# LS Tube Conveyor for Talc

#### Introduction of the Tube conveyor

The Tube Conveyor is a conveying device that pushes the material forward beby rotating spiral blades, commonly known as Jiaolong. This equipment can convey powder, granular and certain viscous materials at multiple angles (0°-90°), can realize fully enclosed conveying, has good sealing performance and no leakage distance, which can reach 4000N/m. The conveying capacity is large and the conveying distance is long. The conveying length of a single machine can reach 20-70 meters. Screw conveyors are widely used in mining, agricultural chemicals, and other industries. In addition, after years of innovation, the screw conveyor of Baisheng Machinery can now realize models with special requirements such as weighing, double shafts, tubular, and shaftless.

16 years







In terms of conveying form, it is divided into two types: shaft screw conveyor and shaftless screw conveyor. Shaft screw conveyor is suitable for non-sticky dry powder materials and

small particle materials. (For example: cement, fly ash, lime, grain, etc.) while shaftless screw conveyor is suitable for conveying materials with certain viscosity and easy to entangle. (For example: sludge, biomass, garbage, etc., the screw conveyor is a kind of conveying equipment with strong sealing and good performance. The fully enclosed conveying and easy-to-clean spiral surface can ensure environmental hygiene and the conveyed materials are not polluted or leaked.



## Scope of application

Screw conveyor are widely used in building materials, metallurgy, chemical industry, electric power, coal, machinery, light industry, grain and food industries. They are suitable for

conveying powdered, granular and small block materials, such as cement, coal powder, grain, fertilizer, ash, sand, coke, etc. Tubular screw conveyors are not suitable for conveying materials that are easy to deteriorate, highly viscous and easy to agglomerate.

In the ceramic industry: clay, pottery, silica, sand, polishing materials, plaster of Paris, aluminum oxide powder, etc.

In the grain and food industry: flour, soybeans, peanuts, starch, milk powder, salt, sugar, vitamin supplements, etc.

In the plastic industry: plastic powder, plastic granules, ground flakes, etc.

In the wood industry: wood chips, sawn wood, by-products, etc.

In the building materials industry: cement, cement raw materials, paid materials, etc.

In the field: filtration, recycling, soda ash, fly ash, fixed residues, waste, etc.

In agriculture: livestock feed, nutrients, powder, etc.



Working principle of Tube Conveyor



The working environment temperature of the screw conveyor is usually -20[40°C, and the temperature of the conveyed material is generally -20[80°C. The screw conveyor is suitable for horizontal and small inclination arrangement, and the inclination angle should not exceed 15°. If the inclination angle is too large, please use the GX series screw conveyor, or contact our company's technical department for a separate design.

The diameter of the LS screw conveyor ranges from 100mm to 1250mm, with a total of twelve specifications, divided into single drive and double drive forms. The single drive screw conveyor can reach a length of 40m (30m for extra large), and the double drive screw conveyor adopts an intermediate disconnected shaft structure, with a length of up to 80m (60m for extra large). The length difference of the screw conveyor is 0.5m per gear, which can be selected according to needs. The head bearing and tail bearing of the screw conveyor are placed outside the shell to reduce the intrusion of dust into the bearing chamber and increase the service life of the key parts of the screw machine. The intermediate hanging bearing adopts two interchangeable structures of rolling and sliding, with low resistance, strong sealing and good wear resistance. The bearing bushes of the sliding bearings are made of powder metallurgy, nylon, babbitt alloy and other materials for users to choose according to different occasions. The oil cup is placed outside the hanging bearing machine, which is convenient for centralized oiling and lubrication. The positions of the inlet and outlet are flexible, and an electric outlet is added to facilitate automatic control. A speed alarm device can also be configured according to user requirements. The cross section of the LS screw conveyor looks like the letter "U", so it is also called a U-shaped screw conveyor.



# Screw conveyor technical parameters:

Name		100	120	140	160	200	250	300	400	
Shell diameter			φ114	φ133	φ168	φ194	φ219	φ273	φ325	φ402
Allowable working angle			0~60	0~60	0~60	0~60	0~60	0~60	0~60	0~60
Capacity(m)			8	10	12	14	15	18	20	25
Capacity(t/h)			6	12	17	28	45	70	130	150
Motor	model	≤7	Y90S-4	Y100L1-4	Y100L2-4	Y132S-4	Y132M-4	Y160M-4	Y160L-4	Y180L-4
	power(kw)		1.1	2.2	3	5.5	7.5	11	15-18.5	22
	model	>7	Y100L1-4	Y100L2-4	Y112M-4	Y132M-4	Y160M-4	Y180M-4	Y180L-4	YH200L
	power(kw)		2.2	3	4	7.5	11	15	18.5-22	20-30

### Maintenance

(I) Regulations that the operators of the screw conveyor should be familiar with and comply with:

1. Each machine should be operated and maintained by a dedicated person, and other personnel are not allowed to start the machine without authorization.

- 2. Preparation work before starting:
- (1) Check whether the wires, switches, etc. are intact;

(2) Check whether the fasteners (anchor bolts, casing connection bolts, intermediate shaft connection bolts, etc.) are loose.

- (3) Check whether the lubrication points are filled with lubricating oil as required.
- (4) Whether the screw is stuck.

3. To prevent overload at start-up, the screw conveyor is guaranteed to start without load, that is, it is started when there is no conveying material in the casing, and the material can be conveyed only after starting.

4. When stopping, unload the material and then stop, that is, stop adding material first and then stop, to ensure the next no-load start.

5. The material should be added evenly to avoid material clogging at the hanging bearing.

6. The conveyed material must not be mixed with hard and large pieces of material to avoid stopping the screw and damaging the machine.

7. During use, the working status of the machine should be checked frequently, and attention should be paid to whether the fastening parts are loose.

8. Special attention should be paid to whether the bolts of the connecting bolt flange and the connecting shaft are loose, dropped or cut off. If found, the machine should be stopped immediately to correct.

9. The machine cover should not be removed during operation to avoid accidents. The operator can open any machine cover only if he needs to check the internal situation.

(II) The maintenance of the screw conveyor should adopt a three-level maintenance system

1. Routine maintenance: ensure the integrity and cleanliness of the machine body parts on a daily basis to keep them in good technical condition.

2. Maintenance: After three months of continuous operation, an inspection and maintenance is carried out to check its integrity, prevent excessive wear of the machine parts, and extend the life of the machine parts.

3. Secondary maintenance: After one year of use, a repair and replacement of some parts are carried out.

Success case of the screw conveyor



