

# GHG 660 LCD PROFESSIONAL

**BOSCH**  
Ideas that work.

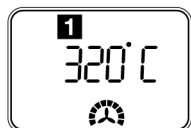
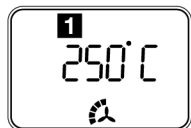
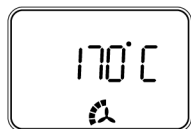
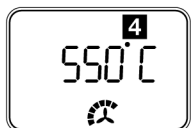
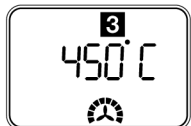
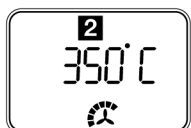
\* Des idées en action.

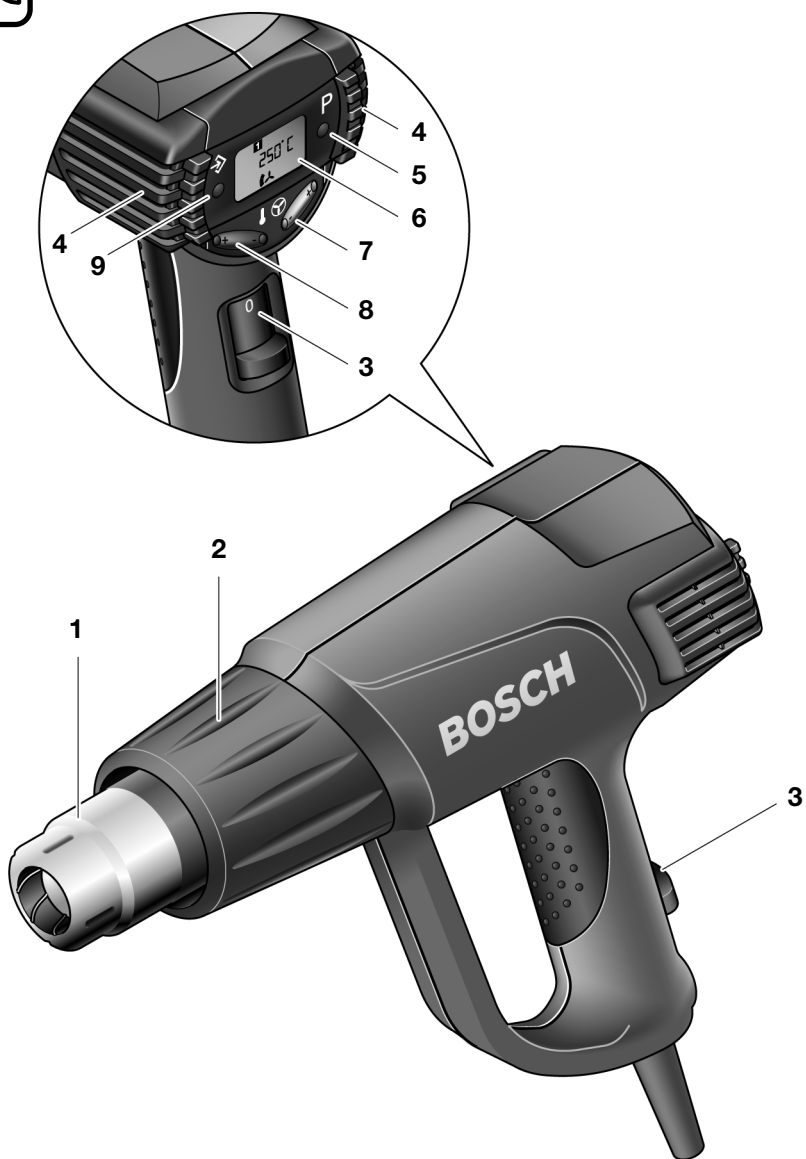
Bedienungsanleitung  
Operating instructions  
Instructions d'utilisation  
Instrucciones de servicio  
Manual de instruções  
Istruzioni d'uso  
Gebruiksaanwijzing  
Betjeningsvejledning  
Bruksanvisning  
Brukerveiledningen  
Käyttöohje  
Οδηγία χειρισμού  
Kullanım kılavuzu

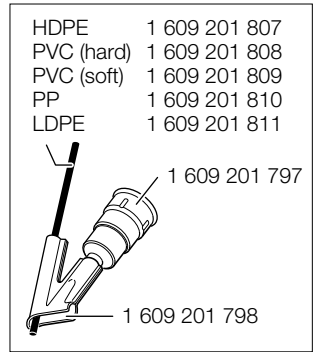
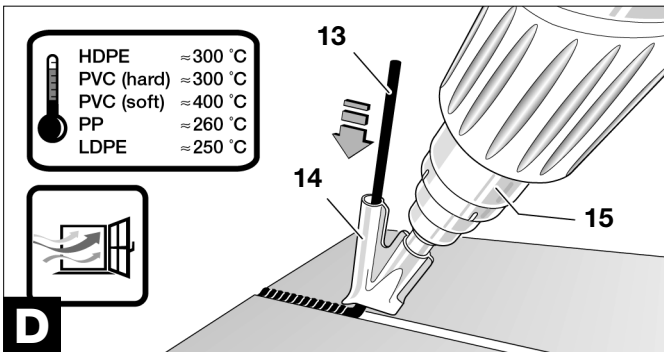
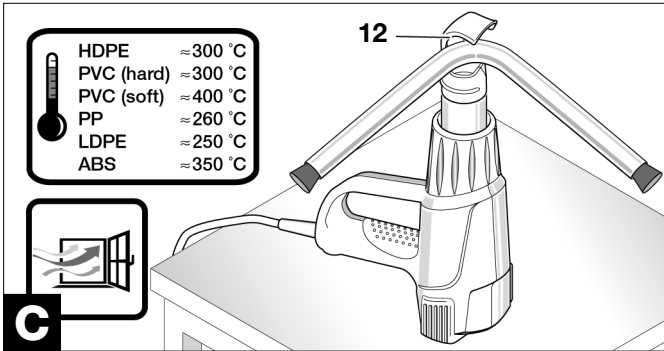
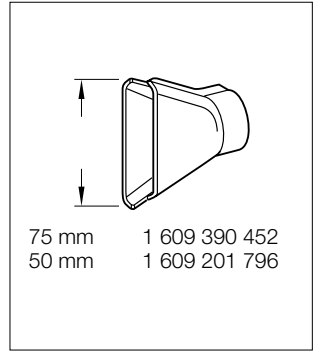
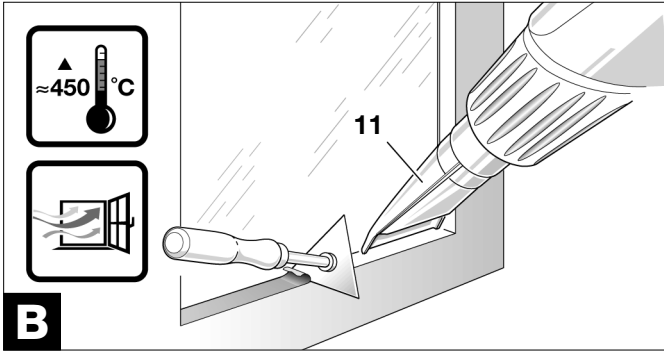
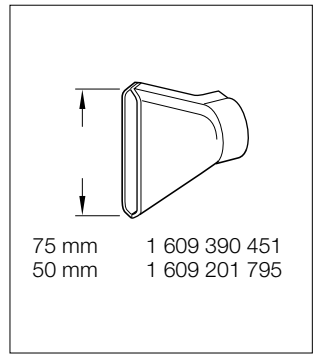
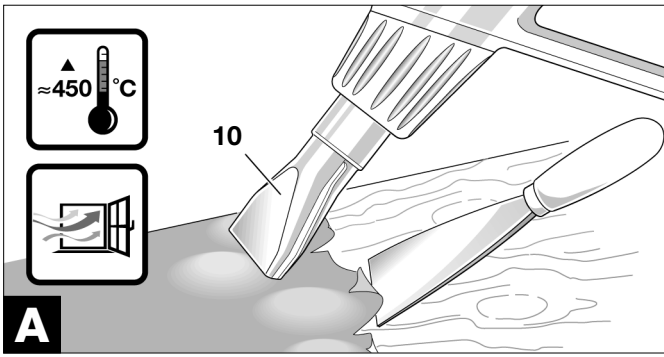


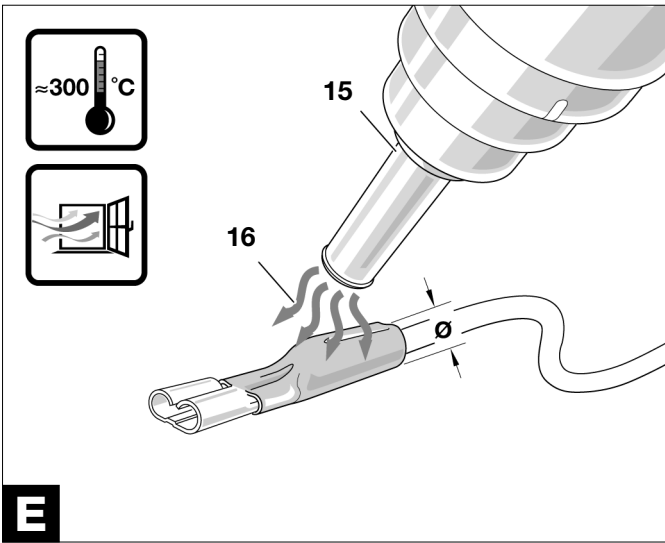
1 → 2 → 3 → 4

1 → 1  
250°C → 320°C

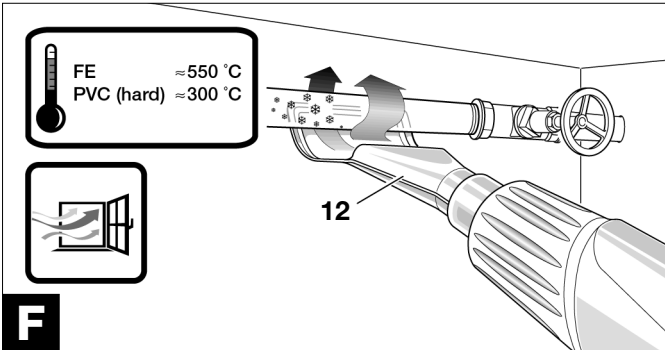
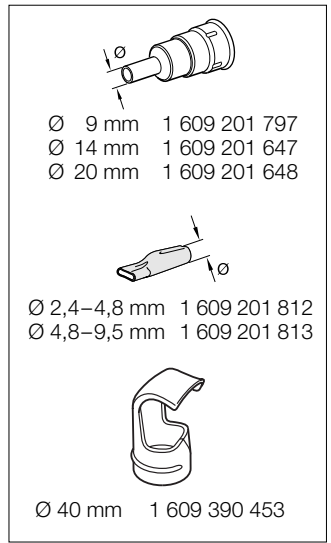




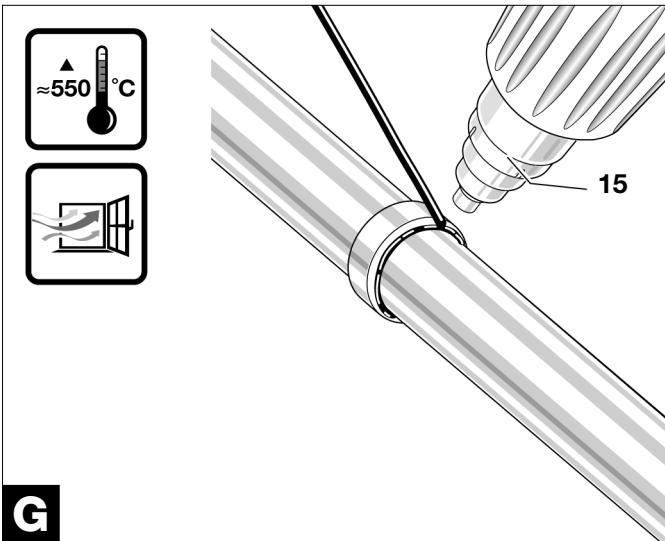
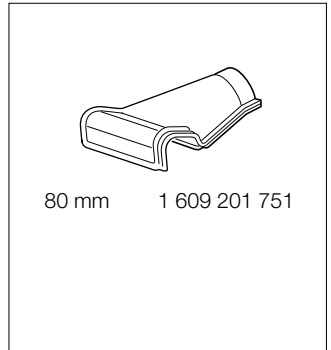




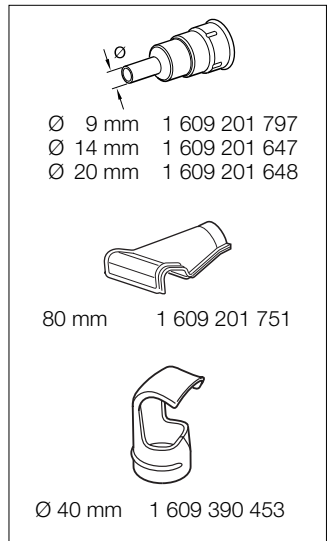
**E**



**F**



**G**



## Product Specifications

### Hot Air Blower

		GHG 660 LCD PROFESSIONAL	GHG 660 LCD PROFESSIONAL
Order number		0 601 944 7..	0 601 944 7..
Voltage	[V]	220–240	110–120
Rated input power max.	[W]	2300	1400
Air flow approx.	[l/min]	250 ... 500	250 ... 500
Temperature at nozzle outlet approx.	[°C]	50 ... 660	50 ... 600
Temperature measuring accuracy at the nozzle outlet on the display		±5 % ±5 %	±5 % ±5 %
Display operating temperature*	[°C]	-20 ... +70	-20 ... +70
Weight without mains cable approx.	[kg]	1.0	1.0
Protection class		□ / II	□ / II

\* Outside of the operating temperature, the display can become black.

Please observe the order number of your unit. The trade names of the individual units may vary.

## Noise Information

Measured values determined according to EN 50 144. Typically the A-weighted sound pressure level of the product is less than 70 dB(A).

## Intended Use

The unit is intended for the forming and welding of plastic, removal of paint and the warming of heat-shrinkable tubing.

It is also suitable for soldering and tinning, loosening of adhesive joints and the defrosting of water lines.

## Product Elements

- 1 Nozzle
- 2 Heat protection
- 3 On-off switch/selector switch
- 4 Cover with dust filter
- 5 Program selection button "P"
- 6 Display
- 7 Button for setting the air flow ↻
- 8 Button for setting the temperature ↓
- 9 Store button →
- 10 Wide nozzle\*
- 11 Glass protection nozzle\*
- 12 Reflector nozzle\*
- 13 Welding rod\*
- 14 Welding shoe\*
- 15 Reduction nozzle\*
- 16 Heat-shrinkable tubing\*

\* Not all the accessories illustrated or described are included in standard delivery.

## For Your Safety



**Working safely with this unit is possible only when the operating and safety information are read completely and the instructions contained therein are strictly followed.**



The workplace should be well ventilated. Gases and vapours that occur are frequently detrimental to health.

- The unit must not be damp and must also not be operated in damp surroundings.
- Before each use of the unit, check the cable and plug. If damage is detected, do not use the unit. Have repairs performed only by a qualified technician. Never open the unit yourself.

- Connect units that are used in the open via a residual current device (RCD) with an actuating current of 30 mA maximum. Do not operate the unit in rain or moisture.
- Do not carry or hang up the unit by the cable.
- Always direct the cable to the rear away from the unit.
- If the cable is damaged or cut through while working, do not touch the cable but immediately pull the mains plug. Never use the unit with a damaged cable.
- Do not operate the unit unattended.
- During pauses in the work, when not in use or during work on the unit itself (e.g., changing of the working tools, repairs, cleaning, adjustment), pull the mains plug.
- Wear safety glasses.
- The strong heating effect (e.g. as a result of careless handling) of this unit increases the danger of fire and explosion!
- When working with plastics, paints, lacquers and similar materials, combustible and poisonous gases can occur. Do not work in the vicinity of easily combustible gases or materials.
- The heat can reach flammable parts that are located outside of the visible area.
- Do not point the unit for a long period at one spot.
- Danger of burning! Do not touch the hot nozzle. Wear protective gloves.
- Never direct the air stream at persons or animals.
- Never use the unit as a hair dryer.
- Do not hold the nozzle outlet too close to the work-piece to be heated. The resulting restriction in the air flow can lead to overheating of the unit.
- Allow the unit to cool completely before storing. The hot nozzle can cause damage.
- Never allow children to use the unit.
- Bosch is able to ensure flawless functioning of the unit only if the original accessories intended for it are used.

## Putting into Operation

### Ensure that the mains voltage is correct!

The voltage of the power source must agree with the value given on the nameplate of the unit. Units designated for 230 V can also be operated with 220 V.

### Switching On/Off

To **put into operation**, slide the on/off switch **3** to the position ☺ or ↓.

In both positions, the unit starts with the air flow and temperature values that were set before the last switch-off.

To **switch off**, slide the on/off switch **3** to the stop at position **O**.

After working for a longer time with high temperature, allow the unit to cool by running in the cold air setting ☺ before switching off.

### Thermo-Protection Switch-Off

When the heater is overloaded (e.g. as a result of restricted air flow), the unit switches it off automatically, however, the blower continues to run. When the unit has cooled to operating temperature, the heater is switched on again.

### Cold Air Setting ☺



The air flow can be regulated, the temperature is fixed at 50 °C (cannot be regulated), no programmed operation is possible

The cold air setting ☺ is suitable for cooling a warmed work piece or for the drying of paint. It is also suitable for cooling the unit before placing down or the changing of nozzles.

When changing from the hot air setting ↓ with high temperatures to the cold air setting ☺, a short time is required until the unit cools down to 50 °C. During this cooling period, the actual temperature of the nozzle outlet is shown in the display **6**.

When changing from the hot air setting ↓ to the cold air setting ☺, the current air flow setting is taken over.

### Hot Air Setting ↓





The air flow and temperature can be regulated, normal and programmed operation is possible

For applications see *Working Examples*.

When changing from the cold air setting ☺ to the hot air setting ↓, air flow, temperature, operating mode and program are automatically set as they were when the hot air setting was last used.

## Setting the Air Flow

The air flow can be regulated with the air flow button **7**.


-  Minimum air flow (approx. 250 l/min)
-  Maximum air flow (approx. 500 l/min)



The air flow can be increased by pressing the “+” side of the air flow button **7** or decreased by pushing the “-” side of the button **7**. Brief pressing of the button increases or decreases the air flow by one step. Longer pressing of the button increases or decreases the air flow continuously until the maximum or minimum air flow is reached.

Decrease the air flow when, for example:

- The surroundings of the work piece should not be heated more than necessary
- A light work piece could be blown away by the air stream.

## Setting the Temperature

The temperature in the hot air setting  can be regulated.

For changes to another temperature, the unit needs a short time to warm or cool the air stream to the target temperature. The target temperature is shown in the display **6** during this time with blinking arrows . After reaching the required temperature, the arrows  are eliminated and the display **6** shows the actual temperature.

The target temperature can be increased in steps of 10 °C by pressing the “+” side of the temperature button **8** or reduced by pressing the “-” side of the button **8**. Brief pressing of the button increases or decreases the target temperature one time by 10 °C. Longer pressing of the button increases or decreases the temperature continuously by 10 °C steps until the button is released or the minimum or maximum temperature is reached.

## Operating Modes

### Programmed Operation





In programmed operation, air flow and temperature settings can be stored in four programs. In each program, any air flow and temperature combination is possible.

Also in programmed operation, air flow and temperature can be changed at any time. If the changes are not stored, they are lost when switching off or when changing to another program.


To change to the programmed mode, press the program selection button “**P**” **5** until the number of the required program (**1**, **2**, **3** or **4**) is shown in the display.



## Pre-Stored Programs

The unit is delivered with the following four programs:

Application	Temperature	Air Flow
<b>1</b> Shaping of plastic tubing (e.g. LDPE)	250 °C	
<b>2</b> Welding of plastic (e.g. PVC)	350 °C	
<b>3</b> Removing paint/softening adhesives	450 °C	
<b>4</b> Soldering	550 °C	

## Changing of Programs

Press the program selection button “**P**” **5** until the number of the program to be changed is shown in the display. Set the required temperature and air flow (see Sections *Setting the Air Flow* and *Setting the Temperature*). As soon as the values of the program are changed, the symbol  blinks in the upper left of the display.

After setting the required air flow and temperature, hold the store button  **9** depressed until the symbol  in the display disappears. The values set are now stored under the program number shown in the display.

## Normal Operation

To change to normal operation, press the program selection button “**P**” **5** repeatedly until there is no longer a program number shown over the temperature in the display.

The air flow and temperature can now be changed at any time.

The last set values for the air flow and temperature remain stored under the following conditions:

- Change to program operation
- Change to the cold setting
- Switch-off of the unit.

## Working Instructions

### Removing the Heat Protector

For working in especially narrow places, the heat protector **2** can be removed.

- **Be careful of the hot nozzle!** Increased danger of burning exists when working without the heat protector.

To remove or mount the heat protector, the unit must be switched off and have cooled. For cooling, run briefly in the cold setting, if necessary.

Turn the heat protector **2** counter clockwise to remove and clockwise to mount again.



## Placing Down the Unit

For cooling of the heated unit or to have both hands free for working, the unit can be placed down in the upright position on the rear housing surface (see Fig. **C**).

- **Be especially careful when working with the upright unit!** There is danger of burning on the hot nozzle and the hot air stream.

## Working Examples

The letters of the following application examples refer to the illustrations on the fold-out page.

Temperature settings given in the application examples are suggested values that, depending on the material characteristics, can deviate. The distance between the nozzle and workpiece is dependent on the material to be processed.

The ideal temperature should first be ascertained by performing a test. Therefore, begin with a lower temperature setting.

All application examples (except **B**) can be performed without accessories. However, the use of the recommended accessory parts simplify the work and significantly improve the quality of the results.

- **Be careful when changing the nozzle, danger of burning!** Do not touch the hot nozzle. Allow the unit to cool. Wear protective glasses.

Bosch stocks an extensive range of accessories (see Bosch Accessories catalogue) which offer a wide range of other applications.

### **A** Removing Paint/Softening Adhesives

Place on the wide nozzle **10**. Soften the paint using hot air and remove evenly using a spatula. Do not heat the paint for too long since this will burn the paint, making it more difficult to remove. The spatula should be kept sharp and clean.

Many adhesives (e.g. stickers) become softer when heated allowing adhesive bonds to be separated or superfluous adhesive to be removed.

### **B** Removing Paint from Window Frames

#### **Danger of glass breaking!**

Use of the glass protection nozzle **11** is essential.

On profiled surfaces, paint can be removed using a spatula and brushed off using a soft wire brush.

### **C** Shaping Plastic Tubing

Place on the reflector nozzle **12**. To avoid kinking the tubing, fill the tubing with sand and seal at both ends. Heat the tubing evenly by moving it from side to side.

### **D** Welding Plastics

Place on the reduction nozzle **15** and the welding shoe **14**. The materials to be welded and the welding rod **13** must be made of the **same material** (e.g. PVC with PVC). The seam must be clean and grease-free. Heat the welding seam until it becomes tacky. Please note that the temperature difference between the tacky and liquid state of a plastic is very small. Then feed in the welding rod **13** and allow to run into the gap so that a uniform bead is produced.

### **E** Shrink Fitting

Place on the reduction nozzle **15**. Select the diameter of the heat-shrink tubing **16** according to the work piece, for example, a cable lug. Heat the heat-shrinkable sleeve evenly.

### **F** Defrosting Water Pipes



**Water lines often do not differ in appearance from gas lines. Gas lines are not to be heated under any circumstances.**

Place on the reflector nozzle **12**. Heat the frozen zone always from the outside to the middle. Warm plastic pipes as well as connections between pipe pieces especially carefully to prevent damage.

### **G** Soft Soldering

For point soldering, place on the reduction nozzle **15**, for the soldering of pipes, the reflector nozzle **12**.

If solder without flux is used, apply soldering grease or paste to the location to be soldered. Warm the location to be soldered for 50–120 s depending on the material. Apply the solder. The solder must melt from the work piece temperature.

After the soldered location has cooled, remove the flux.

## Maintenance and Cleaning

- Before any work on the unit itself, pull the mains plug.
- For safe and efficient working, always keep the unit and the ventilation slots clean.

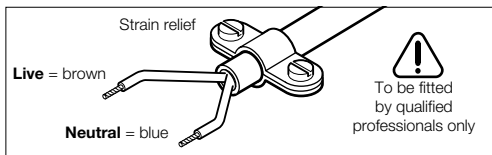
### **Cleaning the Dust Filter**

Slide the cover **4** containing the dust filter to the rear out of the housing. Blow out the dust filter (with compressed air for example) or clean with a soft brush. Replace the cover.

## WARNING

### Important instructions for connecting a new 3-pin plug to the 2-wire cable.

The wires in the cable are coloured according to the following code:



Do **not** connect the blue or brown wire to the earth terminal of the plug.

**Important:** If the plug on the cable of this unit must be replaced, dispose of the old plug to prevent misuse.

If the unit should fail despite the care taken in manufacture and testing, repair should be carried out by an authorised customer services agent for Bosch power tools.

For all correspondence and spare parts orders, always include the 10-digit order number of the unit.

## Environmental Protection



### Recycle raw materials instead of disposing as waste.

The unit, accessories and packaging should be submitted for environment-friendly recycling.

These instructions are printed on recycled paper manufactured without chlorine.

The plastic components are labelled for categorised recycling.

## Service and Customer Advice

Exploded views and information on spare parts can be found under: **www.bosch-pt.com**.

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## CE Declaration of Conformity

We declare under our sole responsibility that this product is in conformity with the following standards or standardization documents:  
EN 60 335 according to the provisions of the directives 73/23/EEC, 89/336/EEC.

CE 03

Dr. Egbert Schneider  
Senior Vice President  
Engineering

Dr. Eckerhard Strötgen  
Head of Product  
Certification

*Dr. Egbert Schneider* *Dr. Eckerhard Strötgen*

Robert Bosch GmbH, Geschäftsbereich Elektrowerkzeuge

**Specification subject to alteration without notice**