

JET

JMD-1144GHV MILLING AND DRILLING MACHINE DRO

Original:
GB
Operating Instructions



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Made in PRC / Сделано в КНР

T – 50000929T

2022-10

In addition to the safety requirements contained in these operating instructions and your country's applicable regulations, you should observe the generally recognized technical rules concerning the operation of metal machines. Any other use exceeds authorization. In the event of unauthorized use of the machine, the manufacturer renounces all liability and the responsibility is transferred exclusively to the operator.

General safety notes

Read and understand the entire instruction manual before attempting assembly or operation.



Keep this operating instruction close by the machine, protected from dirt and humidity, and pass it over to the new owner if you part with the tool. No changes to the machine may be made. Daily inspect the function and existence of the safety appliances before you start the machine. Do not attempt operation in this case, protect the machine by unplugging the power cord.

Before operating the machine, remove tie, rings, watches, other jewellery, and roll up sleeves above the elbows.

Remove all loose clothing and confine long hair.

Wear safety shoes; never wear leisure shoes or sandals.

Always wear the approved working outfit:

- safety goggles
- ear protection



Do not wear gloves while operating this machine.



Install the machine so that there is sufficient space for safe operation and workpiece handling.

Keep work area well lighted.

The machine is designed to operate in closed rooms and must be bolted stable on firm and levelled table surface or on the supplied cabinet stand.

Make sure that the power cord does not impede work and cause people to trip.

Keep the floor around the machine clean and free of scrap material, oil and grease.

Stay alert!

Give your work undivided attention.

Use common sense. Do not operate the machine when you are tired.

Keep an ergonomic body position. Maintain a balanced stance at all times.

Do not operate the machine under the influence of drugs, alcohol or any medication. Be aware that medication can change your behaviour.



Never reach into the machine while it is operating or running down.



Keep children and visitors a safe distance from the work area. Never leave a running machine unattended. Before you leave the workplace switch off the machine.

Do not operate the electric tool near inflammable liquids or gases. Observe the fire fighting and fire alert options, for example the fire extinguisher operation and place.

Do not use the machine in a damp environment and do not expose it to rain.

Before machining, remove any nails and other foreign bodies from the workpiece.

Work only with well sharpened tools.

Machine only stock which rests securely on the table. Always close the chuck cover before you start the machine.

Specifications regarding the maximum or minimum size of the workpiece must be observed.

Do not remove chips and workpiece parts until the machine is at a standstill.

Do not stand on the machine.

Connection and repair work on the electrical installation may be carried out by a qualified electrician only.



Have a damaged or worn power cord replaced immediately.

Make all machine adjustments or maintenance with the machine unplugged from the power source.



Do not over extrude material from the back of spindle bore while machine running.



WARNING

1. Read and understand the entire instruction manual before operating machine.
2. Always wear approved safety glass/face shield while using this machine.
3. Make certain the machine is properly grounded.
4. Before operating the machine, remove tie, rings, Watches other jewelry, and roll up sleeves above the elbows. Remove all loose clothing and confine long hair. DO NOT wear glove.
5. Keep the floor around the machine clean and free of scrap material, oil and grease.
6. Keep machine guards in place at all times when the machine is in use. If remove for maintenance purposes , use extreme caution and replace the guards immediately.
7. DO NOT over reach. Maintain a balance stance at all time So that you do not fall or lean against blades or other moving parts.
8. Make all machine adjustments or maintenance with the Machine unplugged from the power source.
9. Use the right tool. Don't force a tool or attachment

to do a job which it was not designed for..

10. Make certain the motor switch is in the OFF position

Before connecting the machine to the power supply.

11. Keep visitors a safe distance from the work area.

12. Never attempt any operation or adjustment if the

Procedure is not understood.

13. Keep fingers away from revolving parts and cutting

Tools while in operation.

14. Do not attempt to adjust or remove tools during

operation.

15. Always keep cutters sharp.

16. Keep away from the turning handwheel, especially high

speed.

17. Must pour the machine oil into the Gear Box and the power

Feed(optional) rightly.

18. Failure to comply with all of these warnings may cause

serious injury.

1. Attention

1.1 Inspection And Acceptance

Please check carefully when open the package and make sure no parts are missing.

1.2 Safety

Please read the operation manual carefully before the installation and adjustment of the machine. when finish the installation ,check all the details and trial run the machine idly before put it into operation .

1.3 Caution

Keep in mind the safety measures for electrical and operating protection.

2. Work Environment

2.1 The elevation of workshop has to be 2000m or less.

2.2 NO conductive dust allowed.

2.3 NO explosive factor allowed.

2.4 NO corrosive gas or steam which may corrode metal or damage the insulation.

2.5 Keep away from the source of impact or vibration.

3. Operation Instruction

3.1.1 Before starting themachine,read carefully the operation manual and be fully acquainted with all the details.

3.1.2 The operator should be familiar with all the rules and points of attention of running and maintaining the machine.

3.1.3 Remove all the anti-rust coating or grease from the machine .

3.1.4 There' s a reliable ground protection the ground wire must be connected properly before it in operation.

4. Lubrication

Lubricate the sliding and rotating part before trial run.

Pour NO.40 machine oil into the Gear Box and power Feed(optional).Till indicating through the oil level indicators then do a overall check.

Keep oil lever above the mark.

I USAGE

The machine is used for cutting metals and nonmetals. It's suitable to drill, and widely used in the field for instrument, machining, repairing for cutting a single part or a batch of parts.

II USE AND MAINTENANCE

(Refer to chart 1.)

1. The user must read the Operation Manual carefully, know structure and ability of every handle, the system of transmission and lubrication well.

2. Before operating, inspect the normal condition of the column lock handle, the spindle sleeve and electric equipments. The ground line must be connected in the ground.

3. When the position of spindle Box to the working table needs to be adjusted, two clamping shafts ① located on the right side of the hoist descend sliding must be loosened firstly, then turn the hoist descend handle in front of machine, to hoist or descend the working table to the ideal position, finally clamp the clamping shaft ②.

4. A microfeeding institute is applied to the machine, before using, please turn the locking bolt ③ in right side to form the handle

body with microgear, then turn the wheel④ in front of the head, the microfeeding can be realized.

5. The handle body must be separated from microgear during drilling, when drilling finished, loosen the handle⑤, the sleeve will reset automatically. The elastic force can be adjusted after loosening the screw locating in bottom of Spindle Box and turning the spring to different position. The spindle sleeve clamping handle ⑥ should be clamped for milling. To obtain the best effect, pls choose the 3blade vertical milling tool, the most, the working table must be hoisted to the nearest position to the spindle when the 2blade milling tool is used.

6. The spindle box that transmitted by the belt can be survived at 90° (by gear $\pm 45^\circ$) when operating, pls loose the retaining nut and pay attention these nuts need only 1 pitch, then swivel screw lever by socket headscrew wrench(S21-24) to make the spindle box swivel to the place required (clockwise turn the nut, the spindle box will counter clockwise turn, or otherwise), while turning, pls pay attention to the following item:

i: while the spindle box turn from horizontal position or cloned position to vertical position, pls help push the upper of spindle box and gently twitter it.

ii: while the spindle box turn from vertical position to

horizontal position or cloned position, pls push the upper of spindle box with hand and twitter it gently.

7. The cross—slide of spindle box can be realized through the ram moving. For cross sliding, pls firstly loosen the two clamping bolts⑨ locating on the right side of the ram, turn the gear shaft ⑩, to move the ram and spindle box, and tight the two clamping bolts.

8 .The spindle box can turn 360° around the column in the horizontal plane. To realize this, firstly loosen the 4 pcs of clamping nuts(11) un—der the ram, turn the ram to the suitable position, finally tight the 4 pcs of clamping nuts.

9. The spindle' s turn and revolve can be realized by the switch loceted in the right side of hoistdescend sliding.

10. The horizontal milling can be realized . The spindle box must be turn 180° when the tool shaft and jack applied for assistance.

11. If the machine doesn' t work well or have irregular noise, plsimme—diately shut off machine.

SPECIFICATION

Model	JMD-1144GHV DRO
Max. drilling dia. (Iron)	30mm
Max. end milling width (Iron)	100mm
Max. vertical milling dia.(Iron)	25mm
Spindle taper	ISO40
Spindle travel (V)	120mm
Worktable size	1120x280mm
T-slot size	5x14mm
Worktable travel	580/270mm
Distance between Vertical spindle and surface of column	200-650mm
Distance between Vertical spindle and surface of table	70-420mm
Distance between Horizontal spindle and surface of table	15-365mm
Swing of headstock	±45°
Spindle speed (V : 8 steps)	115-1750
Spindle speed (H : 12 steps)	40-1300
Motor power	V: 0.85/1.5kw H: 2.2kw
NW/GW	1300/1400kg
Packing size	1600x1360x2250mm

V: THE SYSTEM OF TRANSMISSION AND CHANGED SPEED

1. Transmission of power

The machine power is transmitted through gear on the shaft of motor and moving gears to the gear of spindle.

2. ① Vertical shaft: when change speed, first cut off power, then change the handle to the position (A or B, C or D) you want (Gear Head).

② Horizontal shaft: when change speed, must cut off power then change the handle (12, 13, 14) to the position (I or II or III; A or B; C or D).

Lubricate the gears often.

3. Belt head of machine transmit power from double speed motor to spindle through a V-belt .

Vertical shaft: when changing speed , open the two side cover of upper spindle box, loosen the tightened bolt of motor, move handle on the rightside to loosen the belt , change bolt to the position needed, remove motor and make belt fitted, tighten the tightened bolt and then work. (Belt head)

VI THE LUBRICATION OF MACHINE AND ROLLING BEARING

1. Each rolling bearing to lubricated with lubricating fat on time (prefer to chart-2)

2. spindle, sleeve, column, table etc, should be lubricated at the right moment.

VII ELECTRIC SYSTEM

1. Electrical circuit adopt the advanced international component to make up, which make the machine easy to operate and safe.

VIII TRANSPORT AND ATTENTION

1. While transporting machine, must be careful to carry and put down.

IX SIMPLE MALFUNCTION & OBVIATION

1. If the motor does not turn, please inspect it is right to connect wire or check electrical source.

2. If the radial run out of spindle is big with noise and heat, please inspect wether spindle is too loose.

Pls spindle the nut on the spindle assembly to the fittest.

3. When the machine wobble, pls check the motor mount and lever lock nut screw, machine head support on the spindle, ifloosing, pls adjust and lock.

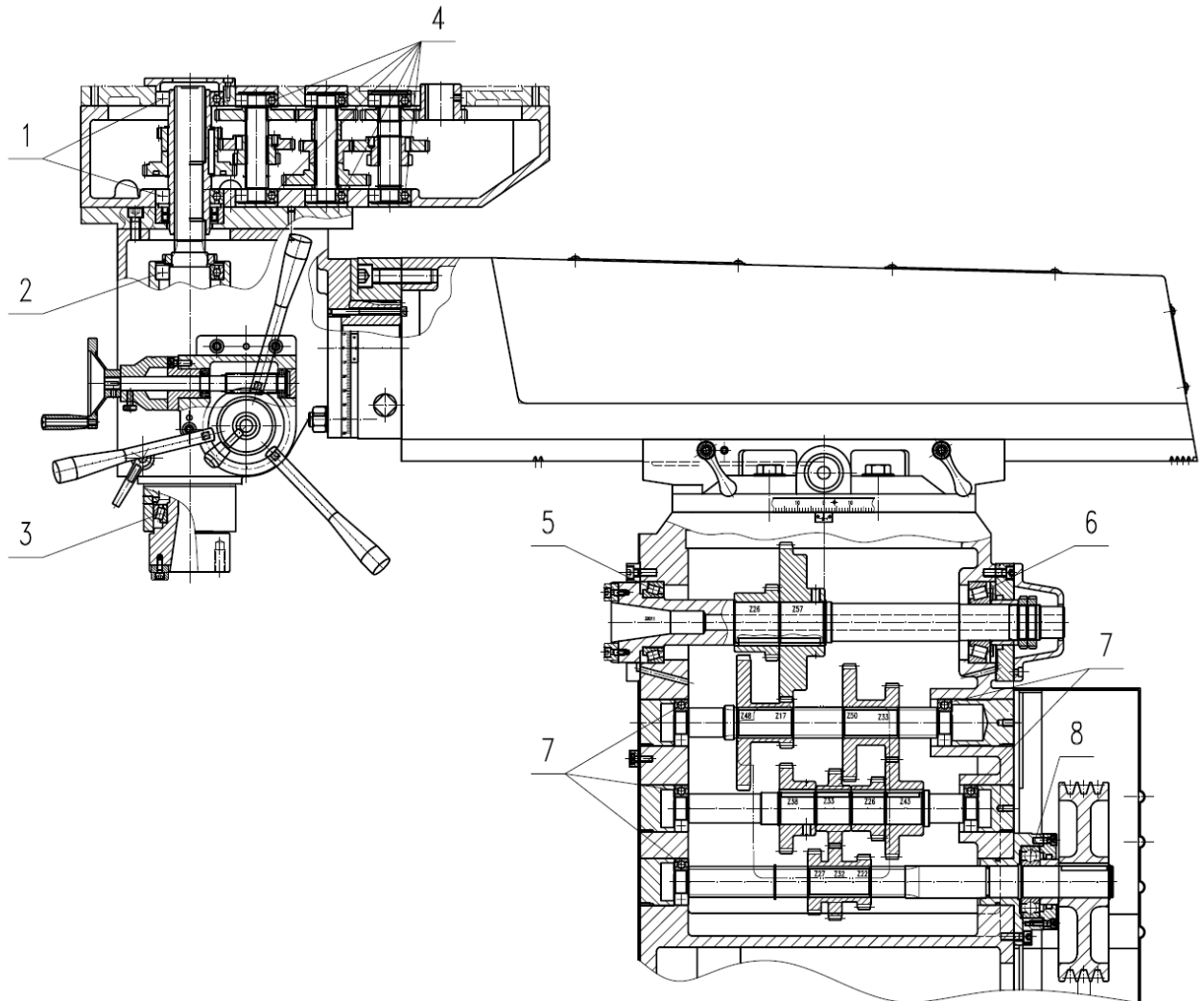
4. It is difficult for the spindle to rise, fall or not replacing, pls inspect wether there is scrap iron and other something in the connection between spindle sleeve and gear shaft and fatigue of spindle, if finding them, pls clean them and apply oil and adjust spring to fittest.

5. If the knee table slide carrige does not rise steadily with noise, the table is steady, pls confirm wether wedge ship loose or not, and clean scrap iron add oil adjust wedge ship to fittest.

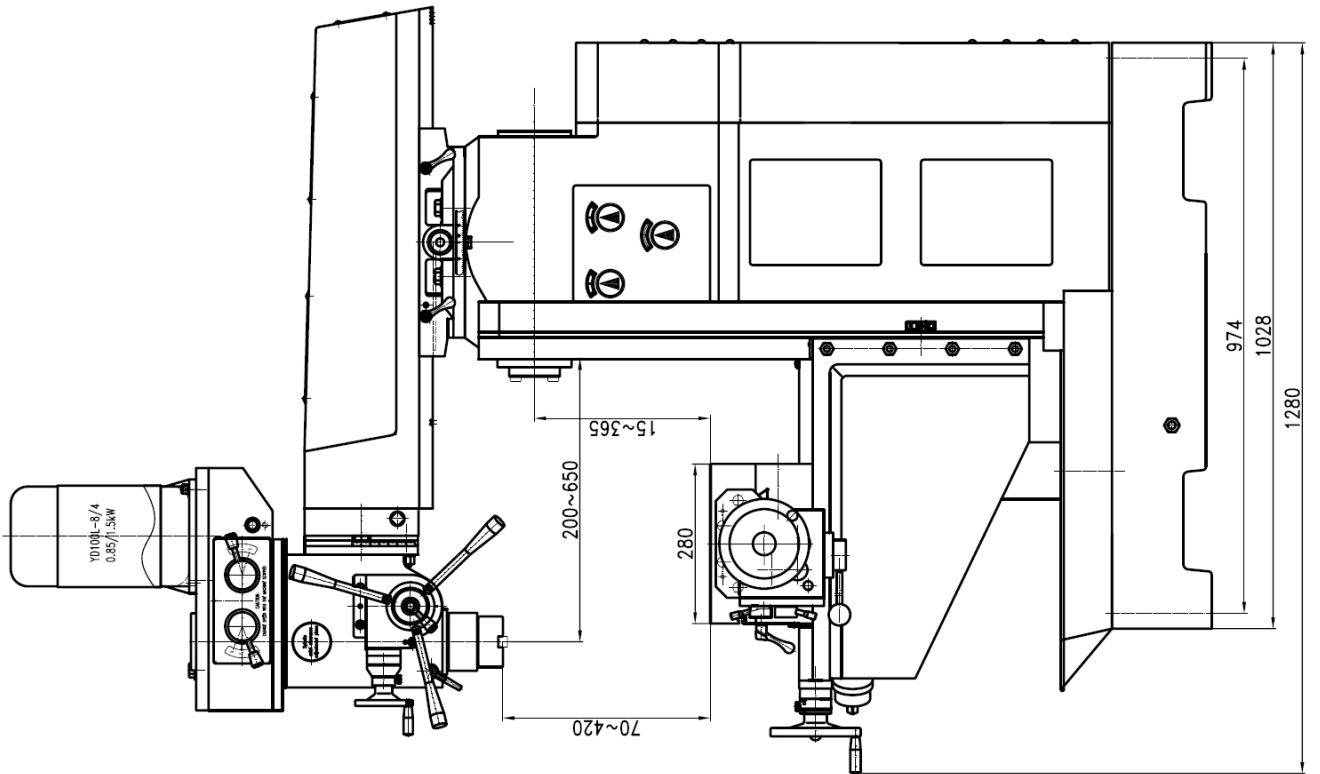
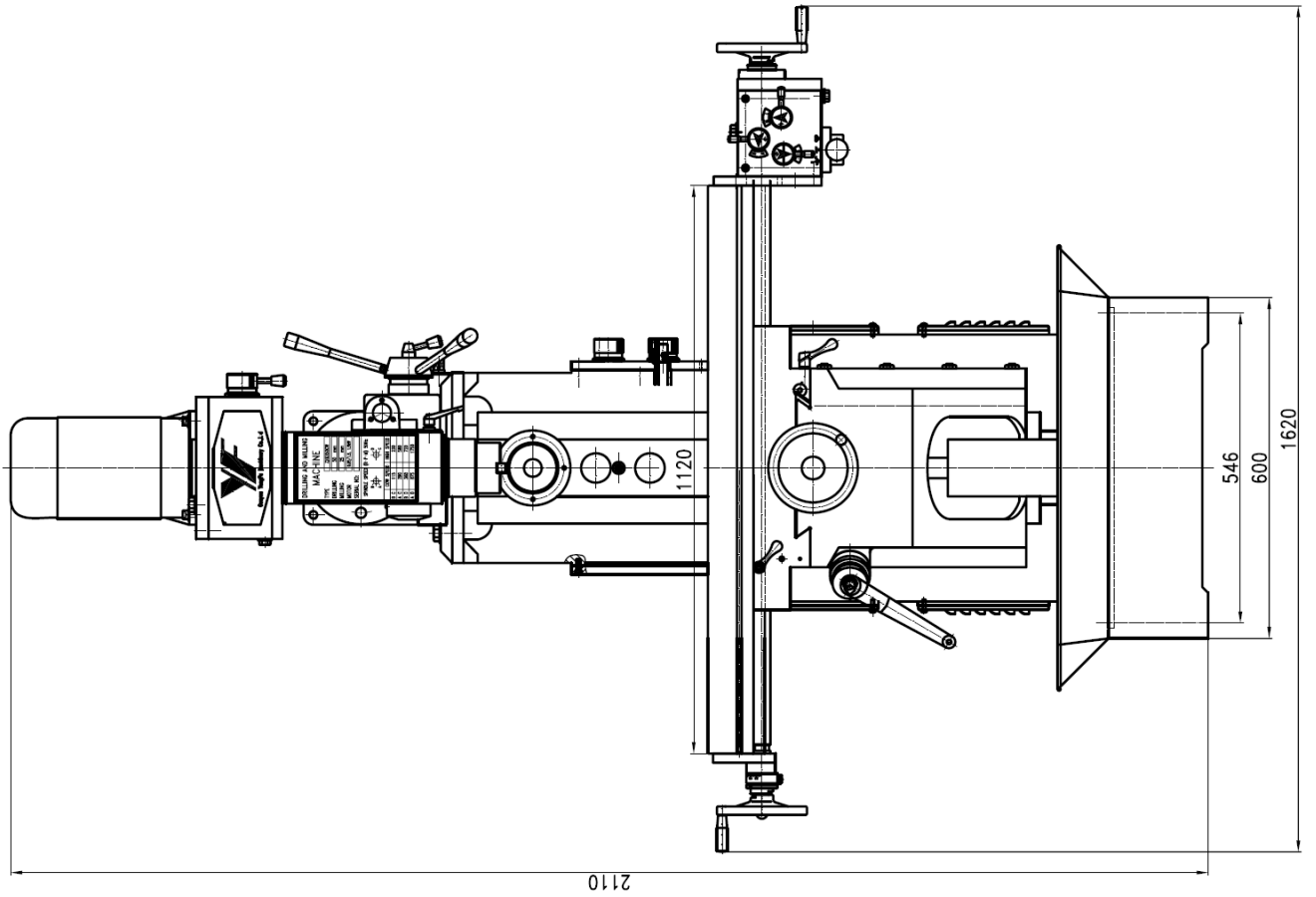
6. If there is noise in gear box, pls stop machine immediately to conform the position you require, then check that the oil meet standard.

7. Prohibited maintaining the machine with electric.

OPERATION MAUNAL		
NO	MODEL	
1	6009-/P5	2
2	6009/P5	1
3	32010/P5	1
4	6204/P5	6
5	32011/P5	1
6	30308/P5	1
7	205	5
8	307	1



Rolling bearing position



Preventive Maintenance

For securing the accuracy and life of the machine, we offer the following maintenance charts.

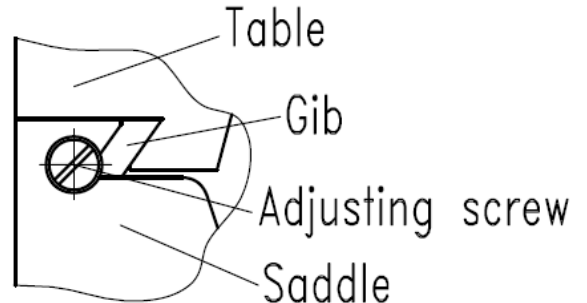
Frequency	Item
Daily	<ol style="list-style-type: none">1. It is necessary to oil each lubrication point before operation.2. It is necessary to release the clamps, clean and lubricate the table after operation.
Monthly	<ol style="list-style-type: none">1. Check all the gibs and adjust if necessary.2. Check all the backlash between screws and nuts ,and adjust it necessary.

MAINTENANCE

(1) Table saddle ways adjustment.

a. Remove all dirt (from area)

b. Turn the table gib screw clockwise while moving the until slight drag is felt.

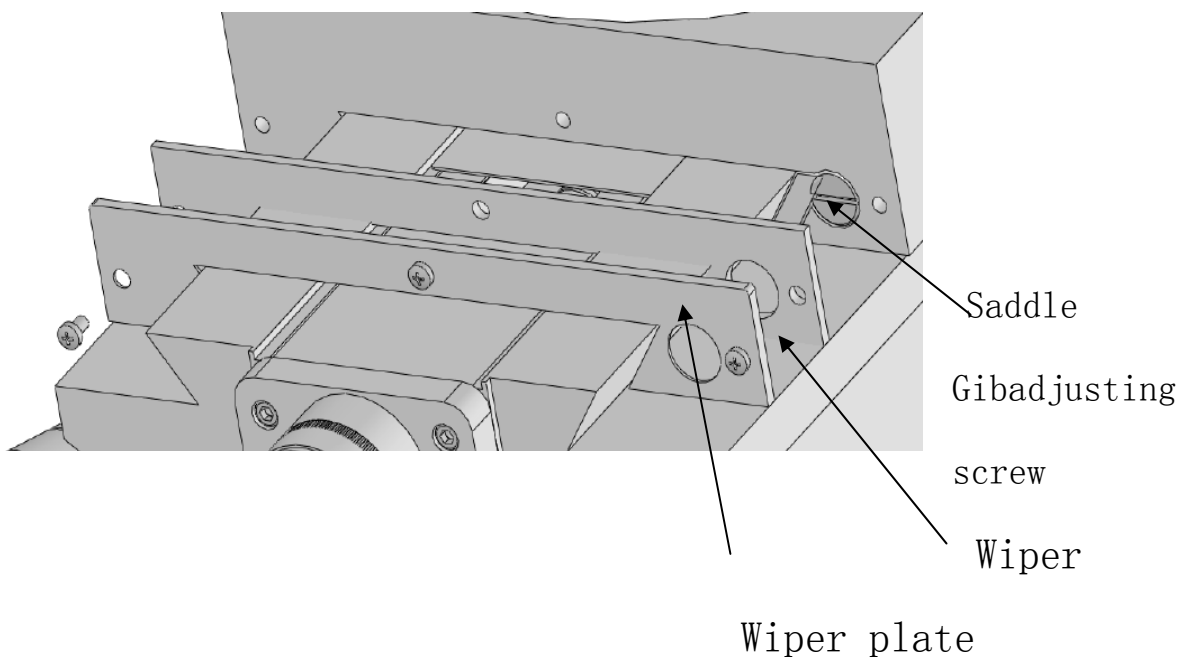


(2) Saddle knee ways adjustment.

a. Remove all dirt (from area)

b. Remove chip wiper guards and wiper.

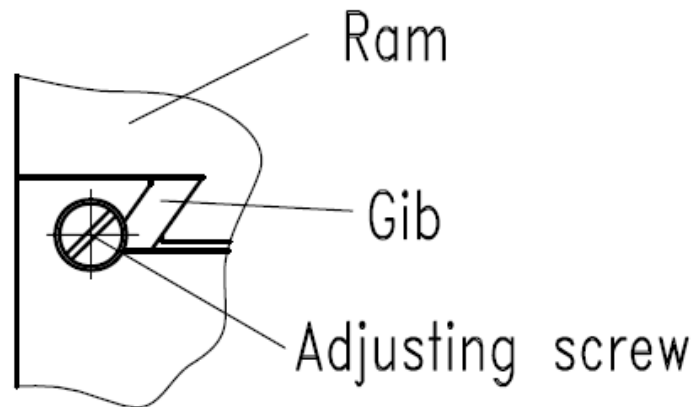
c. Turn gib adjusting screw clockwise while moving the saddle until slight drag is felt.



MAINTENANCE

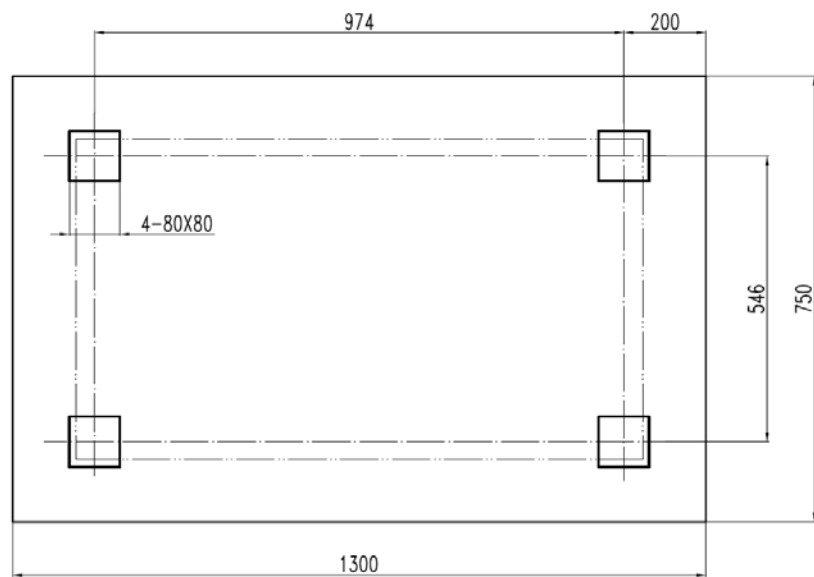
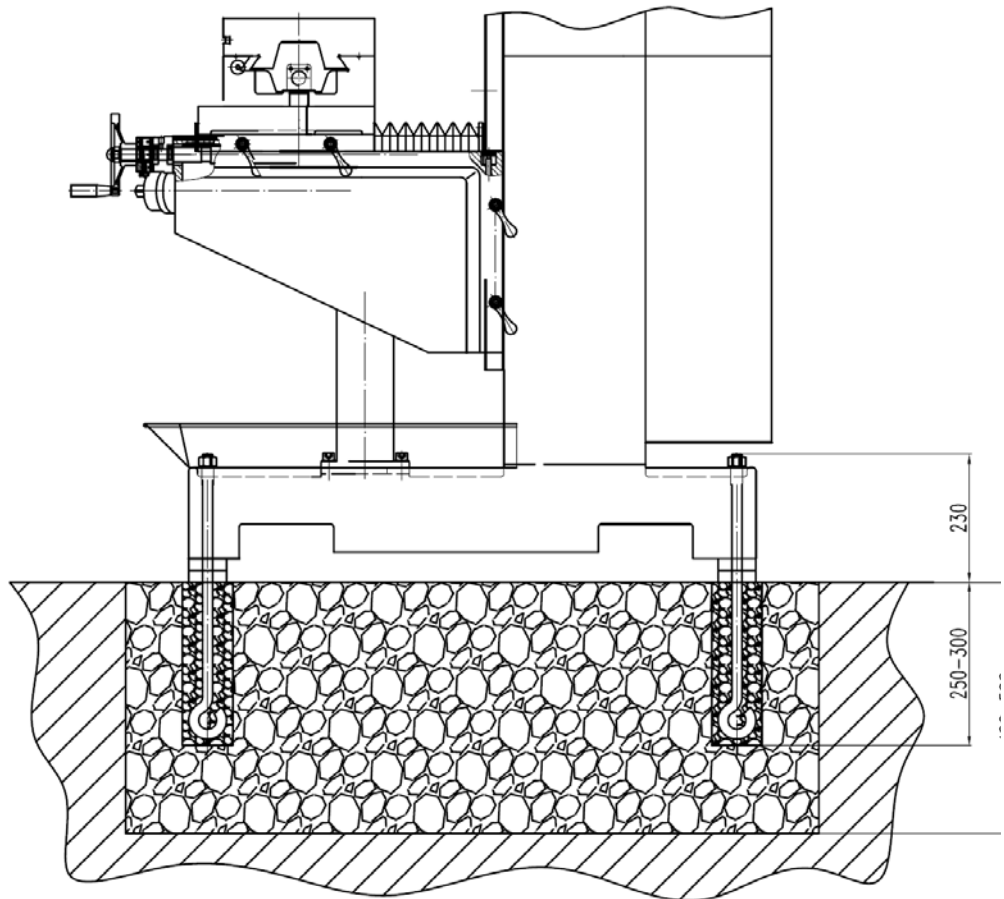
(3) Ram ways adjustment.

- a. Remove all dirt (from area)
- b. Turn the ram gib screw clockwise while moving the ram until slight drag is felt.



INSTALLATION

Ideally this machine should be Bolted to a concrete foundation. The machine should be placed on A solid level flo. or anti-vibration pads to prevent any rocking movement.



Foundation plan

INSTALLATION

Adjust the level of the machine to make sure the allowance is under 0.04/1000mm in the across and horizontal direction after fixing the machine on the base by four bolt.If necessary pads under the base.

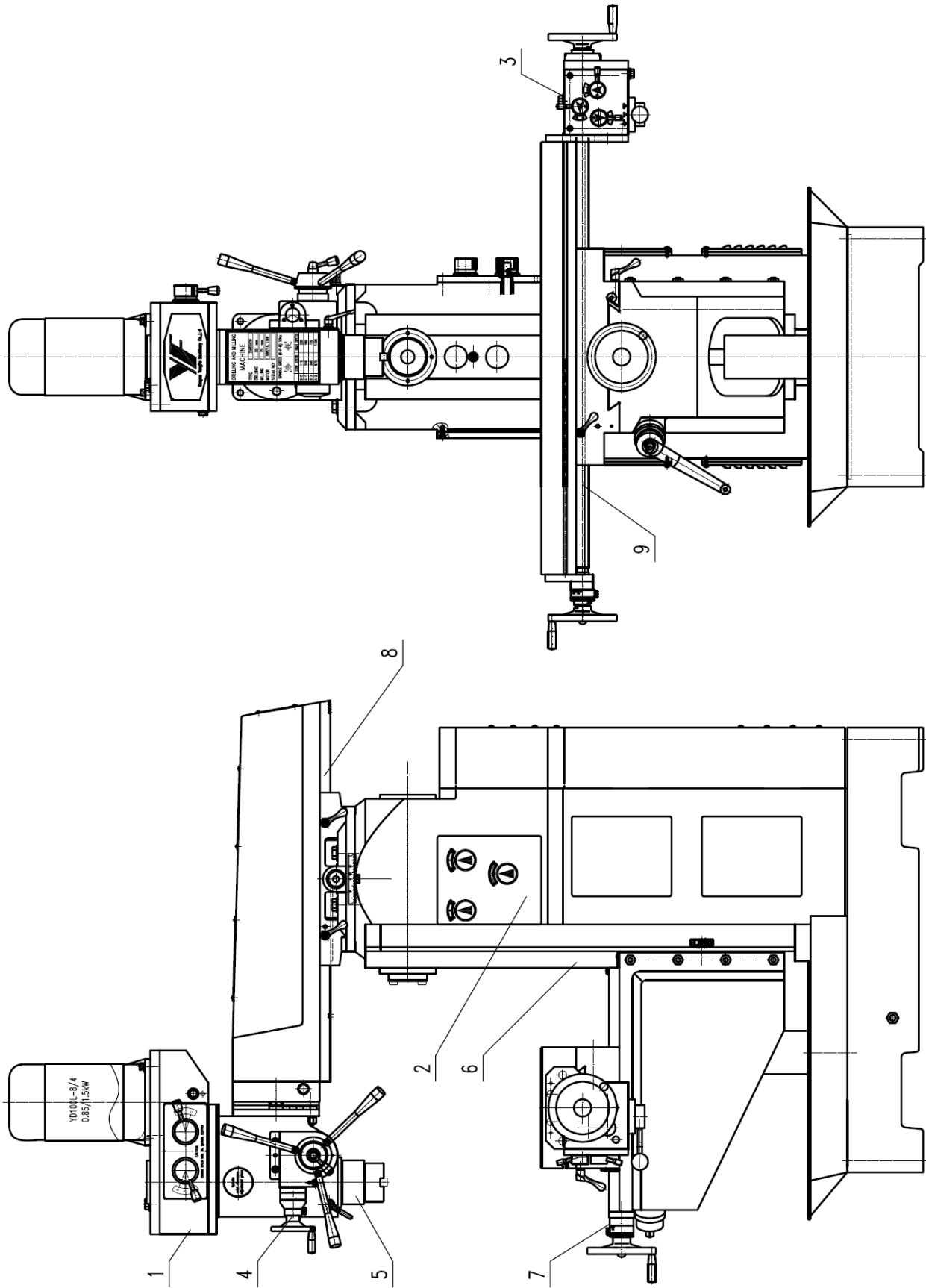
Trial Run



Before trial tun. Please carefully clean the anti-rust oil on the every part of the machine .But the metal tools and other tools which can hurt the parts surface are forbidden.Then coat a thin lager oil on the outer surface.

Lubricate the sliding and rotating part before trial run.Pour engine oil into the Gear Box and the Power Feed .Till indicating through the point then do a overall check.

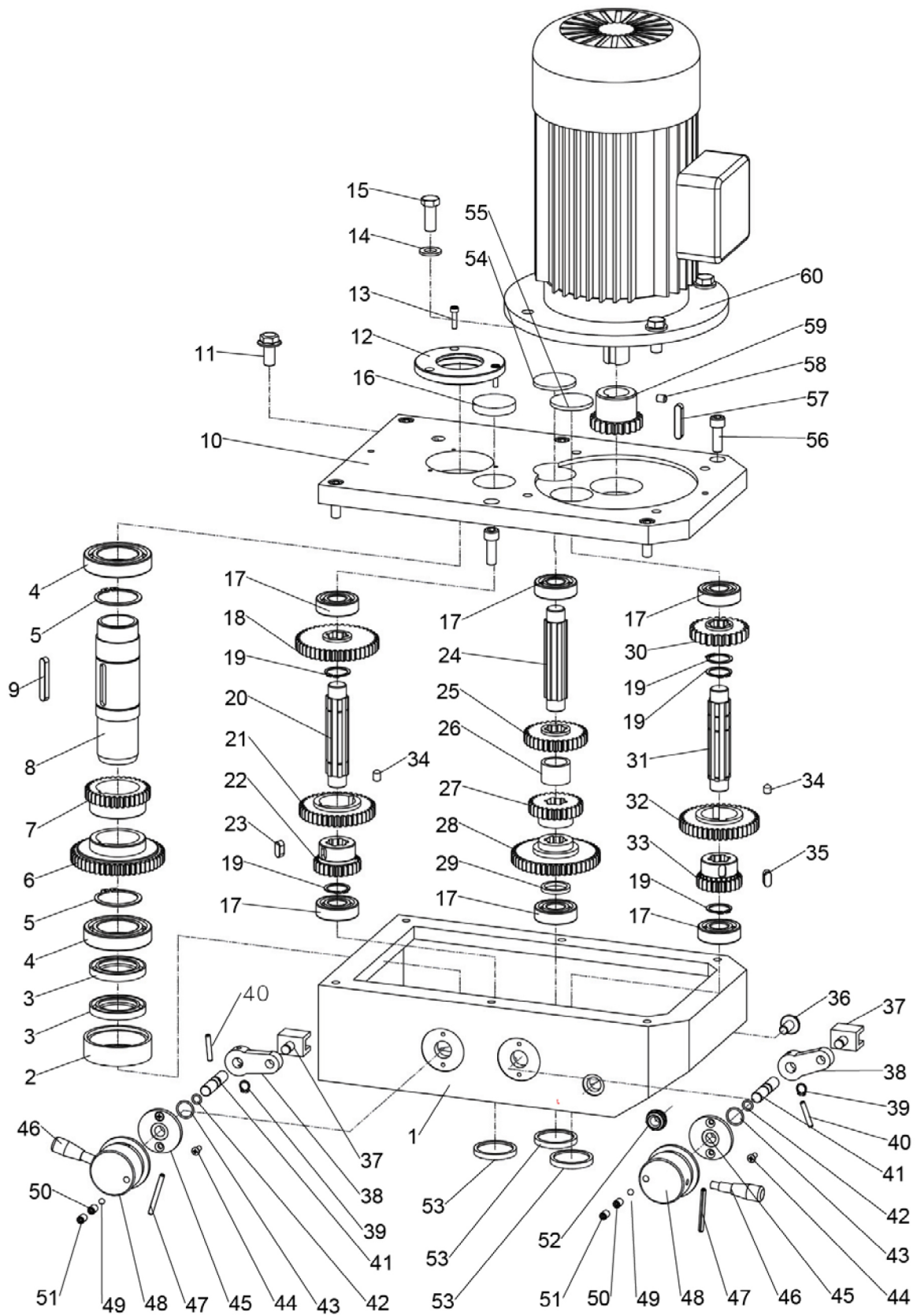
Bofore putting the power,examine if the power parameters is consistent with the indicated parameters on the machine's date plate and at the same time the round direction of the spindle is all right.During the trial run,first run the machine unloaded at the lowest speed for around 30 min's then increase the speed step by step and mean while inspect if the handwheel or handle operates easily or reliably etc.

Notice:Must loosen the tighten handle before move the moving part.



	1, 2, 3	Keep oil level, Change oil once every six months	N46 oil (summer)	N32 oil (winter)
	4,5,6,7,8,9	Fill oil four time per shift Lubricating bearings with Li-grease, changing it once a year	N46 oil (summer)	N32 oil (winter)

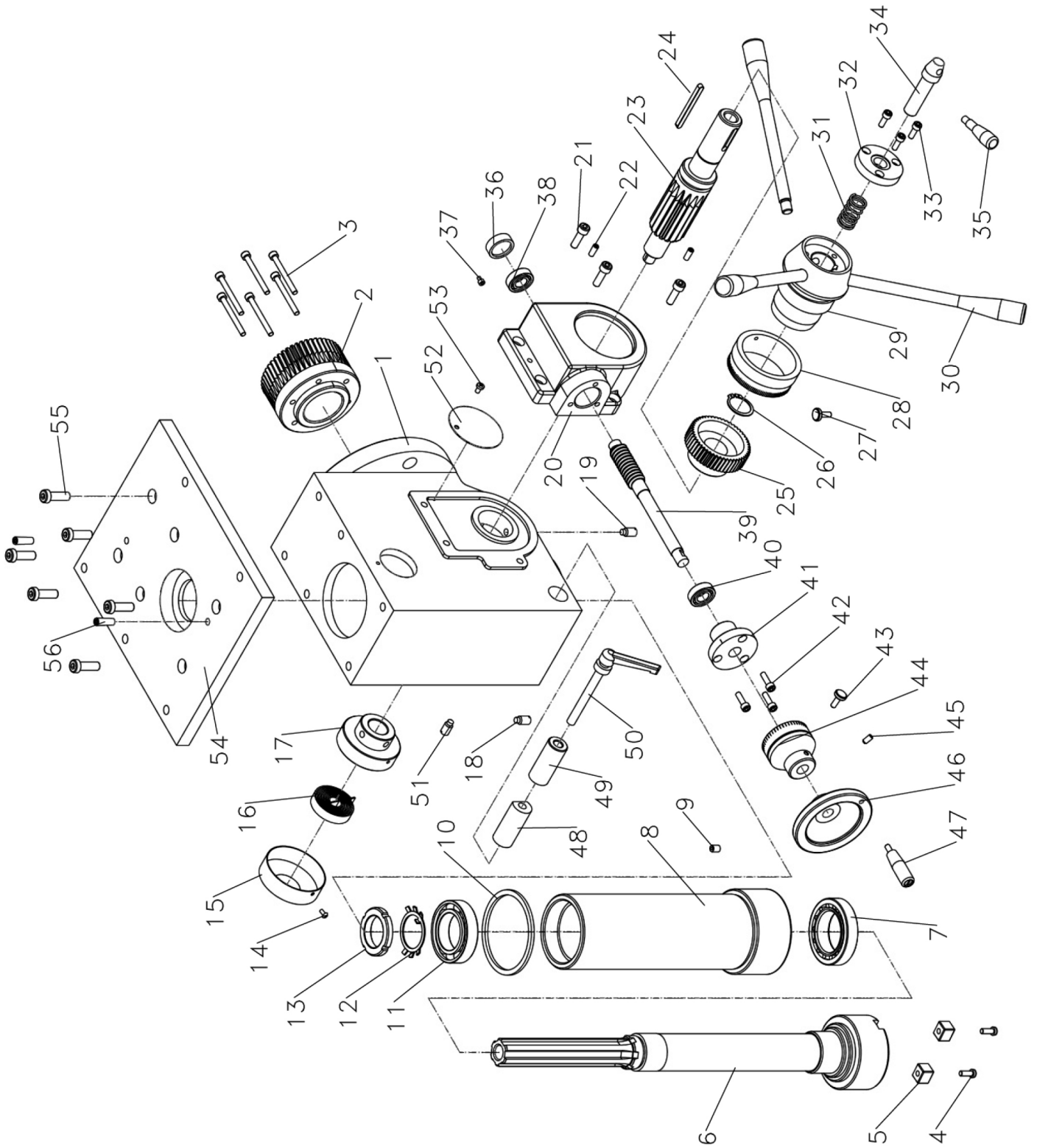
JMD-1144GHV DRO A: GEAR HEAD PARTS



JMD-1144GHV DRO A: GEAR HEAD PARTS

No.	Part No.	Name	Size	Qty.
1	JMD1144GHV-A1	GEAR CASE		1
2	JMD1144GHV-A2	COLLAR		1
3	JMD1144GHV-A3	OIL SEAL	FB45X62X8	2
4	JMD1144GHV-A4	BALL BEARING	6009	2
5	JMD1144GHV-A5	EX RETAINING RING	48	2
6	JMD1144GHV-A6	GEAR		1
7	JMD1144GHV-A7	GEAR		1
8	JMD1144GHV-A8	SHAFT		1
9	JMD1144GHV-A9	KEY	8x50	1
10	JMD1144GHV-A10	BOX COVER		1
11	JMD1144GHV-A11	HEX BOLT	M16x1.5	1
12	JMD1144GHV-A12	COLLAR		1
13	JMD1144GHV-A13	SCREW	M5x15	3
14	JMD1144GHV-A14	WASHER	12	4
15	JMD1144GHV-A15	SCREW		4
16	JMD1144GHV-A16	COVER		1
17	JMD1144GHV-A17	BALL BEARING	6204	6
18	JMD1144GHV-A18	GEAR		1
19	JMD1144GHV-A19	EX RETAINING RING	25	5
20	JMD1144GHV-A20	DRIVING SHAFT		1
21	JMD1144GHV-A21	GEAR		1
22	JMD1144GHV-A22	GEAR		1
23	JMD1144GHV-A23	KEY	8x15	1
24	JMD1144GHV-A24	DRIVING SHAFT		1
25	JMD1144GHV-A25	GEAR		1
26	JMD1144GHV-A26	BUSH		1
27	JMD1144GHV-A27	GEAR		1
28	JMD1144GHV-A28	GEAR		1
29	JMD1144GHV-A29	RING		1
30	JMD1144GHV-A30	GEAR		1
31	JMD1144GHV-A31	DRIVING SHAFT		1
32	JMD1144GHV-A32	GEAR		1
33	JMD1144GHV-A33	GEAR		1
34	JMD1144GHV-A34	SET SCREW	M8x10	4
35	JMD1144GHV-A35	KEY	8x15	1
36	JMD1144GHV-A36	HEX BOLT	M10x1	1
37	JMD1144GHV-A37	LIFT FORK		2
38	JMD1144GHV-A38	ROCKER ARM		2
39	JMD1144GHV-A39	EX RETAINING RING	10	2
40	JMD1144GHV-A40	PIN	5x30	2

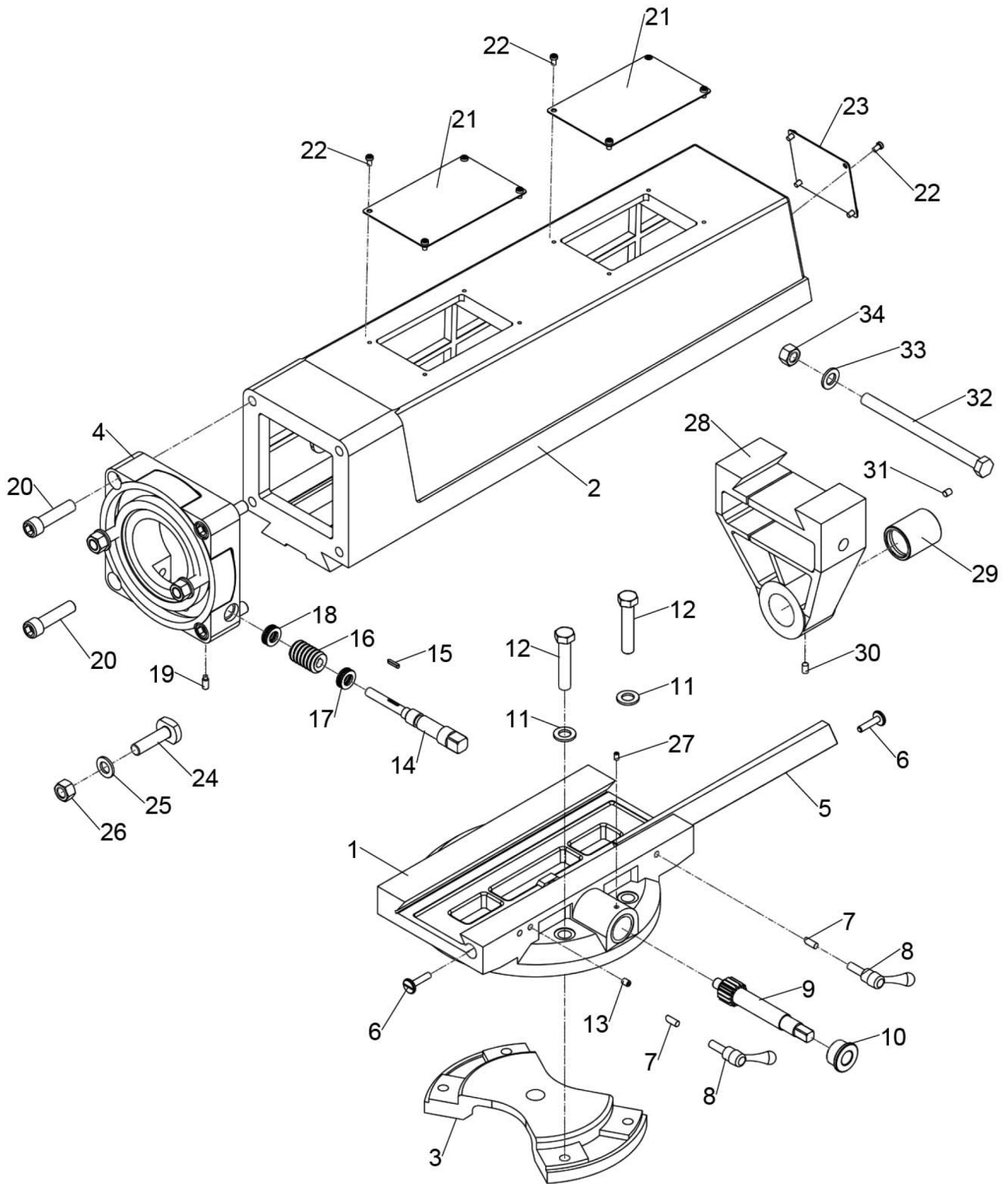
JMD-1144GHV DRO B: SPINDLE BOX PARTS



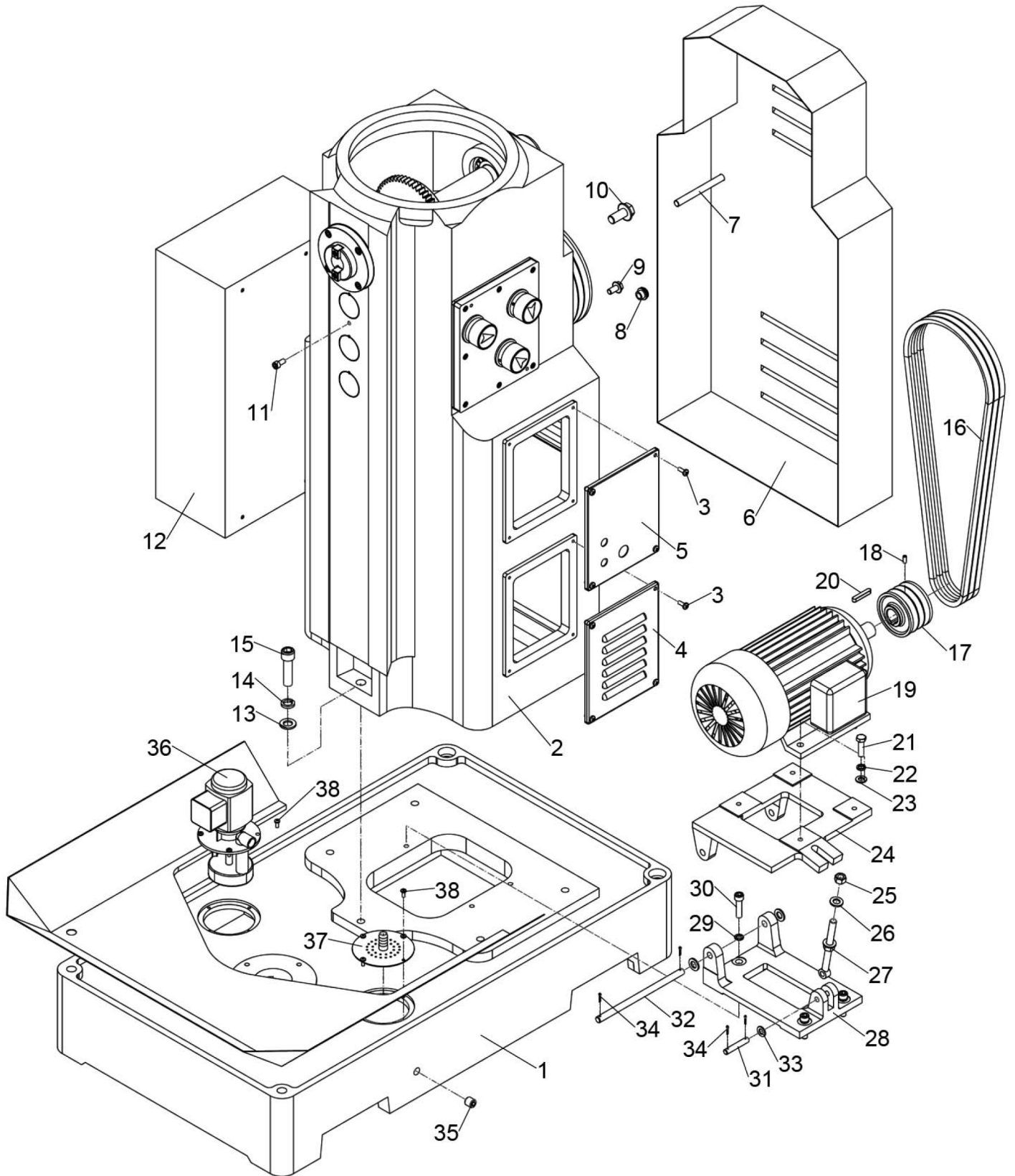
JMD-1144GHV DRO B: SPINDLE BOX PARTS

No.	Part No.	Name	Size	Qty.
1	JMD1144GHV-B1	SPINDLE BOX		1
2	JMD1144GHV-B2	GEAR		1
3	JMD1144GHV-B3	SCREW	M6x75	6
4	JMD1144GHV-B4	SCREW	M6x16	2
5	JMD1144GHV-B5	FIXED KEY		2
6	JMD1144GHV-B6	SPINDLE		1
7	JMD1144GHV-B7	BALL BEARING	32010	1
8	JMD1144GHV-B8	SLEEVE		1
9	JMD1144GHV-B9	OIL CUP		1
10	JMD1144GHV-B10	RUBBER WASHER	90mm	1
11	JMD1144GHV-B11	BALL BEARING	6009	1
12	JMD1144GHV-B12	LOCK WASHER	40	1
13	JMD1144GHV-B13	LOCK NUT	M40x1.5	1
14	JMD1144GHV-B14	CAP SCREW	M4x8	1
15	JMD1144GHV-B15	SPRING CAP		1
16	JMD1144GHV-B16	SPRING PLATE		1
17	JMD1144GHV-B17	SPRING BASE		1
18	JMD1144GHV-B18	SET SCREW	M8x16	1
19	JMD1144GHV-B19	SET SCREW	M8x16	1
20	JMD1144GHV-B20	HANDL WHEEL GEAR BOX		1
21	JMD1144GHV-B21	SCREW	M8x25	3
22	JMD1144GHV-B22	PIN	6x25	2
23	JMD1144GHV-B23	FEED SHAFT		1
24	JMD1144GHV-B24	KEY	8x38	1
25	JMD1144GHV-B25	HELICAL GEAR		1
26	JMD1144GHV-B26	EX RETAINING RING	30	1
27	JMD1144GHV-B27	CAP SCREW	M6-1x16	1
28	JMD1144GHV-B28	SCALE RING		1
29	JMD1144GHV-B29	HANDLE BRACKET HUB		1
30	JMD1144GHV-B30	HANDLE BAR		2
31	JMD1144GHV-B31	COMPRESSION SPRING		1
32	JMD1144GHV-B32	COVER		1
33	JMD1144GHV-B33	CAP SCREW	M6x16	3
34	JMD1144GHV-B34	HANDLE SEAT	M16x2	1
35	JMD1144GHV-B35	HANDLE BAR		1
36	JMD1144GHV-B36	COVER		1
37	JMD1144GHV-B37	SCREW	M6x12	1
38	JMD1144GHV-B38	BALL BEARING	6002	1
39	JMD1144GHV-B39	WORM		1
40	JMD1144GHV-B40	BALL BEARING	6002	1

JMD-1144GHV DRO C: RAM & RAM BASE PARTS



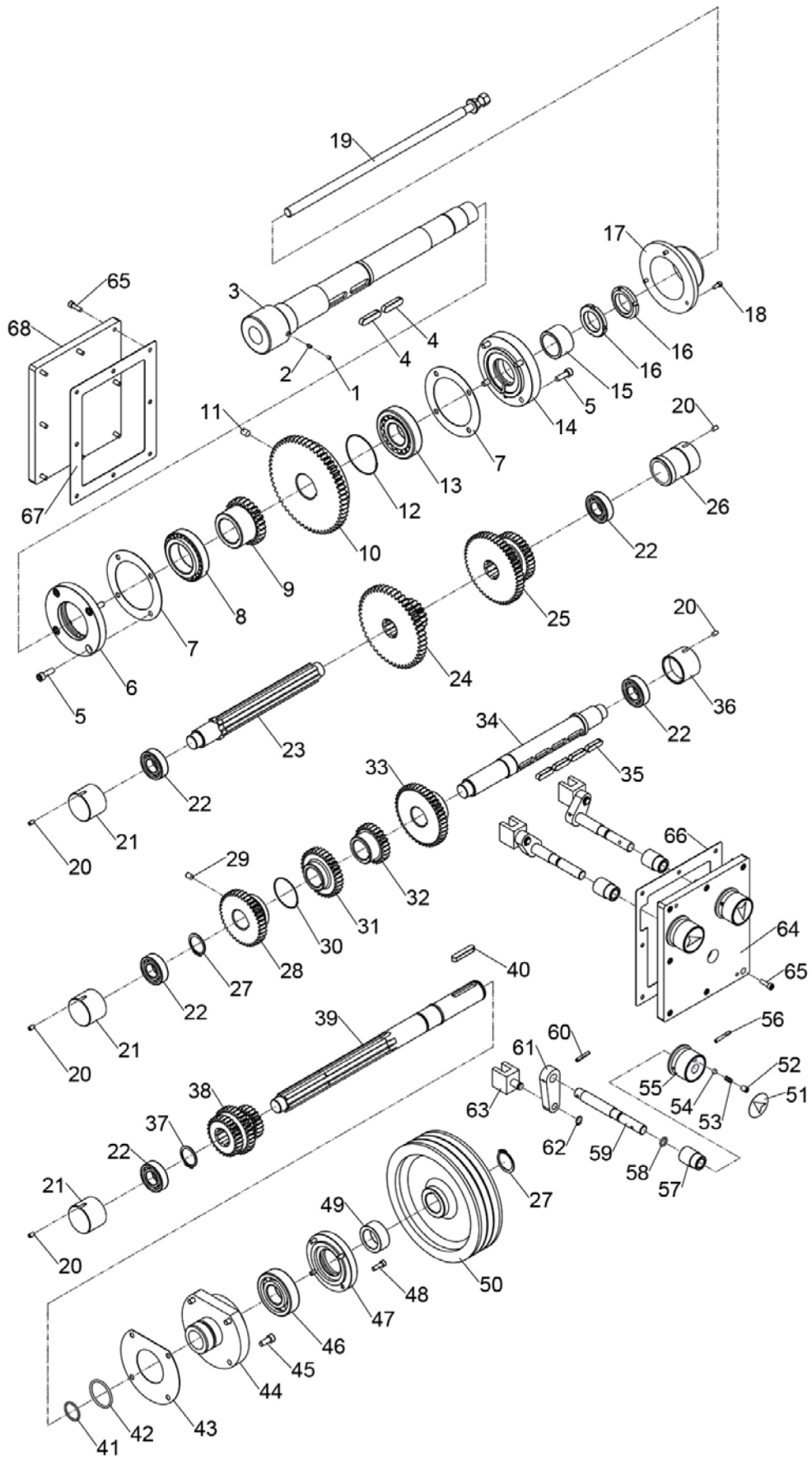
JMD-1144GHV DRO D: BASE & COLUMN PARTS



JMD-1144GHV DRO D: BASE & COLUMN PARTS

No.	Part No.	Name	Size	Qty.
1	JMD1144GHV-D1	BASE		1
2	JMD1144GHV- D2	COLUMN		1
3	JMD1144GHV- D3	PHLP HD SCR	M6x12	8
4	JMD1144GHV- D4	COVER		2
5	JMD1144GHV- D5	COVER		
6	JMD1144GHV- D6	REAR ACCESS PANEL		
7	JMD1144GHV- D7	KNOB	M10x155	
8	JMD1144GHV- D8	OIL SIGHT GLASS		
9	JMD1144GHV- D9	OIL PLUG	M16-10x8	
10	JMD1144GHV- D10	OIL PLUG	M16-1.5x8	
11	JMD1144GHV- D11	CAP SCREW	M8x16	
12	JMD1144GHV- D12	ELECTRICAL CABINET		
13	JMD1144GHV- D13	LOCK WASHER	16mm	5
14	JMD1144GHV- D14	FLAT WASHER	16mm	5
15	JMD1144GHV- D15	HEX BOLT	M16x60	5
16	JMD1144GHV- D16	V-BELT	A-1420	3
17	JMD1144GHV- D17	V-BELT PULLEY		1
18	JMD1144GHV- D18	SET SECREW	M8x16	1
19	JMD1144GHV- D19	MOTOR		1
20	JMD1144GHV- D20	KEY	8x50	1
21	JMD1144GHV- D21	HEX BOLT	M10x30	4
22	JMD1144GHV- D22	LOCK WASHER	10mm	4
23	JMD1144GHV- D23	FLAT WASHER	10mm	4
24	JMD1144GHV- D24	MOTOR MOUNT PLATE		1
25	JMD1144GHV- D25	HEX NUT	M12	2
26	JMD1144GHV- D26	LOCK WASHER	12mm	2
27	JMD1144GHV- D27	ADJUSTING BOLT		2
28	JMD1144GHV- D28	MOTOR BASE PLATE		1
29	JMD1144GHV- D29	FLAT WASHER	10mm	3
30	JMD1144GHV- D30	HEX BOLT	M10x40	3
31	JMD1144GHV- D31	SHAFT		1
32	JMD1144GHV- D32	SHAFT		1
33	JMD1144GHV- D33	LOCK WASHER	12mm	4
34	JMD1144GHV- D34	COTTER PIN	2.5x16	4
35	JMD1144GHV- D35	FLANGEBOLT	M16x1.5	1
36	JMD1144GHV- D36	COOLANT PUMP	DB-12	1
37	JMD1144GHV- D37	COOLANT DRAIN SCREEN		1
38	JMD1144GHV- D38	PHLP HD SCR	M16x12	8

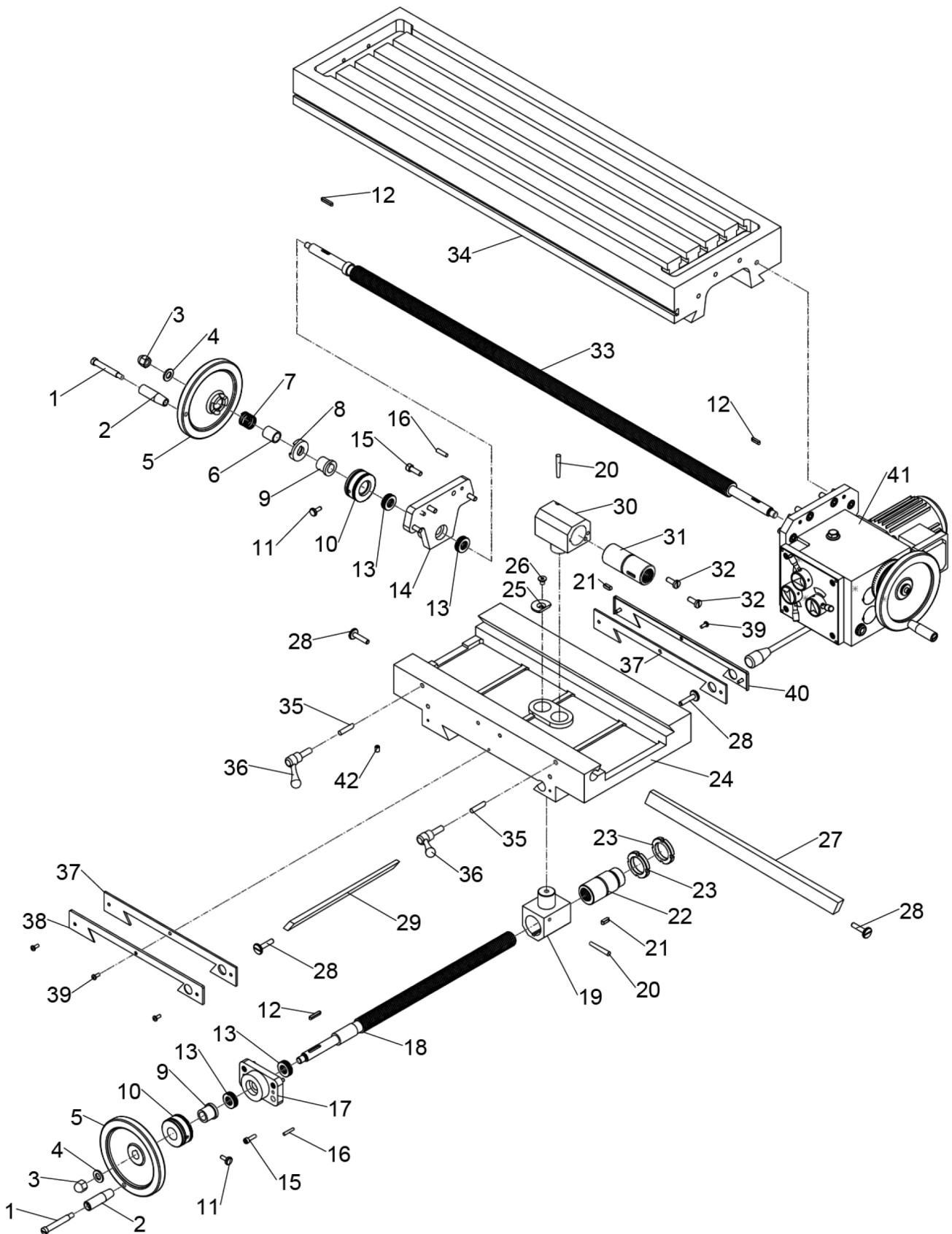
JMD-1144GHV DRO E: COLUMN INTERNAL PARTS



JMD-1144GHV DRO E: COLUMN INTERNAL PARTS

No.	Part No.	Name	Size	Qty.
1	JMD1144GHV- E1	SET SCREW	M5x6	1
2	JMD1144GHV- E2	SET SCREW DOG-PT	M5x8	1
3	JMD1144GHV- E3	HORIZONTAL SPINDLE		1
4	JMD1144GHV- E4	KEY	12x45	2
5	JMD1144GHV- E5	CAP SCREW	M8x25	8
6	JMD1144GHV- E6	END COVER		1
7	JMD1144GHV- E7	GASKET		2
8	JMD1144GHV- E8	BALL BEARING	32011-P5	1
9	JMD1144GHV- E9	GEAR	26T	1
10	JMD1144GHV- E10	GEAR	57T	1
11	JMD1144GHV- E11	SET SCREW	M10x16	1
12	JMD1144GHV- E12	SPECIAL RETAINER		1
13	JMD1144GHV- E13	BALL BEARING	30308-P5	1
14	JMD1144GHV- E14	END COVER		1
15	JMD1144GHV- E15	BUSHING		1
16	JMD1144GHV- E16	SPANNER NUT	M39X1.5	2
17	JMD1144GHV- E17	COVER		1
18	JMD1144GHV- E18	CAP SCREW	M5X12	3
19	JMD1144GHV- E19	HORIZONTAL SPINDLE DRAWBAR		1
20	JMD1144GHV- E20	SET SCREW	M6X10	5
21	JMD1144GHV- E21	PLUG		3
22	JMD1144GHV- E22	BALL BEARING	6205	5
23	JMD1144GHV- E23	SPLINE SHAFT		1
24	JMD1144GHV- E24	GEAR	48/17T	1
25	JMD1144GHV- E25	GEAR	50/33T	1
26	JMD1144GHV- E26	PLUG		1
27	JMD1144GHV- E27	EXT RETAINING RING	35mm	2
28	JMD1144GHV- E28	GEAR	38T	1
29	JMD1144GHV- E29	SET SCREW	M8x14	1
30	JMD1144GHV- E30	SPECIAL RETAINER		1
31	JMD1144GHV- E31	GEAR	33T	1
32	JMD1144GHV- E32	GEAR	26T	1
33	JMD1144GHV- E33	GEAR	43T	1
34	JMD1144GHV- E34	SHAFT		1
35	JMD1144GHV- E35	KEY	10x36	4
36	JMD1144GHV- E36	PLUG		1
37	JMD1144GHV- E37	EXT RETAINING RING	34mm	1
38	JMD1144GHV- E38	GEAR	27/32/22T	1
39	JMD1144GHV- E39	SPLINE SHAFT		1
40	JMD1144GHV- E40	KEY	10x50	1

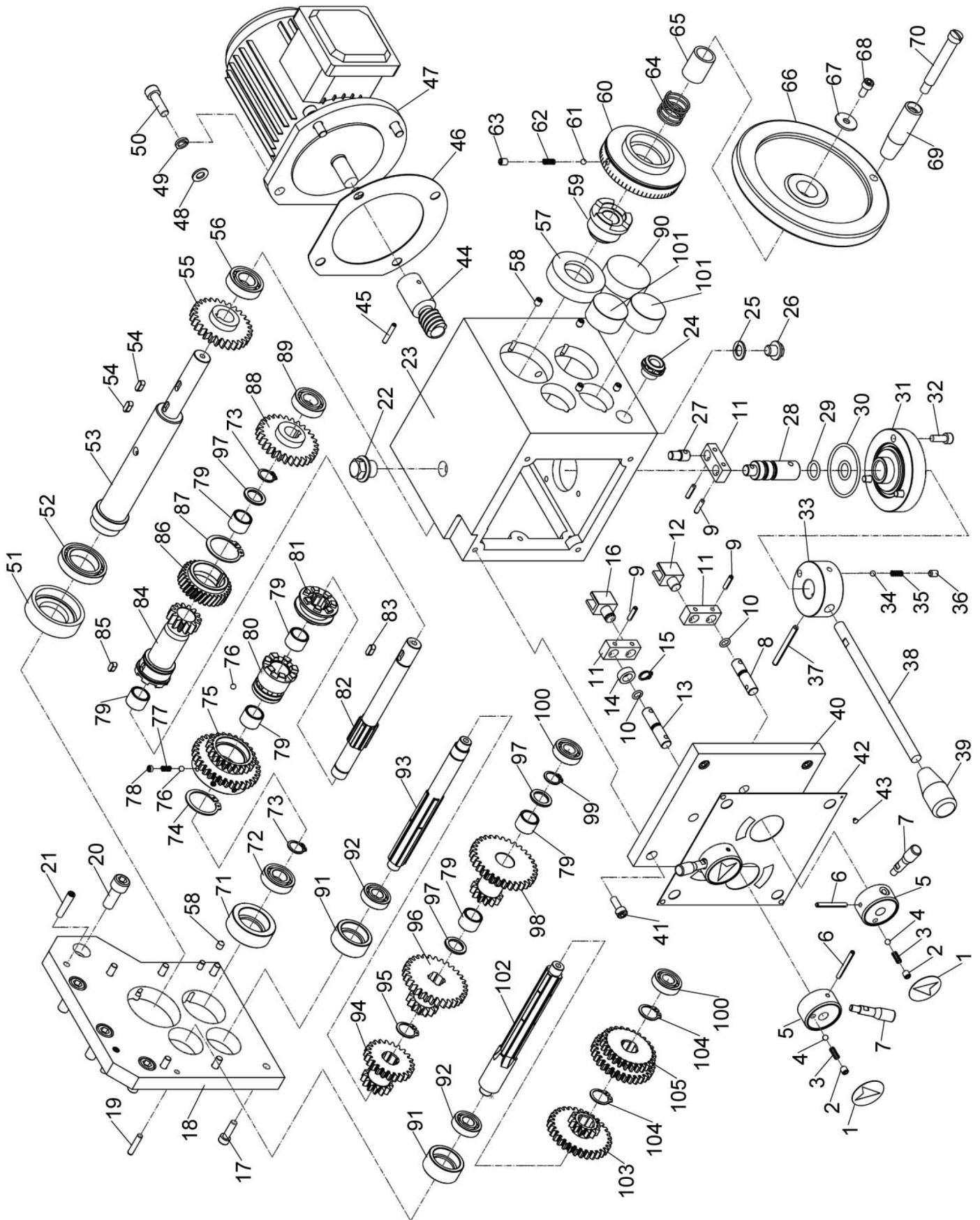
JMD-1144GHV DRO F: TABLE PARTS



JMD-1144GHV DRO F: TABLE PARTS

No.	Part No.	Name	Size	Qty.
1	JMD1144GHV-F1	HANDLE SPINDLE		3
2	JMD1144GHV-F2	TAPER KNOB		3
3	JMD1144GHV-F3	HEX NUT M12-1.75		3
4	JMD1144GHV-F4	LOCK WASHER	12mm	3
5	JMD1144GHV-F5	HAND WHEEL		3
6	JMD1144GHV-F6	SPRING		3
7	JMD1144GHV-F7	BUSH		3
8	JMD1144GHV-F8	CONNECT		3
9	JMD1144GHV-F9	COLLAR		1
10	JMD1144GHV-F10	SCALE RING		1
11	JMD1144GHV-F11	CAP SCREW	M6-1x16	1
12	JMD1144GHV-F12	KEY	5x20	3
13	JMD1144GHV-F13	BALL BEARING	51103	4
14	JMD1144GHV-F14	SUPPORT		1
15	JMD1144GHV-F15	CAP SCREW	M8x25	8
16	JMD1144GHV-F16	PIN	6x25	4
17	JMD1144GHV-F17	SUPPORT		1
18	JMD1144GHV-F18	LONG LEAD SCREW		1
19	JMD1144GHV-F19	BEARING HOUSING		1
20	JMD1144GHV-F20	TAPER PIN	6x40	2
21	JMD1144GHV-F21	KEY	6x22	2
22	JMD1144GHV-F22	THREADED BUSHING		1
23	JMD1144GHV-F23	SPANNER NUT	M36x1.5	2
24	JMD1144GHV-F24	SADDLE		1
25	JMD1144GHV-F25	CAP		1
26	JMD1144GHV-F26	FLANGE SCREW	M8x16	1
27	JMD1144GHV-F27	LONGITUDINAL GIB		1
28	JMD1144GHV-F28	GIB ADJUSTING SCREW		4
29	JMD1144GHV-F29	CROSS GIB		1
30	JMD1144GHV-F30	BEARING HOUSING		1
31	JMD1144GHV-F31	BUSHING		1
32	JMD1144GHV-F32	SPECIAL SCREW		2
33	JMD1144GHV-F33	LONGITUDINAL LEAD SCREW		1
34	JMD1144GHV-F34	TABLE		1
35	JMD1144GHV-F35	LOCK BUSHING		4
36	JMD1144GHV-F36	CLAMP BOLT	M10x40	4
37	JMD1144GHV-F37	FELT GASKET		2
38	JMD1144GHV-F38	WIPER COVER		1
39	JMD1144GHV-F39	PHLP HD SCREW	M5x12	6
40	JMD1144GHV-F40	WIPER COVER		1

JMD-1144GHV DRO G: POWER FEED OF TABLE PARTS



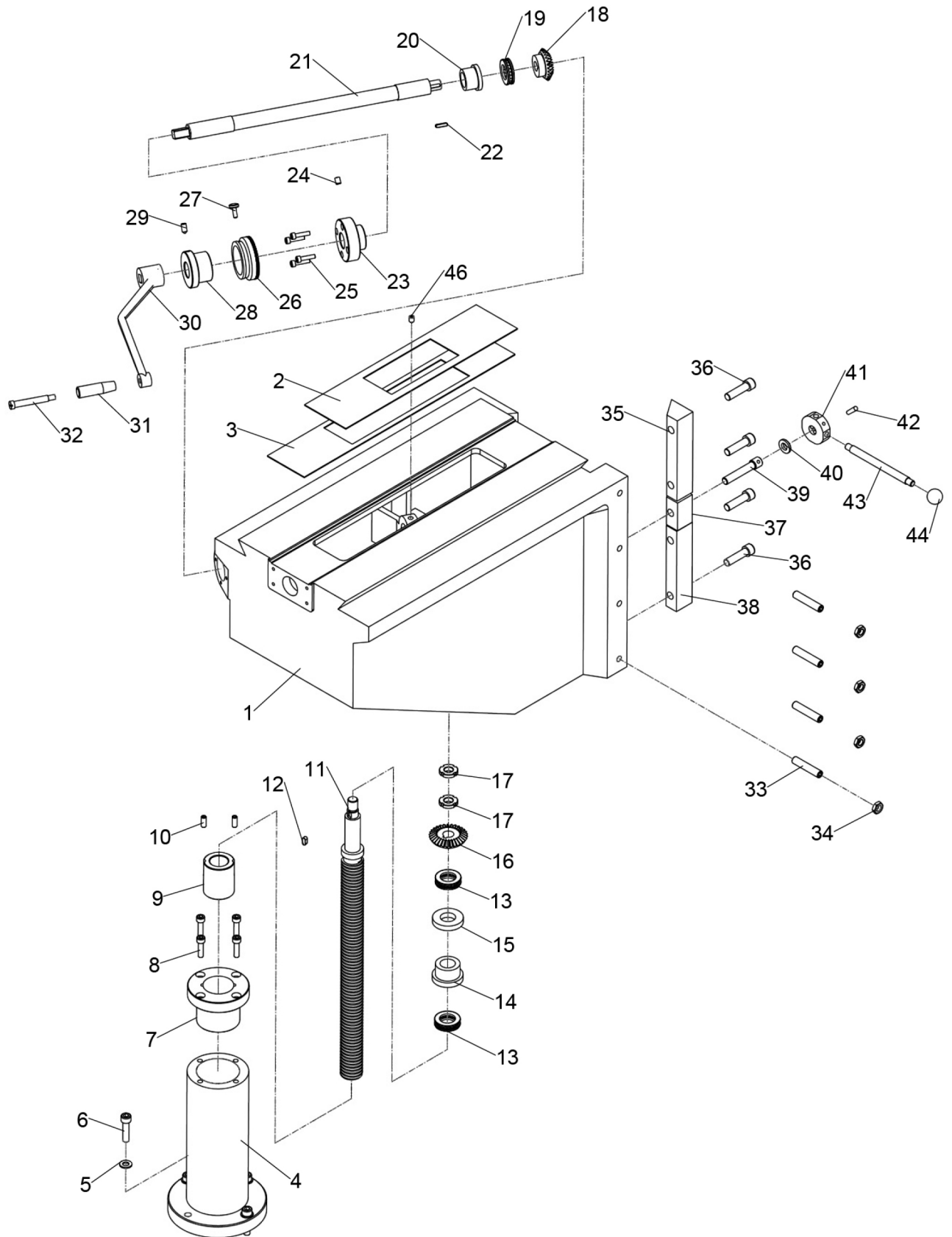
JMD-1144GHV DRO G: POWER FEED OF TABLE PARTS

No.	Part No.	Name	Size	Qty.
1	JMD1144GHV-G1	Indicator plate		3
2	JMD1144GHV-G2	Set screw	M6x6	12
3	JMD1144GHV-G3	Compression spring	GB/T2089 1x4x12	3
4	JMD1144GHV-G4	Steel ball	GB/T308 5	3
5	JMD1144GHV-G5	Handle seat		3
6	JMD1144GHV-G6	Elastic cylindrical pin	GB/T879.1 5x35	3
7	JMD1144GHV-G7	Handle lever		3
8	JMD1144GHV-G8	Shaft		2
9	JMD1144GHV-G9	Elastic cylindrical pin	GB/T879.1 4x16	5
10	JMD1144GHV-G10	O-ring	GB/T3452.1 7.1x1.8	3
11	JMD1144GHV-G11	Rocker arm		3
12	JMD1144GHV-G12	Shifting fork		2
13	JMD1144GHV-G13	Shaft		1
14	JMD1144GHV-G14	Collar		1
15	JMD1144GHV-G15	Circlip for shaft	GB/T894.1 10	1
16	JMD1144GHV-G16	Shifting fork		1
17	JMD1144GHV-G17	Hex socket head bolt	M6x16	6
18	JMD1144GHV-G18	Side plate		1
19	JMD1144GHV-G19	Taper bolt	GB/T117 6x24	2
20	JMD1144GHV-G20	Hex Socket head bolt	M10x25	4
21	JMD1144GHV-G21	Taper bolt	GB/T117 5x24	2
22	JMD1144GHV-G22	Oil plug	M16x1.5	1
23	JMD1144GHV-G23	Box		1
24	JMD1144GHV-G24	Oil gage	GB/T1160.2 M18x1.5	1
25	JMD1144GHV-G25	Aluminum washer		1
26	JMD1144GHV-G26	Oil plug	JB/T1000 M10x1	1
27	JMD1144GHV-G27	Shaft		1
28	JMD1144GHV-G28	Shaft		1
29	JMD1144GHV-G29	O-ring	GB/T3452.1 13.2x2.65	2
30	JMD1144GHV-G30	O-ring	GB/T3452.1 46.2x2.65	1
31	JMD1144GHV-G31	Gland		1
32	JMD1144GHV-G32	Hex Socket head bolt	M6x16	3
33	JMD1144GHV-G33	Handle seat		1
34	JMD1144GHV-G34	Steel ball	GB/T308 5	1
35	JMD1144GHV-G35	Compression spring	GB/T2089 1x4x12	1
36	JMD1144GHV-G36	Set screw	M6x8	1
37	JMD1144GHV-G37	Elastic cylindrical pin	GB/T879.1 5x50	1
38	JMD1144GHV-G38	Handle lever		1
39	JMD1144GHV-G39	Taper knob		1
40	JMD1144GHV-G40	Front cover		1

JMD-1144GHV DRO G: POWER FEED OF TABLE PARTS

No.	Part No.	Name	Size	Qty.
41	JMD1144GHV-G41	Hex Socket head bolt	M6x18	4
42	JMD1144GHV-G42	Information plate		1
43	JMD1144GHV-G43	Rivet	GB/T827 2.5x4	4
44	JMD1144GHV-G44	Worm	m=1.5 z=3	1
45	JMD1144GHV-G45	Elastic cylindrical pin	GB/T879.1 5x24	1
46	JMD1144GHV-G46	Seal ring		1
47	JMD1144GHV-G47	Electromotor	370W 2800rpm	1
48	JMD1144GHV-G48	washer	8	4
49	JMD1144GHV-G49	Spring washer	8	4
50	JMD1144GHV-G50	Hex Socket head bolt	M8x20	4
51	JMD1144GHV-G51	Bearing housing (A – left)		1
52	JMD1144GHV-G52	Bearing	GB/T275 61906	1
53	JMD1144GHV-G53	Shaft (A)		1
54	JMD1144GHV-G54	Flat key	5x10	2
55	JMD1144GHV-G55	Gear	m=2 z=29	1
56	JMD1144GHV-G56	Bearing	GB/T276 6003	1
57	JMD1144GHV-G57	Bearing housing (A - right)		1
58	JMD1144GHV-G58	Set screw	M6x6	8
59	JMD1144GHV-G59	Clutch		1
60	JMD1144GHV-G60	Graduated dial		1
61	JMD1144GHV-G61	Steel ball	GB/T308 5	1
62	JMD1144GHV-G62	Compression spring	GB/T2089 1x4x12	1
63	JMD1144GHV-G63	Set screw	M6x8	1
64	JMD1144GHV-G64	Spring	GB/T2089 1.6x24x15	2
65	JMD1144GHV-G65	Bushing		1
66	JMD1144GHV-G66	Handwheel		1
67	JMD1144GHV-G67	Washer		1
68	JMD1144GHV-G68	Hex Socket head bolt	M6x16	1
69	JMD1144GHV-G69	Handwheel handle		1
70	JMD1144GHV-G70	Handle step screw		1
71	JMD1144GHV-G71	Bearing housing (B – left)		1
72	JMD1144GHV-G72	Bearing	GB/T276 6002	1
73	JMD1144GHV-G73	Circlip for shaft	GB/T894.1 15	2
74	JMD1144GHV-G74	Circlip for shaft	GB/T894.1 30	1
75	JMD1144GHV-G75	Gear	m=2 z1=23 z2=33	1
76	JMD1144GHV-G76	Steel ball	GB/T308 5	16
77	JMD1144GHV-G77	Compression spring	GB/T2089 0.8x4x9	8
78	JMD1144GHV-G78	Set screw	M6x6	8
79	JMD1144GHV-G79	Sliding bearing		6
80	JMD1144GHV-G80	Clutch		1

JMD-1144GHV DRO H: KNEE SPINDLE PARTS



JMD-1144GHV DRO H: KNEE SPINDLE PARTS

No.	Part No.	Name	Size	Qty.
1	JMD1144GHV-H1	KNEE		1
2	JMD1144GHV-H2	WAY SLIDE SMALL		1
3	JMD1144GHV-H3	WAY SLIDE MEDIUM		1
4	JMD1144GHV-H4	KNEE COLUMN		1
5	JMD1144GHV-H5	LOCK WASHER 10MM	10mm	4
6	JMD1144GHV-H6	CAP SCREW	M10x40	4
7	JMD1144GHV-H7	COLLAR		1
8	JMD1144GHV-H8	CAP SCREW	M8x30	4
9	JMD1144GHV-H9	THREADED BUSHING		1
10	JMD1144GHV-H10	SET SCREW	M8x20	2
11	JMD1144GHV-H11	KNEE LEAD SCREW		1
12	JMD1144GHV-H12	KEY	6x12	4
13	JMD1144GHV-H13	BALL BEARING	51105	2
14	JMD1144GHV-H14	COLLAR		1
15	JMD1144GHV-H15	ADJUST WASHER		1
16	JMD1144GHV-H16	CONICAL GEAR		1
17	JMD1144GHV-H17	CIRCULAR NUT	M16x1.5	2
18	JMD1144GHV-H18	CONICAL GEAR		1
19	JMD1144GHV-H19	BALL BEARING	51105	1
20	JMD1144GHV-H20	COLLAR		1
21	JMD1144GHV-H21	SHAFT		1
22	JMD1144GHV-H22	KEY	5x18	2
23	JMD1144GHV-H23	COLLAR		1
24	JMD1144GHV-H24	BILLIARD OIL CUP		1
25	JMD1144GHV-H25	CAP SCREW	M6x25	4
26	JMD1144GHV-H26	SCALE RING		1
27	JMD1144GHV-H27	KNURLED THUMB SCR	M6x16	1
28	JMD1144GHV-H28	COLLAR		1
29	JMD1144GHV-H29	SET SCREW	M8x16	1
30	JMD1144GHV-H30	HANDLE		1
31	JMD1144GHV-H31	TAPER KNOB		1
32	JMD1144GHV-H32	HANDLE SPINDLE		1
33	JMD1144GHV-H33	SET SCREW	M12x60	4
34	JMD1144GHV-H34	HEX NUT	M12	4
35	JMD1144GHV-H35	KNEE GIB LONG		1
36	JMD1144GHV-H36	CAP SCREW	M12x45	4
37	JMD1144GHV-H37	KNEE GIB SHORT		1
38	JMD1144GHV-H38	KNEE GIB LONG		1
39	JMD1144GHV-H39	SPECIAL SCREW		1
40	JMD1144GHV-H40	SPECIAL FLAT WACHER		1

Complementarity Specification

I:VERTICAL TRAVEL OF KNEE

1. Vertical travel of knee by power is on the left of the knee.

2. The knee travel is restricted in the extreme position by means of limit switch.

When Vertical travel of knee by power the crank handle is disengaged automatically.

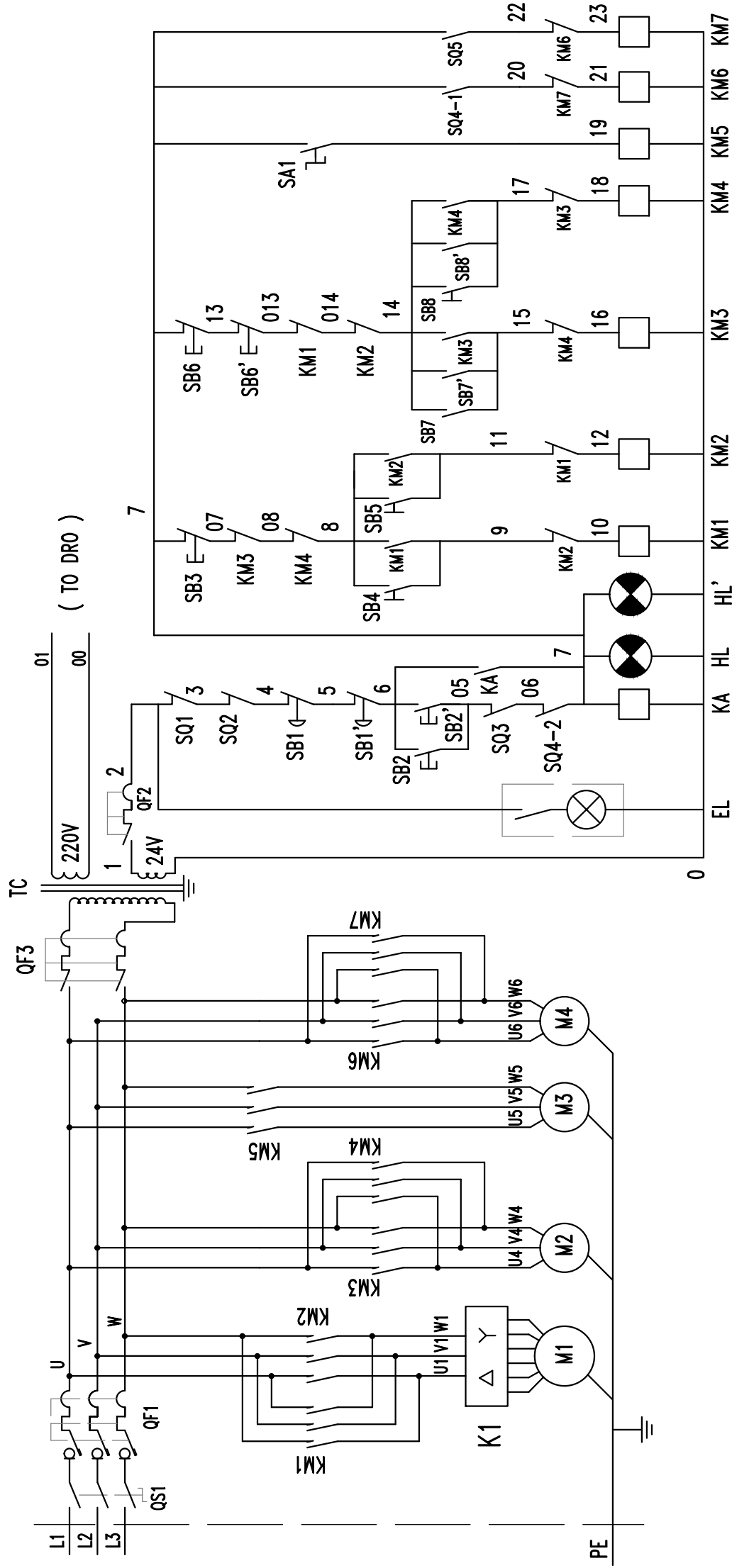
The crank handle is engaged when the table is brought to travel by manual in vertical direction.

3. WARNING

1) Vertical travel of knee by power doesn't do when the lock handle is locking. The lock handle and Vertical travel by power are linking.

2) Must loose the lock handle before Vertical travel of knee.

3) Don't engage the lock handle when Vertical travel of knee by power.



WIRING DIAGRAM

JMD-1144GHV-DRO

NO	Electrical code	Model and Specification	Function description	Supplier
1	QS1	JCH13-20 20/41000	Change-over switch	JUCHE
2	TC	JBK5-250VA	Transformer	AOHENG
3	QF1	JCM6-25	Circuit breaker	JUCHE
4	QF2	DZ47-63 D2	Circuit breaker	JUCHE
5	QF3	DZ47-63 D2	Circuit breaker	JUCHE
6	SB1	LA125H-BS542	Emergency stop button	MINGER
7	SB2	LA125J-11D/206A	Start button	MINGER
8	SB3	LA125H-BA42	stop button (V)	MINGER
9	SB4	LA125H-BA31	Forward (V)	MINGER
10	SB5	LA125H-BA31	Reverse (V)	MINGER
11	SB6	LA125H-BA42	stop button (H)	MINGER
12	SB7	LA125H-BA31	Forward (H)	MINGER
13	SB8	LA125H-BA31	Reverse (H)	MINGER
14	SB1'	LA125H-BS542	Emergency stop button	MINGER
15	SB2'	LA125J-11D/206A	Start button	MINGER
16	SB6'	LA125H-BA42	stop button (H)	MINGER
17	SB7'	LA125H-BA31	Forward (H)	MINGER
18	SB8'	LA125H-BA31	Reverse (H)	MINGER
19	K1	LW28-20/5	High low switch	MINGER
20	SA1	LA125H-BD21	Cooling pump button	MINGER
21	SQ1	KW-7	Spindle protect	LEMA
22	SQ2	LXW5-11Q1	Belt cover protect	LONGJING
23	SQ3	OV-152-1C25	Micro switch	Oumilang
24	SQ4-1	OV-152-1C25	Micro switch	Oumilang
25	SQ4-2	OV-152-1C25	Micro switch	Oumilang
26	SQ5	OV-152-1C25	Micro switch	Oumilang
27	KM1	3TH82	Contactor	SIEMENS
28	KM2	3TH82	Contactor	SIEMENS
29	KM3	3TH82	Contactor	SIEMENS
30	KM4	3TH82	Contactor	SIEMENS
31	KM5	3TH82	Contactor	SIEMENS
32	KM6	3TH82	Contactor	SIEMENS
33	KM7	3TH82	Contactor	SIEMENS
34	KA	3TH82	Contactor	SIEMENS
35	EL	JC38F-3	LED working lamp	JINYE
36	DRO	SDS6	DRO	SINO
37	M1	JMD939GV-D60 (YD100L-8/4)	Vertical Motor	DONGTAI

38	M2	JMD1144GHV- D19 (Y100L-4)	Horizontal Motor	DONGTAI
39	M3	JMD1144GHV-G47 (YS6344)	X Power feed Motor	DONGTAI
40	M4	JMD1144GHV- D36 (DB-12)	Cooling pump	DONGYANG

DRILLING/MILLING MACHINE

QUALITY CERTIFICATE

Item	Test Illustration		Allowance error	Measured Value
1	Flathness	A Horizontal B Cross	0.04/1000 0.04/1000	
2	Work flatness		0.04/200	
3	Run out of Spindle bore	A End spindle face B 200mm to spindle face	0.02 0.04	
4	Kick of spindle		0.02	
5	The perpendicular between Spindle and table	A Longitudinal B corss	0.10/200 0.10/200	
6	The perpendicular between Vertical movement of spindle and table	A Longitudinal B corss	0.10/100 0.10/100	
7	The parallelism between the work flatness and table	A Longitudinal B corss	0.05/200 0.05/200	
8	The straightness of basis "T"		0.03/200	
9	The parallelism between basis "T" and table		0.15/200	
10	The perpendicular between longitudinal move of table and cross move of table.		0.10/200	
11	Straightness of vertical movement of knee	A Longitudinal B corss	0.05/200 0.05/200	
12	The perpendicular between bodway and vertical guideway	A Longitudinal B corss	0.10/200 0.10/200	
13	The perpendicular between table and ram moving		0.10/200	
14	The perpendicular between table and roating plate rotate	Left 30° 0° Right 30°	0.10/200	
15	The parallelism between spindle and worktable		0.10/200	
16	The parallelism between cross move of work and spindle	A Longitudinal B corss	0.10/200 0.10/200	
17	The parallelism between the guideway of ram and spindle	A Longitudinal B corss	0.10/200 0.10/200	
18	Coaxialism between the hole of surporthilt and axis of spindle	A Longitudinal B corss	0.10 0.10	

PACKING LIST FOR

DRILLING & MILLING MACHINE JMD-1144GHV DRO

Series No:		Dimension:			
G/W:		N/W:			
No.	Name	Spec	Model	Quantity	Remark
1	Milling & Drilling Machine		JMD-1144GHV DRO	1	
2	Draw bar	M16x500/475mm		1+1	
3	Adapter	ISO40/MT3 MT3/MT2		1+1	
4	Taper shank for drilling chuck	ISO40/B18		1	
5	Drilling chuck	Φ3~Φ16		1	
6	T slot bolt	M14x55		2	
7	Washer	14		2	
8	Nut	M14		2	
9	Inner hexagonal spanner	2.5 3. 4. 5. 6 .8		1	
10	Tilted wedge			1+1	
11	Spanner	17-19/22-24/8-10		1+1+1	
12	Horizontal milling bar	ISO40-22/27		1+1	
13	Oil gun			1	
14	Handle			3+1	
15	Crank			1	
16	Instruction Manual			1	
17	Certificate of inspection			1	
18	Packing list			1	

Packing inspector _____

Date _____