

**deli**

**DE-JM180-1E**

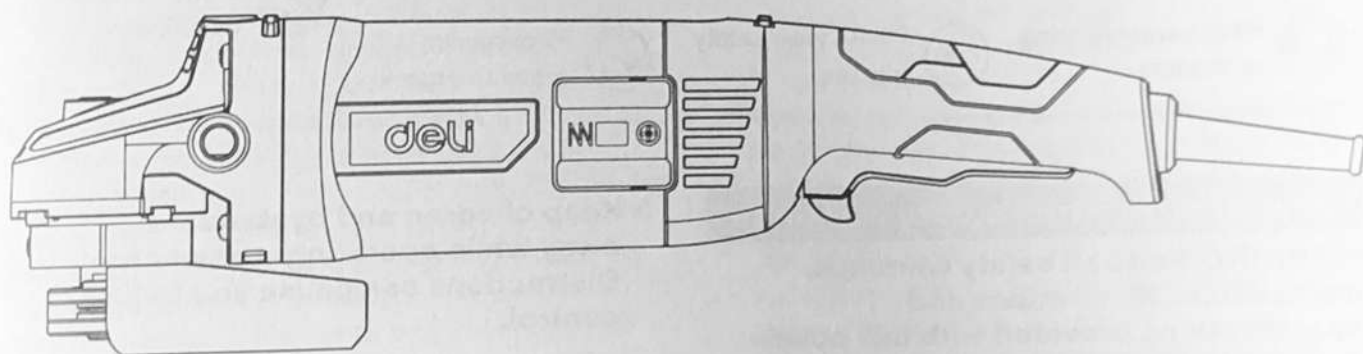
**DE-JM180-1G**

**DE-JM230-1E**

**DE-JM230-1G**

**DE-JM230-2E**

**DE-JM230-2G**



**EN** Angle grinder  
**DE** Winkelschleifer  
**FR** Meuleuse d'angle  
**ES** Amoladora angular

**PT** Afiadora angular  
**RU** угловая шлифовальная машина  
**AR** جلاخة زاوية

## Specifications

Model	DE-JM180-1E DE-JM180-1G	DE-JM230-1E DE-JM230-1G	DE-JM230-2E DE-JM230-2G
Rated voltage	220-240V~ 50/60Hz		
Rated power	2000W	2200W	2400W
Rated speed	8500/min	6400/min	
Safety class	□/II		
Spindle thread	M14		
Wheel diameter	180mm	230mm	
Wheel inner	22mm		
Machine weight	4.2kg		5.0kg

- The manufacturer reserves the right to change the specifications without notice.
- Specifications may differ from country to country.

### Standard accessories:

- Auxiliary handle
- Spanner
- Hex key
- Carbon brushes
- Disc guard

## Symbols

 Read the instruction manual	 Warning sign	 Double insulation	 China Compulsory Certification
 Please wear hearing protectors	 Please wear safety glasses	 Please wear protective mask	

### General power tool safety warnings

**WARNING** 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.

**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.

### Work area safety

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **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.

3. **Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.**

### Electrical safety

1. **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.
2. **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.
3. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
4. **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.

- 5. 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.
- 6. If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

### Personal safety

- 1. 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.
- 2. Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- 3. 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.
- 4. 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.
- 5. Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- 6. Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- 7. 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.
- 8. Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

### Power tool use and care

- 1. 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.
- 2. 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.
- 3. Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- 4. 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.
- 5. Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- 6. Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- 7. 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.
- 8. Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

### Service

- 1. 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.

**Additional safety instructions for grinders, disc-type polishers and disc-type sanders**

## General

This part may be printed separately from the "General Power Tool Safety Warnings".

In these safety instructions, terms such as grinding/**grinder**, sanding/sander, wire brushing/wire brush, polishing/polisher or cutting-off/cut-off tool are selected as specified by the manufacturer. These terms in the warnings and headings shall be consistently used or deleted based on the selected operations. The "and"/"or" conjunctions may be used as appropriate.

If the power tool is intended only for one of the listed operations, the heading of that section is to be used for all warnings.

## Safety instructions for all operations

**Safety warnings common for grinding, sanding, wire brushing, polishing or cutting-off operations:**

- 1. This power tool is intended to function as a grinder, sander, wire brush, polisher, hole cutter 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.
- 2. Operations such as grinding, sanding, wire brushing, polishing, hole cutting or cutting-off are not to be performed with this power tool.** Operations for which the power tool was not designed may create a hazard and cause personal injury.
- 3. Do not convert this power tool to operate in a way which is not specifically designed and specified by the tool manufacturer.** Such a conversion may result in a loss of control and cause serious personal injury.
- 4. Do not use accessories which are not specifically designed and specified by the tool manufacturer.** Just because the accessory can be attached to your power tool, it does not assure safe operation.
- 5. 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.
- 6. 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.
- 7. The dimensions of the accessory mounting must fit the dimensions of the mounting hardware of the power tool.** 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.
- 8. 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.
- 9. 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 applications. The dust mask or respirator must be capable of filtering particles generated by the particular application. Prolonged exposure to high intensity noise may cause hearing loss.
- 10. 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.
- 11. 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.
- 12. 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.
- 13. 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.
- 14. 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.
- 15. 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.

16. **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
17. **Do not use accessories that require liquid coolants.** Using water or other liquid coolants may result in electrocution or shock.

### 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.

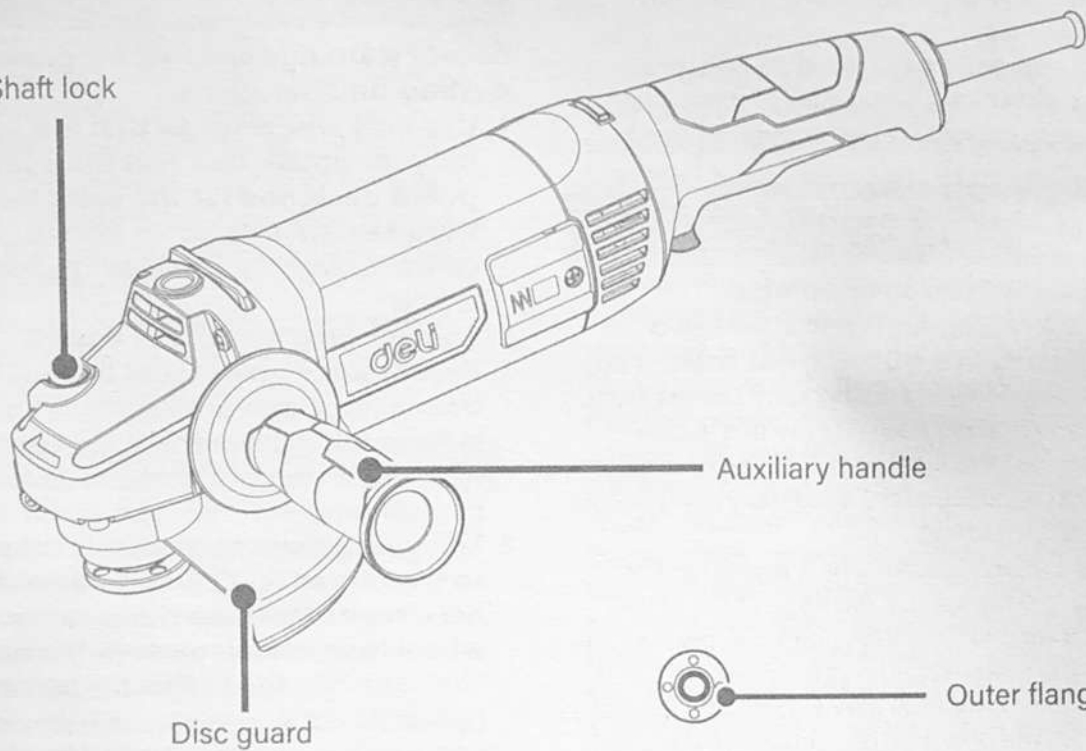
1. **Maintain a firm grip with both hands on the power tool and position your body and arms to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up.** The operator can control torque reactions or kickback forces, if proper precautions are taken.
2. **Never place your hand near the rotating accessory.** Accessory may kickback over your hand.
3. **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.
4. **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.
5. **Do not attach a saw chain woodcarving blade, segmented diamond wheel with a peripheral gap greater than 10mm 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 cutting-off operations:**

1. **Use only wheel types that are specified 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.
2. **The grinding surface of centre depressed wheels must be mounted below the plane of the guard lip.** An improperly mounted wheel that projects through the plane of the guard lip cannot be adequately protected.
3. **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.
4. **Wheels must be used only for specified 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.
5. **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.
6. **Do not use worn down wheels from larger power tools.** A wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.
7. **When using dual purpose wheels always use the correct guard for the application being performed.** Failure to use the correct guard may not provide the desired level of guarding, which could lead to serious injury.

Shaft lock



Auxiliary handle

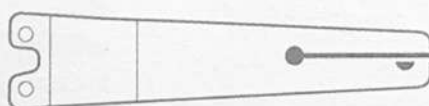
Disc guard



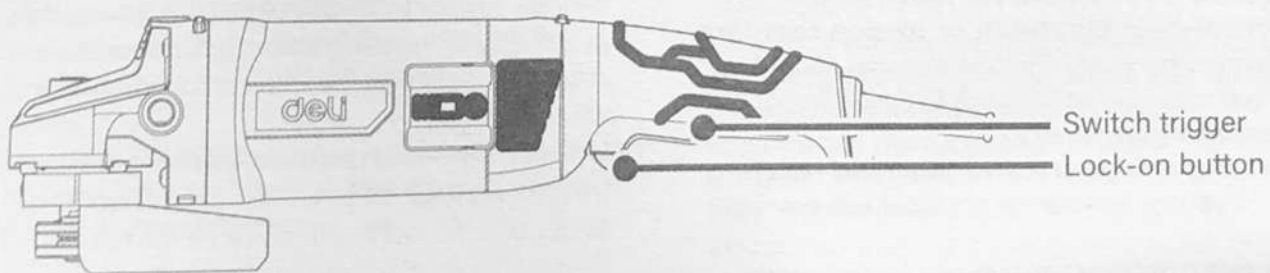
Outer flange



Inner flange



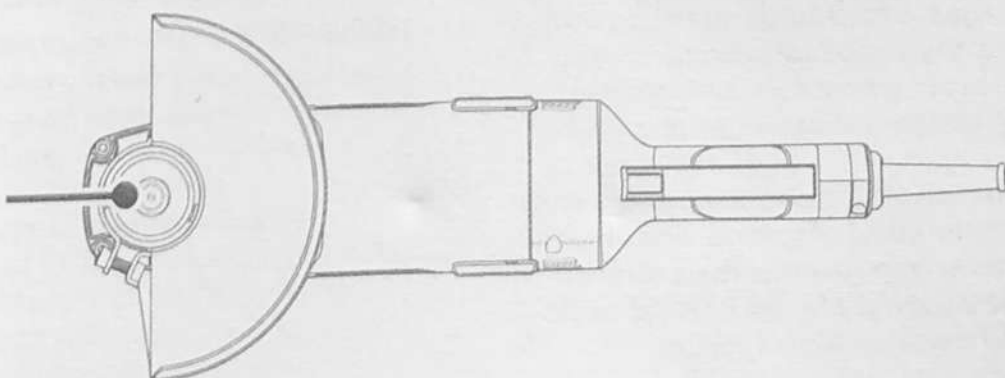
lock nut wrench



Switch trigger

Lock-on button

Spindle



# Operation Instructions

**WARNING:** Read the manual carefully before operation

## 1 Switch trigger

Switch action

**CAUTION:**

Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

To start the tool, depress the lock-off or lock-on button and then pull the switch trigger. Release the switch trigger to stop.

For tool with lock button

**CAUTION:**

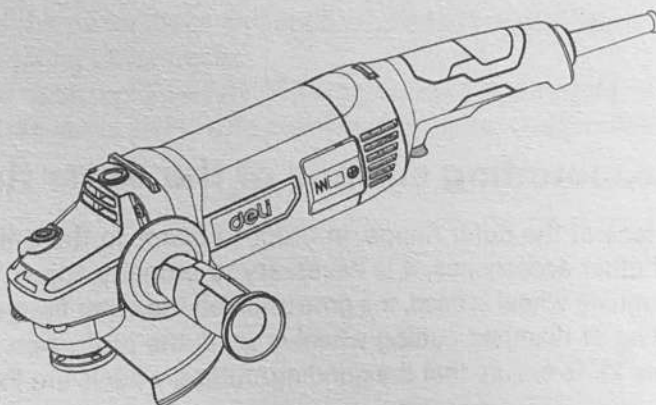
Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

Switch can be locked in "ON" position for ease of operator comfort during extended use. Apply caution when locking tool in "ON" position and maintain firm grasp on tool.

To start the tool, simply pull the switch trigger. Release the switch trigger to stop.

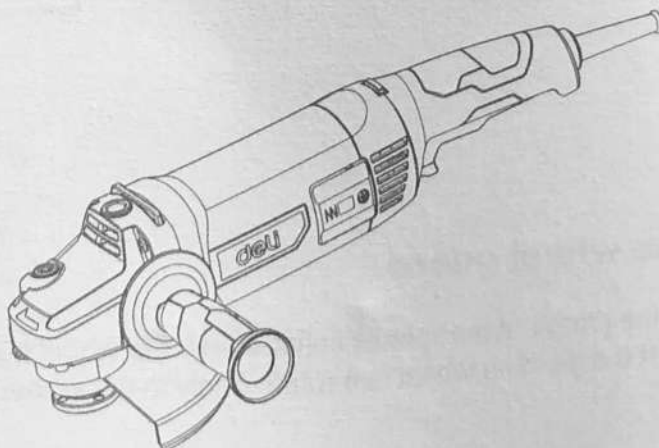
For continuous operation, pull the switch trigger and then push in the lock button, and then release the switch trigger

To stop the tool from the locked position, pull the switch trigger fully, then release it.



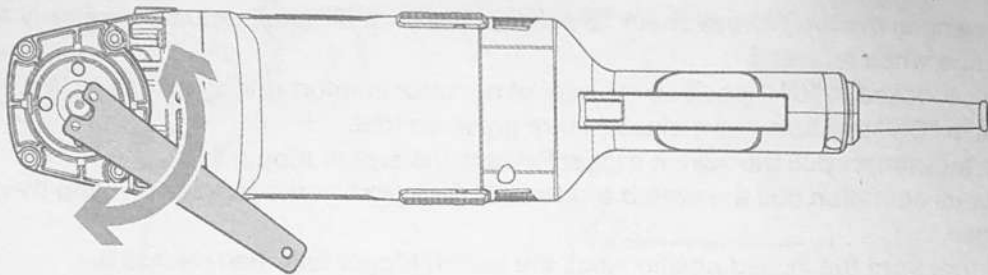
## 2 Shaft lock

The shaft lock is used to prevent spindle rotation when installing or removing accessories such as grinding wheel. Never actuate the shaft lock when the spindle is moving.



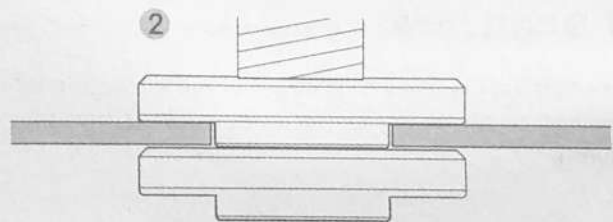
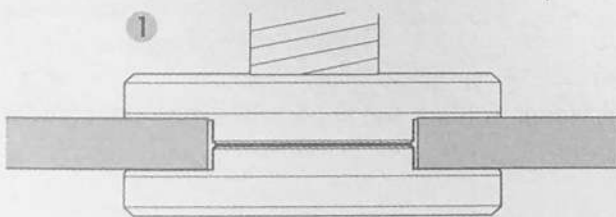
### 3 Installing grinding wheel

First, mount the inner flange onto the spindle so that the recess on the inner flange fits onto the two parallel flat faces on the spindle. After placing the grinding wheel on the inner flange, screw the outer flange onto the spindle. Press the shaft lock and turn the grinding wheel at the same time until the spindle is locked. At the same time, use the lock nut wrench attached with the machine to tighten the outer flange plate to fix the grinding wheel. Insert into the outer flange hole by aligning with the two protruding points on the wrench and tighten the outer flange plate. After installation, turn the grinding wheel and check whether it is locked. Run it for about 30 seconds without load to ensure that the grinding wheel will not shake too much or fall off. To remove the wheel, follow the installation procedure in reverse.



### 4 Adjusting the mounting surface of the outer flange

Adjust the mounting surface of the outer flange. In order to adapt to the different thickness of grinding wheel, cutting wheel and other accessories, it is necessary to properly adjust the mounting surface of the outer flange. If a thicker grinding wheel is used, the protrusion on the outer flange shall be placed inward (see Figure 1). If a thinner cutting or diamond cutting wheel is used, the protrusion on the outer flange shall be placed outward (see Figure 2). To ensure that the grinding/cutting wheels are fixed.



### 5 Adjusting the wheel guard

Put the wheel guard in the groove of the spindle collar, screw the wheel guard to the required position and fasten it. Ensure that the grinding wheel can rotate freely in the wheel guard after tightening.



## Precautions for use

If the machine is seriously hot, please let your machine run for 2-3 minutes without load to cool the motor. Do not start the machine when the grinding wheel or other working accessories are in contact with the workpiece.

Please start working after the machine runs to the maximum speed. Do not increase the friction between the grinding wheel and the workpiece to improve efficiency, the rotating speed of the grinding wheel will decrease, and the working time will be prolonged. When grinding, always keep the angle between the grinding wheel and the working surface 15-30°. Large working angle will cause uneven working surface and affect surface quality. Please keep the angle grinder moving forward, backward and cross when working. When using the diamond cutting wheel, it is seriously hot and causes a spark along the entire circle of the rotating grinding wheel. At this time, please stop using it to cool it and run it for 2-3 minutes without load. Please ensure that the workpiece is well clamped and does not move.

## Maintenance

Before performing any replacement work on the machine, be sure to pull out the plug first.

This power tool can maintain normal operation without applying lubricating oil or special maintenance. The machine has no parts for user replacement.

Simply maintain the machine according to the following requirements.

1. Clean the machine with dry rag after use. Attention: Never use water or chemical cleaning agent to clean the machine, so as not to affect the performance of the machine enclosure or cause electric leakage and other accidents.
2. Always keep the air inlet of the motor clean and unobstructed to prevent debris from accumulating at the air inlet and affecting the cooling of the motor.

In addition, try not to use it in dusty environment. If the power cord is damaged, in order to avoid danger, it must be replaced by the manufacturer, authorized maintenance center or equivalent qualified professionals.

The logo for 'deli' is displayed in white lowercase letters on a dark, trapezoidal background.

## Product Warranty Card

### Dear users :

Thank you for buying our products. In order to ensure your profit, users who buy our products can contact local distributor or Specified repair stations with invoice and warranty cards if the product failures due to quality problems.

### Warranty Notice:

1. From \_\_\_\_\_ (Year/Month/Day) to \_\_\_\_\_ (Year/Month/Day), If the failure happen in normal use, our company will provide free warranty, parts replacement and other services according to the failure situation.
2. This warranty card and purchase invoice are the voucher of after-sales service provided by our company to customers. The card must be detailed only after filling in the following form and affixing the official seal with the distributor.
3. In one of the following cases, free warranty service will be invalid, and maintenance fees will be required:
  - ( 1 ) Exceed the expiration date.
  - ( 2 ) Failure or damage caused by not following the requirements of the product manual, maintenance or improper storage.
  - ( 3 ) Failure or damage caused by disassembling, repairing or modification of the product without the permission of our company.
  - ( 4 ) Machine breakdown or damage caused by force majeure.
  - ( 5 ) Consumable accessories.

This card is issued with the product. One card for one machine, to ensure that you can fully enjoy the right to free warranty service provided by the company, please keep this card properly, lost will not be replaced.

Purchase Date: \_\_\_\_\_ (Year/Month/Day)