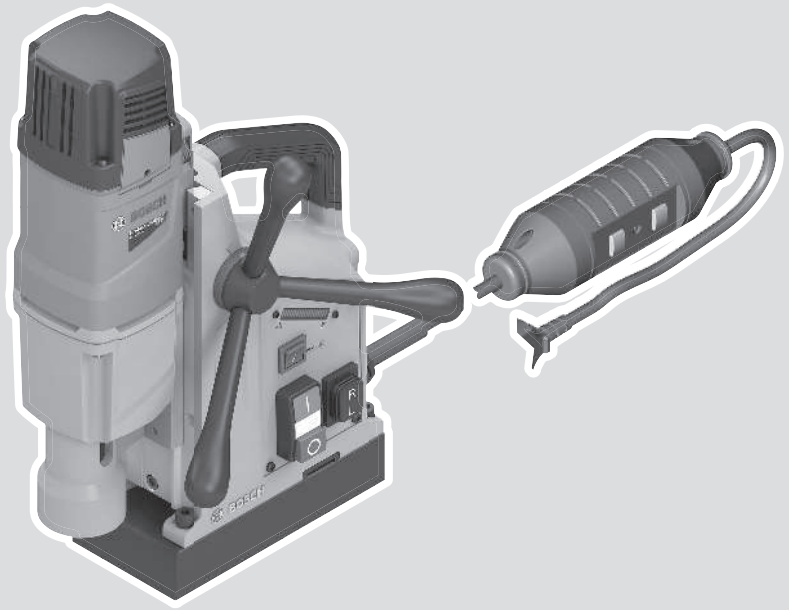
BOSCH

Professional HEAVY DUTY

GBM 50-2



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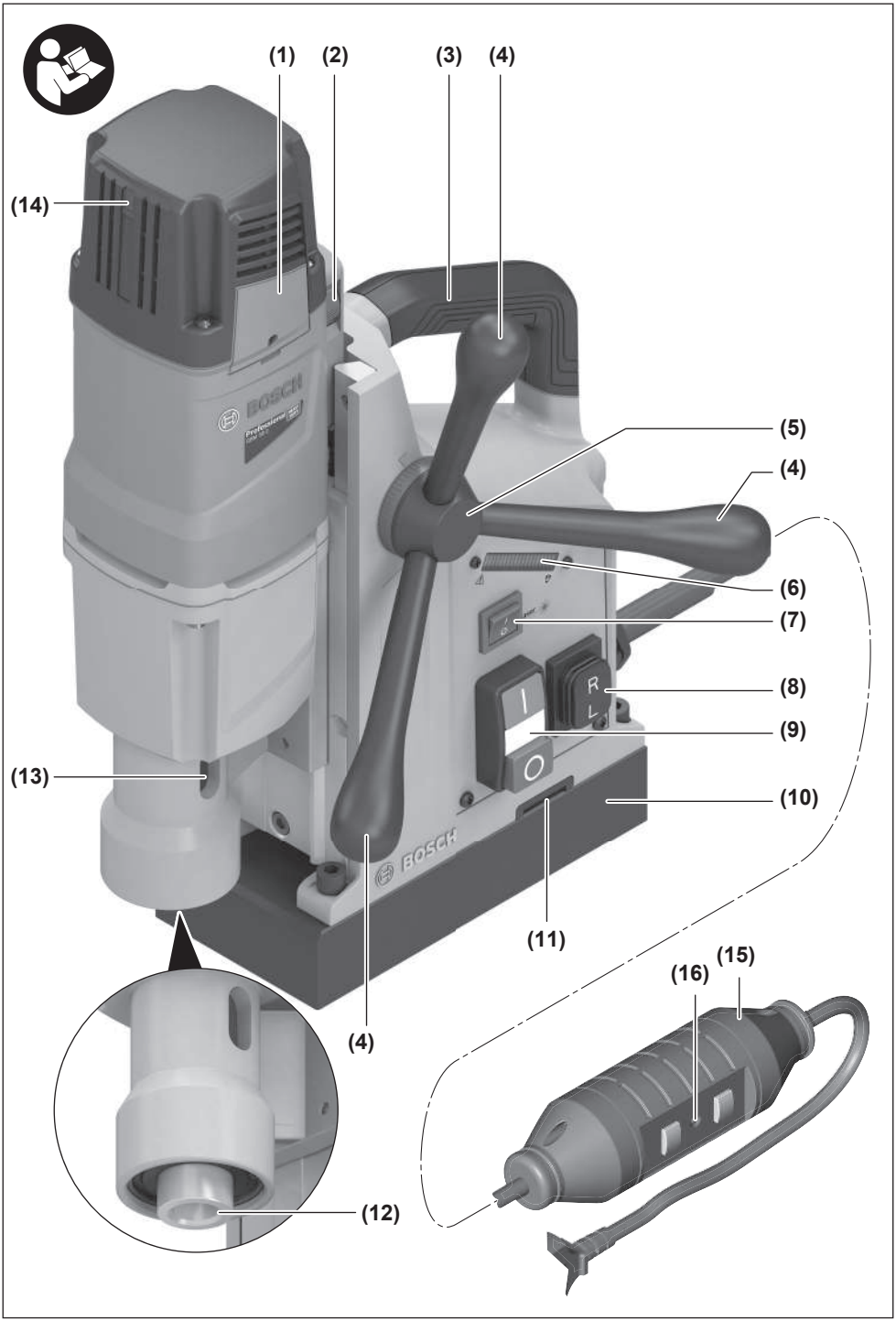
1 609 92A 9TE (2025.10) PS / 19

1 609 92A 9TE

en Original instructions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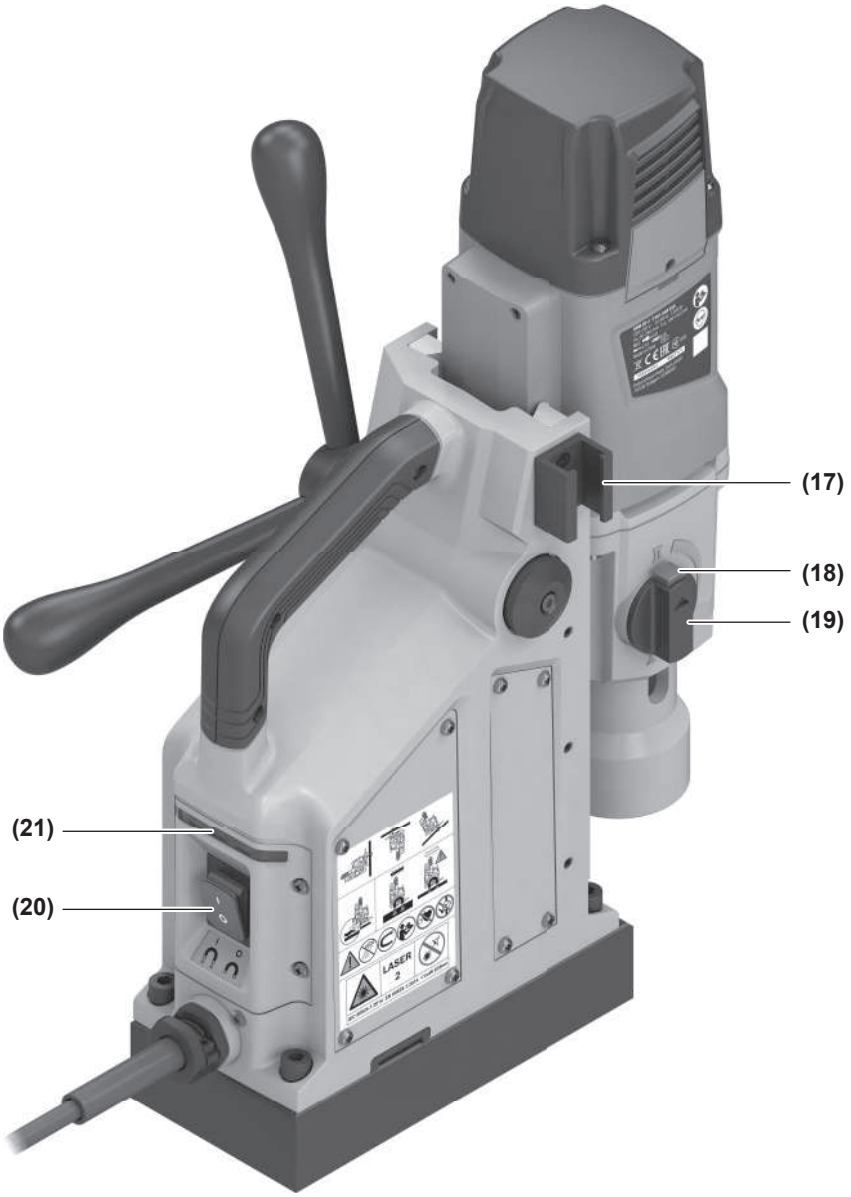
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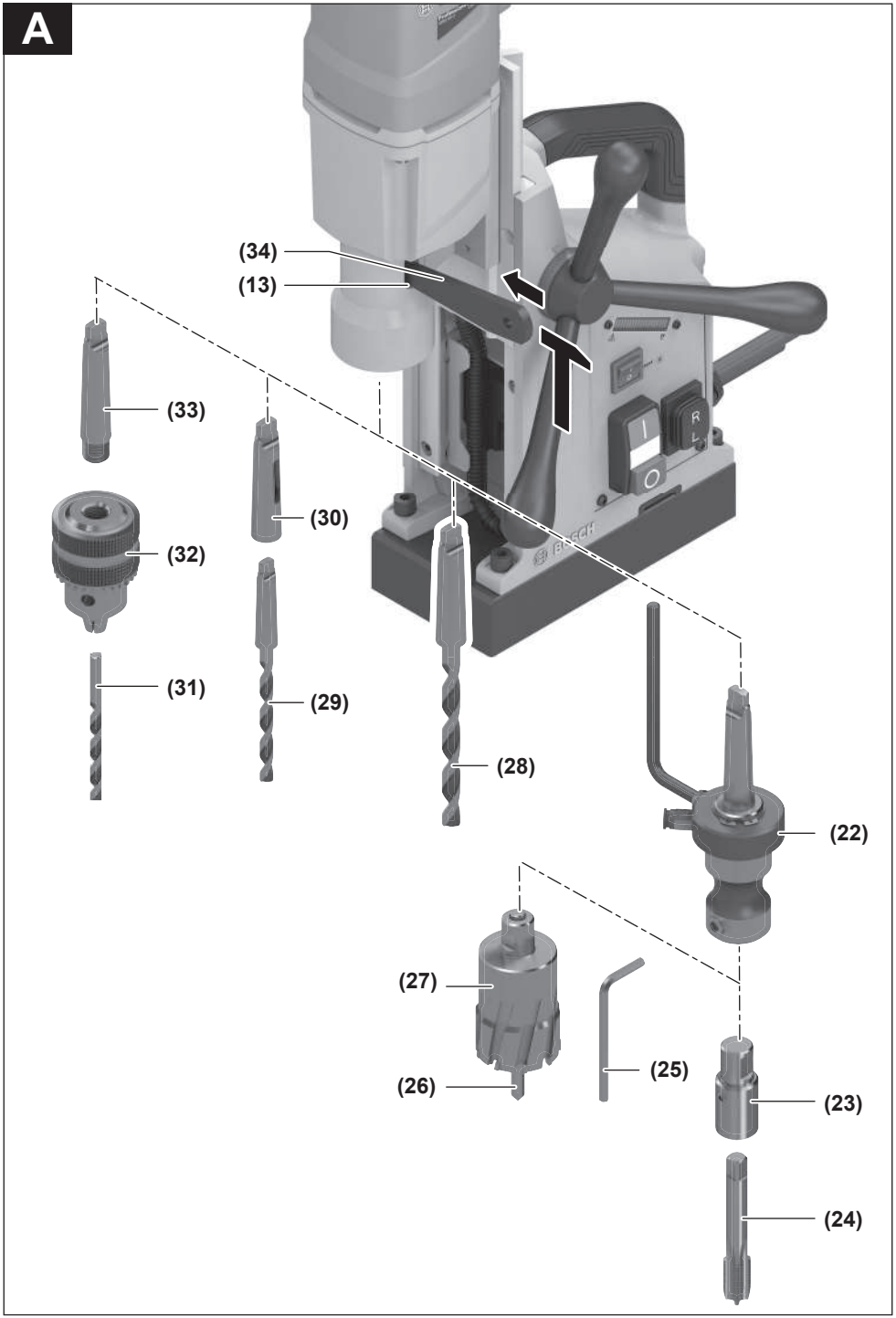
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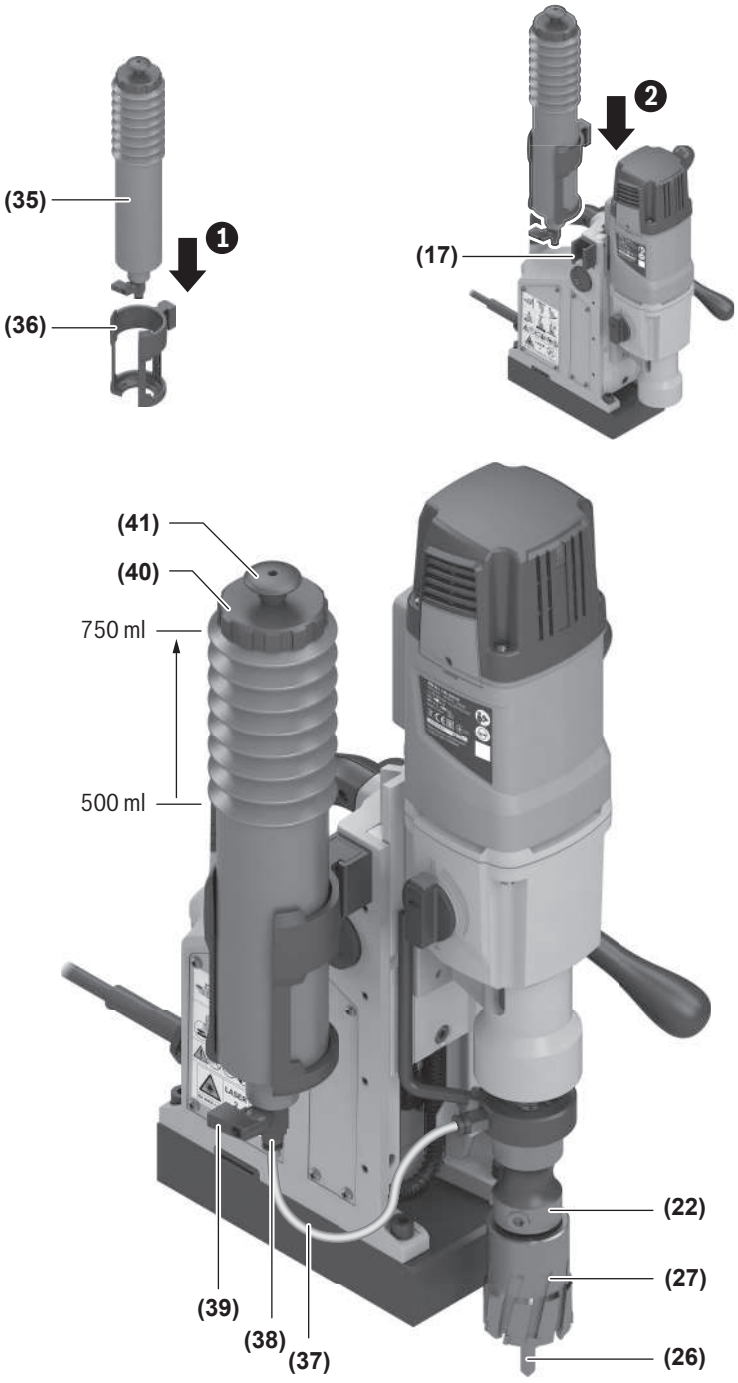

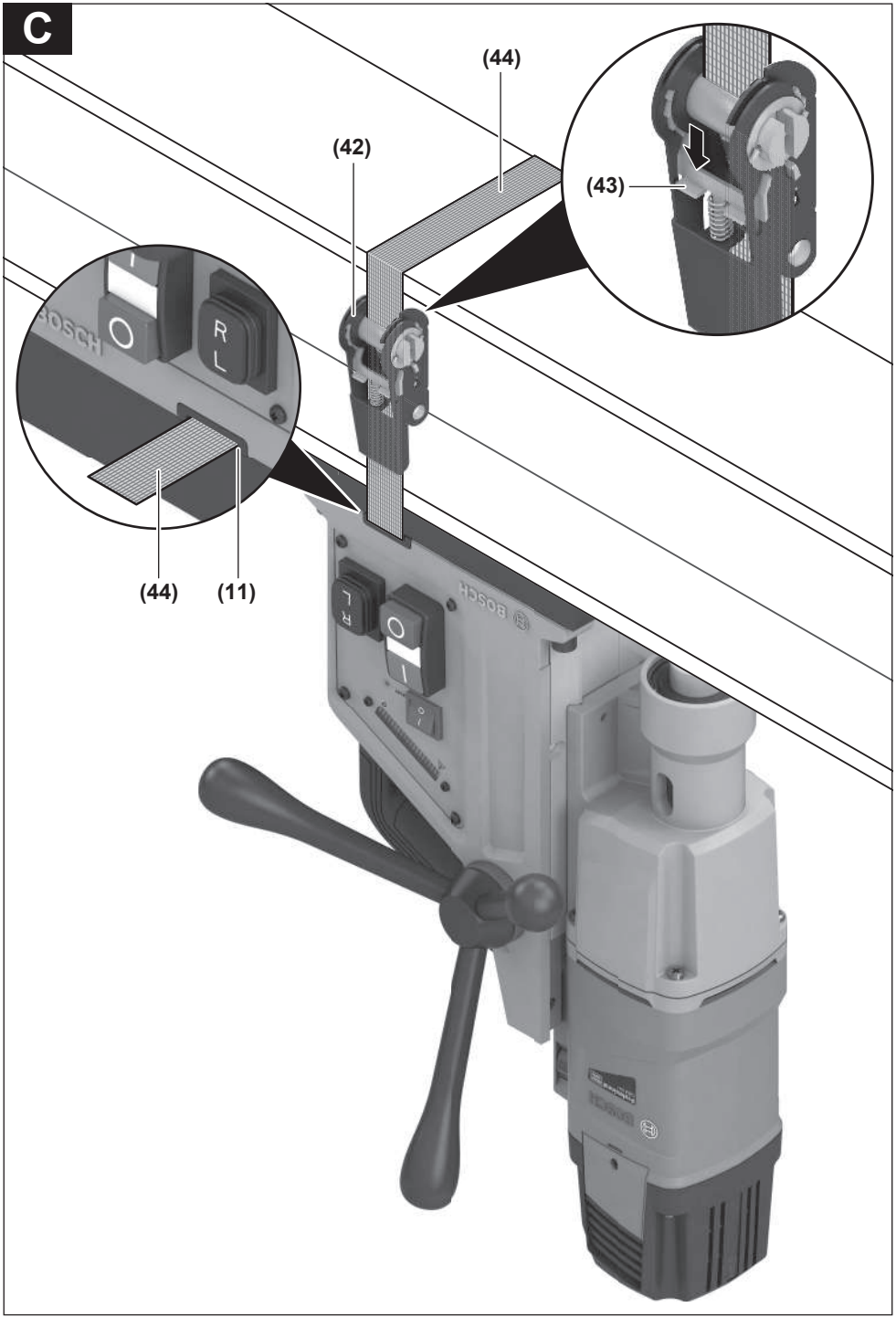
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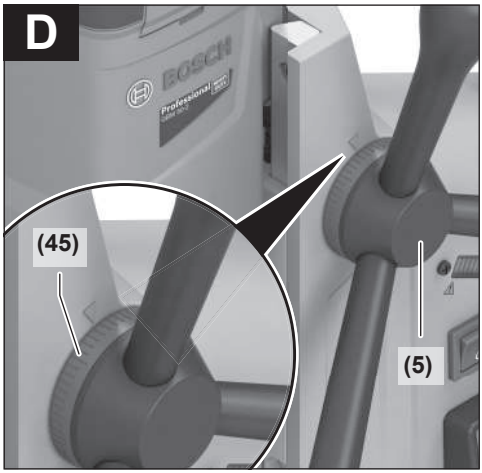
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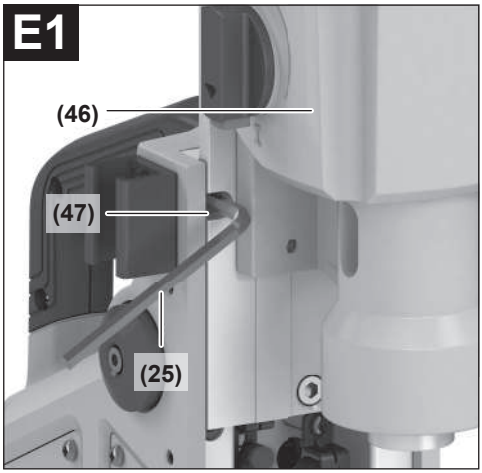
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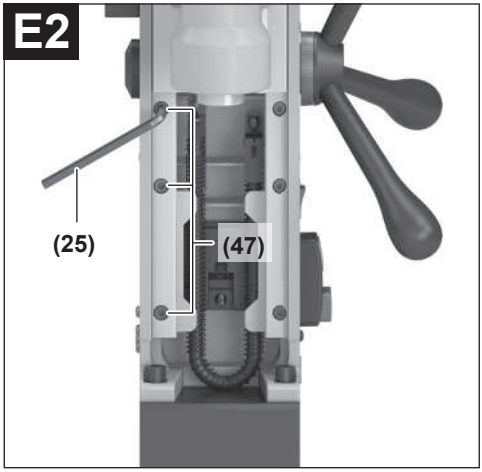
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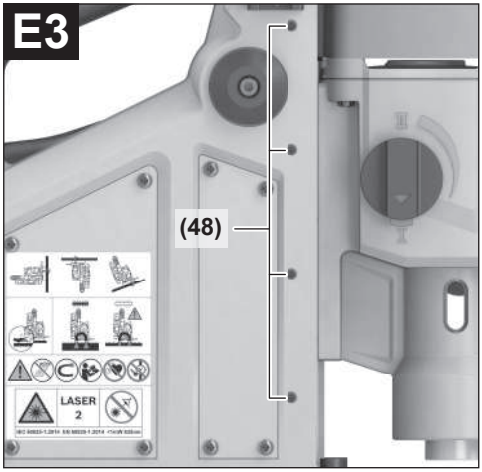
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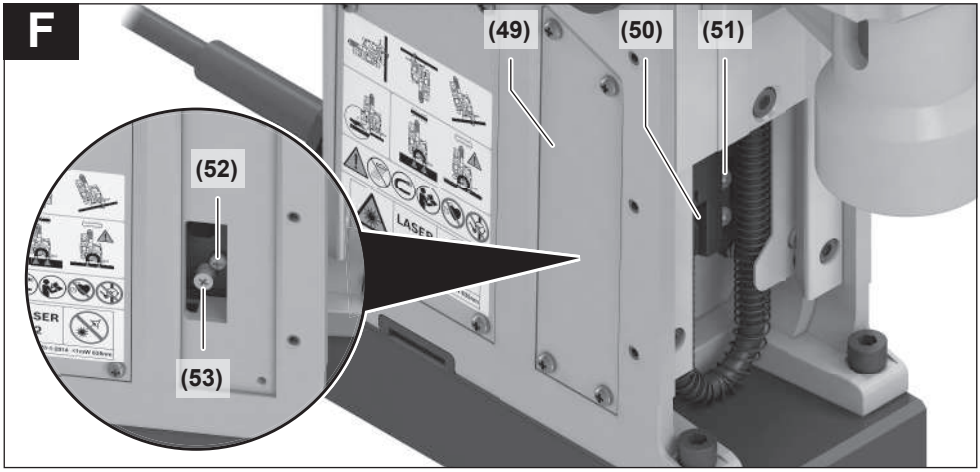
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English

Safety Instructions

General Power Tool Safety Warnings

⚠ 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.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work area safety

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

Personal safety

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

Power tool use and care

- **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

- ▶ **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- ▶ **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
- ▶ **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

Service

- ▶ **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Magnetic drill safety warnings

- ▶ **Operate power tool by insulated grasping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- ▶ **When securing the power tool with the safety strap to the workpiece, ensure that the safety strap is capable of holding and restraining the machine during use.** If the workpiece is weak or porous, it may be damaged causing the power tool to release from the workpiece.
- ▶ **When drilling through walls or ceilings, ensure to protect persons and the work area on the other side.** The bit may extend through the hole or the core may fall out on the other side.
- ▶ **The coolant tank may not be used when drilling into vertical or sloped surfaces, or drilling overhead. Please use foam coolant. Take care that no water penetrates the tool.** If water penetrates the power tool there is an increased risk of an electric shock.
- ▶ **The power tool must be secured.** A power tool that is not properly secured may move or tip over and may result in personal injury.
- ▶ **Do not wear gloves.** Gloves may be entangled by the rotating parts or chips leading to personal injury.
- ▶ **Keep your hands out of the drilling area while the tool is running.** Contact with rotating parts or chips may result in personal injury.
- ▶ **Make sure the accessory is rotating before feeding into the workpiece.** Otherwise the accessory may become jammed in the workpiece causing unexpected movement of the workpiece and personal injury.
- ▶ **When the accessory is jammed, stop applying downward pressure and switch off the tool. Investigate and take corrective actions to eliminate the cause of the jam.** Jamming can cause unexpected movement of the workpiece and personal injury.
- ▶ **Avoid generating long chips by regularly interrupting downward pressure.** Sharp metal chips may cause entanglement and personal injuries.
- ▶ **Never remove chips from the drilling area while the tool is running. To remove chips, move the accessory away from the workpiece, switch off the tool and wait for the accessory to stop moving. Use tools such as a brush or hook to remove chips.** Contact with rotating parts or chips may result in personal injury.
- ▶ **Accessories with speed ratings must be rated at least equal to the maximum speed marked on the power tool.** Accessories running faster than their rated speed can break and fly apart.
- ▶ **Use suitable detectors to determine if utility lines are hidden in the work area or call the local utility company for assistance.** Contact with electric lines can lead to fire and electric shock. Damaging a gas line can lead to explosion. Penetrating a water line causes property damage or may cause an electric shock.
- ▶ **Never operate the power tool without the portable residual current device (PRCD) included in delivery.**
- ▶ **Before beginning work, check that the portable residual current device (PRCD) is functioning properly. Have any damaged portable residual current devices (PRCDs) repaired or replaced by a Bosch after-sales service centre.**
- ▶ **Pay attention that neither persons in the working area nor the power tool itself come into contact with the water that comes out.**
- ▶ **Wear non-skid shoes.** This prevents injuries that can occur from slipping on smooth surfaces.
- ▶ **Products sold in GB only: Never operate the 110 V execution of the machine without isolation transformer according to EN/IEC 61558-1 and EN/IEC 61558-2-23. The isolation transformer must have a grounded earth wire on the secondary winding side.**
- ▶ **Never leave the tool unattended before it has come to a complete stop.** Drilling tools that are still running can cause injuries.
- ▶ **Keep the drill cord away from the work area.** Damaged or entangled cords increase the risk of electric shock.
- ▶ **Do not overload the power tool or climb or stand on it.** Overloading or standing on the power tool can raise its centre of gravity, causing it to tip over.
- ▶ **The power tool must only be operated on a mains supply with protective conductor and adequate dimensioning.**
- ▶ **Disconnect the plug from the power source and/or remove the battery from the power tool before making any adjustments to the power tool or changing accessories.** Accidents can occur when power tools are started unintentionally.
- ▶ **When using the power tool for overhead applications, two persons are always required.**
- ▶ **Secure the power tool with a safety strap when drilling into vertical or sloped surfaces, or working**

overhead. In the event of a power failure or overload, the magnet retention force is not maintained. The power tool may fall over and cause accidents.

- **Danger of the power tool falling down due to sudden pendular motion of the power tool.** When working on a scaffold, the power tool can be subject to a sudden pendular motion when the drill starts or in case of a power failure. Secure the power tool with the provided safety strap. Secure yourself against falling down by applying a safety rope/belt.
- **The surface must be smooth and clean. Smooth out coarse irregularities, e. g., welding spatter and remove loose rust, dirt and grease.** The holding force of the magnet applies only for appropriate surfaces.

Keep the magnet away from implants and other medical devices, e.g. pacemakers or insulin pumps. The magnet generates a field that can impair the function of implants and medical devices.

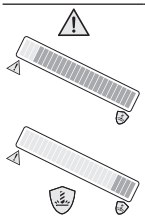
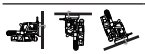
- **Keep the power tool away from magnetic data carriers and magnetically sensitive equipment.** The effect of the magnet can lead to irreversible data loss.
- **Secure the power tool on a stable, even and horizontal surface.** If the power tool can slip or shake, the application tool cannot be operated evenly and safely.
- **Keep the work surface clean, including the workpiece.** Sharp-edged drilling chips and other objects may cause injury. Material mixtures are particularly hazardous. Light metal dust may catch fire or explode.
- **Do not touch the application tool after working before it has cooled.** The application tool becomes very hot while working.
- **Do not touch the drill core that will be automatically ejected through the guide pin once the work process has ended.** The drill core can become very hot.
- **Check the cable regularly and have a damaged cable repaired only by an authorised customer service agent for Bosch power tools. Replace damaged extension cables.** This will ensure that the safety of the power tool is maintained.
- **Store the power tool safely when it is not in use. The storage location must be dry and lockable.** This prevents the power tool from storage damage, and from being operated by untrained persons.
- **Never use the power tool if the cable is damaged. Do not touch the damaged cable and pull out the mains plug if the cable is damaged while working.** Damaged cables increase the risk of an electric shock.
- **Connect the power tool to a mains supply that is properly connected to earth.** The socket and extension cable must have a fully functioning protective conductor.
- **Products sold in GB only:**
  Your product is fitted with an BS 1363/A approved electric plug with internal fuse (ASTA approved to BS 1362). If the plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place by an authorised customer service agent. The replacement plug should have the same fuse rating as the original plug. The severed plug must be disposed of to avoid a possible shock hazard and should never be inserted into a mains socket elsewhere.
- **The retention of the magnets depends on the thickness of the workpiece.** They hold best on low-carbon steel with a thickness of at least 20 mm. When drilling into thinner steel, an additional steel plate (of at least 100 x 200 x 20 mm) must be placed under the magnetic base. Ensure that the steel plate cannot fall off.
- **Metal chips and other debris will seriously hamper magnetic adhesion.** Always ensure that the magnetic base is clean.
- **Avoid the magnet releasing.** Ensure that the magnetic base has properly adhered to the work piece before beginning drilling.
- **Do not switch off the magnetic power or use the reverse drilling function before the power tool comes to a complete stop.**
- **Other units used on the same receptacle will cause uneven voltage that could lead to the magnet releasing.** Always use the power tool alone on the receptacle.
- **Avoid operating annular cutters without coolant fluid.** Always check coolant level before operating.
- **Protect the motor.** Never allow coolant fluid, water, or other contaminants enter the motor.
- **Metal chips are often very sharp and hot. Never touch them with bare hands.** Clean up with a magnetic chip collector and a chip hook or other appropriate tool.
- **Never attempt to use the power tool with incorrect current or abnormally low voltage.** Check the nameplate of the power tool to ensure that correct voltage and frequency are used.
- **The power tool is delivered with a laser warning sign (see table: "Symbols and their meaning")**.
- **Never make warning signs on the machine unrecognisable.**

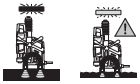
Do not direct the laser beam at persons or animals and do not stare into the direct or reflected laser beam yourself. You could blind somebody, cause accidents or damage your eyes.

- **If laser radiation hits your eye, you must close your eyes and immediately turn your head away from the beam.**
- **Do not make any modifications to the laser equipment.**
- **Do not let children use the power tool unsupervised.** They could unintentionally blind themselves or other persons
- **If the text of the laser warning label is not in your national language, stick the provided warning label in your national language over it before operating for the first time.**

Symbols

The following symbols may be important for the operation of your power tool. Please take note of these symbols and their meaning. Correctly interpreting the symbols will help you to operate the power tool more effectively and safely.

Symbols and their meaning	
	**Do not direct the laser beam at persons or animals and do not stare into the direct or reflected laser beam yourself.**
	**Wear safety goggles.**
	**WARNING!** If the beam of the overload indicator lights up close to the left symbol, the workload is very high. Reduce the workload or switch the motor off, otherwise the overload protection will be activated and the motor will be shut off automatically. If the beam of the overload indicator lights up close to the right symbol, the workload is optimal and there is no overload.
	**WARNING!** The tool must not be operated outside in wet weather.
	**WARNING!** Ensure that the safety strap is working properly before you use it. Never use a safety strap if it is damaged. Instead, replace it immediately.
	**Persons with pacemakers or other medical implants must not use this power tool.**
	**Carrying metal parts or wearing watches is prohibited.** The magnet generates a field that can impair the function of implants and medical devices.
	**WARNING!** When drilling into vertical or diagonal surfaces or overhead, the power tool must be secured with the safety strap.
	**WARNING!** Do not hold your hand underneath the application tool or the accessories when you are changing these.

Symbols and their meaning	
	**WARNING!** Before drilling, ensure that the magnet strength is sufficient. The surface of the workpiece must be level, clean and sufficiently thick.

Product Description and Specifications

Read all the safety and general instructions. Failure to observe the safety and general instructions may result in electric shock, fire and/or serious injury.

Please observe the illustrations at the beginning of this operating manual.

Intended Use

The power tool is suitable for drilling in magnetisable materials (e.g. steel).

The power tool can be used horizontally, vertically and overhead. Ensure that the workpiece clamping surface is level, is at least equal to the footprint of the power tool and consists of clean, magnetisable material at least **20** mm thick.

This product is a consumer laser product in accordance with EN 50689.

Product Features

The numbering of the product features refers to the diagram of the power tool on the graphics page.

- **(1)** Carbon brush cover
- **(2)** Speed preselection thumbwheel
- **(3)** Handle (insulated gripping surface)
- **(4)** Crank handle (3 x)
- **(5)** Crank hub
- **(6)** Overload indicator
- **(7)** Laser on/off switch
- **(8)** Rotational direction switch
- **(9)** Motor on/off switch
- **(10)** Magnetic base
- **(11)** Holder for safety strap
- **(12)** Tool holder
- **(13)** Opening for MT2 drill drift
- **(14)** Indicator for carbon brush change
- **(15)** Portable residual current device
- **(16)** Portable residual current device indicator
- **(17)** Rail for coolant tank holder
- **(18)** Release button for gear selector switch
- **(19)** Gear selector switch
- **(20)** Magnet on/off switch
- **(21)** Magnet strength indicator
- **(22)** Annular cutter adapter

(23) Screw tap adapter[a)]
(24) Screw tap[a)]
(25) Hex key (3/4/6 mm)
(26) Pilot pin
(27) Annular cutter[a)]
(28) Twist drill bit MT2[a)]
(29) Twist drill bit MT1[a)]
(30) Reduction sleeve (MT2/MT1)
(31) Twist drill bit with cylindrical shank[a)]
(32) Keyed chuck (up to a diameter of 16 mm)[a)]
(33) Taper mandrel[a)]
(34) MT2 drill drift
(35) Coolant tank
(36) Coolant tank holder
(37) Coolant hose
(38) Connector for cooling system
(39) Coolant valve
(40) Coolant tank screw cover
(41) Push-pull closure
(42) Ratchet
(43) Pawl on ratchet
(44) Safety strap
(45) Scale for drilling depth
(46) Drill unit
(47) Screws for guide rail
(48) Screws for gap adjustment
(49) Laser cover
(50) Laser beam output
(51) Clip
(52) Screw for laser adjustment (right/left)
(53) Screw for laser adjustment (forward/back)

a) **This accessory is not part of the standard scope of delivery.**

Technical Data

Magnetic drill		GBM 50-2
Article number		**3 601 AB4 0..**
Rated power input	W	1200
No-load speed		
– First gear	min^{-1}	50–250
– Second gear	min^{-1}	100–510
Laser type	nm	635
	mW	< 1
Laser class		2
C_6		1
Divergence of laser line	mrad (full angle)	0.5
Max. drilling diameter		
– Annular cutter	mm	50
– Twist drill bit	mm	23
– Screw tap		M16
Tool holder		MK2 – DIN 228
Magnet retention force	kN	14
Max. drill stroke	mm	165
Magnetic base dimensions (width x depth x height)	mm	200 x 98 x 38.5
Weight[A)]	kg	14.7
Protection class		⏚/I

A) Without mains connection cable

The specifications apply to a rated voltage [U] of 230 V. These specifications may vary at different voltages and in country-specific models.

Values can vary depending on the product, scope of application and environmental conditions. To find out more, visit www.bosch-professional.com/wac.

Noise values

Noise emission values determined according to **EN 62841-1 Annex I**.

Typically, the A-weighted noise level of the power tool is: Sound pressure level **90** dB(A); Sound power level **110** dB(A). Uncertainty K=**3** dB.

Wear hearing protection

The noise emission value given in these instructions has been measured in accordance with a standardised measuring procedure and may be used to compare power tools. It may also be used for a preliminary estimation of noise emissions.

The noise emission value given represents the main applications of the power tool. However, if the power tool is used for other applications, with different application tools or is poorly maintained, the noise emission value may differ. This may significantly increase noise emissions over the total working period.

To estimate noise emissions accurately, the times when the tool is switched off, or when it is running but not actually being used, should also be taken into account. This may significantly reduce noise emissions over the total working period.

Assembly

▶ **Pull the plug out of the socket before carrying out any work on the power tool.**

Fitting the crank handle

– Screw the three crank handles **(4)** tightly into the crank hub **(5)**.

Changing the Tool (see figure A)

– Turn the drive unit all the way up using the crank handle **(4)**.

– Ensure that the application tools are free of grease.

Fitting the annular cutter

– Insert the pilot pin **(26)** into the annular cutter **(27)** (TCT and HSS annular cutters require different diameters of pilot pin).
– Insert the annular cutter with the pilot pin into the annular cutter adapter **(22)** and tighten the screws using the hex key (6 mm) **(25)**.
Where possible, you should use an annular cutter with a Weldon shank.
– Insert the annular cutter adapter into the tool holder **(12)**.
– Connect the coolant hose **(37)** with the connector on the annular cutter adapter.

Fitting the twist drill bit

Tools with Morse taper **MT2:**

– Insert the tool directly into the tool holder **(12)**.

Tools with Morse taper **MT1:**

– Insert the tool into the reduction sleeve (MT2/MT1) **(30)**.
– Insert the reduction sleeve (with the tool inserted) into the tool holder **(12)**.

Tools with **cylindrical** shank:

– Screw the keyed chuck **(32)** onto the taper mandrel **(33)** and insert the tool.
– Insert the taper mandrel (with the keyed chuck screwed in) into the tool holder **(12)**.

▶ **Make sure that the tool clicks securely into place.**

▶ **Do not use force to insert the Morse taper/taper mandrel.** Excessive force could damage the tool holder and the inserted tool.

Fitting the screw tap

Use the correct screw tap adapter **(23)** for screw tapping.

– Insert the screw tap **(24)** into the adapter **(23)**.
– With the screw tap **(24)** inserted, insert the adapter **(23)** into the annular cutter adapter **(22)** and tighten it using the hex key (6 mm) **(25)**.
– Insert the annular cutter adapter **(22)** into the tool holder **(12)**.

Removing the tool

– Place the MT2 drill drift **(34)** in the opening **(13)** so that the bevelled edge faces down.
If the drill drift **(34)** will not go through the drive spindle, turn the application tool slightly.
– Using a hammer, push the drill drift **(34)** towards the tool and remove the application tool from the tool holder.

Fitting and Filling the Coolant Supply System (see figure B)

▶ **The coolant system must only be used when drilling with the annular cutter.**

▶ **The coolant supply system may not be used when drilling into vertical or sloped surfaces, or drilling overhead.**

By pulling or pushing the coolant tank **(35)**, the volume of the tank can be adjusted between 500 ml and 750 ml.

– Insert the coolant tank **(35)** into the holder **(36)**.
– With the coolant tank inserted, push the holder into the rail **(17)** from above.
– Connect the connector **(38)** of the coolant valve to the coolant hose **(37)**.

The coolant tank **(35)** must be filled with coolant before drilling.

– Close the coolant valve **(39)**.
– Unscrew the screw cover **(40)** of the coolant tank and fill the coolant tank **(35)** with coolant.
– Screw the screw cover **(40)** back onto the coolant tank.
– Pull the push-pull closure **(41)** of the coolant tank upwards.
– Open the coolant valve **(39)** fully before switching on the power tool.

Operation

Work preparation

Setting the Rotational Direction

▶ **Only operate the rotational direction switch (8) when the power tool is not in use.**

– **Clockwise rotation:** Push the rotational direction switch **(8)** upwards to position "**R**".
– **Anticlockwise rotation:** Push the rotational direction switch **(8)** downwards to position "**L**".
Note: Anti-clockwise rotation must not be used for drilling.

Portable residual current device

Always check that the residual current device is working correctly before starting the power tool.

– Ensure that the magnet on/off switch **(20)** is in position "**0**".
– Plug in the mains plug and press and hold the **RESET** button on the residual current device **(15)** until the indicator **(16)** lights up red.
– Press and hold the **TEST** button on the residual current device **(15)** until the indicator **(16)** goes out. If the indicator **(16)** does not go out, this means the residual current device is faulty and must be repaired. Do not work with the power tool under any circumstances.
– Once the indicator **(16)** has gone out, press the **RESET** button again.
– If the indicator **(16)** lights up red, position the tool (see "Correctly positioning the power tool", page 15).

▶ **NOTE: After disconnecting the power tool from the power source, you must always perform this test again before using the power tool.**

Note: The residual current device protects against electric shock at 10 mA or more.

Correctly positioning the power tool

A laser cross shows you the exact drilling point.

– Switch on the laser unit via the on/off switch **(7)**.
– Position the power tool on the workpiece and align it with the laser cross on the marking of the workpiece.
– Push the magnet on/off switch **(20)** upwards and check that the power tool adheres to the surface of the workpiece.
– Use the safety strap **(44)** to secure the power tool if necessary.

Fitting the Safety Strap (see figure C)

▶ **Whenever you are working overhead or on diagonal or vertical surfaces, secure the power tool with the supplied safety strap to prevent it from falling over.**

▶ **Check that the safety strap is working properly before you use it. Never use a safety strap that is damaged; instead, replace it immediately.**

– Attach the safety strap **(44)** to the power tool so that it is as free of play as possible.
– Push the safety strap through the holder **(11)** and place it around the workpiece.
– Tighten the safety strap using the ratchet **(42)**.
– To loosen the safety strap, press the pawl **(43)** on the ratchet and pull out the safety strap.
– Attach the safety strap so that the power tool will move away from you if it slips.

Setting the Drilling Depth (see figure D)

The scale **(45)** on the crank hub **(5)** can be used to set the required drilling depth.
The drilling depth can be set using the lines on the scale. The distance between each of the smaller lines amounts to 1 mm, while the distance between the larger lines is 10 mm.

Starting Operation

▶ **Pay attention to the mains voltage.** The voltage of the power source must match the voltage specified on the rating plate of the power tool.

▶ **Products that are only sold in AUS and NZ:** Use a residual current device (RCD) with a nominal residual current of 30 mA or less.

Switching On

– Position and secure the power tool.
– To **switch on** the power tool, push the motor on/off switch **(9)** to position "**I**".

Note: The power tool can only be switched on once the magnet has already been activated.

Switching Off

– To **switch off** the power tool, push the motor on/off switch **(9)** to position "**0**".
– Wait until the power tool has come to a complete stop.
– Push the magnet on/off switch **(20)** downwards to switch off the magnet.

Restart protection

The restart protection feature prevents the power tool from uncontrolled starting after the power supply to it has been interrupted.

– To **restart** the power tool, push the motor on/off switch **(9)** to position "**I**".

The restart protection feature prevents the power tool from uncontrolled starting after the power supply to it has been interrupted.

– To **restart** the power tool, press the **I** button of the motor on/off switch **(9)**.

Note: Once the power supply has been restored, press the **RESET** button on the residual current device **(15)**. The magnet switches on automatically as soon as the indicator **(16)** on the residual current device **(15)** lights up red.

Overload protection

The power tool is equipped with an overload protection system. In normal conditions of use, the power tool cannot be overloaded. In the event of overloading, the power tool automatically shuts off the electronics. The magnet will remain active.

– To start the power tool again after this, press the motor on/off switch **(9)** into position "**I**".

Carry out the following steps before you continue working with the power tool:

– Eliminate any blockages that may be present. If the application tool jams, the **anti-clockwise rotation** function must not be used.
– Allow the power tool to run with no load for approx. one minute; afterwards, it will be ready for use again.

Overload indicator

The overload indicator **(6)** indicates whether an overload has occurred when the power tool is switched on.

Overload indicator (6)	Overload
Green continuous light	No overload
Yellow continuous light	Heavy workload – Reduce feed speed
Red flashing light	Very heavy workload – Reduce feed speed or switch off motor, otherwise overload protection will be activated

Adjusting the Speed

▶ **Select the correct speed before starting work. The speed must be appropriate for both the drilling diameter and the material you intend to drill.** When the speed is set incorrectly, the application tool can become damaged or get caught in the workpiece.

Mechanical gear selection

▶ **Only operate the gear selector switch (19) when the power tool is not in use.**

You can preselect two speed ranges with the gear selector switch **(19)**.

First gear:
Low speed range for working with large drilling diameters.

Second gear:
High speed range for working with small drilling diameters.

– Press the release button **(18)** and turn the gear selector switch **(19)** into the required position.
– If the gear selector switch is not able to be rotated in place, turn the application tool slightly and then change to the required position.

Speed control

You can preselect the required speed using the speed preselection thumbwheel **(2)**, even during operation.

The required speed depends on the application tool used and the material being machined. This will prevent the application tool from overheating when drilling and guarantee high drilling quality.

Speed preselection	Application tool
Gear I: 50–250 min^{-1}	Annular cutter (dia. 35–50 mm), screw tap
Gear II: 100–510 min^{-1}	Twist drill, annular cutter (dia. < 35 mm)

Working Advice

Workpiece Properties

▶ **The magnet retention force of the power tool essentially depends on the thickness of the workpiece. The greatest magnet retention force is achieved using soft steel with a thickness of at least 20 mm.**

Note: When drilling into thinner steel, an additional steel plate (of at least 100 x 200 x 20 mm) must be placed under the workpiece. Ensure that the steel plate cannot fall off.

General Advice

▶ **Secure the power tool with a safety strap when working overhead or on non-horizontal surfaces.** In the event of a power failure or overload, the magnet retention force is not maintained. The power tool may fall over and cause accidents.

▶ **If the application tool jams, do not apply any more feed; instead, switch off the tool.** Investigate the reason for the application tool jamming and eliminate the cause. Do not use the **anti-clockwise rotation** function.

▶ **Always check all parts of the coolant supply system before beginning work.** Never use damaged parts.

▶ **Keep the coolant away from tool parts and people in the working area.**

The surface of the workpiece must be smooth and clean. Smooth out coarse irregularities, e.g. welding spatter, and remove loose rust, dirt and grease. The retention force of the magnet only applies for suitable surfaces.

The motor of the power tool can only be started when the magnet is switched on. Before drilling, the magnet strength should be checked.

Magnet strength indicator (21)	Magnet strength
Green continuous light	Sufficient magnet strength
Red flashing light	Insufficient magnet strength; the power tool must not be used. Causes: Material not thick enough, uneven surface, coated in paint, scale or zinc, unsuitable material (e.g. high-carbon steel)

– Use a drill emulsion or cutting oil for cooling and lubrication in order to prevent the drill bit from overheating or jamming.
  The supplied coolant supply system must only be used when drilling with the annular cutter.
– Workpieces should be centre-punched before being drilled.
– Twist drill bit: For drilling diameters > 10 mm, pre-drill with a small drilling diameter. This allows you to reduce the contact pressure and puts less strain on the power tool.
– When drilling, only use sharpened annular cutters (brand accessories) that are in perfect condition.
– Choose a suitable speed according to the specifications of the application tool.
  Note: The lowest speed must be used for thread cutting.

Drilling

– Switch on the laser (laser on/off switch **(7)**).
– Align the power tool by referring to the laser cross on the workpiece.
– Switch the magnet on to fix the power tool to the workpiece (magnet on/off switch **(20)**).
– Secure the power tool with the safety strap **(44)** when drilling into vertical or sloped surfaces, or working overhead.
– Set an appropriate speed (speed preselection thumbwheel **(2)**).
– Switch the power tool on (motor on/off switch **(9)**).
– To drill, turn the crank handle **(4)** with uniform feed until the required drilling depth is reached.
– Once the required drilling depth has been reached, retract the crank handle until the drive unit has returned to its initial position.
– Switch off the power tool, loosen the safety strap if necessary and switch off the laser and magnet.

Working with the Annular Cutter

– Only use annular cutters that are free of defects; ensure that these are in perfect condition before each use. Do not use any annular cutters that are damaged.
– Switch the power tool off immediately if the annular cutter gets stuck.
– Protect the annular cutter. The tip of the annular cutter is hard yet fragile.

The following measures will help to slow down the wear and prevent breakage of annular cutters:

– When drilling in steel, ensure that there is enough coolant available; use coolant for metal cutting.
– Make sure that the workpiece is level and clean to guarantee the required magnet strength.
– Before drilling, ensure that all parts are properly attached.
– At the start and end of the drilling procedure, reduce the contact pressure by a third.
– Remove large quantities of metal chips when drilling in materials such as cast iron, copper die casting, etc. with compressed air.

Neutral Position of the Rotational Direction Switch

The power tool stops if the rotational direction switch **(8)** is activated during drilling.
If the rotational direction switch is in the centre position, the application tool can be rotated clockwise while the on/off switch for the motor **(9)** is continuously pressed.
In this way, the thread-cutting process can be ended smoothly.

Transport

– Check that all application tools are firmly connected with the power tool and that the drill core is no longer situated in the application tool.
– Wind up the network cable completely and tie it together.
– Use the transport handle **(3)** to lift and transport the power tool.
Never use the crank handle **(4)** or the mains cable.

Maintenance and Service

Maintenance and Cleaning

▶ **Pull the plug out of the socket before carrying out any work on the power tool.**

▶ **To ensure safe and efficient operation, always keep the power tool and the ventilation slots clean.**

In order to avoid safety hazards, if the power supply cord needs to be replaced, this must be done by **Bosch** or by an after-sales service centre that is authorised to repair **Bosch** power tools.

Replacing carbon brushes

The indicator for changing the carbon brush **(14)** will start to light up red approx. eight hours before the power tool automatically switches off as a result of the carbon brushes wearing out. You can continue to use the power tool until it switches off.
The power tool should be sent to the **Bosch** after-sales service. For addresses, see the section "After-Sales Service and Application Service".

Never replace only a single carbon brush!

Note: Only use carbon brushes supplied by **Bosch** and intended specifically for your product.

– Unscrew the cap **(1)** using a suitable screwdriver.
– Replace the spring-loaded carbon brushes and screw the cap back on again.

Adjusting the Guide Rail Gap (see figures E1 – E3)

If the power tool vibrates strongly when drilling or a gap is visible on the guide rail, the width of the guide rail gap must be adjusted. This prevents application tools from being snapped off and avoids damage to the power tool.

– Pull the mains plugs out of the plug socket, remove application tools and the coolant supply system and place the power tool down on a firm, level and horizontal surface.
– Turn the drill unit **(46)** using the crank handle **(4)** upwards, until the recess is above the uppermost screw **(47)**.
– Unscrew the upper screw **(47)** for the left guide rail using the hex key (4 mm) **(25)**.
– Turn the drill unit **(46)** all the way up using the crank handle **(4)**.
– Unscrew the three lower screws **(47)** for the left guide rail using the hex key (4 mm) **(25)**.
– Tighten the four screws **(48)** using the hex key (3 mm) **(25)** while turning the drill unit **(46)** up and down using the crank handle **(4)**. Adjust the required feed force while doing so.
– Turn the drill unit all the way up and tighten the three lower screws **(47)** for the left guide rail using the hex key (4 mm) **(25)**.
– Turn the drill unit all the way down and tighten the upper screw **(47)** for the left guide rail using the hex key (4 mm) **(25)**.

Adjusting the Laser (see figure F)

To ensure precise drilling, the laser beams must be checked after intensive use and adjusted as necessary.

– To switch on the laser, push the laser on/off switch **(7)** into position "**I**".
– Unscrew the laser cover **(49)**.
– Slightly undo the screws for the clip **(51)**.
– Move the laser cross right or left by turning the screw **(52)** in the appropriate direction.
– Move the laser cross towards or away from the application tool by turning the screw **(53)** in the appropriate direction.
– Retighten the screws for the clip **(51)**.
– Screw the laser cover **(49)** back on.

After-Sales Service and Application Service

Great Britain
Tel. Service: (0344) 7360109

GB Importer:
Robert Bosch Ltd.
Broadwater Park
North Orbital Road
Uxbridge
UB9 5HJ

You can find the link to our service addresses and warranty conditions on the last page.

In all correspondence and spare parts orders, please always include the 10-digit article number given on the nameplate of the product.

Disposal

The power tool, accessories and packaging should be recycled in an environmentally friendly manner.

Do not dispose of power tools along with household waste.

Only for EU countries and United Kingdom:

Electrical and electronic equipment that is no longer suitable for use must be collected separately and disposed of in an environmentally friendly manner. Use the designated collection systems.Incorrect disposal may cause harmful effects on the environment and human health, due to the potential presence of hazardous substances.

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