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Investing Industry & Technological Independence



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**WAY LONG SPINDLES**

WORRY FREE RUNNING





**WORRY FREE**

**RUNNING**

## **WAY LONG**

### **A Specialist in Spindle Design and Manufacturing**

Way Long Technology Co., Ltd. was established in 1999 with outstanding business operation team. Under the company's concept of "Quality results from value and dignity", Way Long insists on the company's quality policy of "With expertise product to fully meet customers' requirements". Moreover, with our management commitment of "Dedicated to customers' recognition" Way Long always strives hard to pursue the enterprise perpetuity and growth. In addition to a stable business operation, Way Long is one of the excellent manufacturers in Taiwan and an international quality certified spindle manufacturer.



#### **BUSINESS OPERATION CONCEPT:**

**Committed To Excellence.  
Win Customers' Respect.**

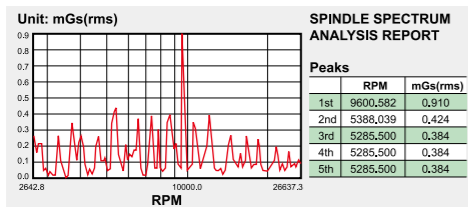
At Way Long, we have extensive experience in the design of machine tool and spindle, and a highly skilled manufacturing team. We have heavily invested in various sophisticated machining equipment and inspection instruments. All Way Long spindles are produced in a dust-free, clean and isolated assembly plant. We produce a wide range of precision spindles, such as spindles for CNC lathes, milling machines and complex type machining centers. We will continuously develop high speed, high quality and custom spindles to serve the domestic and foreign machine tool manufacturers. We have a strong commitment to offer excellent products and technical service for our customers.



**QUALITY POLICY:**

**Quality is Our Life and Dignity**

Way Long has a professional team in combination with outset and technical background to produce high quality products. We offer customers with stable quality, fast and flexible delivery time, competitive price as well as comprehensive services, that fully meet customers' requirements and ensures worry free running of your machines. With an aim to serve the majority of customers in China we have set up warehouses in Shanghai and other areas.



**Spindle Spectrum Analysis**



**Spindle Running Test for Thermal Growth Analysis**



**Part Roundness Inspection**



**Three Dimensional Coordinate Measurement**

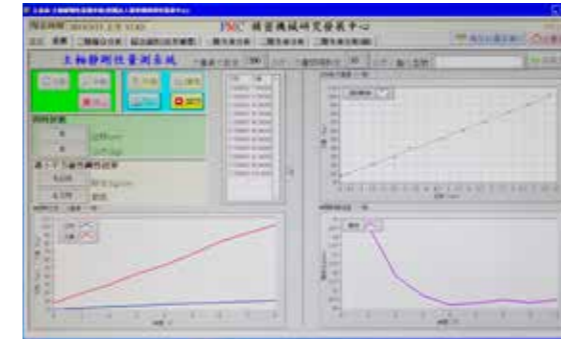


**Spindle Dynamic Balance Calibration**



**■ Rigorous Quality Control**

In order to achieve higher quality level and upgrade technology level, Way Long is not only technically instructed by the bearing suppliers, but also instructed or technically cooperated with domestic renowned manufacturers, academic institution and research organization. These enable us to upgrade assembly technology, inspection and test equipment, so as to enhance the internal quality assurance training for quality consistency.



**■ Spindle Static Rigidity Measurement System**



**■ Japan Imported Sophisticated Cylindrical Grinder**



**■ Swiss Imported Universal Grinder**

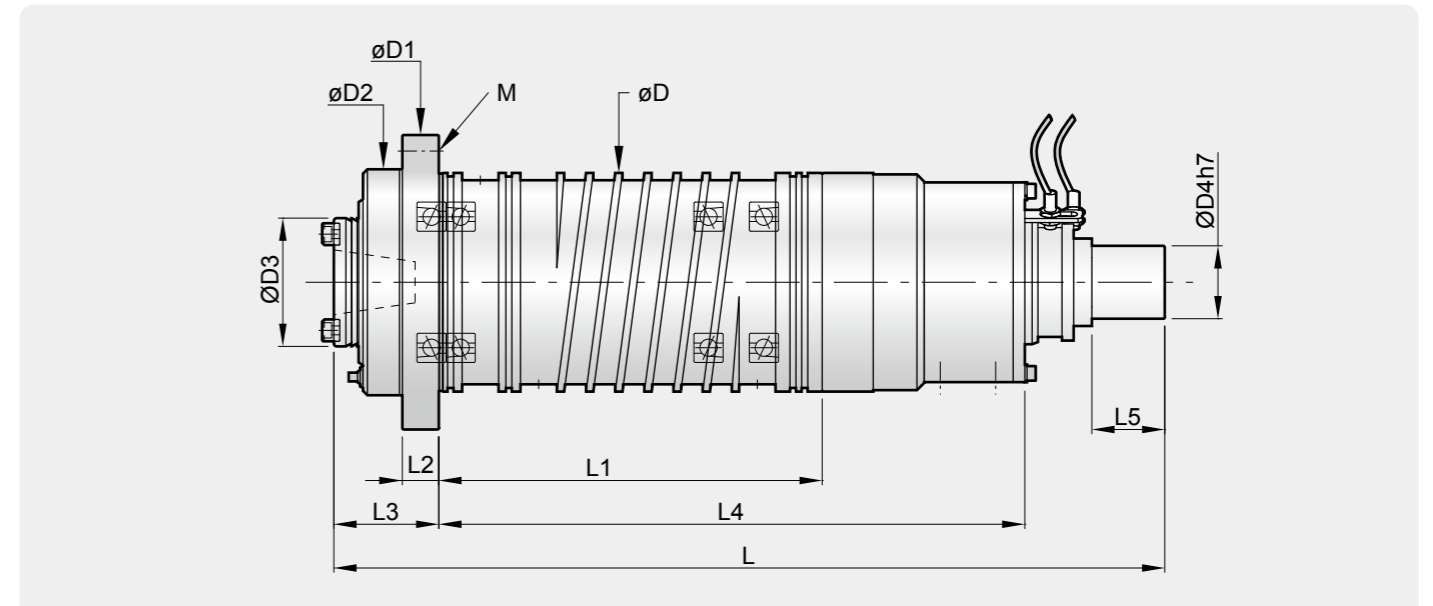


# Direct-Drive Spindle

## Direct-Drive Spindle for Milling Machine



## Dimensional Drawing of Direct-Drive Spindle for Milling Machine



### Specifications of Direct-Drive Spindle for Milling Machine

Model	Speed (rpm)	I.D. of Front Bearing	Front Bearing Type	Rear Bearing Type	Spindle Nose Running Accuracy (250/300mm)	Tool Pulling Force	Lubrication	Dynamic Balance	Temp. Growth
<b>SPINDLE SPECIFICATION : BT 30</b>									
HD34ET	10,000~24,000	ø40	70 x 2	70 x 2	8 μm	220 kgf	Grease	G1	15 °C
HS34ET	12,000~20,000	ø40	70 x 2	70 x 2	8 μm	220 kgf	Grease	G1	15 °C
<b>SPINDLE SPECIFICATION : BT 40</b>									
DL46EA	10,000~18,000	ø60	70 x 2	70 x 2	8 μm	600 kgf	Grease	G1	15 °C
DS46ED	10,000~18,000	ø60	70 x 2	70 x 2	8 μm	600 kgf	Grease	G1	15 °C
WD46ED	12,000~18,000	ø60	70 x 2	70 x 2	8 μm	600 kgf	Grease	G1	15 °C
WE46EA	10,000~18,000	ø60	70 x 2	70 x 2	8 μm	600 kgf	Grease	G1	15 °C
DF46EA	10,000~15,000	ø65	70 x 2	70 x 2	8 μm	700 kgf	Grease	G1	15 °C
DS47ET	10,000~15,000	ø70	70 x 2	70 x 2	8 μm	850 kgf	Grease	G1	15 °C
WD47ET	8,000~15,000	ø70	70 x 2	70 x 2	8 μm	850 kgf	Grease	G1	15 °C
<b>SPINDLE SPECIFICATION : BT 50</b>									
ZD58DB	6,000~10,000	ø80	70 x 3	70 x 2	8 μm	1500 kgf	Grease	G1	15 °C
ZD58ID	6,000~10,000	ø80	70 x 3	70 x 2	8 μm	1500 kgf	Grease	G1	15 °C
DD59ED	6,000~12,000	ø90	70 x 2	70 x 2	8 μm	1750 kgf	Grease	G1	15 °C
DD59ID	6,000~12,000	ø90	70 x 3	70 x 2	8 μm	1750 kgf	Grease	G1	15 °C
ZD59ED	6,000~12,000	ø90	70 x 2	70 x 2	8 μm	1750 kgf	Grease	G1	15 °C
ZD59ID	6,000~12,000	ø90	70 x 3	70 x 2	8 μm	1750 kgf	Grease	G1	15 °C
HD5AAA	4,500	ø100	NN x 1 Thrust x2 NN x 1		8 μm	2000 kgf	Grease	G1	15 °C

### Dimensional and Specification of Direct-Drive Spindle

UNIT: mm

Model	øD	øD1	øD2	øD3	øD4	L	L1	L2	L3	L4	L5	M
<b>SPINDLE SPECIFICATION : BT 30</b>												
HD34ET	ø100	ø138	ø110	ø55	ø38	385	133	20	105	207	35	6-M8-PCD 120
HS34ET	ø100	ø138	ø110	ø55	ø38	385	182	20	56	256.5	35	6-M8-PCD 120
<b>SPINDLE SPECIFICATION : BT 40</b>												
DL46EA	ø120	ø163	ø130	ø78	ø45	490	168	20	127	301	45	6-M8-PCD 146
DS46ED	ø120	ø163	ø130	ø78	ø45	537	168	20	127	312	45	6-M8-PCD 146
WD46ED	ø120	ø164	ø130	ø78	ø45	537	238	20	57	382	45	6-M8-PCD 146
WE46EA	ø120	ø163	ø130	ø78	ø45	490	238	20	57	371	45	6-M8-PCD 146
DF46EA	ø140	ø185	ø140	ø83	ø50	535	238	24	65	373	50	8-M10-PCD 160
DS47ET	ø150	ø202	ø155	ø88	ø50	570	263	25	72	402	55	8-M10-PCD 180
WD47ET	ø150	ø202	ø155	ø88	ø50	570	195	25	140	335	45	8-M10-PCD 180
<b>SPINDLE SPECIFICATION : BT 50</b>												
ZD58DB	ø155	ø205	ø164	ø107	ø50	836	309	30	80	486	50	8-M10-PCD180
ZD58ID	ø155	ø205	ø165	ø107	ø50	836	215	25	174	392	50	8-M10-PCD 180
DD59ED	ø190	ø245	ø200	ø128.57	ø50	810	318	35	200	439	65	8-M12-PCD 220
DD59ID	ø190	ø245	ø200	ø128.57	ø50	810	318	35	200	439	65	8-M12-PCD 220
ZD59ED	ø190	ø245	ø200	ø128.57	ø50	810	318	35	102	537	65	8-M12-PCD 220
ZD59ID	ø190	ø245	ø200	ø128.57	ø50	810	318	35	102	537	65	8-M12-PCD 220
HD5AAA	ø190	ø245	ø200	ø128.57	ø60	842	270	30	170	484	78	8-M12-PCD 220



# Direct-Drive Spindle

## Direct-Drive Spindle for Milling Machine and Tapping Machine

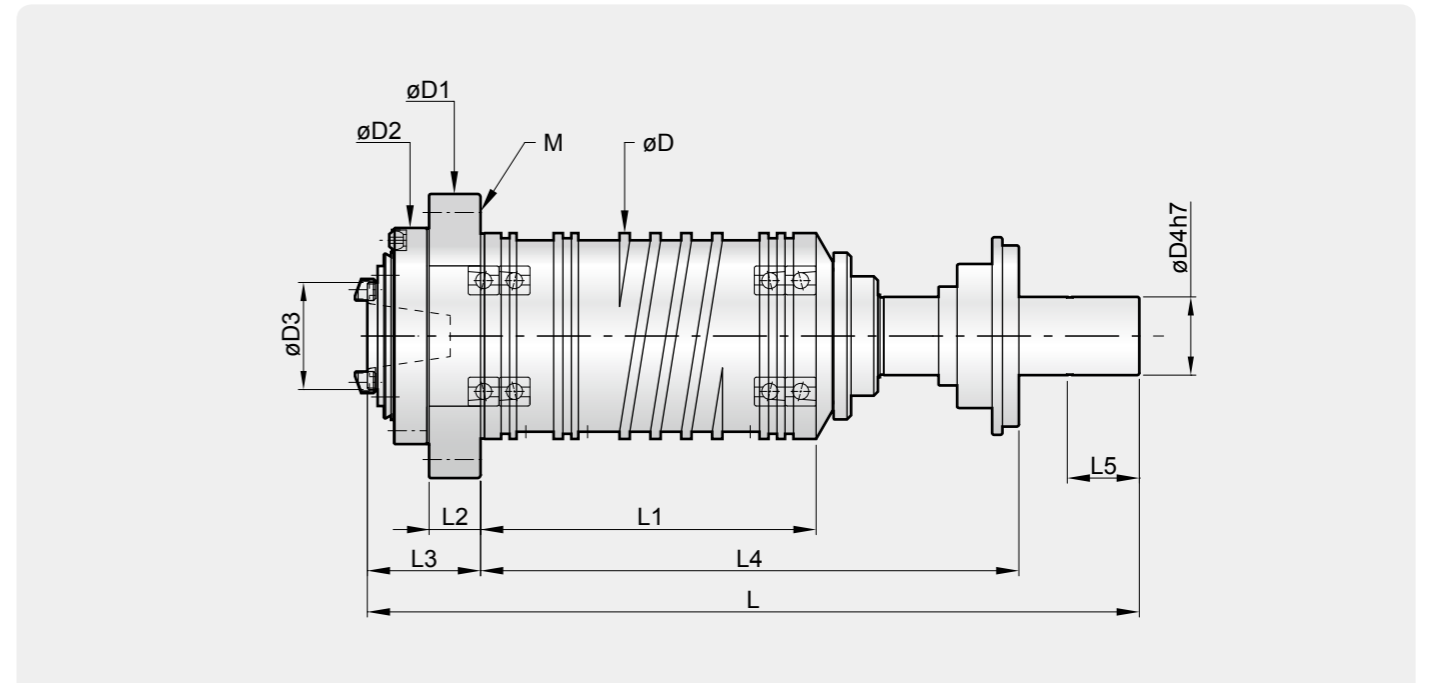


Specifications of Direct-Drive Spindle for Milling Machine

Model	Speed (rpm)	I.D. of Front Bearing	Front Bearing Type	Rear Bearing Type	Spindle Nose Running Accuracy (250/300mm)	Tool Pulling Force	Lubrication	Dynamic Balance	Temp. Growth
SPINDLE SPECIFICATION : BT 30									
DN34EA	12,000~24,000	ø40	70 x 2	70 x 2	8 μm	260 kgf	Grease	G1	15°C
ST34ED	12,000~24,000	ø40	70 x 2	70 x 2	8 μm	250 kgf	Grease	G1	15°C
TN34EA	12,000~24,000	ø40	70 x 2	70 x 2	8 μm	260 kgf	Grease	G1	15°C
TF34EA	10,000~20,000	ø45	70 x 2	70 x 2	8 μm	330 kgf	Grease	G1	15°C

• Design and specifications are subject to change without prior notice. For ordering, please contact our business department.

## Dimensional Drawing of Direct-Drive Spindle for Milling Machine and Tapping Machine



Dimensional and Specification of Direct-Drive Spindle for Tapping Machine

UNIT: mm

Model	øD	øD1	øD2	øD3	øD4	L	L1	L2	L3	L4	L5	M
SPINDLE SPECIFICATION : BT 30												
DN34EA	ø95	ø162	ø107	ø52	ø38	347	82	34	120	186.5	23	7-M8-PCD 146
ST34ED	ø100	ø138	ø105	ø52	ø38	375	173	20	45	270	35	4-M8-PCD 120
TN34EA	ø100	ø138	ø104	ø52	ø38	333	137	20	50	195	35	4-M8-PCD 120
TF34EA	ø100	ø138	ø104	ø60	ø38	370	163	20	45	270	30	6-M8-PCD 120

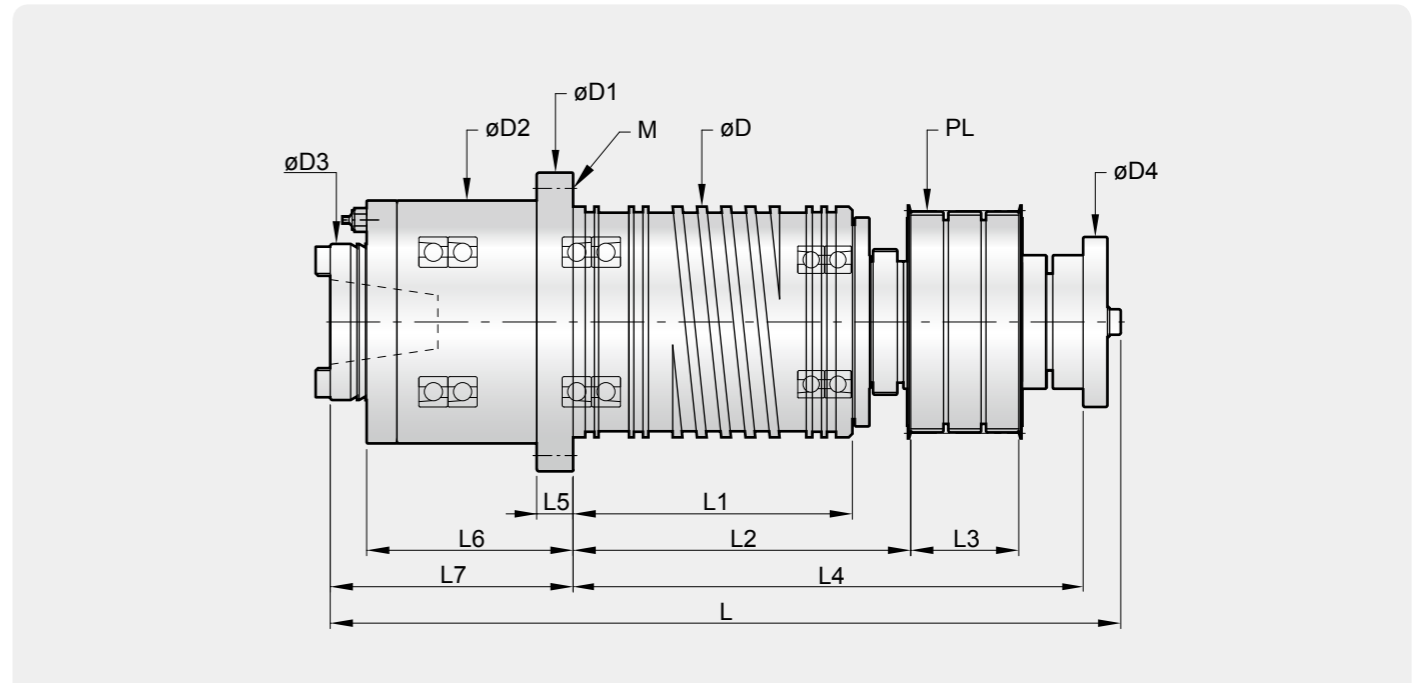
• Design and specifications are subject to change without prior notice. For ordering, please contact our business department.

# Belt-Drive Spindle

## Belt-Drive Spindle for Milling Machine. Coolant Through Spindle Type



## Dimensional Drawing of Belt-Drive Spindle for Milling Machine



### Specifications of Belt-Drive Spindle for Milling Machine

Model	Speed (rpm)	I.D. of Front Bearing	Front Bearing Type	Rear Bearing Type	Spindle Nose Running Accuracy (250/300mm)	Tool Pulling Force	Lubrication	Dynamic Balance	Temp. Growth
<b>SPINDLE SPECIFICATION : BT 40</b>									
FS46EA	8,000~12,000	ø60	70 x 2	70 x 2	8 μm	600 kgf	Grease	G1	15°C
WS46EA	8,000~12,000	ø60	70 x 2	70 x 2	8 μm	600 kgf	Grease	G1	15°C
TF46EA	8,000~12,000	ø65	70 x 2	70 x 2	8 μm	700 kgf	Grease	G1	15°C
FS47EA	8,000~12,000	ø70	70 x 2	70 x 2	8 μm	850 kgf	Grease	G1	15°C
NT47CA	8,000~12,000	ø70	70 x 4	70 x 2	8 μm	800 kgf	Grease	G1	15°C
NT47EB	8,000~12,000	ø70	70 x 2	70 x 2	8 μm	850 kgf	Grease	G1	15°C
WL47EA	8,000~12,000	ø70	70 x 2	70 x 2	8 μm	850 kgf	Grease	G1	15°C
<b>SPINDLE SPECIFICATION : BT 50</b>									
ZS58EA	6,000~10,000	ø80	70 x 2	70 x 2	8 μm	1300 kgf	Grease	G1	15°C
NS59CA	6,000~10,000	ø90	70 x 4	70 x 2	8 μm	1750 kgf	Grease	G1	15°C
NT59CA	6,000~10,000	ø90	70 x 4	70 x 2	8 μm	1750 kgf	Grease	G1	15°C
HT625A	2,500	ø140	NN x 1 Thrust x2 NN x 1		8 μm	2200 kgf	Grease	G1	15°C
<b>SPINDLE SPECIFICATION : BT 60</b>									
WL6IAT	2,000	ø180	NN x 1 Thrust x2 NN x 1		20 μm	5500 kgf	Grease	G1	15°C

• Design and specifications are subject to change without prior notice. For ordering, please contact our business department.

### Dimensional and Specification of Belt-Drive Spindle for Milling Machine

UNIT: mm

Model	øD	øD1	øD2	øD3	øD4	L	L1	L2	L3	L4	L5	L6	L7	M	PL
<b>SPINDLE SPECIFICATION : BT 40</b>															
FS46EA	ø120	ø163	ø130	ø84	ø62	425	238	250	58	340	20	37	57	6-M8-PCD 146	5GT-68T
WS46EA	ø120	ø164	ø130	ø84	ø62	425	168	178	60	270	20	107	127	6-M8-PCD 146	5GT-68T / 8YU-46T
TF46EA	ø140	ø185	ø140	ø89	ø80	435	238	250	60	345	24	45	65	8-M10-PCD 160	5GT-68T
FS47EA	ø150	ø202	ø155	ø88	ø88	510	274	311.5	40	385	25	46	66	8-M10-PCD 180	5GT-68T
NT47CA	ø150	ø202	ø155	ø88	ø80	540	200	248.5	45	395	25	115	135	8-M10-PCD 180	5GT-60/64T / 8YU-44T
NT47EB	ø150	ø202	ø155	ø88	ø80	540	200	246	49	395	25	115	135	8-M10-PCD 180	5GT-60/64T / 8YU-44T
WL47EA	ø150	ø202	ø155	ø88	ø88	510	205	242.5	43	316	25	115	135	8-M10-PCD 180	5GT-68T / 8YU-48T
<b>SPINDLE SPECIFICATION : BT 50</b>															
ZS58EA	ø155	ø205	ø165	ø107	92	609	215	237	56	398	25	147	174	8-M10-PCD 180	8YU-48T
NS59CA	ø190	ø246	ø200	ø128.57	ø140	651	320	368	89	510	35	45	110	6-M12-PCD 220	8YU-60T/65T
NT59CA	ø190	ø246	ø200	ø128.57	ø140	651	230	278	89	420	30	170	200	6-M12-PCD 220	8YU-65T
HT625A	ø270	ø335	ø270	ø170	ø100	468.5	330	403	115	553	30	108	123	8-M16-PCD 300	14M-56T
<b>SPINDLE SPECIFICATION : BT 60</b>															
WL6IAT	ø350	ø415	ø350	ø225	---	---	---	615	200	---	40	75	105	8-M16-PCD 380	HTD-72T

• L2 / L3 : Positions of spindle pulley  
 • L4 : Anti-snap ring position  
 • Design and specifications are subject to change without prior notice. For ordering, please contact our business department.

# Gear-Drive Spindle

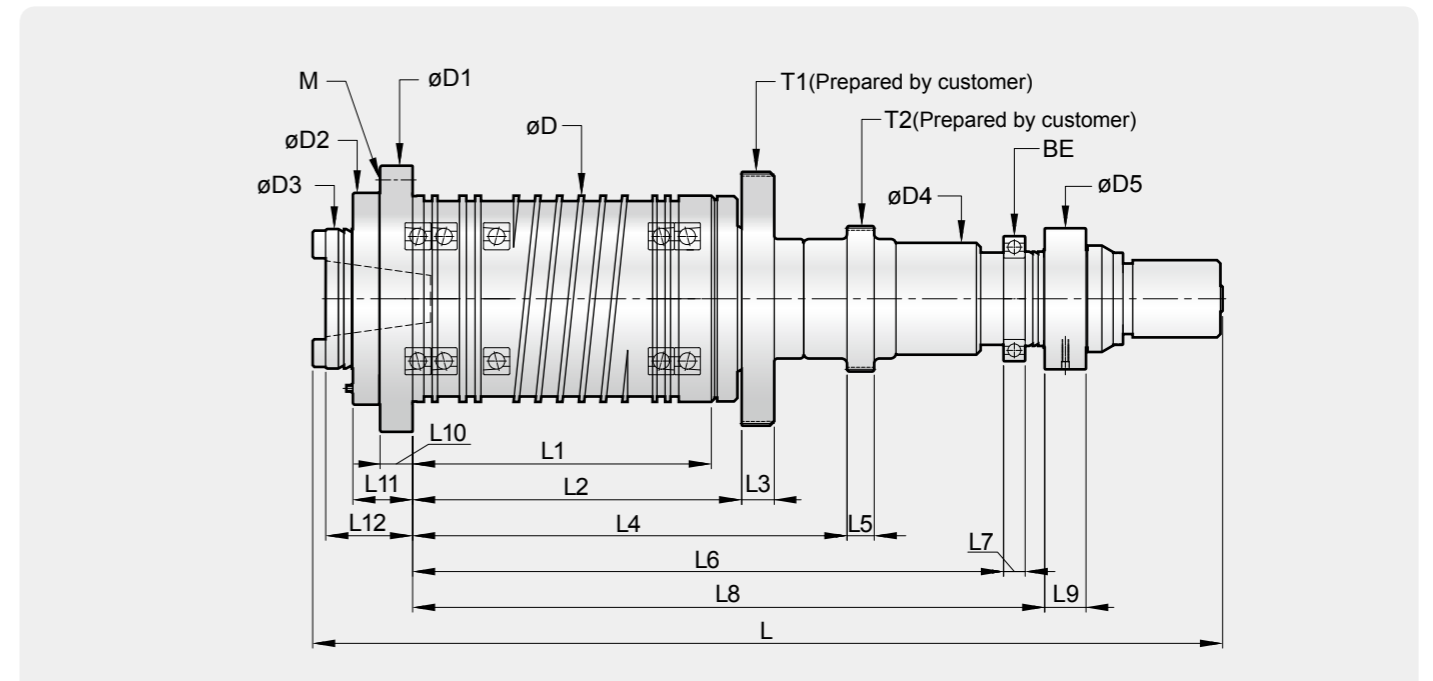


Specifications of Gear-Drive Spindle for Milling Machine

Model	Speed (rpm)	I.D. of Front Bearing	Front Bearing Type	Rear Bearing Type	Spindle Nose Running Accuracy (250/300mm)	Tool Pulling Force	Lubrication	Dynamic Balance	Temp. Growth
<b>SPINDLE SPECIFICATION : BT 50</b>									
DT58FA	6,000	ø80	70 x 3	70 x 2	8 μm	1300 kgf	Grease	G1	15°C
DT59FO	6,000	ø90	70 x 3	70 x 2	8 μm	1750 kgf	Grease	G1	15°C
SZ59FO	6,000	ø90	70 x 3	70 x 2	8 μm	1750 kgf	Grease	G1	15°C
ZS59FO	6,000	ø90	70 x 3	70 x 2	8 μm	1750 kgf	Grease	G1	15°C
ZS5AAO	4,500	ø100	NN x 1 Thrust x2	NN x 1	8 μm	1750 kgf	Grease	G1	15°C

- Above models are available to equip with coolant through spindle (CTS) function (optional).
- Design and specifications are subject to change without prior notice. For ordering, please contact our business department.

Dimensional Drawing of Geae-Drive Spindle for Milling Machine



Dimensional and Specification of Gear-Drive Spindle

UNIT: mm

Model	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
<b>SPINDLE SPECIFICATION : BT 50</b>													
DT58FA	646	190	220.5	26	297.5	22	365	18	383	38	30	57	67
DT59FO	801	246	288	29	399	19	502	22	542.5	22	35	61	75
SZ59FO	826	275	303	30	400	25	544	20	582	38	30	55	80
ZS59FO	916	275	303	30	400	20	544	20	582	38	30	145	170
ZS5AAO	826	275	303	30	400	25	544	22	582	38	30	57	80

Model	T1 (Front Gear)	T2 (Rear Gear)	øD	øD1	øD2	øD3	øD4	øD5	M	BE
<b>SPINDLE SPECIFICATION : BT 50</b>										
DT58FA	Prepared by customer		ø150	ø205	ø162	ø107	ø73	ø81	8-M10-PCD 180	6012
DT59FO	Prepared by customer		ø200	ø256	ø195	ø128.57	ø124	ø122	8-M12-PCD 230	6017
SZ59FO	Prepared by customer		ø190	ø245	ø195	ø128.57	ø103	ø130	8-M12-PCD 220	6015
ZS59FO	Prepared by customer		ø190	ø245	ø200	ø128.57	ø103	ø130	8-M12-PCD 220	6015
ZS5AAO	Prepared by customer		ø190	ø247	ø196	ø128.57	ø103	ø130	8-M12-PCD 220	6017

- L2 / L3 : Positions of front gear
- L4 / L5 : Positions of rear gear
- Design and specifications are subject to change without prior notice. For ordering, please contact our business department.



# Spindle for Lathe



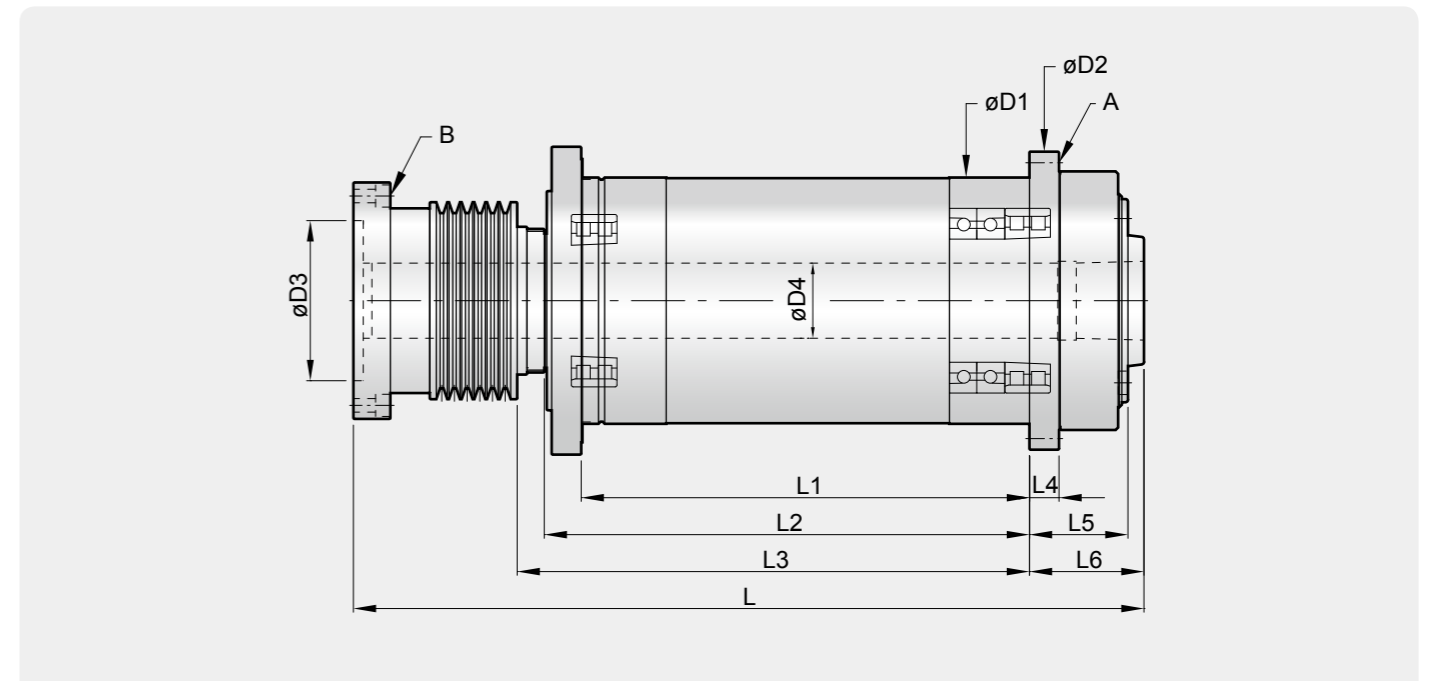
Specifications of Spindle for Lathe

Model	Speed (rpm)	I.D. of Front Bearing	Front Bearing Type	Rear Bearing Type	Spindle Nose Running Accuracy	Spindle Nose Taper	Lubrication	Dynamic Balance	Temp. Growth
<b>Spindle Specification : A2-4</b>									
LC0480V	6,000~8,000	ø70	70 x 2	70 x 2	3 μm	1/20	Grease	G1	15°C
<b>SPINDLE SPECIFICATION : A2-5</b>									
CT205E	6,000	ø80	70 x 3	70 x 2	3 μm	1/20	Grease	G1	15°C
MY205B	5,000~6,000	ø90	70 x 3	NN x 1	3 μm	1/20-	Grease	G1	15°C
WB0560IC	6,000	ø90	70 x 3	NN x 1	3 μm	1/20-	Grease	G1	15°C
<b>SPINDLE SPECIFICATION : A2-6</b>									
WL0642A	4,200	ø100	NN x 1 Thrust x2	NN x 1	3 μm	1/20	Grease	G1	15°C
WL0642AL *	4,200	ø100	NN x 1 Thrust x2	NN x 1	3 μm	1/20	Grease	G1	15°C
TF0640A	4,000	ø110	NN x 1 Thrust x2	NN x 1	3 μm	1/20-	Grease	G1	15°C
<b>SPINDLE SPECIFICATION : A2-8</b>									
WL0830AL	3,000	ø130	NN x 1 Thrust x2	NN x 1	5 μm	1/20	Grease	G1	15°C
<b>SPINDLE SPECIFICATION : A2-11</b>									
TL1125A	2,500	ø170	NN x 1 Thrust x2	NN x 1	5 μm	1/20	Grease	G1	15°C
<b>SPINDLE SPECIFICATION : A2-15</b>									
WL1510A	1,000	ø240	NN x 1 Thrust x2	NN x 1	10 μm	1/20	Grease	G1	15°C

NOTE\* : The difference between model WL0642A and WL0642AL is overall length.

\* Design and specifications are subject to change without prior notice. For ordering, please contact our business department.

Dimensional Drawing of Spindle for Lathe



Dimensional and Specification of Spindle for Lathe

UNIT: mm

Model	øD1	øD2	øD3	øD4	L	L1	L2	L3	L4	L5	L6	A	B
<b>SPINDLE SPECIFICATION : A2-4</b>													
LC0480V	ø150	ø190	ø100	ø45	454.1	245 (241.5~245)	272	282	25	69	80.1	8-M8 PCD 170	6-M10 PCD 115
<b>SPINDLE SPECIFICATION : A2-5</b>													
CT205E	ø170	ø220	ø100	ø56	557	279(261~279)	352	369	26	74	87	6-M12 PCD 195	6-M10 PCD 130
MY205B	ø180	ø220	ø100	ø56	495.5	265(260~265)	307	325	15	20.5	33.5	7-M8 PCD 200	12-M10 PCD 130
WB0560IC	ø276	ø325	---	ø56	627.5	356	---	---	35	90	103	12-M12 PCD 298	11-M8 PCD 258
<b>SPINDLE SPECIFICATION : A2-6</b>													
WL0642A	ø200	ø242	ø130	ø67	600	266(253~266)	291	355	25	80	93	8-M8 PCD 224	6-M10 PCD 170
WL0642AL *	ø200	ø242	ø130	ø61	642	363(350~363)	394	416	24	80	93	8-M8 PCD 224	6-M10 PCD 170
TF0640A	ø200	ø242	ø160	ø79	561	266(256~266)	297	312	25	80	93	8-M8 PCD 224	6-M10 PCD 190
<b>SPINDLE SPECIFICATION : A2-8</b>													
WL0830AL	ø260	ø300	ø160	ø90	779	360(350~360)	404.5	460	30	81	97	12-M8 PCD 280	6-M10 PCD 190
<b>SPINDLE SPECIFICATION : A2-11</b>													
TL1125A	ø315	ø376	ø230	ø131	825	450(448~450)	522	548	30	71	90	8-M12 PCD 341	6-M16 PCD 275
<b>SPINDLE SPECIFICATION : A2-15</b>													
WL1510A	ø400	ø460	---	ø184	979	545(535~545)	642	663	34	101	120	12-M12 PCD435	-----

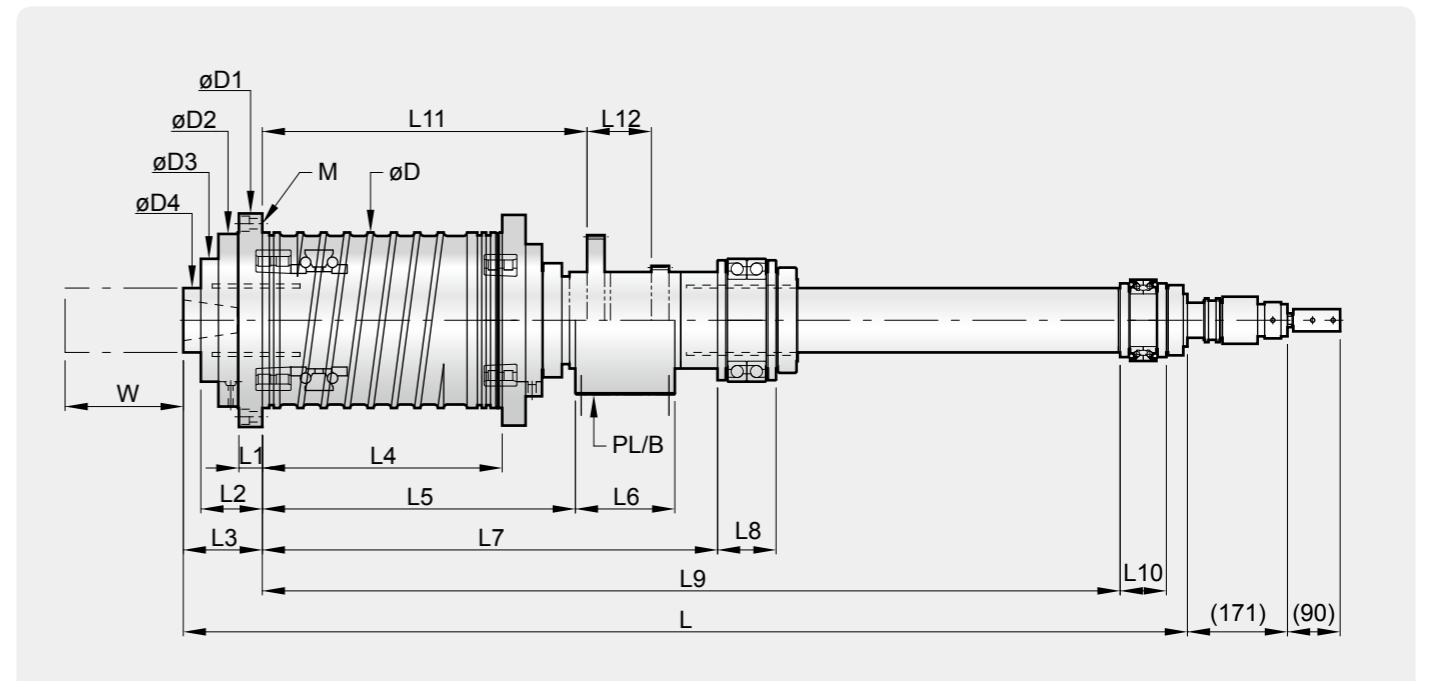
NOTE\* : The difference between model WL0642A and WL0642AL is overall length.

\* Design and specifications are subject to change without prior notice. For ordering, please contact our business department.

# Extensible Horizontal Boring Spindle



## Dimensional Drawing of Extensible Horizontal Boring Spindle



### Specification of Spindle for Horizontal Boring and Milling Machine

Model	Speed (rpm)	I.D. of Front Bearing	Front Bearing Type	Rear Bearing Type	Spindle Nose Running Accuracy (300mm)	Tool Pulling Force	Lubrication	Dynamic Balance	Temp. Growth
SPINDLE SPECIFICATION : BT 50									
HB56AT	2,500	ø160	NN x 1 Thrust x2 NN x 1	NN x 1	8 μm	1,750 kgf	Grease	G1	15°C
HB58AT	2,000	ø180	NN x 1 Thrust x2 NN x 1	NN x 1	8 μm (700mm)	1,750 kgf	Grease	G1	15°C

• Design and specifications are subject to change without prior notice. For ordering, please contact our business department.

### Dimensional and Specification of Extensible Horizontal Boring Spindle

UNIT: mm

Model	øD	øD1	øD2	øD3	øD4	L	L1	L2	L3	L4	L5	L6
SPINDLE SPECIFICATION : BT 50												
HB56AT	ø300	ø365	ø295	ø210	ø110	1716	40	105	135	400~410	535	170
HB58AT	ø350	ø415	ø350	ø225	ø130	2060	40	105	135	470~475	590	190
Model	L7	L8	L9	L10	L11	L12	W	M	PL	B		
SPINDLE SPECIFICATION : BT 50												
HB56AT	778	100	1601	79	555	110	500	8-M16 PCD 330	8YU-100T	150		
HB58AT	843	123	1773	88	610	120	700	8-M16 PCD 380	14M-72T	150		

• Design and specifications are subject to change without prior notice. For ordering, please contact our business department.