



说明书材质要求: 105g 有光铜版纸	说明书成品尺寸: 105*143mm
第一: 专色用6级防晒油墨+CMYK油墨要求: 1. PANTONE137C专色油墨 (专色用6级防晒油墨): 如果自己配色, 油墨配比为: 酒联中黄 (防晒) 2000g 酒联金红 (防晒) 225g 2. C色油墨: 酒联天蓝墨 3. M色油墨: 酒联金红墨 4. Y色油墨: pantone123C专色油墨 5. K色油墨: 酒联黑墨	第二: 特别注意: 1. 印刷时看样请参考我司提供的实物样品颜色。不得偏色 2. 137C的专色不得参考C=0, M=35, Y=90, K=0对应的四色 色谱颜色来看样印刷 Pantone 137C Black (两色印刷)
折叠方式: 风琴折 (20P以下 用风琴折) 特殊情况: 16P/20P: 风琴折 + 对折	备注:

特别注意: 此页内容不印刷

风琴折 + 对折 页面顺序

16P 页面顺序

9	10	11	封面
12	13	14	封底

1	2	3	4
5	6	7	8

20P 页面顺序

11	12	13	14	封面
15	16	17	18	封底

1	2	3	4	5
6	7	8	9	10

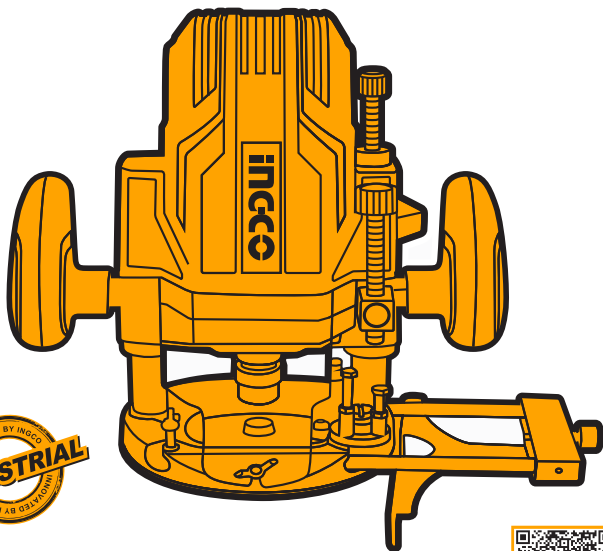
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PRODUCT MANUAL

ELECTRIC ROUTER



RT160028 RT160028xy
URT160028 URT160028xy
x(blank,1,2,3,4,5,6,7,8,9,0,E,S,A,M)
y(blank,-1,-2,-3,-4,-5,-6,-7,-8,-9,E,S,A,M)



SCAN FOR VIDEO

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.

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 a 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 and clothing 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.*
- h) **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.*

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 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.*

- 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 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.***
- 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.***
- h) 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.***

5) 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.***

THE SYMBOLS IN INSTRUCTION MANUAL

	Double insulated for additional protection
	Read the instruction manual before using.
	CE conformity.
	Safety alert. Please only use the accessories supported by the manufacturer.
	Wear safety glasses, hearing protection and dust mask.
	Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.

ADDITIONAL SAFETY WARNINGS

Hold power tool by insulated gripping surfaces, because the cutter may contact its own cord.

Cutting a "live" wire may make exposed metal parts of the power tool "live" and shock the operator.

Use clamps or another practical way to secure and support the workpiece to a stable platform. Holding the work by your hand or against the body leaves it unstable and may lead to loss of control.

Residual risks

Even when the power tool is used as prescribed it is not possible to eliminate all residual risk factors. The following hazards may arise in connection with the power tool's construction and design:

- a) Health defects resulting from vibration emission if the power tool is being used over longer period of time or not adequately managed and properly maintained.
- b) Injuries and damage to property to due to broken accessories that are suddenly dashed.



WARNING!

This power tool produces an electromagnetic field during operation. This field may under some circumstances interfere with active or passive medical implants. To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their physician and the medical implant manufacturer before operating this power tool.

INTENDED USE

The power tool is intended for copy routing as well as routing grooves, edges, profiles and elongated holes in wood, plastic and light building materials while resting firmly on the workpiece.

Can even be used to machine non-ferrous metals when used at a low speed with the appropriate router bits.

SPECIFICATIONS

Technical specifications

Model No.	RT160028 RT160028xy	URT160028 URT160028xy
Rated voltage:	220-240V~50/60Hz	110-120V~50/60Hz
Rated input power:	1600W	1600W
No-load speed:	22000rpm	22000rpm
Diameter of collet:	6mm, 8mm, 12mm, 1/4", 1/2"	1/4", 1/2"
Plunge capacity:	0-60mm	0~2-3/8"

Model No. NOTE: x (blank, 1,2,3,4,5,6,7,8, E,S,A,M); y (blank, -1,-2,-3,-4,-5,-6,-7,-8, E,S,A,M)

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

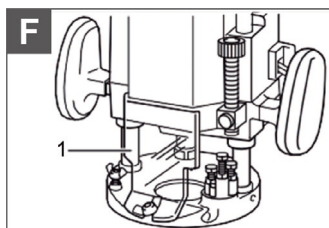
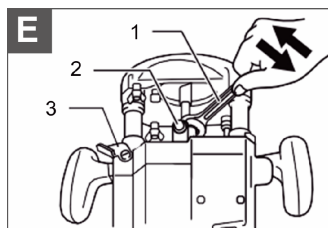
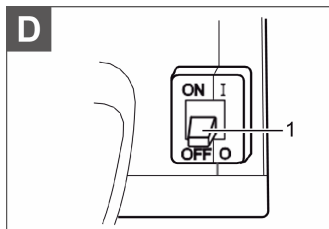
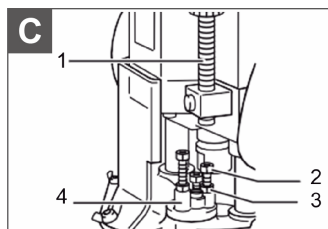
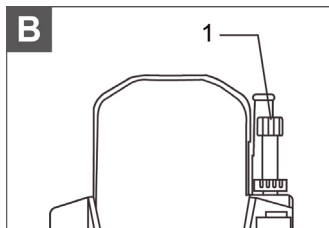
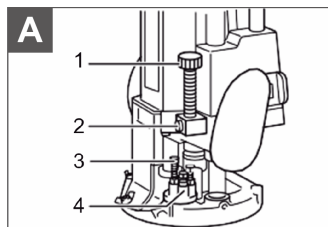
Technical specifications

Model No.	RT160028-9	URT160028-9
Rated voltage:	220-240V~60Hz	127V~60Hz
Rated input power:	1600W	1600W
No-load speed:	22000rpm	22000rpm
Diameter of collet:	6mm, 8mm, 12mm, 1/4", 1/2"	1/4", 1/2"
Plunge capacity:	0-60mm	0~2-3/8"

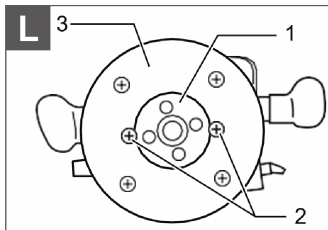
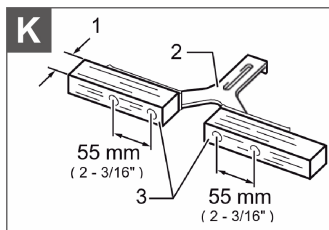
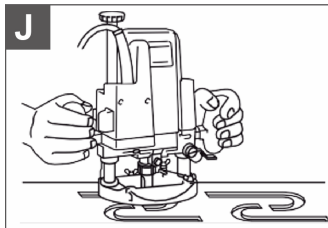
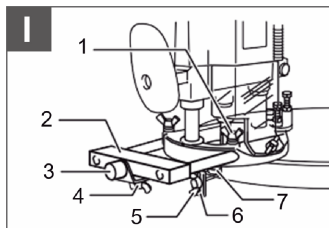
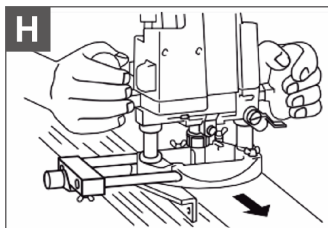
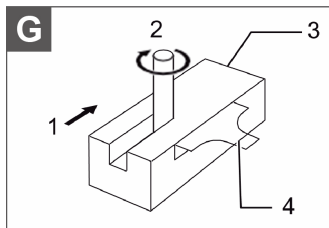
Model No. NOTE: x (blank, 1,2,3,4,5,6,7,8, E,S,A,M); y (blank, -1,-2,-3,-4,-5,-6,-7,-8, E,S,A,M)

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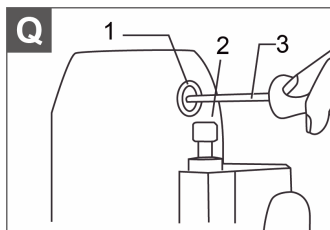
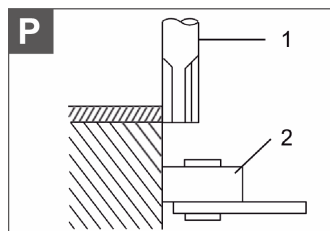
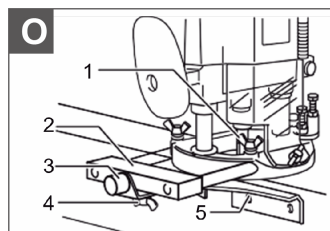
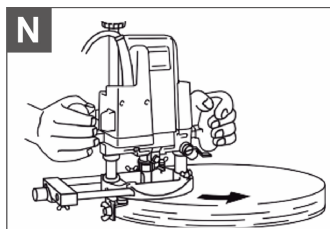
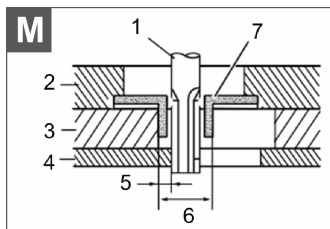
OPERATION PICTURE



OPERATION PICTURE



OPERATION PICTURE



FUNCTIONAL DESCRIPTION



CAUTION:

- Always be sure that the tool is switched off and unplugged before adjusting or checking function on the tool.

ASSEMBLY

Adjusting the depth of cut (see Figure A)

1. Stopper pole
2. Fast-feed button
3. Adjusting hex bolt
4. Stopper block

Place the tool on a flat surface. Loosen the lock lever and lower the tool body until the bit just touches the flat surface. Press the lock lever down to lock the tool body. Now lower the stopper pole until it makes contact with the adjusting hex bolt. The stopper pole can be moved rapidly by depressing the fast-feed button. While pressing the fast-feed button, raise the stopper pole until the desired depth of cut is obtained. The depth of cut is equal to the distance between the stopper pole and the adjusting hex bolt. Stopper pole travel can be checked with the scale (1 mm or 1/16" per graduation) on the tool body. Minute depth adjustments can be obtained by turning the stopper pole (1.5 mm or about 1/16" per turn).

Now, your predetermined depth of cut can be obtained by loosening the lock lever and then lowering the tool body until the stopper pole makes contact with the adjusting hex bolt.

By turning the knob, the upper limit of the tool body can be adjusted. When the tip of the bit is retracted more than required in relation to the base plate surface, turn the knob to lower the upper limit.



CAUTION:

(see Figure B)

1. Knob
- Since excessive cutting may cause overload of the motor or difficulty in controlling the tool, the depth of cut should not be more than 20 mm (13/16") at a pass when cutting grooves. When you wish to cut grooves more than 20

mm (13/16") deep, make several passes with progressively deeper bit settings

- Do not lower the knob too low. The bit will protrude dangerously

Stopper block (see Figure C)

1. Stopper pole
2. Hex bolt
3. Hex nut
4. Stopper block

The stopper block has three adjusting hex bolts which raise or lower 0.8 mm (1/32") per turn. You can easily obtain three different depths of cut using these adjusting hex bolts without readjusting the stopper pole.

Adjust the lowest hex bolt to obtain the deepest depth of cut, following the method of "Adjusting depth of cut". Adjust the two remaining hex bolts to obtain shallower depths of cut. The differences in height of these hex bolts are equal to the differences in depths of cut.

To adjust the hex bolts, first loosen the hex nuts on the hex bolts with the wrench and then turn the hex bolts. After obtaining the desired position, tighten the hex nuts while holding the hex bolts in that desired position. The stopper block is also convenient for making three passes with progressively deeper bit settings when cutting deep grooves.

Switch action (see Figure D)

1. Switch lever



CAUTION:

- Before plugging in the tool, always check to see that the tool is switched off.
- 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.
- Make sure that the shaft lock is released before the switch is turned on.
- Hold the tool firmly when turning off the tool, to overcome the reaction.

To start the tool, move the switch lever to the ON position.

To stop the tool, move the switch lever to the OFF position.

**CAUTION:**

Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.

Installing or removing the bit (see Figure E)

1. Wrench
2. Shaft lock
3. Lock lever

**CAUTION:**

(see Figure F)

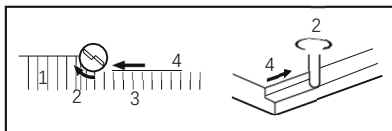
1. Chip deflector
- Install the bit securely. Always use only the wrench provided with the tool. A loose or overtightened bit can be dangerous.
 - Do not tighten the collet nut without inserting a bit or install small shank bits without using a collet sleeve. Either can lead to breakage of the collet cone.
- Insert the bit all the way into the collet cone. Press the shaft lock to keep the shaft stationary and use the wrench to tighten the collet nut securely. When using router bits with smaller shank diameter, first insert the appropriate collet sleeve into the collet cone, then install the bit as described above.
- To remove the bit, follow the installation procedure in reverse.

OPERATION**CAUTION:**

- Before operation, always make sure that the tool body automatically rises to the upper limit and the bit does not protrude from the tool base when the lock lever is loosened.
- Before operation, always make sure that the chip deflector is installed properly.

Set the tool base on the workpiece to be cut without the bit making any contact. Then turn the tool on and wait until the bit attains full speed. Lower the tool body and move the tool forward over the workpiece surface, keeping the tool base flush and advancing smoothly until the cutting is complete.

When doing edge cutting, the workpiece surface should be on the left side of the bit in the feed direction.



NOTE:

(see Figure G)

1. Feed direction
 2. Bit revolving direction
 3. Workpiece
 4. Straight guide
- Moving the tool forward too fast may cause a poor quality of cut, or damage to the bit or motor. Moving the tool forward too slowly may burn and mar the cut. The proper feed rate will depend on the bit size, the kind of workpiece and depth of cut. Before beginning the cut on the actual workpiece, it is advisable to make a sample cut on a piece of scrap lumber. This will show exactly how the cut will look as well as enable you to check dimensions.
 - When using the straight guide or the trimmer guide, be sure to install it on the right side in the feed direction. This will help to keep it flush with the side of the workpiece.

Straight guide (see Figure H, I)

1. Wing bolt (A)
2. Guide holder
3. Fine adjusting screw
4. Wing bolt (B)
5. Straight guide

The straight guide is effectively used for straight cuts when chamfering or grooving. Install the straight guide on the guide holder with the wing bolt (B). Insert the guide holder into the holes in the tool base and tighten the wing bolt (A). To adjust the

distance between the bit and the straight guide, loosen the wing bolt (B) and turn the fine adjusting screw (1.5 mm or about 1/16" per turn). At the desired distance, tighten the wing bolt (B) to secure the straight guide in place.

Wider straight guide of desired dimensions may be made by using the convenient holes in the guide to bolt on extra pieces of wood.

When using a large diameter bit, attach pieces of wood to the straight guide which have a thickness of more than

15 mm (5/8") to prevent the bit from striking the straight guide.

When cutting, move the tool with the straight guide flush with the side of the workpiece.

Templet guide (see Figure J, K)

1. More than 15mm (5/8")
2. Straight guide
3. Wood

The templet guide provides a sleeve through which the bit passes, allowing use of the tool with templet patterns.

To install the templet guide, loosen the screws on the tool base, insert the templet guide and then tighten the screws.

Secure the templet to the workpiece. Place the tool on the templet and move the tool with the templet guide sliding along the side of the templet.

(see Figure L)

1. Templet guide
2. Screw
3. Base plate

NOTE:

The workpiece will be cut a slightly different size from the templet. Allow for the distance (X) between the bit and the outside of the templet guide. The distance (X) can be calculated by using the following equation:

Distance (X) = (outside diameter of the templet guide – bit diameter) / 2

Trimmer guide (see Figure M, N)

1. Bit
2. Base
3. Templet
4. Workpiece
5. Distance (X)
6. Outside diameter of the templet guide
7. Templet guide

Trimming, curved cuts in veneers for furniture and the like can be done easily with the trimmer guide. The guide roller rides the curve and assures a fine cut.

Install the trimmer guide on the guide holder with the wing bolt (B). Insert the guide holder into the holes in the tool base and tighten the wing bolt (A). To adjust the distance between the bit and the trimmer guide, loosen the wing bolt (B) and turn the fine adjusting screw (1.5 mm or 1/16" per turn). When adjusting the guide roller up or down, loosen the wing bolt (C). After adjusting, tighten all the wing bolts securely.

(see Figure O)

1. Wing bolt (A)
2. Guide holder
3. Fine adjusting screw
4. Wing bolt (B)
5. Wing bolt (C)
6. Trimmer guide
7. Guide roller

When cutting, move the tool with the guide roller riding the side of the workpiece.

(see Figure P)

1. Bit
2. Guide roller

MAINTENANCE



CAUTION:

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

Replacing carbon brushes (see Figure Q)

1. Brush holder cap
2. Knob
3. Screwdriver

Remove and check the carbon brushes regularly.

Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

Use a screwdriver to remove the brush holder caps. Take out the worn carbon brushes, insert the new ones and secure the brush holder caps.

NOTE:

When replacing carbon brush located on the same side as the knob, remove the knob first before unscrewing the brush holder cap.



CAUTION:

Be sure to re-install the knob after inserting new carbon brush.

After replacing brushes, plug in the tool and break in brushes by running tool with no load for about 10 minutes. Then check the tool while running and electric brake operation when releasing the switch trigger.

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Authorized Centers, always using replacement parts.

MAINTENANCE&MALFUNCTIONS

Possible malfunctions and methods of their eliminations

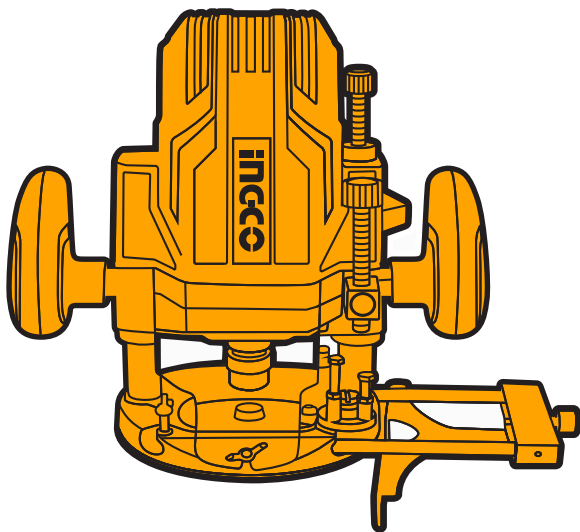
Malfunction	Probable causes	Actions
When the machine is turned on, the electric motor does not work.	● Switch failure ● The power cord or wiring is broken, power cord plug malfunction; ● No brush contact with the collector; ● Wear/damage of brushes	Disconnect the machine from the mains and contact a qualified specialist.
Formation of a circular fire on the collector	● Brush wear/damage of the brush holder; ● Malfunction in the armature coil	Disconnect the machine from the mains and contact a qualified specialist. Please don't repair the machine by your own.
When working, smoke or the smell of burning insulation appears from the ventilation openings.	● Malfunction in the electric motor coil; ● Malfunction of the electrical part of the tool.	
Increased noise in the gearbox	● Wear/breakage of gears or bearings	
When the machine is turned on, the spindle does not rotate	● Gearbox failure.	

Critical state criteria

Critical state criteria	Probable causes	Actions
Cracks on the surfaces of bearing and housing parts	Fatigue deformation of metal	Disconnect the machine from the mains and contact a qualified specialist. Please don't repair the machine by your own.
The power cord or plug is damaged	Overload or breakage	
Excessive wear or damage to the motor or reductor mechanism, or a combination of signs	Fatigue deformation of metal	

Critical state criteria

List of critical failures	Actions
Electric motor sparking	It is necessary to contact a qualified specialist
The appearance of extraneous noise	It is necessary to contact a qualified specialist
If the above malfunctions are detected, it is necessary to disconnect the machine from the mains and contact a qualified specialist	



MADE IN CHINA 0924.V09



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