HOLEMAKER PRO 40

Holemaker Portable Magnetic Drilling Machine

OPERATOR'S MANUAL

⚠ WARNING!

BEFORE USE, ENSURE EVERYONE USING THIS MACHINE READS AND UNDERSTANDS ALL SAFETY AND OPERATING INSTRUCTIONS IN THIS MANUAL.

EYE PROTECTION REQUIRED

HEARING PROTECTION REQUIRED

NEVER PLACE FINGERS NEAR CUTTING AREA OR MACHINE ARBOR

LINE VOLTAGE PRESENT

BEWARE OF ROTATING MACHINE PARTS

Serial # _____ Date of Purchase _____

Ver: 1.1 30/07/2015

Holemaker PRO 40 Portable Magnetic Drilling Machine

Congratulations on the purchase of your Holemaker Pro 40 portable magnetic drilling machine.
Holemaker drilling machines are designed to deliver fast, efficient hole drilling performance in portable applications.

TABLE OF CONTENTS

LIMITED WARRANTY

Industrial Tool & Machinery Sales (hereinafter refered to as ITMS) will, within twelve (12) months from the original date of purchase, repair or replace any goods found to be defective in materials or workmanship. This warranty is void if the item has been damaged by accident, neglect, improper service or other causes not arising out of defects in materials or workmanship.

This warranty does not apply to machines and/or components which have been altered, changed, or modified in any way, or subjected to overloading or use beyond recommended capacities and specifications. Worn componentry due to normal wear and tear is not a warranty claim.

Goods returned defective shall be returned prepaid freight to ITMS or agreed repair agent, which shall be the buyer's sole and exclusive remedy for defective goods. ITMS accepts no additional liability pursuant to this guarantee for the costs of travelling or transportation of the product or parts to and from ITMS or the service agent or dealer, such costs are not included in this warranty.

Our goods come with guarantees which cannot be excluded under the Australian Consumer Law. You are entitled to replacement or refund for a major failure and to compensation for other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

THE MANUFACTURER RESERVES THE RIGHT TO MAKE
IMPROVEMENTS AND MODIFICATIONS TO DESIGN WITHOUT PRIOR NOTICE.

Imported And Distributed By

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IMPORTANT SAFETY INSTRUCTIONS

⚠ WARNING!

WHEN USING ELECTRICAL TOOLS, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE RISK OF FIRE, ELECTRIC SHOCK AND PERSONAL INJURY.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE REFERENCE.

1. Keep Work Area Clean
   - Cluttered areas and benches increase risk of injuries.

2. Consider Work Area Environment
   - Do not expose power tools to rain.
   - Do not use power tools in damp or wet locations.
   - Keep work area well lit.
   - Do not use tool in presence of flammable liquids or gases.

3. Guard Against Electric Shock
   - Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges and refrigerator enclosures.

4. Keep Children Away
   - Do not let visitors contact tool or extension cord.
   - All visitors should be kept away from work area.

5. Store Idle Tools
   - When not in use, tools should be stored in a dry, high and locked-up place, out of reach of children.

6. Do Not Force Tool
   - It will do the job better and safer at the rate for which it was intended.

7. Use Right Tool
   - Do not force a small tool or attachment to do the job of a heavy-duty tool.
   - Do not use tool for unintended purpose. For example: Do not use a circular saw for cutting tree limbs or logs.

8. Dress Properly
   - Do not wear loose clothing or jewellery. They can be caught in moving parts.
   - Rubber gloves and non-skid footwear are recommended when working outdoors.
   - Wear protective hair covering to contain long hair.
   - Always wear safety glasses
   - Use face or dust mask if necessary
   - Use hearing protection

9. Do Not Abuse Electrical Cord
   - Never carry tool by cord or yank it to disconnect from receptacle.
   - Keep cord away from heat, oil and sharp edges.

10. Secure Work
    - Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.

11. Do Not Overreach
    - Keep proper footing and balance at all times.

IMPORTANT SAFETY INSTRUCTIONS

12. Maintain Tools With Care
    - Keep tools sharp and clean for better and safer performance.
    - Follow instructions for lubricating and changing accessories.
    - Inspect tool cords periodically and if damaged, have repaired by authorized service facility.
    - Inspect extension cords periodically and replace if damaged.
    - Keep handles dry, clean, and free from oil and grease.

13. Disconnect Tools
    - Unplug when not in use, before servicing, and when changing accessories, such as cutters.

14. Remove Adjusting Keys And Wrenches
    - Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

15. Avoid Unintentional Starting
    - Do not carry a plugged-in tool. Always disconnect from power source before moving.
    - Be sure switches are off before connecting to a power source.

16. Outdoor Use Of Extension Cords
    - When tool is used outdoors, use only extension cords intended for use outdoors and so marked.

17. Stay Alert
    - Watch what you are doing. Use common sense. Do not operate tool when you are tired.
    - Do not use when taking medications that may cause drowsiness.

18. Check Damaged Parts
    - Before further use of the tool, any damaged parts should be repaired and performance verified prior to operation.
    - Check alignment of moving parts, binding of parts, breakage of parts, mounting, and any other conditions that may affect its operation. Any part that is damaged should be properly repaired or replaced by an authorized service center.
    - Do not use this tool if switches do not turn it on and off. Have defective switches replaced by authorized service center.

19. Use Cutter Guard
    - Always use cutter guard supplied with machine to reduce the risk of injury. (refer fig. 1)

Fig. 1

POWER SUPPLY REQUIREMENTS

Prior to use check condition of the power cord, which has to be free of any cuts, or similar damages.

Attention!: This unit has a class one of insulation and
absolutely requires the power source
to be equipped with a protection circuit.

Power source should be protected with the difference-current circuit cut-out and protected with a 10A fuse - for 230V. At building sites, power should be supplied from a separation transformer such as Type AVM, with minimum power of 2000 VA and with second class protection.

GROUNDING INSTRUCTIONS

⚠ WARNING!

Improperly connecting the grounding wire can result in the risk of electrical shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with tool. Never remove the grounding prong from the plug. If the cord or plug is damaged, have it repaired before using. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician. The Holemaker must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look similar to those in Figure A. If in doubt of proper grounding, call a qualified electrician.

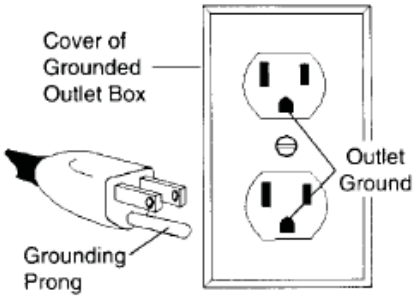


Fig. A

⚠ WARNING!

DO NOT USE HOLEMAKER DRILLING MACHINES ON SURFACES OR MATERIALS BEING WELDED. DOING SO CAN RESULT IN DAMAGE TO THE DRILLING MACHINE.

EXTENSION CORDS

Use only 3-wire extension cords that have 3-prong grounding-type plugs and 3-pole receptacles that accept the tool's plug. Replace or repair damaged cords. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. See table for the correct size to use depending on cord length and nameplate amperage rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

DRIP LOOP: To help prevent cutting fluids from traveling along power cord and contacting power source, tie a drip loop in power cord as shown in Figure C.

MINIMUM GAUGE FOR EXTENSION CORDS				
VOLTS	TOTAL LENGTH OF CORD IN METRES			
240V	0 - 15	15 - 30	30 - 60	60 - 90
AMPERAGE				
0-6	18	16	16	14
6-10	18	16	14	12
10-12	16	16	14	12
12-16	14	12	NOT RECOMMENDED	
RECOMMENDED WIRE GAUGE				

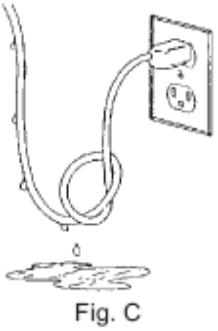
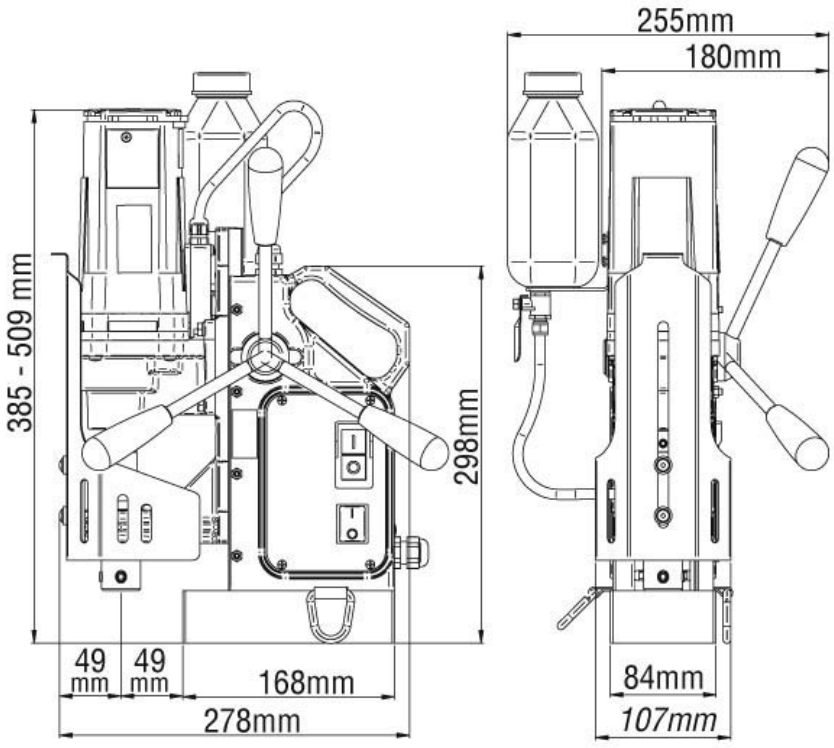


Fig. C

TECHNICAL DATA

Supply voltage: …… 220-240V/ 50-60 Hz.
Motor power …….. 1020 W
Total power …….. 1100 W
Machine speeds (under load): ……..... 440rpm
Insulation class …….. First
Tool holder …… ($^3/_4$" Weldon) 19.05 mm
Capacities: max. holemaker cutter diameter ……..... 40mm
max. drilling depth with standard arbor ……..... 52mm
Magnet Dead Lift (on 25 mm plate) ……..... 10650 N

Dimensions:
electromagnetic base …..... 84x168x41.5 mm
Length of the power cord ……..... 3 m
Total weight ……..…..... 12.5 kg
Noise level ……..…..... 85 dB



SPECIAL INSTRUCTIONS

1. Read and follow operator's manual thoroughly.
2. DO NOT touch rotating cutter or parts.
3. Always stop machine completely and unplug from power source before changing cutters, clearing swarf, refilling lubrication or performing adjustments.
4. Never wear loose clothing or gloves when working near cutting area or machine arbor.
5. Always wear eye protection. Any tool can shatter.
6. Always use safety chain or strap provided with machine.
7. Always use proper tooling. Keep cutters securely fastened.
8. DO NOT use dull or broken cutters.
9. Beware of ejected slugs at end of cut. They become HOT during the cut.
10. Keep all safety features functioning and working properly.
11. Keep bottom of magnet burr free and clear of chips and debris.
12. To reduce the risk of electrical shock, DO NOT remove or alter electrical panels or use machine in damp areas.
13. Use only authorized service centers for repairs.

WHAT YOU SHOULD KNOW BEFORE YOU DRILL

1. Type of material to be drilled, Brinnell or Rockwell hardness, material thickness and position should all be determined to ensure proper selection of cutting tools.
2. Remove any excessive mill scale or rust from surface to be drilled.
3. When drilling thin materials, it is recommended that you place a steel plate under the work piece and Holemaker magnet area to increase magnetic holding force.
4. Material that has been flame cut may become heat treated and therefore difficult to drill. Avoid drilling near such areas whenever possible.
5. Special cutter lubricant is available for using the Holemaker and annular cutters in the horizontal position. Consult you distributor for more information.

⚠ Caution: Do not drill on material where welding is also simultaneously being performed. Drilling machine will be damaged.

⚠ Caution: Powering drilling machine from generator without proper surge protection device between generator and drilling machine may cause damage to the Printed Circuit Board in machine.

⚠ The Holemaker Pro 40 is not designed for use on steel thinner than 3/8" or 10mm, as the magnet's adhesive power would be significantly reduced which can cause machines failure or individuals injury.
The machines built in "Smart Magnet Technology" will detect insufficient magnetic adhesion, and will cause the machines motor on/off button to not engage. Although it is not recommended, this feature can be bypassed by following the attached "Smart Magnet Technology Bypass" instruction leaflet.

MACHINE OPERATION (BEFORE YOU CUT)

Remove all contents from packaging and inspect to ensure no damage was incurred during shipping. Your Holemaker package should include the following:

DESCRIPTION	QTY
HOLEMAKER PRO40 MACHINE	1
METAL CARRY CASE	1
SAFETY CHAIN WITH CLIP	1
HEX WRENCH 2.5mm	1
HEX WRENCH 3mm	1
HEX WRENCH 4mm	1
SPANNER 8mm	1
SPOKE HANDLE WITH KNOBS	3
COOLANT BOTTLE ASSEMBLY	1
OPERATORS MANUAL	1
SMART MAGNET BYPASS	1

⚠ CAUTION!

BE SURE YOUR HOLEMAKER MACHINE IS DISCONNECTED FROM THE POWER SOURCE BEFORE MAKING ADJUSTMENTS

1. Assemble 3 spoke handles to the Holemaker pinion hub. NOTE: Pinion assembly is mounted on the right side of the machine frame. If necessary, it can be reversed to operate from the left side of the frame. Simply remove the screw from the left edge of the pinion. Remove pinion from the right side of the frame and insert it in to the left side of the frame. Replace flat washer and screw (tighten securely).

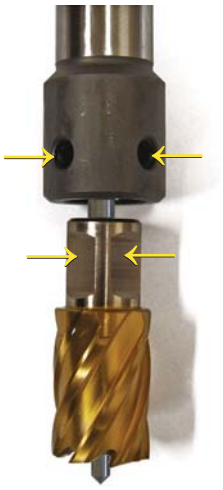
2. To install coolant bottle, use bracket to slide coolant bottle onto the two retaining screws, located on the right side of the drill. Install the hose connector in to the hose fitting on the side of the coolant ring.

3. USING GRUB SCREW ARBOR SYSTEM

(The Holemaker PRO 40 is also available with either a standard grub screw, or a quick grip arbor system)

a. Place the Pilot Pin into the cutter as seen below.

b. Loosen the grub screws with the hex key provided & align the two flat sections of the cutter shank with the grub screws.



c. Insert the cutter shank completely into the arbor. Retighten both grub screws, clamping the flat sections of the shank & locking the cutter into place.

4. USING QUICK GRIB ARBOR SYSTEM

(The Holemaker PRO 40 is also available with either a standard grub screw, or a quick grip arbor system)

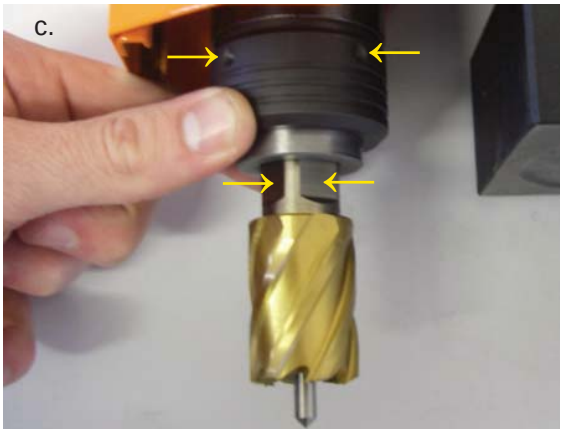
a. Place the Pilot Pin into the cutter as seen below.

b. The Holemaker pro 40 uses a quick release arbor system which accepts standard Holemaker Cutters by locking onto one flat section of the cutter. Alternate brand cutters may not be suitable.

b.

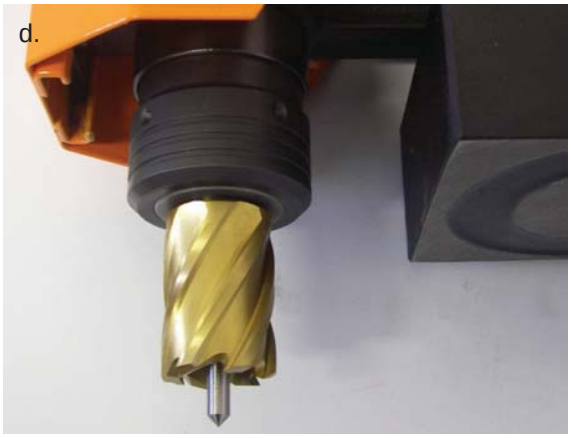
c. Align the two flat sections of the cutter shank with the two indents that are on the arbor collar. While keeping the collar pushed upwards, slide the cutter into the arbor,

c.



d. The annular cutter is now secured into the arbor and ready for use. To remove the cutter from the arbor, repeat this action in reverse.

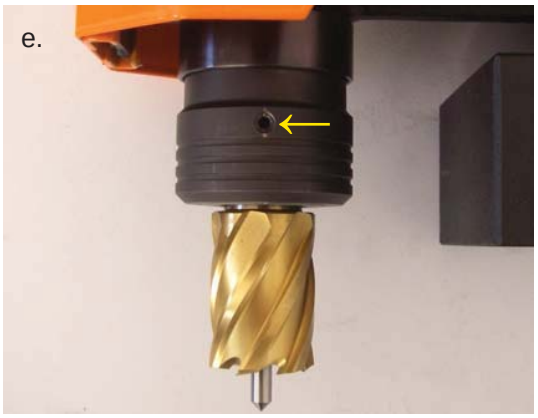
d.



e. DO NOT LOOSEN GRUB SCREW ON ARBOR COLLAR

NOTE: Ensure all setup steps are completed (including the next page) prior to drilling.

e.



5. Fill coolant reservoir with Holemaker Water Soluble Cutting Fluid

MACHINE OPERATION (MAKING THE CUT)

1. Place the Holemaker PRO 40 on the work piece.
2. Attach the safety chain supplied between the machine and the workpiece
3. Lower cutter/drill to surface of material. When using cutter tool holder, coolant flow starts when pilot pin is depressed. Lifting pilot pin off work surface will stop coolant flow.
4. Position the drilling machine with the pilot pin over the center of the hole to be cut.
5. Move the rocker switch located on the panel to the ON position. The switch will illuminate to indicate DC power is going to the magnet.
6. The Holemaker PRO 40 has a “smart” magnet feature fitted. This feature ensures the Holemaker PRO 40 will not operate unless there is sufficient magnetic adhesion available. See “Basic Troubleshooting” for more information. This feature can be bypassed if required. Please contact ITMS or your local dealer for details.
7. Position chip guard toward material being drilled
8. Depress motor ON switch to start drill.
9. To start a cut, apply pressure until the cutter has estabilised an external grove. Then apply steady pressure through the remainder of the cut (Note: Do not peck drill when using annular cutters). The tools are designed to evacuate chips when drilling.

MACHINE OPERATION (AFTER THE CUT)

1. After the cut has finished, the slug should be expelled on the down stroke. If the slug is not expelled after the cut, disconnect the machine from the power source and remove the cutter from the arbor body, then expel the slug. (Caution: The pilot should not be used to do this).
2. After the cut is finished, return motor to the full upright position, depress motor OFF button and wait until motor fully stops. Move magnet switch to the OFF position to release the magnetic base from the material.

INSTRUCTIONS TO CONVERT YOUR HOLEMAKER PRO 40 TO ACCEPT TWIST DRILLS USING OPTIONAL CHUCK & ADAPTOR PART# SA70102

1. Remove arbor, by unscrewing 2 hex screws, which connect the arbor to the motor.

2. Disconnect the arbor from the motor, and pull down through the support casting.
   Also remove the coolant inducer.

3. Push the optional 13mm chuck and adaptor, up through the support casting, and tighten the 2 hex screws onto the flats of the motor spindle.

REGULAR MAINTENANCE

1. The motor slide may become loose and require adjustment after the machine has been in use for the first few weeks. Loosen the 4 locking nuts ; bring the motor slide into the full down position. Using a hex key, equally tighten 4 adjustment screws, working from the center frame position to top and bottom. Proper adjustment would mean the 3-spoke handle controlling the motor slide should stay in whatever position you bring it in to (no drifting down off the slide). When all 4 hex screws have been adjusted, tighten 4 locking nuts to maintain adjustment. This adjustment should be required very infrequently because of the precision of the machine.
2. The motor slides are made of brass; they should be protected from contamination and periodically lubricated with good multi-purpose grease.
3. The motor slides and spring inserts should be inspected and replaced if they have become worn, or damaged in any way.
4. Keep the magnet clean and free of chips, oil or other contaminants.
5. Inspect arbor, sleeve and support bracket for visible wear.
6. The cutting speed should be kept in such a way as not to cause any substantial decrease in motor speed.
7. Non-coolant cutting is not recommended, but if such a case occurs the co-acting parts of arbor should be lubricated from time to time with good multi-purpose grease.
8. Inspect motor brushes and replace after extended periods of machine usage.
9. Replace any worn parts and tighten fasteners that become loose during daily usage.

BASIC TROUBLESHOOTING

1. Magnetic base not holding securely
   - Material is too thin.
   - Surface of material being drilled must be free of chips, debris, rust and mill scale.
   - Does size of cutter exceed machine's rated capacity?
   - Check magnet face for unevenness, nicks and burrs.

2. Drill motor running, arbor and spindle not turning
   - Possible sheared drive train component.

3. Motor slows when drilling
   - Is an extension cord being used? If so, see page 5 for recommended wire gages and cord lengths.
   - Excessive downfeed pressure during drilling cycle will cause motor to slow and overheat.
   - Does cutting tool need to be resharpened?

4. Coolant system not working
   - Coolant system is gravity dependent, machine must be in a upright position to operate properly.
   - Dirt or debris in coolant tank.
   - Consistency of coolant mixture too thick.
   - Is correct pilot pin being used?
   - Vent hole in coolant tank lid blocked.

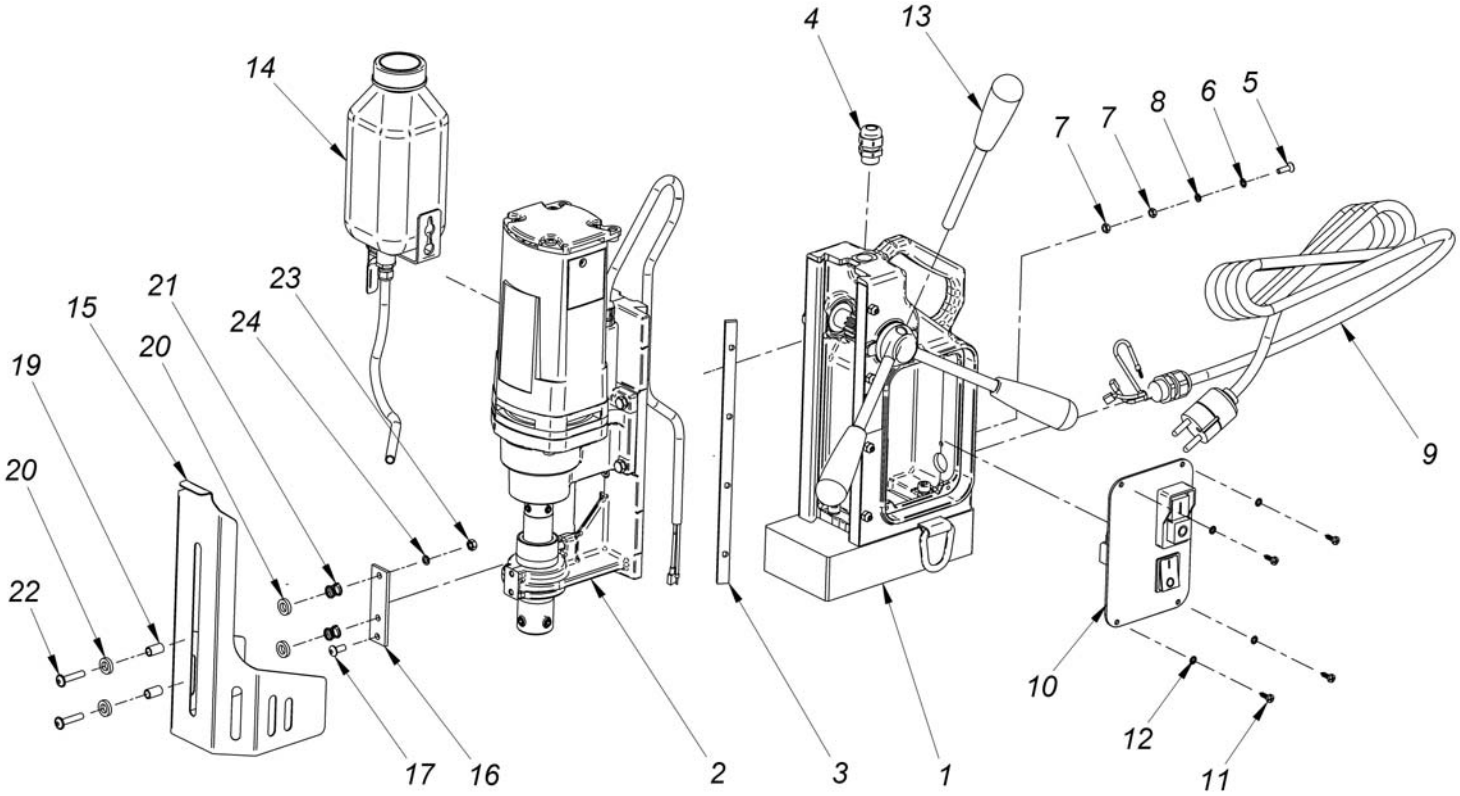
5. Slugs not ejecting from cutter
   - Lack of coolant causing slugs to expand in cutter bore.
   - Is correct pilot pin being used?
   - Possible broken internal arbor parts.

6. Breaking cutters
   - How is coolant being applied? Coolant must be supplied to interior of cutter.
   - Excessive feed pressure being applied when cutter initially contacts work surface.
   - Confirm material hardness.
   - Drilling stacked materials with incorrect cutter.
   - Dull cutters; dull or chipped cutting edges require excessive feed pressure, resulting in breakage.
   - Movement of machine on material - See "1. Magnetic base not holding securely"
   - Inconsistent hardness in material can cause cutter breakage

7. Oversized or rough holes
   - Insufficient coolant.
   - Excessive feed pressure.
   - Dull cutter.

MACHINE BREAKDOWN

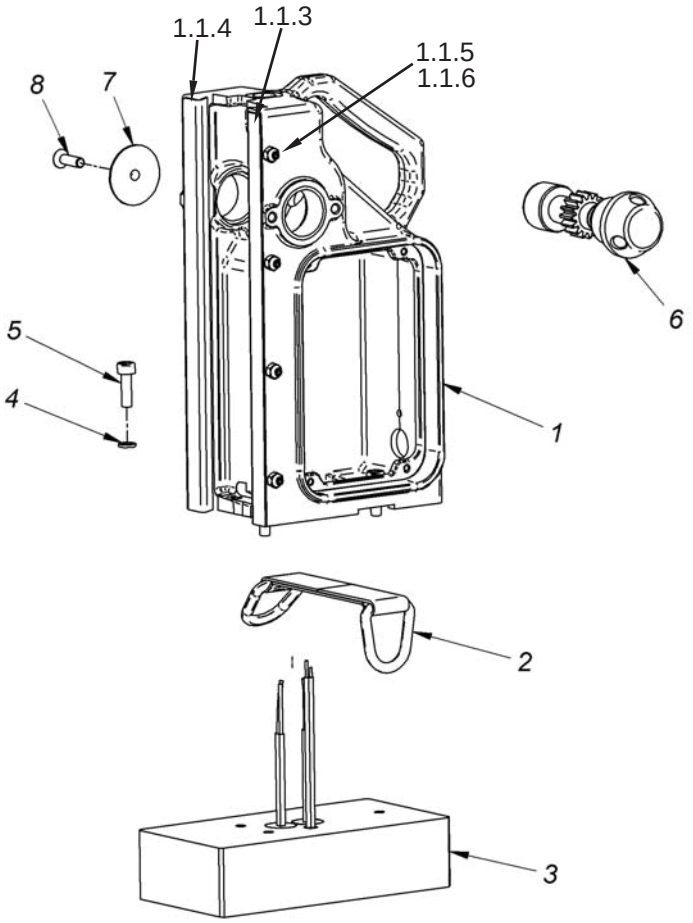
ITEM	PART NUMBER	DESCRIPTION	QTY
1	SEE FRAME ASSEMBLY PG14	FRAME ASSEMBLY,	1
2	SEE FRAME ASSEMBLY PG20	SLIDE ASSEMBLY 230V	1
3	SPMT35106N	PLATE SLIDE INSERT	1
4		NYLON GLAND	1
5		CROSS RECESSED SCREW-M4X16	1
6		SPRING WASHER-4.1	1
7		HEX NUT M4	2
8		SPRING WASHER 4,3	1
9	SPHM35705	POWER CORD 230V 3x1	1
10	SPHM4009	PANEL ASSEMBLY	1
11		CROSS RECESSED PAN HEAD TAPPING SCREW 3,5x13	4
12		SPRING WASHER EXTERNAL STAR 3,7	4
13	SPHM35407	SPOKE HANDLE INCLUDING KNOB	3
14	SPMT6	COOLANT SYSTEM	1
15	SPHMPRO4015	GUARD ASSEMBLY	1
16	SPHMPRO4016	BRACKET GUARDS	1
17		SCR, M5 x 12 FHSCS	1
19	SPHMPRO4019	LOWER SLEEVE,	2
20	SPHMPRO4020	NYLON WASHER SR1940,	4
21	SPHMPRO4021	PUSH SPRING,	2
22		SOCKET BUTTON HEAD CAP SCREW WITH FLANGE M5x25,	2
23		HEX NUT M5	1
24		SPRING WASHER M5	1



MACHINE BREAKDOWN

FRAME ASSEMBLY

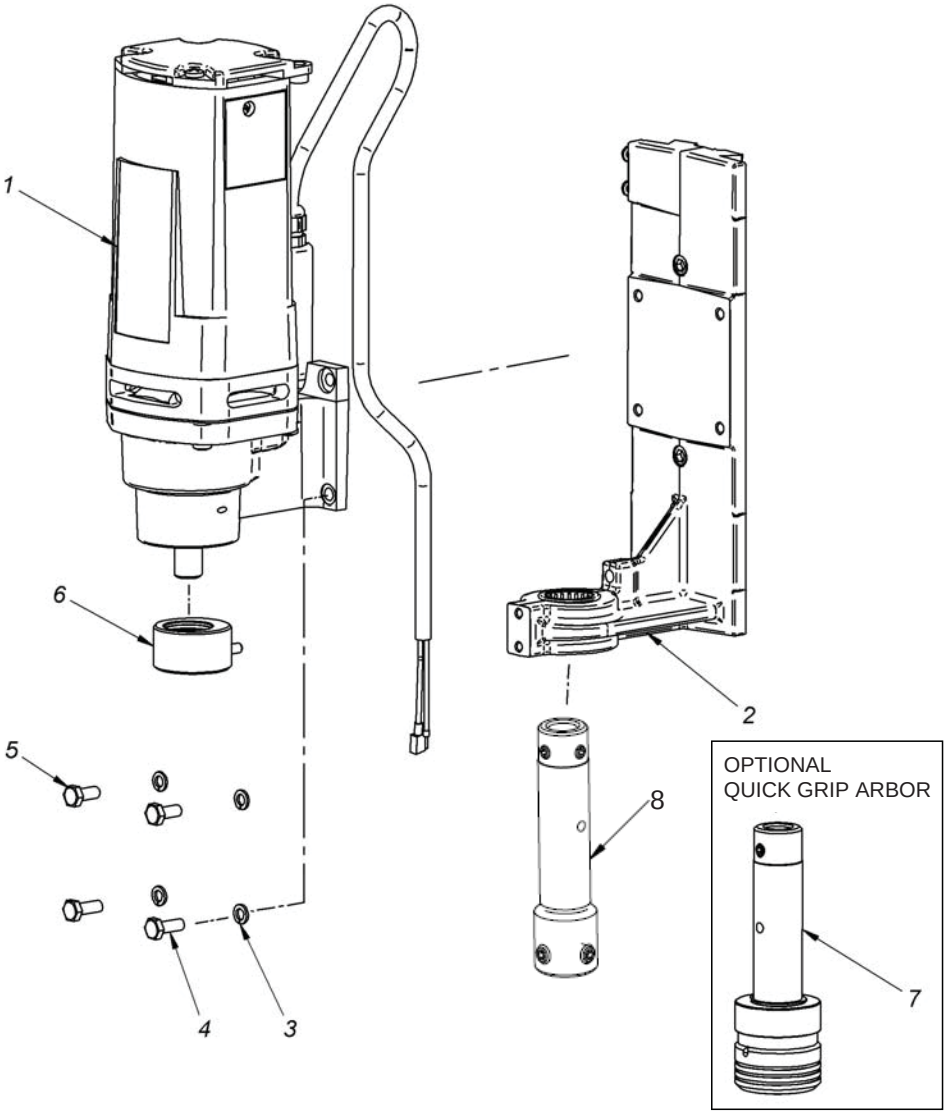
PART NUMBER	ITEM	DESCRIPTION	QTY
SPHM35101NEW	1.1.1	MAIN BODY	1
SPMT35106R	1.1.3	SLIDE INSERT FLAT (RIGHT)	1
SPMT35106L	1.1.4	SLIDE INSERT DOVETAIL (LEFT)	1
SPHM40109	1.1.5	HEX SET SCREW - M5x20	4
SPHM40110	1.1.6	HEX NUT M5	4
SP6796	1.2	D-RING STRAP	1
SPHM200	1.3	ELECTROMAGNETIC BASE	1
	1.4	SPRING WASHER 6,1	3
	1.5	HEX. SOCKET BOLT M6x20	3
SPHM35401	1.6	PINION SHAFT	1
SPHM35405	1.7	WASHER	1
	1.8	SCR, M6 x 16 FHSCS	1



MACHINE BREAKDOWN

SLIDER ASSEMBLY

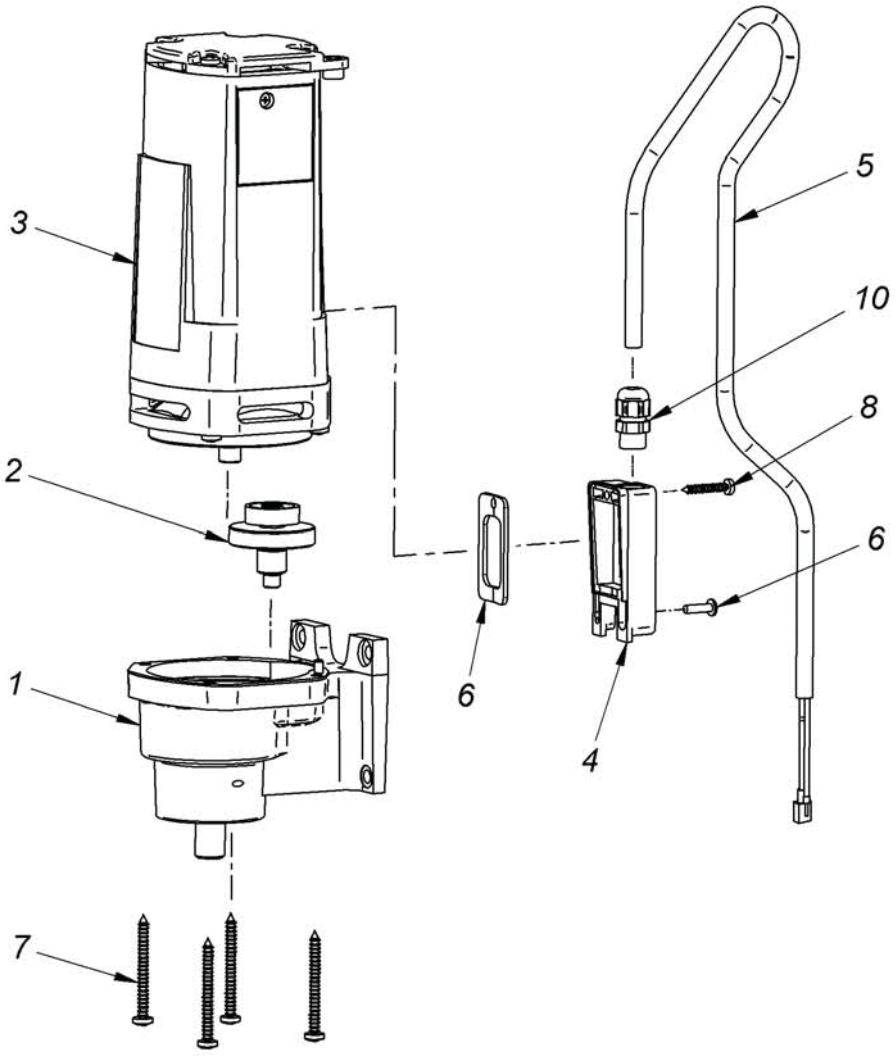
PART NUMBER	ITEM	DESCRIPTION	QTY
SPHM4021	2.1	MOTOR ASSY 230V /INCL. GEARBOX/	1
	2.3	SPRING WASHER 6,1	4
	2.4	M 6 x 16 HHCS - 8.8	2
	2.5	M 6 x 14 HHCS - 8.8	2
SPHM35604	2.6	COOLANT RING	1
SPHM4027	2.7	ARBOR ASSEMBLY - QUICK GRIP TYPE	1
SPHM35507	2.8	ARBOR ASSEMBLY - GRUB SCREW TYPE	1



MACHINE BREAKDOWN

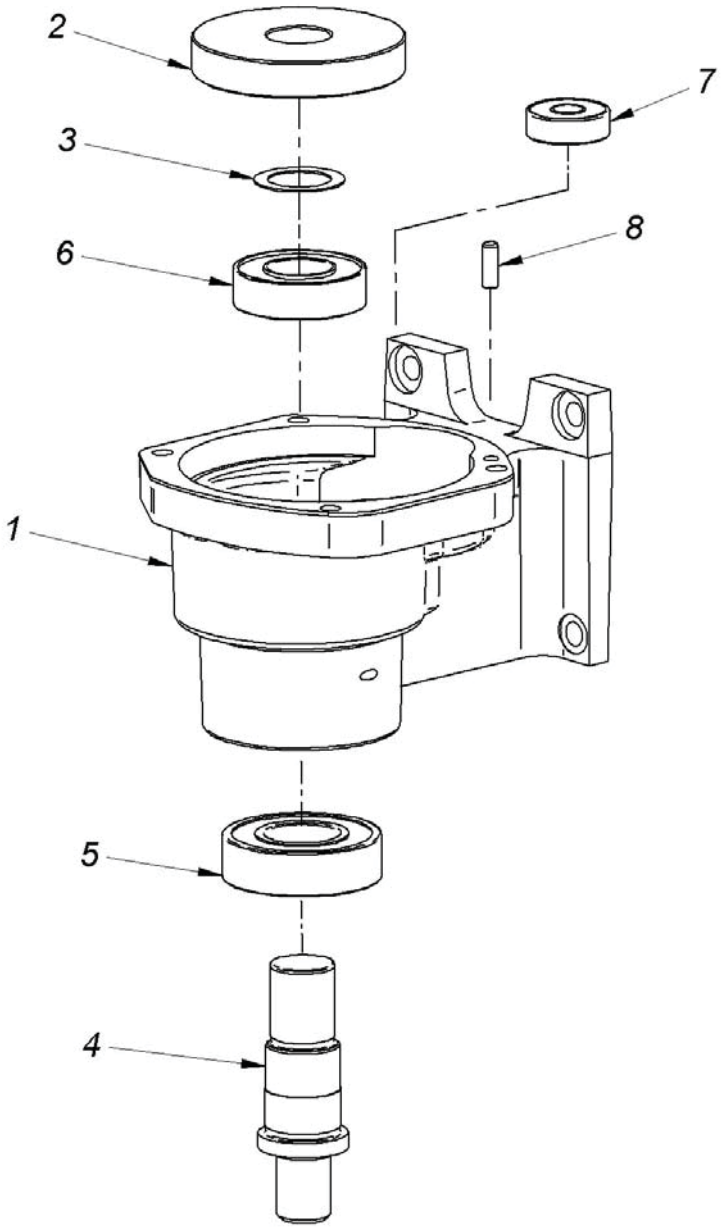
MOTOR & GEARBOX ASSEMBLY

PART NUMBER	ITEM	DESCRIPTION	QTY
SPHM40211	2.1.1	GEARBOX ASSEMBLY	1
SPHM40212	2.1.2	PINION SHAFT ASSEMBLY	1
SPHM40213	2.1.3	MOTOR ASSEMBLY 230V	1
SPHM40214	2.1.4	MOTOR CORD COVER	1
SPHM40215	2.1.5	MOTOR CORD ASSEMBLY	1
SPHM40216	2.1.6	SEAL	1
	2.1.7	SELF-TAPPING SCREW 5x60	4
	2.1.8	SELF-TAPPING SCREW 4x25	1
	2.1.9	SCREW -M4X14	1
	2.1.10	STRAIN RIELIEF PG7	1



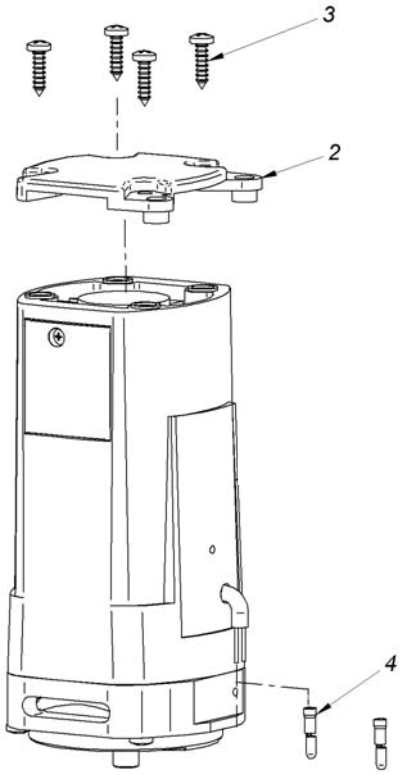
GEARBOX

PART NUMBER	ITEM	DESCRIPTION	QTY
SPHM402111	2.1.1.1	GEARCASE	1
SPHM402112	2.1.1.2	GEAR T=47	1
SPHM402113	2.1.1.3	GEAR WASHER	1
SPHM402114	2.1.1.4	SPINDLE	1
BE6004ZZ	2.1.1.5	BEARING BALL 6004	1
BE6003	2.1.1.6	BEARING 6003 LLU	1
BE608Z	2.1.1.7	BEARING 608 2Z	1
SPHM402118	2.1.1.8	PIN 4x12	1



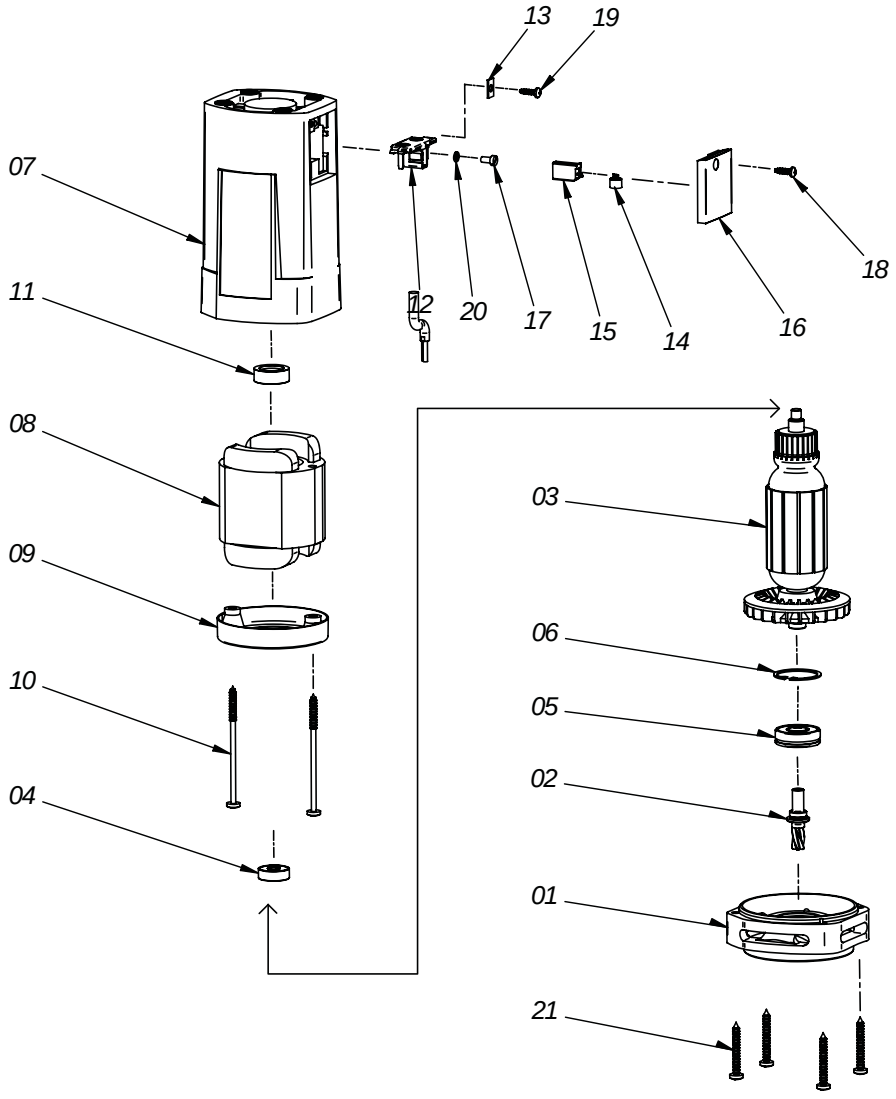
MOTOR

PART NUMBER	ITEM	DESCRIPTION	QTY
SPHM402132	2.1.3.2	COVER, FIELD CASE	1
	2.1.3.3	SELF-TAPPING SCREW 5x20	4
	2.1.3.4	CONNECTOR B4-1-P	2



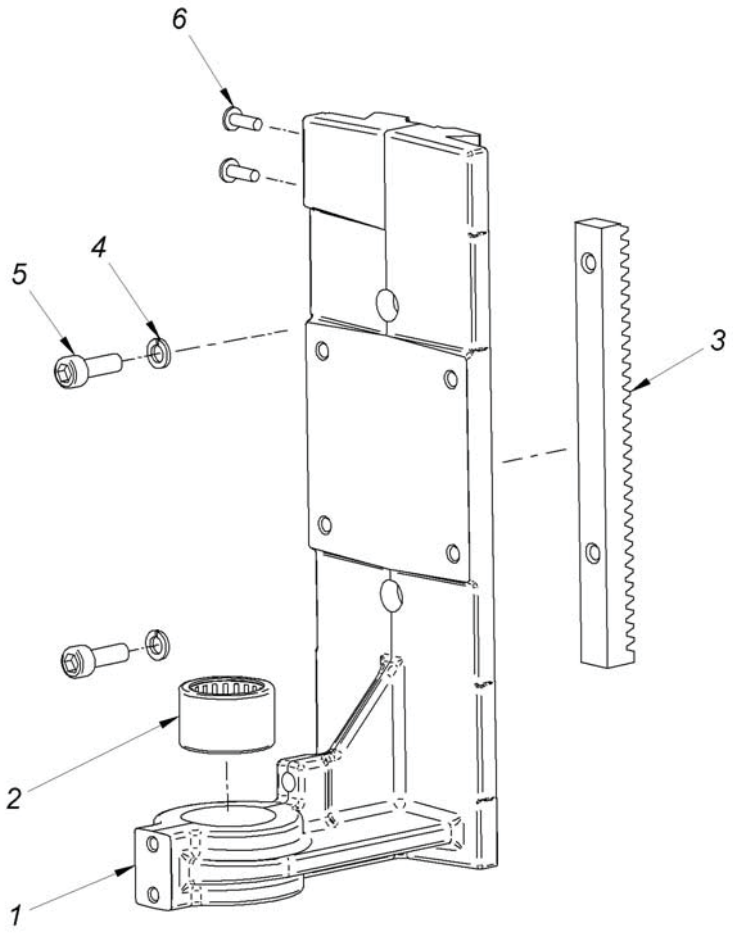
MOTOR

Part No.	ITEM	DESCRIPTION	QTY
SPHM4021311	2.1.3.1.1	GEARBOX COVER	1
SPHM4021312	2.1.3.1.2	GEAR SHAFT	1
SPHM4021313	2.1.3.1.3	ARMATURE 230V	1
BE627ZZ	2.1.3.1.4	BEARING 627ZZ TNG C3 S	1
BE6201DW	2.1.3.1.5	BEARING 6201 2BRS T9H C3	1
SPHM4021316	2.1.3.1.6	INTERNAL RETAINING RING 32W	1
SPHM4021317	2.1.3.1.7	FIELD FRAME	1
SPHM4021318	2.1.3.1.8	FIELD 230V	1
SPHM4021319	2.1.3.1.9	FIELD SHIELD	1
	2.1.3.1.10	SCREW 5X85	2
SPHM40213111	2.1.3.1.11	RUBBER INSERT	1
SPHM40213112	2.1.3.1.12	BRUSH HOLDER	2
SPHM40213113	2.1.3.1.13	PLATE 8x13	2
SPHM40213114	2.1.3.1.14	SPRING	2
SPHM40213115	2.1.3.1.15	MOTOR BRUSH 6,4x12,5x19	2
SPHM40213116	2.1.3.1.16	COVER	2
	2.1.3.1.17	SCREW TW4x13	2
	2.1.3.1.18	SCREW Ph-TZ 3,5x13	2
	2.1.3.1.19	SCREW M4x8-5.8b	2
	2.1.3.1.20	SPRING WASHER 4,2x0,5	2
	2.1.3.1.21	SCREW 5x55	4



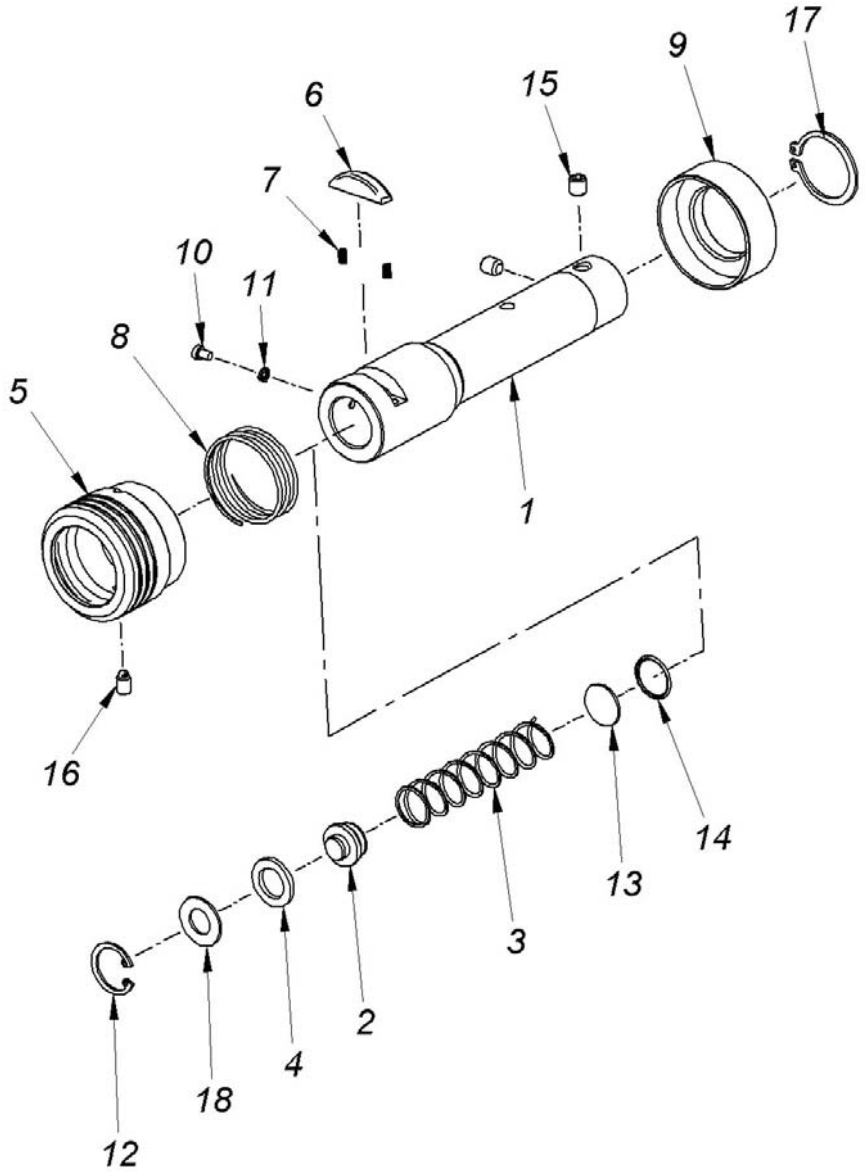
SLIDER ASSEMBLY

PART NUMBER	ITEM	DESCRIPTION	QTY
SPHM35301	2.2.1	SLIDER	1
SPHM35302	2.2.2	NEEDLE BEARING RHNA 253220	1
SPMT35403	2.2.3	GEAR RACK	1
	2.2.4	SPRING WASHER 6,1	2
	2.2.5	HEX. SOCKET BOLT M6X18	2
	2.2.6	SCREW -M4X12	2



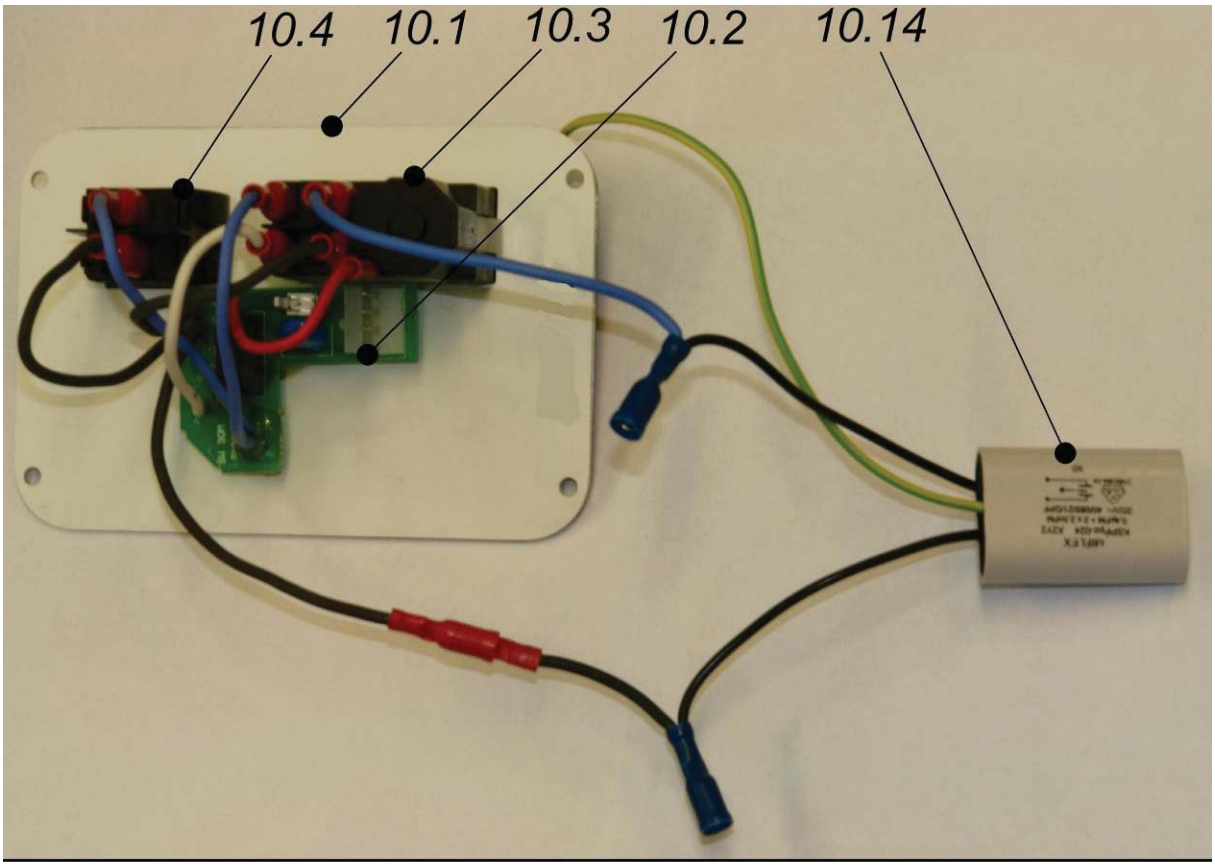
QUICK GRIP ARBOR ASSEMBLY

ITEM	PART NUMBER	DESCRIPTION	QTY
2.7.1		ARBOR BODY	1
2.7.2		PLUNGER	1
2.7.3	SPHM40273	SPRING 1,2x14,8x77,8	1
2.7.4	SPHM40274	SEAL	1
2.7.5	SPHM40275	SLEEVE CLAMP	1
2.7.6	SPHM40276	KEY	1
2.7.7	SPHM40277	KEY SPRING	2
2.7.8	SPHM40278	SLEEVE SPRING	1
2.7.9		SLEEVE	1
2.7.12		INTERNAL CIRCLIP 19	1
2.7.13		WASHER D=18,8x10x1	1
2.7.14		O-RING 14x1,25	1
2.7.15	SPHM35509	INSERT SCREW M6 x0,75 x6	2
2.7.16	SPHM402716	SCREW M5x8	1
2.7.17		EXTERNALE CIRCLIP 25	
2.7.18		WASHER 16x1	



CONTROL PANEL ASSEMBLY

PART NUMBER	ITEM	DESCRIPTION	QTY
SPHM4091	10.1	PANEL PLATE / WITH LABEL	1
SPHM300403	10.2	ELECTRONIC CONTROLLER SW-30 / 230V	1
SPHM300404	10.3	START-STOP SWITCH	1
SPHM300405	10.4	SWITCH, MAGNET HOLEMAKER	1
SPHM4095	10.5	LOCKING PILLAR	3
SPHM401014	10.14	INTERFERENCE ELIMINATOR	1



WIRING DIAGRAM