JEPSON POWER® GERMANY
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Magnetic Drilling Machine

MAGPRO KOMPAKT II

OPERATOR`S MANUAL

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	List of Contents with Magnetic Drill Unit	Check List
1	Operator‘s Manual	YES/NO
2	Coolant Bottle	YES/NO
3	Pilot Pin for 25 mm cutters	YES/NO
4	Pilot Pin for 50 mm cutters	YES/NO
5	5 mm Hexagon Key	YES/NO
6	Drill drift	YES/NO

MOTOR
MAGNET

MAGPRO KOMPAKT II

[1] SPECIFICATIONS OF MAGNETIC DRILLING MACHINE

Maximum hole cutting capacity in .2/.3C steel = 40mm dia. x 30mm depth.

Motor Unit	
Voltages	220/240V, 50Hz
Normal full load output	1,150 W
Magnet Size`	160 x 80 x 42 mm
Magnet Force at 20°C with 20mm minimum plate thick-ness	420kgf at drilling point
Overall Dimensions	
Height - maximum extended	–
Height - minimum	180
Width (including Hand wheel)	110
Length Overall (including Guard)	300
Stroke	35
RPM (No LOAD)	650
Net Weight	10 kg
Maximum hand/arm vibration magnitude (measured at handle during operation in accordance with ISO5349, using a 22 mm cutter through 13 mm MS plate)	0.82 m/s^2
Average noise level during cutting at operators ear position.	90dB(A)

READ BEFORE USING THE MACHINE

[2] SAFETY PROCEDURES

- When using electrical tools, basic safety precautions should always be followed to reduce the risk of electric shock, fire, and personal injury.
- **DO NOT** use in wet or damp conditions. Failure to do so may result in personal injury.
- **DO NOT** use in the presence of flammable liquids or gases. Failure to do so may result in personal injury.
- **ALWAYS SECURE THE MACHINE WITH THE SAFETY CHAIN WHEN WORKING VERTICALLY OR OVERHEAD BEFORE STARTING TO OPERATE.**
- Always wear approved eye and ear protection when the equipment is in operation. Failure to do so may result in personal injury.
- Disconnect from the power source when changing cutters or working on the machine.
- When changing cutters, or removing swarf, ALWAYS wear approved gloves.
- **ALWAYS ENSURE CUTTER RETAINING SCREWS ARE SECURE** – they sometimes vibrate loose when the machine is in continuous use.
- Regularly clear the work area and machine of swarf and dirt, paying particular attention to the underside of the magnet base.

- With a gloved hand, and after switching off, remove any swarf which might have gathered around the cutter and arbor before proceeding with the next hole.

- Before operating the machine, always remove tie, rings, watches and any loose adornments which might entangle with the rotating machinery.

- Should the cutter become ‚fast' in the workpiece, stop the motor immediately to prevent personal injury. Disconnect from the power source and turn arbor to and fro. **DO NOT ATTEMPT TO FREE THE CUTTER BY SWITCHING THE MOTOR ON AND OFF.**

- If the machine is accidentally dropped, always thoroughly examine the machine for signs of damage and check that it functions correctly before trying to drill a hole.

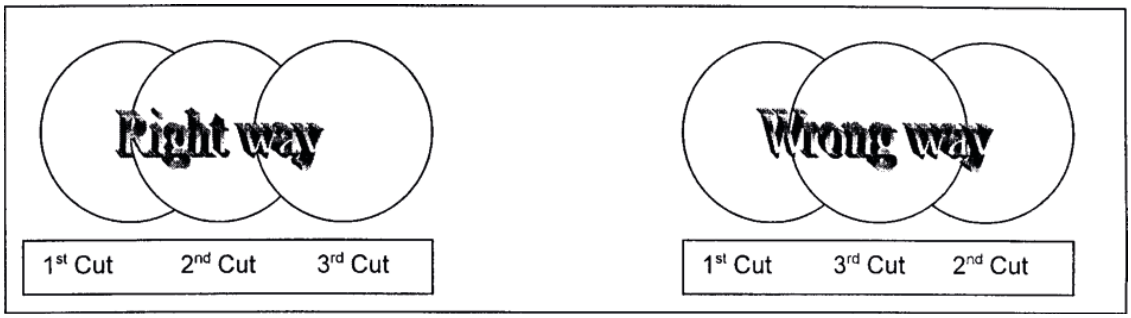
- Regularly inspect the machine and check that nuts and screws are tight.

- Always ensure when using the machine in an inverted position that only the minimum amount of coolant is used and that care is taken to ensure that coolant does not drip on to the motor unit.

- On completion of the cut, a slug will be ejected. **DO NOT** operate the machine if the ejected slug may cause injury.

[3] OPERATING INSTRUCTIONS

- Keep the inside of the cutter clear of swarf. It restricts the operating depth of the cutter.
- Ensure that the coolant bottle contains sufficient cutting oil to complete the required operating duration. Refill as required.
- Occasionally depress the pilot to ensure cutting fluid is being correctly metered.
- To start the machine, first switch on the magnet. And then start the motor by depressing the GREEN start button.
- Apply light pressure when commencing to cut a hole until the cutter is introduced into the work surface. Excessive pressure is undesirable, it does not increase the speed of penetration.
- Always ensure that the slug has been ejected from the previous hole before commencing to cut the next.



(Right) (Wrong)

- Always cut overlapping holes as illustrated above –do not use excessive pressure and ensure cutting fluid is reaching teeth of the cutter.

- If the slug sticks in the cutter, move the machine to a flat surface, switch on the magnet and gently bring the cutter down to make contact with the surface. This will usually straighten a cocked slug and allow it to eject normally.

- Cutter breakage is usually caused by insecure anchorage and a loosely fitting slide. (Refer to routine maintenance instructions).

[4] EXTENSION CABLE SELECTION

The machines are factory fitted with a 2 metre length of cable having three conductors 1.5 mm^2 LIVE, NEUTRAL and EARTH.

If it becomes necessary to fit an extension cable from the power source, care must be taken in using a cable of adequate capacity. Failure to do so will result in a loss of traction by the magnet and a reduction of power from the motor.

Assuming a normal AC supply of the correct voltage, it is recommended that the following extension lengths shall not be exceeded:

For 110v supply: 3.5 metres of 3 core x 1.5 mm^2

For 230v supply: 26 metres of 3 core x 1.5 mm^2 or
17 metres of 3 core x 1.0 mm^2

ALWAYS DISCONNECT THE MACHINE FROM THE POWER SOURCE WHEN CHANGING CUTTERS.

[5] MOUNTING OF CUTTERS

The machine has normal weldon shank, 3/4".
The following procedure is to be used when mounting cutters.

- Take appropriate pilot and place through hole in shank of cutter.
- Insert shank of cutter into 3/4" dia. bore of arbor, ensuring alignment of two drive flats with socket screws.
- Tighten both screws using hexagon key.

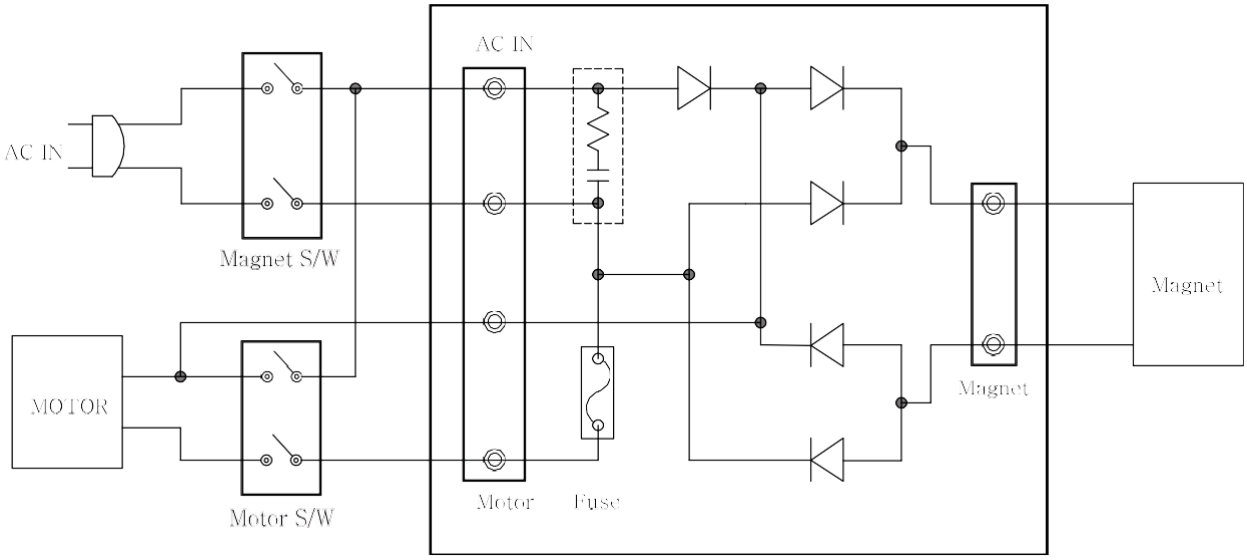
[6] REMEDIES FOR HOLE MAKING PROBLEMS

Problem	Cause	Remedy
1) Magnetic base won't hold effectively	Material being cut may be too thin for efficient holding of magnet.	Attach an additional piece of metal under work-piece where magnet will be located, or mechanically clamp magnetic base to work-piece.
	Swarf or dirt under magnet.	Clean magnet.
	Irregularity on magnet face or work-piece.	Use extreme care, file only imperfections flush to surface.
	Insufficient current going to magnet during drilling cycle.	Confirm power supply and output from control unit.
2) Cutter skips out of centre-punch mark at initiation of cut.	Magnetic base is not holding effectively.	See causes and remedies above.
	Too much feed pressure at start of cut.	Light pressure until a groove is cut. The groove then serves as a stabilizer.
	Cutter is worn, chipped or incorrectly sharpened.	Replace or re-sharpen. Sharpen-ing service is available.
	Poor centre-punch mark; weak pilot spring; pilot not centred in centre-punch mark.	Improve centre-punch and/or replace worn parts.
	Worn or bent pilot, worn pilot hole.	Replace parts.

Problem	Cause	Remedy
3) Excessive drilling pressure required.	Incorrectly re-sharpened, worn or chipped cutter.	Re-sharpen or replace.
	Coming down on swarf lying on surface of work-piece.	Clean work-piece. Take care not to start a cut on swarf.
	Gibs out of adjustment or lack of lubrication.	Lubricate gib and/or adjust grub screws.
	Swarf accumulated (packed) inside cutter.	Clear cutter.
	Incorrect speed selection.	Select appropriate speed.
4) Excessive cutter breakage	Steel swarf or dirt under cutter.	Remove cutter, clean part thoroughly and replace.
	Incorrectly re-sharpened or worn cutter.	Always have a new cutter on hand to refer to for correct tooth geometry, together with instruction sheet.
	Cutter skipping.	See causes and remedies (2).
	Slide-ways need adjustment.	Tighten slide-way.
	Cutter not attached tightly to arbor.	Retighten.

	Insufficient use of cutting oil or unsuitable type of oil.	Fill arbor with an oil of light viscosity and check to be sure oil is being metered into cut-ter when pilot is depressed. If not, check pilot groove and arbor inter-nally for dirt or apply oil ex-ternally. Even a small amount of oil is very effective.
	Incorrect speed selection.	Select appropriate speed.
5) Excessive cutter wear.	Incorrectly re-sharpened cutter.	Refer to instructions and a new cutter for proper tooth geometry.
	Insufficient or spasmodic cutting pressure.	Use sufficient steady pressure to slow the drill down. This will result in optimum cutting speed and chip load.

[7] CIRCUIT



WARNING - THIS APPLIANCE MUST BE EARTHED!

Insulation Resistance Test

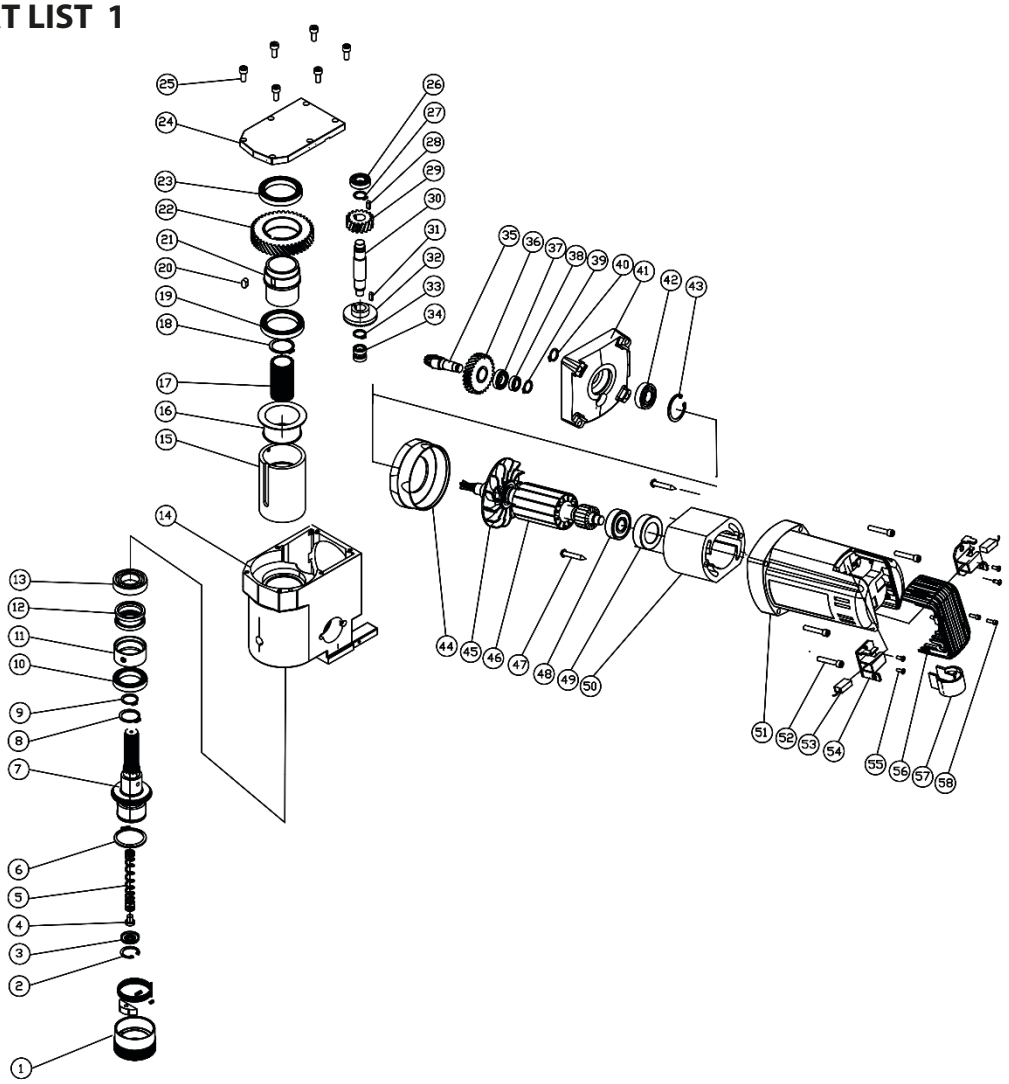
With the magnet switch in the ON position, apply a voltage of 1.5kv between the live connection on the mains plug and the frame of the machine for a duration of 7 seconds. The reading obtained should not fall below infinity. Should a fault be indicated, it **must be found and rectified.**

[8] SLIDE & GIB ADJUSTMENT -- Patented

1. New Sliding System: Machines have very exotic and stable sliding system. It consists of 3 main parts ; Slide Board, Precisely Ground Bar & Adjustment Gib. Basically it has very wear-resistent structure and keeps first condition as time goes.
   It helps to cut comparatively bigger holes easier than normal dove-tail system without any bad movement in sliding area.

2. Gib Adjustment: Adjust the Gib using side bolts loose or tight, if necessary.

[9] PART LIST 1

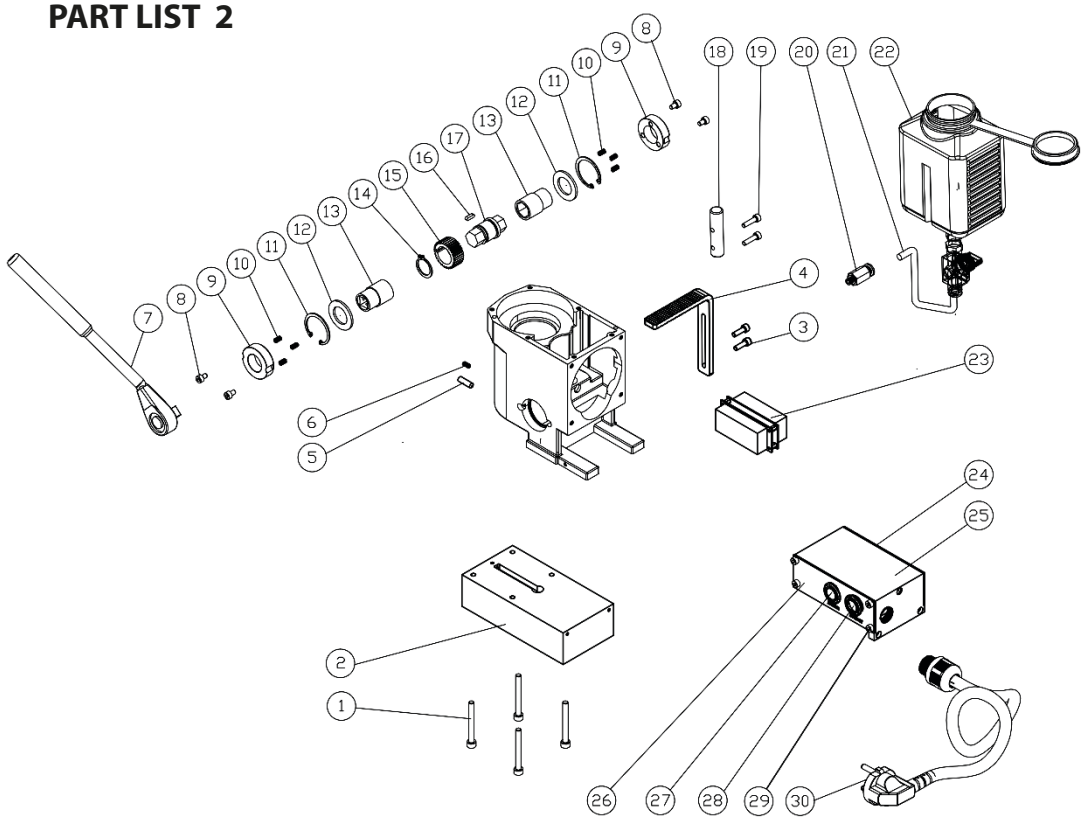


MAGPRO KOMPAKT II _ PART I			
NO	**PART NO.**	**PART NAME**	**Q`ty**
1	A01	Automatic Chuck	1
2	A02	Snap Ring #19	1
3	A03	Rubber Washer	1
4	A04	Spring Guide	1
5	A05	Coolant Spring	1
6	A06	Snap Ring #32	1
7	A07	Main Spindle	1
8	A08	Snap Ring #20	1

NO	PART NO.	PART NAME	Q`ty
9	A09	Snap Ring #16	1
10	A10	Bearing #6805 ZZ	1
11	A11	Retainer Housing	1
12	A12	Retainer	2
13	A13	Bearing #6904ZZ	1
14	A14	Gear Box	1
15	A15	Rack Spindle	1
16	A16	Rack Spindle Inside Cover	1
17	A17	Slip Spindle	1
18	A18	Snap Ring #24	1
19	A19	Bearing #6707	1
20	A20	Key	1
21	A21	Slip Spindle Housing	1
22	A22	Main Gear 42T	1
23	A23	Bearing #6707	1
24	A24	Top Cover	1
25	A25	Hex Socket Head Screw M4x 12L	6
26	A26	Bearing #6900 ZZ	1
27	A27	Snap Ring #12	1
28	A28	Key	1
29	A29	2nd Gear 17T	1
30	A30	2nd Pinion	1
31	A31	Key	1
32	A32	Bevel Gear 27T	1
33	A33	Snap Ring #12	1
34	A34	Bearing #MR148 ZZ	2
35	A35	Bevel Gear Thread 9T	1
36	A36	First Gear 28T	1
37	A37	Bearing #6800 ZZ	1
38	A38	Bearing #MR148 ZZ	2
39	A39	Snap Ring #8	1
40	A40	Snap Ring #12	1
41	A41	Inner Cover	1
42	A42	Bearing #6001ZZ	1
43	A43	Snap Ring #28	1

NO	PART NO.	PART NAME	Q`ty
44	A44	Fan Guide	1
45	A45	Fan	1
46	A46	Armature Ass'y	1
47	A47	Truss Head Screw M5 x 70L	2
48	A48	Ball Bearing #KBC 6000ZZ	1
49	A49	Rubber Bushing	1
50	A50	Stator	1
51	A51	Motor Housing	1
52	A52	Hex Socket Head Screw M5x 60L	4
53	A53	Carbon Brush	2
54	A54	Carbon Brush Holder	2
55	A55	Pan Head Screw M3 x 14L	4
56	A56	Housing Cap	1
57	A57	Cable Cover	1
58	A58	Hex Socket Head Screw M3x 10L	2

PART LIST 2



MAGPRO KOMPAKT II _ PART II			
NO	**PART NO.**	**PART NAME**	**Q`ty**
1	B01	Hex Wrench Bolt M5 x 45L	4
2	B02	Electromagnet Ass'y	1
3	B03	Hex Wrench Bolt M4 x 6L	2
4	B04	Handle	1
5	B05	Key	1
6	B06	Hex Wrench Bolt M5 x 8L	1
7	B07	Rachet Handle 3/8"	1
8	B08	Hex Wrench Bolt M4 x 6L	4
9	B09	Handle Cap	2
10	B10	Feed Handle Spring	6

NO	PART NO.	PART NAME	Q`ty
11	B11	Snap Ring #30	2
12	B12	Handle Bushing	2
13	B13	Rachet Socket 3/8"	2
14	B14	Snap Ring #18	2
15	B15	Rack Pinion Gear	1
16	B16	Key	1
17	B17	Feed Handle Shaft	1
18	B18	Coolant Tank Bracket	1
19	B19	Hex Wrench Bolt M4 x 16L	2
20	B20	Hose Nipple	1
21	B21	Hose	1
22	B22	Coolant Tank	1
23	B23	PCB Controller	1
24	B24	Warning Panel	1
25	B25	Control Box	1
26	B26	Control Panel	1
27	B27	Motor Switch	1
28	B28	Electromagnet Switch	1
29	B29	Round Head Screw M4 x 6L	10
30	B30	Power Cable	1