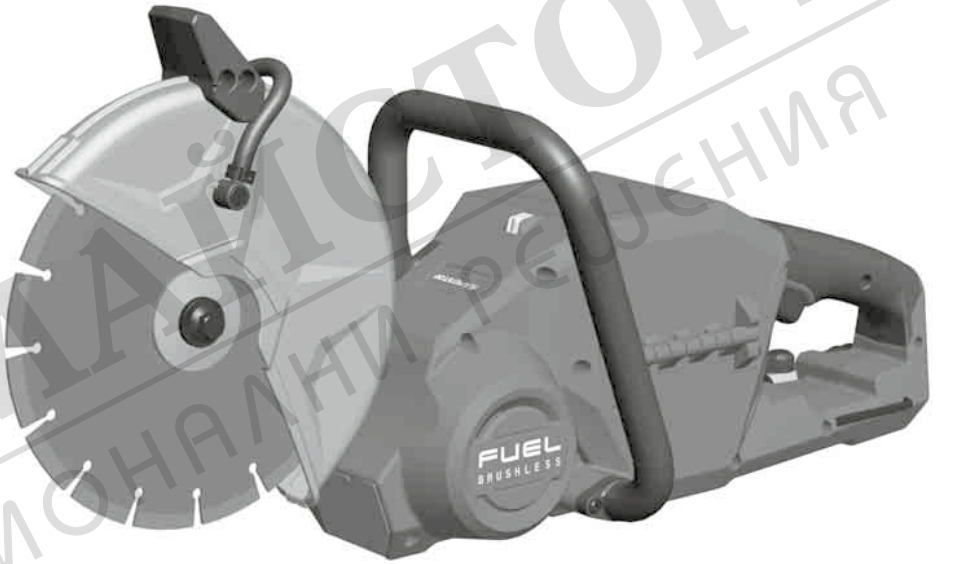
Milwaukee®

Nothing but **HEAVY DUTY.®**



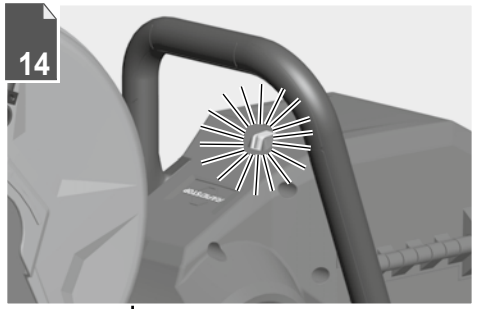
M18 FCOS230

Original instructions

22 Text section with Technical Data, important Safety and Working Hints and description of Symbols

8

14



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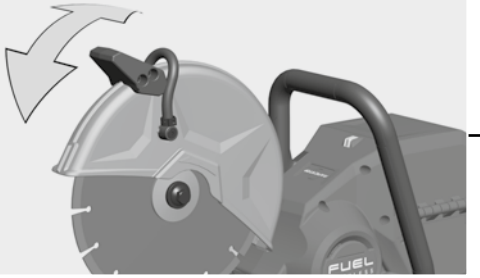

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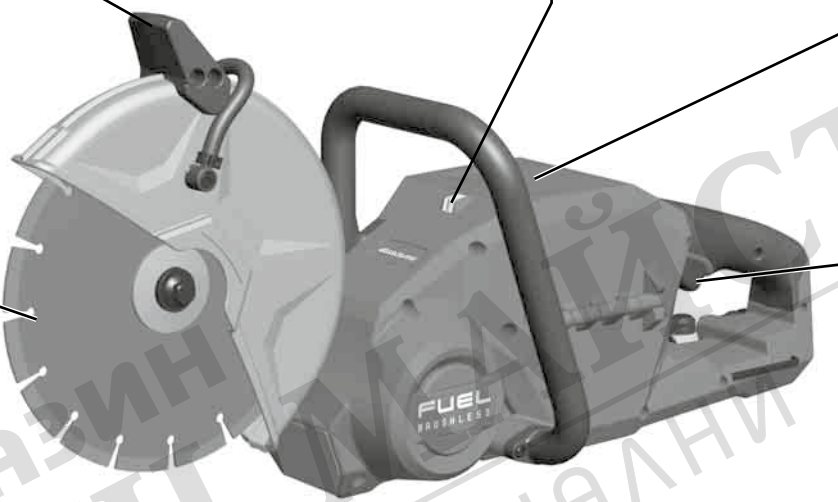

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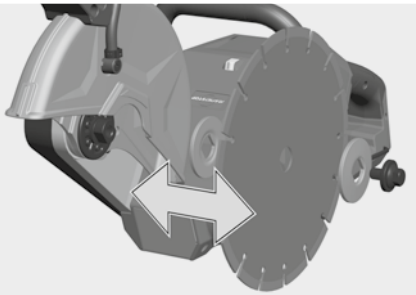

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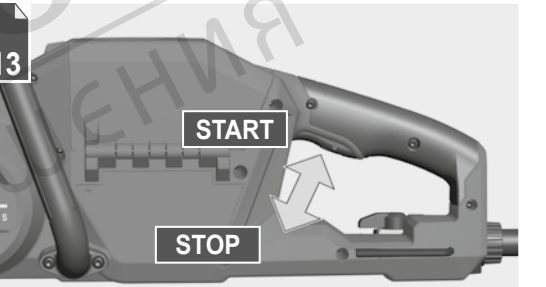

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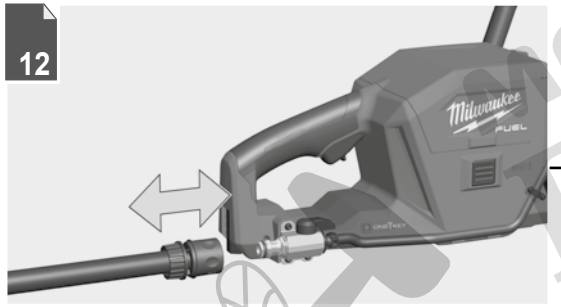

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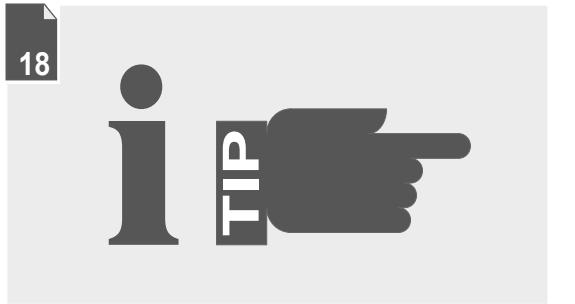

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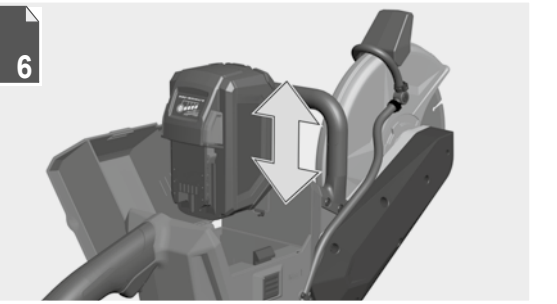

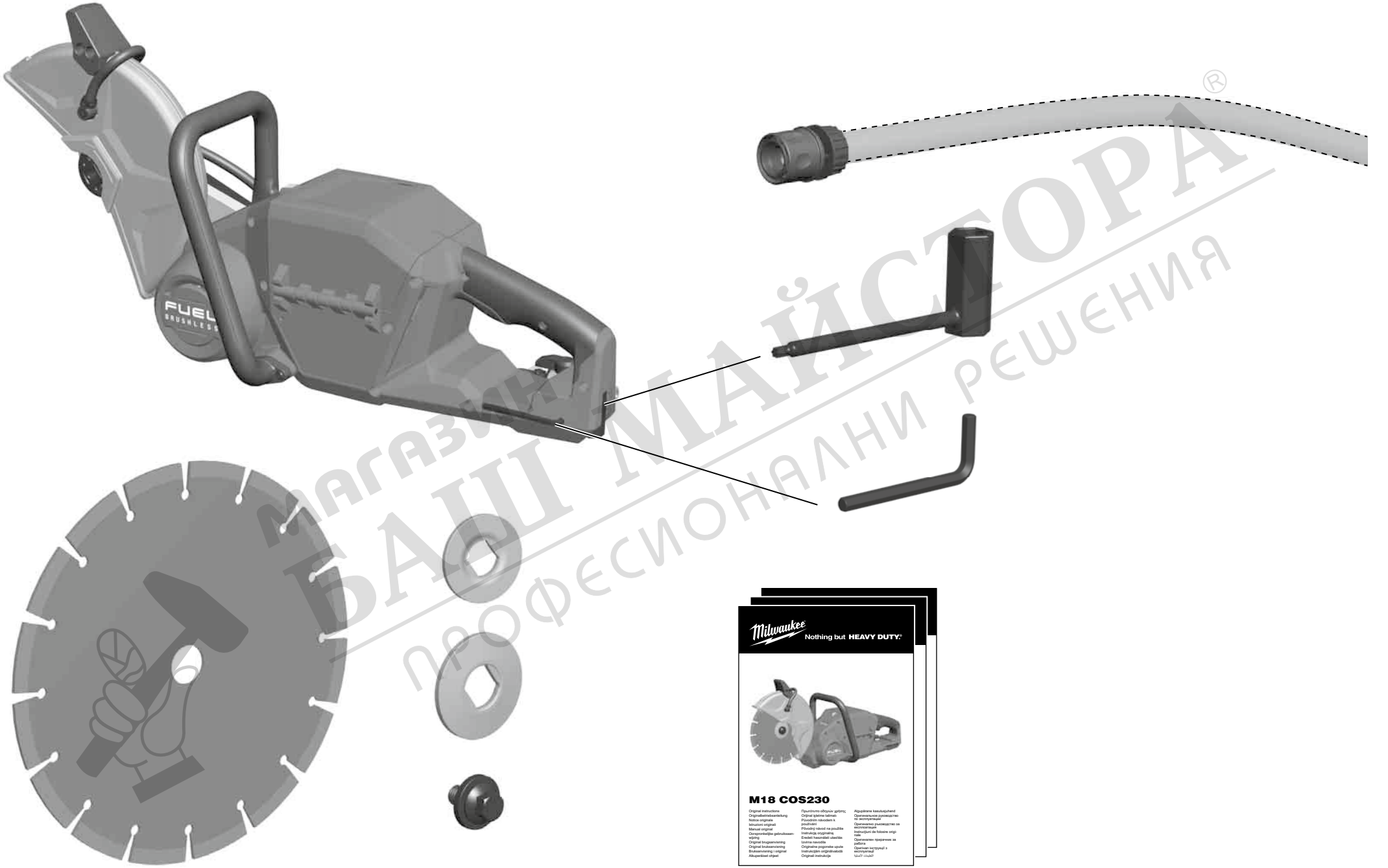

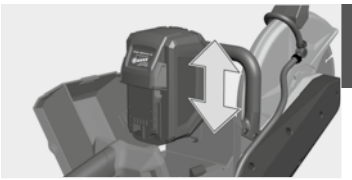

Remove the battery pack before starting any work on the machine.

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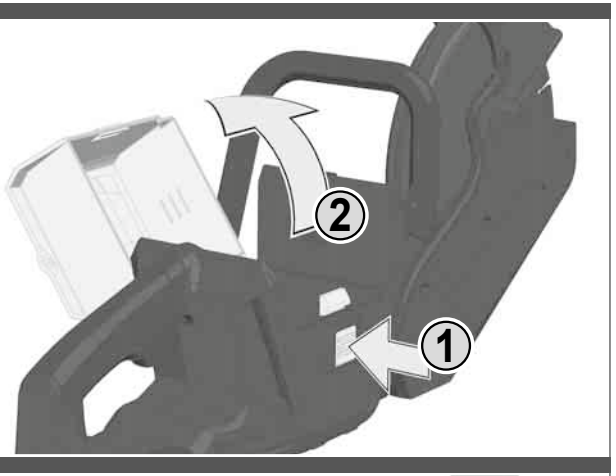

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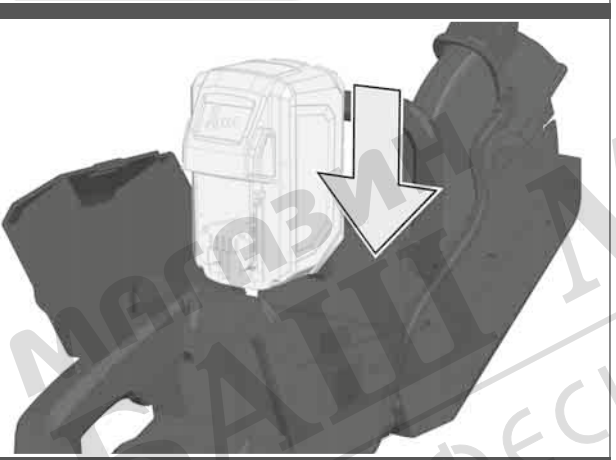

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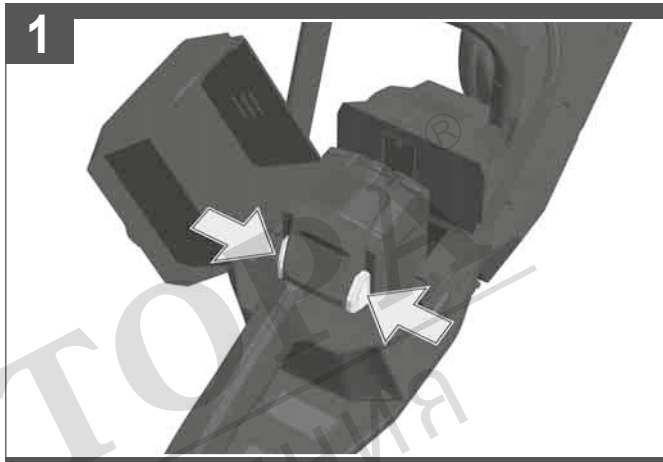

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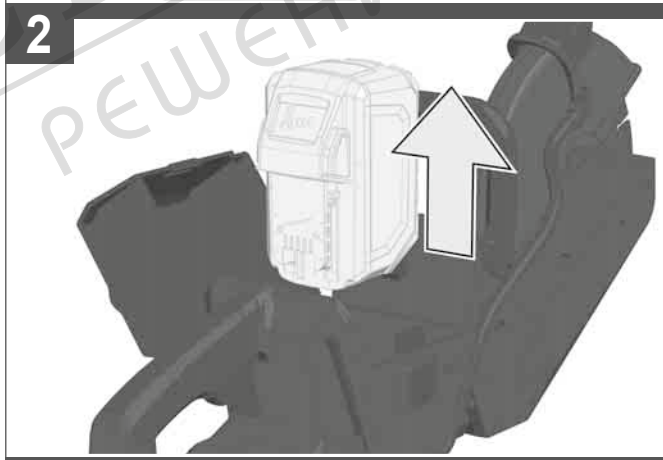

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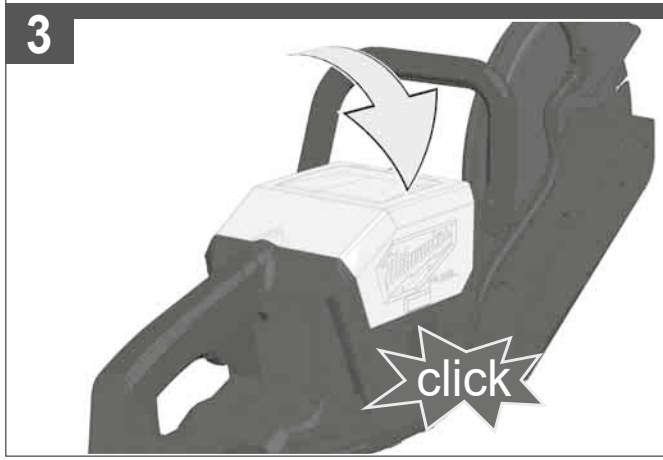

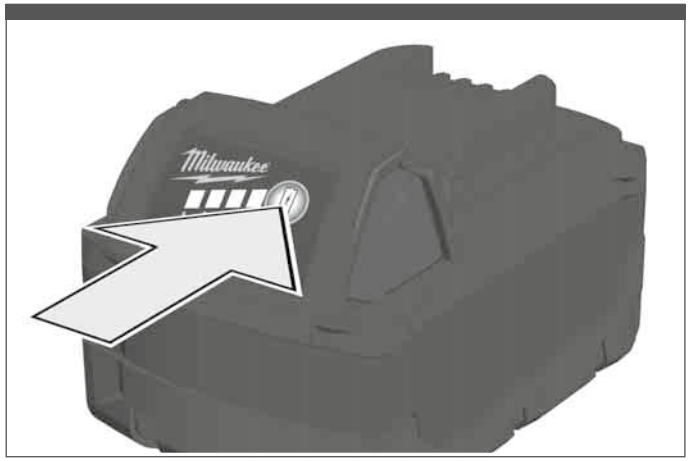

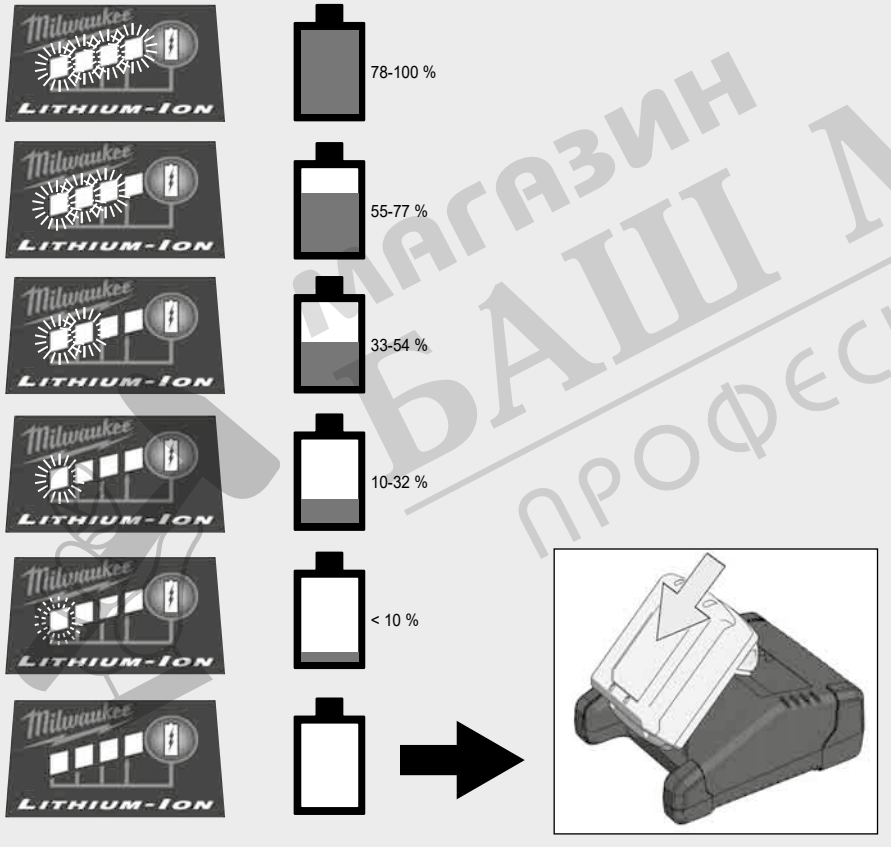

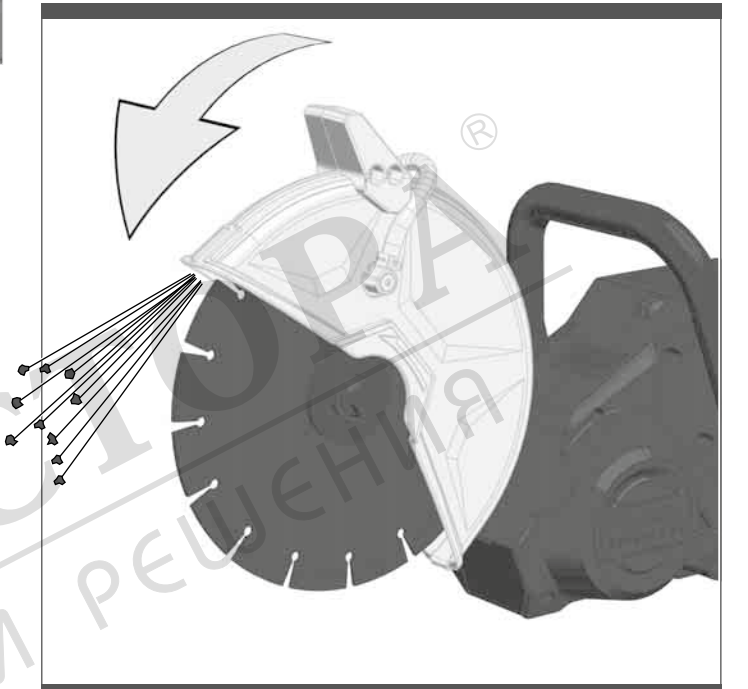

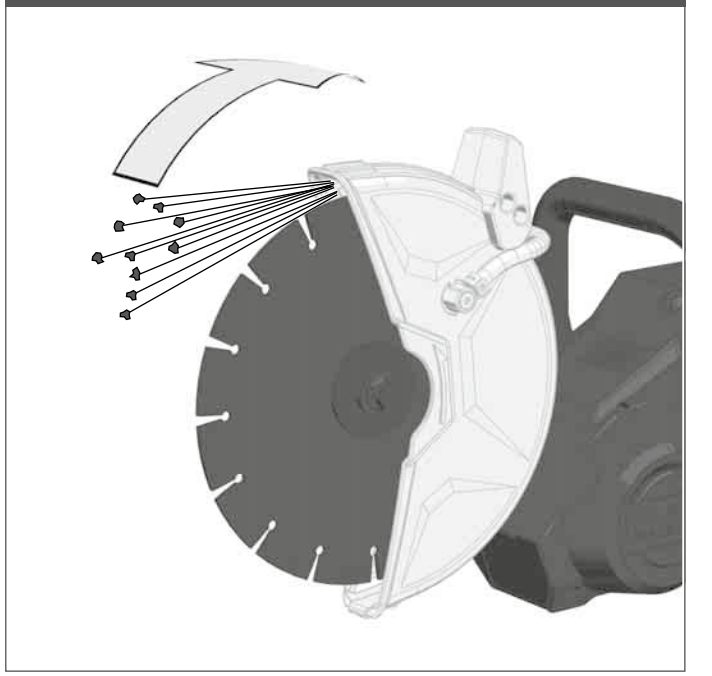

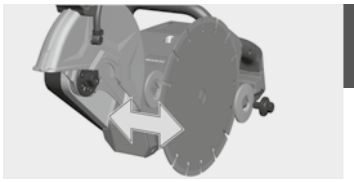

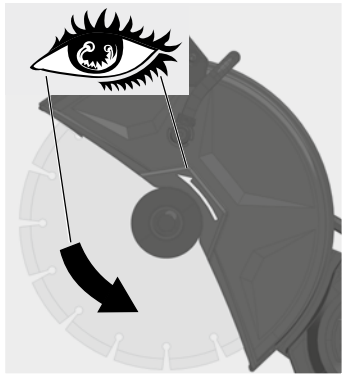

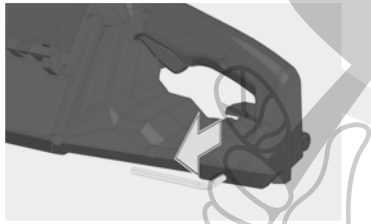

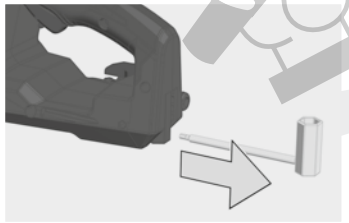

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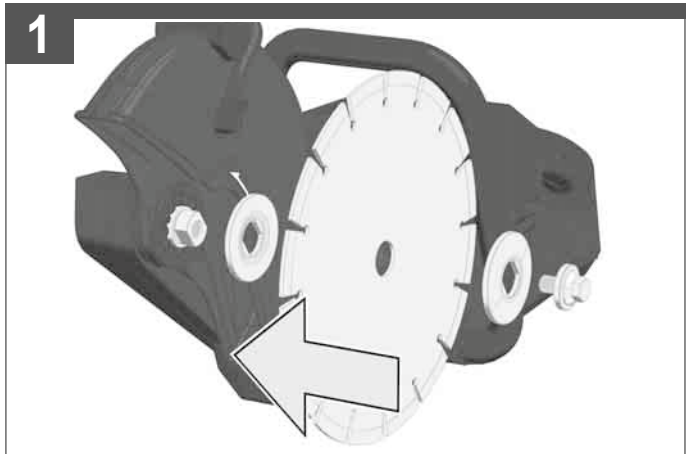

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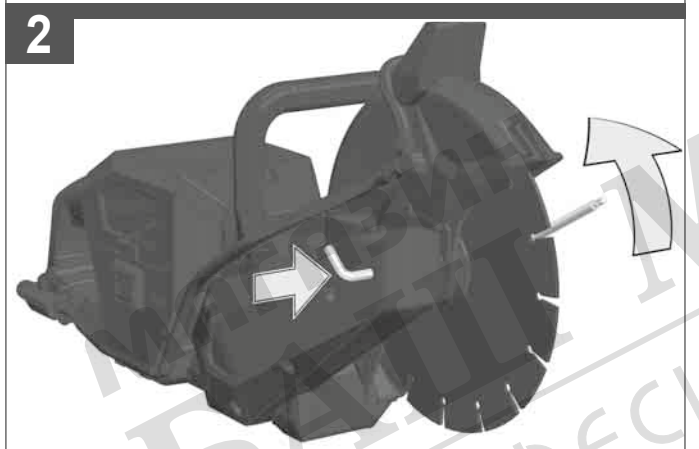

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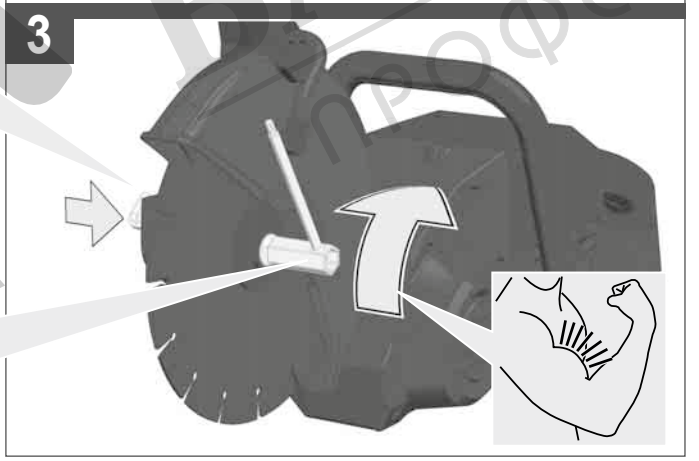

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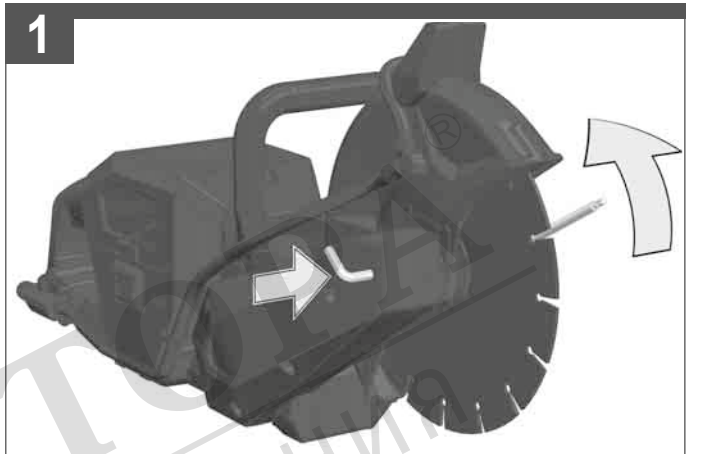

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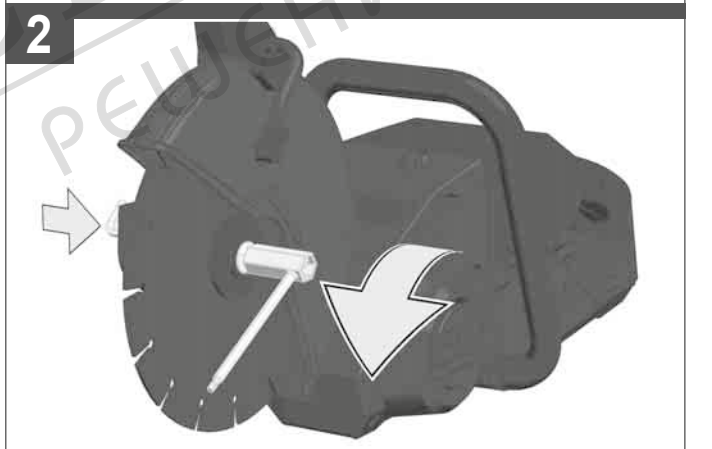

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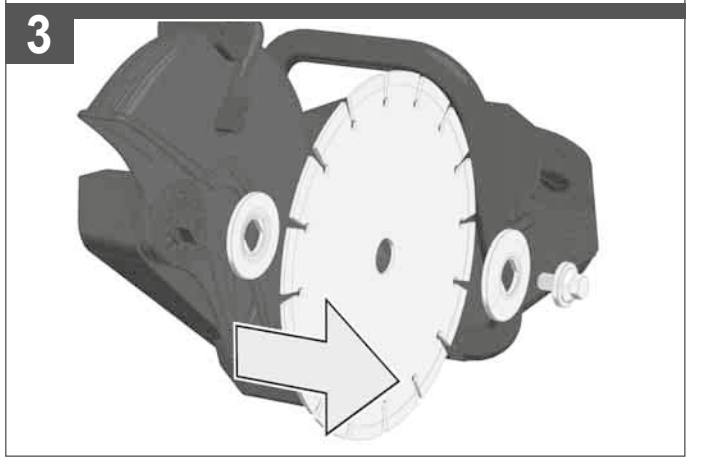

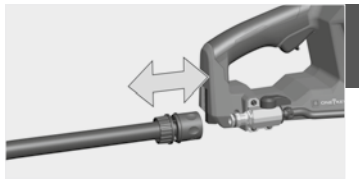

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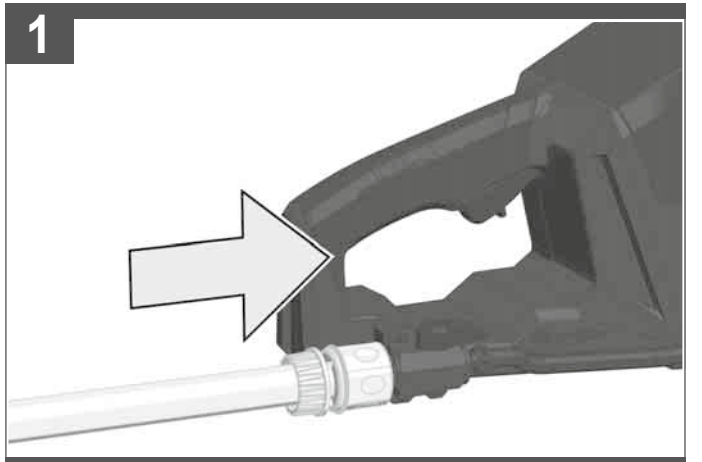

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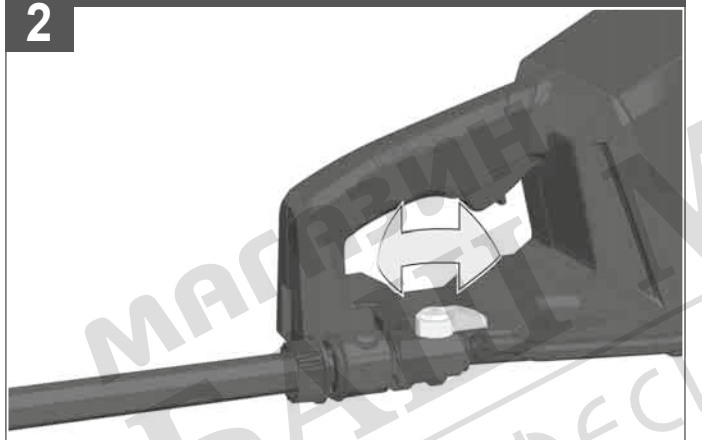

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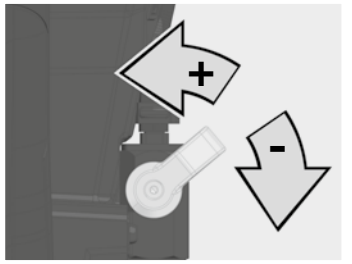

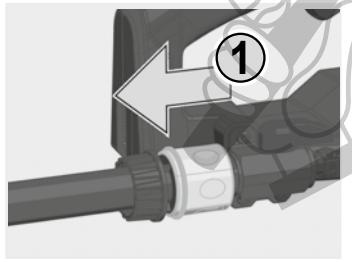

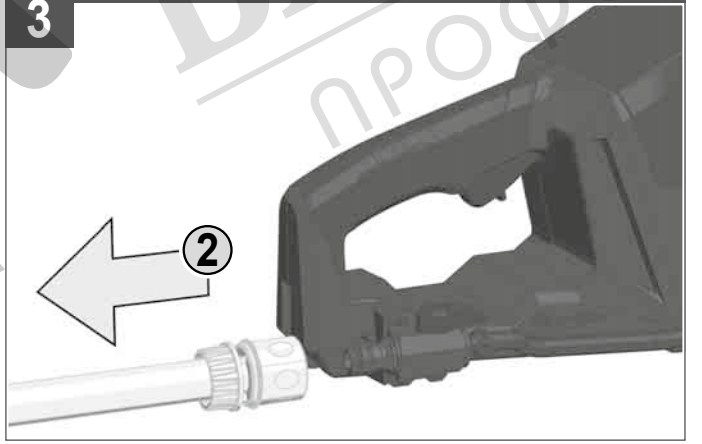

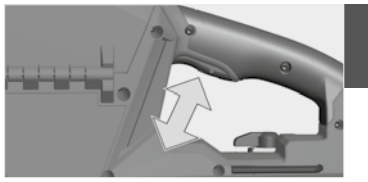

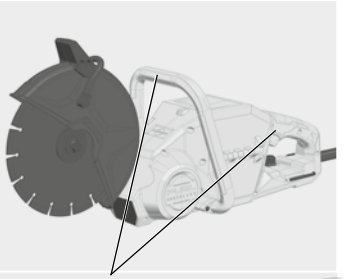

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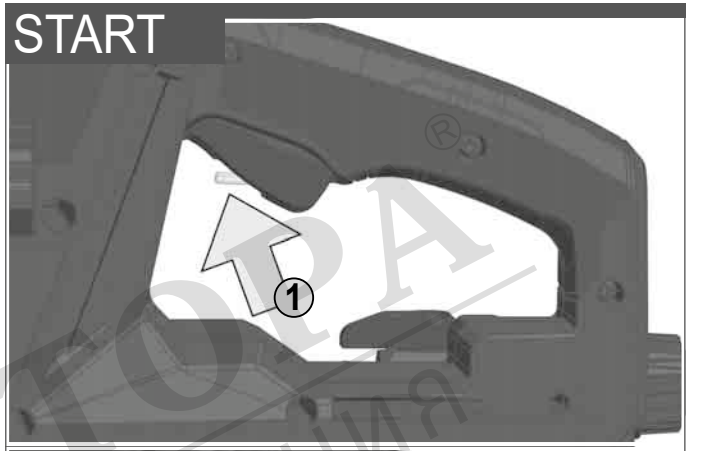

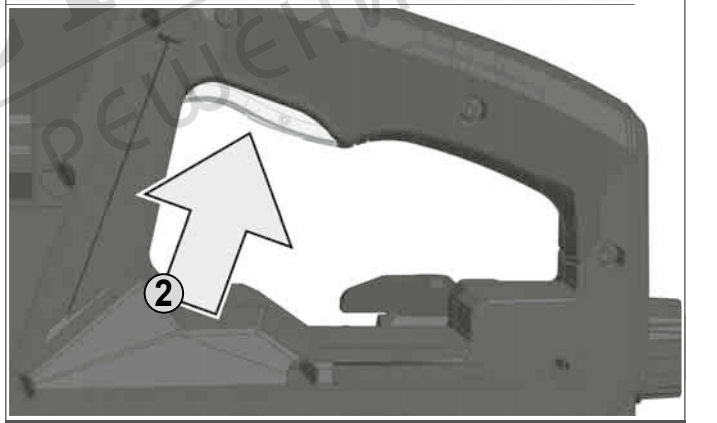

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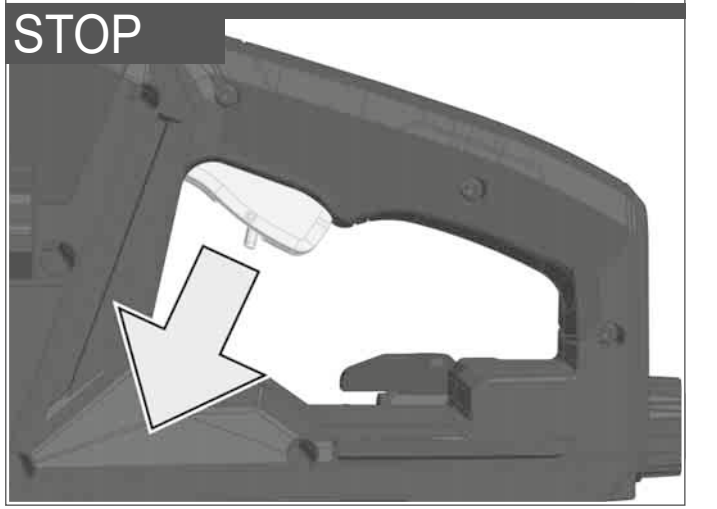
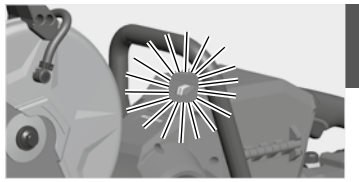
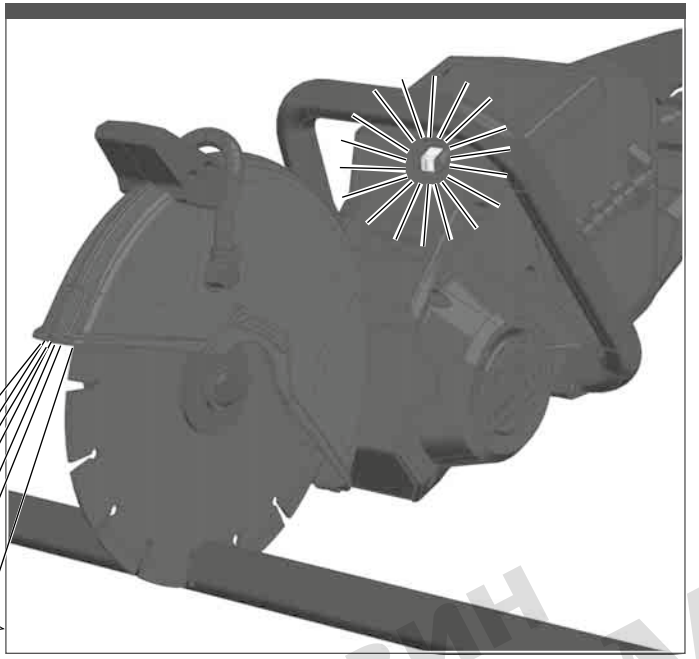
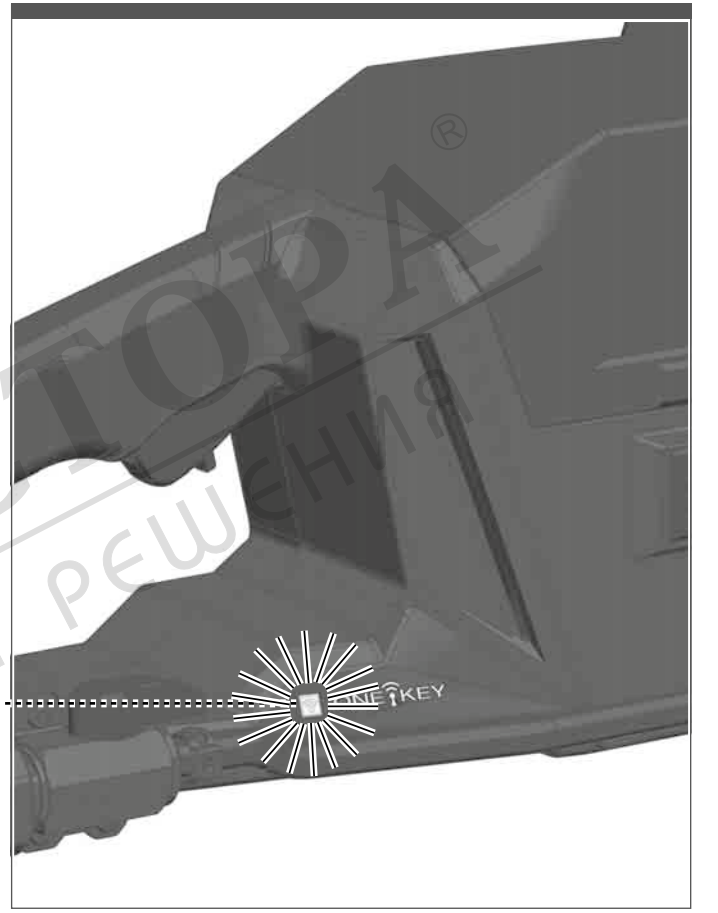


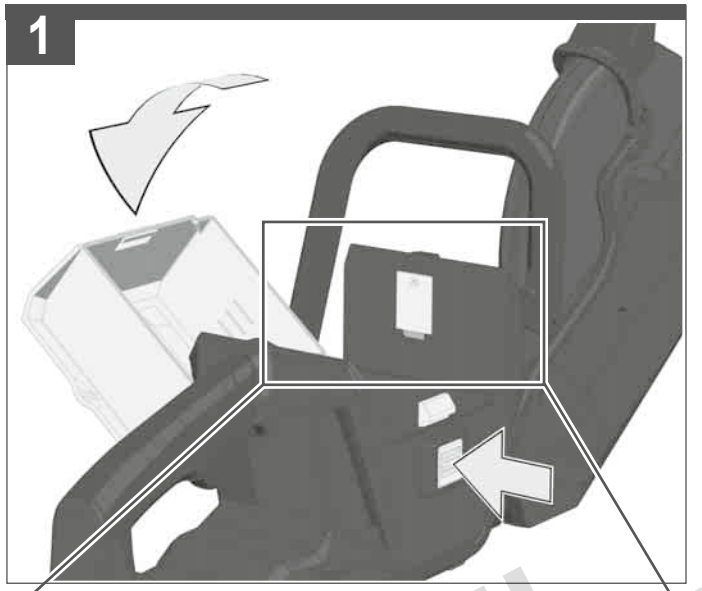


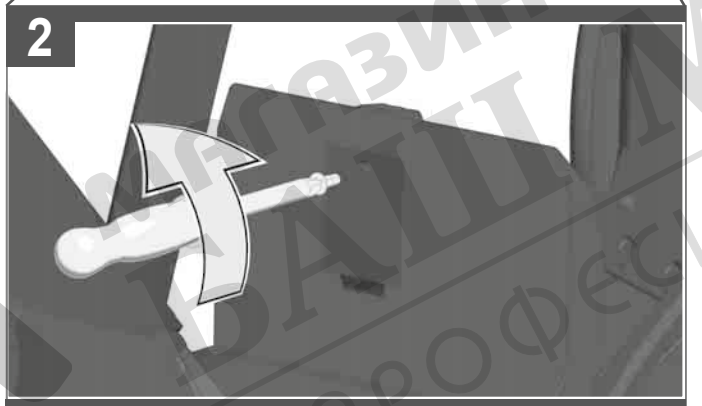
Overload control lamp
If overloaded, the control lamp will turn on. Reduce the load until the control lamp turn off.
If the load is not reduced, the machine shuts off. To continue working, switch the machine off and on again

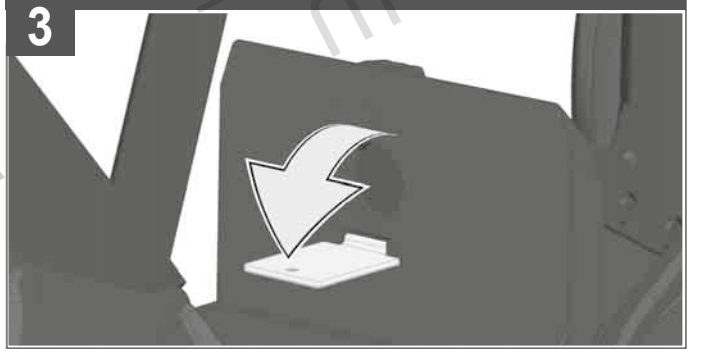


ONE KEY

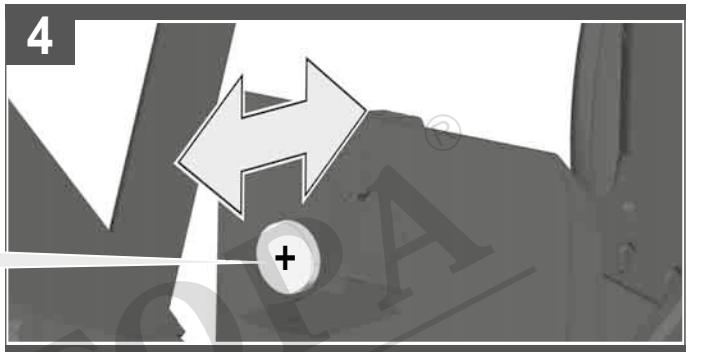


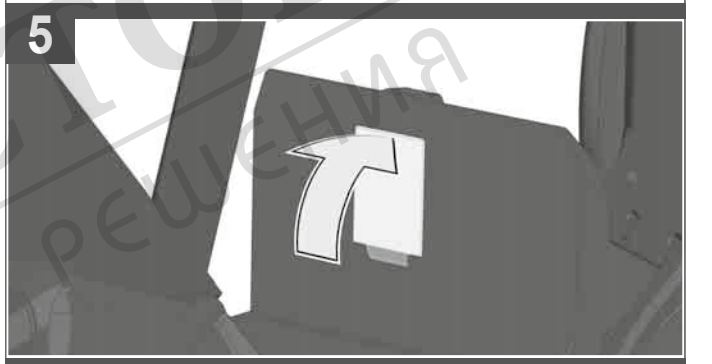


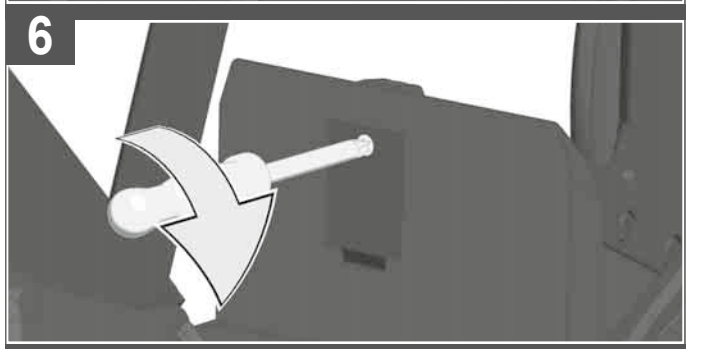


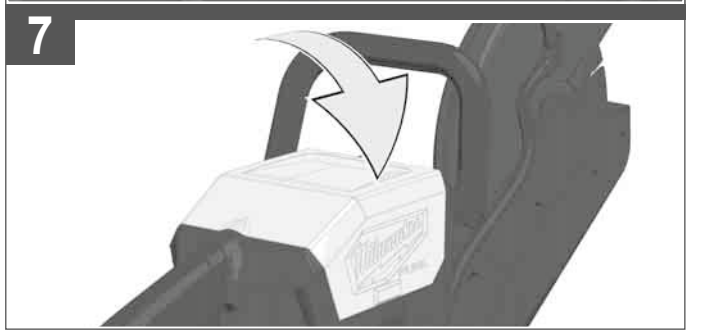


3V CR2032

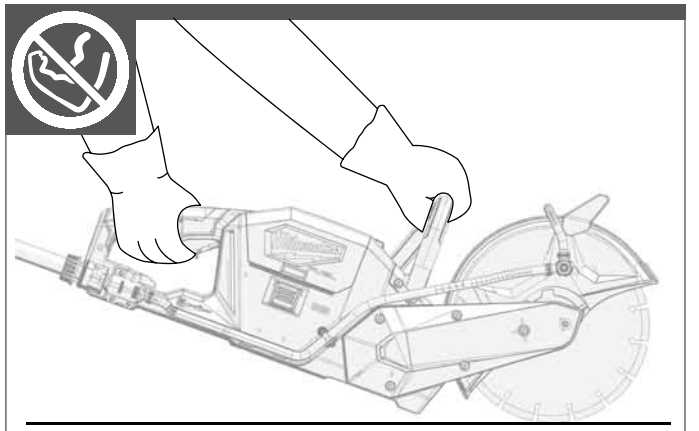


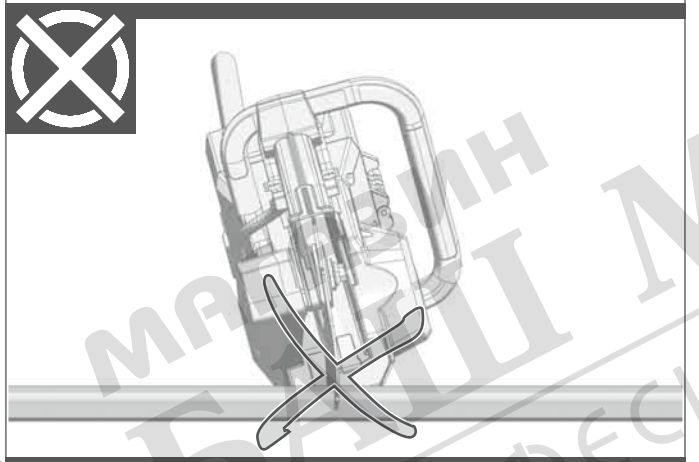






TIP





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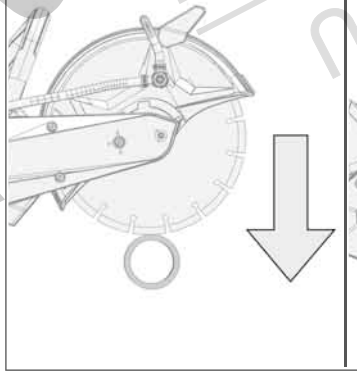

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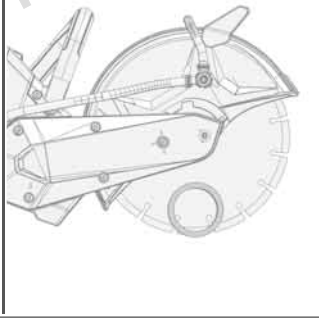

TIP

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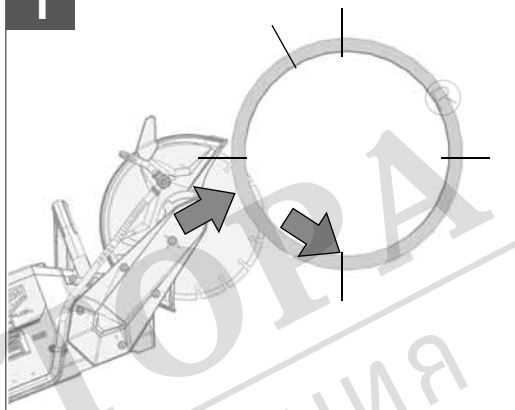

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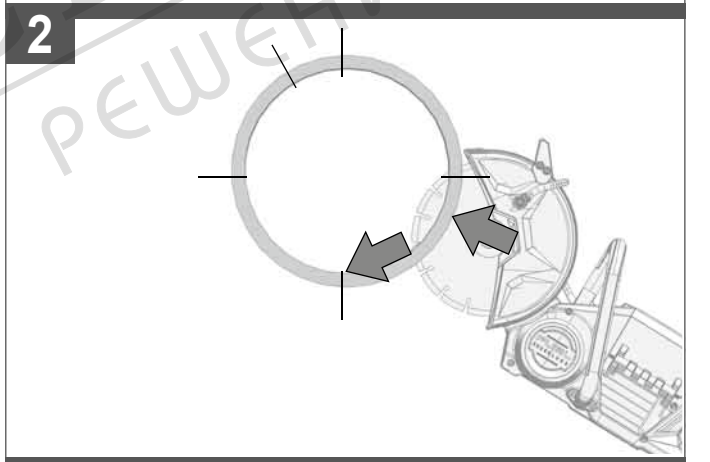

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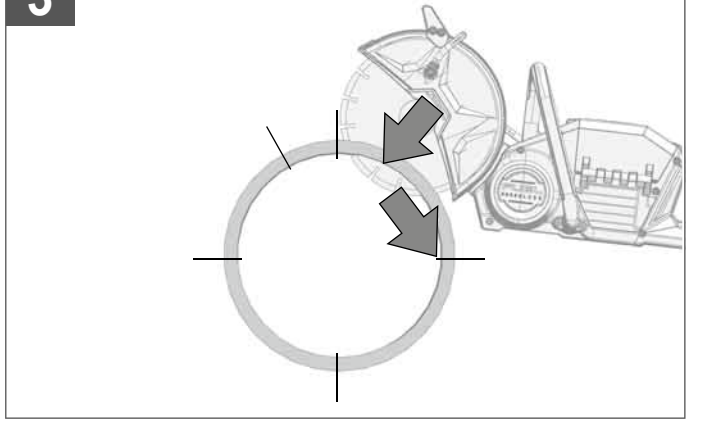

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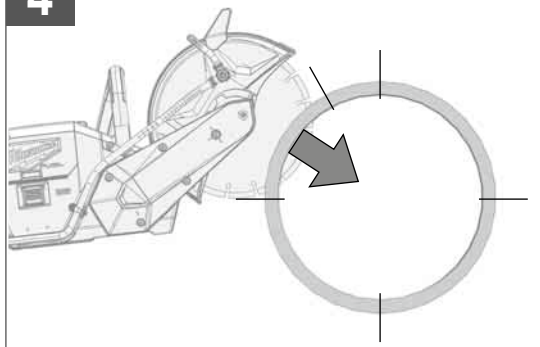

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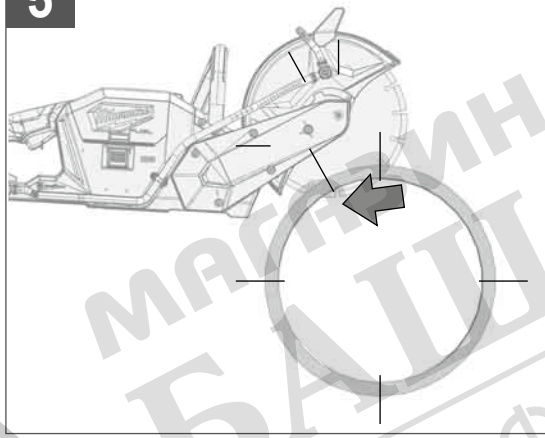
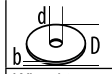


TECHNICAL DATA Cut-off machine	M18 FCOS230
Production code	4745 70 02... ...000001-999999
Rated speed	6600 min^{-1}
D=Cutting disc diameter max. d=Cutting disc hole diameter	230 mm 22.2 mm
 b=Cutting disc thickness min. / max.	1.9 / 3 mm
Wheel type: reinforced abrasive cutting disc or diamond cutting disc	
Cutting depth max.	85 mm
Water supply inlet max	6 bar / 90 psi
Weight according EPTA-Procedure 01/2014 (Li-Ion 12Ah)	6.2 kg
Frequency band(s) of Bluetooth	2402-2480 MHz
Battery Voltage	18 V
Radio-frequency power	1,8 dBm
Bluetooth version	4.0 BT signal mode
Recommended ambient operating temperature	-18°C ... +50 °C
Recommended battery types	M18HB12
Recommended charger	M12-18..., M1418 C6
Noise/Vibration Information Measured values determined according to EN 60 745. Typically, the A-weighted noise levels of the tool are:	
Sound pressure level (Uncertainty K=3dB(A)) Sound power level (Uncertainty K=3dB(A))	101.2 dB(A) 112.2 dB(A)
Wear ear protectors!	
Vibration total values (triaxial vector sum) determined according to EN 60745.	
Vibration emission value $a_{h,SG}$ Uncertainty K	1.81 m/s^2 1.50 m/s^2

WARNING
The vibration and noise emission level given in this information sheet has been measured in accordance with a standardized test given in EN 60745 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure.

The declared vibration and noise emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or poorly maintained, the vibration and noise emission may differ. This may significantly increase the exposure level over the total working period.

An estimation of the level of exposure to vibration and noise should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period.

Identify additional safety measures to protect the operator from the effects of vibration and/or noise such as: maintain the tool and the accessories, keep the hands warm, organization of work patterns.

⚠ WARNING Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
Save all warnings and instructions for future reference.

⚠ CUT-OFF MACHINE SAFETY WARNINGS

a) The guard provided with the tool must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator. Position yourself and bystanders away from the plane of the rotating wheel. The guard helps to protect operator from broken wheel fragments and accidental contact with wheel.

b) Use only bonded reinforced or diamond cut-off wheels for your power tool. Just because an accessory can be attached to your power tool, it does not assure safe operation.

c) The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart.

d) Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel. Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.

e) Always use undamaged wheel flanges that are of correct diameter for your selected wheel. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage.

f) Do not use worn down reinforced wheels from larger power tools. Wheels intended for a larger power tool are not suitable for the higher speed of a smaller tool and may burst.

g) The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.

h) The arbour size of wheels and flanges must properly fit the spindle of the power tool. Wheels and flanges with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.

i) Do not use damaged wheels. Before each use, inspect the wheels for chips and cracks. If power tool or wheel is dropped, inspect for damage or install an undamaged wheel. After inspecting and installing the wheel, position yourself and bystanders away from the plane of the rotating wheel and run the power tool at maximum no load speed for one minute. Damaged wheels will normally break apart during this test time.

j) Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and shop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be cap- able of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.

k) Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken wheel may fly away and cause injury beyond immediate area of operation.

l) Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring. Cutting accessory contacting a live wire may make exposed metal parts of the power tool live and could give the operator an electric shock.

m) Never lay the power tool down until the accessory has come to a complete stop. The spinning wheel may grab the surface and pull the power tool out of your control.

n) Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.

o) Regularly clean the power tool's air vents. The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.

p) Do not operate the power tool near flammable materials. Sparks could ignite these materials.

Kickback and related warnings

Kickback is a sudden reaction to a pinched or snagged rotating wheel. Pinching or snagging causes rapid stalling of the rotating wheel which in turn causes the uncontrolled power tool to be forced in the direction opposite of the wheel's rotation at the point of the binding.

For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

a) Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken.

b) Never place your hand near the rotating accessory. Accessory may kickback over your hand.

c) Do not position your body in line with the rotating wheel. Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.

d) Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.

e) Do not attach a saw chain, woodcarving blade, segmented diamond wheel with a peripheral gap greater than 10 mm or toothed saw blade. Such blades create frequent kickback and loss of control.

f) Do not jam the wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut. Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.

g) When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the wheel from the cut while the wheel is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding.

h) Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut. The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.

i) Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback. Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.

j) Use extra caution when making a pocket cut into existing walls or other blind areas. The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

Additional Safety and Working Instructions

When grinding metal, flying sparks are produced. Take care that no persons are endangered. Because of the danger of fire, no combustible materials should be located in the vicinity (spark flight zone). Do not use dust extraction.

Avoid flying sparks and sanding dust hit your body.

Never reach into the danger area of the machine when it is running.

Chips and splinters must not be removed while the machine is running.

Immediately switch off the machine in case of considerable vibrations or if other malfunctions occur. Check the machine in order to find out the cause.

Do not let any metal parts enter the airing slots - danger of short circuit!

WARNING! Danger of burns! The wheel and workpiece will become hot during use. Wear gloves when changing discs or touching workpiece. Keep hands away from the grinding area at all times.

Do not dispose of used battery packs in the household refuse or by burning them. Milwaukee Distributors offer to retrieve old batteries to protect our environment.

Do not store the battery pack together with metal objects (short circuit risk).

Use only System M18 chargers for charging System M18 battery packs. Do not use battery packs from other systems.

Never break open battery packs and chargers and store only in dry rooms. Keep dry at all times.

Battery acid may leak from damaged batteries under extreme load or extreme temperatures. In case of contact with battery acid wash it off immediately with soap and

water. In case of eye contact rinse thoroughly for at least 10 minutes and immediately seek medical attention.

Warning! To reduce the risk of fire, personal injury, and product damage due to a short circuit, never immerse your tool, battery pack or charger in fluid or allow a fluid to flow inside them. Corrosive or conductive fluids, such as seawater, certain industrial chemicals, and bleach or bleach containing products, etc., can cause a short circuit.

⚠ WARNING This device contains a lithium button/coin cell battery. A new or used battery can cause severe internal burns and lead to death in as little as 2 hours if swallowed or enters the body. Always secure the battery cover. If it does not close securely, stop using the device, remove the batteries, and keep it away from children. If you think batteries may have been swallowed or entered the body, seek immediate medical attention.

SPECIFIED CONDITIONS OF USE

The cut-off machine is intended for cutting metal, stone and ceramic materials.

Please refer to the instructions supplied by the accessory manufacturer.

Do not use this product in any other way as stated for normal use.

WHEEL SELECTION

Cutting surface	Cutting disc type
Non-metallic materials	Silicone carbide abrasive cutting disc
Metallic materials	Aluminum oxide abrasive cutting disc
Masonry materials	Diamond wheel with water supply or silicone carbide abrasive cutting disc

WATER CONNECTION

A water connection is available on the tool to cool the wheel and reduce the formation of dust. The water connection should be used on all concrete cutting applications.

For best results, allow the water to coat the entire cutting wheel before operation.

ONE-KEY™

To learn more about the ONE-KEY functionality for this tool, please reference the Quick Start guide included with this product or go to www.milwaukeetool.com/one-key. To download the ONE-KEY app, visit the App Store or Google Play from your smart device.

Also, when the product experiences ESD, the Bluetooth communication will be disconnected. It needs to be reset manually to recover.

We considered the results to be within our minimum acceptable performance level according to EN 55014-2 / EN 301489-1 / EN 301489-17.

ONE-KEY™ Indicator

Solid Blue	Wireless mode is active and ready to be configured via the ONE-KEY™ app.
Blinking Blue	Tool is actively communicating with the ONE-KEY™ app.
Blinking Red	Tool is in security lockout and can be unlocked by the owner via the ONE-KEY™ app.

BRAKING SYSTEM

The run-on brake engages when the trigger is released, causing the tool to stop within seconds.

Make sure that the insertion tool comes to a complete stop before laying it down.

In comparison with tools without a run-on brake the run-on time will be highly reduced by braking.

If the time between releasing the switch and the stop of the insertion tool increases to much, please have the tool serviced by an authorized MILWAUKEE service facility.

BATTERIES

Battery packs which have not been used for some time should be recharged before use.

Temperatures in excess of 50°C (122°F) reduce the performance of the battery pack. Avoid extended exposure to heat or sunshine (risk of overheating).

The contacts of chargers and battery packs must be kept clean.

For an optimum life-time, the battery packs have to be fully charged, after used.

To obtain the longest possible battery life remove the battery pack from the charger once it is fully charged.

For battery pack storage longer than 30 days:
Store the battery pack where the temperature is below 27°C and away from moisture
Store the battery packs in a 30% - 50% charged condition
Every six months of storage, charge the pack as normal.

BATTERY PACK PROTECTION LI-ION BATTERY

The battery pack has overload protection that protects it from being overloaded and helps to ensure long life. Under extreme stress the battery electronics switch off the machine automatically. To restart, switch the machine off and then on again. If the machine does not start up again, the battery pack may have discharged completely. In this case it must be recharged in the battery charger.

TRANSPORTING LITHIUM BATTERIES

Lithium-ion batteries are subject to the Dangerous Goods Legislation requirements.

Transportation of those batteries has to be done in accordance with local, national and international provisions and regulations.

- The user can transport the batteries by road without further requirements.
- Commercial transport of Lithium-Ion batteries by third parties is subject to Dangerous Goods regulations. Transport preparation and transport are exclusively to be carried out by appropriately trained persons and the process has to be accompanied by corresponding experts.

When transporting batteries:

- Ensure that battery contact terminals are protected and insulated to prevent short circuit.
- Ensure that battery pack is secured against movement within packaging.
- Do not transport batteries that are cracked or leak.

Check with forwarding company for further advice

MAINTENANCE

The ventilation slots of the machine must be kept clear at all times.

Use only Milwaukee accessories and spare parts. Should components need to be replaced which have not been described, please contact one of our Milwaukee service agents (see our list of guarantee/service addresses).

If needed, an exploded view of the tool can be ordered. Please state the machine type printed as well as the six-digit No. on the label and order the drawing at your local service agents or directly at: Techtronic Industries GmbH, Max-Eyth-Straße 10, 71364 Winnenden, Germany.

EC-DECLARATION OF CONFORMITY

We declare as the manufacturer under our sole responsibility that the product described under "Technical Data" fulfills all the relevant regulations and the directives 2011/65/EU (RoHS), 2014/53/EU, 2006/42/EC, and the following harmonized standards have been used:

EN 60745-1:2009+A11:2010
EN 60745-2-22:2011+A11:2013
EN 55014-1:2017+A11:2020
EN 55014-2:2015
EN 62479:2010
EN 301 489-1 V2.2.3
EN 301 489-17 V3.1.1
EN 300 328V2.2.2
EN IEC 63000:2018

Winnenden, 2021-01-26

Alexander Krug
Managing Director

Authorized to compile the technical file.

Techtronic Industries GmbH
Max-Eyth-Straße 10
71364 Winnenden
Germany

GB-DECLARATION OF CONFORMITY

We declare as the manufacturer under our sole responsibility that the product described under "Technical Data" fulfills all the relevant provisions of the following Regulations S.I. 2008/1597 (as amended), S.I. 2017/1206 (as amended), S.I. 2012/3032 (as amended) and that the following designated standards have been used:

BS EN 60745-1:2009+A11:2010
BS EN 60745-2-22:2011+A11:2013
BS EN 55014-1:2017+A11:2020
BS EN 55014-2:2015
BS EN 62479:2010
EN 301 489-1 V2.2.3
EN 301 489-17 V3.1.1
EN 300 328V2.2.2
BS EN IEC 63000:2018

Winnenden, 2021-01-26

Alexander Krug
Managing Director

Authorized to compile the technical file.

Techtronic Industries GmbH
Max-Eyth-Straße 10
71364 Winnenden
Germany

SYMBOLS

	CAUTION! WARNING! DANGER!
	Remove the battery pack before starting any work on the machine.
	Please read the instructions carefully before starting the machine.
	Always wear goggles when using the machine.
	Wear ear protectors!
	Wear a suitable dust protection mask.
	Wear gloves!
	Do not use force.
	Only for cutting work.
	Do not swallow the coin cell battery!
	Do not dispose of electric tools together with household waste material. Electric tools and electronic equipment that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility. Check with your local authority or retailer for recycling advice and collection point.
	Rotation direction
n	Rated speed
V	Volts
⎓	Direct current
CE	European Conformity Mark
UK CA	British Conformity Mark
001	Ukraine Conformity Mark
EAC	EurAsian Conformity Mark

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