

Rigid Frame Strander



The rigid frame strander is an important device for twisting wire and cable conductors. It is mainly used for large-length, large-section aluminum, aluminum alloy stranded wire, bare copper stranded wire and steel core aluminum stranded wire, round and sector-shaped conductors, and cross-linked tightly pressed cores without back twisting.

The stranding quality directly affects the performance of the entire cable product.

The traditional rigid frame strander generally adopts the ground shaft transmission. The transmission of the capstan and the cage is usually driven by the same motor through a reduction box, a gearbox, a ground shaft, an angle box, and the like. The take-up and traverser are controlled separately or centralized driven and controlled by the above motors.

There are many disadvantages to this structure:

- (1). The ground shaft drive is an open drive, with poor lubrication conditions, foreign matter such as dust is easy to enter, causing gear wear and damage, and loud noise at the production site.
- (2). Gear shifting is adopted, and the transmission structure is complicated. The gap between the gears is large, which is prone to motion shock and damage to the ground shaft, gears, and boxes. At the same time, due to its complicated mechanical structure, it is more difficult to maintain the whole machine.
- (3). Due to the limitation of the ground shaft, the rotation speed of the cage is low, and the production speed is difficult to increase, which restricts the production efficiency of the production.
- (4). Because the gearbox has a fixed speed ratio, its pitch can only be changed within a limited range. It is impossible to choose the pitch required by some process designs.

The $\Phi 630$ rigid frame strander combines the stranding production technology of domestic first-class cable manufacturers and absorbs the advantages of the same type of equipment from abroad. It adopts the transmission method with individual motors, and each cage and capstan are driven by separate motors.

1. Equipment Features

1. Each part is driven by a separate motor with a simple structure and low operating noise.
2. Synchronous loading and unloading bobbins, and pneumatic clamping are used for convenient operation, shortening working time and improving production efficiency.
3. Adopting pneumatic tension control and an automatic tension adjustment to keep the tension stable, so that the tension does not change whether the bobbin is full or shallow.
4. Equipped with protections such as disconnected automatic parking device and emergency stop device, which is safe and reliable.

2. Main Technical Parameters

No. of bobbins in cage	6, 12, 18, 24, 30	
Pay-off	PND630	
Dia. of single wire (mm)	Cu	1.5 ~ 4.5
	Al	1.8 ~ 5.0
	Al alloy	1.5 ~ 4.5
Rotating speed (rpm)	6B	Max.200
	12B	Max.180
	18B	Max.160
	24B	Max.140
	30B	Max.120
Pitch (mm)	6B	37 ~ 500
	12B	44 ~ 590
	18B	52 ~ 694
	24B	61 ~ 819
	30 B	72 ~ 1100
Line speed (m/min)	6.9 ~ 53	

Compared with the traditional ground shaft transmission type, the rigid frame strander with individual motors eliminates the multi-stage gearbox and ground shaft transmission system, simplifies the complex mechanical structure of the whole machine, reduces the difficulty of mechanical maintenance, and reduces the noise at the production site. The pitch has a wide range of variation, which can realize the stepless adjustment of the pitch, which is convenient for improving the production process and can meet the technological requirements of different stranding products.

Product link : <https://www.linttop.com/rigid-frame-strander.html>