

## TSB Series Standard Twin Screw Extruder

The TSB series standard twin screw extruder from Chuangbo has strengthened regular torques. This series of products can be used for the mixing process of most kinds of plastic material. The 5-6 N·m/cm<sup>3</sup> torque and max. 600 r/min screw speed of this series of twin screw extrusion machine provide excellent plastic mixing performance. Besides, the price is quite competitive, making it popular with a number of clients.



### Typical Configuration

1. Self-made transmission case, imported bearings for key positions, domestic/imported self-coupling;
2. Strengthened machine in accordance with high torque
3. Automatic electronic test equipment: high-end regular instrument or computer with touch screen. The electric test components in the twin screw extruding machine are world famous brands, some of which are from their JVs in China.
4. All the critical components of the TSB series standard twin screw extruder, such as the barrel, screw elements, transmission case and connectors are produced by CNC machining centers.

Model	Diameter (mm)	L/D	Screw speed (r/min)	Power (KW)	Torque (N·m)	Specific torque (T/A3)	Capacity (kg/h)
<a href="#">TSB-18</a>	18	32-60	600	2.2	17	5.0	0.5~10
<a href="#">TSB-25</a>	26	32-60	600	7.5	57.3	5.4	3~25
<a href="#">TSB-35</a>	35.6	32-68	600	18.5	141	5.2	10~90
<a href="#">TSB-40</a>	41	32-68	600	30	229	5.6	90~150
<a href="#">TSB-52</a>	51.4	32-68	600	55	420	5.3	165~275
<a href="#">TSB-65</a>	62.4	32-68	500	90	825	5.9	270~450
			600	110	840	6.0	330~550
<a href="#">TSB-75</a>	71	32-68	500	132	1210	5.6	400~660
			600	160	1222	5.7	480~800
<a href="#">TSB-85</a>	81	32-68	500	200	1834	5.9	600~1000
<a href="#">TSB-95</a>	93	32-68	400	250	2865	6.0	750~1250
			500	280	2567	5.4	840~1400
<a href="#">TSB-135</a>	133	32-68	400	650	7449	5.6	1950~3250

## TSH Series High Torque Twin Screw Extruder

Haven't you find an extruder that combines high performance and reasonable price? You can not miss the TSH series high torque twin screw extruder from Chuangbo. The high torque gives higher productivity, because the production capacity is enhanced, while the labor cost and power consumption are lowered. The product quality is also improved.



The self-developed high torque transmission case give our twin screw extrusion machine additional advantages—the high torque twin screw extruder can produce twice more products than regular twin screw extruders at the same speed.

The features of our high torque transmission case in the twin screw extrusion facility are as follows:

1. It comes with our latest patented design: 1) the decelerating device and torque distribution device are integrated; 2) the design of shafting and bearing is optimized, leading to 30% carrying ability enhancement comparing to the traditional design; 3) key transverse bearings can serves much longer—the service life could reach 20,000 hours or above.
2. The key gears are made of great material. The surface of the gears is hardened—the hardness can reach HRC58-62, while the precision of the gear grinding reaches level 6.
3. The transverse bearings are purchased from world-class companies such as NSK from Japan.
4. The transmission case is manufactured with CNC machining center, achieving an excellent precision
5. The bath-oiling device comes with compulsory recirculating cooling system, auxiliary spraying device compulsory filtration system, and reliable oil supply system, so the whole lubrication system works just perfectly.
6. The oil seal of the input shaft and output shaft is ordered from famous international companies.
7. The laser shaft aligner is used for the alignment of the input shaft coupling, assuring the precision assembling of the twin screw extruder.

### Typical configuration

1. Screw material: nitriding steel, wear resistance tool steel or PM material (HIP)
2. Barrel material: nitriding steel, wear resistance tool steel barrel liner structure.
3. We mainly choose self-developed high torque transmission, imported key bearings and domestic/imported safety coupling device.
4. Strengthened machine body is designed in accordance with high torque loading
5. Automatic electronic test equipment: high-end regular instrumentation, or computer with touch screen control system; World famous companies or their JVs are chosen to be our suppliers.
6. Critical components such as the barrel, screw components, transmission case and connectors are produced by CNC machining center.

Model	Diameter (mm)	L/D	Screw speed (r/min)	Power (KW)	Torque (N·m)	Specific torque (T/A3)	Capacity (kg/h)
<a href="#">TSH-25</a>	26	32~60	400	7.5	86	8.1	5~35
			600	11	84	7.9	5~55
<a href="#">TSH-35</a>	35.6	32~68	500	22	202	7.5	10~110
			600	30	229	8.5	10~150
<a href="#">TSH-40</a>	41	32~68	500	37	339	8.3	110~200
			600	45	344	8.4	135~225
<a href="#">TSH-52</a>	51.4	32~68	500	75	688	8.6	225~375
			600	90	688	8.6	270~450
<a href="#">TSH-65</a>	62.4	32~68	500	132	1210	8.6	396~660
			600	160	1222	8.7	480~800
<a href="#">TSH-75</a>	71	32~68	500	200	1834	8.5	600~1000
			600	250	1910	8.8	750~1250
<a href="#">TSH-85</a>	81	32~68	500	280	2567	8.2	840~1400
			600	350	2674	8.6	1050~1750
<a href="#">TSH-95</a>	93	32~68	500	450	4126	8.7	1350~2250
			600	550	4202	8.9	1650~2750
<a href="#">TSH-135</a>	133	32~68	400	1000	11460	8.6	3000~5000

## TSS Series High Performance Twin Screw Extruder

The overall performance (including cost-effectiveness and productivity) of the TSS series high performance twin screw extruder is quite satisfactory, showing great product quality, performance and desirable technique parameters.

1. The TSS twin screw extrusion equipment comes with imported high torque gear box, making the extruder more reliable.
2. The transmission system, control system and the feeding system work together closely, providing great pelletizing products and extrusion molding performance.
3. The screw and barrel of the twin screw extrusion unit are designed on the basis on modularization concept, so that the barrel length and screw can work in different combinations after being adjusted according to technique requirements. Thus the production capacity can be fully exploited.



4. The TSS series high performance twin screw extruder has great performance in terms of mixing, distribution, devolatilization, and self-cleaning. So the raw materials won't stick to the shaft and inner wall. With the rapid disturbing of the material surface, devolatilization effect is remarkably enhanced.

### Typical configuration

1. Screw material: nitriding steel, wear resistance tool steel or HIP steel
2. Barrel material: nitriding steel, wear resistance tool steel, integrated liner structure
3. Mainly self-made high torque transmission case; Imported key bearings and domestic/imported safety coupling
4. Strengthened machine body in accordance with high torque loading
5. Automatic electronic test equipment: high-end regular instrumentation, or computer with touch screen; The instrumentation electric test devices in the TSS series high performance twin screw extruder are from world famous companies or their JVs.
6. Critical components such as the barrel, screw components, transmission case and connectors are produced by CNC machining center. Three-dimension coordinate-measure machine is used for the rigid quality control.

Type	Diameter(mm)	L/D	Screw speed(r/min)	Power(kw)	Torque grade(N·m)	Specific torque(T/A <sup>3</sup> )	Capacity(kg/h)
<a href="#">TSS-52</a>	51.4	32~68	I 500	75	688	8.6	225~375
			I 600	90	688	8.6	270~450
			II 500	90	825	10.4	270~450
			II 600	110	825	10.4	330~550
<a href="#">TSS-65</a>	62.4	32~68	I 500	132	1210	8.6	396~660
			I 600	160	1222	8.7	480~800
			II 500	160	1467	10.4	480~800
			II 600	200	1528	10.9	600~1000
<a href="#">TSS-75</a>	71	32~68	I 500	200	1340	8.5	600~1000
			I 600	250	1910	8.8	750~1250
			II 500	250	2292	10.6	750~1250
			II 600	315	2407	11.1	945~1575
<a href="#">TSS-95</a>	93	32~68	I 500	450	4126	8.7	1350~2250
			I 600	550	4202	8.6	1650~2750
			II 500	550	5043	10.6	1650~2750

## TSV Series High Volume Twin Screw

### Extruder

The high volume material container, together with the high torque of the TSV series high volume twin screw extruder, makes the productivity greatly optimized. The energy efficiency is also quite satisfactory.



We have more than 30 years of experience in the manufacturing of extruders. Different twin screw extrusion machine with various parameters settings

are available for your specific requirements like material, length/diameter ratio, production capacity, speed and the product type.

The TSV series high volume twin screw extruder is typically suitable for 1) the material with high content of filling material, 2) fluffy material, 3) and reactive extrusion.

### Feature

1. TSV twin screw extrusion equipment is typically suitable for low specific power consumption operation.
2. The material volume and torque are both very large.
3. Automatic electronic test equipment: high-end regular instrument or computer with touch screen, world famous brands or their JVs' element of the electrical test devices
4. Critical components such as the main barrel, screw components, transmission case and connectors produced by CNC machining center

Type	Diameter(mm)	Do/Di	L/D	Screw speed(r/min)	Power(kw)	Torque grade(N·m)	Specific torque(T/A <sup>3</sup> )	Capacity(kg/h)
<a href="#">TSV-44</a>	44	1.8	32~68	500	30	280	6.8	90~150
				600	37	285	7	110~200
				800	45	260	6.5	135~225
<a href="#">TSV-55</a>	55	1.8	32~68	500	55	510	6.5	165~275
				600	75	575	7.3	225~375
				800	90	520	6.5	270~450
<a href="#">TSV-66</a>	66	1.8	32~68	500	110	1015	7.2	330~550
				600	132	1015	7.2	396~660
				800	160	920	6.6	480~800
<a href="#">TSV-77</a>	77	1.8	32~68	500	160	1475	7	480~800
				600	200	1535	7.1	600~1000
				800	250	1440	6.7	750~1250
<a href="#">TSV-86</a>	86	1.8	32~68	500	250	2300	7.4	750~1250
				600	315	2415	7.8	945~1575
				800	400	2300	7.4	1200~2000
<a href="#">TSV-100</a>	99	1.8	32~68	500	400	3680	7.8	1200~2000
				600	500	3835	8	1500~2000

## TSC Series Two-Stage Screw Extruder

The TSC series two-stage screw extruder is the latest product line of Chuangbo. The torque level of the twin screw has been increased, and the processing technique is divided into two stages. Thus the material can be processed individually and more effectively at each stage for different purposes. The production capacity and energy efficiency of the TSC twin screw extrusion equipment are remarkably enhanced. The TSC series products are typically



suitable for the process of thermal sensitive material and shear-sensitive material, such as PVC, XLPE, cable sheath with low smoke zero halogen flame retardant, and some kinds of shielding materials.

The two processing stages of the TSC twin screw extrusion machine are as follows:

**Stage one:** The TSB and TSH series co-rotating twin screw mixers are able to take advantage of the high speed, high shear force and great mixing power of the machine to shorten the residence time of the material in the mixer. The whole plasticization and mixing process is completed with our extrusion pressure due to the absence of extrusion die.

**Stage two:** The SE series single screw extruder's low speed gives low shear force, so the high temperature during the extrusion is avoided and consequently the plastified material won't decompose. The ranges for the processing parameters are extended, while the temperature is under precision control. Thus more techniques can be used with the TSC series two-stage screw extruder, and the productivity will be greatly enhanced.

Type		Diameter (mm)	L/D	Screw speed (r/min)	Power (kw)	Capacity (kg/h)
<a href="#">TSC-52/120</a>	TSB-52	51.4	24~48	500	45	100~300
	SE-120	120	7~20	85	30~37	
<a href="#">TSC-52/150</a>	TSH-52	51.4	24~48	600	90	200~500
	SE-150	150	7~20	85	37~45	
<a href="#">TSC-65/150</a>	TSB-65	62.4	24~48	500	75	200~500
	SE-150	150	7~20	85	37~45	
<a href="#">TSC-65/180</a>	TSH-65	62.4	24~48	600	160	400~1000
	SE-180	180	7~20	85	45~55	
<a href="#">TSC-75/180</a>	TSB-75	71	24~48	500	110	400~800
	SE-180	180	7~20	85	45~55	
<a href="#">TSC-75/200</a>	TSH-75	71	24~48	600	250	700~1500
	SE-200	200	7~20	85	55~75	
<a href="#">TSC-95/200</a>	TSB-95	93	24~48	400	200~250	700~1500
	SE-200	200	7~20	85	55~75	

## CM Series Twin-Rotor Continuous Mixer

1. The twin-rotor continuous mixer can achieve continuous production property in addition to the traditional mixer's great mixing performance and wider parameter setting range. Just like the co-rotating twin screw extruder, the CM series twin-rotor continuous mixer is a kind of advanced and high performance blending facility. The two kinds of machine have different but complementary applications in the mixing and modification of plastic and rub.



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2. The CM continuous mixing equipment is based on the stretching mixing technique, thus the power consumption will be lower. Besides, in the manufacturing of many kinds of master batch or mixing materials with high content of carriers, and processing aids usage will be eliminated or greatly reduced. By the improvement mentioned above, the production techniques and the product cost are optimized.

3. The main part of the machine comprise three systems, namely none-engaged screw twin crew material feeding system, dual-rotor mixing system and the twin screw extruding system. The two none-engaged counter-rotate mixing rotors, together with the extrusion pressure control devise, leads to optimized material residence time, degree of fill and the mixing performance.

4. Comparing to the twin screw extruder, our CM series two-rotor continuous blending machine has lager tube volume and are suitable for more material types (i.e. fluffy or big size material). The main part of the machine is designed as split-type so that it is simple to clean and maintain, and exchange the production material.

5. The two rotors in the mixing process have been lengthened to enhance the venting and mixing performance. The application range is also expanded.

6. The twin-rotor continuous mixer comes with different types of rotor. Combining with adjustable embedding type barrel, parameters and their combinations of the mixer will be more variable, and then a wider range of material could be handled and more processing techniques can be adopted.

7. The rotors of the mixer are supported at both ends, so they can bear more pressure. Friction and abrasion between the screw and the barrel are thus avoided.

### Application

The CM series twin-rotor continuous mixer is typically suitable for high degree filling, mixing and modifying operation, such as the filling of various special materials, functional master batch, color master batch, black master batch, flame retardant master batch, shielding master batch, elastomer, and the mixture of rubber and plastic.

Type	Continuous mixer + single screw	<a href="#">CM-50/SE100</a>	<a href="#">CM-75/SE120</a>	<a href="#">CM-100/SE150</a>	<a href="#">CM-130/SE180</a>
	Continuous mixer + melt pump	<a href="#">CM-50/RB100</a>	<a href="#">CM-75/RB200</a>	<a href="#">CM-100/RB315</a>	<a href="#">CM-130/RB500</a>
Dual-rotor mixer	Rotor nominal diameter (mm)	50	75	100	130
	Rotor L/D	10	10	10	10
	Rotor max.speed (rpm)	1000	800	600	500
	Main motor power (kw)	30	75/90	132/160	250/315
Single-screw extruder	Screw diameter (mm)	100	120/150	150/180	180/200
	Screw L/D	11	11	11	11
	Screw Max.rotating speed (rpm)	95	120	120	100
	Motor power (kw)	15	37/45	45/55	55/75
Melt pump	Conveying capacity (ml/r)	100	200	315/400	500/800
	Motor power (kw)	4	7.5	15	22
	Typical output capacity (kg/h)	60-150	150-450	300-800	650-1500