

# JET

## JMD-939GHV DRO MILLING AND DRILLING MACHINE

Original:  
GB  
Operating Instructions



**EAC**

**JPW Tool Group Hong Kong Limited**

98 Granville Road, Tsimshatsui East, Kowloon, Hong Kong, PRC  
[www.jettools.com](http://www.jettools.com)

**Импортер в РФ: ООО «ИТА Технолоджи»**

105082, Москва, Переведеновский пер., д. 17  
[www.jettools.ru](http://www.jettools.ru)

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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 un-plugged 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 warning 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 Safey

Please read the operation manual caefully 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 the machine, 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 non-metals. It is 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 to 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 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 micro-feeding institute is applied to the machine, before using, please turn the locking bolt ③ in right side to form the handle

body with micro-gear, then turn the wheel④ in front of the head, the micro-feeding can be realized.

5. The handle body must be separated from micro-gear 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 3-blade vertical milling tool, the most, the working table must be hoisted to the nearest position to the spindle when the 2-blade milling tool is used.

6. The spindle box that transmitted by the belt can be survived at  $90^\circ$  (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 head screw 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  $360^{\circ}$  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 loce—ted in the right side of Hoist—descend sliding.

10. The horizontal milling can be realized . The spindle box must be turn  $180^{\circ}$  when the tool shaft and jack applied for assistance.

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

## SPECIFICATION

Model	JMD-939GHV 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	1000x240mm
T-slot size	5x14mm
Worktable travel	580/220mm
Distance between Vertical spindle and surface of column	250-650mm
Distance between Vertical spindle and surface of table	35-370mm
Distance between Horizontal spindle and surface of table	20-320mm
Swing of headstock	±45°
Spindle speed (V : 2 steps)	100-600 / 350-2000
Spindle speed (H : 9 steps)	60-1350
Motor power	V: 2.2kw H: 1.5kw
NW/GW	835/925kg
Packing size	1340x1140x2250mm

## 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. ①Vertical 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).

②Horizontal 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 right side 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, if loosing, pls adjust and lock.

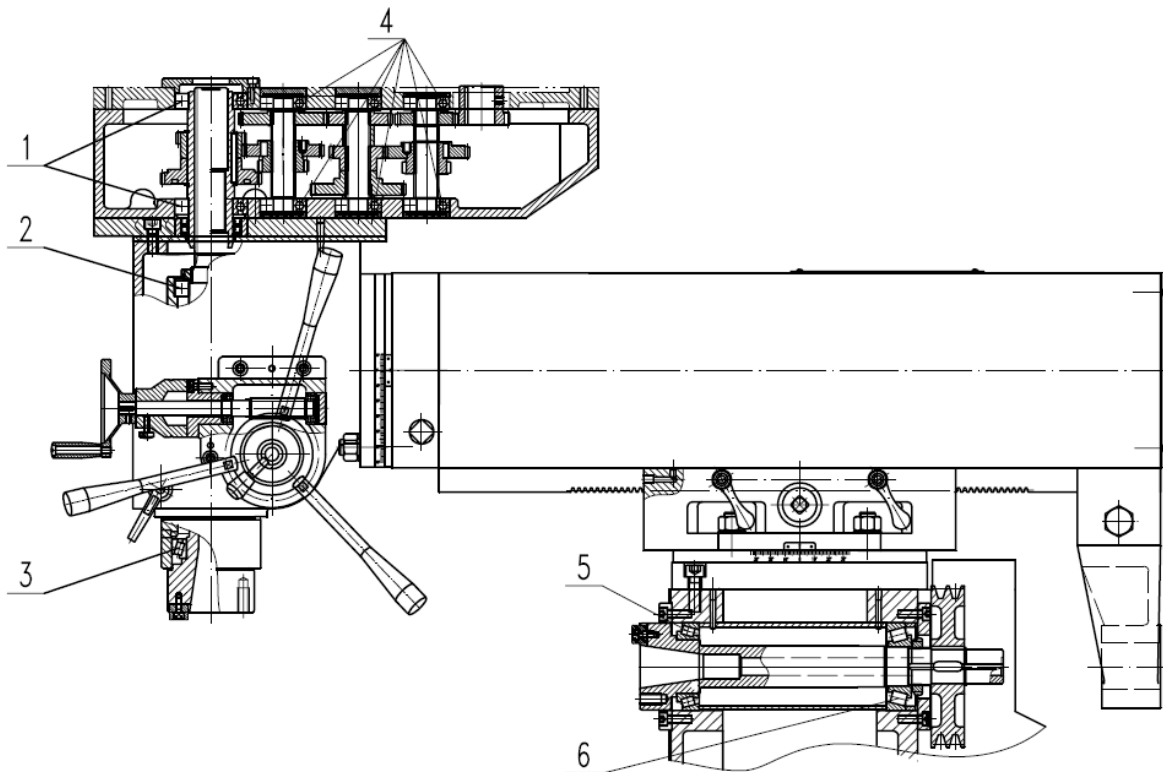
4. It is difficult for the spindle to rise, fall or not replacing, pls inspect wether there is scrap iron and other something in the connection between spindle sleeve and gear shaft and fatigue of spindle, if finding them, pls clean them and apply oil and adjust spring to fittest.

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

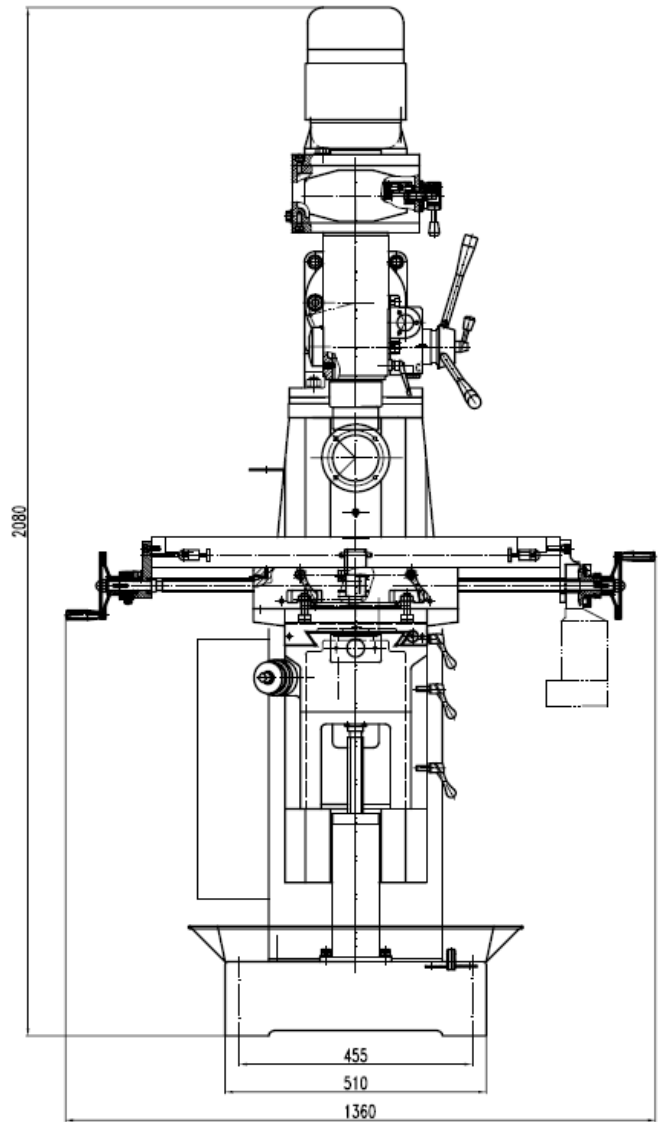
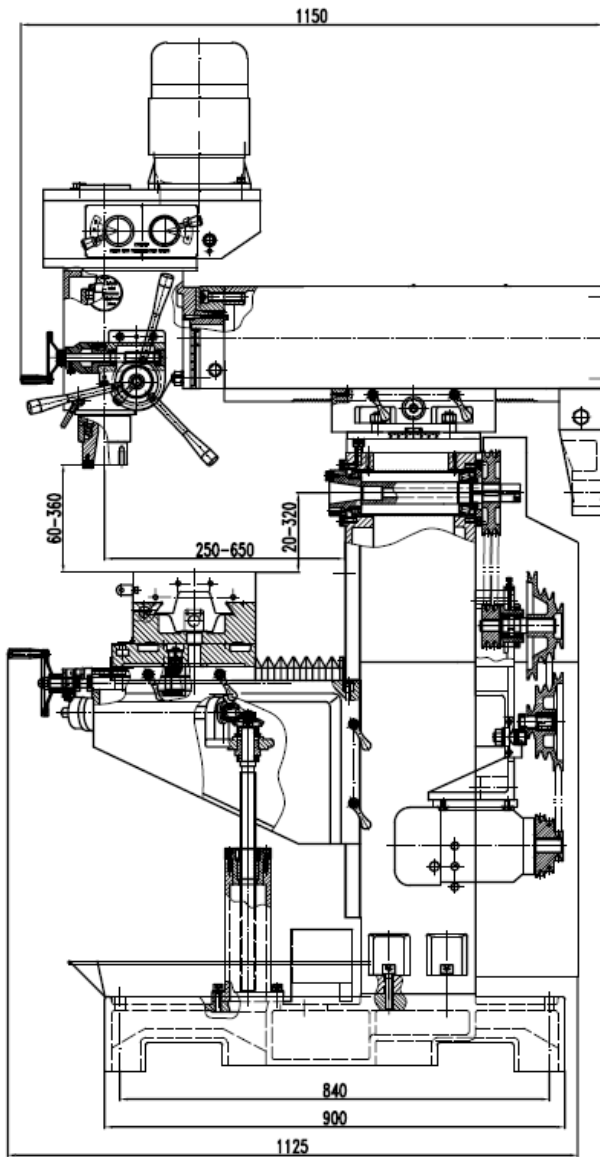
6. If there is noise in gear box, pls stop machine immediately to conform the position you require, then check that the oil meet standard.

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



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

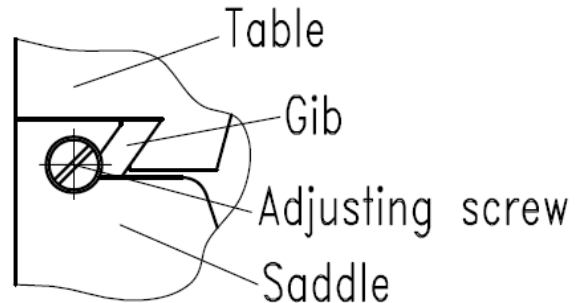


## MAINTENANCE

(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.

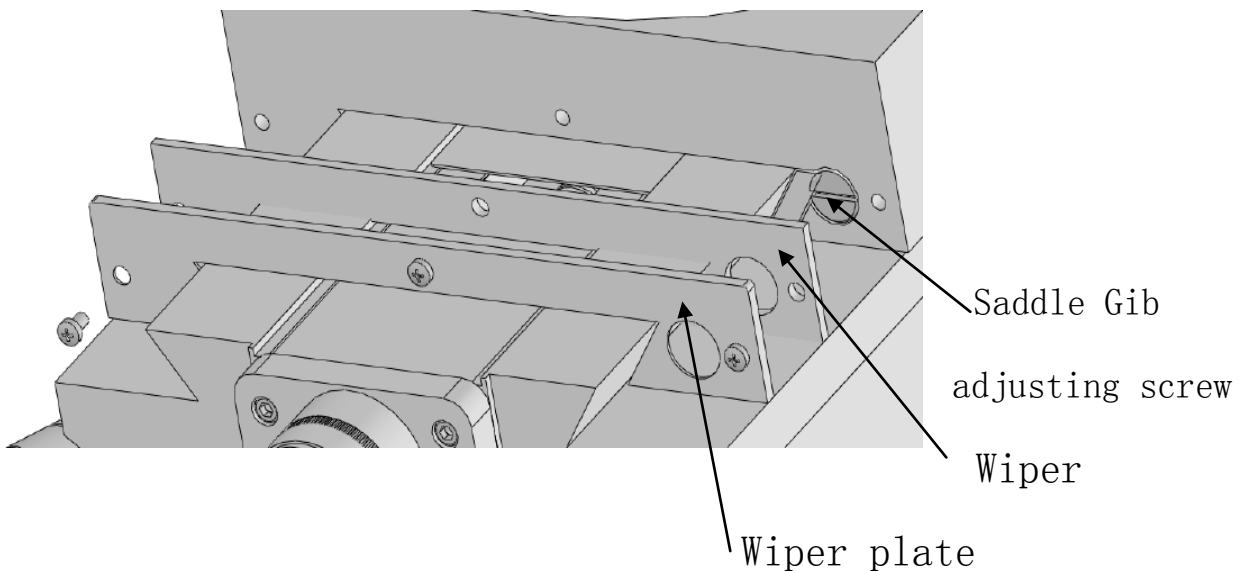


(2) Saddle knee ways adjustment.

a. Remove all dirt (from area)

b. Remove chip wiper guards and wiper.

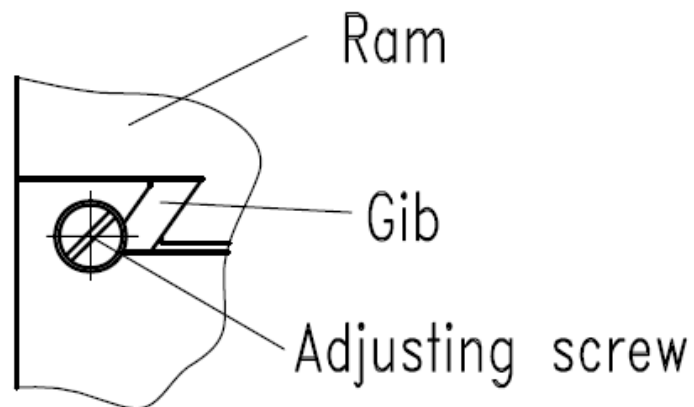
c. Turn gib adjusting screw clockwise while moving the saddle until slight drag is felt.



## MAINTENANCE

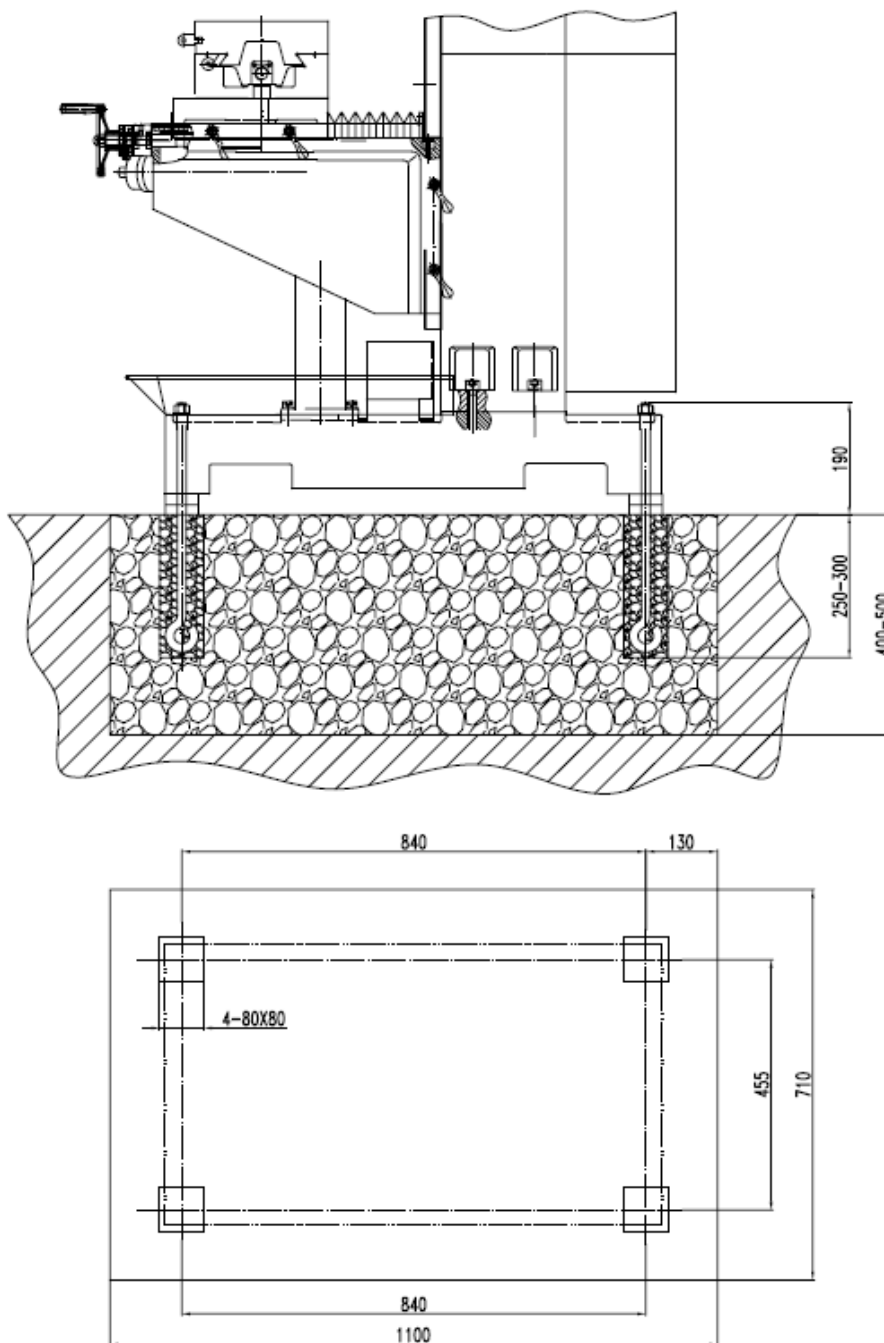
(3) Ram ways adjustment.

- 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 ang rocking movement.



Foundation plan

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**

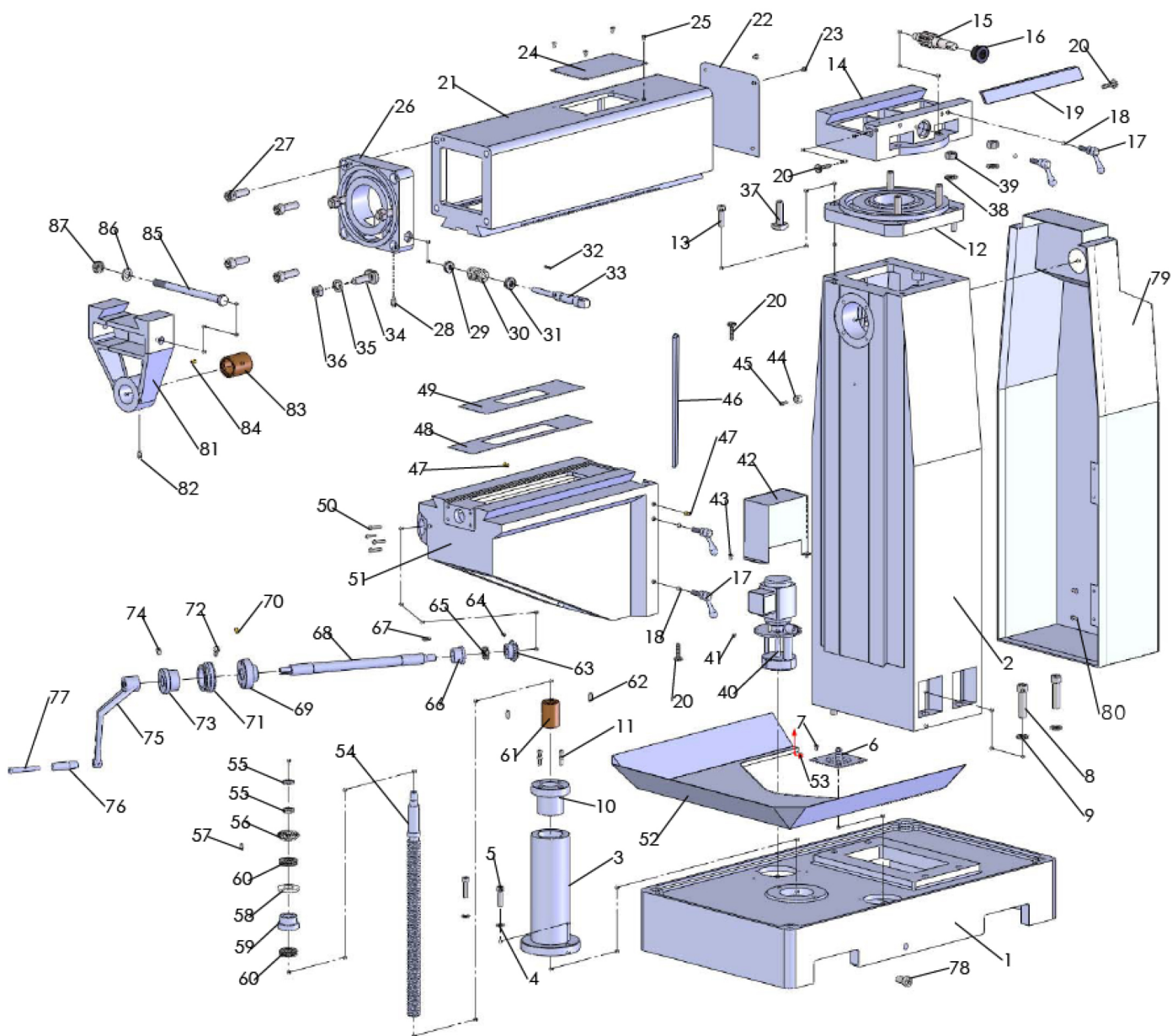
Before trial tun. Please carefully clean the anti-rust oil on the every part of the machine .But the metal tools and other tools which can hurt the parts surface are forbidden. Then coat a thin lager oil on the outer surface.

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.

# JMD-939GHV DROA: COLUMN PARTS



**JMD-939GHV DRO    A: COLUMN PARTS**

No.	Part No.	Name	Size	Qty.
1	JMD939GHV-A1	BASE		1
2	JMD939GHV-A2	COLUMN		1
3	JMD939GHV-A3	ELEVATING SCREW HOUSING		1
4	JMD939GHV-A4	LOCK WASHER	10mm	2
5	JMD939GHV-A5	HEX BOLT	M10-1.5x45	2
6	JMD939GHV-A6	CONNECT TUBE		1
7	JMD939GHV-A7	PHLP HD SCR	M6x12	4
8	JMD939GHV-A8	HEX BOLT	M16-2x65	4
9	JMD939GHV-A9	LOCK WASHER	16mm	4
10	JMD939GHV-A10	COLLAR		1
11	JMD939GHV-A11	CAP SCREW	M8-1.25x25	2
12	JMD939GHV-A12	HOLD SUPPORT		1
13	JMD939GHV-A13	CAP SCREW	M12-1.75x30	4
14	JMD939GHV-A14	AROUND BRACKET		1
15	JMD939GHV-A15	FEED SHAFT		1
16	JMD939GHV-A16	COLLAR		1
17	JMD939GHV-A17	CLAMP BOLT	M10-1.5x53x25	4
18	JMD939GHV-A18	CLAMP BLOCK		4
19	JMD939GHV-A19	GIB		1
20	JMD939GHV-A20	FLAT HD SCR	M8-1.25x40	4
21	JMD939GHV-A21	OVERARM		1
22	JMD939GHV-A22	COVER		1
23	JMD939GHV-A23	PHLP HD SCR	M6-.1x10	4
24	JMD939GHV-A24	COVER		1
25	JMD939GHV-A25	PHLP HD SCR	M6-.1x10	4
26	JMD939GHV-A26	HOLD BRACKET		1
27	JMD939GHV-A27	CAP SCREW	M16-2x50	4
28	JMD939GHV-A28	CAP SCREW	M8x20	1
29	JMD939GHV-A29	BALL BEARING	51101	1
30	JMD939GHV-A30	WORM		1
31	JMD939GHV-A31	BALL BEARING	51102	1
32	JMD939GHV-A32	KEY	4x 4x20	1
33	JMD939GHV-A33	WORM SHAFT		1
34	JMD939GHV-A34	T BOLT	M16-2x60	3
35	JMD939GHV-A35	WASHER	16MM	3
36	JMD939GHV-A36	HEX NUT	M16-2	3
37	JMD939GHV-A37	T BOLT	M16-2x50	4
38	JMD939GHV-A38	WASHER	16mm	4
39	JMD939GHV-A39	HEX NUT	M16-2	4
40	JMD939GHV-A40	ELECTRIC PUMP	DB-12	1

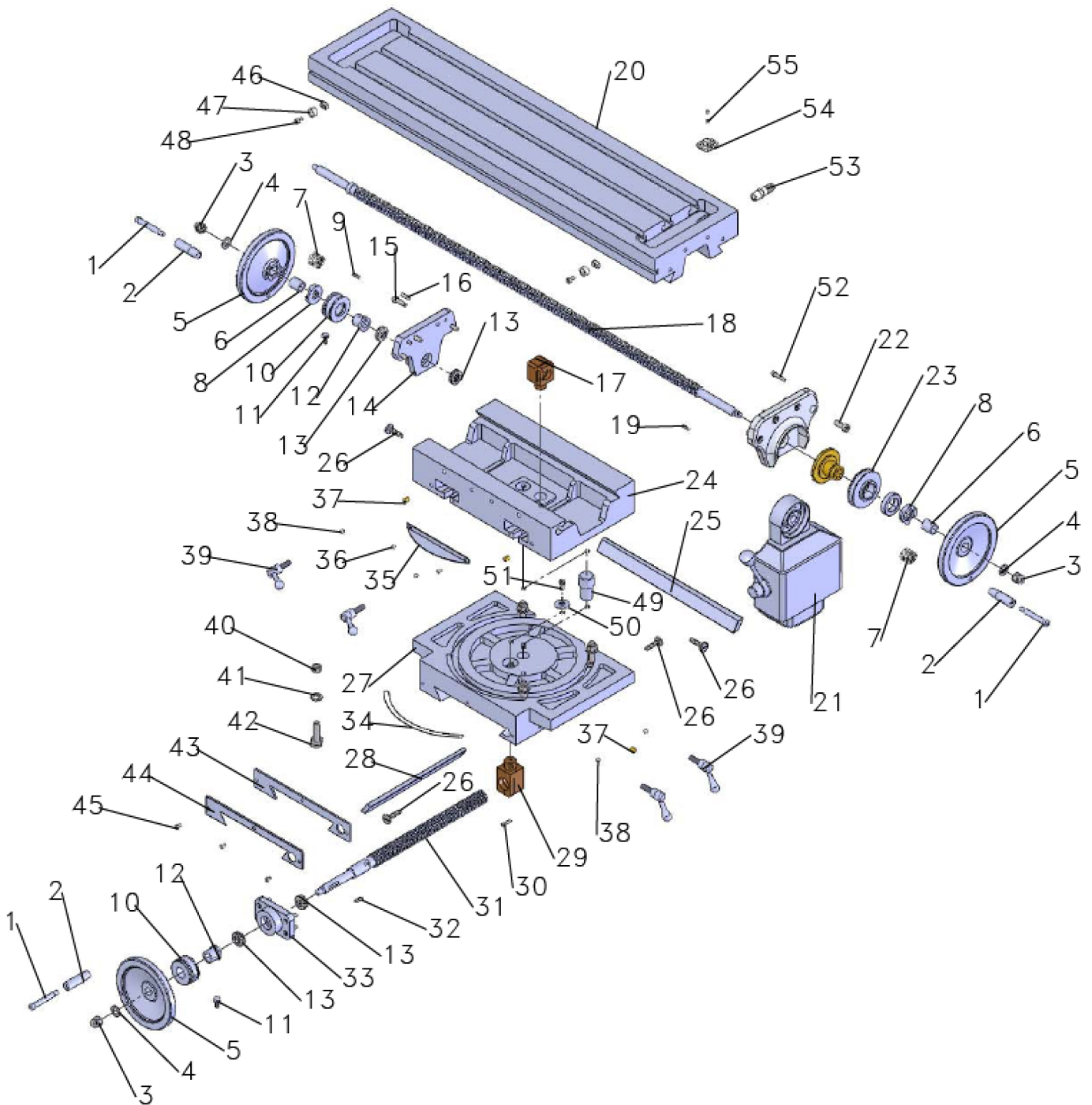
**JMD-939GHV DRO    A: COLUMN PARTS**

No.	Part No.	Name	Size	Qty.
41	JMD939GHV-A41	CAP SCREW	M5X12	4
42	JMD939GHV-A42	SHIELD		1
43	JMD939GHV-A43	CAP SCREW	M5X12	2
44	JMD939GHV-A44	SLEEVE		1
45	JMD939GHV-A45	SCREW	M6x18	1
46	JMD939GHV-A46	GIB		1
47	JMD939GHV-A47	BILLIARD OIL CUP		4
48	JMD939GHV-A48	WIPER PLATE		1
49	JMD939GHV-A49	WIPER PLATE		1
50	JMD939GHV-A50	CAP SCREW	M6x25	4
51	JMD939GHV-A51	KNEE		1
52	JMD939GHV-A52	OIL PAN		1
53	JMD939GHV-A53	CAP SCREW	M6X12	2
54	JMD939GHV-A54	HOIST DESCEND LEAD SCREW		1
55	JMD939GHV-A55	CIRCULAR NUT	M16X1.5	2
56	JMD939GHV-A56	CONICAL GEAR		1
57	JMD939GHV-A57	KEY	6x6x12	1
58	JMD939GHV-A58	ADJUST WASHER		1
59	JMD939GHV-A59	COLLAR		1
60	JMD939GHV-A60	BALL BEARING	51105	2
61	JMD939GHV-A61	NUT	42x60mm	1
62	JMD939GHV-A62	SET SCREW	M8x20	2
63	JMD939GHV-A63	CONICAL GEAR		1
64	JMD939GHV-A64	SET SCREW	M6-1x10	1
65	JMD939GHV-A65	BALL BEARING	51103	1
66	JMD939GHV-A66	COLLAR		1
67	JMD939GHV-A67	KEY	5x5x20	1
68	JMD939GHV-A68	SHAFT		1
69	JMD939GHV-A69	COLLAR		1
70	JMD939GHV-A70	CAP SCREW	M6-1x22	1
71	JMD939GHV-A71	SCALE RING		1
72	JMD939GHV-A72	KNURLED THUMB SCR	M6-1x10	1
73	JMD939GHV-A73	COLLAR		1
74	JMD939GHV-A74	SET SCREW		1
75	JMD939GHV-A75	HANDLE		1
76	JMD939GHV-A76	TAPER KNOB		1
77	JMD939GHV-A77	HANDLE SPINDLE		1
78	JMD939GHV-A78	SCREW		1
79	JMD939GHV-A79	BEHIND COVER		1
80	JMD939GHV-A80	FLAT HD SCR	M5x12	4





## JMD-939GHV DROB: ROTARY TABLE PARTS

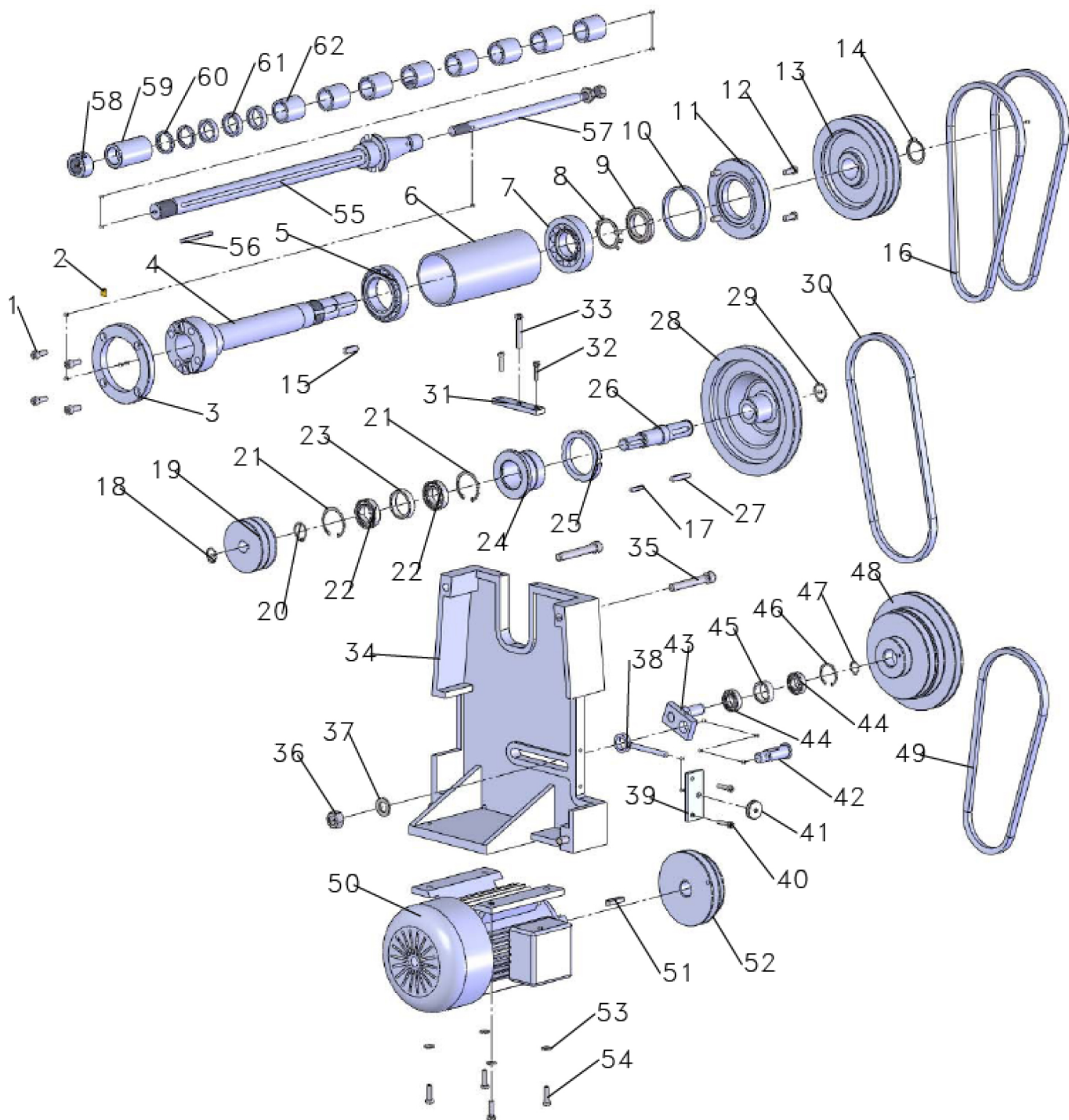


**JMD-939GHV DRO    B: ROTARY TABLE PARTS**

No.	Part No.	Name	Size	Qty.
1	JMD939GHV-B1	HANDLE SPINDLE		3
2	JMD939GHV-B2	TAPER KNOB		3
3	JMD939GHV-B3	HEX NUT	M12-1.75	3
4	JMD939GHV-B4	LOCK WASHER	12mm	3
5	JMD939GHV-B5	HAND WHEEL		3
6	JMD939GHV-B6	BUSH		2
7	JMD939GHV-B7	SPRING		2
8	JMD939GHV-B8	CONNECT		2
9	JMD939GHV-B9	KEY	5x20	1
10	JMD939GHV-B10	SCALE RING		2
11	JMD939GHV-B11	CAP SCREW	M6-1x16	2
12	JMD939GHV-B12	COLLAR		2
13	JMD939GHV-B13	BALL BEARING	51103	4
14	JMD939GHV-B14	SUPPORT		1
15	JMD939GHV-B15	CAP SCREW	M8x25	6
16	JMD939GHV-B16	PIN	6x25	2
17	JMD939GHV-B17	SPECIAL NUT		1
18	JMD939GHV-B18	LONG LEAD SCREW		1
19	JMD939GHV-B19	KEY	5x20	1
20	JMD939GHV-B20	TABLE		1
21	JMD939GHV-B21	POWER FEED		1
22	JMD939GHV-B22	CAP SCREW	M10x25	4
23	JMD939GHV-B23	SCALE RING		1
24	JMD939GHV-B24	ROTARY BRACKET		1
25	JMD939GHV-B25	GIB		1
26	JMD939GHV-B26	ADJUST SCREW	M8-1.25	3
27	JMD939GHV-B27	CENTER BASE		1
28	JMD939GHV-B28	GIB		1
29	JMD939GHV-B29	SPECIAL NUT		1
30	JMD939GHV-B30	SCREW	M5x25	3
31	JMD939GHV-B31	LONG LEAD SCREW		1
32	JMD939GHV-B32	KEY	5x30	1
33	JMD939GHV-B33	SUPPORT		1
34	JMD939GHV-B34	ANGLE RULER		1
35	JMD939GHV-B35	GUARD		1
36	JMD939GHV-B36	SCREW	M5x10	2
37	JMD939GHV-B37	OIL CUP	8	4
38	JMD939GHV-B38	CLAMP BLOCK		4
39	JMD939GHV-B39	CLAMP BOLT	M10-1.5x53x25	4
40	JMD939GHV-B40	HEX NUT	M12	4



### JMD-939GHV DRO C: HORIZONTAL SPINDLE PARTS

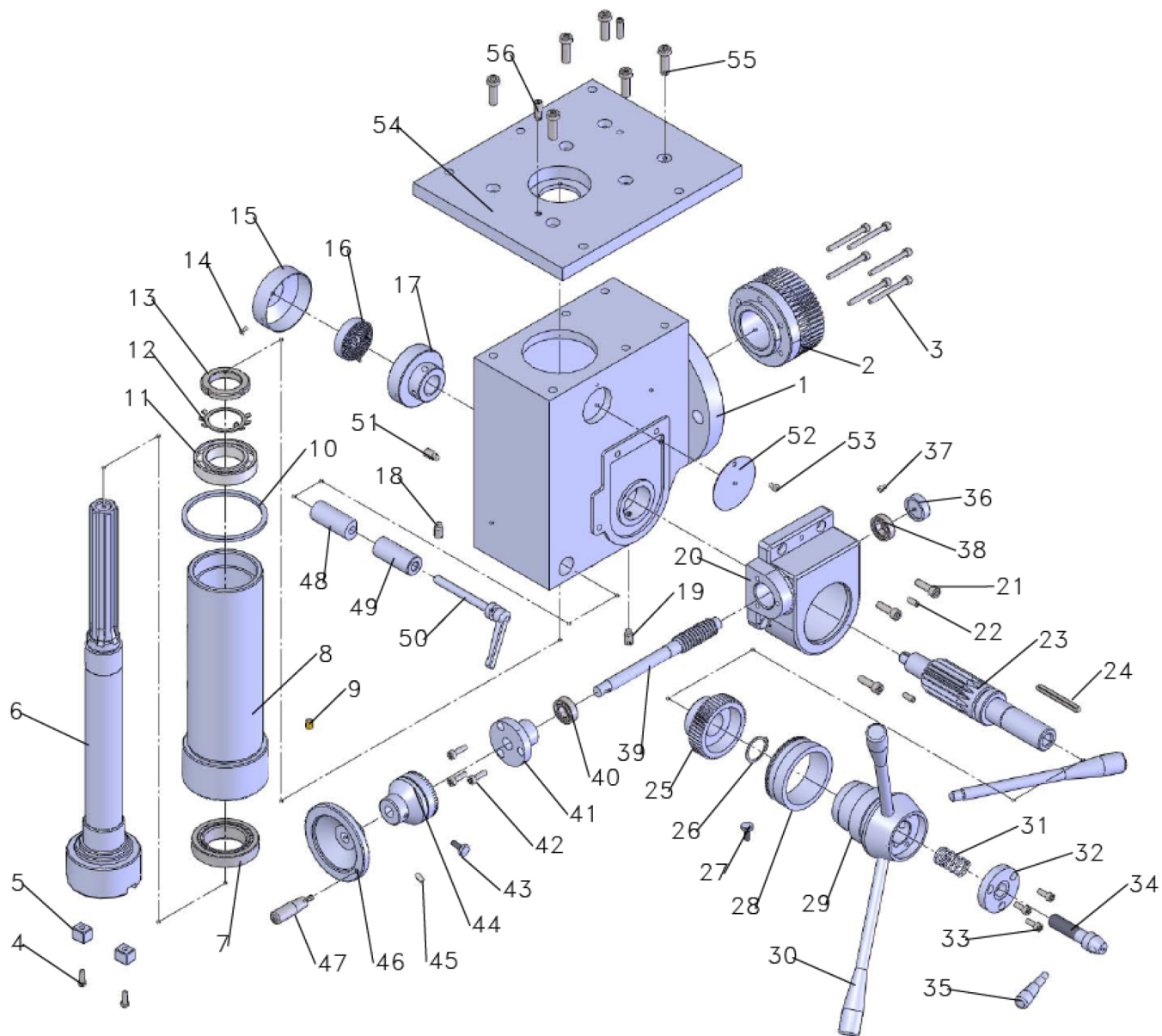


**JMD-939GHV DRO C: HORIZONTAL SPINDLE PARTS**

No.	Part No.	Name	Size	Qty.
1	JMD939GHV-C1	CAP SCREW	M8-1.25x25	4
2	JMD939GHV-C2	OIL CUP		1
3	JMD939GHV-C3	COVER		1
4	JMD939GHV-C4	SPINDLE		1
5	JMD939GHV-C5	BALL BEARING	32011	1
6	JMD939GHV-C6	COLLAR		1
7	JMD939GHV-C7	BALL BEARING	30308	1
8	JMD939GHV-C8	FLAT WASHER	39mm	1
9	JMD939GHV-C9	SLOTTED LOCK NUT	M39x1.5	1
10	JMD939GHV-C10	SPECIAL WASHER	90x4	1
11	JMD939GHV-C11	COVER		1
12	JMD939GHV-C12	CAP SCREW	M8-1.25x25	4
13	JMD939GHV-C13	SPINDLE PULLEY		1
14	JMD939GHV-C14	RETAINING RING		1
15	JMD939GHV-C15	KEY	10x8x30	1
16	JMD939GHV-C16	V-BELT	A838	2
17	JMD939GHV-C17	KEY	6x30	1
18	JMD939GHV-C18	EXT RETAINING RING	20	1
19	JMD939GHV-C19	WHEEL		1
20	JMD939GHV-C20	EXT RETAINING RING	25	1
21	JMD939GHV-C21	INT RETAINING RING	47mm	2
22	JMD939GHV-C22	BALL BEARING	6005	2
23	JMD939GHV-C23	COLLAR		1
24	JMD939GHV-C24	COLLAR		1
25	JMD939GHV-C25	SPECIAL NUT	M64x2	1
26	JMD939GHV-C26	SMALL SHAFT		1
27	JMD939GHV-C27	KEY	8x40	1
28	JMD939GHV-C28	PULLEY		1
29	JMD939GHV-C29	EXT RETAINING RING	25mm	1
30	JMD939GHV-C30	V-BELT	A864	1
31	JMD939GHV-C31	SUPPORT		1
32	JMD939GHV-C32	CAP SCREW	M6-1x25	2
33	JMD939GHV-C33	HEX BOLT	M8-1.25x60	1
34	JMD939GHV-C34	MOTOR BASE		1
35	JMD939GHV-C35	CAP SCREW	M12-1.75x85	4
36	JMD939GHV-C36	HEX NUT	M16-2	1
37	JMD939GHV-C37	FLAT WASHER	16mm	1
38	JMD939GHV-C38	ADJUST SCREW	M8-1.25	1
39	JMD939GHV-C39	SUPPORT		1
40	JMD939GHV-C40	CAP SCREW	M6-1x25	2



### JMD-939GHV DRO D: SPINDLE BOX PARTS



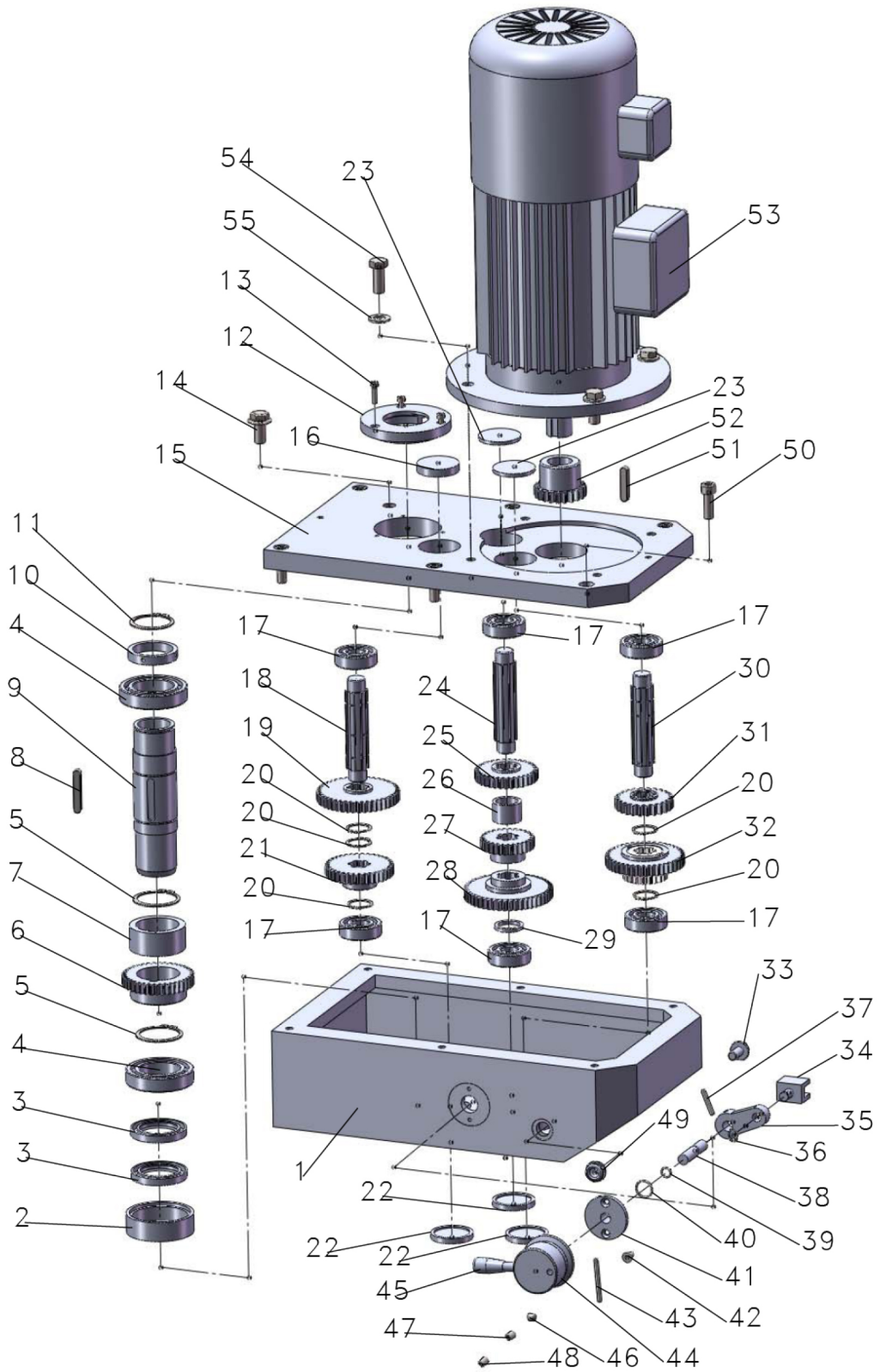
**JMD-939GHV DRO    D: SPINDLE BOX PARTS**

No.	Part No.	Name	Size	Qty.
1	JMD939GHV-D1	SPINDLE BOX		1
2	JMD939GHV-D2	GEAR		1
3	JMD939GHV-D3	SCREW	M6x75	6
4	JMD939GHV-D4	SCREW	M6x16	2
5	JMD939GHV-D5	FIXED KEY		2
6	JMD939GHV-D6	SPINDLE		1
7	JMD939GHV-D7	BALL BEARING	32010	1
8	JMD939GHV-D8	SLEEVE		1
9	JMD939GHV-D9	OIL CUP		1
10	JMD939GHV-D10	RUBBER WASHER	90mm	1
11	JMD939GHV-D11	BALL BEARING	6009	1
12	JMD939GHV-D12	LOCK WASHER	40	1
13	JMD939GHV-D13	LOCK NUT	M40x1.5	1
14	JMD939GHV-D14	CAP SCREW	M4x8	1
15	JMD939GHV-D15	SPRING CAP		1
16	JMD939GHV-D16	SPRING PLATE		1
17	JMD939GHV-D17	SPRING BASE		1
18	JMD939GHV-D18	SET SCREW	M8x16	1
19	JMD939GHV-D19	SET SCREW	M8x16	1
20	JMD939GHV-D20	HANDL WHEEL GEAR BOX		1
21	JMD939GHV-D21	SCREW	M8x25	3
22	JMD939GHV-D22	PIN	6x25	2
23	JMD939GHV-D23	FEED SHAFT		1
24	JMD939GHV-D24	KEY	8x38	1
25	JMD939GHV-D25	HELICAL GEAR		1
26	JMD939GHV-D26	EXT RETAINING RING	30	1
27	JMD939GHV-D27	CAP SCREW	M6-1x16	1
28	JMD939GHV-D28	SCALE RING		1
29	JMD939GHV-D29	HANDLE BRACKET HUB		1
30	JMD939GHV-D30	HANDLE BAR		2
31	JMD939GHV-D31	COMPRESSION SPRING		1
32	JMD939GHV-D32	COVER		1
33	JMD939GHV-D33	CAP SCREW	M6x16	3
34	JMD939GHV-D34	HANDLE SEAT	M16x2	1
35	JMD939GHV-D35	HANDLE BAR		1
36	JMD939GHV-D36	COVER		1
37	JMD939GHV-D37	SCREW	M6x12	1
38	JMD939GHV-D38	BALL BEARING	6002	1
39	JMD939GHV-D39	WORM		1
40	JMD939GHV-D40	BALL BEARING	6002	1





# JMD-939GHV DRO E: GEAR HEAD PARTS



**JMD-939GHV DRO    E: GEAR HEAD PARTS**

No.	Part No.	Name	Size	Qty.
1	JMD939GHV-E1	GEAR CASE		1
2	JMD939GHV-E2	COLLAR		1
3	JMD939GHV-E3	OIL SEAL	FB45x62x8	2
4	JMD939GHV-E4	BALL BEARING	6009	2
5	JMD939GHV-E5	EXT RETAINING RING	45	2
6	JMD939GHV-E6	GEAR		1
7	JMD939GHV-E7	COLLAR		1
8	JMD939GHV-E8	KEY	8x50	1
9	JMD939GHV-E9	SHAFT		1
10	JMD939GHV-E10	SPEED MEASUREMENT		1
11	JMD939GHV-E11	EX RETAINING RING	45	1
12	JMD939GHV-E12	COLLAR		1
13	JMD939GHV-E13	SCREW	M5x15	3
14	JMD939GHV-E14	HEX BOLT	M16x1.5	1
15	JMD939GHV-E15	BOX COVER		1
16	JMD939GHV-E16	COVER		1
17	JMD939GHV-E17	BALL BEARING	6204	6
18	JMD939GHV-E18	DRIVING SHAFT		1
19	JMD939GHV-E19	GEAR		1
20	JMD939GHV-E20	EX RETAINING RING	25	5
21	JMD939GHV-E21	GEAR		1
22	JMD939GHV-E22	COVER		3
23	JMD939GHV-E23	COVER		2
24	JMD939GHV-E24	DRIVING SHAFT		1
25	JMD939GHV-E25	GEAR		1
26	JMD939GHV-E26	COLLAR		1
27	JMD939GHV-E27	GEAR		1
28	JMD939GHV-E28	GEAR		1
29	JMD939GHV-E29	RING		1
30	JMD939GHV-E30	DRIVING SHAFT		1
31	JMD939GHV-E31	GEAR		1
32	JMD939GHV-E32	GEAR		1
33	JMD939GHV-E33	HEX BOLT	M10x1	1
34	JMD939GHV-E34	LIFT FORK		1
35	JMD939GHV-E35	ROCKER ARM		1
36	JMD939GHV-E36	EX RETAINING RING	10	1
37	JMD939GHV-E37	PIN	5x30	1
38	JMD939GHV-E38	SMALL SPINDLE		1
39	JMD939GHV-E39	RUBBER RING	12x2	1
40	JMD939GHV-E40	RUBBER RING	20x2	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.



## JMD-939GHV 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	MINGER
9	SB4	LA125H-BA31	Forward	MINGER
10	SB5	LA125H-BA31	Reverse	MINGER
11	SB6	LA125H-BA42	stop button	MINGER
12	SB7	LA125H-BA31	Forward	MINGER
13	SB8	LA125H-BA31	Reverse	MINGER
14	SA1	LA125H-BD21	Cooling pump button	MINGER
15	SQ1	KW-7	Spindle protect	LEMA
16	SQ2	LXW5-11Q1	Belt cover protect	LONGJING
17	KM1	3TH82	Contactor	SIEMENS
18	KM2	3TH82	Contactor	SIEMENS
19	KM3	3TH82	Contactor	SIEMENS
20	KM4	3TH82	Contactor	SIEMENS
21	KM5	3TH82	Contactor	SIEMENS
22	KA	3TH82	Contactor	SIEMENS
23	DRO	SDS6	DRO	SINO
24	EL	JC38F-3	LED working lamp	JINYE
25	Power feed X	JMD939GHV-B21 (AS-350)	Power feed X	ASONG
26	M1	JMD939GHV-E53 (YVF100L-4)	Vertical Motor	DONGTAI
27	M2	JMD939GHV-C50 (Y90L-4)	Horizontal Motor	DONGTAI
28	M3	JMD939GHV-A40 (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	
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-939GHV DRO

Series No:		Dimension:			
G/W:		N/W:			
No.	Name	Spec	Model	Quantity	Remark
1	Milling & Drilling Machine		JMD-939GHV DRO	1	
2	Draw bar	M16x340/510mm		1+1	
3	Adapter	ISO40/MT3 MT3/MT2		1+1	
4	Taper shank for drilling chuck	ISO40/B18		1	
5	Drilling chuck	Φ 3~Φ 16		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	Horizontal milling bar	ISO40-22/27		1+1	
12	Spanner	17-19/22-24		1+1	
13	Oil gun			1	
14	Handle			3+1	
15	Crank			1	
16	Extension rod			1	
17	Instruction Manual			1	
18	Certificate of inspection			1	
19	Packing list			1	

Packing inspector \_\_\_\_\_

Date \_\_\_\_\_