

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.

1) Work area safety

- a) **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- b) **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.
- c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) Electrical safety

- a) **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.
- b) **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.
- c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d) **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.
- e) **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.
- f) **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.

3) Personal safety

- a) **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.
- b) **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.
- c) **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.
- d) **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.
- e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f) **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.
- g) **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.

4) Power tool use and care

- a) **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.
- b) **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.
- c) **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.

- d) **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.
- e) **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.
- f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) **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.

5) Battery tool use and care

- a) **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.
- b) **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- c) **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.
- d) **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.

6) Service

- a) **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.

Machine-specific Safety Warnings

GSB 12 VE-2 / GSB 14,4 VE-2 / GSB 18 VE-2:

- ▶ **Wear hearing protection when using impact drills.** The influence of noise can lead to loss of hearing.

GSR 18 VE-2 / GSB 18 VE-2:

- ▶ **Always use the auxiliary handle supplied with the machine.** Loss of control can cause personal injury.
- ▶ **When working with the machine, always hold it firmly with both hands and provide for a secure stance.** The power tool is guided more secure with both hands.

GSR 12 VE-2 / GSR 14,4 VE-2 / GSR 18 VE-2 / GSB 12 VE-2 / GSB 14,4 VE-2 / GSB 18 VE-2:

- ▶ **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 or may cause an electric shock.
- ▶ **Switch off the power tool immediately when the tool insert jams. Be prepared for high reaction torque that can cause kickback.** The tool insert jams when:
 - the power tool is subject to overload or
 - it becomes wedged in the workpiece.
- ▶ **Hold the machine only by the insulated gripping surfaces, when performing an operation where the cutting tool may run into hidden wiring.** Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
- ▶ **Hold the machine with a firm grip.** High reaction torque can briefly occur while driving in and loosening screws.
- ▶ **Secure the workpiece.** A workpiece clamped with clamping devices or in a vice is held more secure than by hand.
- ▶ **Do not work materials containing asbestos.** Asbestos is considered carcinogenic.
- ▶ **Take protective measures when dust can develop during working that is harmful to one's health, combustible or explosive.** Example: Some dusts are regarded as carcinogenic. Wear a dust mask and work with dust/chip extraction when connectable.
- ▶ **Keep your workplace clean.** Blends of materials are particularly dangerous. Dust from light alloys can burn or explode.

- ▶ **Always wait until the machine has come to a complete stop before placing it down.** The tool insert can jam and lead to loss of control over the power tool.
- ▶ **Avoid unintentional switching on. Ensure the On/Off switch is in the off position before inserting battery pack.** Carrying the power tool with your finger on the On/Off switch or inserting the battery pack into power tools that have the switch on invites accidents.
- ▶ **Do not open the battery.** Danger of short-circuiting.



Protect the battery against heat, e. g., also against continuous sun irradiation and fire. There is danger of explosion.

- ▶ **Do not short-circuit the battery.** There is danger of explosion.

Functional Description



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

GSR 12 VE-2 / GSR 14,4 VE-2 / GSR 18 VE-2:

The machine is intended for driving in and loosening screws as well as for drilling in wood, metal, ceramic and plastic.

GSB 12 VE-2 / GSB 14,4 VE-2 / GSB 18 VE-2:

The machine is intended for driving in and loosening screws as well as for drilling in wood, metal, ceramic and plastic and for impact drilling in brick, brickwork and stone.

Product Features

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

- 1 Keyless chuck
- 2 Torque preselection ring
- 3 Gear selector
- 4 Soft grip ("Comfort Zone")
- 5 Operating mode preselection ring (GSB 12 VE-2 / GSB 14,4 VE-2 / GSB 18 VE-2)
- 6 Auxiliary handle (GSR 18 VE-2 / GSB 18 VE-2)
- 7 Battery unlocking button
- 8 Battery*
- 9 Screwdriver bit*
- 10 Rotational direction switch
- 11 On/Off switch
- 12 Auxiliary handle clamping band
- 13 Universal bit holder*
- 14 Securing screw for keyless chuck
- 15 Allen Key**
- 16 Brush holder
- 17 Cover lid

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

**Commercially available (not included in the delivery scope)

Technical Data

Cordless Screwdriver		GSR 12 VE-2 PROFESSIONAL	GSR 14,4 VE-2 PROFESSIONAL	GSR 18 VE-2 PROFESSIONAL
Article number		3 601 J93 K..	3 601 J93 H..	3 601 J93 F..
Rated voltage	V=	12	14.4	18
No-load speed				
– 1st gear	rpm	0–430	0–450	0–470
– 2nd gear	rpm	0–1 650	0–1 720	0–1 800
Max. torque for hard/soft screwdriving application according to ISO 5393	Nm	67/28	72/30	82/38
Max. screw dia.	mm	8	10	12
Max. drilling dia.				
– Steel	mm	13	13	13
– Wood	mm	40	45	50
Chuck clamping range	mm	1.5–13	1.5–13	1.5–13
Drill spindle		1/2"	1/2"	1/2"
Weight according to EPTA-Procedure 01/2003	kg	2.4	2.5	2.7

Technical data determined with 2.6 Ah NiMH HD battery.

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

Combination Cordless Drill		GSB 12 VE-2 PROFESSIONAL	GSB 14,4 VE-2 PROFESSIONAL	GSB 18 VE-2 PROFESSIONAL
Article number		3 601 J94 K..	3 601 J94 H..	3 601 J94 F..
Rated voltage	V=	12	14.4	18
No-load speed				
– 1st gear	rpm	0–450	0–470	0–500
– 2nd gear	rpm	0–1 850	0–1 950	0–2 050
Impact frequency at no-load	bpm	28 000	29 000	31 000
Max. torque for hard/soft screwdriving application according to ISO 5393	Nm	60/26	65/28	75/36
Max. screw dia.	mm	8	10	10
Max. drilling dia.				
– Steel	mm	13	13	13
– Wood	mm	35	40	45
– Brickwork	mm	13	13	16
Chuck clamping range	mm	1.5–13	1.5–13	1.5–13
Drill spindle		1/2"	1/2"	1/2"
Weight according to EPTA-Procedure 01/2003	kg	2.7	2.8	3.0

Technical data determined with 2.6 Ah NiMH HD battery.

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

Declaration of Conformity

We declare under our sole responsibility that this product is in conformity with the following standards or standardization documents: EN 60745 according to the provisions of the directives 89/336/EEC, 98/37/EC.

Dr. Egbert Schneider
Senior Vice President
Engineering

Dr. Eckerhard Strötgen
Head of Product
Certification

Dr. Egbert Schneider *Dr. Eckerhard Strötgen*

10.05.2006, Robert Bosch GmbH, Power Tools Division
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Noise/Vibration Information

Measured values determined according to EN 60745.

GSR 12 VE-2 / GSR 14,4 VE-2 / GSR 18 VE-2:

Typically the A-weighted sound pressure level of the machine is 72 dB(A). Uncertainty K=3 dB.

The noise level when working can exceed 85 dB(A).

Wear hearing protection!

Overall vibrational value (vector sum of three directions) determined according to EN 60745:

Drilling in metal: Vibrational emission value

$a_{rh}=2.5 \text{ m/s}^2$, uncertainty K=1.5 m/s^2 ,

Screwdriving: Vibrational emission value $a_{rh}=2.5 \text{ m/s}^2$, uncertainty K=1.5 m/s^2 .

GSB 12 VE-2 / GSB 14,4 VE-2 / GSB 18 VE-2:

Typically the A-weighted noise level of the machine is: sound pressure level 90 dB(A); sound power level 101 dB(A). Uncertainty K=3 dB.

Wear hearing protection!

Overall vibrational value (vector sum of three directions) determined according to EN 60745:

Drilling in metal: Vibrational emission value

$a_{rh}=3.5 \text{ m/s}^2$, uncertainty K=1.5 m/s^2 ,

Impact drilling in concrete: Vibrational emission value

$a_{rh}=13 \text{ m/s}^2$, uncertainty K=1.5 m/s^2 ,

Screwdriving: Vibrational emission value $a_{rh}=2.5 \text{ m/s}^2$, uncertainty K=1.5 m/s^2 .

GSR 12 VE-2 / GSR 14,4 VE-2 / GSR 18 VE-2 / GSB 12 VE-2 / GSB 14,4 VE-2 / GSB 18 VE-2:

⚠ WARNING 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.

The vibration emission level will vary because of the ways in which a power tool can be used and may increase above the level given in this information sheet. This could lead to a significant underestimate of exposure when the tool is used regularly in such a way.

Note: To be accurate, an estimation of the level of exposure to vibration experienced during a given period of work should also take into account the times when the tool is switched off and when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period.

Assembly

Battery Charging

A battery that is new or has not been used for a longer period does not develop its full capacity until after approx. 5 charging/discharging cycles.

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

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.

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

Auxiliary Handle (GSR 18 VE-2 / GSB 18 VE-2) (see figure A)

► Operate your machine only with the auxiliary handle **6**.

The auxiliary handle **6** can be set to any position for a secure and low-fatigue working posture.

Turn the bottom part of the auxiliary handle **6** in counterclockwise direction and swivel the auxiliary handle **6** to the desired position. Then retighten the bottom part of the auxiliary handle **6** by turning in clockwise direction.

The clamping band **12** of the auxiliary handle must be seated in the corresponding groove.

Changing the Tool (see figure B)

- ▶ **Before any work on the machine (e. g., maintenance, tool change, etc.) as well as during transport and storage, set the rotational direction switch to the centre position.** Unintentional actuation of the On/Off switch can lead to injuries.

The drill spindle is locked when the On/Off switch **11** is not pressed. This makes quick, convenient and easy changing of the tool in the drill chuck possible.

Open the keyless chuck **1** by turning until the tool can be inserted. Insert the tool.

Firmly tighten the collar of the keyless chuck **1** by hand in clockwise direction until the locking action ("click") is no longer heard. This automatically locks the drill chuck.

The locking is released again to remove the tool when the collar is turned in the opposite direction.

Replacing the Drill Chuck (see figures E – G)

- ▶ **Before any work on the machine (e. g., maintenance, tool change, etc.) as well as during transport and storage, set the rotational direction switch to the centre position.** Unintentional actuation of the On/Off switch can lead to injuries.

Removing the Drill Chuck (see figures E–F)

The keyless chuck **1** is secured with a securing screw **14** against unintentional loosening from the drill spindle. Completely open the keyless chuck **1** and unscrew the securing screw **14** in clockwise direction. **Please note that the securing screw has a left-hand thread.**


Clamp the short end of an Allen key **15** into the keyless chuck **1**.

Place the machine on a stable surface (e.g. a workbench). Hold the machine firmly and loosen the keyless chuck **1** by turning the Allen key **15** in anticlockwise direction. Loosen a tight-seated keyless chuck by giving the long end of the Allen key **15** a light blow. Remove the Allen key from the keyless chuck and completely unscrew the keyless chuck.

Mounting the Drill Chuck (see figure G)

The keyless chuck is mounted in reverse order.

Note: After mounting the keyless chuck, screw the securing screw **14** in again.

 **The drill chuck must be tightened with a tightening torque of approx. 10–25 Nm.**

Operation

Starting Operation

Inserting the Battery

- ▶ **Use only original Bosch O-pack batteries with the voltage given on the type plate of your machine.** The use of other batteries can lead to injuries and danger of fire.

Set the rotational direction switch **10** to the centre position in order to avoid unintentional starting. Insert the charged battery **8** into the handle so that it can be felt to engage and faces flush against the handle.

Reversing the Rotational Direction (see figure C)

The rotational direction switch **10** is used to reverse the rotational direction of the machine. However, this is not possible with the On/Off switch **11** actuated.

Right Rotation: For drilling and driving in screws, push the rotational direction switch **10** left to the stop.

Left Rotation: For loosening or unscrewing screws, push the rotational direction switch **10** right to the stop.

Setting the Torque

With the torque presetting ring **2** the required torque setting can be preselected in 25 steps. With the correct setting, the insert tool is stopped as soon as the screw is screwed flush into the material or when the adjusted torque is reached. The safety clutch is deactivated in the "▲" position, e. g. for drilling.

Select a higher setting or switch to the "▲" symbol when unscrewing screws.

Setting range 1–20:

Lower torque for screwing in screws with small diameter or into soft materials. Fine torque gradients between the individual setting positions.

Setting range 21–25:

Higher torque for screwing in screws with large diameters or into hard materials. Coarse torque gradients between the individual setting positions.

Setting the Operating Mode (GSB 12 VE-2 / GSB 14,4 VE-2 / GSB 18 VE-2) (see figure D)

With the operating mode preselection ring **5**, you can select between drilling/screwdriving and impact drilling.

Drilling and screwdriving

Set the preselection ring **5** to the "Drilling without impact" symbol.

Impact drilling

Set the preselection ring **5** to the "Impact drilling" symbol.

In the "Impact drilling" position, the safety clutch is deactivated and the maximum power is always effective.

Gear Selection, Mechanical

- ▶ **Actuate the gear selector 3 only when the machine is at a standstill.**

Two speed ranges can be preselected with the gear selector **3**.

Gear I:

Low speed range; for screwdriving or working with large drilling diameter.

Gear II:

High speed range; for working with small drilling diameter.

If the gear selector **3** cannot be pushed through to the stop, lightly turn the drill chuck with drill.

Switching On and Off

To **start** the machine, press the On/Off switch **11** and keep it depressed.

To switch off the machine, **release** the On/Off switch **11**.

Adjusting the Speed

The speed of the switched on power tool can be variably adjusted, depending on how far the On/Off switch **11** is pressed.

Light pressure on the On/Off switch **11** results in a low rotational speed. Further pressure on the switch results in an increase in speed.

Fully automatic spindle locking (Auto-lock)

When the On/Off switch **11** is not pressed, the drill spindle and thus the tool holder are locked.

This enables screws to be screwed in, even when the battery is empty and allows for the machine to be used as a screwdriver.

Run-on Brake

When the On/Off switch **11** is released, the chuck brakes to a stop, thus preventing the run-on of the tool.

When driving in screws, wait until the screw is screwed in flush with the material and then release the On/Off switch **11**. By doing so, the head of the screw does not penetrate into the material.

Operating Instructions

- ▶ **Apply the power tool to the screw only when it is switched off.** Rotating tool inserts can slip off.

Soft Grip ("Comfort Zone")

The gripping surface (soft grip) **4** reduces the danger of slipping and thereby improves the grip on the machine and the handling.

At the same time, the rubber coating achieves a vibration-reducing effect.

Tips

After longer periods of working at low speed, allow the machine to cool down by running it for approx. 3 minutes at maximum speed with no load.

For drilling in metal, use only perfectly sharpened HSS drill bits (HSS=high-speed steel). The appropriate quality is guaranteed by the Bosch accessories program.

Before screwing larger, longer screws into hard materials, it is advisable to predrill a pilot hole with the core diameter of the thread to approx. $\frac{2}{3}$ of the screw length.

Maintenance and Service

Maintenance and Cleaning

- ▶ **Before any work on the machine (e. g., maintenance, tool change, etc.) as well as during transport and storage, set the rotational direction switch to the centre position.** Unintentional actuation of the On/Off switch can lead to injuries.

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

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.

Replacing the Carbon Brushes (see figure H)

When the carbon brushes are worn, the power tool switches off automatically. For replacement of the carbon brushes, unscrew the four screws of the cover lid **17** and remove the cover lid **17**. Insert a screwdriver or similar into the notch of the brush holder **16** and carefully pry it out. Remove the used carbon brushes and replace them. The new carbon brushes can also be inserted when turned by 180°. Lightly press the inserted carbon brushes downward until they can be clearly heard to engage. Afterwards mount the cover lid **17** again.

Service and Customer Assistance

Exploded views and information on spare parts can be found under:

www.bosch-pt.com

Great Britain

Robert Bosch Ltd. (B.S.C.)
P.O. Box 98
Broadwater Park
North Orbital Road
Denham-Uxbridge
Middlesex UB 9 5HJ

☎ Service: +44 (0) 18 95 / 83 87 82

☎ Advice line: +44 (0) 18 95 / 83 87 91

Fax: +44 (0) 18 95 / 83 87 89

Ireland

Origo Ltd.
Unit 23 Magna Drive
Magna Business Park
City West
Dublin 24

☎ Service: +353 (0)1 / 4 66 67 00

Fax: +353 (0)1 / 4 66 68 88

Australia and New Zealand

Robert Bosch Australia Pty. Ltd.
RBAU/SPT
1555 Centre Road
P.O. Box 66
3168 Clayton/Victoria

☎ +61 (0)1 / 3 00 30 70 44

Fax: +61 (0)1 / 3 00 30 70 45

www.bosch.com.au

Disposal

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

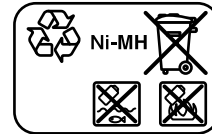
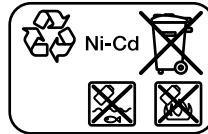
Only for EC countries:



Do not dispose of power tools into household waste!

According the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national right, power tools that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

Battery packs/batteries:



Ni-Cd: Nickel cadmium

Warning: These battery packs contain cadmium, a highly toxic heavy metal.

Ni-MH: Nickel metal hydride

Do not dispose of battery packs/batteries into household waste, fire or water. Battery packs/batteries should be collected, recycled or disposed of in an environmental-friendly manner.

Only for EC countries:

Defective or dead out battery packs/batteries must be recycled according the guideline 91/157/EEC.

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
Middlesex UB 9 5HJ

☎ Service: +44 (0) 18 95 / 83 87 82

☎ Advice line: +44 (0) 18 95 / 83 87 91

Fax: +44 (0) 18 95 / 83 87 89

Subject to change without notice.