

KTG600 Angle Grinder

Technical Data

Angle Grinder	KTG600	
Power Input	W	610
No load speed	rpm	11,500
Wheel Diameter	mm	ø100
Spindle		M10
Switch Type		Slider
Weight	kg	1.70
Cable Length	m	2.0

General Power Tool Safety Warnings



WARNING! Read all safety warnings and 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

- 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.

2) 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 extension 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.

3) 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 injury.
- 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.
- 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, clothing and gloves 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.

4) 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.

- c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** *Such preventive safety measures reduce the risk of starting the power tool accidentally.*
- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools 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 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 Instructions For All Operations

Safety Warnings Common for Grinding Operations:

- a) **This power tool is intended to function as a grinder and cut-off tool. Read all safety warnings, instructions, illustrations and specifications provided with this power tool.** *Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.*
- b) **Operations such as sanding, wire brushing or polishing are not recommended to be performed with this power tool.** *Operations for which the power tool was not designed may create a hazard and cause personal injury.*
- c) **Do not use accessories which are not specifically designed and recommended by the tool manufacturer.** *Just because the accessory can be attached to your power tool, it does not assure safe operation.*
- d) **The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool.** *Accessories running faster than their rated speed can break and fly apart.*
- e) **The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool.** *Incorrectly sized accessories cannot be adequately guarded or controlled.*
- f) **The arbour size of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool.** *Accessories with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.*
- g) **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheel for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.** *Damaged accessories will normally break apart during this test time.*
- h) **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and shop apron capable of stopping small abrasive or workpiece fragments.** *The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.*
- i) **Keep bystanders a safe distance away from work area.** *Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.*
- j) **Hold power tool by insulated gripping surfaces only, 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 shock the operator.*

NOTE The above warning may be omitted if polishing is the only recommended operation.
- k) **Position the cord clear of the spinning accessory.** *If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.*
- l) **Never lay the power tool down until the accessory has come to a complete stop.** *The spinning accessory may grab the surface and pull the power tool out of your control.*
- m) **Do not run the power tool while carrying it at your side.** *Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.*

- n) **Regularly clean the power tool's air vents.** *The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.*
 - o) **Do not operate the power tool near flammable materials.** *Sparks could ignite these materials.*
 - p) **Do not use accessories that require liquid coolants.** *Using water or other liquid coolants may result in electrocution or shock.*
- e) **Do not attach a saw chain woodcarving blade or toothed saw blade.** *Such blades create frequent kickback and loss of control.*

Safety Warnings Specific for Grinding and Abrasive Cutting-Off Operations

- a) **Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel.** *Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.*
- b) **The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator.** *The guard helps to protect operator from broken wheel fragments and accidental contact with wheel.*
- c) **Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel.** *Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.*
- d) **Always use undamaged wheel flanges that are of correct size and shape for your selected wheel.** *Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges.*
- e) **Do not use worn down wheels from larger power tools.** *Wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.*

NOTE The above warning does not apply for power tools specifically designed for use with a liquid system.

Causes and Operator Prevention of Kickback

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding.

For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.




Kickback is the result of tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:

- a) **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces.** *Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reaction or kickback forces, if proper precautions are taken.*
 - b) **Never place your hand near the rotating accessory.** *Accessory may kickback over your hand.*
 - c) **Do not position your body in the area where power tool will move if kickback occurs.** *Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.*
 - d) **Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory.** *Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.*
- a) **Do not "jam" the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut.** *Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.*
 - b) **Do not position your body in line with and behind the rotating wheel.** *When the wheel, at the point of operations, is moving away from your body, the possible kickback may propel the spinning wheel and the power tool directly at you.*
 - c) **When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding.**
 - d) **Do not restart the cutting operation in the workpiece.** *Let the wheel reach full speed and carefully reenter the cut. The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.*

- e) **Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback.**
Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
- f) **Use extra caution when making a "pocket cut" into existing walls or other blind areas.**
The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

Labels on your tool

They may include the following symbols.

V	.....volts
A	.....Amperes
Hz	.....Hertz
W	.....Watts
~	.....Alternating current
n	.....No load speed
	.....Class II Construction
	.....Earthing terminal
	.....Safety alert symbol
.../min	.....Revolutions or reciprocation per minute

Save these instructions!



Warning! To reduce the risk of injury, the user must read the instruction manual.



Always wear safety glasses.



Wear ear protection.

Double Insulation




The tool is double insulated. Double insulation means that all the external metal parts are electrically insulated from the mains power supply. This is done by placing insulated barriers between the electrical and mechanical components so as to making unnecessary for the tool to be earthed.

NOTE: Double insulation does not take the place of normal safety precautions when operating this tool. The insulation system is for added protection against injury resulting from a possible electrical insulation failure within the tool.

Electrical Safety

The electric motor has been designed for one voltage only. Always check that the power supply corresponds to the voltage on the rating plate.



Warning: Never connect the live (L) or neutral (N) wires to the earth pin marked E or .

Using an Extension Cable

An extension cable should not be used unless absolutely necessary. Use of an improper extension cable could result in a risk of fire and electric shock. If an extension cable must be used, use only those that are approved by the country's Electrical Authority. Make sure that extension cord is in good condition before using. Always use the cord that is suitable for the power input of your tool (see technical data on name plate). The minimum conductor size is 1.5mm. When using a cable reel, always unwind the cable completely.

Description (Fig. A)

Your Black and Decker small angle grinder has been designed for grinding and cutting applications.

1. On/off switch
2. Side handle
3. Spindle lock
4. Wheel guard
5. Inner flange
6. Outer flange

Assembly and Adjustment



Prior to assembly and adjustment always unplug the tool.

Mounting and Removing the Guard (Fig. B)

Mounting

- ◆ Place the angle grinder on a flat and steady surface, spindle (7) up (fig. B1)
- ◆ Align the 3 lugs (8) with the 3 slots (9) in gearcase cover.
- ◆ Press the guard (4) down and turn it in the direction of the arrow until it is in the working position providing maximum protection to the user (fig. B2)
- ◆ Insert the bolt (11) to the holes on the bracket. Screw the nut (12) on the thread of the bolt. Use crosshead screwdriver (13) (not supply) to tighten the bolt and nut.



Do not operate the grinder with a loose guard.

Removing

- ◆ Follow the procedure above in reverse order.

Mounting and Removing Grinding Wheels or Cutting Discs (Fig. C & D)

Your grinder comes with two reversible flanges to accommodate a wide variety of different accessories. Make sure the correct sides of the flanges are being used ensuring no excessive play between the accessory and the flanges.

Mounting

- ◆ Place the inner flange (5) on the grinder spindle (7) (fig. C1)
- ◆ Place the wheel (14) against the flange. Screw the threaded flange (6) onto the spindle (7). (fig. C2).
- ◆ Make sure that the threaded outer flange (6) is facing in the correct direction for the type of disc fitted. For grinding discs, the flange (6) is fitted with the raised portion facing towards the disc (fig. C3).
- ◆ Press in the spindle lock button (3) and rotate the spindle until it locks. Keeping the lock button pressed in, tighten the threaded flange (6) with the spanner (15) provided (fig. D)

Release the spindle lock.

Removing

- ◆ Follow the procedure above in reverse order.

Instruction for Use

- ◆ Always observe the safety instructions and applicable regulations.
- ◆ Ensure all materials to be ground are secured in place.
- ◆ Apply only a gentle pressure to the tool. Do not exert side pressure on the grinding wheel or cutting disc.
- ◆ Avoid overloading. Should the tool become hot, let it run a few minutes under no load condition.
- ◆ Slide after push

Prior to Operation

- ◆ Install the appropriate guard and disc or wheel. Do not use excessively worn discs or wheels.
- ◆ Be sure the inner and threaded flanges are mounted correctly.
- ◆ Make sure the disc or wheel rotates in the direction of the arrows on the accessory and the tool.

Switching On And Off (Fig. A)



Make sure that the switch is in the "OFF" position before plugging in.

- ◆ To run the tool, slide the ON/OFF switch (1) forward to the "ON" position.
- ◆ To stop the tool, slide the switch backwards to the "OFF" position.
- ◆ Always switch off the tool when work is finished and before unplugging.



Do not switch the tool ON and OFF when under load.

Handy Hints (Fig. G)

- ◆ Hold your angle grinder with one hand on the body and the other hand firmly around the side handle.
- ◆ Always position the guard so that as much of the exposed disc as possible is pointing away from you.
- ◆ Be prepared for a stream of sparks when the disc touches the metal.

Grinding (Fig. H)

Use a depressed center Type 27 disc. Hold the tool at an angle of approximately 20°-30° to work for grinding.

Edge Grinding and Cutting



Do not use edge grinding wheels for surface grinding applications because these wheels are not designed for side pressures encountered with surface grinding. Wheel breakage and injury may result.

Edge grinding can be performed with type 27 wheels designed and specified for this purpose. Protect yourself during edge grinding by directing the open side of the guard toward a surface. Edge grinding wheels should contact the work surface only at the edge of the wheel, not on the top or bottom of the wheel. Side pressure on the wheel could lead to breakage of the wheel.

Maintenance

Your Black and Decker power tool has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper tool care and regular cleaning. Your tool is not user-serviceable. Take the tool to an authorized Black and Decker repair agent. This tool should be serviced at regular intervals or when showing a noticeable change in performance.

Lubrication

Black and Decker power tools are properly lubricated at the factory and are ready for use. Tools should be relubricated regularly, depending on usage. This lubrication should only be attempted by trained power tool repair persons, such as those at Black and Decker service centers or by other qualified service personnel.

Cleaning



Warning: unplug the tool before you use a cloth to clean the housing. With the motor running, blow dirt and dust out of all air vents with dry air at least once a week. Wear safety glasses when performing this. Exterior plastic parts may be cleaned with a damp cloth and mild detergent. Although these parts are highly solvent resistant, NEVER use solvents.

Tool Care

Avoid overloading the machine. Overloading will result in a considerable reduction in speed and efficiency and the unit will become hot. In this event, run the machine at no load for a minute or two until cooled to normal working temperature by the built in fan. Switching your machine on and off whilst under load will considerably reduce the life of the switch.

Important

To ensure product SAFETY and RELIABILITY, repairs, maintenance and adjustment (other than those listed in this manual) should be performed by authorized service centers or other qualified organizations, always using identical replacement parts. Unit contains no user serviceable parts inside.

Accessories

The performance of any power tool is dependent upon the accessory used. Black and Decker accessories are engineered to high quality standards and are designed to enhance the performance of power tool. By using Black and Decker accessories will ensure that you get the very best from your Black and Decker tool. Black and Decker offers a large selection of accessories available at our local dealer or authorized service center at extra cost.

Note: Accessory must be rated for use at speed equal to or higher than nameplate RPM of tool with which it is being used.



CAUTION: The use of any non-recommended accessories may be hazardous.

Protecting The Environment



Should you find one day that your tool needs replacement, or if it is of no further use to you, think of the protection of the environment. Black and Decker recommends you to contact your local council for disposal information.

Service Information

Black and Decker offers a full network of company-owned and authorized service locations throughout Asia. All Black and Decker Service Centers are staffed with trained personnel to provide customers with efficient and reliable power toolservice. Whether you need technical advice, repair, or genuine factory replacement parts, contact the Black and Decker location nearest to you.

Notes

- ◆ Black and Decker's policy is one of continuous improvement to our products and, as such, we reserve the right to change product specifications without prior notice.
- ◆ Standard equipment and accessories may vary by country.
- ◆ Product specifications may differ by country.
- ◆ Complete product range may not be available in all countries. Contact your local Black and Decker dealers for range availability.
- ◆ Pictures of product may differ to actual unit. Some units do not include side-handle &/or grinding wheel.