Polymak®

MAGNETIC CORE DRILL

PM50MD PRO

INSTRUCTION MANUAL

Read and follow all safety precautions in instruction manual.

General Safety Specification

 Warning!Please reading all safety warning,instructions,diagrams and regulations provided by power tools company. Failure to follow the instructions listed below can lead to electric shock, fire and/or serious injury.

Keep all warnings and instructions for reference.

The term "power tools" in the warning refers to electric (wired) or battery (wireless) power tools.

a) Safety of workplace

1）Keep workplace clean and bright, Disturbance and darkness can lead to accidents.

2）Do not operate electric tools in explosive environments, such as flammable liquids, gases or dust. Sparks from electric tools can ignite dust or gas.Keep away from children and bystanders when operating power tools. Lack of concentration can cause you to lose control of your tools.

b) Electrical Safety

1）The plug of electric tool must match the socket. It must not be modified in any way. The electric tool that needs to be grounded can not use any conversion plug. Unmodified plugs and matched sockets will reduce the risk of electric shock.

2）Avoid human contact with ground surfaces, such as pipes, radiators and refrigerators. If you touch the ground surface, you will increase the risk of electric shock. Electric tools should not be exposed to rain or humidity. Electric tools brought into the water will increase the risk of electric shock.

3）Soft wires shall not be abused. Never use soft wires to carry, pull or pull out electric tools or plugs. Keep the soft wire away from heat sources, oil, sharp edges or moving parts. Damaged or wound soft wires increase the risk of electric shock.

4）When using electric tools outdoors, use extension lines suitable for outdoor use. Wires suitable for outdoor use will reduce the risk of electric shock.

5）If it is unavoidable to operate electric tools in humid environment, the power supply with residual current device (RCD) protection should be used. The use of RCD can reduce the risk of electric shock.

1）Personal safety

2）Keep alert, pay attention to the operation and keep awake when operating electric tools. Don't use electric tools when you feel tired, or when you have drug, alcohol or therapeutic reactions. Instantaneous negligence in the operation of electric tools can lead to serious personal injury.

3）Use personal protective devices. Always wear goggles. Protective devices, such as dust masks, slip-proof shoes, safety hats and hearing protection under appropriate conditions, can reduce personal injury.

4）Prevent accidental starting. Make sure the switch is on and off before connecting the power supply and/or battery pack, picking up or carrying the tool. It is dangerous to put your finger on the switch to carry the tool or switch on when it is energized.

5）Remove all adjusting keys or wrenches before the electric tool is connected. Spanners or keys left on electric tools can cause personal injury.

6）Don't stretch your hands too far. Always pay attention to foothold and body balance, so as to better control the power tools in unexpected circumstances.

7）Dress appropriately. Don't wear loose clothes or accessories. Keep your hair and clothes away from moving parts. Loose clothes, accessories or long hair may be involved in moving parts.

8）If device is provided to connect with debris removal and dust collection

equipment, it should be ensured that the connection is sound and the device is used properly. The use of dust collecting devices can reduce the hazards caused by dust debris.

9）Don't neglect the safety criteria of tools because of the familiarity with them. A careless action can cause serious injury in an instant.

c) Use of electric tools and matters needing attention

1）Do not reluctantly use electric tools, according to the use of appropriate electric tools. Choosing the right electric tools designed according to the rated value will make your work more efficient and safer.

2）If the switch can not turn on or off the power supply, the electric tool can not be used. It is dangerous and must be repaired that electric tools cannot be controlled by switches.

3）Before any adjustment, replacement of accessories or storage of electric tools, the plug must be removed from the power supply and/or the battery pack (such as removable) must be removed. This protective safety measure reduces the risk of accidental starting of electric tools.

4）Store unused electric tools outside the reach of children, and do not allow people who are not familiar with electric tools and do not understand these instructions to operate electric tools. Electric tools are dangerous in the hands of untrained users.

5）Maintain power tools and accessories. Check whether the moving parts are adjusted in place or jammed, check the damage of the parts and other conditions affecting the operation of electric tools. In case of damage, electric tools should be repaired before use. Many accidents are caused by poorly maintained electric tools.

6）Keep cutting tools sharp and clean. Tools with well-maintained sharp cutting edges are not easily jammed and easy to control.

7）Choose electric tools, accessories and tool cutters according to the instructions, taking into account the working conditions and the work to be done. The use of electric tools in operations that do not conform to their use can lead to dangerous situations.

8）Keep the handle and grip surface dry, clean and free from grease. In unexpected circumstances, the slippery handle can not guarantee the safety of grip and the control of tools.

d) Maintain

Electric tools are maintained by professional maintenance personnel using the same spare parts. This will ensure the safety of the electric tools being repaired.

Safety precautions

1）Keep in mind that the rig should not be used continuously for more than 5 hours. If the rig is used for a long time (more than 5 hours), the magnetic seat will be overheated. Do not touch the magnetic seat by hand. When you stop working, turn off the power supply of the magnetic seat immediately and pull out the power plug.

2）In elevated operation, the magnetic seat drill must be fastened with safety belt to prevent sudden power loss of the magnetic seat, causing the magnetic seat drill to fall and injure people.

3）The magnetic drill can only be used on the metal surface of magnet absorber, but not on non-magnet absorber metals, such as aluminum, copper, stainless steel, alloy and so on.

4）Notes for drilling holes in the wall: You can't stand under the machine, the falling of the machine will cause personal injury. Before working, the cutting fluid of the

cooling pot is poured out, and the cutting fluid is filled manually.

5）The thickness of drilling face should not be less than 9 mm. The thickness of the workpiece is less than 9 mm, which will reduce the magnet attraction. The solution is to add an iron plate with a thickness greater than 10 mm at the bottom of the workpiece.

6）Keep the magnetic absorption surface smooth and clean. If there are impurities on the magnetic suction surface, the suction will decrease and the work should be cleaned up.

7）In use, the suction condition is checked after the magnetic seat is adsorbed, and the operation can be carried out only after the adsorption is confirmed to be reliable.

8）The magnetic base should not be placed on the surface with holes. Placing the magnetic base on the surface with holes reduces the magnetic force.

9）Be careful of iron scraps.

10） Use high quality cutting fluid during drilling.

11） When installing or disassembling the drill bit, the power supply must be disconnected. If the drill bit is stuck during drilling, please turn off the power of the motor immediately, but not the power of the magnetic seat. When the drill bit rotates in the steel plate, it is strictly forbidden to turn off the power supply of the magnetic seat, so as to avoid suction between the magnetic seat and the iron plate, causing personal injury.

●Operational instructions:

1. The two flat sides of the bit handle are aligned with the position of the two fixing screws of the bit and inserted into the spindle hole.
2. Tighten the screw and fix the bit.
3. The hand test thimble is flexible and flexible.
4. After replacing the drill bit for the first use, tighten the bit fixing screw again before the second use.

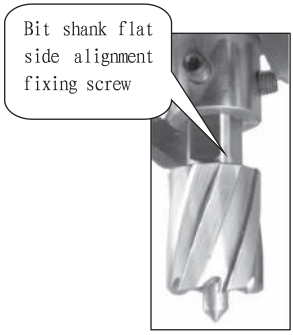


Figure 1

Second、Install twist drills:

1. The two flat sides of the transfer joint

are aligned with the position of the two fixing screws of the drill bit and inserted into the spindle hole.

2. Tighten the drill bit fixing screw, fix and change the joint.

3.Install the drill chuck and tighten it.

4.Open the three jaws of the drill chuck with the key of the drill chuck, insert the twist bit, and then tighten the three jaws.

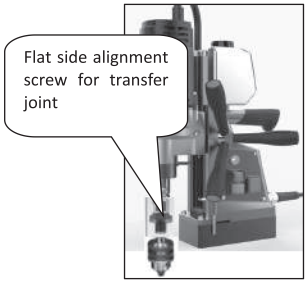


Figure 2

Third、Travel adjust

The height of the fuselage can be adjusted conveniently according to the thickness of the workpiece.

Insert the 8mm inner hexagonal wrench into the inner hexagonal screw and loosen it downward to move the height of the fuselage up and down. After adjusting the required height, tighten the inner hexagonal screw upward with the inner hexagonal wrench.

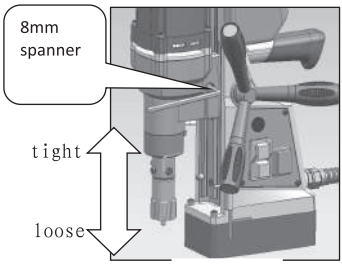


Figure3

Forth, Coolant use

Turn the coolant switch to position (Fig. 4) and turn on the coolant. Push the ejector pin by hand, and the fluid in the drill hole should be released smoothly.

Turn the coolant switch to position (Fig. 5) and turn off the coolant.

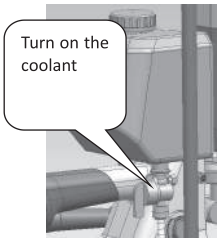


Figure 4

◆High quality cutting fluid should be used during drilling to ensure adequate cooling during drilling. Without cutting fluid, the service life of drill bits will be seriously affected. Using inferior cutting fluid or water cooling will affect the life of machine oil seal and drill bit.

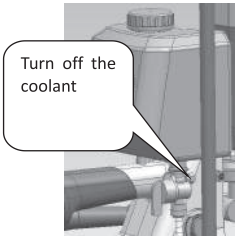


Figure 5

Fifth: Guide rail tightening adjustment

Tightening: First loosen three fixing screw of guide rail with one screwdriver, then loosen three nuts, then rotate the fixing screw clockwise with 2.5 inner hexagonal wrench until proper tightness; then tighten the nut,

then tighten three fixing screw of guide rail with one screwdriver.

Adjust loosening: first release three fixed screws with one-word screwdriver, then release three nuts, then rotate the fastening screw counterclockwise with 2.5 inner hexagonal wrench until proper tightening; then tighten the nut, and then tighten the three fixed screws with one-word screwdriver.

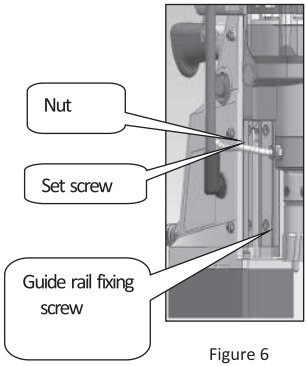


Figure 6

Sixth、Switch operation

Firstly, press the switch button of the magnetic seat to the position of "I", and the switch lamp of the magnet is on, indicating that the magnetic seat has been energized. The manual test machine confirms that the magnetic seat has been adsorbed reliably. Then press the switch button of the motor "I", and the motor runs.

The overload protector trips when the bit is blocked or the current is abnormally overloaded. After clearing the fault, press the overload protection button, and then press a motor switch, you can restart.

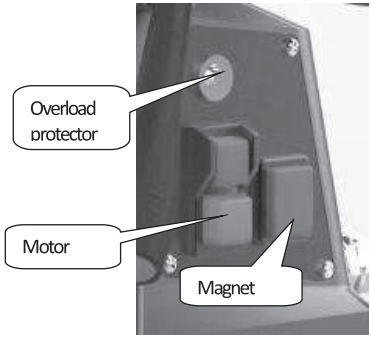


Figure 7

◆When the magnetic drill starts and closes, the operation sequence of the motor switch and the magnetic seat switch button should be strictly observed: when starting, the magnet switch should be turned on first, then the motor switch should be turned on; when closing, the motor switch should be turned off first, and then the magnet switch should be turned off.

Seventh、Replace brush

In operation, brushes should be replaced when large sparks occur or the motor stops turning.

When replacing, remove the back cover screw with cross screwdriver, remove the back cover, pull out the brush button with pointed tongs, pull

out the disc spring, remove the worn brush, install a new brush, and confirm by hand that the brush can slide in the brush rack, clamp the disc spring, insert the brush button, cover the back cover, install the screw, fix the back cover.

Be sure to replace both brushes at the same time, and please specify the replacement of the original factory brushes.

●Maintenance and inspection:

◆Warning!

In order to avoid accidents, please unplug the drill power before any maintenance. Do not reassemble the magnetic drill or make any changes to the circuit.

◆When the magnetic seat drill fails, it should be inspected and repaired by the professional maintenance unit, and the parts can not be disassembled and replaced arbitrarily by itself.

◆In the process of using the magnetic seat drill, the scraps on the guide rail should be removed at any time, and the sliding parts should be kept clean and lubricated to reduce wear and tear.

◆Replace rubber sealing ring in time. When using for a period of time, if it is found that the magnetic seat drill head leaks, it is necessary to check and replace the sealing ring in time.

◆Keep the magnetic base drill clean and dry. When it is not suitable for the time being, dry the machine in time, place it in a dry and clean place. The drill bit should be unloaded. The connecting parts of the drill spindle and the drill bit thread should be coated with grease and protected.

●Quality assurance

◆The magnetic base drills manufactured by company are guaranteed to be manufactured, and their repairs or replacement period meets the requirements of using national laws or standards.

◆Damage caused by natural consumption, overload and wrong operation is not included in the factory guarantee.

◆Tools should not be disassembled. They can only be repaired or replaced if they are returned to factory or distributor.

●Maintenance

When your tool fails, please deliver it to the manufacturer or distributor for repair and specify the use of the original parts. Never disassemble or replace the parts of other tools by yourself.

●Faults and troubleshooting methods:

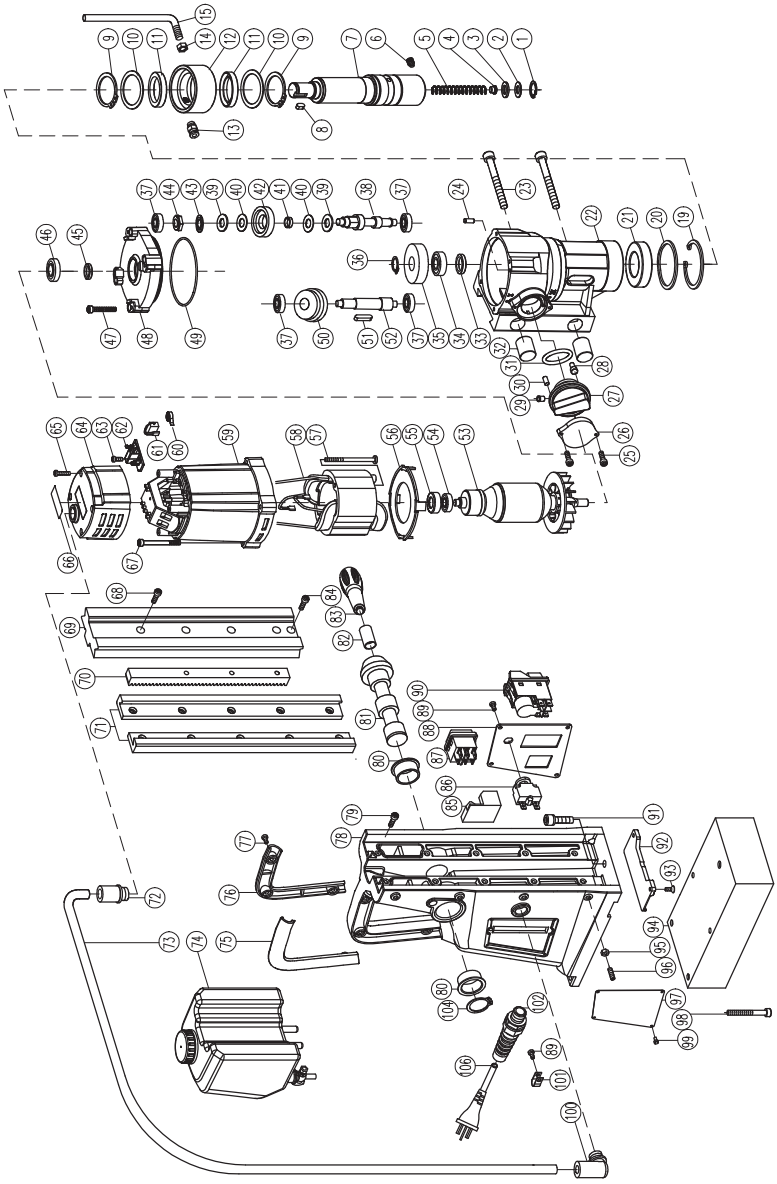
Fault phenomenon	Possible causes	Elimination method
Magnets have no suction	1. Power failure 2. Bad switching 3.Fuse disconnection	1.Check and repair power supply 2.Maintenance switch or switch

		3. Replace with a new fuse
The motor does not work	1. Power failure 2. Bad switching 3. Bad contact or worn out of brush 4.Breaking of stator and rotor coils	1.Check and repair power supply 2.Maintenance switch or switch 3. Replace with a new brush 4.Detection of stator and rotor or replacement of stator and rotor
Motor commutator fire	1.Short Circuit or Break of Stator and Rotor Coil 2.Brush disc spring not pressed well 3. The commutator has worn badly.	1.Repair or replace stator and rotor 2.Appropriate pressure of overhaul coil spring 3. Replacement of Rotor
Slow drilling speed	1. Bit wear 2. Bit breakdown 3.Wear of guide rail, large clearance of guide rail and shaking of nose	1. Repair or replace drill bit 2. Replacement of drill bit 3.Adjustment of guide clearance
Leakage at water seal	Wear or aging of skeleton oil seal	Replacement of skeleton oil seal
Coolant is not flowing smoothly	There is dirt at the outlet of drill bit	Remove the drill bit and clean it up

●Technical specification:

Model	PM50MD PRO	
Voltage	220V~	
Input power	1700W	
Maximum cutter diameter (coring drill)	50mm	
Maximum cutter diameter (twist drill)	16mm	
Maximum cutter depth	50mm	
Guide stroke	170/310mm	
Total lift height	310mm	
weight	19kg	
Standard spare parts	Oil pot 5mm Inner hexagon spanner 2.5mm Inner hexagon spanne 6mm Inner hexagon spanne 8-10mm Open spanner Safety belt Rocker handle Fuse	1pc 1pc 1pc 1pc 1pc 1set 3pcs 1pcs

PM50MD PRO



PM50MD PRO			
No.	parts name	No.	parts name
1	ring/Φ19	55	bearing sleeve/Φ22×Φ25×8.5
2	Flat washer/Φ9.5×Φ18.5×1	56	fan cover
3	Rubber washer/Φ11×Φ19×2	57	screw/ST4.8×65
4	Step pin/Φ7.5×Φ10.4×6.5	58	stator/220V1600WΦ80mm
5	spring/Φ1×Φ10×98×19	59	housing
6	screw/M10×10/12.9	60	coil spring
7	Output shaft	61	carbon brush/7X11X18
8	key/5×12/HRC40-45	62	brush holder assembly
9	ring/Φ35	63	screw/ST3×10
10	Flat washer/Φ35×Φ44×1	64	rear cover
11	oil seal /Φ35×Φ47×8	65	screw/ST4.2×12
12	Water seal	66	brand/39.5×15.5cm
13	PC Threaded through joint/M8	67	screw/M5×35
14	nut/M8	68	screw/M5×16
15	Limited rod/Φ7XM8X137	69	double dovetail plate/269X63.4X19.5
19	ring/Φ55	70	rack/190X15X15/45
20	big washer/Φ54.9×Φ35×0.35	71	Fixed guide rail/268X27X15.5
21	bearing/6006RS/GRSC	72	bellows joint/M16×1.5
22	gearbox	73	Plastic corrugated pipe/Φ10×Φ13×600
23	bolt/M8×75/12.9	74	oil pot
24	pin/Φ4X10	75	righ handle
25	screw/M4X10	76	left handle
26	knob pressing plate	77	screw/ST4.2×20
27	button	78	aluminum frame
28	deflector rod/Φ6.5X12.7	79	screw/M5×12
29	Pulling beads/D5X6	80	Plastic shaft sleeve/Φ34.5×Φ29×Φ25×15
30	knob limited pin/Φ3X5.7	81	Joystick gear shaft/Φ37.6X121.5/14
31	O-ring/Φ21XΦ3	82	Handle extension sleeve/Φ16×Φ10×39
32	Clamping block/Φ20×23.5	83	Joystick handle assembly
33	rubber seal/FB20X32X6	84	screwM5×20
34	bearing/6003-2RS	85	rectifier bridge/TN65-1
35	#6 gear/Φ17XΦ49.2X12.5/	86	circuit overload protector 8A
36	ring/Φ17	87	magnetic switchMC1-35/KND2-12/2 12(10)A
37	bearing/608-2Z/GRSC	88	switch board
38	#3 gear shaft/Φ18.4X85.5/16+11	89	screw/M4×10
39	pressing ring	90	motor switch/JB03-12/2-2 12A 250V5E4
40	friction plate	91	screw/M8×25/8.8
41	cupper sleeve	92	cover
42	#2 gear/Φ17XΦ37.2X9.2/34	93	screw/M4×10
43	Belleville spring	94	electromagnet/13500N
44	nut	95	nut M5
45	Rubber washer/Φ11XΦ19X2	96	screw/M5×20 8.8
46	bearing/6001/NSK	97	label
47	screw/M5×35	98	screw/M6×50
48	middle cover	99	rivet/Φ2.15X5.6
49	O-ring/Φ86XΦ2	100	Corrugated pipe joint/M16×1.5
50	#4 gear/Φ14XΦ43X18.6/37+42	101	pressing plate
51	key/5X28	102	cable sheath assembly
52	#5 gear shaft/Φ16.3X84/10	104	ringΦ25
53	armature/220V1700WΦ48.2mm	106	cable
54	bearing/608Z-RS/GRSC-Z3		

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