

# GAZELLE<sup>®</sup>

## **GM4550** Angle Grinder User Manual



**EN**

Read through carefully and understand these instructions before use.

# GENERAL POWER TOOL SAFETY WARNINGS



**WARNING! Read and understand all instructions.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal 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 anyway. 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 in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

NOTE: The term "residual current device (RCD)" may be replaced by the term "ground fault circuit interrupter (GFCI)" or "earth leakage circuit breaker (ELCB)".

## 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 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 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, clothing, and gloves 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. **During the operation, do not take it lightly and ignore the safety guidelines because of frequent use of the tool.** Any careless motion may cause serious injuries.

## 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 tool if switch does not turn it on or 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 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.
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. 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 the handle and grabbing surface dry, clean and free of grease.** In unexpected situation, wet and slippery handle cannot ensure your grabbing safety and control of the handle

#### 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.

#### VOLTAGE WARNING:

Before connecting the machine to a power source (receptacle, outlet, etc.), be sure the voltage supplied is the same as that specified on the nameplate of the machine. A power source with voltage greater than that specified for the machine can result in SERIOUS INJURY to the user, as well as damage to the machine. If in doubt, DO NOT PLUG IN THE MACHINE. Using a power source with voltage less than nameplate rating is harmful to the motor.

### ADDITIONAL SAFETY RULES

#### 1. Safety instructions for all operations

##### Safety Warnings Common for Sanding:

- a) **This power tool is intended to function as sander. 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 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) **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.**
- k) **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.**

- l) **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.*
- m) **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.*
- n) **Do not operate the power tool near flammable materials.** *Sparks could ignite these materials.*
- o) **Do not use accessories that require liquid coolants.** *Using water or other liquid coolants may result in electrocution or shock.*
- p) **Do not use accessories that require liquid coolants.** *Using water or other liquid coolants may result in electrocution or shock.*

## 2. 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.*

## 3. Additional safety instructions for sanding operations

### Safety Warnings Specific for Sanding

#### 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 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.*
- c) **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.*
- d) **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.*
- e) **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.*
- f) **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.*

### SAVE THESE INSTRUCTIONS.

 **WARNING!** MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

### Symbol



WARNING



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



Always Wear eye protection



Class II tool

## TECHNICAL DATA

Model	GM4550
Rated Power Input	1500W
Rated Speed	11800/min
Wheel Size	$\Phi 125 \times 4 \times \Phi 22 \text{mm}$
Type	27
Net Weight	2.3kg

●Due to the continuing program of research and development, the specifications herein are subject to change without prior notice.

## INSTRUCTIONS FOR OPERATION

### Installing or Removing Protection Guard

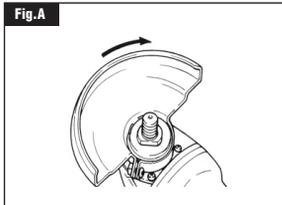
#### CAUTION:

Always be sure that the tool is switched OFF and unplugged before installing or removing the wheel guard.

Always mount protection guard when operating the tool.

Mount the wheel guard with the protrusion on the wheel guard band aligned with the notch on the bearing box. Then rotate the wheel guard around 180 degrees. Be sure to tighten the screw securely. (Fig. A)

To remove the wheel guard, follow the installation procedure in reverse.

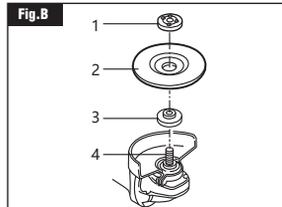


### Installing or Removing the Depressed Center Wheel

#### CAUTION:

Always be sure that the tool is switched OFF and unplugged before installing or removing the wheel.

Screw the inner flange onto the spindle. Press the spindle lock firmly so that the spindle cannot revolve, then use the lock nut wrench to secure the inner flange. Fit the wheel on over the inner flange and screw the outer flange onto the spindle. (Fig.B)

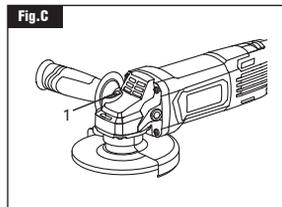


1. Outer Flange
2. Wheel
3. Inner Flange
4. Drive Spindle

### Spindle Lock

#### CAUTION:

Never actuate the spindle when the spindle is moving. The tool may be damaged. Press the spindle to prevent spindle rotation when installing or removing accessories. (Fig. C)



1. Spindle Lock

### Switch Operation

#### CAUTION:

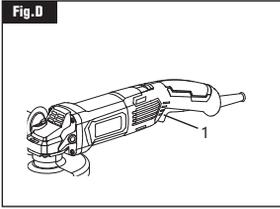
●Before plugging in the tool, always check to see that the switch trigger actuates properly.

●When the power tools are turned on and the machine is running at full speed, it means that the electronic device has failed and the machine is not in use.

To start the tool, first push the lock-off button, then press the switch knob. Release the switch knob to stop.

For continuous operation, first push the lock-off button, then press the switch knob.

Push the lock-off button forward and release the switch knob. To stop the tool from the locked position, pull the switch trigger fully, and then release it. (Fig. D)

**Fig.D**

1.Switch Knob

### Prevent Restarting Device

Prevent restarting device can prevent the machine from accidentally starting up again after a sudden power failure. Starting again, pressing the switch and then releasing can turn on the power tool.

### Over Current Protection Device

When the load of the power tool reaches 12A, the over current protection device will cut off the power and the machine will stop working. Starting again, pressing the switch and then releasing can turn on the power tool.

### Constant Electronic Device

NO matter the machine is under load or no load, the constant electronic device can stabilize the speed and ensure consistent working efficiency.

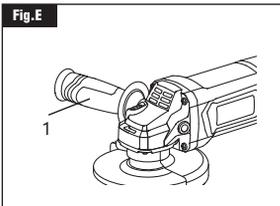
### Soft Start Function

Soft start device is installed in the tool. After the switch is switched on, the motor starts slowly, which can reduce the recoil force during the tool start and make the start smooth.

### Auxiliary Handle

For all work with the tool, the auxiliary handle must be mounted.

Screw the auxiliary handle on the side of the gear housing. (Fig.E)

**Fig.E**

1.Auxiliary Handle

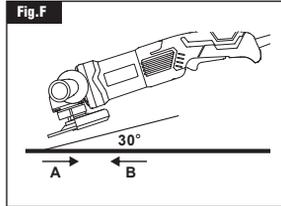
### Operation

#### WARNING:

- It should never be necessary to force the tool. The weight of the tool applies adequate pressure. Forcing and excessive pressure could cause dangerous wheel breakage.
- Depressed center wheel should not be used after it has been worn down to 100mm in diameter. Use of

the wheel after this point is unsafe and it should be removed from service and rendered unusable by intentional destruction.

In general, keep the edge of the wheel or disc at an angle of about 15°-30° to the work piece surface. During the break-in period with a new wheel, do not work the grinder in the B direction, or it will cut into the work piece. Once the edge of the wheel has been rounded off by use, the wheel may be worked in both A and B directions. (Fig. F)

**Fig.F**

## MAINTENANCE AND INSPECTION

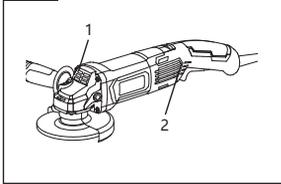
### CAUTION:

Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.

### Cleaning Ventilation Slots

For safe and proper working, always keep the power tool and its ventilation slots clean. Use a soft, clean and dry brush to clean the ventilation slots regularly or when they're clogged. (Fig. G)

Fig.G



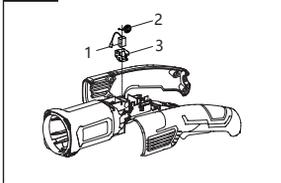
- 1.Air Outlet
- 2.Air Inlet

### Replacing carbon brushes

Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time.

Use a screwdriver to remove the handle assembly. Disconnect the carbon brush from the brush holder, then draw the Belleville spring and take out the worn carbon bush and replace new one; Release the Belleville spring and reconnect each carbon brush with the brush holder. And then tighten the handle assembly securely. (Fig. H)

Fig.H



- 1.Carbon Brush
- 2.Belleville Spring
- 3.Carbon Brush Holder

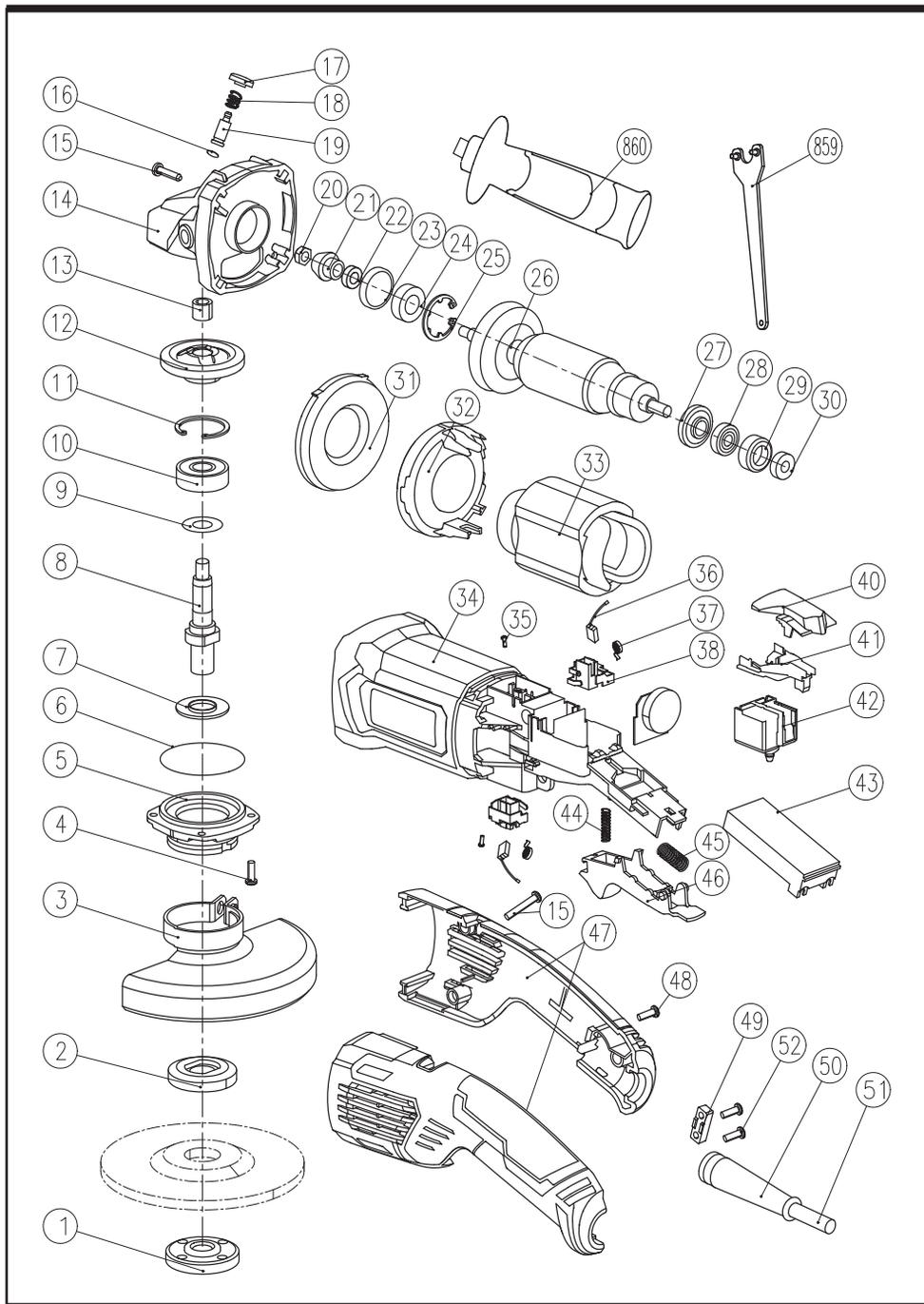
- Damaged cord must be replaced by a special cord purchased from authorized service center.
- To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by authorized centers, always using original replacement parts.

## EXPLANATION OF GENERAL VIEW

1	Outer Flange	21	Driving Spiral Bevel Gear
2	Inner Flange	22	Shaft seal assembly
3	Wheel Guard Assembly	23	Square Seal Ring(22×25.2×4)
4	Cross Recessed Small Pan Head Screw M4×14	24	Ball Bearing 608
5	Gear Housing Cover	25	Circlip For Hole
6	O Ring	26	Armature
7	Dust Cap	27	Insulation Washer
8	Drive Spindle	28	Ball Bearing 607
9	Dustproof Washer 12	29	Bearing Rober Sleeve(19×21.2×8.6)
10	Ball Bearing 6201	30	Magnetic Ring
11	Circlip For Hole32	31	Guide Plate
12	Driven Spiral Bevel Gear	32	Baffle Plate
13	Needle Bearing HK0810	33	Stator Assembly
14	Gear Housing	34	Motor Housing
15	Cross Recessed Pan Head Tapping Screw ST4.2×25	35	Cross Recessed Pan Head Tapping Screw ST2.9×9
16	O Ring(5.6×1.5)	36	Carbon Brush Assembly (1Self - Stop, 1Non- Self - Stop)
17	Lock Nut	37	Coil Spring
18	Auto-Lock Spring	38	Carbon Brush Holder
19	Lock Pin	40	Switch Top Cover
20	Nut M7	41	Switch lower cover

## EXPLANATION OF GENERAL VIEW

42	Switch	49	Strain Relief
43	Constant speed controller	50	Cord Guard
44	Trigger Small Spring	51	Cord
45	Trigger Big Spring	52	Cross Recessed Pan Head Tapping Screw ST4×15
46	Trigger	861	Oil Cap Wrench
47	Handle Assembly	862	Auxiliary Handle(M10)
48	Cross Recessed Pan Head Tapping ScrewST4.2×19		



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