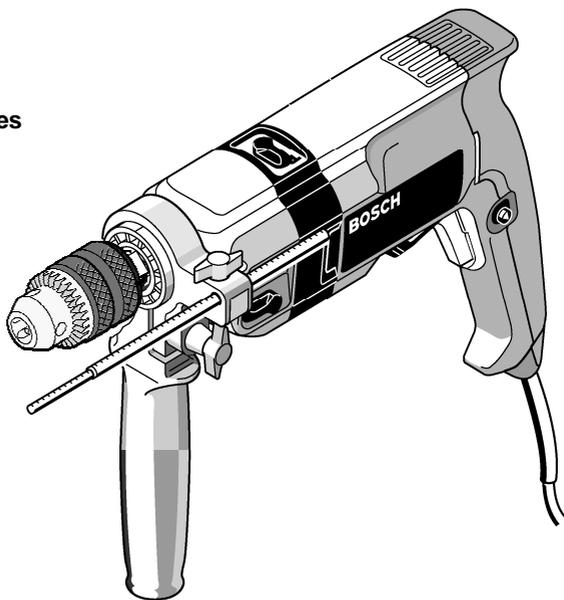


GSB 20-2 GSB 20-2 RE PROFESSIONAL



BOSCH

Manual de instruções
Manual de instrucciones
Operating instructions



Atenção! Leia Antes de usar.
¡Atención! Lea antes de usar.
Attention! Read before using.



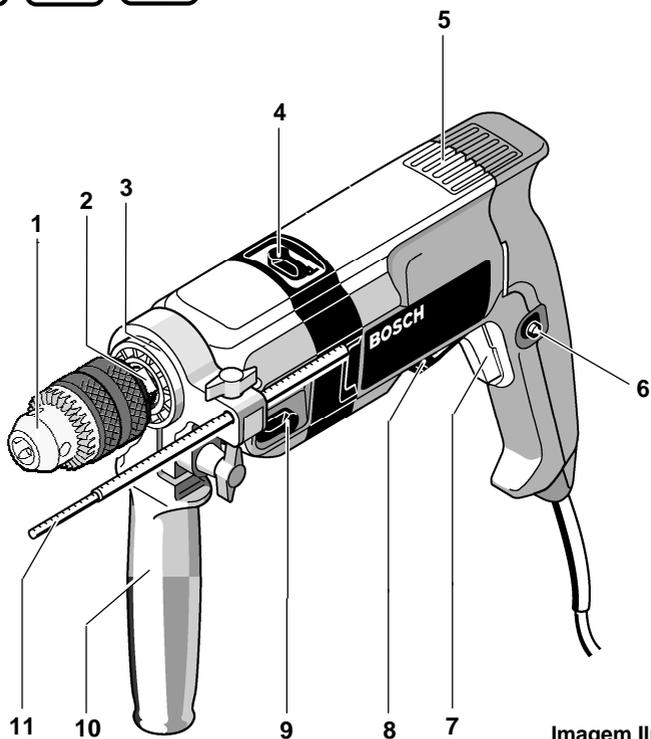
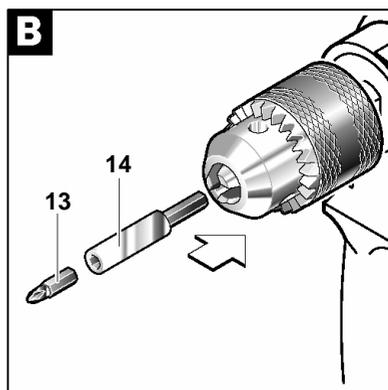
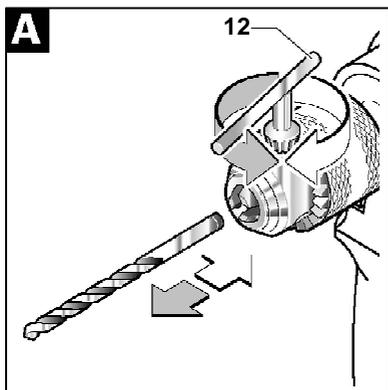


Imagem Ilustrativa
GSB 20-2 RE



Technical data

Impact Drill		GSB 20-2	GSB 20-2 RE
Type n°		0 601 184 1..	0 601 194 5..
Power	[w]	701	701
Amperage	127 V [A]	5,8	5,8
	220 V [A]	3,3	3,3
No-Load speed		[min ⁻¹]	1000/3000
Impacts		[min ⁻¹]	48000
Drill Chuck	Concrete [mm]	20/13	20/13
Clamping range	Steel [mm]	13/08	13/08
	Aluminum [mm]	15/10	15/10
13mm (1/2")	Wood [mm]	40/25	40/25
Weight approx.	[kg]	2,2	2,2
Safety Class		II / II	II / II

Operating controls

1. Chuck 13 mm
2. Spindle
3. Spindle's collar - 43 mm Ø
4. Commutator drilling with/without impact
5. Ventilation slots
6. Lock on button
7. Switch
8. Reversing lever (GSB 20-2 RE)
9. Speed commutator
10. Side handle
11. Depth stop rod
12. Chuck key

*** Not all of the accessories illustrated or described are included as standard delivery.**

Intended use

Bosch Hammer Drills GSB 20-2 and GSB 20-2 RE have been developed to execute the more different drilling types in: steel, aluminum, wood, concrete and others. By using other accessories, you will be able to do small jobs of: sanding, polishing, grinding, brushing, etc.

For you safety

 **Working safely with this machine is possible only when the operating and safety information are read completely and the instructions contained therein are strictly followed. In addition, the general safety instructions on page 11 must be followed. Before using for the first time, ask for a practical demonstration.**

 If the mains cable is damaged or cut through while working, do not touch the cable but immediately pull the mains plug. Never use the machine with a damaged cable.

 Wear ear protection.
Wear safety goggles.

For long hair, wear hair protection.

 Hold tools by insulated gripping surfaces when performing an operation where the drilling tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.

- Insert the mains plug only when the machine is switched off.
- Always direct the cable to the rear away from the machine.
- Don't use your tool in damp locations.
- Don't use your tool in the presence of flammable fluids or gases. Danger of explosion!
- When drilling use the auxiliary handles **10**.
- 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.

- If the drilling tool jams it will cause the tool to jolt. If this occurs switch the tool off immediately.
- When working with the machine, always hold it firmly with both hands and provide for a secure stance.
- Be careful when screwing in long screws; danger of sliding off. (GSB 20-2 RE)
- For screws, work using the first gear or with a low speed. (GSB 20-2 RE)
- Place the machine on the screw/nut only when switched off. (GSB 20-2 RE)
- Always switch off the machine and allow to come to a stop before placing it down.
- Never allow children to use the machine.
- Don't use damaged accessories such as stiff bits, worn out sanding paper, split grinding wheels, etc.
- Do not place such loads on the machine that it ceases to turn. Damage the motor.

Bosch is only able to ensure perfect functioning of the machine if the original accessories intended for it are used.

Side handle

- **When drilling use the auxiliary handle 10.**

To improve the handling and the safety, always use side handle.

DEPTH STOP ROD 11.

For serial drills of same depth you have to put the depth stop **11** in the auxiliary handle **10** and to adjust the depth according to your necessity.

Accessories assembly

Caution! The chuck may be very hot: During longer working periods, especially when impact drilling, the chuck can become very hot. In this case we recommend wearing protective gloves.

- Open the chuck **1** and insert the accessory's shank until it reaches the bottom of the chuck. Use chuck key **12** to tighten it up through the three holes of the chuck.

Attention! An accessory shank that has only the tip fastened: damage the chuck's and accessory's and by cause an accident.

SCREWDRIVER TOOLS (accessories optional - fig. B)

When using screwdriver bits **13**, a bit holder **14** should always be used.

Use only the screwdriver bits that fit the screw head. For driving screws, position the selector switch **4** to the symbol "Drilling and Driving".

Initial Operation

Do not drill, fasten or cut into blind areas where electric, gas or water lines may exist. Use appropriate detectors to determine if these lines are hidden in the work area or call the local utility company for assistance.

Check for correct mains voltage: The voltage of the power source must agree with the voltage specified on the nameplate of the machine.

ON/OFF SWITCH

INTERMITTENT SWITCHING

ON - Press trigger of switch 7.

OFF - Release trigger

CONTINUOUS SWITCHING

ON - Press trigger of switch 7, then lock button 8 and release it.

OFF - Press and release trigger on switch 7.

CHANGING SPEED

Two speed ranges can be pre-selected with the gear speed commuted 9:

Speed 1: No-Load speed 1000 min⁻¹

Speed 2: No-Load speed 3000 min⁻¹

Impact drill is built with a sliding key mechanism which has two positions. The position can be changed more easily when the motor is almost stopping or stopped. Rotate lever 10 in 180° to select the opposite position. The lever seats naturally in position 1 and 2 (1st and 2nd speed). If there is any difficult in getting the gears to engage when changing speeds, turn the chuck a little bit by hand.

STEPLESS SPEED CONTROL (GSB 20-2 RE)

The machine runs with variable speed between 0 and maximum depending on the pressure applied to the On/Off switch 7. Light pressure results in a low rotational speed thus allowing smooth, controlled starts.

Attention: Do not load the machine so heavily that it comes to a standstill.

REVERSION OF THE SENSE OF ROTATION (GSB 20-2 RE)

The reversing lever 8 allows to invert the motor's sense of rotation, thus enhancing the field of applications with all of screw driving / removal.

Position: **R** - right = drilling / screw driving

L - left = screw removal

Attention: To invert the sense of rotation, be sure the motor is switched off.

- The reversing or anticlockwise operation enables application for tasks such loosening of screw.

Function with and without impact

Without impact (rotation only)

Turn the commutator drilling with/without impact 4 with the arrow pointing to . In this position you will be able to drill steel, aluminum, wood, plastic and other materials.

With impact (rotation with impact system)

Turn the commutator drilling with/without impact 4 with the arrow pointing to . In this position you will be able to drill concrete, stone, wall tiles, bricks and other materials.

Warning! Use your hammer drill only with the arrow of switch pointing to one of the two positions, or . Never stop in the dead center (between those two positions), for this will damage the tool.

To change from one system to another rotate the lever 180° which can be done while the machine is running.

Practical Advice

Select the right bit

By choosing the correct bit for every specific material, and

keeping it correctly sharpened, you'll allow your tool to show its best performance.

Carbon tipped bits - wood

High speed steel bits - soft steel, aluminum, wood, etc.

Carbide tipped bits - concrete, marble, ceramics, etc.

Attention! When drilling in metal, use special cutting oil to prevent the bit to burn. Drillings in concrete, stone, ceramics, etc. should be in dry.

Check the material to be drilled and select the correct bit. Do not drill with a bit that is inadequate for the job, because this will damage either your workpiece or the bit itself.

Small workpieces

Use a vise or clamps to hold your workpiece. Loose pieces could grip into the bit and cause accidents.

Wall tiles and ceramics

Begin to drill without impact and activate the impact system after drilling through the enamel surface. By doing this, you prevent the bit to slide or the material to split.

Replacing the Drill Chuck

Use an open-end spanner at spanner surface to retain the chuck 1. Place the chuck key 12 in one of the 3 bores and loosen the chuck by turning it to the left using the key as a lever. If the chuck is frozen in place, a tap on the chuck key 12 should loosen it. The drill chuck is mounted in reverse order.



The chuck must be tightened with a torque of approx. 30 – 40 Nm.

Maintenance and cleaning

- Before any work on the machine itself, pull the mains plug.



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

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

Guarantee

We guarantee BOSCH appliances in accordance with statutory/country-specific regulations (proof of purchase by invoice or delivery note).

Damage attributable to normal wear and tear, overload or improper handling will be excluded from the guarantee.

In case of complaint please send the machine, **undismantled**, to your dealer or the BOSCH Service Center for electric power tools.

Warning!

Freight and insurance costs are charged to the client, even for warranty claims.

Environmental protection

Recycle raw materials instead of disposing as waste



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

The plastic components are labeled for categorized recycling.

⚠ 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.

SAVE THESE INSTRUCTIONS

1. Work area safety

a) Keep work area clean and well lit. *Cluttered and poorly lit areas can result in accidents.*

b) Do not operate power tools 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 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 misuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. *Damaged or entangled cords increase the risk of electric shock.*

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 it is not possible to avoid the use of the power tool in humid or wet areas, use a residual current device (RCD) protected supply. *Use of an RCD reduces the risk of electric shock.*

g) In case of change need or substitution of the electric cable, it should be made by an authorized and qualified technical service. *A damaged cable increases 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 if 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 safety equipment. Always wear eye protection. *Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*

c) Avoid accidental starting. Ensure the switch is in the off-position before plugging in. *Carrying power tools with your finger on the switch or plugging in power tools that are switches can invite accidents.*

d) Remove any adjusting key or wrench before switching on the power tool. *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 these devices can reduce dust related hazards.*

h) Use ear protectors. *Exposure to noise can cause hearing loss.*

i) Use auxiliary handles supplied with the tool. *Loss of control can cause personal injury.*

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.*

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 can cause injuries 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 tools operation. If damaged, have the power tool repaired before use.

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 and in the manner intended for the particular type of power tool, 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 injuries.*

5) 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.*

b) The substitution of the brushes of the power tool should be accomplished by an authorized and qualified technical service. *Brushes out of specification can cause damages to the motor of the power tool.*