

Vitrex®

Sign of a professional job

Angle Grinder

Safety and Operating Manual



Environmental Protection

Waste electrical products should not be disposed of with household waste.

Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.



Safety First

Always wear Vitrex Protective Equipment when using hand or power tools.



ANGLE GRINDER

Owner's Safety and Operating Manual



You must abide by certain safety precautions when using the grinder. In order to prevent injuries and damages from occurring, you must always read through this operating manual carefully.

This manual must be kept in a safe place so that the information that it contains is always available. This operating manual must accompany the equipment if it is transferred to somebody else.

We do not accept any liability for accidents or damage arising from ignoring this manual and the safety instructions.

SPECIFICATIONS

Model No.	AGR900	Speed	12000RPM
Power	900W	Hand/Arm Vibration	1.5m/s ²
Voltage	230V-240V 50Hz	Sound Rating	Lpa:86dB(A) Lwa:99.6dB(A)
Protection Class	 Double Insulated	Disc Diameter	115mm

SAFETY INSTRUCTIONS

IMPORTANT! Read all the warnings and instructions. Failure to comply with the warnings and instructions may cause electric shock, fire and/or serious injuries. Strict observance of these warnings with the use of personal protective equipment minimizes risks of accidents but does not completely rule them out. Use the appliance as described in these instructions. Do not use it for which it was not intended. These instructions refer to an appliance that is manufactured in several models and versions. Carefully read and observe the safety standards and operational instructions provided hereafter. Store all warnings and instructions for future reference.

The term 'Power Tool' in the warnings refers to the machine tools operated by means of (wired) connection to the electric power supply or battery (wireless).



Important! The Angle Grinder is suitable, when used with the appropriate discs, for the grinding, sanding, wire brushing, polishing and abrasive cutting of materials such as metal, wood, plastic and dry bricks. It is prohibited to use dangerous materials in environments with risk of fire/explosion.

SAFETY IN THE WORK AREA

- **Keep the work area clean and well lit.** Overcrowded and/or badly lit areas may cause accidents.
- **Do not operate power tools in explosive atmospheres, e.g. in the presence of flammable liquids, gases or powders.** Power tools create sparks that may ignite powders or fumes.
- **Keep children and unauthorised personnel at a distance when operating a power tool.** Distractions may cause you to lose control of the tool.
- **Keep the nylon packaging bags in a safe place.** Bags can cause suffocation and must be kept out of the reach of children.
- **Use the tool in a well-ventilated area.** Ventilation is necessary for cooling the tool and for eliminating air impurities produced when working.
- **Do not operate power tools outdoors in the presence of rain, fog, storms, high or low temperatures, or in damp or wet environments.** Use in these conditions may cause electrocution.

ELECTRICAL SAFETY

- **The power tool plug must correspond to the socket and power supply. Never modify the plug in any way. Do not use adapters with earthed power tools.** Unmodified plugs and suitable sockets reduce the risk of electric shocks.
- **Do not allow the body of the appliance to come into contact with earthed surfaces such as pipes, radiators, cookers and refrigerators.** If the body is earthed, the risk of electric shock increases.
- **Do not expose power tools to rain and do not use them in wet environments.** Water permeating into power tool increases the risk of electric shocks.
- **Do not let the cable become worn. Never use the cable to transport, pull or disconnect the power tool from the power supply socket. Keep the cable away from heat, oil, sharp edges or moving parts.** Damaged or twisted cables increase the risk of electric shocks.
- **When using a power tool outdoors, use an extension cable suitable for outdoor use.** The use of a suitable cable reduces the risk of electric shock.
- **Use an electric power supply protected by a differential switch (RCD).** The use of a suitable residual current device (RCD) reduces the risk of electric shock. Consult your electrician.
- **Frequently check the power supply cable. Do not crush or tread on the power supply cable.** A damaged cable causes electric shock.
- **In case of doubt regarding electricity, consult an experienced technician.** The unsafe use of electricity is very dangerous for yours and other people's safety.

PERSONAL SAFETY

- **Never allow yourself to be distracted. Control what you are doing and use your common sense when using power tools. Never use the tool when you are tired or under the influence of drugs, alcohol or medicines.** A moment of distraction when using power tools could cause serious personal injuries.
- **Use personal protective equipment. Always wear eye protection.** Protection equipment such as dust repelling masks, anti-slip safety shoes, gloves, safety helmets, or ear protection reduces the possibility of personal injuries.
- **Prevent switching the appliance on accidentally. Make sure that the switch is in the off position before connecting the tool to the electric supply and/or to battery units and before taking or transporting it.** Carrying power tools with your finger on the switch or connecting them to the electric power supply with the switch in the on position can cause accidents.
- **Remove any adjustment wrench before switching on the power tool.** Any key or spanner left attached to a rotating part of the power tool may cause personal injuries.
- **Do not lose your balance. Always keep an appropriate position and balance.** This allows better control of the power tool in unexpected situations.
- **Wear appropriate clothing. Do not wear loose clothing or jewellery. Keep hair, clothing and gloves away from moving parts.** Loose clothing, jewellery or long hair may get entangled in the moving parts.

- **If any devices to be connected to dust extraction and collection systems are provided, make sure that they are connected and used appropriately.** The use of these devices may reduce the risks connected with dust.
- **The user is responsible for other people as far as accidents or damage to people or property are concerned.** Improper use causes accidents and damage.
- **Never use with bare or wet feet/hands.** Use in these conditions may cause electrocution.
- **Processing of harmful materials must be performed in compliance with the laws in force.** Some types of dust and material such as metals, wood, paints, etc. are very harmful to health. Protect yours and other people's health using suitable protections and devices.
- **Do not approach the cooling air ejection slots.** The air generated may contain machining residuals and small parts that are harmful for your respiratory tracts and eyes.
- **Do not cover or insert things in the cooling slots.** Unsuitable ventilation of the power tool may start a fire. Accessing the internal parts may damage the tool and cause electrocution.
- **Do not use the power tool if the guard is open, damaged or missing.** Correctly installed guards protect your health and allow safe use.

USE AND MAINTENANCE OF POWER TOOLS

- **Do not force the power tool. Use a suitable tool for the operation to be carried out.** An appropriate power tool can perform the work with higher efficiency and safety without having to exceed the parameters intended for its use.
- **Do not use the power tool if the on/off switch is not activated properly.** Any power tool that cannot be controlled by its switch is dangerous and must be repaired before use.
- **Disconnect the plug from the power supply and/or from the power tool battery unit before any adjustment, replace the accessories or store the power tools.** These preventive safety measures reduce the risk of accidental start of the power tool.
- **Store unused power tools out of reach of children and do not allow them to be used by any unskilled people or those who are not aware of these instructions.** Power tools are dangerous if used by unskilled people.
- **Carry out the required maintenance on power tools. Check any possible misalignment or locking of the moving parts, any breakage of the parts and any other condition that may affect the operation of power tools. If there is any damage, the power tool must be fixed before use.** Numerous accidents are caused by improper maintenance of power tools.
- **Keep the cutting elements, where fitted, clean and sharpened.** Cutting elements in good conditions and with sharp edges are less likely to lock and can be controlled more easily.
- **Use the power tool, accessories and abrasive parts, etc. according to these instructions, considering the work condition and the operation to be performed.** The use of the power tool for operations other than those for which it is intended may cause dangerous situations.
- **Keep a safe distance from moving parts.** Touching moving parts causes serious injuries.
- **Do not modify the power tool.** Taking off, replacing or adding components not included in the instructions is prohibited and causes the warranty to become null and void.
- **Do not leave the power tool running unattended.** Turn it off before leaving it unattended in order to prevent any accidents.
- **The power tool must never come into contact with water or other liquids.** Use in these conditions may cause electrocution.

SAFETY WARNINGS

Safety warnings apply equally to grinding & abrasive cutting:

- Before installing or removing accessories (discs, etc.), unplug the device. Any maintenance must be performed safely in order to prevent accidents caused by an unexpected start.
- If the electricity isn't available (i.e. because of a malfunction, an interruption by the supplying company because of works, an accidental removal of the plug, etc.) the tool must be switched off ('off-0'). This way an accidental restart of the tool will be prevented.
- For work on buildings or load-bearing structures, closed pipes or containers it is important to check, by means of detectors, that there are not any: electrical or telephone cables, liquids or gases under pressure (that may be inflammable or corrosive) pipes etc. Cutting, even partially, of masonry may weaken the structure of the entire building causing it to collapse. Leaking of liquids or gases may cause explosions, fire and flooding.
- If the tool stops during use, switch it off immediately. Do not force difficult operations for the tool.
- Keep the tool stable with both hands and stand in a safe work position. The strains caused by working lead to stress which must be contrasted with your force.
- Fasten the item you are working on with a vice or another device. An item held by hand can suddenly cause an accident.
- This power tool is intended to function as a grinder & cutting machine. Read all safety warnings, instructions and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire, and/or a serious accident.
- Do not use attachments which are not specifically made or recommended by the tool manufacturer. The mere fact that a part may be attached to the power tool does not guarantee safe operation.
- The rated speed of the part must be at least equal to the maximum speed indicator on the power tool. The parts, if made to run at a speed higher than specified, may break and be thrown into the air.
- The outside/inside diameter and thickness of your part must be adapted to the characteristics of the capacity of your power tool. Parts which are not the correct size cannot be adequately protected or controlled.
- The shape of the grinders, flanges, pillows or support of any other part must properly fit the spindle of the power tool. Parts with shaft holes that do not match the mounting hardware on the power tool will not remain in balance, will vibrate excessively and may cause loss of control.
- Do not use a damaged part. Before each use, examine the parts, such as the abrasive grinders to check for any traces of chips or cracks, the support cushions to check for any cracks, lacerations or excessive wear, and the metal brushes to uncover any loose or broken wires. If the power tool or part has been dropped, examine for signs of damage or install an undamaged part. After checking and installing a part, distance yourself and any others present from the scope of the rotating part and run the power tool at maximum no load speed for one minute. The damaged parts will normally break during this trial.
- Always wear personal protective equipment . Depending on the application, use a face shield, mask or goggles. Depending on the task, wear a dust mask, hearing protectors, gloves and an apron to guard against abrasive fragments while working. Eye protection must be able to protect against flying debris produced by different operations. The dust mask or respirator should be able to filter the particles produced from your work. Prolonged exposure to high noise levels can cause hearing loss.
- Keep people at a safe distance from the work area. Anyone entering the work area must wear personal protective equipment. Fragments of the work piece or broken parts may fly off and cause injury in the immediate vicinity of the work area.

- **Hold the tool only by the insulated gripping surfaces, while performing operations in which the cutting part may be in contact with hidden wiring, or with its own cord.** Contact between the cutting part and a 'live' cable may also cause the exposed metal parts of the power tool to be 'live' and give an electric shock to the operator.
- **Position the cord away from the rotating part.** If you lose control of the tool, the cord can be cut or twisted and your hand or arm may be pulled into the rotating part.
- **Never store the power tool until all of the parts have completely stopped moving.** The rotating part can grip the surface and draw the power tool out of your control.
- **Do not run the power tool while carrying it to the side.** Accidental contact with the moving part may lead to it getting caught in your clothes and can entangle the moving part.
- **Regularly clean the ventilation openings of the power tool.** The motor fan will draw dust inside the casing and an excessive accumulation of powdered metal may cause electrical hazards.
- **Do not operate the power tool near flammable materials.** Sparks could cause these materials to ignite.
- **Do not use parts which require liquid coolants.** The use of water or other liquid coolants may result in electrocution or electric shock.

KICKBACKS

Kickback is a sudden reaction to catches or entanglements of the rotating grinder, brush support cushions or any other part. The jammed or entangled item causes a rapid blockage of the movement of the part, which in turn forces the power tool out of control, opposing the direction of movement of the part at the point of blockage.

For example, if an abrasive grinder is jammed or entangled by the work piece, the rim of the grinder which comes into contact with the piece may cut into the surface of the material, causing the grinder to jump or come off. The grinder can jump towards the operator or in the opposite direction, depending on the direction of the grinder movement when it jams. The abrasive grinders can also break in these conditions.

Kickback is the result of misuse of the power tool or of incorrect procedures or conditions of usage, and can be avoided by taking proper precautions as specified below.

- **Firmly grip the tool and place your body and your arms in such a position so as to resist the force of the kickback. Always use the auxiliary handgrip, if present, to have maximum control over kickback or torque reactions during start-up.** The operator can control torque reactions and kickbacks if the appropriate precautions have been taken.
- **Never put your hands near the rotating part-** kickback from the part can cause injury to your hand.
- **Do not place yourself in the area towards which the power tool will move in case of kickback.** The backlash will push the tool in the opposite direction to that of the grinder at the moment of entanglement.
- **Take particular care when working on corners, sharp edges, etc. Avoid making the part jump or catch.** Corners, sharp edges or jumps have a tendency to trap the rotating part and cause loss of control or kickback.
- **Do not connect the blade of a chainsaw for wood, or the blade of a toothed saw to the power tool.** Such blades cause frequent kickback and loss of control.

GRINDING AND ABRASIVE CUT-OFF OPERATIONS

- Use only types of grinding wheel that are compatible with your electric tool and the specific protection of the grinding wheel of your choice. The grinding wheels which were not conceived for your power tool cannot be adequately protected and are not safe.
- The protection must be firmly fixed to the electric tool and safely positioned so that the operator is exposed to the grinding wheel as little as possible. The protection allows to protect the operator from fragments of broken grinding wheel and from an accidental contact with the wheel.
- The grinding wheels must only be used for the recommended applications. For example: do not grind with the side of the grinding wheel to cut something. Cutting grindstones are destined to peripheral grinding; by pushing on the side of these wheels, they can break.
- Always use flanges which are not damaged and whose shape and size are correct for the grinding wheel of your choice. Adequate flanges for grinding wheels support them reducing the risk of breaking the wheel. Flanges for cutting wheels can be different from flanges for grinding wheels.
- Do not use used grinding wheels of bigger electrical tools. Grinding wheels destined to bigger electrical tools are not adequate because of the higher speed of smaller tools: the grinding wheel can explode.

CUTTING OPERATIONS

- Do not 'block' the cutting wheel or push excessively. Do not try to make the cut excessively deep. By pushing on the wheel, its load increases as well as the chances of twisting or bending the wheel while cutting and the chances of recoil or breaking the wheel.
- Do not stand next to the rotating wheel or behind it. While working, the grinding wheel separates from the body and the possible recoil can push it and the electric tool towards you.
- When the grinding wheel bends or when the cutting operation is interrupted for any reason, remove the power plug of the electric tool and keep it still until the wheel stops. Do not try to remove the cutting wheel from the cut while it is moving or a recoil can happen. You have to identify the reasons why the wheel bent and take appropriate measures so that it doesn't happen again.
- Do not resume the cutting operation of the working item. Let the grinding wheel reach its maximum speed and carefully insert it again in the cut. If the electrical tool is restarted while inside the working item, the grinding wheel can stop, go back up or have a recoil.
- Arrange a stand for the panels or any other working piece with big size in order to minimize the risk that the wheel gets stuck or recoils. Big working pieces tend to bend under their own weight. Stands must be put under the working piece near the cutting line and near their edge on both sides of the wheel.
- Be careful especially when doing a 'groove cut' on existing walls or other areas that are not visible. The jutting out grinding wheel can cut water or gas pipes, electrical wires or objects, events which can cause recoil.

USING A METAL BRUSH ATTACHMENT (NOT INCLUDED)

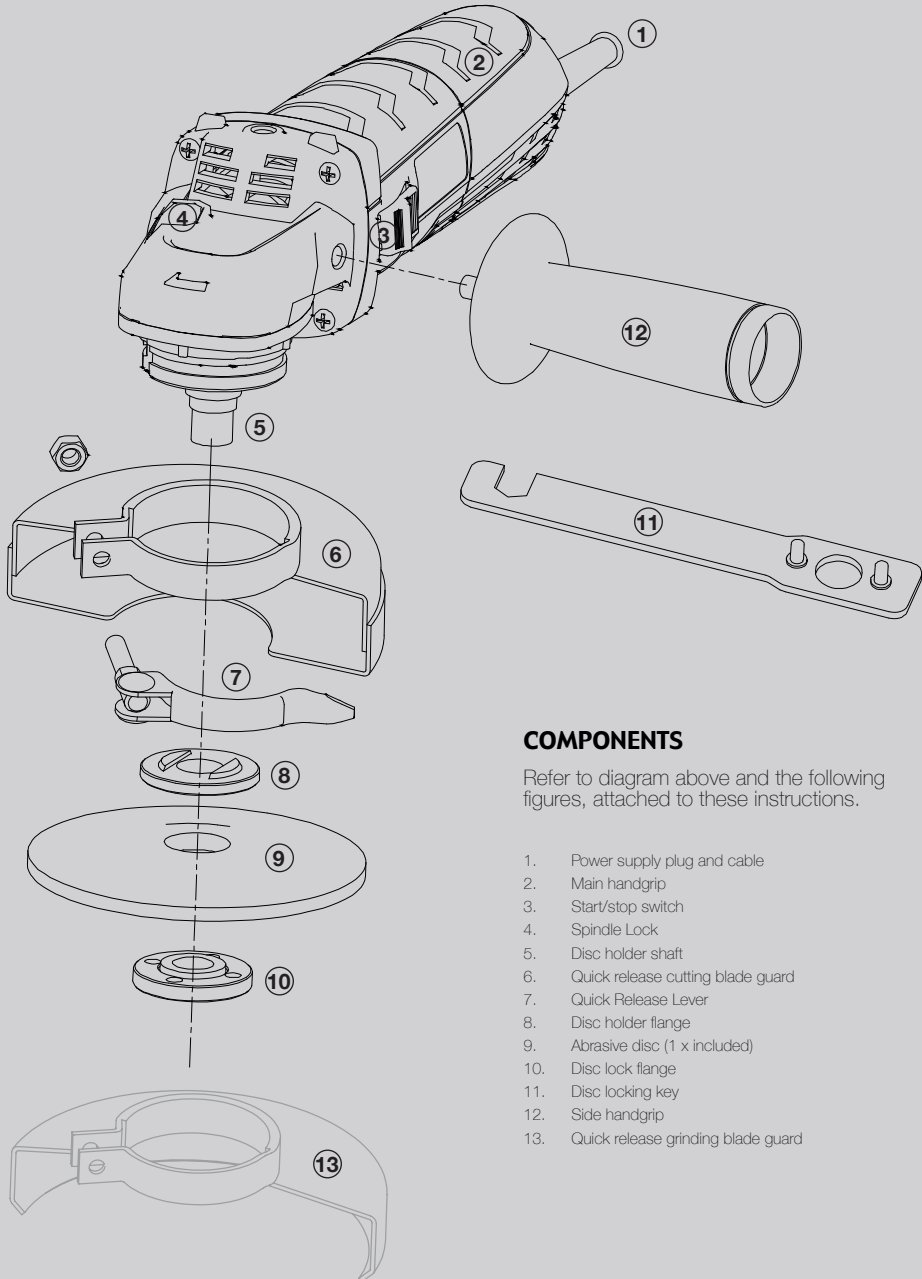
- When using the brush, even during normal operation, metal bristles may be emitted. Do not apply excessive weight on the brush. The wire bristles can easily penetrate light clothing and/or skin. If it is recommended to use protective equipment for wire brushing, do not allow this to interfere with the metal wire disc or the wire brush in any way. The metal wire disc or the brush may expand in diameter due to workload and centrifugal forces.

NOISE AND VIBRATIONS

The level of noise and vibrations shown on the attached sheet are average values for the use of the power tool. The use of different attachments, different materials, different processes such as cutting or wire brushing and the lack of tool maintenance all have significant influence on noise and vibration. Therefore adopt all the preventative measures necessary to eliminate any possible damage due to loud noises and strain from vibrations; wear ear phones, anti-vibration gloves, take breaks while working and ensure the power tool and its accessories are kept efficient at all times.

We thank you for having purchased this power tool that will hereafter also be referred to as 'Angle Grinder'.

These instructions contain information deemed necessary for proper use, knowledge and standard tool maintenance. It does not provide information on the processing techniques on various material.



COMPONENTS

Refer to diagram above and the following figures, attached to these instructions.

1. Power supply plug and cable
2. Main handgrip
3. Start/stop switch
4. Spindle Lock
5. Disc holder shaft
6. Quick release cutting blade guard
7. Quick Release Lever
8. Disc holder flange
9. Abrasive disc (1 x included)
10. Disc lock flange
11. Disc locking key
12. Side handgrip
13. Quick release grinding blade guard

TRANSPORT

Always use the packaging or case provided when transporting the tool; this will protect it from impact, dust and humidity which can compromise normal operation. During transport, remove the abrasive disc, brush, etc. from the machine.

HANDLING

Firmly grasp the hand tool (pos. 2) without using the switch; keep the tool well away from your body and after use place it down gently once the disc has stopped.

STARTING UP

When choosing where to use the power tool, the following should be considered:

- That the area is not damp and is sheltered from the elements.
- That the working area is sufficiently large and free from obstacles.
- That the area is well lit.
- That the tool is used close to the interrupter switch.
- That the power supply system is earthed and conforms to the standards (only if the power tool is class 1, and equipped with a plug with earth cable).
- That the room temperature should be between 10° and 35°C.
- That the environment is not in a flammable/explosive atmosphere.

Take out the machine and components and visually check that they are perfectly intact; then proceed to thoroughly clean them in order to remove any protective oil from metal surfaces.

ASSEMBLING PROTECTION PROVIDED WITH THE ANGLE GRINDER



IMPORTANT! Only use 115mm discs with this Angle Grinder.

Protection already assembled on the Angle Grinder:

Check that the protection has been correctly assembled and fixed.

Disassembled protection provided:

Depending on the protection in use, follow the relevant steps below.

SIDE HANDGRIP ASSEMBLY (pos.12)

The lateral handgrip can be assembled on any side on which there is a threaded hole (pos.12); it is usually secured on the left in order to grab hold with the left hand, but it can be assembled in the position of your preference (e.g. for left-handed people). Insert the handgrip into the threaded hole of the device and secure by screwing tightly.

DISC ASSEMBLY (pos.8)

1. Always unplug the Angle Grinder before changing discs.
2. Check that the rotation direction of the disc corresponds to that of the Angle Grinder.
3. Turn the Angle Grinder upside down.
4. Check that the diameter of the seat of the 2 flanges and the hole of the disc are the same size; to this end, it is better to measure using a gauge (not included) and reading the technical data.
5. Temporarily block the rotation of the motor shaft by pressing the button (pos.4) and unscrew the disc lock flange (pos.10). Do not disassemble the disc hold flange (pos.8).
6. Insert the abrasive disc (pos.9) onto the shaft (pos.5) and place it on the disc hold flange (pos.8). Make sure the disc hold flange rabbet goes into the disc hole.
7. Correctly place the disc lock flange (pos.10). Screw the disc block flange (pos.10) and fix it carefully using the fixture key (pos.11): while doing so, keep the shaft block button pressed (pos.4) The locking key should be inserted with the two pins, in the disc lock flange holes.
8. Rotate by hand and check that the disc is well centred and well secured by the flanges.
9. Keeping the grinder away from the body, carry out a test run without load for 1 minute.

RE-ASSEMBLING THE FLANGES (pos.8-10)

In the event both flanges have been removed, pay attention to the reassembling sequence:

1. Insert the disc hold flange (pos.8) into the threaded shaft; this flange has a contoured sear that must be coupled with the contoured shaft.
2. Screw the disc lock flange (pos.10) into the threaded shaft and tighten with the disc locking key.

STARTING AND STOPPING THE DEVICE

Single action switch:

- To start, press the 'ON-I' switch forward (pos.3).
- To stop, release the 'OFF-O' switch.

Double-action switch:

- To start, press the 'ON-I' switch down and then forward (pos.3)
- To stop, release the 'OFF-O' switch.

Switch with safety device:

- To start, in sequence press the safety device (pos.4) and then press the 'ON-I' (pos.3) switch.
- To stop, release the 'OFF-O' switch.

CONTINUOUS OPERATION

For single and double-action switches, you can set the fixed switch to 'ON-I': when it is switched on, press to block it. To deactivate this function and switch off, simply press 'OFF-O' for a short while and release immediately. In the event the electricity supply is cut off, press the 'OFF-O' switch.

ABRASIVE DISCS

Purchase high quality abrasive discs which have the maximum external diameter indicated in the technical details of the grinder, a suitable hole which fits the requirements of the flanges, and which are suitable for the maximum speed of the grinder and the materials to be processed. Contact your retailer who will be able to give you the best advice. Thorough use, discs wear thin, lose their calibration and expire after a certain date. Always make a visual check before using and replace if necessary. For the assembly and replacement, go to the 'INSTALLATION- Abrasive disc assembly' chapter. Handle and store the discs with care, do not subject them to impact, bending, compression, moisture, high or low temperatures, and direct sunlight.

MAINTENANCE & SUPPORT



IMPORTANT! Before any checks or adjustment unplug the tool from the electric power supply.

Have the maintenance operations carried out on power tools by qualified technical personnel only using original spare parts. This will allow the safety of the power tool to be maintained.

Do not attempt to repair the power tool or to access internal parts. Interventions by unqualified personnel and unauthorised by the manufacturer could create serious risks and will cause the warranty to be null and void.

The working life and costs also depend on constant and meticulous maintenance. Take good care of your power tool and clean it regularly. In this way its efficiency will be ensured and its life span extended.

- Remove dust and machining residuals with a cloth or a brush with soft bristles.
- Do not wet or spray water over the power tool - risk of internal infiltrations.
- Do not use any inflammables, detergents or solvents.
- The plastic parts can easily be damaged by chemical agents.
- Do not use compressed air for cleaning: risk of material ejection!
- Be careful when cleaning the switch, motor fan slots and hand grips.

Protect the unpainted parts with protective oil and use the original packaging or case (where fitted) to protect it.

TROUBLESHOOTING

PROBLEM	CAUSES	SOLUTIONS
The power tool fails to start	Power supply line disconnected	Check the electric power supply line
	Plug not inserted	Insert the plug in the electric power supply socket and press the start button
	Switch in the 'OFF - 0' position	Flip the switch to 'ON - I'
	Electrical fault	Contact an authorised service centre
The power tool vibrates a lot	Damaged or unbalanced accessory	Substitute the accessory
	Incorrectly assembled accessory	Disassemble the accessory, clean the components and reassemble according to the instructions



IMPORTANT! If the power tool still fails to operate correctly after you have carried out the above operations, or in the event of anomalies other than those described above, take it to an authorised service centre with proof of purchase and ask for the spare parts. Always provide the information shown on the technical data label.

DISPOSAL

In order to protect the environment, proceed according to the local laws in force. Contact the relevant authorities for more information. When the machine is no longer usable or repairable, deliver the machine and packaging to a recycling centre.



Electric and electronic waste may contain potentially hazardous substances for the environment and human health. It should therefore not be disposed of with domestic waste, but by means of differentiated collection at specific centres or returned to the vendor in the event of purchasing new equipment of the same type. Illegal disposal of waste will result in administrative sanctions.

WARRANTY

The product is protected by law against all non-conformities with regards to its stated characteristics, provided that it has been used solely in the way described in this user's instructions, it has not been tampered with in any way, it has been stored correctly, it has been repaired by authorised personnel and, where necessary, only original spare parts have been used. In the event of industrial or professional use or similar, the warranty is valid for 12 months. To issue a request for intervention covered by warranty, proof of purchase must be shown to the retailer or authorised service centre.

AMENDMENTS

The text, figures and data correspond to the standards in place on the date of printing the instructions contained herein. The manufacturer reserves the right to update the documentation if changes are made to the appliance, without being bound by any obligations.

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Sign of a professional job

Angle Grinder

Safety and Operating Manual



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