

Robert Bosch GmbH

Power Tools Division
70745 Leinfelden-Echterdingen
Germany

www.bosch-pt.com

2 609 932 811 (2011.11) O / 182 UNI



2 609 932 811

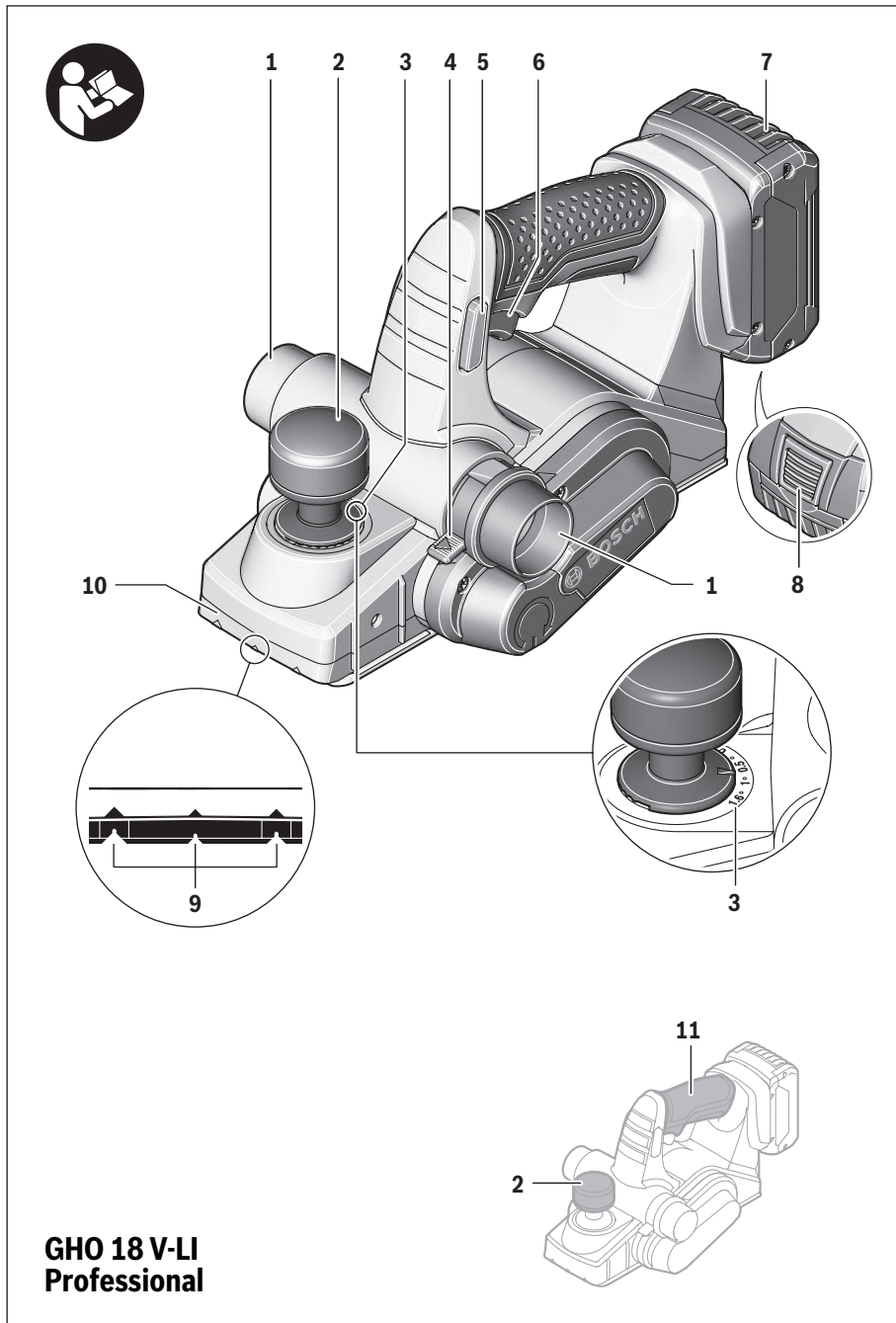
GHO Professional

14,4 V-Li | 18 V-Li

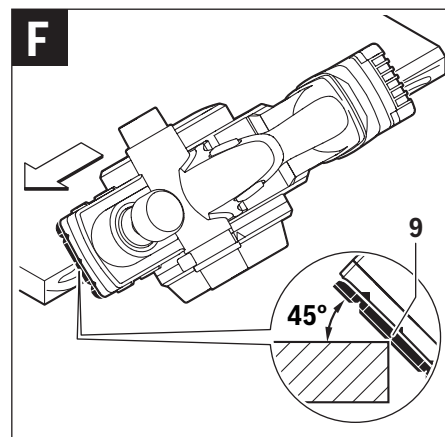
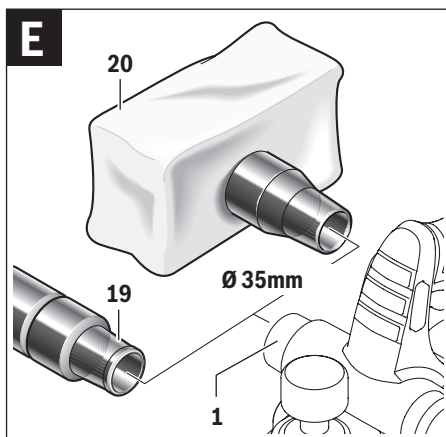
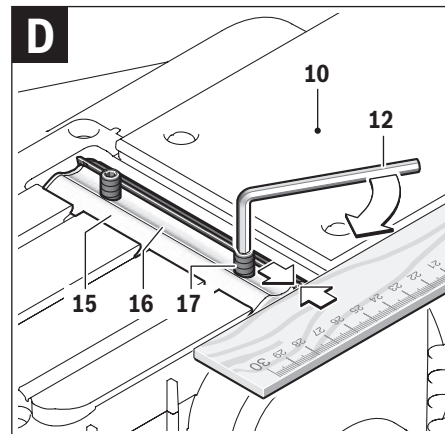
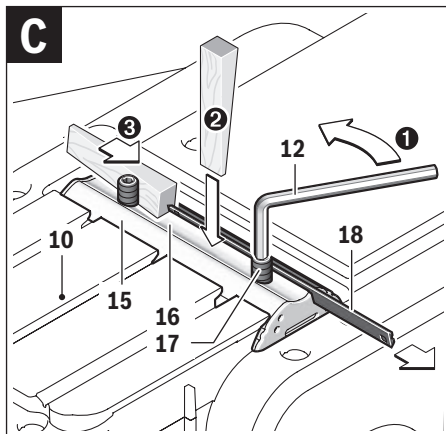
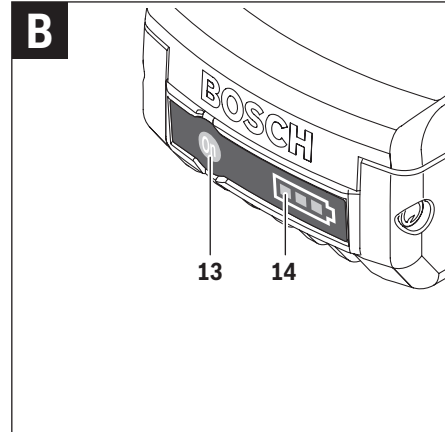
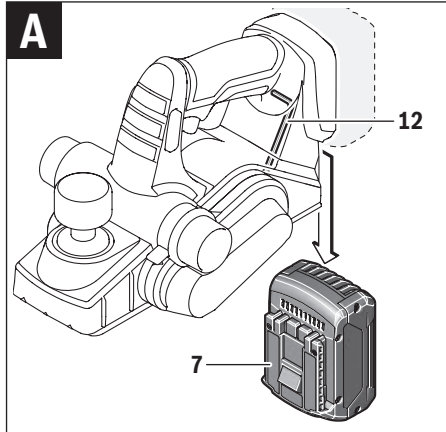


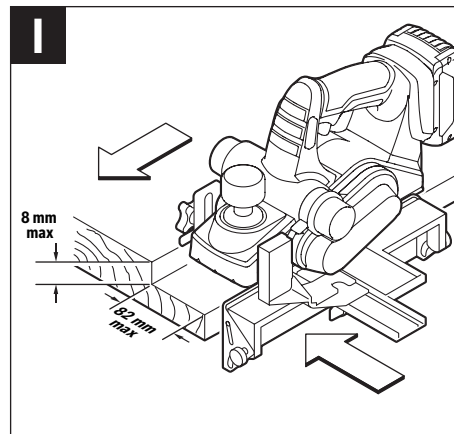
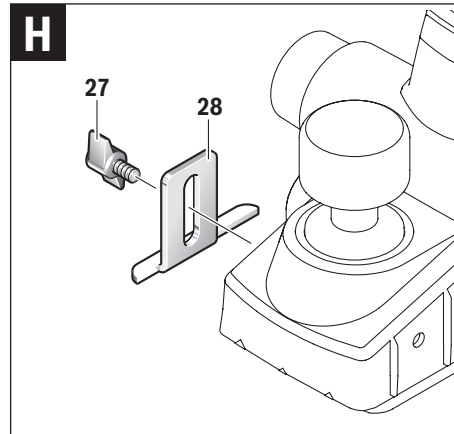
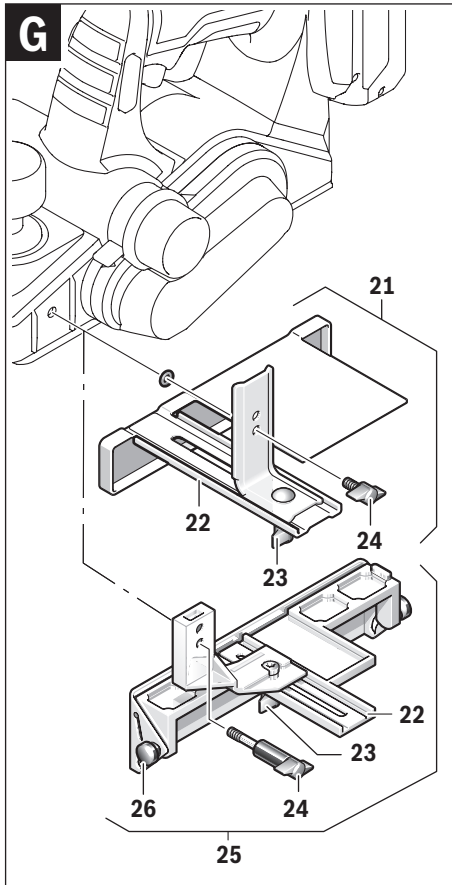
- | | | |
|--|--|---------------------------------------|
| de Originalbetriebsanleitung | el Πρωτότυπο οδηγιών χρήσης | sr Originalno uputstvo za rad |
| en Original instructions | tr Orijinal işletme talimatı | sl Izvirna navodila |
| fr Notice originale | pl Instrukcja oryginalna | hr Originalne upute za rad |
| es Manual original | cs Původní návod k používání | et Algupärane kasutusjuhend |
| pt Manual original | sk Pôvodný návod na použitie | lv Instrukcijas oriģinālvalodā |
| it Istruzioni originali | hu Eredeti használati utasítás | lt Originali instrukcija |
| nl Oorspronkelijke gebruiksaanwijzing | ru Оригинальное руководство по эксплуатации | ar تعليمات التشغيل الأصلية |
| da Original brugsanvisning | uk Оригінальна інструкція з експлуатації | fa راهنمای طرز کار اصلی |
| sv Bruksanvisning i original | ro Instrucțiuni originale | |
| no Original driftsinstruks | bg Оригинална инструкция | |
| fi Alkuperäiset ohjeet | | |





4 |





12 | English

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 2002/96/EG müssen nicht mehr gebrauchsfähige Elektrowerkzeuge und gemäß der europäischen Richtlinie 2006/66/EG müssen defekte oder verbrauchte Akkus/Batterien getrennt gesammelt und einer umweltgerechten Wiederverwendung zugeführt werden.

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

Deutschland
Recyclingzentrum Elektrowerkzeuge
Osteroder Landstraße 3
37589 Kalefeld

Schweiz

Batrec AG
3752 Wimmis BE

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

Bitte beachten Sie die Hinweise im Abschnitt „Transport“, Seite 11.

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

Planer Safety Rules

- ▶ **Wait for the cutter to stop before setting the tool down.** An exposed rotating cutter may engage the surface leading to possible loss of control and serious injury.

- ▶ **Use clamps or another practical way to secure and support the workpiece to a stable platform.** Holding the work by your hand or against the body leaves it unstable and may lead to loss of control.
- ▶ **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 reach into the saw dust ejector with your hands.** They could be injured by rotating parts.
- ▶ **Apply the machine to the workpiece only when switched on.** Otherwise there is danger of kickback when the cutting tool jams in the workpiece.
- ▶ **When working, always hold the planer in such a manner that the planer base plate faces flat on the workpiece.** Otherwise the planer can become wedged and lead to injuries.
- ▶ **Never plane over metal objects, nails or screws.** The planer blade and the blade shaft can become damaged and lead to increased vibrations.
- ▶ **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. Provide for fresh air 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.
- ▶ **Use only original Bosch batteries with the voltage listed on the nameplate of your power tool.** When using other batteries, e. g. imitations, reconditioned batteries or other brands, there is danger of injury as well as property damage through exploding batteries.

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 planing of firmly supported wooden materials, such as beams and boards. It is also suitable for beveling edges and rebating.

14 | English

Product Features

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

- 1 Chip ejector (alternatively right/left)
- 2 Depth adjustment knob (insulated gripping surface)
- 3 Planing depth scale
- 4 Chip ejection selector lever
- 5 Lock-off button for On/Off switch
- 6 On/Off switch
- 7 Battery*
- 8 Battery unlocking button*
- 9 V-grooves
- 10 Planer base plate
- 11 Handle (insulated gripping surface)
- 12 Allen key
- 13 Button for charge-control indicator*
- 14 Battery charge-control indicator*
- 15 Blade drum
- 16 Clamping element for blade
- 17 Fastening screw for planer blade
- 18 Carbide blade (TC)
- 19 Extraction hose (Ø 35 mm)*
- 20 Chip/dust bag*
- 21 Parallel guide*
- 22 Scale for rebating width*
- 23 Locking nut for adjustment of rebating width*
- 24 Fastening bolt for parallel and beveling guide*
- 25 Angle stop*
- 26 Locking nut for angle adjustment*
- 27 Fastening bolt for rebating depth stop*
- 28 Rebating depth stop*

*Accessories shown or described are not part of the standard delivery scope of the product. A complete overview of accessories can be found in our accessories program.

Technical Data

| Planer | | GHO 14,4 V-LI Professional | GHO 18 V-LI Professional |
|--|-------------------|----------------------------|--------------------------|
| Article number | | 3 601 EA0 4.. | 3 601 EA0 3.. |
| Rated voltage | V= | 14.4 | 18 |
| No-load speed | min ⁻¹ | 14 000 | 14 000 |
| Planing depth | mm | 0 – 1.6 | 0 – 1.6 |
| Rebating depth | mm | 0 – 8 | 0 – 8 |
| Planing width, max. | mm | 82 | 82 |
| Weight according to EPTA-Procedure 01/2003 | kg | 2.5 | 2.6 |

Please observe the article number on the type plate of your machine. The trade names of the individual machines may vary.

Noise/Vibration Information

Measured sound values determined according to EN 60745.

Typically the A-weighted noise levels of the product are:
Sound pressure level 79 dB(A); Sound power level 90 dB(A).
Uncertainty K = 3 dB.

Wear hearing protection!

Vibration total values a_h (triax vector sum) and uncertainty K determined according to EN 60745:

$$a_h = 3.0 \text{ m/s}^2, K = 1.5 \text{ m/s}^2.$$

The vibration emission 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 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.

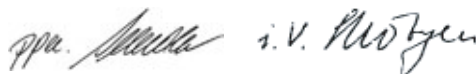
Identify additional safety measures to protect the operator from the effects of vibration such as: maintain the tool and the accessories, keep hands warm, organise work patterns.

Declaration of Conformity 

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

Technical file (2006/42/EC) at:
Robert Bosch GmbH, PT/ETM9,
D-70745 Leinfelden-Echterdingen

Dr. Egbert Schneider Dr. Eckerhard Strötgen
Senior Vice President Engineering Director
Engineering PT/ESI



Robert Bosch GmbH, Power Tools Division
D-70745 Leinfelden-Echterdingen
18.11.2011

Assembly

- ▶ **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.

Battery Charging (see figure A)

- ▶ **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 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.

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

To remove the battery **7** press the unlocking buttons **8** and pull out the battery downwards. **Do not exert any force.**

The Allen key **12** required for replacement of the planer blade is located inside the machine and should always be stored there.

The battery is equipped with a NTC temperature control which allows charging only within a temperature range of between 0 °C and 45 °C. A long battery service life is achieved in this manner.

Observe the notes for disposal.

Battery Charge-control Indication (only for 3.0 Ah battery) (see figure B)

The three green LEDs of the battery charge-control indicator **14** indicate the charge condition of the battery **7**. For safety reasons, it is only possible to check the status of the charge condition when the machine is at a standstill.

Press button **13** to indicate the charge condition. This is also possible when the battery **7** is removed.

| LED | Capacity |
|-------------------------------|------------|
| Continuous lighting 3 x green | $\geq 2/3$ |
| Continuous lighting 2 x green | $\geq 1/3$ |
| Continuous lighting 1 x green | $< 1/3$ |
| Flashing light 1 x green | Reserve |

When no LED lights up after pushing button **13**, then the battery is defective and must be replaced.

Changing the Tool

- ▶ **Be cautious when replacing the planer blades. Do not grasp the planer blades by the cutting edges.** Possible danger of injury due to the sharp cutting edges of the planer blades.

Use only original Bosch carbide blades (TC).

The carbide blade (TC) has 2 cutting edges and can be reversed. When both cutting edges are dull, the planer blade **18** must be replaced. The carbide blade (TC) may not be resharpened.

Disassembling the Planer Blade(s) (see figure C)

To reverse or replace the planer blade **18**, rotate the blade drum **15** until it is parallel to the planer base plate **10**.

- Loosen the two fastening screws **17** with the Allen key **12** by approx. 1 – 2 turns.
- If necessary, loosen the clamping element **16** by giving it a light blow with a suitable tool (e. g. a wooden wedge).
- Push the planer blade **18** sideways out of the blade drum **15** with a piece of wood.

Assembling the Planer Blade(s) (see figure D)

The guide groove of the planer blade always ensures continuous height adjustment when replacing or reversing it.

If required, clean the blade seat in the clamping element **16** and the planer blade **18**.

When assembling the planer blade, ensure that it is seated properly in the blade holder of the clamping element **16** and aligned flush at the side edge of the rear planer base plate **10**. Afterwards tighten the 2 fastening screws **17** again with the Allen key **12**.

Note: Before restarting, check if the fastening screws **17** are tightened well. Rotate the blade drum **15** by hand and ensure that the planer blade does not graze.

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.

- As far as possible, use a dust extraction system suitable for the material.
- 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.

Clean the chip ejector **1** regularly. Use a suitable tool (e. g., a piece of wood, compressed air, etc.) to clean a clogged chip ejector.

- ▶ **Do not reach into the saw dust ejector with your hands.** They could be injured by rotating parts.

To ensure optimum extraction of dust/chips, always work with external dust extraction or a chip/dust bag.

16 | English

External Dust Extraction (see figure E)

An extraction hose (Ø 35 mm) **19** (accessory), can be attached on either side of the chip ejector.

Connect the vacuum hose **19** to a vacuum cleaner (accessory). An overview for connecting to various vacuum cleaners can be found at the end of this manual.

The vacuum cleaner must be suitable for the material being worked.

When vacuuming dry dust that is especially detrimental to health or carcinogenic, use a special vacuum cleaner.

Integrated Dust Extraction (see figure E)

A chip/dust bag (accessory) **20** can be used for smaller jobs. Insert the sleeve of the chip/dust bag firmly into the chip ejector **1**. Empty the chip/dust bag **20** at regular intervals to maintain optimum dust collection.

Choice of Chip Ejector Side

With the selector lever **4**, the chip ejector **1** can be switched to right or left. Always press the selector lever **4** until it engages in the end position. The selected ejection direction is indicated by an arrow symbol on the selector lever **4**.

Operation**Operating Modes****Adjusting the Planing Depth**

With the adjustment knob **2**, the planing depth can be adjusted variably from 0 – 1.6 mm using the planing depth scale **3**.

Starting Operation**Inserting the Battery**

► **Use only original Bosch lithium ion batteries with the voltage listed on the nameplate of your power tool.** Using other batteries can lead to injuries and pose a fire hazard.

Insert the charged battery **7** into the battery port until it can be felt to engage and is seated flush.

Switching On and Off

To **start** the machine, **first** push the lock-off button for the On/Off switch **5** and **then** press the On/Off switch **6** and keep it pressed.

To switch off the machine, **release** the On/Off switch **6**.

Note: For safety reasons, the On/Off switch **6** cannot be locked; it must remain pressed during the entire operation.

Run-on Brake

An integrated run-on brake reduces after-running of the blade shaft after switching off the machine.

Protection Against Deep Discharging

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.

Working Advice**Planing**

Set the required planing depth and place the front part of the planer base plate **10** against the workpiece.

► **Apply the machine to the workpiece only when switched on.** Otherwise there is danger of kickback when the cutting tool jams in the workpiece.

Switch the machine on and guide the machine with even feed over the surface to be planed.

To achieve high-grade surfaces, work only with low feed and apply pressure on the centre of the planer base plate.

When machining hard materials (e.g. hardwood) as well as when utilising the maximum planer width, set only low planing depths and reduce planer feed, as required.

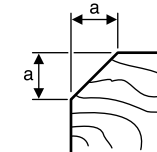
Excessive feed reduces the surface quality and can lead to rapid clogging of the chip ejector.

Only sharp blades achieve good cutting capacity and give the machine longer life.

Beveling Edges (see figure F)

The V-grooves in the front planer base plate allow quick and easy beveling of workpiece edges. Depending on required bevel width, use the corresponding V-groove. For this, place the planer with the V-groove onto the edge of the workpiece and guide it along the edge.

| Groove to be used | Dimension a (mm) |
|-------------------|------------------|
| none | 0 – 2.5 |
| small | 1.5 – 4.0 |
| medium | 2.0 – 4.5 |
| large | 3.0 – 5.5 |

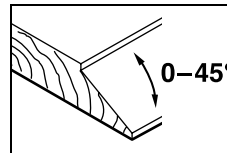
**Planing with Parallel/Beveling Guide (see figure G – I)**

Mount the parallel guide **21** or beveling guide **25** to the machine using the corresponding fastening bolt **24**. Depending on the application, mount the rebating depth stop **28** with fastening bolt **27** to the machine.

Loosen the locking nut **23** and adjust the requested rebating width on the scale **22**. Tighten the locking nut **23** again.

Adjust the requested rebating depth accordingly with the rebating depth stop **28**.

Carry out the planing procedure several times until the requested rebating depth is reached. Guide the planer applying sideward supporting pressure.

Beveling with the Beveling Guide

When beveling rebates and surfaces, adjust the required slope angle with the angle adjustment **26**.

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.**

When the battery is no longer operative, please refer to an authorised after-sales service agent for Bosch power tools.

If the machine should fail despite the care taken in manufacturing and testing procedures, repair should be carried out by an after-sales service centre for Bosch power tools.

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

After-sales Service and Customer Assistance

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

Our customer service representatives can answer your questions concerning possible applications and adjustment of products and 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: +44 (0844) 736 0109
Fax: +44 (0844) 736 0146
E-Mail: boschservicecentre@bosch.com

Ireland

Origo Ltd.
Unit 23 Magna Drive
Magna Business Park
City West
Dublin 24
Tel. Service: +353 (01) 4 66 67 00
Fax: +353 (01) 4 66 68 88

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: +61 (01300) 307 044
Fax: +61 (01300) 307 045
Inside New Zealand:
Phone: +64 (0800) 543 353
Fax: +64 (0800) 428 570
Outside AU and NZ:
Phone: +61 (03) 9541 5555
www.bosch.com.au

Republic of South Africa

Customer service
Hotline: +27 (011) 6 51 96 00

Gauteng – BSC Service Centre

35 Roper Street, New Centre
Johannesburg
Tel.: +27 (011) 4 93 93 75
Fax: +27 (011) 4 93 01 26
E-Mail: bsctools@icon.co.za

KZN – BSC Service Centre

Unit E, Almar Centre
143 Crompton Street
Pinetown
Tel.: +27 (031) 7 01 21 20
Fax: +27 (031) 7 01 24 46
E-Mail: bsc.dur@za.bosch.com

Western Cape – BSC Service Centre

Democracy Way, Prosperity Park
Milnerton
Tel.: +27 (021) 5 51 25 77
Fax: +27 (021) 5 51 32 23
E-Mail: bsc@zsd.co.za

Bosch Headquarters

Midrand, Gauteng
Tel.: +27 (011) 6 51 96 00
Fax: +27 (011) 6 51 98 80
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.