

JEI DRILLING AND CUTTING SOLUTIONS

OPERATOR'S MANUAL

CORDLESS DRILLING MACHINE WITH ELECTROMAGNETIC BASE

Minibeast Cordless



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1. GENERAL INFORMATION

1.1. Application

The Minibeast Cordless is a drilling machine designed to drill holes of diameters up to 36 mm (1.42") with TCT annular cutters and up to 30 mm (1.18") with HSS annular cutters. The machine can also drill holes of diameters up to 12 mm (0.47") by using twist drill bits. It allows machining holes of diameters up to 30 mm (1.18") by using conical countersinks.

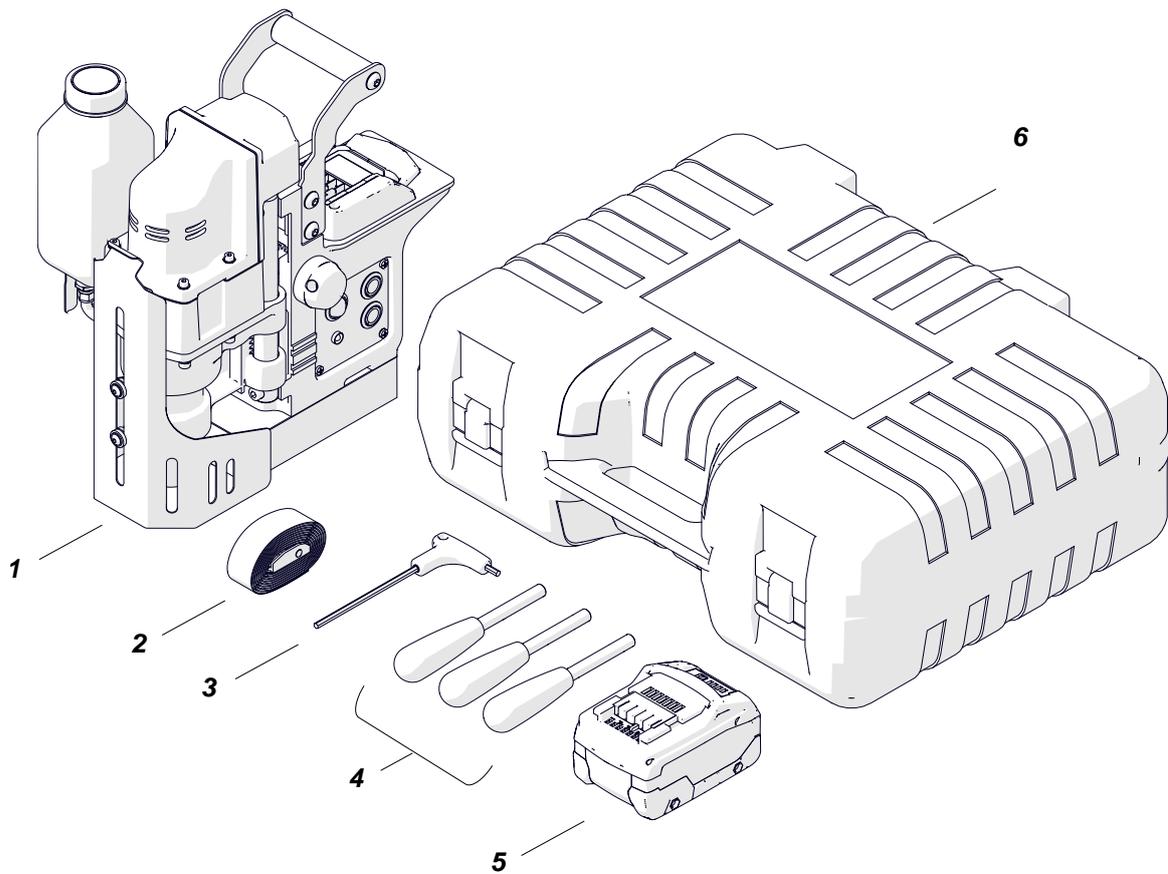
The drilling machine is battery powered. After charging the battery, it can work in places that are not connected to the mains.

The electromagnetic 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 a clamping loss.

1.2. Technical data

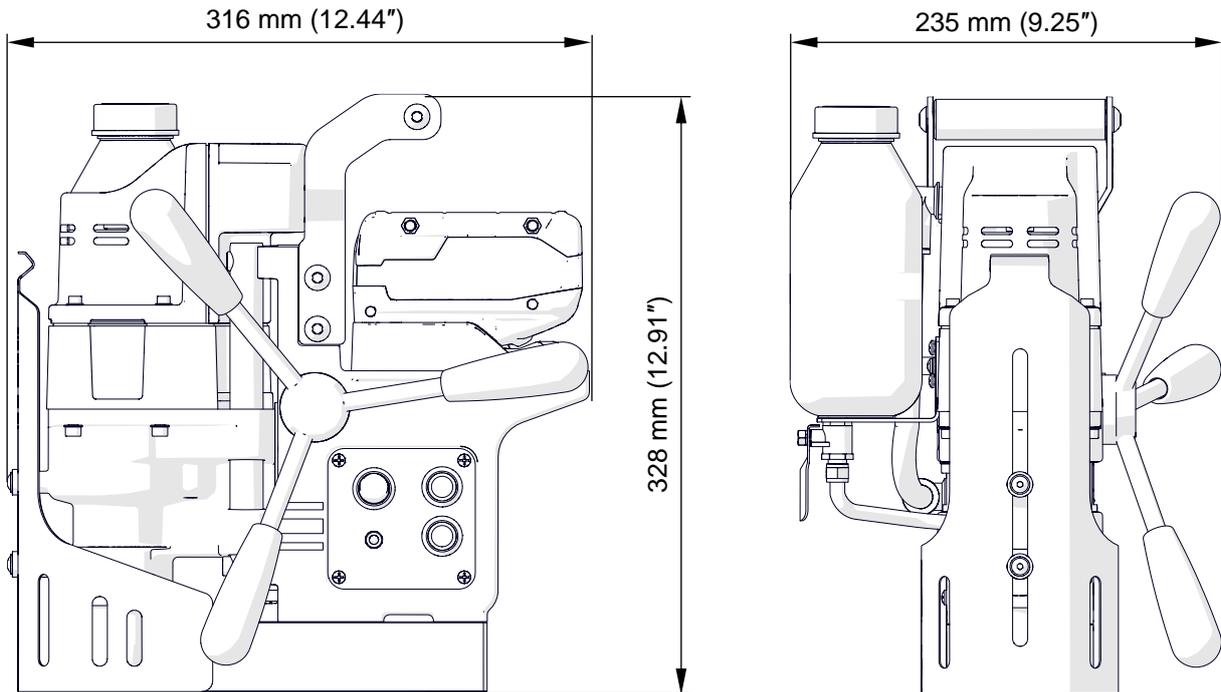
Spindle shank	19 mm (3/4") Weldon
Maximum drilling diameter with TCT annular cutter	36 mm (1.42")
Maximum drilling diameter with HSS annular cutter	30 mm (1.18")
Maximum drilling diameter with a twist drill bit	12 mm (0.47")
Maximum diameter of a hole to be machined with a conical countersink	30 mm (1.18")
Maximum drilling depth	50 mm (1.97")
Stroke	70 mm (2.76")
Minimum workpiece thickness	6 mm (0.24")
Electromagnetic base dimensions	80 mm x 160 mm x 38 mm (3.15" x 6.3" x 1.5")
Clamping force (surface with the thickness of 25 mm and roughness $R_a = 1.25$)	7500 N
Voltage	18 V DC
Power	450 W
Protection level IP	IP20
Rotational speed with load	260 rpm
Required ambient temperature	0 – 40 °C (32 – 104 °F)
Weight with battery 4 Ah	11.5 kg (25.35 lbs)

1.3. Equipment included

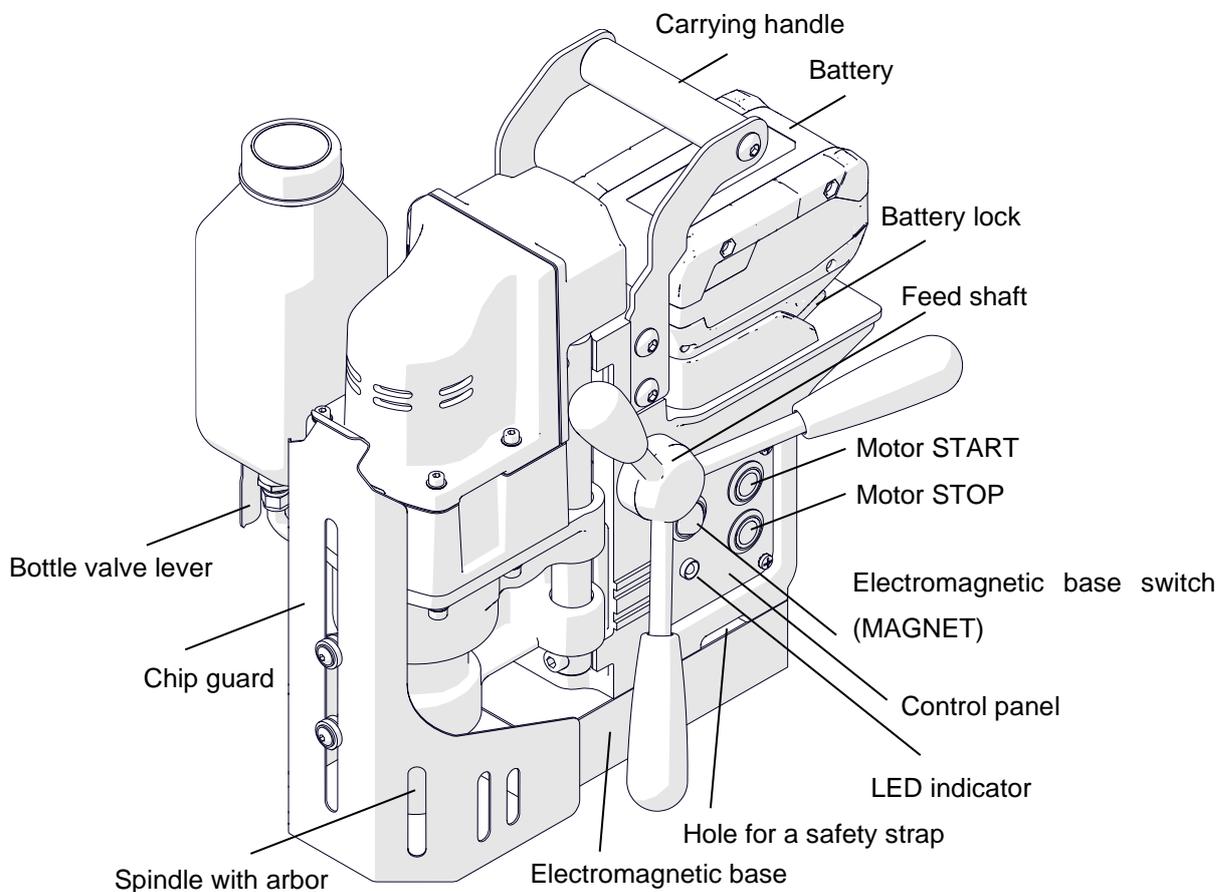


1	Drilling machine with cooling system	1 unit
2	Safety strap	1 unit
3	4 mm (0.16") hex wrench with a handle	1 unit
4	Handle	3 units
5	Battery 18 V LiHD 4.0 Ah	1 unit
6	Box	1 unit
-	Operator's Manual	1 unit

1.4. Dimensions



1.5. Design



2. SAFETY PRECAUTIONS

1. Before use, read this Operator's Manual and complete training in occupational safety and health.
2. Use only in applications specified in this Operator's Manual.
3. Keep the machine and the battery away from children.
4. Keep the machine and the battery dry. Do not expose the machine to rain, snow, or frost.
5. Do not expose the machine and the battery to fire or excessive temperature.
6. Set the MAGNET switch to 'O' before you install the battery and before you move the machine. Use the carrying handle to move the machine.
7. Keep untrained people away from the machine.
8. Before each use, ensure the correct condition of the machine, battery, and tools. Make sure that the machine has all parts, and they are genuine, undamaged and correctly installed.
9. Make sure to maintain correct conditions that may influence the operation of the machine.
10. Do not stay below the machine that is put at heights.
11. Keep the work area well-lit, clean, and free of obstacles.
12. Make sure that the tool is correctly attached. Remove items from the work area before you turn on the machine.
13. Do not use tools that are dull or damaged.
14. Remove the battery before you install or remove tools. Use protective gloves to install and remove tools.
15. Remove the battery before you manually turn the spindle.
16. Do not remove the battery during operation of the machine.
17. Use annular cutters without the pilot pin only when you drill incomplete through holes.
18. Drill with the chip guard lowered.
19. Do not drill/machine holes which diameter or depth differ from those specified in the technical data.
20. Do not use in explosive environments or near flammable materials.
21. Do not use on surfaces that are rough, not flat, not rigid, or are covered with rust, paint, chips, or dirt.

22. Always secure the machine with a safety strap. Use the safety strap to attach the machine to a stable structure. Put the strap through the hole in the machine body. In the horizontal position, attach the strap to the carrying handle. Do not put the strap into the buckle from the front.
23. Use eye and ear protection and protective clothing. Do not wear loose clothing.
24. We do not recommend working on workpieces thinner than 6 mm (0.24"). The clamping force depends on the workpiece thickness and is much lower for thin plates.
25. Each time before you put the machine on the workpiece, grind the workpiece with coarse-grained sandpaper. Make sure that the full bottom of the base touches the surface.
26. Do not touch chips or moving parts. Do not let anything get caught in moving parts.
27. After each use, clean the machine and the tool. Do not remove chips with your bare hands.
28. Remove the battery 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 tool from the holder.
33. If you are not going to use the machine for an extended period, put anti-corrosion material on the steel parts.
34. Use only original Promotech or CAS (Cordless Alliance System) batteries and chargers with the following parameters:
Batteries: 18 V LiHD 4.0 Ah, 18 V LiHD 10.0 Ah
Chargers: ASC 145
35. Do not open the battery and do not short-circuit its contacts.
36. Do not allow the battery to be fully discharged. Do not leave the battery in the machine.
37. Store the machine and battery in a safe and dry place. Do not store discharged battery.

38. Acid flammable liquid may leak from defective battery. If the liquid comes in contact with your skin or eyes, rinse them immediately with clean water and seek medical attention.
39. When you transport the battery, familiarize yourself with hazardous goods carriage regulations (UN 3480 and UN 3481).

3. SYMBOLS

Before using the machine, read the description of the following symbols.



Wear eye protection



Wear ear protection



Refer to instruction manual



Warning of flammable substances



Warning of corrosive substances

4. STARTUP AND OPERATION

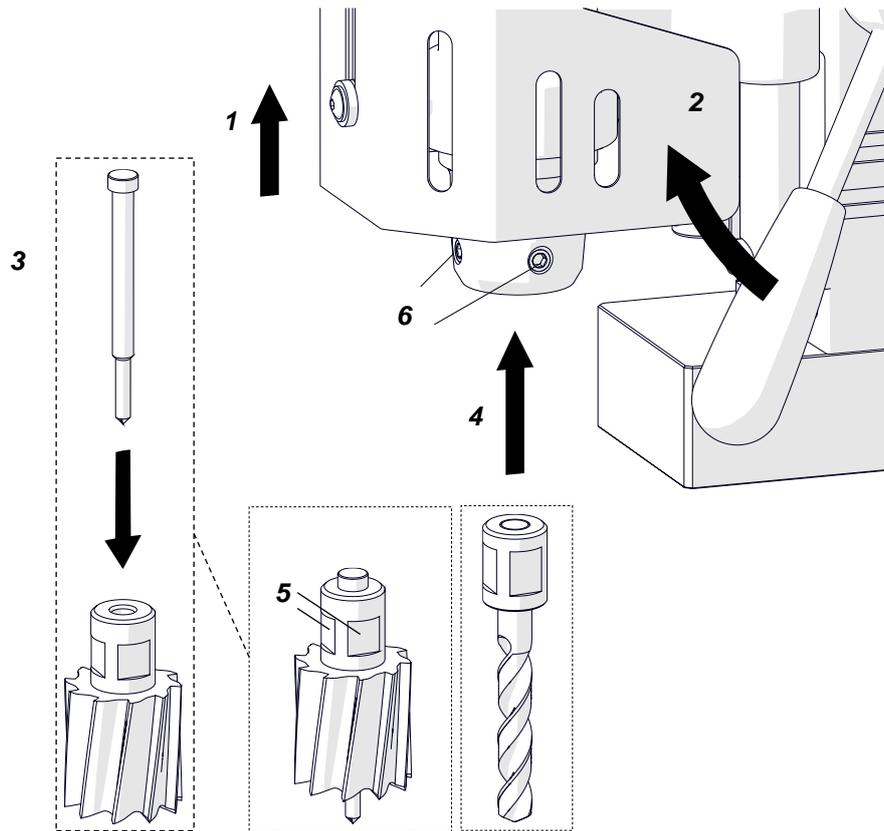
4.1. Tools compatible with drilling machine

The drilling machine can be used with tools listed in the following table.

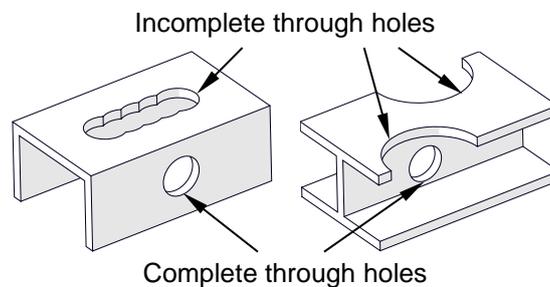
Tool	Maximum tool diameter	Application	Tool holder
Turbo Tough, TCT annular cutter	36 mm (1.42")	Drilling through holes	19 mm (3/4") Weldon
Turbo Steel, HSS annular cutter	30 mm (1.18")		
Turbo Steel, Twist drill bit	12 mm (0.47")	Drilling through and blind holes	
Turbo Steel, Countersink	30 mm (1.18")	Countersinking and chamfering holes	

4.2. Installing and removing the tool

Remove the battery. Lift the chip guard (1). Turn the handles to the right (2) to lift the motor. When you install the annular cutter – use gloves to put the correct pilot pin into the cutter (3). Use a dry cloth to clean the spindle and the tool. Put the tool into the spindle (4) so that the flat surfaces (5) align with the screws (6). Use the 4 mm hex wrench to tighten the screws. To remove the tool, loosen the screws.



When you use an annular cutter, drill only through holes. Do not use the pilot pin for incomplete through holes.



4.3. Application of a cooling system

The drilling machine is equipped with a gravity cooling system.

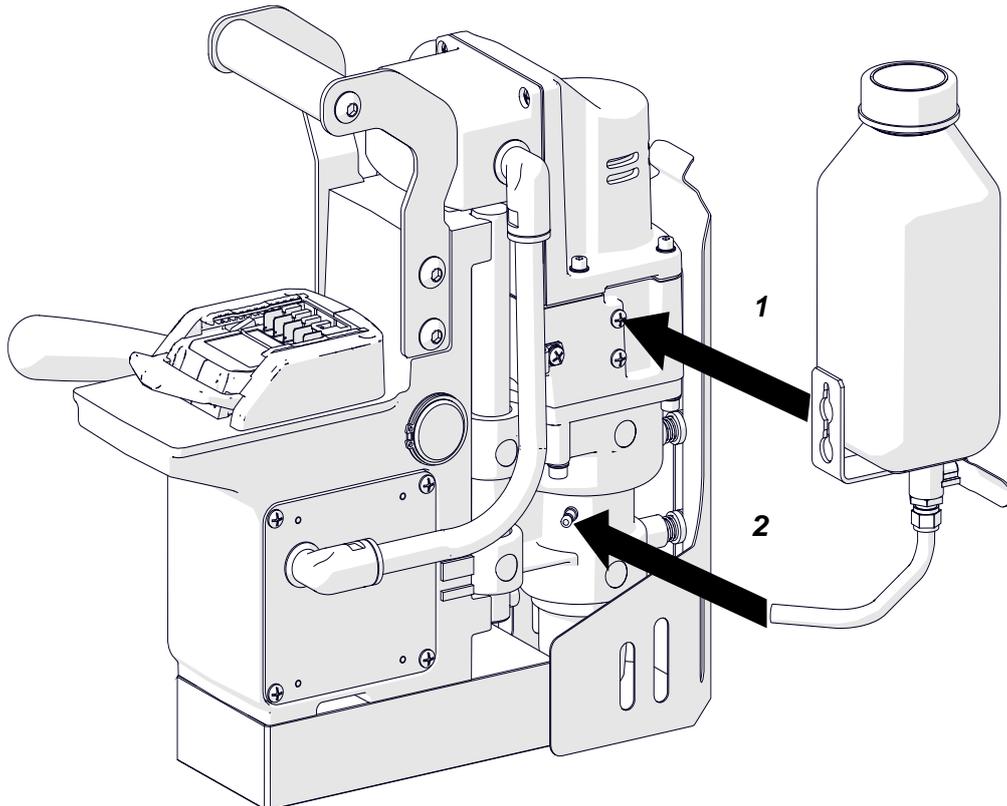
Install the cooling system when you drill vertically with an annular cutter. When you use other tools or drill with an annular cutter in position other than vertical, use coolants under pressure or in the form of spray or paste. Do not allow coolant to flow into the motor.

Do not use pure water as coolant. You can use a mixture of water and drilling oil.

4.4. Installing and removing the cooling system

Remove the battery. Use lever to close the bottle valve. Put the bottle on the screws (1). Attach the hose to the fitting (2). Check the operation of the cooling system. To do this, loosen the bottle cap and open the valve using lever. Turn the handles to the left to apply light pressure on the pilot pin. The coolant should fill the system and start flowing from the cutter.

Remove cooling system in reverse sequence.



4.5. Checking the battery charge level

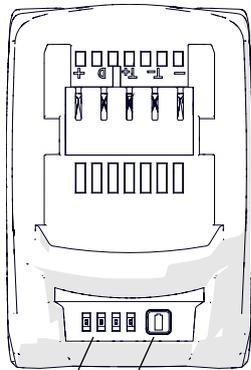
Charge the battery before first use.

To check the charge level, press the charge status button. If only one LED on the charge indicator flashes green, charge the battery.

Do not charge fully charged battery.



Before charging the battery, read the charger manual.

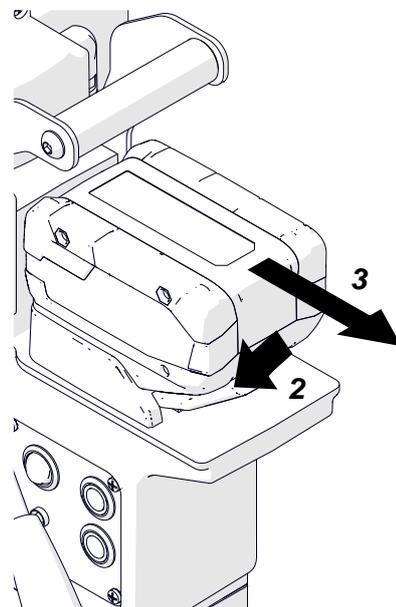
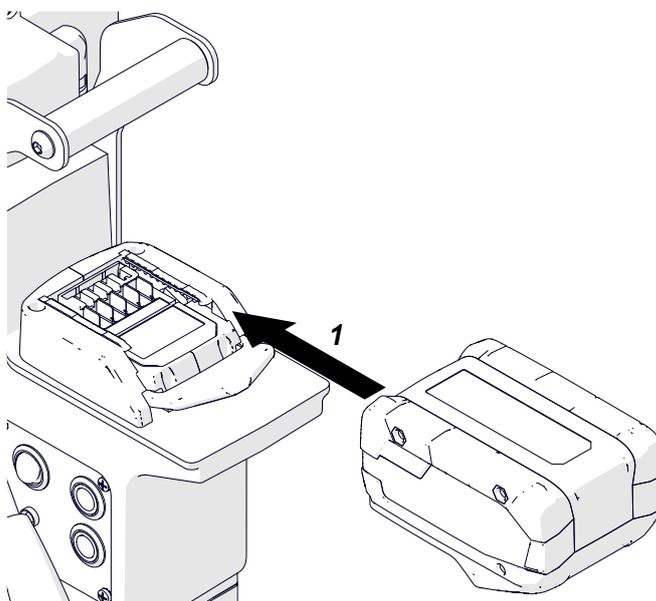


Charge status button
Charge indicator

	4 LEDs light up green	≤ 100%
	3 LEDs light up green	≤ 75%
	2 LEDs light up green	≤ 50%
	1 LED lights up green	≤ 25%
	1 LED flashes green	charging required

4.6. Installing and removing the battery

Slide the battery in (1) until it locks into place. Press and hold the battery lock (2) to remove the battery (3).



4.7. Clamping surface requirements

The ferromagnetic surface to which the drilling machine is clamped must be at least 6 mm (0.24") thick.

The clamping force of the electromagnetic base will be lower if the clamping surface is thin, rough, not flat, not rigid, the voltage is lower than required, or the bottom of the base is worn.

The force will be lower if there is rust, paint, chips, or dirt. The workpiece should be ground with coarse-grained sandpaper and cleaned.



Some types of steel (non-ferromagnetic) do not conduct the magnetic flux, therefore the machine cannot clamp onto them.

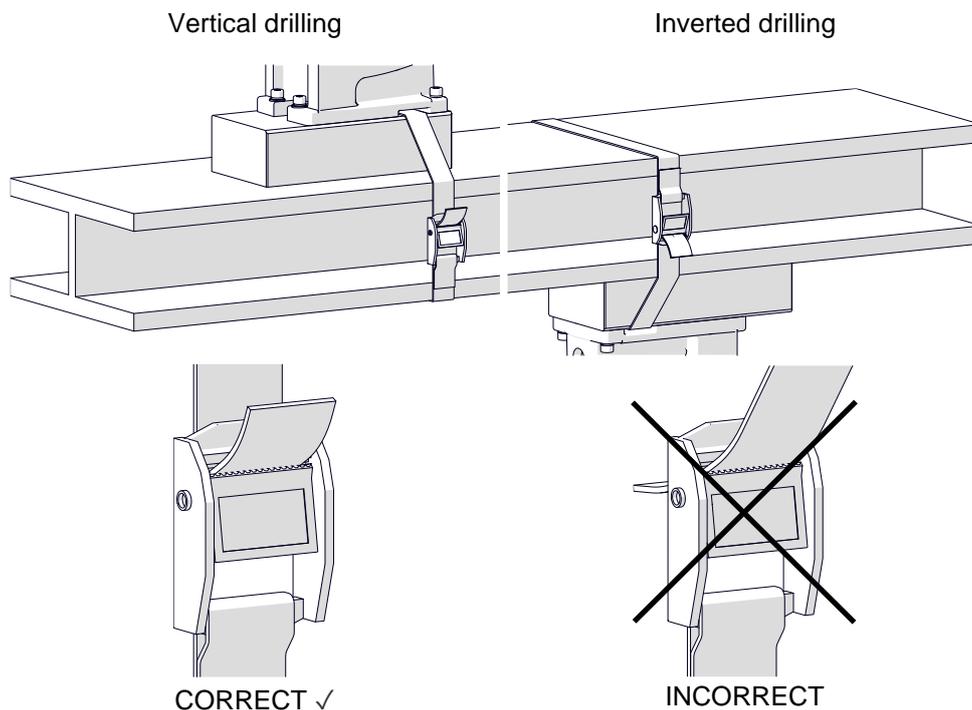
4.8. Securing the machine with a safety strap



Always secure the machine with a safety strap!

It prevents the machine from falling if it 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. If the machine detaches from the workpiece and hangs on the strap, replace the strap. Do not put the strap into the buckle from the front.



4.9. Machine state indication

There is an LED indicator on the control panel that shows state of the machine.

LED indication	Machine state	Machine performance
Green is on	Sufficient clamping force	–
Green flashes	Low clamping force	High risk of losing clamping
Red is on	Discharged battery	Motor stops, after a time of up to 15 minutes the electromagnetic base turns off
Red flashes	Motor overload or clamping loss	Motor stops

4.10. Preparing

1. Clean steel parts, including the spindle, from the anti-corrosion material used to preserve the machine during storage and transport.
2. Attach the handles to the feed shaft.
3. Put the machine on a workpiece.
4. Select the correct tool. Clean the spindle and the tool with a dry cloth. Install the tool in the arbor.
5. For vertical drilling with an annular cutter install the cooling system and fill it with coolant. Make sure that the cooling system works correctly.
6. Install the battery.
7. Set the MAGNET switch to 'I' to turn on the clamping. Check the LED indicator to see if the clamping force is sufficient.



The operator takes full responsibility for working with low clamping force.

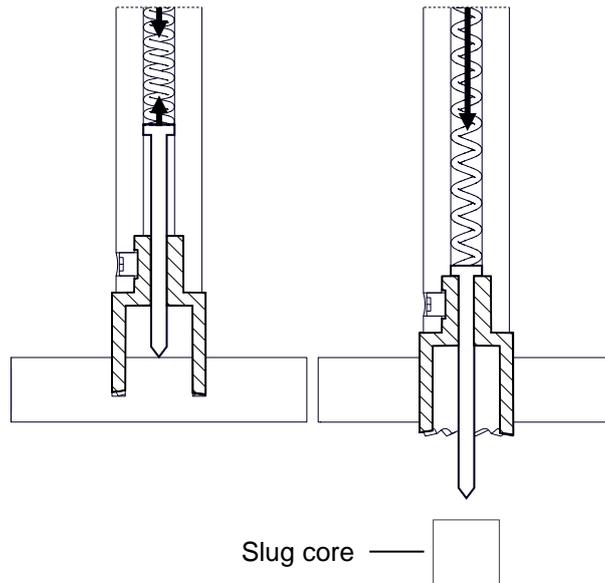
8. Secure the machine with the safety strap.
9. Turn the handles to the left to put the tool above the workpiece.
10. Lower the chip guard to cover the tool.

4.11. Drilling

1. Press the Motor START button to start the motor.
2. Turn the handles to the left to put the tool into the workpiece. Do not change the position of the drilling machine while making the hole.



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



3. After the hole is made, retract the tool from the workpiece. Press the Motor STOP button to stop the motor.
4. Before you move the machine, set the MAGNET switch to 'O' to turn off the base.

4.12. Finishing the operation

1. Turn off the motor and the base.
2. Remove the battery.
3. Clean the drilling machine and the tool.
4. Remove the machine from the work area.
5. If the cooling system is installed, remove the remaining coolant. To do this, tighten the bottle cap, close the valve, and then press the pilot pin. Remove the cooling system.
6. With gloves on, remove the tool from the arbor.
7. Put the machine in the box.

5. ACCESSORIES

5.1. Battery charger ASC 145

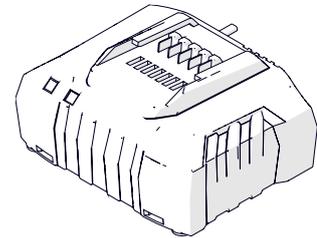
Part number:

LDW-0738-10-00-30-0 (EU)

LDW-0738-04-00-30-0 (UK)

LDW-0738-06-00-30-0 (AUS/NZ)

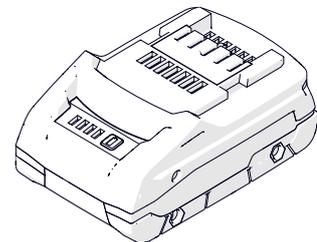
LDW-0738-24-00-30-0 (USA/CND)



5.2. Battery 18 V LiHD 4.0 Ah

Part number:

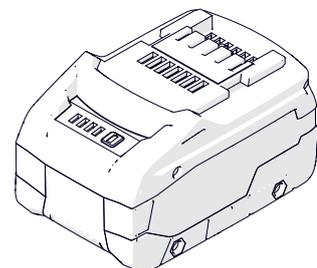
AKM-0738-10-00-01-0



5.3. Battery 18 V LiHD 10.0 Ah

Part number:

AKM-0738-10-00-02-0

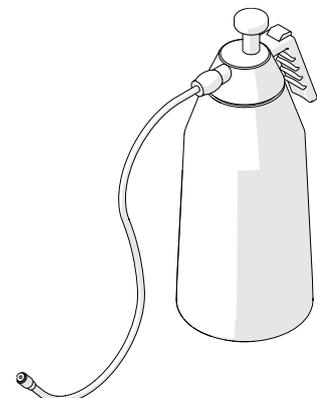


5.4. Pressure cooling system

Capacity: 2 liters

Part number:

UKL-0440-16-00-00-0



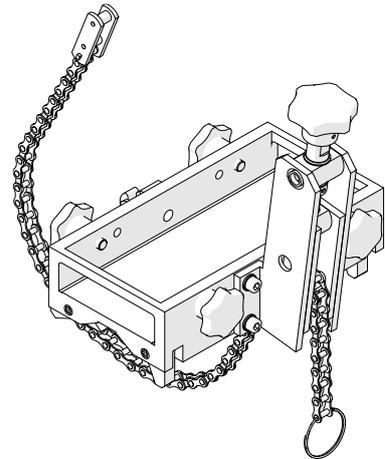
5.5. Pipe attachment

For pipes with diameters: 80 – 250 mm (3.15" – 9.84")

Internal dimensions: 95 × 211 mm (3.74" × 8.31")

Part number:

JEICB-S

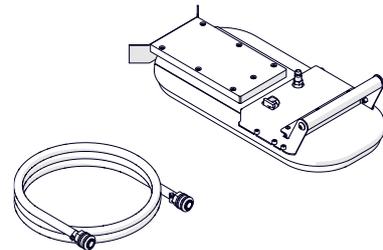


5.6. Vacuum pad

Allows you to clamp the machine to flat non-ferromagnetic surfaces. Can be supplied from an ejector with the compressed air or from a vacuum pump.

Part number (vacuum pad, supply hose):

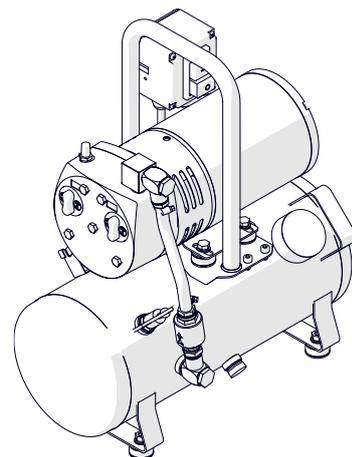
JEI-VPAD



Part number (vacuum pump with safety reservoir):

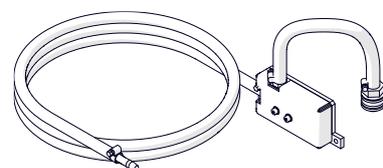
AGR-0541-10-20-00-0 (EU)

AGR-0541-10-10-00-0 (UK)



Part number (ejector):

ZSP-0587-11-00-00-0



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.



In accordance with the European Directive 2006/66/EC, the batteries are marked with the symbol of the crossed-out waste bin. Below this symbol there may be a chemical symbol of heavy metal present in the battery, if its percentage is above: 0.0005% for mercury (Hg), 0.002% for cadmium (Cd), 0.004% for lead (Pb). Batteries must not be disposed of with household waste and WEEE waste. The user must return the battery to a collection point for used batteries. Before returning the battery, discharge it*, remove it from the device and protect the contacts with insulating tape. Returning the battery to the collection point reduces the negative impact of its hazardous substances on human health and the environment, and enables the recovery of raw materials and plastics in the recycling process.

* refers to undamaged batteries

7. DECLARATION OF CONFORMITY

Declaration of conformity

JEI Drilling & Cutting Solutions Ltd

Unit 21 Empire Business Park

Enterprise Way, Burnley

Lancashire, BB12 6LT

We declare with full responsibility that:

Battery drilling machine with electromagnetic base Minibeast Cordless

is manufactured in accordance with the following standards:

- 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, Unit 21 Empire Business Park, Burnley, Lancs, BB12 6LT



Burnley, 16 May 2022

David McFadden
Managing Director

8. WARRANTY CARD

WARRANTY CARD No.....

..... in the name of Manufacturer warrants the Battery Drilling Machine with Electromagnetic Base **Minibeast Cordless** 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 tools as well as damage or wear that arise from misuse, accident, tampering, or any other causes not related to defects in workmanship or material.

Serial number

Date of sale

Signature of seller.....

0.03 / 27 May 2022

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