

# Screw conveyor

## 1. Main structure and working principle:

- a. The screw conveyor adopts a shaftless spiral process, which has a small contact area with materials, low friction, and no clogging and winding.
- b. The material enters from the feed inlet and gradually moves to the outlet through the spiral to complete the conveying process.
- c. The thickness of the spiral is large and the service life is long. The support adopts an integrally pressed U-shaped groove structure with high strength and a detachable upper cover plate for easy observation of the material conveying situation.
- d. A wear-resistant liner that can be quickly disassembled is used between the U-shaped groove and the shaftless spiral, which has a long service life and is convenient for maintenance and operation. The driving part adopts cycloidal pinwheel reducer, which has low noise, balanced transmission and long service life. Screw conveyor is composed of driving mechanism (motor reducer, drive shaft), U-shaped groove and bracket, shaftless screw, liner, cover plate, inlet, outlet, fasteners and other components. The conveyor has a suitable rotation speed, which can achieve the purpose of conveying the slag (or sludge) without causing blockage.

## 2. Parameter

Model	Spiral diameter	Conveying capacity(m <sup>3</sup> /hr)										
		20 rpm	25 rpm	32 rpm	40 rpm	50 rpm	63 rpm	71 rpm	80 rpm	90 rpm	100 rpm	112 rpm
SC160	160	1.3	1.6	2.1	2.6	3.2	4.1	4.7	5.2	5.9	6.5	7.3
SC 200	200	2.5	3.2	4.0	5.0	6.3	8.0	9.0	10.1	11.4	12.6	14.2
SC 250	250	5.0	6.2	7.9	9.9	12.4	15.6	17.6	19.8	22.3	24.8	
SC 315	315	7.7	9.6	12.3	15.3	19.2	24.2	27.2	31.0	34.5		
SC 400	400	17.4	21.7	27.8	34.8	43.5	54.7	61.7	70.4			
SC 500	500	31.0	39.0	50.0	62.0	78.0	98.0	110.5				
SC 630	630	57.5	72	92	115	140	180					
SC 800	800	101	126	160	200	252						

### **3. The durability of the equipment**

- a. The trouble-free operation time of the equipment is greater than or equal to two years.
- b. The service life of the complete equipment is not less than 10 years.
- c. Annual inspection once a year, the service life of electrical components is not less than 2 years, the reducer bearing is not less than 10 years, and the protective coating is not less than 3 years.

### **4. Material of main components:**

Spiral blade	wear-resistant and corrosion-resistant special steel and better
Conveying tank body, cover plate	SUS 304
Wear-resistant liner	Wear-resistant engineering plastic
Frame	SUS304
Fasteners such as bolts stainless	SUS304

### **5. the characteristics of screw conveyor:**

- a. Driving device: The driving device is placed at one end of the screw conveyor, and it adopts the direct connection form of the motor reducer and the screw drive shaft, no coupling is needed, and it is convenient to disassemble and maintain. The drive shaft can bear the bending distance and the axial extrusion force at the same time. Load. The drive device (motor and reducer) adopts the structure of the high-quality shaft-mounted reducer produced by SEW (option). It runs flexibly, smoothly and reliably, and has no abnormal noise. All the joint surfaces of the reducer and the input and output shaft seals are not Will leak. The drive motor is suitable for 380V, 3-phase, 50Hz, its protection grade is IP55 (outdoor type), and the insulation grade is F grade.
- b. The design, manufacture and installation of Screw conveyor should ensure that it meets the buyer's requirements, has a high degree of work reliability, and minimizes the amount of maintenance work, which is convenient for inspection and maintenance during use.

c. Screw conveyor is mainly composed of shaftless screw, U-shaped spiral groove, cover plate, liner, inlet and outlet, discharge port and driving device. Material port output.

d. The Screw conveyor is easy to install. It only needs to use expansion bolts to fix the steel support on the concrete foundation. It can run intermittently or continuously for 24 hours a day.

e. The Screw conveyor has no high-speed running parts, so that the transmission spiral is low in wear, the equipment is energy-saving, and the noise is low.

f. The electrical components that control the Screw conveyor are included in the on-site electrical control box of the grille. For specific control requirements, please refer to the electrical control part of the grille.

**6. Scope of supply:**

Complete machine supply: including U-shaped tank, wear-resistant liner, shaftless dragon, upper cover, bracket, reduction mechanism, etc.

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