



GHD-25

DRILL PRESS

Original:
GB
Operating Instructions



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M-50000955T

201707

CE-Conformity Declaration
CE-Konformitätserklärung
Déclaration de Conformité CE

Product / Produkt / Produit:

Drill Press
Säulenbohrmaschine Perceuse
à colonne

GHD-25

Brand / Marke / Marque:

JET

Manufacturer / Hersteller / Fabricant:

JPW (Tool) AG, Tämperlistrasse 5, CH-8117 Fällanden
Schweiz / Suisse / Switzerland

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

2014/35/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 ISO 13849-1:2008

EN 12717:2001 + A1:2009

EN 60204-1:2006+A1:2009

Responsible for the Documentation / Dokumentations-Verantwortung / Responsabilité de Documentation:

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JPW (Tool) AG



2016-05-24 Alain Schmid, General Manager

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General safety notes

Milling machines can be dangerous if not used properly. Therefore the appropriate general technical rules as well as the following notes must be observed.



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 mains cable.

Do not wear gloves while operating this machine.

Remove all loose clothing and confine long hair.



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

Wear safety shoes; never wear leisure shoes or sandals.

Always wear the approved working outfit:

- Safety goggles
- Ear protection
- Dust protection



Install the machines 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 placed stable on firm and levelled table surface.

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 behavior.



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



Never leave a running machine unattended. Before you leave the workplace switch off the machine.

Keep children and visitors a safe distance from the work area.

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.

Metal dust is explosive and can also represent a risk to health.

Dust from some tropical woods in particular, and from hardwoods like beech and oak, is classified as a carcinogenic substance.

Always use a suitable dust collection device.

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

Make sure to guide and hold the chisel with both hands safe and tight during machining.

Work only with well sharpened tools.

Machine only stock which is chucked

securely on the machine, always check before switching the machine on.

Provide workpieces with center holes before clamping between centers.

Work large and unbalanced workpieces at low spindle speed only. Workpieces with cracks may not be used.

Remove the chuck key or dowel pins before turning the machine on.

Always close the belt cover.

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

Test each set-up by revolving the work by hand to insure it clears the tool rest and bed. Check setup at the lowest speed before you increase to the operating speed.

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

Never stop workpiece with the hand during run out.

Do not attempt to engage the spindle lock pin until the spindle has stopped.

Never take measurement on a rotating workpiece.

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.



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<p>Dear end-user,</p> <p>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.</p> <p>Important notice:</p> <ol style="list-style-type: none"> 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.(clockwise) 5. Machine must be stopped if spindle speed 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 and stopped the machine stopped. Familiar with its position and its use are necessary. 8. Professional electric service engineer is required for electric maintenance. 9. When the machine working. The spindle box must be clamped otherwise. It will be hurt operator or the machine destroyed. 10. 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. 11. Correct use and daily maintenance of the machine are required in order to keep machine accuracy and its lifetime in long time. 	

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12. 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:**

GHD series vertical drilling machines are our new products designed and developed by our-self based on our accumulated experience in so many years in this field. It is universal machine which could be widely used for small and middle sizes of work pieces for drilling, spot facing, reaming, tapping and 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 Single 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 The spindle features good rigidity and good wear resisting and equipped with tool disassembly and balancing device.

1.4 The spindle box could be turned round the column center line and could be moving up and down following the column.

1.5 Main operation levers and push buttons could be reached easily that makes you comfortable when you operate the machine.

1.6 Spindle feed in manual one mode , there are available in this series machines.

1.7 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.

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

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

The machine consists of spindle box, column, machine base, electric cabinet and machine accessories, total five 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. Spindle box up and down movement is an auxiliary motion.

Two operating levers in the front of spindle box could make changes for the spindle speed in 12 steps. Changing either lever position could drive a triple gear and a double gear moving along with axis direction results the speed change. One of levers 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.

Up and down movement of the spindle box is completed by manual, Adjustment for the required distance of cutter and work piece could also be made by manual.

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.

4. Electrical system

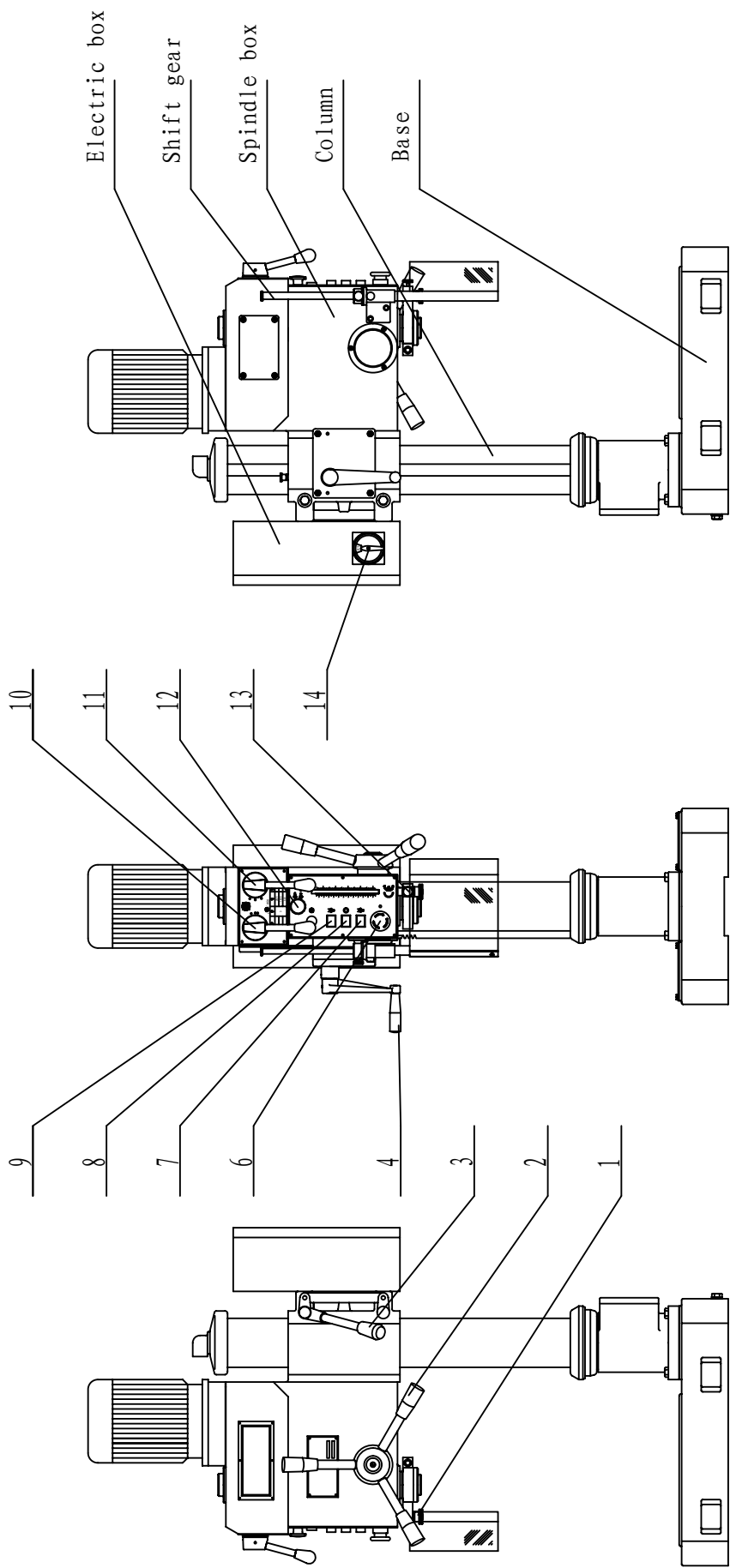
4.1 Brief description

The machine is suitable for the power supply for 400V/50HZ 3 phase. Special voltage with 60HZ could also be available as per the requirements of the end user.

4.2 Explanation of the circuit(refer to drawing4、 5)

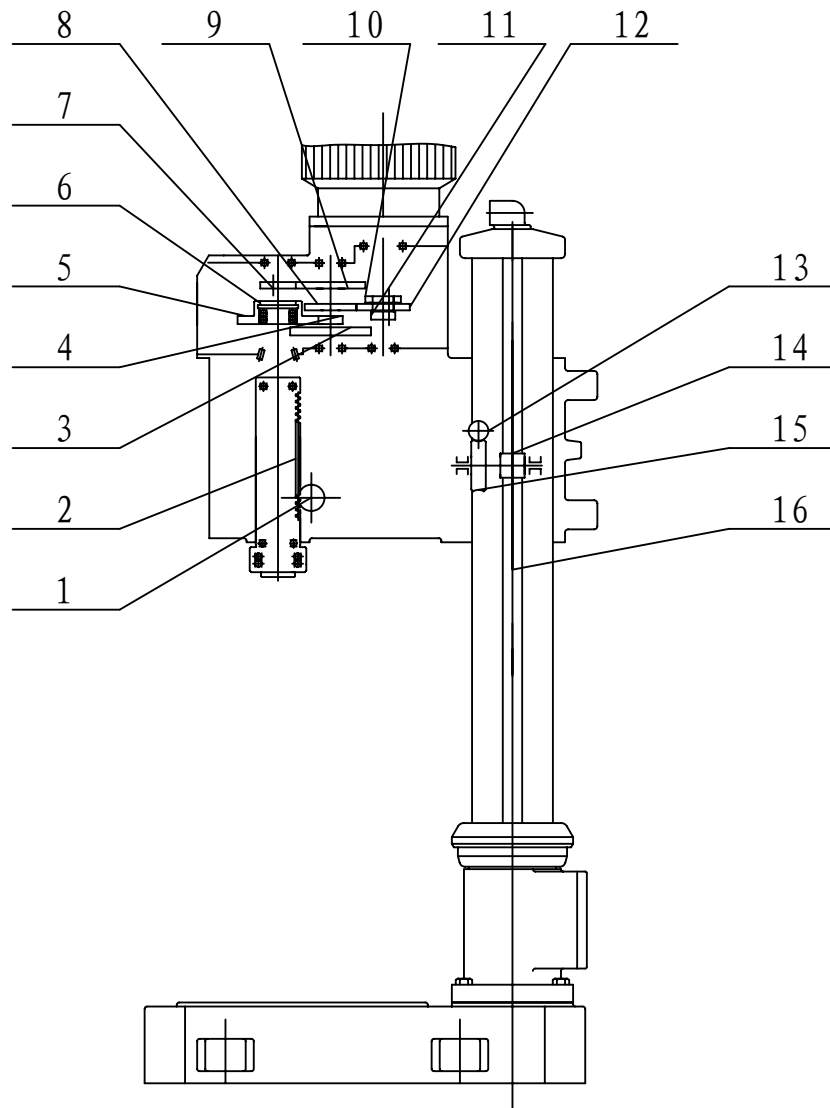
The spindle of the machine is moving by two-speed motor, it is controlled by switch(QSA1) AC contactors (KM1) and so on.

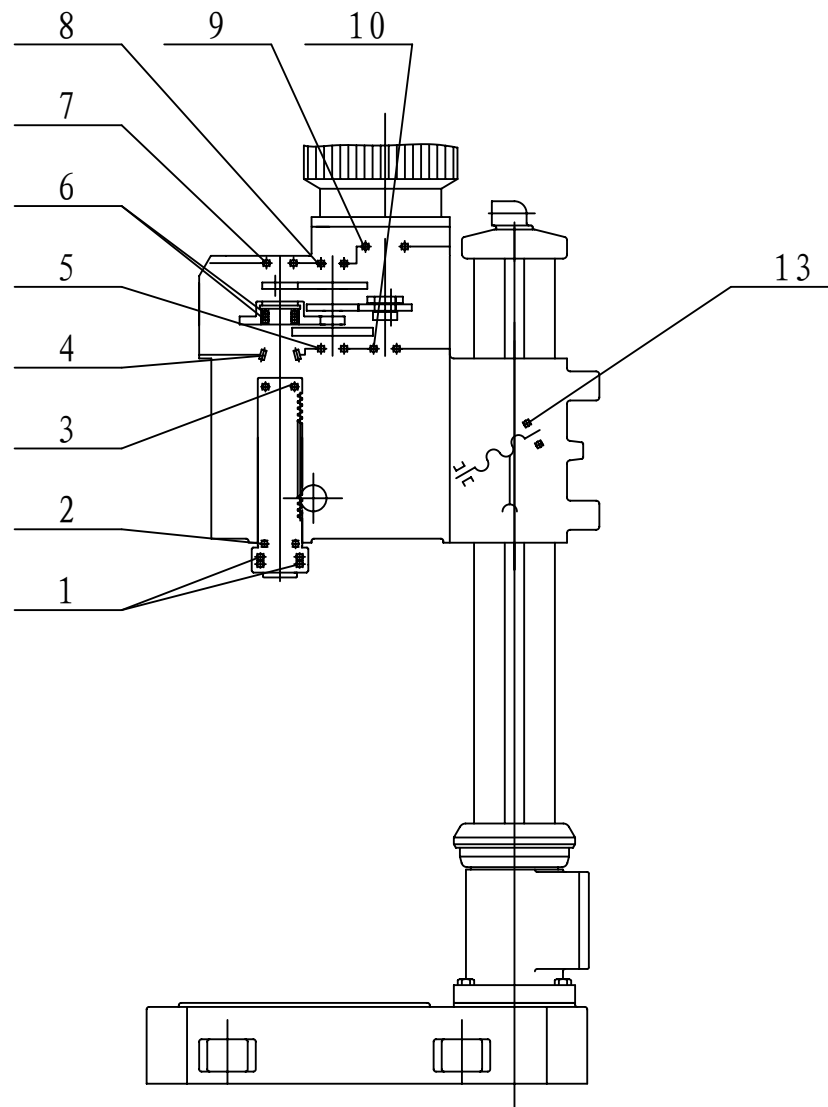
When using the machine, the breaker QF1, fuse FU1,FU2,FU3 which is in the electrical Box B1 must be put on, when examining and repairing, it could be put off. The spindle motor and pump motor use breaker and fuses for his protection, and the switch features overload protection, short cut protection and phase break protection. Press the main power switch QS1,the electrical source HL1 light up, it is working now, contrary, work is stopped.



Outside picture drawing (1)

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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
Part drawing NO.	GHD25-1-049	GHD25-1-014	GHD25-1-077	GHD25-1-078	GHD25-1-022	GHD25-1-022	GHD25-1-023	GHD25-1-079	GHD25-1-080
Number of teeth and starts	13	19	50	15	50	22	22	32	41
Module	2.5	2.5	2	2	2	2	2	2	2
Direction of helical angle									
Class of Accuracy	8	8	7-6-6	7-6-6	7-6-6	9	7-6-6	7-6-6	7-6-6
Material	45	40Cr	45	40Cr	45	45	45	45	45
Heat treatment and hardness	T235	HV500	G52	G52	G52	G42	G52	G52	G52
Number on the drawing	10	11	12	13	14	15			
Part drawing NO.	GHD25-1-088	GHD25-1-086	GHD25-1-087	GHD25-1-060	GHD25-1-065	GHD25-1-062			
Number of teeth and starts	22	15	33	1	25	30			
Module	2	2	2	2	2.5	2			
Direction of helical angle									
Class of Accuracy	7-6-6	7-6-6	7-6-6	9	9	9			
Material	45	45	45	45	45	Cu			
Heat treatment and hardness	G52	G52	G52	T235	T235				



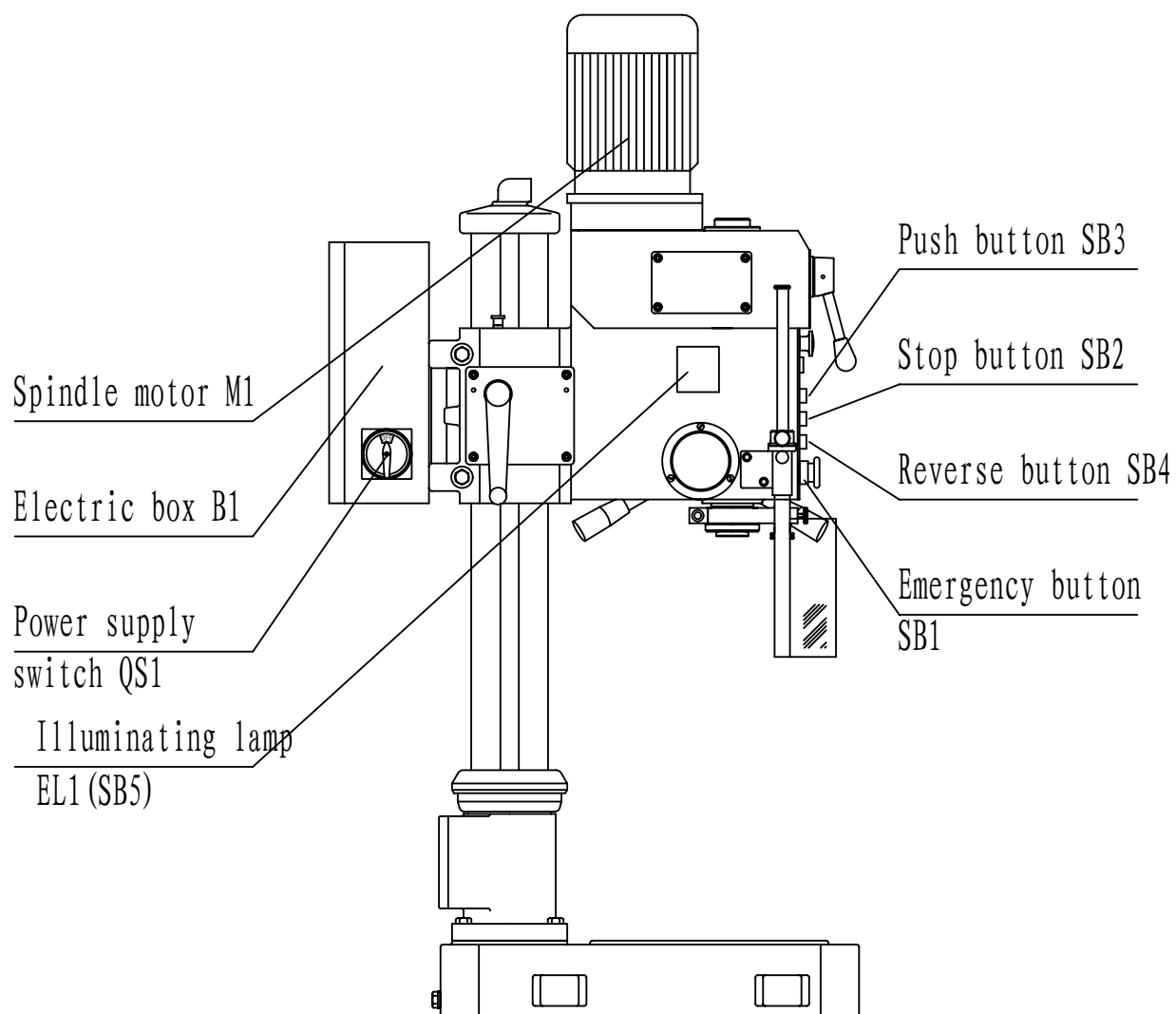


List and distribution of rolling bearings (3)

Roller bearing table

Table (2)

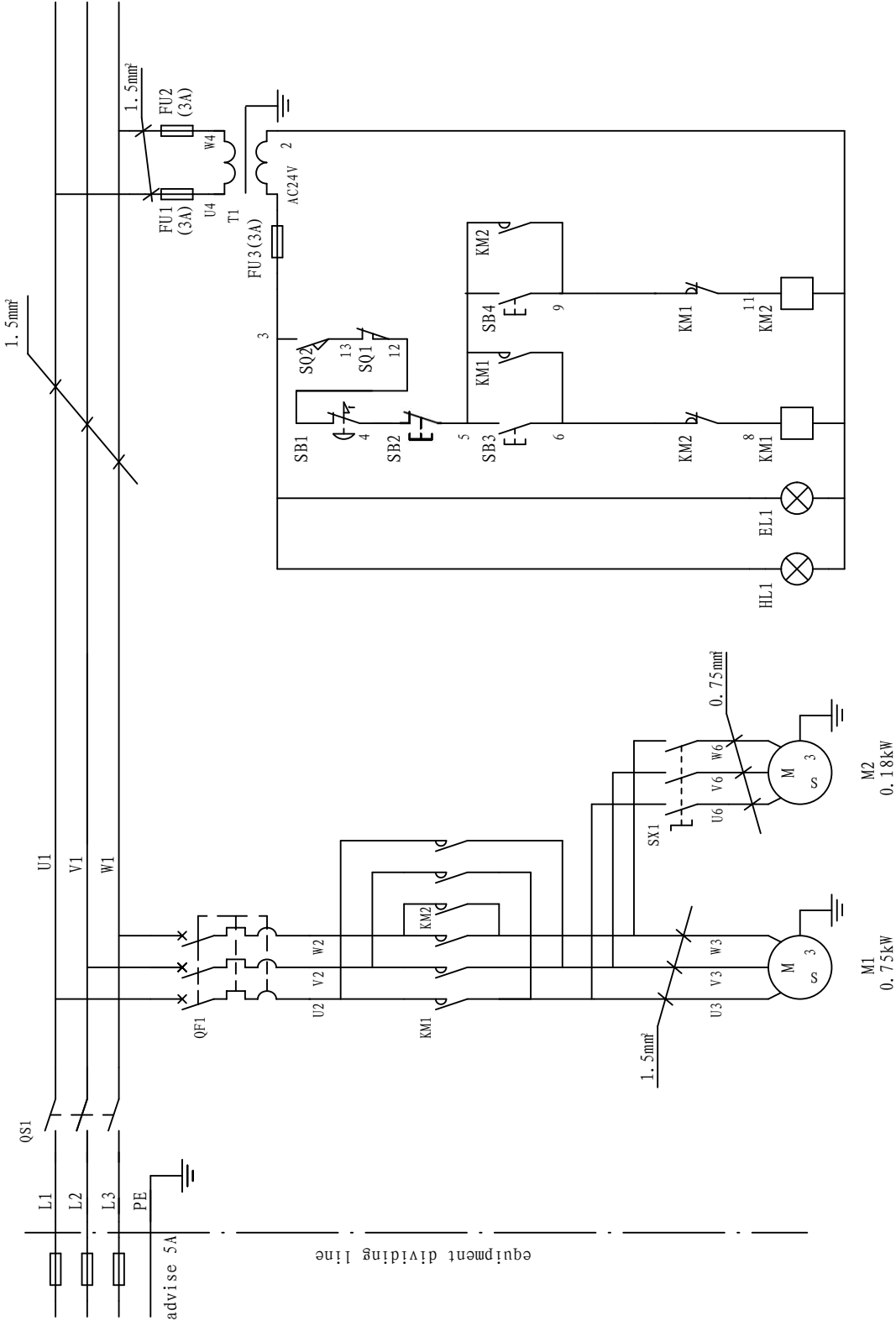
[illegible]



Wiring Diagram (4)

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Total power supply	Chief switch	Spindle motor	coolant pump	Power supply lamp	Rotation	Reverse rotation	Power supply

3 ϕ AC400V 50Hz



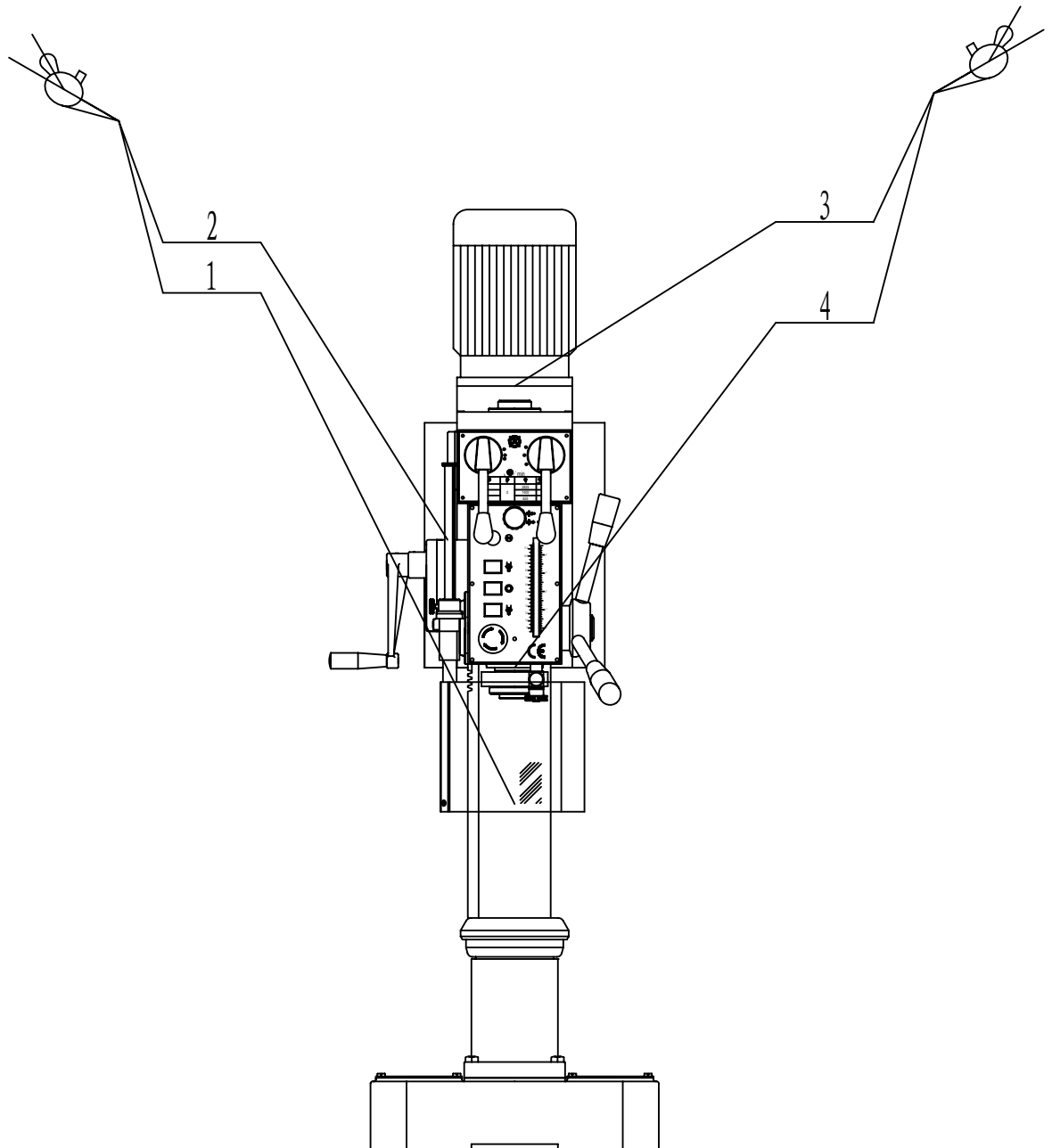
Attention: The diameter of the line without indicating is 0.75mm .

Electric System Diagram (5)

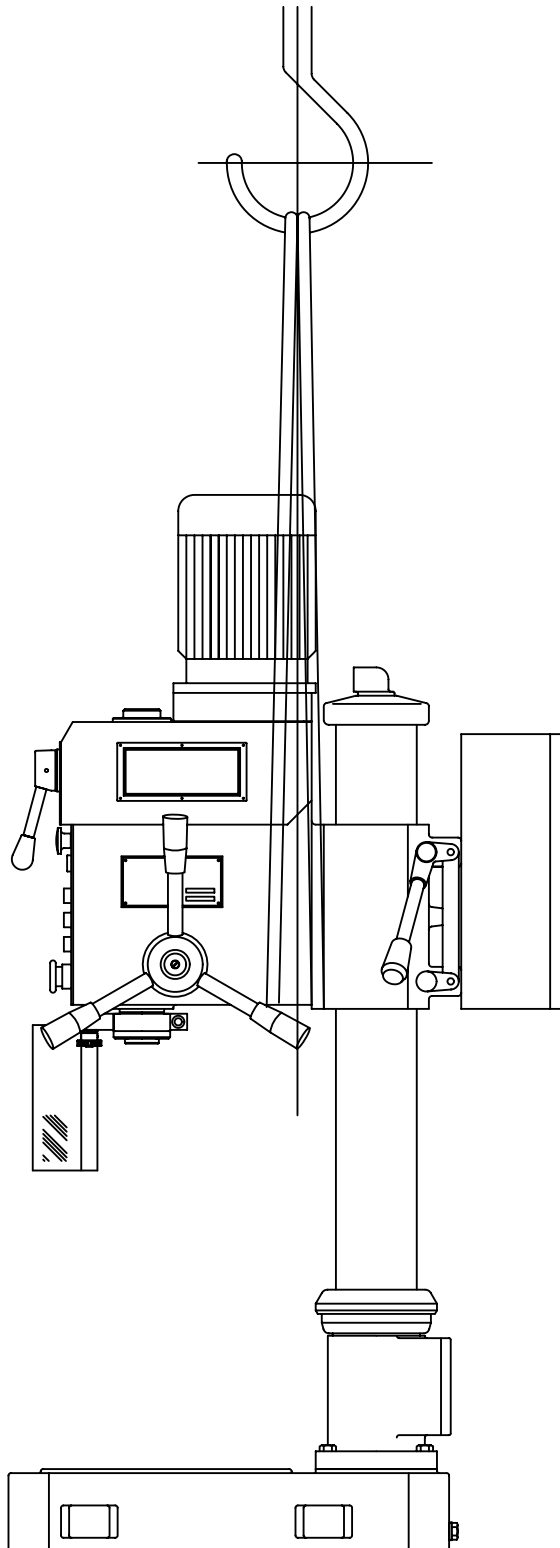
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<p>4.3 Machine operation</p> <p>Put the switch (QSA1) at the position which is required (“1” main motor 1440 r/min.”2”main Motor 2880 r/min, “R” the reversion of main motor, “0” machine is stopped). Press the button SB3, it is working normally. When put the switch (QSA1) at “R”, the main motor stop working.</p> <p>4.4 Emergency stop operation:</p> <p>If emergency stop is necessary during operation, press emergency push button SQ1 that makes the loss of electric power of the contactor KM1, so the machine is completely stopped. After eliminating the breakdown , release the lock of the push button then restart the machine.</p> <p>4.5 Maintenance of the electric equipment:</p> <p>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.</p>	

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4.7 Electric components list:					
Table (3)					
Code of elements	Name	Specification	Q'ty	Remark	
QS1	Instruction switch	JCH13-20	1		
QF1	Breaker	DZ108-1.6/2.5A	1		
KM1,KM2	Connector	LC1E1201B5N(AC24V)50Hz	2		
		LAEN20N	2		
SB1	Emergency stop button	LA42(B)J-11/R	1		
SB2	Push button	LA42(B)PJ-11/R	1		
SB3,SB4	Push button	LA42(B)PJ-22/G	2		
HL1	Signal lamp	AD17-16 AC24V	1		
T1	Transformer	JBK6-63TH 400/24	1		
EL1	Lamp	25W AC24V	1		
SX1	Selection switch	LA42XL2-30/B	1		
SQ1	Micro switch	LXP1-020-0A	1		
SQ2	Door switch	JWM6-11A	1		

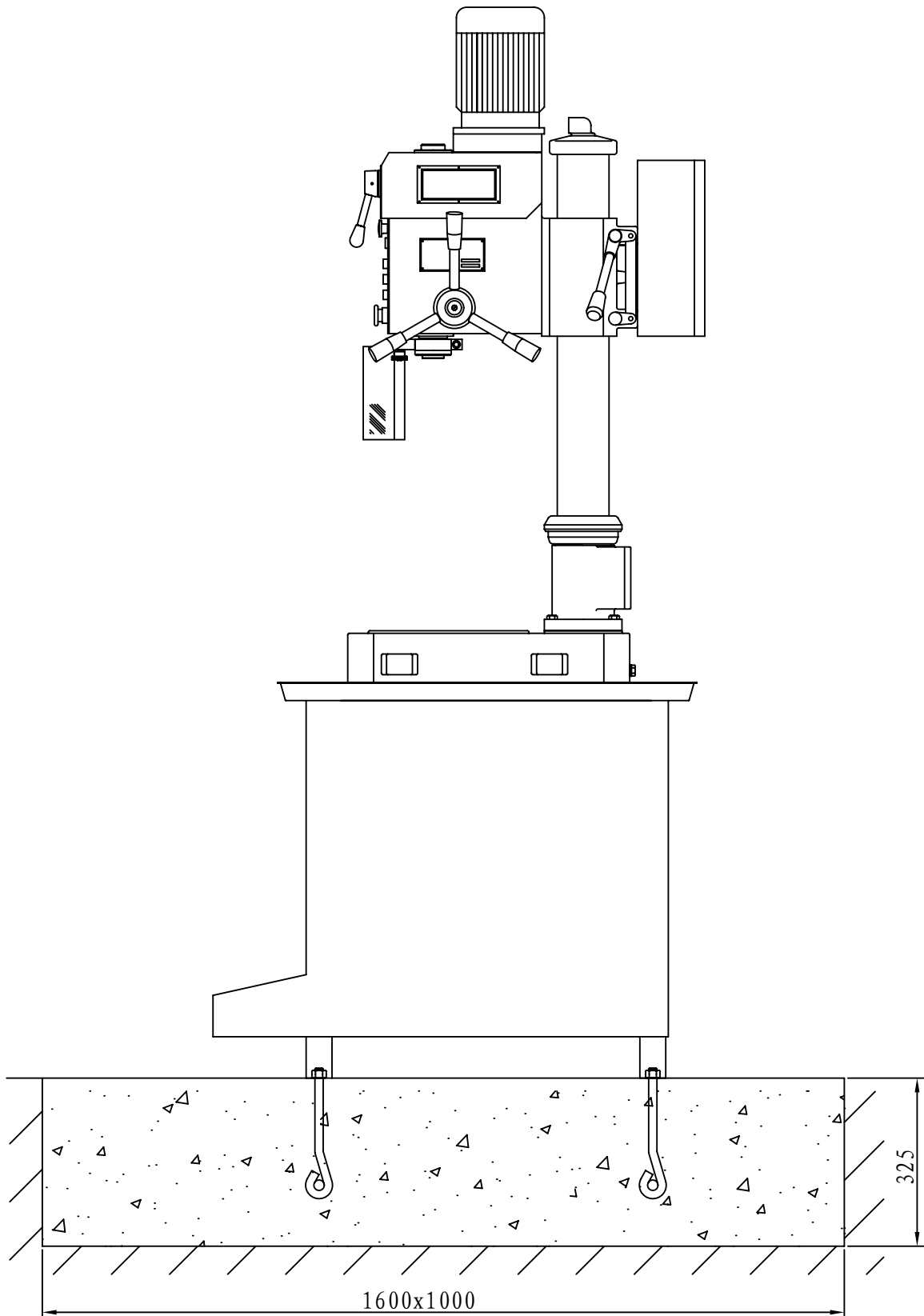
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<p>5. Lubrication system:</p> <p>5.1 There are two types of lubrication in this machine:</p> <ul style="list-style-type: none"> a. Grease b. Lubrication by manual filled oil <p>5.2 Gears in the spindle box are lubricated by grease, it uses NO.3 Lithium industrial grease, for the new machine, washing and grease replacement after six months running. Later, washing and grease replacement once a year is required.</p> <p>5.3 The machine needs manual oil fill lubrication. Manual oil fill lubrication place, see diagram (6)</p> <p>6 Hoisting and installation:</p> <p>6.1 Hoisting:</p> <p>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).</p> <p>The crate must not be reversed or inclined and must not be strongly stroked when lift up the machine.</p> <p>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.</p> <p>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.</p> <p>6.2 Installation:</p> <p>Working area of the machine shall be the size when the spindle box rounds its column in one cycle. Its diameter is about Ø2000mm. Further more, space for the work pieces, toolbox, and machine accessories as well as operating and maintenance space must be considered.</p> <p>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.</p>	



Lubrication Diagram (6)



Hoisting of the machine (7)



Foundation and Installation Diagram (8)

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<p>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 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.</p> <p>6.3 Preparation before machine running:</p> <p>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.</p> <p>7 Use and operation of the machine:</p> <p>7.1 For the operating levers, handles, electric switches and buttons, please refer to the diagram 1 and diagram 4..</p> <p>7.2 Mounting and dismounting of tool cutters:</p> <p>The machine equipped with a tool dismounting device to be controlled by a knob (12). Push forward the knob (12) to the spindle box direction when tool mounting is required. As for dismounting tool cutters, pull out the knob (12), hold the tool cutter by left hand, meanwhile, turn the feed lever (3) 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.</p> <p>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.</p> <p>Warning: The knob (12) 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.</p>	

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7.3 Changes for the spindle speed:

Spindle speed change could be made by moving the two levers (10) and (11) located in the front of the spindle box. Relations between spindle speed revolution and levers position is indicated at the speed change label. 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 in the right side position shall be in the “idle” position, so spindle rotation could be easily obtained.

7.4 Operation of the spindle feed:

The machine is adopted manual feed, at the right side of the spindle box, there are three feed levers (2), The spindle will move down if turned the lever one of any three feed levers in counter clockwise direction. The spindle will move up if turned the lever in clockwise direction

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 (13) by turning knob (1), moving the scale to the required depth, then fastening the knurled screw(13). Now the machining depth could be controlled.

7.6 Tapping

Turn the feed lever (2) and let the tap approaches the work piece shall be exerted in order to let the tap comes into the hole. Promptly start the reverse button (7) when the screw depth is reached, the spindle rotates in reversion ,push the tap out of work piece with a little force and, then once tapping operation finished.

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.

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<p>9. Machine use and maintenance:</p> <p>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.</p> <p>9.2 Lubrication of the machine is very important. Daily lubrication work as per the requirements of the operation manual is necessary. Otherwise transmission parts and bearings will be damaged.</p> <p>9.3 Max. spindle torque of this machine is 70 Nm. Max. feed resisting force in the driving system is 5000 N. Over permitted cutting feed range is not allowed. High spindle speed with big cutting feed is not good to the machine.</p> <p>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°).</p> <p>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.</p> <p>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.</p> <p>9.7 As gears are to be used for spindle, so it is not allowed to change spindle speed when machine running, otherwise it will damage gears, shafts or relevant parts.</p> <p>9.8 Do not extend spindle quill too much, instead, a proper working table height is suggested. Clean the spindle taper hole and tool taper shank first before tool mounting. Unqualified or rusted or damaged taper shank is forbidden to use.</p> <p>9.9 Dry agent inside of the electric box and regularly removing dustiness are necessary. It is forbidden to use gasoline or kerosene or diesel oil to clean electric components. We suggest to use those no erosion and not be easily burned liquid such as carbon tetrachloride etc.</p>	

[illegible]

Drill Press

Model: GHD-25

Certificate of Inspection

Max. Drilling Diameter: 25mm

Series Number:

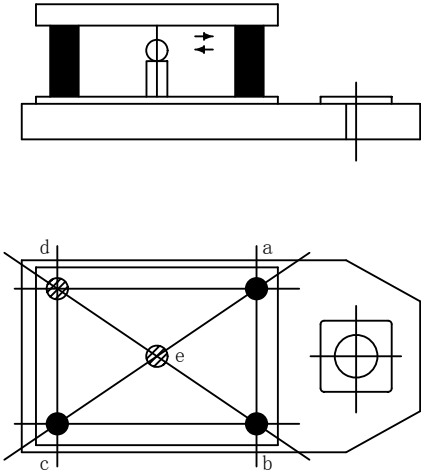
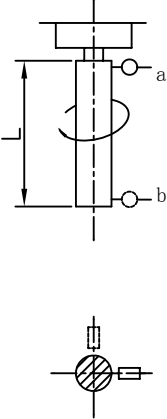
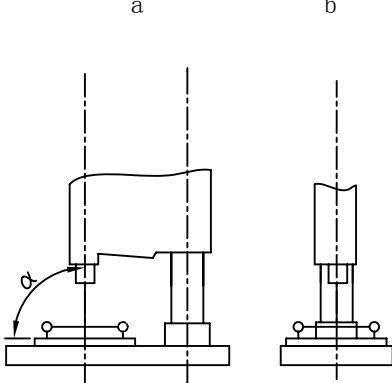
Certificate of Inspection

Total 2

Page 1

Precesion Inspection Record

Germetrical Precision Test:

No.	Item	Brief Drawing	Precision	
			Allowance (mm)	Actual Test
G1	Parallelism of the base surface		0.06 at any tested Length of 300 (flat or concave)	
G2	Spindle bore axis runout a) Close to spindle surface b) at a distance of L to spindle surface		L=100 a) 0.02 b) 0.035	
G3	Parpendicularity of the spindle axis to Base plate table surface		a) 0.10/300* ($\alpha \leq 90^\circ$) b) 0.10/300*	

Certificate of Inspection			Total 2	
			Page 2	
Precesion Inspection Record				
Germetrical Precision Test:				
No.	Item	Brief Drawing	Precision	
			Allowance (mm)	Actual Test
G4	Parpendicularity of the Spindle sleeve to Base plate table surface	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>a</p> </div> <div style="text-align: center;"> <p>b</p> </div> </div>	<p>a) 0.07/100* ($\alpha \leq 90^\circ$)</p> <p>b) 0.07/100*</p>	
Work Accuracy:				
P1	The change of Parpendicularity of spindle axis to work table surface under the axial force	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>a</p> </div> <div style="text-align: center;"> <p>b</p> </div> </div>	<p>F=5000N (500kgf) 2/1000</p>	
<p>*Distance between the two points of Indicator</p>				

Drill Press

Model: GHD-25

Packing list

Max. Drilling Diameter: 25mm

Series Number:

Packing list				Total	1
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Case No.: 1/1 Dimension (L ×W × H): × × CM Gross weight: Net weight:					
No.	Name	Specification and marks	Q'ty	Remark	
1	Machine		1 piece		
2	Drill check with lever	1-13: GB6087	1 piece		
3	Drill check adaptor		1 piece		
4	Tool shank adaptor	3-2: JB3477	1 piece		
		3-1: JB3477	1 piece		
5	Taper wedge for shank	Wedge 1: JB3482	1 piece		
6	Fuse	Ø5×20 3A	2 pieces		
7	Operation manual		1 piece		
	Quality certificate		1 piece		
	Packing list		1 piece		
<div>Inspector of the packing:</div> <div>Date:</div>					

Drill Press

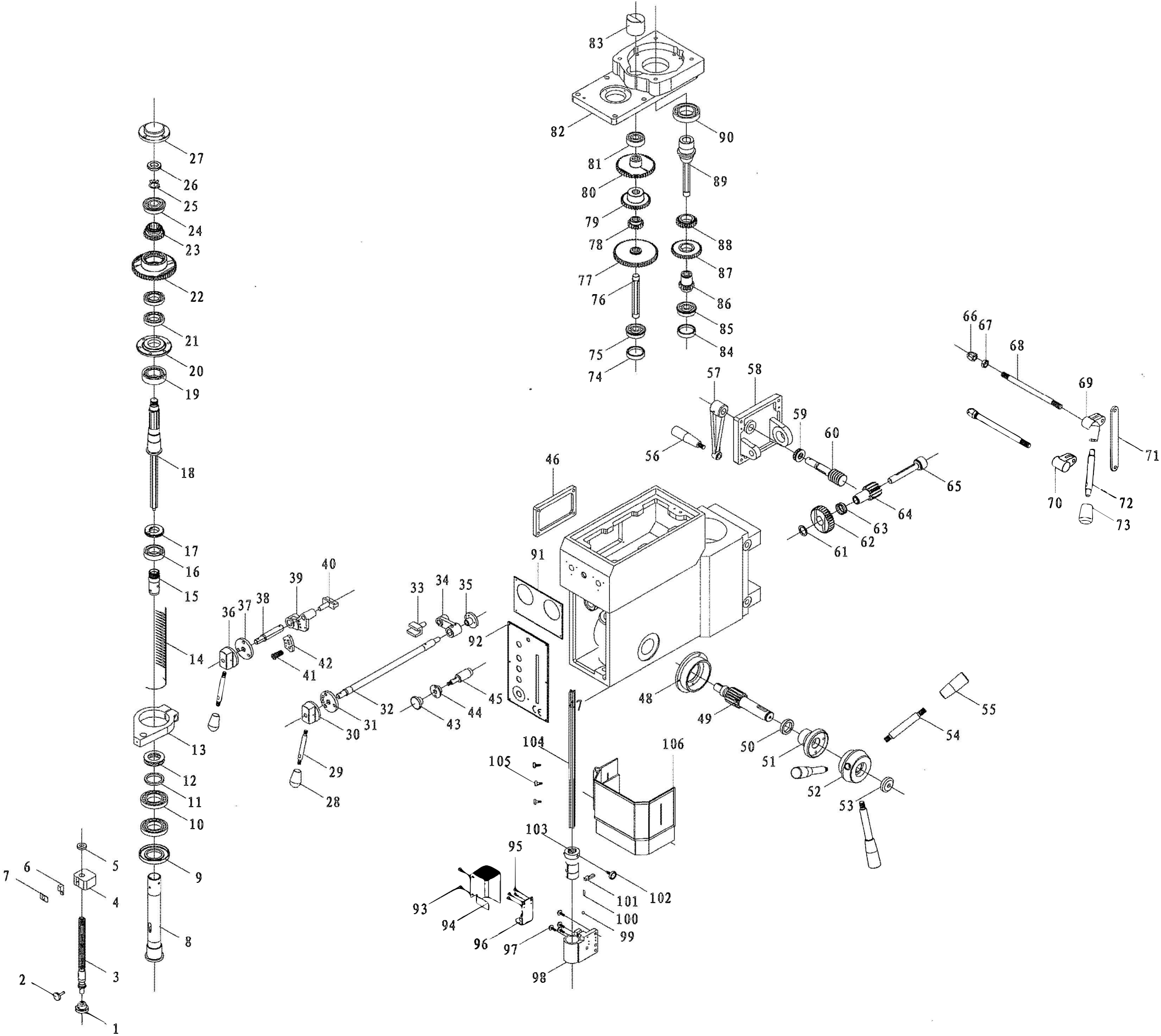
Model: GHD-25

Ancillary page of Operation Manual

Max. Drilling Diameter: 25mm

Series Number:

Parts Breakdown For GHD-25 Drill Press Drawing (1)



Part List for GHD-25 DRILL PRESS

No.	Part no.	Description	Size	Qty.
1	GHD25-1-001	Knurled nob		1
2	GHD25-1-002	Knurled screw bolt		1
3	GHD25-1-003	Scaled screw		1
4	GHD25-1-004	Scaled nut		1
5	GHD25-1-005	Positioning block		1
6	GHD25-1-006	Support for the indicator		1
7	GHD25-1-007	Scaled indicator sheet		1
8	GHD25-1-008	Spindle		1
9	GHD25-1-009	Spindle cover		1
10	GHD25-1-010	Bearing		2
11	GHD25-1-011	Washer		1
12	GHD25-1-012	Bearing		1
13	GHD25-1-013	Scaled clamper		1
14	GHD25-1-014	Spindle quill		1
15	GHD25-1-015	Spline quill		1
16	GHD25-1-016	Bearing		1
17	GHD25-1-017	Nut		1
18	GHD25-1-018	Transmission shaft		1
19	GHD25-1-019	Bearing		1
20	GHD25-1-020	Bearing cover		1
21	GHD25-1-021	Bearing		1
22	GHD25-1-022	Gear(8)		1
23	GHD25-1-023	Gear(9)		1
24	GHD25-1-024	Bearing		1
25	GHD25-1-025	Washer	18	1
26	GHD25-1-026	Nut		1
27	GHD25-1-027	Bearing cover		1
28	GHD25-1-028	Knob		2
29	GHD25-1-029	Lever		2
30	GHD25-1-030	Lever seat		1
31	GHD25-1-031	Positioning Washer		1
32	GHD25-1-032	Fork shaft		1
33	GHD25-1-033	Fork		1
34	GHD25-1-034	Right Lever		1
35	GHD25-1-035	Bushing		1
36	GHD25-1-036	Lever seat		1
37	GHD25-1-037	Positioning washer		1
38	GHD25-1-038	Fork shaft		1
39	GHD25-1-039	Left lever		1
40	GHD25-1-040	Block		1
41	GHD25-1-041	Sleeve		1
42	GHD25-1-042	Positioning block		1
43	GHD25-1-043	Knurled handle		1
44	GHD25-1-044	Bushing		1
45	GHD25-1-045	Positioning shaft		1
46	GHD25-1-046	Cover		1
47	GHD25-1-047	Spindle box		1

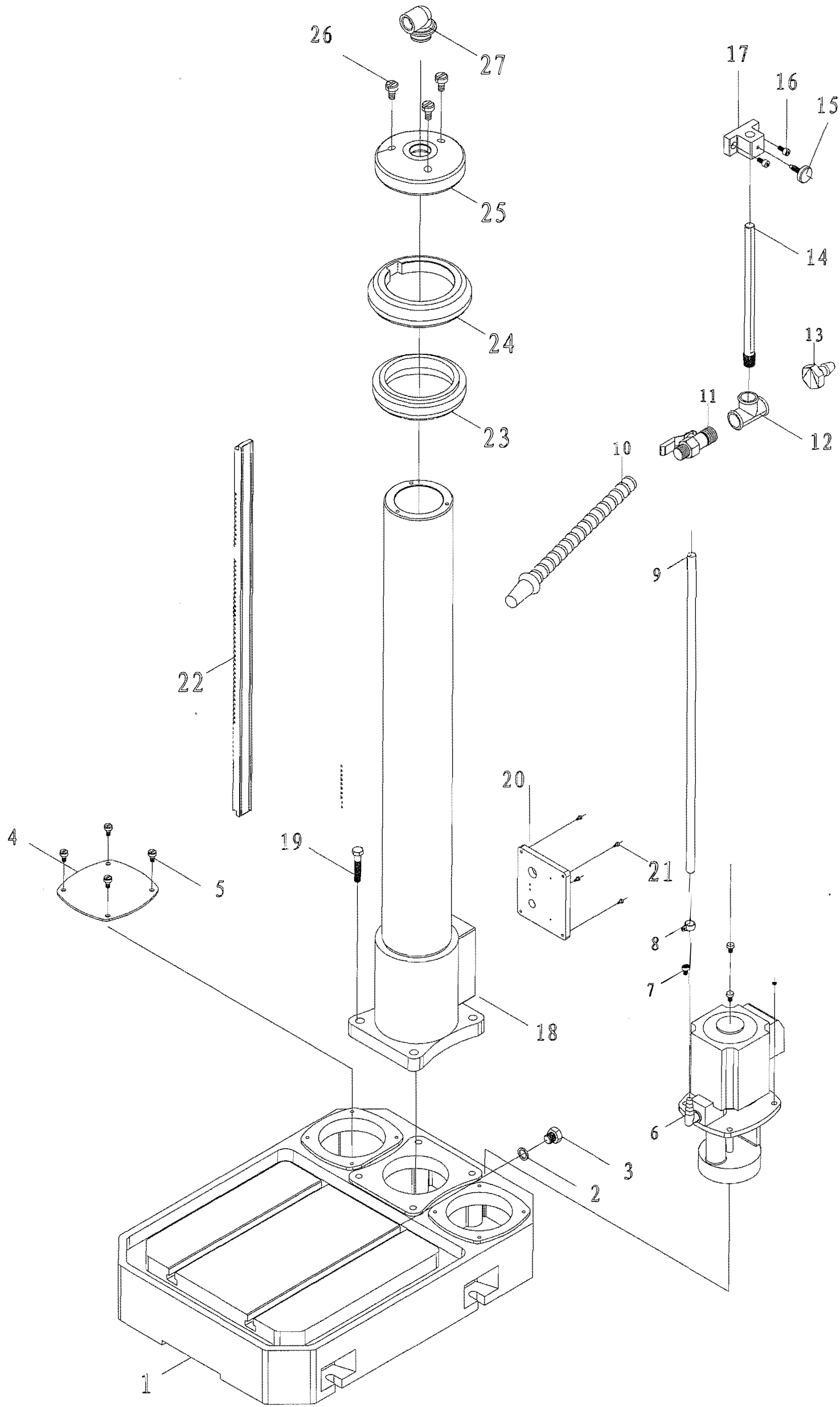
Part List for GHD-25 DRILL PRESS

No.	Part no.	Description	Size	Qty.
48	GHD25-1-048	Spring box		1
49	GHD25-1-049	Shaft		1
50	GHD25-1-050	Washer		1
51	GHD25-1-051	Shaft quill		1
52	GHD25-1-052	Lever seat		1
53	GHD25-1-053	Cover		1
54	GHD25-1-054	Feed lever		3
55	GHD25-1-055	Nob		3
56	GHD25-1-056	Turning lever		1
57	GHD25-1-057	Lifting lever of bracket		1
58	GHD25-1-058	Lifting seat		1
59	GHD25-1-059	Bearing		1
60	GHD25-1-060	Lifting worm		1
61	GHD25-1-061	Washer		1
62	GHD25-1-062	Lifting worm for spindle box		1
63	GHD25-1-063	Quill		1
64	GHD25-1-064	Gear		1
65	GHD25-1-065	Shaft		1
66	GHD25-1-066	Cover type nut	M12	2
67	GHD25-1-067	Hex thin nut	M12	2
68	GHD25-1-068	Double end bolt		2
69	GHD25-1-069	Lever seat		1
70	GHD25-1-070	Nut		1
71	GHD25-1-071	Connecting board		1
72	GHD25-1-072	Hand lever		1
73	GHD25-1-073	Hand sleeve		1
74	GHD25-1-074	Cover		1
75	GHD25-1-075	Bearing		1
76	GHD25-1-076	II shaft		1
77	GHD25-1-077	Gear(5)		1
78	GHD25-1-078	Gear(1)		1
79	GHD25-1-079	Gear(6)		1
80	GHD25-1-080	Gear(7)		1
81	GHD25-1-081	Bearing		1
82	GHD25-1-082	Box cover		1
83	GHD25-1-083	Bearing quill		1
84	GHD25-1-084	Cover		1
85	GHD25-1-085	Bearing		1
86	GHD25-1-086	Gear(2)		1
87	GHD25-1-087	Gear (4)		1
88	GHD25-1-088	Gear(3)		1
89	GHD25-1-089	I Shaft		1
90	GHD25-1-090	Bearing		1
91	GHD25-1-091	Speed label		1
92	GHD25-1-092	Operation label		1
93	GHD25-1-093	Slotted cheese-head screw	M4X30	2
94	GHD25-1-094	Cover		1

Part List for GHD-25 DRILL PRESS

No.	Part no.	Description	Size	Qty.
95	GHD25-1-095	Slotted cheese head screws	M4X8	4
96	GHD25-1-096	Mounting plate		1
97	GHD25-1-097	Slotted cheese head screws	M6X12	4
98	GHD25-1-098	Holder		1
99	GHD25-1-099	Steel ball	6	1
100	GHD25-1-100	Pin		1
101	GHD25-1-101	Lever		1
102	GHD25-1-102	Screw		1
103	GHD25-1-103	Sleeve		1
104	GHD25-1-104	Supporting bar		1
105	GHD25-1-105	Slotted countersunk headscrew	M5X12	2
106	GHD25-1-106	Protection guard		1

Parts Breakdown For GHD-25 Drill Press Drawing (2)



Part List for GHD-25 DRILL PRESS

No.	Part no.	Descirption	Size	Qty.
1	GHD25-2-01	Base		1
2	GHD25-2-02	Retainer ring	16	1
3	GHD25-2-03	Oil plug	M16X1.5	1
4	GHD25-2-04	Cover plate		1
5	GHD25-2-05	Screw	M6X10	4
6	GHD25-2-06	Cooling pump	0.18kW	1
7	GHD25-2-07	Slotted cheese head screws	M6X20	4
8	GHD25-2-08	Hose clamp		1
9	GHD25-2-09	Hose	Ø10X1500	1
10	GHD25-2-10	Cooling pipe	L=400	1
11	GHD25-2-11	Ball valve		1
12	GHD25-2-12	Tee		1
13	GHD25-2-13	Pipe joint		1
14	GHD25-2-14	Adjusting bracket		1
15	GHD25-2-15	Screw		1
16	GHD25-2-16	Hexagon socket head cap screws	M6X14	2
17	GHD25-2-17	Supporting		1
18	GHD25-2-18	Column		1
19	GHD25-2-19	Screw	M12X40	4
20	GHD25-2-20	Electrical box door		1
21	GHD25-2-21	Screw	M4X12	1
22	GHD25-2-22	Rack		1
23	GHD25-2-23	Sleeve with steel ball		1
24	GHD25-2-24	Baffle ring		1
25	GHD25-2-25	Cover		1
26	GHD25-2-26	Screw	M6X16	3
27	GHD25-2-27	Elbow pipe with shaft ring		1

Standard Accessories List for GHD-25 Drill Press

No.	Part no.	Descirption	Size	Qty.
1	GHD25-ACC-01	Key for drill chuck		1
2	GHD25-ACC-02	Drill chuck	1-13mm B16	1
3	GHD25-ACC-03	Taper wedge for shank		1
4	GHD25-ACC-04	Fuse	3A	2
5	GHD25-ACC-05	Adapter	MT3-1	1
6	GHD25-ACC-06	Adapter	MT3-2	1
7	GHD25-ACC-07	Adapter	MT3-B16	1

