

JET

JMD-45L

MILLING AND DRILLING MACHINE

Original:
GB
Operating Instructions



EAC

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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:FAILURE TO FOLLOW THESE RULES
MAY RESULT IN SERIOUS PERSONAL INJURY**

As with all machinery there are certain hazards involved with operation and use of the machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

This machine was designed for certain applications only. We strongly recommends that this machine. NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the machine until you have had detail instruction form your dealer.

SAFTEY RULES FOR ALL TOOLS

1.FOR YOUR OWN SAFETY , READ THIS INSTRUCTION MANUAL BEFORE OPERATING THE TOOL. Learn the tool's application and limitations as well as the specific hazards peculiar to it.

2.KEEP GUARDS IN PLACE and in working order.

3.GROUND ALL TOOLS. If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong plug receptacle, the adapter lug must be attached to a know ground . Never remove the thrid prong.

4.REMOVE ADJUSTING AND WRENCHES.

Form habit of checking to see that keys and adjusting wrenched are removed form tool before turning it "on."

5.KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.

6.DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

7.KEEP CHILDER AND VISITORS AWAY. All children and visitors should be keep a safe distance form work area.

8.MAKE WORKSHOP CHILDROOF-with padlocks, master switches, or by removing starter keys.

9.Don't force tool. It will do the job better and be safer at the rate for which it was designed.

10.USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

11.WEAR PROPER APPAREL. No loose clothing , gloves , neckties , rings ,

bracelets, or other jewelry to get caught in moving parts. Nonslip foot wear is recommended . Wear protective hair covering to contain long hair.

12.ALWAYS WEAR EYE PROTECTION. Refer to ANSIZ87.1 Standard for appropriate recommendations . Also use face or dust mask if cutting operation is dusty.

13.SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

14.DON'T OVERREACH. Keep proper footing and balance at all times.

15.MAINTAIN TOOLS IN TOP CONDITION.

Keep tool sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16.DISCONNECT TOOLS before servicing and when changing accessories such as blades,bits cutters,etc.

17.USE RECOMMENDED ACCESSORIES.

Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards.

18.AVOID ACCIDENTAL STARTING. Make sure switch is in "OFF" position before plugging in power cord.

19.NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

20.CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function check for alignment of moving parts binding of moving parts,breakage of parts mounting , and any other conditions that may affect its operation.A guard or other part that is damaged should be properly repaired or replaced.

21.DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

22.NEVER LEAVE TOOL RUNNING UNATTENDED.TURN POWER OFF. Don't leave tool until it comes to a complete stop.

23.DRUGS ALCOHOL, MEDICATION. Do not operate tool while under the influence of drug,alcohol or any medication.

24.MAKE SURE TOOL IS DISCONNECTED FORM POWER SUPPLY while motor is being mounted, connected or reconnected.

ADDITIONAL SAFETY RULES FOR MILL DRILL

1. **BE SURE** drill bit or cutting tool is securely locked in the chuck.
2. **BE SURE** chuck key is remove form the chuck before turning on power .
3. **Adjust** the table or depth stop to avoid drilling into the table.
4. **SHUT OFF** the power , remove the drill bit or cutting tool, and clean the table before leaving the machine.
5. **CAUTION.** When practical, use clamps or a vise to secure workpiece to keep the workpiece form rotating while the drill bit or cutting tool.
6. **WARNING: FOR Your Own Safety Don't wear gloves when operating a mill/drill.**

SPECIFICATION

Model	JMD-45L
Max. drilling capacity (Iron/Steel)	45mm/32mm
Max. milling capacity (Face milling)	80mm
Max. milling capacity (End milling)	32mm
Spindle taper	ISO30
Spindle travel	120mm
Worktable size	1000x240mm
T-slot size	3x14mm
Worktable travel	760/190mm
Distance between spindle to column	258mm
Max. distance between spindle nose to worktable	450mm
Swing of headstock	±45°
Spindle speed (12 steps)	75, 180, 280, 600, 1000, 1600
	150, 360, 560, 1200, 2000, 3200
Motor power	1.1/1.5kw
NW/GW	310/340kg
Packing size	1240x760x1150mm

WARNING: CHANGE SPEED ONLY WHEN MACHINE IS STOPPED CHANGING THE GEAR BOX OIL

Tilt the head stock over as shown in Fig 1. Open the drain plug to allow the oil to drain form the opening completely. Then lock the oil drain plug and turn the head to be upright position. Remove the oil filler plug fill the oil to the gear until the oil lever reach the middle of oil fluid lever indicator. Then lock the plug.

CLEANNING

- (1) Your machine has been coated with a heavy grease to protect it in shipping. This coating should be completely removed before operating the machine. Commercial degreaser , kerosene or similar solvent may be used to remove the grease form the machine, but avoid getting solvent ob belts or other rubber parts.
- (2) After cleaning , coat all bright work with a light lubrication. Lubricate all points with a medium consistency machine oil.

LUBRICATION:

All ball bearings in your mill/drill are sealed for lift,requiring no lubrication.

Points requiring lubrication are:

- (1) Internal spline drive assembly. Keep this area well lubricated with a good grade grease, insert grease in the hole at the top of spindle pulley spline driver, lube twice yearly.
- (2) A light film of oil applied to the quill and column will reduce wear,prevent rust, and assure ease of operation.
- (3) Quill return spring should receive oil (sae 20) once yearly. Remove cover plate and apply oil with squirt can or small brush.
- (4) **IMPORTANT:**The gear box should be oiled with a lubricant such as sae 68 oil in level. **CHANGE OIL EVERY ONE YEAR.**
- (5) Apply lubriplate to quill pinion every 90 days.

NOTE: use extreme care when performing this operation and keep hands clear of pinch points. When using paraffin bar , do this only by turning the sheaves by hand. Do not apply with motor running.

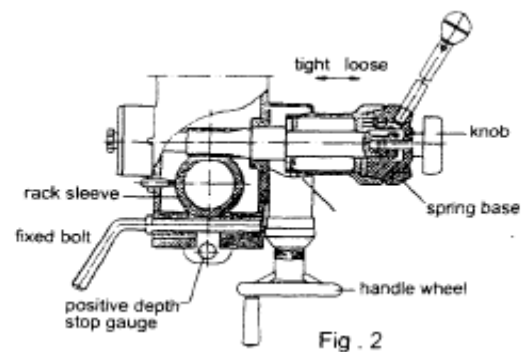
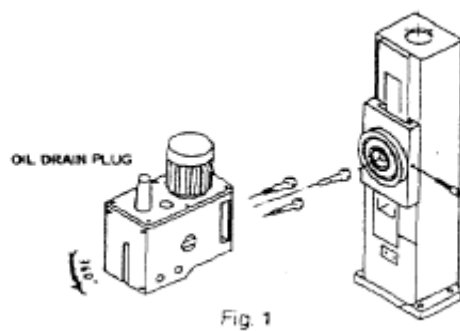
USE OF MAIN MACHINE PARTS

- (1) To raise and lower the head by head handle.
- (2) Equipped with an electric switch for tapping operation clockwise or counterclock wise.
- (3) To adjust the quick or slow feeding by feed handle.
- (4) To adjust the table left and right travel by table handle wheel.
- (5) To adjust the table fore and after travel by table handle wheel.
- (6) To operate the spindle handle wheel for micro feed.
- (7) To adjust the scale size according to working need.

PRECAUTION OPERATION

Check all parts for proper condition before operation ; if normal safety precautions are nnoticed carefully, this machine can provide you withstanding of accurate service.

- (1) Before Operation
 - (a) Fill the lubricant
 - (b) In order to keep the accurate precision, the table must be free from dust and oil deposits.
 - (c) Check to see that the tools are correctly set and the workpiece is set firmly.
 - (d) Be sure the speed is not set to fast.
 - (e) Be sure everything is ready before use
- (2) After Operation
 - (a) Turn off the electric switch.
 - (b) Turn down the tools.
 - (c) Clean the machine and coat it with lubricant.
 - (d) Cover the machine with cloth to keep out the dust.
- (3) Adjustment of head
 - (a) To raise and lower the head, loosen the leaf screw located on the right side of the raise and lower base. When the desired height is reached tighten leaf screw to avoid vibration.
 - (b) Unscrew 3 nuts while the workpiece needs to be bevel turn to the degrees you wish on the scale, then screw the 3.



QUILL RETURN SPRING ADJUSTMENT:

Spring tension for return of spindle, after hole drilling, has been pre-set at the factory. No further adjustment should be attempted unless absolutely necessary. Adjustment will probably be required if a multiple spindle drilling or tapping head is used. If adjustment is necessary, loosen lock screw while holding quill spring housing. Do not allow the housing to turn in your hand, or spring will unwind. Turn entire housing assembly clockwise the number of turns necessary to cause the quill to return to its up position. (NOTE: The flat

of the spring housing pilot is lined up with the spring loading hole on the body of the spring housing.) Reset lockscrew make sure point of screw mates the flat on the housing journal.

(1) Preparing for Drilling (see fig.2)(Except addition power feed system).

Turn of the knob make loose the taper body of worm gear and spring base. Then we decide spindle stroke setting the positive depth stop gauge for drilling blind hole or free state for pass hole.

(2) Preparing for milling(see fig.2)(Except addition power feed system)

- (a) Adjust the positive depth stop gauge to highest point position.**
- (b) Turn tight of the knob be use to taper friction force coupling the worm gear and spring base. Then turning the handle wheel by micro set the spindle of work piece machining height.**
- (c) Lock the rack sleeve at the desired height with fixed bolt.**

ADJUSTING TABLE SLACK AND COMPENSATE FOR WEAR(see fig.3)

- (1) Your machine is equipped with jib strip adjustment to compensate for wear and excess slack on cross and longitudinal travel.**
- (2) Clockwise rotation the job strip bolt with a big screw for excess slack otherwise a little counter cloclwise if too tight.**
- (3) Adjust the jib strip bolt until feel a slight drag when shifting the table.**

CLAMPING TABLE BASE AND MACHINE BASE (See Fig.3)

(1)When milling longitudinal feed. It is advisable to lock the cross feed table travel to insure the accuracy of your work. To do this , tighten the small leaf

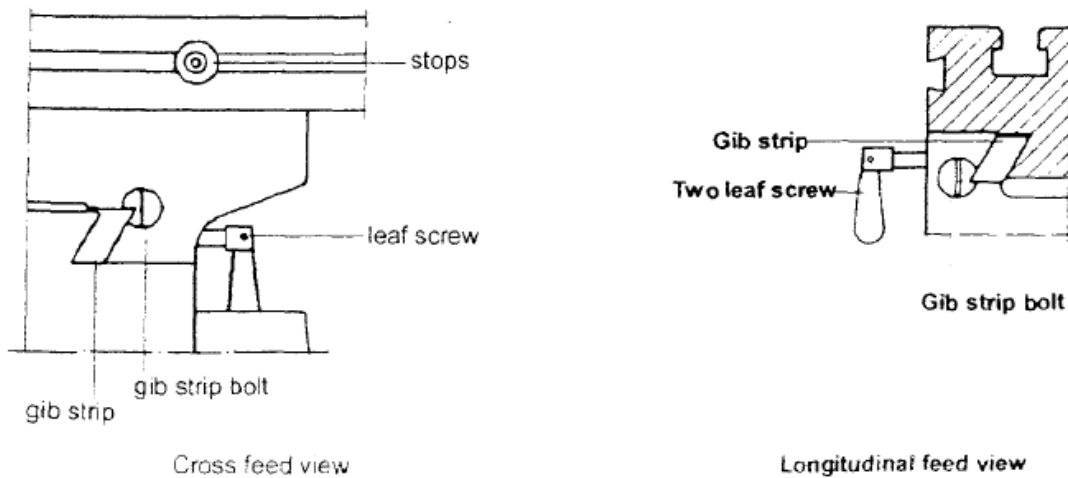


Fig.3

(2) To tighten the longitudinal feed travel of the table for cross feed milling, tighten the two small leaf screw on the front of the table base.

(3) Adjustable travel stops are provide on the front of the table for control of cross travel and the desired milling length.

TO CHANGE TOOLS

(1) Removing Face Mill or Drill Chuck Arbor

Loosen the arbor bolt at the top of the spindle shaft approximately 2 turns with a wrench. Rpa the top of the arbor bolt with a mallet.

After taper has been broken loose, holding chuck arbor on hand and turn detach the arbor bolt with the other hand.

(2) To install Face Mill or Cutter Arbor

Insert cutter and cutter arbor bolt detach securely, but do not over-tighten.

(3) Removing Taper Drills

(a) Turn down the arbor bolt and insert the taper drill into the spindle shaft.

(b) Turn the rapid down handle rod down until the oblong hole in the rack sleeve appears. Line up this hole with the hole in the spindle. Insert key punch key through holes and strike lightly with a mallet. This will force the taper drill out.

SPECIFICATION OF T-SLOT

The size of T-Solt on table as fig.4

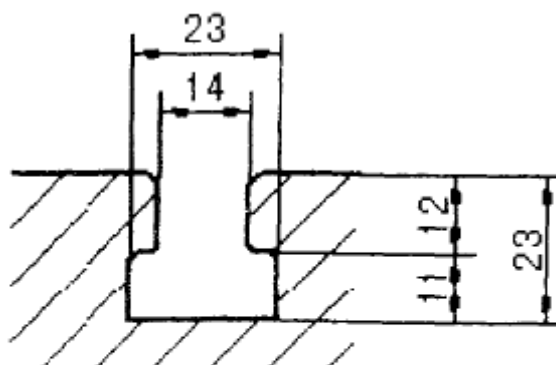
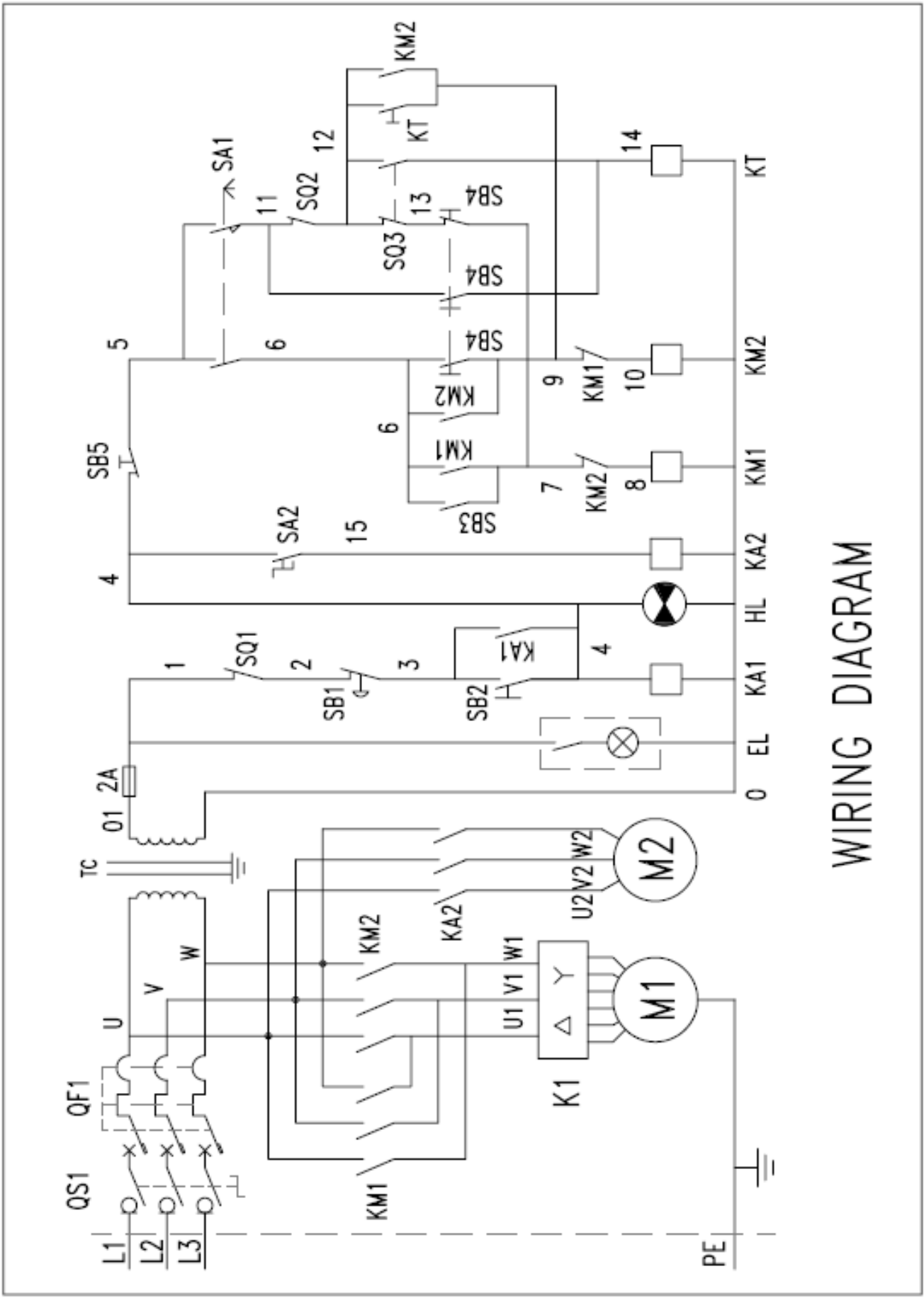


Fig.4

TROUBLE SHOOTING HINTS

TROUBLE	PROBABLE CAUSE	REMEDY
Excessive Vibration	<ol style="list-style-type: none"> 1. Motor out of balance 2. Bad motor 	<ol style="list-style-type: none"> 1. Balance or replace problem motor. 2. Replace motor
Motor stalls	<ol style="list-style-type: none"> 1. Over feeding. 2. Dull drill. 3. Motor not building up to running speed. 4. Bad motor 	<ol style="list-style-type: none"> 1. Replace feed rate. 2. Sharpen drill and keep sharp. 3. Replace or repair motor .Check fuses in all three legs on three phase motors and replace if necessary. 4. Replace motor
Noisy Operation	<ol style="list-style-type: none"> 1. Excessive vibration 2. Improper quill adjustment. 3. Noisy spline. 4. Noisy motor 	<ol style="list-style-type: none"> 1. Check remedy under excessive vibration. 2. Adjust quill. 3. Lubricate spline. 4. Check motor bearing or for loose motor fan.
Drill or Tool heats up or burns work	<ol style="list-style-type: none"> 1. Excessive speed. 2. Chips not clearing. 3. Dull tool. 4. Feed reate too slow. 5. Rotation of drill incorrect. 6. Failure to use cutting oil or coolant (on steel) 	<ol style="list-style-type: none"> 1. Reduce speed. 2. Use pecking operation to clear chips. 3. Sharpen tool or replace. 4. Increase feed enough to clear chips. 5. Reverse motor rotation. 6. Use cutting oil or coolant on steel
Drill leads off	<ol style="list-style-type: none"> 1. No drill spot. 2. Cutting lips on drill off center. 3. Quill loose in head. 4. Bearing play. 	<ol style="list-style-type: none"> 1. Center punch or center drill workpiece. 2. Regrind drill. 3. Tighten quill. 4. Check bearings and reseal or replace if necessary.
Excessive drill runout or wobble	<ol style="list-style-type: none"> 1. Bent drill. 2. Bearing play. 3. Drill not seated properly in chucks. 	<ol style="list-style-type: none"> 1. Replace drill. Do not attempt to straighten. 2. Replace or reseal bearings. 3. Loosen , reseal and tighten chuck.
Work or fixture comes loose or spins	<ol style="list-style-type: none"> 1. Failure to clamp workpiece or work holding device to table. 	<ol style="list-style-type: none"> 1. Clamp workpiece or work holding device to table surface.

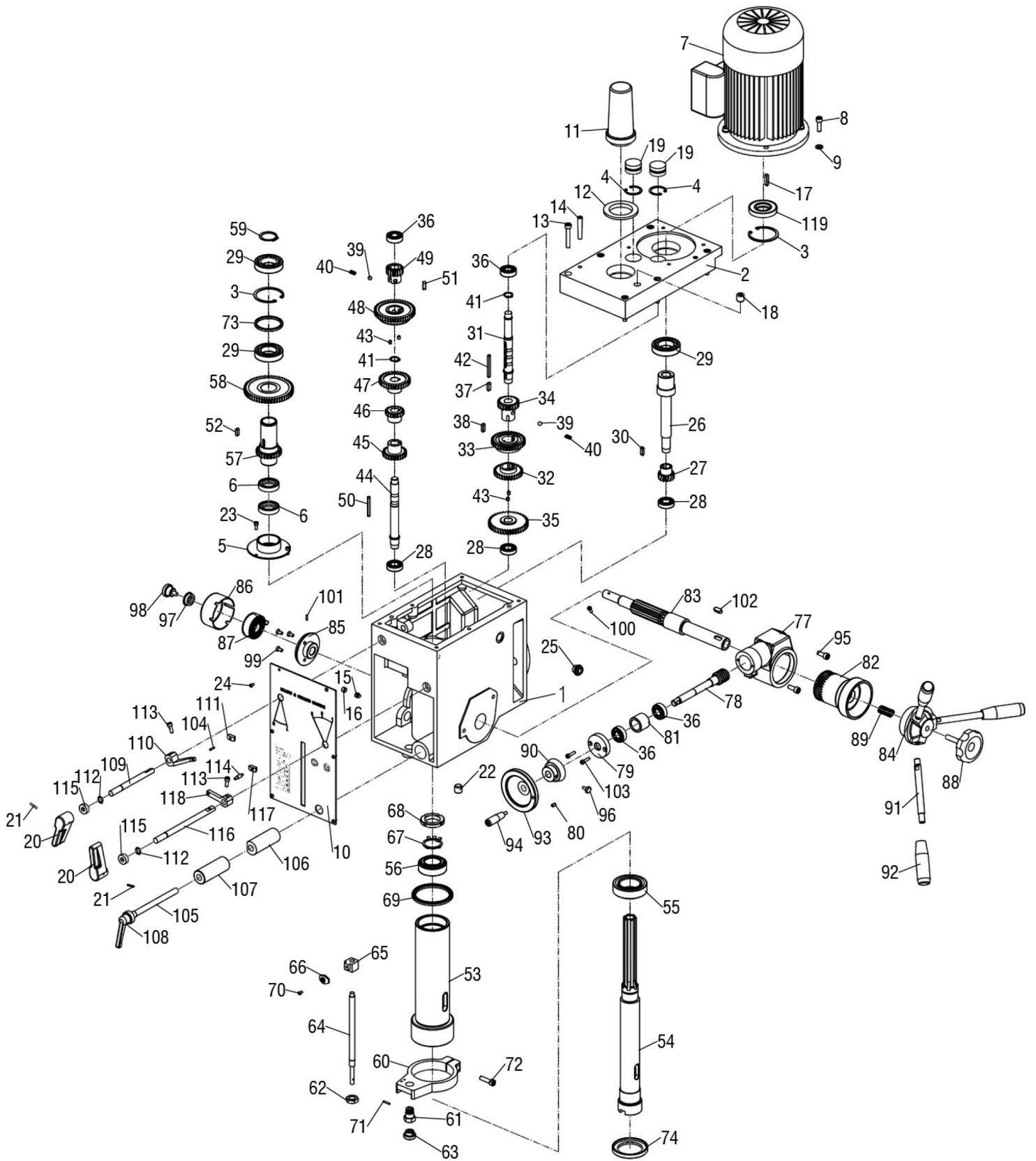


WIRING DIAGRAM

JMD-45L

NO	Electrical code	Model and Specification	Function description	Supplier
1	QS1	JCH13-20 20/41000	Change-over switch	JUCHE
2	TC	JBK5-63VA	Transformer	AOHENG
3	FU	2A	FUSE	ZHENGRONG
4	QF1	JCM6-25	Circuit breaker	JUCHE
5	SB1	LA125H-BS542	Emergency stop button	MINGER
6	SB2	LA125J-11D/206A	Start button	MINGER
7	SB3	LA125H-BA31	Forward	MINGER
8	SB4	LA125H-BA31	Reverse	MINGER
9	SB5	LA125H-BA42	stop button	MINGER
10	SA1	LA125H-BD33	Drilling milling /Tapping	MINGER
11	SA2	LA125H-BD21	Cooling pump button	MINGER
12	SQ1	KW-7	Spindle protect	LEMA
13	SQ2	KW3-OZ	Tapping limit switch	BINGSHUANG
14	SQ3	KW3-OZ	Tapping limit switch	BINGSHUANG
15	KM1	3TB41	Contactor	SIEMENS
16	KM2	3TB41	Contactor	SIEMENS
17	KA1	HH52P-L	Auxiliary relay	E&E
18	KA2	HH54P-L	Auxiliary relay	E&E
19	KT	H3Y-2	Time relay	OMRON
20	EL	JC34A	LED working lamp	JINYE
21	K1	LW28-20/5	Double Speed Switch	JUCHE
22	M1	JMD40-A7 (YD90L-4/2)	MOTOR	DONGTAI
23	M2	DB-12	Cooling pump	DONGTAI

JMD-45L Head Parts - A



JMD-45L Head Parts - A

No.	Part No.	Code	Name	Size	Qty.
1	JMD45L-A1	20010B	Head body		1
2	JMD45L-A2	20011B	Head body cover		1
3	JMD45L-A3		Int retaining ring	Φ 62	2
4	JMD45L-A4		Int retaining ring	Φ 35	2
5	JMD45L-A5	20018B	Airtight base		1
6	JMD45L-A6		Airtight ring	45X35X10	2
7	JMD40-A7		Motor		1
8	JMD45L-A8		Screw	M8X25	1
9	JMD45L-A9		Washer	8	1
10	JMD45L-A10	20201	Plate		1
11	JMD45L-A11	20304-1B	Arbor bolt cover		1
12	JMD45L-A12	20304-2B	Arbor bolt cover base		1
13	JMD45L-A13		Screw	M8X45	6
14	JMD45L-A14		Pin	8X40	2
15	JMD45L-A15		Screw	M10X10	1
16	JMD45L-A16		Screw	M10X8	1
17	JMD45L-A17		Key	6X28	1
18	JMD45L-A18		Bolt	ZG3/8"	1
19	JMD45L-A19	20020B	Cap		2
20	JMD45L-A20	20307B	Speed lever		2
21	JMD45L-A21		Pin	3X18	2
22	JMD45L-A22		Oil plug	ZG3/8"	1
23	JMD45L-A23		Screw	M5x10	3
24	JMD45L-A24		Screw	M4X8	6
25	JMD45L-A25		Oil pointer	M18X1.5	1
26	JMD45L-A26	20105B	I shaft		1
27	JMD45L-A27	20105-1-B	Gear Z14		1
28	JMD45L-A28		Bearing	6003 / P5	3
29	JMD45L-A29		Bearing	6007 / P5	3
30	JMD45L-A30		Key	5X25	1
31	JMD45L-A31	20106B	II shaft		1
32	JMD45L-A32	20108-B	Gear Z29		1
33	JMD45L-A33	20110-1-B	Gear Z35		1
34	JMD45L-A34	20111-B	Gear Z21		1
35	JMD45L-A35	20106-1-B	Gear Z41		1
36	JMD45L-A36		Bearing	6202 / P5	4
37	JMD45L-A37		Key	6X14	1
38	JMD45L-A38		Key	6X28	1
39	JMD45L-A39		Ball	Φ 8	2
40	JMD45L-A40		Spring		2

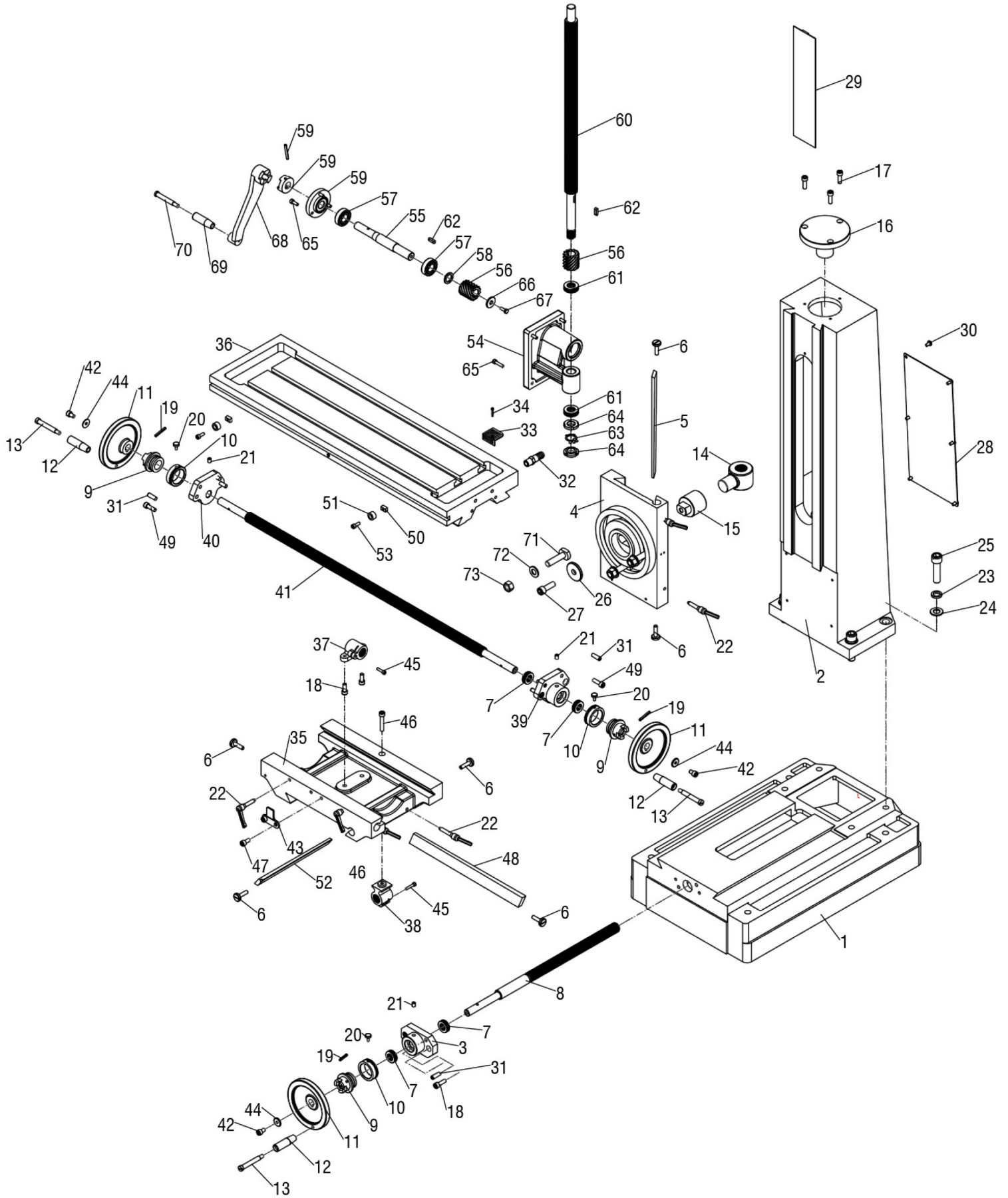
JMD-45L Head Parts - A

No.	Part No.	Code	Name	Size	Qty.
41	JMD45L-A41		Ext retaining ring	Φ 18	2
42	JMD45L-A42		Key	5X50	1
43	JMD45L-A43		Screw	M6X12	4
44	JMD45L-A44	20107B	Ill shaft		1
45	JMD45L-A45	20109-B	Gear Z25		1
46	JMD45L-A46	20110-2-B	Gear Z18		1
47	JMD45L-A47	20112-B	Gear Z32		1
48	JMD45L-A48	20113-B	Gear Z43		1
49	JMD45L-A49	20115-B	Gear Z16		1
50	JMD45L-A50		Key	5X50	1
51	JMD45L-A51		Key	6X18	1
52	JMD45L-A52		Key	6X18	1
53	JMD45L-A53	20019	Spindle sleeve		1
54	JMD45L-A54	20104B	Spindle		1
55	JMD45L-A55		Bearing	30207/P5	1
56	JMD45L-A56		Bearing	30206 /P5	1
57	JMD45L-A57	20114-B	Splined sleeve Z25		1
58	JMD45L-A58	20116-B	Gear Z53		1
59	JMD45L-A59		Ext retaining ring	Φ 35	1
60	JMD45L-A60	20012	Feed base		1
61	JMD45L-A61	20128	Support base		1
62	JMD45L-A62	20129	Nut		1
63	JMD45L-A63	20130	Knob		1
64	JMD45L-A64	20131	Graduated rod		1
65	JMD45L-A65	20021	Fixed bolt		1
66	JMD45L-A66	20132	Scale board		1
67	JMD45L-A67		Lock washer	Φ 35	1
68	JMD45L-A68		Lock nut	M35X1.5	1
69	JMD45L-A69	20308	Rubber washer		1
70	JMD45L-A70		Screw	M4X8	1
71	JMD45L-A71		Split pin	3X18	1
72	JMD45L-A72		Bolt	M8X30	1
73	JMD45L-A73	20024B	Separating ring		1
74	JMD45L-A74	20133B	Bearing cover		1
77	JMD45L-A77	20015	Worm wheel box		1
78	JMD45L-A78	20119	Worm shaft		1
79	JMD45L-A79	20302	Worm cover		1
80	JMD45L-A80		Screw	M6X12	1
81	JMD45L-A81	20120	Separating ring		1
82	JMD45L-A82	20016	Worm wheel		1

JMD-45L Head Parts - A

No.	Part No.	Code	Name	Size	Qty.
83	JMD45L-A83	20117	Pinion shaft		1
84	JMD45L-A84	20013	Handle body		1
85	JMD45L-A85	20118	Spring base		1
86	JMD45L-A86	20123	Spring cap		1
87	JMD45L-A87	20122	Spring plate		1
88	JMD45L-A88	20303	Big ripple handle		1
89	JMD45L-A89		Compression spring		1
90	JMD45L-A90	20017	Graduated plate		1
91	JMD45L-A91	20121B	Handle rod		1
92	JMD45L-A92	20301B	Handle ball		1
93	JMD45L-A93	20306B	Handle wheel		1
94	JMD45L-A94	20305-B	Handle rod		1
95	JMD45L-A95		Screw	M8X25	2
96	JMD45L-A96		Screw	10107	1
97	JMD45L-A97	203063	Washer		1
98	JMD45L-A98	203066	Screw		1
99	JMD45L-A99		Screw	M6X12	3
100	JMD45L-A100		Screw	M5X12	1
101	JMD45L-A101		Pin	3X12	2
102	JMD45L-A102		Key	8X20	1
103	JMD45L-A103		Screw	M5X20	2
104	JMD45L-A104		Pin	3X15	1
105	JMD45L-A105	20124B	Fixed bolt		1
106	JMD45L-A106	20203B	Fixed tight block		1
107	JMD45L-A107	20202B	Fixed tight block		1
108	JMD45L-A108		Adjust handle		1
109	JMD45L-A109	20125B	Lever shaft		1
110	JMD45L-A110	20022-1B	Lever		1
111	JMD45L-A111	20204-2B	Lever bracket		1
112	JMD45L-A112		Ext retaining ring	12	2
113	JMD45L-A113		Screw	M6X16	2
114	JMD45L-A114	20204-3B	Lever rod		1
115	JMD45L-A115		Oil seal	12X22X8	2
116	JMD45L-A116	20126B	Long lever shaft		1
117	JMD45L-A117	20204-1B	Lever bracket		1
118	JMD45L-A118	20022-2B	Lever		1
119	JMD45L-A119		Oil seal	35x62x10	1

JMD-45L Base Parts - B



JMD-45L Base Parts - B

No.	Part No.	Code	Name	Size	Qty.
1	JMD45L-B1	10010	Base		1
2	JMD45L-B2	10013	Column		1
3	JMD45L-B3	10021	Square flange		1
4	JMD45L-B4	10016	Raise and lower base		1
5	JMD45L-B5	10025	Gib strip		1
6	JMD45L-B6	10106	Screw		6
7	JMD45L-B7		Bearing	51103	4
8	JMD45L-B8	10104	Table screw		1
9	JMD45L-B9	10102	Dial clutch		3
10	JMD45L-B10	10111	Graduated plate		3
11	JMD45L-B11	10301	Wheel		3
12	JMD45L-B12	20305-1B	Turn handle		3
13	JMD45L-B13	20305-1B	Screw		3
14	JMD45L-B14	10024	nut		1
15	JMD45L-B15	10117	Nut bracket		1
16	JMD45L-B16	10014	cover		1
17	JMD45L-B17		Screw	M8x20	3
18	JMD45L-B18		Screw	M8x25	4
19	JMD45L-B19		Pin	5x35	3
20	JMD45L-B20	10107	screw		2
21	JMD45L-B21		Oil cup	8	5
22	JMD45L-B22		Fixed handle	M8	6
23	JMD45L-B23		Washer	16	4
24	JMD45L-B24		Washer	16	4
25	JMD45L-B25		Bolt	M16x60	4
26	JMD45L-B26	10120	washer		1
27	JMD45L-B27		Screw	M12x35	1
28	JMD45L-B28	10119	plate		1
29	JMD45L-B29	10124	Protecting cover		1
30	JMD45L-B30		Screw	M6x12	6
31	JMD45L-B31		Pin	8x30	6
32	JMD45L-B32		Pipe joint		1
33	JMD45L-B33		Filter screen		1
34	JMD45L-B34		Screw	M3x25	2
35	JMD45L-B35	10011	Center base		1
36	JMD45L-B36	10012	Table		1
37	JMD45L-B37	10202	Table nut		1
38	JMD45L-B38	10203	Table base nut		1
39	JMD45L-B39	10020	Right flange		1
40	JMD45L-B40	10019	Left flange		1

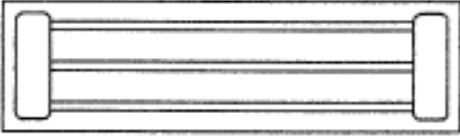
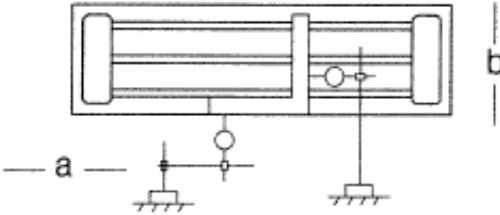
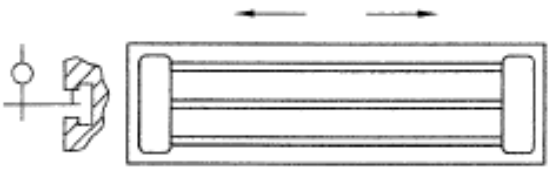
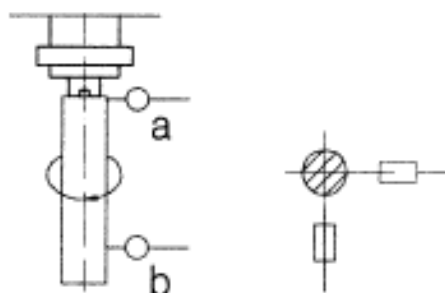
Certificate of Inspection
for
Geared Head Milling and Drilling Machine
Model JMD-45L

Dispatch No.:

The machine has been qualified and may be permitted to dispatch

Head of Inspection Depart _____ Date _____

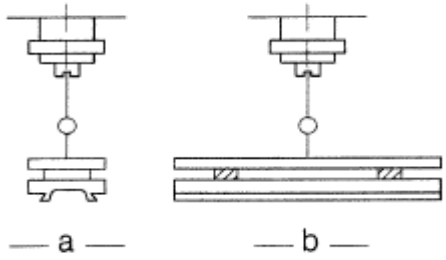
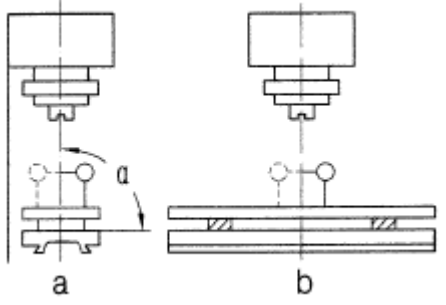
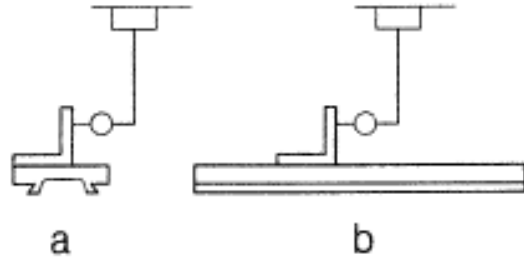
Director _____ Date _____

<p style="text-align: center;">ACCURACY TEST FOR MILLING & DRILLING MACHINE</p>		<p style="text-align: center;">Total 2</p>	
		<p style="text-align: center;">P1</p>	
No.	Checking items	Tolerance	Error tested
G1	<p>The flatness of worktable surface</p> 	<p>0.025 for any tesred length 200 Max 0.08</p>	
G2	<p>Squareness of worktable longitudinal movement to cross movement</p> 	<p>0.04/300</p>	
G3	<p>Parallelism of worktable longitudinal movement to the base T-slot</p> 	<p>0.05</p>	
G4	<p>Ran-out of spindle hole center line</p> 	<p>a)Near spindle nose 0.015 b)At a distance of 100 form spindle nose 0.02</p>	

**ACCURACY TEST FOR
MILLING & DRILLING MACHINE**

Total 2

P1

No.	Checking items	Tolerance	Error tested
G5	<p>Parallelism of worktable movement to worktable surface</p>  <p align="center">— a — — b —</p>	<p>a 0.02 for any 100 testing length b 0.03 for any 300 testing Max 0.06</p>	
G6	<p>Squareness of spindle rotating line to worktable surface</p>  <p align="center">a b</p>	<p>a 0.05/300 $a \leq 90^\circ$ b 0.05/300</p>	
G7	<p>Squareness of spindle sleeve vertical movement to worktable surface</p>  <p align="center">a b</p>	<p>a 0.05/100 b 0.05/100</p>	

PACKING LIST FOR

GEARED HEAD DRILLING & MILLING MACHINE JMD-45L

Series No :		Dimension :			
G/W :		N/W :			
No.	Name	Spec	Model	Quantity	Remark
1	Milling & drilling machine		JMD-45L	1	
2	Draw bar	M12		1	
3	Adapter	ISO30/MT3		1	
4	Taper shank for drilling chuck	ISO30/B16		1	
5	Drilling chuck	$\Phi 1 \sim \Phi 13$		1	
6	T slot bolt	M12×55		2	
7	Washer	12		2	
8	Nut	M12		2	
9	Inner hexagonal spanner	2.5/3、4、5		4	
10	Tilted wedge			1+1	
11	Spanner	19-22		1	
12	Oil gun			1	
13	Handle			3	
14	Hand wheel			3	
15	Screw	M6x12		3	
16	Washer	6		3	
17	Instruction Manual			1	
18	Certificate of inspection			1	
19	Packing list			1	

Packing inspector_____

Date_____