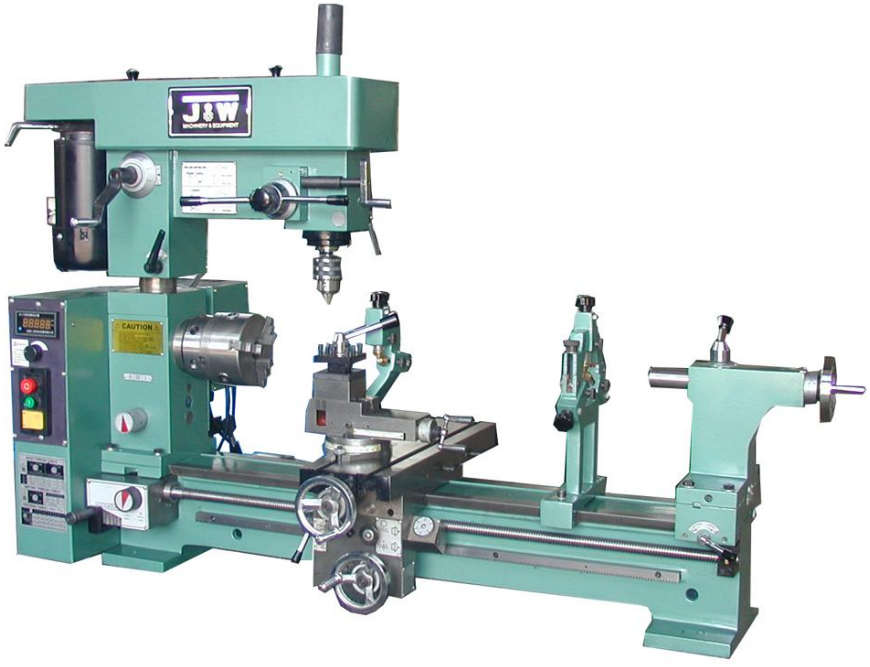
MP500V MP800V

VARIABLE SPEED MULTI-PURPOSE

OPERATION MANUAL



Many thanks for purchasing our Multi-Purpose Machine Model:HQ500V、HQ800V, Before operating, Please study the operation manual, and should be according to it to operate step and step.

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1. SPECIFICATION

TURNING

Model	HQ500V	HQ800V
Distance between centers	500	800
Swing over bed	420	
Max.longitudinal travel	440	740
Max.cross travel	200	
Spindle taper	M.T.4	
Travel of tailatock barrel	70mm	
Taper of tailstock barrel	M.T.3	
Spindle hole diameter	Ø28mm	
Spindle speed	Variable speed	
Longitudinal leadscrew pitch	6T.P.I./4mm	
Inch thread can be cutted	4-30T.P.I./0.7-4mm	
Range of automatic feeding (Longitudinal and cross)	0.0035-0.022inch/0.088-0.55mm	

DRILLING & MILLING

Spindle taper	M.T.4
Spindle travel	110mm
Max. distance between spindle center to column	285mm
Max. distance between nose and table	406mm
Headstock travel	100mm
Spindle speed	50-750r.p.m,750-3000r.p.m.
Table size	475mm×160mm
Drilling capacity	22mm
End milling capacity	28mm
Face milling capacity	80mm

OTHERS

Motor power	1.1KW
Motor voltage	90V or 180v
Net weight	275kg
Gross weight	325kg
Overall dimension	1460 mm×580mm×965mm(HQ500)
	1760mm×580mm×965mm(HQ800)
Packing size	1130mm×580mm×1100mm(HQ500)
	1430mm×580mm×1100mm(HQ800)

2. APPLICATION

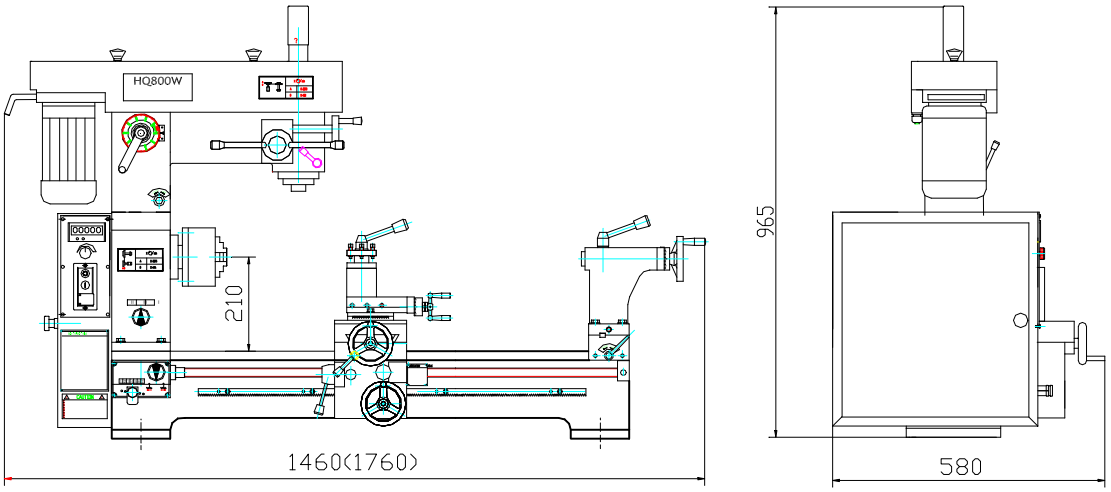
The machine has the function of turning, milling, drilling and thread cutting. Variable speed and work feeding can be controlled automatically or manually, suitable for processing metal, wood and other

materials. It is extensively used in job-shops, teaching, scientific research, occupation training, especially in house for household utensils.

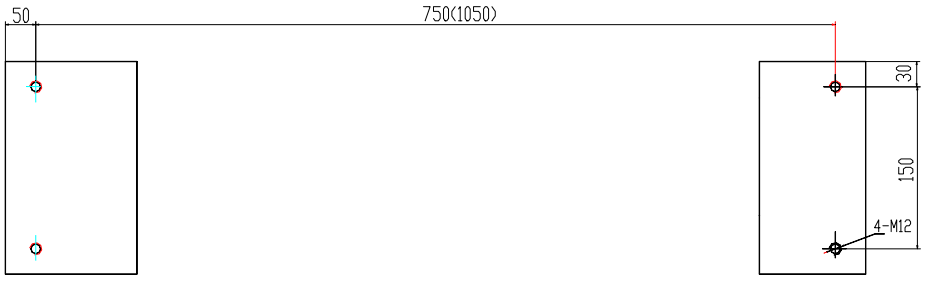
3. CONSTRUCTION

The machine has the character of compact construction, easy operating and wide-range speed. The function of turning, drilling, and milling can be made in one machine. Worktable feed can be controlled automatically or manually in longitudinal and cross direction. The drilling –milling headstock can be moved up and down and rotated freely. With the power of double motors, drilling and milling can be operated separately. The machine was designed according to CE standard.

4. GENERAL DIMENSION



Overall size



Bed fixing hole size

5. INSTALLATION

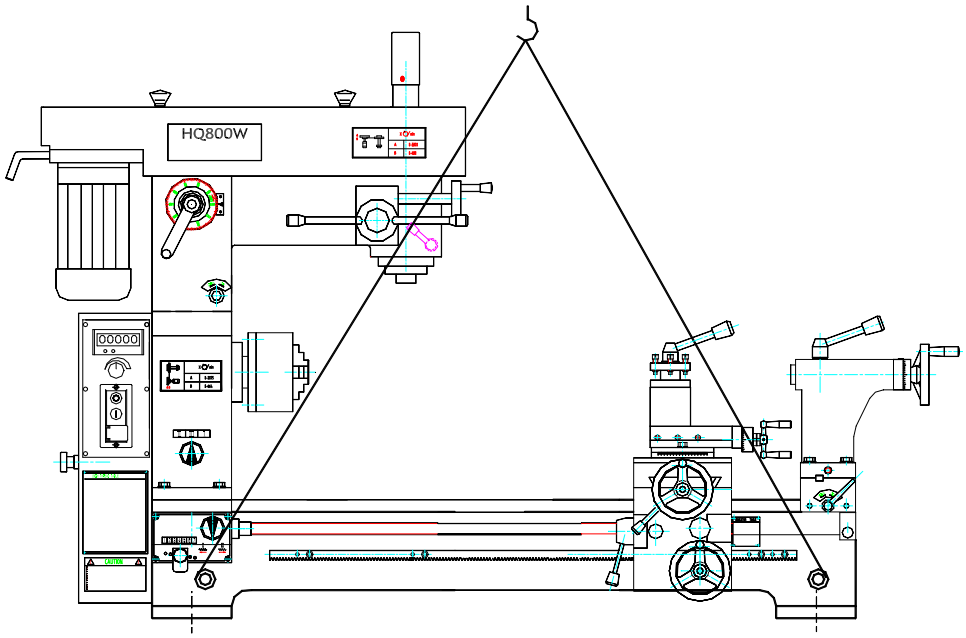
5.1 FOUNDATION

The base of the machine foundation must be solid without noticeable deflection and heavy enough to support the weight of the machine. The floor installation must be fairly level.

If you use our stand, please place the stand in installation position, then make mark in installation hole position, then move the stand, cover the foundation bolts, place two adjustable iron spacer in the end of headstock and tailstock separately. In order to increase the touched square, please stagger the front and back iron spacers. Hereafter, place the stand on the adjustable iron spacers and fix with foundation bolts. Lift the machine on the stand and fix to stand by using the nut and bolts. If possible, you could ask a professional worker to install.

5.2 LIFTING

Before lifting the machine, place spacers on the machine in order to prevent its surfaces from being damaged. In order to avoid machine dealing and leaning, please lock the slide and tailstock. When lift the machine under the lifting rod with steel rope, please pay more attention to the machine gravity. Place the machine carefully on the base, adjust the machine leveling position, and finally fit the machine perfectly.



5.3 CLEANING

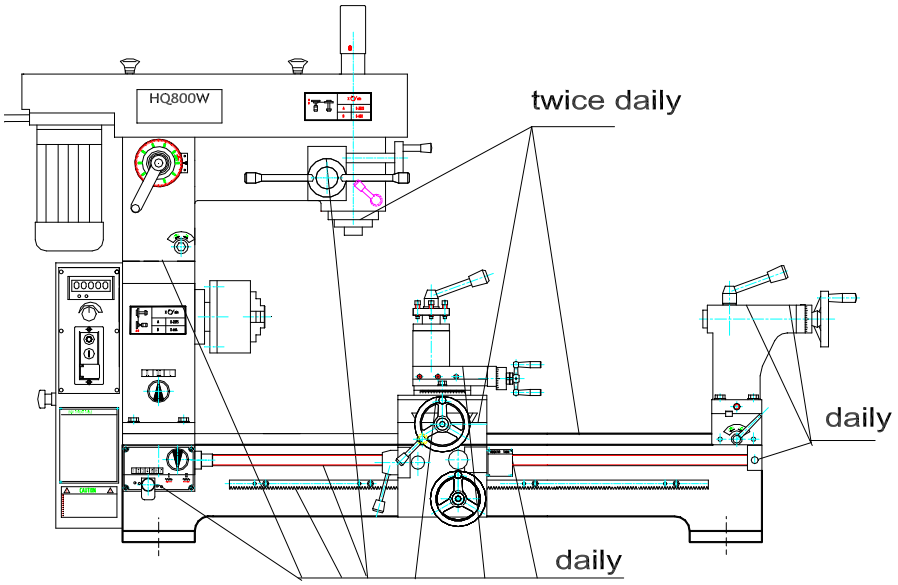
Before shipment, the machine un-painted surfaces are all coated with antirust oil. Before using, you can clean the antirust oil by cleanser and gasoline. After finishing cleaning, lubricate the slide way.

5.4 LEVELING

By a 6″ precision machine spirit level, you can level the machine in longitudinal and cross direction. Then tighten the foundation bolts and nuts.

6. LUBRICATING CHART

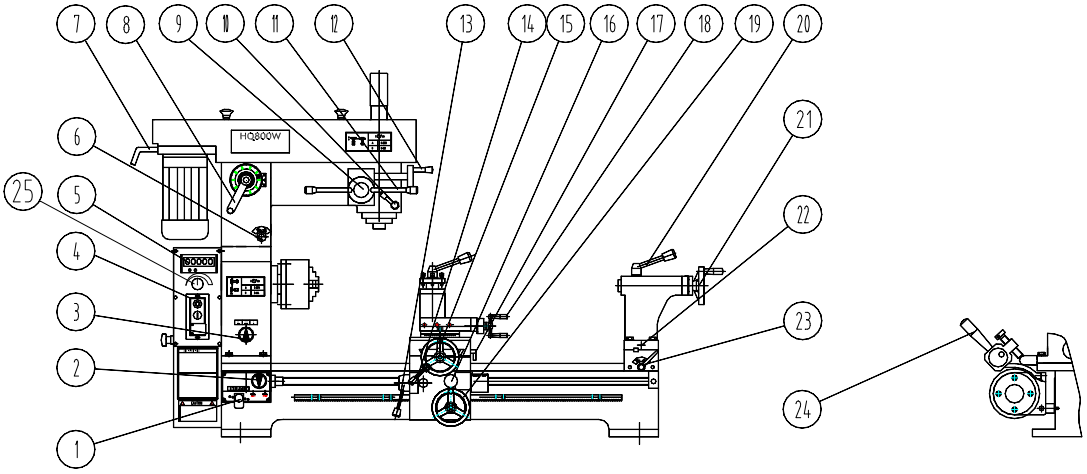
The machine lubricating points should lubricated according to the lubricating chart.



Driving bearings should be lubricated with grease regularly, clean once each year. The gears in the headstock should be lubricated by No.70 or HL-30 gear oil, oil level according to oil gauge.

The oil in the headstock should be changed regularly, the first time after about half a month, the second time after 45 days, later once each half a year.

7. OPERATION EXPLANATION



(1) Gear shift lever	(14) Saddle lock lever
(2) Leadscrew clutch handle	(15) Cross feed handwheel
(3) Change lever	(16) Longitudinal-cross feed clutch handle
(4) Magnetic switch	(17) Slide locking lever
(5) Digital tachometer	(18) Toolpost feed handwheel
(6) Locking lever	(19) Longitudinal feed handwheel
(7) Belt tension lever	(20) Tailstock barrel locking lever
(8) Up and down crank	(21) Tailstock handwheel
(9) Micro feed clutch lever	(22) Reset screw
(10) Spindle locking lever	(23) Tailstock locking lever
(11) Spindle feed lever	(24) Motor pulley tension lever
(12) Micro feed lever	(25)Speed controlling potentiometer
(13) Half nut lever	

7.1CAUTION

a. BEFORE FAMILIAR WITH THE CONTROL PARTS AND THEIR FUNCTIONS, PLEASE DON'T OPERATE THE MACHINE CONPLETELY.

b. CHECK LUBRICATING SURFACES AND SLIDES, TURNING SPARE PARTS AND THEN LUBRICATE A THE LUBRICATING POINTS.

c. AFTER WORKING, YOU SHOLD CUT OFF CURRENT.

d. THE MACHINE IS NOT ARMED WITH LIGHT EQUIPNENT. YOU SHOULD SUPPLY ENOUGH LIGHT INSTRUMENT YOUSELF, AND AVOID SHADOW INTERRUTING IN ORDER TO PREVENT THE DANGER FROM HAPPENING BECAUSE OF LACK LIGHTING.

e. KEEP CLAMPING THE WORKKING PIECE FIRMLY, PREVENT IT FLYING OFF. THE OUTSTANDING PART OF THE PIECE SHOULD NOT BE MORE 80MM. THE RATE OF LENGEH AND DIAMETER FOR THE OUTSTANDIING PART SHOUD BE NOT MOTE THAN 4.

f. WHEN ACCIDENT HAPPEN DURING OPERATION, PLEASE CUT OFF POWEER AT ONCE TO MAKE THE MACHINE STOP.

g. THEN NEEDING TO ADJUST TOOL, THE MACHINE OR WORKING PIECE, YOU MUST CUT OFF POWER.

7.2 MAIN SPINDLE DRIVING

a. Before starting the machine, you should check the tension of belt. The belt should depress about 10mm under normal finger pressure.

b. Turn the switch SA to position "2".

c To make the motor work perfectly, please change the belt position on the pulley, 2 steps speed could be gained.

7.3 DRILLING-MILLING SPINDEL DRIVING

a. At first, check the protection instrument if effective, then push master switch, pilot light, the machine is awaiting working. Now stop, forward and reverse of drilling-milling spindle can be made by operating the shift switch.

b. Drilling-milling spindle feeding can be change by lever(11), If need micro feeding, pull out drilling-milling clutch lever(9), then operate lever(12) to micro feed.

c. The speed of drilling-milling spindle can be made by lever(7):push lever to backward, loose belt and

change the belt position on the pulley, then push the lever to the front to tighten belt, finally lock lever(7).

a) Adjust the belt tension to proper position (same as above). Turn the switch “SA” to position “1”, and then you could drill and mill .

b) To make the motor work perfectly, two steps speed could be gained.

7.4 LONGITUDIANL FEED

a. HAND FEEDING: Turn the clutch handle (2) to the middle position, half-nut lever (13) in disengaged position, turn the hand wheel (19), now longitudinal hand feeding can be made.

b. AUTOMATIC FEEDING: The half-nut lever (13) in engaged position, longitudinal-cross feed clutch handle (16) in inner position. Now cross auto-feeding can be made. By turning the handle (2) to change direction of auto-feeding.

7.5CROSS FEEDING

a. Hand feeding can be made by operating the hand wheel(15) directly.

b. Automatic feeding: half-nut lever(B) in engaged position. Pull out longitudinal-cross feed clutch handle (16), now cross automatic feeding can go. By turning the handle (2) to change direction of auto-feeding.

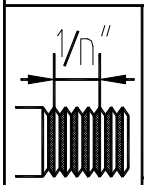
7.6 THRED CUTTING

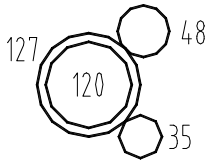
a. Main spindle in low speed, Refer to gear chart, adjust gear shift lever(1) properly , half- nut lever (B) in engaged position. Now can go to cut thread. Different thread pitch (inch, metric) cutting can go by changing the lever (1) and handle (3).

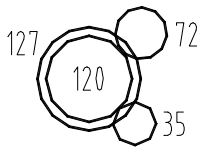
b. CAUTION: IN CUTTING THREAD COURSE, DON’T LEAVE handle (2) OFF RIGHT OR LEFT POSITION. WHEN A KIND OF THREAD NEED MANY TIMES. TURN THE HANDWHEEL (15) TO MAKE TOOL AWAY FROM WORKPICCE, OPERATE THE ELECTRICAL SWITCH TO MAKE MOTOR RUN IN THE OPPOSITE DIRECTION. AFTER FINISHING RETURNING TOOL CONTINUE TO CUT THREADS. DO SO MANY TIMES UP TO FINISHING CUTTING THREADS.

c. Chang the handle(2), the leadscrew could be reversed.

INCH THREAD TABLE

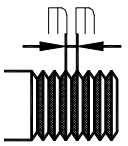


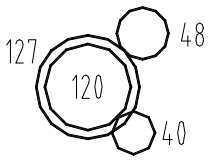




	1	2	3	4	5	6	7	1	2	3	4	5	6	7
I		7½	7	6½	6	5½	5¼		5			4		3½
II		15	14	13	12	11	10½		10			8		7
III		30	28		24	22	21		20			16		14

METRIC THREAD TABLE

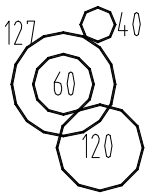




	1	2	3	4	5	6	7
I	2.5		3		3.5		4
II	1.25		1.5		1.75		2
III		0.7	0.75	0.8			1

FEEDING TABLE





	1	2	3	4	5	6	7
I	.35 / .014	.38 / .015	.40 / .016	.45 / .018	.50 / .020	.52 / .021	.55 / .022
II	.175 / .007	.19 / .0075	.20 / .008	.225 / .009	.25 / .010	.26 / .0105	.28 / .011
III	.088 / .0035	.095 / .0038	.10 / .004	.113 / .0045	.125 / .005	.13 / .0053	.14 / .0055

7.7TAIL STOCK

The tail stock can slides along the bed ways freely and can be locked in any position by the lock lever(23).

Tail stock barrel position can be adjusted by turning the tail stock hand wheel (21), locked by lock lever (20). Before shipment, it is sure that the tail stock center and spindle center are in the same line. If need to use the tail stock center to cut small taper, you should loose the screw, adjust the two reset screw (22) to make the deviation between spindle center and tail stock center. Now you can start the work.. After finishing proceeding, you should do as the above to move tail stock in original position. When use tail stock to do the external cutting and get a taper, please adjust the reset screw (22) as the above way. Now you can eliminate the taper.

7.8THREADING DIAL

Threading dial performs the function of indicating the proper time to engage the half-nut so that the tool will enter the same groove of the thread on each successive cutting. Threading dial is marked with lines

numbered 1.2.3.4.5.6, and a single line is marked on the housing of the threading dial (fixed line). The instruction plate (see the following figure) riveted on the threading dial shows the selection of matching the revolving lines with the fixed line.

When cutting thread, engage the half-nut at the proper numbers shown on the scale column of the threading dial plate. 1-6 on the scale means the half-nut can be engage on any of the numbered lines 1.2.3.4.5.6. In the first cutting, if engage the half-nut when matching the numbered lines with fixed line, you can engage the half-nut for successive cutting only when matching the numbered lines with the fixed line. 1.4 mean the half-nut can be engaged on 1.4 for successive cutting. If the half-nut engage with the lead screw all the time while cutting the thread, need not to use the threading dial. In this case, after finishing each successive cutting, firstly back the tool and reverse the motor, then move the tool to the last start cutting position and make the next successive cutting.

INDICATOR TABLE							
TPI	SCALE	TPI	SCALE	TPI	SCALE	TPI	SCALE
8	14	12	1-6	20	14	32	14
9	1-6	14	14	22	14	40	14
10	14	16	14	24	1-6		
11	14	18	1-6	28	14		

8.CHECK PROBLEMS AND TEPAIRING

CAUTION: BEFORE CHECKING, PLEASE TURN OFF THE CURRENT.

8.1Turn on the current, the spindle doesn't run.

a. The voltage is not right and the main switch turned off ……please adjust the input voltage and turn on the main switch.

b. The fuse in electric box was broken …… please change a new one.

c. Wire connector is loosing …… please check and fix it again.

8.2 The motor is too heat or not powerful.

a. Overloading or working time is too long …… please reduce it.

b. Poor quality of motor …… please change a new one.

c. The fuse or wire connector is not good (easily make the motor short circuit …… please turn off the current and change a fuse.

d. The belt is too tight …… please loose it to suitable position.

8.3Temperature of main spindle bearings is too high.

a. No enough grease to lubricate …… please fill the lubricnting oil according to oil gauge.

b.The bearing assembly is too tight …… adjust spindle bearing space propny .

c.High speed turning for long time …… slightly reduce the cutting amount.

8.4 Shortage of motive force when the spindle is running.

a. The belt is too loose or worn and tore …… please adjust the belt tension to correct position or change a new one .

b. The motor is burnt …… please change a new one .

c .The fuse has broken ……please change a new one .

8.5 Making small taper when external turning.

It is not on the same line between the spindle center and the tail stock center-please adjust the tail stock according to the operation manual.

8.6 During proceeding, the surface of work piece is very rough.

a. The space of the spindle bearing is too big …… adjust it to correct position or change a new one.

b. The space between the saddle and the gib it is too big …… adjust them to correct position.

c. The tool is not sharp …… please sharpen it.

d. The work piece doesn't lock tightly …… please lock it tightly.

e. The precision of spindle bearing is too bad to wear …… please change a new one.

9. MAINTENANCE

Please often keep the machine in good condition and good precision. It is advisable that maintenance is better than repair.

9.1 Daily maintenance

a. Before using everyday, please pour the oil and lubricate all the moving parts.

b. If the spindle temperature is too high or too noisy, please stop the machine and check it in order to keep its precision.

c. When the machine is in trouble, please stop to repair it. If you don't do it well, please ask for the local repairman or supplier to help you.

d. It is not allowable to work the machine with too many loads.

e. Before leaving the workshop, please clean the working area, unload the work piece, turn off the power, be careful to clean the iron chipping and shavings and dust, pour into the lubricating oil or antirust oil according to the manual.

9.2 Weekly maintenance

a. Clean and protect the screw.

b. Check all sliding turning surfaces if lack of lubricating, if not, please pour into oil.

9.3 Monthly maintenance

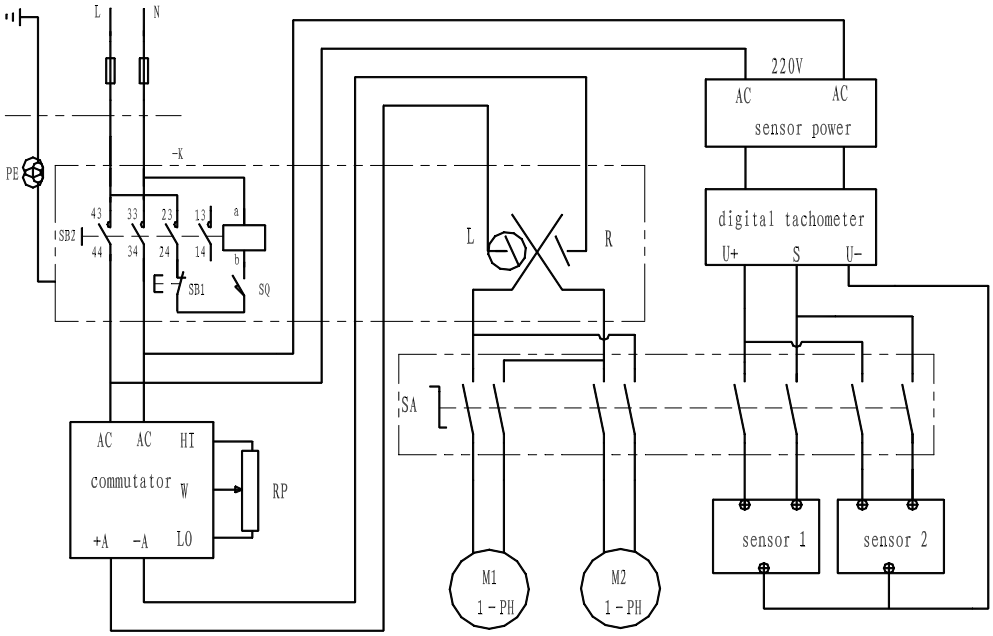
a. Adjust all the gib space of the saddle.

b. Lubricate the worm gear, half nut bearings in order to prevent wearing.

10.ELECTRICAL SYSTEM

10.1 COMPOSITION

The electrical system consists of silicon controlled rectifier, magnetic switch, compound switch, speedpot, digital tachometer, sensor and D.C. motor, etc. this system has the function of variable speed and digital display for speeds.



10.2 CAUTION

(1) A FUSE AS THE FOLLOWING CHART SPECIFICATIONS MUST BE CONNECTED BETWEEN CURRENT AND THE MACHINE.
(2) THE GROUND TREMINAL OF THE MACHINE MUST BE GROUNDING PERFECTLY.
(3) BEFORE CUTTING OF CURRENT OF THE MACHINE, DON'T OPEN ELECTRIC PROTECTIONS, IF SOME WRONG WITH ELECTRIC SYSTEM, PLEASE ASK FOR A REPAIRMAN TO HELP YOU.

SPECIFICATION OF FUSE

VOLTAGE	SPECIFICATION
110V	20A
220V	10A

10.3 According to the manual, after finish all the preparations, turn the speed controlling potentiometer to the "0" position in anti-clockwise direction, press the green button of magnetic switch, make the current on and the tachometer with digital display is bright with display "0000". As the same time, press the switch on the left of tachometer to change corresponding display. Adjust the speedpot knob to the speed you needed. When need to change the turning direction, adjust the speed to "0" position, press the switch below the magnetic switch.

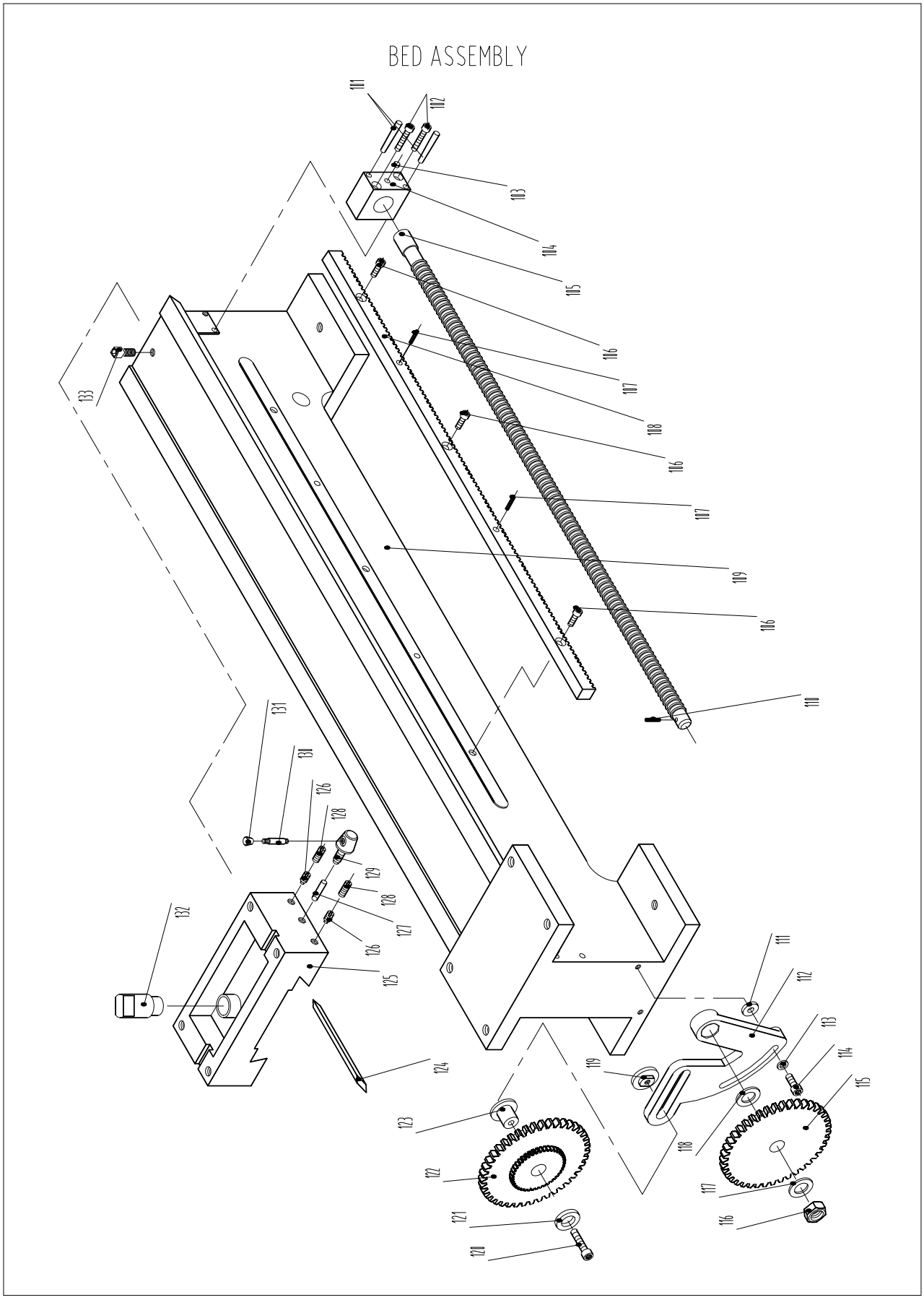
11.STANDARD ACCESSORIES

Item no.	Item name	Specification	Quantity	Remarks
1	3-jaw chuck	130mm	1	Installed
2	Dead centers	M3	1	
		M4	1	
3	Wedge		1	
4	Tie rod		1	Installed
5	Tie rod washer		1	Installed
6	Tool post wrench		1	
7	Double end wrench	13*16mm	1	
8	Allen wrench	3mm	1	
		4mm	1	
		5mm	1	
		6mm	1	
9	“-“ screw driver	100×6mm	1	
10	Duplex gears (m=1)	T=120/127	1	
		T=60/127	1	Installed
11	Gear (m=1)	T=35	1	
		T=40	1	Installed
		T=48	1	
		T=72	1	
		T=120	1	Installed

The descriptions and specifications given in the manual are subject to alteration without notice.

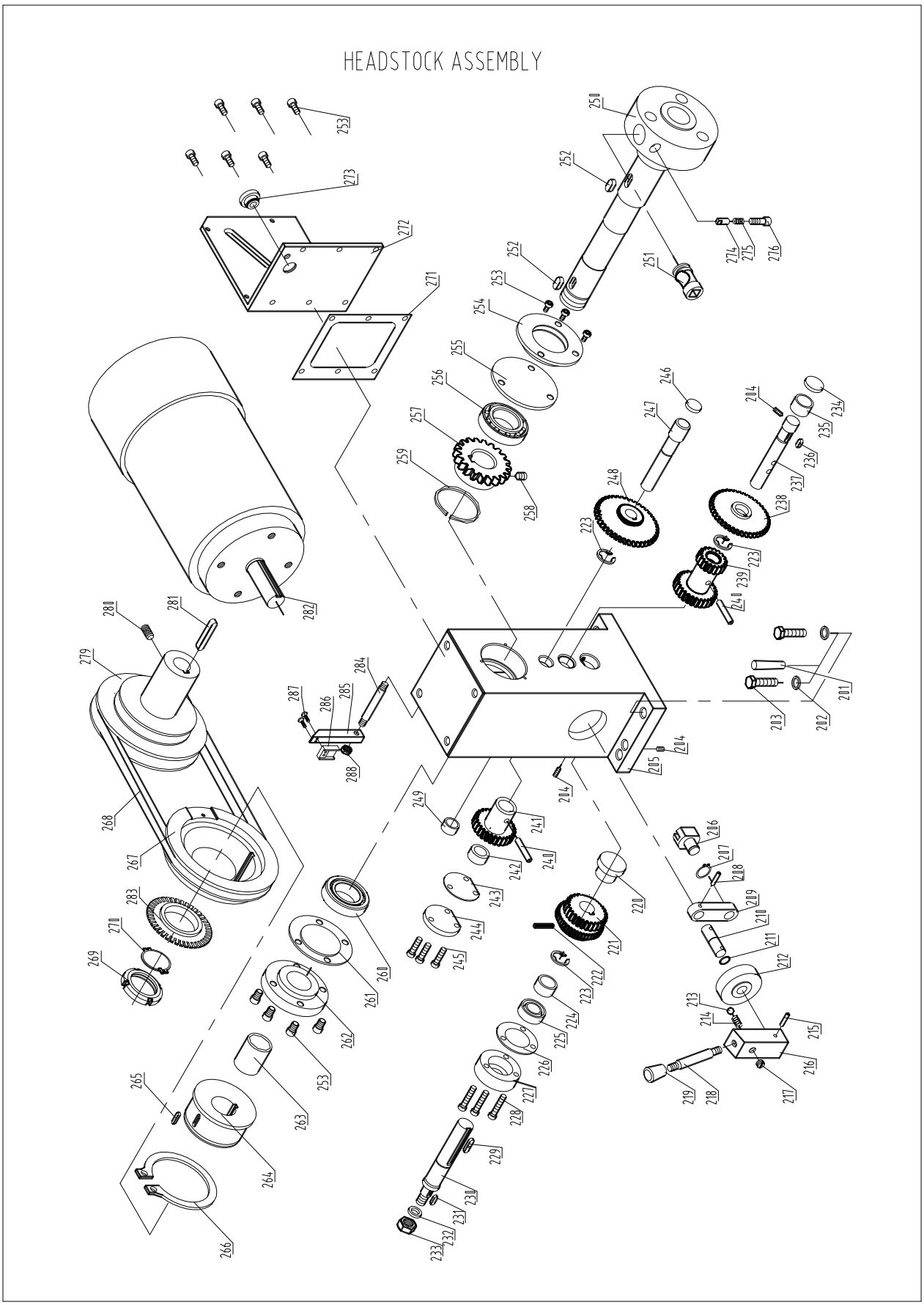
12.OPTIONAL ACCESSORIES (ACCORDING TO THE SUPPLY CONTACT)

Item no.	Item name	Specification	Quantity	Remarks
1	Lathe tool		1	
2	Milling cutter holder		1	
3	Reversible thread tapping tools		1	
4	D.C. motor system		1	
5	Machine stand		1	
6	Protection for chuck		1	
7	Protection for lead screw		1	
8	Protection for tool post		1	
9	Protection for drilling and milling		1	
10	Drill chuck	1-13mm	1	
11	Follow rest		1	
12	Steady rest		1	


BED ASSEMBLY
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BED ASSEMBLY

Index No.	Part No.	Description	QTY.
101	GB/T117	Taper pin 6×55	2
102	GB/T70	Screw M6×45	2
103	GB/T1155	Oil ball 6	1
104	HQ500-01-004	Lead screw seat	1
105	HQ800W-01-003(1)	Lead screw	1
106	GB/T70	Screw M6×18	3
107	GB/117	Taper pin B5×55	2
108	CZ1224CHG-01-007（1）	Rack	1
109	HQ800W-01-001	Bed	1
110	GB/T879	Spring pin 4×22	1
111	HQ400/3-01-013	Adjusting washer	1
112	HQ800W-01-002	Change gear bracket	1
113	GB/T97.1	Washer 6	1
114	GB/T70	Screw M6×30	1
115	HQ400/3-附 01-012	Gear T120	1
116	GB/T6170	Nut M10	2
117	GB/T97.1	Washer 10	2
118	HQ400/3-01-012	Adjusting washer	2
119	HQ400/3-01-009	T-key	1
120	GB/T70	Screw M6×40	1
121	GB5287-85	Washer	1
122	HQ500-01 特 02-002	Duplex gear T60/T127	1
123	HQ400/3-01-010	T-key	1
124	HQ400-11-016	Gib	1
125	HQ400-11-004	Tailstock base	1
126	GB/T79	Screw M8×14	2
127	HQ400-11-015	Locking block	1
128	GB/T77	Screw M8×25	2
129	HQ400-11-022	Locking screw	1
130	JB/T7271.6	Handle rod M6×50	1
131	JB/T7271.3	Handle gripe	1
132	HQ400-11-034	Stop pin	1
133	GB/T70	Screw M8×14	1

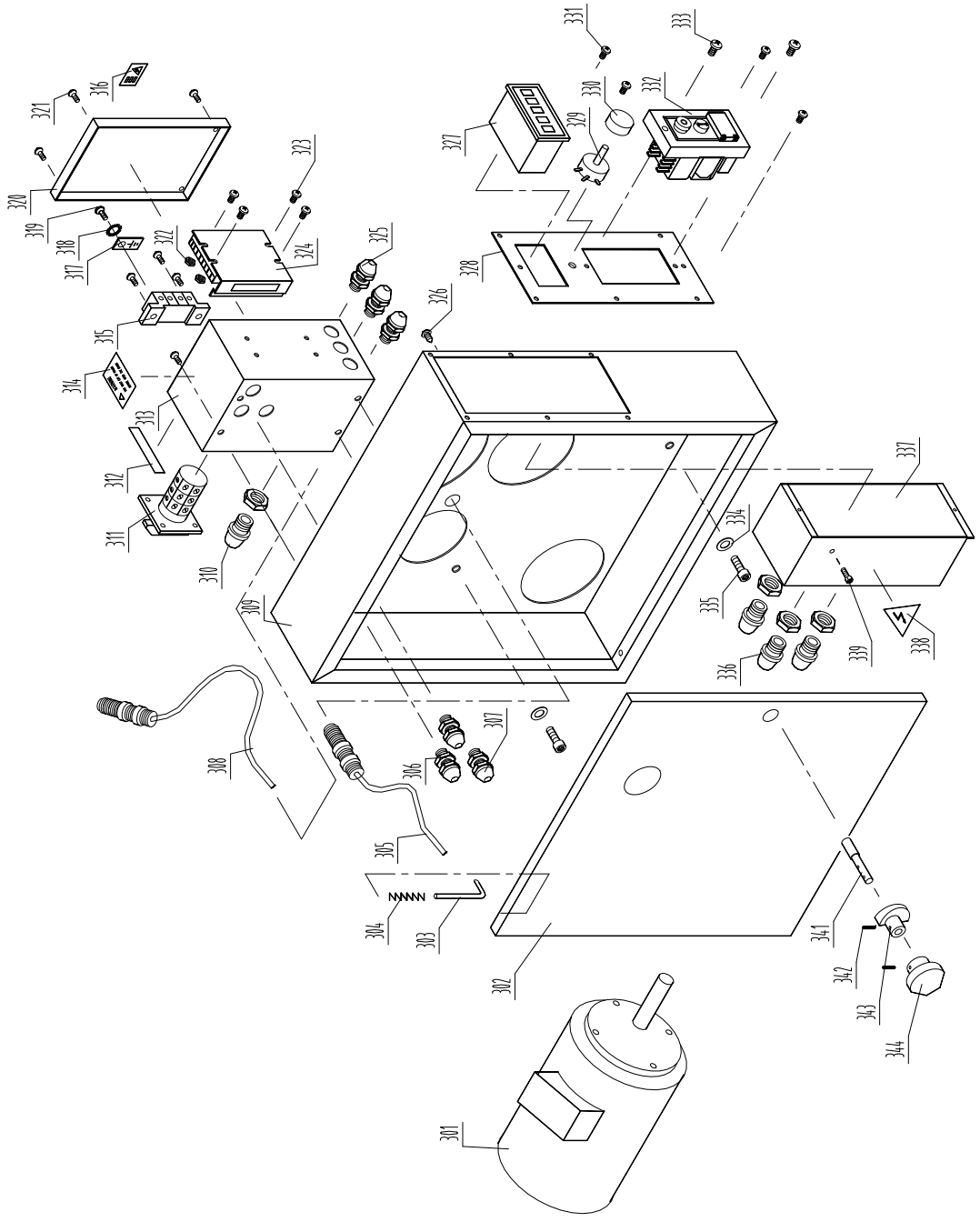

HEADSTOCK ASSEMBLY

HEADSTOCK ASSEMBLY

Index No.	Part No.	Description	QTY.
201	GB/T117	Taper bin 8×40	2
202	GB/T97.2	Washer 10	4
203	GB/T5781	Bolt M10×35	4
204	GB/T78	screw M5×12	3
205	HQ500-02-005	Headstock	1
206	HQ500-02-027	Fork	1
207	GB/T894.1	Retain ring (external)12	1
208	GB/T879.1	Spring pin 5×18	1
209	CZ300A-03-050	Fork arm	1
210	HQ400/3-02-041	Straight pin	1
211	GB/T3452.1	O-ring 8.5×1.8	1
212	HQ500-02-013	Spacer	1
213	GB/T308	Steel ball 6.5	1
214	GB/T2089	Spring 1×6×15	1
215	GB/T879	Spring pin 4×40	1
216	HQ400/3-02-022	Handle seat	1
217	GB/T73	flat point set screw M8×5	1
218	HQ400-13-005	Handle	1
219	GB/T4141.12	Handle knob M10×32	1
220	GB/T1160	Oil glass	1
221	HQ500-02-025	Triplex gear	1
222	GB/T879	Spring pin 3×8	1
223	GB/T894.1	Retain ring (external)14	3
224	HQ500-02-015	Brass bushing	1
225	HG4-692-67	O-ring PD15×30×10	1
226	HQ400/3-02-005	Gasket	1
227	HQ400/3-02-002	O-ring seat	1
228	GB/T65	Bolt M5×20	3
229	HQ500-02-028	Key	1
230	HQ500-02-021	Shaft D	1
231	GB/T1096	Key 4×8	1
232	GB/T848	Washer 10	1
233	GB/T6170	Nut M10	1
234	HQ500-02-020	Hole plug	1
235	HQ500-02-014	Brass bushing	1
236	GB/T1096	Key 5×14	1
237	HQ500-02-017	Shaft C	1
238	HQ400/3-02-012	Gear C	1
239	HQ500-02-026(2)	Gear C(2)	1
240	GB/T879	Spring pin 4×20	2
241	HQ500-02-026(1)	Gear C (1)	1
242	HQ400/3-02-038	Brass bushing	1
243	HQ400/3-02-026	Gasket	1

244	HQ500-02-022	Cover	1
Index No.	Part No.	Description	QTY.
245	GB/T818	Screw M5×12	3
246	HQ500-02-019	Hole plug	1
247	HQ500-02-009	Shaft B	1
248	HQ400/3-02-013	Duplex gear B	1
249	HQ400/3-02-030	Brass bushing	1
250	HQ800W-02-001	Spindle	1
251	CZ1340G-02-034	Locking bolt	3
252	GB/T1096	Key 8×22	2
253	GB/T70	screw M5×16	13
254	DIY1619-02-036	Cover	1
255	DIY1619-02-037	Gasket	1
256	GB/T297	Taper roller bearing 2007109	1
257	HQ500-02-006	Gear A	1
258	GB/T71	screw M8×10	1
259	GB/T921	Locking ring 47	1
260	GB/T297	Taper roller bearing 2007108	1
261	HQ500-02-003	Gasket	1
262	HQ500-02-002	Flange	1
263	HQ800W-02-002	Spacer	1
264	HQ500-02-024	Pulley bushing	1
265	GB/T1096	Key 10×25	1
266	GB/T894.1	Retain ring(external) 63	1
267	HQ800W-02-003	Pulley	1
268	GB/T11544-89	V-belt A-1000	1
269	GB/T812	Spanner nut M40×1.5	1
270	GB/T858	Locking washer 40	1
271	HQ500-02-012	Gasket	1
272	HQ500-02-011	Bracket	1
273	CM1224C-03-034	Oil plug	1
274	CZ1340G-02-035	Pin	3
275	GB/T2089	Spring 0.6×3×10	3
276	GB/T70	Screw M8×20	3
279	HQ800W-02-004	Motor pulley	1
280	GB73	Screw M8×12	1
281	GB 1096-79	Key 6×40	1
282		DC Motor (1.1KW 1400rpm)	1
283	HQ800W-02-009	Induce circle	1
284	HQ800W-02-007	Bolt	1
285	HQ800W-02-008	Sensor seat	1
286	CX16DW-03-026	Sensor cover	1
287	GB823-85	Screw	1
288	GB41-86	Nut M8	1

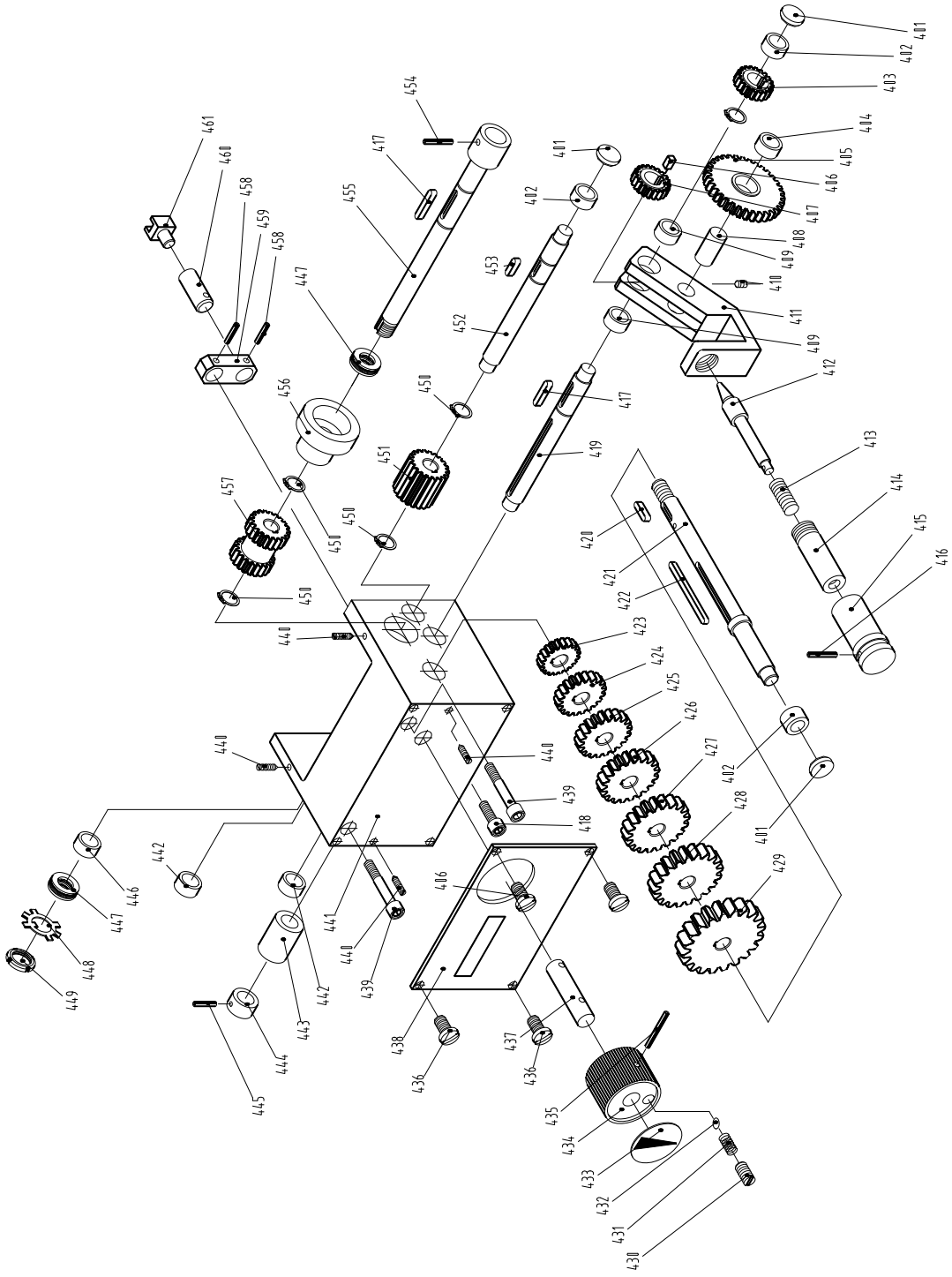
ELECTRICAL SYSTEM ASSEMBLY



ELECTRICAL SYSTEM ASSEMBLY

Index No.	Part No.	Description	QTY.
301	DC90V /1400RPM	Motor	1
302	HQ800W-03-009	Protector door	1
303	CZ300A-08-007	Pin	1
304	CZ300A-08-006	Spring	1
305	E3F-DS10C1	Sensor	1
306	JB/T8774.8	Pipe connector M20×1.5	2
307	JB/T8774.8	Pipe connector M16×1.5	1
308	E3F-DS10C1	Sensor	1
309	HQ800W-03-007	Protector	1
310	JB/T8774.8	Pipe connector M20×1.5	1
311	LW26-20/HQ500-03T03-006	Complex switch	1
312	HQ800W-03-013	Indicator	1
313	HQ800W-03-002	Electrical system box	1
314	CZ1340G-09-013	Attention plate	1
315	HQ400	Connecting base	1
316	CZ1237G-09-011	Electrical plate	1
317	CM1224C-09-005	Connecting with earth plate	1
318	GB/T862.1	Washer	2
319	GB/T818	Screw M4×8	4
320	HQ800W-03-003	Electrical system box cover	1
321	GB/T818	Screw M4×8	4
322	GB/T6170	Nut M4	6
323	GB/T818 M4*12	Screw	4
324	DART-125D	Variable speed control	1
325	JB/T8774.8	Pipe connector	3
326	GB/T818	Screw M4×8	1
327		Digital tachometer	1
328	HQ800W-03-006	Fitting plate	1
329	ML1744 1.5K	Speedpot	1
330	ML1744	Speedpot knob	1
331	GB/T818	Screw M4×10	6
332	KID11-10D	Magnetic switch	1
333	GB/T818	Screw M4×12	2
334	GB/T85	Washer 5	4
335	GB/T70	Screw M5×10	4
336	JB/T8774.8	Pipe connector	3
337	HQ800W-03-005	Switch protector	1
338	HQ400-03-008(3)	Warning sign	1
339	GB/T818	Screw M4×8	1
341	CZ300A-08-008	Pin	1
342	GB/T879	Spring pin 3×14	2
343	CZ300A-08-005	Locking block	1
344	GB/T4141.29	Handle	1

GEARBOX ASSEMBLY

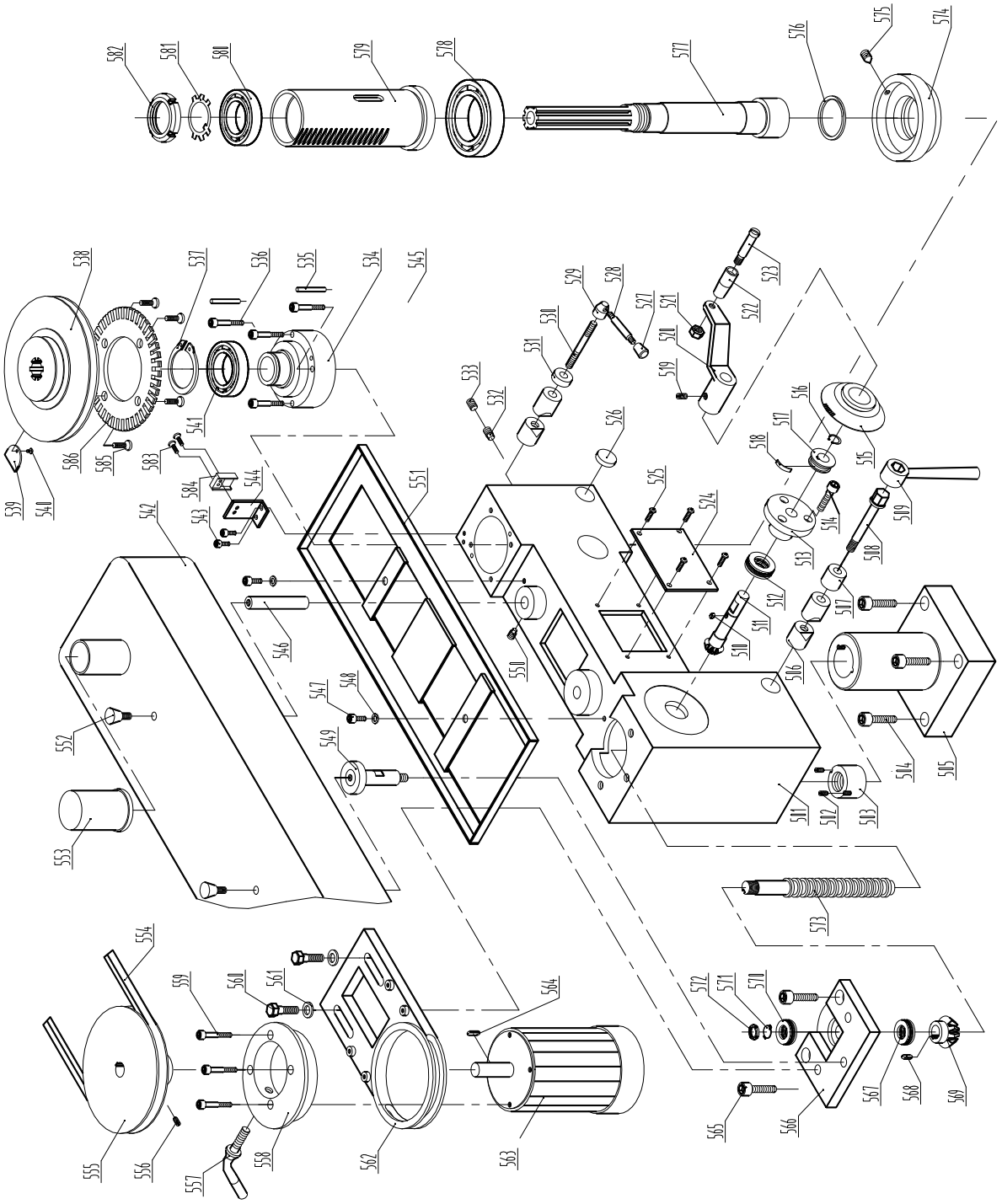


GEARBOX ASSEMBLY

Index No.	Part No.	Description	QTY.
401	HQ800W-04-021	Cover	3
402	HQ800W-04-020	Right sleeve	3
403	HQ800W-04-022	Gear T24	1
404	HQ800W-04-005	Gear sleeve	1
405	HQ800W-04-006	Gear T36	1
406	GB/T1096	Key4×8	1
407	HQ800W-04-008	Gear T24	1
408	GB/T119	Pin B12×24	1
409	HQ800W-04-007	Sleeve	2
410	GB/T71	Screw M5×6	4
411	HQ800W-04-032	Handle seat	1
412	HQ800W-04-033	Locating pin	1
413	GB/T2089	Spring 1×10×38	1
414	HQ800W-04-034	Locating seat	1
415	HQ800W-04-035	Handle	1
416	GB/T879	Spring pin3×22	1
417	GB/T1096	Key4×25	2
418	GB/T70	Screw M6×20	1
419	HQ800W-04-019	Shaft B	1
420	GB/T1096	Key 4×16	1
421	HQ800W-04-018	Shaft A	1
422	GB/T1096	Key 4×55	1
423	HQ800W-04-011	Gear T25	1
424	HQ800W-04-012	Gear T28	1
425	HQ800W-04-013	Gear T30	1
426	HQ800W-04-014	Gear T32	1
427	HQ800W-04-015	Gear T35	1
428	HQ800W-04-016	Gear T38	1
429	HQ800W-04-017	Gear T40	1
430	GB/T77	Screw M8×8	1
431	GB/T2089	Spring 1×5×20	1
432	GB/T308	Steel ball6.5	1
433	HQ800W-04-037	Indicator	1
434	HQ800W-04-030	Handle	1
435	GB/T879	Spring pin 4×40	1
436	GB/T823	Screw M4×8	4
437	GB/T119	Pin B12×50	1
438	HQ800W-04-031	Plate	1
439	GB/T70	Screw M6×85	2
440	GB/T78	Screw M5×16	2
441	HQ800W-04-001	Gearbox	1
442	HQ800W-04-004	Left sleeve	2
443	HQ800W-04-010	Shaft sleeve	1
444	HQ800W-04-009	Locating sleeve	1

Index No.	Part No.	Description	QTY.
445	GB/T879	Spring pin 4×18	1
446	HQ800W-04-003	Left sleeve for shaft D	1
447	GB/T301	Bearing 51101	1
448	GB/T858	Washer 12	1
449	GB/T810	Nut M12×1.25	1
450	GB/T894.1	Retain ring (external) 12	5
451	HQ800W-04-024	Gear T20	1
452	HQ800W-04-023	Shaft C	1
453	GB/T1096	Key 4×14	1
454	GB/T879	Spring pin 4×22	1
455	HQ800W-04-002	Shaft D	1
456	HQ800W-04-026	Bearing seat	1
457	HQ800W-04-025	Duplex gear T24	1
458	GB/T879	Spring pin 4×16	2
459	HQ800W-04-029	Arm	1
460	HQ800W-04-028	Pin	1
461	HQ800W-04-027	Fork	1
462	GB/T301	Thrust ball bearing 51102	1

MILLING AND DRILLING ASSEMBLY

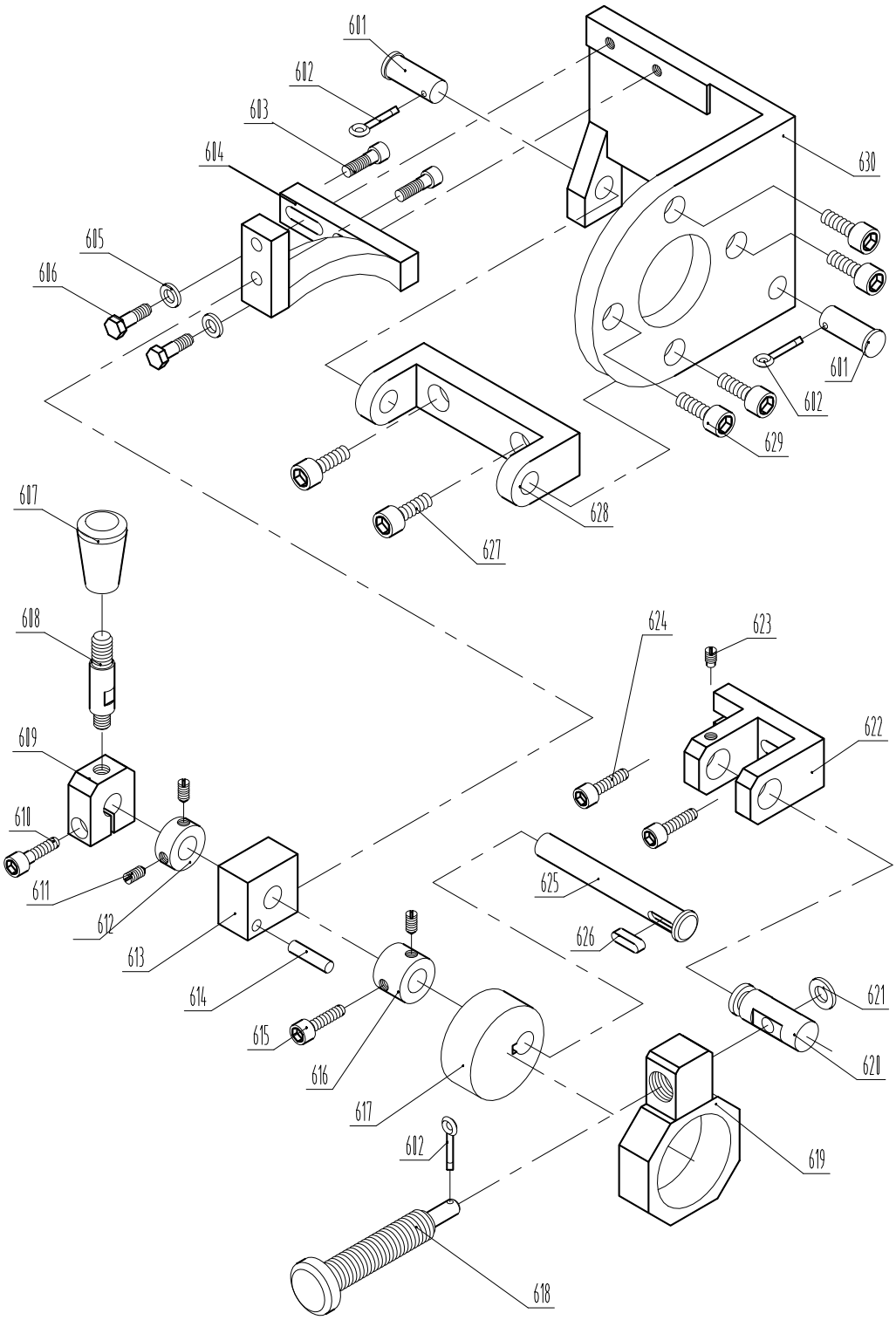


MILLING AND DRILLING ASSEMBLY

Index No.	Part No.	Description	QTY.
501	HQ800W-05-002	Mill-drill head	1
502	GB/T71-85	ScrewM6×20	2
503	HQ800W-05-010	Nut	1
504	GB70	Screw M10×40	1
505	HQ500-05-001	Support column	1
506	HQ500-05-003	Brake block (pair)	2
507	HQ500-05-004	Brake spacer	1
508	HQ500-05-022	Screw	1
509	CX16-03-006	Handle	1
510	GB/T1096-79	Key4×8	1
511	HQ800W-05-003	Gear shaft	1
512	GB/T301-94	Bearing51102	1
513	HQ800W-05-006	Gear shaft seat	1
514	GB/T70-85	Screw M6×10	1
515	HQ800W-05-004	Dial	1
516	GB/T894.1-86	Retain ring (external) 15	4
517	HQ800W-05-005	Dial seat	1
518	HQ500-10-016	Spring piece	1
519	GB/T77-85	Screw M8×10	1
520	ZX32W-01-017	Shaft	1
521	GB/T6172-86	Nut M8	1
522	JB/T72704-94	Handle M8×65	1
523	GB/T77-85	Screw M8×10	1
524	HQ800W-05-015	Name plate	1
525	GB/T818	Screw M5×8	4
526	HQ500-05-005	Hole plug	2
527	GB/T4141.12-84	Handle knob BM10×32	1
528	GB/T4141.15-84	Handle M10×50	1
529	GB/T4141.16-84	Handle seat BM10×20	1
530	GB/T899	Stud AM10×80	1
531	HQ500-05-004	Brake spacer	1
532	GB/T75	Screw M10×14	1
533	GB/T73	Screw M10×12	1
534	HQ500-05-009	Pulley seat flange	1
535	BG/T117-86	Taper pin ΦA5×45	2
536	GB/T70	Screw M6×40	4
537	GB/T894.1	Retain ring (external) 40	1
538	HQ800W-05-014	Milling-drilling pulley	1
539	HQ800W-03-011	Flashing piece	1
540	GB/T65	Screw M3×10	1
541	GB/T276	Ball bearing 108Z	1
542	HQ800W-05-021	Upper cover	1
543	GB/T70	Screw M4×12	2
544	HQ800W-03-022	Sensor seat	1
545	GB/T6172-86	Nut M5	1
546	HQ500-05-019	Upper cover post	1
547	GB/T70	Screw M6×12	2
548	GB/T97.1	Washer Φ6	2

549	HQ500-05-012	Upper cover post	1
550	GB/T79	Screw M8×12	1
551	HQ800W-05-012	Lower cover	1
552	GB/T4141.26-84	Knob CM8×25	2
553	HQ400-24-021	Cap	1
554	GB/T1154	V-belt A1321	1
555	HQ800W-05-020	Motor pulley	1
556	GB/T73	Screw M8×12	1
557	HQ500-05-017	Tension handle	1
558	HQ800W-05-017	Eccentric flange	1
559	GB/T70	Screw 6×20	4
560	GB/T5781	Hex head screw M10×30	2
561	GB/T97.1	Washer 10	2
562	HQ800W-05-018	Motor mount	1
563		Motor (1.1KW-4P 1400rpm)	1
564	GB/T 1096	Key 6×40	1
565	GB/70	Screw M10×20	2
566	HQ800W-05-008	Screw seat	1
567	GB/T301	Bearing 51103	1
568	GB/T1096	Key 5×20	1
569	ZX32W-01-007	Gear	1
570	GB/T301-94	Bearing 51103	1
571	GB/T858	Washer Φ16	1
572	GB/T812	Spanner nut M16×1.5	1
573	HQ800W-05-009	Screw	1
574	HQ400-22-002	Cover	1
575	GB/T71	Screw M5×8	1
576	HQ400-22-001	Gasket	1
577	HQ500-08-002	Spindle	1
578	GB/T297	Ball bearing 2007107	1
579	HQ500-08-001	Quill	1
580	GB/T297	Bearing 2007106	1
581	GB/T858	Washer 30	1
582	GB/T812	Spanner nut M30×1.5	1
583	GB823-85	Screw M3×12	2
584	CX16DW-03-026	Sensor cover	1
585	GB70-85	Screw M5×10	4
586	HQ800W-05-021	Induce circle	1

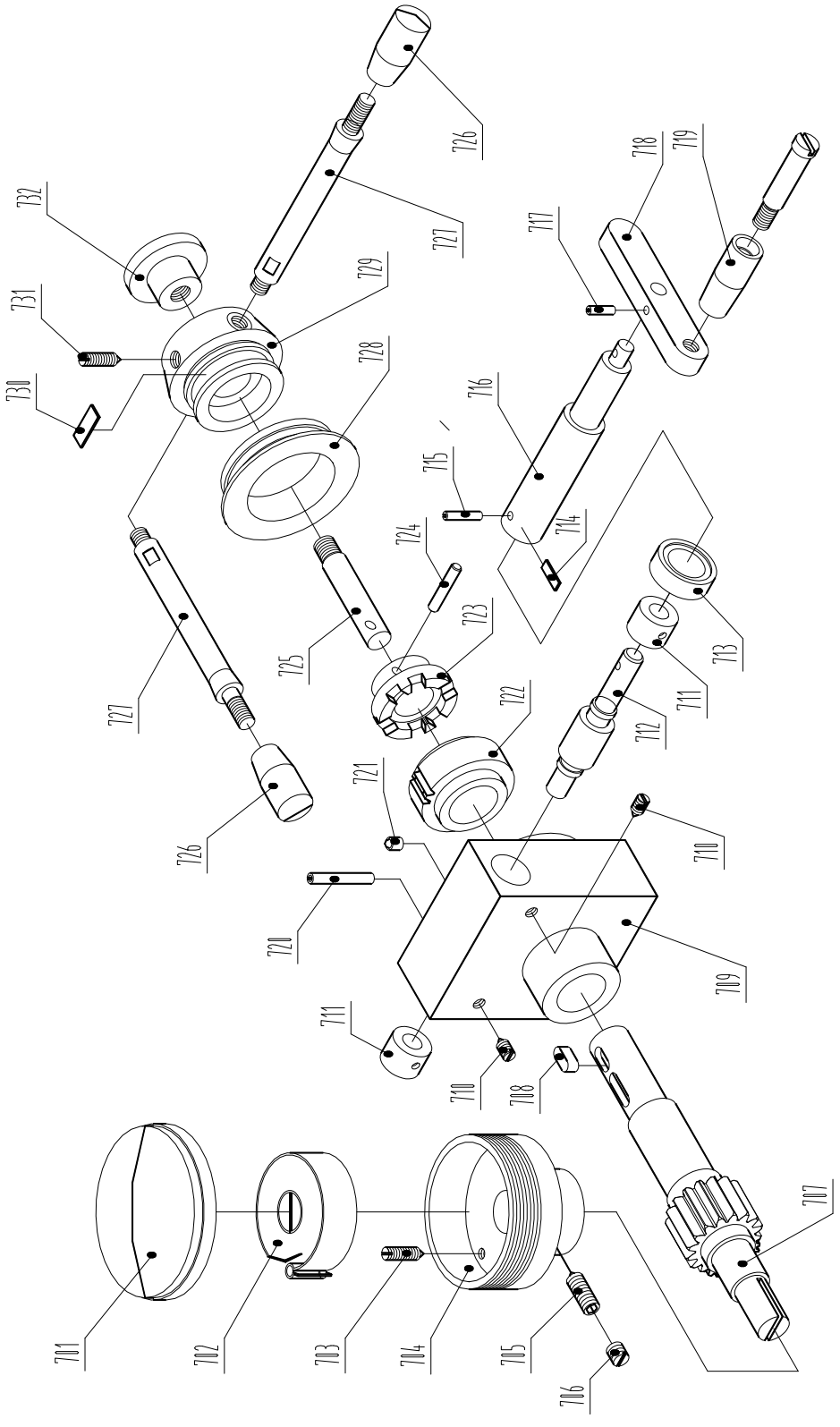
MOTOR PULLEY TENSION STRUCTURE ASSEMBLY



MOTOR PULLEY TENSION STRUCTURE ASSEMBLY

Index No.	Part No.	Description	QTY.
601	HQ800W-06-016	Pin	2
602	GB/T91	Pin 3	3
603	GB/T70	Screw M6×15	2
604	HQ800W-06-013	Connecting board	1
605	GB/T95	Washer 6	2
606	GB/T5780	Bolt M6×20	2
607	GB/T4141.12	Handle knob M10×32	1
608	HQ800-06-001	Handle	1
609	HQ800-06-002	Handle seat	1
610	GB/T70	Screw M6×30	1
611	GB/T73	Screw M6×8	3
612	HQ800W-06-012	Spacer **B**	1
613	HQ800W-06-011	Connecting block	1
614	GB/T119	Pin 6×25	1
615	GB/T70	Screw M6×15	1
616	HQ800W-06-010	Spacer **A**	1
617	HQ800W-06-008	Eccentric block	1
618	HQ800W-06-006	Screw	1
619	HQ800W-06-009	Eccentric block seat	1
620	HQ800W-06-007	Shaft	1
621	GB/T95	Washer 8	1
622	HQ800W-06-004	Fitting seat	1
623	GB75-85	Screw	1
624	GB/T70	Screw M6×20	2
625	HQ800W-06-003	Shaft	1
626	GB 1096-79	Key 5×18	1
627	GB/T70	Screw M8×20	2
628	HQ800W-06-015	Motor seat	1
629	GB/T70	Screw M8×20	4
630	HQ800W-06-014	Motor board	1

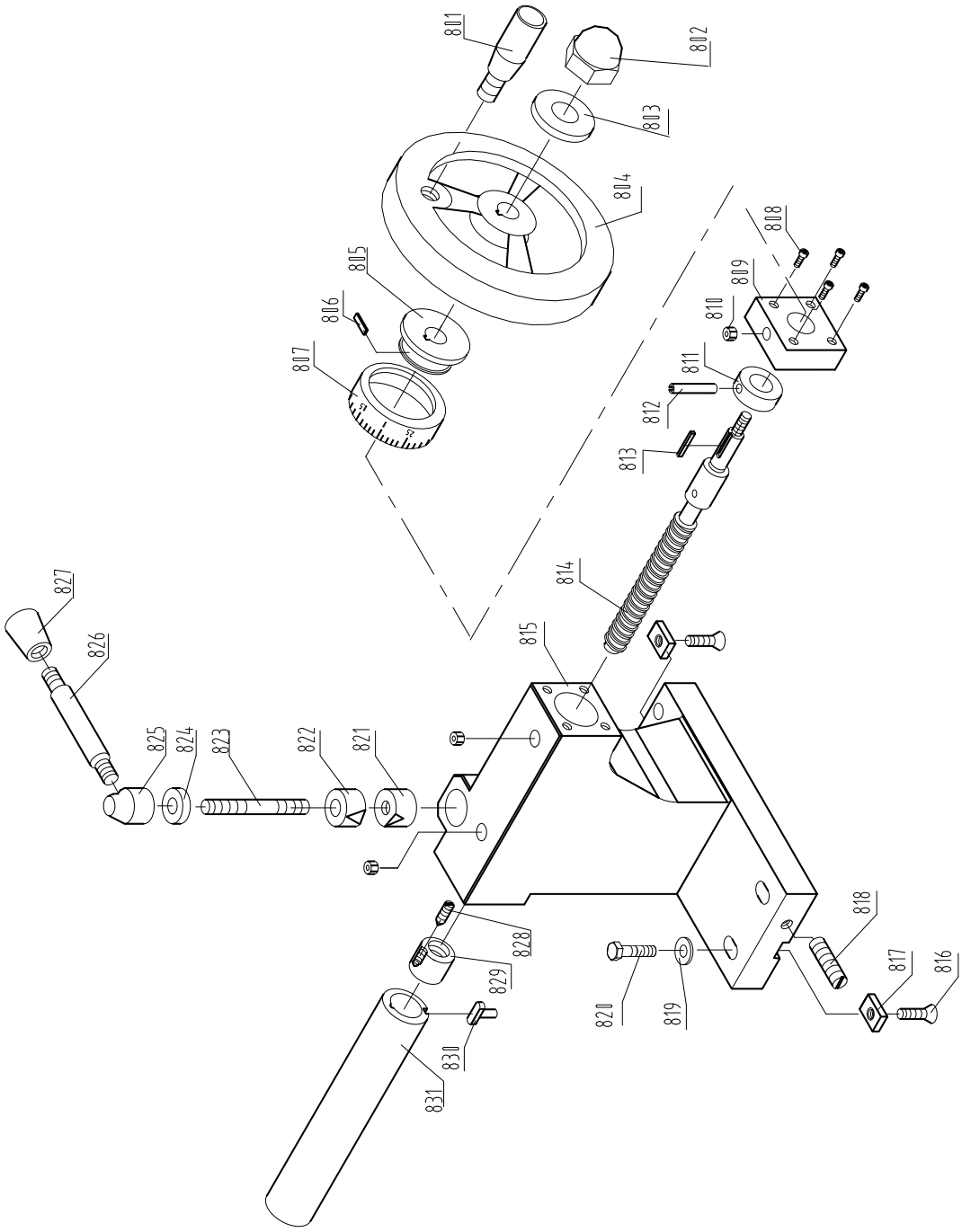
SPINDLE ASSEMBLY



SPINDLE FEEDING ASSEMBLY

Index No.	Part No.	Description	QTY.
701	HQ400-24-019	Cover	1
702	HQ500-05-006	Volute spring	1
703	GB/T71	Screw M5×25	1
704	HQ500-05-007	Volute spring box	1
705	GB/T78	Screw M8×20	2
706	GB/T73	Screw M8×12	3
707	HQ400/4-07-001	Gear shaft	1
708	GB/T1096	Key A6×14	1
709	HQ400/4-07-002	Feeding box	1
710	GB/T71	Screw M6×8	2
711	Hq400-23-010	Bushing	2
712	HQ400-23-004	Worm	1
713	HQ500-05-005	Dial	1
714	HQ500-10-016	Spring piece	1
715	GB/T879	Spring pin 4×20	1
716	HQ500-07-003A	Handle	1
717	GB/T879	Spring pin 4×14	1
718	GB/T4141.4	Handle12 ×50	1
720	GB/T879	Spring pin 5×35	1
721	GB/T1155	Oil ball 6	1
722	HQ400-23-005	Worm wheel	1
723	HQ400-23-006	Clutch	1
724	GB/T119	Pin D5×28	1
725	Hq400-23-009	Shaft	1
726	GB/T4141.14	Handle knob BM8×40 2	2
727	HQ400-23-001	Handle	2
728	HQ400-23-007	Dial	1
729	HQ400-23-013	Dial seat	1
730	HQ400-23-008	Spring piece	1
731	GB/T71	Screw M6×18	1
732	GB/T4141.27	Handle BM10×40	1

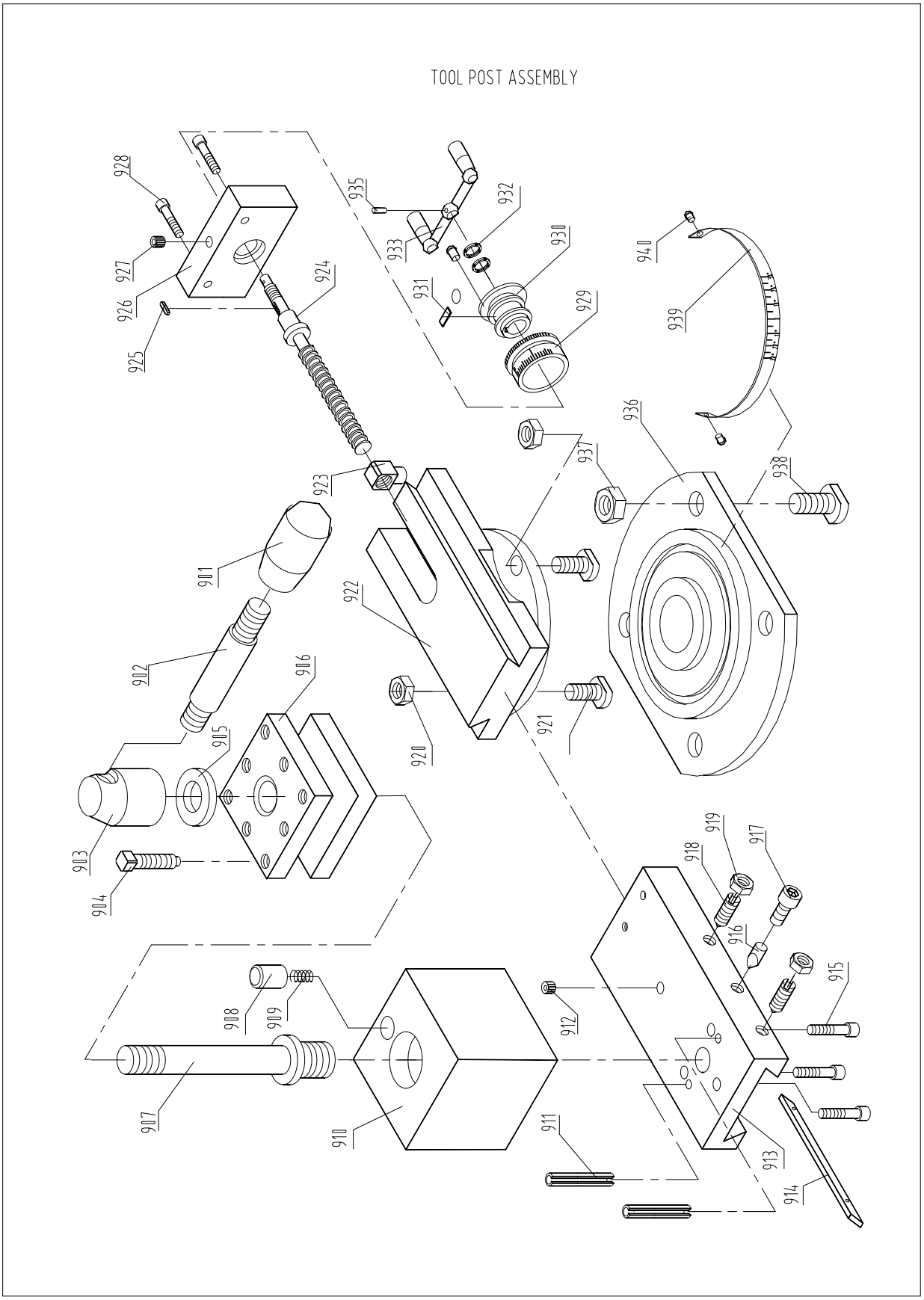
TAILSTOCK ASSEMBLY



TAILSTOCK ASSEMBLY

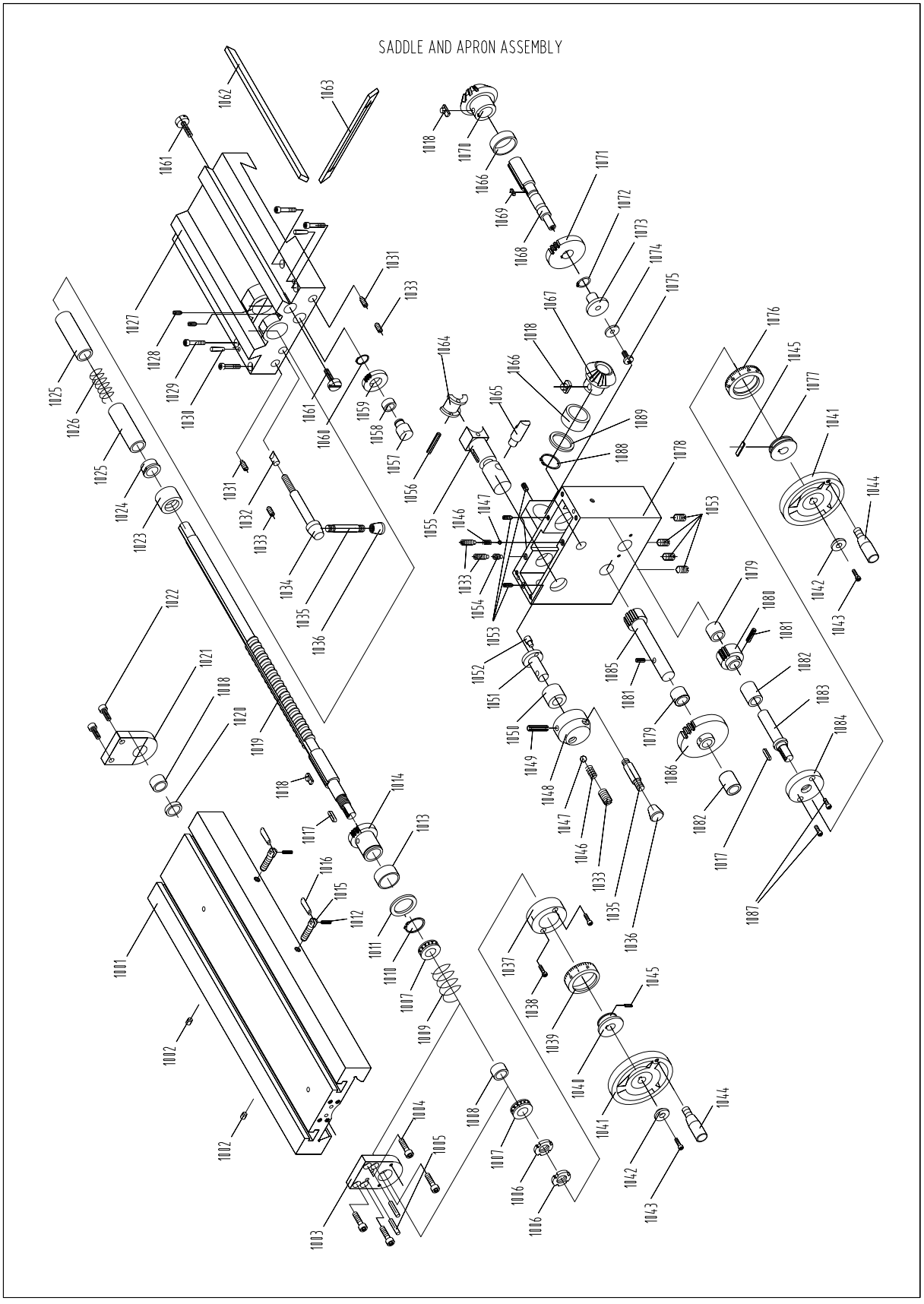
Index No.	Part No.	Description	QTY.
801	JB/T7270.5-94	Handle M6×50	1
802	GB/T923-88	Acorn Nut M10	1
803	GB/T97-85	Flat Washer 10	1
804	JB/T7273.3-94	Hand Wheel B12×100	1
805	HQ400/4-10-015	Scale ring base	1
806	HQ500-10-016	Spring piece	1
807	HQ400-13-010	Scale ring	1
808	GB/T70-85	Screw M5×20	4
809	HQ400-13-009	Feed Screw Socket	1
810	JB/T7940.4-95	Oiler	3
811	HQ400-13-008	Bracket	1
812	GB/T119-86	Pin D5×24	1
813	GB/T1096-79	Key C4×18	1
814	HQ400-13-006	Feed Screw	1
815	HQ400-13-001	Tail Stock Body	1
816	GB/T819-85	Screw M5×14	2
817	HQ400-13-004	Key	2
818	GB/T73-85	Screw M10×50	2
819	GB/T97.2-85	Washer 10	4
820	GB/T5780-86	Screw M10×40	4
821	HQ400-13-011	Locking block (Bottom)	1
822	HQ400-13-012	Locking block (Top)	1
823	GB/T899-85	Double-Screw Bolt AM10×40	1
824	HQ400-13-013	Washer	1
825	HQ400-13-004	Locking Nut	1
826	HQ400-13-005	Locking Lever	1
827	JB/T7271.3-94	Knob M10×32	1
828	GB/T71-85	Set Screw M4×8	1
829	HQ400-13-007	Feed Nut	1
830	HQ400-13-003	T-Key	1
831	HQ400-13-002	Tail Stock Barrel	1

TOOL POST ASSEMBLY



TOOL POST ASSEMBLY

Index No.	Part No.	Description	QTY.
901	GB/T4141.2	Taper knob M10×32	1
902	DJ136/1-018	Handle lever M10	1
903	DJ136/1-017	Handle seat	1
904	GB/T85	Square head bolt M8×25	8
905	DJ136/1-016	Set washer	1
906	DJ136/2-005	Tool post	1
907	DJ136/2-006	Double head bolt	1
908	DJ133/2-007	Positioner	1
909	GB/T2089	Spring Φ5×Φ0.6×30	1
910	DJ136/2-004	Tool base	1
911	GB/T879	Spring pin 5×30	2
912	GB/T1155	Oil ball 6	1
913	DJ136/2-003	Upper slider	1
914	DJ136/2-009	Upper slider gib	1
915	GB/T70	screw M6×16	3
916	DJ136/2-008	Set pin	1
917	GB/T70	screw M5×8	1
918	GB/T71	Slotted set screw M5×16	2
919	GB/T41	Hexagon nut M5	2
920	GB/T41	Hexagon nut M8	2
921	GB/T37	T-bolt M8×28	2
922	DJ136/2-002	Swivel base	1
923	DJ136/2-015	Lead screw nut	1
924	DJ136/2-014	Lead screw	1
925	GB/T1096	Key 4×15	1
926	DJ136/2-013	Lead screw seat	1
927	GB/T1155	Oil ball 6	1
928	GB/T70	screwM6×16	2
929	DJ136/2-012	Dial	1
930	DJ136/2-010	Dial seat	1
931	DJ136/2-011	Spring piece	1
932	GB/T810	Slotted round nut M10×1	2
933	GB/T4141.10	Bi-lever balance handle8×25	1
935	GB/T117	Taper pin 3×16	1
936	DJ136/2-001	Base	1
937	GB/T41	Hexagon head nut M10	2
938	GB/T37	T-bolt M10×28	2
939	DJ136/2-017	Angle ruler	1
940	GB/T876	Rivet Φ2×5	2

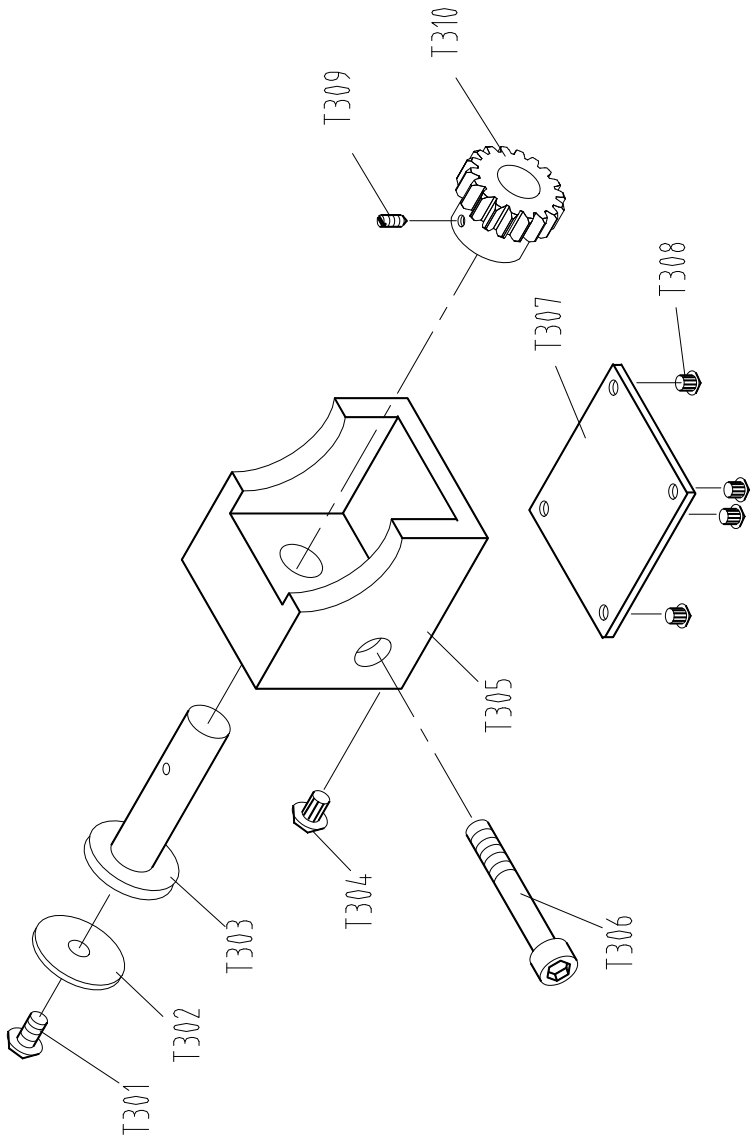

SADDLE AND APRON ASSEMBLY

SADDLE AND APRON ASSEMBLY

Index No.	Part No.	Description	QTY.
1001	HQ500-10-003	Table	1
1002	JB/T 7940.4-4	Oil ball 6	6
1003	HQ500-10-010	Lead screw seat (B)	1
1004	GB/T 70-85	Screw M5×16	4
1005	GB/T 879-5	Spring pin 5×20	2
1006	GB/T 810-13	Spanner nut M14×1.5	2
1007	GB/T 301-11	Thrust ball bearing8102	2
1008	HQ500-10-011	Spacer A	2
1009	HQ500-10-048	Spring B	1
1010	GB/T 894.1-9	Retain ring (external) 26	1
1011	HQ500-10-046	Washer	1
1012	GB/T 879-7	Spring pin 2×10	2
1013	HQ500-10-045	Spacer G	1
1014	HQ500-10-010	Gear A	1
1015	HQ500-10-006	Locking screw	2
1016	CM1224C-05-022B	Locking lever	2
1017	GB/T 1096-14	Key 4×18	2
1018	HQ500-10-030	T-Key	2
1019	HQ500-10-008	Cross feeding lead screw	1
1020	HQ500-10-050	Washer	1
1021	HQ500-10-007	Lead screw (A)	1
1022	GB/T 70-85	Screw M6X16	2
1023	HQ500-10-009	Cross feeding lead nut	1
1024	HQ500-10-051	Spacer	1
1025	HQ500-10-049	Spacer	2
1026	HQ500-10-047	Spring A	1
1027	HQ500-10-002	Saddle	1
1028	GB/T 71-85	Screw M6×8	10
1029	GB/T 70-85	Screw M6×35	4
1030	GB/T 117-6	Tap pin A5×25	2
1031	GB/T 75-85	Screw M8×16	2
1032	HQ400-11-014	Locking washer	1
1033	GB/T 73-85	Screw M8×8	5
1034	HQ500-10-025	Locking screw	1
1035	HQ400-00-016	Handle rod	2
1036	JB/T 7271.3-23	Handle knob M6×20	2
1037	HQ500-10-013	Fixing sleeve (A)	1
1038	GB/T 70-85	Screw M5×16	4
1039	HQ500-10-014	Dial	1
1040	HQ500-10-015	Dial seat (A)	1
1041	JB/T 7273.3-16	Hand wheel B12×100	2
1042	HQ500-10-018	Washer	2
1043	GB/T 70-15	Screw M4×12	2
1044	JB/T 7270.4-17	Handle M6×50	2

Index No.	Part No.	Description	QTY.
1045	HQ500-10-016	Spring piece	2
1046	CM1224C-06-007	Spring	2
1047	GB/T 308-2	Steel ball 6.5	2
1048	HQ500-10-036	Handle seat	1
1049	GB/T 879-26	Pin 4×40	1
1050	HQ500-10-035	Spacer (E)	1
1051	HQ500-10-034	Eccentric wheel	1
1052	HQ400/3-06-003	Arm	1
1053	GB/T 71-85	Screw M6×8	10
104	HQ500-10-001	Screw	1
1055	HQ500-10-033	Half nut seat	1
1056	GB/T 879-25	Spring pin 4×30	1
1057	HQ500-10-043	Shaft	1
1058	HQ500-10-037	Spacer (F)	1
1059	HQ500-10-042	Gear T32	1
1060	GB/T 894.1-27	Retain ring (external) 12	1
1061	HQ500-10-004	Screw	2
1062	HQ500-10-005	Table gib	1
1063	HQ500-10-026	Saddle gib	1
1064	HQ400/3-06-002B	Half nut	1
1065	HQ500-10-032	Stop pin	1
1066	HQ500-10-031	Spacer (D)	2
1067	HQ500-10-029A	Bevel gear	1
1068	HQ500-10-017	Shaft	1
1069	GB/T 1096-29	Key A5×8	1
1070	HQ500-10-029	Gear	1
1071	HQ500-10-027	Gear T48	1
1072	GB/T 894.1-27	Retain ring (external) 14	1
1073	HQ500-10-038	Pull-push knob	1
1074	GB/T 96-85	Washer 6	1
1075	GB/T 818-19	Screw M6×8	1
1076	HQ500-10-041	Dial	1
1077	HQ500-10-019	Dial seat (B)	1
1078	HQ500-10-028	Apron	1
1079	HQ500-10-024	Spacer (C)	2
1080	HQ500-10-023	Gear T25	1
1081	GB/T 879-21	Spring pin 4×20	2
1082	HQ500-10-022	Spacer (B)	2
1083	HQ500-10-020	Shaft	1
1084	HQ500-10-021	Fixing sleeve B)	1
1085	HQ500-10-040	Shaft gear T21	1
1086	HQ500-10-039	Gear T65	1
1087	GB/T 70-85	Screw M4×12	4
1088	GB894.1-86	Retain ring (external) 28	1
1089	HQ500-10-029B	Washer	1

THREADING DIAL



READING DIAL

Index No.	Part No.	Description	QTY.
T301	GB/T818	Screw M4×12	1
T302	HQ500-10T01-004	Indicator plate	1
T303	HQ500-10T01-002	Arbor	1
T304	GB/T827	Rivet 2×4	1
T305	HQ500-10T01-001	Threading dial seat	1
T306	GB/T70	Screw M6×50	1
T307	HQ500-00-017	Threading plate	1
T308	GB/T827	Rivet 2×4	4
T309	GB/T71	Screw M5×8	1
T310	HQ500-10T01-003	Gear T24	1