

Operators manual

V 1.2 EN | February 2021

 **EUROBOOR**  
FOR PROFESSIONALS BY PROFESSIONALS



Pneumatic magnetic drilling machine

**AIR.55**



Congratulations on purchasing this premium air powered drilling machine with permanent magnetic base. At EUROBOOR we strive to exceed our customers' expectations by developing and providing premium and innovative portable drilling and cutting solutions. We believe that a professional like you must be able to rely on a professional supplier. Which has led us to become a major player in the industrial world, with our own factory and several offices worldwide. All because we have always listened to our customers and to the demands from the market.

Our vision is focused on developing innovative portable tools that add value for our customers and facilitate them in their daily work. We never lose sight of sustainability, time savings and cost savings.

Enjoy your new machine!

Before operating your new machine, please first read all instructions. You find the instructions in this manual and on the warning label on your machine. With proper use, care and maintenance your machine will provide you with years of premium drilling performance.

**TO REDUCE THE RISK OF INJURY USER MUST READ AND UNDERSTAND ALL INSTRUCTIONS**

To view all our offices and their contact information please visit: [www.euroboor.com](http://www.euroboor.com)

The original manual has been produced in the English language. If any discrepancies should occur in translations, reference must be made to the original version for clarification.

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# 1. Safety

## 1.1 General safety instructions

Do not use this power tool before you have thoroughly read and completely understood this Instruction Manual and the “General Safety Instructions”, including the figures, specifications, safety regulations and the signs indicating DANGER, WARNING and CAUTION.



**WARNING:** *When using tools intended for use in potentially explosive atmospheres, basic safety precautions should always be followed to reduce the risk of fire and personal injury.*

Please also observe the relevant national industrial safety regulations. Non-observance of the safety instructions in the said documentation can lead to burns and other severe injuries.

This Operator’s Manual including the “General Safety Instructions” should be kept for later use and enclosed with the machine, should it be passed on or sold.

### WORK AREA

1. Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
2. Do not operate the machine in highly explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Hot machine parts, cutters or workpiece may ignite the dust or fumes.
3. Keep bystanders, children, and visitors away while operating a magnetic drilling machine. Distractions can cause you to lose control.
4. Do not expose the machine to rain or wet conditions.

### PNEUMATIC SAFETY

1. The air supply should always be turned OFF and disconnected before installing or removing any accessory on or from this machine.
2. The machine requires clean and dry air at a pressure between 6.3 and 8.0 bar (90 and 116 PSI). Unstable or too high air pressure may damage the machine and/or cutters and drills.
3. Female air supply outlet connectors must match the male 3/8" connector inlet on the machine. Never damage or modify the male connector in any way. Only use fitting and coordinated adapter and connector pairs.
4. Do not abuse the air hoses. Never use the hose on the machine to carry it. Never pull the outlet connector on the hose from the inlet connector on the machine by pulling at the hose. Keep the air hoses away from heat, oil, sharp edges or moving parts. Replace damaged hoses immediately. Damaged hoses may cause air leakage and impact the performance of the machine.

### PERSONAL SAFETY

1. Stay alert, watch what you are doing and use common sense when using a pneumatic magnetic drilling machine. Do not use the machine while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating machines may result in serious personal injury.

2. Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, long hair and fabric gloves can be caught in moving parts.
3. Avoid accidental starting. Be sure that the air inlet control knob is OFF before connecting the air tube. Machines that have the knob in ON position may cause accidents.
4. Never place hands, fingers, gloves or clothing near cutting area or rotating machine parts.
5. Remove adjusting tools before turning the machine ON. A wrench or a key that is left attached to a rotating part of the machine may result in personal injury.
6. Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the machine in unexpected situations.
7. Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.
8. Always use supplied safety chain during any work on non-horizontal objects. Mounting can release.

## MACHINE USE AND CARE

1. Do not exceed the recommendation for maximum drilling diameters to prevent overload. It could cause premature malfunctions that may result in rubbing and friction.
2. Use suitable oil for the air lubricator on your air supply unit and keep it at level. The wrong oil or insufficient oil may damage the pneumatic drilling machine.
3. During drilling operations, drills must be lubricated with good quality cutting oil.
4. To prevent injuries, make sure that the ejection direction of the slug is shielded. Alternatively, remove the slug from the annular cutter after each hole.



**WARNING:** *The slug may be sharp and hot!*

5. Avoid spilling cutting oil. Apply EUROBOOR cutting paste or spray when using the machine on non-horizontal surfaces.
6. Use clamps or other practical way to secure and support the work piece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.
7. Do not use the machine if the magnet and air control knob can't be turned ON or OFF. Any tool that cannot be controlled with the knob is dangerous and must be repaired.
8. Switch OFF the air supply and disconnect the tube outlet connector from the machine before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
9. Store idle machines out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
10. Maintain machines with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.
11. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the machine operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
12. Use only accessories that are recommended by EUROBOOR for your model. Accessories that may be suitable for one machine, may become hazardous when used on another machine.

## SERVICE

- Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
- When servicing a tool, use only identical replacement parts. Follow instructions in the maintenance section of this manual. Use of unauthorised parts or failure to follow maintenance instructions may create a risk of injury.
- When using this machine, you **MUST** wear ear and eye protection.

## 1.2 Specific safety information

- Keep your fingers well out of the drill area.
- Avoid touching the drilled core that is automatically ejected by the centering pin when the working procedure is finished. Contact with the core when it is hot, or if it falls, can cause personal injuries.
- Always use the safety chain
- The magnetic drilling machine is optimised for use on steel starting with a thickness starting 3 mm with minimal air gap between the magnet surface and the mounting surface. Keep the air gap to a minimum by cleaning the surface; neglecting to do so this will affect the performance of the magnet significantly.
- The maximum allowable tip force of the magnetic drilling machine will increase with the thickness and type of material; air gaps, surface coatings and debris can reduce this value.
- Always place the machine on a surface that is clear of shavings, chips, swarf and surface dirt.
- Keep the magnet clean and free of debris and swarf.
- Do not switch on the machine until it has been mounted and installed according to these instructions.
- Do not switch on the machine before having checked that the magnet has been tightened firmly to the mounting surface.
- Adjust the table so cutter does not extend into the work piece before drilling. Do not perform any design, assembly or construction activities on the work piece while the machine is switched on.
- Before switching on the machine, make sure all accessories have been mounted correctly.
- Always use the recommended speed for the accessories and the material.
- Do not use the machine on the same work piece on which electric welders are being used.
- Use only an appropriate cutting fluid. We offer a range of premium cutting oils and lubricants which are specially developed and selected for optimum performance and maximum tool life.
- Do not use liquid cutting lubricants while drilling vertically or overhead. Dip the cutter in cutting paste or apply an appropriate spray for these applications.
- Do not pour cutting fluid into the reservoir while it is mounted in the bracket.
- Install the safety guard before use to shield the rotating drill and to protect the operator against metal debris.
- Ensure that metal chips or resinous residue cannot lead to blockage of the function.
- In case of jammed cutter disconnect the machine from the air supply, remove the reason for the jam before turning on the machine again.

## **RESIDUAL RISKS**

In spite of the application of the relevant safety regulations and the implementation of safety devices, certain residual risks cannot be avoided. These are:

- Impairment of hearing
- Risk of personal injury from flying particles
- Risk of burns due to accessories becoming hot during operation
- Risk of personal injury due to prolonged use

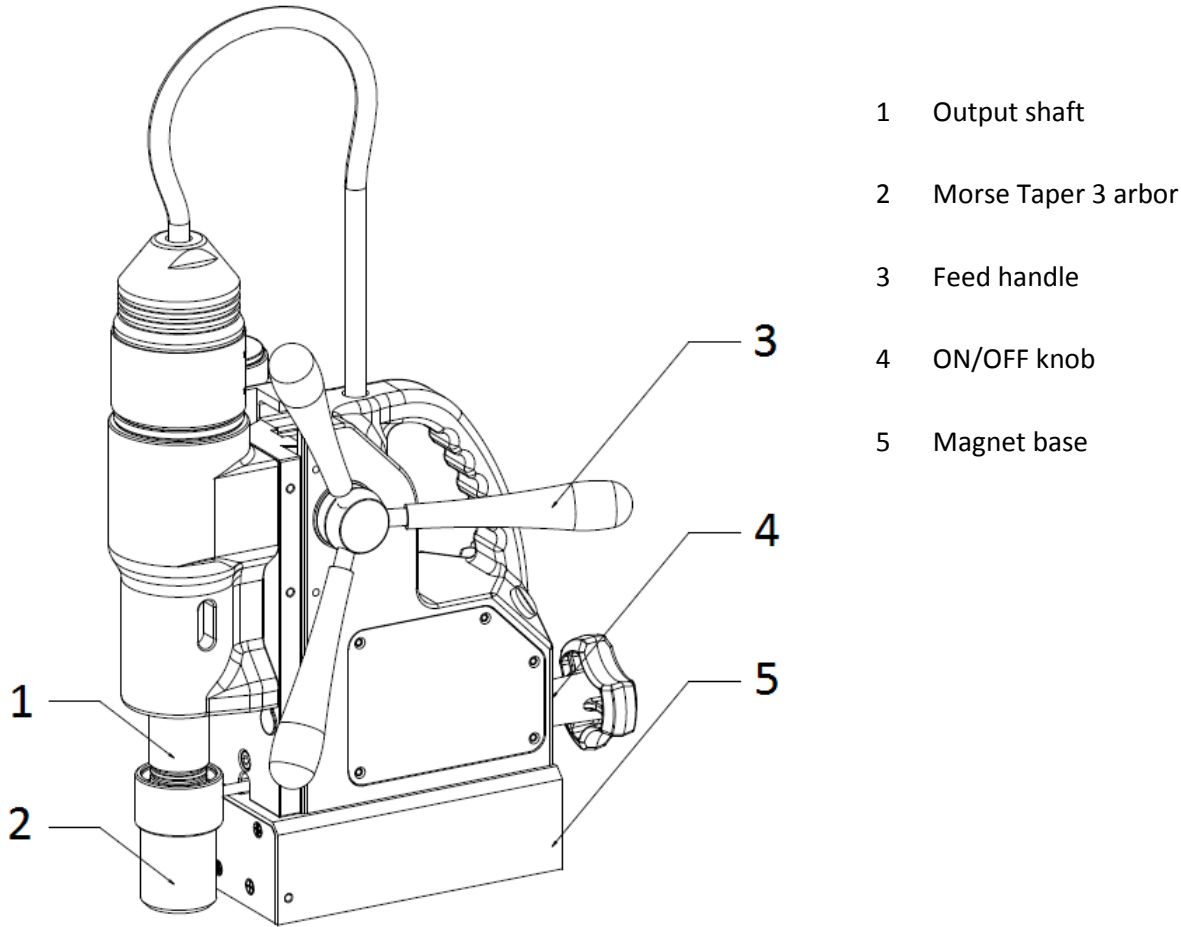
Always try to reduce these risks as much as possible.

## 2. Description

### 2.1 Intended use

This portable pneumatic drilling machine with an air-powered, spark-free motor and a permanent magnetic base can be used for drilling, countersinking and reaming on flat workpieces with a magnetisable surface in a weather-protected environment where electrical machines are less convenient or not allowed, especially in areas and spaces with potentially explosive atmospheres. The machine can be used horizontally, vertically or overhead.

### 2.2 Description and features



[image 2-1]



## 2.3 Case contents

- 1 x AIR.55 magnetic drilling machine
- 1 x Instruction manual
- 3 x Handles
- 1 x Oil tank + attachment pin
- 1 x Bottle of cutting oil
- 3 x Allen keys (2.5, 4 and 5 mm)
- 1 x Safety chain with lock
- 1 x Morse Taper 3 (MT3) arbor
- 1 x Drift key MT3
- 2 x Wrench 19/22
- 1 x Safety guard
- 1 x Set of ear plugs
- 1 x Pair of safety glasses
- 1 x Pair of gloves

## 2.4 Serial number

The serial number is mentioned on the machine and is engraved on the frame. Additional serial no. stickers are provided with the machine for your administration.

The serial number will help you and your sales point validate and identify the machine.

As example:

*R552008001*

breaks down to:

*R55 20 08 001*

Machine series

Year of manufacture









Month of manufacture

Identification number

## 2.5 Technical data

	<b>Metric</b>	<b>Imperial</b>
<b>Annular cutting (HSS)</b>	Ø 12 - 52 mm	Ø 7/16" - 2 1/16"
<b>Annular cutting (TCT)</b>	Ø 12 - 55 mm	Ø 7/16" - 2 3/16"
<b>Twist drilling</b>	Ø 1 - 23 mm	1/16" - 15/16"
<b>Tapping</b>	-	-
<b>Countersinking</b>	Ø 12 - 55 mm	Ø 7/16" - 2 3/16"
<b>Length</b>	380 mm	14 15/16"
<b>Width</b>	245 mm	9 5/8"
<b>Height</b>	615 - 700 mm	24 3/16" - 27 9/16"
<b>Stroke</b>	167 mm	6 9/16"
<b>Weight</b>	16.5 kg	36.4 lbs
<b>Magnet (L x W x H)</b>	183 x 100 x 55 mm	7 3/16" x 3 15/16" x 2 3/16"
<b>Magnetic force</b>	900 kg	1,984 lbs
<b>Speed (no load)</b>	350 rpm	350 rpm
<b>Arbor (Weldon)</b>	MT3 19.05 mm	MT3 3/4"
<b>Air supply</b>	6.3 - 8.0 bar	90 - 116 PSI
<b>Air consumption</b>	1.1 m <sup>3</sup> /min	38.85 SCFM
<b>Air hose (internal Ø)</b>	Min. Ø 14 mm	Min. 9/16"

## 2.6 Symbols

Symbol	Term, meaning	Explanation
	Read documentation	Be sure to read the enclosed documentation such as the Instruction Manual and the General Safety Instructions
	Wear ear protection	Use ear protection during operation
	Wear eye protection	Use eye-protection during operation
	Danger/warning/caution	Observe the information in the adjacent text!
	European conformity symbol	Confirms the conformity of the tool with the directives of the European Community
	ATEX	Symbol for ATEX certified mechanical equipment for use in potentially explosive atmospheres
	International Electrotechnical Commission	Conformity with international electrotechnical safety standards
	ISO9001	Certified in accordance with ISO9001:2015 quality management system
mm	Millimetre	Unit of measure for the dimensions
"	Inch	Unit of measure for the dimensions
kg	Kilogram	Unit of measure for the mass
lbs	Pound	Unit of measure for the mass
rpm	Revolutions per minute	Unit of measure for the rotation speed
bar		Unit of measure for the air pressure
PSI	Pounds per Square Inch	Unit of measure for the air pressure
m <sup>3</sup> /min	Cubic metres per minute	Unit of measure for the air consumption
SCFM	Standard Cubic Feet per Minute	Unit of measure for the air consumption

## 2.7 Environmental



Separate collection. This product must not be disposed of with normal household waste.



Separate collection of used products and packaging allows materials to be recycled and used again. Re-use of recycled materials helps prevent environmental pollution and reduces the demand for raw materials.

Local regulations may provide for separate collection of electrical products from the household, at municipal waste sites or by the retailer when you purchase a new product.

## 3. Preparation & adjustment

### 3.1 Assembly



**WARNING:** To reduce the risk of injury, turn unit off and disconnect machine from the air supply before installing and removing accessories, before adjusting or changing set-ups or when making repairs. Be sure all switches are in the OFF position. An accidental start-up can cause injury.

#### FITTING THE FEED HANDLES

1. Fit each of the three feed handles by screwing them into the hub in clockwise directions
2. Tighten firmly by hand

The handles are supposed to face slightly outward. Be careful not to cross-thread any of the components.

#### MOUNTING THE SAFETY GUARD

The safety guard protects against chippings and accidental contact and must always be mounted before operation.

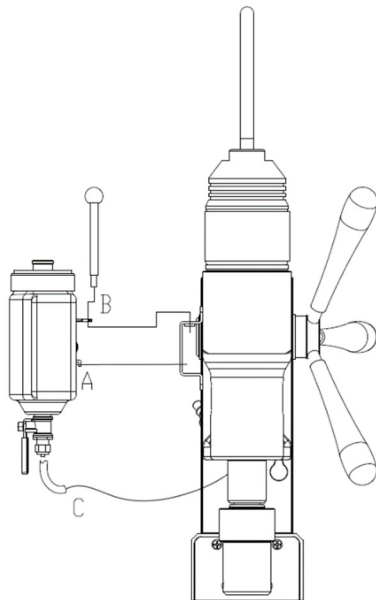
1. Hold the guard in front of the magnet, align the slots in the guard with the holes in the magnet.
2. Fit the screws into the holes located in the side of the magnet.



**WARNING:** Always use the safety guard

#### FITTING THE LUBRICATION SYSTEM

The lubrication system can be used for horizontal drilling applications (the drill being used vertically).



1. Hang the oil tank (A) on the tank holder
2. Position and tighten the attachment pin (B)
3. Connect the hose (C) to the fitting on the Morse Taper arbor. Make sure the hose is connected fully and tightly
4. To disconnect the hose, press the blue ring on the connection and gently pull out the hose

[image 3-1]

#### FITTING THE SAFETY CHAIN

1. Pass the safety chain through the frame grip opening
2. Wrap the chain around the work piece
3. Securely close the chain using the lock



**WARNING:** Always use the safety chain when using machine vertically and/or upside down.

## 3.2 Prior to use

Please make sure that the contacting surface for the magnet is level, clean and rust-free. Remove any varnish or primer. When working on materials that are not magnetisable, suitable fixation devices must be used. When working on steel materials with a material thickness of less than 3 mm, the workpiece must be reinforced with an additional steel in order to guarantee the magnetic holding power.

Check the machine for possible damage. Before using the machine, you must carefully check protective devices or slightly damaged components to ensure they are operating perfectly and as intended.

Check that moving parts are in perfect working order and do not jam and check whether parts are damaged. All parts must be correctly installed and fulfill all conditions necessary to ensure perfect operation of the machine.

Damaged protective devices and parts must be repaired or replaced according to specifications by EUROBOOR or any authorised EUROBOOR dealer.

**DO NOT** use under wet conditions or in presence of flammable liquids or gases.

**DO NOT** let children come into contact with the machine. Supervision is required when inexperienced operators use this machine.

### PNEUMATIC SAFETY

The machine has been designed for a specific air pressure range between 6.3 and 8.0 bar (90 and 116 PSI). Always check prior to use that the air supply corresponds to this range.

Never modify the air connectors in any way. Do not use damaged air connectors. The standard male 3/8" connector can be exchanged by the same in case of damage, or replaced by another of a different connection type only by trained personnel and authorised repair centres. Only use fitting and coordinated adapter and connector pairs suitable for the given air pressure.

Do not abuse the air hoses. Never use the hose on the machine to carry it. Never pull the outlet connector on the hose from the inlet connector on the machine by pulling at the hose. Keep the air hoses away from heat, oil, sharp edges or moving parts.

Replace damaged hoses immediately. Damaged hoses may cause air leakage and impact the performance of the machine.

### Useful tips

- Try a few simple projects using scrap material until you develop a "feel" for the magnetic drilling machine;
- Let the machine run in for a period of 8 to 10 hours before starting with big operations. Do not load the machine too much during this run-in period;
- Never use the machine with serious overload;
- Keep the machine clear from moisture at all times to protect the machine, yourself and others.

## 4. Using the machine

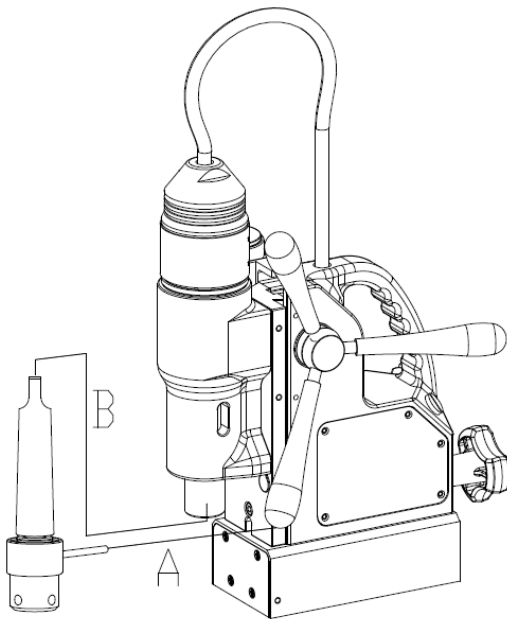


**WARNING:** Always observe the safety instructions and applicable regulations.

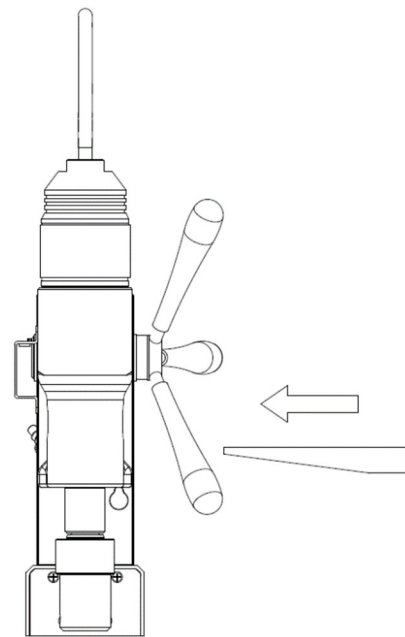


**WARNING:** To reduce the risk of serious personal injury, turn tool off and disconnect tool from air supply source before making any adjustments or removing/installing attachments or accessories.

### 4.1 Morse taper arbor



[image 4-1]



[image 4-2]

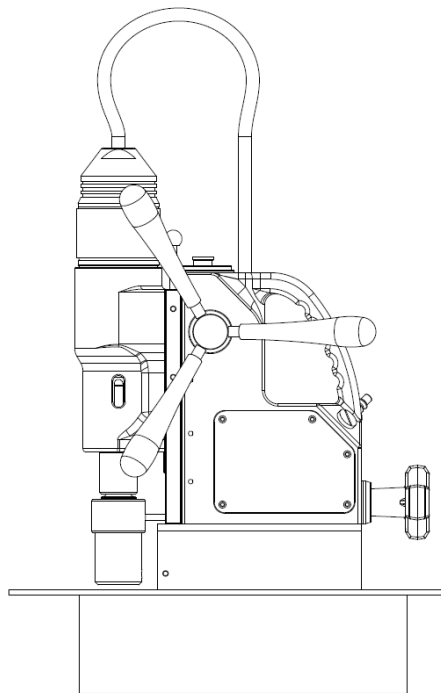
1. Make sure the inside of the output shaft and the Morse Taper 3 (MT3) arbor are clean and free of grease
2. Align the coolant ring rotation limiter with the recess in the gearbox (A)
3. Firmly slide the Morse Taper arbor into the output shaft by hand (B). Make sure it is properly positioned. You should not be able to pull it out by hand.
4. To remove the Morse Taper arbor
  - Switch of the air supply and motor
  - Rotate the output shaft by hand until the slot on the shaft aligns with the slot on the gearbox
  - Gently tap the supplied drift key into the slots with a hammer and pull out the Morse Taper arbor

## 4.2 Magnet base

By combining EUROBOOR permanent magnet technology and a pneumatic drilling unit, we have created a tool that is capable of quickly and safely drilling on flat surfaces in potentially explosive atmospheres. Permanent magnets allow for a more efficient field on thinner material, allowing more consistent tip forces.

Make sure the magnetic drilling machine is placed on a smooth, clean, level and solid surface without any objects or debris to guarantee maximum adhesion.

The workpiece must at least be 6 mm (1/4") thick for the magnet to stick and to drill safely. In case the workpiece is between 3 mm (1/8") and 6 mm (1/4"), make sure to make a proper base to create a good magnetic field as shown below.



[image 4-3]

Full saturation of the permanent magnet is reached with 15 mm steel.

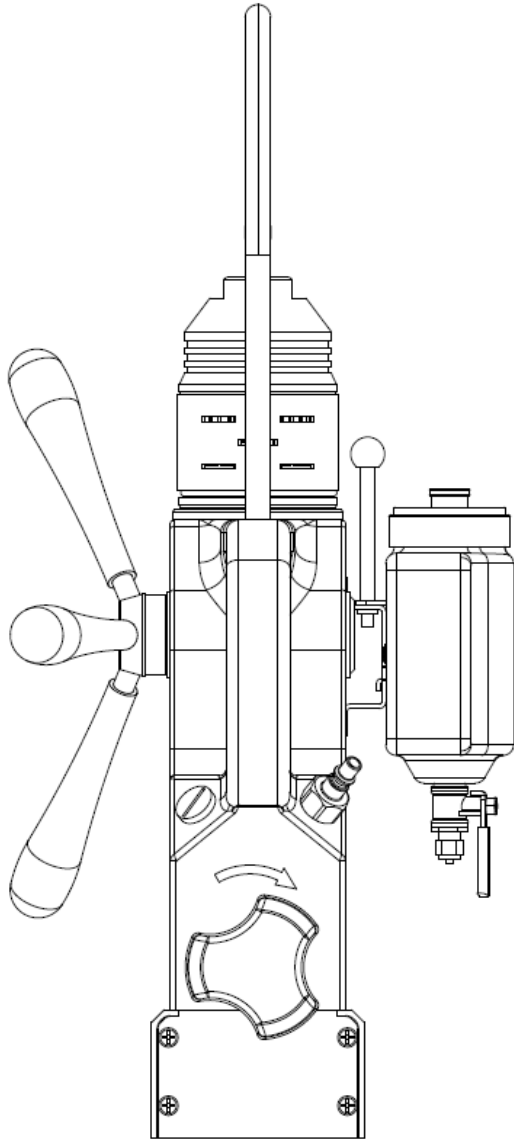
When the electromagnet is not able to create a good enough magnetic field, this may be caused by

- Surface not being flat;
- Workpiece is not magnetisable (e.g. aluminium);
- Workpiece is coated or painted;
- Workpiece is not thick enough.
- Temperature of the workpiece, which should not exceed 80° C (176 °F)

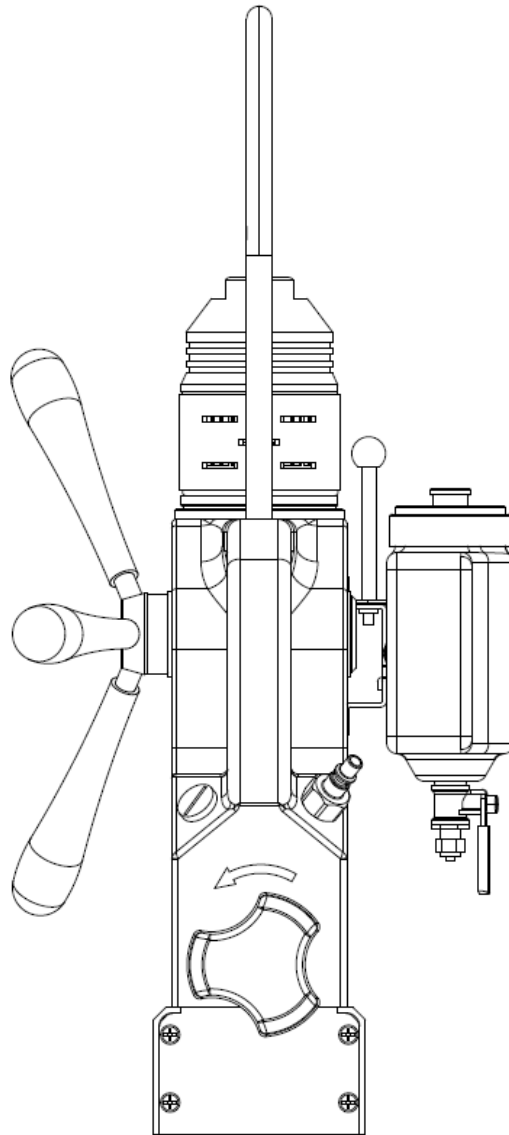
Using the magnet:

1. Place and position the machine on the workpiece;
2. To activate the magnet, firmly grab the knob at the backend of the machine and rotate it clockwise 180°;
3. To deactivate the magnet, rotate the knob counterclockwise by 180°.





[image 4-4 | magnet ON]



[image 4-5 | magnet OFF]

**!** **WARNING:** Do not use this machine when the knob can't perform the 180° rotation. The magnet may not generate sufficient attachment force.

**We want to point out that above mentioned precautions do not guarantee that the magnet will not release from the material. EUROBOOR accepts no liability when it comes to the magnet not functioning or functioning poorly.**

Make sure that the magnet is attached tightly to the workpiece before turning on the machine.

Always use the safety chain included. Drilling above your head is extremely dangerous and is not recommended. For the use of magnetic drilling machines on pipes, not-flat or non-magnetic materials, we refer to our catalogue or our website [www.euroboor.com](http://www.euroboor.com) where several vacuum tightening systems, pipe clamping systems and TUBE machines can be found.

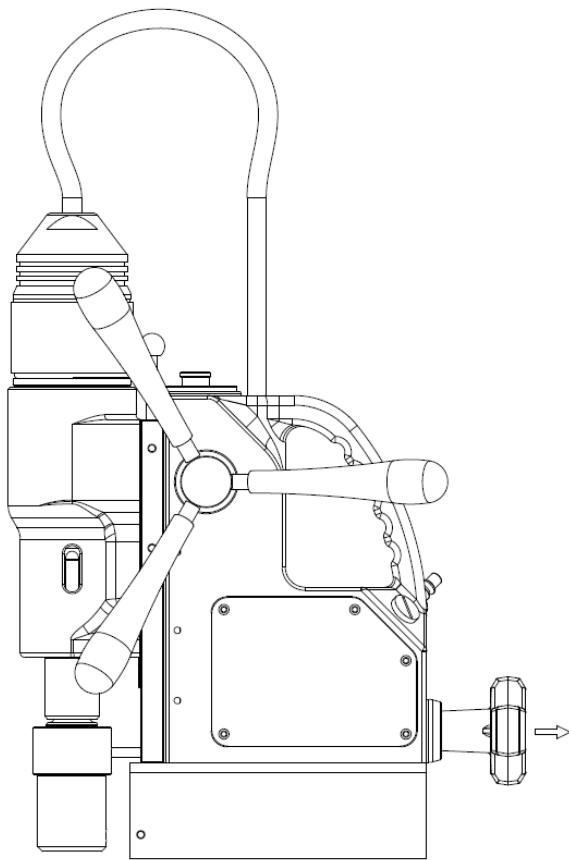
### 4.3 Switching motor on and off



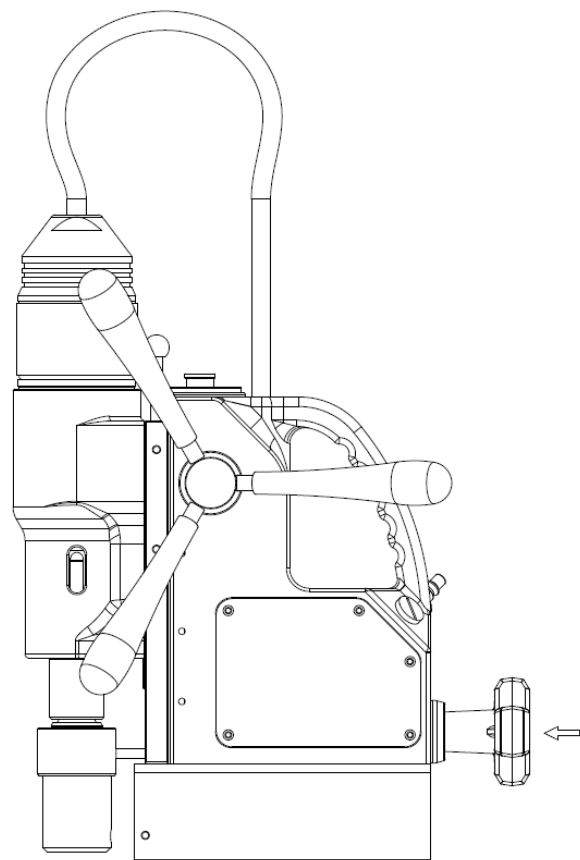
**WARNING:** Put 10 drops of pneumatic oil into the air inlet of the machine before connecting the air hose and starting the motor!

Using the motor:

1. Make sure the magnet is activated and air hose connected to the air inlet on the machine. Turn on the air supply.
2. To activate the motor, pull out the knob.
3. Always allow the motor to run for a couple of seconds before starting any type of operation.
4. To deactivate the motor, push the knob back in. Do not forget to turn off the air supply before disconnecting the air hose.



[image 4-6 | motor ON]



[image 4-7 | motor OFF]

## 4.4 Tool lubrication

### HORIZONTAL APPLICATIONS

In order to use the lubrication system, the tank must be filled with a cutting fluid or oil

1. Make sure the flow regulator is closed
  2. Unscrew the cap
  3. Fill the container with cutting fluid or oil
  4. Screw the cap back on
- Adjust the fluid flow as required using the flow regulator;
  - Add more cutting fluid if the shavings (metal chips) become blue.

### VERTICAL AND OVERHEAD APPLICATIONS

Dip the cutter in cutting paste or apply an appropriate spray.




**WARNING:** *Do not use the lubrication system in vertical or overhead drilling applications. Instead use EUROBOOR cutting paste or spray*

Make sure to use only suitable cutting oil or fluid. EUROBOOR offers a wide range of cutting lubricants for all tool and material combinations. Proper cooling will help you create better and faster results, and extend the lifetime of your tools.

# 5 Working with operation tools

## 5.1 Annular cutters

Annular cutters only cut material at the periphery of the hole, rather than converting the entire hole to shavings. As a result, the energy required to make a hole is lower than for a twist drill. When drilling with an annular cutter, it is not necessary to drill a pilot hole.

 **WARNING:** Do not touch the cutter or the parts close to the cutter immediately after operation, as they may be extremely hot and cause burns to the skin. Ensure nobody is in the work area where the metal core is ejected.

### DRILLING CONDITIONS

The ease with which material can be drilled depends on several factors including tensile strength and abrasion resistance. Whilst hardness and/or strength is the usual criterion, wide variations in machinability can exist among material showing similar physical properties.

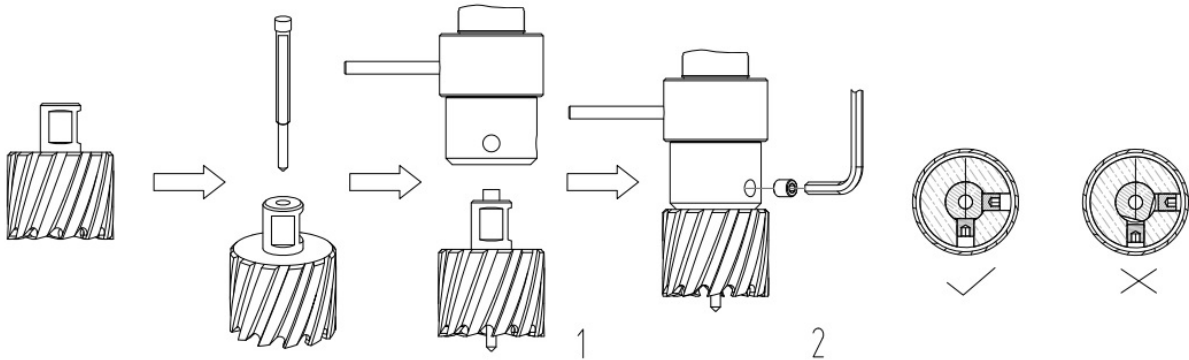
The drilling conditions are dependent on requirements for tool life and surface finish. These conditions are further restricted by the rigidity of the tool and the work piece, lubrication and machine power available. The harder the material, the lower the cutting speed.

Some materials of low hardness contain abrasive substances leading to rapid cutting edge wear at high speeds. Feed rates are governed by rigidity of set-up, volume of material to be removed, surface finish and available machine power.

### DRILLING A HOLE

Now that you have read the explanatory information and safety recommendations above, you are ready to actually start drilling. Follow these 12 steps for best drilling result :

1. Install the annular cutter
  - Place the pilot pin into the cutter
  - Align the flat faces on the cutter shank with the screws in the tool holder
  - Make sure the cutter shank is entered fully and correctly (1)
  - Tighten the screws (2)



[image 5-1]

2. Precisely mark the centre of the hole
3. Use the pilot pin to position the machine and in the correct position, with the tip of the pilot pin to meet the marked center of the hole.
4. Switch on the magnet and verify that the drill is in the right position and that the machine is pushed tight against the work piece.
5. If you have installed the lubrication system, open the valve to release the oil. If not, fill the holes of the spindle with cutting oil.
6. Switch the motor on at and allow it to run at the unloaded speed.
7. Turn the arms to start drilling. Apply only a slight pressure when the annular cutter touch the metal. Do not push the annular cutter with force into the metal.
8. Apply regular pressure while drilling. The drilling performance does not improve by putting more pressure on the tool. Too much pressure will overload the motor and your annular cutter will be worn sooner.



**WARNING:** *A continuous, non-discoloured iron swarf is a sign of correct drilling speed and a well lubricated, sharp cutter. Let the cutter do the job and give it time to cut the metal!!!*

9. Adjust the oil supply when necessary. Without lubrication system, stop drilling regularly, refill the holes of the spindle and continue drilling.
10. Apply less pressure when the drill cuts through the material. The slug will be pushed out of the cutter by the pilot pin.
11. Turn the arms to put the motor in highest position and switch off the motor unit.
12. Remove the burrs, metal chips and clean the cutter and surface without getting injuries.

**Caution:** The metal slug out can be sharp and very hot!!

## 5.2 Twist drills

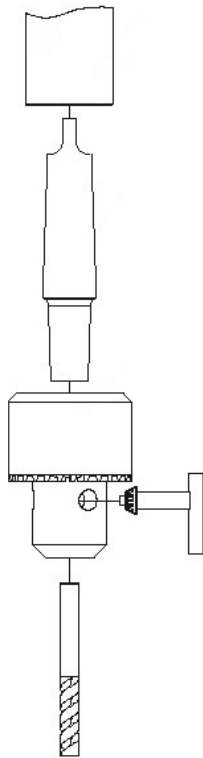
### Weldon shank

Fit the twist drill with 19.05 mm (3/4") Weldon shank into the arbor and fasten the screws with the provided Allen key.

Follow the further steps in paragraph Annular cutters.

### Standard parallel shank (DIN338)

1. Remove the Morse Taper 3 (MT3) arbor for Weldon shanks (see paragraph Morse Taper arbor)
2. Fit a MT3 arbor connection
  - a. EUROBOOR code 1/2UNF-MC3 for 1/2" x 20 UNF drill chuck connections
  - b. EUROBOOR code B16-MC3 for B16 drill chuck connections
3. Fit the appropriate twist drill chuck to the arbor
4. Fit the drill with parallel shank and fasten it



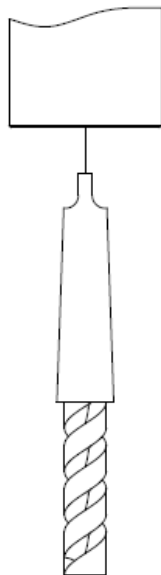
[image 5-2 | Example of fastening a drill with a key]

5. Precisely mark the center of the hole, and use the tip of the twist drill to position the machine.

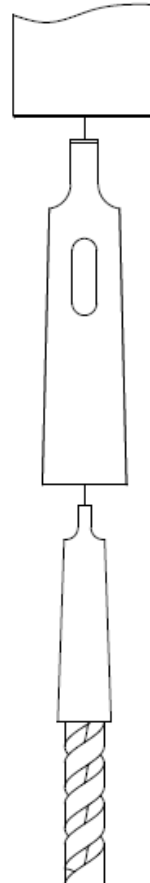
For further steps see paragraph Annular cutters.

### Morse Taper shanks (MT2 or MT3)

1. Remove the Morse Taper 3 (MT3) arbor for Weldon shanks (see paragraph Morse Taper arbor)
2. Fit a twist drill with a MT3 shank
3. For twist drills with a MT2 shank fit an MT3-MT2 adapter (EUROBOOR code IBK.MC3-MC2) before fitting the drill (see below)



[image 5.3 | fitting drill with MT3 shank]



[image 5.4 | fitting drill with MT3-MT2 adapter]

4. Precisely mark the center of the hole, and use the tip of the twist drill to position the machine.

For further steps see paragraph Annular cutters.

### 5.3 Countersinks

To install drills for reaming and countersinking follow the steps mentioned in previous paragraphs.

## 6. Maintenance

Your EUROBOOR power tool has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper tool care and regular cleaning.



**WARNING:** *To reduce the risk of injury, turn unit off and disconnect machine from the air supply before installing and removing accessories, before adjusting or changing set-ups or when making repairs. Be sure the switch is in the OFF position. An accidental start-up can cause injury.*

Just as every magnetic drilling machine with moving parts, your EUROBOOR magnetic drilling machine also needs regular maintenance service. A few recommendations:

### **VISUALLY CHECK THE MACHINE FOR DAMAGE**

Machine must be checked before operation for any signs of damage that will affect the operation of the machine. Particular notice must be taken of the air supply hoses, if the machine appears to be damaged it should not be used. Failure to do so may cause injury or death.

### **CLEANING**

- Clean all dirt, dust, metal chips and burrs of your magnetic drilling machine
- Blow dirt and dust out of the main housing with dry air as often as dirt is seen collecting in and around the air vents. Wear approved eye protection and an approved dust mask
- Never use solvents or other harsh chemicals for cleaning the non-metallic parts of the tool. These chemicals may weaken the materials used in these parts. Use a cloth dampened only with water and mild soap. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

### **OPERATION OF THE MACHINE**

The machine operation must be checked to ensure that all components are working correctly. Replace any defective parts immediately. This prevents properly function parts from being damaged.

### **CHECK MAGNETIC BASE**

Before every operation the magnetic base should be checked to make sure that there is no damage present. An uneven magnet base will cause the magnet not to hold as efficiently and may cause injury to the operator.

### **CHECK PNEUMATIC PARTS**

The air hose connections, the air hose and the air inlet connector on the machine must be checked regularly. Fasten loose connections with provided wrench. Replace damaged parts.

### **CHECK GEARBOX GREASE**

The gearbox grease should be checked and replaced periodically to ensure maximum lubrication and minimal wear, and thus the best performance of the machine.

### **MOTOR LUBRICATION**

Use suitable oil for the air lubricator on your air supply unit and keep it at level. The wrong oil or insufficient oil may damage the pneumatic drilling machine.



## ADJUSTMENT OF SLIDE

An essential requirement of the machine is that the slide can move in a smooth and controlled manner, free of lateral movement and vibration.

This situation can be maintained by periodic adjustment of the slide and is accomplished in the following manner:

1. Place the machine in an upright position and, by means of the capstan, raise the slide to its highest position. Clean the aluminium rails and apply a small amount of light machine oil to the wear surfaces
2. Gently feed in setting screw with supplied Allen key 2.5 until slight resistance is encountered. Follow your way down adjusting all setting nuts and screws
3. Operate the slide up and down a few times to test the movement and make any further necessary adjustments. Try to ensure that all the screws are exerting a uniform pressure on the slide from top to bottom. A perfectly adjusted slide will operate freely up and down without any sideways movement

## LUBRICATING THE FEED TRAVEL

The feed travel should be lubricated periodically with grease to ensure smooth operation.

- Raise the motor unit to the highest position possible
- Lubricate the dove-tail guide way at both sides
- Lubricate the gear rack

After repeated use, the gear rack may become loose. If necessary, adjust the self-locking set screws at the left side. Tighten screws in series until the gear rack moves freely in the dove-tail guide but does not allow the motor to wobble.

## REPAIR, MODIFICATION AND INSPECTION

Repair, modification and inspection of EUROBOOR Magnetic drilling machines must be done by EUROBOOR or an EUROBOOR authorised dealer. The spare parts list will be helpful if presented with the machine to the EUROBOOR dealer for service when requesting repair or other maintenance.

EUROBOOR machines are constantly being improved and modified to incorporate the latest technological advancements. Accordingly, some parts (i.e. part numbers and/or design) may be changed without prior notice. Also, due to EUROBOOR's continuing program of research and development, the specifications of machines are subject to change without prior notice.



**WARNING:** *Since accessories, other than those offered by EUROBOOR, have not been tested with this product, use of such accessories with this tool could be hazardous. To reduce the risk of injury, only EUROBOOR recommended accessories should be used with this product.*

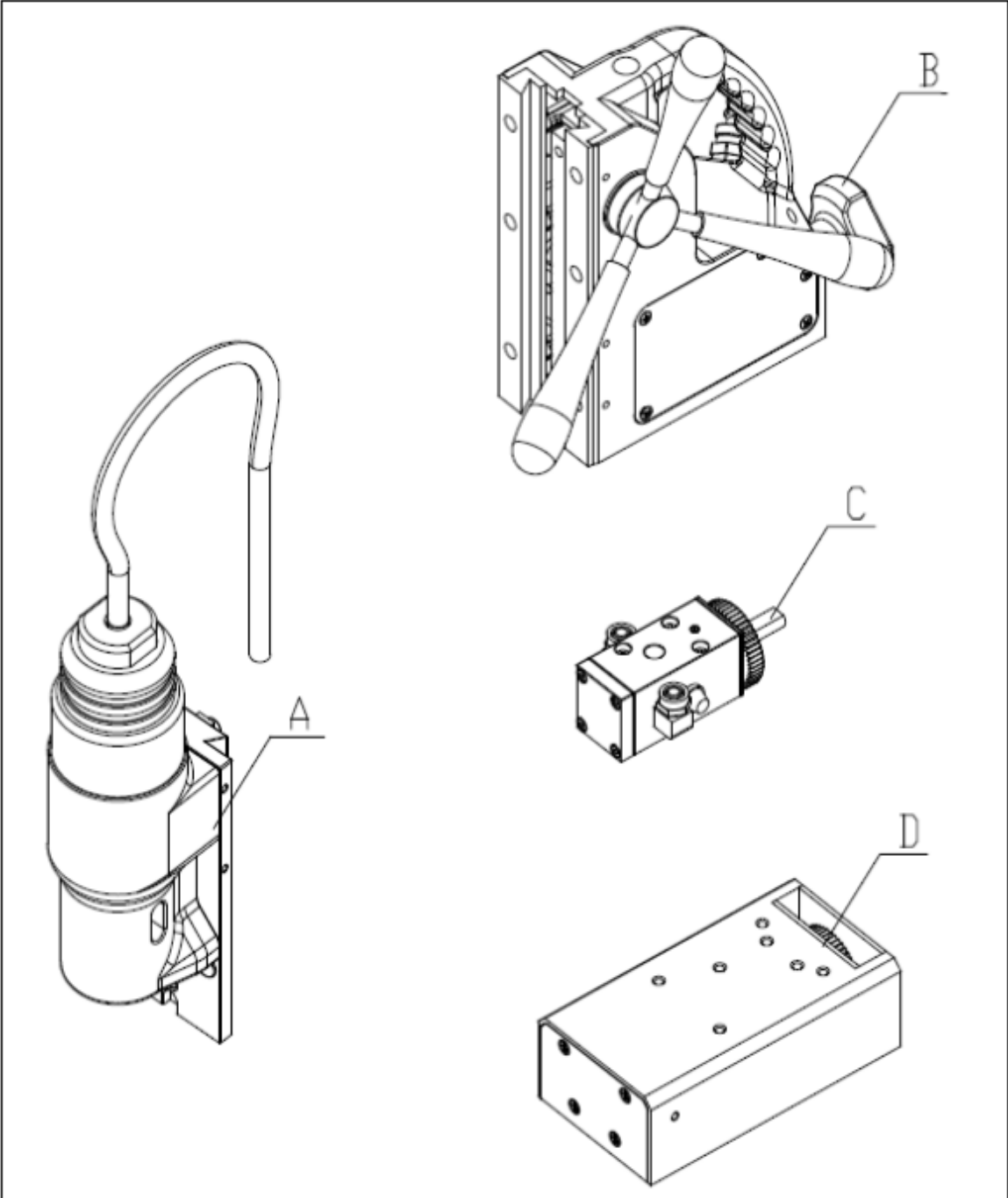
Consult your dealer for further information on the appropriate accessories.

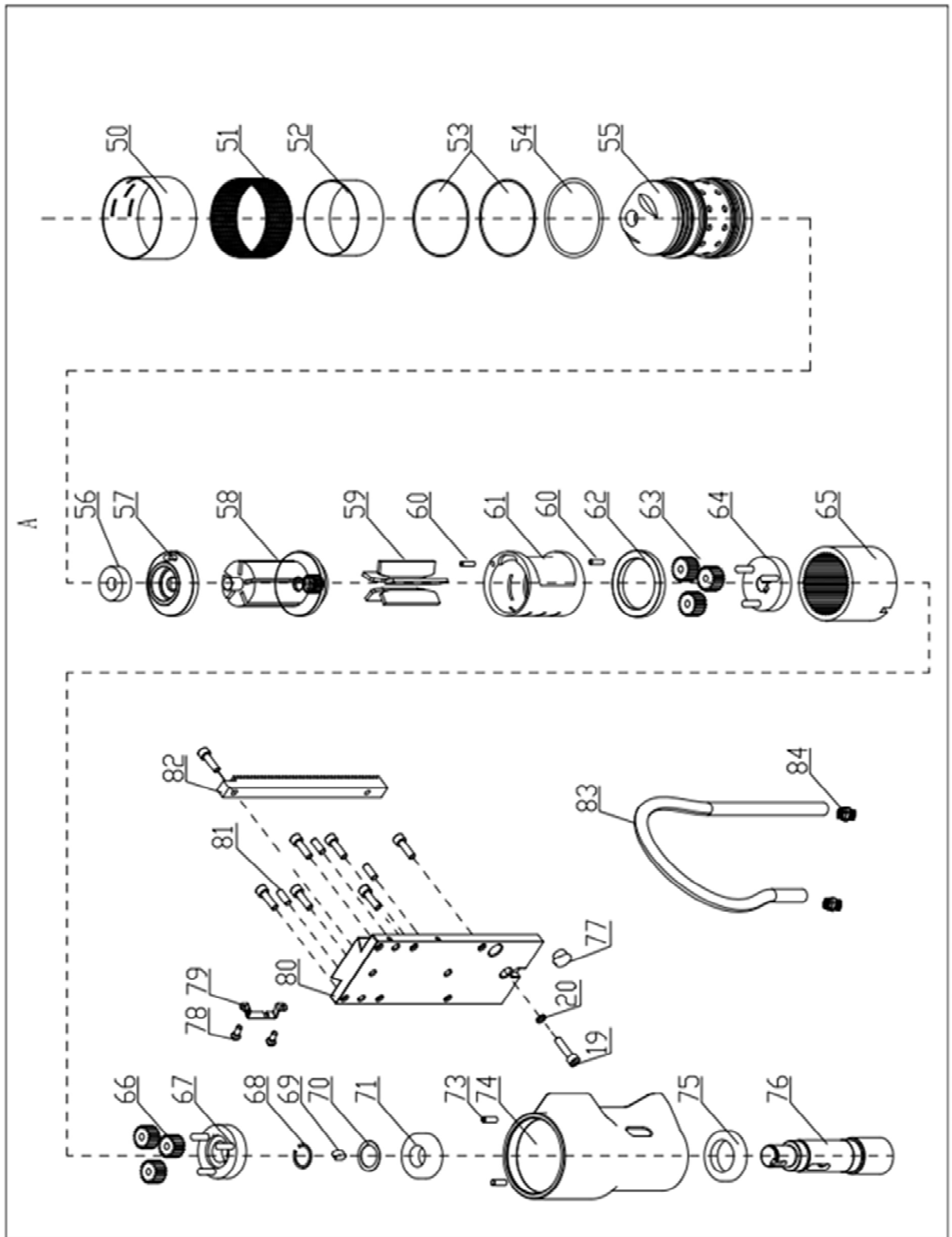
## 7. Trouble shooting

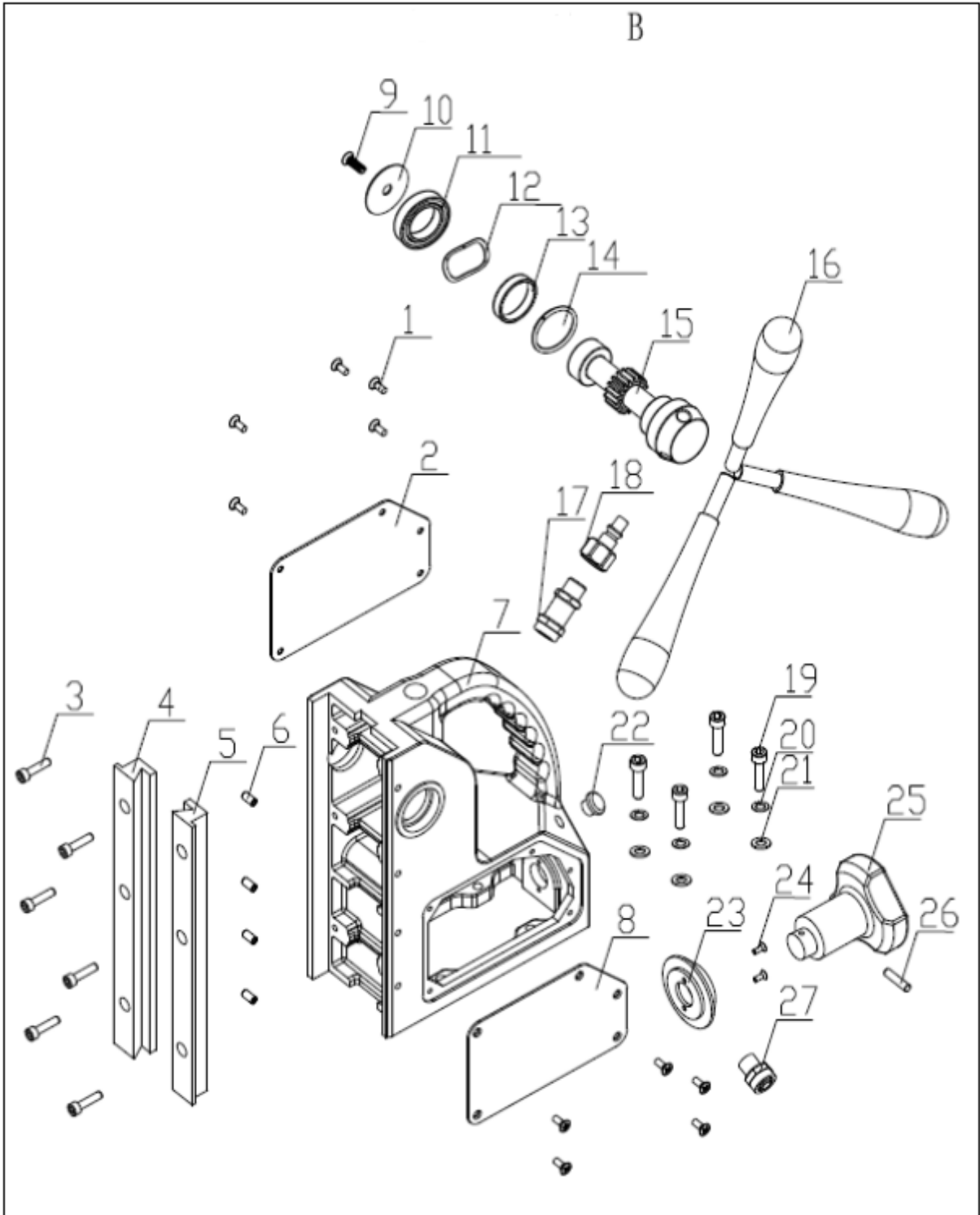
Insufficient magnetic force	<ul style="list-style-type: none"> <li>- Bottom of magnet not clean and/or dry</li> <li>- Bottom of magnet not suitable for workpiece</li> <li>- Work piece is not bare metal</li> <li>- Work piece is not clean or flat</li> <li>- Work piece too thin</li> <li>- Defective magnet</li> </ul>
Motor starts running with switch in OFF position when air supply is switched ON	<ul style="list-style-type: none"> <li>- Defective ON / OFF switch or valve</li> </ul>
Motor does not start with switch in ON position	<ul style="list-style-type: none"> <li>- Damaged or defective connectors or air hose</li> <li>- Defective ON / OFF switch or valve</li> <li>- Defective gearbox casing</li> </ul>
Motor suddenly stops	<ul style="list-style-type: none"> <li>- Components loose or missing, causing vibration</li> <li>- Machine shifting on workpiece</li> <li>- Unstable cutter/arbor combination</li> <li>- Dull cutter</li> <li>- Cutter not suitable for workpiece</li> </ul>
Motor running irregularly or too slow	<ul style="list-style-type: none"> <li>- Insufficient or irregular air pressure</li> </ul>
Motor makes loud or screeching noise	<ul style="list-style-type: none"> <li>- Air pressure is too high</li> <li>- Bearing(s) worn out</li> <li>- Gear(s) worn out</li> <li>- Insufficient grease in gear box</li> </ul>
Motor running roughly and/or seizing up	<ul style="list-style-type: none"> <li>- Bent arbor</li> <li>- Shaft extending from the motor is bent</li> <li>- Guide not mounted straight</li> <li>- Dirt between arbor and guide</li> </ul>
Motor making a rattling sound	<ul style="list-style-type: none"> <li>- Bearing(s) worn out</li> <li>- Gear(s) worn out</li> <li>- Insufficient grease in gear box</li> </ul>
Annular cutters break quickly, holes are bigger than the hole cutter	<ul style="list-style-type: none"> <li>- Clearance in the guide</li> <li>- Bent arbor</li> <li>- Shaft extending from the motor is bent</li> <li>- Bent pilot pin</li> </ul>
Guiding takes a great deal of effort	<ul style="list-style-type: none"> <li>- Guides are set too tight</li> <li>- Guides or gear-rack are dry and need lubrication</li> <li>- Guides or gear rack are dirty or damaged</li> <li>- Capstan hub of feeding system is damaged</li> </ul>
Rotation system free stroke too long	<ul style="list-style-type: none"> <li>- Loose or defective gear-rack</li> <li>- Defective rotation system</li> </ul>

# 8. Exploded views & spare parts list

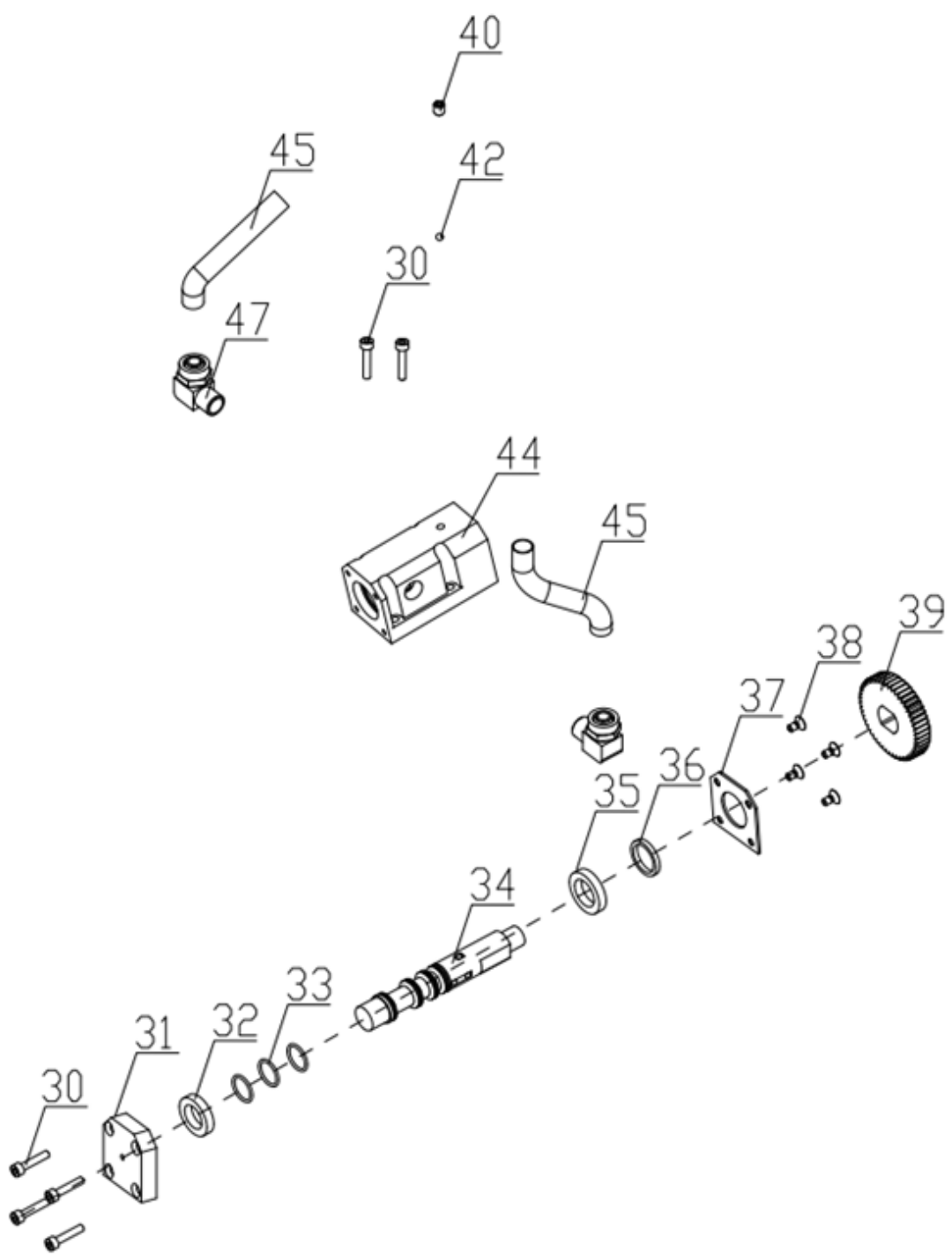
## 8.1 Exploded views

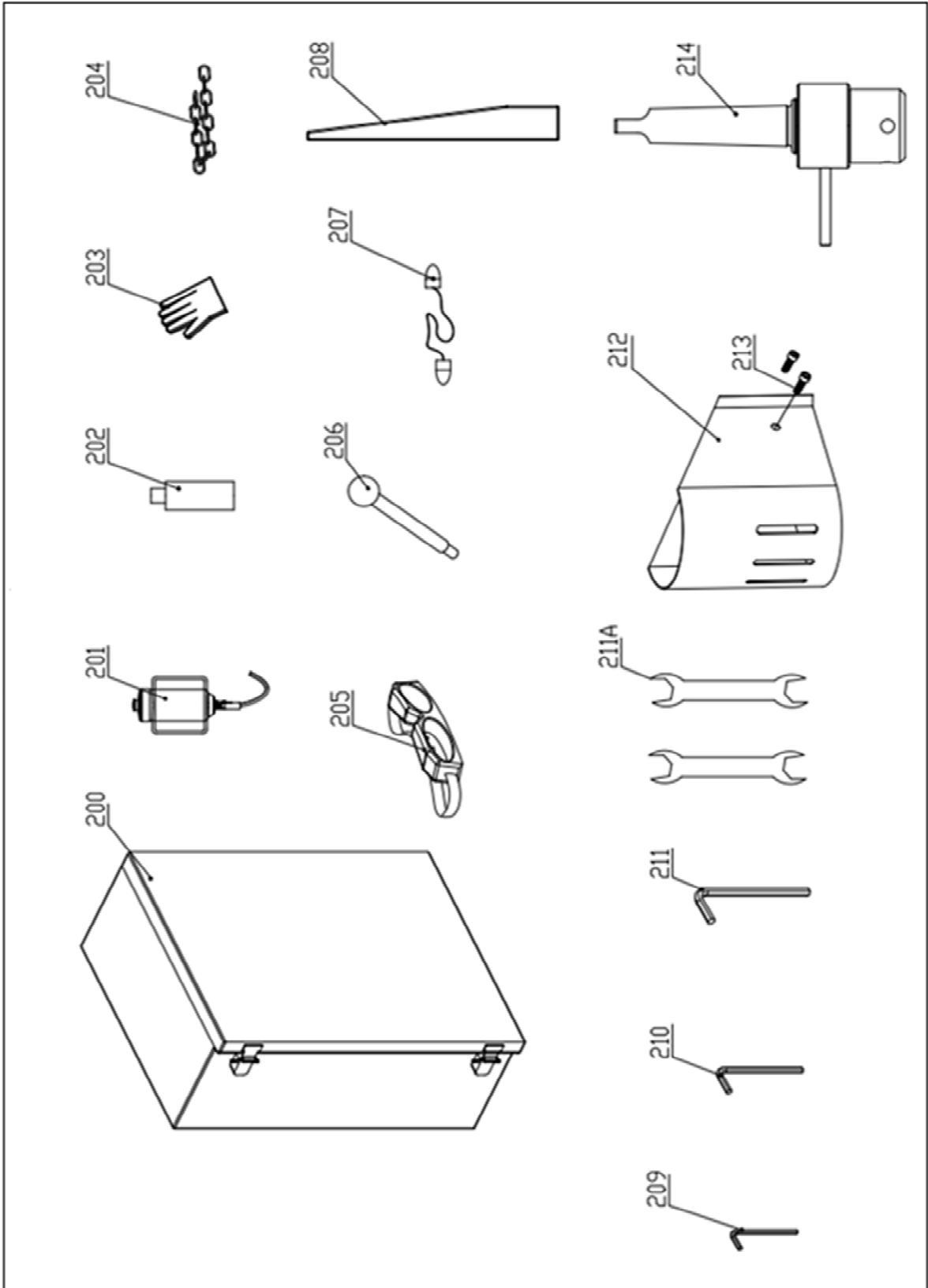






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## 8.2 Spare parts

No.	Part no.	Description	Qty
1	020.0101	Panel screw BKVZ M4 x 8	10
2	AIR.0006	Rear panel AIR.55	1
3	100.0022	Bolt M5 x 20	6
4	AIR.0002	Aluminium rail (L) 17x22.8x230	1
5	AIR.0003	Aluminium rail (R) 17x22.8x230	1
6	020.0056/S	Screw SS M5 x 6	4
7	AIR.0001	Frame AIR.55	1
8	AIR.0005	Front panel AIR.55	1
9	020.0081	End screw BKVZ M6 x 16	1
10	050.0030	Ender cover Ø36 X 3	1
11	050.0063	Bearing 6804 ZZ	1
12	040.0023	Washer	1
13	032.0127A	Adapter ring v2	1
14	030.0027	Washer	1
15	020.0061/Z	Capstan hub assembly	1
16	020.0315	Arm for capstan	3
17	AIR.A015	Connector assembly	1
18	AIR.0004	Quick connector M15 x 1	1
19	020.0156	Bolt M6 x 20	4-8
20	020.0111	Washer M6 DIN7980	1-4
21	020.0112	Washer M6	4
22	AIR.0042	Silencer 3/8"	1
23	AIR.0025	Gear spacing ring 30x17x10	1
24	AIR.0007	Screw M3 x 8	2
25	AIR.0008	Adjustment handle	1
26	AIR.0009	Pin 3 x 16	1
27	AIR.0081	Pneumatic joint 1/4"	1
30	020.0329	Screw M4 x 16	6
31	AIR.0010	Board 45 x 40 x 9.5	1
32	AIR.0011	Bearing 61802	1
33	AIR.0012	O-ring 17 x 1.5	3
34	AIR.0013-1	Valve stem 17 x 132	1
35	AIR.0011A	Bearing 61803	1
36	AIR.0014	Ring 22 x 17.5 x 2.8	1
37	AIR.0015	Board 45 x 40 x 2	1
38	AIR.0016	Screw M4 x 8	4
39	AIR.0017	Gear M1 x T50	2
40	020.0056/S	Screw SS M5 x 6	1

No.	Part no.	Description	Qty
42	AIR.0020	Steel ball 5	2
44	AIR.0022	Valve body 79.5 x 40 x 45	1
45	AIR.0023	Tube 12	2
47	AIR.0024	Right-angle air connection 1/4"	2
50	AIR.0043	Stainless steel tube cover	1
51	AIR.0044	Stainless steel mesh	1
52	AIR.0045	Silencer sponge	1
53	AIR.0046	O-ring 70 x 3.3	1
54	AIR.0047	O-ring 64 x 2.2	2
55	AIR.0048	Case	1
55A	100.0571	Circlip 471 11 x 1	1
56	AIR.0049	Bearing 6201Z	1
57	AIR.0050	Intake cover	1
58	AIR.A007	Armature	1
59	AIR.0053	Page	5
60	032.0211	Casing pin 4 x 12	2
61	AIR.0054	Field	1
62	AIR.0059	Limit ring	1
63	AIR.0060	Planetary gear	3
64	AIR.A005	Planetary gear carrier	1
65	AIR.0064	Ring gear	1
66	AIR.0066	Planetary gear	3
67	AIR.A006	Planetary gear carrier	1
68	050.0076	Circlip Ø20	1
69	050.0077	Key 6 x 6 x 12	1
70	050.0462	Washer 20.5 x 28 x 0.2	1
71	030E.5034	Bearing nsk 6004 ddu	1
73	100.0549	Casing pin	2
74	AIR.0067	Inner gear plate	1
75	050.0068	Bearing 61906 DDU	1
76	050.0461	Spindle drive shaft 34 x 146	1
77	AIR.0068	Sealing plug	1
78	KSP.MS	Screw M5 x 10	2
79	KSP.M/3	Tank holder	1
80	AIR.0070	Slide	1
81	AIR.0069	Pin 6 x 16	3
82	050.0074	Rack - 1.5X39T	1
83	AIR.0090	Hydraulic pipe	1



No.	Part no.	Description	Qty
84	AIR.0091	Pipe joint M16 x 1.5	2
200	AIR.A009	Case for AIR.55	1
201	KSP.Q2	Coolant tank Quick Connect	1
202	IBO.0.2L	Bottle 0.2LTR	1
203	PRM.61	EUROBOOR gloves M	1
	PRM.62	EUROBOOR gloves L	
	PRM.63	EUROBOOR gloves XL	
204	SAF.400	Safety chain (1 mtr) with lock	1
205	SAF.100	Safety goggles	1
206	KSP.P	Pin and knob for cooling tank	1

No.	Part no.	Description	Qty
207	SAF.200	Ear plugs	1
208	DRIFT3	Drift MT3	1
209	IMB.US2.5	Allen key 2.5 mm	1
210	IMB.US4	Allen key 4.0 mm	1
211	IMB.US5	Allen key 5.0 mm	1
211A	AIR.0094	Open end wrench 19/22	2
212	SAF.MDMB	Safety guard	1
213	020.0223	Screw M5 x 10	2
214	080.2002A	Arbor MT3 - 19.05 (3/4") Weldon	1
D	AIR.A004	Magnet AIR.55	1
		Pneumatic oil	

## 8.3 Warranty and service

### Warranty

Euroboor B.V. warrants this magnetic drilling machine to be free of material defects and workmanship errors under normal use for a period of 12 months after date of purchase.

This 12 month period can be extended to 24 months in total by registering the product on our website: <https://euroboor.com/support/register/>.

Serial number:

Date of purchase:

**Don't forget to register your machine at:**  
<https://euroboor.com/support/register/>  
**[ only when registered you benefit from extended warranty ]**

### Service

To maximise the lifetime of your EUROBOOR machine always use service and parts from an official EUROBOOR distribution channel. Whenever in need of such, always contact original point of sales or, if no longer existent, the distributor of EUROBOOR products in your country.

## 8.4 ATEX

### CE DECLARATION OF CONFORMITY



Manufacturer

**EUROBOOR BV**  
Kryptonstraat 110  
NL - 2718 TD Zoetermeer

declares that the following appliance complies with the appropriate basic safety and health requirements of the EC guidelines based on its design and type, as brought into circulation by EUROBOOR BV.

<i>Designation/function</i>	Professional pneumatic drilling machine with permanent magnetic base, suitable for drilling in potentially explosive atmospheres
<i>Types</i>	AIR.55 TUBE.55/AIR
<i>Characteristics</i>	Non-electric, spark-free, air powered motor Speed: 350 rpm (no load) Air pressure: min. 6.3 bar, max. 8.0 bar Air consumption: 1.1 m <sup>3</sup> /min
<i>Applicable EC directives</i>	2001/95/EC on general product safety 2014/34/EU also known as ATEX 114
<i>Classifications</i>	II 2G Ex h IIC T6 80°C Gb II 2D Ex h IIIB T6 80°C Db
<i>Further standards</i>	EN-IEC 60079 on Ex equipment EN ISO 80079 on non-electrical equipment
<i>Valid until</i>	5 February 2024



Zoetermeer, 5 February 2021

Albert Koster

Managing Director