

# **INSTRUCTION MANUAL**

## **BRUSHLESS MICRO MOTOR**

**MODEL:**

**PRIME SENSE A6**

※ Please Read instruction carefully first to  
avoid inappropriate operating and accidents.

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# 1.Product Function Introduction

## 1) Start and Stop Function

- ① Turn on the micromotor, the display shows a pause state **||** .  
After pressing the start button  , the handpiece operates normally.
- ② After each program switch, it is in a paused state **||** .  
pressing the start button  , the handpiece operates normally.
- ③ Switching the foot control  to hand control  , it is in a paused state.  
After pressing the start button  , the handpiece operates normally.
- ④ The Start and Stop Function is invalid when it under foot control.

## 2) Forward&reverse Function

- ① Starting with forward rotation **F**  .
- ② When rotating forward, press the switch forward and reverse button  ,  
Switch the handpiece to reverse **R**  .
- ③ When rotating reverse, press the switch forward and reverse button  ,  
Switch the handpiece to forward **F**  .

## 3) Foot&hand control function

- ① In Hand control  , press the switch Foot&hand control button  ,  
Switch to foot control  .
- ② In Foot control  , press the switch Foot&hand control button  ,  
Switch to hand control  .

## 4) Foot&hand control function

- ① At 10k, The highest gear is **10K** , Maximum speed 10000RPM.
- ② At 25k, The highest gear is **25K** , Maximum speed 25000RPM.
- ③ At 55k, The highest gear is **55K** , Maximum speed 55000RPM.
- ④ After each program switch, it is in a paused state **||** .  
pressing the start button  , the handpiece operates normally,  
It is invalid when it under foot control.

## 5) Speed control pedal function

- ① When in foot mode  , adjust the speed through foot pedal.
- ② Adjust the gear to the required maximum gear,  
adjusting speed range of 00k to the maximum gear by foot pedal.

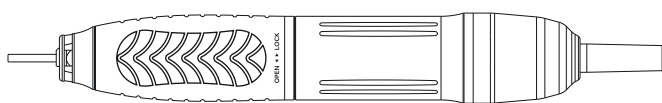
## 6) Failure Alarm

- E4, handpiece not inserted or locked for more than 5-7s.

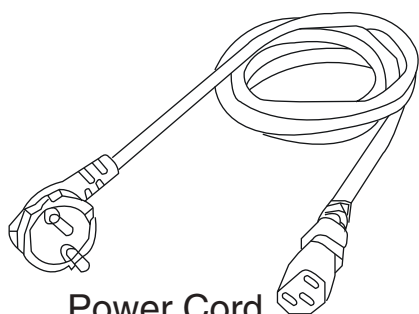
## 2.Product list



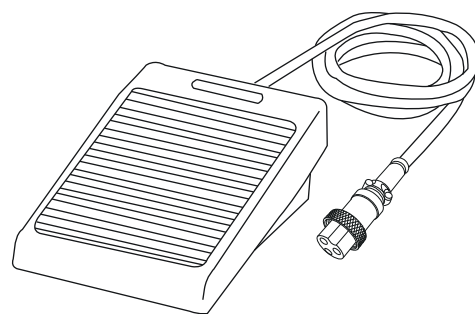
Controller



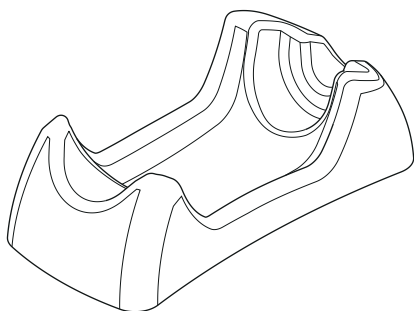
Handpiece



Power Cord

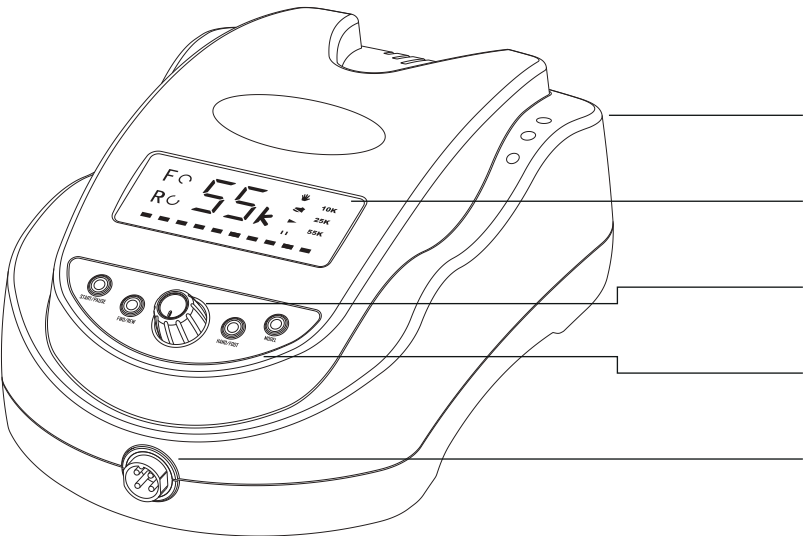


Foot Speed Control Pedal

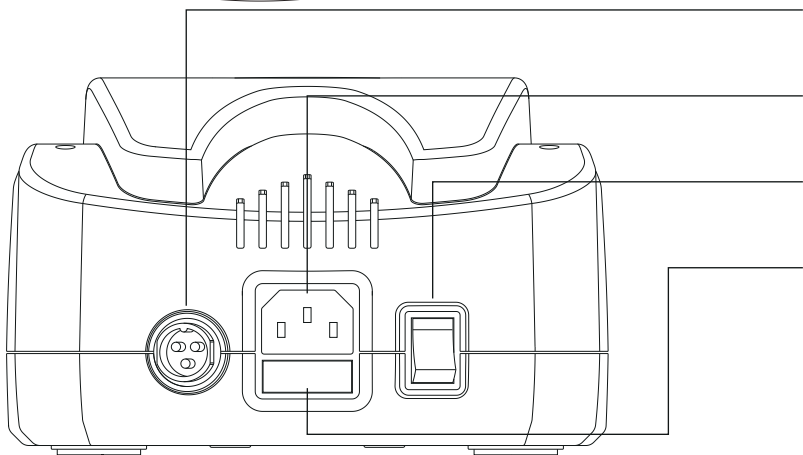


Handpiece Holder

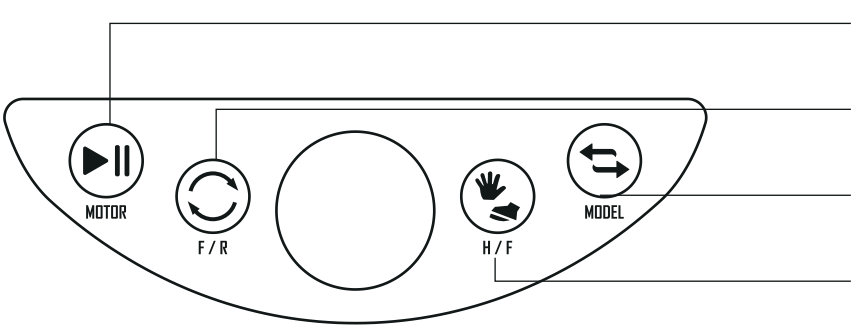
3.Part name



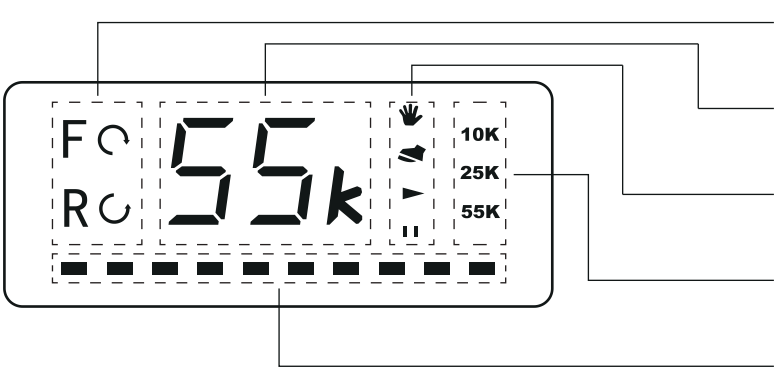
- 1 Controller
- 2 Display
- 3 Speed control knob
- 4 Panel button
- 5 Handpiece Plug base
- 6 Pedal plug base



- 7 Power plug
- 8 Power switch
- 9 Fuse



- 1 Start/stop button
- 2 Forward/reverse button
- 3 Mode button
- 4 Hand/foot button

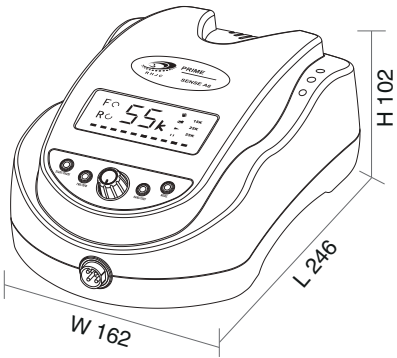


- 1 F F C /R R C switch
- 2 Speed display ( 1k=1000rpm )
- 3 Hand / Foot
- 3 Start / Stop
- 4 Program display
- 5 Resistance bar

4.Product parameters

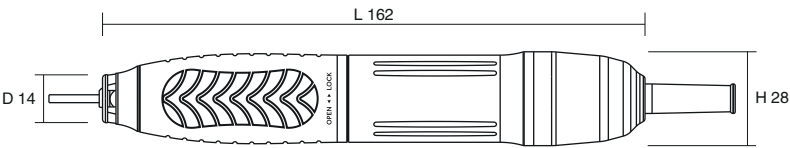
Control Box Specification PRIME SENSE A6

| Input power source    | Fuse | Weight | Maximum load current | Dimension(mm)  |
|-----------------------|------|--------|----------------------|----------------|
| AC100~120V<br>50/60Hz | 5 A  | 2.47kg | 9 A                  | W 162          |
| AC200~240V<br>50/60Hz | 3 A  |        |                      | L 246<br>H 102 |



Handpiece Specification PRIME SENSE A6

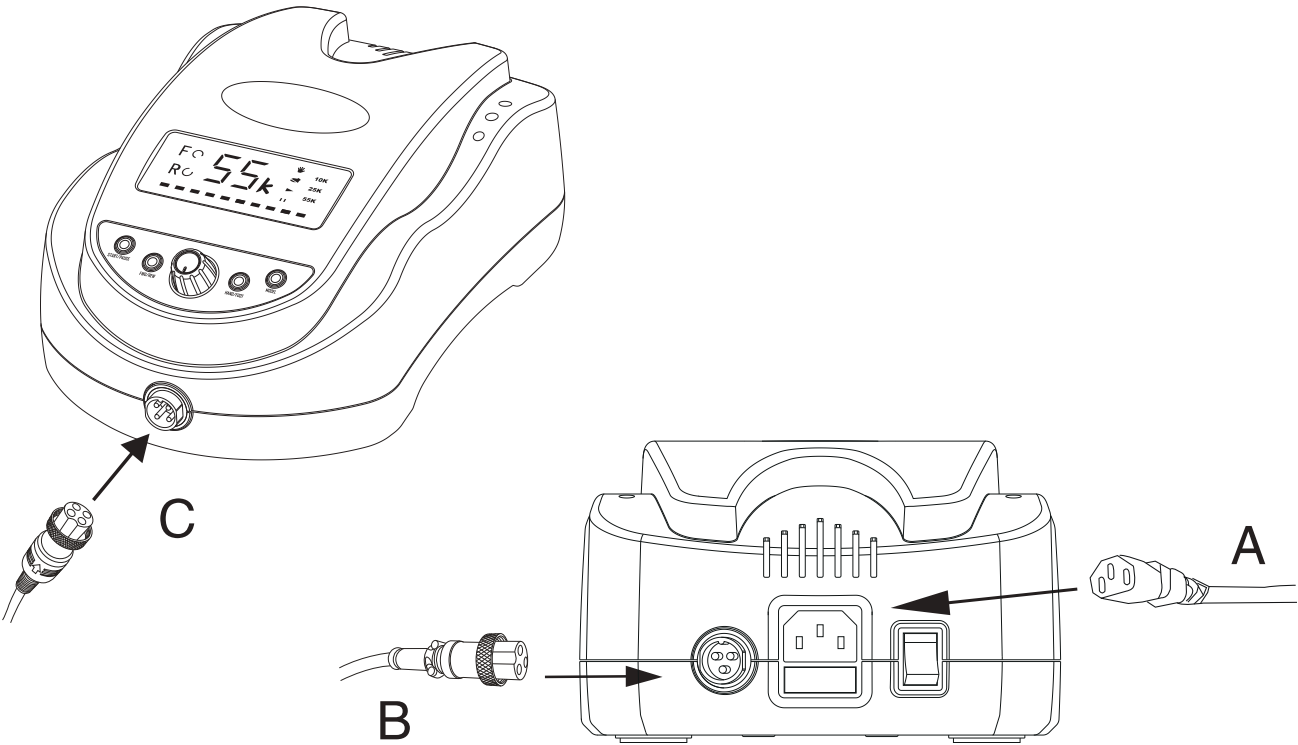
|           |                   |
|-----------|-------------------|
| Output    | 240W              |
| Speed     | 55.000RPM         |
| Torque    | 8.5 N.cm          |
| Weight    | 240 g             |
| Dimension | L162 D14 H28 (mm) |



5.Usage Steps

 WARNING

Please make sure that power is oFF and connect the motor and root pedal.  
(Otherwise, it might cause malfunction.)



1. After checking off switch in control box,plug in

Connect the power cord with control box.(Picture A)

Connect the foot pedal to control box.(Picture B)

Connect the handpiece to output of control box.(Picture C)

2. \* As indicated by the arrows,it lights green on the power on   
and shows the figures on display screen.

\* As indicated by the arrows,the green lights is gone off when power off.   
The figures are disappeared.

3. Check handpiece

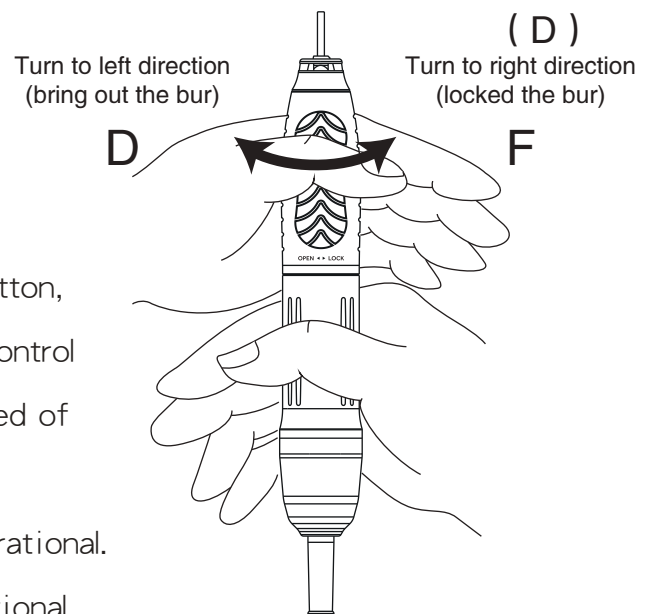
Check collect chuck of handpiece locked well turning the handle of  
handpiece or pulling bur out. (Picture D)

4. After completing steps 1-3, turn on the power  
switch and start the controller.

5. After turning on the machine, press the on/off button,  
select the desired work program, turn the speed control  
knob on the controller and slowly increase the speed of  
the handpiece.

6. Press hand control/foot control to see if it is operational.

7. Set up Forward and Reverse to see if it is operational.

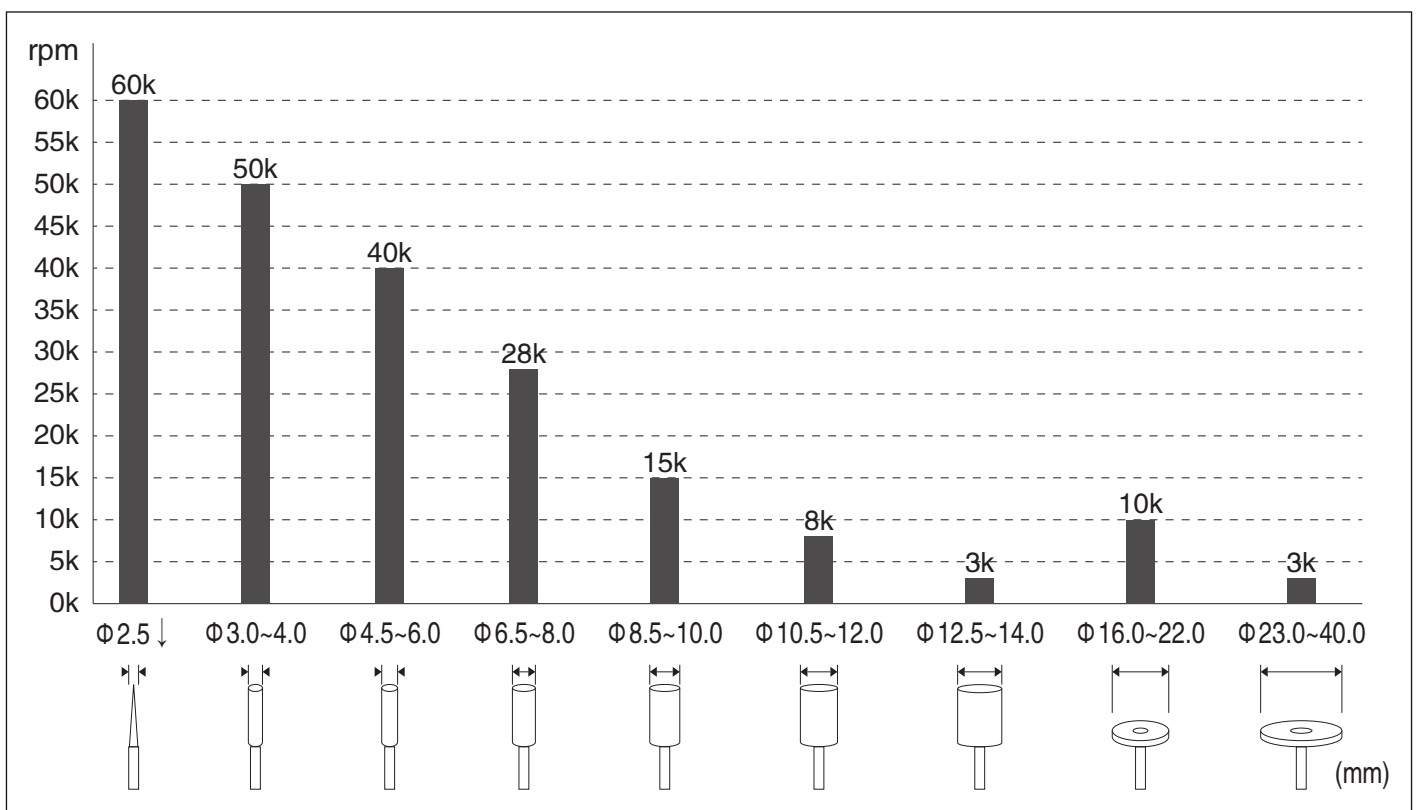


## 6.Attention Points

**1.Please keep the RPM according to below diagram of right against the accident.**



The deepest depth recommended for grinding head to insert into collet chuck is 27 to 30 (mm).  
Longer the grinding head exposed centrifugal force, the weaker of the grinding head and easily  
cause the rod body bended. Serious accidents might happen under excessive speed while using  
large diameter grinding head.Such as: bending of the grinding head bar (which may hurt  
fingers), bearing damage, collet chuck deformed and so on.



- ※ 2. Protective glasses and gloves must be worn when operating the appliance.
- 3. If any problem occurs in handpiece, use after repairing.
- 4. Make sure that the switch is off before putting the power plug in the socket, in order to avoid an unexpected injury due to sudden start.
- 5. A circuit breaker is provided to protect the motor. It is actuated when there is an overload which the motor cannot stand. Work within a range of load which it is not actuated.
- 6. Do not open the chuck while operating.
- 7. Keep the handpiece with setting a bur to the collet chuck after operation.
- 8. Do not put the handpiece down before it stops completely.
- 9. Be sure to pull out the power cord before moving the control box.
- 10. Use the specified voltage.
- 11. Use accessories suitable for this product.
- 12. Wear proper protective clothes and equipment, including a dust mask and safety goggles.  
Use a proper suction unit and a ventilator.
- 13. Keep the workplace clean. Debris may cause an accident.
- 14. Memory saves the conditions of direction and hand foot selection on turning off the power, therefore, be careful when the power on.
- 15. Do not work at dangerous place. Do not use the control box in humid place.
- 16. Check for any troubles, including vibration of bur, at a low speed, and then start high speed.
- 17. When RPM is zero, you can replace the bur.
- 18. Do not turn on the power of control box while the collet chuck of handpiece open.  
Otherwise, the figure display will show (E4).

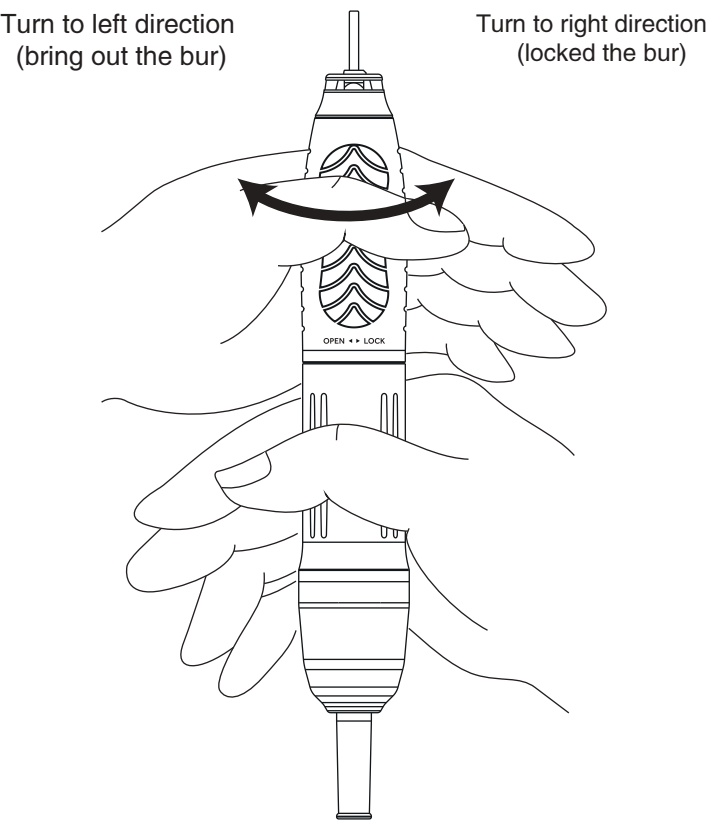
## 7.Common Problems and troubleshooting methods

When following the suggested solution cannot solve the problem,  
please contact the dealer or manufacturer for assistance.

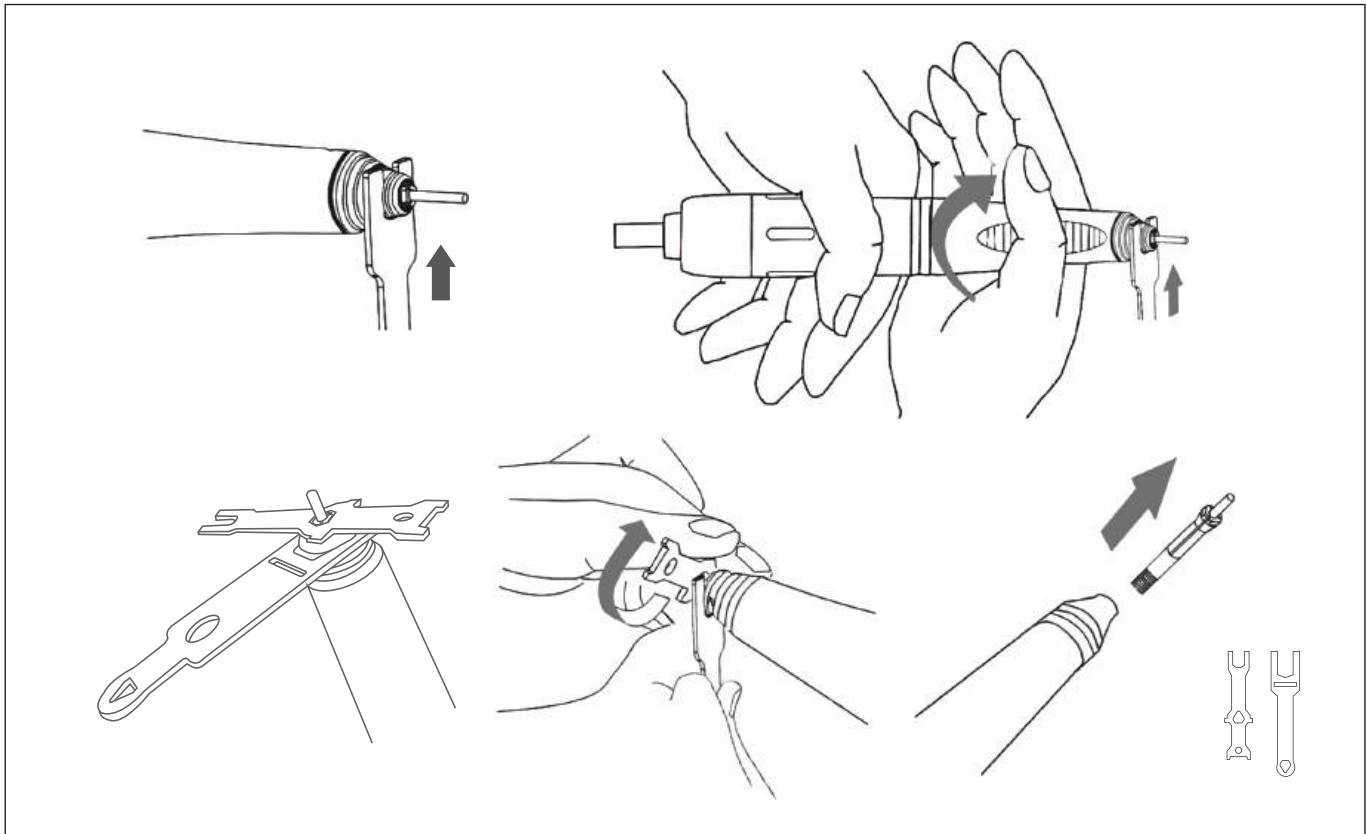
| Fault phenomenon                                                                                  | Fault analysis                                                     | Analysis | Solution                                                                                              |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------|
| After turning on the power, the digital display tube shows nothing                                | Check if the power cord is properly connected to the controller    | Yes      | Please contact the dealer                                                                             |
|                                                                                                   |                                                                    | No       | Reconnect the power supply                                                                            |
| After turning on, the digital display tube shows speed but the handpiece does not rotate normally | Check if the program is in a startup state                         | Yes      | Please contact the dealer                                                                             |
|                                                                                                   |                                                                    | No       | Switch the program to the startup state                                                               |
|                                                                                                   | Check if the program is in hand control mode                       | Yes      | Please contact the dealer                                                                             |
|                                                                                                   |                                                                    | No       | Switch the program to hand control mode                                                               |
| Digital display E4 (handpiece not inserted or locked for more than 5–7s or handpiece cord broken) | Check if the handpiece switch is in the closed state               | Yes      | Please contact the dealer                                                                             |
|                                                                                                   |                                                                    | No       | Turn the handpiece switch to the closed state, reset the speed control knob to zero and then reuse it |
|                                                                                                   | Check if the handpiece is properly connected to the controller     | Yes      | Poor contact of the handpiece wire, Please plug again (if useless, please contact the dealer)         |
|                                                                                                   |                                                                    | No       | Connect handpiece to Controller                                                                       |
| After switching the speed program, the handpiece cannot start                                     | Check if the program is in a startup state                         | Yes      | Please contact the dealer                                                                             |
|                                                                                                   |                                                                    | No       | Switch the program to the startup state                                                               |
|                                                                                                   | Check if the program is in hand control mode                       | Yes      | Please contact the dealer                                                                             |
|                                                                                                   |                                                                    | No       | Switch the program to hand control mode                                                               |
| speed program not working                                                                         | No need to check                                                   | -----    | Please contact the dealer                                                                             |
| The handpiece cannot start in foot mode                                                           | Check if the handpiece weld is properly connected to the PCB board | Yes      | Please contact the dealer                                                                             |
|                                                                                                   |                                                                    | No       | Reconnect the handpiece weld to the PCB motherboard                                                   |

# 8.Cleaning and maintenance

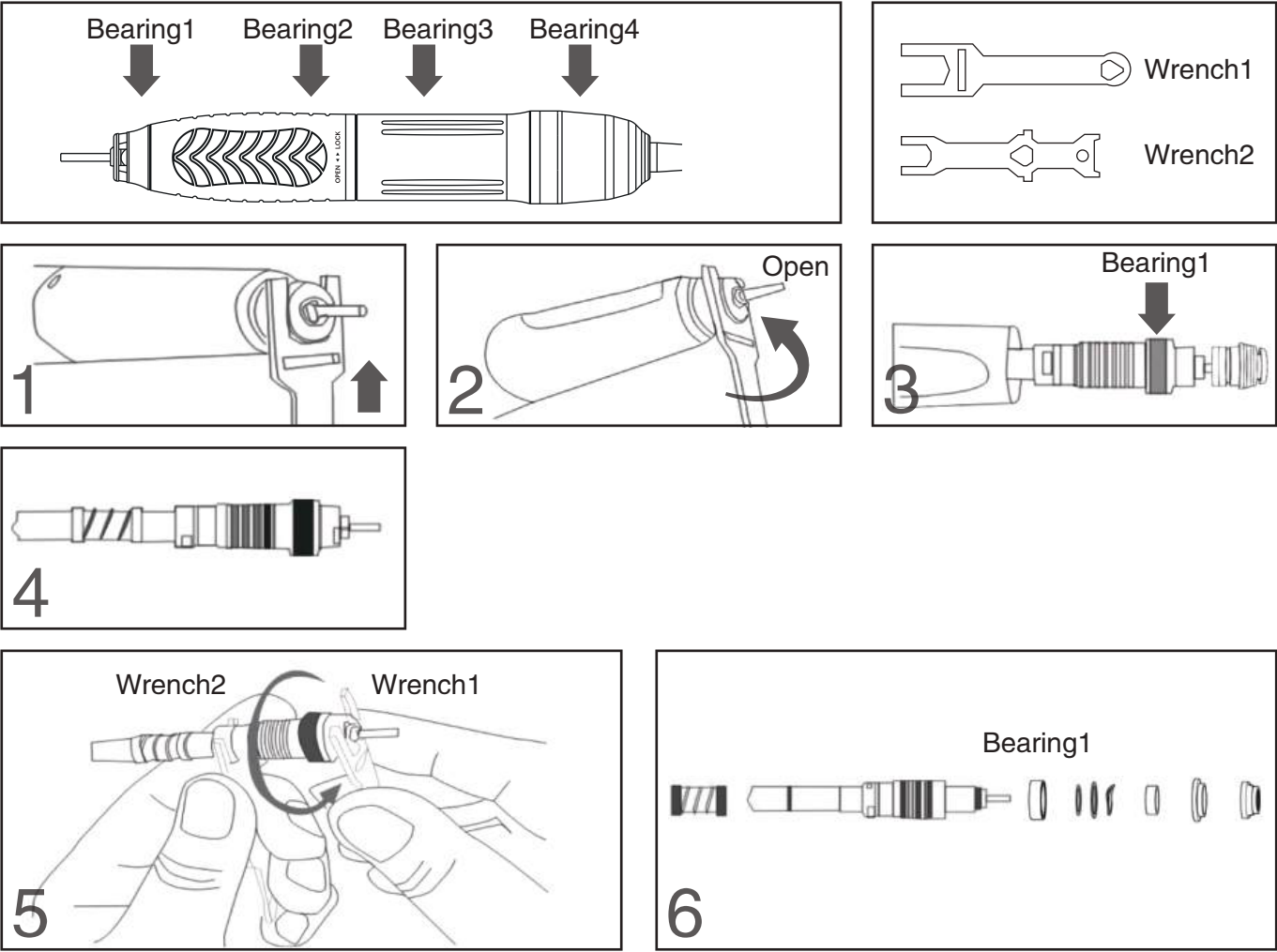
## Bur replacement



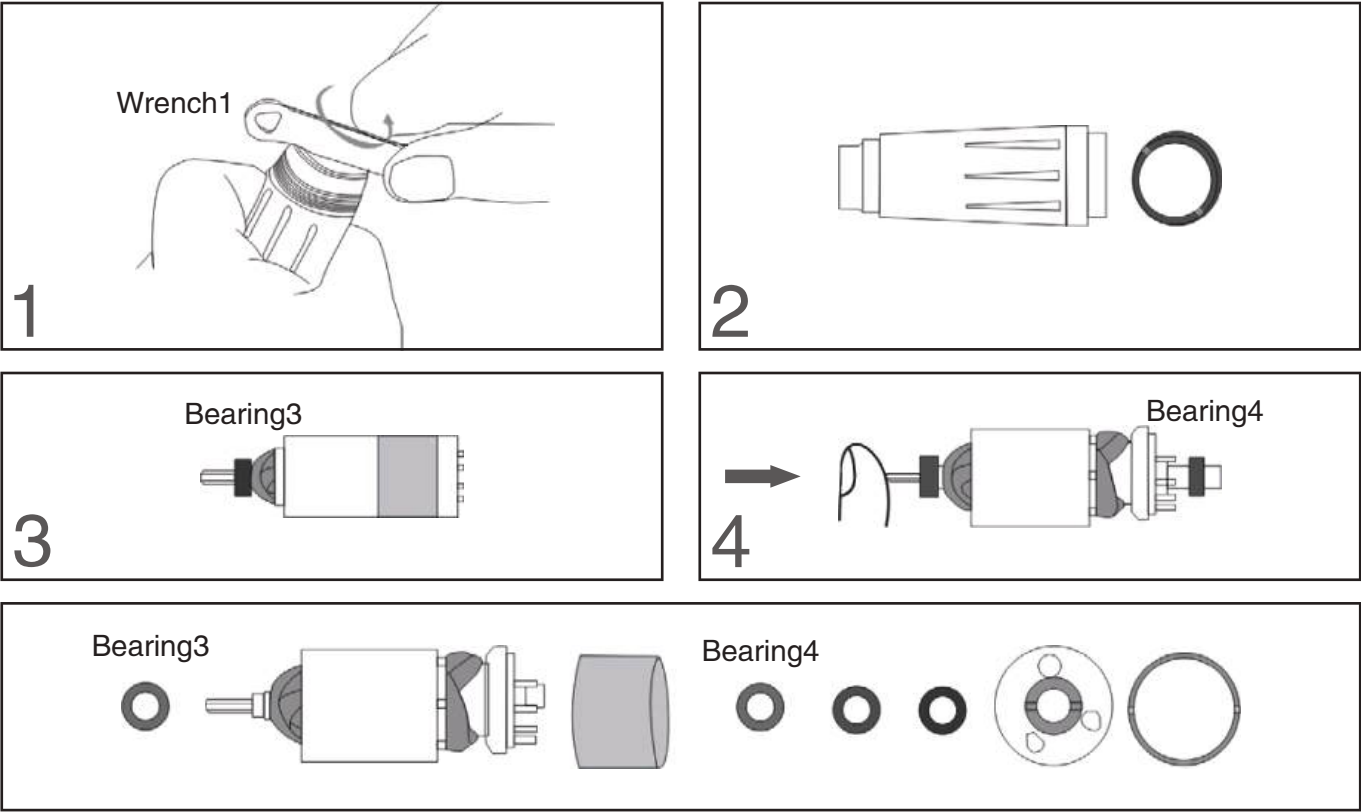
## Collet chuck replacement



Bearing replacement



Bearing replacement 3、4

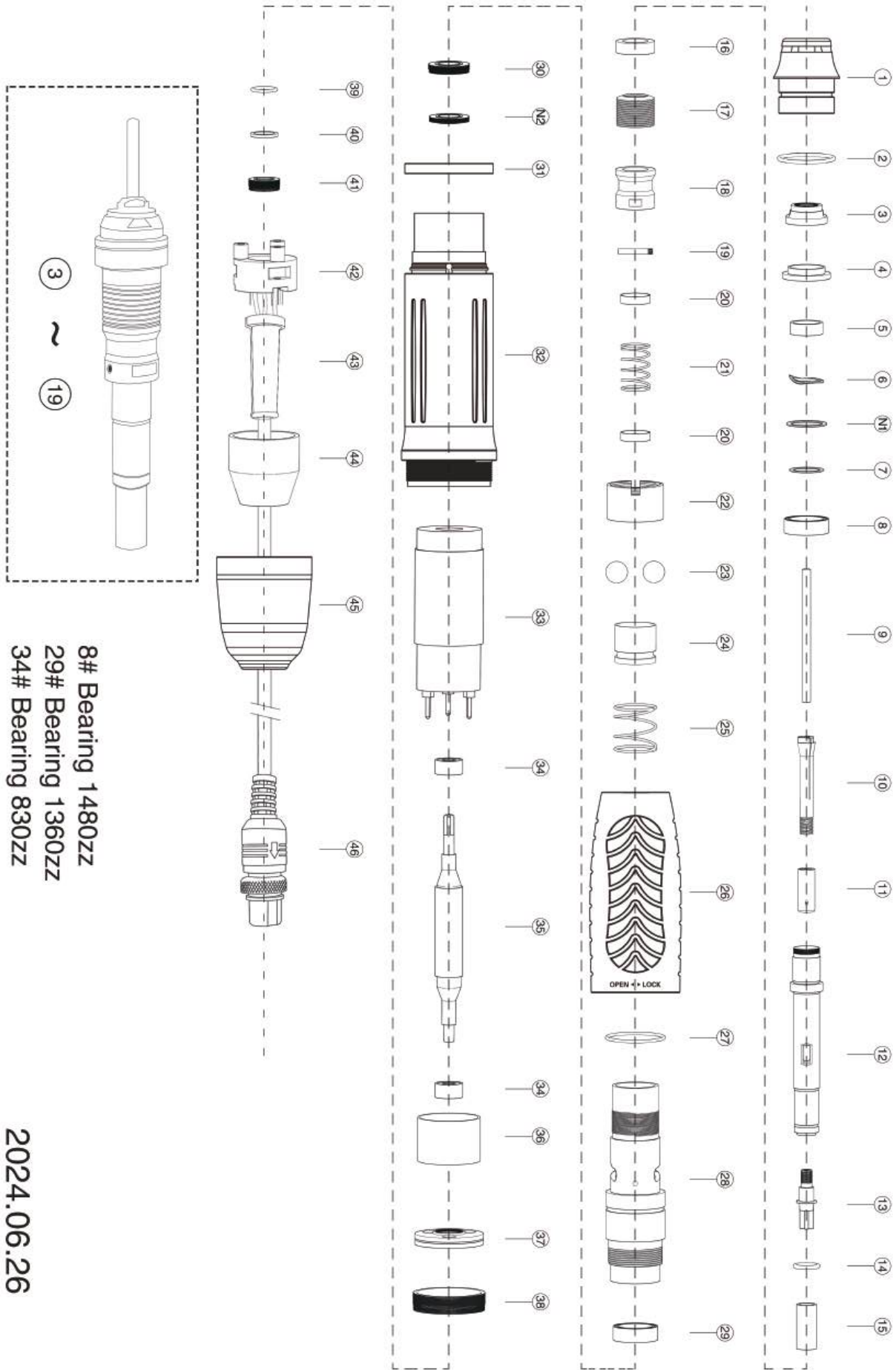


## SUGGESTION FOR MAINTENANCE

- 1 . Keep the place around in handpiece clean from dust and grindings.
- 2 . Remove dust on handpiece wiping with isopropyl alcohol and avoid wet inside.  
Do not apply the oil to the goods or clean water. The grease inside of the bearing could melt away due to the oil.
- 3 . Air cleaning is acceptable, but air pressure may affect to the handpiece badly.

9.Handpiece schematic

PRIME SENSE A6 HANDPIECE



## 10.Safety precautions

- 1.Do not use with damaged or faulty power cord,plug and outlet. Maybe it can cause the danger of fire,electric shock.
- 2.Do not use the broken power plug. Otherwise,it causes the danger of electric shock and fire.
- 3.When unplug the power cord,hold the plug and do not touch with wet hand.
- 4.Do not bend the power cord excessively and do not press with heavy things. It may cause electric shock and fire.
- 5.Do not place near heat equipment and candles or cigarette causing fire.
- 6.Put this product into someplace where children cannot be touch with.
- 7.Use the grounding conductor. Breakage or electric leak may cause the danger of electric shock.
- 8.Please do not use many high–power electronic devices in one Socket,otherwise,it may cause electric shock or fire.
- 9.Do not place or set up the product in the humid and rainy location. It brings the danger of electric shock and fire.
- 10.Do not drop or damage the handpiece. In case of malfunction,dropping,drowning,do not use and contact to the manufacturer.
- 11.Use the products in proper use as per the instruction.
- 12.You cannot change the functions of products casually.
- 13.RHJC is not responsible for the accident causing by not following the instructions.
- 14.Please wear protective equipment before operation(protective goggles and Safety gloves).

## 11.After Sales Service and Warranty

### Warranty

- 1.Control box pedal -1 year.
- 2.Handpiece - 1 year (Warranty does not include consumable parts such as bearings and carbon brush.)

### Services charge

#### **In case of the fault or malfunction from the misuse of the user:**

- Using with wrong Input Voltage (AC Voltage);
- Dropping down during setting or moving;
- In case of user's misuse or improper use;
- Using consumable parts or accessories not recommended by manufacturer;
- Malfunction after repairing at the places not recommended by manufacturer.

#### **Other cases**

Force Majeure (the fires,droughts and floods) .

# 12.Safety specification

## 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.

# Safety instructions for all operations

Safety warnings common for grinding, sanding, wire brushing, polishing, carving or abrasive cutting-off operations:

- a) **This power tool is intended to function as a grinder, sander, wire brush, polisher, carving or cut-off 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.
- b) **Operations such as grinding, sanding, wire brushing, polishing or cutting-off are not recommended to be performed with this power tool.** Operations for which the power tool was not designed may create a hazard and cause personal injury.
- c) **Do not use accessories which are not specifically designed and recommended by the tool manufacturer.** Just because the accessory can be attached to your power tool, it does not assure safe operation.
- d) **The rated speed of the grinding accessories must be at least equal to the maximum speed marked on the power tool.** Grinding accessories running faster than their rated speed can break and fly apart.
- e) **The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool.** Incorrectly sized accessories cannot be adequately controlled.
- f) **The arbour size of wheels, sanding drums or any other accessory must properly fit the spindle or collet of the power tool.** Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- g) **Mandrel mounted wheels, sanding drums, cutters or other accessories must be fully inserted into the collet or chuck.** If the mandrel is insufficiently held and/or the overhang of the wheel is too long, the mounted wheel may become loose and be ejected at high velocity.
- h) **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, sanding drum for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.**

Damaged accessories will normally break apart during this test time.

- i) **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments.**

The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.

- j) **Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.** Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
- k) **Hold power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

- l) **Always hold the tool firmly in your hand(s) during the start-up.** The reaction torque of the motor, as it accelerates to full speed, can cause the tool to twist.
- m) **Use clamps to support workpiece whenever practical. Never hold a small workpiece in one hand and the tool in the other hand while in use.** Clamping a small workpiece allows you to use your hand(s) to control the tool. Round material such as dowel rods, pipes or tubing have a tendency to roll while being cut, and may cause the bit to bind or jump toward you.
- n) **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.
- o) **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.
- p) **After changing the bits or making any adjustments, make sure the collet nut, chuck or any other adjustment devices are securely tightened.** Loose adjustment devices can unexpectedly shift, causing loss of control, loose rotating components will be violently thrown.
- q) **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.
- r) **Regularly clean the power tool's air vents.** The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
- s) **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
- t) **Do not use accessories that require liquid coolants.** Using water or other liquid coolants may result in electrocution or shock.

## Further safety instructions for all operations

### Kickback and related warnings

- a) **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces.**  
The operator can control kickback forces, if proper precautions are taken.
- b) **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.
- c) **Do not attach a toothed saw blade.** Such blades create frequent kickback and loss of control.
- d) **Always feed the bit into the material in the same direction as the cutting edge is exiting from the material (which is the same direction as the chips are thrown).**  
Feeding the tool in the wrong direction causes the cutting edge of the bit to climb out of the work and pull the tool in the direction of this feed.
- e) **When using rotary files, cut-off wheels, high-speed cutters or tungsten carbide cutters, always have the work securely clamped.** These wheels will grab if they become slightly canted in the groove, and can kickback. When a cut-off wheel grabs, the wheel itself usually breaks. When a rotary file, high-speed cutter or tungsten carbide cutter grabs, it may jump from the groove and you could lose control of the tool.

## Additional safety instructions for grinding and cutting-off operations

Safety warnings specific for grinding and abrasive cutting-off operations:

- a) **Use only wheel types that are recommended for your power tool and only for recommended applications. For example: do not grind with the side of a cut-off wheel.**  
Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
- b) **For threaded abrasive cones and plugs use only undamaged wheel mandrels with an unrelieved shoulder flange that are of correct size and length.**  
Proper mandrels will reduce the possibility of breakage.
- c) **Do not “jam” a cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut.** Overstressing the wheel increases the loading and susceptibility to twisting or snagging of the wheel in the cut and the possibility of kickback or wheel breakage.
- d) **Do not position your hand in line with and behind the rotating wheel.** When the wheel, at the point of operation, is moving away from your hand, the possible kickback may propel the spinning wheel and the power tool directly at you.
- e) **When wheel is pinched, snagged or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur.** Investigate and take corrective action to eliminate the cause of wheel pinching or snagging.
- f) **Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut.** The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
- g) **Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback.** Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
- h) **Use extra caution when making a “pocket cut” into existing walls or other blind areas.**  
The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

# EC Declaration of conformity

Manufacturer: Tianjin Renhe Juncheng Technology Development Co., Ltd.

Address: A1-1-1, International Industrial City, XEDA, Xiqing District, Tianjin, China

declare that the machine/s

Designation: **Micro Motor Handpiece**

Model/Type: PRIME SENSE A6

correspond with the applicable EU directives

**2006/42/EC, 2014/30/EU**

and are manufactured in accordance with the following standards or standardized documents:

**EN 62841-1, EN 60745-2-23, EN 55014-1, EN 55014-2**



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