ELMARK®
The Brand of Electricity

MANUAL

Read carefully before installation

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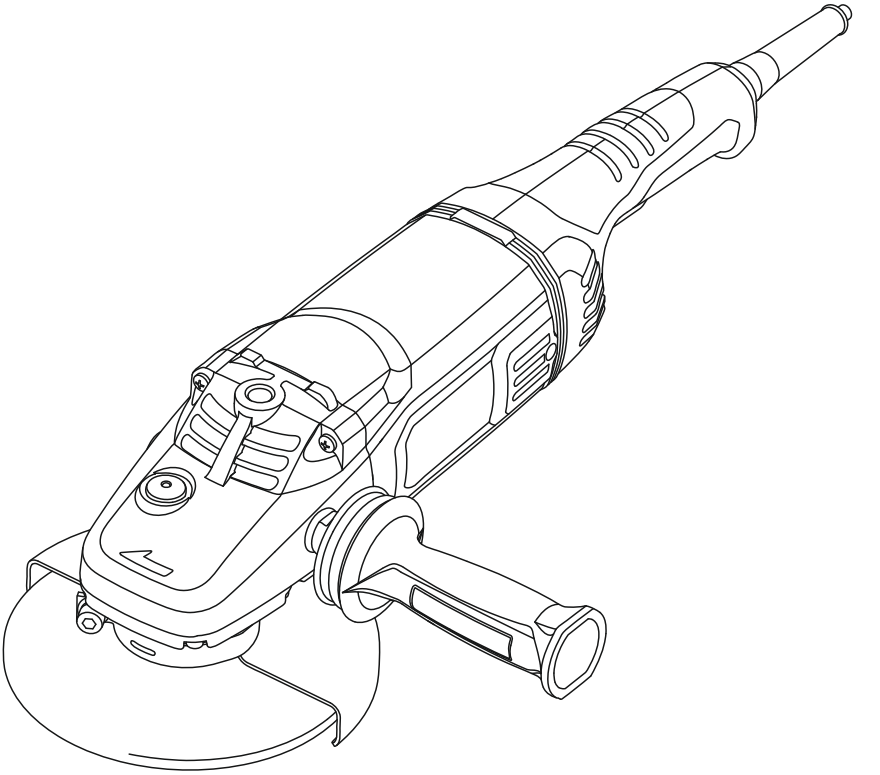
Models: 59502
59503



PROFESSIONAL TOOLS

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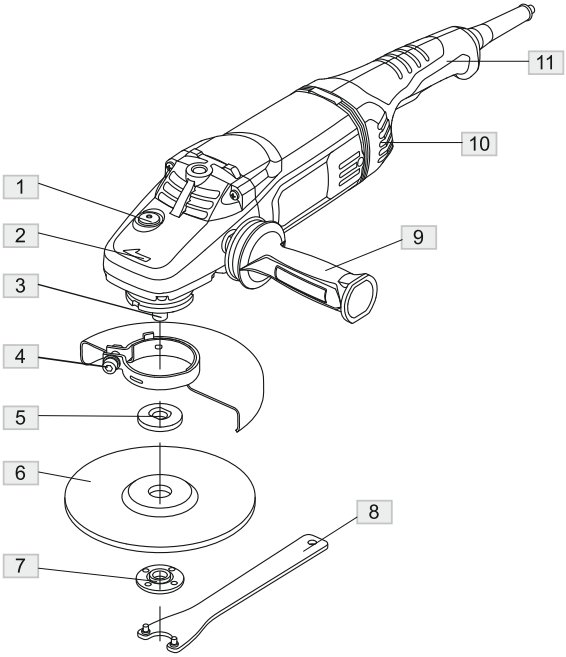
(BG) Инструкция за монтаж и експлоатация
(EN) Instruction for installation and use
(RO) Instrucțiune de instalare și utilizare
(SRB) Uputstvo za ugradnju i upotrebu
(HR) Uputstvo za ugradnju i upotrebu
(BIH) Uputstvo za ugradnju i upotrebu
(HU) Szerelési és kezelési utasítás
(SLO) Navodilo za vgradnjo in uporabo
(GR) Οδηγιεσ για την εγκατασταση και τη χρηση
(MK) Упатство за вградување и употреба
(SK) Návod na montáž a používanie
(PL) Instrukcja instalacji i użytkowania
(P) Instrução para instalação e uso
(IT) Istruzioni per l'installazione e l'uso

(BG) Ъглошлайф
(EN) Angle Grinder
(RO) Polizor unghiular
(SRB) Kutna brusilica
(HR) Uhlová brúska
(BIH) Kutna brusilica
(HU) Sarokcsiszoló
(SLO) Kotni brusilnik
(GR) Γωνιακός λειαντήρας
(MK) Мелелка за агол
(SK) Uhlová brúska
(PL) Szlifierka kątowa
(PT) Pebarbadora
(IT) Smerigliatrice Angolare

DESCRIPTION OF THE TOOL

1. MAIN PARTS

The grinder is intended for roughing, metal and stone materials.
Read, understand and follow all safety rules and instructions before using this tool.



1. Pin button
2. Direction
3. Spindle
4. Non-cutting Guard
5. Inner flange
6. Wheel
7. Outter flange
8. Spanner
9. Side handle(Grasping position)
10. Main handle rotate button(only for CIHQ type)
11. Main Handle(Grasping position)

	59502	59503
No load (/min)	6500	6500
Rated Input power (W)	2000	2400
Wheel diameter (mm)	180	230
Spindle screw thread	M14	M14
Weight (Kg)	5.5	5.6
Protect grade	⧈/II	⧈/II
Insulated grade	E	E
Electronic control		

Note1: Due to G★LAXIA TECH **'s continuing program of development, the specifications herein are subject of change without prior notice.**

Note2: The values given are valid for nominal voltages [U] of 220 V. For lower or higher voltages and models for specific countries, these values can vary.

GENERAL SAFETY RULES

⚠ **WARNING:** Read instructions. Failure to follow instructions listed below may result in electric shock, fire and/or serious personal injury. The term “power tool” in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.
Save instructions for consultation.

1. **WORK AREA**

1) Keep work area clean and well lit. Cluttered and 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.

2. **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 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.

3. **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 safety equipment. Always wear eye protection. Safety equipment such as a dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
3) Avoid accidental starting. Ensure the switch is in the off-position before plugging in. Carrying power tools with your finger on the switch or plugging in 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 that is 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 clothing, gloves and hair 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 that these are connected and properly used. Use of these devices can reduce dust-related hazards.
8) Use clamps or another practical way to support and secure the workpiece to a stable platform. Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
9) Do not use on a ladder or unstable support. Stable footing on a solid surface enables better control of the power tool in unexpected situations.

10) Keep handles dry, clean, and free from oil and grease. Slippery hands cannot safely control the power tool.

11) Always wear safety glasses with side shields. Everyday glasses may have impact resistant lenses, but they are not safety glasses. Following this rule will reduce the risk of eye injury.

12) Protect your lungs. Wear a face or dust mask if the operation is dusty. Following this rule will reduce the risk of serious personal injury.

13) Protect your hearing. Wear hearing protection during extended periods of operation. Following this rule will reduce the risk of serious person injury.

4. **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 or come away the battery box 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 tools 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 and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. Use of the power tool for operations different form intended could result in a hazardous situation.

8) Save these instructions. Refer to them frequently and use them to instruct others who may use this tool. If you lend this tool to someone else, also lend them these instructions.

5. **SERVICE**

1) Have your power tool serviced by a qualified repair person.

2) When servicing a power tool, use only identical replacement parts.

3) Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance instructions may create a risk of shock or injury.

ALL OF SAFETY RULES

CURRENT SAFETY WARNING

1. This power tool is intended to function as a grinder 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. Do not recommend use this power tool operations as sander, wire brush and so on. Used this power tool do besides appointed function will cause hazards and personal injuries.

3. 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.

4. 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 fly apart.

5. 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.
6. The arbor size of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool. Accessories with arbor 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.
7. Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pads for cracks, tear or excessive wear. If the power wool 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.
8. 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 work piece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
9. Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of the work piece or of a broken accessory may fly away and cause injury beyond the immediate area of operation. Contact with “live” wire will also make exposed metal parts of the power tool “live” and shock the operator.
10. Hold the power tool only by the insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own power cord. Contact with a “live” wire will also make exposed metal parts of the power tool “live” and shock the operator.
11. 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.
12. 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.
13. 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.
14. Regularly clean the air vents of the power tool. The fan of the motor will draw dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
15. Do not operate the power tool near flammable materials. Sparks could ignite these materials.
16. Do not use accessories that require coolants. Using water or other coolants may result in electric cauterization or electric shock.

ADDITIONAL SAFETY WARNING:

⚠ 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 the 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 your hands on the power tool and position your body and arm to allow you to resist kickback forces. Always use the auxiliary handle, for maximum control over kick- back or torque reaction during start-up. The operator can control torque reactions or kick back forces, if proper precautions are taken.
2. Never place your hand near the rotating accessory. The accessory may kickback over your hand.
3. Do not position your body in the area where the power tool will move if kickback occurs. Kickback will propel the tool in the direction opposite to the wheel's movement at the point of snagging.
4. Use special care when working sharp edges , sharp sides etc. Avoid bouncing and snagging the accessory. Sharp edges, sharp sides 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 or toothed saw blade. Such blades create frequent kickback and loss of control.

ADDITIONAL GRINDING SAFETY WARNING

1. Use only wheel types that are recommend for you power tool and the specific guard designed for the selected wheel. Wheel for which the power tool was not designed cannot be adequately guarded and are unsafe.
2. The guard must be firmly 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 and accidental contact with the wheel.
3. Wheels must be used only for recommended applications. For example: Do not grind with the side of a cut-off wheel. Side forces applied to these wheels may cause them to shatter.
4. 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.
5. Do not use worn down wheels from larger power tools. A wheel intended for a larger power tool is not suitable for the higher speed of a smaller tool and may burst.

USE CARE OF ANGEL GRINDER

1. The grinder is intended for grinding.
2. Avoid the wheel impact or force actions, if this condition occurs, stop the machine immediately and check the machine.
3. If there is considerable vibration or other defects are detected in operation, stop the machine immediately and check the machine to determine the cause.
4. When grinding metal, flying sparks are produced. Take care that sparks resulting from use do not hit persons.
5. Some dust created by power grinding contains chemicals known to birth defects. Do not work with materials containing asbestos.
6. Shorten the clean periods when working in dusty conditions.
7. The machine should only be used only for dry working.

WARNING: Some dust created by power Cutting contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

a) lead from lead-based paints

b) arsenics and chromium from chemically reacted lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment.

- Non-cutting Guard
- Side handle
- Spanner
- Flange

Be sure to check the accessories as it is subject to change by areas and models.

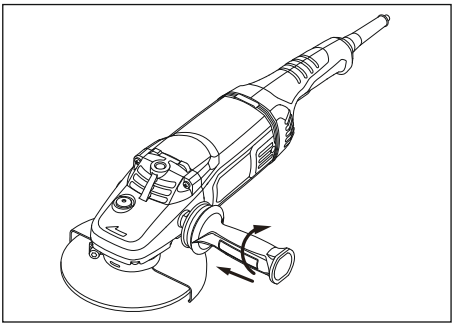
1. POWER SUPPLY

The power tool supply must match the nameplate date.

2. INSTALLING SIDE HANDLE

Thread side handle into side handle socket on desired position and tighten securely. Please use the side handle fully. (Must be used the side handle with true method (Only is restricted in 2817 and 2817.1 series types) when the wheel's diameter size is 125 mm).

3. ADJUSTING AND DISASSEMBLING GUARD

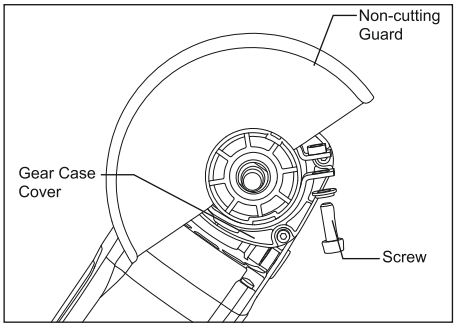


When you fit the guard, ensure that the prominence on the hoop of the guard coincides with the groove in the gear-case cover**.** Then turn the guard to the working position counter-clockwise**.** At last, tighten the bolt**.**

(Click to the instructions in the direction for the installation, contrary to the disassembly.)

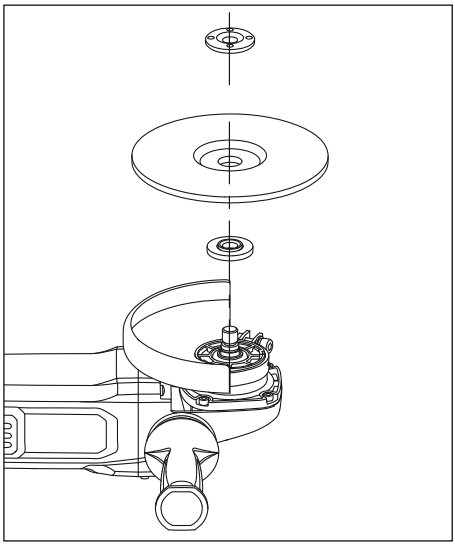
Before operation , be sure that the guard is fixed securely. Loosen the fixing screw , the guard can be adjusted to desired position , tighten the fixing screw firmly to fix the guard in the position.

4. MOUNTING WHEEL



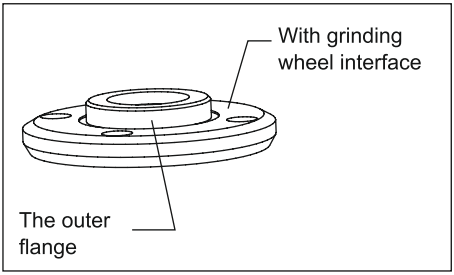
⚠ WARNING**:** Only use grinding wheels with maximum safe operating speed rated at or above 80m/s. Never use damaged or imbalance grinding wheels.

1) In the spindle (3) completely static situation, Lock it by pressing the spindle lock button (1).



2) Slip the inner flange (5) onto spindle and the side of "O" Ring towards outside, wheel (6) loaded withstood the inner flange. Then have the thread on flange (7) screw together to the spindle (Pays attention to the outer flange the installment direction following

chart to show : When installment grinding wheel uses the different surface contact piece).



3) Check the compatibility of the wheel (6) and flange, no clearance is allowed. Then tighten the outer flange (7) with the spanner (8).

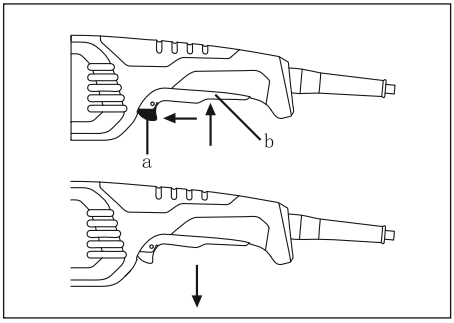
4) Unplug the spanner (8) and loosen the spindle lock button (1).

5. SWITCH ON AND OFF

⚠ WARNING: To reduce the risk of injury, to make sure you can control the switch freely and keep it off before plugging grinder.

The switch includes the lock button a and the trigger b. The lock button must be pressed to activate the trigger, which will avoid accidental starting the machine.

1) ON: Push the lock button and depress the



trigger.

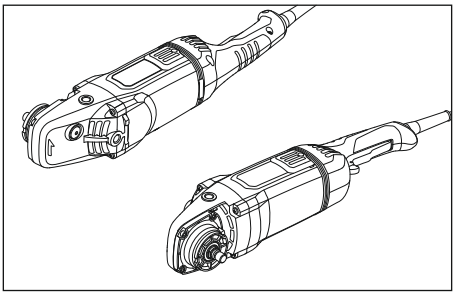
2) OFF: Depress and release the trigger

3) Only move the work piece after starting the tool.

4) Once the safety brush worn, grinder is designed to be turned off automatically.

5) Running the tool no loaded for at least 1 minute in a protection area when using the new wheel for the first time.

6. TURNING GEAR BOX



1) Take off four bolts connecting gear box and housing.

2) Turn the gear box to left 90 or right 90 in the gear case wasn't unsheathe condition. (NOTE: If the distance between gear box and housing is more than 2mm, have repaired at your nearest Authorized Service Center).

3) Reassembly the four bolts，after and screws tight guarantees the bolt not slippery tooth.

7. Pivotable main handle

⚠ Only work with the main handle (10) engaged.

1) Push in the button (10).

2) The main handle (11) can now be turned 90°to both sides and be engaged.

3) Make sure that it is securely positioned： the main handle(11) must be engaged and it should not be possible to move it.

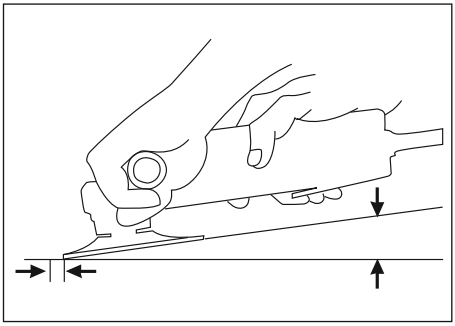
APPLICATION

⚠ WARNING: To reduce the risk of injury, electric shock and damage to the tool, before any work check the utility lines electricity, gas or water supply line are hidden in the work area.

⚠ WARNING: Firmly grasp primary hold part of tool and side handle before starting.

1. GRINDING APPLICATION

1) When grinding, keep a 15 angle between the wheel and the work piece, the best grinding results can be achieved with part contact.



2) For avoid the work piece will not overly heat up nor discolor and no ridges will be formed, move the machine back and forth with moderate pressure.

3) **Never use cut-off wheel to grind work piece.**

4) Always hold the tool properly so that sparks and grinding dust fly away from the body.

⚠ **WARNING: Sparks generated when grinding metal. Take care that no combustible material presented in the area of flying sparks.**

TOOL MAINTENANCE

⚠ **WARNING: Before any work on the machine itself, pull the power plug.**

1. **Avoid the tool vibration or impact, and keep it from oil and grease.**
2. **Inspect bolts periodically.** If the bolts loosen, tighten them immediately, or will result in serious accident.
3. **Inspect tool cords periodically.** If damaged, have repaired at your nearest Authorized Service Center**.** This tool was used with the power cord as a particular structure, don't replace the power cord without authorization, such as replacement, please go to the Authorized Service Center**.**
4. **Keep the rents clean.** Clean all parts of the tool, clean dust periodically**.** To prevent debris entry**.**
5. **Change the brush.** Inspect and change the brush by Authorized Service Center to ensure safety operation and long use life.
6. **All service MUST only be performed by Authorized Service Center.** ALWAYS use only accessories that are recommended for this tool**.**
7. **Cleanliness.** Avoid the use of plastic cracks caused by damage to the solvent. Use clean cloths and mild soap to clean the plastic housing**.**

ENVIRONMENT PROTECTION

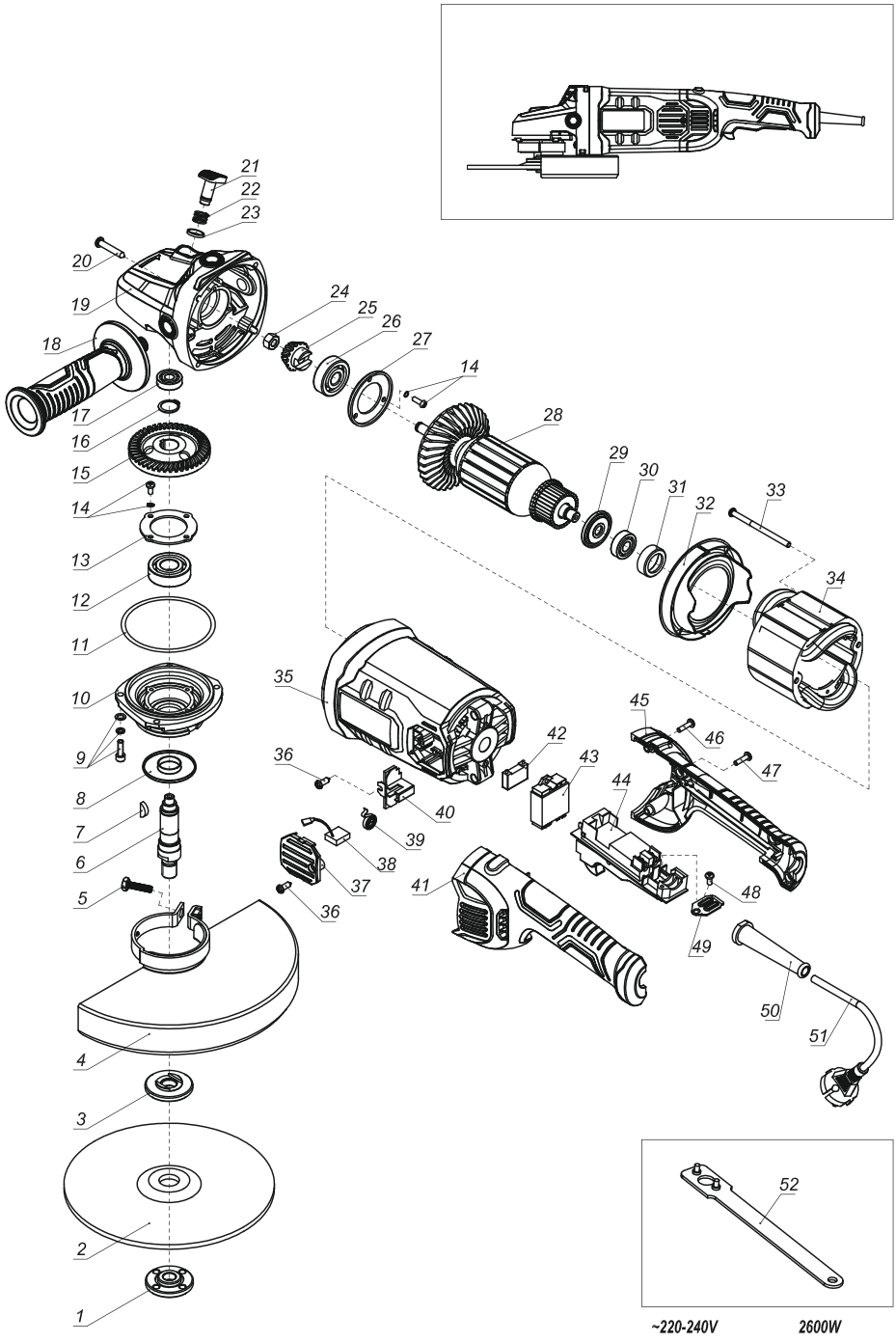
1. Tool, accessories and packaging should be sorted for environment-friendly recycling.
2. Power tools and accessories at the end of their service life still contain large amounts of valuable raw materials and plastics which can likewise be fed back into a recycling process.
3. Some dust created by working contains harmful chemicals must be collected by special garbage recycle site.

SERVICE

1. In case of guarantee, repair or purchase of replacement parts, always contact the qualified service center. And supplied with the efficient service card and invoice.
2. It is without the scope of guarantee when the tool was normal wear, overload or improper use of damage.

Problem Shooting

Problems	Reasons	Ways to Solve The Problems
1. The motor stops running	1. Unconnected to power source	1. Connect to power source
	2. Plugs not fully connect	2. Check all plugs
	3. Switch out of work	3. Replace or repair the switch
	4.Brushs not touch the commutator	4. Replace the brushs with two new ones
2. Running slowly (Not running) with the noise at the beginning of power turn-on	1. Switch out of work	1. Replace or repair the switch
	2. Mechanical trouble	2. Check mechanical parts
3. Commutator sparkle	1. Armature short circuit	1. Repair the armature
	2. Poor connection between the brush and the commutator	2. Replace it with a new one
	3. Commutator surface not smooth	3. Clean the commutator surface
4. Running slowly with the noise in process of working	1. Grinding wheel worn out	1. Replace it with a new one
	2. Grinding wheel touched reinforcing steel bar	2. Chose another work place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2600W

No.	Part Name
1	Flange unt
2	Grinding wheel
3	Flange
4	Grinding wheel cover
5	Screw
6	Spindle
7	Wood ruff-key
8	Dust cover
9	Screw
10	Front cap
11	O ring
12	Bearing
13	Front cap bearing clamp
14	Screw
15	Gear
16	Check ring
17	Bearing
18	Handle -F
19	Head shell
20	Screw
21	self-lock pin
22	Self-lock pin spring
23	Check ring
24	nut
25	Pinion
26	Bearing
27	Head shell bearing cover
28	Armature
29	Dust ring
30	bearing
31	bearing sleeve
32	Fan guide
33	Screw
34	stator
35	housing
36	screw
37	Brush cover
38	Carbon brush
39	Coil spring
40	carbon brush holder
41	left handle
42	Capacitance
43	Soft start
44	Switch
45	right handle
46	screw
47	screw
48	screw
49	Cord clamp
50	Cord armor
51	Cord plug
52	Spanner

ELMARK®

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