

NANO POLISHER



Part list

NO.	Name	Qty	NO.	Name	Qty
1	Protection cover	1	15	Motor bracket	1
2	Output shaft	1	16	Motor	1
3	Bearing	1	17	Trigger	1
4	Steel ball	1	18	Trigger spring	1
5	Gear	1	19	Locking piece	1
6	Jump ring	1	20	Locking spring	1
7	Bearing	1	21	Locking cap	1
8	Gear shaft	1	22	Switch	1
9	Bearing	1	23	Casing fastener	1
10	Check ring	1	24	Speed controller	1
11	Bearing	1	25	Battery connector	1
12	O ring	1	26	Lithium battery	1
13	Motor coupling sleeve	1	27	Machine casing	2
14	Screw	2	28	Screw	11

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) **Battery tool use and care**
 - a) **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
 - b) **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
 - c) **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
 - d) **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

- 6) **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.

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

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

- a) **Maintain a firm grip on the 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 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 toss of control.



Figure 4

Reinstall No.5 protection cover



Figure 5

Insert No.11 wrench into No.9 flat square shaft, and then rotate No.10 polishing pad. This way you can easily install all the polishing heads



Figure 6

If you have trouble removing the polishing joint, please try using two wrenches to solve the problem. Insert No.11 wrench into the No.7 output shaft for fixation and rotate another No.11 wrench to remove the polishing joint.

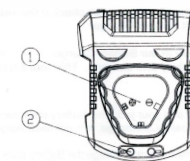


Figure 7

Warning : Be sure to disconnect the power when installing or replacing the polishing head.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE REFERENCE

FUNCTIONAL DESCRIPTION



Specification		
Part	Description	Function
1	Recharging Seat	Seat for tool recharging
2	Charger indicator	Shows the charging status

TECHNICAL SPECIFICATIONS FOR MACHINE

TYPE	Machine
Voltage	12V
Speed/rpm	2500~5500r/min
Power	80W
Battery life (min)	About 60minutes without load

TECHNICAL SPECIFICATIONS FOR BATTERY

TYPE	Battery
Voltage	12V
Output Amps(A)	2.0Ah
Charging time	About 65 minutes

TECHNICAL SPECIFICATIONS FOR CHARGER

TYPE	Charger
Input voltage	220-240V~
Input frequency(Hz)	50-60Hz
Voltage	45W
Output voltage	12.6V
Charge current	Max 2.4A

Safety instruction for chargers and battery

Important Safety Instructions

WARNING: read all safety warnings and instructions
Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

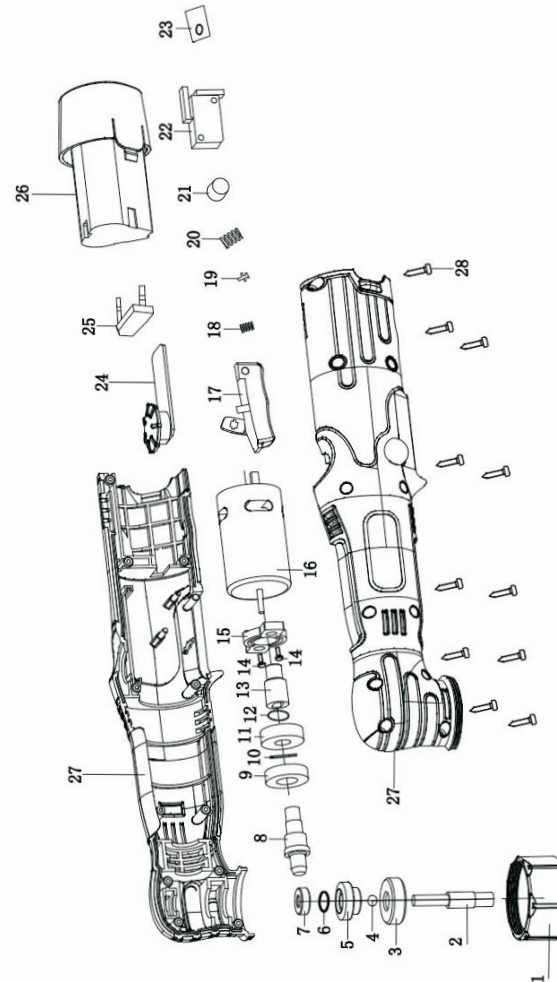
Before using the battery operated tool and charger, read this Operator's Manual, your tool Operator's Manual and all labels on the battery tool and charger.

Summary of device labels containing safety information			
	WARNING: To reduce the risk of injury, user must read instruction manual	Hz	Hertz
	CE mark for EU market	A	Ampere
	Volts Direct current		For Indoor Use Only
	Double insulated (Class II)		Do not dispose with household rubbish
W	Watt		

WARNING

- **To reduce the risk of injury.** Only use the factory's LI-ION battery charger to charge the LI-ION battery its. Other types of chargers may cause personal injury or damage. Battery tool and charger are not compatible with NiCd systems. Do not wire a battery tool to a power supply plug or car cigarette lighter. Battery tool will be permanently disabled or damaged.
- **Avoid dangerous environments.** Do not charge battery tool in rain, snow, damp or wet locations. Do not use battery tool or charger in the presence of explosive atmospheres (gaseous fumes, dust or flammable materials) because sparks may be generated when inserting or removing battery tool, possibly causing fire.
- **Charge in a well ventilated area.** Do not block charger vents. Keep them clear to allow proper ventilation. Do not allow smoking or open flames near a charging battery tool. Vented gases may explode.
- **Maintain charger cord.** When unplugging charger, pull plug rather than cord to reduce the risk of damage to the electrical plug and cord. Never carry charger by its cord. Keep cord from heat, oil and sharp edges. Make sure cord will not be stepped on, tripped over or subjected to damage or stress. Do not use charger with damaged cord or plug. Have a damaged cord replaced immediately.
- **Charger is rated for 100-240 Volt AC.** For technical data refer to the label of LI-ION Battery Charger. Charger must be plugged into an appropriate receptacle.
- **Unplug charger when not in use.** Remove battery tool from the unplugged charger.
- **To reduce the risk of electric shock,** always unplug charger before cleaning or maintenance. Use a Ground Fault Circuit Interrupter (GFCI) to reduce shock hazards.
- **Do not burn or incinerate tool battery pack.** Battery pack may explode, causing personal injury or damage. Toxic fumes and materials are created when battery pack is burned.
- **Do not crush, drop or damage tool battery pack.** Do not use a tool battery pack or charger that has received a sharp blow, been dropped, run-over, or damaged in any way (e.g. pierced with a nail, hit with a hammer, stepped on).
- **Do not disassemble.** Incorrect reassembly may result in the risk of electric shock, fire or exposure to battery chemicals.
- **Battery chemicals cause serious burns.** Never allow contact with skin, eyes or mouth. If a damaged tool battery pack leaks battery chemicals, use rubber or neoprene gloves to dispose of it. If skin is exposed to battery fluids, wash with soap and water and rinse with vinegar. If eyes are exposed to battery chemicals, immediately flush with water for 20 minutes and seek medical attention. Remove and dispose of contaminated clothing.
- **Do not short circuit.** A battery operated tool's battery pack will short circuit if a metal object makes a connection between the positive and negative contacts on the tool's battery pack. Do not place a battery operated tool near anything that may cause a short circuit, such as coins, keys or nails. A short circuited battery tool pack may cause fire and personal injury.
- **Store your battery operated tool and charger in a cool, dry place.** Do not store the tool's battery pack where temperatures may exceed 50°C (120°F) such as in direct sunlight, a vehicle or metal building during the summer.

Explosive view



⚠ WARNING: to reduce the risk of injury or explosion, never burn or incinerate a tool's battery pack even if it is damaged, dead or completely discharged. When burned, toxic fumes and materials are created.

⚠ WARNING: before connect the cable to the electric socket check if the voltage of the electric socket coincides with the Voltage specified in the label of LI-ION Battery Charger

⚠ WARNING: charge LI-ION Battery pack only in our Battery Charger
Other types of batteries may cause personal injury and damage. This tool's battery pack and charger are not compatible with NiCd or NiMH systems.

When to charge

Charge your battery tool when convenient for you and your job. The Battery pack does not develop "memory" when charged after only a partial discharge. It is not necessary to run down the battery tool pack before placing it on the charger.

Use the led Battery pack lever in dication to determine when to charge the Battery pack:

- * GREEN: from 100% to 50% batteries charge
- * YELLOW: from 50% to 20% batteries charge
- * RED: from 20% to 0% batteries charge
- * RED BLINKING: 0% battery charge: the tool does not start

How to charge

Plug the charger into the power supply socket: the green light will firmly turn on (stand by). Insert the charger connector into the battery pack and the red light will turn on.
A fully discharged battery pack with an internal temperature in the normal range will charge normally. If overheating occurs, wait for it to cool before recharging.

After charging is complete, the green light will firmly turn on. The charger will keep the battery operated tool fully charged if it is left on the charger. If the charger is green all the time (over 60 minutes), the battery pack is damaged, please contact the franchiser.

Maintenance and storage

⚠ WARNING: to reduce the risk of injury, always unplug the charger before performing any maintenance. Never disassemble the battery pack, the tool or charger. Contact a service facility for all repairs.

To reduce the risk of injury and damage, never immerse your battery pack, tool or charger in liquid or allow a liquid to flow inside them.

Cleaning: Clean out dust and debris from charger vents and electrical contacts by gently blowing with compressed air; wearing appropriate dust mask taking consideration of the type of material having been worked.
Only use a mild soap solution on a damp cloth to clean the battery tool and charger, keeping away from all electrical contacts. Other cleaners may contain chemicals that could cause damage to the plastic and other insulated parts. Some of these include gasoline, turpentine, lacquer thinner, chlorinated cleaning solvents, ammonia, and household detergents containing ammonia. Do not use flammable or combustible solvents (refer to previous instructions) around battery pack, tool and charger.

Storage: Store battery charger at room temperature away from moisture. Do not store in damp locations where corrosion of terminals may occur.

As a general practice, it is better to unplug the battery charger and remove the battery pack when not in use. No battery damage will occur, however, if the battery pack is left plugged in the charger.

FAILURE TO START

In a case of failure to start: check to make sure the prongs on the cord plug are making good contact in the outlet; check if the current is present in the plug. Also, check for blown fuses or open circuit breakers in the line.

HEALTH AND SAFETY INFORMATION

Device Safety Compliance

The Battery Charger is CE marked for conformity to European Low Voltage and EMC directive regulations - refer to Declaration of Conformity for details.

WEEE Compliant

At the end of its useful life, this product pursuant to European Directive 2012/19/EU and its implementation in national law, must not be released into the environment or thrown away as domestic waste, but must be disposed of an authorized recycling centers.



Operating steps

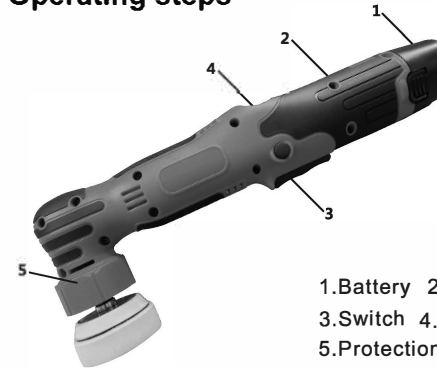


figure 1

- 1.Battery 2.Casing
- 3.Switch 4.Speed controller
- 5.Protection cover



Figure 2

Remove No.5 protection cover as shown in figure 3



Figure 3

Insert No.11 wrench into No.7 output shaft, then rotate No.8 eccentricity seat to install the entire eccentric part as shown in figure 4