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Installation Manual of Beyond 300/301 Delivery System

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1 Introduction

1.1 Products information

- **Name:** Delivery system
- **Model:** Beyond 300/301
- **Working conditions:**
 - ① Ambient temperature: 5 °C ~ 40 °C;
 - ② Relative humidity: ≤ 80%;
 - ③ Nominal Voltage : AC110 V ± 22 V;
 - ④ Nominal Frequency: 60 Hz ± 1 Hz;
 - ⑤ Water pressure: 29psi ~ 58psi;
 - ⑥ Input air pressure : 72.5psi ~ 101.5psi, Air flow ≥ 50 L/min.

Unit conversion	
MPa	psi
0.2MPa	29psi
0.4MPa	58psi
0.6MPa	87psi
0.8MPa	116psi

1.2 Symbols explanation

Table 1

Symbols	Explanations
 Manufacturer	 EU Representative
 Manufacturing Date	 Serial Number
 Handle with Care	 Keep Dry

Symbols	Explanations
 Refer to Instructions	 Caution!
 Refer to Attached Document.	 Backrest down
 Avoid Electric Shock	 Backrest up
 Ground Protection	 Chair down
 Setup Button	 Chair up
 Spitting position	 Program chair position 1
 Program chair position 2	 Program chair position 3

2 Compositions

The system is composed by following components.

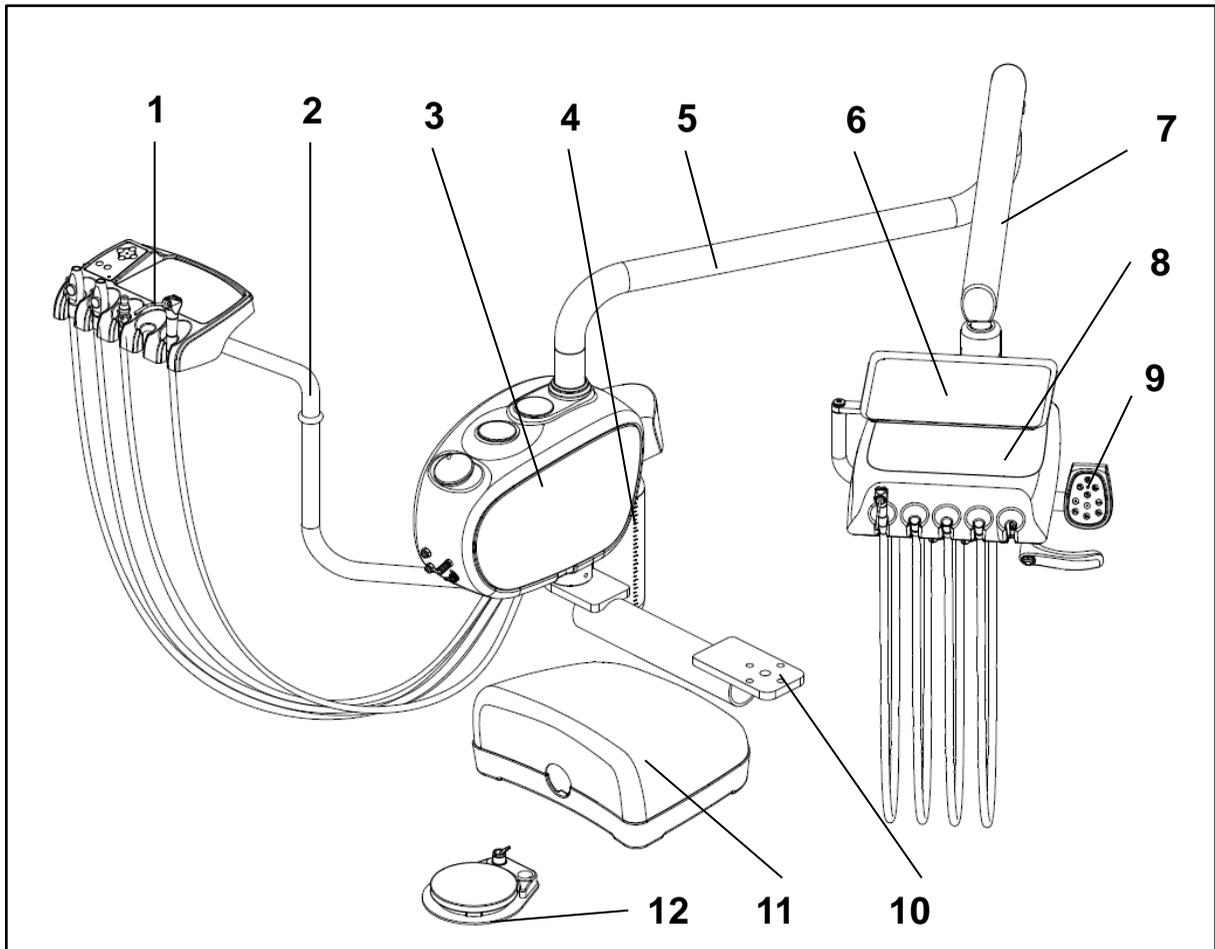
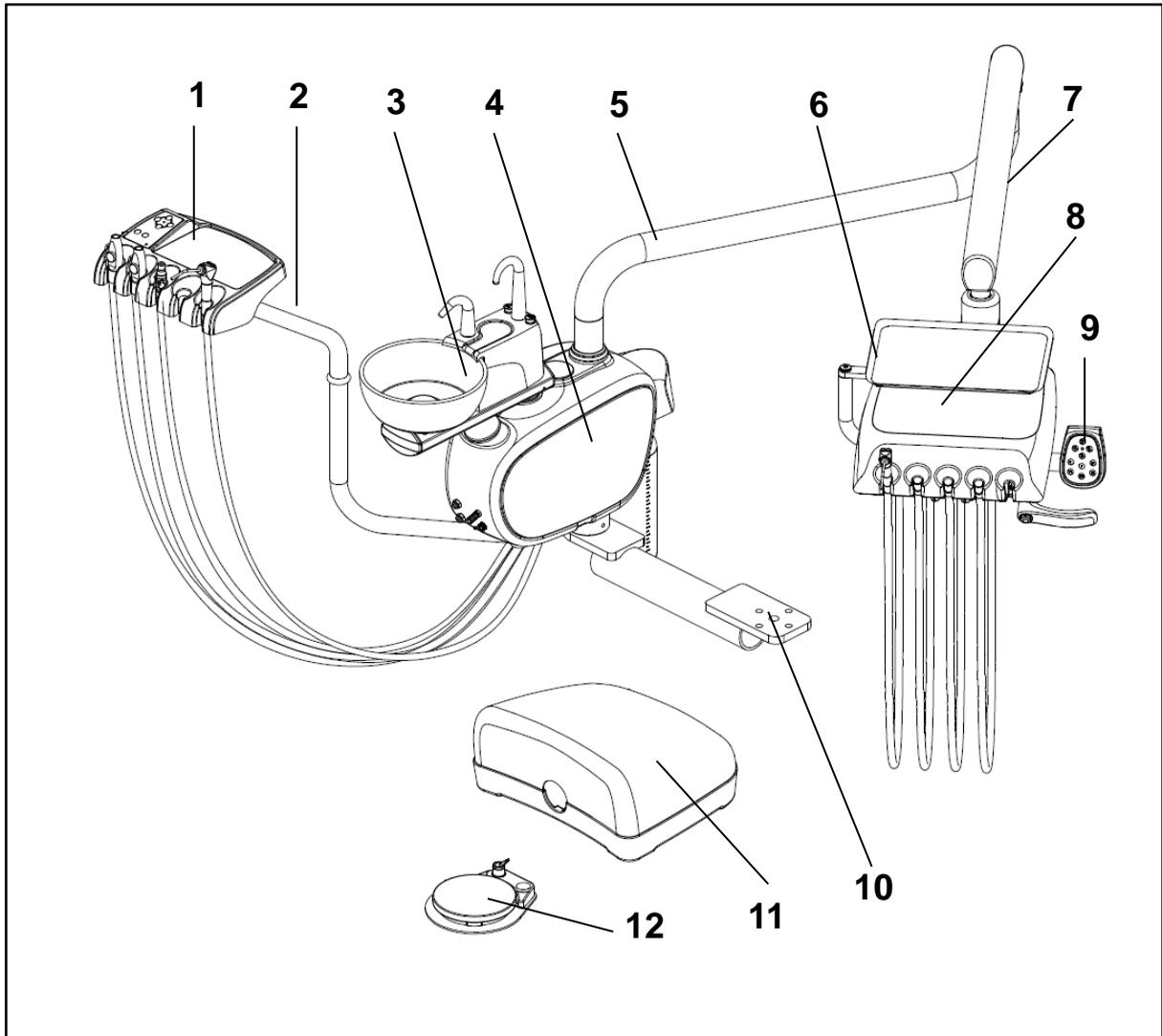


Figure 1 Beyond 300 delivery system

Item	Component	Item	Component
1	Assistant's control	7	Level arm
2	Assistant arm	8	Delivery head
3	Water unit	9	Touchpad control panel
4	Water bottle	10	Chair adapter
5	Rotary arm	11	Junction box
6	Tray	12	Foot control

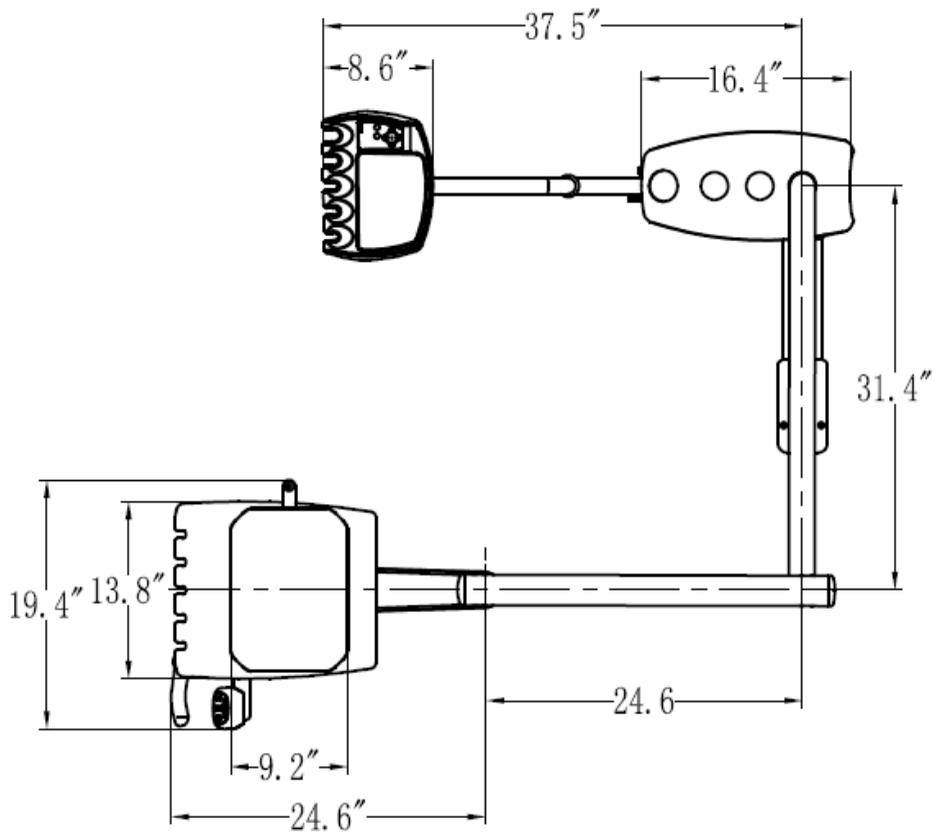
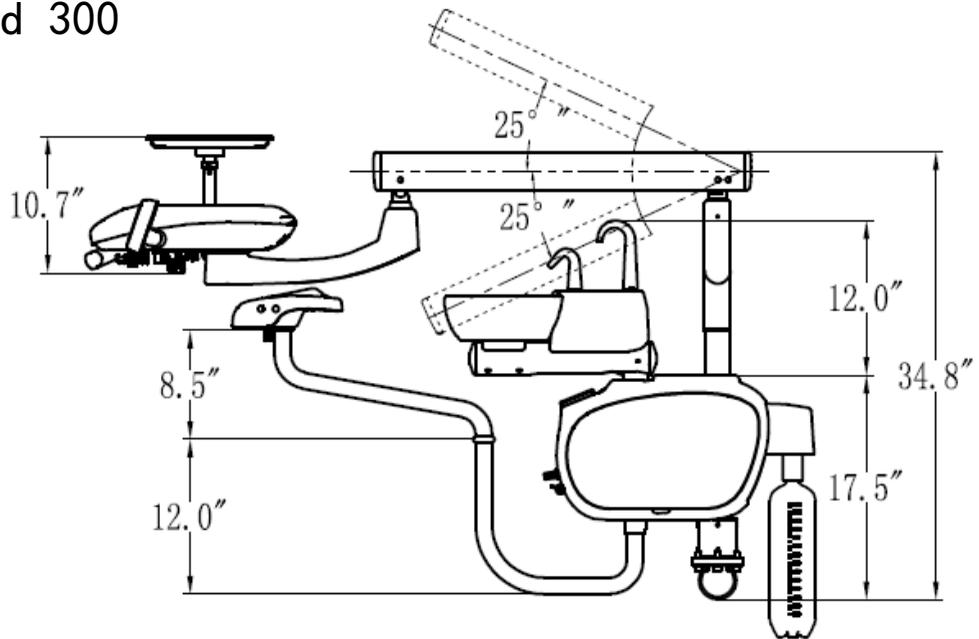
Figure 2 Beyond 301 delivery system



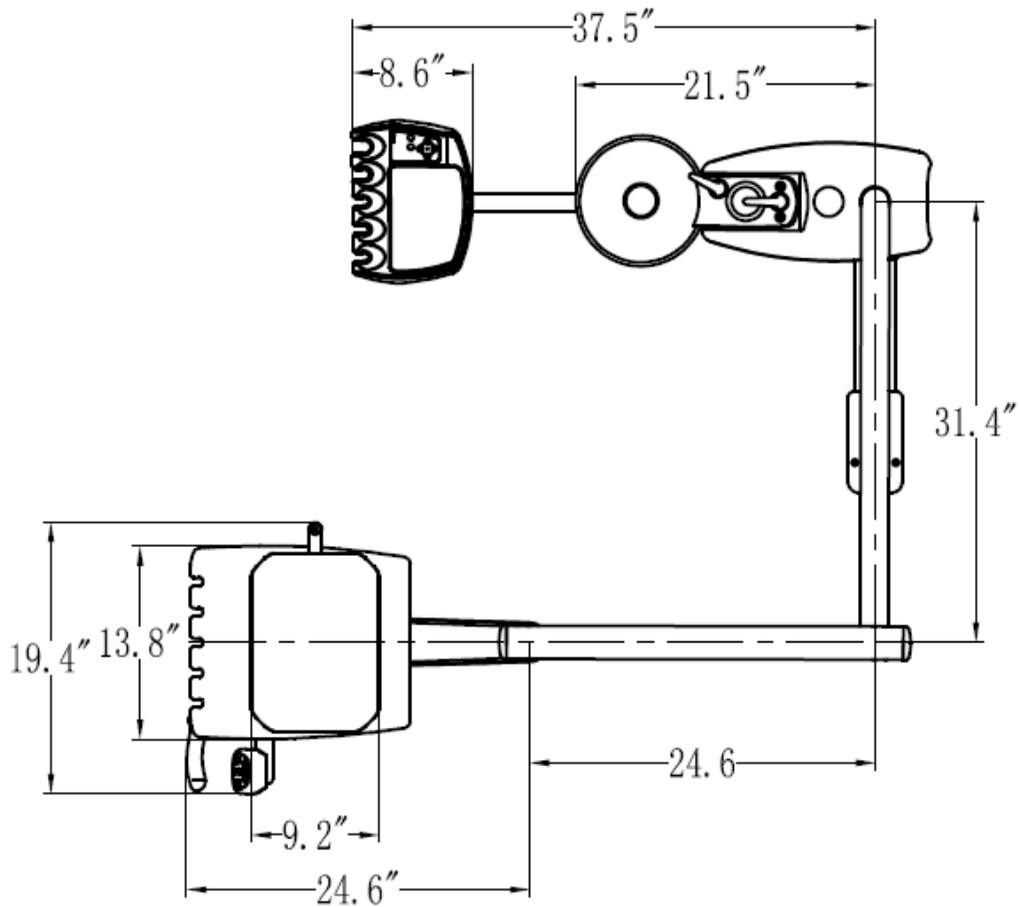
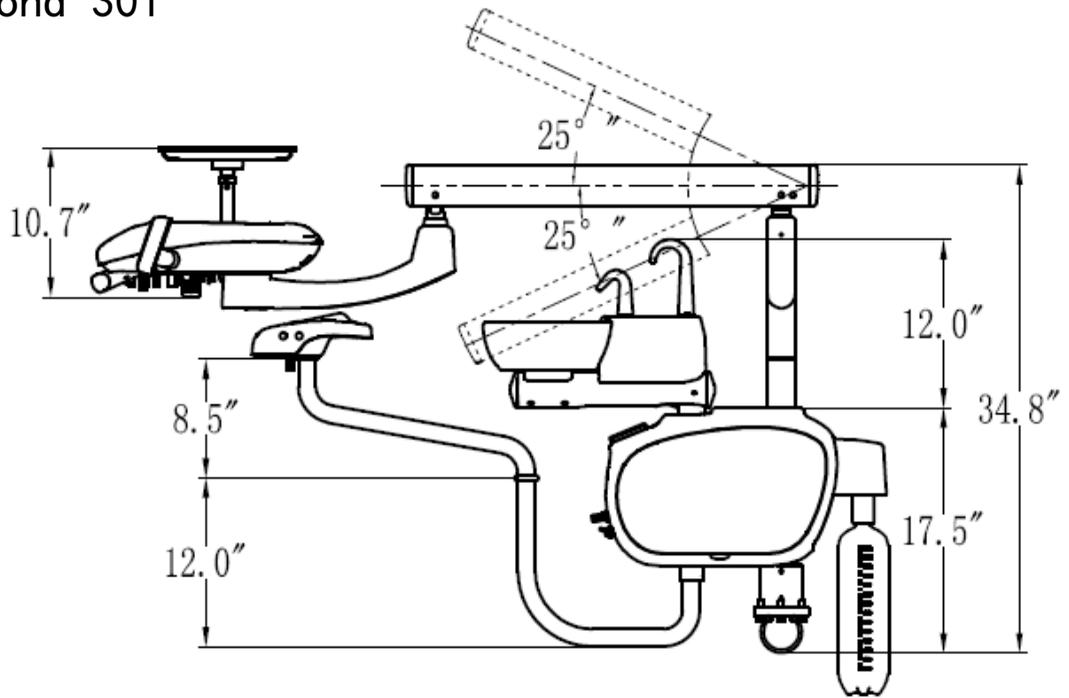
Item	Component	Item	Component
1	Assistant's control	7	Level arm
2	Assistant arm	8	Delivery head
3	Cuspidor	9	Touchpad control panel
4	Water unit	10	Chair adapter
5	Rotary arm	11	Junction box
6	Tray	12	Foot control

3 Sizes

Beyond 300



Beyond 301



4 Specifications

Table 2

Light illuminance	8000-40000 Lux
Max load of delivery head	2.5kg
Ambient temperature	5 °C ~ 40 °C
Air supply pressure	72.5psi~101.5psi
Water supply pressure	29~58psi

5 Preparations

5.1 Attentions

Before install the unit, you should:

- Confirm the floor construction is safety to support the chair and clean.
- Apply two manually operated valves for the air and water source.
- Exhaust the dirty water and air before connecting.

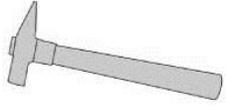
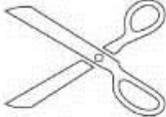
Before install the unit, please read the manual carefully:

- Input voltage AC110 V ,60 Hz.
- Make sure the dental unit is in good grounding.
- All the electrical components and connections should be made by an authorized technician.
- Only fuse and accessories recognized by ADS technician can be used.
- This device should not operate in the environment of high temperature, high humidity, vibration flammability, unbalance, or dusty.
- Only the authorized spare parts can be used in this device.
- This device can not be used in the environment of strong magnetic, electromagnetic.

5.2 Tools recommended

The tools and instruments need to prepare before installation.

Table 3

	Electrical drill		Pincers
	Hammer		Scissors
	Leveling instrument		Flat-bladed Screw driver
	Phillip screw driver		Allen wrench
	Spanner		Hexagon socket wrench

5.3 Installation sequence

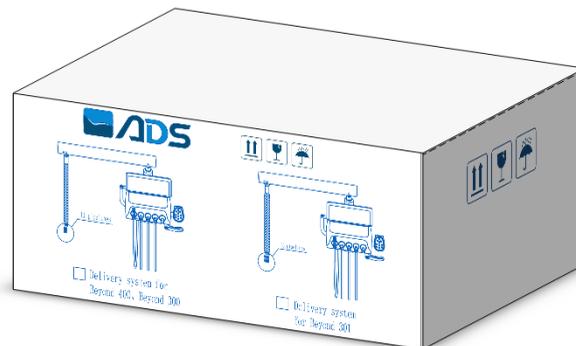
Installing packages of the Beyond 300 system. Please install these packages as the sequence below.

Figure 3 Installing Packages

1 Beyond side box unit



2 Beyond dentist unit



3 Dental light unit (optional)



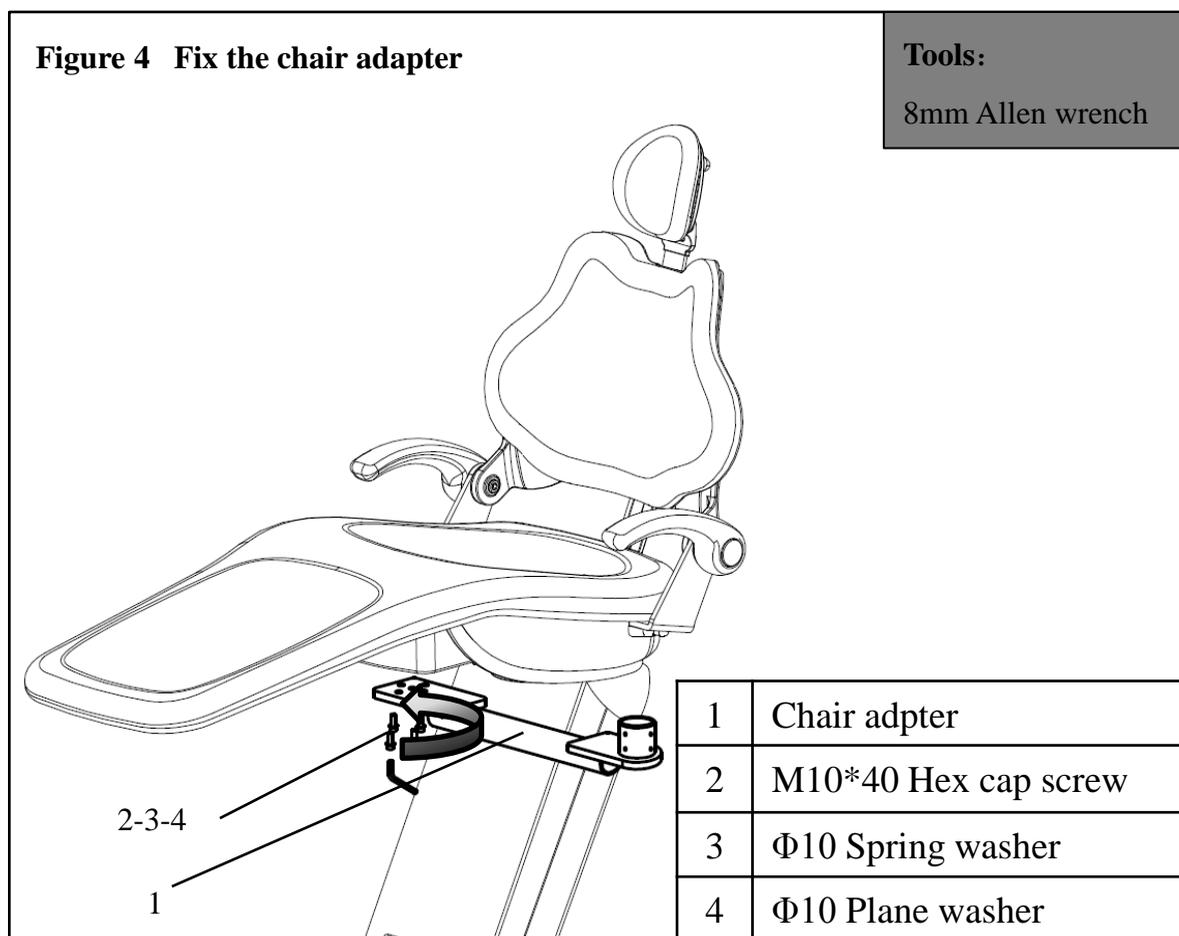
Notice:
Each box contains all the parts that belong to the package .

6 Installation

It is necessary to check whether the system and its accessories are damaged after unpacking. In addition, please check all accessories according to the accessories list. Install the system in following steps:

6.1 Fix the chair adapter

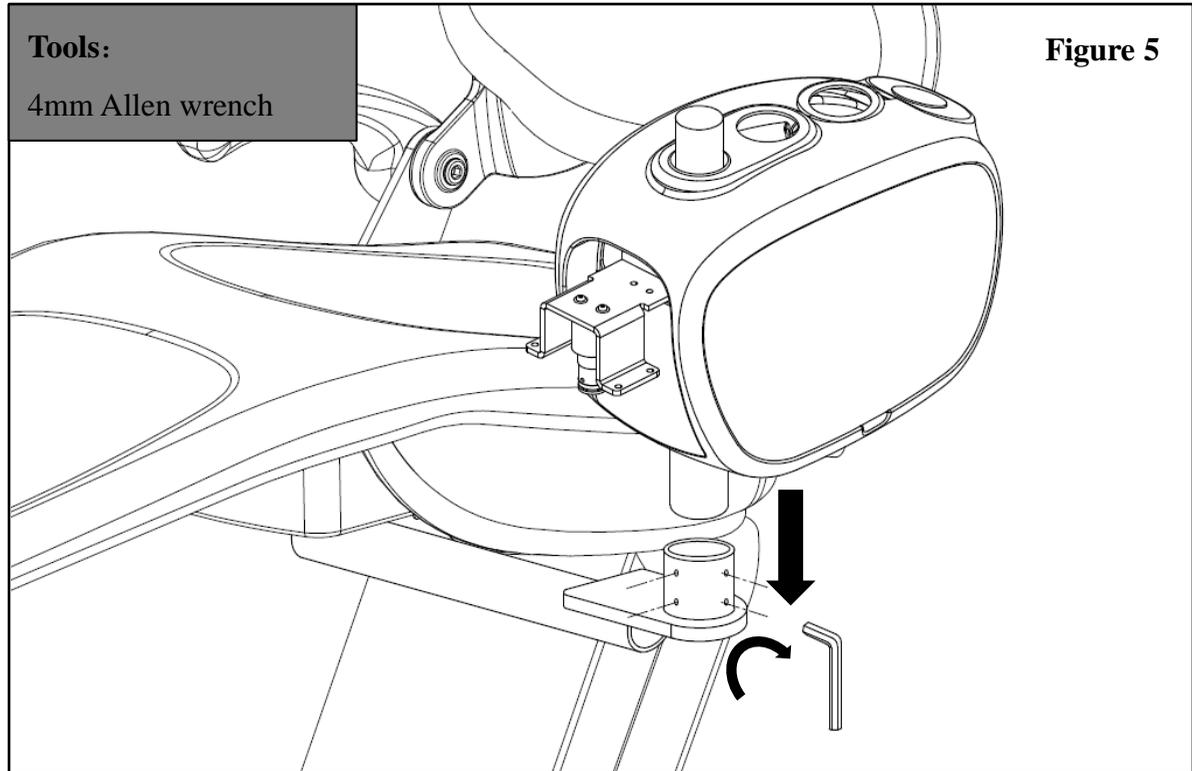
1. The system should be mounted to left side of the dental chair.
2. Fix the adapter on the chair frame with four M10*40 screws.



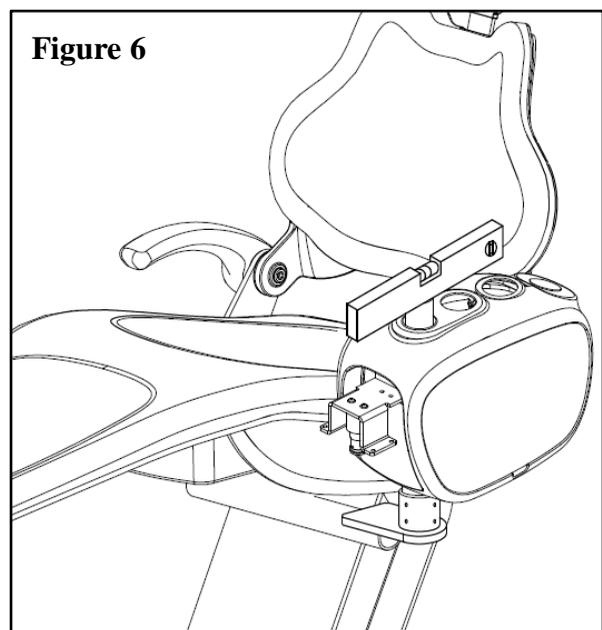
Attention: Completely tighten the screws to avoid water unit loosening during operation.

5.2 Install the water unit

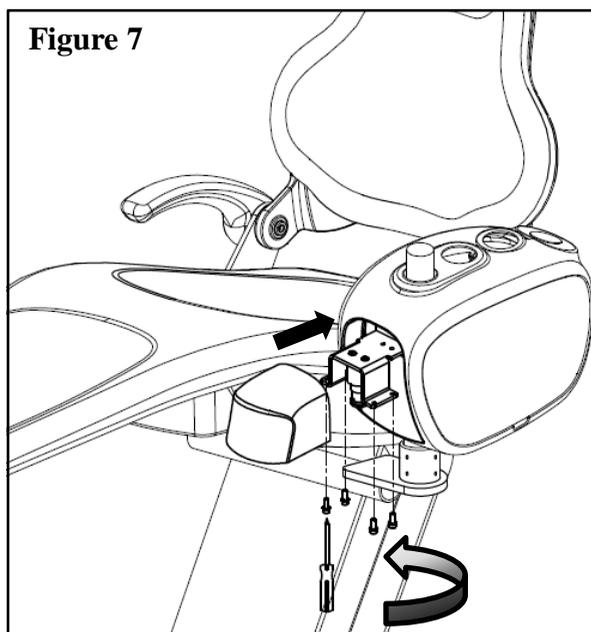
1. Mount the water unit to the adapter and fix it with eight M8*10 set screws.



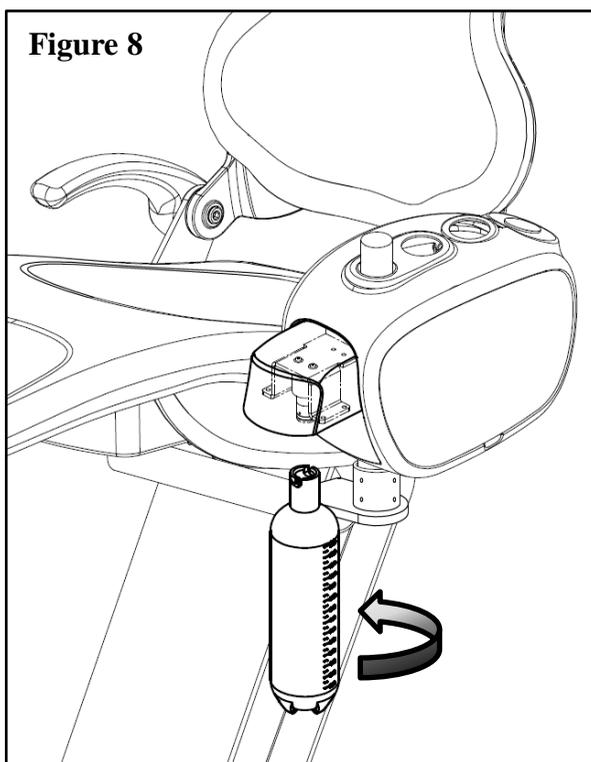
2. Check the levelness of the water unit through a leveling instrument, change the levelness by adjusting the screws on the post.



3. Mount the water bottle cover to the bracket with four M5*12 outer hex Philips screws.

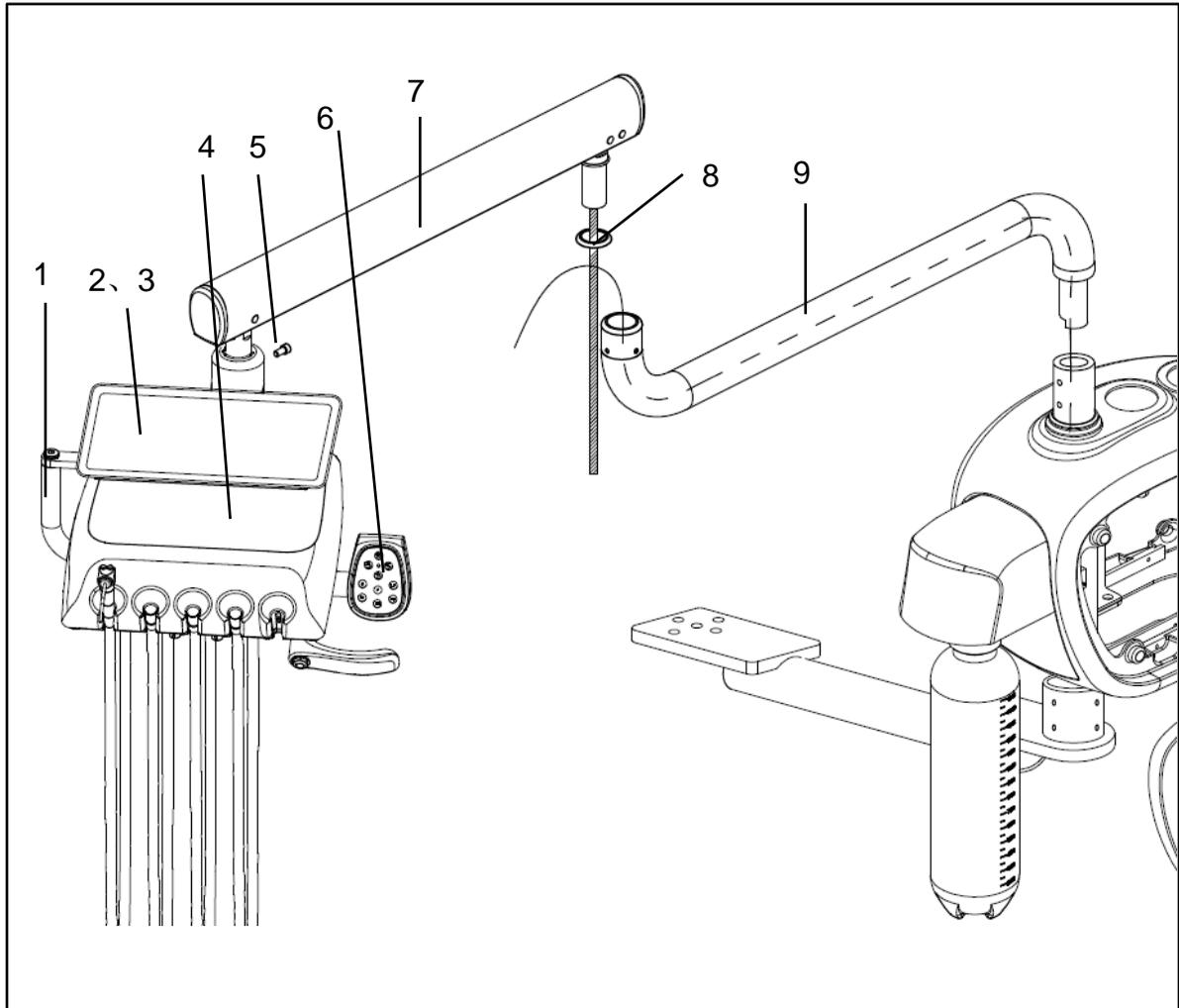


4. Hold the water bottle upward and align the bottle head gaps to the fixing pins, swivel the bottle clockwise to fix it.



5.3 Install dentist unit

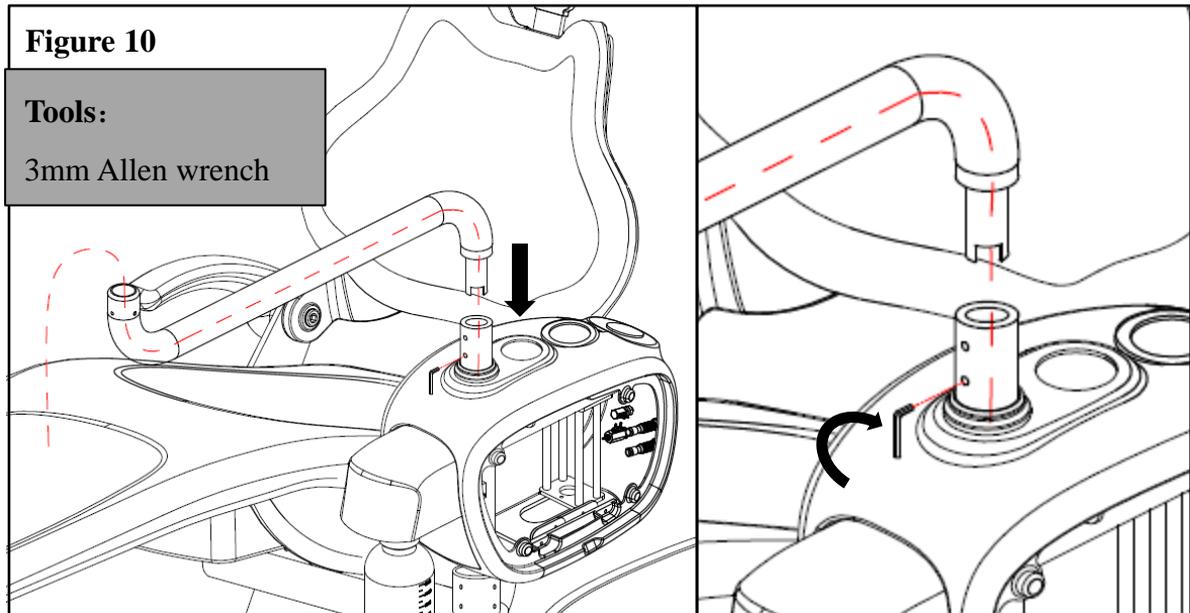
Figure9 Compositions



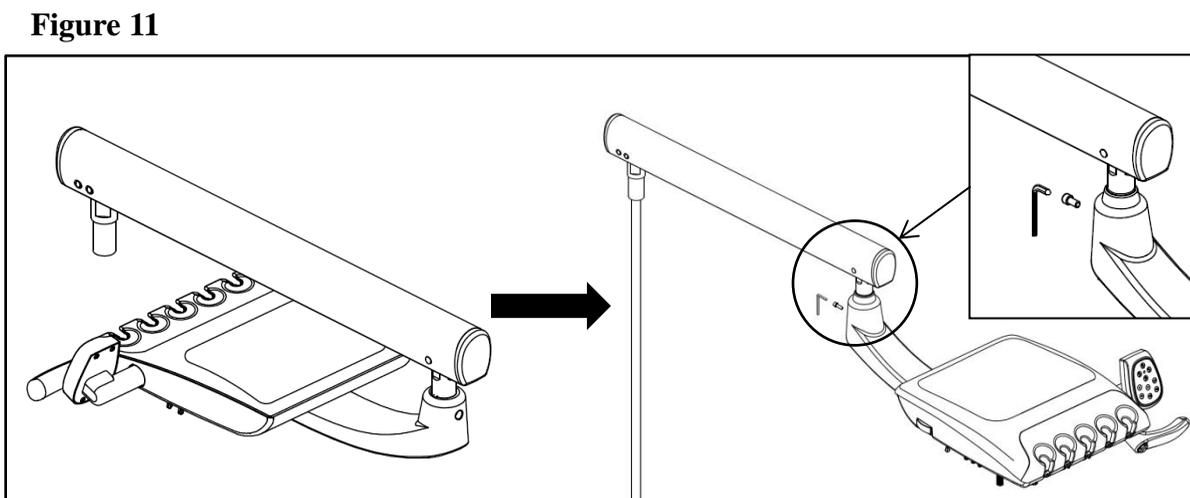
1	tray holder	6	Touchpad control panel
2	Tray	7	Level arm
3	Anti-skid mat	8	Cosmetic ring
4	Delivery head	9	Rotary arm
5	M6*20 Hex screw assembly		

1. Insert the rotary arm into the mounting hole and fasten the arm by two M6*8 screws, then insert the M6 plugs. Reserve the guide rope.

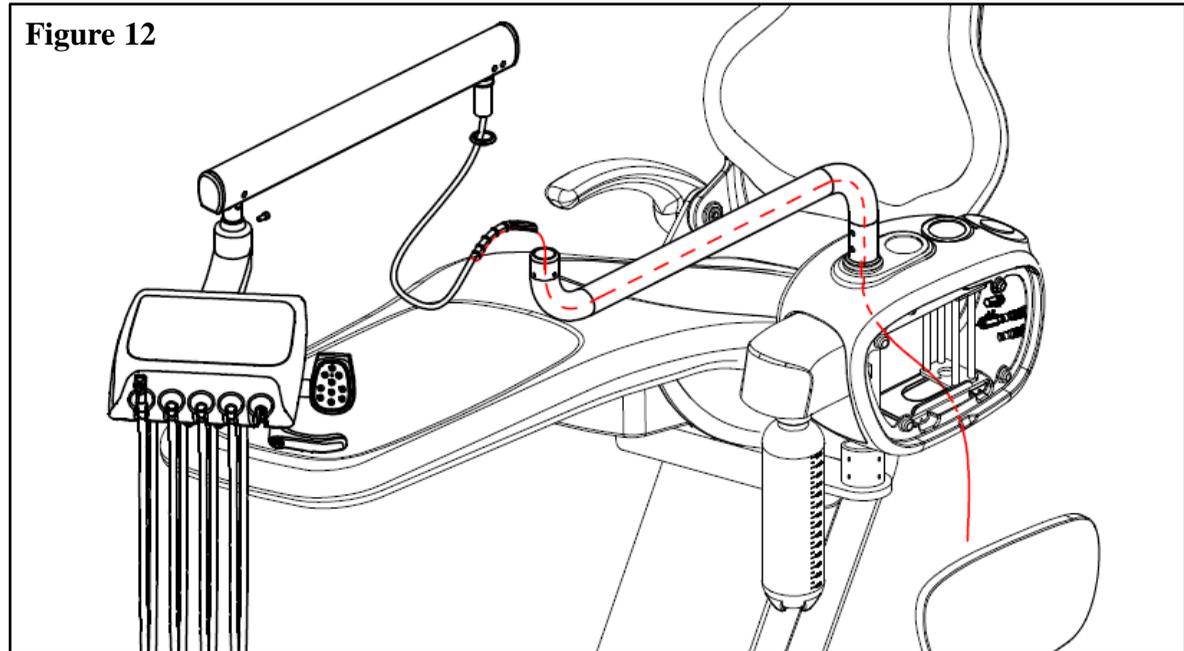
Note: The first screw for damping force regulation, The second is the lock screw



2. Remove the dentist unit after the Delivery head turn around, with the Allen screw in one M6 * 20 Delivery head and balance arm fixed, prevent rotation.



3. Pass the tubes of dentist unit through the cosmetic ring ,tie the tubes with the guide rope, then pull the guide rope and let the tubes route through the rotary arm and approach to the wter unit interior. Joint the level arm and rotary arm together.

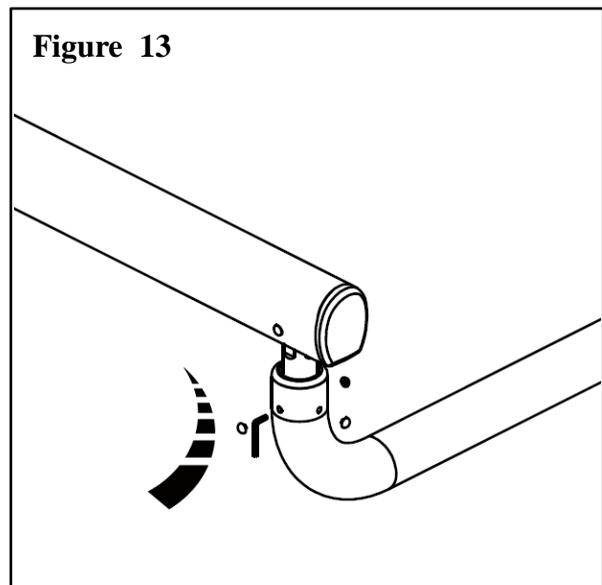


4. Joint the level arm and the rotary arm with three M6*8 set screws,tighten the screws in clockwise.

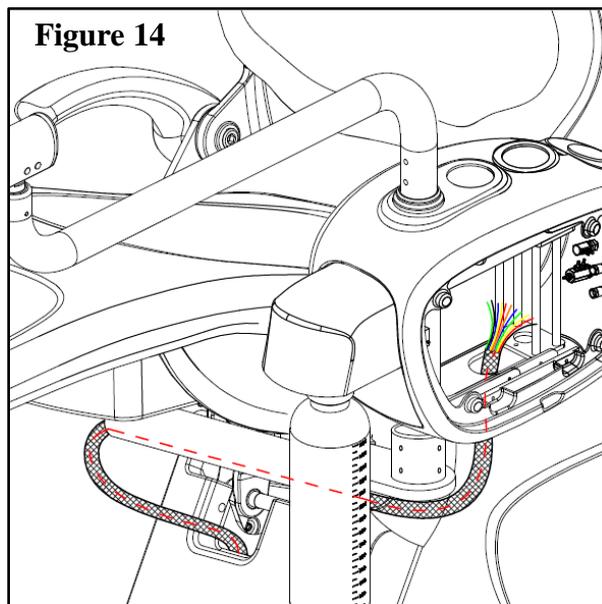
Note: Tension of the M6 set screw affects the damping force of the rotary arm.

Tool:

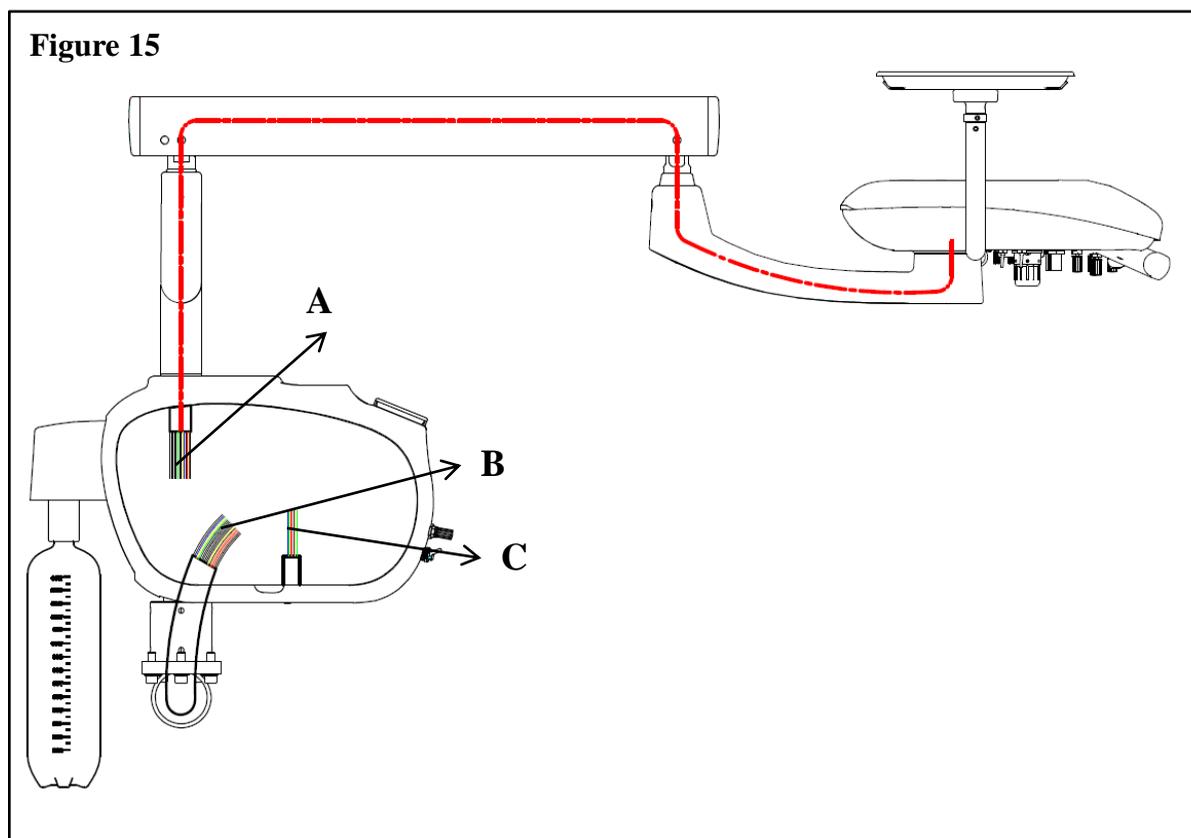
3mm Allen wrench



5. Pass the reserved tubes bundle through the chair adapter and pull it out to the water unit interior.



6. The tubes of the dentist unit, the water unit and the reserved should be connected by color.



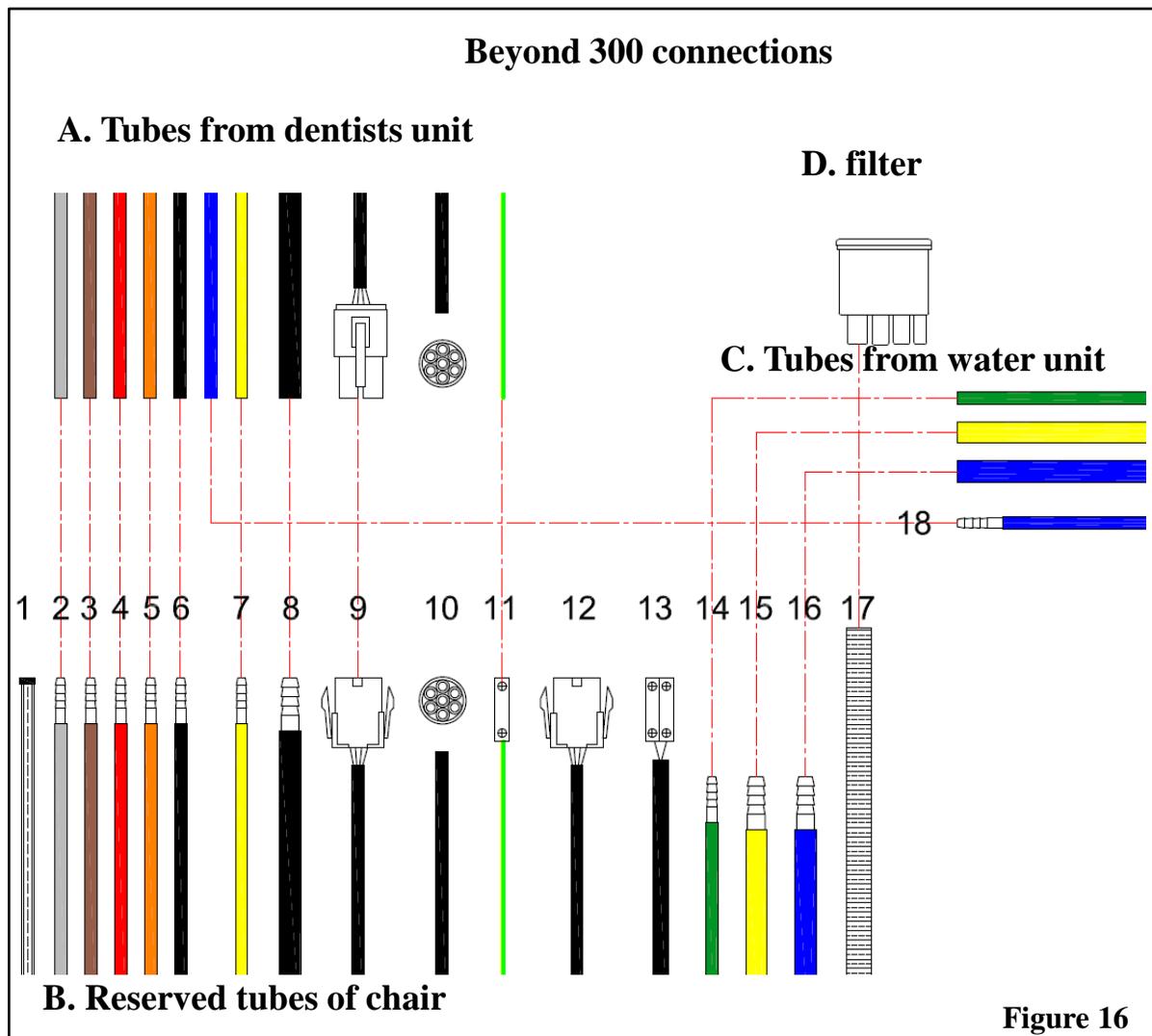


Figure 16

- | | |
|----------------------------------|------------------------------------|
| 1. 1/8" clear, reserved | 10. 24V, 7 cores power cord |
| 2. 1/8" white | 11. Ground wire |
| 3. 1/8" brown | 12. Control wire of assitant unit |
| 4. 1/8" red | 13. 24V dental light power cord |
| 5. 1/8" orange | 14. 1/8" green |
| 6. 1/8" black | 15. 1/8" green |
| 7. 1/8" yellow | 16. 1/4" blue |
| 8. 1/4" black | 17. Corrugated pipe, to the filter |
| 9. Control wire of delivery head | 18. 1/8" blue |

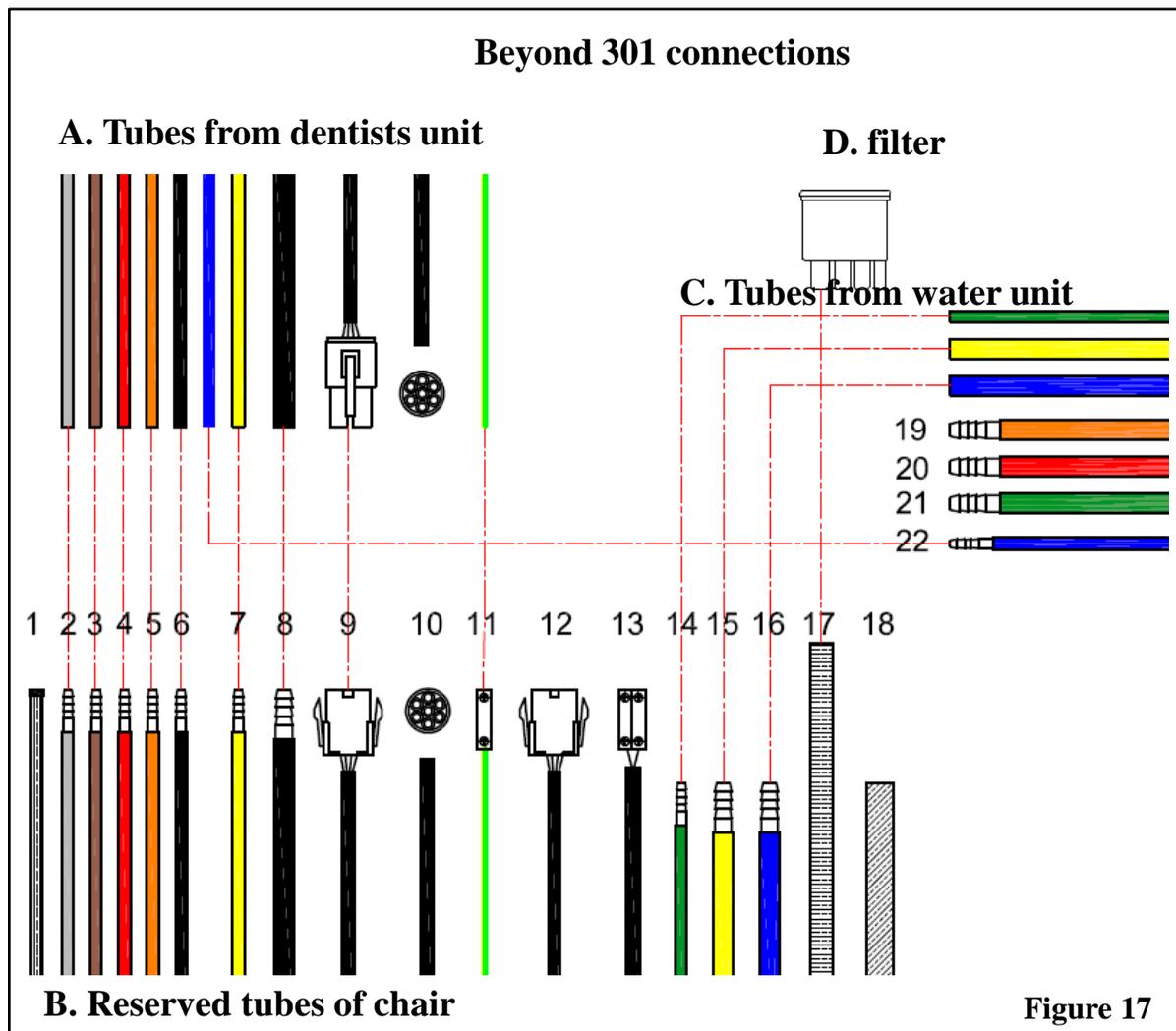
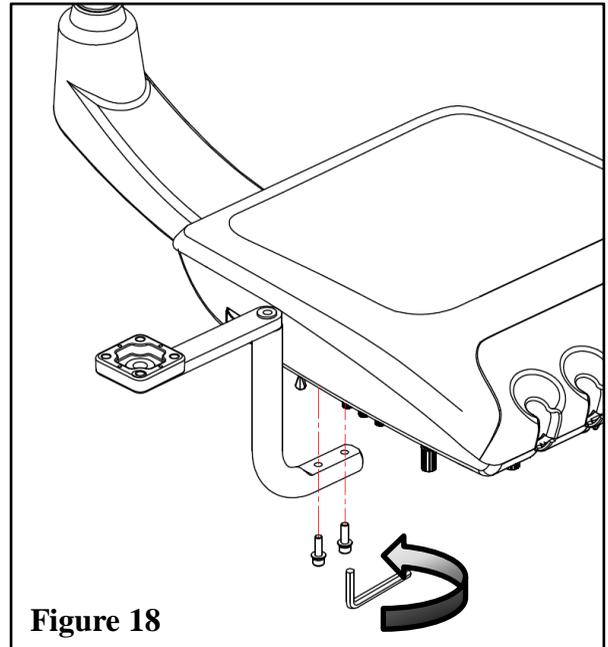


Figure 17

- | | |
|----------------------------------|------------------------------------|
| 1. 1/8" clear, reserved | 12. Control wire of assitant unit |
| 2. 1/8" white | 13. 24V dental light power cord |
| 3. 1/8" brown | 14. 1/8" green |
| 4. 1/8" red | 15. 1/8" green |
| 5. 1/8" orange | 16. 1/4" blue |
| 6. 1/8" black | 17. Corrugated pipe, to the filter |
| 7. 1/8" yellow | 18. Winding pipe, to cuspidor |
| 8. 1/4" black | 19. 1/4" orange, to cuspidor |
| 9. Control wire of delivery head | 20. 1/4" red, to cuspidor |
| 10. 24V, 7 cores power cord | 21. 1/4" green, to cuspidor |
| 11. Ground wire | 22. 1/8" blue |

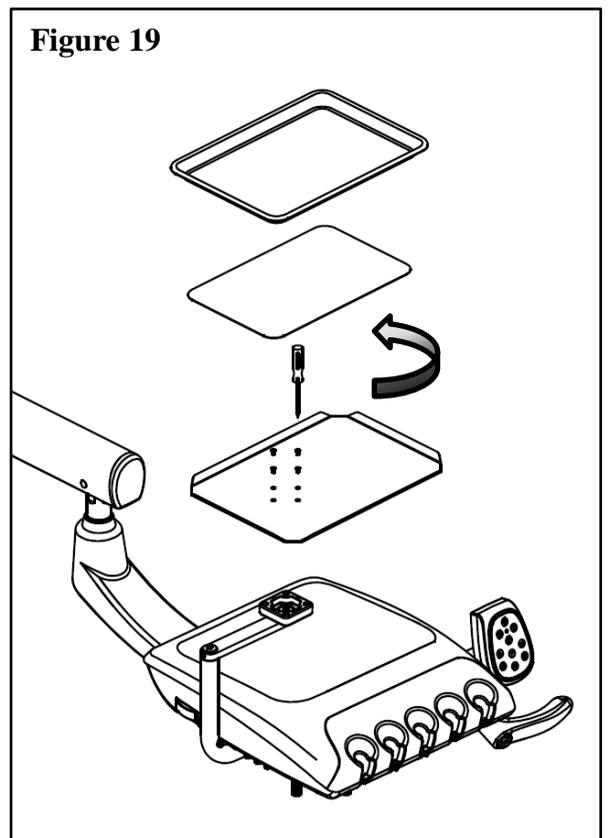
7. Install the tray holder to the bottom of delivery head, and fix with two M6*20 hex cap screws.

Tools:
5mm Allen wrench



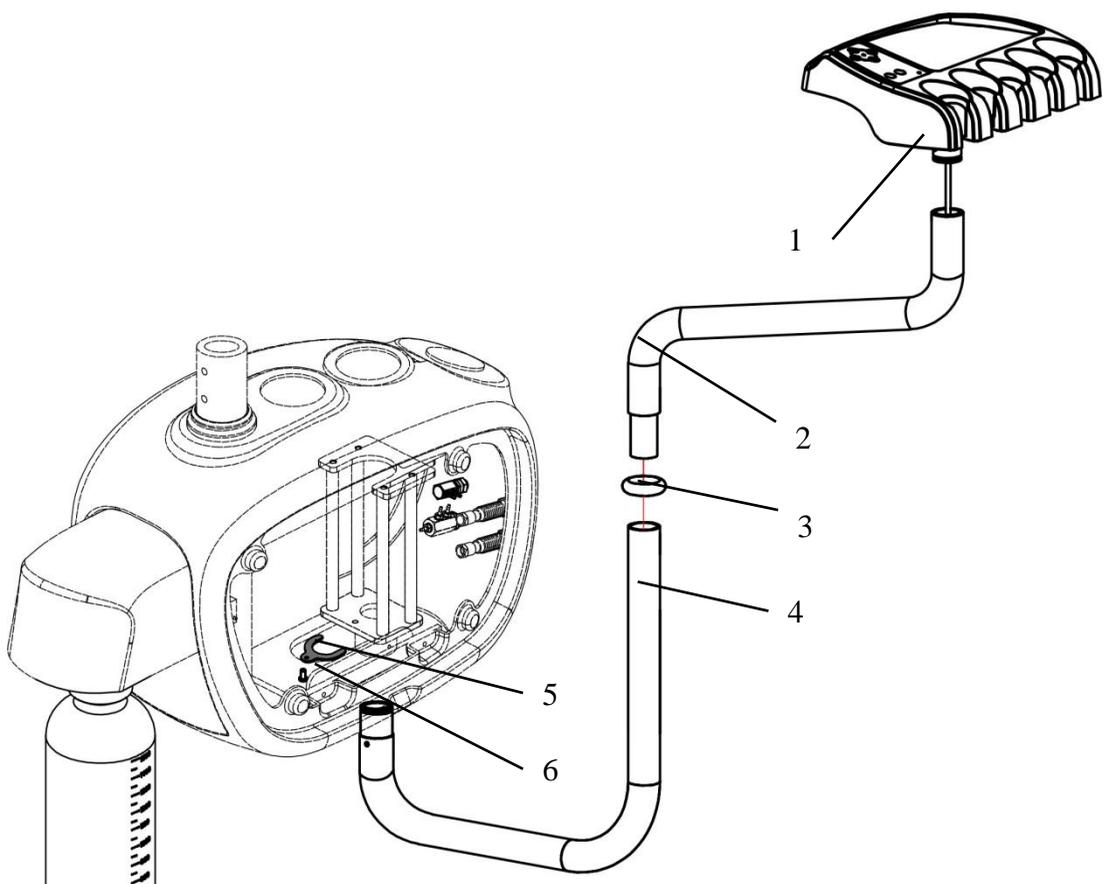
8. Install the tray supporter on the tray holder and fix with four M3*6 Philip's countersunk screws, put the anti-skid mat on the supporter, and then put the stainless steel instrument tray on the mat.

Tools:
Philip's screw driver



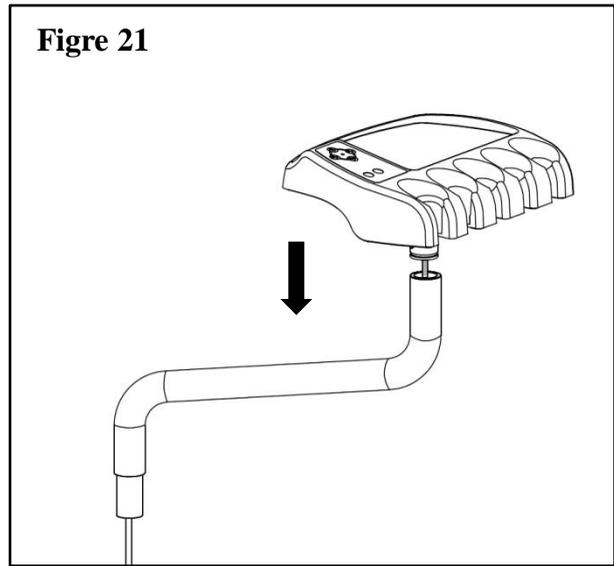
6.4 Install assistant unit

Figure 20

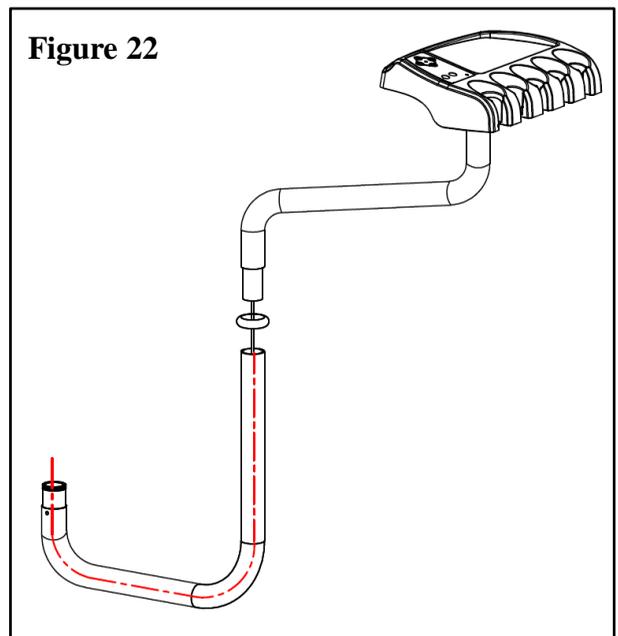


1	Assistant's control
2	Assistant arm,Upper
3	Cosmetic ring
4	Assistant arm,Lower
5	Clip
6	M5*12 outer hex Philip's bolt group

1. The Assistant 's control installed to the Assistant arm, Upper.

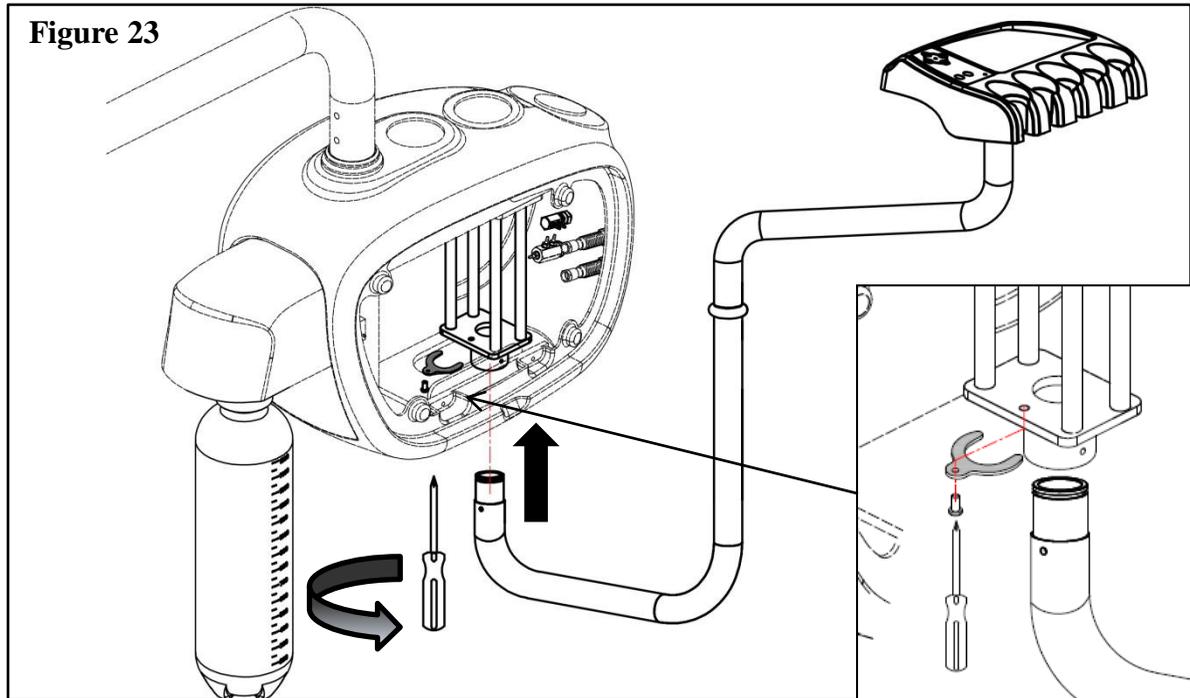


2. Pull the guide rope to make the wire pass through the cosmetic ring and the lower assistant arm. Then joint the two parts of assistant arm together.

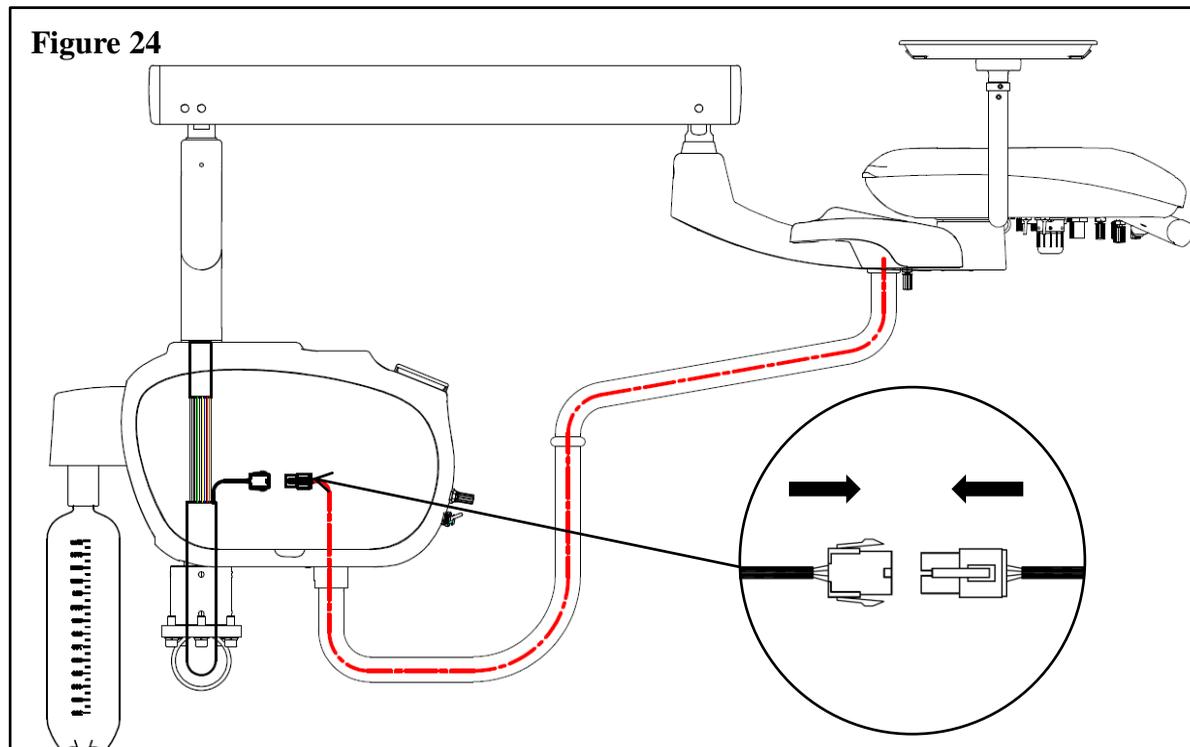


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3. Install the unit to sidebox by inserting the arm to the mounting hole on the bottom of sidebox. Then fix the arm with a clip and fasten the clip with a M5*16 Philip's pan head screw.



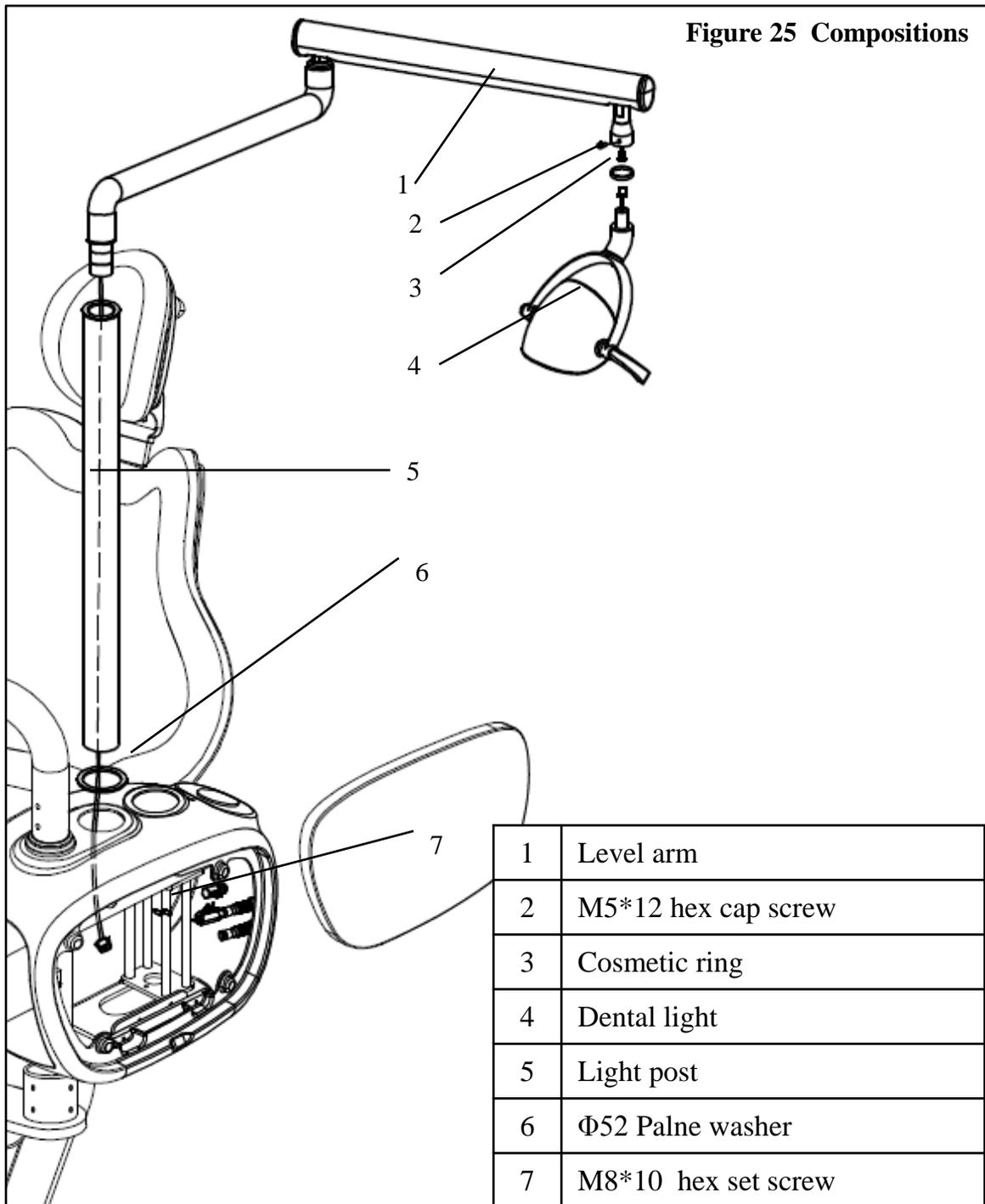
4. Wire connection. Connect terminals of the reserved wire and of the wire from assistant's control.



6.5 Install dental light

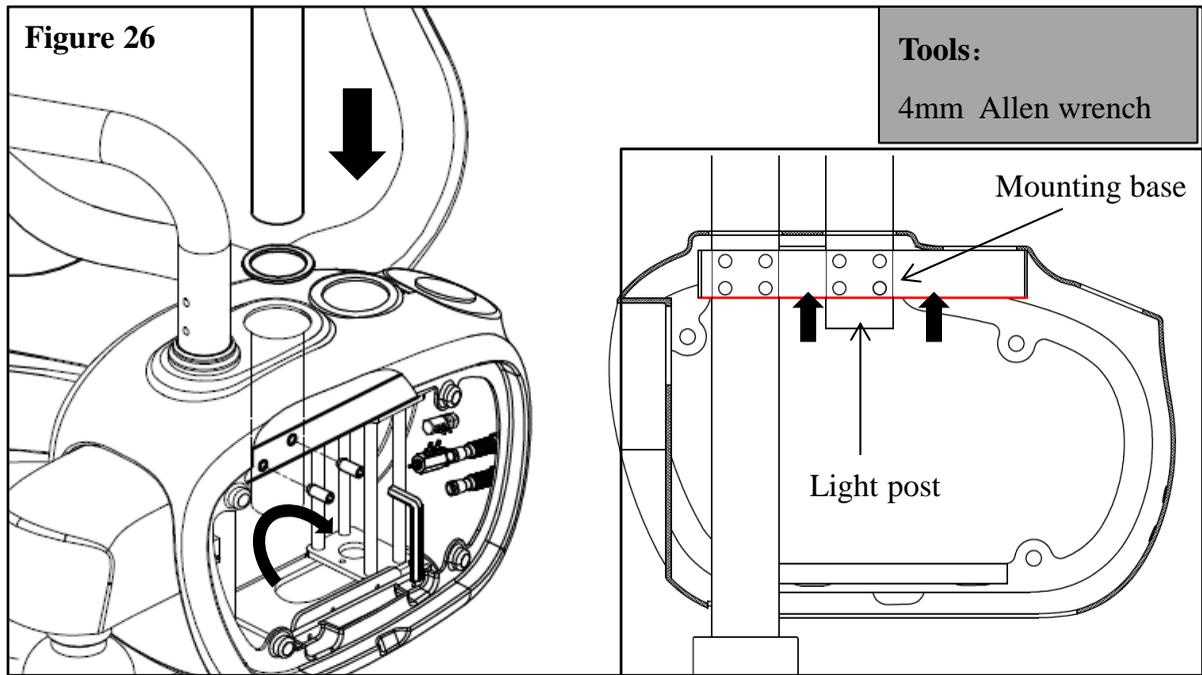


Notice: Please ignore this step if there is no lamp configuration.

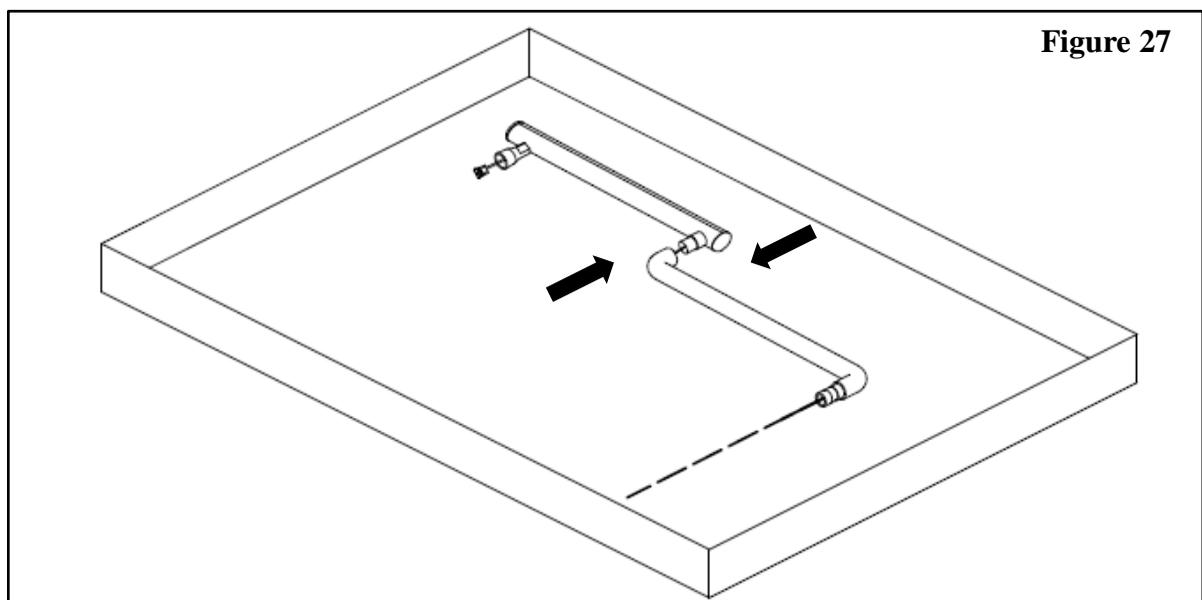


1. Pass the light post through the palne washer and insert the post into the mounting hole,the end of the post should protrude from the mounting base. Then fix the post with four M8*10 hex set screws.

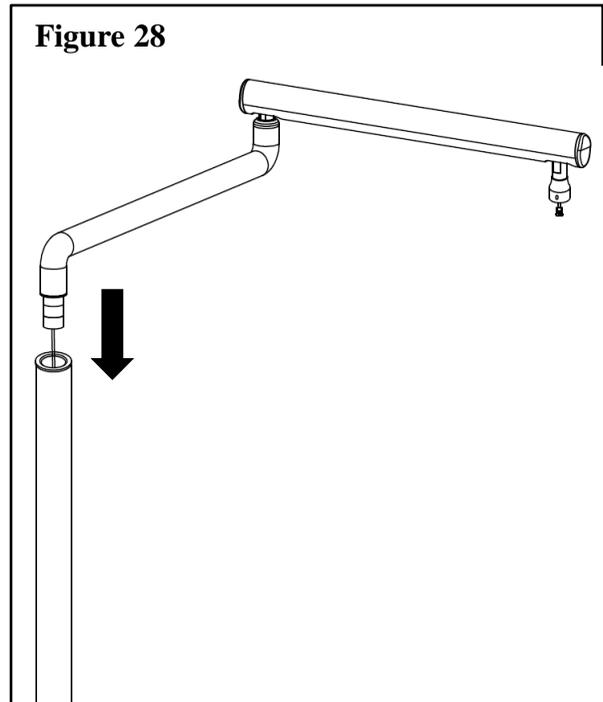
Note: The length that the post protrudes from the base decides dental light's actual height.



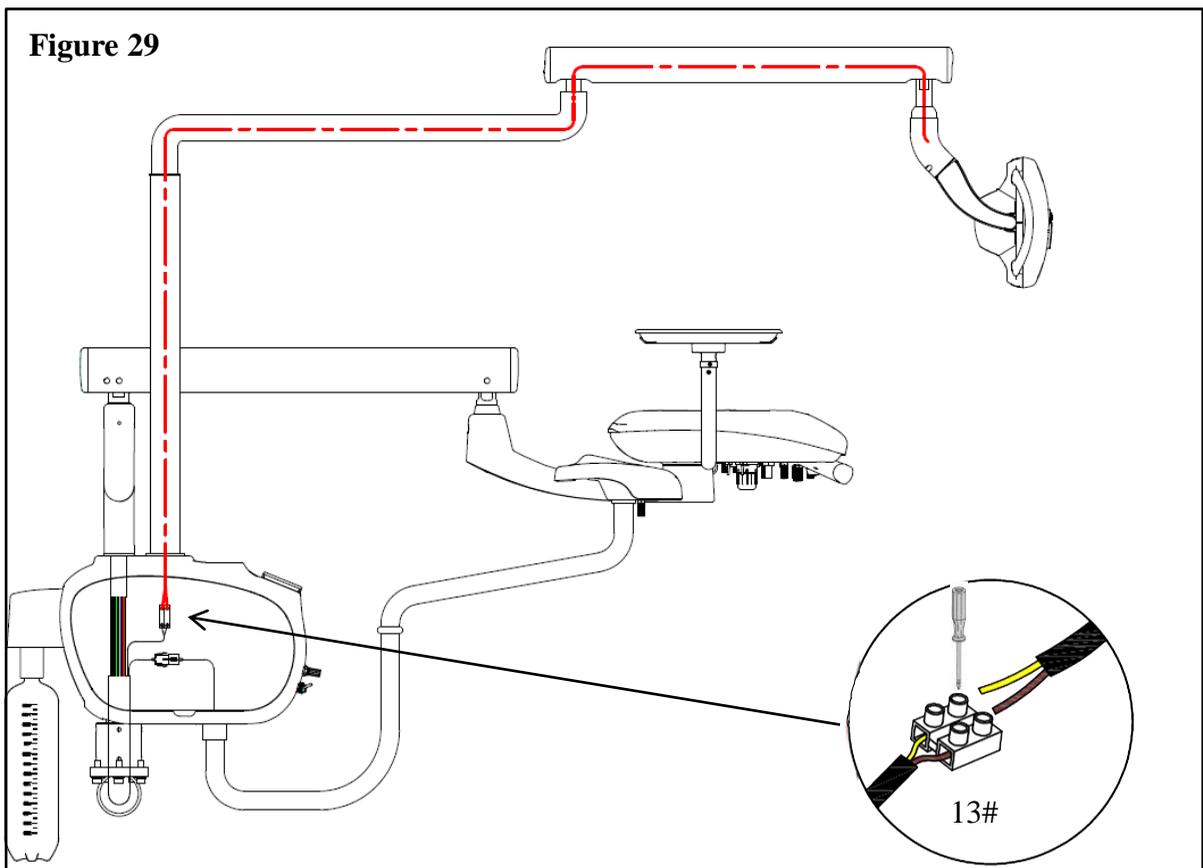
2. Joint the level arm and the rotary arm, take them out from the carton.



3. Tie up the wire and the guide rope, pull the guide rope to make the wire pass through the post and approach water unit interior. Then joint the rotary arm and the light post.



4. Connect the light wire to that of the chair.



5. Pass the light head shaft through a cosmetic ring and connect the wire terminals , make sure the lamp shaft is well inserted into the level arm, fully fasten with a M5*12 screw.

Note: Before tighten the screw, please hold the light head to avoid

Tools:

4mm Allen wrench

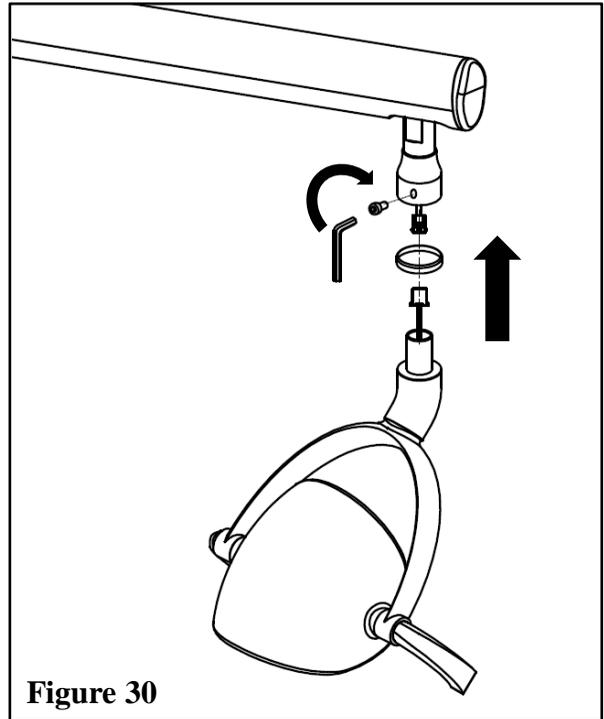


Figure 30



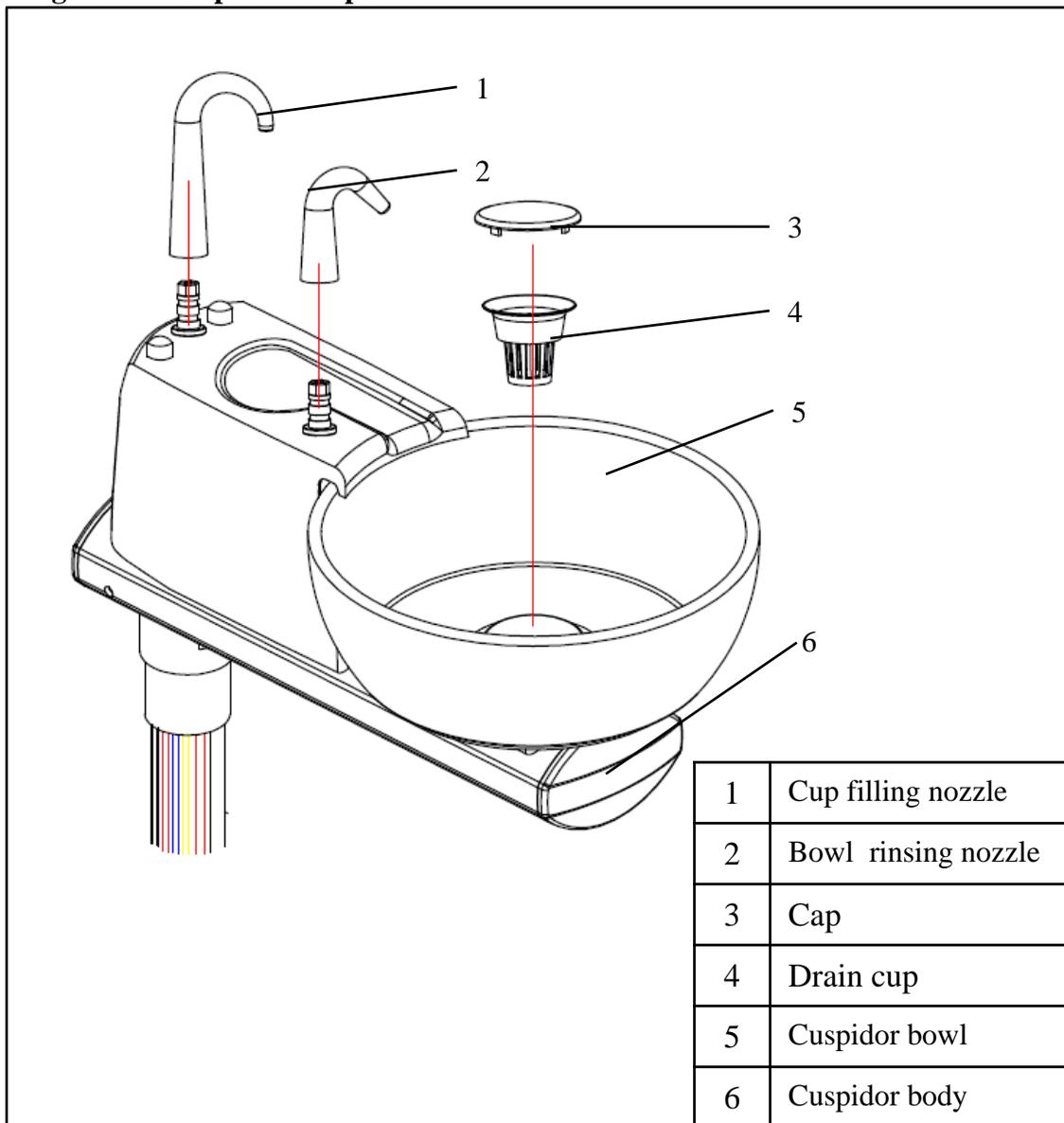
Note: If there's no cuspidor of your system, you can cover the side box and fasten the screws after finishing this step.

6.6 Install cuspidor

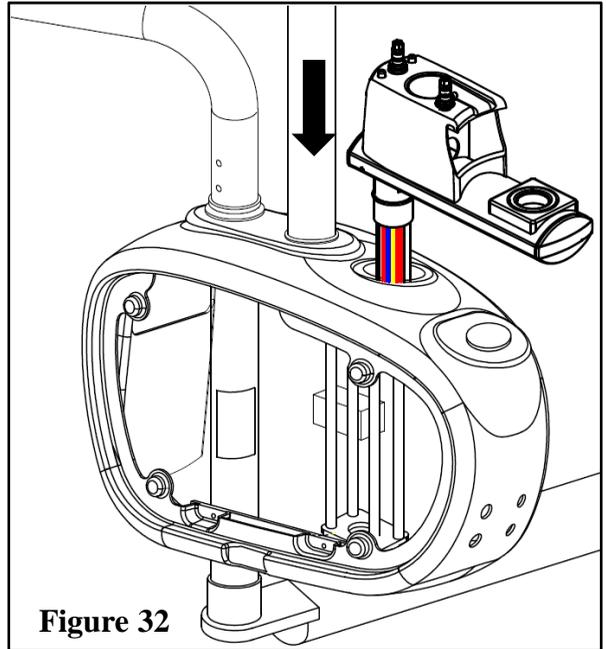


Notice: Please ignore this step if there is no cuspidor configuration.

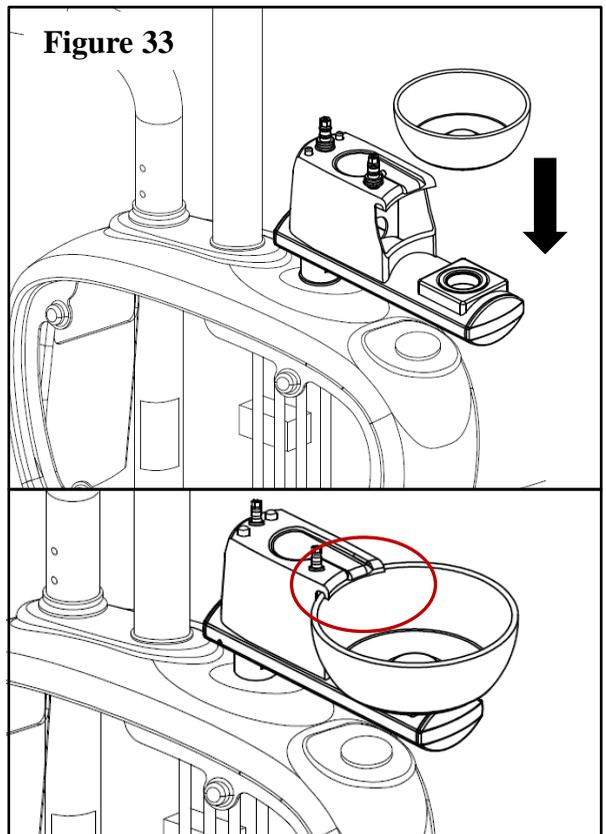
Figure 31 Cuspidor compositions



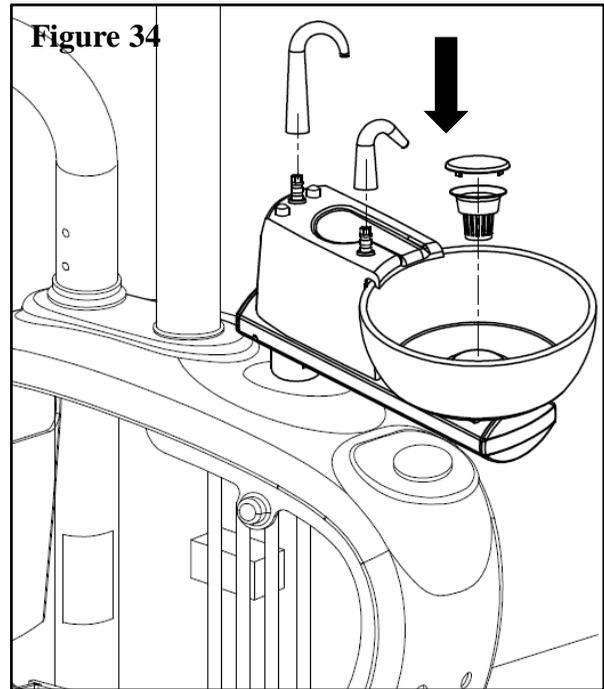
1. Pass the tubes through the mounting hole and place the connecting shaft into the mounting base .



2. Place the cuspidor bowl to its position and fix it on its upper edge.



3. Mount the cup filling nozzle, the bowl rinsing nozzle, the drain cup and the cap as the figure shown.



4. Connect the tubes and cover the side box. (the connection is shown in the next page)

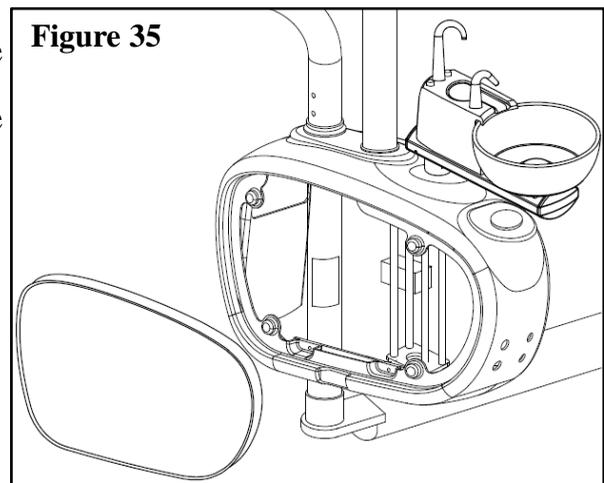
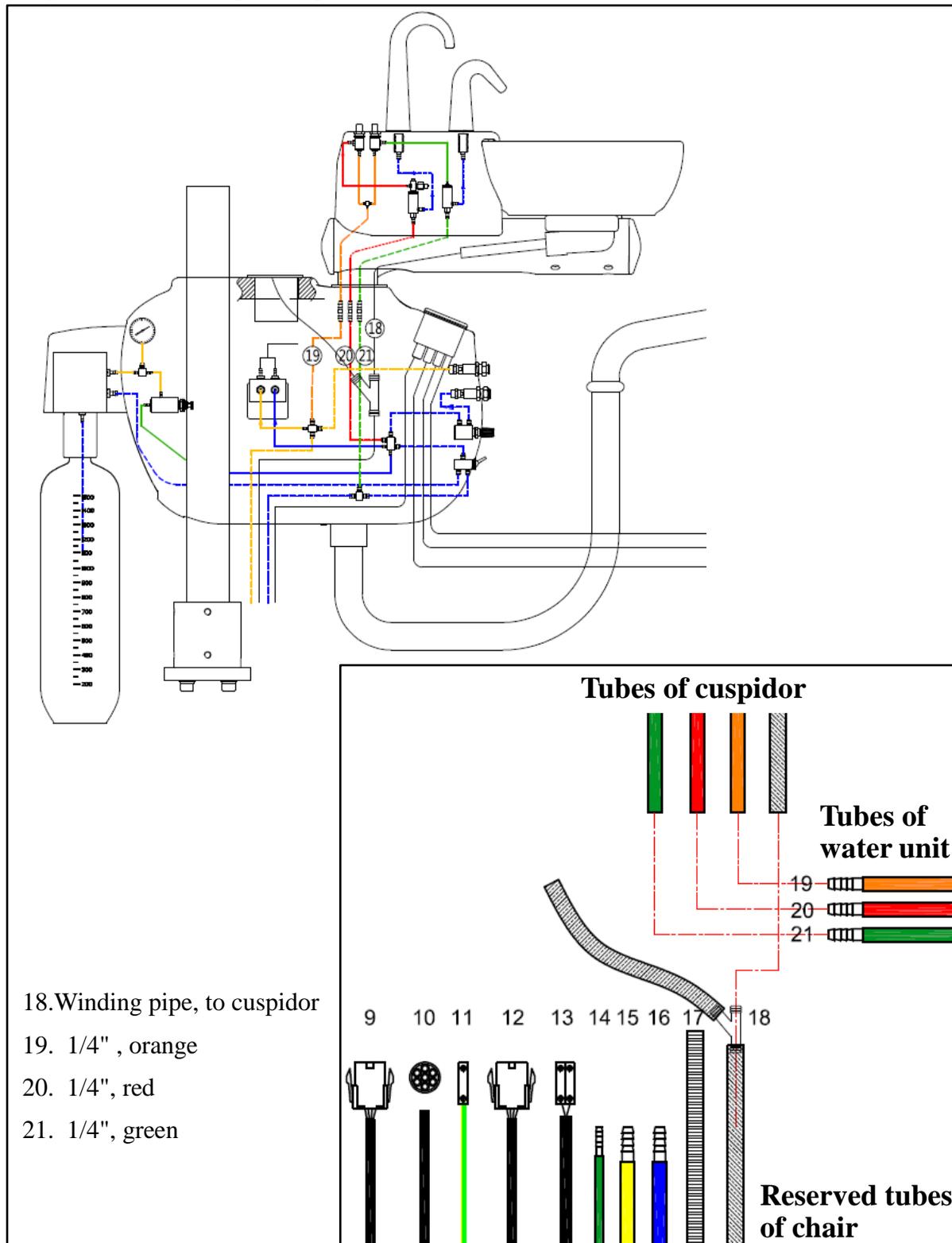


Figure 36 Cuspidor connection
(Beyond 301 with cuspidor type)



6.7 Install junction box

Figure 37 Junction box connection

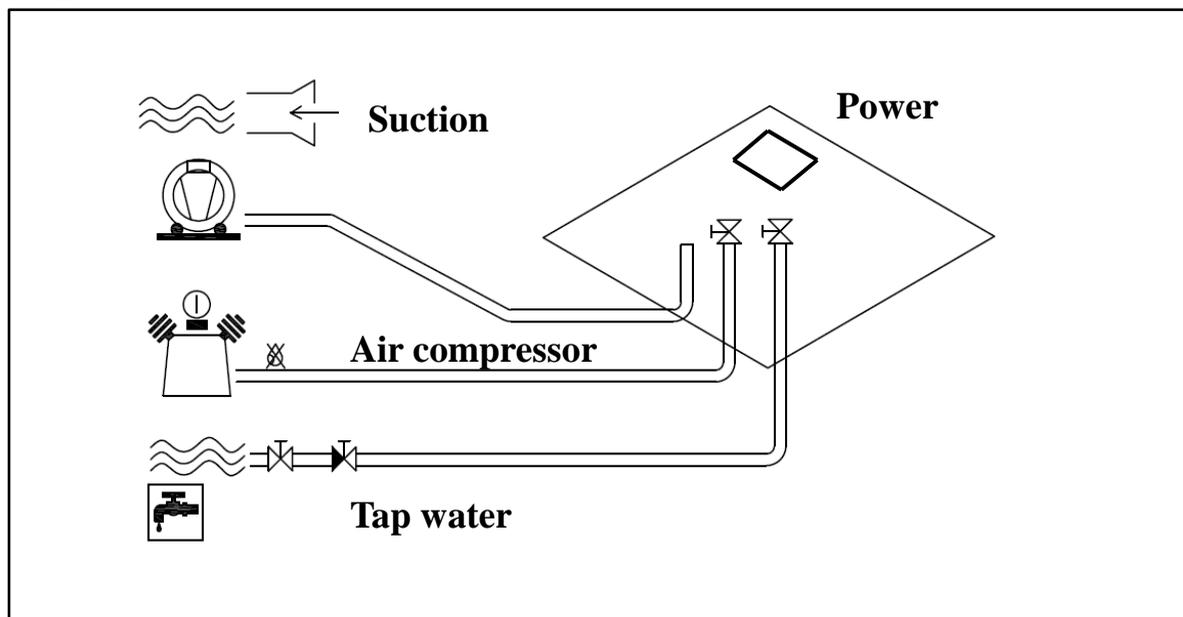
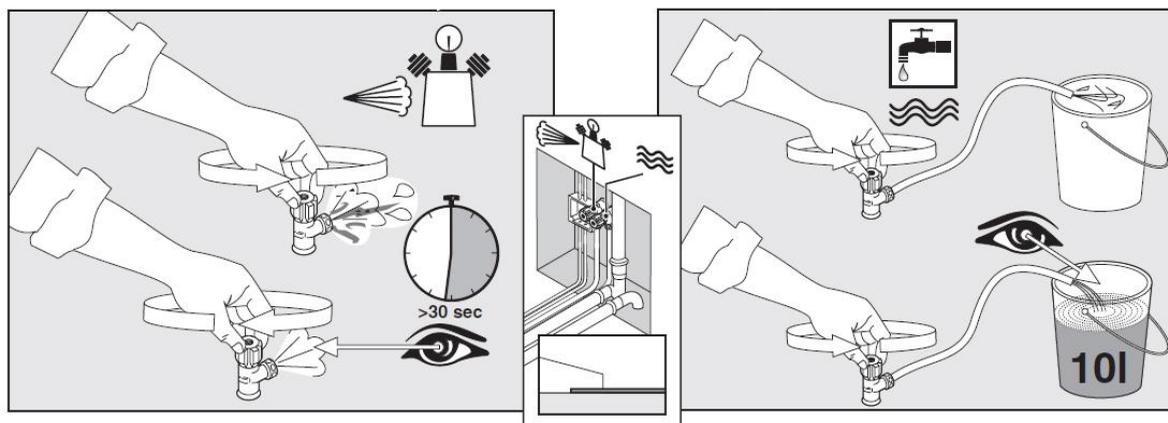


Figure 38 Clean the tubes before connecting.



The tubes and wires are in the tubing zone or inside the external junction box, their places lie on your chair configurations.

1. Open the valves to exhaust water and air, clean the tubes before connecting.
2. Open the cover of junction box, connect the air-in, water-in and water-out.
3. Take out the power box of dental light, connect the power cord to the power box, and plug into the socket.
4. Close the cover after making sure they are well-performed.

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Connect the junction box tubes to the reserved tubes by color. Connect foot control tubes to the reserved tubes and the junction box tubes by color.

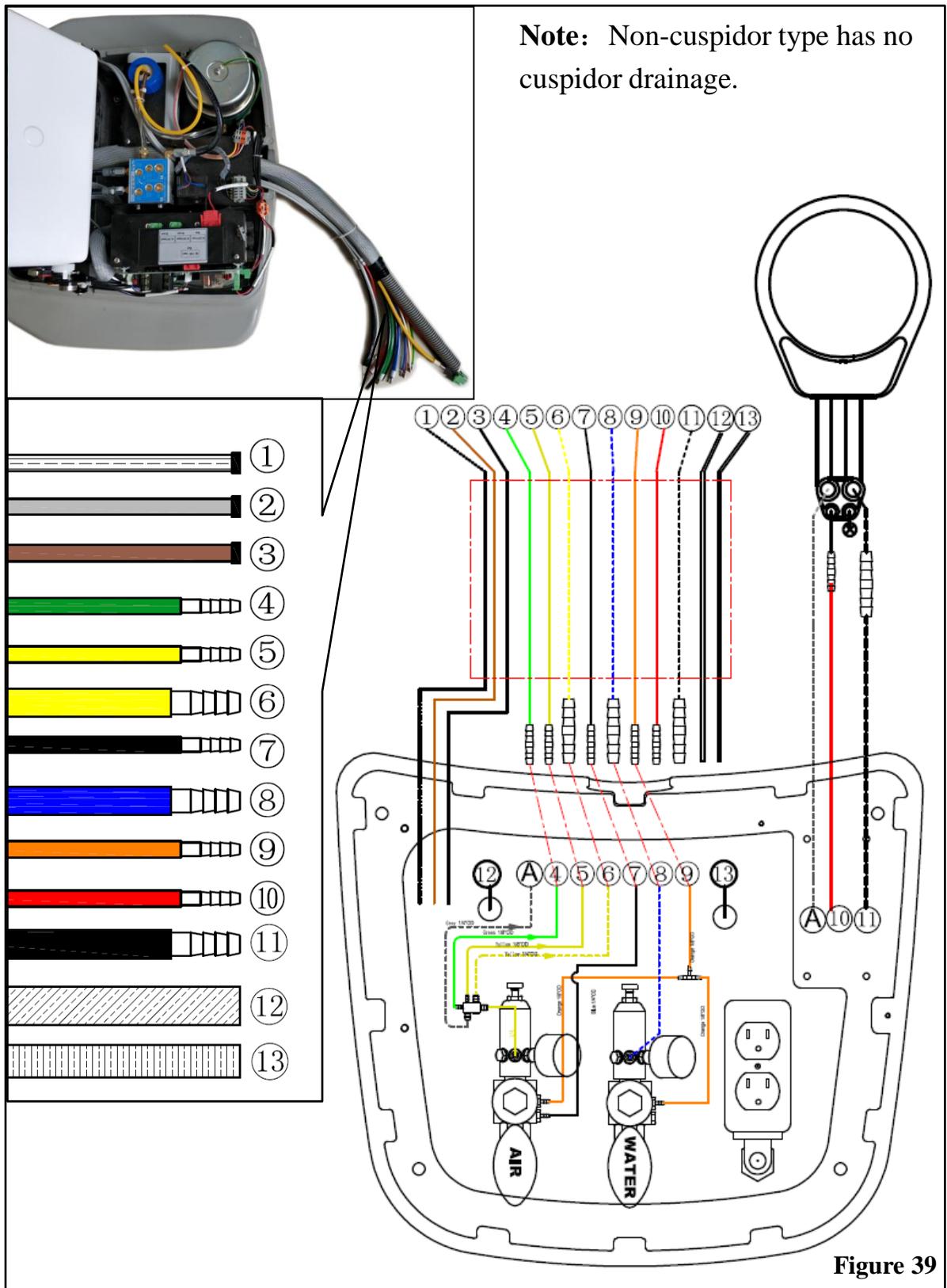
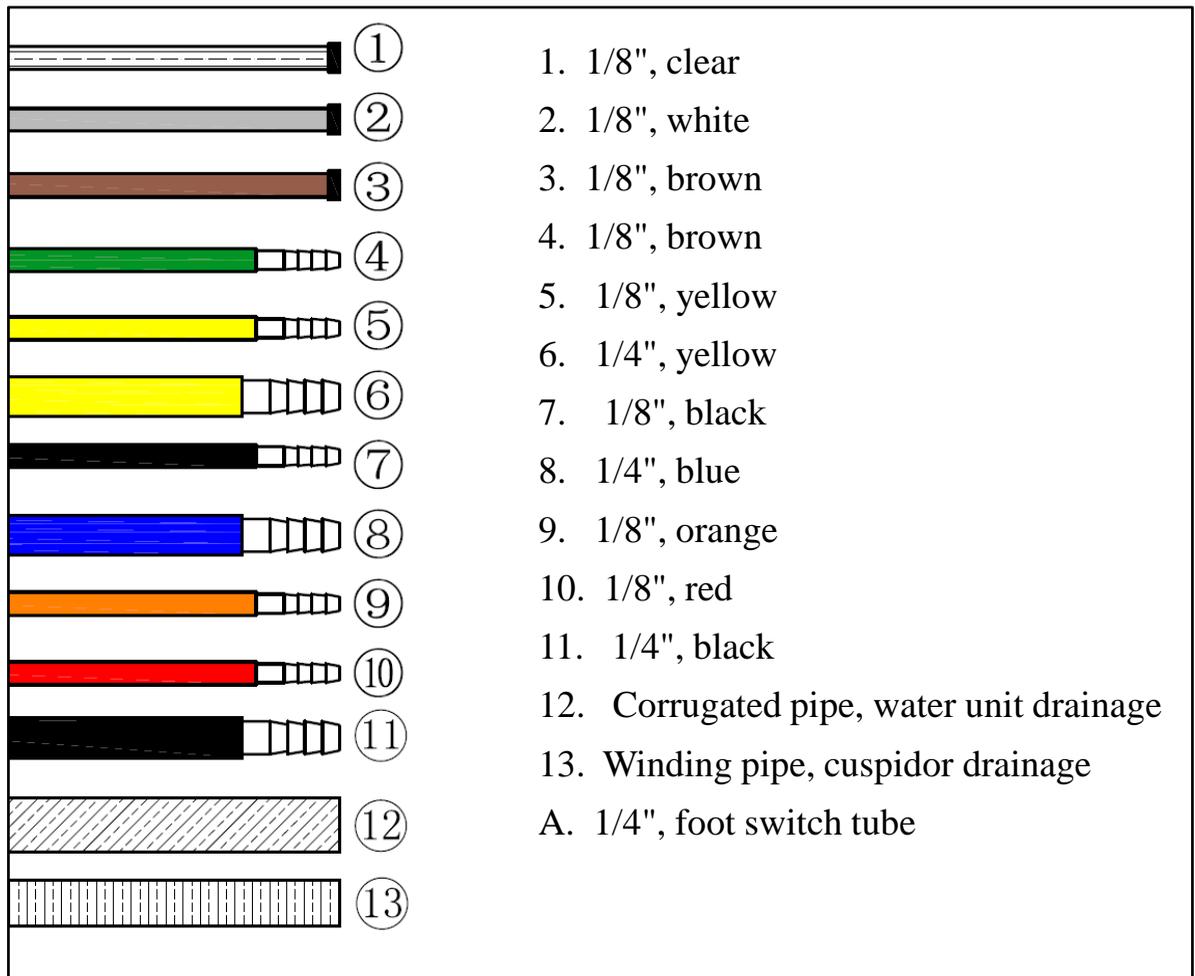


Figure 39



Note:

According to the need to filter drain (thread tube) with good drainage joint connection and clinic again after reserved valve connection.

