

LCX-1BS Light Truck TBM Technical Introduction

1. Application

This machine is used to build from 155D-12 to 7.50-16 common structural Nylon, Rayon cotton thread tyres.

2. Technical Parameters

NO.	Description		Technical Data
1	Tire Sizes		155D-12 to 7.50-16
2	Bead Diameter		12"-16"
3	Drum Diameter		335mm-492mm
4	Drum Width (320mm-600mm)	155D-12	335mm(320mm-380mm)
		6.00-16	380mm(350mm-460mm)
		7.00-15	450mm(350mm-460mm)
		7.50-16	450mm(440mm-600mm)
5	Max. Ply (Fabric) Width		1000mm
6	Overhang		185mm
7	Motor Central Height		900mm
8	Rotation Speed		Max. 200r/min
			Min. 100r/min
9	Spindle and Drum Combine Diameter		50mm
10	Brake Capsule Size		200mm
11	Lifting Speed		3mm/s
12	Under Press Roll Max. Width		800mm
13	Behind Press Roll Working Speed		Radial 13.2mm/s

		Axial 10.5mm/s
		Rotate 3.94r/min
14	Rear Roller Axial Separation Width Range	230mm-580mm
15	Main Motor Power	5.5kw
16	Building Motor Power	0.37kw
17	Building Motor Rotation Speed	1400r/min
18	Rear Roller Motor Power	0.75kw
19	Rear Roller Motor Rotation	910r/min
20	Radial Liner Guidance	35mm
21	Axial Liner Guidance	35mm
22	Max. Wind Press	0.6Mpa
23	Dimension	4350×1480×1542mm
24	Weight	About 3000kg
25	Servicer Square Post Size	32*32 (Customerize)
26	Cord Fabric Max Out Diameter	600mm(Customerize)
27	Wooden Roller Width	1200mm(Customerize)
28	Rated Voltage	400 V

3. Picture





4. Description About Structure

The machine is mainly composed of main machine, servicer device, forming rod

device, lower pressing roller device, rear pressing roller device, positive packer device, inner and outer buckle device(including a size of press roller used assistant drum), pneumatic control system and electrical control system.

(1) Mainframe(Main Machine)

The main machine is the most basic part of the machine. The main motor is installed at the rear of the chassis and driven by the triangular belt to make the main shaft drive the forming group to rotate. The folding of forming drum is firstly to brake the brake sleeve, and then the main shaft is reversed to make them produce relative movement to complete the folding of forming drum.

(2) Servicer Device(6 layer servicer)

Servicer device is welded by square tubes, which has 6 layers. Cord fabric roll and chafer fabric roll are respectively placed on the safety collet, and the tail of the safety collet of the cord roll is equipped with a pneumatic brake. The storage of the cord fabric is controlled by the photoelectric switch, which can automatically control the start and stop of the turn-on motor. There is a group of idler above the cord fabric storage device for conveying the cord fabric. The front section of the feeding frame is composed of a panel, a group of positioning rollers and a group of universal balls. The height can be adjusted by air cylinder and positioning rod to match the forming drums with different diameters. The position of the positioning roller can be adjusted by the lead screw, nut and sliding plate to ensure that the cord center line coincides with the center line of the forming drum.

(3) Forming rod device(Building Bar Device)

The device is installed above the chassis, and its function is to guide the cord barrel to the forming drum. When working, the cylinder drives the forming rod through the pull rod and moves back and forth along the two guide rods. Turning the hand wheel through the worm wheel and worm can make the forming rod swing horizontally. The

height of the forming rod can be slightly adjusted by the motor through the worm, worm wheel and screw rod to meet the needs of forming more than two cord barrels. If the specification of the formed tire is changed and the diameter of the formed drum changes, the strut must be lifted and lowered.

(4) Holding down roll device(Bottom Stitcher)

The holding down roller(Bottom Stitcher) is an axial pressing device in the tire forming process, which is used to roll cord fabric and tread. During operation, the air cylinder is inflated, and the two pressure rollers installed on the piston rod are boosted on the forming drum. The motor drives the left and right screws to rotate through the chain to separate the two pressure rollers axially. When the rolling reaches the required position, the contact block touches the travel switch, the air cylinder exhausts, the pressure roller drops, the motor reverses, and the two pressure rollers are combined to the position before rolling through the left and right screws. The two pressure rollers are equipped with compression springs, which are compressed when combined. When the pressure roller is separated, the two pressure rollers start to separate only after the pressure roller spring is fully extended, so as to avoid pressure leakage at the center.

(5) Rear pressing roller device(Back Stitcher)

The rear pressing roller is a device used for bead wrapping (including forward and reverse wrapping), stripping and trimming of the cord barrel during tire forming. During operation, the pressure roller is pushed by the air cylinder to make the pressure roller press on the forming drum. The pressure resultant force can be adjusted through the pressure regulating valve. The radial, axial and rotation of the roller arm are driven by a reducer respectively. The slide plate can move radially along the linear guide rail on the base, and the pressure roller can move axially along the linear guide rail on the slide plate, and can rotate through the worm and worm gear, In order to avoid burning out the motor due to overload, an overload safety device is set at one end of the screw

rod and the polished rod. When the load is too large, there will be sliding between the tooth coupling and the sprocket, and its contact pressure can be adjusted appropriately by screwing the nut with the help of spring pressure.

(6) 1# packer device

1# winder is a device specially used for wind. The lifting air duct drives two groups of spring coil belts to slide along the 55 ° inclined plane of the sliding seat, two groups of large spring coil belts bypass the large rollers and hang on the pressure rollers on both sides, and six small spring coil belts are hung on the small rollers at both ends respectively. When the bag is being wrapped, the lifting air duct drives two groups of spring coil belts to rise radially to the forming drum, and the small spring coil belt tightly presses the outer surface of the cord drum with the change of the diameter of the forming drum. At this time, the left impact plate has hit the travel valve switch, and the compressed air enters the side pressure roller air duct through the travel valve, so that the side pressure roller drives the large spring coil. Using the speed difference between the large spring coil belt and the cord drum, The extended cord fabric on the forming drum is constantly crushed, and the side pressure roller driven by the small air duct is stuck in the drum shoulder of the forming drum to be buckled. However, for those with high drum shoulder, in addition to the positive package pressing, the back pressing roller is still needed for supplementary pressing.

In order to meet the tire molding of different specifications, the spacing between the two groups of spring wheels, lifting air duct and stroke position are adjustable.

(7) Outer buckle device

The outer ring device and the inner ring device should work synchronously. During operation, the inner and outer ring discs move forward along the brake sleeve and shaft head at the same time. The inner and outer steel rings touch the drum shoulder, and the steel ring is pasted to the stop. In order to press the steel ring tightly in the drum

shoulder, the inner and outer ring discs can rotate around their axis and rotate with the forming drum, which is more convenient for installing the steel ring.

(8) Pneumatic control system

The pneumatic control system is composed of two couplets, pressure reducing valve, solenoid valve, throttle valve, quick exhaust valve connector, nylon pipe and other parts, which is used to control the forward direction, forward speed and thrust of each cylinder to meet the requirements of forming process.

(9) Electrical control system

The electrical control system is composed of electric control cabinet, operation panel, frequency converter, contactor, air switch, wire and other parts to control the rotation of motor and the movement of cylinder.

5. Quotation

No.	Product Name	Size	Unit Price(FOB Qingdao)	Qty	Total Price
1	Forming Drum	155D-12	\$3.00	1	\$3.00
2	Forming Drum	7.00-15	\$3.00	1	\$3.00
3	Forming Drum	6.00-16/7.50-16	\$3.00	1	\$3.00
4	Servicer Device	6 layers	\$5.00	1	\$5.00
5	Tire Building Machine	LCX-1BS	\$30	1	\$30
Total Amount				6	\$30
Warranty Service	Half One Year	One Year	Two Years		
Price	\$9	\$1	\$1		

Note:

1. **Payment terms: 30% down payment by T/T before producing machines, balance paid before loading at factory; FOB QINGDAO;**
2. **Delivery time: Within 4 months;**
3. **Package: Export Standard Package**
4. **Document: Offered according to customer's request**
5. **We can send technical engineer to your workshop to install the equipment and test it. The expense can be discussed each other.**
6. **Valid time: 15 days.**