

PROMAC®

05-2019

Drill Press
Bohrmaschinen
Perceuses

JDT-5030



CE

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CE-Conformity Declaration
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Déclaration de Conformité CE

Product / Produkt / Produit:

JDT-5030

Drill Press / Säulenbohrmaschinen / Perceuses à colonne

Brand / Marke / Marque:

PROMAC

Manufacturer / Hersteller / Fabricant:

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9 Rue des Pyrénées, 91090 LISSES, France

We hereby declare that this product complies with the regulations
Wir erklären hiermit, dass dieses Produkt der folgenden Richtlinie entspricht
Par la présente, nous déclarons que ce produit correspond aux directives suivantes

2006/42/EC

Machinery Directive
Maschinenrichtlinie
Directive Machines

2014/30/EU

electromagnetic compatibility
elektromagnetische Verträglichkeit
compatibilité électromagnétique

designed in consideration of the standards
und entsprechend folgender zusätzlicher Normen entwickelt wurde
et été développé dans le respect des normes complémentaires suivantes

EN ISO 12100:2010

EN 13128:2001+A1:2006 EN+ A2:2009

EN 12717:2001 + A1:2009 + AC:2010

EN 60204-1:2006/AC2010

EN 61000-6-2:2005

EN 61000-6-4:2007/A1:2011

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TOOL FRANCE SARL



2019-05-05 Christophe SAINT SULPICE, General Manager

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Dear end-user,

Thank you very much for choosing our products. Please let us have the model of your machine, series number, as well as the name, address and correspondence method of your company in order to facilitate us to let you have a good service.

Important notice:

1. Please immediately contact your dealer in case the machine, accessories or documents are not in conformity with those indicated in the packing list after the machine package is opened.
2. Please carefully read this Operation Manual particularly the electric part of this documents before installation, testing and running the machine.
3. Removing grease on the machine (particularly on the column) and checking lubrication oil in each place is well filled . Running the machine without lubrication oil is strictly forbidden. Lubrication of the machine as per the stipulation of this documents is required.
4. Ground wire of the machine shall be well connected. When test running, push jog button in slow spindle speed to check if direction of spindle revolution is correct.
5. Machine must be stopped if spindle speed or feed rate change is necessary.
6. Please check if cutting tool or work piece is well clamped before machining
7. The red mushroom push button located in front of the spindle box is an emergence push button for emergency purpose only. Familiar with its position and its use are necessary.
8. Professional electric service engineer is required for electric maintenance.
9. The machine must be stopped when you need removing away the cutting material around the drill. Moving the cutting material by hand or by hook is definitely forbidden.
10. Correct use and daily maintenance of the machine are required in order to keep machine accuracy and its lifetime in long time.
11. We will much appreciate if you could solve some problems of the machine.
In order to facilitate us for the service, please let us know the details regarding the places and phenomenon of the troubles if you could not solve problems.

1. Main use and features of the machine:

JDT series vertical drilling machines are our new products designed and developed by ourself based on our accumulated experience in so many years in this field. It is really a multi-function universal machine which could be widely used for small and middle sizes of work pieces for drilling, spot facing, reaming, tapping etc. Besides, some machine tool accessories could also be used on this machine. The machines are suitable for the machining workshop, maintenance workshop and production line etc.

Features:

- 1.1 Good in appearance, easy in operation, convenience in maintenance and well consideration in safety protection
- 1.2 Double speed motor is to be used for the main drive system with sufficient driving power but saving energy. Wide spindle speed range is adopted driven by gears.
- 1.3 Oil lubrication both for the main driving system and for the feed driving system could be supplied automatically by a new type of trochoid pump when it is working in forward and reverse revolution.
- 1.4 The spindle features good rigidity and good wear resisting and equipped with tool disassembly and balancing device.
- 1.5 The worktable could be turned round the column center line or worktable center line itself or horizontal shaft centerline by manual and could be moving up and down by manual or automatically.
- 1.6 Main operation levers and push buttons could be reached easily that makes you comfortable when you operate the machine.
- 1.7 Spindle feed both in mechanical and in electrical with micro feed structure is available in this series machines.
- 1.8 Superior quality material with special treatment for the wear-resisting purpose has been used for transmission parts such as gears, worm and worm shaft, rack, lead screw etc as well as for some key parts like spindle and spindle quill.
- 1.9 An adjustable safety protection clutch in the spindle feed device is available in order to prevent the machine and tools from damage when overloaded.

1.10 A safety protection guard under the spindle box is available as it is not only prevent coolant splash while cutting but also could observe the machining status.

The guard is interlocked with the spindle, so when the guard is opened, the spindle could not be running until the protection guard keeps his position.

2. Main technical data:

2.1 Main technical data

No.	Name of the items	Unit	Data
1	Max. drilling diameter (steel)	mm	50
2	Max. tapping diameter (steel)	mm	M30
3	Distance between spindle center line to the center line of column	mm	370
4	Max. distance between spindle end to the surface of the worktable (automatic)	mm	585(410)
5	Max. distance between spindle end to the worktable surface of the base	mm	1170
6	Max. stroke of the spindle	mm	240
7	Spindle taper	Morse	MT4
8	Number of speed steps of the spindle	Step	12
9	Spindle speed range	r/min	40-2100
10	Feed steps of the spindle	Step	4
11	Feed range of the spindle	mm/r	0.1-0.4
12	Max. stroke of worktable and its bracket	mm	530(410)
13	Rotation degree of worktable and its bracket in cross direction	degree	$\pm 45^\circ$
14	Working area of the worktable (L x W)	mm	600×500
15	Working area of the worktable of the base (L x W)	mm	445×435
16	Numbers and width of the T slots both for worktable and worktable of base	mm	2-T14, 2-T14
17	Diameter of column	mm	$\phi 200$
18	Power and speed of the main motor	kW, rpm	2.2/2.8; 960/1440
19	Power and speed of the worktable up and down motor.	kW, rpm	0.25/1440
20	Power and flow rate of the coolant pump motor	kW, L/min	0.18/6
21	Machine dimension (L x W x H)	mm	1020×700×2350
22	Weight of the machine (Net weight/Gross weight)	kg	660/720

2.2 For the machine appearance and its main technical data, see diagram 1.

3. Brief description of the driving system and its structure:

The machine consists of spindle box, column, machine base, worktable and its bracket, electric cabinet, coolant device and machine accessories, total seven component parts. Spindle revolution is main motion of the machine. During drilling and milling processing, spindle movement along with its axis is a feed motion. Worktable up and down movement and worktable turn round itself is an auxiliary motion. To those big or higher work piece that could be clamped on the worktable of the base. The worktable and its bracket should turn round the column to a proper area far away from the machining area.

Double-speed vertical motors realize machine transmission. A special pump supplies coolant water.

Operating lever in the front of spindle box could make changes for the spindle speed in 12 steps. Run the lever position could drive a triple gear and a quadruple gear moving along with axis direction results the speed change. The lever has an idle position that is for the spindle rotation by manual for loading and unloading of tool cutters as well as for the adjustment of work piece only. Adjustment of the feed rate could be realized by shifting a set of gears controlled by changing a lever position in the right corner of spindle box. It also has an idle position for disengaging power feed transmission of the spindle for the micro adjustment of the spindle by manual.

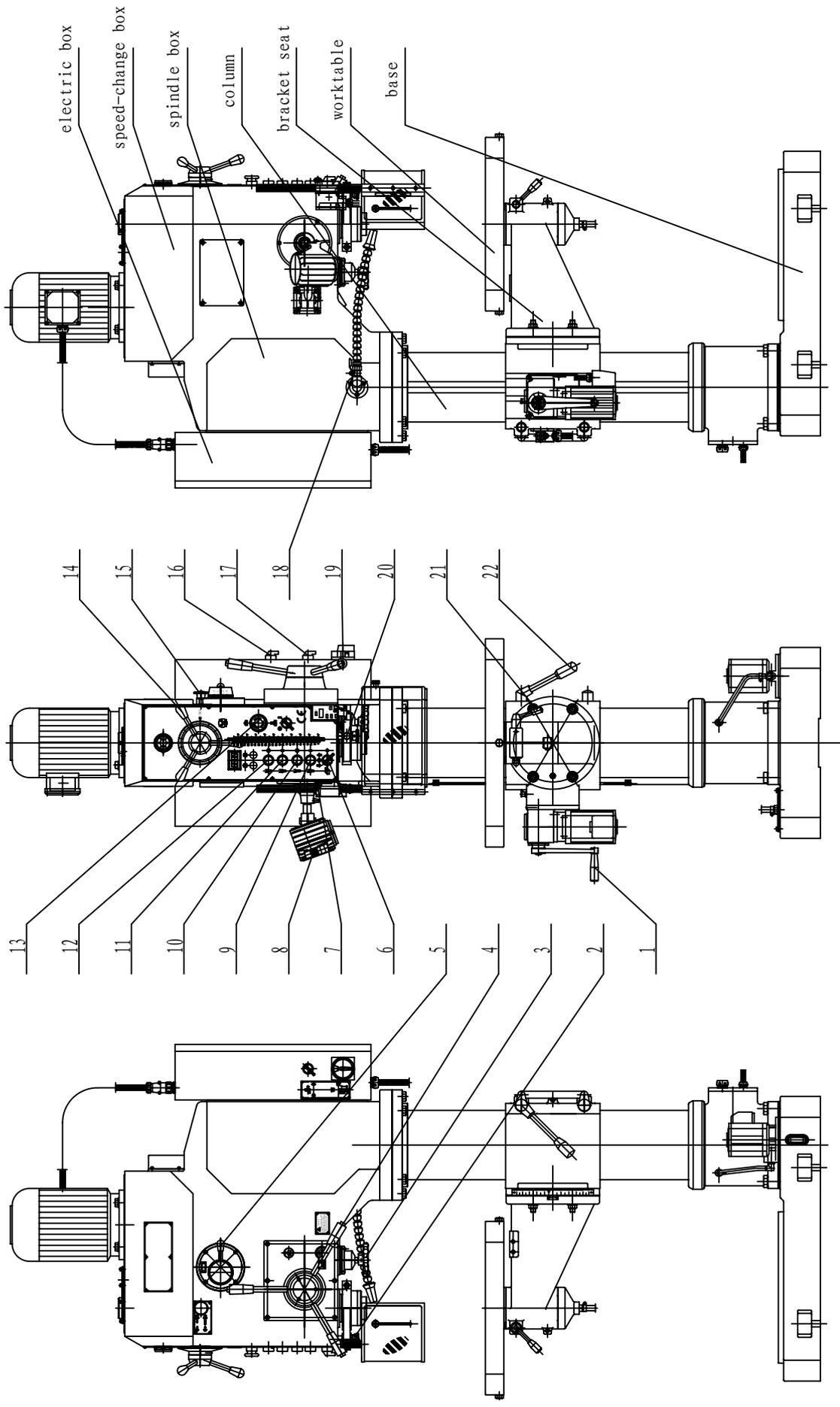
Up and down movement of the worktable and its bracket is completed by a vertical speed reduction motor. Of course, little adjustment for the height of the worktable could also be made by manual.

Two kinds of lubrication, auto or manual, of the machine are available. Auto lubrication system consists of a filter (located inside of a tank under spindle box), a lubrication oil pump (located on the middle of spindle box), a visual window and an oil nozzle etc.

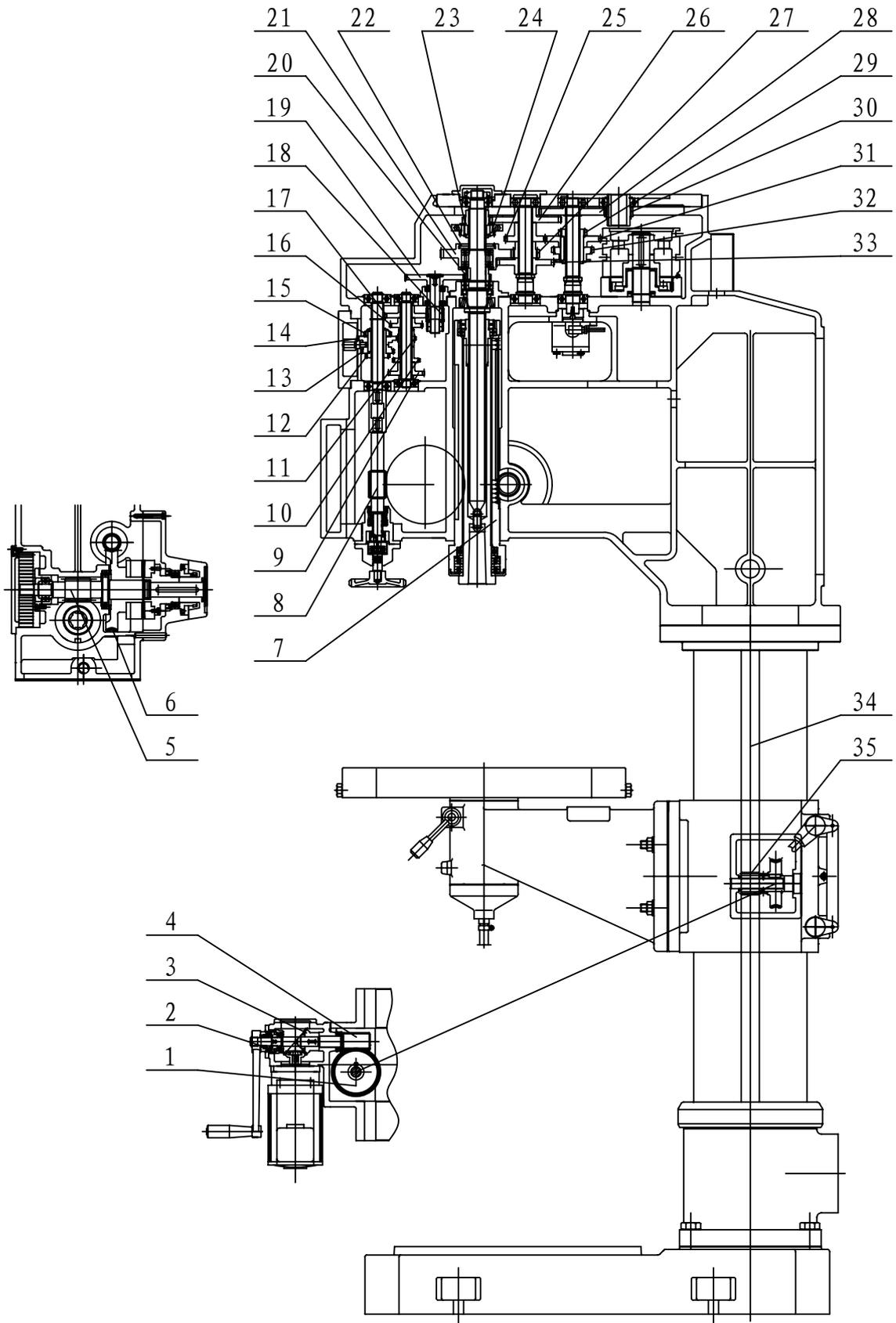
Please refer to the diagram 2 for the transmission system of the machine.

For the gear, worm and worm shaft, rack and pinion etc, please see table 1.

For the details of roller bears to be used on the machine, please refer to the diagram 3 and for a list of roller bears, please refer to the table 2.



drawing (1) picture of appearance of machine



drawing 2 picture of transmission

4.1 list of gear, worm wheel, worm and rack

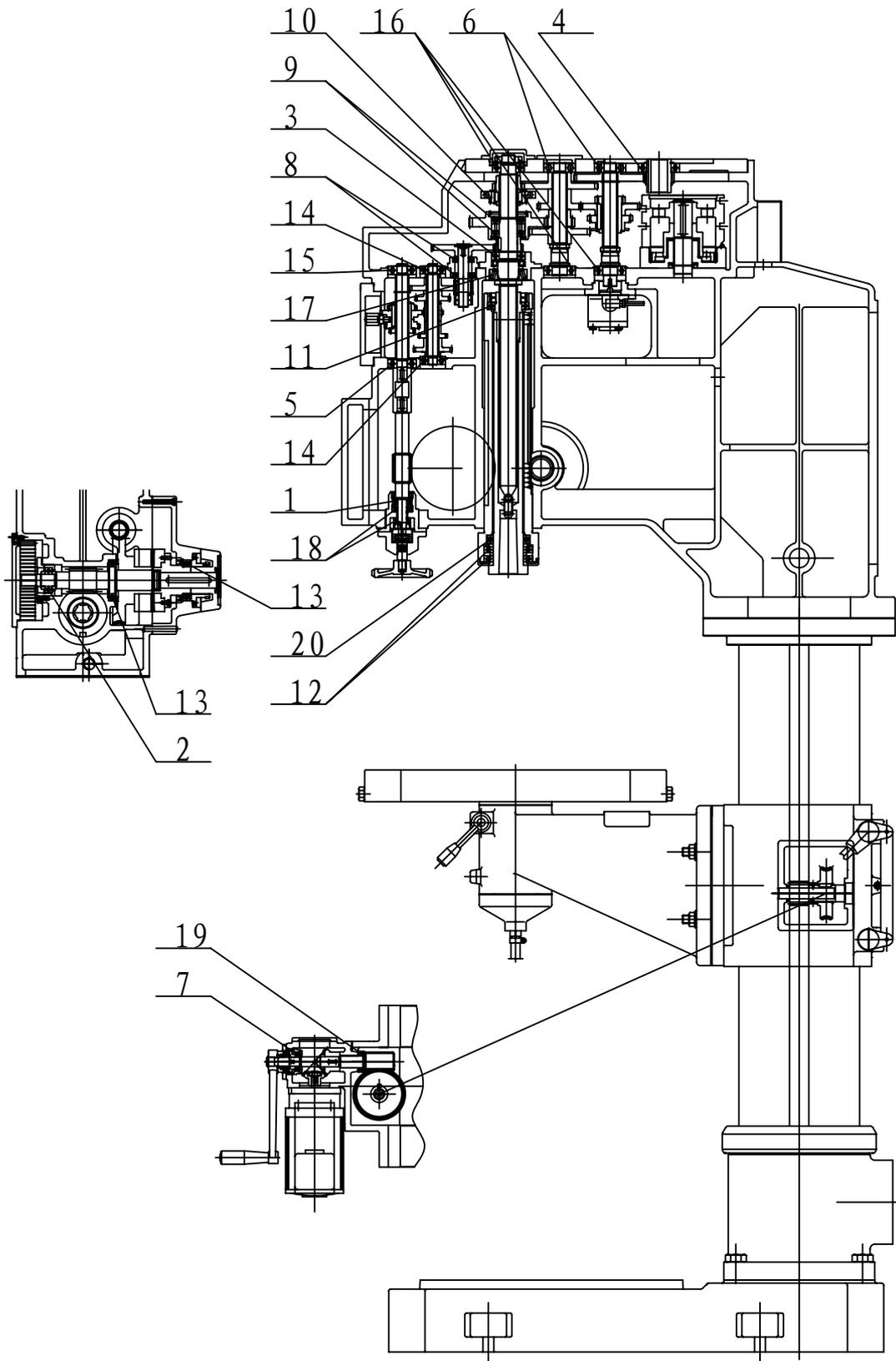
table (1)

Number on the drawing	1	2	3	4	5	6	7	8	9	10
Part drawing NO.	11016/ ZY5050	12013/ ZY5050	12011/ ZY5050	12012/ ZY5050	32001/ ZY5050A	31001/ ZY5050A	32036/ ZY5050	32064/ ZY5050	32041/ ZY5050	32042/ ZY5050
Number of teeth and starts	40	26	30	30	15	70	37	1	36	26
Module	2	1.5	1.5	2	2.5	2	2.5	2	1.75	1.75
Direction of helical angle						Left		Left		
Class of Accuracy	9	9	9	9	8-7-7	8	8	9	8-7-7	8-7-7
Material		45	45	45	45	QT400	40Cr	45	45	45
Heat treatment and hardness		T235	T235	T235	T235		HV500		G48	G48
Number on the drawing	11	12	13	14	15	16	17	18	19	20
Part drawing NO.	32043/ ZY5050	32059/ ZY5050	32058/ ZY5050	32057/ ZY5050	32056/ ZY5050	32044/ ZY5050	32045/ ZY5050	32013/ ZY5050	32052/ ZY5050	32048/ ZY5050
Number of teeth and starts	17	22	32	41	26	32	43	15	60	25
Module	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Direction of helical angle										
Class of Accuracy	8-7-7	8-7-7	8-7-7	8-7-7	8-7-7	8-7-7	8-7-7	8-7-7	8-7-7	8-7-7
Material	45	45	45	45	45	45	45	45	45	45
Heat treatment and hardness	G48	G48	G48	G48	G48	G48	G48	G48	G52	G52

4.1 list of gear, worm wheel, worm and rack

table (1)

Number on the drawing	21	22	23	24	25	26	27	28	29	30
Part drawing NO.	32012/Z Y5050	32012/Z 50	32010/Z 50	32011/Z 50	30007/Z 50	32006/Z 50	32008/Z 50	32002/Z 50	32003/Z 50	32001/Z 50
Number of teeth and starts	51	40	18	40	28	50	17	59	17	22
Module	2.5	1.5	2.5	1.5	2.5	2.5	2.5	2	2.5	2
Direction of helical angle										
Class of Accuracy	7-6-6	9	7-6-6	9	7-6-6	7-6-6	7-6-6	7-6-6	7-6-6	7-6-6
Material	40Cr	40Cr	40Cr	40Cr	40Cr	40Cr	40Cr	40Cr	40Cr	40Cr
Heat treatment and hardness	G42	G42	G42	G52	G52	G52	G52	G52	G52	G52
Number on the drawing	31	32	33	34	35					
Part drawing NO.	32004/Z 50	32005/Z 50	32009/Z Y5050	12004/Z Y5050	12015/Z Y5050					
Number of teeth and starts	39	27	40	77	14					
Module	2.5	2.5	2.5	2.5	2.5					
Direction of helical angle										
Class of Accuracy	7-6-6	7-6-6	7-6-6	9	9					
Material	40Cr	40Cr	40Cr	45Cr	45Cr					
Heat treatment and hardness	G52	G52	G52	T235	T235					



drawing 3 picture of rolling bearing

Operation Manual				Total	26
				page	10
Roller bearing table					
Table (2)					
No.	Model	Name	Specification	Q'ty	Accuracy
1	GB276,102	Deep racing ball bearing	15×32×9	1	
2	GB276,104	Deep racing ball bearing	20×42×12	1	
3	GB276,106	Deep racing ball bearing	30×55×13	1	
4	GB276,108	Deep racing ball bearing	40×68×15	1	
5	GB276,303	Deep racing ball bearing	17×47×14	1	
6	GB276,304	Deep racing ball bearing	20×52×15	2	
7	GB276,7000102	Deep racing ball bearing	15×32×8	1	
8	GB276,7000103	Deep racing ball bearing	17×35×8	2	
9	GB276;7000106	Deep racing ball bearing	30×55×9	2	
10	GB276;7000111	Deep racing ball bearing	50×90×11	1	
11	GB276,D1000909	Deep racing ball bearing	45×68×12	1	D
12	GB276;D7000110	Deep racing ball bearing	50×80×10	2	D
13	GB276;1180909K	Deep racing ball bearing	45×68×12	2	
14	GB277;50302	Deep racing ball bearing	15×42×12	2	
15	GB277;50303	Deep racing ball bearing	17×47×14	1	
16	GB277;50205	Deep racing ball bearing	25×52×15	3	
17	GB297;2007107E	Roller bearing	35×62×18	1	
18	GB301,8102	Thrust bearing	15×28×9	2	
19	GB301,8104	Thrust bearing	20×35×10	1	
20	GB301,8110	Thrust bearing	50×70×14	1	

4. Electrical system

4.1 Brief description

The machine with foreign advanced single chip and superior quality electric element is controlled by electric system, the software system not only realize all kinds movement control ,but also has many protective function with catenation, the capability of this system is very good ,and the movement of this system is jarless and reliable. the move and stop of the main motor function are used by electric circuitry, and it improved the accuracy of machine's drilling.

4.2 Explanation of the circuit

When using the machine, breaker QF1,QF2,QF3 which positioned electric box B1(drawing 4) must be closed, it can be opened when examined and repaired. The three breakers separately protect short circuit、over loading and short phase of spindle motor, pump motor and lifting motor. when close the chief switch QS1, the system is entering working state and the single lamp HL1 light up ,when break the chief electric source, the lamp crush out and working stopped.

4.3 Tapping operation:

Electric Element for the tapping control mainly contactors KM1 and KM2, selection switch SX1 and limit switches SQ2 and SQ3 for tapping depth control. Put the selection switch SX1 into the “1”(“0”is for hole drilling only),arrange the spindle revolution in clockwise direction (KM1 engaged), put the spindle manual operation lever in down position until touches work piece, tapping job noe is starting. When required depth is reached , the limit switch SQ3 works, the spindle immediately runs in counter clockwise direction (KM2 engaged), the tap returns out of the work piece, when spindle returns to the up highest position ,the limit switch SQ2 works, spindle runs in clockwise direction, now one tapping job is finished. If tapping stop is required, push the button (SB4) on the lever end , the spindle motor will immediately run in count clockwise direction, that's all.

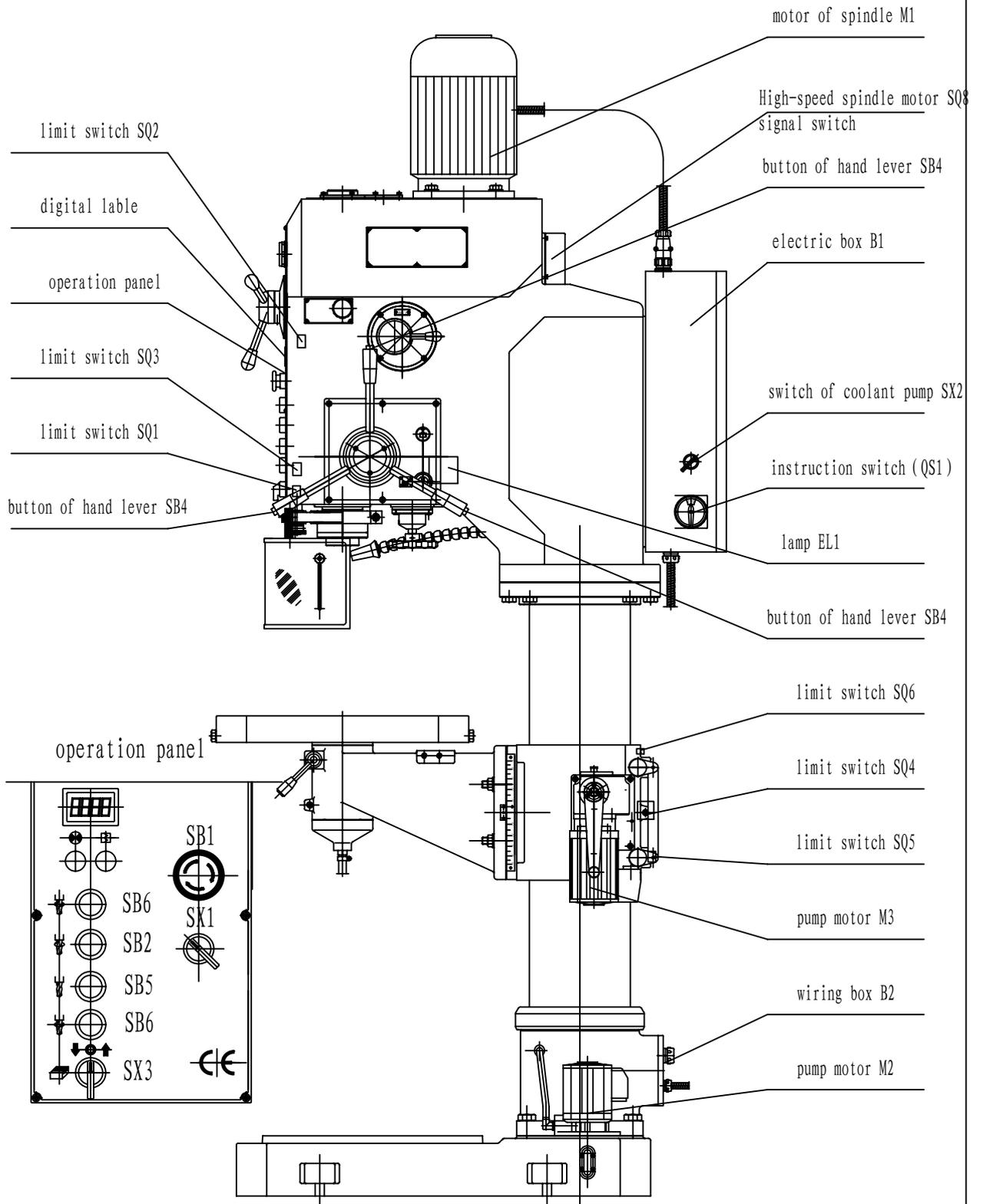
If the selection switch SX1 is in the “0”position, normal drilling work starts.

Attention: As the spindle motor works frequently during tapping, the motor will be hot quickly ,so the tapping job could not be down for a long time, eight times of tapping per minutes maximum is recommended as the motor needs cool when it is hot otherwise it will be burned.

4.4 Auto feed operation:

When auto feed , moving spindle down 5-6mm, press a push button at the end of either one of the three levers, now feed clutch is engaged and indicator HL2 on the panel is lighted auto feed job is started.

When required drilling depth is reached ,the limited switch will be pressed, then spindle returns automatically. Press the push button of the lever once again, auto feed will be stopped and the spindle will return back to the original place.



drawing (4) picture of electrical element of machine

4.5 Emergency stop operation:

If emergency stop is necessary during operation, press emergency push button SB1,so the machine is completely stopped .After eliminating the breakdown ,release the lock of the push button then restart the machine.

4.6 Coolant pump

Revolving the switch of coolant pump right, then the coolant pump is moving and working with the spindle. When the spindle stopped, the coolant pump stopped too.

4.7 Lifting motor

The clamping handle 22 must be opened when the worktable lifting, turn the push button SX3 at required position.

4.8 Installation of the main motor:

Insert the key of the main motor into the solt position of the spline shaft then fixed by 4-M10 ×35 hex screw bolts. Connect three phases and one ground wires to the power supply as per the electrical Diagram(5) of the machine.(please note the direction of main revolving).

4.9 Sheet metal guard:

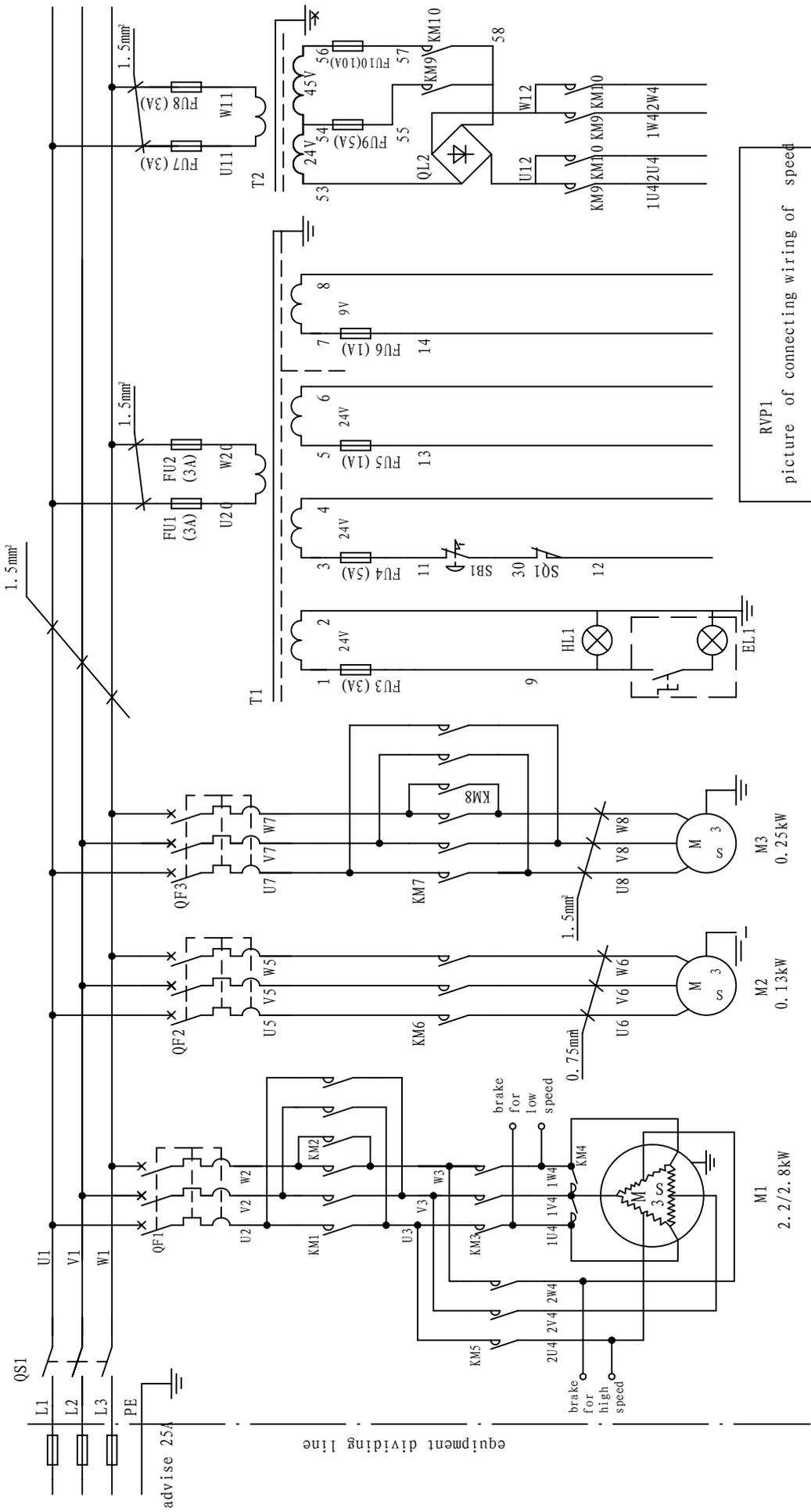
The sheet metal guard of this machine has a safety protection function, when it is opened The spindle can't working, until it is closed when the spindle is working now, it immediately stopped if The sheet metal guard is opened .

4.10 Maintenance of the electric equipment:

Turn off the electric power before maintenance of the electric equipment starts. The electric equipment must keep on clean condition. Therefore, regularly cleaning is necessary. However .liquid such as kerosene, gasoline and detergent etc. is not be allowed for the cleaning. Wave of power supply shall not be over $\pm 10\%$ required by the electric motor. Maintenance of electric equipment is absolutely important in order to keep machine works well.

total power supply total switch splind motor pump motor lifting motor control

3 φ AC400V 50Hz



picture of connecting wiring of speed

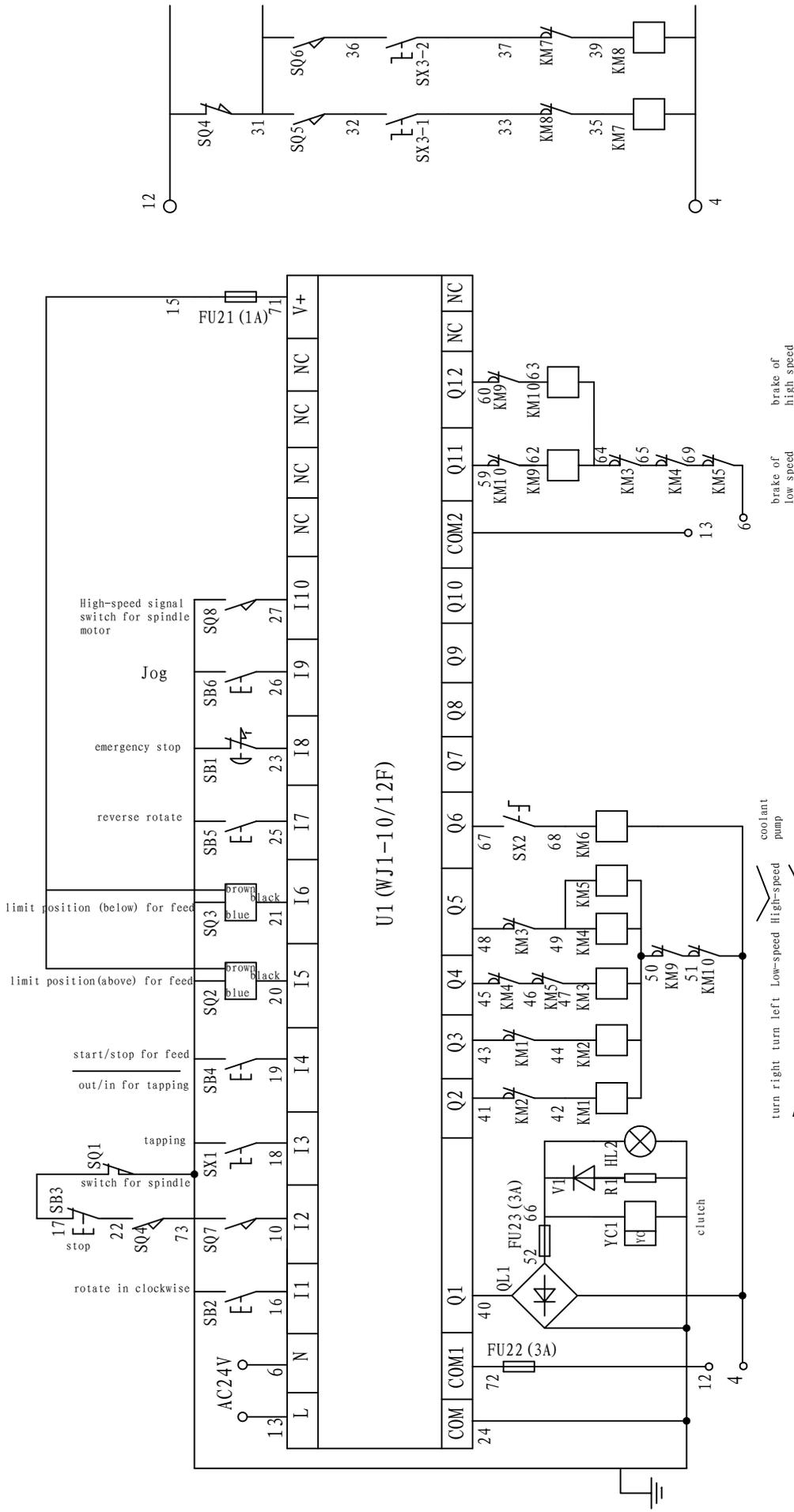
yellow	yellow	brown	blue	black
8	14	81	82	83
		brown	blue	black
				S1

Attention: The diameter of the line without indicating is 0.75mm .

drawing (5-1) picture of electric element

lifting for table

PLC control



Attention: The diameter of the line without indicating is 0.75mm .

drawing (5-2) picture of electric element

Electric components list:

Table (3)

Code of elements	Name	Specification	Q'ty	Remark
QF1	Breaker	GV2-ME14	1	
QF2	Breaker	GV2-ME04	1	
QF3	Breaker	GV2-ME06	1	
QS1	Instruction switch	JCH13-20	1	
SX1,2	Selection switch	C2SS2-10B-10	2	
SB1	Emergency stop button	CE4T-10R-02	1	
SB2,5	Push button	CP1-10G-10	2	
SB6	Push button	CP1-10B-10	1	
SB3	Push button	CP1-10R-01	1	
HL1,HL2	Single lamp	AD17-16 AC24V	1	
SB4	Push button	Homedade	3	
SX3	Selection push button	C3SS2-10B-20	1	
SQ1	Micro switch	C2-A2Z	1	
SQ5,SQ6	Micro switch	E62-10A	2	
SQ2,SQ3	Adjacent switch	TL-Q5MC1	2	
SQ4	Micro switch	XCKN2102P20C	1	
KM1-5, KM7-10	Contactor	LC1E1201B5N(AC24V)	9	
	Secondary contact	LAEN02N	5	
KM6	Contactor	LC1 D0901 (AC24V)	1	
SQ8	Micro switch	Z-15GD	1	
EL1	Illuminating light	AC24V;25W	1	
T1	Transformer	JBK5-160TH ,400/24,24,24,9	1	
T2	Transformer	JBK5-300TH 400V/0V,24V,45V	1	
R1	Resistor	RT 2W62 Ω	1	
V1	Diode	IN5404	1	
U1	Control panel	WJ1-10/12F	1	
QL1	Bridge wiring	QL5A 200V	1	
QL2	Bridge wiring	QL10A 200V	1	
RVP1	Tachometer	RSD-42	1	
SQ7	Door switch	JWM6-11A	1	

5. Lubrication and coolant system:**5.1 Lubrication system:**

Parts and bearings inside of the spindle box are all automatically lubricated. Oil level shall be a little bit higher than the centerline of the oil window when you fill lubrication oil. Too much oil filling will cause overflowing. Oil release plug and a filter device are in the same unit located at left side down of the spindle box. Please pay attention that when fastening your oil release plug, don't forget to put the oil absorption pipe inside of the filter, otherwise no filtered oil will be available. The filter needs to be washed once every two weeks.

For lubrication places and its requirements by manual. Please refer to the diagram 6.

5.2 Coolant system:

A special pump will supply coolant both for tool cutter and for work piece during machining. Coolant liquid is stored in a compartment located at the backside of the machine base. Flow rate of the coolant could be adjusted by a ball valve. Regularly washing for the coolant system is necessary and coolant water shall be exchanged as per actual condition.

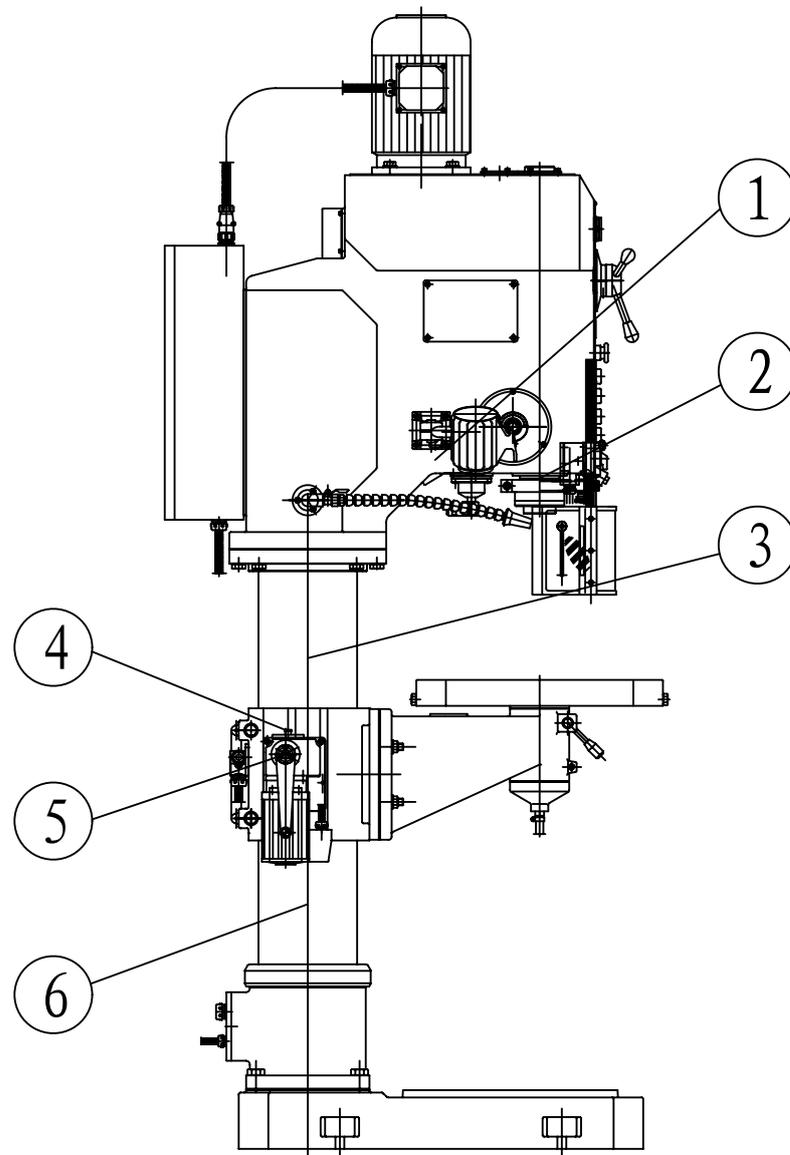
6. Hoisting and installation:**6.1 Hoisting:**

The machine is strongly fixed inside of the crate. When hoisting the machine, please pay close attention to the sign outside of the crate (where the wire cable shall be placed and where the gravity center is).

The crate must not be reversed or inclined and must not be strongly stroked when lift up the machine.

Considering small size of the bottom and higher size of the height of the machine package, therefore, moving the machine by roller is forbidden. Lifting by a crane or by forklift is recommended.

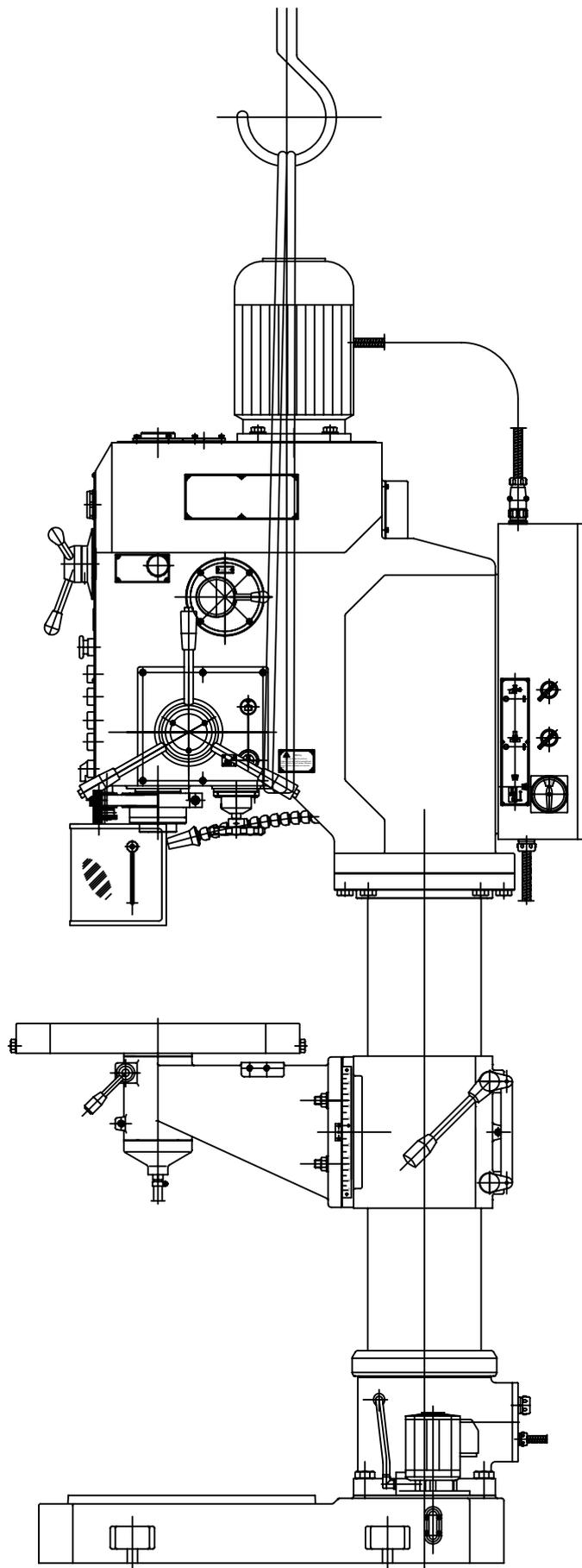
Please refer to the diagram 7 for the machine lifting. A soft pad between machine and wire cable is necessary in order to avoid paint damage of the machine. Lifting must be slow at beginning to see if the gravity center is correct.



drawing 6 picture of lubrication

Chart of lubrication position

No.of lubrication position	lubrication position	lubrication period	Grease designation
1	oil pool of spindle box	Grease up once every 3 month	ISO VG33 machinery oil
2	Surface of main spindle sleeve	Oiling once for each shift	
3	Surface of upright column	Oiling once for each shift	
4	Worm bearing for Carriage lifting	Grease up once every 3 month	ZL-3 lithium base grease
5	Carriage lifting device	Oiling once for each shift	ISO VG33 machinery oil
6	Surface of upright column	Oiling once for each shift	ISO VG33 machinery oil



drawing 7. picture of hoisting

6.2 Installation:

Working area of the machine shall be the size when the worktable rounds its column in one cycle. Its diameter is about $\varnothing 2000\text{mm}$. Further more, space for the work pieces, toolbox, and machine accessories as well as operating and maintenance space must be considered.

The machine should be placed on a solid ground. No foundation construction is required if ground of workshop is solid enough. However, we suggest that you'd better to make a foundation as per the attached drawing 8 and shall consider some space for foundation screw bolts use.

When the foundation is completely dry, the machine could be laid down on the adjustable pad. Concrete could be filled when screw bolts are placed. Fastening screw bolts after concrete is completely dry. Leveling the machine first, required tolerance should not be over $0.04/1000\text{mm}$ both in horizontal and cross plane. Checking all items of the accuracy as per the table sheet of the certificate. Accuracy value for each checked item must not be over the required value.

6.3 Preparation before machine running:

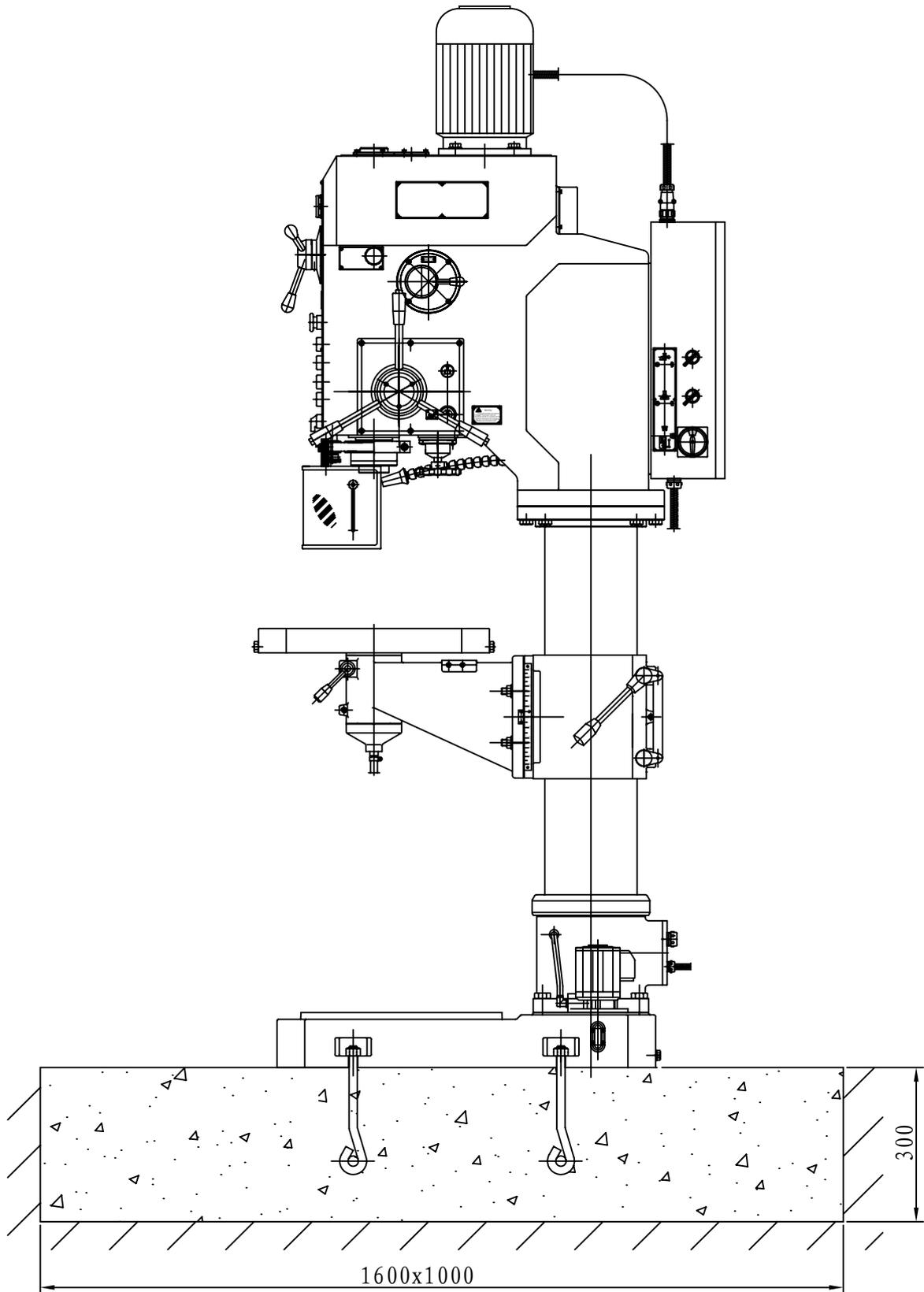
A strict checking, testing and try cutting of the machine have been made before machine delivery. No adjustment of the machine itself is necessary. Before machine running, clean all surfaces of the machine first by using cloth with kerosene or gasoline, checking all lubrication points then turn the main switch of the machine to the "on" position, running the machine with middle or slow speed and checking all revolution direction is correct, operating levers are in a correct position, checking machine noise and working temperature are all ok. The machine should be running for a certain period of time, then it could be used if no any un-normal condition happened.

7. Use and operation of the machine:

7.1 For the operating levers, handles and buttons, please refer to the diagram 1 and diagram 4.

7.2 Mounting and dismounting of tool cutters:

The machine equipped with a tool dismounting device to be controlled by a nob (15). Push forward the nob (15) to the spindle box direction when tool mounting is required. As for dismounting tool cutters, pull out the nob (15), hold the tool cutter by left hand, meanwhile, turn the feed lever (4) by right hand, then the spindle quill goes up rapidly, the tool cutter will fall down until tool taper shank strokes the shaft of spindle.



drawing 8 picture of installation of machine

In case too tight mesh between tool shank and spindle taper and the tool cutter could not fall down after several strokes, then you have to use the normal way by using a taper wedge to dismounting the tool cutter.

If milling cutter is used, be sure to take away the screw on the tool holder screwed on the end of the spindle, the milling cutter then could be easily dismounted.

Warning: The nob (16) must not be pulled out while tool mounting or machine Running, otherwise, the spindle will goes up quickly which results tool cutter falls down. It is really dangerous.

7.3 Changes for the spindle speed and feed rate:

Spindle speed change could be made by moving the levers (14) located in the front of the spindle box. Relations between spindle speed revolution position is indicated at the dial. Meanwhile, the digital meter indicates the actual spindle revolution.

As mounting or dismounting tool cutter or adjustment of work piece needs spindle rotation by manual, therefore, the lever shall be in the “idle” position, so spindle rotation could be easily obtained.

Changes of the feed rate could be realized by using the lever (5) in the upper right side position of the spindle box. As micro manual feed needs disengagement of the auto feed, therefore, the lever shall also be in the “idle” position.

7.4 Selection and operation of the spindle feed:

There are three types of spindle feed selections for your choice as per the requirement of your machining:

Manual feed: Simply moving the feed lever(4)at the right side of the spindle box, the spindle will move down if turned the lever in counter clockwise and the spindle will move up if turned the lever in clockwise.

Auto feed: There are three levers(4),at the end of each lever equipped with a push button. Push one of any three buttons(SB4), auto feed could be realized as per your required pre-set feed rate. Push one of any three buttons(SB4) once again, the auto feed will be stopped immediately.

Manual micro feed: Spindle micro feed needs two steps. First, put the feed rate lever(5)in the “idle” position. Secondly, push button (SB4), then push up the micro feed hand wheel(3) and make sure that the clutch is engaged, now the micro feed hand wheel could be turned and micro feed of the spindle works.

7.5 Cutting depth control:

For the batch production, you need control cutting depth. A scale in front of spindle box could meet your requirements. Loosening knurled screw (20) by turning nob (2), moving the scale to the required depth, then fastening the knurled screw(20). Now the machining depth could be controlled.

7.6 Tapping:

Put the “Selection Switch”(15) on the tapping position first, turn the feed lever(4) and let the tap approaches the work piece, a proper manpower force (based on the size of screw) shall be exerted in order to let the tap comes into the hole. The spindle will be rotated in reverse when the screw depth is reached, and the tap comes out.

Suppose, tapping job needs stop, push button (SB4) of the hand lever(4) then spindle will have reverse revolution. and tap returns back.

7.7 Adjustment of worktable position:

Symbols multi-use and convenience of the machine also reflects multi function of its worktable. Except its normal manual and auto up and down function, it can also be turned around the table itself, around the column and tilt in $\pm 45^\circ$ in horizontal position.

Operation method for the table tilting

Using a special tool to take out the taper pin and loosening four screw nuts on the bracket and manually turn the worktable to the required position then fastening the four screw nuts, now the work piece can be machined as per your tilting angle.

When the job is finished, keep the worktable in the original position by using the same way mentioned on the above. Be sure do not forget to push the pin in its position.

8. Machine adjustment:

8.1 Spindle balance force adjustment:

Balance of spindle is realized through a springiness from a coil spring device located at the left side of the spindle box. Balance force shall be adjusted to the point that the spindle together with its tool shall not go down itself when spindle stops. (go up a little bit shall be much better).

Over springiness or less needs adjustment. Simply loosening the screw on the cover of spring box, turn the spring box cover, the spring could be either fastening or loosening. Fastening screw on the cover if the balance force is ok

8.2 Adjustment for the feed safety clutch:

Feed safety clutch is mounted on upper side of the warm shaft. If too much feed resisting force is occurred, the feed safety clutch will be automatically slipped (sound “Ka” will be heard) in order to protect machine driving system not to be damaged. Clutch appearance could be seen when opening the cover below the feed change label.

Using a tool to turn a slotted nut in clockwise, this will increase the feed resisting force, meanwhile, the counter clockwise will reduce the feed resisting force. The max. feed resisting force of this machine is 10000N, Over feed resisting force will cause un-safety, be sure to lock it by screw bolt or nut after adjustment.

9 Machine use and maintenance:

- 9.1 Before running the machine, carefully read the Operation Manual first, fully understand the structure of the machine and its performance and needs to familiar with locations for all levers and buttons.
- 9.2 Lubrication of the machine is very important. Daily lubrication work as per the requirements of the operation manual is necessary. Filter should be cleaned once every two weeks otherwise pump, transmission parts and bearings will be damaged.
- 9.3 Max. spindle torque of this machine is 160Nm. Max. feed resisting force in the driving system is 10000N. Over permitted cutting feed range is not allowed. High spindle speed with big cutting feed is not good to the machine.
- 9.4 As standard drill with 118 degree angle features big cutting force but quick wear-out, so diameter and roughness of holes is not so ideal after drilling, therefore, regrinding its edges particularly for the big diameter drills is necessary. It is better to use two different angles for the machining of cast iron material (Second angle could be 70°).
- 9.5 Spot facer with three edges is proffered for the spot facing machining, using a normal drill for spot facing job will cause vibration. However, it will have a better result for the spot facing machining if reducing the rear angle of the normal drill with two different angles and going down the cutting speed and feed rate.
- 9.6 Temperature of motor will be increased so quickly when tapping due to frequently Motor direction be changed. Therefore, rapid and continuous tapping shall be avoided. Max. eight times per minutes of tapping is recommended. The machine shall be stopped for cooling if the motor is too hot.
- 9.7 A proper cutting force is required when milling. As this is not a milling machine although it has a milling function. Too big milling force will cause worktable moving round the column, therefore, clamping the worktable strongly is required when milling and a reasonable cutting feed rate for milling job is necessary.
- 9.8 Please turn off the coolant valve when mounting and dismounting tools, clamping or adjusting work piece or measuring work piece, as coolant is not necessary during this period. Stop coolant pump if these job takes more than ten minutes.
- 9.9 As gears are to be used for spindle and feed system, so it is not allowed to change spindle speed or change cutting feed rate when machine running, otherwise it will damage gears, shafts or relevant parts.

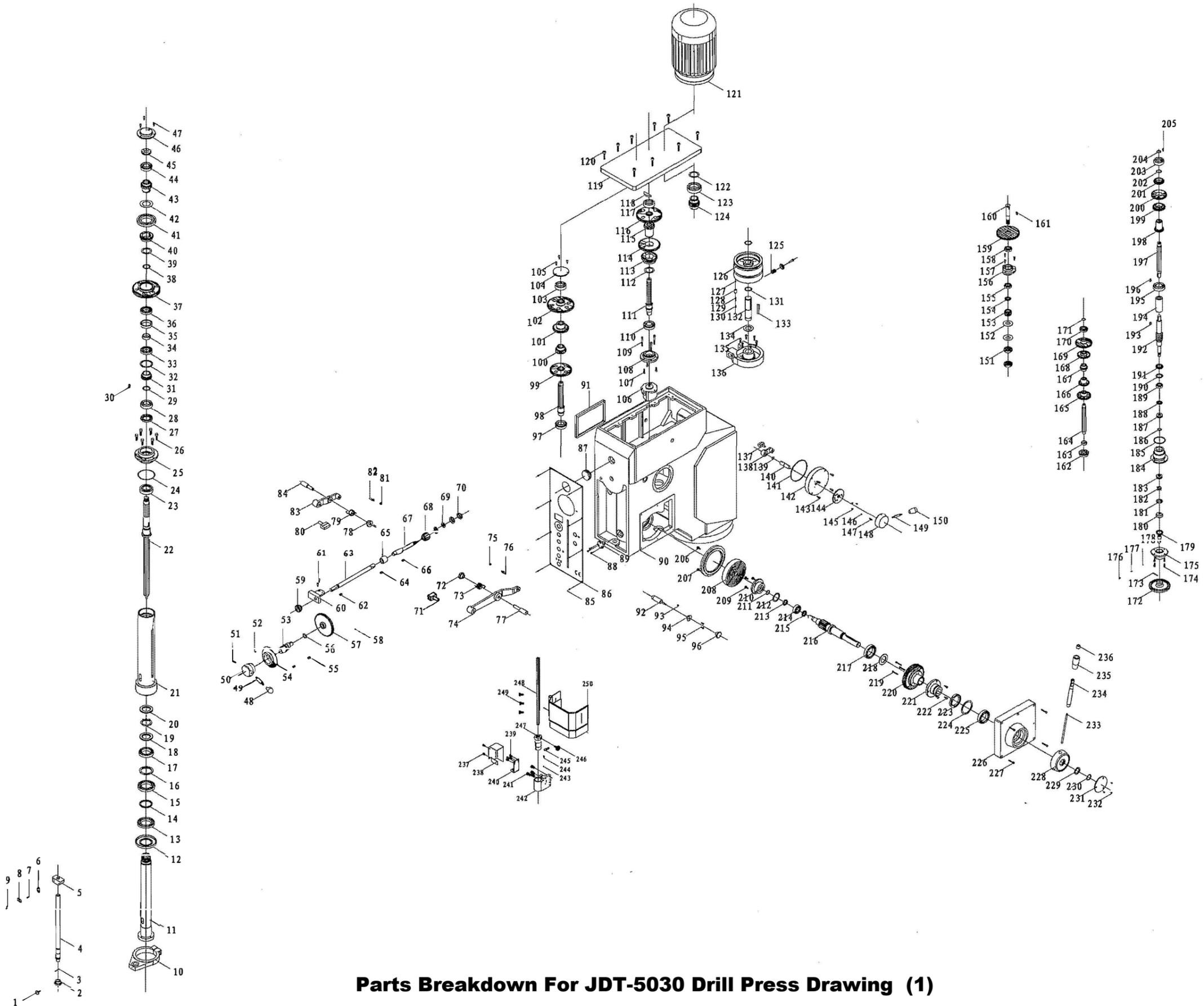
Packing list	Total 1
	page 1

Case No.: 1/1
Dimension (L ×W × H): 110×67 ×225 CM
Gross weight:726kg
Net weight: 696kg

No.	Name	Specification and marks	Q'ty	Remark
1	Machine		1 piece	
2	Drill chuck with lever	1-13: GB6087	1 piece	
3	Drill chuck adaptor		1 piece	
4	Tool shank adaptor	4-3: JB3477	1 piece	
		4-2: JB3477	1 piece	
		3-1: JB3477	1 piece	
5	Taper wedge for shank	Wedge 1: JB3482	1 piece	
		Wedge 3: JB3482	1 piece	
6	Wrench	21×24/GB4388	1	
7	Battery	SR44	1	
8	Fuse	φ 5×25 3A/1A/5A/10A	2 for each	
17	Operation manual		1 piece	
	Quality certificate		1 piece	
	Packing list		1 piece	

Inspector of the packing:

Date:



Parts Breakdown For JDT-5030 Drill Press Drawing (1)

Part List for JDT-5030 DRILL PRESS

No.	Part no.	Description	Size	Qty.
1	JDT5030-1-001	Knurled screw bolt		1
2	JDT5030-1-002	Knurled knob		1
3	JDT5030-1-003	Pin	3X26	1
4	JDT5030-1-004	Scaled screw		1
5	JDT5030-1-005	Scaled nut		1
6	JDT5030-1-006	Support for the vernier		1
7	JDT5030-1-007	Slotted cheese head screws	M3X6	1
8	JDT5030-1-008	Scaled indicator sheet		1
9	JDT5030-1-009	Cross recessed pan headscrew	M2X6	2
10	JDT5030-1-010G	Scale clamper		1
11	JDT5030-1-011	Main spindle		1
12	JDT5030-1-012	Bearing cover		1
13	JDT5030-1-013	Bearing		1
14	JDT5030-1-014	Washer		1
15	JDT5030-1-015	Bearing		1
16	JDT5030-1-016	Washer		1
17	JDT5030-1-017	Bearing		1
18	JDT5030-1-018	Bearing		1
19	JDT5030-1-019	Washer		1
20	JDT5030-1-020	Round nut		2
21	JDT5030-1-021	Spindle quill		1
22	JDT5030-1-022	Transmission shaft		1
23	JDT5030-1-023	Bearing	75X2.65	1
24	JDT5030-1-024	O-ring		1
25	JDT5030-1-025	Bearing seat		1
26	JDT5030-1-026	Hexagon socket head capscrews	M8X25	6
27	JDT5030-1-027	Seal ring		1
28	JDT5030-1-028	Bearing		1
29	JDT5030-1-029	External circlip		1
30	JDT5030-1-030	key		1
31	JDT5030-1-031	Feed gear		1
32	JDT5030-1-032	External circlip		1
33	JDT5030-1-033	Bearing		1
34	JDT5030-1-034	Inner ring spacer		1
35	JDT5030-1-035	Outer ring spacer		1
36	JDT5030-1-036	Bearing		1
37	JDT5030-1-037	Gear		1
38	JDT5030-1-038	External circlip		1
39	JDT5030-1-039	External circlip		1
40	JDT5030-1-040	Gear		1
41	JDT5030-1-041	Bearing		1
42	JDT5030-1-042	Washer		1
43	JDT5030-1-043	Gear		1
44	JDT5030-1-044	Bearing		1
45	JDT5030-1-045-1	Round nut		1
	JDT5030-1-045-2	Washer		1
46	JDT5030-1-046	Cover		1
47	JDT5030-1-047	Hexagon socket head capscrews	M5X12	3
48	JDT5030-1-048	Knob		1

Part List for JDT-5030 DRILL PRESS

No.	Part no.	Description	Size	Qty.
49	JDT5030-1-049	Handle		1
50	JDT5030-1-050	Handle seat		1
51	JDT5030-1-051	Slotted set screw	M6X20	1
52	JDT5030-1-052	Slotted set screw	M5X10	1
53	JDT5030-1-053	Handle shaft		1
54	JDT5030-1-054	Indicator dial		1
55	JDT5030-1-055-1	Key		1
	JDT5030-1-055-2	Key		1
56	JDT5030-1-056	O-ring	24X3.1	1
57	JDT5030-1-057	Gear		1
58	JDT5030-1-058	Slotted set screws	M5X8	1
59	JDT5030-1-059-1	Variable gear		1
	JDT5030-1-059-2	External circlip		1
60	JDT5030-1-060	Holder		1
61	JDT5030-1-061	Hexagon socket head capscrews	M6X20	1
62	JDT5030-1-062	Key		1
63	JDT5030-1-063	Gear shaft		1
64	JDT5030-1-064	key		1
65	JDT5030-1-065	Sleeve		1
66	JDT5030-1-066	Key		1
67	JDT5030-1-067	Gear shaft		1
68	JDT5030-1-068	Gear		1
69	JDT5030-1-069	Washer		2
70	JDT5030-1-070	round nut	M14X1.5	2
71	JDT5030-1-071	Pin		1
72	JDT5030-1-072	Fixed seat		1
73	JDT5030-1-073	Torsional spring (A)		1
74	JDT5030-1-074	Fork lever		1
75	JDT5030-1-075	Ball		1
76	JDT5030-1-076	Fork lever		1
77	JDT5030-1-077-1	Lever shaft (I)		1
	JDT5030-1-077-2	External circlip		1
78	JDT5030-1-078	Fixed seat		1
79	JDT5030-1-079	Torsional spring (B)		1
80	JDT5030-1-080	Lever block		1
81	JDT5030-1-081	Ball		1
82	JDT5030-1-082	Fork lever		1
83	JDT5030-1-083	Fork lever		1
84	JDT5030-1-084-1	Lever shaft (II)		1
	JDT5030-1-084-2	External circlip		1
85	JDT5030-1-085	Rivet		18
86	JDT5030-1-086	Panel		1
87	JDT5030-1-087	Oil pointer		1
88	JDT5030-1-088	Slotted countersunk headscrew		3
89	JDT5030-1-089	Positioning block		1
90	JDT5030-1-090G	Spindle box		1
91	JDT5030-1-091-1G	Cover		1
	JDT5030-1-091-2	Hexagon socket head capscrews	M5X16	4
92	JDT5030-1-092	Shaft		1

Part List for JDT-5030 DRILL PRESS

No.	Part no.	Description	Size	Qty.
93	JDT5030-1-093	Key		1
94	JDT5030-1-094	Feed gear		1
95	JDT5030-1-095	Slotted countersunk headscrew	M3X6	1
96	JDT5030-1-096	Knurlied knob		1
97	JDT5030-1-097	Bearing		1
98	JDT5030-1-098	Spline shaft (I)		1
99	JDT5030-1-099	Gear		1
100	JDT5030-1-100	Gear		1
101	JDT5030-1-101	Gear		1
102	JDT5030-1-102	Gear		1
103	JDT5030-1-103	Bearing		1
104	JDT5030-1-104	Bearing cover		1
105	JDT5030-1-105	Hexagon socket head capscrews	M5X12	3
106	JDT5030-1-106	Oil pump		1
107	JDT5030-1-107	Hexagon socket head capscrews	M6X16	3
108	JDT5030-1-108	Oil pump seat		1
109	JDT5030-1-109	Hexagon socket head capscrews	M6X45	3
110	JDT5030-1-110	Bearing		1
111	JDT5030-1-111	Spline shaft (II)		1
112	JDT5030-1-112	External circlip		1
113	JDT5030-1-113	Gear		1
114	JDT5030-1-114	Gear		1
115	JDT5030-1-115	Gear		1
116	JDT5030-1-116	Gear		1
117	JDT5030-1-117	Bearing		1
118	JDT5030-1-118	Bearing cover		1
119	JDT5030-1-119G	Spindle box cover		1
120	JDT5030-1-120	Hexagon socket head capscrews	M8X25	9
121	JDT5030-1-121G	Motor	2.2/2.8kW	1
122	JDT5030-1-122	External circlip		1
123	JDT5030-1-123	Bearing		1
124	JDT5030-1-124	Motor gear		1
125	JDT5030-1-125-1	Pin		1
	JDT5030-1-125-2	Sleeve		1
	JDT5030-1-125-3	Hexagon thin nut	M16X1.5	1
126	JDT5030-1-126	Cam		1
127	JDT5030-1-127	Ball	8	2
128	JDT5030-1-128	Bushing		2
129	JDT5030-1-129	Spring		2
130	JDT5030-1-130	Slotted set screw with flat po int	M8X10	2
131	JDT5030-1-131	External circlip		2
132	JDT5030-1-132	Cam shaft		1
133	JDT5030-1-133	Key		1
134	JDT5030-1-134	Bearing		1
135	JDT5030-1-135	Hexagon socket head capscrews	M6X20	6
136	JDT5030-1-136	Cam bracket		1
137	JDT5030-1-137	Lever block		1
138	JDT5030-1-138	Fork lever		1
139	JDT5030-1-139	O-ring	15X1.9	1

Part List for JDT-5030 DRILL PRESS

No.	Part no.	Description	Size	Qty.
140	JDT5030-1-140-1	Shaft		1
	JDT5030-1-140-2	Pin		1
141	JDT5030-1-141	O-ring	110X3.1	1
142	JDT5030-1-142G	Feed cover		1
143	JDT5030-1-143	Hexagon socket head capscrews	M5X25	4
144	JDT5030-1-144	Block		1
145	JDT5030-1-145	Hexagon socket head capscrews	M4X8	3
146	JDT5030-1-146	Ball	8	1
147	JDT5030-1-147	Spring		1
148	JDT5030-1-148-1	Handle seat		1
	JDT5030-1-148-2	Slotted set screws with cone point	M6X30	1
149	JDT5030-1-149	Handle lever		1
150	JDT5030-1-150	Knob		1
151	JDT5030-1-151	Round	M16X1.5	2
152	JDT5030-1-152	Spring		2
153	JDT5030-1-153	Feed gear		1
154	JDT5030-1-154	Washer		1
155	JDT5030-1-155	Bearing		1
156	JDT5030-1-156	Seat		1
157	JDT5030-1-157	Hexagon socket head capscrews	M5X16	3
158	JDT5030-1-158	Bearing		1
159	JDT5030-1-159	Feed gear		1
160	JDT5030-1-160	Small shaft		1
161	JDT5030-1-161	Key		1
162	JDT5030-1-162	Bearing		1
163	JDT5030-1-163	Washer		1
164	JDT5030-1-164	Spline shaft (Ⅲ)		1
165	JDT5030-1-165	Feed gear		1
166	JDT5030-1-166	Feed gear		1
167	JDT5030-1-167	Feed gear		1
168	JDT5030-1-168	Feed gear		1
169	JDT5030-1-169	Feed gear		1
170	JDT5030-1-170	Bearing		1
171	JDT5030-1-171	External circlip		1
172	JDT5030-1-172	Hand wheel		1
173	JDT5030-1-173	Pin	4X30	1
174	JDT5030-1-174	Hexagon socket head capscrews	M5X20	4
175	JDT5030-1-175	Cover		1
176	JDT5030-1-176	Screw	M6X8	1
177	JDT5030-1-177	Spring		1
178	JDT5030-1-178	Ball	5	1
179	JDT5030-1-179	Shaft		1
180	JDT5030-1-180	Clutch		1
181	JDT5030-1-181	Round nut	M14X1.5	1
182	JDT5030-1-182	Washer		1
183	JDT5030-1-183	Bearing		1
184	JDT5030-1-184	Bearing seat		1
185	JDT5030-1-185	O-ring	55X3.1	1
186	JDT5030-1-186	O-ring	19X2.4	1

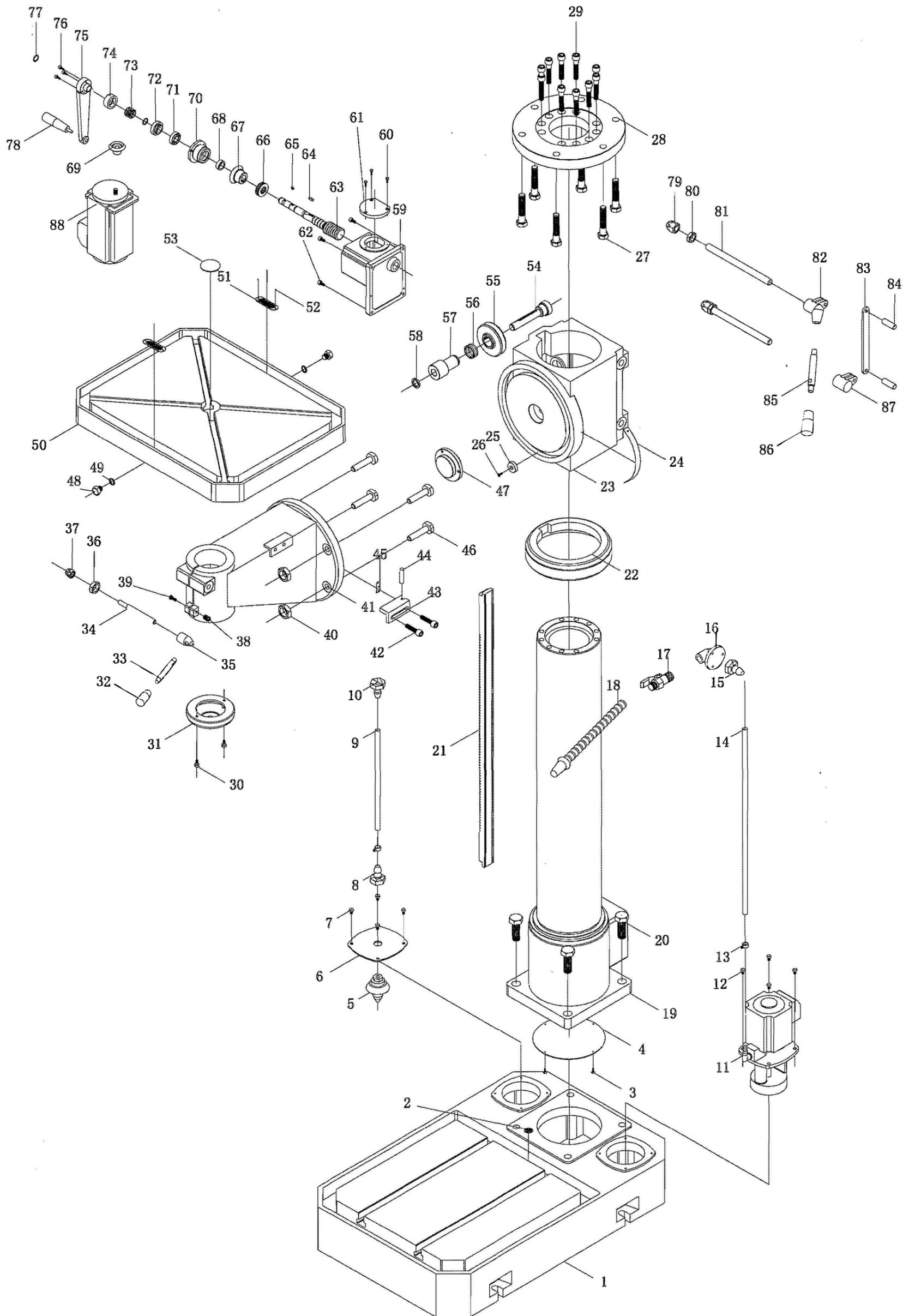
Part List for JDT-5030 DRILL PRESS

No.	Part no.	Description	Size	Qty.
187	JDT5030-1-187	Bearing		1
188	JDT5030-1-188	Washer		1
189	JDT5030-1-189	Bearing		1
190	JDT5030-1-190	Washer		1
191	JDT5030-1-191	seal ring		1
192	JDT5030-1-192	Worm shaft		1
193	JDT5030-1-193	Key		1
194	JDT5030-1-194	Sleeve		1
195	JDT5030-1-195	Bearing		1
196	JDT5030-1-196	Key		1
197	JDT5030-1-197	Spline shaft (IV)		1
198	JDT5030-1-198	Feed gear		1
199	JDT5030-1-199	Feed gear		1
200	JDT5030-1-200	Feed gear		1
201	JDT5030-1-201	Feed gear		1
202	JDT5030-1-202	External circlip		1
203	JDT5030-1-203	Bearing		1
204	JDT5030-1-204	External circlip		1
205	JDT5030-1-205	Screw		3
206	JDT5030-1-206	Slotted cheese head screws	M5X12	3
207	JDT5030-1-207	Cover		1
208	JDT5030-1-208-1	Coil spring		1
	JDT5030-1-208-2	Pin		1
209	JDT5030-1-209	Slotted cheese head screws	M5X12	3
210	JDT5030-1-210	Bearing box		1
211	JDT5030-1-211	External circlip		1
212	JDT5030-1-212	External circlip		1
213	JDT5030-1-213	Adjusting washer		1
214	JDT5030-1-214	Bearing		1
215	JDT5030-1-215	Adjusting washer		1
216	JDT5030-1-216	Cross shaft		1
217	JDT5030-1-217	Bearing		1
218	JDT5030-1-218	Washer		1
219	JDT5030-1-219	Hexagon socket head capscrew	M5X30	1
220	JDT5030-1-220	Worm gear		1
221	JDT5030-1-221	Sleeve		1
222	JDT5030-1-222	Hexagon socket head capscrew	M5X12	1
223	JDT5030-1-223	Seal ring		1
224	JDT5030-1-224	External circlip		1
225	JDT5030-1-225	Bearing		1
226	JDT5030-1-226G	Feed side cover		1
227	JDT5030-1-227	Hexagon socket head capscrew	M6X45	4
228	JDT5030-1-228	Handle seat		1
229	JDT5030-1-229	Adjusting washer		1
230	JDT5030-1-230	External circlip		1
231	JDT5030-1-231	Press cover		1
232	JDT5030-1-232	Slotted set screw with flatpoint		1
233	JDT5030-1-233	Lever		3
234	JDT5030-1-234	Handle lever		3

Part List for JDT-5030 DRILL PRESS

No.	Part no.	Description	Size	Qty.
235	JDT5030-1-235	Core bar		3
236	JDT5030-1-236-1	Konb		3
	JDT5030-1-236-2	Spring		3
	JDT5030-1-236-3	External circlip		3
237	JDT5030-1-237	Slotted cheese head screws	M4X30	2
238	JDT5030-1-238	Cover		1
239	JDT5030-1-239	Slotted cheese head screws	M4X8	4
240	JDT5030-1-240	Mounting plate		1
241	JDT5030-1-241	Slotted cheese head screws	M6X12	4
242	JDT5030-1-242	Holder		1
243	JDT5030-1-243	Ball	6	1
244	JDT5030-1-244	Pin		1
245	JDT5030-1-245	Lever		1
246	JDT5030-1-246	Screw		1
247	JDT5030-1-247	Teleflex		1
248	JDT5030-1-248	Supporting rod		1
249	JDT5030-1-249	Slotted cheese head screws		2
250	JDT5030-1-250	Guard		1

Parts Breakdown For JDT-5030 Drill Press Drawing (2)



Part List for JDT-5030 DRILL PRESS

No.	Part no.	Description	Size	Qty.
1	JDT5030-2-01G	Base		1
2	JDT5030-2-02	Drainage plate		1
3	JDT5030-2-03	Slotted countersunk headscrew	M3X8	4
4	JDT5030-2-04	Cover		1
5	JDT5030-2-05	Water strainer		1
6	JDT5030-2-06	Plate		1
7	JDT5030-2-07	Slotted countersunk headscrew	M6X10	4
8	JDT5030-2-08	Pipe joint		1
9	JDT5030-2-09	Hose		1
10	JDT5030-2-10	Pipe joint		1
11	JDT5030-2-11	Coolant pump	0.18kW	1
12	JDT5030-2-12	Slotted cheese head screw	M6X25	1
13	JDT5030-2-13	Hose clamp		4
14	JDT5030-2-14	Hose		1
15	JDT5030-2-15	Pipe joint		1
16	JDT5030-2-16G	Connector		1
17	JDT5030-2-17	Brass ball valve;		1
18	JDT5030-2-18	Cooling pipe		1
19	JDT5030-2-19G	Column		1
20	JDT5030-2-20	Hexagon headed bolt		4
21	JDT5030-2-21	Rack		1
22	JDT5030-2-22	Ring		1
23	JDT5030-2-23B	Bracket		1
24	JDT5030-2-24	Plate		1
25	JDT5030-2-25	Stopper		1
26	JDT5030-2-26	Slotted countersunk headscrew	M5X12	1
27	JDT5030-2-27	Hexagon headed bolt		6
28	JDT5030-2-28G	Connecting seat		1
29	JDT5030-2-29	Hexagon socket head capscrews	M12X30	10
30	JDT5030-2-30	Slotted countersunk headscrew	M5X20	2
31	JDT5030-2-31B	Shell		1
32	JDT5030-2-32	Long lever quill		1
33	JDT5030-2-33	Hand lever		1
34	JDT5030-2-34	Double end bolt		1
35	JDT5030-2-35	Hand lever seat		1
36	JDT5030-2-36	Thin hexagon nut	M10	1
37	JDT5030-2-37	Cap nut	M10	1
38	JDT5030-2-38	Adjusting screw		2
39	JDT5030-2-39	Hexagon headed bolt		2
40	JDT5030-2-40	Thick hexagon nut	M14	4
41	JDT5030-2-41B	Bracket seat		1
42	JDT5030-2-42	Hexagon socket head capscrews	M10X20	2
43	JDT5030-2-43	Locking block		1
44	JDT5030-2-44	Pin		1
45	JDT5030-2-45	Plate		1
46	JDT5030-2-46	Screw		1
47	JDT5030-2-47	Locating shaft		1
48	JDT5030-2-48	Oil plug		2
49	JDT5030-2-49	Washer		2

Part List for JDT-5030 DRILL PRESS

No.	Part no.	Description	Size	Qty.
50	JDT5030-2-50 B	Worktable		1
51	JDT5030-2-51	Drainage plate		2
52	JDT5030-2-52	Cross Recess Head Screw		4
53	JDT5030-2-53	Cover plate		1
54	JDT5030-2-54	Small shaft		1
55	JDT5030-2-55	Worm gear		1
56	JDT5030-2-56	Sleeve		1
57	JDT5030-2-57	Gear		1
58	JDT5030-2-58	Washer		1
59	JDT5030-2-59B	Side cover		1
60	JDT5030-2-60	Cross recessed pan headscrew	M4X8	3
61	JDT5030-2-61B	Side cover		1
62	JDT5030-2-62	Hexagon socket head capscrews	M6X16	4
63	JDT5030-2-63	Worm screw		1
64	JDT5030-2-64	key		
65	JDT5030-2-65	key		
66	JDT5030-2-66	Bearing		1
67	JDT5030-2-67	Taper gear		1
68	JDT5030-2-68	Washer for adjusting		1
69	JDT5030-2-69	Taper gear		1
70	JDT5030-2-70	Bearing seat		1
71	JDT5030-2-71	Bearing		1
72	JDT5030-2-72	Connecting end		1
73	JDT5030-2-73	Spring		1
74	JDT5030-2-74	Connecting end		1
75	JDT5030-2-75B	Lever for lifting		1
76	JDT5030-2-76	Hexagon socket head capscrews	M4X14	3
77	JDT5030-2-77	External circlip		2
78	JDT5030-2-78	Lever for turning		1
79	JDT5030-2-79	Cap nut	M16	2
80	JDT5030-2-80	Hexagon thin nut	M16	2
81	JDT5030-2-81	Double end bolt		2
82	JDT5030-2-82B	Main nut for clampingboard		1
83	JDT5030-2-83	Connecting board forbracket		1
84	JDT5030-2-84	Pin		
85	JDT5030-2-85	Hand lever		1
86	JDT5030-2-86	Long hand quill		1
87	JDT5030-2-87B	Nut for clamping board		1
88	JDT5030-2-88	motor	0.25kW	1



Warranty / Garantie

TOOL FRANCE SARL guarantees that the supplied product(s) is/are free from material defects and manufacturing faults.

This warranty does not cover any defects which are caused, either directly or indirectly, by incorrect use, carelessness, damage due to accidents, repairs or inadequate maintenance or cleaning as well as normal wear and tear.

Further details on warranty (e.g. warranty period) can be found in the General Terms and Conditions (GTC) that are an integral part of the contract.

These GTC may be viewed on the website of your dealer or sent to you upon request.

TOOL FRANCE SARL reserves the right to make changes to the product and accessories at any time.

TOOL FRANCE SARL garantiert, dass das/die von ihr gelieferte/n Produkt/e frei von Material- und Herstellungsfehlern ist.

Diese Garantie deckt keinerlei Mängel, Schäden und Fehler ab, die - direkt oder indirekt - durch falsche oder nicht sachgemäße Verwendung, Fahrlässigkeit, Unfallschäden, Reparaturen oder unzureichende Wartungs- oder Reinigungsarbeiten sowie durch natürliche Abnutzung durch den Gebrauch verursacht werden.

Weitere Einzelheiten zur Garantie können den allgemeinen Geschäftsbedingungen (AGB) entnommen werden.

Diese können Ihnen auf Wunsch per Post oder Mail zugesendet werden.

TOOL FRANCE SARL behält sich das Recht vor, jederzeit Änderungen am Produkt und am Zubehör vorzunehmen.

TOOL FRANCE SARL garantit que le/les produit(s) fourni(s) est/sont exempt(s) de défauts matériels et de défauts de fabrication.

Cette garantie ne couvre pas les défauts, dommages et défaillances causés, directement ou indirectement, par l'utilisation incorrecte ou inadéquate, la négligence, les dommages accidentels, la réparation, la maintenance ou le nettoyage incorrects et l'usure normale.

Vous pouvez trouver de plus amples détails sur la garantie dans les conditions générales (CG).

Les CG peuvent être envoyées sur demande par poste ou par e-mail .

TOOL FRANCE SARL se réserve le droit d'effectuer des changements sur le produit et les accessoires à tout moment.