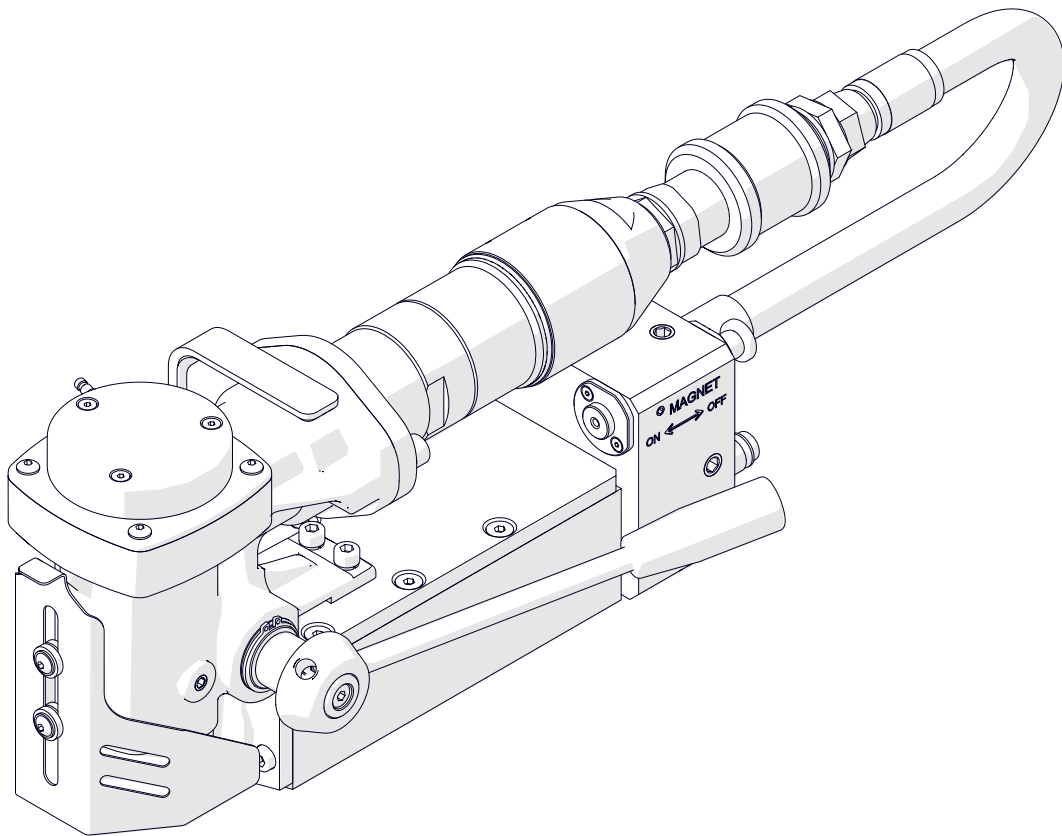


## **OPERATOR'S MANUAL**

### **HORIZONTAL AIR DRILLING MACHINE WITH MAGNETIC BASE AIRBEAST 40 ATEX**



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## 1. GENERAL INFORMATION

### 1.1. Application

The AIRBEAST 40 ATEX is a drilling machine designed to drill holes of diameters of up to 40 mm (1 37/64") to a depth of up to 25 mm (63/64") by using annular cutters.

The machine is Ex c IIC T6/T4 Gb Ex c IIIB T6/T4 Db certified to allow work in potentially explosive atmospheres.

The magnetic base clamps the machine to ferromagnetic surfaces. This assures that the operator is safe, and the machine works correctly. A safety strap protects the machine from falling in case of clamping loss.

It is allowed to drill outside pipes of a minimum diameter of 250 mm after checking the clamping of the magnetic base using the indicator.

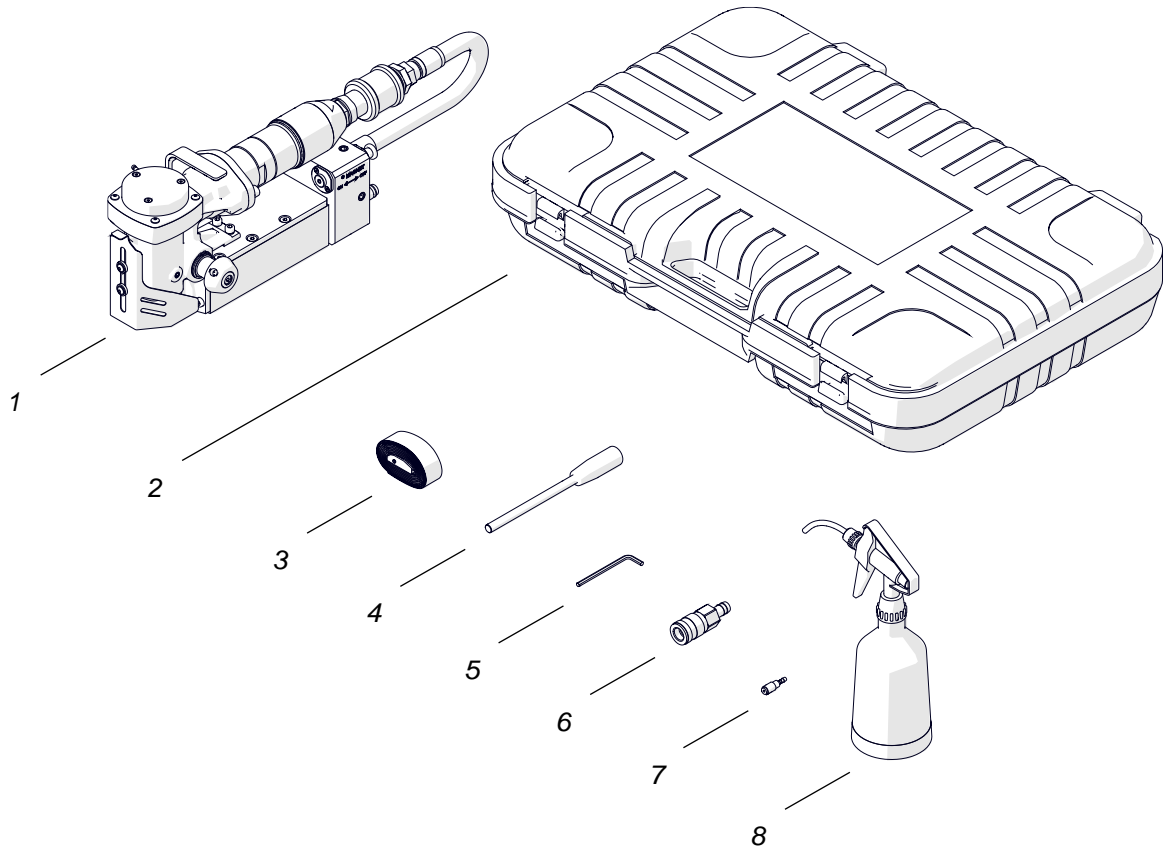
The machine is designed for use by a professional operator only.

### 1.2. Technical data

Pressure	6 bar (87 psi)
Air connection	CEJN 410 DN 10.4 R 3/8" BSPT fitting for quick coupling
Air consumption	1400 l/min (50 CFM)
Required air purity	40 µm (5 class)
Minimum diameter of air hoses	13 mm (33/64")
Power	800 W
Tool holder	19 mm (3/4") Weldon
Maximum drilling diameter	40 mm (1 37/64")
Maximum drilling depth	25 mm (63/64")
Stroke	40 mm (1 37/64")
Minimum pipe diameter*	250 mm (9 27/32")
Minimum workpiece thickness	10 mm (25/64")
Clamping force surface with the thickness of 25 mm (63/64") and roughness $R_a = 1.25$	7000 N
Magnetic base dimensions	75 mm x 188 mm x 56 mm (2 61/64" x 7 13/32" x 2 13/64")
Rotational speed with load	240 rpm
Noise level	More than 70 dB
Required ambient temperature during operation	0 – 40 °C (32 – 104 °F)
Required ambient temperature during storage	-10 – 50 °C (14 – 122 °F)
Maximum allowed ambient humidity	80% (non-condensing)
Weight	15 kg (33 lbs)
Potentially explosive atmosphere	Ex c IIC T6/T4 Gb Ex c IIIB T6/T4 Db

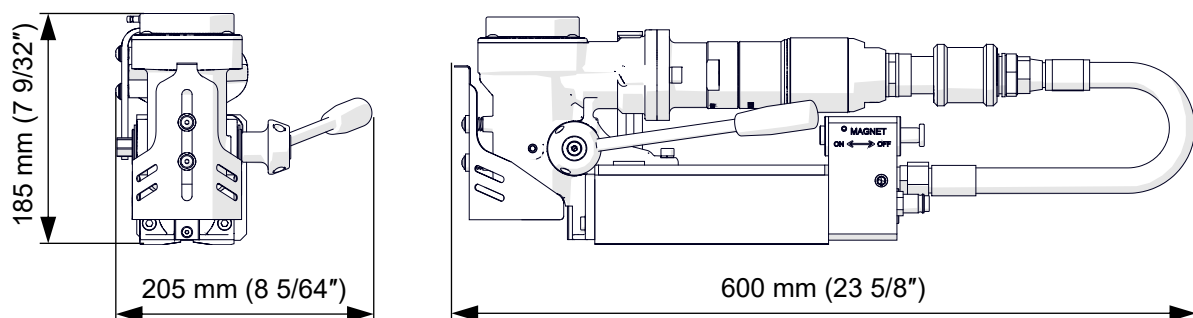
\* always check the clamping of the magnetic base using the indicator

### 1.3. Equipment included



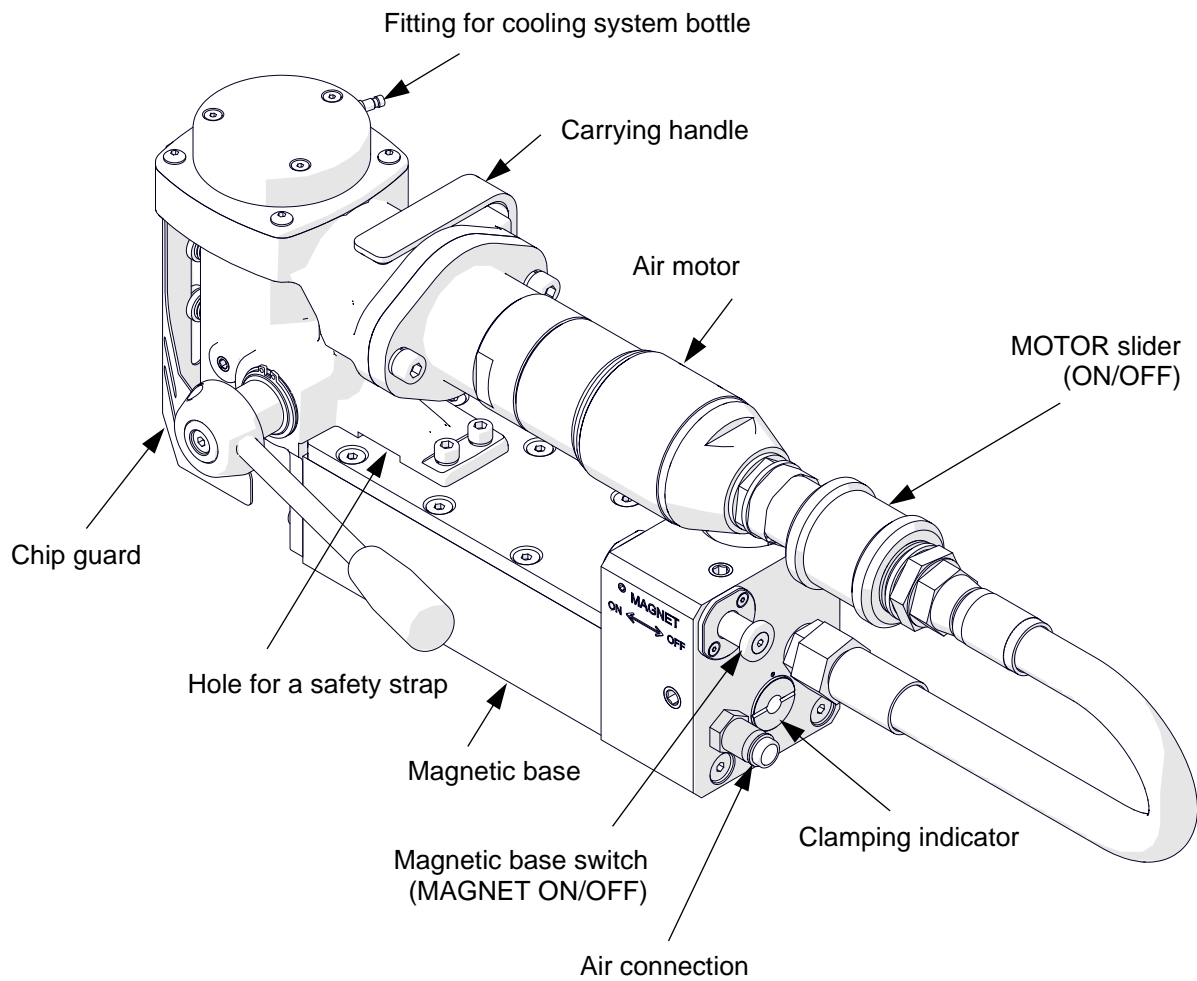
1	Drilling machine	1 unit
2	Box	1 unit
3	Safety strap	1 unit
4	Feed lever	1 unit
5	4 mm hex wrench	1 unit
6	Air quick coupling	1 unit
7	Quick coupling for cooling system bottle	1 unit
8	Cooling system bottle 0.5 l	1 unit
–	Operator's manual	1 unit

### 1.4. Dimensions



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**1.5. Design**

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## **2. SAFETY PRECAUTIONS**

1. Before use, read this Operator's Manual and complete a training in occupational health and safety.
2. Use only in applications specified in this Operator's Manual.
3. Make sure that the machine has all parts and they are genuine and not damaged.
4. Make sure that the specifications of the power source are the same as those specified on the rating plate.
5. Supply only with clean and lubricated air. Make sure that the air source has an air preparation unit (filter, regulator, and lubricator). Do not supply air by using a hose without a quick coupling.
6. Do not carry the machine by the hoses and do not pull the hoses. This can cause damage and serious injury.
7. Set the MAGNET switch and MOTOR slider to OFF before you move the machine. Use carrying handle to move the machine.
8. Keep untrained persons away from the machine.
9. Before each use, ensure the correct condition of the machine, air source, supply hose, air connection, quick coupling and tools.
10. Before each use, make sure that no part is cracked or loose. Make sure to maintain correct conditions that can have an effect on the operation of the machine.
11. Keep the machine dry. Do not expose the machine to rain, snow, or frost. Protect the supply hose from the sun.
12. Do not stay below the machine that is put at heights.
13. Keep the work area well-lit, clean, and free of obstacles.
14. Remove all elements from the work area before you connect the machine to the air source.
15. Use the set screws to tighten the annular cutter.
16. Do not use cutters that are dull or damaged.
17. Unplug the supply hose before you install and remove annular cutters.
18. Install and remove annular cutter by using protective gloves.
19. Use annular cutters without the pilot pin only when you drill incomplete through holes.
20. Do not drill holes whose diameter or depth differ from those specified in the technical data.

21. Do not use on surfaces that are rough, not flat, not rigid, or have rust, paint, chips, or dirt.
22. Ensure that the machine is correctly attached to the surface by checking the position of clamping indicator.
23. Use the safety strap to attach the machine to a stable structure. Put the strap through the hole in the machine body. Do not put the strap into the buckle from the front.
24. Each time before you put the machine on the workpiece, rub the workpiece with coarse-grained sandpaper. Make sure that the full bottom of the base touches the workpiece.
25. Always use eye and hearing protection and protective clothing during work. Do not use loose clothing.
26. Do not touch chips or moving parts. Do not let anything to be caught in moving parts.
27. After use, clean the machine and the cutter. Do not remove chips with bare hands.
28. Unplug the supply hose before you do maintenance or install/remove parts.
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 immediately send the machine to the service center for check and repair.
31. Do not leave the machine when it operates.
32. If you are not going to use the machine, remove the cutter from the holder. Then, remove the machine from the work area and keep it in a safe and dry place.
33. If you are not going to use the machine for an extended period, put anti-corrosion material on the steel parts.
34. SYMBOLS



Refer to instruction manual



Wear ear protection

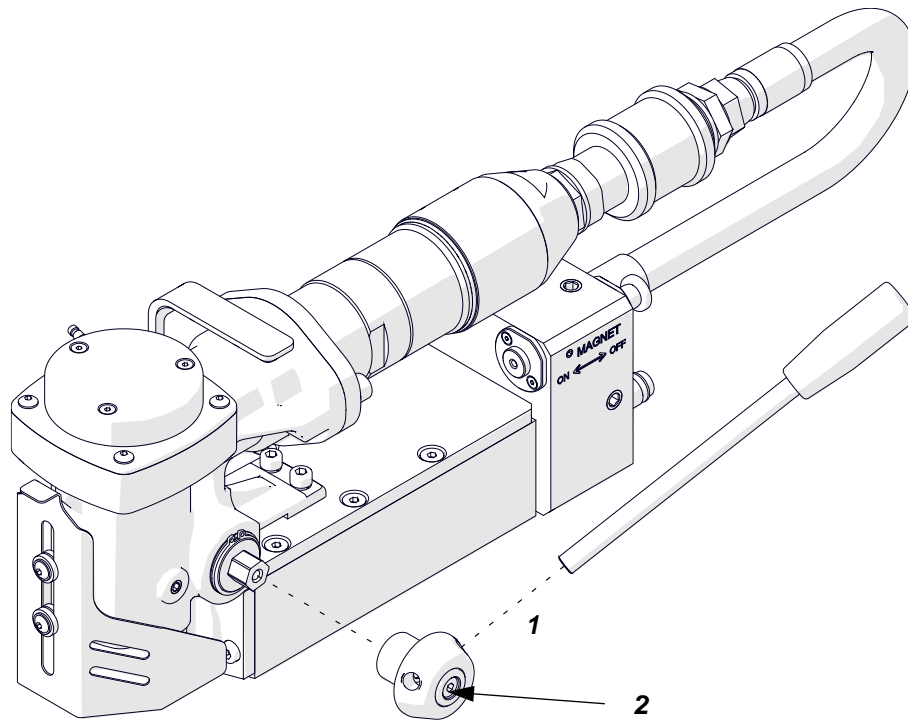


Wear eye protection

### 3. STARTUP AND OPERATION

#### 3.1. Installing the feed lever

Attach the feed lever (1). To install the lever at the other side of the machine, use the 4 mm hex wrench and loosen the head screw (2). Then, attach the head at the other side.

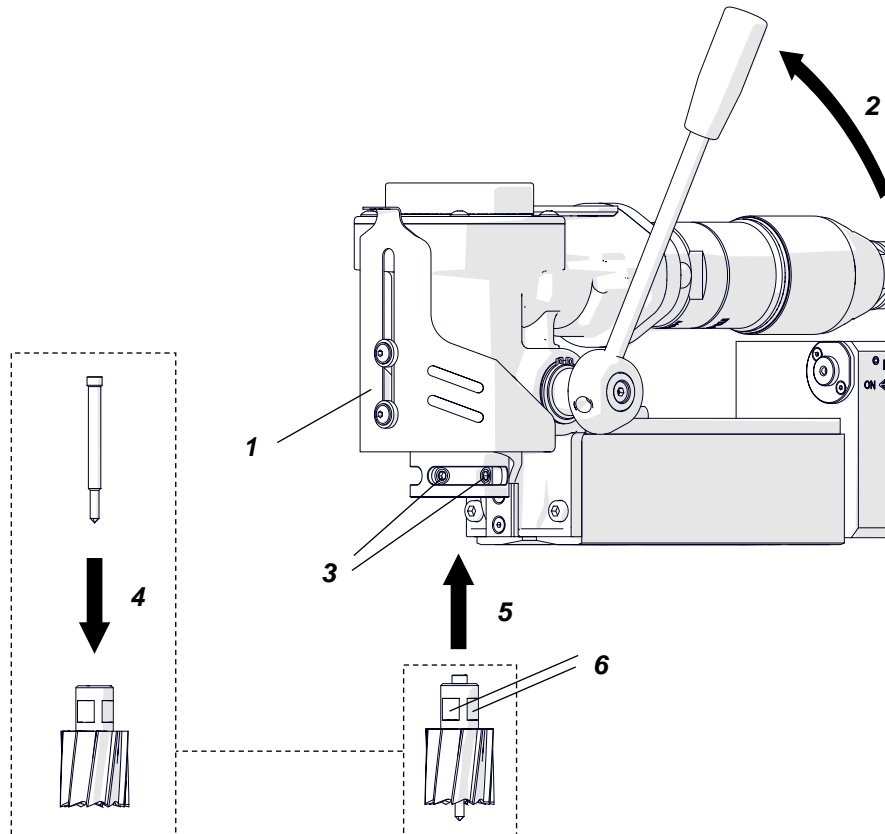




### 3.2. Installing and removing the annular cutter

Unplug the supply hose and lift the chip guard (1). Turn the feed lever to the left (2) to get access to the set screws (3). Use gloves to put the correct pilot pin into the annular cutter (4). Clean the cutter with a dry cloth. Put the cutter into the arbor (5) to align the flat surfaces (6) with the screws (3). Use the 4 mm hex wrench to tighten the screws.

To remove the cutter, loosen the screws (3) with the 4 mm hex wrench.



### **3.3. Preparing**

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The motor is at its full power after one hour of operation. Before the first use or after a long period of storage, put 3–5 drops of oil into the air connection. Then, connect the machine to a 6-bar air source and let the machine operate for 5–10 minutes.

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Before use, clean steel parts, including the Weldon socket, from anti-corrosion material used to preserve the machine for storage and transport.

Select the cutter that matches the required hole diameter. Use a dry cloth to clean the spindle and the cutter. Then, install the cutter as described before.

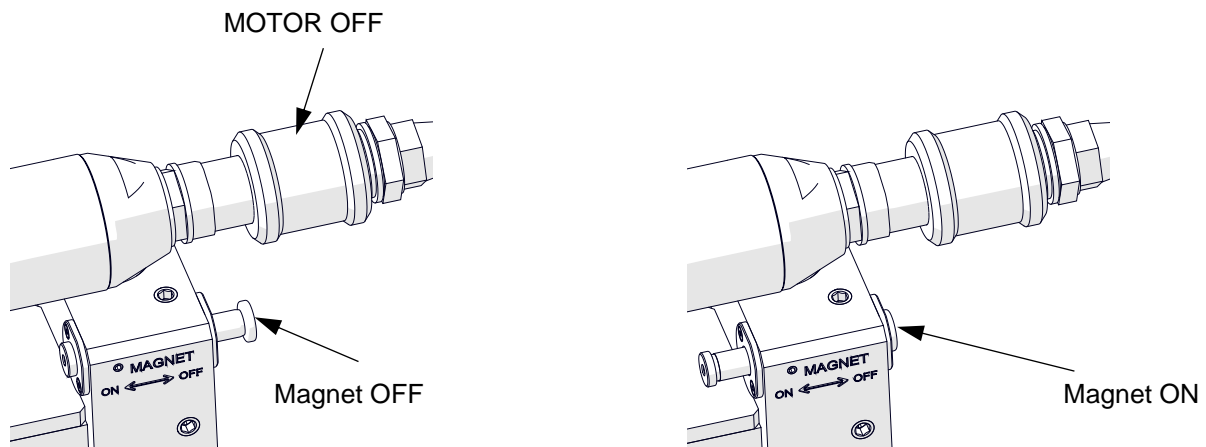
Connect the machine to a correctly prepared air source of sufficient purity. Use a supply hose with the air quick coupling. Make sure that all inner diameters of the air source (including the supply hose and fittings) are of at least 13 mm (3/8"). Use an air preparation unit that has a filter, regulator, and lubricator.

Put the machine on a ferromagnetic workpiece of thickness of at least 10 mm (25/64"). Drilling on convex surfaces is allowed only after checking the clamping of the magnetic base using the indicator. Make sure that there is no rust, paint, chips, or dirt on the surface. They decrease the clamping force. The force will be lower also if the surface is thin, rough, not flat, not rigid, or the bottom of the base is worn. Some types of steel (non-ferromagnetic) do not conduct magnetic flux so the machine cannot clamp onto them.

With the MOTOR slider set to OFF, set the MAGNET switch to ON to turn on the clamping.



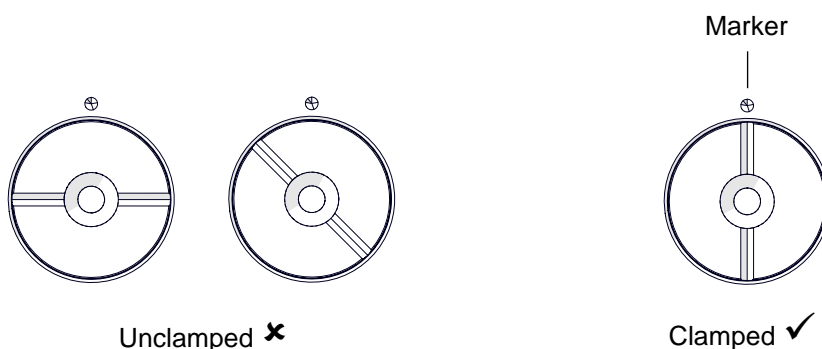
**If the motor switch is set to ON, then the motor starts up immediately when you turn on the clamping.**



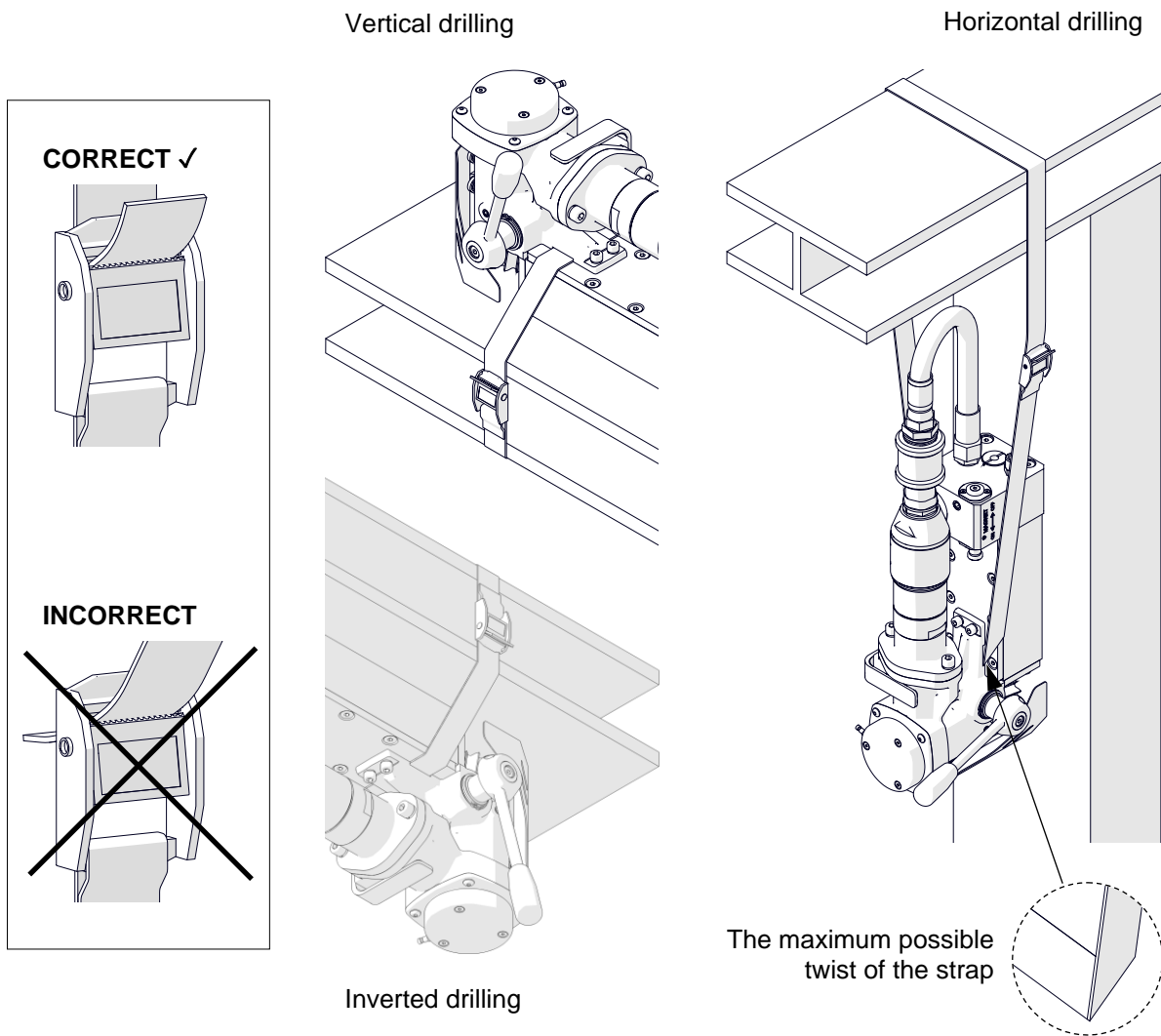
Then ensure that the machine is clamped to the surface by checking the position of clamping indicator.



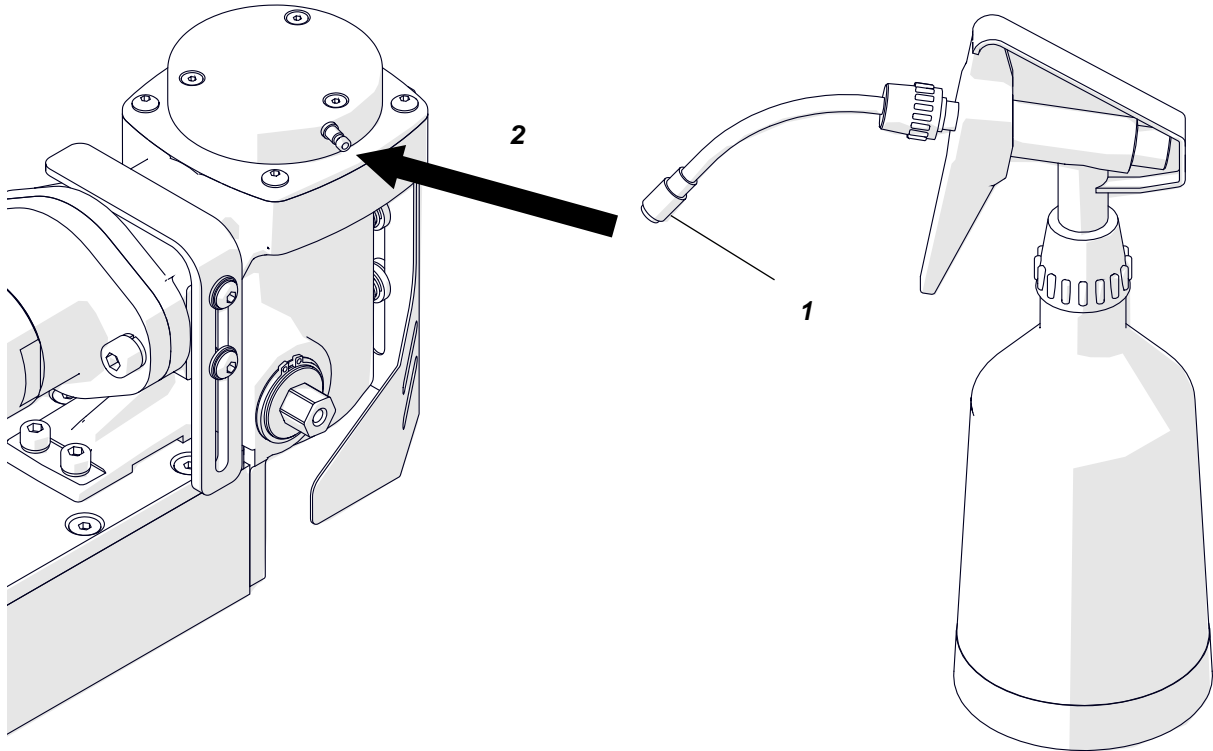
**Drilling is allowed only when the clamping indicator matches the marker.**



Use the safety strap to prevent fall and injury if the machine loses the clamping. Attach the machine to a stable structure by putting the strap through the hole in the machine body. Make sure that the strap is tight and not twisted (except for horizontal drilling; the maximum possible twist is shown in the figure). If the machine comes loose from the workpiece and hangs on the strap, replace the strap. Do not put the strap into the buckle from the front.



When you work in the vertical position, use the cooling system supplied with the machine. To do this, connect the quick coupling (1) to the bottle. Then, fill the bottle with coolant and connect the bottle to the fitting (2).



Do not use only water as the coolant. You can use a mixture of water and drilling oil. Then, make sure that the cooling system works correctly. To do this, press the lever of the bottle several times. Then, turn the feed lever to apply a light pressure on the pilot pin. The coolant should fill the system and start flowing from the cutter.

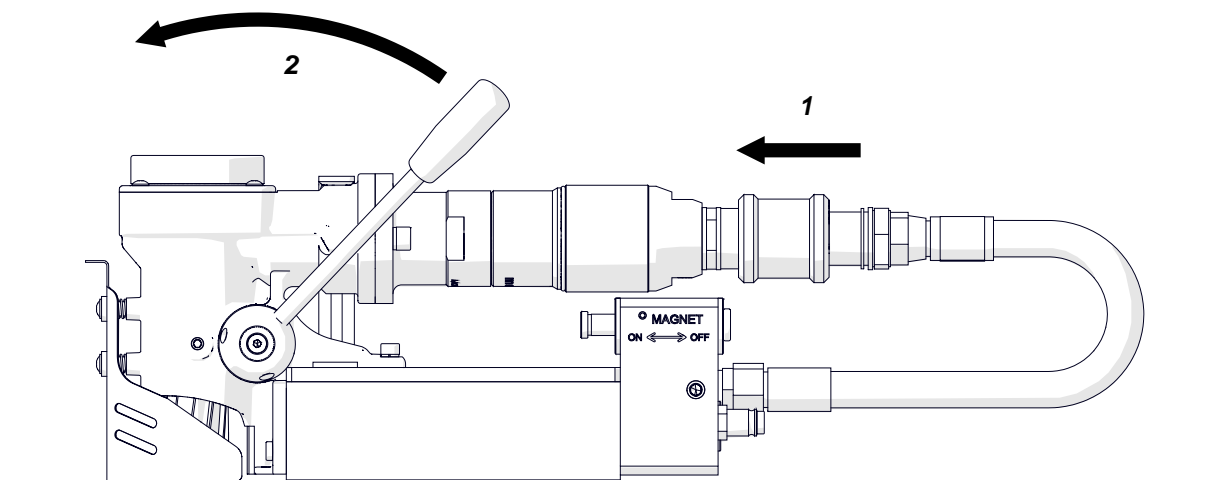
### 3.4. Drilling

Set the MOTOR slider to ON (1) to start the motor.

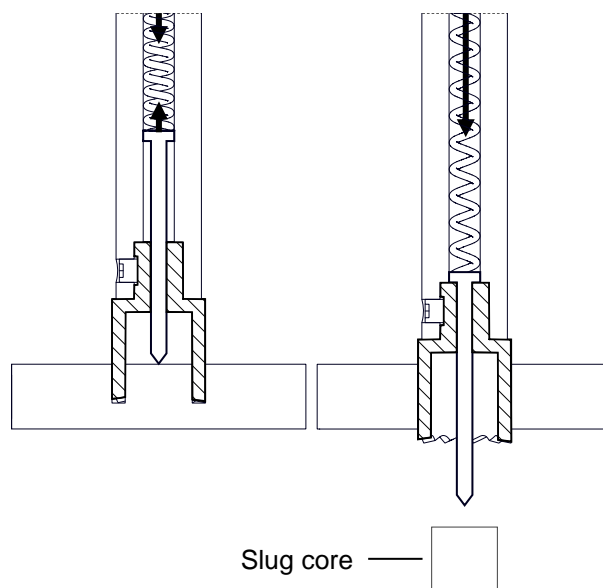


The motor does not start if the **MAGNET** switch is set to OFF.

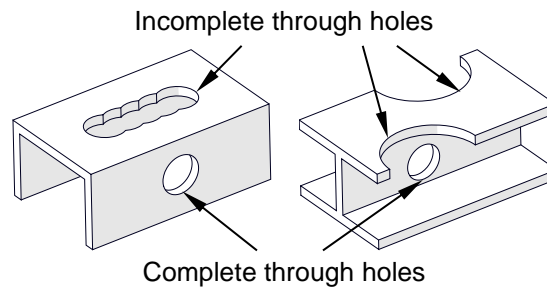
Then, turn the feed lever to the left (2) to put the tool into the workpiece. Maintain a constant pressure on the lever. Keep the machine in the same position until the hole is made.



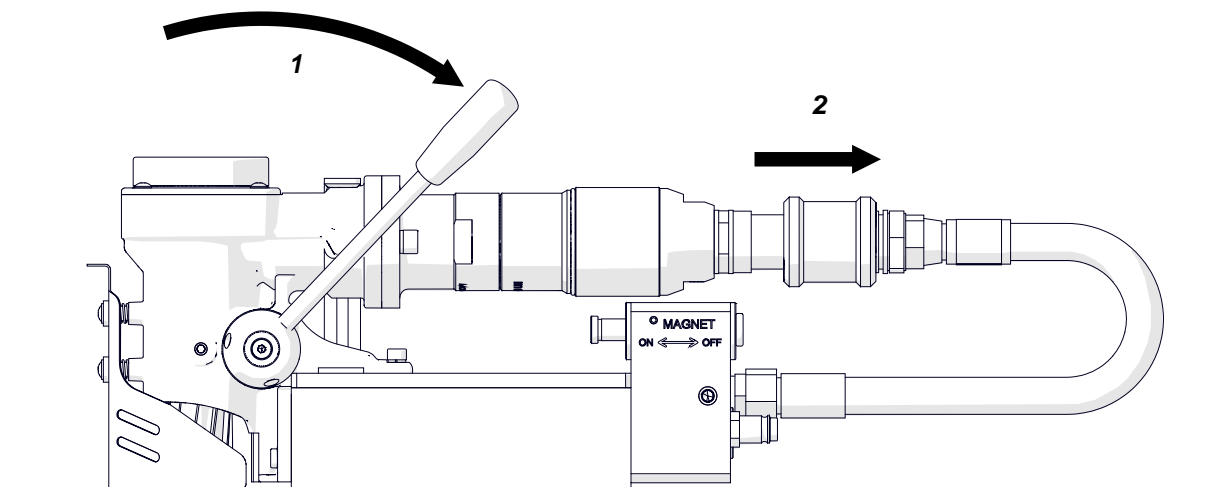
When the annular cutter goes through the workpiece, the slug core is pushed out with a large force.



Drill only through holes. For incomplete through holes do not use the pilot pin.



After the hole is made, retract the cutter from the workpiece (1). Then vigorously set the MOTOR slider to OFF (2) to turn off the engine.



Before you move the machine, set the MAGNET switch to OFF to turn off the base.

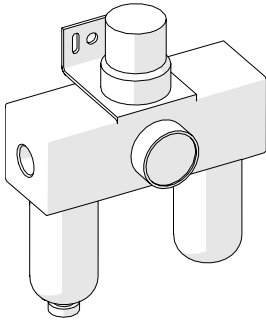
After use, turn off the motor and the base, and then unplug the supply hose. Clean the machine and the cutter, and then remove the machine from the work area.

Press the pilot pin to remove the coolant that remains in the system. Before you put the machine into the box, remove the bottle, and use gloves to remove the cutter from the holder.

### 3.5. Maintaining the air preparation unit

Maintain the air preparation unit as required. Keep the water trap drained, filter cleaned, and oil reservoir filled so that there is a drop of oil every 2–5 seconds. Use only oil of ignition temperature over 260°C (500°F). If you are not going to use the machine for at least 24 hours, increase the supply of oil and let the motor operate for 2–3 seconds. This will prevent rusting and degrading of the rotor vanes.

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**4. ACCESSORIES**

Air preparation unit

Part number (filter, regulator, lubricator):  
ZST-000021



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## 5. 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.

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**6. DECLARATION OF CONFORMITY****Declaration of conformity**

**JEI Drilling & Cutting Solutions Ltd  
Unit 21 Empire Business Park, Enterprise Way  
Burnley, Lancashire, BB12 6LT, UK**

We declare with full responsibility that:

**Horizontal air drilling machine AIRBEAST 40 ATEX gr. II, cat.  
2 G/D**

is manufactured in accordance with the following standards:

- EN ISO 12100: 2010,
- EN ISO 14120: 2015,
- EN 1127-1: 2019,
- EN ISO 80079-36: 2016,
- EN ISO 80079-37: 2016,

and satisfies the regulations of the guidelines: 2014/34/EU, 2006/42/EC.

Person authorized to compile the technical file:

David McFadden, Burnley, UK



Burnley, 24 November 2023

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David McFadden  
Managing Director

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## 7. WARRANTY CARD

**WARRANTY CARD No.....**

..... in the name of Manufacturer warrants the AIRBEAST 40 ATEX Drilling Machine to be free of defects in material and workmanship under normal use for a period of 12 months from the date of sale. This warranty does not cover cutters 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 .....

**0.01 / 1 December 2023**

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