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**Transport**

Die enthaltenen Li-Ionen-Akkus unterliegen den Anforderungen des Gefahrgutrechts. Die Akkus können durch den Benutzer ohne weitere Auflagen auf der Straße transportiert werden. Beim Versand durch Dritte (z.B.: Lufttransport oder Spedition) sind besondere Anforderungen an Verpackung und Kennzeichnung zu beachten. Hier muss bei der Vorbereitung des Versandstückes ein Gefahrgut-Experte hinzugezogen werden.

Versenden Sie Akkus nur, wenn das Gehäuse unbeschädigt ist. Kleben Sie offene Kontakte ab und verpacken Sie den Akku so, dass er sich nicht in der Verpackung bewegt. Bitte beachten Sie auch eventuelle weiterführende nationale Vorschriften.

**Entsorgung**

Elektrowerkzeuge, Akkus, Zubehör und Verpackungen sollen einer umweltgerechten Wiederverwertung zugeführt werden.

Werfen Sie Elektrowerkzeuge und Akkus/Batterien nicht in den Hausmüll!

**Nur für EU-Länder:**

Gemäß der europäischen Richtlinie 2012/19/EU müssen nicht mehr gebrauchsfähige Elektrowerkzeuge und gemäß der europäischen Richtlinie 2006/66/EG müssen defekte oder verbrauchte Akkus/Batterien getrennt gesammelt und einer umweltgerechten Wiederverwertung zugeführt werden.

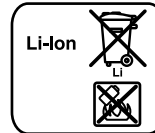
Nicht mehr gebrauchsfähige Akkus/Batterien können direkt abgegeben werden bei:

**Deutschland**

Recyclingzentrum Elektrowerkzeuge  
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 37589 Kalefeld

**Schweiz**

Batrec AG  
 3752 Wimmis BE

**Akkus/Batterien:****Li-Ion:**

Bitte beachten Sie die Hinweise im Abschnitt „Transport“, Seite 13.

Änderungen vorbehalten.

**English****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.

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

**Safety instructions for all operations****Safety Warnings Common for Grinding, Sanding, Wire Brushing, Polishing, Carving or Abrasive Cutting-Off Operations**

- ▶ **This power tool is intended to function as a grinder, sander, wire brush, polisher, carving 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.
- ▶ **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 guarded or controlled.
  - ▶ **The arbour size of wheels, sanding drums or any other accessory must properly fit the spindle or collet of the power tool.** 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.
  - ▶ **Mandrel mounted wheels, sanding drums, cutters or other accessories must be fully inserted into the collet or chuck.** If the mandrel is insufficiently held and/or the overhang of the wheel is too long, the mounted wheel may become loose and ejected at high velocity.
  - ▶ **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, sanding drum 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 shop 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.
  - ▶ **Always hold the tool firmly in your hand(s) during the start-up.** The reaction torque of the motor, as it accelerates to full speed, can cause the tool to twist.
  - ▶ **Use clamps to support workpiece whenever practical. Never hold a small workpiece in one hand and the tool in the other hand while in use.** Clamping a small workpiece allows you to use both hands to control the tool. Round material such as dowel rods, pipes or tubing have a tendency to roll while being cut, and may cause the bit to bind or jump toward you.
  - ▶ **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.
  - ▶ **After changing the bits or making any adjustments, make sure the collet nut, chuck or any other adjustment devices are securely tightened.** Loose adjustment devices can unexpectedly shift, causing loss of control, loose rotating components will be violently thrown.
  - ▶ **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, backing pad, 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 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.
  - ▶ **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces.** The operator can control kickback forces, if proper precautions are taken.
  - ▶ **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 use a toothed saw blade.** Such blades create frequent kickback and loss of control over the power tool.
  - ▶ **Always feed the bit into the material in the same direction as the cutting edge is exiting from the material (which is the same direction as the chips are thrown).** Feeding the tool in the wrong direction causes the cutting edge of the bit to climb out of the work and pull the tool in the direction of this feed.
  - ▶ **When using rotary files, cut-off wheels, high-speed cutters or tungsten carbide cutters, always have the work securely clamped.** These wheels will grab if they become slightly canted in the groove, and can kickback. When a cut-off wheel grabs, the wheel itself usually breaks. When the rotary file, high-speed cutter or tungsten carbide cutter grab, it may jump from the groove and you could lose control of the tool.

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**Safety warnings specific for Grinding and Abrasive Cutting-Off operations**

- ▶ **Use only wheel types that are recommended for your power tool and only for recommended applications.** For example: **do not grind with the side of a cut-off wheel.** Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
- ▶ **For threaded abrasive cones and plugs use only undamaged wheel mandrels with an unrelieved shoulder flange that are of correct size and length.** Proper mandrels will reduce the possibility of breakage.
- ▶ **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 hand in line with and behind the rotating wheel.** When the wheel, at the point of operation, is moving away from your hand, the possible kickback may propel the spinning wheel and the power tool directly at you.
- ▶ **When wheel is pinched, snagged 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 pinching or snagging.
- ▶ **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 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.
- ▶ **Allow brushes to run at operating speed for at least one minute before using them. During this time no one is to stand in front or in line with the brush.** Loose bristles or wires will be discharged during the run-in time.
- ▶ **Direct the discharge of the spinning wire brush away from you.** Small particles and tiny wire fragments may be discharged at high velocity during the use of these brushes and may become imbedded in your skin.

**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.
- ▶ **Secure the workpiece.** A workpiece clamped with clamping devices or in a vice is held more secure than by hand.
- ▶ **The power tool is not suitable for stationary operation.** For example, it may not be clamped in a vice or fastened on a workbench.
- ▶ **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 Bosch power tool.** 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 power tool is intended for cutting metal and stone materials, and for grinding, sanding and polishing metal and painted surfaces without the use of water. In addition to this, the power tool is suitable for drilling in wood, soft metal, plastic and light building materials when used with the appropriate accessories.

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 Cutting disc
- 2 Holding rod
- 3 Grinding accessory\*
- 4 "PowerLight"
- 5 Spindle lock
- 6 On/Off switch
- 7 Speed regulator
- 8 Battery charge-control indicator
- 9 Battery pack
- 10 Direction-of-rotation arrow for grinding spindle
- 11 Dust protection cap (for detailed work)
- 12 Clamping nut
- 13 Collet of the collet chuck
- 14 Handle (insulated gripping surface)
- 15 Inner shank dimension  $L_0$
- 16 Battery unlocking button
- 17 Open-end spanner/Screwdriver
- 18 Shank
- 19 Collet
- 20 Drive spindle
- 21 Dust protection cap (for working close to surfaces)

\*The accessories illustrated or described are not included as standard delivery.

## Technical Data

Cordless multi rotary tool		GRO 10,8 V-Li
Article number		3 601 JC5 0..
Rated voltage	V=	10.8
Rated speed	$\text{min}^{-1}$	5000 – 35000
Collet chuck- $\emptyset$	mm	3.2
Spanner flat of collet chuck	mm	9.55
Max. outer diameter:		
– Cutting disc	mm	38
– Grinding accessory	mm	22.5
– Wire brush	mm	20
– Grinding disc	mm	20
– Drill bit	mm	3.2
Max. inner shank dimension $L_0$	mm	10
Max. shank length	mm	35
Weight according to EPTA-Procedure 01/2003	kg	0.6
Technical data determined with battery from delivery scope.		

### Battery

Permitted ambient temperature		
– when charging	$^{\circ}\text{C}$	0 ... +45
– during operation*	$^{\circ}\text{C}$	-20 ... +50
– during storage	$^{\circ}\text{C}$	-20 ... +60
Recommended batteries	GBA 10,8V x,xAh 0-.	
* Limited performance at temperatures $< 0^{\circ}\text{C}$		

## Noise/Vibration Information

Measured sound values determined according to EN 60745.

Typically the A-weighted sound pressure level of the product is 74 dB(A). Uncertainty  $K = 3$  dB.

The noise level when working can exceed 80 dB(A).

### Wear hearing protection!

Vibration total values  $a_{\text{h}}$  (triax vector sum) and uncertainty  $K$  determined according to EN 60745:

$$a_{\text{h}} = 9 \text{ m/s}^2, K = 1.5 \text{ m/s}^2.$$

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.



## Declaration of Conformity

We declare under our sole responsibility that the product described under "Technical Data" is in conformity with the following standards or standardisation documents: EN 60745 according to the provisions of the directives 2009/125/EC (Regulation 1194/2012), 2011/65/EU, 2004/108/EC, 2006/42/EC.

Technical file (2006/42/EC) at:

Robert Bosch GmbH, PT/ETM9,  
D-70745 Leinfelden-Echterdingen

Henk Becker	Helmut Heinzelmann
Executive Vice President	Head of Product Certification
Engineering	PT/ETM9

*PPA*  
 i.v. 

Robert Bosch GmbH, Power Tools Division  
D-70745 Leinfelden-Echterdingen  
Leinfelden, 26.11.2013

## Assembly

### Battery Charging

► 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.

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**Note:** The battery is supplied 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.

Observe the notes for disposal.

**Removing the battery (see figure A)**

- To remove the battery **9**, press the unlocking buttons **16** and pull the battery out of the machine to the rear. **Do not exert any force.**

**Battery Charge-control Indication**

The three green LEDs of the battery charge-control indicator **8** indicate the charge condition of the battery **9**.

LED	Meaning
Continuous lighting 3 x green	Battery Capacity $\geq 2/3$
Continuous lighting 2 x green	Battery Capacity $\geq 1/3$
Continuous lighting 1 x green	Battery Capacity $< 1/3$
Flashing light 1 x green	Reserve
Continuous lighting 1 x red	Power tool has overheated! – Switch the power tool off and allow it to cool down completely.
Flashing light 1 x red	Power tool has overloaded! – Exert less pressure on the workpiece during work.

**Changing the Tool**

- ▶ **When inserting an application tool, pay attention that the shank of the application tool is firmly seated in the tool holder.** When the shank of the application tool is not inserted deep enough in the tool holder, the application tool can become loose again and not be controlled.
- ▶ **Use only flawless tool bits that are not worn.** Defective tool bits can break, for example, and cause injury or damage.
- ▶ **Only use brand accessories for grinding, sanding, brushing, polishing, routing and cut-off grinding from the dealer for the power tool, which are approved for a speed of 35000 rpm and which have a shank with an outside diameter of 3.2 mm.**

**Inserting (see figure B)**

- Press the spindle lock **5** and turn the clamping nut **12** by hand until locked.

- Press and hold the spindle lock and loosen the clamping nut **12** with the open-end spanner **17** by turning it in an anticlockwise direction.
- Insert the dust-free application tool (e.g. holding rod **2**, grinding accessory **3** or drill bit) into the collet **13** of the collet chuck **19**.

**Note:** Ensure that the shank **18** of the application tool sits in as far as possible, but at least 10 mm into the collet chuck.

- Press and hold the spindle lock **5** and tighten the application tool by turning the clamping nut **12** with the open-end spanner **17** in a clockwise direction.

**Removing**

- Loosen the clamping nut **12** as previously described and remove the application tool.

**Mounting a Cutting Disc (see figure C)**

Cutting discs reinforced with fibreglass are included in the scope of delivery. They can be used for grooving, routing and cutting metal, wood and plastic.

- Insert the holding rod **2** into the collet (see "Inserting", page 18).
- Press and hold the spindle lock **5** and completely unscrew the screw on the holding rod **2** using the screwdriver **17**.
- Attach the cutting disc **1** to the holding rod **2** and reinsert and tighten the screw.

**Changing the Collet Chuck (see figure D)**

- Press the spindle lock **5** and turn the clamping nut **12** by hand until locked.
- Press and hold the spindle lock and loosen the clamping nut **12** with the open-end spanner **17** by turning it in an anticlockwise direction.
- Remove the clamping nut **12** together with the collet chuck **19**.
- Insert the required collet chuck into the drive spindle **20**.
- Screw the clamping nut **12** onto the drive spindle **20** and tighten it slightly in a clockwise direction using the open-end spanner **17**.

**Replacing the Dust Protection Cap (see figure E)**

Two dust protection caps are included in the scope of delivery.

Use the dust protection cap **11** when you need a good grip for detailed work.

Use the dust protection cap **21** when you have to work close to the workpiece surface.

The dust protection cap largely prevents the penetration of dust into the tool holder during operation. When inserting the tool, pay attention that the dust protection cap is not damaged.

- Unscrew the dust protection cap used.
- Screw on the new dust protection cap and tighten it.

**Dust/Chip Extraction**

- ▶ Dusts 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 dusts can cause allergic reactions and/or lead to respiratory infections of the user or bystanders.

Certain dusts, such as oak or beech dust, are considered as 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.

- ▶ **Prevent dust accumulation at the workplace.** Dusts can easily ignite.

## Operation

### Starting Operation

#### Inserting the battery

- Insert the charged battery **9** into the battery port until it can be felt to engage and is seated flush.

#### Switching On and Off

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

- To **start** the power tool, push the On/Off switch **6** forwards.
- To **switch off** the machine, push On/Off switch **6** toward the rear.

### Adjusting the Speed

The speed regulator **7** enables continuously variable adjustment of the speed of the power tool even during operation.

Speed setting	Speed control adjustment
1	5000 – 8000 min <sup>-1</sup>
2	9000 – 12000 min <sup>-1</sup>
3	16000 – 19000 min <sup>-1</sup>
4	20000 – 24000 min <sup>-1</sup>
5	24000 – 28000 min <sup>-1</sup>
6	30000 – 35000 min <sup>-1</sup>

- When working with plastics and other materials with a low melting point, use low speeds.
- Perform cutting work in wood, iron or steel at high speeds.
- When polishing, buffing and cleaning, work with speeds of up to max. 15000 rpm in order to avoid damaging the workpiece and application tool.

### Working Advice

Detailed work can be carried out best if you hold the power tool as a pen between thumb and index finger (see figure F).

For heavy work such as cutting or grinding, use the "golf grip method" (see figure G).

Move the cutting disc or grinding accessory with light pressure to achieve an optimum work result. Too much pressure will reduce the performance of the power tool and lead to faster wear of the application tool.

- ▶ **Ensure that grinding tools and cutting discs are protected against impact when stored.**

### Recommended Cutting Methods

- Panel materials (see figure H)
- Bars (see figure I)
- Pipes (see figure J)

### Blockage protection

The built-in blockage protection protects the motor and battery in case of a blockage. If the application tool becomes jammed in the workpiece or if too much pressure is exerted on the workpiece, the motor will stop.

- Determine the cause of the blockage and correct it.

## 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.**

### After-sales Service and Application Service

In all correspondence and spare parts order, please always include the 10-digit article number given on the type plate of the machine.

Our after-sales service responds to your questions concerning maintenance and repair of your product as well as spare parts. Exploded views and information on spare parts can also be found under:

**www.bosch-pt.com**

Bosch's application service team will gladly answer questions concerning our products and their accessories.

#### Great Britain

Robert Bosch Ltd. (B.S.C.)

P.O. Box 98

Broadwater Park

North Orbital Road

Denham

Uxbridge

UB 9 5HJ

Tel. Service: (0844) 7360109

Fax: (0844) 7360146

E-Mail: boschservicecentre@bosch.com

#### Ireland

Origo Ltd.

Unit 23 Magna Drive

Magna Business Park

City West

Dublin 24

Tel. Service: (01) 4666700

Fax: (01) 4666888

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**Australia, New Zealand and Pacific Islands**

Robert Bosch Australia Pty. Ltd.  
 Power Tools  
 Locked Bag 66  
 Clayton South VIC 3169  
 Customer Contact Center  
 Inside Australia:  
 Phone: (01300) 307044  
 Fax: (01300) 307045  
 Inside New Zealand:  
 Phone: (0800) 543353  
 Fax: (0800) 428570  
 Outside AU and NZ:  
 Phone: +61 3 95415555  
 www.bosch.com.au

**Republic of South Africa****Customer service**

Hotline: (011) 6519600

**Gauteng – BSC Service Centre**

35 Roper Street, New Centre  
 Johannesburg  
 Tel.: (011) 4939375  
 Fax: (011) 4930126  
 E-Mail: bsctools@icon.co.za

**KZN – BSC Service Centre**

Unit E, Almar Centre  
 143 Crompton Street  
 Pinetown  
 Tel.: (031) 7012120  
 Fax: (031) 7012446  
 E-Mail: bsc.dur@za.bosch.com

**Western Cape – BSC Service Centre**

Democracy Way, Prosperity Park  
 Milnerton  
 Tel.: (021) 5512577  
 Fax: (021) 5513223  
 E-Mail: bsc@zsd.co.za

**Bosch Headquarters**

Midrand, Gauteng  
 Tel.: (011) 6519600  
 Fax: (011) 6519880  
 E-Mail: rbsa-hq.pts@za.bosch.com

**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!

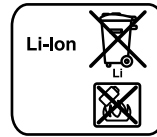
**Only for EC countries:**

According to the European Guideline 2012/19/EU, power tools that are no longer usable, and according to the European Guideline 2006/66/EC, defective or used battery packs/batteries, must be collected separately and disposed of in an environmentally correct manner.

Batteries no longer suitable for use can be directly returned at:

**Great Britain**

Robert Bosch Ltd. (B.S.C.)  
 P.O. Box 98  
 Broadwater Park  
 North Orbital Road  
 Denham  
 Uxbridge  
 UB 9 5HJ  
 Tel. Service: (0844) 7360109  
 Fax: (0844) 7360146  
 E-Mail: boschservicecentre@bosch.com

**Battery packs/batteries:****Li-ion:**

Please observe the instructions in section "Transport", page 20.

Subject to change without notice.

**Français****Avertissements de sécurité****Avertissements de sécurité généraux pour l'outil**

**AVERTISSEMENT** Lire tous les avertissements de sécurité et toutes les instructions. Ne pas suivre les avertissements et instructions peut donner lieu à un choc électrique, un incendie et/ou une blessure sérieuse.

**Conserver tous les avertissements et toutes les instructions pour pouvoir s'y reporter ultérieurement.**

Le terme « outil » dans les avertissements fait référence à votre outil électrique alimenté par le secteur (avec cordon d'alimentation) ou votre outil fonctionnant sur batterie (sans cordon d'alimentation).