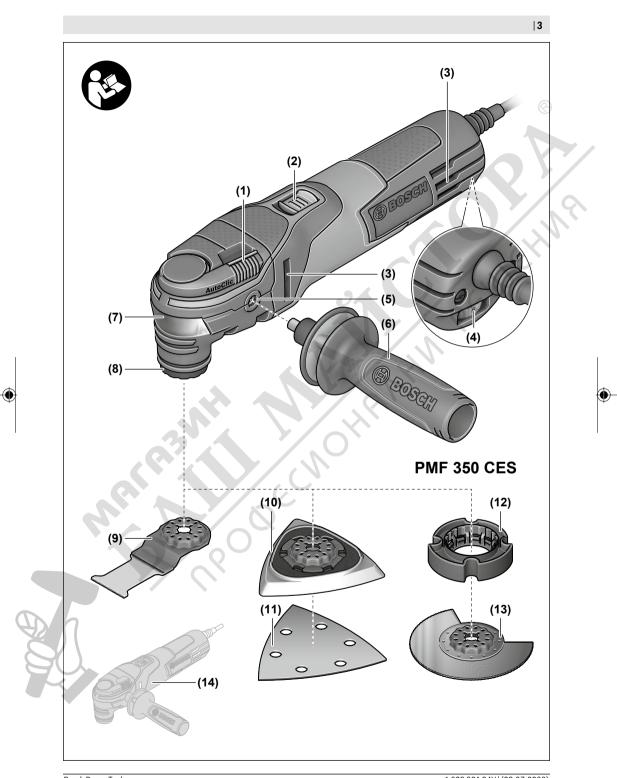


# **PMF 350 CES** A CONCERNING CONCERNING

- Originalbetriebsanleitung de
- Original instructions en
- fr Notice originale
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- Oorspronkelijke gebruiksaanwijzing nĪ
- Original brugsanvisning da
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- Orijinal işletme talimatı tr
- ar دليل التشغيل الأصلي

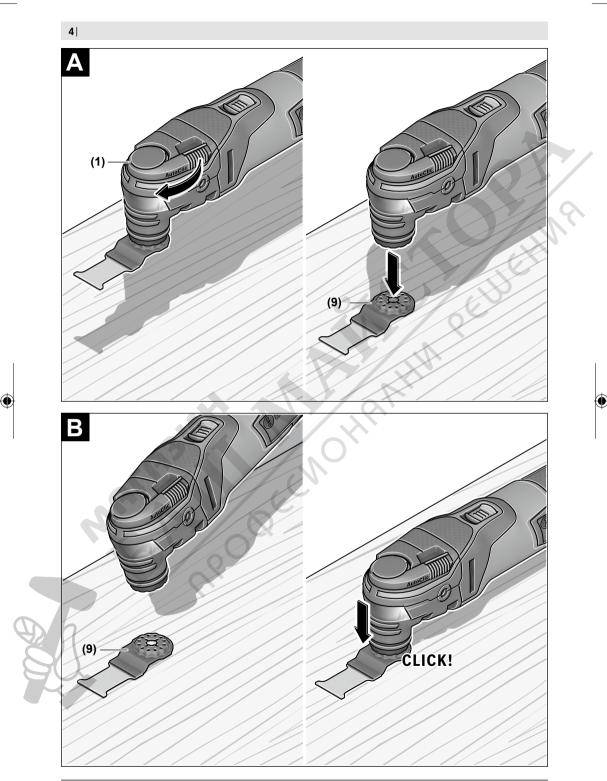


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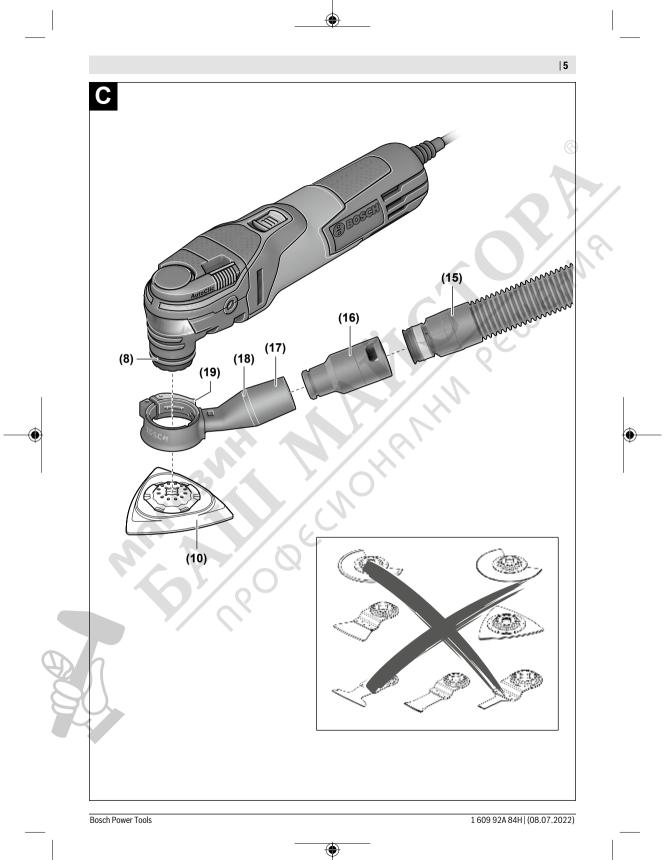
Bosch Power Tools

1 609 92A 84H | (08.07.2022)



1 609 92A 84H | (08.07.2022)

Bosch Power Tools



Für alle übrigen Elektro- und Elektronikgeräte muss der Vertreiber geeignete Rückgabemöglichkeiten in zumutbarer Entfernung zum jeweiligen Endnutzer gewährleisten; das gilt auch für Altgeräte, die in keiner äußeren Abmessung größer als 25 cm sind, die der Endnutzer zurückgeben will, ohne ein neues Gerät zu kaufen.

# English

# **Safety Instructions**

# **General Power Tool Safety Warnings**

# WARNING

Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all in-

structions listed below may result in electric shock, fire and/ or serious iniury.

# Save all warnings and instructions for future reference. The term "power tool" in the warnings refers to your mainsoperated (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 or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an exten-► sion 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 iniury.
- ► Use personal protective equipment. Always wear eye protection. Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal iniuries.
- 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 and clothing 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.
- Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

# 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 remove the battery pack, if detachable, 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.

# 16 | English

- 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 and accessories. 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.
- ► Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

# Service

Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

# Safety information for multifunction tools

- Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- Use clamps or another practical way to secure and support the workpiece to a stable platform. Holding the workpiece by hand or against your body leaves it unstable and may lead to loss of control.
- Only use the power tool for dry sanding. Water entering a power tool will increase the risk of electric shock.
- ► Warning: Danger of fire! Avoid overheating the workpiece and the sander. Always empty the dust collector before taking a break from work. Sanding dust in the dust bag, microfilter, paper bag (or in the filter bag or vacuum cleaner filter) can spontaneously combust under certain conditions, for example if flying sparks are created when sanding metals. This risk is increased if the sanding dust is mixed with paint or polyurethane residue or with other chemical substances and if the workpiece is hot as a result of prolonged work.
- Keep hands away from the sawing area. Do not reach under the workpiece. Contact with the saw blade can lead to injuries.
- Clean the air vents on your power tool regularly. The motor's fan will draw the dust inside the housing and ex-

cessive accumulation of powdered metal may cause electrical hazards.

- Use suitable 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.
- Hold the power tool firmly with both hands and make sure you have a stable footing. The power tool can be more securely guided with both hands.
- When changing the application tool, wear protective gloves. Application tools can become hot when used for prolonged periods of time.
- Do not scrape any dampened materials (e.g. wallpaper) or on damp surfaces. Water entering a power tool increases the risk of electric shock.
- Do not treat the surface you will be working on with any fluids that contain solvents. Poisonous vapours may develop due to the materials heating up when being scraped.
- Take particular care when handling scrapers and blades. The application tools are very sharp. Danger of injury.

# Products sold in GB only:

Your product is fitted with an BS 1363/A approved electric plug with internal fuse (ASTA approved to BS 1362). If the plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place by an authorised customer service agent. The replacement plug should have the same fuse rating as the original plug. The severed plug must be disposed of to avoid a possible shock hazard and should never be inserted into a mains socket elsewhere.

# Product Description and Specifications



# Read all the safety and general instructions.

Failure to observe the safety and general instructions may result in electric shock, fire and/or serious injury.

Please observe the illustrations at the beginning of this operating manual.

# Intended Use

The power tool is intended for sawing and cutting woodbased materials, plastic, plasterboard, non-ferrous metals and mounting elements (e.g. nails, clamps). It is also suitable for working on soft wall tiles and for dry sanding and scraping of small areas. It is ideal for working close to edges and flush with surfaces.

# **Product Features**

The numbering of the product features refers to the diagram of the power tool on the graphics page.

- AutoClic lever for unlocking the application tool/accessory
- (2) On/off switch
- (3) Ventilation slots
- (4) Orbital stroke rate preselection thumbwheel
- (5) Thread for auxiliary handle
- (6) Auxiliary handle (insulated gripping surface)
- (7) 180° light band
- (8) Tool holder
- (9) Plunge cut saw blade<sup>a</sup>
- (10) Sanding plate<sup>a)</sup>
- (11) Sanding sheet<sup>a)</sup>
- (12) Depth stop<sup>a)</sup>
- (13) Segment saw blade<sup>a)</sup>
- (14) Handle (insulated gripping surface)
- (15) Dust extraction hose<sup>a)</sup>
- (16) Dust extraction adapter<sup>a)</sup>
- (17) Dust extraction outlet<sup>a)</sup>
- (18) Dust extraction system<sup>a)</sup>
- (19) Clamping lever for dust extraction system<sup>a)</sup>
- Accessories shown or described are not included with the product as standard. You can find the complete selection of accessories in our accessories range.

# **Technical Data**

| Multifunction tool                         |                   | PMF 350 CES |
|--|-------------------|-------------|
| Article number                             |                   | 3 603 A02 2 |
| Orbital stroke rate preselec-<br>tion      | 7.4               |             |
| Constant electronic control                |                   | •           |
| Soft start                                 |                   | / (•        |
| AutoClic tool holder                       |                   |             |
| Rated power input                          | W                 | 350         |
| Power output                               | W                 | 185         |
| No-load speed no                           | min <sup>-1</sup> | 15000-20000 |
| Oscillation angle on left/<br>right        | °                 | 1.4         |
| Weight according to EPTA-Procedure 01:2014 | kg                | 1.6         |
| Protection class                           | - I. FU           | □/II        |

The specifications apply to a rated voltage [U] of 230 V. These specifications may vary at different voltages and in country-specific models.

# Noise/Vibration Information

Noise emission values determined according to **EN 62841-2-4**.

Typically, the A-weighted noise level of the power tool is: Sound pressure level **83** dB(A); sound power level **94** dB(A). Uncertainty K = **3** dB.

### Wear hearing protection!

# Working without the Auxiliary Handle

Total vibration values  $a_h$  (triax vector sum) and uncertainty K determined according to **EN 62841-2-4** (Sanding), **EN 62841-2-11** (Cutting):

Sanding:  $a_h = 6 \text{ m/s}^2$ , K = **1.5** m/s<sup>2</sup>, Cutting with plunge cut saw blade:  $a_h = 10 \text{ m/s}^2$ , K = **2** m/s<sup>2</sup>, Cutting with segmential saw blade:  $a_h = 10 \text{ m/s}^2$ , K = **3** m/s<sup>2</sup>

Scraping:  $a_h = 10 \text{ m/s}^2$ , K = 1.5 m/s<sup>2</sup>.

### Working with the auxiliary handle

Total vibration values  $a_h$  (triax vector sum) and uncertainty K determined according to **EN 62841-2-4** (Sanding), **EN 62841-2-11** (Cutting):

Sanding:  $a_h = 5 \text{ m/s}^2$ , K = **1.5** m/s<sup>2</sup>,

Cutting with plunge cut saw blade:  $a_h = 13 \text{ m/s}^2$ ,  $K = 3 \text{ m/s}^2$ , Cutting with segmential saw blade:  $a_h = 12 \text{ m/s}^2$ ,  $K = 3 \text{ m/s}^2$ , Scraping:  $a_h = 12 \text{ m/s}^2$ ,  $K = 1.5 \text{ m/s}^2$ .

The vibration level and noise emission value given in these instructions have been measured in accordance with a standardised measuring procedure and may be used to compare power tools. They may also be used for a preliminary estimation of vibration and noise emissions.

The stated vibration level and noise emission value represent the main applications of the power tool. However, if the power tool is used for other applications, with different application tools or is poorly maintained, the vibration level and noise emission value may differ. This may significantly increase the vibration and noise emissions over the total working period.

To estimate vibration and noise emissions accurately, the times when the tool is switched off or when it is running but not actually being used should also be taken into account. This may significantly reduce vibration and noise emissions over the total working period.

Implement additional safety measures to protect the operator from the effects of vibration, such as servicing the power tool and application tools, keeping their hands warm, and organising workflows correctly.

# Assembly

 Pull the plug out of the socket before carrying out any work on the power tool.

# Changing the tool

► Wear protective gloves when changing tools. There is a risk of injury when touching the application tools.

# **Selecting an Application Tool**

Please observe the application tools intended for your power tool.



| 18   English     |   |              |                  |                        |
|------------------|---|--------------|------------------|------------------------|
| Application tool | _ | PMF 350 CES  | Application tool | PMF 350 CES            |
| STARLOCK PLUS    |   | $\checkmark$ | STARLOCK MAX     | $\rightarrow$ $\times$ |

The following table shows examples of application tools. You can find additional application tools in Bosch's extensive range of accessories.

| Application tool |   | Material  | Application  |
|------------------|---|---|--|
|                  | Bi-metal segment<br>saw blade                             | Wood-based materials,<br>plastic, non-ferrous<br>metals   | Separating cuts and plunge saw cuts;<br>including sawing close to edges, in corners and in difficult-<br>to-reach areas;<br>example: Shortening skirting boards that are already in-<br>stalled or door frames, plunge cuts when adapting floor<br>panels    |
|                  | Sanding plate for<br>Delta series 93 mm<br>sanding sheets | Depends on the sanding sheet  | Sanding surfaces at edges, in corners or in difficult-to-<br>reach areas;<br>depending on the sanding sheet, e.g. for sanding wood,<br>paint, varnish, stone;  |
|                  |   |   | fleeces for cleaning and for texturing wood, removing rust<br>from metal and for keying varnish, polishing felt for pre-<br>polishing  |
|                  | Profile sander  | Wood, pipes/profiles,<br>paint, varnish, filler, metal  | Convenient and efficient sanding of profiles up to a dia-<br>meter of 55 mm;<br>red sanding sheets for sanding wood, pipes/profiles, var-<br>nish, filler and metal  |
|                  |   | Softwood, soft plastics,<br>plasterboard, thin-walled<br>aluminium profiles and<br>non-ferrous metal pro-<br>files, thin sheet metal,<br>non-hardened nails and | Small separating cuts and plunge cuts;<br>example: Cutting a recess for sockets, cutting a copper<br>pipe so that it is flush with a surface, making plunge cuts in<br>plasterboard<br>Delicate adaptation work in wood;                                     |
|                  | HCS plunge cut<br>saw blade for wood                      | screws<br>Wood-based materials,<br>soft plastics  | example: Sawing recesses for locks and fittings<br>Separating cuts and plunge saw cuts;<br>including sawing close to edges, in corners and in difficult-<br>to-reach areas;<br>example: Thin plunge cut in solid wood for installing a<br>ventilation grille |
|                  | Bi-metal plunge cut<br>saw blade, hard-<br>wood           | Hardwood, laminated boards  | Plunge cuts in laminated boards or hardwood;<br>example: Installation of skylights   |
|                  | TC plunge cut saw<br>blade, metal                         | materials, fibreglass, plas-  | Plunge cuts in extremely abrasive materials or metal;<br>example: Cutting kitchen front covers, easy cutting<br>through hardened screws, nails and stainless steel   |
|                  |   | Softwood, hardwood,<br>veneered boards, plastic-<br>coated boards, non-<br>hardened nails and<br>screws   | Plunge cuts in laminated boards or hardwood;<br>example: Shortening door frames, recesses for a shelf  |
|                  | TC-Riff segment<br>saw blade                              | Cement joints, soft wall<br>tiles, fibreglass-reinforced<br>plastics, porous concrete   | Making cuts near edges, in corners or in difficult-to-reach<br>areas;<br>example: Removing joints between wall tiles for improve-<br>ment work, cutting recesses in tiles, plasterboard or<br>plastics   |

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| Application tool |                                     | Material  | Application  |
|------------------|-------------------------------------|---|--|
|                  | Diamond-Riff seg-<br>ment saw blade | Cement joints, soft wall<br>tiles, epoxy resin, fibre-<br>glass-reinforced plastics   | Precise routing and cutting of tile/joint material, epoxy<br>resin and fibreglass-reinforced plastics;<br>example: Producing small cut-outs in soft wall tiles and<br>routing recesses in fibreglass-reinforced plastic  |
|                  | TC-Riff Delta plate                 | Mortar, concrete residue,<br>wood, abrasive materials   | Rasping and sanding on a hard surface;<br>example: Removing mortar or tile adhesive (e.g. when re-<br>placing damaged tiles), removing carpet adhesive residue   |
|                  | TC-Riff grout and mortar remover    | Mortar, joints, epoxy<br>resin, fibreglass-rein-<br>forced plastics, abrasive<br>materials  | Routing and cutting of joint material and tile material, as<br>well as rasping and sanding on a hard surface;<br>example: Removing tile adhesive and joint mortar  |
|                  | HCS multi blade                     | Roofing felt, carpets, arti-<br>ficial turf, cardboard, PVC<br>flooring   | Fast and precise cutting of soft material and flexible abras-<br>ive materials;<br>example: Cutting carpets, cardboard, PVC flooring, roof-<br>ing felt, etc.  |
|                  | Scraper, fixed                      | Carpets, mortar, con-<br>crete, tile adhesive   | Scraping on a hard surface;<br>example: Removing mortar, tile adhesive, concrete<br>residue and carpet adhesive residue  |
|                  | Scraper, flexible                   | Carpet adhesive, paint residue, silicone  | Flexible scraping on a soft surface;<br>example: Removing silicone joints, carpet adhesive<br>residue and paint residue  |
|                  | Bi-metal segment<br>serrated blade  | Insulation material, insula-<br>tion boards, floor panels,<br>impact sound insulation<br>boards, cardboard, car-<br>pets, rubber, leather | Precise cutting of soft materials;<br>example: Cutting insulation boards to size, cutting pro-<br>truding insulation material to length so that it is flush with<br>the surface  |
|                  | TC-Riff sanding fin-<br>ger         | Wood, paint   | Sanding of wood or paint in hard-to-reach areas without<br>sanding paper;<br>example: Sanding off paint between window shutter slats,<br>sanding wooden flooring in corners  |
|                  | TC-Riff plunge cut<br>saw blade     | Fibreglass, mortar, wood  | Plunge cuts in extremely abrasive materials;<br>example: Routing of thin mosaic tiles  |
|                  | HCS universal joint cutter          | Expansion joints, window<br>putty, insulation materials<br>(rock wool)  | Cutting soft materials;<br>example: Cutting silicone expansion joints or window<br>putty   |
|                  |                                     | Softwood, hardwood,<br>veneered boards, plastic-<br>coated boards, non-<br>hardened nails and<br>screws                                   | Fast, deep plunge cuts in wood and metal;<br>example: Fast cutting of wood containing nails, deep<br>plunge cuts in laminated boards and precise shortening of<br>door frames  |
|                  |                                     | Wood, abrasive wood-<br>based materials, plastics,<br>hardened nails and<br>screws, non-ferrous metal<br>pipes                            | Fast, deep plunge cuts in wood, abrasive wood-based ma-<br>terials and plastics;<br>example: Fast cutting of non-ferrous metal pipes and pro-<br>files with small dimensions, easy cutting of non-hardened<br>nails, screws and steel profiles with small dimensions |
|                  | TC plunge cut saw<br>blade, metal   | Stainless steel, screws<br>and nails, epoxy resin,<br>fibreglass-reinforced   | Fast, deep plunge cuts in severely abrasive materials or<br>metal;<br>example: Fast cutting of kitchen front covers, easy cutting<br>through hardened screws, nails and stainless steel.   |

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Bosch Power Tools

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# 20 | English

| Application tool |                                      | Material   | Application   |
|------------------|--------------------------------------|--|---|
|                  |                                      | plastics, fibreglass, plas-<br>terboard, porous concrete |   |
|                  | HCS plunge cut<br>saw blade for wood | Softwood, dowels, pins,<br>furniture elements            | Fast, deep separating cuts and plunge cuts;<br>including sawing close to edges in corners and in difficult-<br>to-reach areas;<br>example: Deep plunge cut in softwood for installing a vent-<br>ilation grille |

# Fitting/changing the application tool (AutoClic) (see figures A-B)

Remove the application tool if one has already been fitted. To do so, open the AutoClic lever **(1)** all the way. The application tool/accessory will be ejected.

Place the required application tool (e.g. plunge cut saw blade **(9)**) on a level surface so that the depressed centre is face down (see figure on the graphics page; you should be able to read the text on the application tool from above). Turn the application tool to a position which is convenient for the job at hand. Press the power tool onto the application tool at the required angle until it audibly engages.

Check that the application tool is seated securely. Application tools that are attached incorrectly or are not securely fixed in place may come loose during operation, thereby putting you at risk.

# Fitting and Adjusting the Depth Stop

The depth stop (12) can be used when working with segment saw blades.

Remove the application tool if one has already been fitted. Slide the depth stop **(12)** over the tool holder **(8)** and onto the collar of the power tool as far as it will go, with the labelled side facing upwards.

The depth stop is intended for the following cutting depths:

 With segment saw blades ACZ 85... with a diameter of 85 mm: Cutting depths 8 mm, 10 mm, 12 mm and 14 mm (information on the depth stop in a larger font size and without brackets).

 With segment saw blades ACZ 100 .. with a diameter of 100 mm: Cutting depths 14 mm, 16 mm, 18 mm and 20 mm (information on the depth stop in a smaller font size and in brackets).

Insert the appropriate segment saw blade for the desired cutting depth. Slide the depth stop (12) from the tool holder (8) in the direction of the application tool until you can rotate it freely. Rotate the depth stop (12) so that the desired cutting depth is above the section of the saw blade that will be used to saw. Slide the depth stop (12) onto the collar of the power tool once again as far as it will go.

Remove the depth stop (12) for all other cutting depths and for working with other application tools. To do this, remove the application tool and pull the depth stop away from the collar.

# Fitting the Auxiliary Handle (accessory)

The low-vibration auxiliary handle enables the tool to be used safely and more comfortably.

Screw the auxiliary handle into the thread (5) on the left or right of the machine head depending on how you are working.

 Do not continue to use the power tool if the auxiliary handle is damaged. Do not make any alterations to the auxiliary handle.

# **Choosing the Sanding Sheet**

Different sanding sheets are available, depending on the material you are working with and the required surface removal rate:

| Sanding sheet   | Material  | Application            | Grit                     |          |
|---|---|------------------------|--------------------------|----------|
| Red quality<br>Red quality<br>based materials (e.g.<br>hardwood, softwood,<br>chipboard, construction<br>boards)<br>Metal materials | For pre-sanding, e.g. of rough and uneven beams and boards                      | Coarse                 | 40<br>60                 |          |
|   | For surface sanding and levelling of slight irregularities                      | Medium                 | 80<br>100<br>120         |          |
|   | For finish-sanding and fine sanding of wood                                     | Fine                   | 180<br>240<br>320<br>400 |          |
|   | – Paint<br>– Varnish  | For sanding down paint | Coarse                   | 40<br>60 |
| White quality - Filler<br>- Bodyfiller  | For sanding undercoats (e.g. removing brushstrokes, paint drips and paint runs) | Medium                 | 80<br>100<br>120         |          |

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|-----|------|----|
|-----|------|----|

| Sanding sheet | Material | Application                                    | Grit |                   |
|---------------|----------|--|------|-------------------|
|               |          | For final sanding of primers prior to painting | Fine | 180<br>240<br>320 |

# Attaching/changing the sanding sheet on the sanding plate

The sanding plate **(10)** is fitted with a hook-and-loop fastening, allowing sanding sheets with a hook-and-loop backing to be secured quickly and easily.

Tap the hook-and-loop fastening of the sanding plate **(10)** before fitting the sanding sheet **(11)** to facilitate maximum adhesion.

Position the sanding sheet **(11)** so that it is flush with one side of the sanding plate **(10)**, then place the sanding sheet on the sanding plate and press it on firmly.

To ensure optimum dust extraction, make sure that the punched holes in the sanding sheet are aligned with the drilled holes in the sanding plate.

To remove the sanding sheet **(11)**, take hold of it by an edge and pull it away from the sanding plate **(10)**.

You can use all sanding sheets, polishing and cleaning fleeces from the Delta 93 mm series in the **Bosch** range of accessories.

Sanding accessories such as fleece/polishing felt are attached to the sanding plate in the same way.

# **Dust/Chip Extraction**

The dust from materials such as lead paint, some types of wood, minerals and metal can be harmful to human health. Touching or breathing in this dust can trigger allergic reactions and/or cause respiratory illnesses in the user or in people in the near vicinity.

Certain dusts, such as oak or beech dust, are classified as carcinogenic, especially in conjunction with wood treatment additives (chromate, wood preservative). Materials containing asbestos may only be machined by specialists.

- Use a dust extraction system that is suitable for the material wherever possible.
- Provide good ventilation at the workplace.

- It is advisable to wear a P2 filter class breathing mask. The regulations on the material being machined that apply in the country of use must be observed.

• Avoid dust accumulation at the workplace. Dust can easily ignite.

# Connecting the dust extraction system (see figure C)

The dust extraction system **(18)** is only designed for use with the sanding plate **(10)**; it serves no purpose when used together with other application tools.

Always connect a dust extraction system for sanding. Remove the application tool and the depth stop (12) for fitting the dust extraction system (18) (accessory).

Slide the dust extraction system (18) as far as it will go over the tool holder (8) onto the collar of the power tool. Turn the dust extraction system to the required position (not directly under the power tool). Push the clamping lever **(19)** shut to fix the dust extraction system in position.

Push the dust extraction adapter **(16)** (accessory) onto an extraction hose **(15)** (accessory) until you hear it click into place. Connect the dust extraction adapter **(16)** to the extraction outlet **(17)** and the extraction hose **(15)** to a dust extractor (accessory).

You will find an overview of how to connect various dust ex tractors at the end of these operating instructions.

The dust extractor must be suitable for the material being worked.

When extracting dry dust that is especially detrimental to health or carcinogenic, use a special dust extractor.

# Operation

# **Starting Operation**

- Pay attention to the mains voltage. The voltage of the power source must match the voltage specified on the rating plate of the power tool.
- Products that are only sold in AUS and NZ: Use a residual current device (RCD) with a nominal residual current of 30 mA or less.

# Switching On/Off

Make sure that you are able to press the On/Off switch without releasing the handle.

To **switch on** the power tool, slide the on/off switch **(2)** forward so that **"I"** appears on the switch.

The electronic soft start limits the torque when the power tool is switched on and increases the service life of the motor.

The Constant Electronic keeps the orbital stroke rate at no load and under load virtually consistent, guaranteeing uniform performance.

To **switch off** the power tool, slide the on/off switch (2) backwards so that "O" appears on the switch.

The  $180^{\circ}$  light band **(7)** improves visibility in the immediate work area. It is automatically switched on and off with the power tool.

# Do not look directly into the worklight; it can blind you.

# Preselecting the orbital stroke rate

You can even preselect the required orbital stroke rate during operation using the orbital stroke rate preselection thumbwheel **(4)**.

The required orbital stroke rate is dependent on the material and the work conditions and can be determined using practical tests.

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Orbital stroke rate level "6" is recommended for sawing, cutting and sanding harder materials, such as wood or metal; orbital stroke rate level "4" is recommended for softer materials, such as plastic.

# **Working Advice**

- Pull the plug out of the socket before carrying out any work on the power tool.
- Always wait until the power tool has come to a complete stop before placing it down.

**Note:** Do not keep the ventilation slots **(3)** on the power tool closed when working as this will reduce the service life of the power tool.

# **Operating principle**

The oscillating drive causes the application tool to oscillate back and forth by 2.8° up to 20000 times per minute. This enables precise work in the tightest of spaces.



Use a consistent, low contact pressure when performing work; otherwise, the performance will be impaired and the application tool may jam.



While working, move the power tool back and forth to prevent the application tool overheating and jamming.

## Sawing

- Use only undamaged saw blades that are in perfect condition. Bent or dull saw blades can break, negatively influence the cut, or lead to kickback.
- When sawing lightweight materials, take into account the statutory provisions and recommendations of the material manufacturers.
- Plunge cuts may only be applied to soft materials, such as wood, gypsum board, etc.

Before using HCS saw blades to saw into wood, chipboard, building materials, etc., check these saw blades for foreign objects, such as nails, screws, etc. Remove the foreign objects as required or use bi-metal saw blades.

# Cutting

**Note:** When cutting wall tiles, please bear in mind that the application tools are subject to high wear if used for extended periods.

# Sanding

The material removal rate and sanding result are primarily determined by the choice of sanding sheet, the preselected orbital stroke rate level and the contact pressure.

Only immaculate sanding sheets achieve good sanding performance and make the power tool last longer.

Be sure to apply consistent contact pressure in order to increase the lifetime of the sanding sheets.

Excessively increasing the contact pressure will not lead to increased sanding performance, rather it will cause more severe wear of the power tool and of the sanding sheet.

To sand corners, edges and hard-to-reach areas accurately, you can also work with the tips alone or with an edge of the sanding plate.

The sanding sheet may heat up significantly when used to sand specific points rather than entire surfaces. Reduce the orbital stroke rate and contact pressure and allow the sanding sheet to cool down at regular intervals.

Do not use a sanding sheet for other materials after it has been used to work on metal.

Use only original **Bosch**-sanding accessories.

Always connect a dust extraction system for sanding.

# Scraping

Select a high orbital stroke rate level for scraping. Work on a soft surface (e.g. wood) at a flat angle and with low contact pressure. Failure to do so may cause the scraper to cut into the surface underneath.

# **Maintenance and Service**

# **Maintenance and Cleaning**

- Pull the plug out of the socket before carrying out any work on the power tool.
- ► To ensure safe and efficient operation, always keep the power tool and the ventilation slots clean.

In order to avoid safety hazards, if the power supply cord needs to be replaced, this must be done by **Bosch** or by an after-sales service centre that is authorised to repair **Bosch** power tools.

Regularly clean Riff application tools (accessories) using a wire brush.

# After-Sales Service and Application Service

Our after-sales service responds to your questions concerning maintenance and repair of your product as well as spare parts. You can find explosion drawings and information on spare parts at: **www.bosch-pt.com** 

The Bosch product use advice team will be happy to help you with any questions about our products and their accessories.

In all correspondence and spare parts orders, please always include the 10-digit article number given on the nameplate of the product.

# **Great Britain**

Robert Bosch Ltd. (B.S.C.) P.O. Box 98 Broadwater Park North Orbital Road Denham Uxbridge UB 9 5HJ At www.bosch-pt.co.uk.you.cap.orde

At www.bosch-pt.co.uk you can order spare parts or arrange the collection of a product in need of servicing or repair. Tel. Service: (0344) 7360109 E-Mail: boschservicecentre@bosch.com

### You can find further service addresses at:

www.bosch-pt.com/serviceaddresses

# Disposal

The power tool, accessories and packaging should be recycled in an environmentally friendly manner.



Do not dispose of power tools along with household waste.

# **Only for EU countries:**

According to the European Directive 2012/19/EU on Waste Electrical and Electronic Equipment and its implementation into national law, power tools that are no longer usable must be collected separately and disposed of in an environment-ally friendly manner.

If disposed incorrectly, waste electrical and electronic equipment may have harmful effects on the environment and human health, due to the potential presence of hazardous substances.

# **Only for United Kingdom:**

According to The Waste Electrical and Electronic Equipment Regulations 2013 (SI 2013/3113) (as amended), products that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

# Français

# Consignes de sécurité

Avertissements de sécurité généraux pour l'outil électrique

# AVERTISSE-MENT

# Lire tous les avertissements de sécurité, les instructions, les illustrations et les spécifications fournis

avec cet outil électrique. Ne pas suivre les instructions énumérées ci-dessous peut provoquer un choc électrique, un incendie et/ou une blessure sérieuse.

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

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

# Sécurité de la zone de travail

 Conserver la zone de travail propre et bien éclairée. Les zones en désordre ou sombres sont propices aux accidents.

- Ne pas faire fonctionner les outils électriques en atmosphère explosive, par exemple en présence de liquides inflammables, de gaz ou de poussières. Les outils électriques produisent des étincelles qui peuvent enflammer les poussières ou les fumées.
- Maintenir les enfants et les personnes présentes à l'écart pendant l'utilisation de l'outil électrique. Les distractions peuvent vous faire perdre le contrôle de l'outil.

# Sécurité électrique

- Il faut que les fiches de l'outil électrique soient adaptées au socle. Ne jamais modifier la fiche de quelque façon que ce soit. Ne pas utiliser d'adaptateurs avec des outils électriques à branchement de terre. Des fiches non modifiées et des socles adaptés réduisent le risque de choc électrique.
- Éviter tout contact du corps avec des surfaces reliées à la terre telles que les tuyaux, les radiateurs, les cuisinières et les réfrigérateurs. Il existe un risque accru de choc électrique si votre corps est relié à la terre.
- Ne pas exposer les outils électriques à la pluie ou à des conditions humides. La pénétration d'eau à l'intérieur d'un outil électrique augmente le risque de choc électrique.
- Ne pas maltraiter le cordon. Ne jamais utiliser le cordon pour porter, tirer ou débrancher l'outil électrique. Maintenir le cordon à l'écart de la chaleur, du lubrifiant, des arêtes vives ou des parties en mouvement. Des cordons endommagés ou emmêlés augmentent le risque de choc électrique.
- Lorsqu'on utilise un outil électrique à l'extérieur, utiliser un prolongateur adapté à l'utilisation extérieure. L'utilisation d'un cordon adapté à l'utilisation extérieure réduit le risque de choc électrique.
- Si l'usage d'un outil électrique dans un emplacement humide est inévitable, utiliser une alimentation protégée par un dispositif à courant différentiel résiduel (RCD). L'usage d'un RCD réduit le risque de choc électrique.

### Sécurité des personnes

- Rester vigilant, regarder ce que vous êtes en train de faire et faire preuve de bon sens dans votre utilisation de l'outil électrique. Ne pas utiliser un outil électrique lorsque vous êtes fatigué ou sous l'emprise de drogues, de l'alcool ou de médicaments. Un moment d'inattention en cours d'utilisation d'un outil électrique peut entraîner des blessures graves.
- Utiliser un équipement de protection individuelle. Toujours porter une protection pour les yeux. Les équipements de protection individuelle tels que les masques contre les poussières, les chaussures de sécurité antidérapantes, les casques ou les protections auditives utilisés pour les conditions appropriées réduisent les blessures.
- Éviter tout démarrage intempestif. S'assurer que l'interrupteur est en position arrêt avant de brancher



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