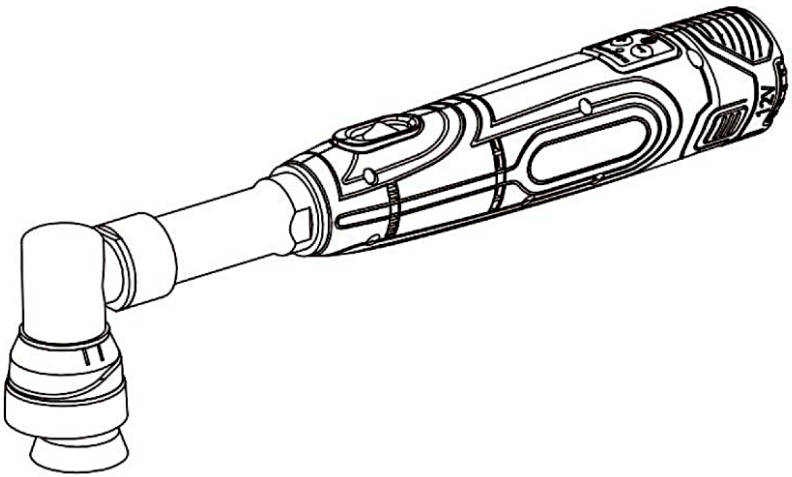
EN

Cordless Mini Polisher
NTools NANO BP3550



Contents of the Package

No.	Name	Number of Pieces
1	NTools NANO BP3550 Cordless Mini Polisher	1
2	Li-Ion (lithium-ion) rechargeable battery pack	2
3	Li-Ion battery pack charger	1
4	Velcro work wheel Ø35 / M6x1	1
5	Velcro work wheel Ø50 / M6x1	1
6	3 mm eccentric cam with counterweight	1
7	12 mm eccentric cam with counterweight	1
8	Straight connector for rotary work	1
9	Flat spanners	2
10	Operating instructions	1
11	Case for transport and safe storage	1

GENERAL SAFETY WARNINGS FOR POWER TOOLS
WARNING!
Read all safety warnings and all indications. Failure to follow warnings and indications may result in shock, fire and/or serious injury. Keep all warnings and indications for future reference. The term 'power tool' in the warnings refers to a wired mains-powered device or a cordless battery-powered device.
1) Workplace safety
a) Keep the work area clean and well lit. Littered or dark areas are conducive to accidents.
b) Do not use power tools in explosive atmospheres, for example in the presence of flammable liquids, gases or dust. Power tools can produce sparks that can ignite dust or fumes.
c) Keep children and bystanders away when working with the power tool. Distractions can cause loss of control.
2) Electrical safety
a) Power tool plugs must fit into a socket. Never modify the plug in any way. Do not use any adapters with grounded power tools. Unmodified plugs and matching sockets will reduce the risk of electric shock.
b) Avoid body contact with earthed surfaces such as pipes, radiators, cookers and fridges. There is an increased risk of electric shock if your body is grounded or earthed.
c) Do not expose power tools to rain nor moisture. Water entering a power tool increases the risk of electric shock.
d) Do not abuse the cord. Never use the cord to carry, pull nor disconnect a power tool. Keep the cord away from heat sources, oil, sharp edges or moving parts. Damaged or tangled wires increase the risk of electric shock.
e) When using a power tool outdoors, use an extension cord designed for outdoor use. Using a cord suitable for
d) Keep unused power tools out of the reach of children and do not allow anyone unfamiliar with a power tool or these instructions to operate power tool. Power tools are dangerous in the hands of untrained users.
e) Maintenance of power tools. Check for misalignment or jamming of moving parts, cracks in parts and any other conditions that may affect the performance of a power tool. If damaged, return the power tool for repair 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 jam less often and are easier to control.
g) Use a power tool, accessories, tool bits, etc. observing these instructions, taking into account the working conditions and the type of work to be done. Using the power tool for operations other than those intended may cause a dangerous situation.
5) Use and care of the cordless tool
a) Charge with the charger indicated by the manufacturer only. A charger that is suitable for one type of a battery pack may create a risk of fire when used with another battery pack.
b) Use power tools only with specifically designated batteries. The use of other batteries may present a risk of injury and fire.
c) When the battery pack is not in use, keep it away from other metal objects such as paper clips, coins, keys, nails, screws or other small metal objects that can make a connection between one terminal and the other. Short-circuiting battery pack terminals can cause burns or fire.
d) Liquid may escape from a battery pack under inappropriate conditions; avoid contact with it. In the case of accidental contact, flush with water. In the event of a liquid getting into eyes, seek medical

outdoor use reduces the risk of electric shock.
f) If it is unavoidable to work with a power tool in a damp place, use it with a power supply protected by a residual current device (RCD). Using an earth leakage circuit breaker reduces the risk of electric shock.
3) Personal safety
a) Stay alert, pay attention to what you are doing and use common sense when operating a power tool. Do not use a power tool when you are overtired or under the influence of drugs, alcohol or medication. A moment's inattention while operating a power tool can cause serious injury.
b) Wear personal protective equipment. Always wear safety goggles. Protective equipment such as a dust mask, non-slip safety shoes, safety helmet or hearing protectors used under appropriate conditions will reduce injury.
c) Prevent unintentional start-up. Make sure the switch is in the off position before connecting to a power source and/or battery pack, picking up or carrying. Carrying power tools with your finger on the switch or powering power tools that have the switch on is conducive to accidents.
d) Remove the setting key or spanner before switching the power tool on. A spanner left on a rotating part of a tool can cause injury.
e) Do not overdo it. Maintain proper posture and balance at all times. This allows better control of the power tool in unexpected situations.
f) Dress appropriately. Do not wear loose clothing nor jewellery. Keep hair, clothing and gloves away from moving parts. Loose clothing, jewellery or long hair can be caught by moving parts.
g) If devices are provided for the connection of dust extraction and collection, ensure that these are connected and working properly.
4) Use and care of power tools used. The use of a dust collector can reduce dust hazards.
a) Do not use a power tool by force. Use a right power tool for your task. The right power tool will do the job better and safer at the rate for which it was designed.
b) Do not use a power tool if the switch does not switch it on nor off. Any power tool that cannot be controlled by the switch is hazardous and must be repaired.
c) Disconnect the plug from the power source and/or battery pack from the power tool before making any adjustments, changing accessories or storing the power tool. Such precautionary safety measures reduce the risk of accidentally starting the power tool.

attention, too. Liquid escaping from a battery pack may cause irritation or burns.
6) Service
a) Have the power tool serviced by a qualified service technician using only identical spare 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 associated warnings
Kickback is a sudden reaction to a jammed or snagged rotating disc, backing plate, brush or other equipment. The jamming or snagging causes the rotating attachment to stop quickly, which in turn causes an uncontrolled tool to be pushed in the direction opposite to the rotation of the attachment at the point of jamming. For example, if an abrasive wheel is caught or pinched by the workpiece, the edge of the wheel entering the point of jamming may penetrate the surface of the material, causing the wheel to slide out or away. The wheel may jump towards or away from the operator, depending on the direction of wheel movement at the jamming point. Abrasive discs can also break under these conditions. Kickback is the result of improper use of a tool and/or incorrect operating procedures or conditions and can be avoided by taking appropriate precautions below.
a) Hold the tool firmly and position your body and arm to resist the forces of a kickback. Always use an auxiliary handle, if available, to gain maximum control of a kickback or torque response during start-up. The operator can control the torque reaction or kickback forces if appropriate precautions are taken.
b) Never bring your hand close to a rotating accessory. The accessory may a kickback of your hand.
c) Do not position your body in an area where a tool will move if a kickback occurs. A kickback will cause the tool to be rejected in the direction opposite to the movement of the disc at the jamming point.
d) Take extra care when working in corners, sharp edges, etc. Avoid bouncing and snagging the accessory. Corners, sharp or bouncing edges tend to catch a rotating accessory and cause loss of control or kickback.
e) Do not attach a chainsaw for wood carving or a toothed saw. Such blades cause frequent kickback and loss of control.

Safety instructions for chargers and batteries
Important safety instructions

WARNING: Read all warnings and safety instructions. Failure to follow warnings and instructions may result in electric shock, fire and/or serious injury. Before using a battery-powered tool and charger, read this operating instructions, the tool operating instructions and all other labels on the battery pack and charger.

Summary of equipment labels containing safety information			
	WARNING: To reduce the risk of injury, the user must read the operating instructions	Hz	Hertz
	CE mark for the EU market	A	Ampere
V ⎓	DC voltage		For indoor use only
	Second class protection with primary and secondary insulation		Do not dispose of with domestic waste
W	Watt		

WARNING

▪ To reduce the risk of injury, use only the factory Li-Ion battery pack charger to charge the Li-Ion battery pack. Other types of chargers may cause personal injury or property damage. The rechargeable tool and charger are not compatible with NiCd systems. Do not connect the rechargeable tool to a power plug or a cigarette lighter. The rechargeable tool will be permanently disabled or damaged.
▪ Avoid hazardous environments. Do not charge the rechargeable tool in rainy, snowy, damp or wet conditions. Do not use a rechargeable tool or charger in explosive atmospheres (gas fumes, dust or flammable materials) as sparks may be generated when inserting or removing a battery pack in or from a rechargeable tool, which may cause a fire. Charge in a well-ventilated area. Do not block charger ventilation openings. Keep them clean to allow adequate ventilation. Do not allow smoking nor open flames near a charging battery tool. Released gases may explode.
▪ Maintain charger cable properly. When disconnecting a charger, pull the plug, not the cord, to reduce the risk of damage to the plug and the power cord. Never carry the charger holding it by its cord. Protect the cord from heat, oil and sharp edges. Make sure the cord will not be stepped on, tripped over or subjected to damage or stress. Do not use the charger with a damaged cord or plug. Replace a damaged cord immediately. The charger is suitable for 100–240 V AC voltage. Please refer to the label of the Li-Ion charger for technical specifications. The charger must be plugged into a suitable socket.
▪ Unplug the charger when not in use. Remove the rechargeable tool from a disconnected charger. To reduce the risk of electric shock, always disconnect the charger before cleaning or maintenance. Use Ground Fault Circuit Interrupter (GFCI) protection to reduce the risk of electric shock.
▪ Do not burn nor incinerate the battery pack that powers the tool. The battery pack may explode, causing injury or damage. Burning the battery pack produces toxic fumes and materials.
▪ Do not crush, drop nor destroy the tool's battery pack. Do not use the tool battery pack or charger that has been hit hard, dropped, run over or damaged in any way (e.g., pierced by a nail, hit with a hammer, stepped on).
▪ Do not disassemble. Incorrect reassembly may result in a risk of an electric shock, fire or contact with battery pack chemicals.
▪ Battery pack chemicals cause severe burns. Never allow contact with skin, eyes nor mouth. If battery pack chemicals are leaking from a damaged battery pack, remove them with rubber or neoprene gloves. If your skin is

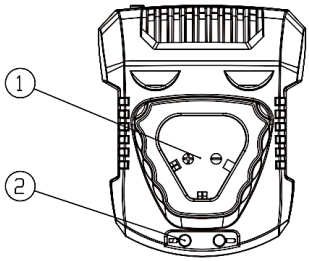
exposed to battery pack fluids, wash with soapy water and rinse with vinegar. If your eyes come into contact with battery chemicals, flush immediately with water for 20 minutes and seek medical advice. Remove and discard contaminated clothing.

▪ Do not short circuit. The battery pack from a battery-powered tool will short-circuit if a metal object comes into contact with the positive and negative terminals of the battery pack at the same time. Do not place a battery-powered tool near objects that can cause a short circuit, such as coins, keys or nails. Short-circuiting the battery pack in a tool can cause fire and injury.

▪ Store the rechargeable tool and charger in a cool, dry place. Do not store the tool's battery pack where the temperature may exceed 50°C (120°F), such as in direct sunlight, in a vehicle or in a metal building in summer.

READ AND RETAIN ALL INSTRUCTIONS FOR FUTURE REFERENCE

FUNCTIONAL DESCRIPTION OF THE CHARGER



Specifications		
Part	Description	Functionality
1	Charging socket	For connecting the charger plug
2	Charger indicator light	Indicates charging status

TECHNICAL SPECIFICATIONS OF THE TOOL	
Voltage	12 V
Rotational speed	2,500–6,000 RPM
Power output	80 W
Battery pack life (no load)	60 minutes
BATTERY PACK SPECIFICATIONS	
Type	Li-Ion (lithium-ion) rechargeable battery pack
Voltage	12 V
Capacity	2.0 Ah
Charging time	Approx. 45 minutes
CHARGER SPECIFICATIONS	
AC input voltage	100–240 V AC
Input frequency	50–60 Hz
Power output	25 W
Output voltage	12.6 V
Charging current	Max. 2.4 A

WARNING: To reduce the risk of injury or explosion, never set fire to or burn the tool's battery pack, even if it is damaged, dead or completely discharged. Burning produces toxic fumes and materials.

WARNING: Before connecting the power cord to an electrical socket, check that the voltage at the electrical socket corresponds to the voltage shown on the label of the Li-Ion charger.

WARNING: Charge the lithium-ion battery in our charger only. Other battery pack types may cause injury and damage. The battery pack and charger of this tool are not compatible with NiCd or NiMH systems.

When to charge?
Charge your rechargeable tool when it is convenient for you and your work. Battery packs do not develop 'memory' when charged after a partial discharge. It is not necessary to discharge the battery pack before placing it in the charger. Use the battery pack LED indicator to determine when to charge the battery:
GREEN: from 100% to 50% battery pack charge capacity
YELLOW: from 50% to 20% battery pack charge capacity
RED: from 20% to 0% battery pack charge capacity
RED FLASHING: 0% battery pack charge capacity: tool does not start.

How to charge?
Plug the charger into a power socket: the green indicator light will be permanently on (standby). Insert the battery pack and the red light will switch 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 down before charging again. When charging is complete, a strong green indicator light will switch on. The charger will ensure that the rechargeable tool is fully charged if the battery pack is left in the charger. If the charger glows green all the time (more than 60 minutes), the battery pack is defective — contact your dealer.

Maintenance and storage.

WARNING: To reduce the risk of injury, always disconnect the charger before carrying out any maintenance work. Never disassemble the battery pack, tool nor charger. Contact a service centre for all repairs. To reduce the risk of injury and damage, never immerse the battery pack, tool or charger in a liquid or allow liquid to enter them.

Cleaning.
Remove dust and debris from the charger ventilation openings and electrical contacts by gently blowing with compressed air; wear a suitable dust mask that takes into account the type of material being worked on. Use only a mild soap solution on a damp cloth to clean the cordless tool and charger, away from any electrical contacts. Other cleaners may contain chemicals that can damage plastic and other insulated parts. Some of these include petrol, turpentine, lacquer thinner, chlorinated cleaning solvents, ammonia and household detergents containing ammonia. Do not use flammable nor combustible solvents (see previous indications) around the battery pack, tool and charger.

Storage.
Store the charger at room temperature, away from moisture. Do not store in damp areas where corrosion can occur on terminals. As a general practice, it is better to disconnect the charger and remove the battery pack when not in use. However, there will be no damage to the battery if the battery remains connected to the charger.

START ERROR
In the event of a failure to start: check that pins of the cable plug make good contact with a socket; check that there is current in the plug. Also check that there are no blown fuses or open circuit breakers in a line.

HEALTH AND SAFETY INFORMATION

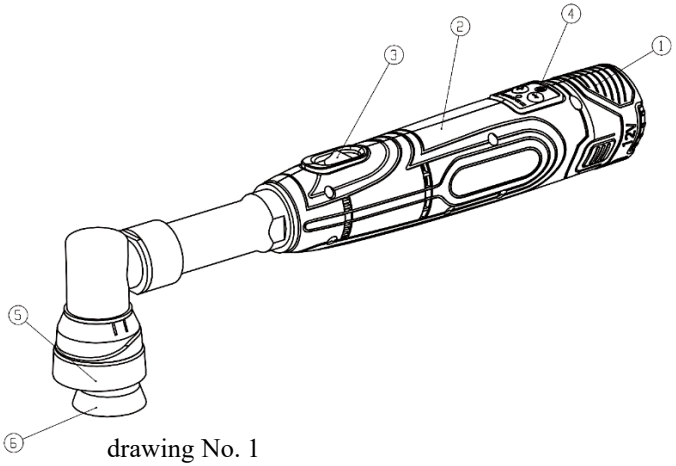
Compliance with appliance safety regulations

The battery charger bears the CE mark confirming compliance with the European Low Voltage and Electromagnetic Compatibility (EMC) regulations. Please refer to the Declaration of Conformity for details.

Compliance with the WEEE Directive.

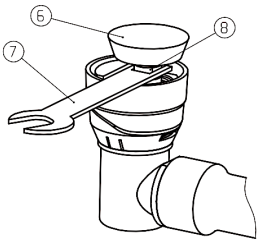
This product, at the end of its useful life, in accordance with the European Directive 2012/19/EU and its implementation into national law, must not be released into the environment nor disposed of as household waste, but must be disposed of at authorised recycling facilities.

Manipulators, work disc attachment and gear changes from rotation to eccentric.



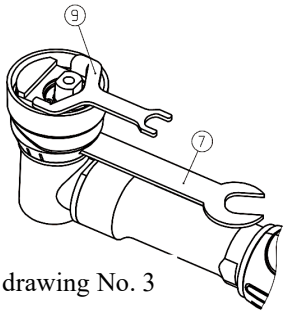
drawing No. 1

1. Li-Ion rechargeable battery
2. Body
3. Switch
4. Speed controller
5. Gearbox cover
6. Velcro-type working disc



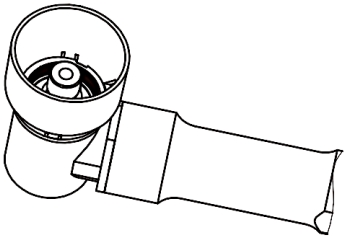
drawing No. 2

Insert spanner No. 7 into the notch in the small shaft work disc holder No. 8 and then unscrew work disc No. 6 by hand as shown in figure No. 2.

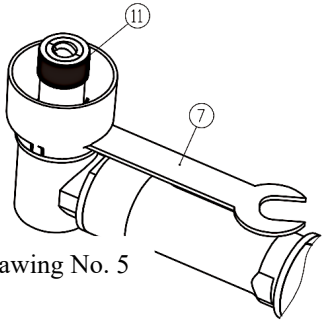


drawing No. 3

Insert spanner No. 9 into the notch of the 12 mm eccentric socket and then insert spanner No. 7 into the notch of the drive shaft and remove the large eccentric so that the drive looks as shown in figure No. 4.

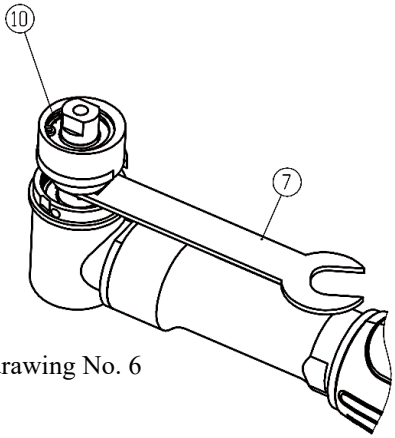


drawing No. 4



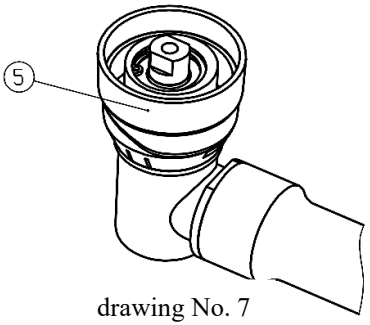
drawing No. 5

Insert spanner No. 7 into the notch on the drive shaft and remove the rotating assembly No. 11 by hand to install another assembly such as an eccentric.



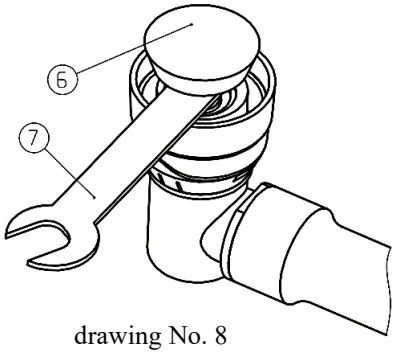
drawing No. 6

Insert spanner No. 7 into the notch on the drive shaft and lock it in place. Then manually unscrew the 3 mm eccentric with the work disc holder — item No. 10. Assemble the second large 12 mm eccentric or the rotary work disc holder onto the drive shaft thread in the reverse of the removal as shown in picture No. 6.



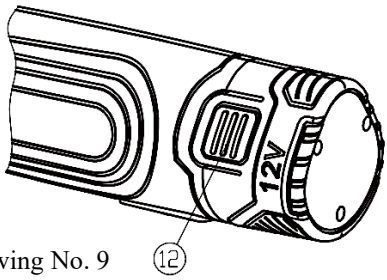
drawing No. 7

Place the protective cover No. 5 on the aluminium head cover and engage its locks, as shown in Figure No. 7.



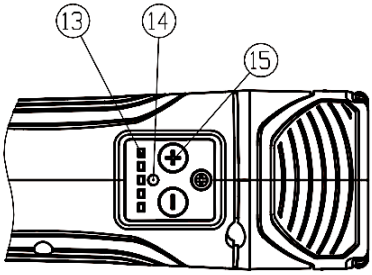
drawing No. 8

Insert spanner No. 7 into the notch in the work disc holder and then unscrew work disc No. 6 by hand.



drawing No. 9

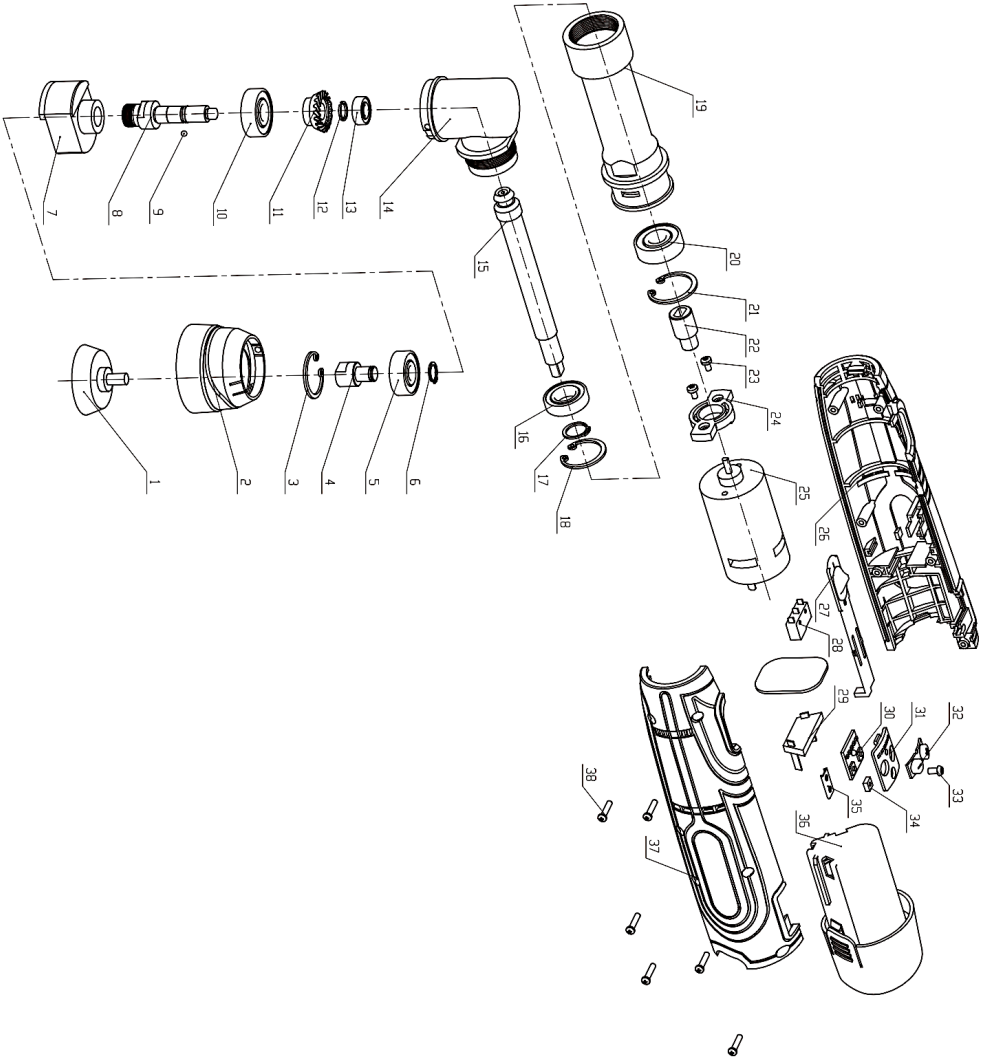
Battery lock button.



drawing No. 10

No. 13 — speed control indicator.
No. 14 — power indicator.
No. 15 — speed increase or decrease button.

Construction diagram of the NTools NANO BP3550 mini polisher.



Parts list of the NTools NANO BP3550 mini polisher.

Part No.	Part name	Quantity
1	Velcro work wheel Ø35 / M6x1	1
1	Velcro work wheel Ø50 / M6x1	1
2	Protective cover	1
3	Spring-loaded circlip	2
4	Working disc holder M6x1	1
5	Bearing	1
6	Washer	1
7	3 mm eccentric cam with counterweight	1
7	12 mm eccentric cam with counterweight	1
7	Straight connector for rotary work	1
8	Short drive shaft	1
9	Steel ball	1
10	Bearing	1
11	90° gear box gear wheel	1
12	Spring ring without lugs	1
13	Bearing	1
14	Body – 90° gearbox cover	1
15	90° gearbox toothed shaft	1
16	Bearing	1
17	Spring ring without lugs	1
18	Spring-loaded circlip	1
19	Handle — aluminium shaft cover	1
20	Bearing	1
21	Spring-loaded circlip	1
22	Coupling sleeve	1
23	Bolt	2
24	Motor positioning sleeve	1
25	Electric motor	1
26	Holder – right-hand motor housing	1
27	Slide switch	1
28	Micro switch	1
29	Power contact assembly	1
30	Speed controller assembly	1
31	Speed controller cover	1
32	Speed controller buttons	1
33	Bolt	1
34	Square nut	1
35	Housing lock	1
36	Li-Ion (lithium-ion) rechargeable battery pack	1
37	Holder – left-hand motor housing	1
38	Screws	6