9L*2.2W*2.5H	5.3L*2.4W*2.6H	9L*2.2W*2.5H	10L*2.4W*2.6H
Feeding type	batch	continuous belt type	batch	continuous belt type
Structure type	One set	Two sets	One set	Two sets

Note:Jiansu Kintep Environmental Protection Co.,Ltd.has the right to revise the parameters according to technology improved without noticed.

model	KSWW-4.5	KSWW-6	KSWW-7.5	KSWW-12
Dehumidification capacity/day	4500kg	6000kg	7500kg	12000kg
Total power	68kw	86kw	121kw	172kw
Refrigerant	R134a	R134a	R134a	R134a
COP	4.5	4.5	4.5	4.5
power supply	380V/50HZ	380V/50HZ	380V/50HZ	380V/50HZ
Drying temperature	30-70°C	30-70°C	30-75°C	30-75°C
Control System	Touch screen+PLC	Touch screen+PLC	Touch screen+PLC	Touch screen+PLC
Application range	Sludge Moisture 70-75%	Sludge Moisture 70-75%	Sludge Moisture 70-75%	Sludge Moisture 70-85%
Moisture of dried sludge	<30%(adjustable)	<30%(adjustable)	<30%(adjustable)	<30%(adjustable)
Dimension,m	4L*3.3W*3.0H	4L*4.3W*3.5H	4L*3.3W*3.0H	10L*5W*4.0H
Feeding type	Continuous plate type	Continuous plate type	Continuous plate type	Continuous belt type
Structure type	Two sets	Two sets	Two sets	Two sets

About KINTEP

Jiangsu Kintep Environmental-protection Equipment Co.,Ltd. is a professional environmental protection product manufacture with the spirit of low-carbon, environmental friendly, safety and efficient. It covers an area over 35,000 squares, has fixed assets more than 30 million, and configured with advanced oridyctuib equipments, strong technical force. As a good cooperater, Kintep works closely with some professional institutions and owns a number of patents for invention. With the professional level and mature technology in sewage treatment equipment

industry, Kintep always be the top in the Chinese environmental protection industry participated in the National Museum's Exhibition of World Expo, it also establishes a "professional and Hi-tech" image in the industry.

Our easy maintenance screw dehydrator, had got Chinese patent since 2010, now it has 9 series to meet various sludge concentration and different customers' demand.



Certifications



BV



ISO



CE



PATENT

Service & Support

- ◆ All-around Pre-sale Technical Support
- ◆ Perfect After-sale Service
- ◆ Quick Response System

- ◆ Professional In-sale Service
- ◆ Professional Service Team
- ◆ Strict manufacturing Quality Control

Kintep 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 complete manufacturing system including mechanical processing, welding, heating processing, assembling, inspection, etc.

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