Dentalsalemall

CE 1639 ISO13485:2016



Combined dental comprehensive treatment machine

Type DS-KID-8

Description

Please read the manual before installing and using the product.

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Note: Please read the instruction carefully before operating the machine.

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1. GENERAL PROVISIONS

1.1 Honorable users

Thank you for purchasing the Combined Dental Therapy Machine from our company. The Combined Dental Therapy Machine is a kind of product which is improved and designed according to the market demand. In order for you to be familiar with this product as soon as possible, please read the technical instructions in detail. This Technical Instruction Manual will provide you with assistance before use and when you need to consult relevant information.

1.2 Instructions for use

Before using the equipment, please carefully read the technical instructions to familiarize yourself with the equipment. You must pay attention to the warnings and safety tips listed. Be sure to keep this instruction manual handy to ensure that it is readily available to you or other users.

1.3 Warranties and Liability

The equipment shall be maintained regularly by the users to ensure the operation safety and function reliability and sufficiently protect the safety and health of the patients, users and other personnel.

Equipment maintenance work will be performed by us or our specifically authorized resellers only and if the parts affecting the safety of the Equipment are damaged, then the original parts shall be used for replacement.

1.4 User Personnel and Territories

The equipment is operated by trained professionals and is used for dental diagnosis and treatment. Do not operate this device in areas where there is an explosive hazard.

Note:The high speed handpiece, low speed handpiece, dental cleaners, light curing devices and other devices mentioned in this manual are not included in the dental comprehensive treatment machines manufactured by the Company and shall be deemed as products purchased by customers separately.

2. PRODUCT PROFILE

2.1 Structure Overview

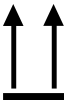
2.1.1 Suspension seat and panda chassis coordination generous, cater to the psychology of children, doctors operating space.Easy to use, and easy to clean and care

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for; up and down running track, simple and stable; box body landing design to provide more stable support.

2.1.2 Ocean Wave & Shell Design Cart, Larger Space, More Flexible Movement. Avoid shaking caused by the movement of the child; Unique injection machine plate makes the overall shape beautiful and generous, while ensuring that the shape beautiful and easy for doctors to operate and use. Equipped with advanced color screen setting system, more intuitive and convenient; intelligent display LCD screen can display, store doctor set state, content, display device use state speed, turn, power, air pressure, and so on.

2.1.3 The rotational speed of the mobile phone can be adjusted arbitrarily within the maximum rotational speed range according to the needs, and the oral lamp adopts the intensity of the induction control lamp; the salivation system has the function of automatic delay, and can filter the solid substance without affecting the suction, which reduces the trouble of frequent cleaning and makes the operation convenient, safe and sanitary.

Markings	Meaning	Markings	Meaning
 (on the nameplate)	Watch out! Access to accompanying documents		Moisture proof
 (on heaters)	Watch out! High temperature		Up
	Watch out!		Handle with Care
	Equipment Type B	IPX4	Protection grade of pedal switch
	Protection Grounding		AC voltage (AC)

2.1.4 Mouthwash, flushing water time can be personalized set, easy to operate. The application of low pressure constant temperature mouthwash heater, low pressure viewing lamp and dynamic instrument interlock ensure the safety of the operator.

2.1.5 Dental chair adopts high power import 24V DC motor, low noise, stable movement, comfortable sitting and lying; the standard configuration of dental chair armrest can turn to the right, convenient for patients to enter and exit.

2.1.6 The machine adopts safe and low voltage computer control, the control panel is reasonable, simple to operate, reliable in performance, easy to clean and disinfect, with

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external pink whale box, adapt to different diagnostic room pipeline design.

2.2 Markings

Ex-works Nameplate

The nameplate of the integrated dental therapy unit shall be located at the back of the dental chair. Data given on the nameplate:

- Model
- Machine code
- Input power
- Input power
- Registration and Production Address
- Contact number
- Date of Production
- Name of manufacturer

3. PERFORMANCE INDICATORS

3.1 Classification

3.1.1 Type of Equipment according to electrical shock protection: Type I

3.1.2 According to the electric shock prevention degree: applicable part of type B, the symbol shall be 

3.1.3 According to the degree of protection against harmful inlet fluid: ordinary equipment, foot switch IPX4.

3.1.4 According to the working system: the dental chair should be operated intermittently in 10% occupancy ratio, that is, the dental chair should take 18 minutes off for 2min. The continuous running time of a dental chair shall not exceed 2 minutes.

3.2 Total weight: 260 kg

3.3 Material: steel frame, spray paint blister shell, glass spittoon

3.4 Working conditions

3.4.1 Environmental Conditions

3.4.1.1 Ambient temperature range: + 10 ℃ ~ + 40 ℃

3.4.1.2 Relative humidity range: 30% RH ~ 75% RH

3.4.1.3 Atmospheric pressure range: 700hPa ~ 1060hPa

3.4.2 Power source: 220 V 50 Hz

3.4.3 Water source: Hydraulic pressure 0.2 MPa ~ 0.4 MPa, recommended water

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hardness ≤ 60 mg/L, limit of water flow speed (higher than 5L/min), limit of pH (6.5 ~ 8.5).

3.4.4 Gas source: air pressure is 0.55MPa (gauge pressure of sub box), air speed limit (higher than 80NL/min), humidity limit (the dew point at atmospheric pressure is not higher than -20 ° C), oil pollution limit (maximum 0.5mg/m), and particle pollution limit (particles of 1μm to 5μm are not higher than 100 pieces/m).

External gas source air pressure 0.6 MPa ~ 0.8 MPa, and no water, oil

3.4.5 Power: 680VA (including dental chair)

3.5 Transport and storage conditions

3.5.1 Ambient temperature range: -40 ℃ ~ + 55 ℃

3.5.2 Relative humidity range: ≤ 80% RH

3.5.3 Atmospheric pressure range: 500hPa ~ 1060hPa

3.5.4 During transportation and storage, attention should be paid to the rules of “up” and “afraid of rain”.

3.6 Major Technical Indicators

3.6.1 Overall machine to earth leakage current: ≤ 0.5mA

3.6.2 Insulation resistance: ≥ 2MΩ

3.6.3 Type and rating of fuse:

F1、 F2、 F3、 F4、 F5、 F6：250V AC F6.3 AL (φ5x20)

3.6.4 Oral lamp: AC12V ~ 24V 23VA lighting: up to 25000 Lux stepless dimming

3.6.5 Heater for Constant Temperature Rinse Water: AC24V 60W Temperature: 40 ℃ ± 5 ℃

Primary protection: 45 ℃; secondary protection: 70 ℃

3.6.6 Lifting capacity of pediatric dental chair: 1000N

3.6.7 Lifting range of children’s dental chair: 280mm ~ 580mm

3.6.8 Elevation angle of backrest and horizontal level: 2 ° ~ 70 °

3.6.9 Expansion and Adjustment Volume of Headrest: 150mm

3.6.10 Viewing light

Dimension of viewing light: 30cm × 20cm (It is suggested that the size of photograph under observation: 25cm × 15cm). Screen brightness > 2000cd/m2, uniformity > 0.7, stability ≤ 2%, scattering coefficient > 0.9., light source color temperature > 6500K. Rated power: 10W, operating voltage: 10V. The ambient illumination in the reading room shall not be greater than 100lx.

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3.7 Device control method: foot controlled air switch

3.8 Heavy duty suction machine (suction): Negative air pressure type

3.8.1 Vacuum level can reach 27 kPa at pressure of 550 kPa

3.8.2 At pressure of 550kPa, the pumping rate shall not be less than 1 L/min

3.9 Saliva (weak suction): Water under negative pressure

3.9.1 Vacuum level can reach 10kPa at 200kPa water pressure.

3.9.2 At the pressure of 200kPa, the pumping rate shall not be less than 400ml/min

3.10 Equipment load:

3.10.1 The maximum load bearing capacity of a children's dental chair is 135 kg.

3.10.2 Trolley disks shall have a maximum loadable weight of 5 kg (evenly distributed).

3.11 Useful life: for the date of production, see the label. The useful life is 5 years.

4. COMBINED DENTISTRY COMPREHENSIVE THERAPY MACHINES

4.1 Introduction to structure

4.1.1 The therapy machine is a combined floor structure (See Figure 1), and the instructions for using the dental chair refer to the instructions of the dental chair (See Figure 4). Keys (Fig. 2, 3) located on the helper rack and therapeutic mechanical disc control panel will control the corresponding action of the levitation dental chair.

4.1.2 The power, air and water supply into the equipment (including the dental chair) shall be supplied from an external whale yard.

4.1.3 Mouthwash and flushing water are controlled by solenoid valve. Constant temperature mouthwash heater adopts 24V voltage, which is safe and reliable. Its switch is set on the main control panel. The utility model has the advantages of simple operation, and can provide the functions of hot water rinsing and hot fog spraying with a three-purpose gun on a scaffold.

4.1.4 There is a main switch on the back of the panda. Press the button to control the power supply, air source and water source entering the equipment.

4.1.5 The control switches inside the foot pedal switch and hanger shall jointly control high and low speed mobile phones and tooth cleaning machines.

4.1.6 Buttons on the auxiliary control panel at the assistant rack and keys on the

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main control panel at the device tray (See Figures 2 and 3) can control the corresponding actions of the levitation dental chair. Strong and weak absorption should be controlled jointly by the solenoid valve in the main box and the switch components in the assistant rack.

4.1.7 Inside the panda box, there is a bottle of pure water. The pure water is convenient for users to use pure water to work for the mobile phone and prolong the life of the mobile phone. The assembling and disassembling method is safe and convenient to meet the needs of modern dental industry. Tap water and purified water are easily switched.

4.1.8 Helper rack can be rotated, with safety protection function, and with control of flushing bowl, mouthwash and oral lights and other control panels, convenient for the assistant operation.

4.1.9 Oral lamp stepless dimming, close to the induction head can adjust the intensity of light. Dimming method: In the light state, the hand near the LED oral light sensor head 5CM-8CM to keep 3S, automatically enter the dimming state, when the first heard buzzer "di" sound for the highest brightness, again heard buzzer "di" sound for the lowest brightness. In the dimming process, the brightness is considered suitable to leave the sensor head.

4.1.10 Filter system is adopted in the water pipe: Flushing glue water, mouth rinse water, assistant rack gun, mobile phone and instrument tray gun can adopt filtered tap water, mobile phone and instrument tray gun can also use the pure water bottle outside the box, which can make the water of mobile phone cleaner and prolong the service life of mobile phone.

4.1.11 The diameter of the sewage discharge pipe for strong and weak suction and sputum should be 16mm; and the maximum Waste Water flow rate should be: 5L/min; The minimum angle of the waste water discharge pipe is 90 °.

4.1.12 When strong absorption (φ17.8mm) and weak absorption (φ11mm) casing joints match the qualified strong absorption (φ17mm) and weak absorption (φ10.5mm) casing pipes, the force applied to insert and remove the casing pipe from the casing joints shall conform to IEC 62366.

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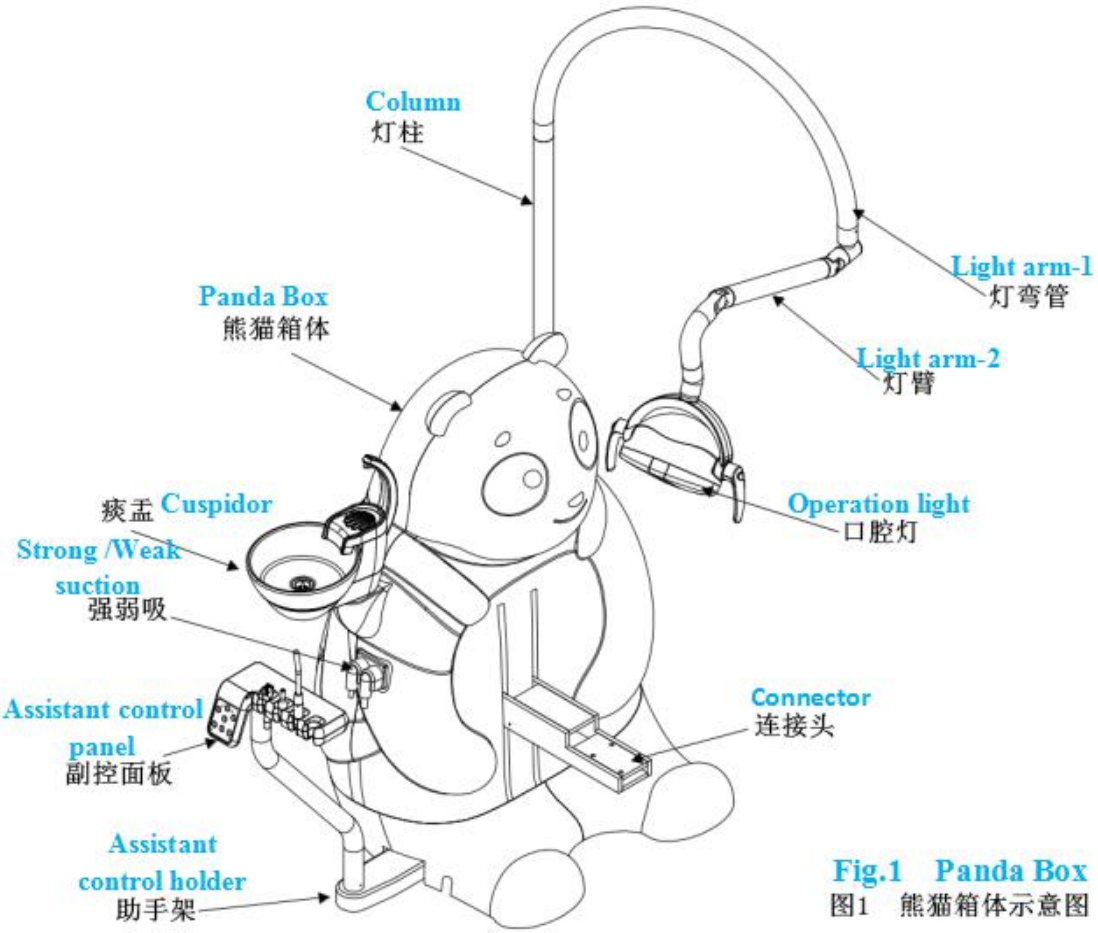


Fig.1 Panda Box
图1 熊猫箱体示意图

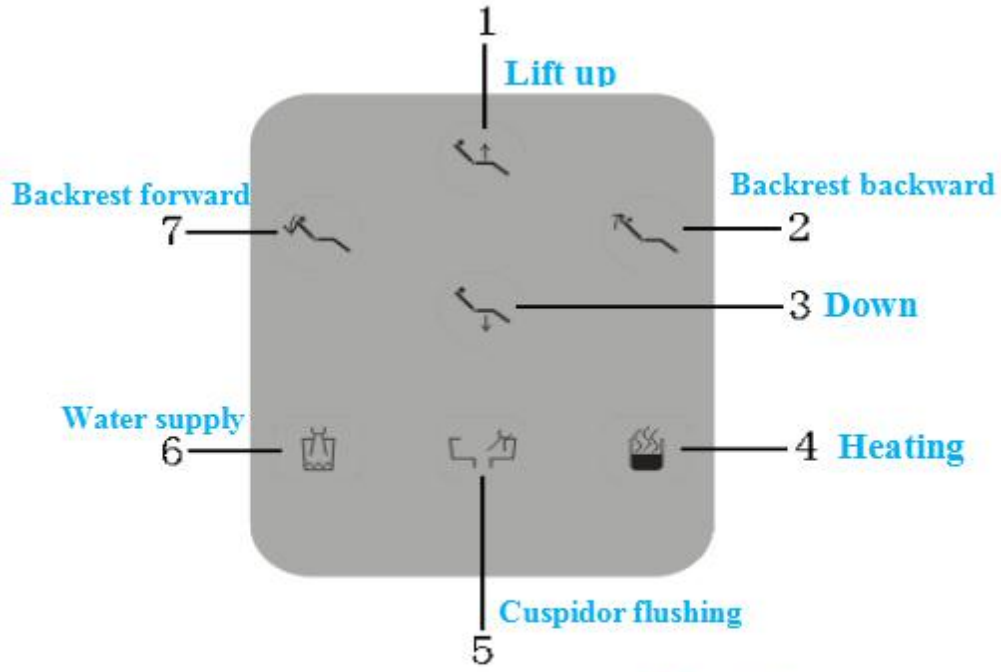


Fig.2 Assistant control panel
图2 副控面板

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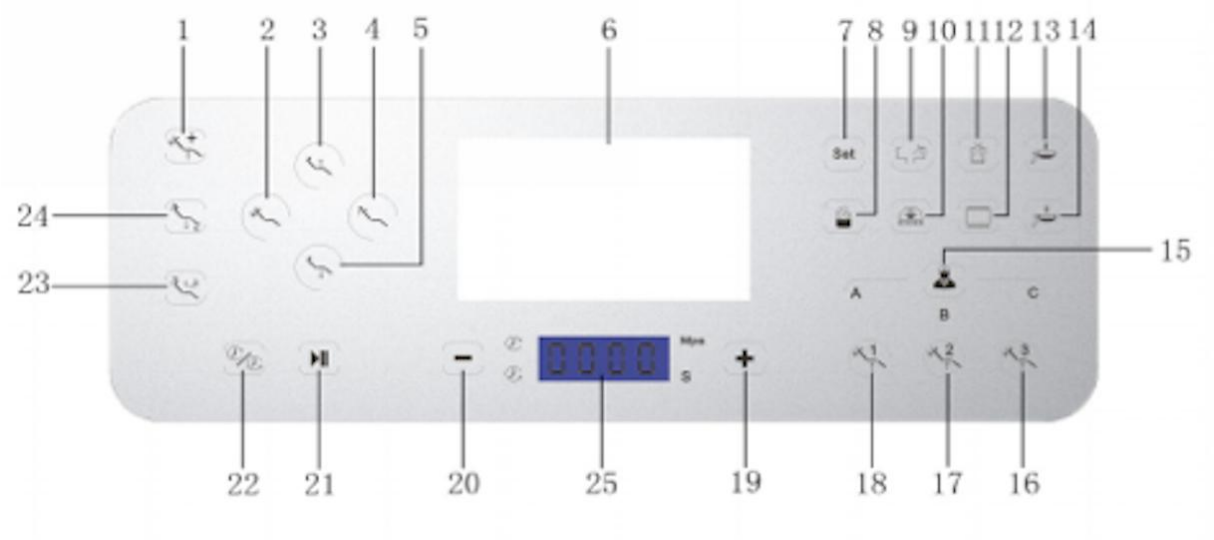


Fig.3 Main control panel

1.Emergency position 2.Backrest forward 3.Lift up 4.Backrest backward
5.Down 6.LCD Screen 7.Set button 8.Heating 9.Cuspidor flushing
10.Operating light button 11.Water supply 12.X-ray film viewer
13.Movable tray up 14.Movable tray down 15.Three doctors memory selected
16.Doctor-3 17.Doctor-2 18.Doctor-1 19.option button “+”
20.Option button “-” 21.Start/Enter button 22.Timing/air pressure
23.Spitting position 24.Zero position 25.Display indicator

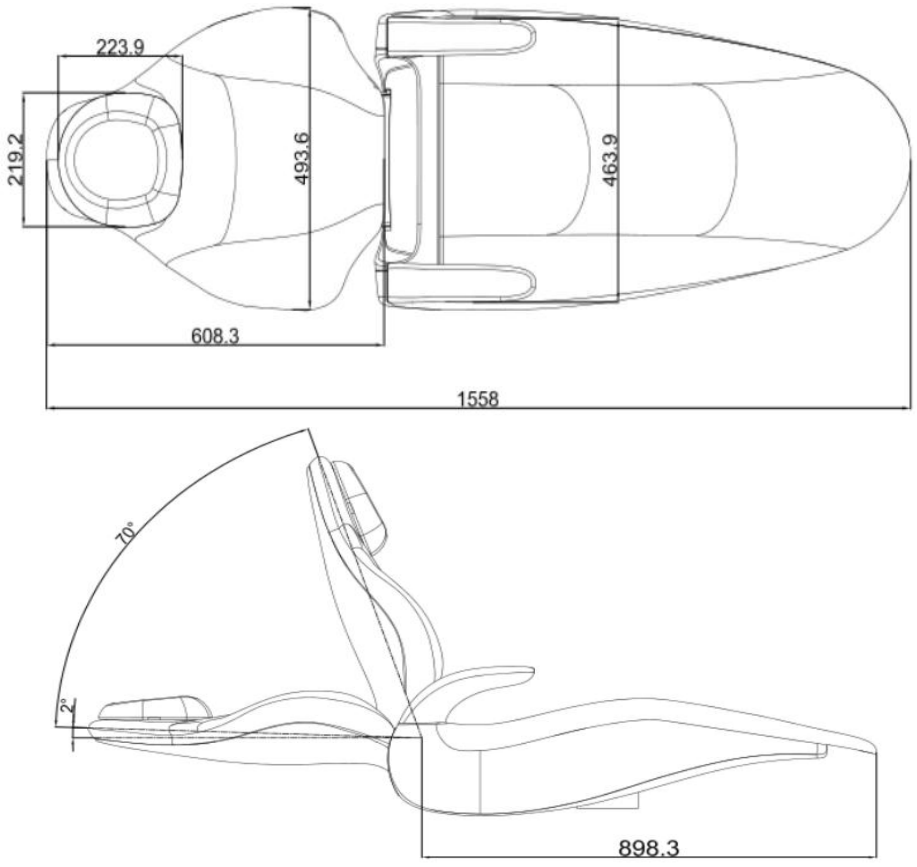
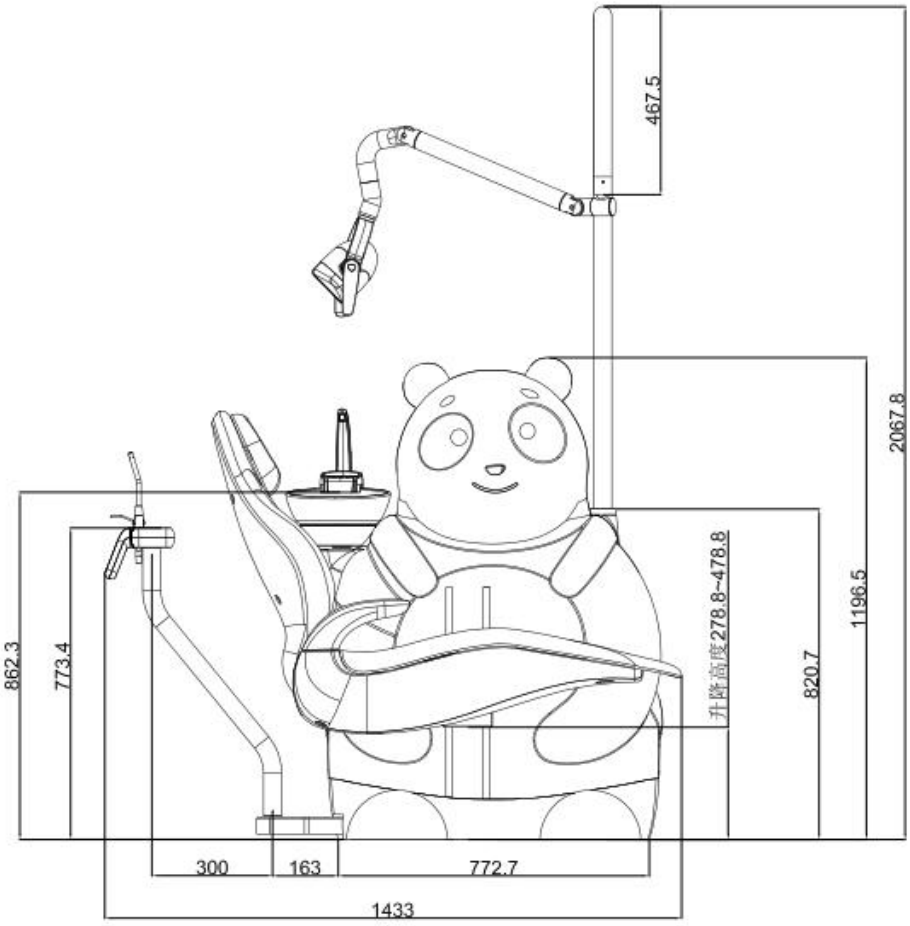


Fig.4 Size of dental unit

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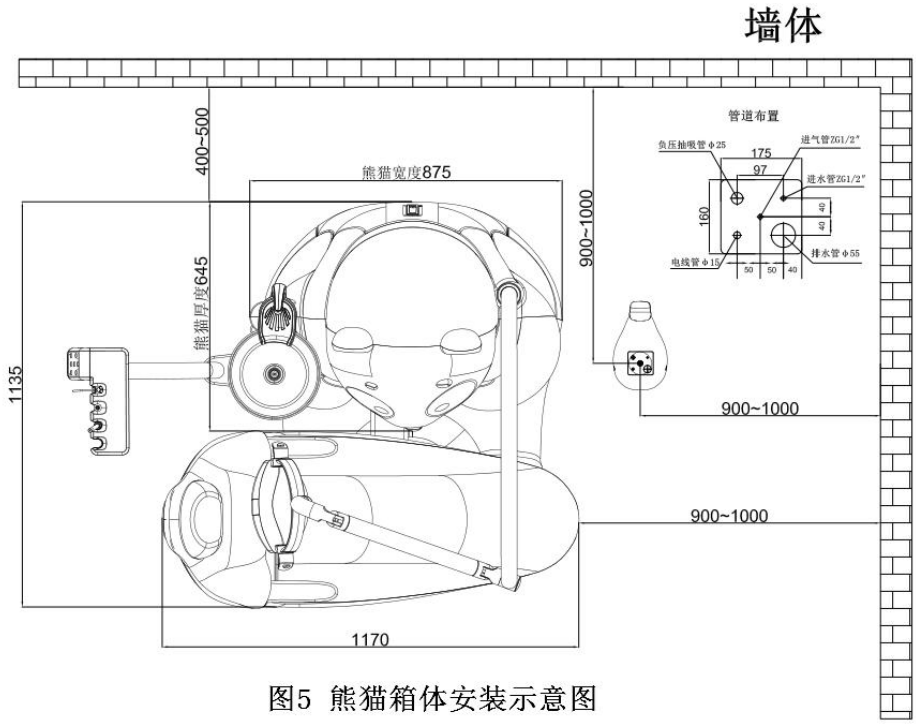


图5 熊猫箱体安装示意图

Fig.5 Panda Box Installation schematic

4.2 Installation Instructions

4.2.1 Remove the packing case from the machine and install the machine in an

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appropriate location in accordance with the operation manual of the dental chair. Refer to the dimensional drawings of the dental appliance and supporting dental chairs for the relevant external size. (See Figures 4 and 5)

4.2.2 Gas supply pipe, water supply pipe, exhaust pipe and socket positions must be reserved in the trench before installing the equipment. Connect the spare parts of therapeutic machine with the air supply joint, water supply joint and water supply joint in the trench (1/2 "for water supply and air pipe), and connect the other end with the blue and white water pipe inside the spiral hose without any leakage at the connection.

4.2.3 Connect the sewer from the spiral hose to the sewer joint which is taken out of the spare parts box, and insert the outlet of the sewer joint into the trench sewer (1/2 "of the sewer). Open the water supply valve and air valve inside the box (the valve is in the open position when leaving the factory). Refer to the longitudinal plane diagram of the ditch for relevant dimensions.

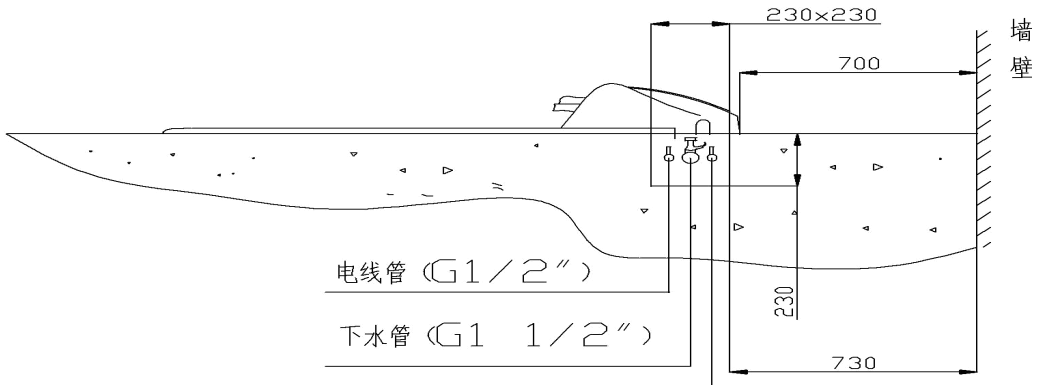


Fig. 6 Longitudinal layout of trenches

4.2.4 Spittoon installation: Remove the spittoon base and water cup supply pipe from the fitting box and install them properly. Unpack the spittoon and install the spittoon directly on the spittoon base. Remove the spittoon and install the fittings properly.

4.2.5 Installation of lamp arm and oral lamp: Insert the lamp arm (including decorative ring and positioning screw) into the special socket hole inside the device arm, connect the wire in the lamp arm into the case through the lamp arm, and install the lamp arm and oral cavity (including decorative ring) on the lamp arm.

4.2.6 Panoramic lamps (optional accessories): Mount omnipresent lamp support on cart lampholder case.

4.2.7 Installation of various instruments on the instrument tray and assistant rack.

4.2.8 Install strong and weak casing connectors respectively.

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4.2.9 Install three-gun nozzles.

4.2.10 Install mobile phones in order by referring to mobile phone instructions.

4.2.11 Connect the power source, water source and gas source and commission. Cetcase gauge pressure shall be stabilized at 0.55MPa.

Note: Units or individual clinics using this equipment must be equipped or connected with a amalgam separator in the waste discharge system of the dental therapist.

4.3 Instructions for Use

Connect the equipment with the power, gas and water supply and open the main switch on the back of Panda (open first and close later) and the equipment will be in service condition. Position the dental chair in the appropriate position as instructed, turn the oral lamp bracket, and turn or lower the lamp so that the lamp rests in its position for work.

4.3.1 Display Interface and Setup Instructions

Schematic diagram of main interface and setting up interface of control panel and display



Fig.7 Control Panel



Fig. 8 Main Screen Interface

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Fig.9 Schematic Setup Interface

4.3.2 Functional description of main control panel

There are two ways to display the control panel, the white icon indicates that there is no active running state, the blue one indicates that there is no active running state, and the display on the screen is much the same, the blue icon indicates that there is no active running state, and the orange one indicates that there is active running state.

4.3.2.1 “ ” ascending button

Press and hold down the button, the electric dental chair will run (up) in the direction indicated by the arrow, and the display screen will show “ ↑ ”. When you reach the desired position, release the button, and the electric dental chair stops working immediately, and the display “ ↑ ” does not display (if you hold down the button all the time, the dental chair will automatically stop when it rises to its limit position).

4.3.2.2 “ ”Doved-down button

Press and hold down the button, the electric dental chair will run towards (under) the direction indicated by the arrow, and the display screen will show “ ↓ ”. When you reach the desired position, release the button, and the electric dental chair stops working immediately, and the display “ ↓ ” does not display (if you hold down the button all the time, the dental chair will automatically stop when it reaches its limit position.)

4.3.2.3 “ ”Back up key

Press and hold down the button to move the back of the electric dental chair towards the direction (front) indicated by the arrow and the display screen will show “ ↗ ”. When the required position is reached, release the button, and the backrest of the electric dental chair immediately stops running and the display “ ↗ ” does not display (if the button is pressed continuously, the backrest of the dental chair automatically stops when it reaches the limit position).

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4.3.2.4 “ ”Back down key

Press and hold down the button, the back of the Electric Dental Chair will run towards (after) the direction indicated by the arrow, for the display screen of “ ”. When the required position is reached, release the button, and the backrest of the electric dental chair immediately stops running and the display “ ” does not display (if the button is pressed continuously, the backrest of the dental chair automatically stops when it reaches the limit position).

See drawing 10. Rendering of function description in the following diagram.



Fig.10 Orientation functional renderings

4.3.2.5 “ ”Water Supply Key

Tap this button to start the water supply, The water supply icon on the control panel is displayed in blue, and the “ ”orange display on the display screen is displayed until the preset time automatically stops and the icon color is restored to the original color. In the process of water supply, if press this button again, water supply stops.

Preset water supply preset time: hold down “ Set ”set button 4 to 5 seconds, wait for the main interface to switch to the setting interface, press" + "," - "button to go to the next step, the selection of the previous step, select “ 供水时间设置 ”water supply time set press “ ” start/pause button to enter the water supply time set interface, hold down “ ”start/pause button, the screen time will continue to increase (the maximum time value is 34 seconds), the control panel of the water supply button blue display, add to the required time can be released, then press" + "button will jump to the next step “ 返回 RETURN ”return button, then press “ ”start/pause button to exit the current interface, return to the main setting interface.

Set up interfaces for water supply as illustrated in Figure 11

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Fig.11 Cup filling time setting

4.3.2.6 “ ”Flushing and silting key

Tap this button to start flushing, and the flush icon on the control panel will appear in blue and the “ ”orange display on the display will automatically stop until the preset time when the icon color will return to its original color; while flushing, press this button again to stop flushing.

Preset the preset time of flushing water: hold down the “ Set ”setting key for 4 to 5 seconds, release the hand when the main interface switches to the setting interface, press the "+", "-" button to select the next step or the previous step, select the “ 冲淤时间设置 ” and then press the “ ”start or the pause button to enter the setting interface of the time of flushing silt. There are four time modes in turn, press the "+", "-" button to enter the next step or the previous step, the icon in the selection will flicker. Select the desired time and then press the “ ”start or pause button to determine the static display of the icon after the selection. The setup mode is as follows:

Make sure the “ 30s ”30s is selected and the buzzer beeps;

Confirm “ 1min ” 1min, two beeps will be heard;

Confirm “ 3min ” 3min, The buzzer will ring three times;

Make sure the “ 常开 ” is on and the buzzer beeps four times.

Set an interface for erosion and silt time as shown in Figure 12.



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Fig.12 Cuspidor rinsing setting

4.3.2.7 “ ” heating key

Press the button, the heater starts heating, the heating icon on the control panel appears in blue, and the “ ”orange display on the display shows that when the temperature reaches the set point, the heater stops heating and the icon color returns to its original color; during this process, if you press the button again, the heating stops.

4.3.2.8 “ ”Key for viewing film

Click this button, turn on the viewing light, the control panel on the viewing light icon blue display, the display on the “ ”orange display, click this button to turn off the viewing light, icon color is restored to the original color.

4.3.2.9 “ ” Oral light key

Click the button, turn on the oral light, the control panel on the oral light icon blue display, the display on the “ ”orange display, light click on the button to turn off the oral light, icon color to restore the original color.

4.3.2.10 “ ”First aid key

During the treatment, press the button, the electric dental chair will rise to the highest position and lean back to the extreme position; press the button again during the operation, and the electric dental chair will stop working; press the key of any direction, and the electric dental chair will stop working immediately.

4.3.2.11 “ ” RESET KEY

When the patient is about to see a doctor or after treatment, the doctor only needs to press the button, the electric dental chair runs to the initial state immediately, and the oral light and the viewing light are turned off automatically; the chair is lowered to the lowest position, and the backrest is leaned forward to the limit position; the patient is convenient to go up and down; during the operation, press any direction key, the action is stopped immediately.

4.3.2.12 “ ”Spitting key

During the treatment of the patient, just press the button, the back of the electric dental chair tilts forward to the limit position, while the oral lamp is turned off, flushing is turned on, and the spitting and flushing keys are shown in blue on the control panel. The " " and " " orange display on the screen simply presses the button again after the spitting is completed. The backrest of the electric dental chair leans back to the therapeutic position where the oral light is turned on and the flush is turned off. The

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control panel mouth light key blue display, display screen “  ”orange display; Press any arrow key to stop the action at once.

4.3.2.13 “  ”Doctor position: “A”,“B” or “C”

Press this button to select from the "A", "B", and "C" docs, and back again. Select the "A", "B", and "C" indicator lights in the control panel and the “  ”Display corresponding to the light display.

4.3.2.14 The “  ”, “  ” and “  ” three memory digits

Press this button to enter three different doctor memory bits. During the memory operation, the display screen will display according to the “  ”、“  ”、 “  ”and “  ” corresponding to the running of the electric dental chair.

4.3.2.15 “  ” Positive Timing/Countdown

Positive Timing: Press this button, the display screen shows the interface is timing, the screen shows 0: 00, click the “  ” start/pause button to start running time, click again, pause the current time, press again, reset the time, to 0: 00, the maximum value of 59: 59;

Countdown: Click the “  ” Positive/Countdown button. The screen displays the countdown setting interface. The screen displays the set time with a maximum of 59: 59. Press the “  ” Start/Pause button to start the running time. Press the Start/Pause button again to pause the current time. Press again to reset the time to the set time. Pause the current time first, press the "+" key, the number of seconds set flicker, that the current number of seconds can be set, then press the "+", "-" button to add or subtract, set the minute method: press the “  ”Positive/Countdown button, the minute set flicker, that the current settings can be set minutes, at this time press the "+", "-" button to add or subtract. Setup is complete, when the countdown time to 0: 00, the buzzer into a long-honking state, press "+", "-", “  ”start/pause,"  "Positive/countdown key to cancel. Whether you set minutes or seconds, you pause the current time before you can set it.

Barometric mode: When the sensing module of the sensing pressure plate senses a certain pressure, the display will automatically enter the working mode of the dental handset, and the Mpa value will change with the barometric pressure.

Setting up of an interface for the timing/countdown, as shown in Figures 13 and 14

As Figure 15 illustrates, this is a dental phone work interface.

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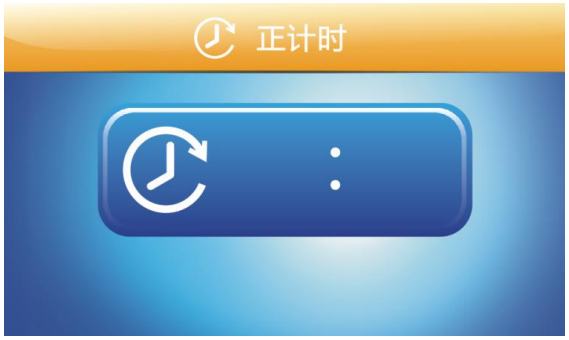


Fig.13 Positive Timing



Fig.14 Countdown



Fig.15 Dental phone work interface

4.3.2.16 “⏯”START/SUSPEND KEY

This button only works on the Timing/Countdown and Settings interface and sub interfaces and does not respond in the main interface. In positive/countdown mode, it is the start/pause and reset function; in the setup interface and sub-interface, it is the OK key function.

4.3.2.17 Function selection keys of "+" and "-"

By tapping this button, you can proceed to the next step, The selection of the previous step, Long press and hold is quick selection and fast increase and decrease; When the countdown mode is set, the "+" key is also used to set the number of seconds; the "+" and "-" keys do not work in the positive timing mode.

4.3.2.18 “Set” Setting Keys

①、 Setting of Water Supply and Supply Volume

Press and hold the “Set”Settings button until the display switches into the settings interface, you can let go.

To lightly press the “+”,“-” buttons for selection of functions; Press “⏯” start or suspend to enter the water supply time setting interface after checking the “供水时间设置”water supply time setting. The number of seconds in the display will be

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increased by holding down the “ ⏯ ” start or suspend key. When the length of time is increased to the needed time, press “+”, choose “start” or “stop”, and then press “start” or “stop” to determine the time. Then, the system can exit the setting interface of water supply time and return to the menu of the higher level. In the setting of water supply time, can refer to the container required water, release the water supply key, stop water supply.

Click the "Settings" button again, the indicator lights off, set up, the display back to the main interface. The computer has done a good job of new memory, later use, just press the water supply button, will automatically in the container to this amount of water. (Please readjust water volume according to foregoing steps in case of sudden and major change in water pressure or use of vessel size.)

This setting can be saved after power-off.

②、 Setting of Erosion Time

Press and hold the " Set " Settings button until the display switches into the settings interface, you can let go.

Lightly press the “+” or “-” buttons to select the functions. Select the “ 冲淤时间设置 ” erosion time and press the “ ⏯ ”start or suspend buttons to enter the flushing time setting interface. The settings are set at the following times:

Select “ 30s ”30s, press “ ⏯ ”Start Pause button and ring.

Check “ 1min ” for 1 min, press “ ⏯ ”to start/stop, and make two clicks.

Select “ 3min ” for 3min, press “ ⏯ ”to start/to pausethe button, and make three sounds.

Select " 常开 "Open, press “ ⏯ ”Start/Pause, and sound four times.

When the setting is completed, press "+", "-" and select " 返回 RETURN ", then press “ ⏯ ”start or pause to determine the key, and then return to the setting interface. To exit the setting mode, press the “ Set ” setting button lightly or press the “+”, “-” button to press the start/stop button after the “ 返回 RETURN ” returns. Set indicator lights off, the display back to the main interface, that the sputum time has been saved.

This setting can be saved after power-off.

③、Memory Bit Setting

A + (1, 2, 3) is triple memory digit

B + (1, 2, 3) is triple memory digit

C + (1, 2, 3) is triple memory bit

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Press and hold the “ Set ” Settings button until the display switches into the settings interface, you can let go.

To select functions by depressing the buttons of "+" or "-" lightly; Select “ 记忆位设置 ” to set memory digit and then press “ ⏯ ” start or pause to enter the interface of setting memory digit. The height of the electric dental chair may be adjusted by pressing “ ↑ ” 、 “ ↓ ” 、 “ ↗ ” and “ ↓ ” . Example: Press the “ ⏯ ” Start button or the Pause button to switch the doctor position. The “ A ” Show button on the screen is Doctor A. Then press the "+" or "-" keys to select “ ” Memory Position 1. The icons on the screen will flicker. Hold down the “ ↑ ” Up button and the “ ↓ ” Back button, then press the “ ⏯ ” Start button or the Pause button to confirm. The icons on the screen are displayed statically, indicating that they are currently set. Other memory bits and so on, After the settings, you can lightly press the “ Set ” set button or press “+”, “-” select “ 返回 RETURN ”, and then press “ ⏯ ” to start/stop” to exit.

This setting can be saved after power-off.

As shown in Figure 16, set the interface for memory bits



Fig.16　Memory position setting interface

④、Manual setting of the lowest and highest bits

Press and hold the “ Set ” Settings button until the display switches into the settings interface, you can let go.

Tap the “＋” , “－” button to select the function, select the “ 极限位设置 ” Limitation position setting and then press the “ ⏯ ” start/pause button to enter the limit settings interface, set the indicator to flicker, the buzzer long sound slow into the setting state.

At this time, the highest adjustment of the electric dental chair can be done by pressing “ ↑ ” the up button, then pressing the "+", "-" and then selecting the " 坐垫最高 ↑ ", then pressing the “ ⏯ ” start or stop button to determine the starting or stopping button.

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Other limit setting methods are the same as above.

This setting can be saved after power-off.

As shown in Figure 17, set the interface for the limit bit



Fig.17 Limitation position setting

⑤、 Language

Press and hold the " Set "Settings button until the display switches into the settings interface, you can let go.

Lightly press the "+" or "-" buttons to select functions. Select the " 语言设置 LANGUAGE "language, and then press the " ⏯ "start or suspend buttons to enter the interface of language settings. The " 中文 " Chinese and " English " English languages can be selected.

Set up interfaces for languages as illustrated in Figure 18



Fig.18 Language

⑥、 Restoration of Set-up Settings

Press and hold the " Set " Settings button until the display switches into the settings interface, you can let go.

Tap the "+", " -" buttons to select features, and then click the button to select the function. Select " 恢复出厂设置 " Resume Factory Settings and press " ⏯ "Start/Pause to enter the Resume Factory Settings interface. Select Press " ⏯ "Start/Pause to start/pause. After the honking of the buzzer, the electric dental chair starts to move by itself. The

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electric dental chair finds out the highest seat, the front seat and the lowest seat, and after the final position of the back, the buzzer automatically finds the double high and double low position.

This setting can be saved after power-off.

As shown in Figure 19, set up the interface for restoring the factory



Fig.19 Default setting

4.4.1 Instruction for Installation

Note: When adjusting the position of the appliance attached to the dental chair, do not make its center of gravity deviate seriously from the balance position to prevent the appliance from tipping over.

Connect the power trial run (gas control switch to control the power supply wire).

Note: If the gas control switch assembly is not connected with the air source during the test, use accompanying insulator to make it closed artificially; if the gas control switch assembly is connected with the air source, the gas control switch shall be controlled by the air source and shall not be manually closed.

Note: Power must have a reliable grounding cable.

4.4.2 Instructions for Use

Foot switch operation:

The foot switch housing is provided with four signs, which respectively indicate four toggling directions of the foot switch.

4.4.2.1 Lifting movement: foot switch to move forward, the seat face up; to move back, the seat face down.

4.4.2.2 Pitching movement: the foot switch fluctuates to the left, the backrest is tilted down; to the right, the chair surface is bent.

Notes: degree of protection for foot switch shall be IPX4.

4.4.3 Main Control Panel Operation (see Figure 3 and to be installed on the

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therapy machine disc) and Auxiliary Control Panel Operation (see Figure 2 and to be installed on the therapy machine assistant rack).

4.4.3.1 Lifting movement: Press 3 key chair face to rise; Press 5 key chair face to descend; Stop movement after loosening. Keep pressing, the seat face moves continuously, until the seat position limit when the movement stops.

4.4.3.2 The pitch motion: pressing the 4, 2 buttons respectively to control the movement of backrest bending forward and backward, and the operating method is the same as the lifting motion.

4.4.3.3 Memory position function: This dental chair can set 3 memory positions by itself according to dentist's habit. No matter where the chair is, just press 18 keys, the dental chair will automatically run to the 1st memory position. Similarly, press 17 keys and 16 keys respectively, and the dental chair will automatically run to the 2nd memory position and the 3rd memory position.

4.4.3.4 Reset function: press the button of 24 wherever the chair is located, and the dental chair will automatically move to a seat convenient for the patient to go up and down (i.e. the lower reset position).

4.4.3.5 Easy spitting function: wherever the chair is located, press the 23 key and the dental chair will automatically move to the position where the patient spits. Press the 23 key again and the chair position will be restored to the treatment position before spitting.

4.4.3.6 Stop function: no matter what kind of movement the dental chair carries out, as long as you press any key on the main control panel, the movement will be stopped immediately.

4.4.3.7 Control of first-aid position: press the button 1, and the dental chair will automatically run to the first-aid position (treatment position).

4.4.3.8 Headrest height: the Headrest can be freely adjusted to a proper height to adapt to different height by means of magnetic absorption on the backrest.

4.4.3.9 Use of the armrest: In order to facilitate the patient to go up and down the dental chair, the right armrest is a movable armrest. When the patient goes up, next dentistry chair, can turn right armrest clockwise to limit position, wait for the patient to sit hind, rotate counterclockwise right armrest again to use position can.

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5. PRINCIPLE DIAGRAM OF WATER AND ELECTRICITY

5.1 Principle drawing of water & gas

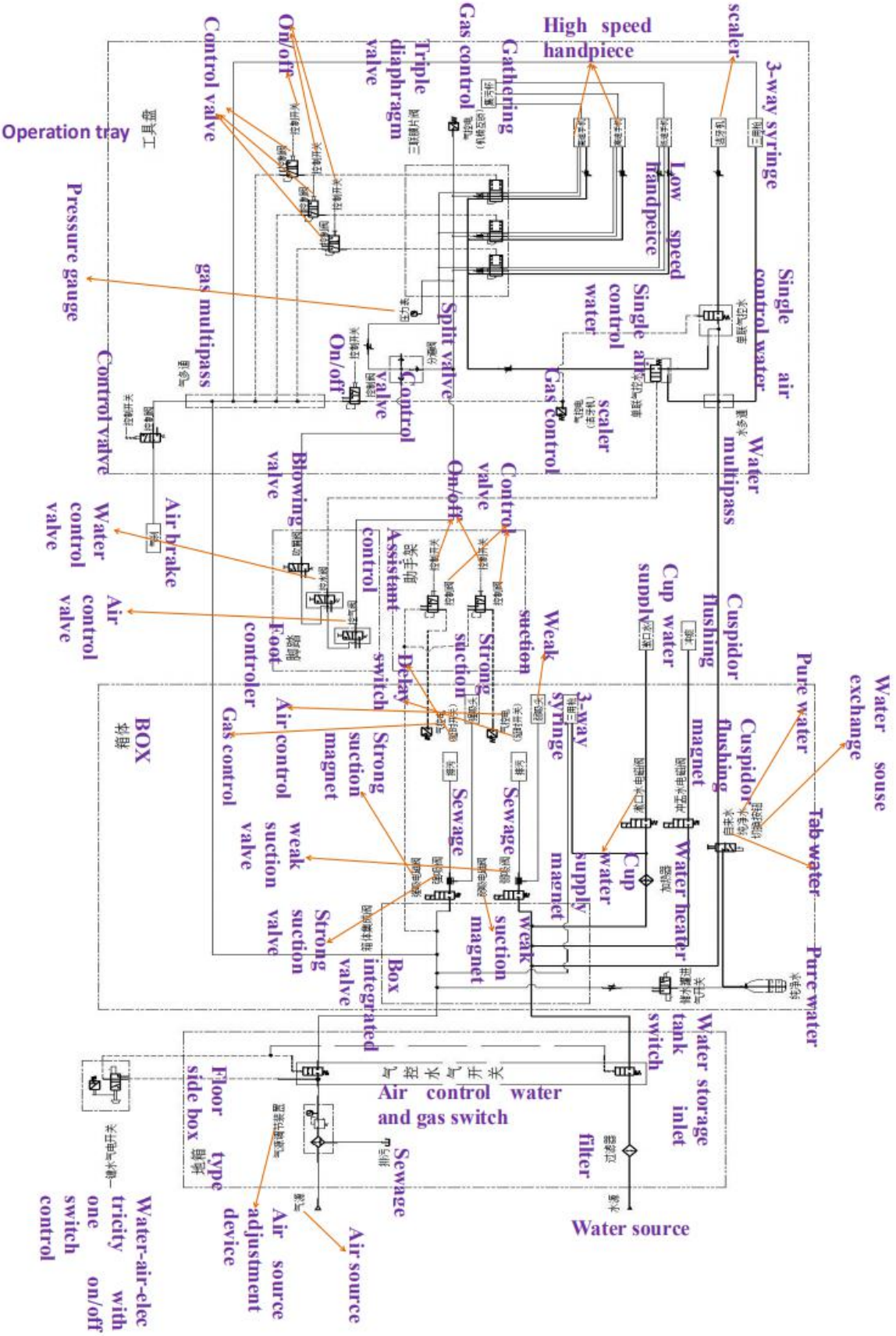


Fig.20 Water-gas schematic diagram

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5.2 Electrical wiring diagrams

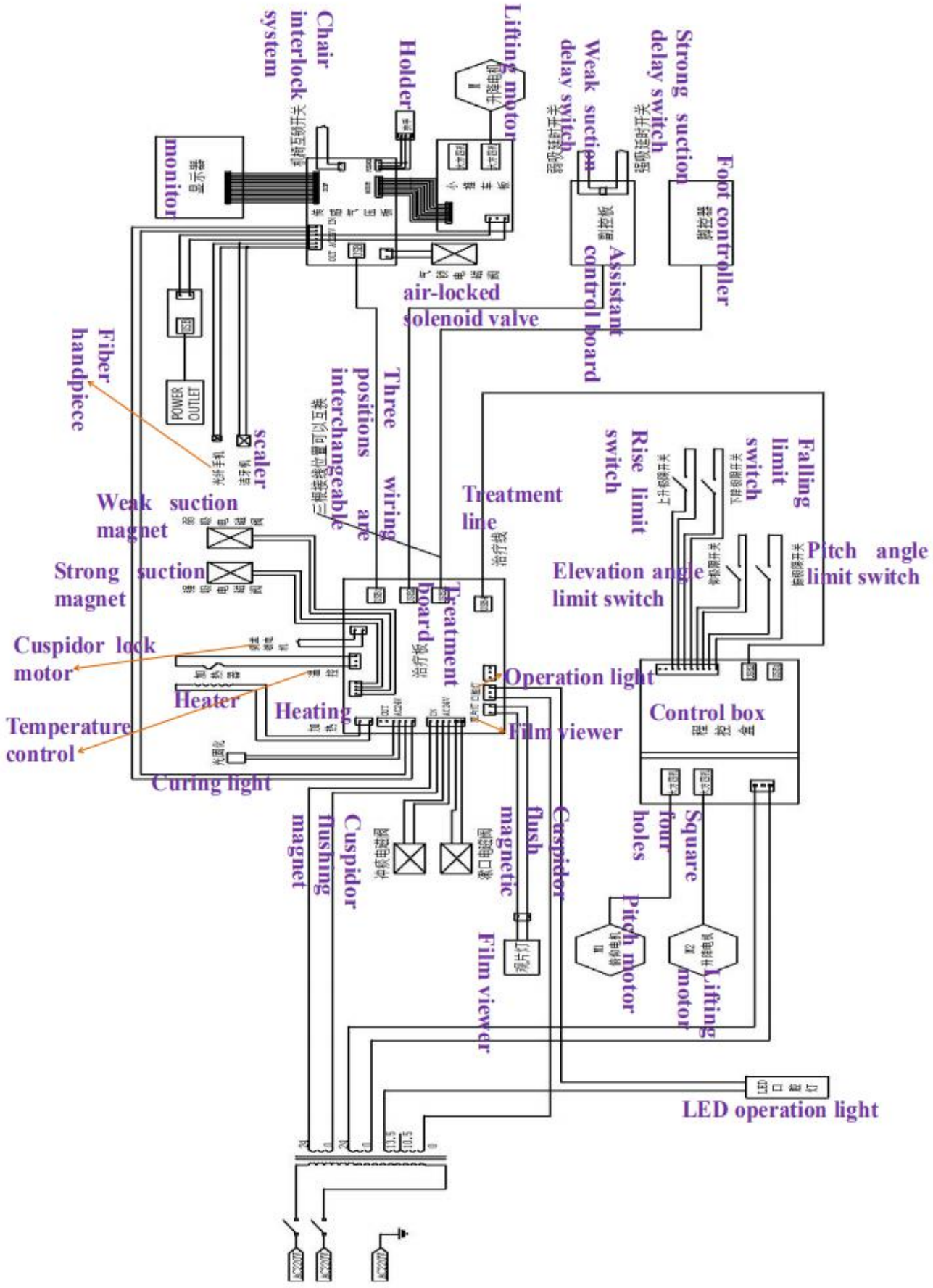


Fig.21 Circuit schematic

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6. REPAIR AND MAINTENANCE

 **Attention, please! Please shut down the power supply to the Panda Dental Comprehensive Therapy Machine before performing maintenance and surface cleaning or sterilization. Daily maintenance, should keep the equipment clean, unobstructed pipeline, eliminate leakage, rotating part of the timely injection of lubricating oil, keep the equipment in good working condition.**

6.1 Cleaning and sterilization

The external surfaces of equipment are suggested to be cleaned for household use, and the parts which frequently touch are suggested to be scrubbed with medical alcohol solution. (It is advised to perform once half a month).

6.1.1 The cleaning process is the first step of all disinfection procedures:

6.1.1.1 Clean thoroughly with a detergent or surfactant, and then rinse with clean water, this cleaning process can remove the surface of a large number of microorganisms.

6.1.1.2 Pharmaceuticals and chemicals commonly used in dental hospitals are likely to damage the painted and plastic parts of the equipment surface. Therefore, it is recommended to try to use isolation supplies.

6.1.2 Instructions for use of cleaning and sanitization

6.1.2.1 In cleaning and sterilizing, use soft, single-use, discarded paper or sterilized gauze.

6.1.2.2 Dishcloth, sponge or other materials that can be used many times are recommended.

6.1.2.3 The nozzles and handles of tertiary spray guns are suggested to be put in sterilization bag before sterilization, and then sterilized by high temperature (maximum temperature of 134 ° C) and high pressure steam (pressure 205.8KPa). The sterilization time is not less than 3 minutes.

6.1.2.4 Strong and weak suction heads are suggested to be sterilized with glutaraldehyde disinfectant.

6.1.2.5 Spittoon application soft hair brush often brush to keep spittoon clean and clean.

Note: Please discard all cleaning and disinfecting supplies after cleaning.

6.2 Filter Maintenance

6.2.1 Water System

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To ensure the normal use of the equipment, the water inlet of the equipment is equipped with a filter to block impurities in the water, so that it does not enter the equipment, but a long time, sewage will block the filter element and affect the flow of water through, at this time it is necessary to clean or change the filter element to restore the function.

In general, the filter element shall be cleaned or replaced in any of the following conditions:

① The use time shall be more than one year;

② The pressure loss of the filter element is more than 0.1MPa;

③ the filter element is contaminated;

④ The effluent becomes turbid;

6.2.2 Gas System

In order to ensure the stability, cleanness and dryness of the input gas in the equipment, an air filter pressure relief valve is arranged at the intake end of the front cover of the equipment to stabilize the gas pressure, make it not exceed the set value, and have the function of filtering impurities and water in the gas. Filtered water will be gathered in the filter sediment cup, a long time, the water must be more gathered water discharge, so as not to affect the filtering effect.

In general, there is one of the following circumstances will be on the filter pressure relief valve drainage.

① The use time shall be more than one week;

② The volume of water in the filtered cup shall be 3/4;

③ Discoloration of the water in the filter cup (not colorless transparent water);

The specific method of cleaning is as follows:

① Regularly (suggested three months) clean the air filter for children's dental chair; drain water in the air filter every half a month, to avoid water entering air path and affect normal use of the machine; press the front of water filter to drain and release switch button, water in the cup will be flushed away.

② Clean the water filter for the dental chair on a regular basis (recommended three months), remove and install the screws during cleaning, remove the bottom nut of the cup, unscrew the cup, remove the filter cylinder, and clean the parts. Install the water filter in proper order and tighten it after cleaning to ensure reliable sealing before use.

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③ Please clean the strong and weak suction filters in time to ensure the smooth flow of the strong and weak suction water: Unhook the cup body of the filter and pull it down to remove the cup body, take out the filter screen, dump the filth into the garbage collection bag and dispose of it, clean the filter screen and the wall of the inside of the cup with clean water or neutral detergent, put the filter screen (small bulge up) into the cup body and install the cup body in place.

④ Regularly (recommend one month) clean the lower part of the device tray and return gas cylinder. Screw down the bottle body, clean with detergent and then tighten the bottle body on the joint. Then use it.

⑤ Use lens paper or absorbent cotton when scrubbing oral lamp lenses. Do not use alcohol cotton or other solvent substances.

⑥ Children dental chair motor should not start and reverse frequently, so as not to affect the motor life.

⑦ Frequently check whether the power cable outer skin is damaged or not, and whether the power plug is in good contact. If there is any hidden danger, it shall be replaced by professional maintenance personnel.

⑧ It is recommended that professional maintenance personnel of the Hospital shall conduct electrical safety inspection once half a year to check whether the leakage current and protective grounding connection comply with relevant requirements.

⑨ The disposal of parts and the whole machine after scrap is recommended to be handled in accordance with local regulations.

7. COMMON TROUBLES AND TROUBLESHOOTING

Failure	Reason	Treatment method
Controlling water by mobile phone non-stop	Defective outlet valve	Refer to mobile phone manual
Air bubbles out of mobile phone	1.High speed sharp gasket defects 2.Pipe Rupture	A.Reference to mobile phone manual B.Inspection and Replacement
Poor atomization of mobile phone outlet water	1.Blocking of High-speed Nozzle 2.Improper adjustment of	A.Contact mobile phone supplier B.Adjust the water regulating

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	slight adjustment of water	valve again
Anhydrous spraying of mobile phone	1.The water pressure is too low 2.Water quantity valve not open 3.Water switch on foot switch not turned on 4.Water supply switch not open 5.Switching switch for tap water and purified water 6.Free of pressure in pure water cup	A.Regulating Hydraulic Pressure B.To switch on water C.Turn on water supply switch D.Turn on water supply switch E.Adjustment switching F.Regulation control gas switch
Phone nose weakness	1.Defective needle and bearing 2.Insufficient working pressure	A.Contact mobile phone supplier B.Check the air pressure
Leakage when mobile phone not working	Loosening of hanging valve	Adjust cage valve in proper position
Working pressure is not stable	1.Filter Blocking 2.Kink and choke pipe of intake pipe	A.Cleaning B.Check the pipeline
Unsmooth flushing pan and launching water	The solenoid valve is blocked with foreign matter.	Clean solenoid valve spool
Saturation-inability	1.Blockage of filter net 2.Insufficient Hydraulic or Pneumatic Pressure	A.Cleaning filter B.Adjustment of water or atmospheric pressure
Three-gun can not produce water.	1.Pipe blockage 2.Improper adjustment of outlet control knob	A.Plug the nozzle and meanwhile press the water outlet and gas button B.Readjustment

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Water content in three gun air	1.Excess water accumulation in air filter 2.Valve Core Failure 3.Nozzle installation not suitable	A.Timely drainage B.Inspection and Replacement C.Reinstallation

Table Failure Reasons and Solutions

If, after the above inspection and handling, the equipment still cannot work normally, please contact the Distributor or our company's after-sales service personnel and inform them of the product model, factory serial number and details of the failure.

Note: This specification is used together with standard products. If it is a special order product, please refer to related annexes of this specification.

8. PACKING LIST

No.	Name/Model	Quantity
1	Lamp posts	1pc
2	Lamp Arms	1pc
3	Oral lamp	1pc
4	Glass spittoon	1pc
5	Trolleys	1pc
6	Panoramic Viewer	1pc
7	Auxiliary tool disks	1pc
8	Seat Cushion	1pc
9	Backrest	1pc
10	Headrest	1pc
11	Combined dentist comprehensive treatment machine	1pc
12	Description	1pc
13	Certificate of conformity	1pc
14	Warranty Card	1pc

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9.SAFETY REMINDER

9.1 Identification hazard level

Follow the precautions and safety precautions listed in this document in order to avoid injury or property damage. Such tips shall bear the following special marks:

⚠ WARNING
Personnel Injury Warning May result in the risk of minor to severe injuries to personnel.

⚠ Attention
WARNINGS REGARDING PROPERTY DAMAGE The danger and danger that may result in damage to the Equipment or any item in other operating conditions.

Description
Action Help Prompt Apply tips and other useful information.

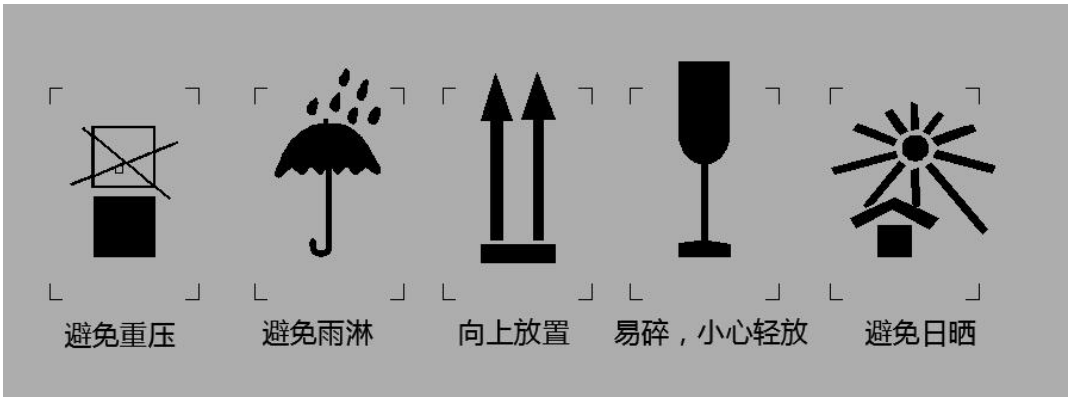
9.2 Reminders on equipment

9.2.1 The nameplate of equipment shall be marked with the following:

⚠ Note accompanying documentation for equipment

Type B parts

9.2.2 The following marks shall be marked on the outer packaging cases:



9.2.2.1 Quality of media: in order to ensure the safety of patients, only drinking water and dry oil-free medical gas can be supplied to the equipment; in order to ensure that the water quality of the equipment meets the medical requirements and the

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statutory State requirements, users must be responsible for the water quality and regularly check the water quality.

9.2.2.2 Patient chair: The maximum load of children's chair is 70kg. The patient's limbs must be on the cushion.

9.2.2.3 Ventilation opening: equipment ventilation opening should not be blocked, otherwise the air circulation is affected. May cause the device to overheat. Do not spray disinfectant or other liquid into the ventilation opening to avoid any equipment function failure.

9.2.2.4 Electromagnetic compatibility: Portable and mobile high-frequency communications devices that affect medical electronic devices. As a result, mobile communication tools such as mobile phones should not be used in clinics and hospital areas. If external high-frequency surgical equipment is used, it should not be placed on racks of this equipment.

10. POINTS FOR ATTENTION

10.1 Operation can be carried out only after carefully reading and understanding all contents of the specifications.

10.2 The product is ideal for use in dental hospitals and clinics and must be operated by trained professionals (such as doctors). The product is intended only for the diagnosis and treatment of oral diseases.

10.3 Power socket wires shall be configured as standard and the grounding conductor must be solid. The therapy unit can not be connected to other mobile devices.

10.4 Main switches for water, gas and power shall be turned off after work.

10.4.1 Do not heat the constant temperature mouthwash heater when the water stops.

10.4.2 Turn off the water bottle control gas switch before adding water to the clean water bottle.

10.5 The electromagnetic interference has been taken into consideration in the design of the products. To ensure normal application, the products should be far away from high-frequency electrical signal equipment to avoid interference.

10.6 Compressed air provided for therapeutic machines shall be free of oil, and other hygienic indexes shall meet relevant requirements. Compressor for providing compressed air shall be equipped by user and must be filtrated by filter with one filter hole of 23μm.

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10.7 During the operation of the children's dental chair, ensure that no accessible objects are present within the range of the movement.

10.8 The filter hole diameter of the water used in the machine is 85μm, but the water in the pressure-reducing valve must be discharged once a week, and the water filter core and the weak suction filter cup shall be cleaned once a month.

10.9 The nozzles and handles of three-purpose sprayers shall be put in sterilization bags before sterilization, and then sterilized by high temperature (maximum temperature of 134 ° C) and high pressure steam (pressure 205.8KPa). The sterilization time is not less than 3 minutes.

10.10 The trolley trays shall not be stacked with overweight goods.

10.11 If you are planting with outside equipment, you must disconnect the power supply to the pediatric dental chair at any time. To avoid personal injury due to malfunction and accidental touch of the control button.

10.12 A unit or private clinic using the Equipment must be equipped or connected with a amalgam segregation device in the discharge system of the dental therapist wastes.

10.13 Have regular maintenance every quarter, change electrical components or maintain and clean the power supply must be cut off.

10.14 Do not use this machine with flammable narcotic gas mixed with air or with flammable narcotic gas mixed with oxygen or nitrous oxide.

10.15 If the machine needs to be equipped with functional accessories "such as dental cleaners, UV curing accessories or equipment selected by the machine must pass CE certification of quality products."

10.16 Environment requirements for transportation and storage:

10.16.1 Transport vertically upward, careful light, rain prevention.

10.16.2 Storage environment: humidity does not exceed 85%, non- corrosive gas, ventilation is good, the equipment must be properly stored, in order to maintain good working condition. MANUFACTURER shall not be responsible for misuse, negligence or improper use of the Equipment.

10.17 The disposal of waste water and materials must meet the local requirements for environmental protection.

10.18 Maintenance of the machine should be performed by the professional repairers authorized by the Company. Unauthorized disassembly, reinstallation and maintenance of the machine may cause fatal damage to the machine and the Company is no longer

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entitled to the warranty services provided by the Company.

10.19 Do not use hand in direct contact with oral lamp bulb. When the lamp bulb cools, put on protective gloves and then replace it to avoid scalding. Do not touch PC board or manufacturer's electronic components with hands or metal instruments.

10.20 The air pressure of therapy machines will have been set when they leave the factory, and non-professionals are not allowed to adjust the pressure at will.

10.21 The movement limit of a children's dental chair is locked, and non-professionals may not adjust it at will.

10.22 The chassis is cleaned with a wet cloth and neutral detergent to guarantee that the leather is smooth, elastic and free from corrosion; the PU components and ABS components are cleaned with a soft cloth dipped in soapy water; the metal baking paint components are cleaned with a soft cloth dipped in soapy water or wiped with automobile wax spraying.

10.23 Children's dental chairs shall be rated for a load of 135 kg and may not function properly if overloaded.

10.24 Clean water sources shall be used for air supply pressure of 0.6 ~ 0.8 MPa and water pressure of 0.2 ~ 0.4 MPa;

10.25 Regularly check the equipment to check whether there is any leakage of water and gas in the chassis and tooling pallet;

10.26 Portable and mobile high-frequency communications can affect medical electronic devices. Mobile communication tools such as mobile phones shall not be used in the clinic and hospital areas. If external high-frequency surgical equipment is used, it should not be placed on racks of this equipment.

Note: Non-professionals are not allowed to disassemble this machine. We only provide spare parts to the customers who have maintenance agreement.

11. EMC ELECTROMAGNETIC COMPATIBILITY INSTRUCTIONS

⚠ 11.1 NOTE:

11.1.1 The DS-KID-8 Conjoined Dental Appliance will comply with applicable requirements of YY0505-2012 Standard EMC.

11.1.2 Customer shall install and use in accordance with the Electromagnetic Compatibility information provided with the accompanying document.

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11.1.3 Portable and portable RF communication equipment may affect the performance of DS-KID-8 United Dental Comprehensive Therapy Machine, so as to avoid strong electromagnetic interference, such as close to mobile phones and microwave ovens;

11.1.4 The Guidelines and the manufacturer's declarations are detailed in the attachment.

⚠ **11.2 WARNING**:

11.2.1 The DS-KID-8 Union type comprehensive dental apparatus shall not be used near or stack with other equipment, if it is necessary to use near or stack, it shall be observed and verified for normal operation in the configurations in which it is used.

11.2.2 Except for cables sold as spare parts for internal components by the manufacturer of the DS-KID-8 Combined Dental Therapy Machine, the use of accessories and cables other than those specified may result in increased emission or decreased interference levels for the DS-KID-8 Combined Dental Therapy Machine.

11.2.3 Using additional accessories or cables in conjunction with a TR-KID-8 Combined Dental Therapy Machine may result in increased emissions or lower interference levels.

No.	Name.	Cable length (m)	Whether shielded	Remark
1	Power supply cable	1.8	No	/
2	Trolley connection wire	2.5	No	/
3	Pedal switch connector	1.7	No	/

EXHIBITS:

Guideline and Manufacturer's Statement – Electromagnetic Launch		
The DS-KID-8 Combined Dental Therapy Machine is intended to be used in an electromagnetic environment, as specified below, and purchasers or users of the TR-KID-8 Combined Dental Therapy Machine shall ensure that it is used in such electromagnetic environment:		
Launching test	**Compliance**	**Electromagnetic Environment – Guidelines**
Emission of RF	1 Group	The DS-KID-8 Conjoined Dental Complex uses RF energy only for its internal functions. As a result, its RF emissions are low and may

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		not cause any interference to nearby electronic devices.
GB 4824 RF launch	Class B	The DS-KID-8 Conjoined Dental Complex is suitable for use in all facilities, including domestic and direct connection to residential public low voltage power grids for domestic use.
GB 17625.1 Harmonic emission	Class A	
GB 17625.2 Voltage fluctuation/blinking emission	Compliance	

Guideline and Manufacturer's Statement – Electromagnetic immunity			
The TR-KID-8 Combined Dental Therapy Machine is intended to be used in an electromagnetic environment, as specified below, and purchasers or users of the TR-KID-8 Combined Dental Therapy Machine shall ensure that it is used in such electromagnetic environment:			
Immunity test.	**IEC 60601 Test Levels**	**Conformity Level**	**Electromagnetic Environment – Guidelines**
Electrostatic Discharge (ESD) **GB/T 17626.2**	± 6 kV contact discharge ± 8 kV Air Discharge	± 6 kV contact discharge ± 8 kV Air Discharge	The floor should be wood, concrete, or tile, and if the floor is covered with synthetic material, the relative humidity should be at least 30%.
Electrically fast transient pulse group **GB/T 17626.4**	± 2 kV pair power cable ± 1 kV pair of input/output line	± 2 kV pair power cable	Grid power shall have quality that is typical for commercial or hospital use.
Surges **GB/T 17626.5**	± 1 kV differential-mode voltage	± 1 kV differential-mode voltage	Grid power shall have quality that is typical for commercial or hospital use.

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	± 2 kV common mode voltage	± 2 kV common mode voltage	
Voltage Sag, Short-time Interrupt and Voltage Change on Power Input Line **GB/T 17626.11**	<5%UT,lasting 0.5 week (on UT,>95% temporary degrade) 40% UT,5 weeks (on UT,60% lowered) 70% UT,25 weeks (on UT,30% temporaty decrease) <5% UT,lasting 5 s (on UT,>95% temporary degrade)	< 5% UT, lasting for 0.5 week (on UT, > 95% temporary decrease) 40% UT, lasting for 5 weeks (on UT, 60% temporary decrease) 70% UT, lasting 25 weeks (on UT, 30% temporary decrease) < 5% UT, lasting for 5 s (on UT, > 95% temporary reduction)	Grid power shall have quality that is typical for commercial or hospital use. It is recommended that the TR-KID-8 Combined Dental Therapy Machine use an uninterruptible power supply or battery power supply if the user needs to continuously operate the machine during the period of power outage.
Electric frequency magnetic field (50/60 Hz) **GB/T 17626.8**	3A/m	3A/m,50Hz	Power-Frequency magnetic fields shall have horizontal characteristics of the Power-Frequency magnetic fields at locations typical in typical commercial or hospital environments.
Note: UT means the voltage of the AC network before the test voltage is applied.			

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Guideline and Manufacturer's Statement – Electromagnetic immunity			
The DS-KID-8 Combined Dental Therapy Machine is intended to be used in an electromagnetic environment, as specified below, and the purchaser or user of the DS-KID-8 Combined Dental Therapy Machine shall ensure that it is used in this electromagnetic environment:			
Immunity test.	**IEC 60601 Test Levels**	**Conformity Level**	**Electromagnetic Environment – Guidelines**
RF Conduction GB/T 17625.6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and portable RF communications equipment shall not be used closer to any part of the TR-KID-8 Union Type Dental Appliance, including cables, than the recommended isolation distances. Such distance shall be calculated from a formula corresponding to the frequency of the transmitter. **Recommended isolation distance** $D = 1.2\sqrt{P}$
RF radiation GB/T 17626.3	3 V/m 80 MHz to 2,5 GHz	3 V/m	$D = 1.2\sqrt{P}$ 80MHz to 800MHz $D = 2.3\sqrt{P}$ 800MHz to 2,5GHz Among them, P is the rating in watts (W) units according to the maximum output rating of the transmitter provided by the transmitter manufacturer, d is the recommended isolation distance, in meters (m) units. b The field strength of a stationary RF transmitter is determined by surveying

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			the electromagnetic field a, and in each frequency range b should be lower than the coincident level. There may be interference near devices labeled with the following symbols. 

Note 1: At 80MHz and 800MHz frequencies, the formula for higher frequency bands is used.

Note 2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection of buildings, objects and human bodies.

A Fixed transmitting aerodrome strengths such as base stations for wireless (cellular/cordless) telephones and ground moveable radios, amateur radio, AM (AM) and FM (FM) radios, and television broadcasting, etc., which are not theoretically accurately predictable. In order to evaluate the electromagnetic environment of a stationary RF transmitter, it is necessary to examine the electromagnetic field. If the field strength of the site where the TR-KID-8 Combined Dental Therapy Machine is measured is higher than the RF conformance level for the above application, the TR-KID-8 Combined Dental Therapy Machine shall be observed to verify its normal operation. If abnormal performance is observed then additional measures may be necessary, such as re-orientation or re-positioning of the DS-KID-8 Union Type Dental Care Machine.

B The field strength shall be less than 3 V/m at 150KHz ~ 80MHz over the full frequency range.

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Recommended Isolation Distance between Portable and Portable RF Communication Equipment and DS-KID-8 Union Type Dental Therapy Machine

The DS-KID-8 Conjoined Dental Complex is expected to be used in a controlled electromagnetic environment with radiation RF interference. Depending on the maximum power output of the communication equipment, buyers or users of the DS-KID-8 Combined Dental Therapy Machine may avoid electromagnetic interference by maintaining the minimum distance between the Portable and Portable RF Communication Equipment (transmitters) and the TR-KID-8 Combined Dental Therapy Machine as recommended below.

Rated maximum output power of transmitter/W KWH	**Isolation distance/m corresponding to different frequency of transmitter**		
	150 kHz ～ 80 MHz $D = 1.2\sqrt{P}$	**80 MHz ～ 800 MHz** $D = 1.2\sqrt{P}$	**800 MHz～ 2,5 GHz** $D = 2.3\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For maximum output ratings of each emitter not listed in the table above, *d is recommended* as the isolation distance in meters (m) units defined by the formula in the corresponding emitter frequency column, where P is the rated maximum output rating of each emitter provided by the emitter manufacturer in watts (W).

Note 1: At 80MHz and 800MHz frequencies, the formula for higher frequency ranges is used.

Note 2:These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection of buildings, objects and human bodies.

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