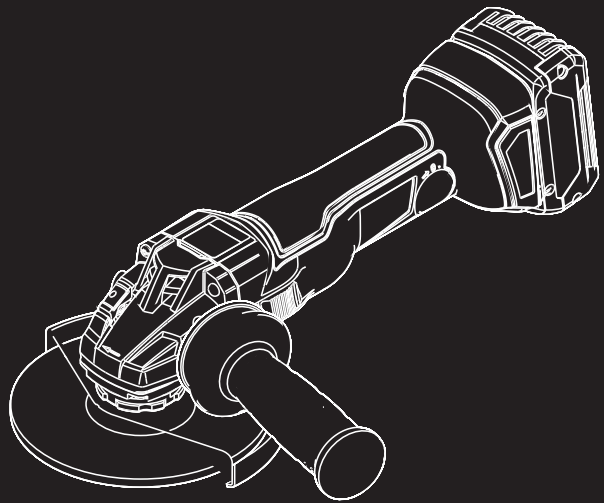


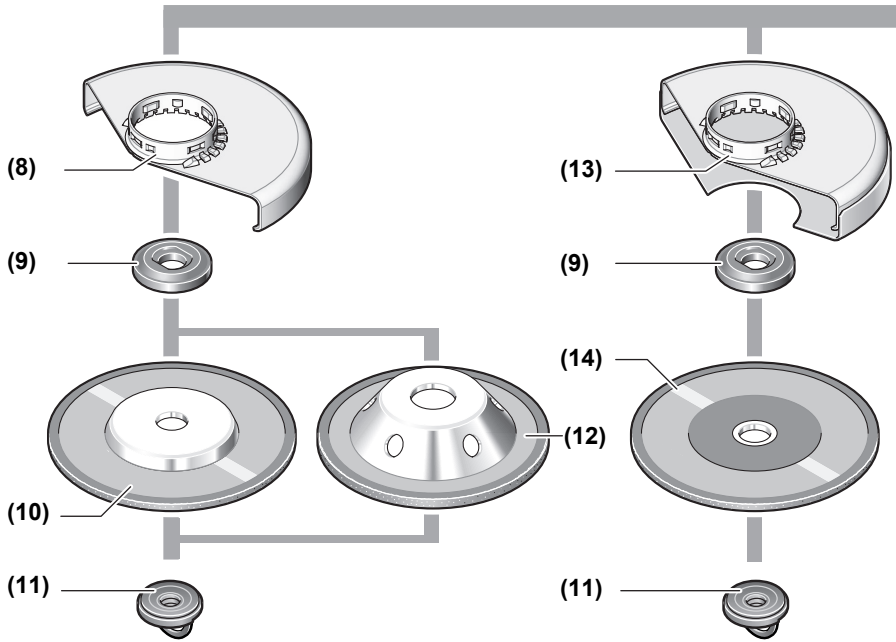
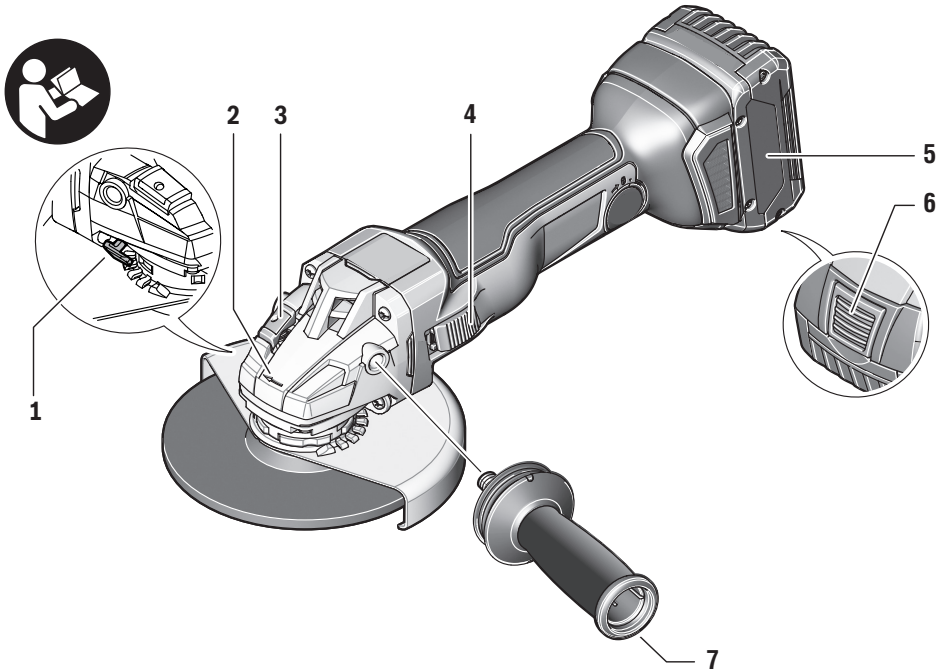
18V Angle Grinder

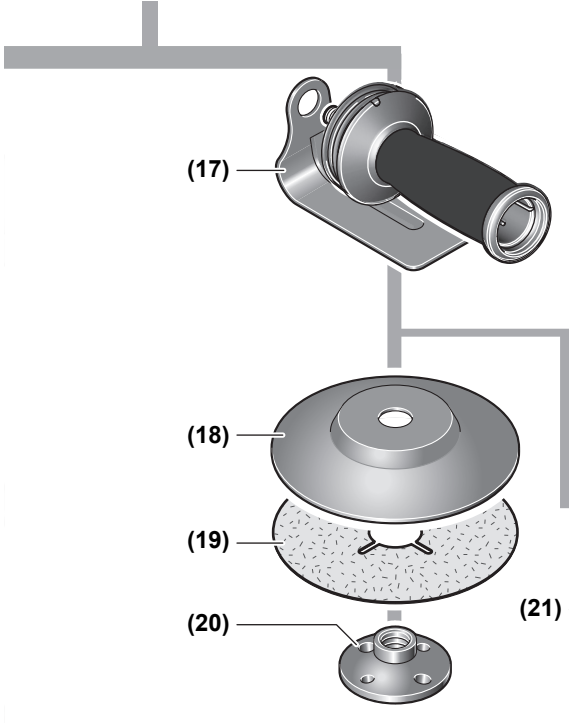
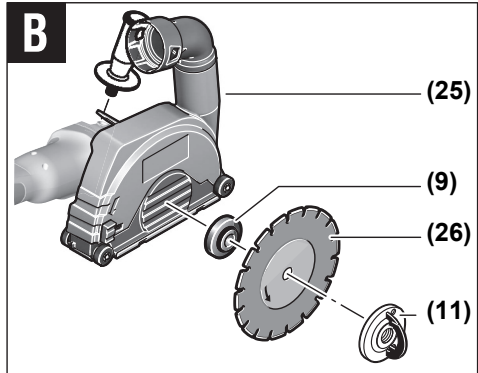
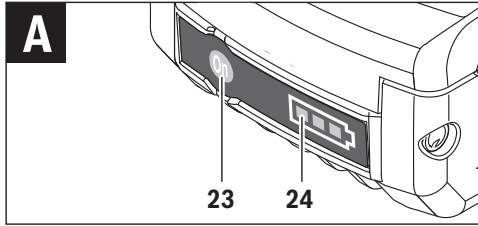
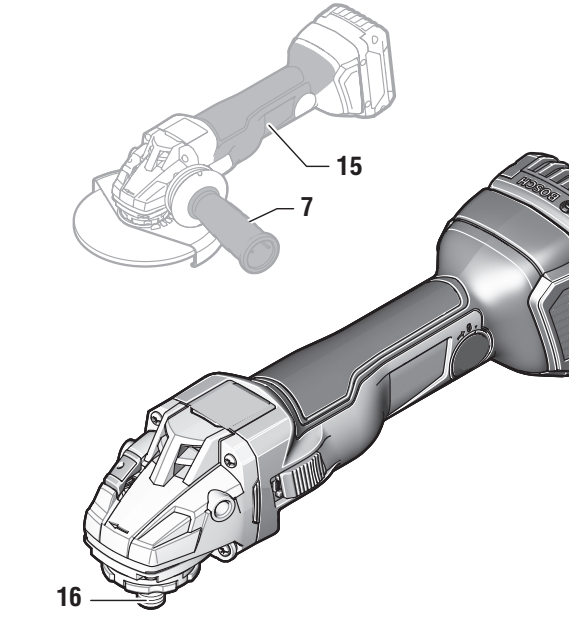
Owners Manual



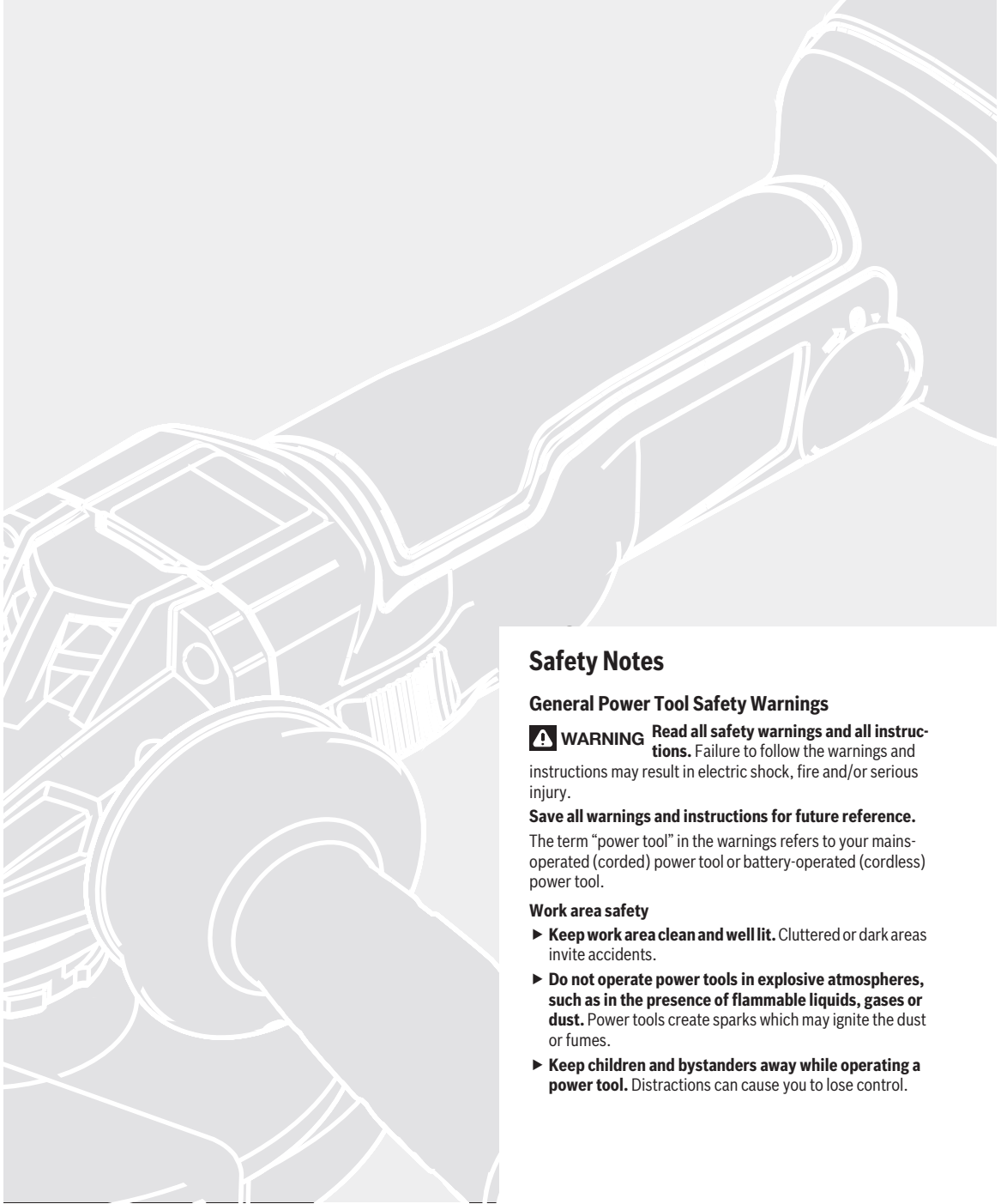
BRUSHLESS / 

 Ramset™





CBAGR18



Safety Notes

General Power Tool Safety Warnings

⚠ WARNING Read all safety warnings and all instructions. Failure to follow the warnings and instructions 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 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, clothing and gloves 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.

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 the battery pack 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. 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.

Battery tool use and care

- ▶ **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- ▶ **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- ▶ **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
- ▶ **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

Service

- ▶ **Have your power tool serviced by the Ramset National Service Centre using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Safety Warnings for Angle Grinder

Safety Warnings common for Grinding, Sanding, Wire Brushing or Abrasive Cutting Off Operations

- ▶ **This power tool is intended to function as a grinder, sander, wire brush or cut-off tool. 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.
- ▶ **Operations such as polishing are not recommended to be performed with this power tool.** Operations for which the power tool was not designed may create a hazard and cause personal injury.
- ▶ **Do not use accessories which are not specifically designed and recommended by the tool manufacturer.** Just because the accessory can be attached to your power tool, it does not assure safe operation.
- ▶ **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.
- ▶ **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 controlled.
- ▶ **Threaded mounting of accessories must match the grinder spindle thread. For accessories mounted by flanges, the arbour hole of the accessory must fit the locating diameter of the flange.** Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- ▶ **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.** Damaged accessories will normally break apart during this test time.
- ▶ **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments.** The eye protection must be capable 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.
- ▶ **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 accessory may fly away and cause injury beyond immediate area of operation.

- ▶ **Hold 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 shock the operator.
- ▶ **Never lay the power tool down until the accessory has come to a complete stop.** The spinning accessory may grab the surface and pull the power tool out of your control.
- ▶ **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.
- ▶ **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.
- ▶ **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
- ▶ **Do not use accessories that require liquid coolants.** Using water or other liquid coolants may result in electrocution or shock.

Kickback and related warnings

- ▶ **Kickback is a sudden reaction to a pinched or snagged rotating wheel, sanding band, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory’s rotation.**
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.
- ▶ **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.
- ▶ **Never place your hand near the rotating accessory.** Accessory may kickback over your hand.
- ▶ **Do not position your body in the area where power tool will move if kickback occurs.** Kickback will propel the tool in direction opposite to the wheel’s movement at the point of snagging.
- ▶ **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.
- ▶ **Do not attach a saw chain woodcarving blade or toothed saw blade.** Such blades create frequent kickback and loss of control.

Safety warnings specific for Grinding and Abrasive Cutting-Off operations

- ▶ **Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel.** Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.
- ▶ **The grinding surface of the centre depressed wheels must be mounted below the plane of the guard lip.** An improperly mounted wheel that projects through the plane of the guard lip cannot be adequately protected.
- ▶ **The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator.** The guard helps to protect operator from broken wheel fragments, accidental contact with wheel and sparks that could ignite clothing.
- ▶ **Wheels must be used only for recommended applications. For example: do not grind with the side of the cut-off wheel.** Abrasive cut-off wheels are intended for peripheral grinding; side forces applied to these wheels may cause them to shatter.
- ▶ **Always use undamaged wheel flanges that are of correct size and shape for your selected wheel.** Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges.
- ▶ **Do not use worn down reinforced wheels from larger power tools.** Wheels intended for larger power tools are not suitable for the higher speed of a smaller tool and may burst.

Additional safety warnings specific for abrasive cutting off operations

- ▶ **Do not “jam” the cut-off 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.
- ▶ **Do not position your body in line with and behind the rotating wheel.** When the wheel, at the point of operation, is moving away from your body, the possible kickback may propel the spinning wheel and the power tool directly at you.
- ▶ **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 cut-off 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.
- ▶ **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.

- ▶ **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.
- ▶ **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.

Safety warnings specific for sanding operations

- ▶ **Do not use excessively oversized sanding disc paper. Follow manufacturers recommendations, when selecting sanding paper.** Larger sanding paper extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc, or kickback.


Safety warnings specific for wire brushing operations

- ▶ **Be aware that wire bristles are thrown by the brush even during ordinary operation. Do not overstress the wires by applying excessive load to the brush.** The wire bristles can easily penetrate light clothing and/or skin.
- ▶ **If the use of a guard is recommended for wire brushing, do not allow any interference of the wire wheel or brush with the guard.** Wire wheel or brush may expand in diameter due to work load and centrifugal forces.

Additional safety warnings



Wear safety goggles.

- ▶ **Use appropriate 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.
 - ▶ **Do not touch grinding and cutting discs before they have cooled down.** The discs can become very hot while working.
 - ▶ **Secure the workpiece.** A workpiece clamped with clamping devices or in a vice is held more secure than by hand.
 - ▶ **Do not open the battery.** Danger of short-circuiting.
- 

Protect the battery against heat, e. g., against continuous intense sunlight, fire, water, and moisture. Danger of explosion.
- ▶ **In case of damage and improper use of the battery, vapours may be emitted. Ventilate the area and seek medical help in case of complaints.** The vapours can irritate the respiratory system.
 - ▶ **Use the battery only in conjunction with your Ramset product.** This measure alone protects the battery against dangerous overload.
 - ▶ **The battery can be damaged by pointed objects such as nails or screwdrivers or by force applied externally.** An internal short circuit can occur and the battery can burn, smoke, explode or overheat.

Product Description and Specifications



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

While reading the operating instructions, unfold the graphics page for the machine and leave it open.

Intended Use

The machine is intended for cutting, roughing and brushing of metal and stone materials without the use of water.

For cutting with bonded abrasives, a special cutting guard (accessory) must be used.

When cutting in stone, provide for sufficient dust extraction. With approved sanding tools, the machine can be used for sanding with sanding discs.

The light of this power tool is intended to illuminate the power tool's direct area of working operation and is not suitable for household room illumination.

Product Features

The numbering of the product features refers to the illustration of the machine on the graphics page.

- 1 Unlocking lever for protection guard
- 2 Direction-of-rotation arrow on housing
- 3 Spindle lock button
- 4 On/Off switch
- 5 Battery*
- 6 Battery release button*
- 7 Auxiliary handle
- 8 Protection guard for grinding
- 9 Hub flange with O-ring
- 10 Grinding Disc*
- 11 Quick-clamping nut with bar
- 12 Carbide grinding head*
- 13 Protection guard for cutting*
- 14 Cutting disc*
- 15 Handle (insulated gripping surface)
- 16 Grinding spindle
- 17 Hand guard*
- 18 Rubber sanding pad*
- 19 Abrasive disc*
- 20 Round nut*
- 21 Cup brush*
- 22 Diamond core cutter*
- 23 Button for charge indicator
- 24 Battery charge indicator
- 25 Cutting guide with dust extraction protection guard*
- 26 Diamond cutting disc*

***Accessories shown or described are not part of the standard delivery scope of the product.**

Technical Data

Angle Grinder		CBAGR18
Rated voltage	V=	18
Rated speed	min ⁻¹	9000
Grinding disc diameter, max.	mm	125
Thread of grinder spindle		M 14
Thread length (max.) of grinder spindle	mm	22
Kickback stop		●
Restart Protection		●
Run-out brake		●
Speed preselection		-
Weight according to EPTA-Procedure 01:2014		
- with vibration-damping auxiliary handle	kg	2.6 – 2.8*
- with standard-auxiliary handle	kg	2.4 – 2.6*
Permitted ambient temperature		
- during charging	°C	0... +45
- during operation** and during storage	°C	-20... +50
Recommended batteries		CBBAT18...
Recommended chargers		CBCHR18

* depending on the battery pack being used

** limited performance at temperatures <0 °C

Noise/Vibration Information

Sound emission values determined according to EN 60745-2-3.		
Typically the A-weighted noise levels of the product are		
Sound pressure level	dB(A)	79
Sound power level	dB(A)	90
Uncertainty K	dB	3
Wear hearing protection!		
Vibration total values a_h (triax vector sum) and uncertainty K determined according to EN 60745-2-3:		
Surface grinding:		
a_h	m/s ²	6.0
K	m/s ²	1.5
Disk sanding:		
a_h	m/s ²	3.5
K	m/s ²	1.5

The vibration level given in this information sheet has been measured in accordance with a standardised 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 emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or insertion tools or is poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period.

An estimation of the level of exposure to vibration 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 such as: maintain the tool and the accessories, keep the hands warm, organisation of work patterns.

Fitting

Charging the Battery

- **Use only the battery chargers listed on the accessories page.** Only these battery chargers are matched to the lithium-ion battery of your power tool.

Note: The battery supplied is partially charged. To ensure full capacity of the battery, completely charge the battery in the battery charger before using your power tool for the first time. The lithium-ion battery can be charged at any time without reducing its service life. Interrupting the charging procedure does not damage the battery.

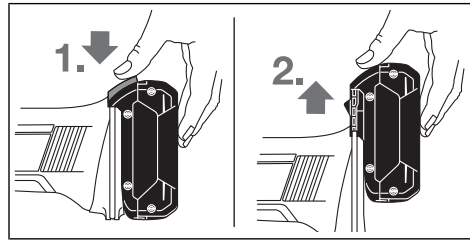
The lithium-ion battery is protected against deep discharging by the “Electronic Cell Protection (ECP)”. When the battery is empty, the machine is switched off by means of a protective circuit: The inserted tool no longer rotates.

- **Do not continue to press the On/Off switch after the machine has been automatically switched off.** The battery can be damaged.

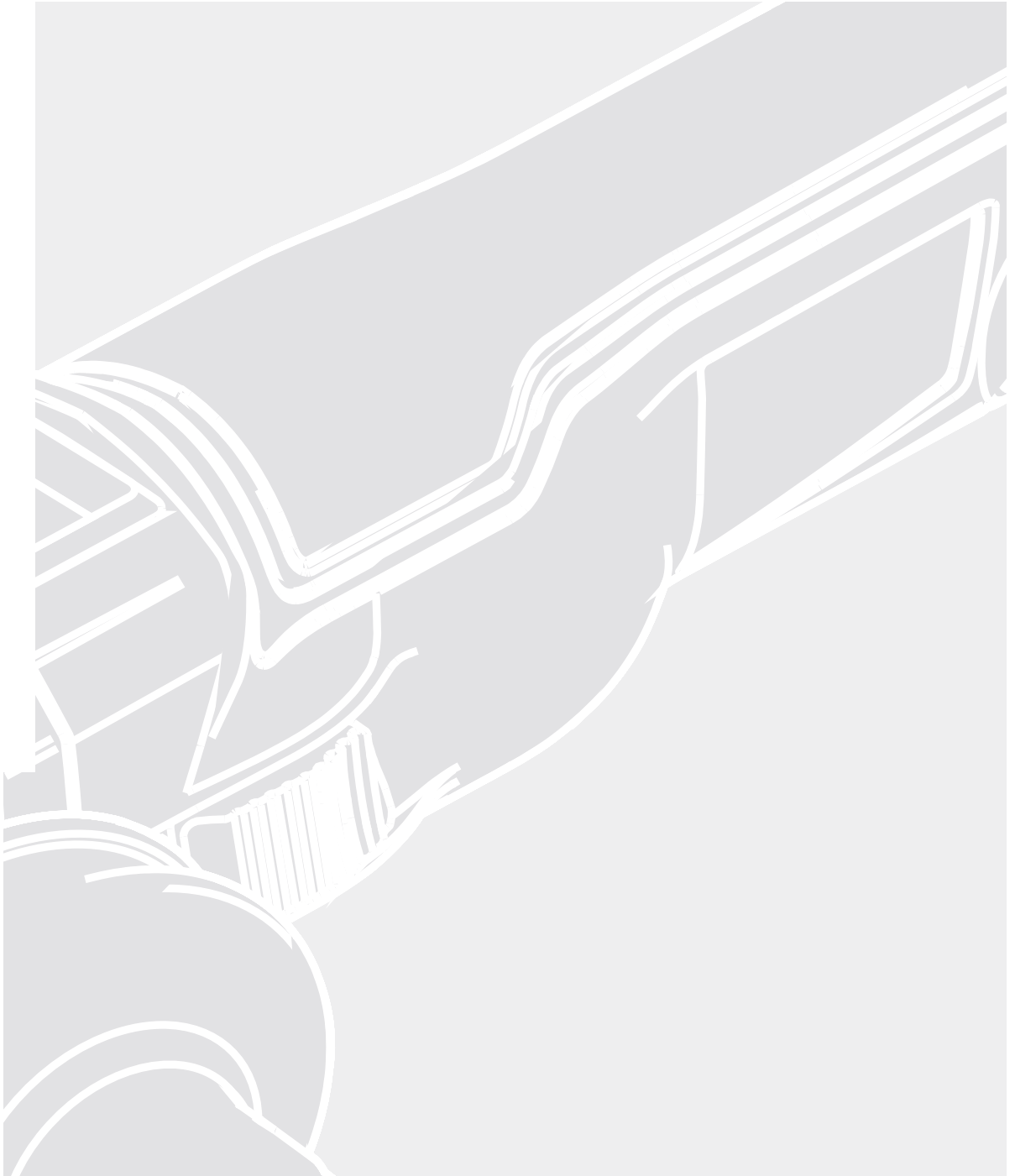
Follow the instructions on correct disposal.

Removing the battery

The battery **5** is equipped with two locking levels that should prevent the battery from falling out when pushing the battery unlocking button **6** unintentionally. As long as the battery is inserted in the power tool, it is held in position by means of a spring.



To remove the battery **5**, press the unlocking button **6** and pull out the battery toward the front. **Do not exert any force.**



Battery Charge Indicator (see figure A)

The three green LEDs of the battery charge indicator **24** indicate the charge condition of the battery **5**. For safety reasons, it is only possible to check the state of charge when the power tool is at a standstill.

Press button **23** to display the state of charge. This is also possible when the battery **5** is removed.

LED	Capacity
Continuous lighting 3 x green	≥ 2/3
Continuous lighting 2 x green	≥ 1/3
Continuous lighting 1 x green	< 1/3
Flashing light 1 x green	Reserve

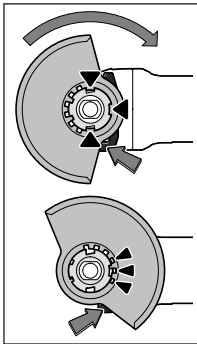
When no LED lights up after pushing button **23**, then the battery is defective and must be replaced.

Fitting Protective Equipment

- ▶ **Remove the battery from the power tool before carrying out work on the power tool (e.g. maintenance, changing tool, etc.). The battery should also be removed for transport and storage.** There is risk of injury from unintentionally pressing the on/off switch.

Note: If the grinding disc breaks during operation or the holding fixtures on the protective guard/power tool become damaged, the power tool must be sent to the after-sales service immediately; see the "After-sales service and advice on using products" section for addresses.

Protection Guard for Grinding



Place the protective guard **8** on the power tool's holding fixture until the protection guard's coding lugs line up with the holding fixture. When doing so, press and hold the unlocking lever **1**.

Press the protective guard **8** on to the spindle collar until the shoulder of the protection guard is seated against the flange of the machine, and turn the protection guard until it can clearly be heard to engage.

Adjust the position of the protective guard **8** to the requirements

of the work process. For this, press the release lever **1** upward and turn the protective guard **8** to the required position.

- ▶ **Always adjust the protective guard 8 in such a manner that all 3 red cams of release lever 1 engage into the corresponding notches of the protection guard 8.**
- ▶ **Adjust the protective guard 8 in such a manner that sparking is prevented in the direction of the operator.**
- ▶ **The protective guard 8 may be turned only upon actuation of the release lever 1! Otherwise the power tool may not continue to be used under any circumstances and must be taken to an after-sales service agent.**

Note: The encoding keys on the protection guard **8** ensure that only a protection guard that fits the machine type can be mounted.

Protective Guard for Cutting

- ▶ **For cutting with bonded abrasives, always use the protective guard for cutting 13.**
- ▶ **Provide for sufficient dust extraction when cutting stone.**

The protection guard for cutting **13** is mounted in the same manner as the protection guard for grinding **8**.

Extraction Guard for cutting with a guide block

The cutting guide with dust extraction protection guard **25** is mounted in the same manner as the protection guard for grinding **8**.

Side Handle

- ▶ **Do not operate your power tool without the side handle 7.**

Screw the side handle **7** on the right or left of the machine head depending on the working method.

Vibration-dampening Auxiliary Handle



The vibration-dampening auxiliary handle reduces the vibrations, making operation more comfortable and secure.

- ▶ **Do not make any alterations to the auxiliary handle. Do not continue to use an auxiliary handle if it is damaged.**

Hand Guard

- ▶ **For operations with the rubber sanding pad 18 or with the cup brush/wheel brush/flap disc, always mount the hand guard 17.**

The hand guard **17** is fastened with the auxiliary handle **7**.

Fitting The Abrasive Tools

- ▶ **Before any work on the machine itself (e. g. maintenance, tool change, etc.) as well as during transport and storage, remove the battery from the power tool.**

There is danger of injury when unintentionally actuating the On/Off switch.

- ▶ **Do not touch grinding and cutting discs before they have cooled down.** The discs can become very hot while working.

Clean the grinding spindle **16** and all parts to be mounted.

For clamping and loosening the grinding tools, lock the grinder spindle with the spindle lock button **3**.

- ▶ **Actuate the spindle lock button only when the grinder spindle is at a standstill.** Otherwise, the machine may become damaged.

Grinding/Cutting Disc

Pay attention to the dimensions of the abrasive tools. The diameter of the hole must match that of the hub flange. Do not use an adapter or reducer.

When using diamond cutting discs, ensure that the arrow indicating the direction of rotation on the diamond cutting disc matches the direction of rotation of the power tool (see the direction of rotation arrow on the machine head).

See the graphics page for fitting instructions.

Use the quick-clamping nut (11) to secure the grinding/cutting disc without the need for additional tools.

Only use the quick-clamping nut (11) for grinding/cutting discs up to a maximum diameter of 150 mm.

- ▶ **The quick-clamping nut (11) may be used only for grinding or cutting discs.**

Flap disc

- ▶ **Always fit the hand guard (17) when working with the flap disc.**

Rubber Sanding Pad

- ▶ **Always fit the hand guard (17) when working with the rubber sanding pad (18).**

See the graphics page for fitting instructions.

Slide the rubber sanding pad (18) onto the grinding spindle (16).

Press the sanding sheet (19) firmly onto the underside of the rubber sanding pad (18).

Screw on the round nut (20) and tighten with a two-pin spanner.

Cup brush/disc brush

- ▶ **Always fit the hand guard (17) when working with the cup brush or disc brush.**

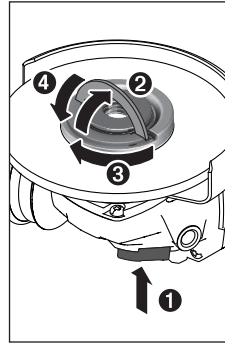
See the graphics page for fitting instructions.

The cup brush/disc brush must be screwed onto the grinding spindle until it rests firmly against the grinding spindle flange at the end of the grinding spindle thread. Tighten the cup brush/disc brush with an open-ended spanner.

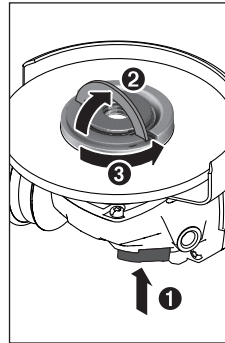
Carbide Grinding Head

- ▶ **A grinding head may be used only with a suitable protective guard.**

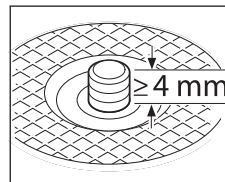
- ▶ **Only use quick-clamping nuts (11) that are in good working order and not damaged.**
- ▶ **When screwing on, make sure that the printed side of the quick-clamping nut (11) is not facing the grinding disc.**
- ▶ **Always secure a grinding/cutting disc using only the quick-clamping nut (11) supplied.**



Press the spindle lock button (3) to lock the grinding spindle. To tighten the quick-clamping nut (11), fold up the bar and turn the quick-clamping nut firmly clockwise. Then fold down the bar to secure the quick-clamping nut. **It is not sufficient to tighten the disc along the edge.**



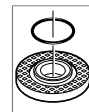
Quick-clamping nuts (11) that are properly secured and not damaged can be removed by hand. To do this, fold up the bar and turn the quick-clamping nut firmly anticlockwise. If the quick-clamping nut is stuck, do not attempt to loosen it with a tool – always use a two-pin spanner.



After fitting the hub flange and the grinding/cutting disc, the free thread length of the grinding spindle must be **at least 4 mm**.

Ensure that the abrasive tool is firmly seated, so that it does not twist away from

the spindle in the runout of the power tool.



A plastic part (O-ring) is fitted around the center-ring collar in the hub flange (9). **If the O-ring is missing or damaged**, the hub flange (9) must be replaced before operation can resume.

- ▶ **After fitting the abrasive tool, check that the abrasive tool is fitted correctly and can turn freely before switching on the power tool. Make sure that the abrasive tool does not brush against the protective guard or other parts.**

Approved Abrasive Tools

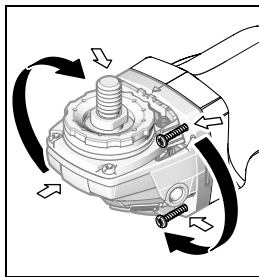
The permissible speed [min^{-1}] or the circumferential speed [m/s] of the grinding tools used must at least match the values given in the table.

Therefore, observe the permissible **rotational/circumferential speed** on the label of the grinding tool.

	max. [mm]		[mm]	[min^{-1}]	[m/s]
	D	b			
	115	7	22.2	9000	80
	125	7	22.2	9000	80
	115	-	-	9000	80
	125	-	-	9000	80
	75	30	M 14	9000	45
	82	-	M 14	9000	80

Rotating the Machine Head

- ▶ **Before any work on the machine itself (e. g. maintenance, tool change, etc.) as well as during transport and storage, remove the battery from the power tool.** There is danger of injury when unintentionally actuating the On/Off switch.



The machine head can be rotated with respect to the machine housing in 90° steps. In this manner, the On/Off switch can be brought into a more convenient position for special working situations, e.g. for left-handed persons.

Completely unscrew the four screws. Rotate the

machine head carefully, **without removing it from the housing**, to the new position. Screw in and tighten the four screws again.

Dust/Chip Extraction

- ▶ Dust from materials such as lead-containing coatings, some wood types, minerals and metal can be harmful to one's health. Touching or breathing-in the dust can cause

allergic reactions and/or lead to respiratory infections of the user or bystanders.

Certain dust, such as oak or beech dust, is considered carcinogenic, especially in connection with wood-treatment additives (chromate, wood preservative). Materials containing asbestos may only be worked by specialists.

- Provide for good ventilation of the working place.
- It is recommended to wear a P2 filter-class respirator.

Observe the relevant regulations in your country for the materials to be worked.

- ▶ **Avoid dust accumulation at the workplace.** Dust can easily ignite.

Operation

Start-up

Inserting the battery

Insert the charged battery **8** from the front into the base of the power tool until the battery is securely locked.

Switching On and Off

To **start** the power tool, push the On/Off switch **4** forwards.

To **lock** the On/Off switch **4**, press the On/Off switch **4** down at the front until it latches.

To **switch off** the power tool, release the On/Off switch **4** or, if it is locked, briefly push down the back of the On/Off switch **4** and then release it.

To save energy, only switch the power tool on when using it.

- ▶ **Check abrasive tools before using. The abrasive tool must be mounted properly and be able to move freely. Carry out a test run for at least one minute with no load. Do not use damaged, out-of-centre or vibrating grinding tools.** Damaged grinding tools can burst and cause injuries.

Kickback stop



If there is a sudden kickback in the power tool, e. g. jamming in a separating cut, the power supply to the motor will be interrupted electronically.

To **restart the operation**, switch the On/Off switch **4** to the Off position and start the machine again.

Restart Protection

The restarting protection feature prevents uncontrolled restarting of the machine after an interruption in the power supply.

To **restart the operation**, switch the On/Off switch **4** to the Off position and start the machine again.

Impact shutdown

The integrated impact shutdown switches the power tool off as soon as it hits the floor. T

To **restart the operation**, switch the On/Off switch **4** to the Off position and start the machine again.

Practical Advice

- ▶ Exercise caution when cutting slots in structural walls; see Section “Information on Structures”.
- ▶ Clamp the workpiece if it does not remain stationary due to its own weight.
- ▶ Do not strain the machine so heavily that it comes to a standstill.
- ▶ After heavily straining the power tool, continue to run it at no-load for several minutes to cool down the accessory.
- ▶ Do not touch grinding and cutting discs before they have cooled down. The discs can become very hot while working.
- ▶ Do not use the power tool with a cut-off stand.

When the power tool is electrostatically charged, the built-in electronic control switches it off. To restart the power tool, press the On/Off switch 4 again.

Rough Grinding

- ▶ Never use a cutting disc for roughing.

The best roughing results are achieved when setting the machine at an angle of 30° to 40°. Move the machine back and forth with moderate pressure. In this manner, the workpiece will not become too hot, does not discolour and no grooves are formed.

Flap Disc

With the flap disc (accessory), curved surfaces and profiles can be worked.

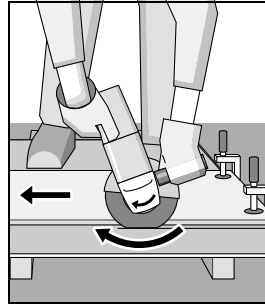
Flap discs have a considerably higher service life, lower noise levels and lower sanding temperatures than conventional sanding sheets.

Cutting Metal

- ▶ For cutting with bonded abrasives, always use the protective guard for cutting 13.

When cutting, work with moderate feed, adapted to the material being cut. Do not exert pressure onto the cutting disc, tilt or oscillate the machine.

Do not reduce the speed of running down cutting discs by applying sideward pressure.

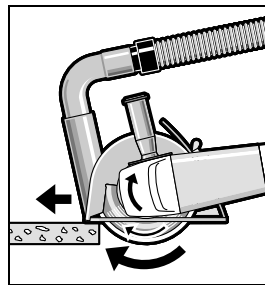


Cutting Stone (see figure B)

- ▶ Provide for sufficient dust extraction when cutting stone.
- ▶ Wear a dust respirator.
- ▶ The machine may be used only for dry cutting/grinding.

For cutting stone, it is best to use a diamond cutting disc.

When using the cutting guide with dust extraction protection guard 25, the vacuum cleaner must be approved for vacuuming masonry dust. Suitable vacuum cleaners are available from Bosch.



Switch on the machine and place the front part of the cutting guide on the workpiece. Slide the machine with moderate feed, adapted to the material to be worked.

For cutting especially hard material, e. g., concrete with high pebble content, the diamond cutting disc can overheat and become damaged as a result. This is clearly indicated by circular sparking, rotating with the diamond cutting disc.

In this case, interrupt the cutting process and allow the diamond cutting disc to cool by running the machine for a short time at maximum speed with no load.

Noticeably decreasing work progress and circular sparking are indications of a diamond cutting disc that has become dull. Briefly cutting into abrasive material (e. g. lime-sand brick) can resharpen the disc again.

Recommendations for Optimal Handling of the Battery

Protect the battery against moisture and water.

Store the battery only within a temperature range between -20 °C and 50 °C. As an example, do not leave the battery in the car in summer.

Occasionally clean the venting slots of the battery using a soft, clean and dry brush.

A significantly reduced working period after charging indicates that the battery is used and must be replaced.

Observe the notes for disposal.

Maintenance and Service

Maintenance and Cleaning

- ▶ **Before any work on the machine itself (e. g. maintenance, tool change, etc.) as well as during transport and storage, remove the battery from the power tool.**

There is danger of injury when unintentionally actuating the On/Off switch.

- ▶ **For safe and proper working, always keep the machine and ventilation slots clean.**

Please store and handle the accessories carefully.

After-sales Service and Application Service

Our after-sales service responds to your questions concerning maintenance and repair of your product as well as spare parts.

ramsetreid Postal:

Australia:

P.O. Box 192, Croydon, Victoria 3136
1 Ramset Drive, Chirnside Park, Victoria 3116

Customer Service Center Inside Australia:

Phone: 1300 780 063
Fax: 1300 780 064

New Zealand:

Inside New Zealand:
Phone: 0800 RAMSET (726738)
Fax: (0800) 428570

Outside AU and NZ:

Phone: +61 3 9726 62
www.ramset.com.au

Transport

The contained lithium-ion batteries are subject to the Dangerous Goods Legislation requirements. The user can transport the batteries by road without further requirements.

When being transported by third parties (e.g.: air transport or forwarding agency), special requirements on packaging and labelling must be observed. For preparation of the item being shipped, consulting an expert for hazardous material is required.

Dispatch batteries only when the housing is undamaged. Tape or mask off open contacts and pack up the battery in such a manner that it cannot move around in the packaging.

Please also observe possibly more detailed national regulations.

Disposal



The machine, rechargeable batteries, accessories and packaging should be sorted for environmental-friendly recycling.



Do not dispose of power tools and batteries/rechargeable batteries into household waste!

Warranty

This Ramset™ tool is warranted to the original purchaser only to be free from defects in material and workmanship. Subject to certain exceptions Ramset™ will repair replace any part of the tool which, after examination, is determined by Ramset™ to be defective in material or workmanship for a period of two (2) years* after the date of purchase.

Return the tool and a copy of proof of purchase to the Ramset™ National Service Centre, freight prepaid and insured, as requested for this warranty to be effective. This warranty does not apply to damage that Ramset™ determines to be from repairs made or attempted by anyone other than Ramset™ authorized personnel, misuse, alterations, abuse, normal wear and tear, lack of maintenance, or accidents.

*Statutory rights for goods and purchases as a customer.

Australia

In addition to other rights and remedies that may be available under law, our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonable foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

New Zealand

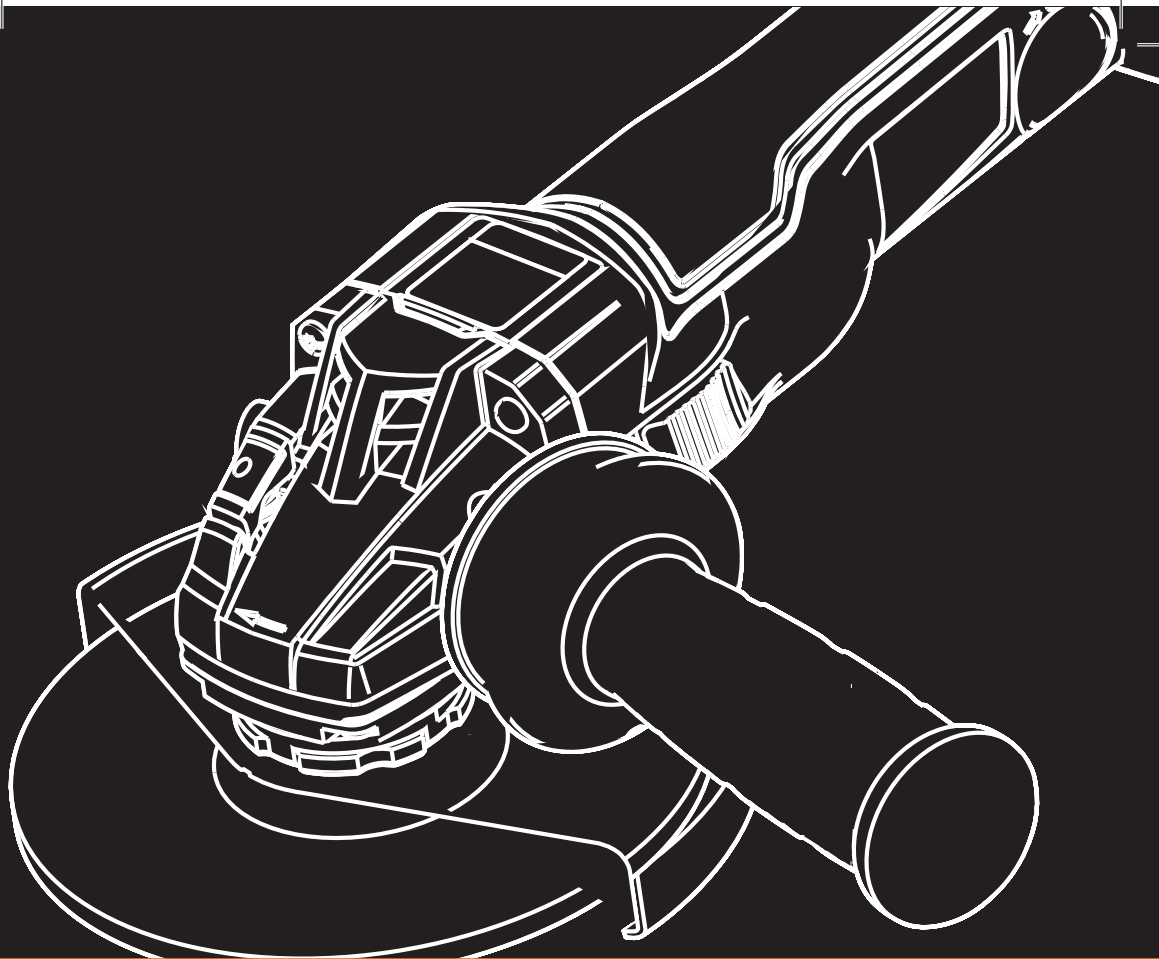
This warranty is supplemental to any other rights and remedies you have under the Consumer Guarantees Act 1993 NZ, unless your purchase is made for commercial purposes, in which case Ramset™ excludes all consumer guarantees implied in the Consumer Guarantees Act 1993 NZ in respect of your product.

Acceptance of the exclusive repair and replacement remedies described herein is a condition of the contract for the purchase of every Ramset™ product. If you do not agree to this condition, you should not purchase the product. In no event shall Ramset™ be liable for any incidental, special, consequential or punitive damages, or for any costs, attorney fees, expenses, losses or delays alleged to be as a consequence of any damage to, failure of, or defect in any product including, but not limited to, any claims for loss of profits.

This warranty is exclusive and in lieu of all other warranties or conditions, written or oral, expressed or implied. Without limiting the generality of the foregoing, Ramset™ disclaims any implied warranty of merchantability or fitness for a particular use or purpose, and all other warranties.







customer service

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