

## BRANCHES

- Shandong Tongda Textile machinery Co.,Ltd
- Qingdao Tongda Textile Machinery Co.,Ltd
- Qingdao Weaving Machine Co.,Ltd
- Shandong Tongda Nickel Screen Co.,Ltd
- Shandong Tongda Synthetic Co.,Ltd
- Shandong Tongda Textile Machinery (group) Co.,Ltd

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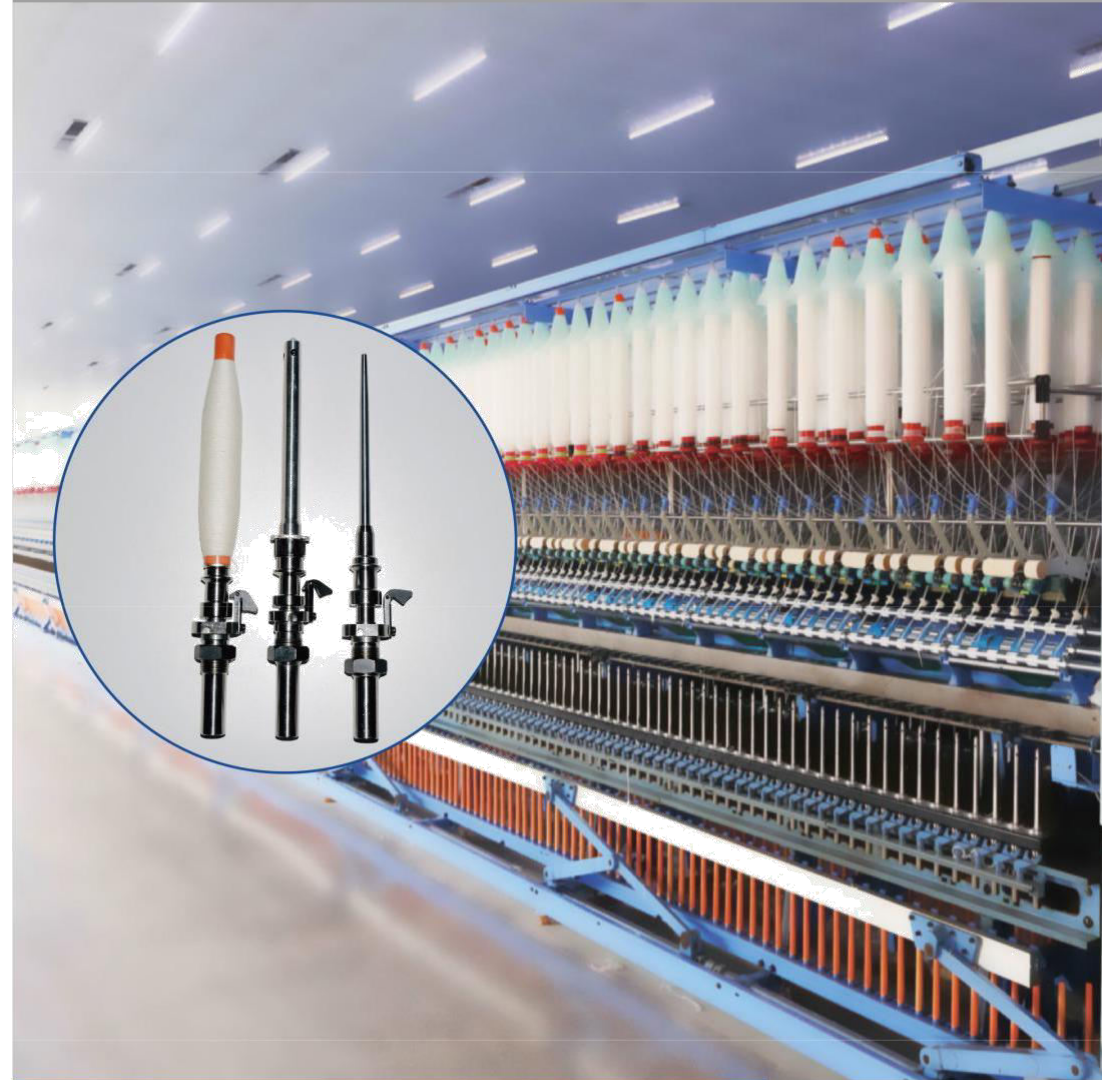
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SINCE **TONGDA** 1952

# Spinning Spindles



Quality Makes the difference

**TONGDA**

Spinning Spindle Series

**TONGDA** Group was founded in 1952. It specializes in design, manufacturing, and marketing of a wide range of textile machinery and related spare parts. We offer various categories of cotton spinning spindle, wool spindle, twisting spindle and special spindles made to order. Currently 3 million sets of spindles and accessories with high-speed, high-efficiency, high-quality, energy-saving and fuel-saving performance are supplied to customers every year.

TONGDA mainly has 3 series of spindles: TD3200, TD4000 and TD7000. Its novel high-speed and high-performance is beyond its price in value: yield increasing, energy saving, oil saving, labour saving, less noise, reducing abrasions of spindle itself, spinning ring, traveler, bobbin, spindle tape, and reducing incidental yarn faults including twist irregularity, oily yarns, fibrous yarns, shaking yarns, broken yarns and etc.

TONGDA has built a complete infrastructure to support a full effort for product research and development to satisfy the needs of the marketplace. The company places its focus on becoming a professional supplier of Textile machinery, related spares parts and new materials with continuous development of modern ergonomic designs, a reliable service support network, and an efficient global network of logistics. Today, Tongda machines and spare parts are being widely used by thousands of cotton and yarn, textile manufacturers. Along with product development, Tongda has been awarded technology patents. Special techniques in design and manufacturing have also been perfected.

TONGDA is an ISO9001, ISO14001, and ISO13485 company. The products are designed to meet the technical standards of 3C and CE. All the products are certified by the Industry Administration Authority. Tongda will continue to strive to be a stronger leader in the global market of Cotton machinery and Spinning machinery.

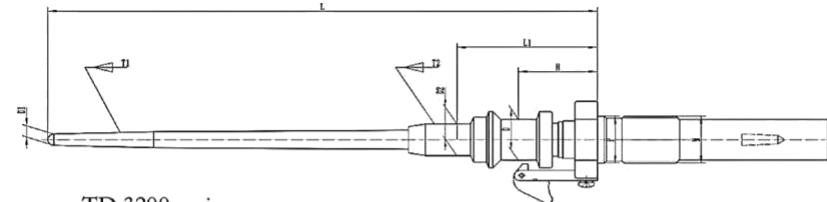


**TD3200** series spinning spindle design combines the advanced foreign technological advantages and our own characteristics, it's suitable for processing cotton, silk, chemical fiber, blended warp and weft. YD3200 series spinning spindle adopts an integral structure. The lower part which connects elastic tube with spiral groove and matches coil spring has good function of self-adjusted and smooth operation. With steel wharve, the spindle meets textile enterprises' requirements of higher speed and lower energy consumption. It prolongs period of oil replenishment and reduces the costs because of improved insert structure. High-quality structure design and advanced manufacturing technology ensures long period of high rotation accuracy and less deformation of insert. Footsteps can install with spindle rail coordinately according to customers' requirements.

Recommended for speeds: 8000~17000RPM



TD 3200 insert



TD 3200 series



Model	D	H	L	L1	D1xT1	D2xT2	Installation Size
TD3203C	Φ22	35	244.5	62.5	Φ6x0.055	Φ16.94x0.01	M25x1.5 P25(M24P24to be marked)
TD3203C-20.5	Φ20.5						
TD3201C	Φ22		213.5		Φ4.15x0.042	Φ16.34x0.01	
TD3202C	Φ22	233.5	Φ5x0.04	Φ16.34x0.01			
TD3206C	Φ22	28	224.5	55	Φ5x0.0392	Φ16.34x0.025	



### The insert of TD4000

series spinning spindle according to advanced HF structure principle, connects metal elastic tube and with lengthwise buffer component. It has good effects of longitudinal vibration buffer and lateral self-adjusting center, which keeps more loading, less vibration, lower noise, longer life.

The spindle adopts advanced connecting structure of upper part. The upper part has good rigidity and strong ability of deformation resistance. Production according to international manufacturing standards improves the performance of complete spindle. The spindle operates more smoothly while full load or half load.

The smallest diameter of spindle pulley could be 18.5mm; this can make it adapt to high speed and low consumption. Spindle will be more stable when it operates with steel footstep.

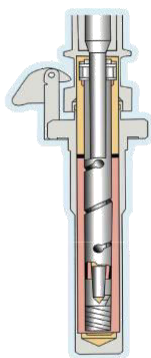
Steel footstep avoids oil leakage and breakage caused by casting flaw. Clean lubricant prolongs spindle life. Advanced structure design keeps long period of oil replenishment and low maintenance costs.

This series spinning spindle is suitable for auto-doffing. With quality bobbin, the max operating speed of bare spindle is **18000rpm**, and the max operating speed of aluminum plug spindle is **20000rpm**.

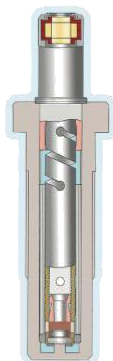
High-precision processing, advanced manufacturing technology and strict quality controlment ensures the accuracy of insert making. It makes the spindle more stable and suitable for high speed.

Optimum structural design and reasonable manufacturing technology ensure high rotation accuracy and less deformation of elastic tube for a long time.

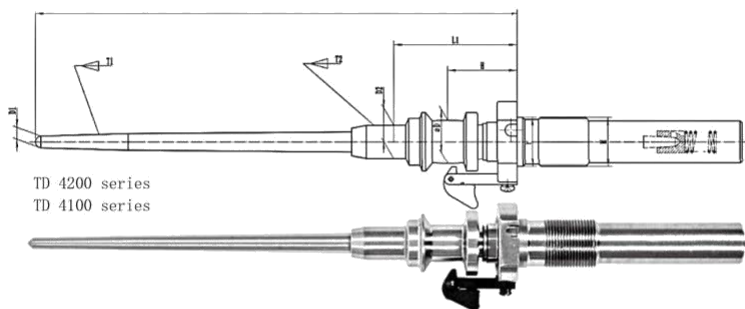
We can design and manufacture the spindle for other specifications suitable for various kinds of spinning frame according to customers' requirements. Footsteps can install with spindle rail coordinately.



TD4200 Inserts (Hftype)

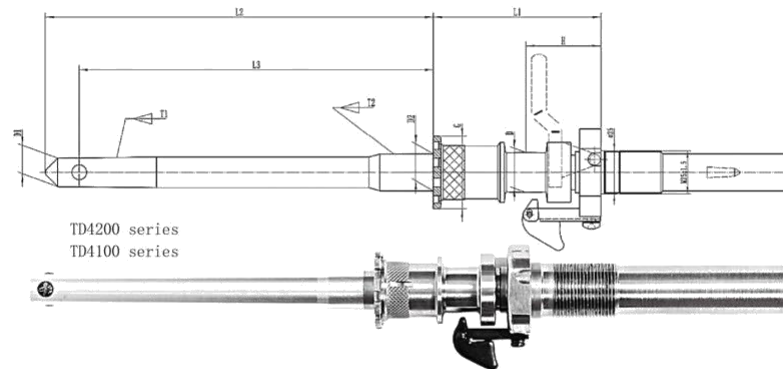


HP-S 68 inserts



TD 4200 series  
TD 4100 series

型号	D	H	L	L1	D1xT1	D2xT2	Installation Size
TD4103-19	Φ19	35	244.5	62.5	Φ6x0.055	Φ16.94x0.01	M25x1.5P25.5 M25x1.5P26
TD4203C	Φ22						
TD4203C-20.5	Φ20.5						
TD4204CE	Φ20.2	34	253.5	60	Φ6x0.052	Φ17.78x0.01	
-			249.5				
20.2(RY5)			244.5				
			240.5	64			



TD4200 series  
TD4100 series

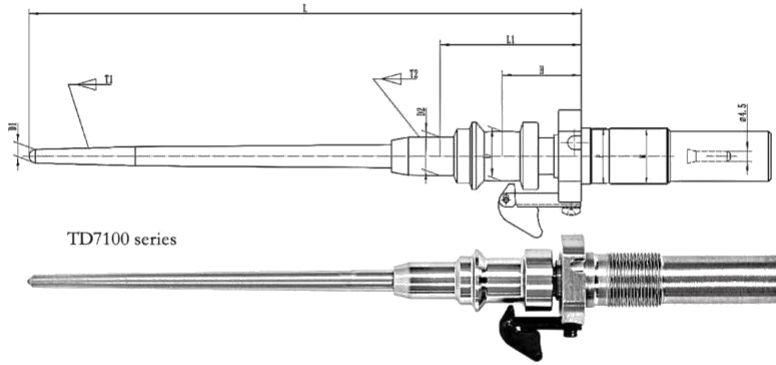
Model	D	H	L1	L2	L3	G	D1xT1	D2xT2
TD4210R-20.5	Φ20.5	35	75	183	167	Φ35	Φ14.12x0.0263	Φ18.61x0.065
TD4110R-19	Φ19							
TD4211FA-20.5	Φ20.5		78	180.5	165		Φ13.18x0.022	Φ17.1x0.022
TD411TA-19	Φ19							
TD4211FB-20.5	Φ20.5			188.6			Φ12.92x0.0233	Φ17x0.0233
TD411FB-19	Φ19							
TD4211MA	Φ22			169.5	152.5		Φ16.27x0.0156	Φ18.78x0.0156
TD4212K	Φ24		75	204	189	Φ39	Φ17.15x0.0263	Φ22.15x0.0263

### TD7000

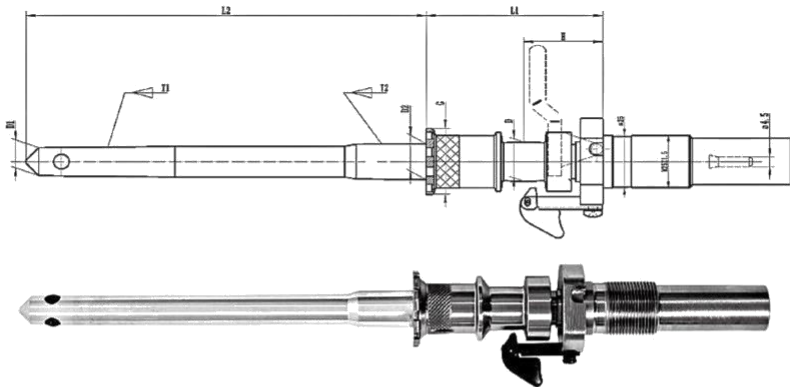
series spinning spindle is a kind of high-speed and high-performance spindle, which is equipped with the novel HPS-68 insert independently developed by our company. The HPS-68 insert incorporates both a roller neck bearing and a convex footstep bearing, the convex footstep bearing consists of a radial bearing which functions hydrodynamically and an axial plane-thrust bearing to absorb the axial forces. As the inner diameter of the neck bearing is 6.8 mm, it has been possible to reduce the whorl diameter to even smaller. The blade is very short and consequently extremely rigid. The forces acting radially in the area of the footstep bearing are absorbed by a genuine hydrodynamic radial bearing. The sphero-point of the blade runs on a free-sitting flat disc, which resists axial forces. The entire footstep bearing is housed in an elastic sleeve, even the slightest eccentric movements are damped by means of the oil coil. Neck bearing geometry which has been modified in the micro-range lends additional stability to spindle operation. The use of sophisticated new-type advanced and applicable production lines with mature modern equipment ensures a high degree of precision. Very little play, held to close tolerances, is provided in neck and footstep bearings, and this has a positive influence on spindle running. Such a footstep bearing design offers substantial advantages in particular for high speeds and axial loads.

The aluminum rod made of high-strength and superhard aluminum alloy is held by the spindle blade and the wharve from inside and outside, has good rigidity, can not loosen to move, and thus can effectively resist external impact deformation. The spindle insert adopts reliable axial overload protection to resist impact without subsidence and is suitable for push-down pipe insertion of integral auto-doffing. The optimized design of the yarn cutter leads to high doffing yarn reserve rate. The use of a yarn gripper can realize doffing with zero winding and no end yarns. The accurate fit between the spindle bolster and the rail of the spinning frame ensures good verticality of the spindle to realize non-correction installation.

The spindle is targeted at domestic and foreign high level customers, is widely applied to high-speed spinning, spinning high-quality yarns, compact spinning, integral auto-doffing and speed increase reform of a spinning frame, and the highest working speed of the spindle can reach to **25000rpm**. The aluminum plug can be adjusted in type and size according to customer's requirements to allow customers to fit different types and sizes of bobbins.



Model	D	H	L	L1	D1xT1	D2xT2	Installation Size
TD7103E-19	Φ19	35	244.5	62.5	Φ6x0.055	Φ 16.94x0.01	M25x15.5 P25
TD7103E-20.2	Φ20.2						
TD7103E-20.5	Φ20.5						



Model	D	H	L1	L2	L3	G	D1xT1	D2xT2
TD7110R-20.5	Φ20.5	35	75	183	167	Φ35	Φ14.12x0.0263	Φ18.61x0.065
TD7110R-19	Φ19		78					
TD7111FA-20.5	Φ20.5			180.8	165		Φ13.18x0.022	Φ17.1x0.022
TD7111FA-19	Φ19							
TD7111MA-19	Φ19			169.5	152.5		Φ16.27x0.0156	Φ18.78x0.0156

## FEATURES

The TONGDA novel high-speed and high-performance spindle adopts innovated designs of HPS-68 insert incorporating both a roller neck bearing and a sphero-point (convex) footstep bearing, the convex footstep bearing consisting of a radial bearing which functions hydrodynamically and an axial plane-thrust bearing to absorb the axial forces, the diameter of the neck bearing being reduced to Ø6.8mm, the distance between the neck bearing and the footstep bearing being reduced to 100mm, and further reduction of the wharve diameter, and etc., has been granted a lot of patents for our technologies. Compared with the conventional common spindle incorporating the cone-point (conical-tip, pointed) footstep bearing, such innovated designs naturally have the structural advantages of stable operation, no axial displacement, less friction wear, high load supporting capability, better consistency, etc. Tongda group has further developed the excellent performances of these genes by means of advanced and applicable technical equipment and fine manufacture:

- Extremely stable operation, particularly applicable to high speed
- Less energy consumption, low noise, oil and labour saving, yield increasing.
- Long service life, stable performance, and better consistency.
- Simple and convenient installation, use and maintenance.

