

 **Safety instructions**  
**Angle grinder**  
Please read and keep in a safe place.

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**GB****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 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 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**

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. Service

- a) **Have your electric tool repaired only by trained personnel using only genuine spare parts.** This will ensure that your electric tool remains safe to use.

#### 6. Recommendation

We recommend that the tool always be supplied via a residual current device with a rated residual current of 30 mA or less.

#### Safety Information for all Applications

- a) **This electric tool is designed for use as a grinder/sander and cutting-off machine. Obey all the safety instructions, general instructions, illustrations and data supplied with the tool.** *If you fail to obey the following instructions, you may suffer an electric shock, fire and/or serious injuries.*
- b) **This electric tool is not designed for sanding, working with wire brushes or polishing.** Use of the electric tool in ways it was not intended could lead to dangerous situations and injuries.
- c) **Do not use any accessories which have not been designed and recommended by the manufacturer specifically for this electric tool.** *Just because you can attach an accessory to your electric tool, this does not guarantee that you can use it safely.*
- d) **The maximum speed of the plug-in tool must be at least as high as the maximum speed specified on the electric tool.** *Accessories which rotate faster than the maximum speed may break and be catapulted out of the tool.*
- e) **The external diameter and thickness of the plug-in tool must comply with the dimension specifications of your electric tool.** *Plug-in tools of the wrong size cannot be adequately screened or checked.*
- f) **Grinding wheels, flanges, grinding disks or other accessories must fit precisely on the grinding spindle of your electric tool.** *Plug-in tools which do not fit exactly on to the grinding spindle of the electric tool will rotate irregularly, vibrate a great deal and may result in you losing control.*
- g) **Do not use damaged plug-in tools. Before use, check plug-in tools such as grinding/sanding wheels for splintering and cracks, grinding/sanding disks for cracks, wear or heavy wear, and wire brushes for loose or broken wires. If the electric tool or the plug-in tool is dropped, check whether it is damaged or use an undamaged plug-in tool. When you have checked and fitted the plug-in tool, make sure that you and other persons in the vicinity are not on a level with the rotating plug-in tool and allow the electric tool to run for one minute at maximum speed.** *Damaged plug-in tools will generally break during this test time.*
- h) **Wear personal protection equipment. Use face guards, eye protection or goggles depending on the application. If reasonable, wear a dust mask, ear protection, safety gloves or special aprons to keep small grinding and material particles away from you.** *Protect your eyes from flying foreign bodies which may be created by a range of applications. Dust masks or respiration masks must filter the dust generated by the application. If you are exposed to loud noise for a lengthy period of time, you may suffer hearing loss.*
- i) **Ensure that others keep a safe distance away from where you are working. Anybody who enters the area must wear personal protection equipment.** *Pieces of the workpiece or broken plug-in tools may be catapulted into the air and cause injuries even outside the immediate vicinity of where you are working.*
- j) **Hold the tool only by the insulated handles when carrying out work during which the plug-in tool could strike concealed power cables or its own mains lead.** *Contact with a live cable will also make the metal parts of the tool live and will cause an electric shock.*
- k) **Keep the power cable away from rotating plug-in tools.** *If you lose control of the machine, the mains lead may be cut or caught and your hand or arm might be pulled into the rotating plug-in tool.*

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- l) **Never put the electric tool down until the plug-in tool has reached a complete standstill.** *The rotating plug-in tool may come into contact with the surface on which you place it which could result in you losing control of the electric tool.*
- m) **Never leave the electric tool running whilst you are carrying it.** *Your clothing can come into contact with the rotating plug-in tool and the plug-in tool could thus bore into your body.*
- n) **Clean the ventilation slots on your electric tool at regular intervals.** *The motor fan draws dust into the housing and a heavy accumulation of metal dust can pose electric risks.*
- o) **Never use the electric tool in the vicinity of inflammable materials.** *Sparks may ignite these materials.*
- p) **Do not use any plug-in tools which require liquid coolant.** *Use of water or other liquid coolants could result in electric shocks.*

#### Other safety information for all applications

Recoil is the sudden reaction as a result of a jammed or blocked rotating plug-in-tool, such as a grinding wheel, grinding disks, wire brushes etc. Jamming or blocking leads to an abrupt stop of the rotating plug-in-tool. This causes acceleration of any uncontrolled electric tools rotating in the opposite direction to the plug-in-tool at the point of blockage.

If for example a grinding wheel gets jammed or blocked by the workpiece, the edge of the grinding wheel could get stuck and the grinding wheel could break free or recoil, if it should come into contact with the workpiece. The grinding wheel moves toward or away from the operator, depending upon the direction of rotation of the disk at the point of blockage. Grinding wheels could also be broken if this occurs.

Recoil is the result of incorrect or wrong use of the electric tool. It can be prevented by suitable precautions, as described below.

- a) **Hold the electric tool securely and move your body and your arms into a position in which you can absorb the force created by the recoil.** *Always use the additional handle (if there is one) to give you the maximum possible control over recoil forces or reaction moments whilst the tool is operating at full speed. The operator can manage the recoil and reaction forces by taking suitable precautions.*
- b) **Never move your hand into the vicinity of rotating plug-in tools.** *The plug-in tool may catch your hand if it suffers recoil.*
- c) **Keep your body out the area into which the**

**electric tool will be moved if it suffers recoil.**

*Recoil will throw the electric tool into the direction opposite to the grinding/sanding wheel at the point at which it is blocked.*

- d) **Work with particular care around corners, sharp edges, etc. Ensure that the plug-in tool does not bounce off or jam in the workpiece.** *At corners, sharp edges or if it bounces, the rotating plug-in tool will tend to jam. This will result in loss of control or recoil.*
- e) **Do not use chain saw blades or toothed saw blades.** *These plug-in tools often cause recoil or loss of control of the electric tool.*

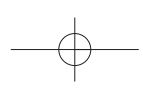
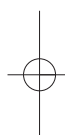
#### Special safety information for grinding/sanding and cutting-off

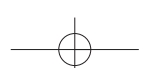
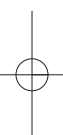
- a) **Use only grinding/sanding wheels that have been approved for your electric tool and the safety hood designed for these grinding/sanding wheels.** *Grinding/sanding wheels which are not designed for the electric tool cannot be shielded adequately and are unsafe.*
- b) **The safety hood must be securely fastened to the electric tool and adjusted so that it offers maximum safety, in other words it prevents the smallest possible part of the grinding/sanding wheel from striking the operator.** *The safety hood is designed to protect the operator from broken pieces and accidental contact with the grinding/sanding wheel.*
- c) **Grinding/sanding wheels may only be used for the applications for which they are recommended. For example: Never grind/sand a side surface area with a cutting-off wheel.** *Cutting-off wheels are designed for removing material with the edge of the wheel. Applying lateral force to these cutting-off wheels can cause them to break.*
- d) **Always use undamaged clamping flanges of the correct size and shape for the grinding/sanding wheel you have selected.** *Suitable flanges support the grinding/sanding wheel and thus reduce the risk of the grinding/sanding wheel breaking. Flanges for cutting-off wheels may differ from the flanges for other grinding/sanding wheels.*
- e) **Do not use worn grinding/sanding wheels from larger electric tools.** *Grinding/sanding wheels for larger electric tools are not designed for the higher speeds of smaller electric tools and may break.*

**Other special safety information for cutting-off wheels**

- a) **Avoid blocking the cutting-off wheel or applying excessive contact pressure. Do not make any excessively deep cuts.** *Overloading the cutting-off wheel will increase the stress on it and its susceptibility to jam or block and therefore the possibility of recoil or of the grinding wheel breaking.*
- b) **Avoid the area in front of and behind the rotating cutting-off wheel.** *If you move the cutting-off wheel in the workpiece away from yourself, in the event of recoil the electric tool and the rotating wheel may be catapulted directly towards you.*
- c) **If the cutting-off wheel jams or you interrupt your work, switch off the tool and hold it still until the wheel has reached a complete standstill. Never attempt to pull the cutting-off wheel out of the cut whilst it is still rotating, otherwise it may suffer recoil.** *Find and rectify the cause of the jam.*
- d) **Do not switch the electric tool on again whilst it is inside the workpiece. Allow the cutting-off disk to reach its full speed before you continue the cut with care.** *Otherwise the wheel may catch, jump out of the workpiece or cause recoil.*
- e) **Support panels or large workpieces to reduce the risk of recoil by a jammed cutting-off wheel.** *Large workpieces may sag under their own weight. The workpiece must be supported on both sides of the wheel both near the cut and also at the edge.*
- f) **Be particularly careful with "pocket cuts" in existing walls or in areas which you cannot see clearly.** *As the cutting-off disk enters the cut it may suffer recoil if it cuts into gas or water pipes, electric cables or other objects.*

**Do not lose these safety instructions**







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