OPERATOR'S MANUAL

DRILLING MACHINE WITH MAGNETIC BASE

MINIBEAST ULTRA

Unit 21 Empire Business Park, Enterprise Way, Burnley, BB12 6LT
Phone: +44 1706 229490
www.jeiuk.com e-mail: sales@jeisolutions.co.uk

Contents

1. GENERAL INFORMATION 3
1.1. Application 3
1.2. Technical data 3
1.3. Equipment included 5
1.4. Dimensions 6
1.5. Design 6
2. SAFETY PRECAUTIONS 7
3. SYMBOLS 9
4. STARTUP AND OPERATION 10
4.1. Installing, removing, and operating the annular cutter 10
4.2. Installing and removing the cooling system bottle 12
4.3. Preparation 12
4.4. Drilling 14
4.5. Replacing the brushes 15
5. ACCESSORIES 16
5.1. Pressure cooling system 16
6. ENVIRONMENTAL PROTECTION 17
7. DECLARATION OF CONFORMITY 18
8. WARRANTY CARD 19

1. GENERAL INFORMATION

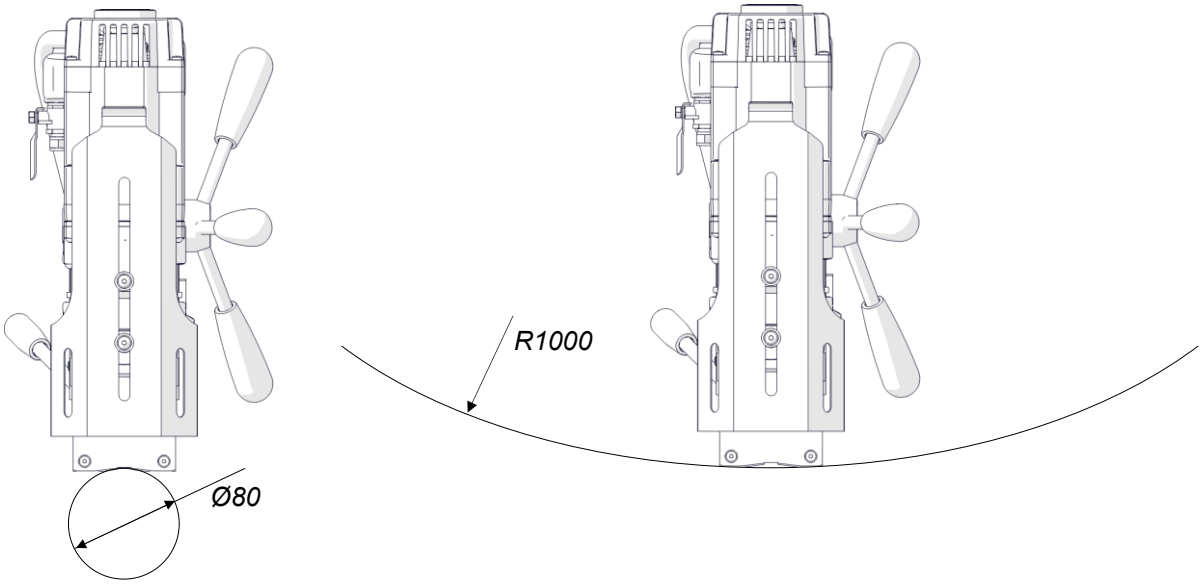
1.1. Application

The PRO 36 is a drilling machine designed to drill holes with diameters of up to 36 mm (1.42″) to a depth of up to 50 mm (1.97″) by using annular cutters.
The magnetic base allows for fixing to the ferromagnetic surfaces with force assuring operator's safety and correct operation of the drilling machine. The safety strap protects the machine from falling in case of a fixing loss.

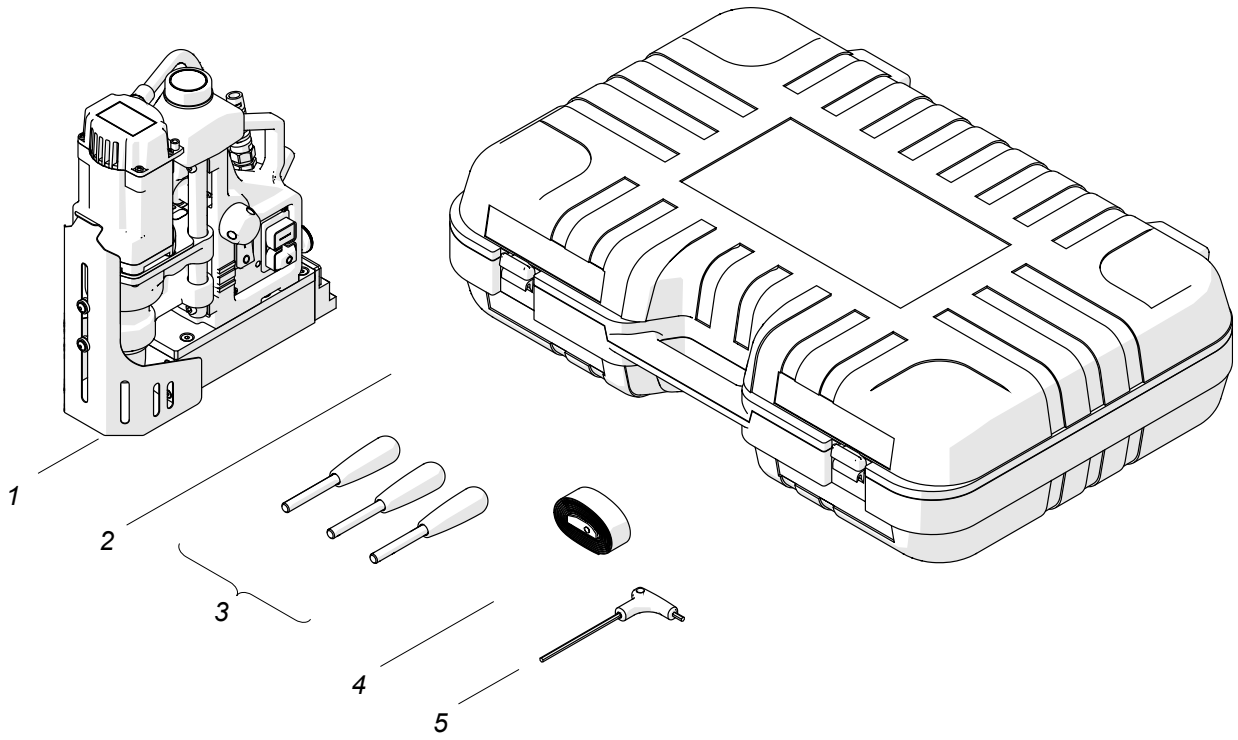
1.2. Technical data

Voltage	1~ 220-240 V, 50-60 Hz
Power	1020 W
Spindle shank	19 mm (3/4″) Weldon
Maximum drilling diameter	36 mm (1.42″)
Maximum drilling depth	50 mm (1.97″)
Magnetic base holding force (surface of thickness of 25 mm and roughness of R_a = 1.25)	7000 N
Magnetic base dimensions	75 mm × 188 mm × 53 mm
Stroke	70 mm (2.76″)
Rotational speed with load	350 rpm
Minimum workpiece thickness	5 mm (0.2”)
Protection class	I
Noise level	More than 70 dB
Required ambient temperature	0-40°C
Weight	13.2 kg (29.1 lbs)

The drilling machine allows for drilling on curved surfaces. The minimum values of external and internal diameters are shown below.

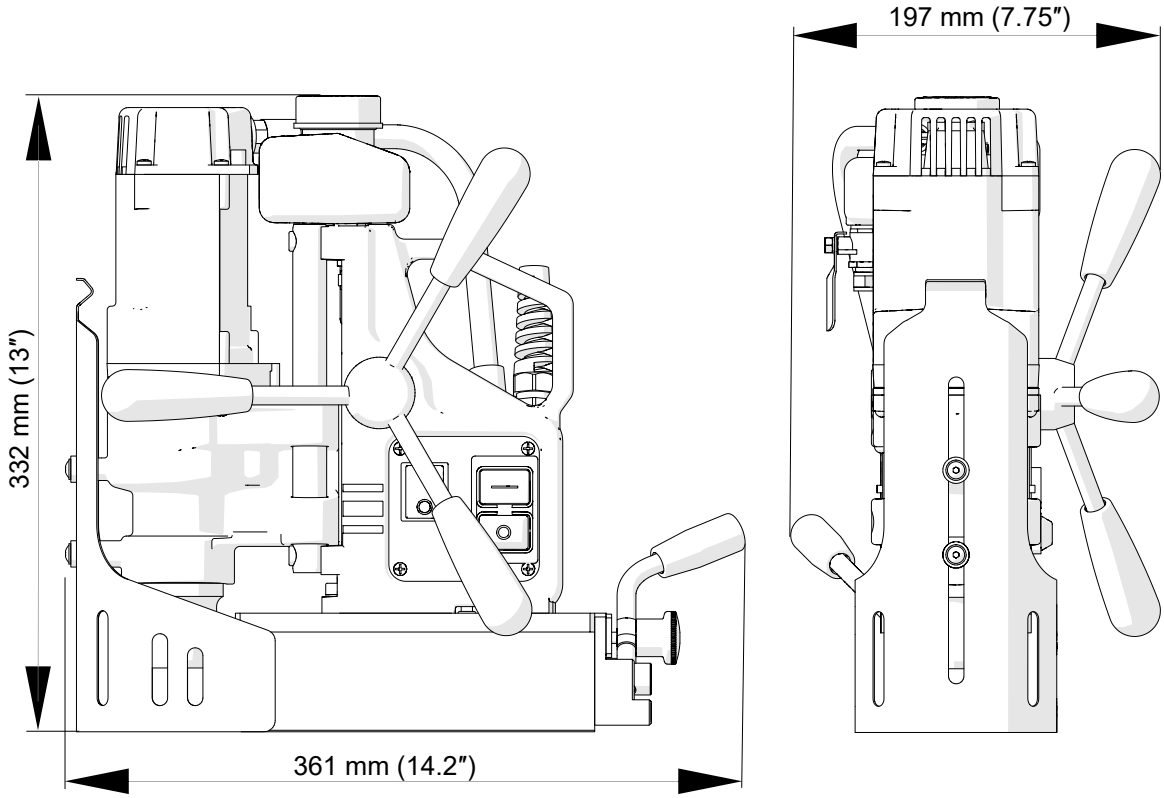


1.3. Equipment included

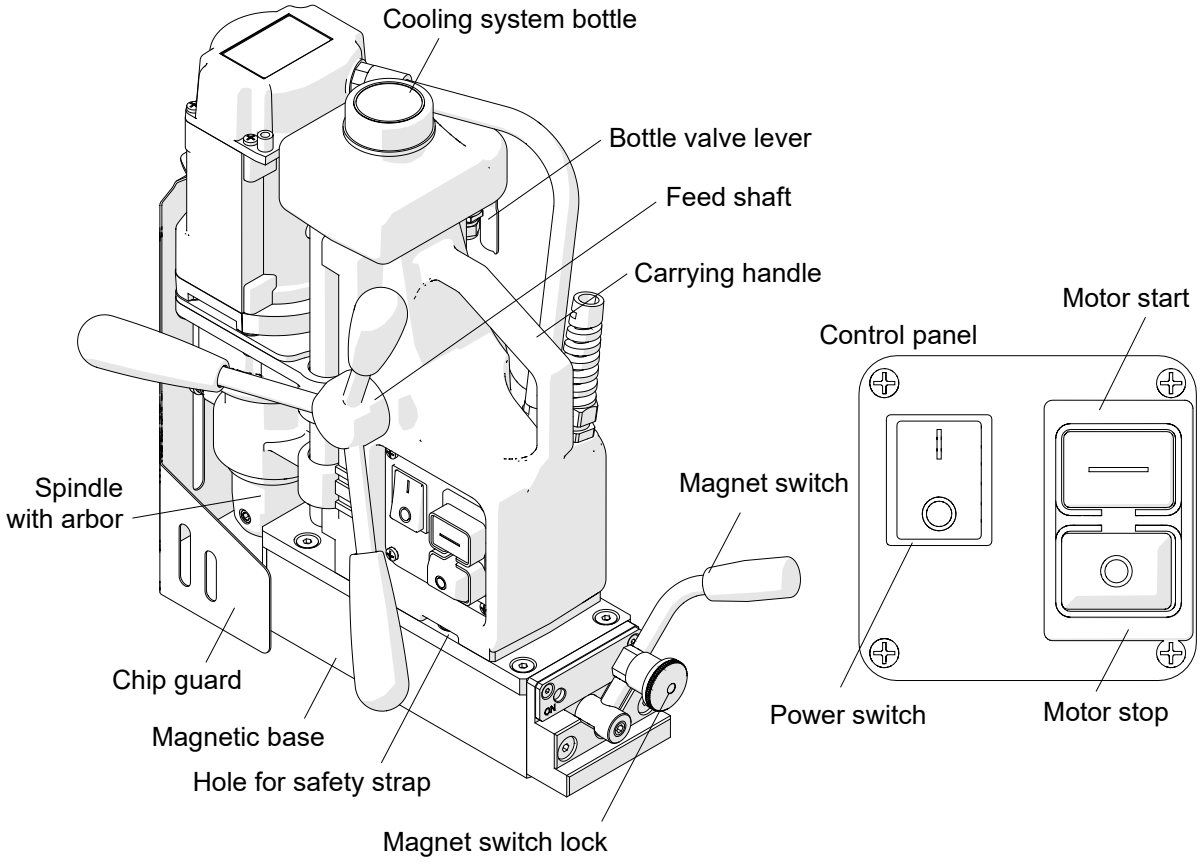


1	Drilling machine with a cooling system bottle and a chip guard	1 unit
2	Plastic box	1 unit
3	Handle	3 units
4	Safety strap	1 unit
5	4 mm hex wrench with a handle	1 unit
–	Operator’s manual	1 unit

1.4. Dimensions



1.5. Design



2. SAFETY PRECAUTIONS

1. Before use, read this Operator's Manual and complete training in occupational health and safety.
2. Use the machine only in applications specified in this operator's manual.
3. The machine must be complete, and all parts must be genuine and fully operational.
4. The specifications of the power source must conform to those specified on the rating plate.
5. Connect the machine to a correctly grounded power source. Protect the power source with a 16 A fuse for 230 V or a 32 A fuse for 115 V. If you are going to work on building sites, supply the machine through an isolation transformer with class II protection only.
6. Do not carry the machine by the power cord and do not pull the power cord. This may cause damage and electric shock.
7. Carry and position the machine with use of handle and only when the magnet switch is set to "0".
8. Untrained bystanders must not be present near the machine.
9. Before each use, ensure the correct condition of the machine, power source, power cord, plug, control parts, and tools.
10. Keep the machine dry. Never expose it to rain, snow, or frost.
11. Do not stay below the machine that is put at heights.
12. Keep the work area well-lit, clean, and free of obstacles.
13. Install the annular cutter securely by tightening the set screws. Remove wrenches from the work area before you connect the machine to the power source.
14. Do not use cutters that are dull or damaged.
15. Install and remove cutters by using protective gloves and only when the machine is unplugged from the power source.
16. Never use annular cutters without the pilot pin except when drilling incomplete through holes.
17. Do not drill holes whose diameter or depth differ from those specified in the technical data.
18. Never use the machine near flammable liquids or gases, or in explosive environments.
19. Never use the machine on surfaces that are uneven, not rigid, covered with rust, paint, chips, or dirt.

20. Use the safety strap in all work positions. Attach the machine to a fixed structure by fastening the strap through the opening in the machine body. When working in horizontal position fasten the strap to the carrying handle. Do not put the strap into the buckle from the front.
21. Before every use, inspect the machine to ensure it is not damaged. Make sure that no part is cracked or loose. Make sure to maintain proper conditions that may affect the operation of the machine.
22. Always use eye and hearing protection and protective clothing during work. The clothing must not be loose.
23. Proceed with caution when drilling in workpieces with a thickness less than 10 mm (3/8''). The holding force depends on the workpiece thickness and is much lower for thin sheets.
24. The whole bottom of the base must be in full contact with the workpiece. Each time before you put the machine on the workpiece, rub the workpiece with coarse-grained sandpaper.
25. Do not touch chips or moving parts. Do not let anything being caught in the moving parts.
26. After every use, remove chips and excess coolant from the machine and tool. Do not remove chips with bare hands.
27. Cover steel parts with a thin anti-corrosion coating to protect them against rust when not in use for any extended period.
28. Maintain the machine and install/remove parts and tools only after you unplug the machine from the power source.
29. Repair only in a service center appointed by the seller.
30. If the machine falls, is wet, or has any damage, stop the work and promptly send the machine to the service center for check and possible repair.
31. Do not leave the machine unattended when it operates.
32. If you are not going to use the machine, remove the cutter and the pilot pin from the holder, and then remove the machine from the worksite. Store the machine in a safe and dry place.

3. SYMBOLS

Before using the machine, familiarize yourself with the following symbols (tab. 1).

	Use eyes protection
	Use hearing protection
	Read the Operator’s Manual
	Warning against electric voltage

Tab. 1. Explanation of symbols

4. STARTUP AND OPERATION

4.1. Installing, removing, and operating the annular cutter

Unplug the machine from the power source and then rotate the handles to the right (*1*) to lift the motor. Wear protective gloves, insert the proper pilot pin into the annular cutter (*2*), and then use clean and dry cloth to wipe the arbor and cutter. Put the cutter into the arbor (*3*) to align the flat surfaces (*4*) with the screws (*5*). Then, use the 4 mm hex wrench to tighten both set screws.

To remove the cutter, loosen the screws (*5*) with the 4 mm hex wrench.

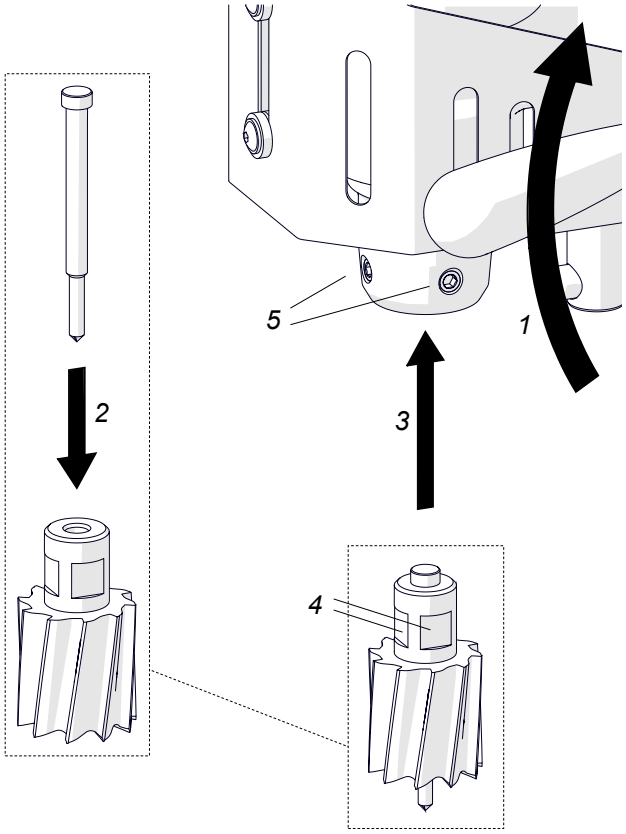


Fig. 1. Installing the annular cutter

Fig. 2 shows how the annular cutter works. As the cutter drills into the workpiece, the pilot pin retracts, and the coolant gets into the cutter. The tightened spring causes the slug core to be pushed out after drilling.

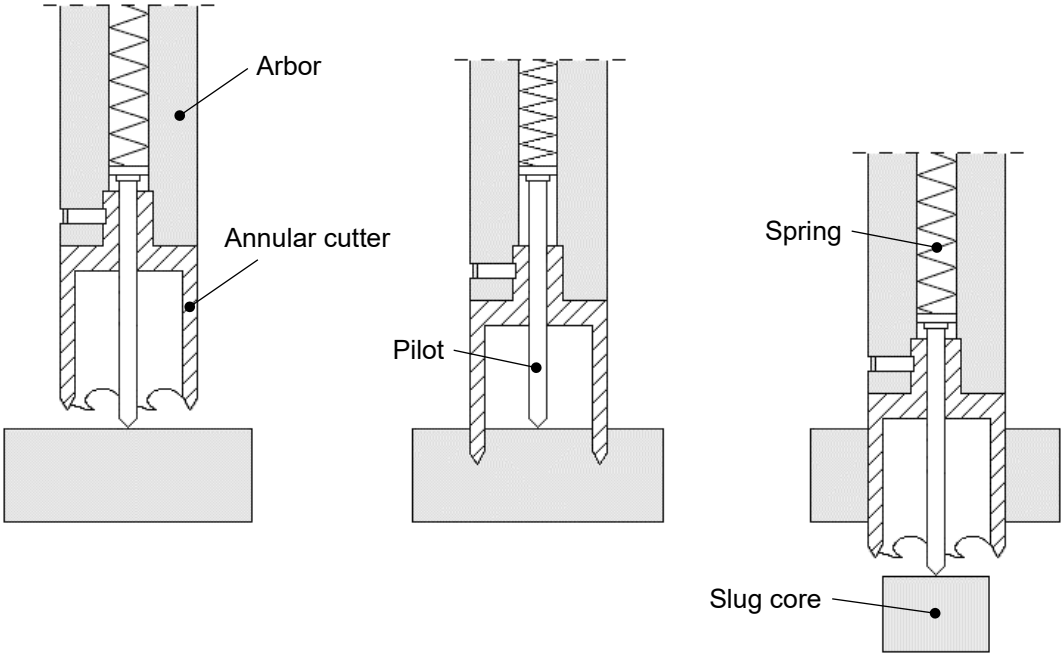


Fig. 2. Annular cutter principle of operation

Annular cutters are designed to drill only through holes (fig. 3). For incomplete through holes do not use the pilot pin.

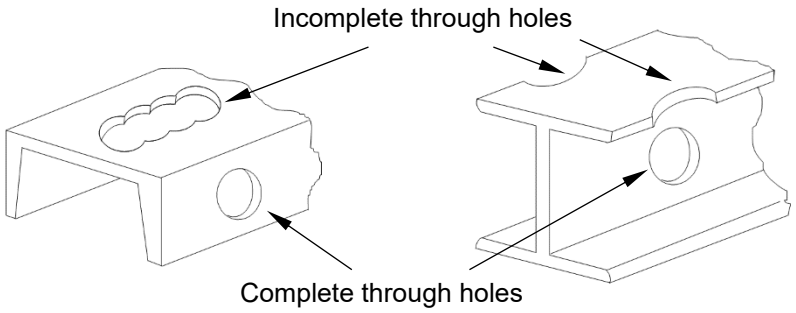


Fig. 3. Types of holes to drill with annular cutters

4.2. Installing and removing the cooling system bottle

Turn the handles to lift the motor (*1*, fig. 4). Next, place the cooling system bottle on the machine (2), and then attach the bottle hose to the hose fitting (3).
To remove the bottle, first detach the hose and lift the motor.

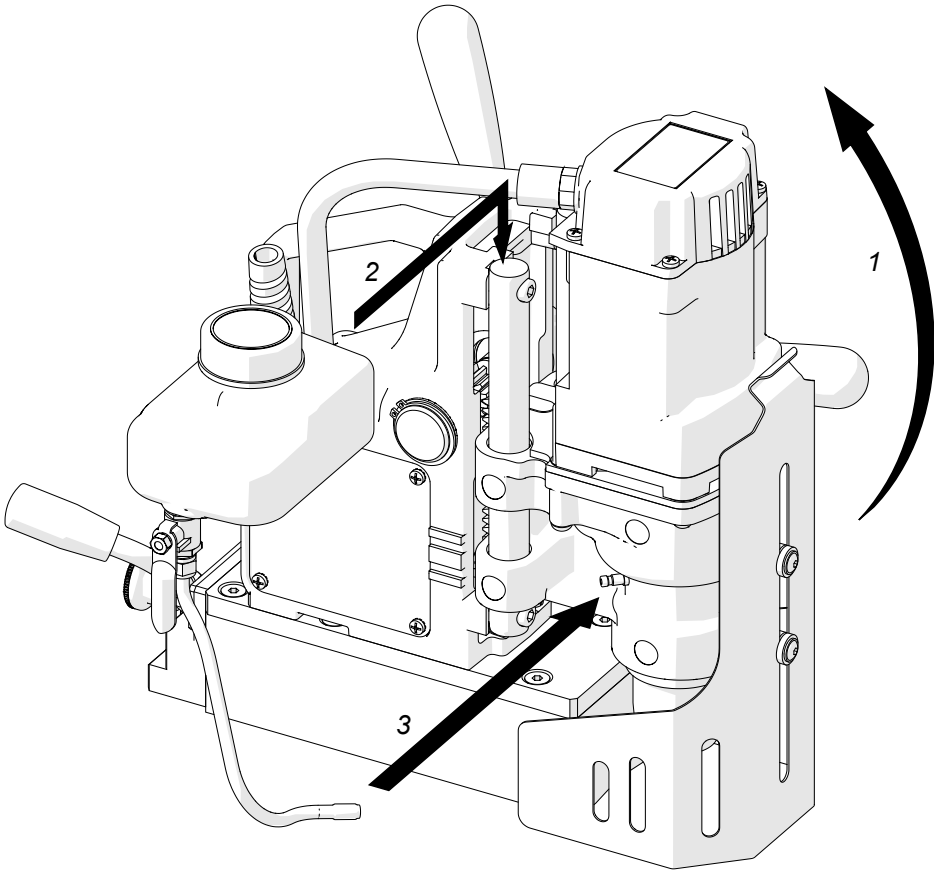


Fig. 4. Installing the cooling system bottle

4.3. Preparation

Before starting, clean steel parts, including the arbor, from anti-corrosion coating used to preserve the machine for storage and transport.
Attach the handles to the feed shaft. The machine can help the work of a left-handed person or in hard-to-reach places. To do this, install the feed shaft so that the handles are on the opposite side of the machine.
Select the proper annular cutter based on the hole size desired. Use a clean and dry cloth to wipe the arbor and cutter. Then, install the cutter into the arbor as described before.

Put the machine on a flat ferromagnetic surface that is at least 5 mm (0.2″) thick and free of rust, paint, chips, or dirt that decrease the holding force. The force value depends also on the type, thickness, flatness, and roughness of the surface, and the wear of the base bottom. Next, set the magnet switches to “ON” to turn on the clamping. Some types of steel are non-ferromagnetic (they do not conduct the magnetic flux) so the machine cannot clamp onto them.

Use the safety strap to prevent the machine from falling and avoid possible injury to the operator if the machine loses the clamping. To protect the machine, attach it to a fixed structure by fastening the strap through the opening (fig. 5a, 5b). When working in horizontal position fasten the strap to the carrying handle (fig. 5c). The strap must be tight, not twisted, and must be replaced every single time the machine comes loose from steel and hangs on the strap. Never insert the strap into the buckle from the front (fig. 5d).

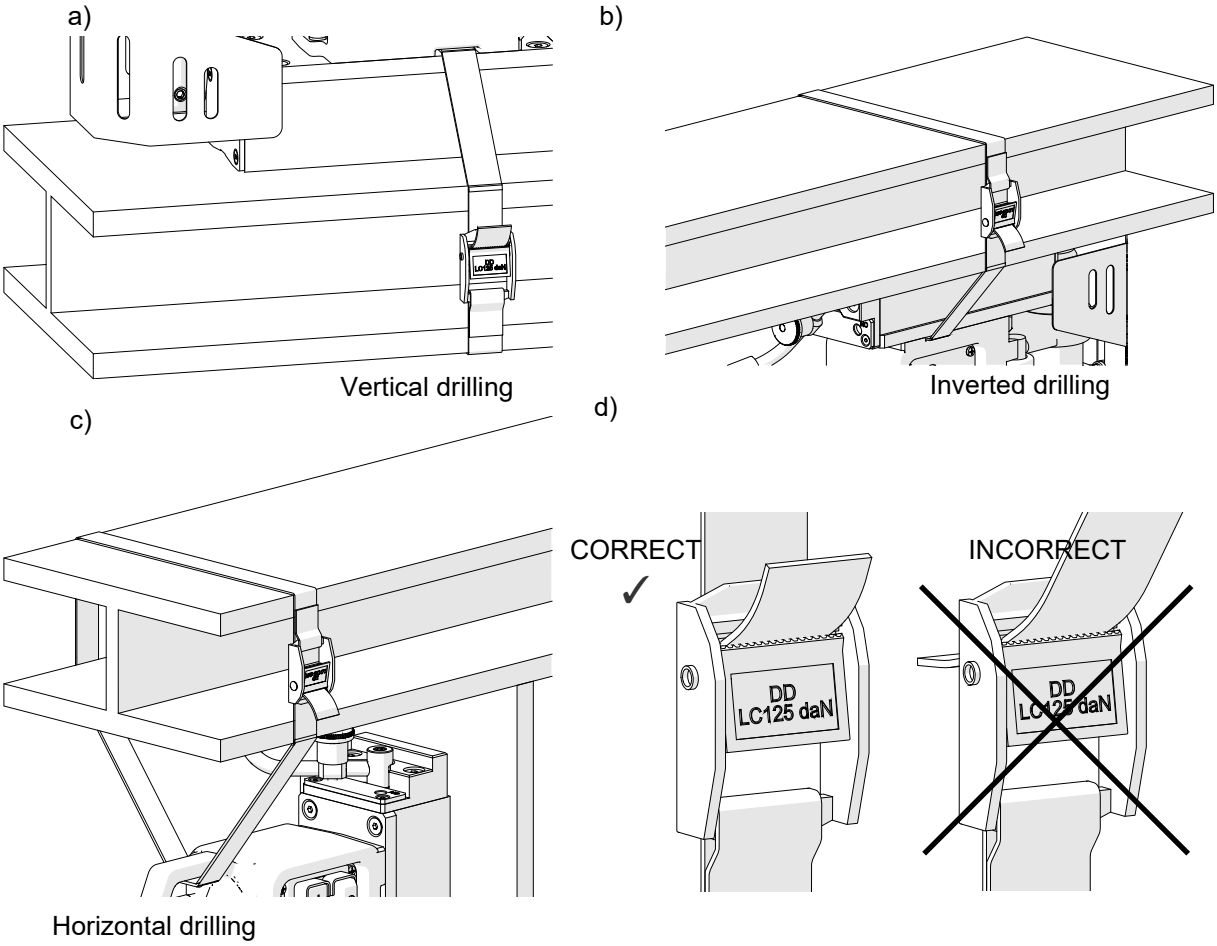


Fig. 5. Protecting the machine from falling by using the safety strap

Rotate the handles to the left to put the cutter end above the workpiece.

For vertical drilling (fig. 5a), fill the cooling system bottle with coolant. Do not use only water as the coolant. However, using emulsions made from water and drilling oil is adequate. Make sure that the cooling system works correctly. To do this, slightly loosen the bottle cap and use the lever to open the valve. The coolant should fill the system and start flowing from the cutter.

The cooling system works by gravity. Thus, when working in inverted or horizontal positions (Fig. 5b, 5c) use coolants under pressure or in the form of spray or paste.

4.4. Drilling

Connect the machine to the power source and set the POWER switch to “I”. Press the green MOTOR button to start the motor. Then, slowly rotate the handles to the left to lower the cutter to the workpiece, and start drilling. Drill the hole in one pass.

When the annular cutter goes through the workpiece, the slug core is pushed out with a large force.

Proceed with caution when drilling in workpieces with a thickness less than 10 mm (3/8’’). The holding force depends on the workpiece thickness and is much lower for thin sheets.

If the machine loses contact with the workpiece, the motor will still be running. Then, quickly press the red MOTOR button to turn off the motor.

After you get to the depth of 40 mm (1.6″), retract the tool above the workpiece as often as possible to supply the coolant manually (from the bottle) directly to the drilling area. After the hole is made, remove the cutter from the workpiece and press the red MOTOR button to turn off the motor. Before moving the machine to another place, set the magnet switch to “OFF” to turn off the base.

After using it, turn off the motor and the base, and then unplug the power cord. Next, clean chips and excess coolant from the machine and cutter and then remove the machine from the worksite. Tighten the bottle cap, close the valve, and then press the pilot pin to remove the coolant that remains in the cooling system. Use gloves to remove the cutter and the pilot pin from the arbor and then put the machine into the box.

4.5. Replacing the brushes

Check the condition of the brushes every 100 work hours. Unplug the machine from the power source and then rotate the handles to the right (*1*, fig. 6) to lift the motor. Next, remove the pressing plate (*2*), and then remove the brush holder (*3*) and the brush (*4*).If the brush is shorter than 5 mm (0.2″), replace both brushes with new ones. Install in the opposite sequence. Then, let the motor operate with no load for 20 minutes.

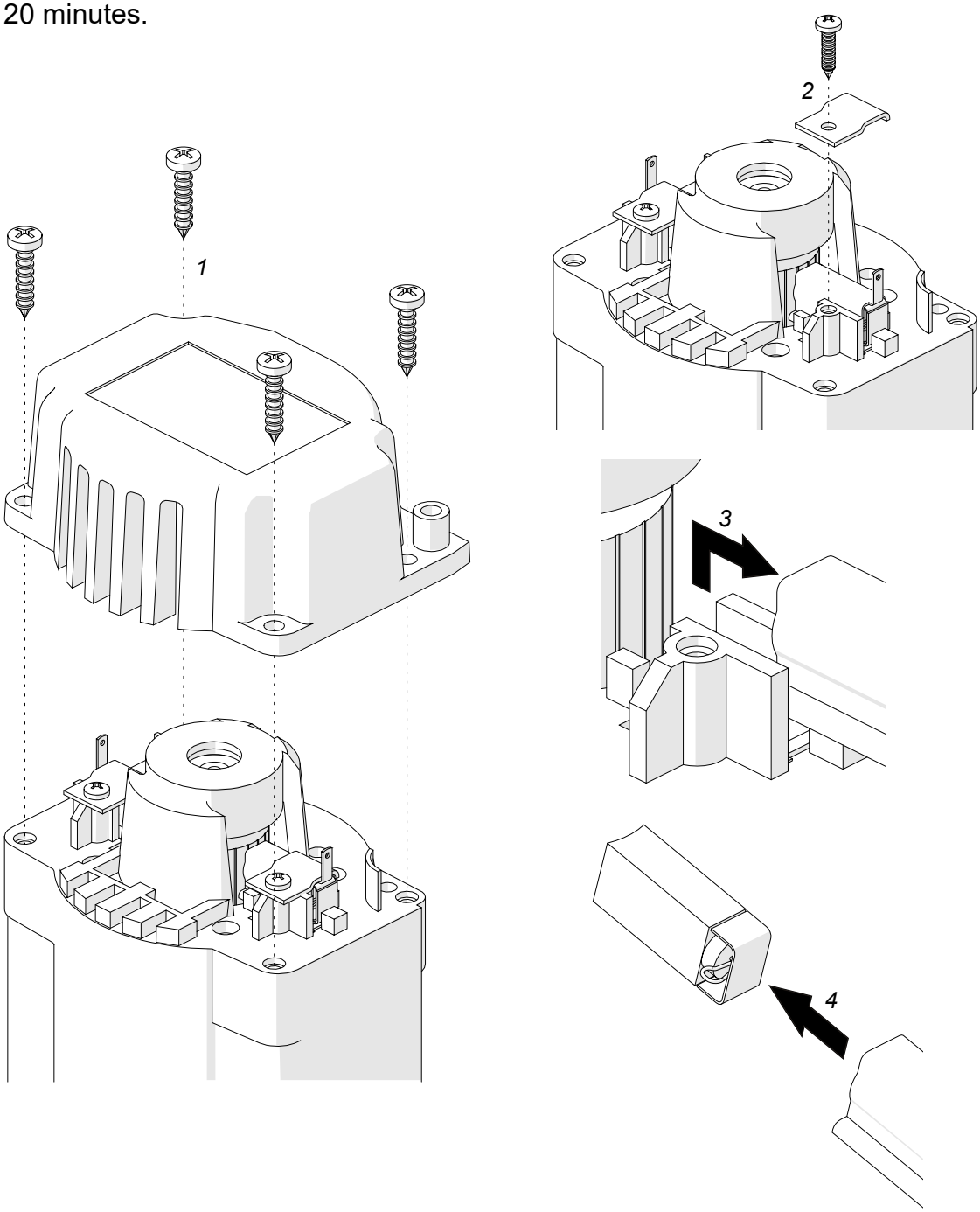


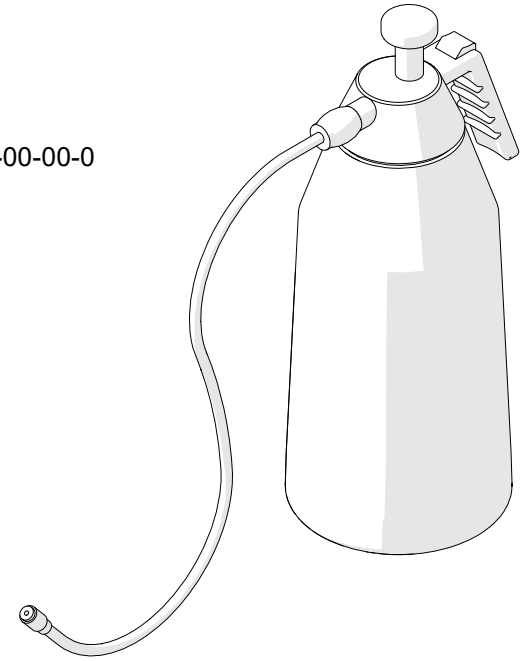
Fig. 6. Replacing the brushes

5. ACCESSORIES

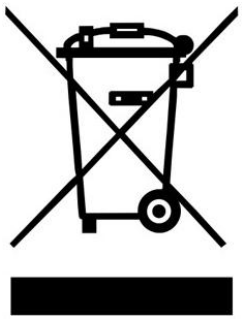
5.1. Pressure cooling system

Capacity of 2 liters.

Part number:
UKL-0440-16-00-00-0



6. ENVIRONMENTAL PROTECTION



In accordance with the European Directive 2012/19/EU, this device is marked with the symbol of the crossed-out waste bin. This marking means that the equipment must not be disposed of with other household waste after the service life. The user must return the product to a collection point for used electrical and electronic equipment. The collectors of used equipment, including local collection points, shops and municipal units create an appropriate system for returning such equipment. Correct handling of used electrical and electronic equipment helps in avoiding damage to health and the environment, which may result from the presence of dangerous components and incorrect storage and processing of such equipment.

7. DECLARATION OF CONFORMITY

EC Declaration of conformity

JEI DRILLING & CUTTING SOLUTIONS LTD
UNIT 21 EMPIRE BUSINESS PARK
ENTERPRISE WAY, BURNLEY, BB12 6LT

We declare with full responsibility that:

MINIBEAST ULTRA Drilling Machine with Magnetic Base

which the declaration applies to is in accordance with the following standard(s) placed below:

- EN ISO 12100:2010,
- EN 62841-1:2015,
- EN 55014-1:2017,

and satisfies the regulations of the guidelines: 2014/30/EU, 2006/42/EC, 2011/65/EU.

Person authorized to compile the technical file:
David McFadden, Managing Director

Burnley, 4 November 2022

David McFadden

8. WARRANTY CARD

WARRANTY CARD No.....

…….. in the name of Manufacturer warrants the machine to be free of defects in material and workmanship under normal use for a period of 2 years (24 months) from the date of sale, except batteries (if applicable) which are covered with 2 years (24 months) warranty from their manufacturing date.

This warranty does not cover tools and accessories as well as damage or wear that arise from misuse, accident, tempering, or any other causes not related to defects in workmanship or material.

Serial number .....

Date of sale .....

Signature and stamp of the seller .....

0.02 / 25 August 2025

WE RESERVE THE RIGHT TO MAKE CHANGES IN THIS MANUAL WITHOUT NOTICE