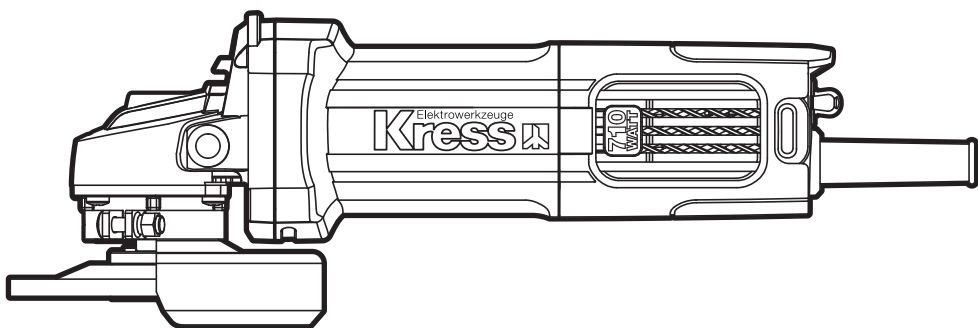


Elektrowerkzeuge  
**Kress**




## **SAFETY AND OPERATING MANUAL**

**Angle grinder**

**KU699B**



# 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 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 or Abrasive Cutting-Off Operations:

- a) **This power tool is intended to function as a grinder or 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, 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) **Threaded mounting of accessories must match the grinder spindle thread. For accessories mounted by flanges, the arbour hole of the accessory must fit the locating diameter of the flange.** Accessories 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 wheels 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 workshop 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 the 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 could give the operator an electric shock.
- 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.
- q) **Your hand must hold on the handle when you are working.**

# FURTHER SAFETY INSTRUCTIONS FOR ALL OPERATIONS

## Kickback and Related Warnings

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 power 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 reactions 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.*
- e) **Do not attach a saw chain woodcarving blade or toothed saw blade.** *Such blades create frequent kickback and loss of control.*

## ADDITIONAL SAFETY INSTRUCTIONS FOR GRINDING AND CUTTING-OFF OPERATIONS

### 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 the operator from broken wheel fragments, accidental contact with wheel and sparks that could ignite clothing.*
- 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.*

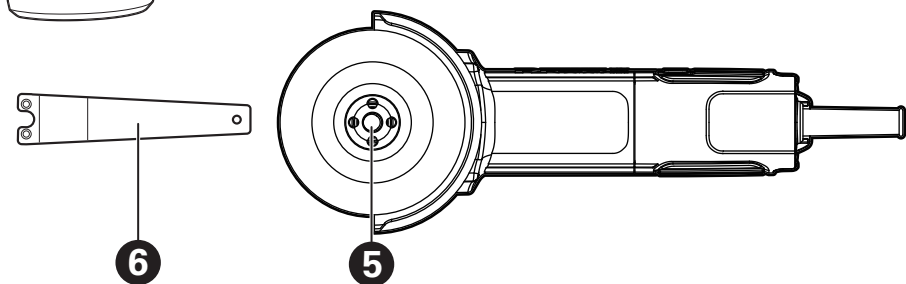
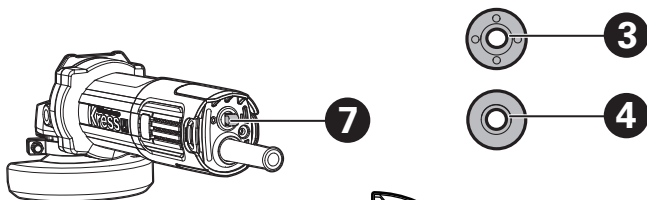
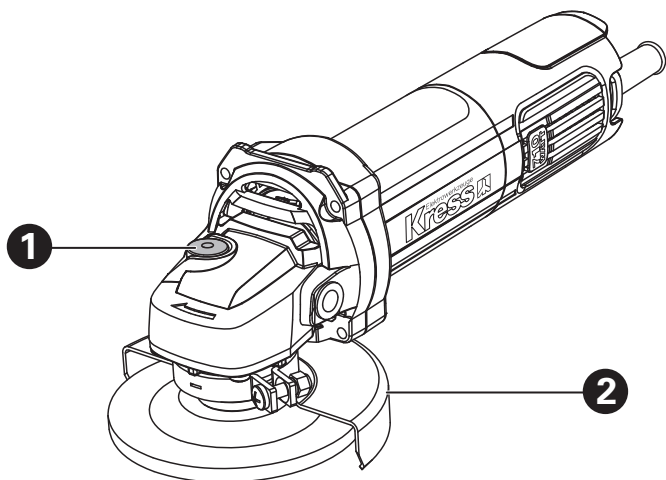
## ADDITIONAL SAFETY INSTRUCTIONS FOR CUTTING-OFF OPERATIONS

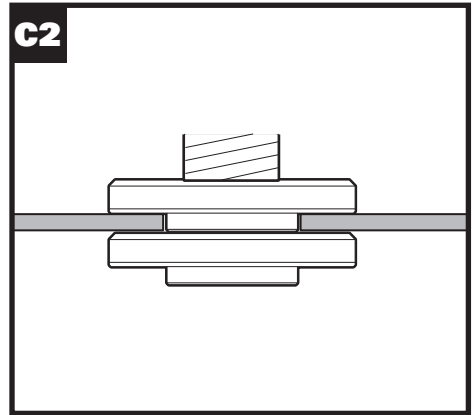
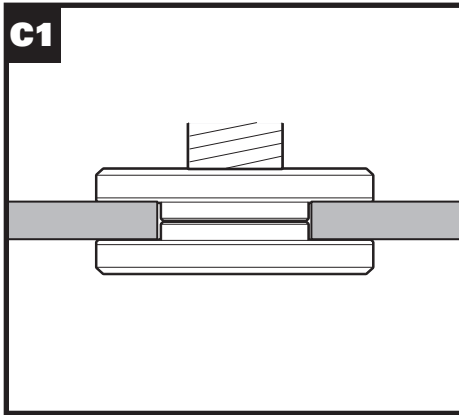
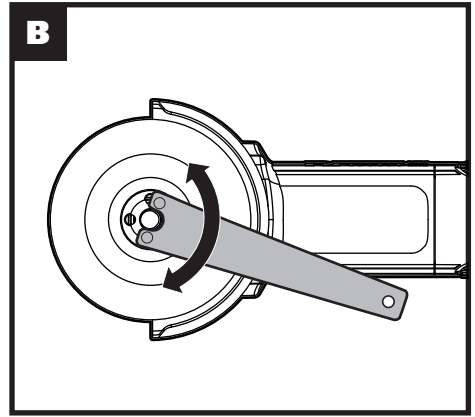
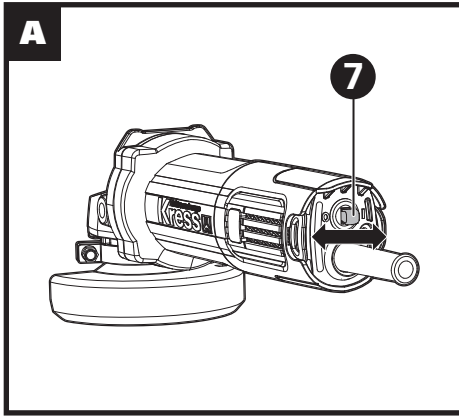
### Additional Safety Warnings Specific for Abrasive Cutting-Off Operations:

- 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 operation, 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 re-enter 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.*

## SYMBOLS

	To reduce the risk of injury, user must read instruction manual
	Wear ear protection
	Wear eye protection
	Wear dust mask
	Double insulation
	Warning








# COMPONENT LIST

1. SPINDLE SELF-LOCKING BUTTON
2. SHIELD OF ABRASIVE DISC
3. OUTER FLANGE
4. INNER FLANGE
5. SPINDLE
6. SPANNER
7. LEVER REAR SWITCH

\* Some of the accessories mentioned in illustrations or texts are not included in the scope of supply.

# MACHINE SPECIFICATION

Rated voltage	220-230V ~ 50Hz
Rated input power	710W
Rated speed	12000r/min
Protection class	 /II
Spindle thread	M10
Disc size	100mm
Disc bore	16mm
Machine weight	1.3kg

# ACCESSORIES

Disc platen wrench	1
Inner flange	1
Outer flange	1
Shield of abrasive disc	1
Auxiliary handle	/

Recommend to choose your accessories from the store where you purchased the power tool. Please select the right accessory based on your work. Please refer to the accessory package for more methods and assistance of using the accessory.

# OPERATION INSTRUCTIONS



**NOTE:** Please read the instructions carefully before use.

## 1. LEVER REAR SWITCH (SEE FIGURE A)

When turning on the power tool, push the rear switch of driving lever to "I" position.

For turning off the power tool, please push the rear switch of driving lever to "O" position.

Note: Make sure the rear switch of driving lever is at "O" position when the machine is plugged in.

## 2. MAIN SHAFT AUTO-LOCKING KNOB

The spindle self-locking button is only used for replacement of abrasive tools. Do not press the Lock button when the machine is in operation.

## 3. INSTALLATION OF GRINDING DISC

Mount the inner flange (4) on the spindle (5) and fix it on the two shoulders of the spindle. Place the grinding disc on the inner flange and screw the outer flange (3) onto the spindle. Press the spindle self-locking button while turning the grinding disc at the same time until the spindle is locked tightly; then tighten the outer flange with the accompanying wrench to fasten the grinding disc (see Figure B). Insert two bumps of the wrench into the outer flange holes to tighten the outer flange. Turn the grinding disc to check whether it is locked. Run for 30 seconds without load and check whether there is large vibration or falling off of the grinding disc. To disassemble the grinding disc, please reverse the steps above.

## 4. ADJUST THE PRESSING SURFACE OF THE OUTER FLANGE

It is needed to adjust the clamping surface of outer flange to fit the different thicknesses of the abrasive disc and the blade. If a thinner blade or a diamond blade is used, the protruding side of the outer flange should be placed outward (see Figure C2). If a thicker abrasive disc is used, the protruding side of the outer flange should be placed towards the abrasive disc (see Figure C1). Make sure the grinding disc/blade is fixed.

## 5. SHIELD OF ABRASIVE DISC

Put the shield behind the slot of the spindle collar and screw it to the desired operation position. Tighten the shield with screws. The grinding disc should be able to rotate freely within the shield.

**The operator should have the closed side of the shield face himself/herself.**

## 6. CUTTING METAL



**WARNING! A protective shield for cutting is required when cutting metal.**

When cutting, work with moderate feed, adapted to the material being cut. Do not exert pressure on the cutting disc, tilt or oscillate the machine.

Do not reduce the speed of running down cutting discs by applying sideward pressure.

The machine must always work in an up-grinding motion. Otherwise, the danger exists of it being pushed uncontrolled out of the cut. When cutting profiles and square bar, it is best to start at the smallest cross section.

professional person with equivalent qualifications to avoid a hazard.

## PRECAUTIONS

If the machine is severely hot, make your machine run for 2-3 minutes without load to cool the motor.

Do not start the machine when the grinding disc or other operational accessories are in contact with the workpiece.

Please start working after the machine has reached the maximum speed.

Do not improve the efficiency by increasing the friction between the grinding disc and the workpiece, otherwise it will reduce the speed of the grinding disc, which will lead to longer working hours

When grinding, always keep the angle between the grinding disc and the working surface at 15-30 degree. Larger angles will cause uneven working surfaces and affect the surface quality. Please keep the angle grinder move back and forth in a crossed manner.

Do not adjust the cutting angle when using the blade, otherwise the grinding disc will stop suddenly and the motor will be blocked or the grinding disc gets broken.

When cutting, it is required to perform against the rotating direction of the grinding wheel; and the disc will jump out of the groove if it is performed in the rotating direction of the grinding disc.

Please try to use diamond blade when cutting hard materials.

When the diamond disc is used, it can overheat so that sparks appear around the rotating grinding disc. Please stop using for cooling, and make it running for 2-3 minutes without load.

Make sure the workpiece is well clamped without movement.

## MAINTENANCE

**Be sure to unplug the power cord before any repair work on the machine.**

This power tool can keep normal operation without additional lubrication or special maintenance. There is no part for replacement for users. Only simple maintenance is needed based on the following requirements.

1. Wipe the machine with a dry cloth in time after using. Do not clean the machine with water or chemical detergent to avoid affecting the performance of the casing or causing such accident as electric leakage.
2. Always keep the air inlet clean and unobstructed to prevent debris from accumulating and affecting the cooling of the motor.

Also, try not to use it in dusty environment.

If the power cord is damaged, it must be replaced by the manufacturer, a special service center, or an



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