

Dental Chair Unit

Installation Instruction

Excellence casting quality

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I 、 SAFETY INFORMATION

Please read the instructions so that you can use this product correctly. Please contact our distributor for any special request.

Note:

1. To reduce the possibility of fire and electric shock, do not place the device in a damp place or open the container. If you need to repair the machine, please contact professional maintenance personnel. If the device has smoke or other abnormal conditions, which may lead to some dangerous conditions such as fire, please disconnect the power immediately and contact your local dealer or after-sales service.
2. If the device is flooded with water, it may cause some hazards such as electricity leakage. Please disconnect the power supply immediately and contact your local dealer or after-sales service.
3. In case of any unexplained malfunction, disconnect the power supply immediately and contact your local distributor.
4. Please do not disassemble and refit the equipment, otherwise some parts inside will be damaged or the motor may occur.
5. The power cable should not be damaged. If the power cable is damaged, disconnect the power supply immediately. Contact your local dealer to have the damaged wires replaced.
6. This product is suitable for a.c.220V/50Hz power supply voltage operation, if working at other voltages, may cause danger.
7. Please pay attention to the weather change, when lightning weather, please disconnect the power.
8. Do not touch the power plug when hands are wet, or it may cause an electric shock.
9. Do not use insecticide, alcohol, thinner or chemical liquid to clean the equipment, otherwise it may cause surface peeling or damage.
10. Please do not rebuild the machine, if any damage occurs, this is not to do any maintenance and support.

To customers:

This product is not equipped with a mercury separator, so the drainage system of this device cannot filter solid particulate debris or amalgam. In order to avoid possible pollution caused by drainage, please install a mercury separator on the drainage system of this device to avoid pollution caused by drainage.

If you would like more detailed information, please contact us.

Please record the product number of the equipment here,
convenient for future inquiry!

II 、 CAUTIONS

- This product is only used for diagnosis, treatment and operation in stomatology department!
- Please use fuses and accessories approved by our company!
- The product contains motor-mechanical moving parts, please ensure that you do not touch any items within the range of working motion!
- When not using this product, please put the patient chair to the lowest position, and cut off the water, gas and power!
- Make sure the headrest is locked before using the patient chair!
- Do not use this product in high temperature, high humidity, vibration, flammable or unbalanced environment!
- The patient chair of this product belongs to the intermittent operation equipment, the continuous movement time shall not exceed 2 minutes!
- Please refer to the manual before using the dental hand-pieces!
- Please refer to the instruction manual for the use of light curing and tooth cleaning machine!
- Water supply must be passed before using water heater to prevent short circuit caused by dry burning water heater!
- If the equipment needs to be repaired or maintained, please contact professional maintenance personnel. Before maintenance, water, gas and power must be cut off!
- When not using the equipment for a long time, be sure to disconnect the water, gas and power supply!
- It is recommended that the use period of the dental integrated therapy machine is 8 years, beyond the period may lead to aging of the pipeline, function failure, and even may cause accidents. Please contact the qualified medical device recovery unit to eliminate or update the equipment in time!

III 、 TRANSPORTATION AND STORAGE

- 1、 Transport conditions: upward, handle with care and damp proof.
- 2、 Transport environment: Temperature 5 °C to 40°C, relative humidity ≤80%.
- 3、 No more than two wooden cases are allowed when transporting or storing stacks.

IV、PRODUCT INTRODUCTION

Model:	Dental Chair Unit
Safety class:	Class I
Protection type:	Type B
Type of power supply:	Single phase three core, grid power supply
Supply Voltage:	a.c.220V
Supply Frequency:	50Hz
Input Power:	350VA
Production Licence No.:	粤药监械生产许 20224935 号
Production Registration No.:	粤械注准 20222171822

◆ This product has the application part, no signal input, signal output part, belongs to the non-mobile ordinary equipment.

This product is a dental device specially manufactured for qualified personnel to use in dentistry clinical and related procedures. It consists of a complete set of interrelated dental equipment and instrument components for diagnosis, treatment and operation in stomatology departments. This product is mainly composed of dental patient chair, oral lamp, instrument tray, three-use spray gun, mouthwash water device, spit suction device, spittoon, film viewing lamp and foot switch.

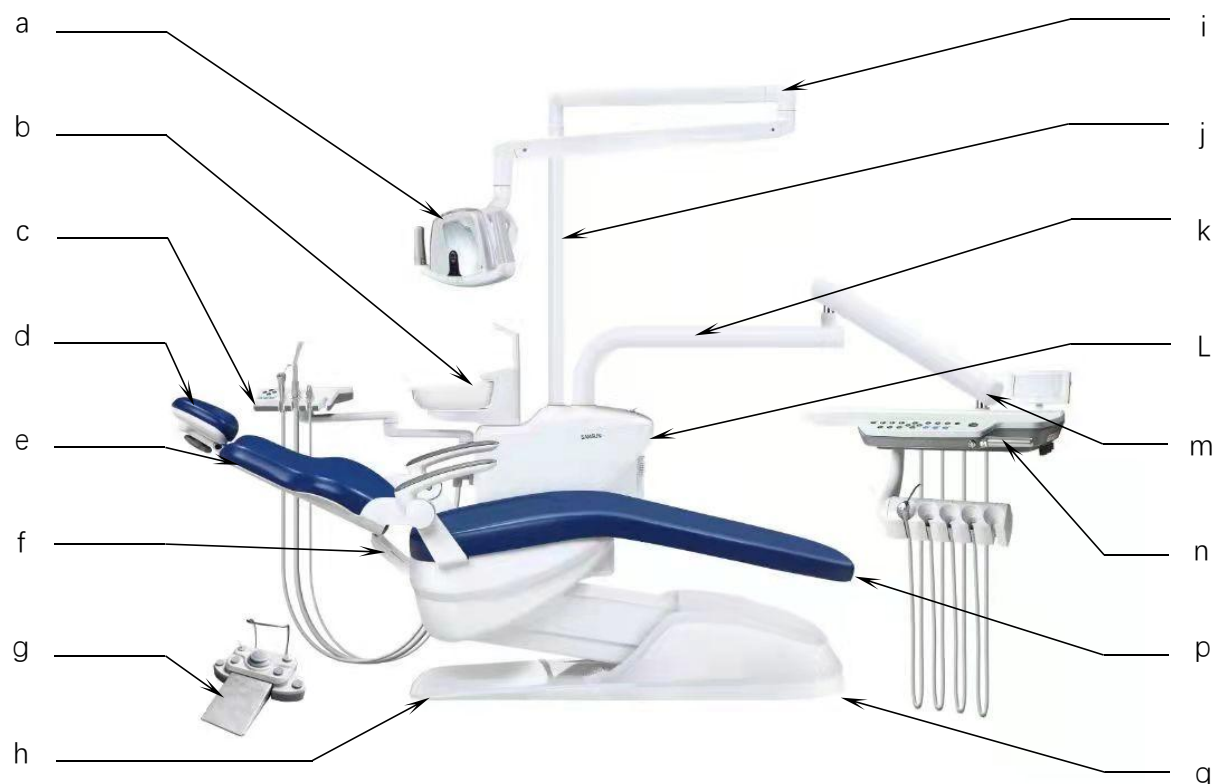
V、SERVICE CONDITIONS

- 1、 To ensure the normal use of the device, the input parameters of water, gas, electricity, and working environment must meet the following requirements:
- 2、 Air source: pressure 0.6MPa~0.8MPa flow rate >50L/min without oil
- 3、 Water source: water pressure 0.2MPa~0.4MPa flow >10L/min hardness <25 degrees
- 4、 Power Supply: a.c.220V/50Hz 10A
- 5、 Environment: temperature 5~40°C relative humidity 30%~75%

VI、BASIC PARAMETER

Operating light lux	More than 8000LX~20000LX
X Ray viewer lux	>2000cd/m ²
Patient chair load capacity	<1323N (约 135KG)
Instrument tray load capacity	<5KG
Maximum height of seat cushion from ground	730MM
Minimum height of seat cushion from ground	380MM
Lean backrest range	-3~72°
Headrest guide plate expansion range	120mm
Hot water temperature of thermostatic water heater	40±5°C

VII、PRODUCT STRUCTURE DIAGRAM



Product structure name:

No.	Name	No.	Name
a	Operating Lamp	i	Led Arm
b	Spittoon	j	Led Arm Poles
c	Assistant Tray	k	Rocker Arm
d	Headrest	L	Water Tank
e	Backrest	m	Balance Arm
f	Backrest Connector	n	Instrument Tray
g	Pedal	p	Cushion
h	Bottom Shell	q	Front Shell

VIII、PRODUCT SETUP

1、Installation Space

1.Environmental Requirement

To ensure the normal operation of the product, please install it in a clean, dry and ventilated place, and ensure that the product contact ground level and solid.

2.Space Requirement

In order to ensure that the product does not touch any objects within the range of working motion, the installation space must be guaranteed to meet the following requirements:

- a) Length not less than 3500mm

- b) Width not less than 2700mm
- c) Height not less than 2000mm

2、Product Setup

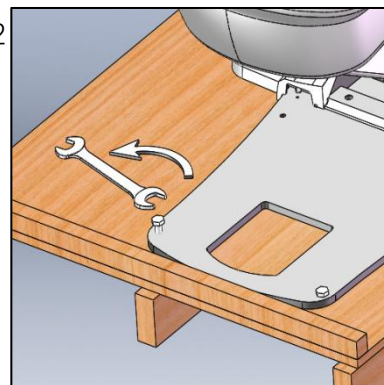
一、Installation and handling

- a) Unpack the product, take out the power cord of the product and connect it to the appropriate power supply. Open the main switch of the equipment (swing lever to ON), control the dental patient chair to the highest through the auxiliary control, remove the front shell and bottom shell, and pull out the power cord.
- b) Use the M8 external hexagonal screw wrench to remove the 3 screws that secure the patient chair to the packing plate and carefully move the dental patient chair to the intended installation position. As shown in Figure 2.

Figure1



Figure2



Attention:

- ◆ In the process of moving the patient chair, do not lift the swivel arm, handrail, assistant tray, water tank or plastic shell and other easily broken parts. Otherwise, they may be damaged due to excessive force.
- ◆ In the process of handling, please stabilize the instrument tray, operating light, assistant tray, etc., to avoid accidental contact due to rotation.

二、Installation of Patient Chair

- a) Access the power supply, open the main switch, control the back connecting rod through the auxiliary control button, close the main switch. See Figure 3.
- b) Push the backrest sponge forward to remove the backrest sponge; Turn the backrest iron plate up, connect the connecting rod of the backrest to the backrest iron plate with the hex screws, and tighten the screws with the hex wrench. See Figure 4-6.
- c) The backrest sponge back face position is aligned with the hook on the backrest iron plate on both sides at the same time to press down; Align the guide bar of the headrest and insert it into the notch on the backrest (apply proper amount of semi-solid grease on the guide bar if necessary). See Figure 7-8.

Figure3

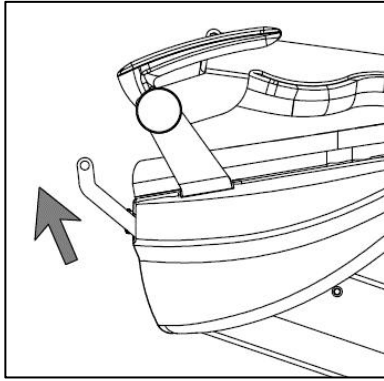


Figure4

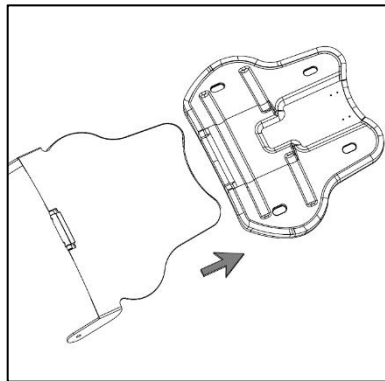


Figure5

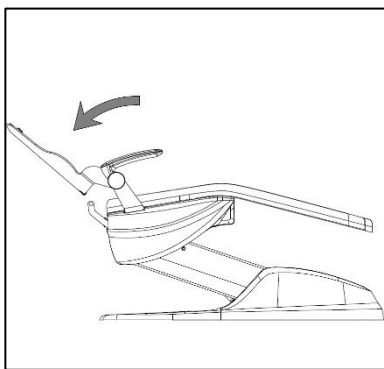


Figure6

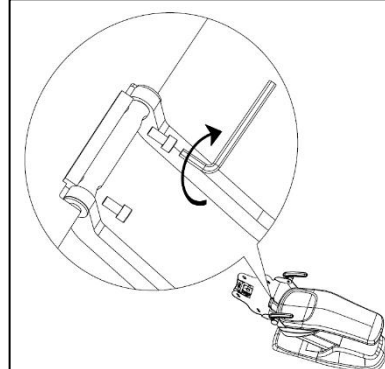


Figure7

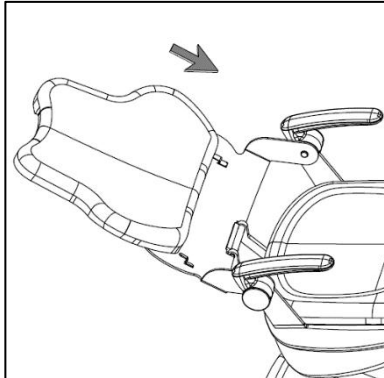
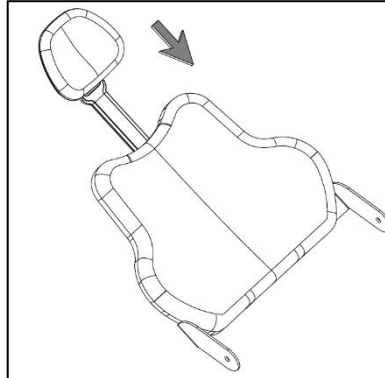


Figure8



Attention:

- ◆ When the connecting rod of the back is extended, it needs to be assisted to extend it, otherwise it may damage the plastic parts!
- ◆ Do not press the backrest iron plate directly on the cushion, otherwise it may scratch the cushion leather!
- ◆ After installing the backrest sponge, check for a round to make sure the hooks on the backrest iron plate are inserted into the appropriate holes!

三、 Installation of swivel arm and balance arm

- a) Use a Phillips screwdriver to remove the screws and elastic connectors on the end of the balancing arm; Open the case shells on both sides of the case (screws at the bottom of the case). Insert the pipe in the boom into the column, and the boom goes through the decorative snare on the column. Finally, insert the rear connector of the balancing arm into the slot hole of the swivel arm. See Figure 9-10.
- b) Take out the pipeline from the slot of the column and sort the pipeline; Turn and check the swivel arm and the balancing arm, apply proper amount of semi-solid grease to the tail joint of the balancing arm if necessary, and finally tighten the screws and elastic medium to the tail joint of the balancing arm with a Phillips screwdriver. Press the swivel cap onto the swivel end face. See Figure 11-12.

Figure9

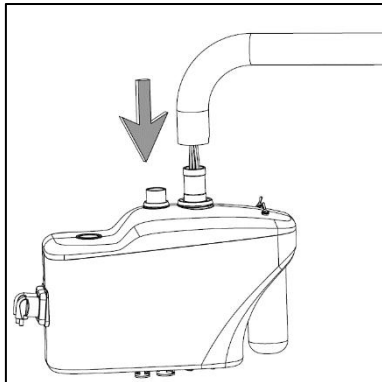


Figure10

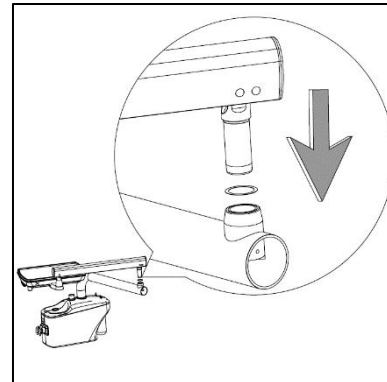


Figure11

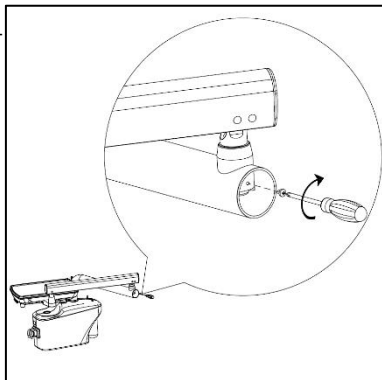
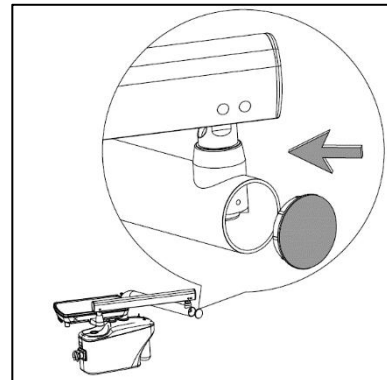


Figure12



Attention:

- ◆ It is recommended that two persons work together to install the instrument. During installation, please stabilize the instrument tray to avoid accidental contact due to rotation.
- ◆ After installing the swivel arm, rotate it to ensure that it is installed properly.
- ◆ The top cover of water tank does not need to be removed.

四、Installation of led operating lamp

- a) Open the packing box, take out the lamp center column and arm, and insert the rear end of the lamp arm through the decorative ring into the lamp center column (one end of the internal limited slot); Figure 13
- b) Connect the middle column of the lamp with the wire plug in the flange of the middle column of the chassis, and insert the middle column of the lamp into the flange of the middle column through the decorative ring; Turn the center column to ensure that the U-notch on the center column is caught in the limit screw on the flange of the center column. See Figure 14-15.
- c) Take out the mouth lamp, unscrew the M5 hex socket screw on the connecting shaft, and put on the decorative ring; Connect the connecting shaft of the oral lamp with the power plug of the connecting shaft of the arm, insert the power cord and plug into the connecting shaft of the arm, and then insert the connecting shaft of the oral lamp into the connecting hole of the arm, and tighten it with the M5 hexagon screw equipped with the lamp. Insert the mouth lamp handle into the mouth lamp handle frame. See Figure 16-18.

figure13

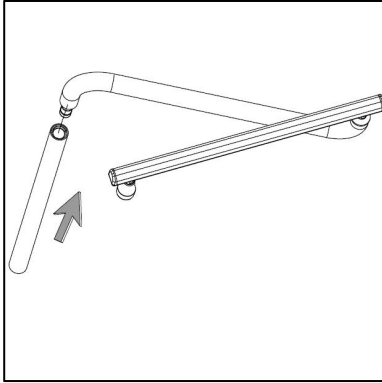


figure14

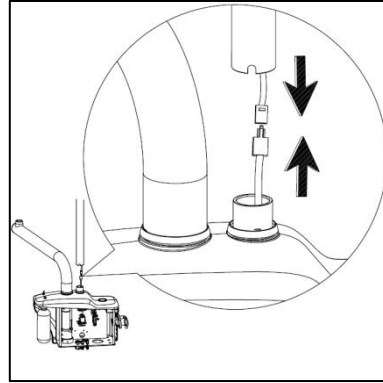


figure15

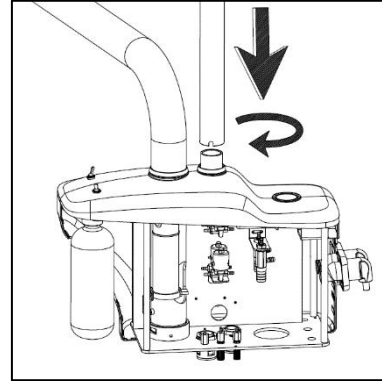


figure16

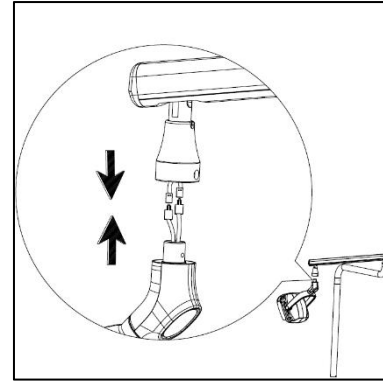


figure17

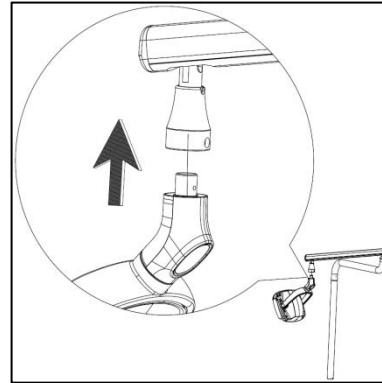
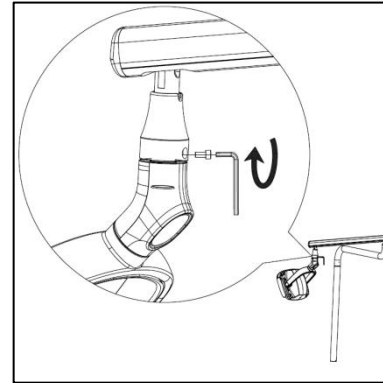


figure18



五、Installation of Spittoon

- Open the packing case, remove the spittoon and spittoon, and unscrew the spittoon shaft.
- Insert the spittoon shaft into the spittoon flange on the case, and unscrew the provided screws and spring. See Figure 19-20.
- Screw the spittoon into the body of the spittoon and install the components; Plug in the water supply pipe. See Figure 21-22.

figure19

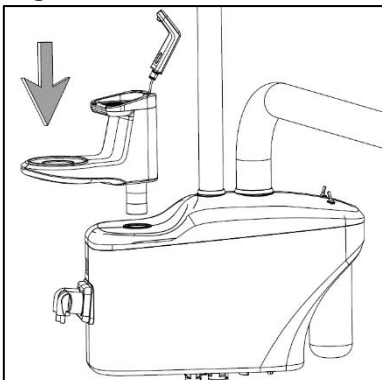


figure20

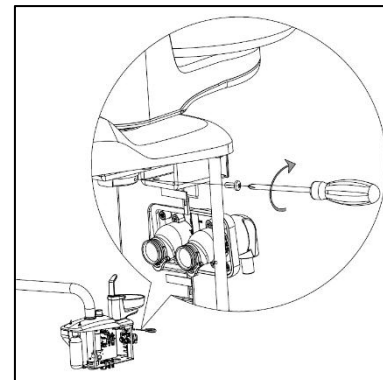


figure21

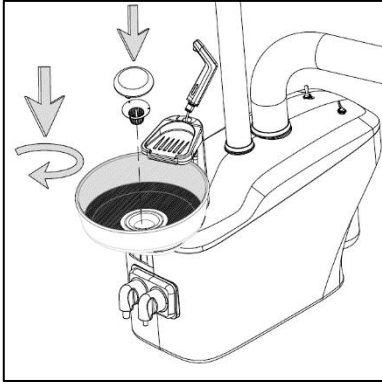
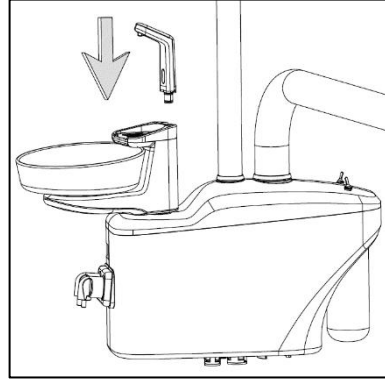


figure22



Attention:

- ◆ Rotate the spittoon and apply proper amount of semi-solid grease to the spittoon if necessary.
- ◆ Rotate the spittoon in or out of the main spittoon in a clockwise direction.

六、 Connection of equipment pipelines and lines

a) Plug the spittoon drain pipe into the Y-shaped tee in the case and lock it tightly with a throat clamp; According to the icon on the spittoon pipe path, connect the valve body in the corresponding box and press with copper sleeve. See Figure 23.

b) Open the pipeline packaging in the column and sort the pipeline; Connect the corresponding connectors in the chassis according to the color and number of the water pipe and gas pipe. See Figure 24.

c) Insert the wire through the round hole in the side panel of the case, and insert the wire according to the label prompt on the control box and the shape of the joint; Connect the ground wire. See Figure 25-26.

figure23

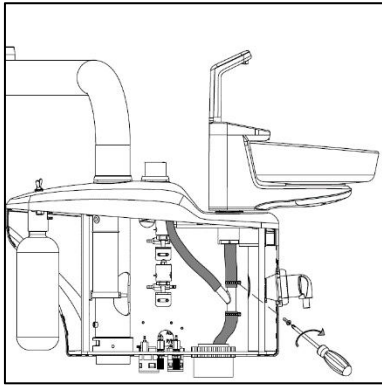


figure24

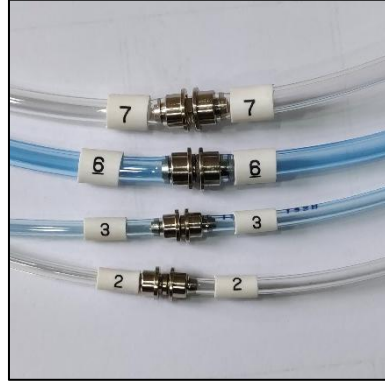


figure25

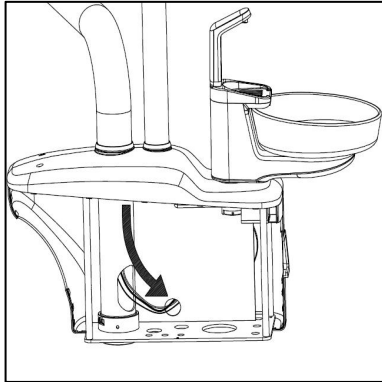
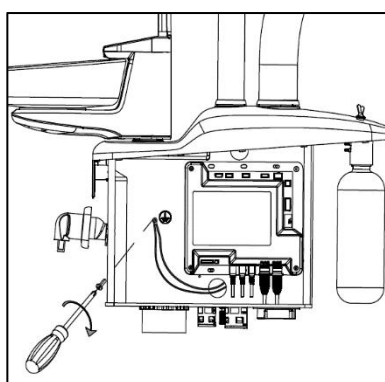


figure26



Attention:

- ◆ When connecting water pipes, ensure that pipe ports are firmly pressed by using copper sleeves.
- ◆ When connecting water pipes, arrange them properly to minimize pipe bending. Ensure that the pipes

are not folded in half; otherwise, device performance may be affected.

◆When connecting cables, ensure that the plugs are properly installed and secure.

七、Installation of Instrument Tray And Accessories

a)Installation of the instrument disc: Insert the trachea (colorless and transparent) on the triple diaphragm valve into the gas gauge on the instrument disc; Insert the USB main control wire and self-locking wire on the circuit board; Close the instrument plate and lock it with the equipped tapping screws. See Figure 27-29.

b)Installation of the syringe: Take out the nozzle of the syringe from the accessory bag, press the convex ring of the syringe body, insert the nozzle, and then release the convex ring to make it pop out and reset. If the convex ring does not automatically pop up and reset, reinstall it until the convex ring automatically pops up and reset. See Figure 30.

figure27

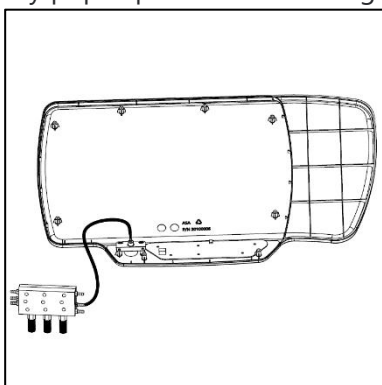


figure28

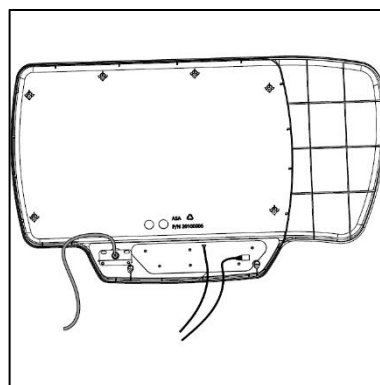


figure29

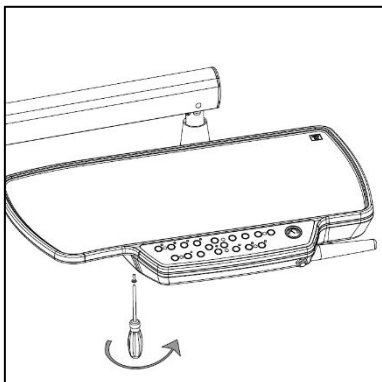
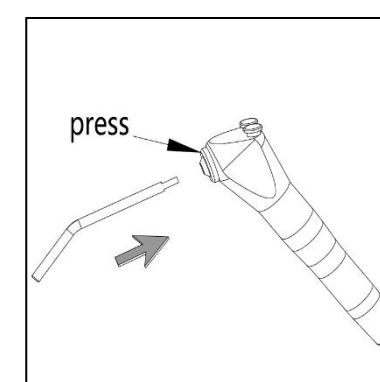


figure30



Attention:

◆When connecting gas pipes, ensure that the pipe ports are firmly pressed..

◆When connecting cables, ensure that the plugs are properly installed and secure.

八、Installation of tank water and air pipe

a)Connect the water inlet pipe, air inlet pipe, and drain pipe to the proper water source, air source, and drain port based on the product requirements or the label. During connection, the water inlet pipe and air inlet pipe should be well sealed to prevent water and air leakage. Ground the grounding wire of the machine.

b)Lay water, air, and drainage pipes based on the installation position of the device. The following figure shows the recommended installation layout. (A. Wastewater pipe B. Suction pipe C. Water supply pipe D. Power input E. Communication circuit F. Air source input)

Figure
31

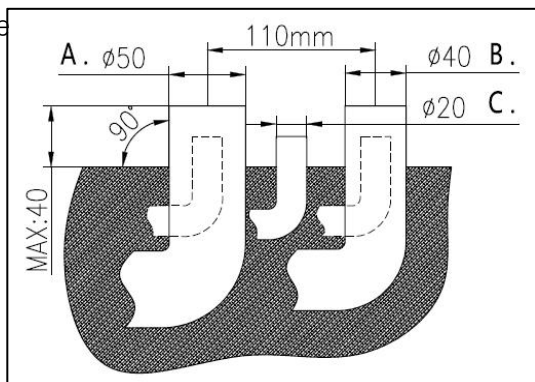
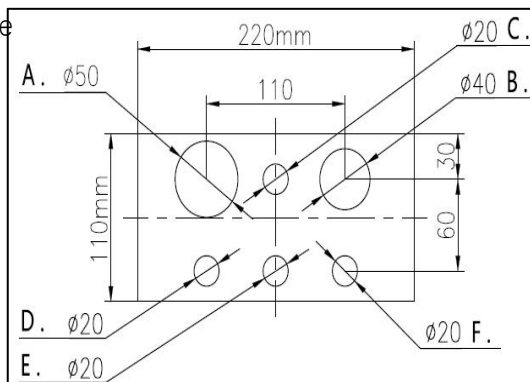


Figure
32



Attention:

- ◆ The water outlet should not be more than 40mm above the floor where the chair is installed. Otherwise, the water in the drain pipe may backflow.
- ◆ The drainage outlet must be arranged into a smooth downward sloping type.
- ◆ Do not arrange any pipe to be twisted, raised or undulating. Do not place the outlet in water.

九、Horizontal adjustment of equipment

Screw the six M10 horizontal screws in the accessory bag into the bottom plate of the dental patient chair and adjust the screw length to adjust the level of the equipment. As shown in Figure 33-34.

Attention:

- ◆ When adjusting the horizontal, the patient chair bottom plate and the ground should be as many contact surfaces as possible to ensure the stability of the entire equipment.
- ◆ When adjusting the level, take the levelness of the column in the lamp as the target and measure the levelness of multiple angles of the column repeatedly.

Figure33

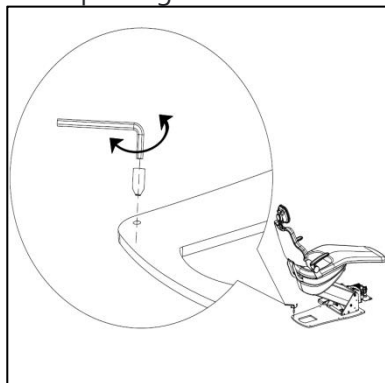
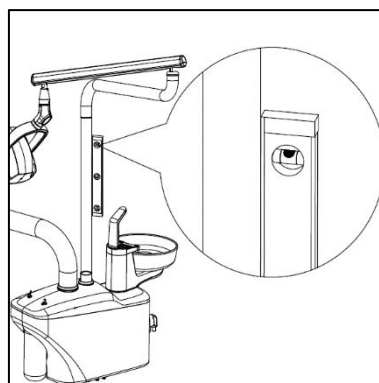


Figure34



十、Housing installation

- a) Close the left and right sides of the case and screw in the screws (and gaskets) from the bottom. See Figure 35-36.
- b) The bottom shell is secured to the bottom plate of the patient's chair by screws provided; Cover the strengthening plate cover; Fasten the front shell to the reinforcing plate cover, insert the positioning post into the bottom shell hole, and lock it to the floor box bracket with the equipped screws. See Figure 37 to 38.

figure35

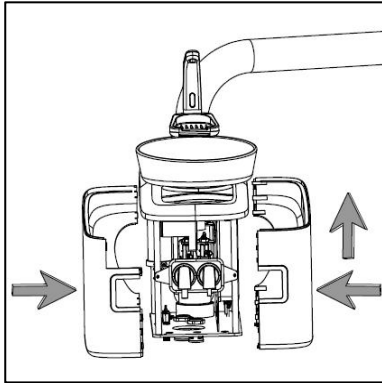


figure36

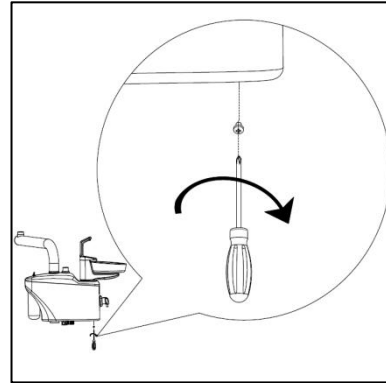


figure37

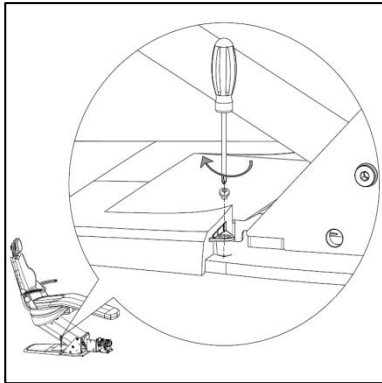
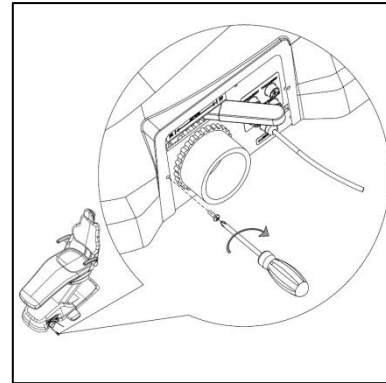


figure38

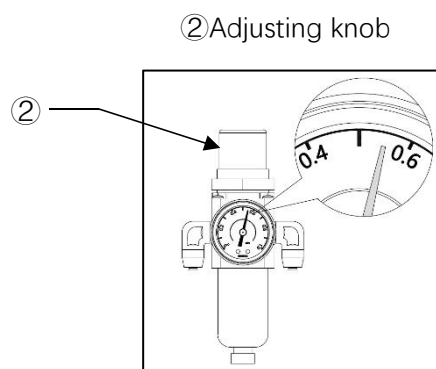
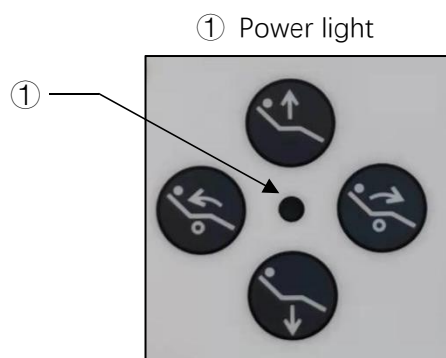


Attention:

◆ The installation of the enclosure shall be scheduled after the completion of product commissioning.

IX、Product Debugging

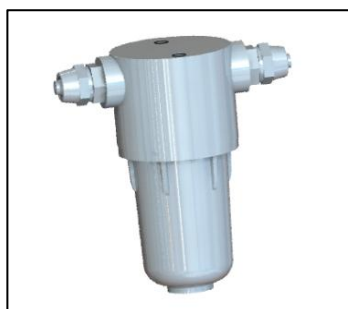
1. Open the main switch of water, gas and electricity at the ground box (the lever is placed ON) :
2. The buzzer emits a sound of "drip", the power indicator of the instrument panel and the sub-control panel lights up, and the equipment conducts the complete self-test.
3. Check the connection between the water source and air source of the ground tank and the internal interfaces of the chassis. Ensure that the pipe interfaces of the device are free of water and air leakage.
4. Check and adjust the pressure value of the barometer on the air reducing valve at the ground box. The normal working pressure is 0.55MPa. Adjustment method: pull up the top knob of the air reducing valve, turn the knob clockwise to increase the pressure value, and vice versa to reduce the pressure value; Adjust and press the knob again.
5. Install dental hairpieces: pull out each handpieces tube and step on the foot pedal to discharge the remaining water and gas in the pipe before installing. When installing, align the handpieces port with the hole and tighten the screw. Pick up the handpieces, press the pedal, and the barometer value on the instrument plate should be 0.2MPa.
6. Inject appropriate amount of water into the water bottle and press the switch of the syringe to check the water outlet and atomization effect. Press the heating button on the main control board .Check the mouthwash temperature after ten minutes.
7. According to the instructions, press the buttons on the main control board to check whether the buttons can be used normally.



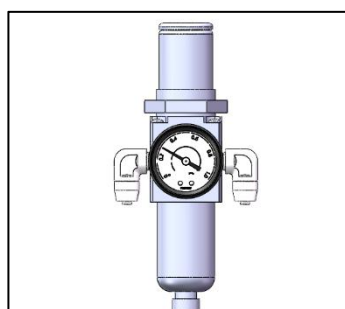
X、Care and maintenance

- 1、 In order to keep the product clean, a wet cloth can be used to wipe the surface of the product daily.
- 2、 In order to keep tap water clean, it is recommended to clean the water filter element in the water tank regularly. If the water filter shell or filter element is found damaged, it should be replaced immediately.
- 3、 To keep water in water bottle clean, it is recommended to clean the inside of water bottle regularly. Before removing the water bottle, turn off the water bottle air supply switch. Note: Water bottle storage can not use high temperature disinfection, otherwise it will affect the performance of the water bottle.
- 4、 In order to keep the gas dry, it is recommended to discharge the water inside the air reducing valve regularly. If the air reducing valve is found to leak, it should be replaced immediately.
- 5、 led operating lamp maintenance should be carried out at room temperature, using a soft wet cloth to wipe
- 6、 It is recommended to clean the dirt in the suction filter cup regularly.
- 7、 Please refer to the manual for the maintenance and use of the handpieces.

Water filter



Air reducing valve



Saliva suction filter cup

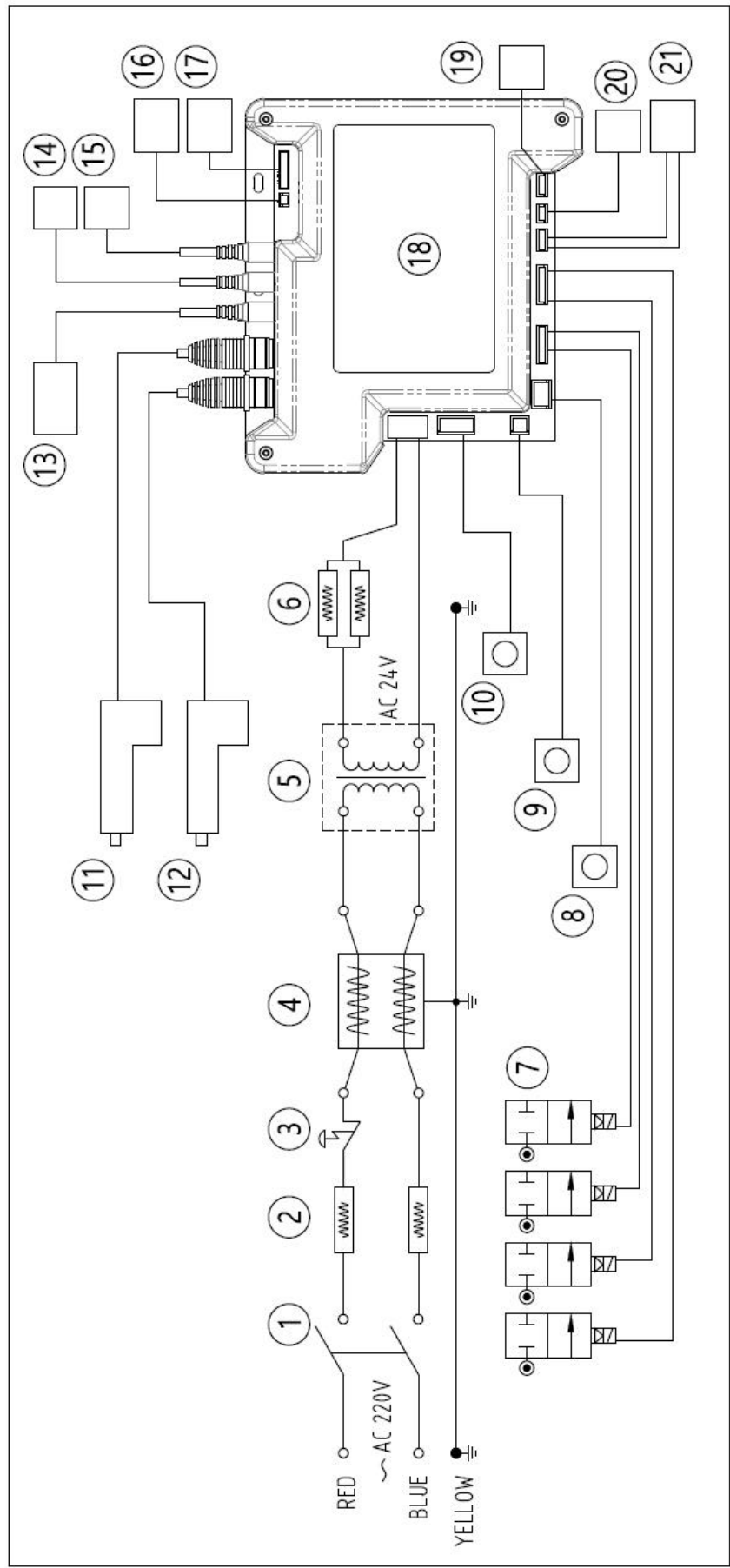


XI、Common Fault

No.	The diagnosis	fault analysis	solution	remark
1	The led operating light doesn't work	1.The lamp bead is burnt out 2.The cable is not properly connected 3.Cable breakage	1.Replace the lamp bead of the same model 2.Re-butt after correcting the joint 3.Replace the cable	
2	Spittoon or flushing water will not come out	1.The waterways are twisted and flattened 2.Solenoid valve coil is burnt out	1.Arrange or replace the pipes in the chassis 2.Replace solenoid valve	
3	The mouthwash or flushing bowl should not be closed	1.The solenoid valve spool is stuck by a foreign object	1.Remove the cleaning spool or replace the solenoid valve	
4	The flushing bowl has poor drainage	1.Fouling of line 2.Drain pipe flattened	1.Drain pipe flattened 2.Replace the water pipe with a new one or remove the hot water	
5	The mouthpiece does not absorb the saliva properly	1.Fouling in pipe 2.The filter cup is clogged with dirt	1.Clean or replace new pipe 2.Remove the strainer to remove dirt	
6	The power indicator is off	1.The fuse is blown out 2.Emergency stop switch closed	1.Replace fuse 2.Turn out the emergency stop switch	
7	Handpieces working pressure is not up to standard	1.Pipe twisted and flattened 2.The air source pressure is substandard	1.Arrange pipes or replace pipes 2.Adjust the air source pressure	

XII、Circuit Diagram

Dental Chair Unit Schematic Circuit



XIII、Water Gas Diagram

Dental Chair Unit Schematic Diagram Of Water And Gas

