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Installation Manual
of
Beyond 400 Delivery System

P/N:8500917 Version：D Date：2024-03-03

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1 Introduction

1.1 Products information

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

•**Name**：Delivery system

•**Model**： Beyond 400

•**Working condition requirements**：

① Ambient temperature：5 ℃～40 ℃；

② Relative Humidity：≤80％；

③ Nominal Voltage：AC110 V±22 V；

④ Nominal Frequency：60 Hz±1 Hz；

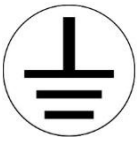
⑤ Water Pressure：29 psi～58 psi；

⑤ Input air pressure 72.5 psi~101.5 psi , Air flow ≥50 L/min；

1.2 Symbols explanation

Table 1

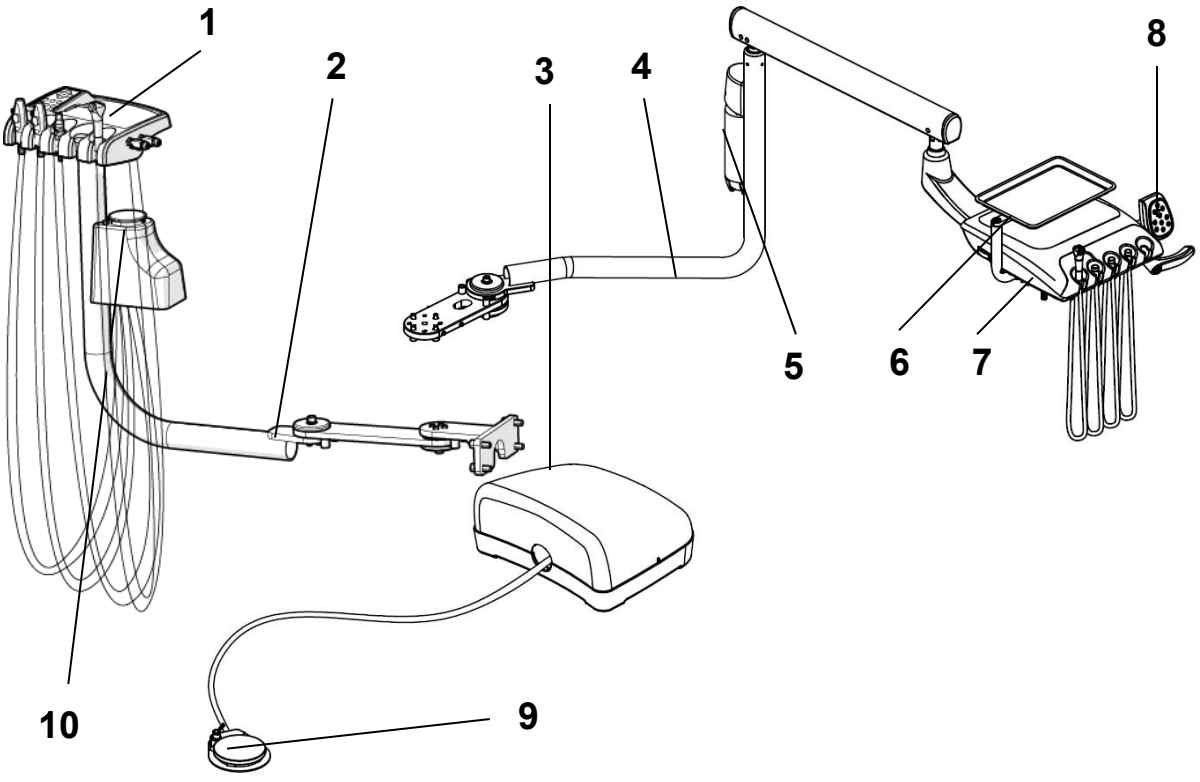
Symbol	Explanation
 Manufacturer	 EU Representative
 Producing date	 Serial number
 Place with care	 Keep dry

Symbol	Explanation
 Refer to introductions	 Notice
 Refer to attached documents	 Backrest down
 Avoid electric shock	 Backrest up
 Ground protection	 Chair down
 Set	 Chair up
 Spitting position	 Program Chair Position 1
 Program Chair Position 2	 Program Chair Position 3

2 Composition

The system is composed by following components.

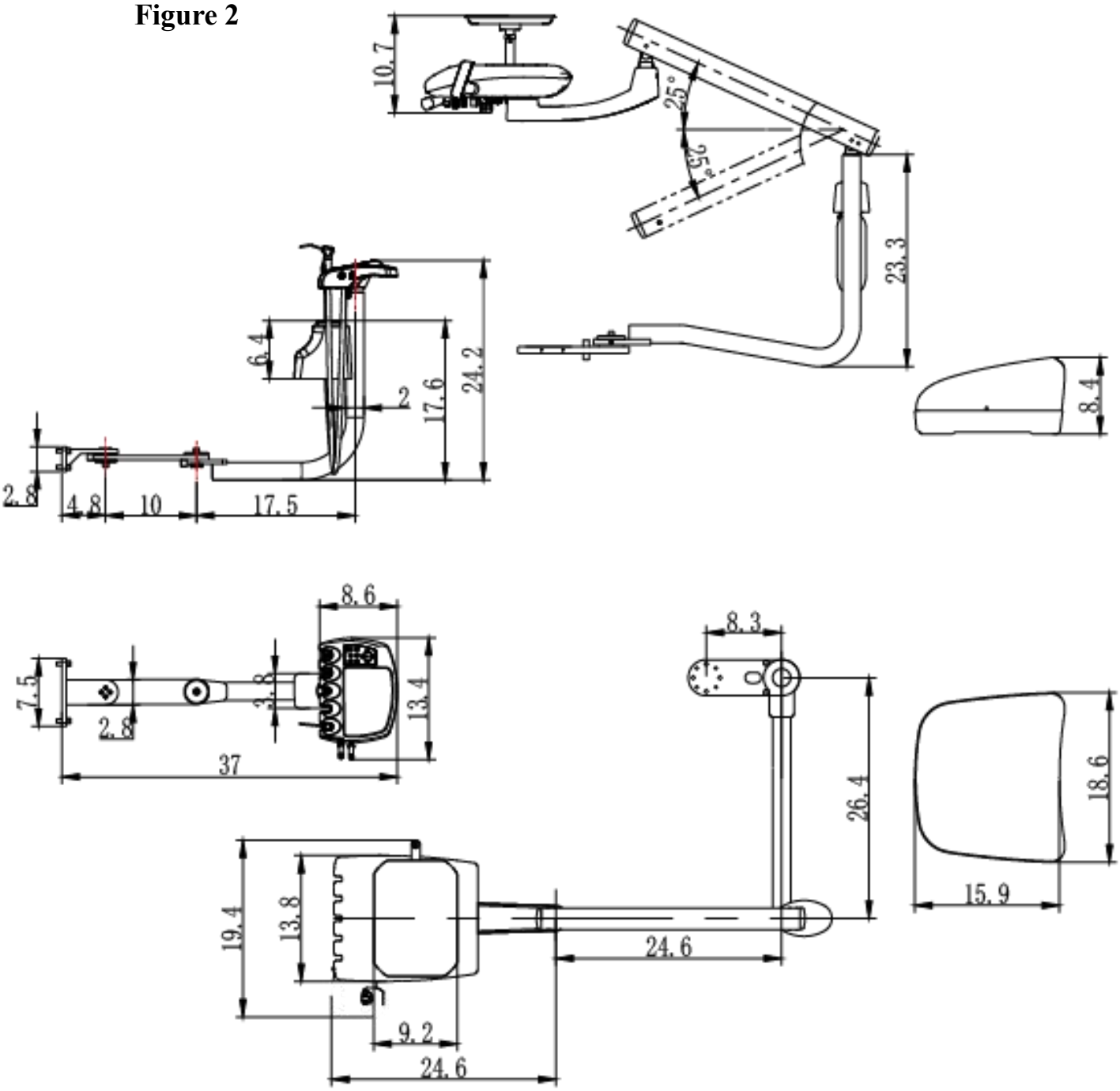
Figure 1 Beyond 400 delivery system



Item	Component	Item	Component
1	Assistant tray	6	Instrument tray
2	Assistant arm(rear mounted)	7	Delivery head
3	Junction box	8	Touch pad control panel
4	Rotary arm(front mounted)	9	Foot control
5	Water bottle	10	Filter

3 Sizes(unit:inches)

Figure 2



4 Specifications

Table 2

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

5 Preparations

5.1 Attentions

Before install the unit, you should:

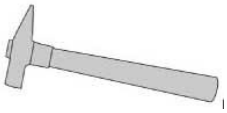
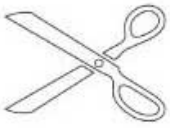
- Clear all the debris in the room ,and clean the floor thoroughly.
- Apply two manually operated valves for the air and water source.
- Exhaust the dirty water and air before connecting.

Before install the unit, please read the manual carefully:

- Input voltage AC110 V ,50/60 Hz.
- Make sure the dental unit is in good grounding.
- All the electrical components and connections should be made by an authorized technician.
- Only fuses 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.

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

5.3 Installation sequence

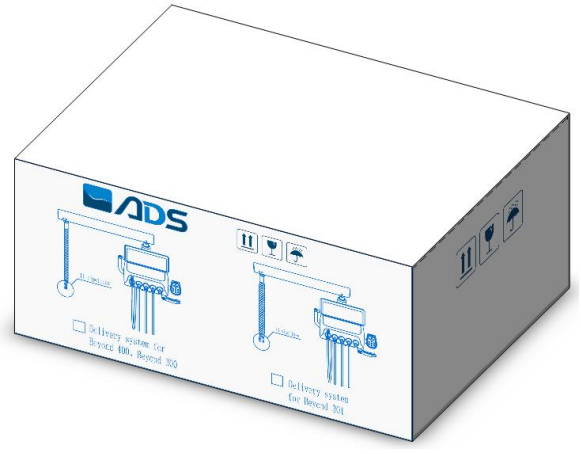
Installing packages of the Beyond 400 system. Please install these packages as the sequence below.

Figure 3 Installing packages

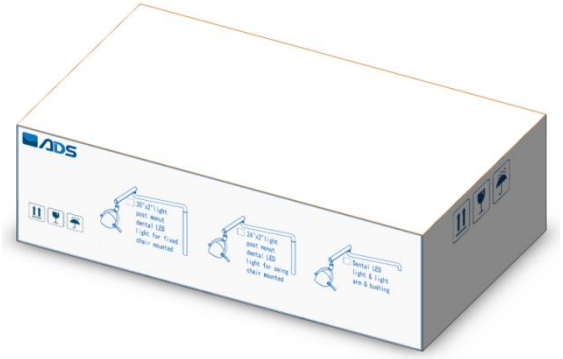
1 Compass arm set



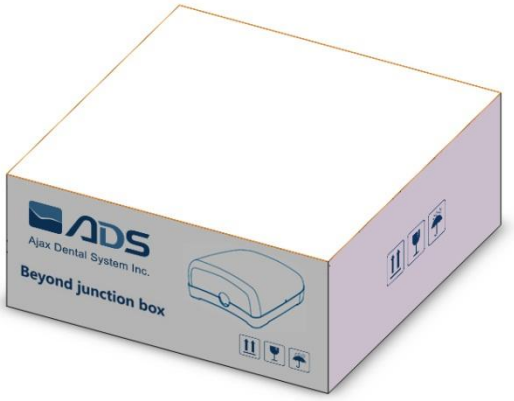
2 Beyond dentist unit



3 Dental light unit



4 Junction box unit

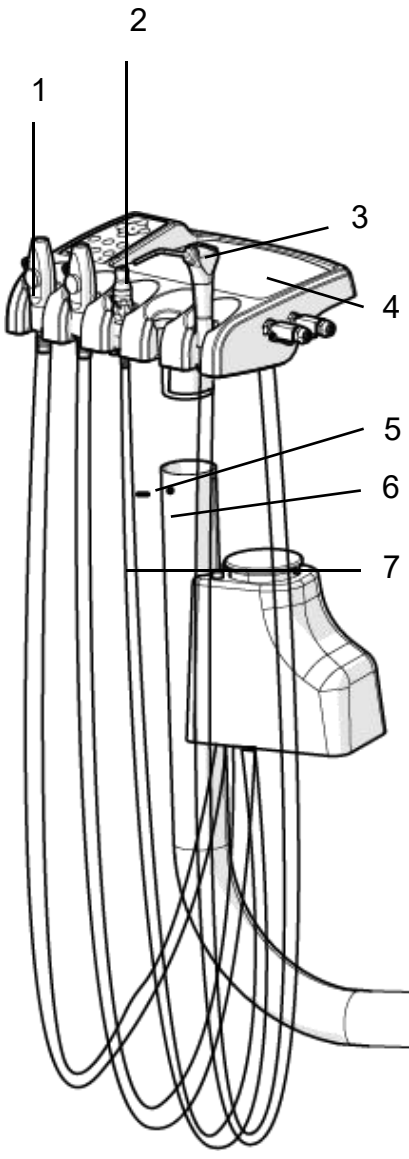


Notice:
Each box contains all the parts that belong to the package .

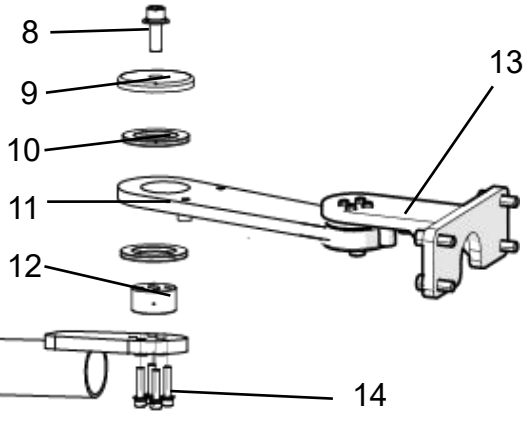
6 Installation

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. Please install the unit in following orders.

Figure 4 Assistant unit



1	HVE valve
2	SE valve
3	3-way syringe
4	Assistant tray
5	M4*6 hexagon socket set screw with flat point
6	Assistant arm
7	Tubes
8	M10*30 hexagon socket cap screw
9	Bearing cover
10	AXK4060 plane bearing
11	Connecting plate
12	Connecting shaft
13	Fixing bracket
14	M6*30 stainless steel hex socket head cap screw assembly



6.1 Install assistant unit

1. Loosen the M10*30 screw assembly on connecting plate, install assistant arm to the plate as the figure shown, then fasten the screw.

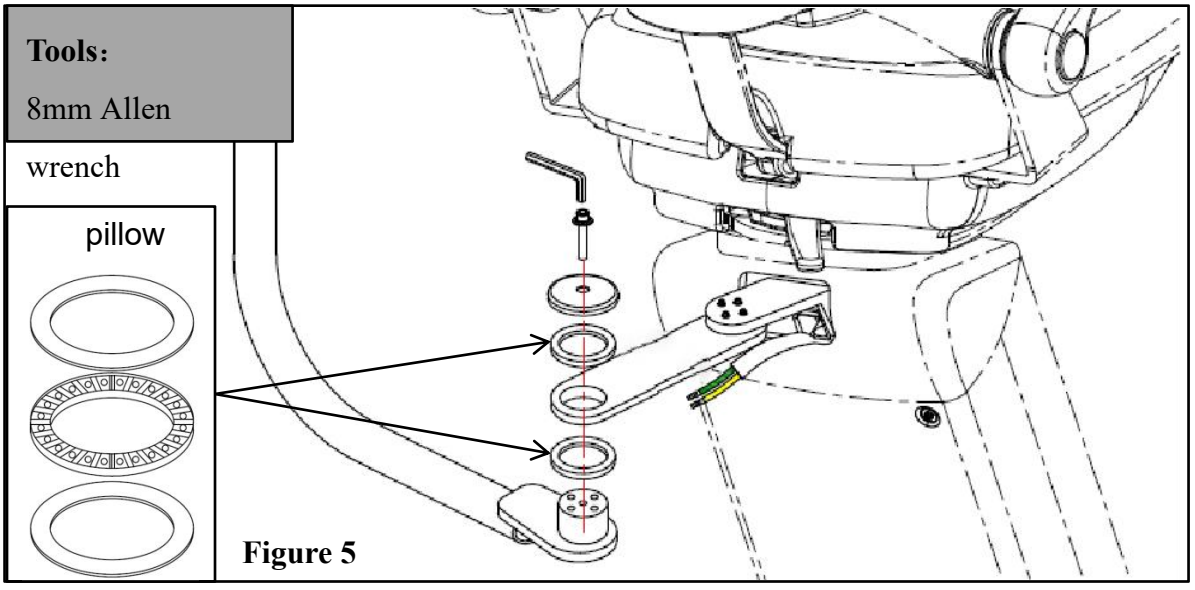
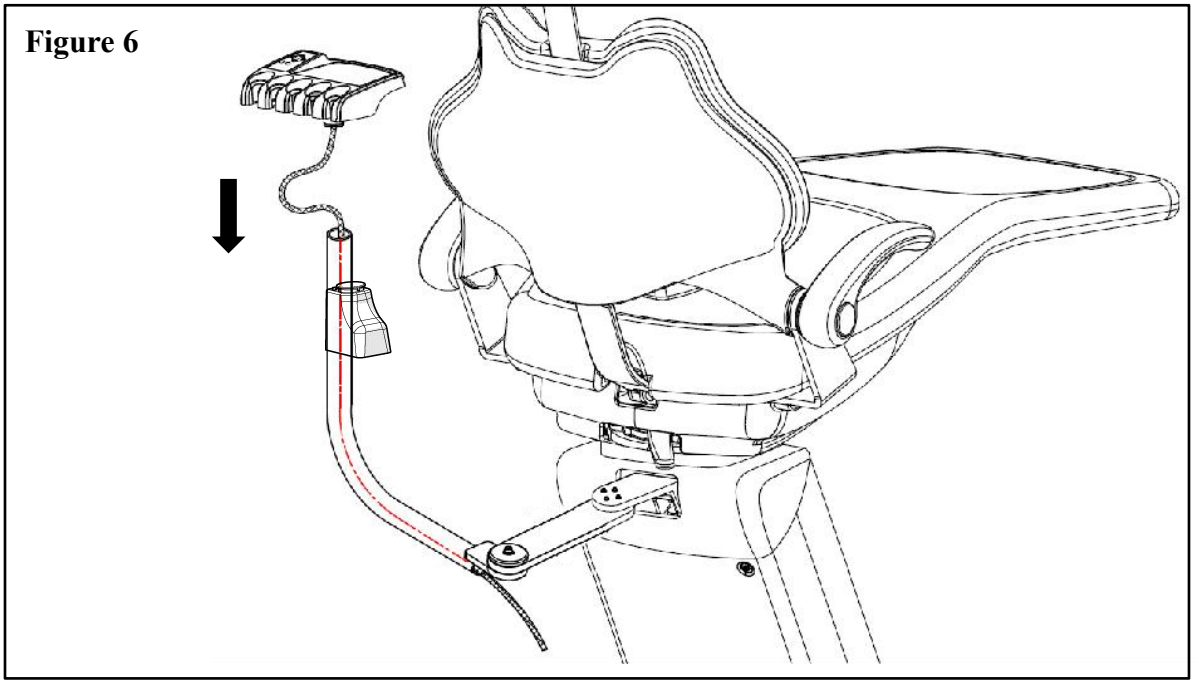


Figure 5

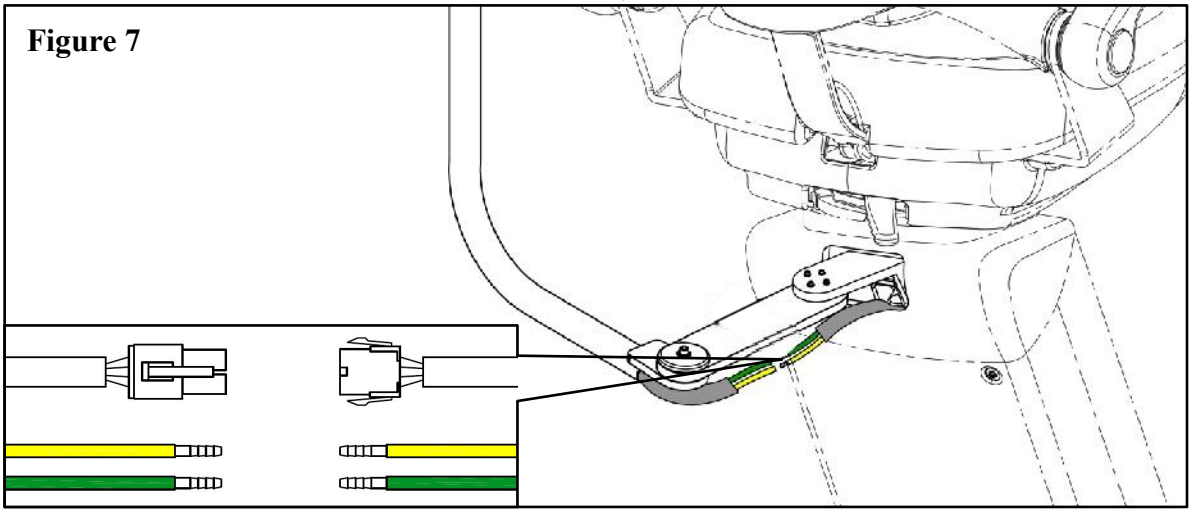
2. Let the tubes of assistant tray pass through the arm, mount the assistant tray to the arm and fasten a M4*8 pan head screw.

Figure 6



3. Pass the tubes that of the assistant tray through a R-shape clip, and connect them to the reserved tubes by color.

Figure 7



4. Put the HVE valves,the SE valve and the 3-way syringe to the holders.

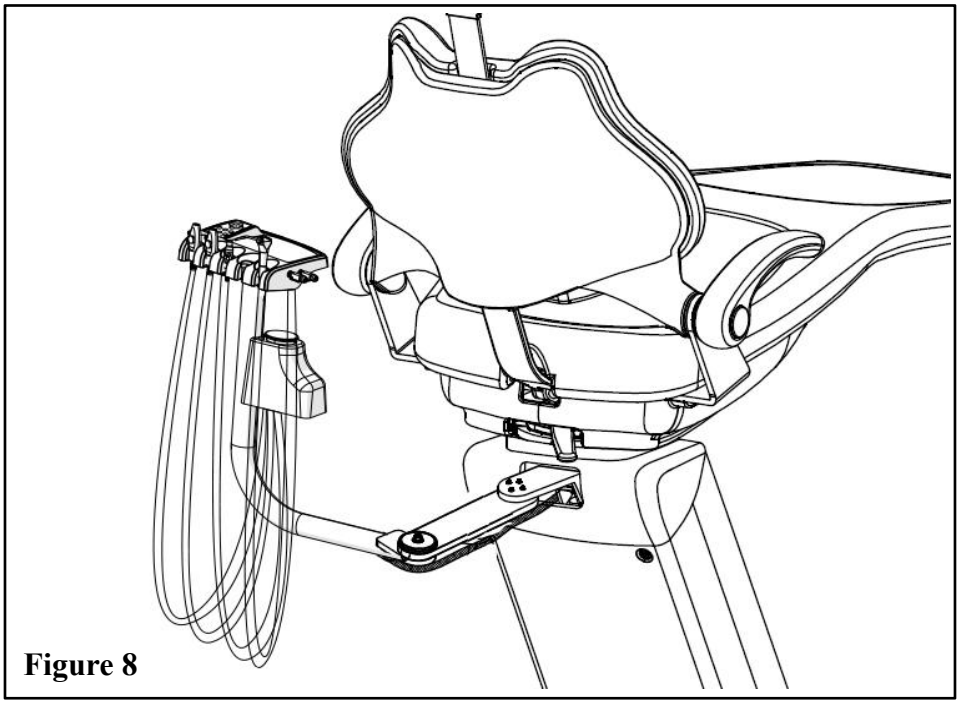


Figure 8

6.2 Install rotary arm to the chair

1. Loosen the M10*30 screw assembly on the front connecting plate, install the rotary arm to the plate as the figure shown , then fasten the screw.

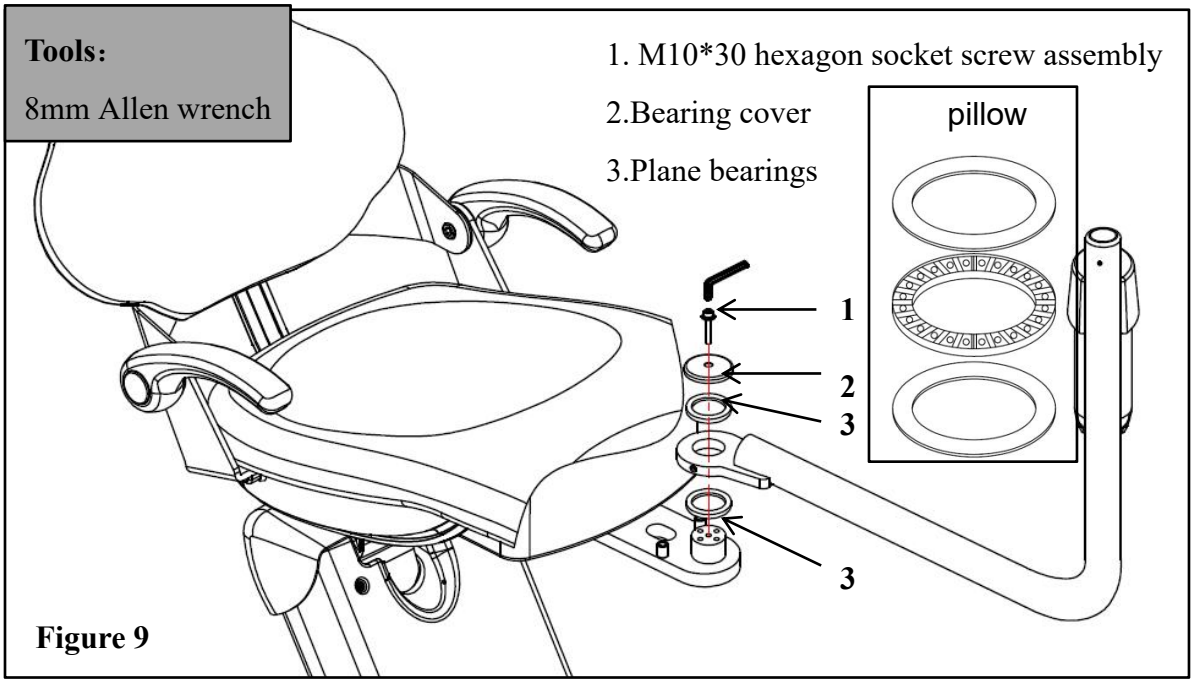


Figure 9

2. Adjust the four set screws on the connecting plate to change the levelness of the rotary arm .

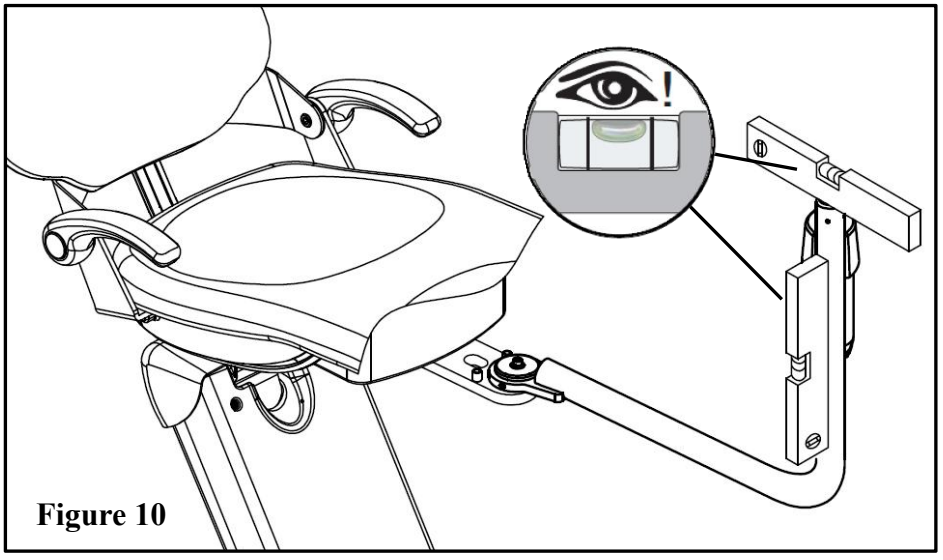
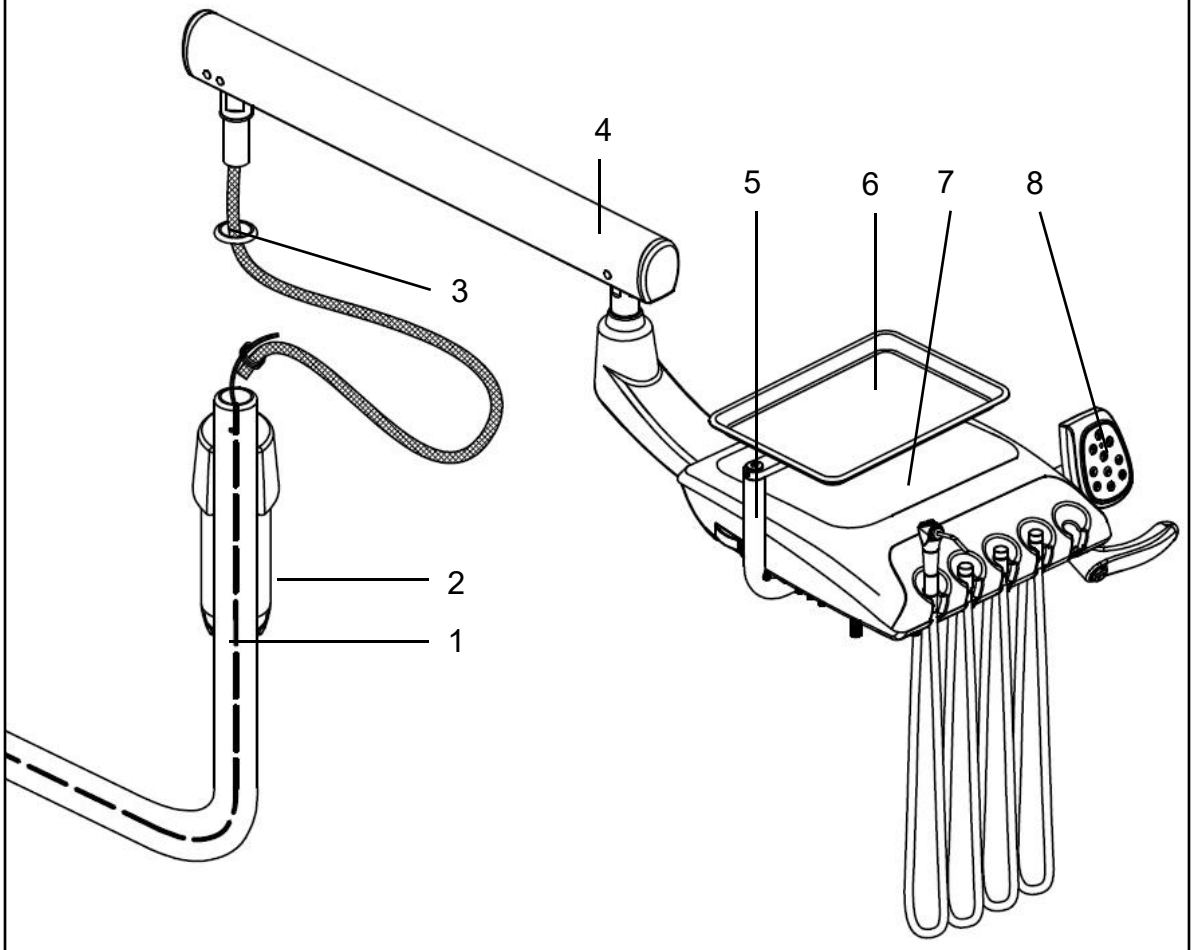


Figure 10

6.3 Install dentist unit

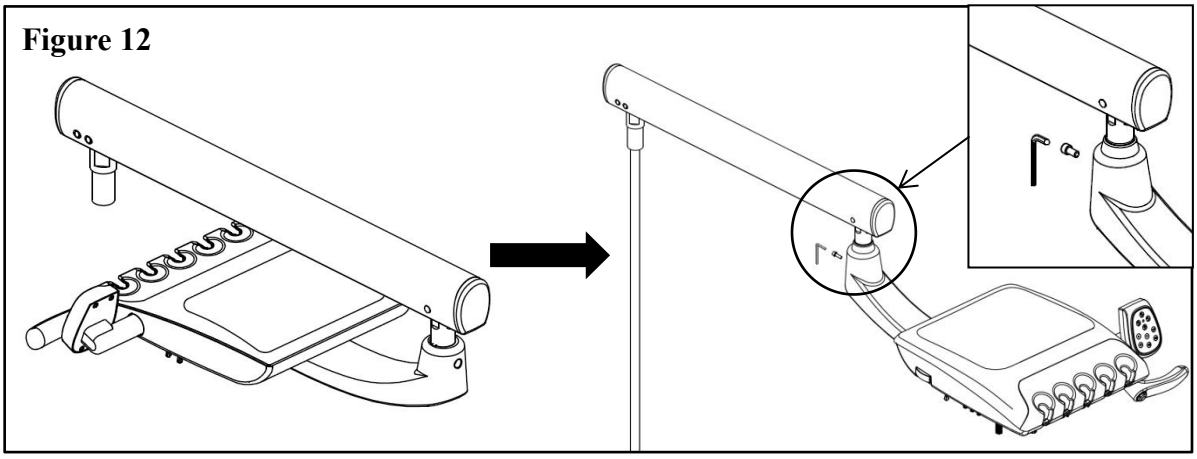
Figure 11 Dentist unit



1	Rotary arm (front mounted)	5	Tray bar
2	Water bottle	6	Instrument tray
3	Cosmetic ring	7	DE-5 Delivery head
4	Level arm	8	Touch pad control panel

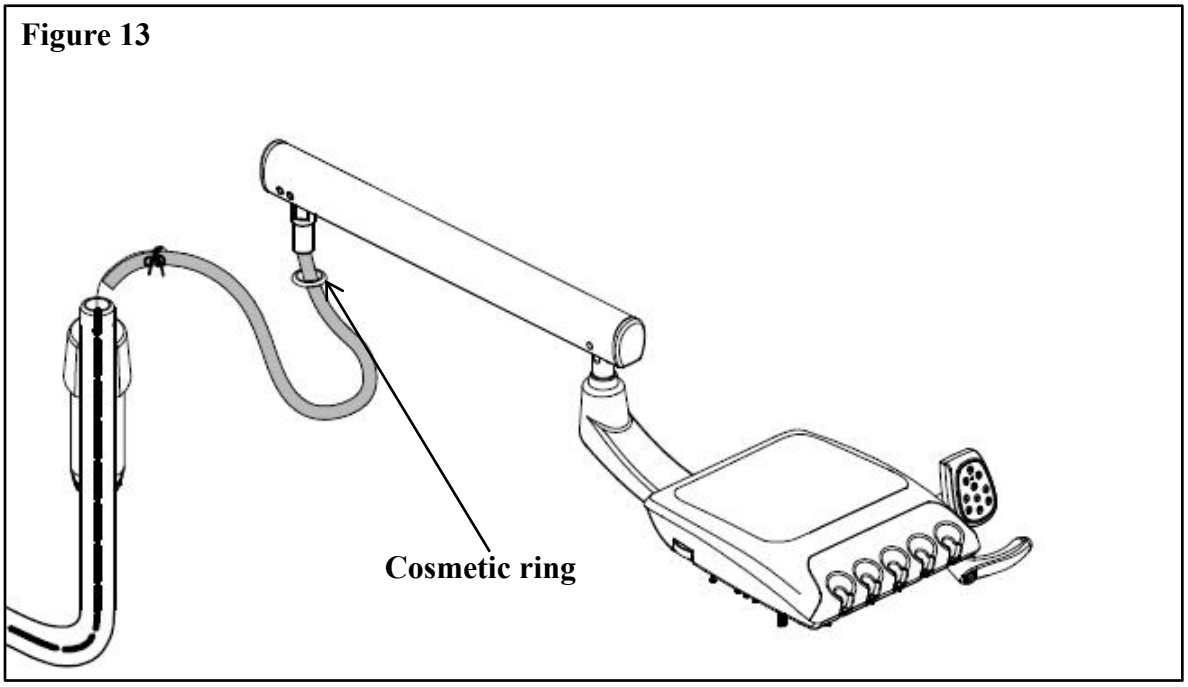
1. Get fixed rotation angle between the bracket of delivery head and the level arm by a M6*20 screw assembly, in avoid of 360° rotation of the delivery head.

Figure 12



2. Tubes pass through a cosmetic ring and bind with the guide line, pull the guide line to let the wires pass through the rotary arm.

Figure 13



3. Install the unit to the rotary arm , fix it with three M6*8 set screws and insert the screw caps.

Tools:
3mm Allen wrench

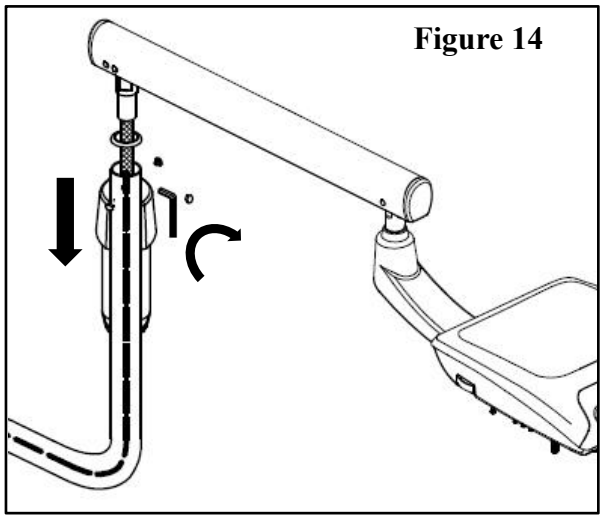


Figure 14

4. Fix the tray supporting bar at the bottom of delivery head by two M6*20 cap screws .

Tools:
5mm Allen wrench

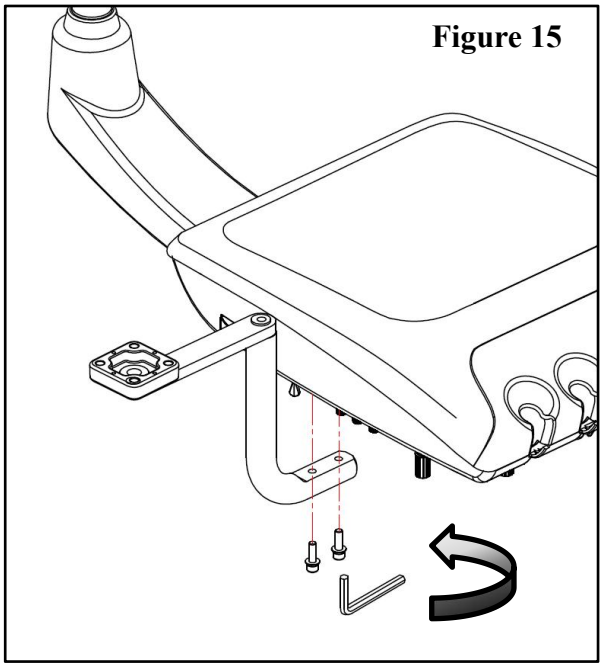
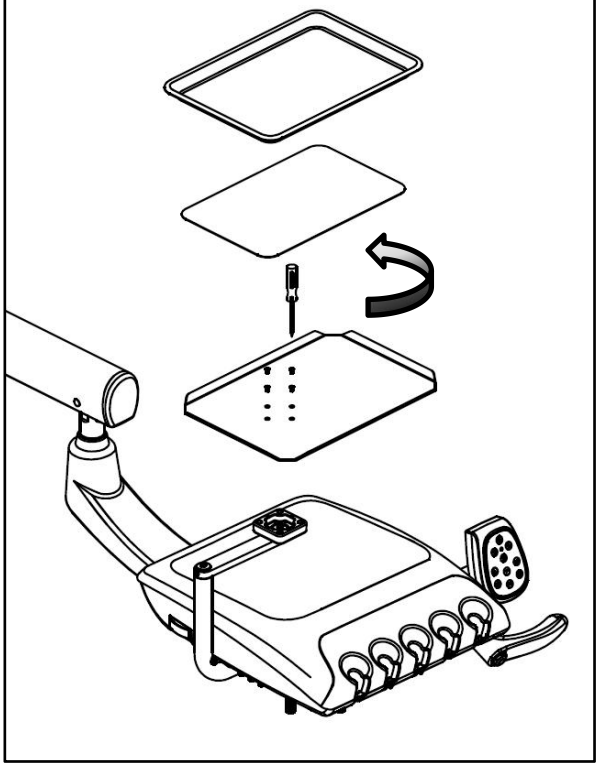


Figure 15

5. Fix the instrument metal tray to the supporting bar by four M3*10 countersunk screws, put a rubber pad on the metal tray and then put the plastic tray on the rubber pad.

Figure 16



Tools:

Philips screw driver

5. Connect he tubes of the dentist unit and those reserved by color, and cover the shell after connection . Ignore the excess wires among the reserved lines.

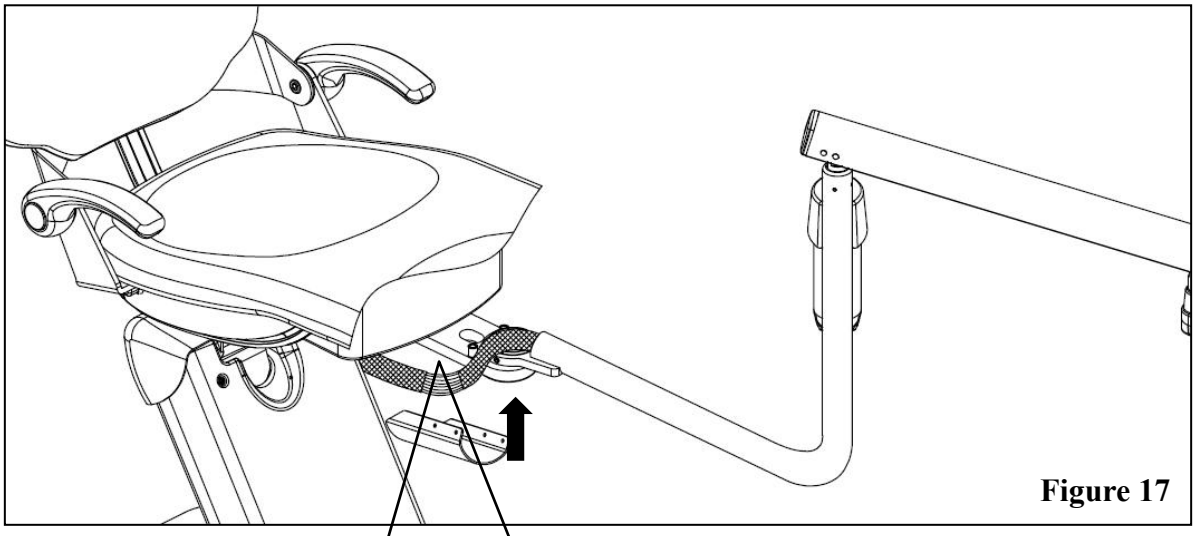
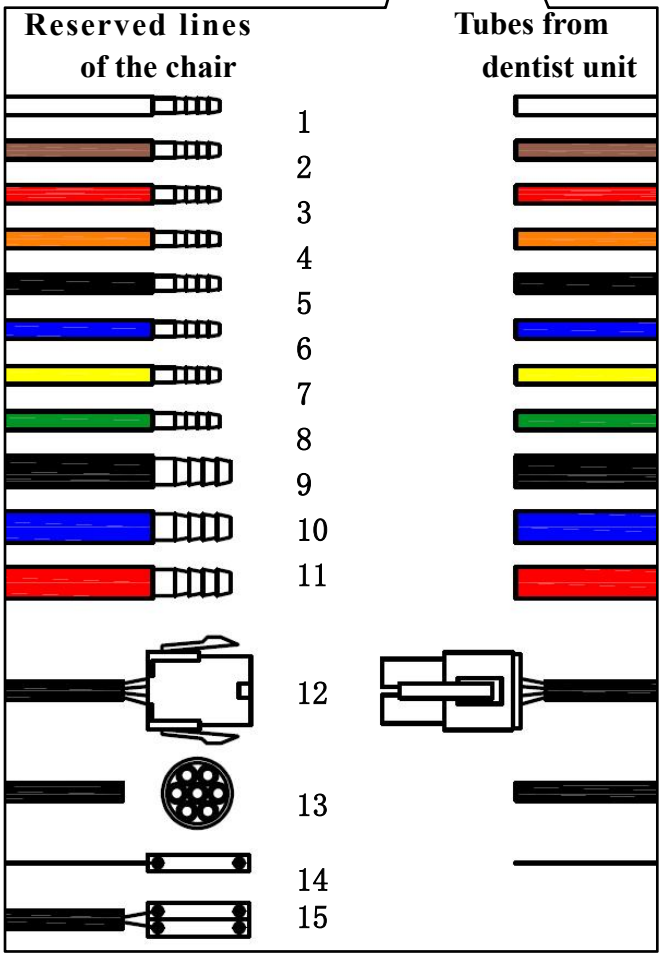


Figure 17



1. 1/8" white， reserved for dentist unit
2. 1/8" brown，reserved for dentist unit
3. 1/8" red ，reserved for dentist unit
4. 1/8" orange，reserved for dentist unit
5. 1/8" black，reserved for dentist unit
6. 1/8" blue，reserved for dentist unit
7. 1/8" yellow，reserved for dentist unit
8. 1/8" green，reserved for dentist unit
9. 1/4" black，reserved for dentist unit
10. 1/4" blue，reserved for dentist unit
11. 1/4" red，reserved for dentist unit
12. Control wire for delivery head
13. 24V,7 core power cord for delivery head
14. 24V power cord for dental light
15. Ground wire for delivery head

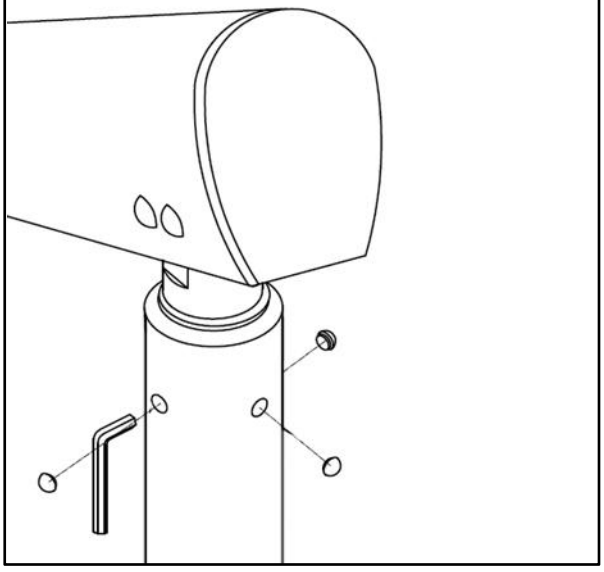
6.4 Level arm adjustment

1. Remove the screw caps, change the tightness of the screws to adjust the damping force of level arm.

   Note： Loosen the screws in counterclockwise, tighten in clockwise.

Tools：
3mm Allen wrench

Figure 18

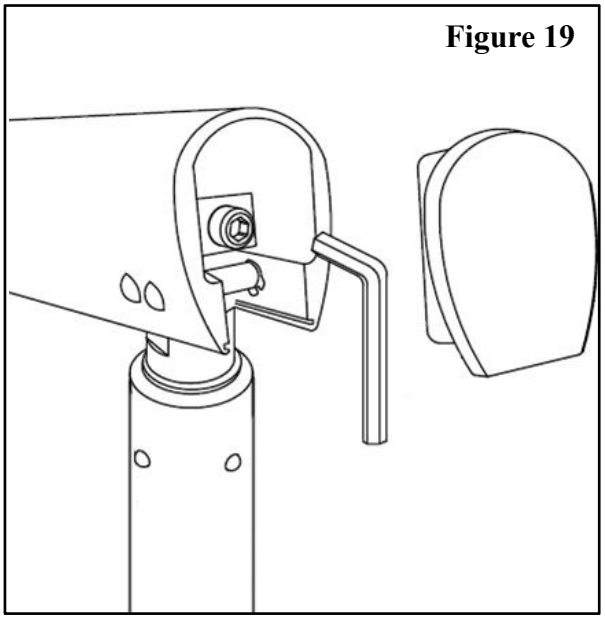


2. Remove the end cover of level arm, adjust the tightness of the screw to get suitable balance force.

   Note： Loosen the screws in counterclockwise, tighten in clockwise.

Tools：
5mm Allen wrench

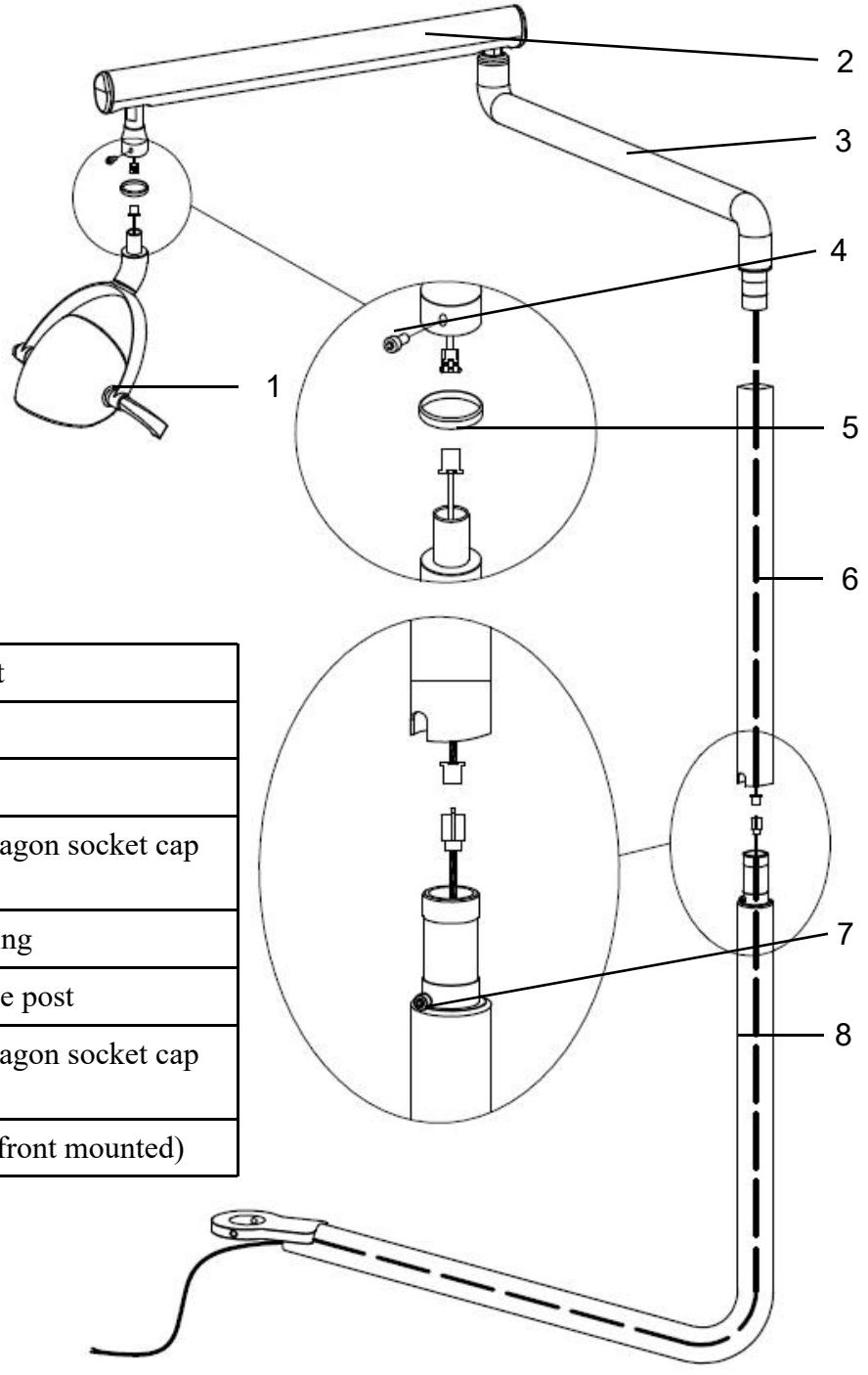
Figure 19



6.5 Install dental light（optional）

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

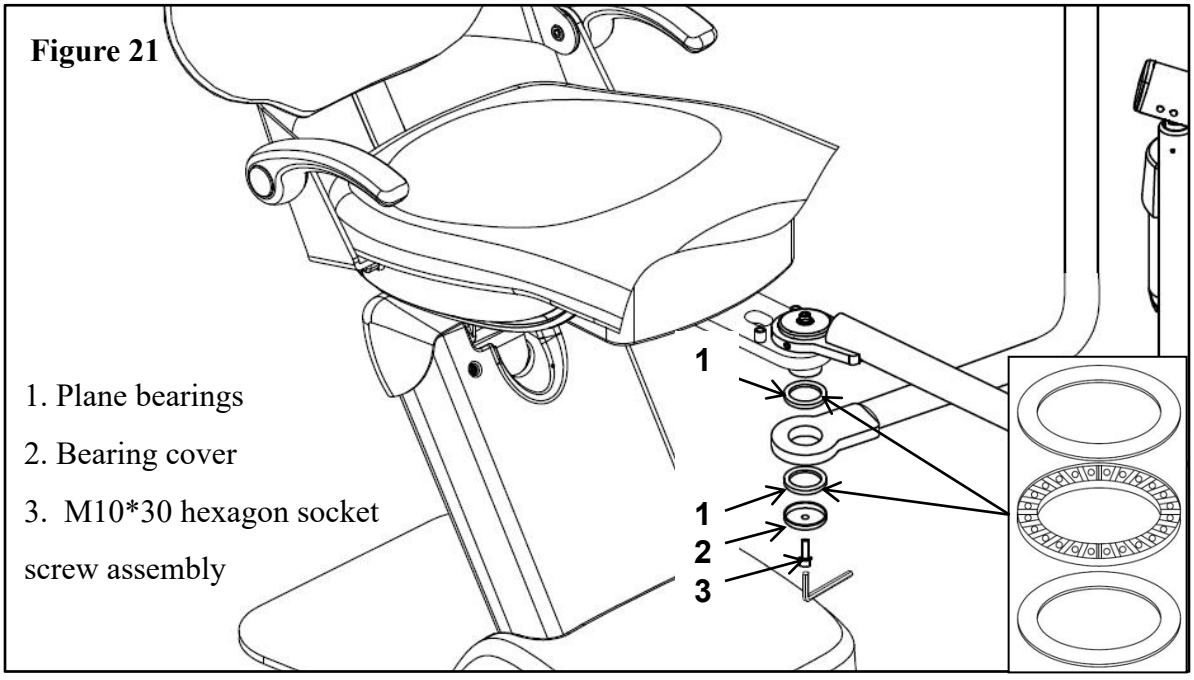
Figure 20



1	Dental light
2	Level arm
3	Rotary arm
4	M5*12 hexagon socket cap screw
5	Cosmetic ring
6	Intermediate post
7	M5*10 hexagon socket cap screw
8	Lamp arm(front mounted)

1. Release the M10*30 screw on the connecting plate, mount the lamp arm to the plate as the figure shown, then fasten the screw.

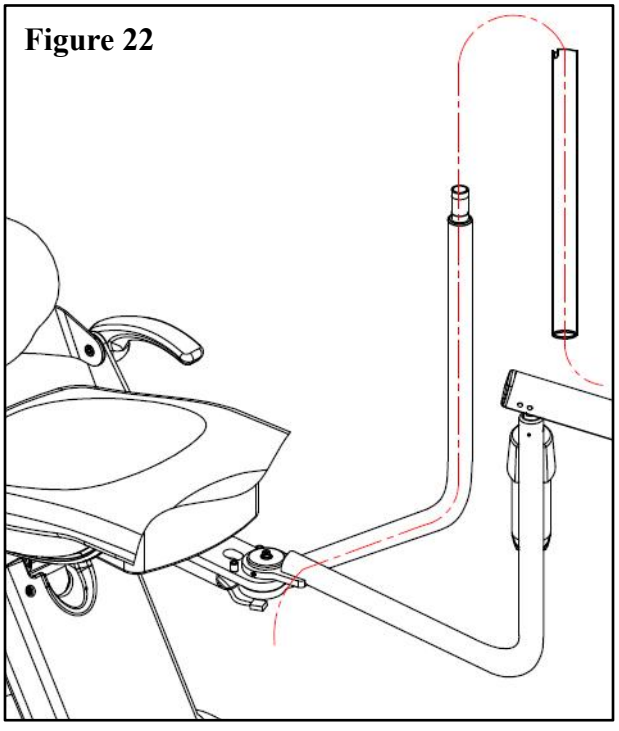
Figure 21



1. Plane bearings
2. Bearing cover
3. M10*30 hexagon socket screw assembly

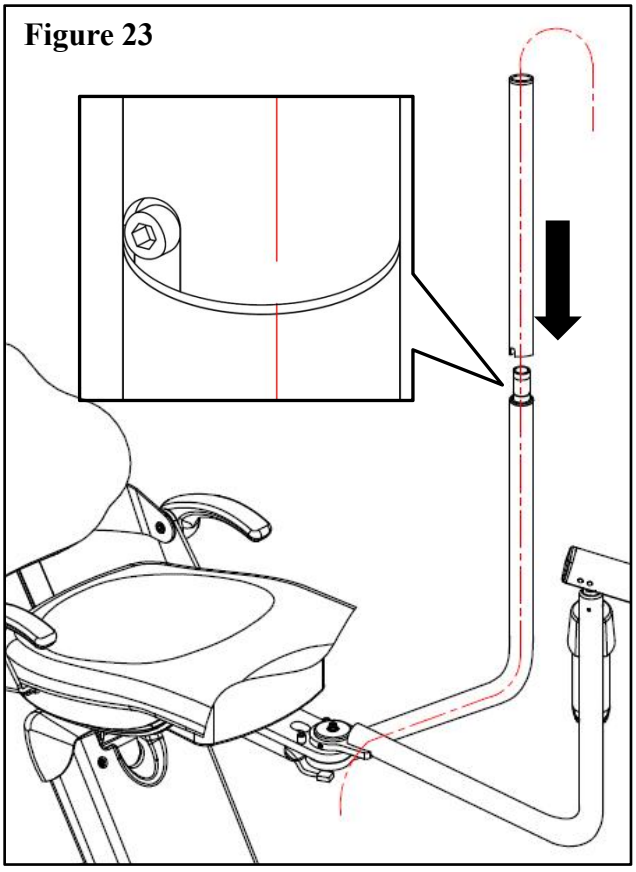
2. Let the guide line route though the intermediate post as the figure shown, the post end which has a jag should be upward.

Figure 22



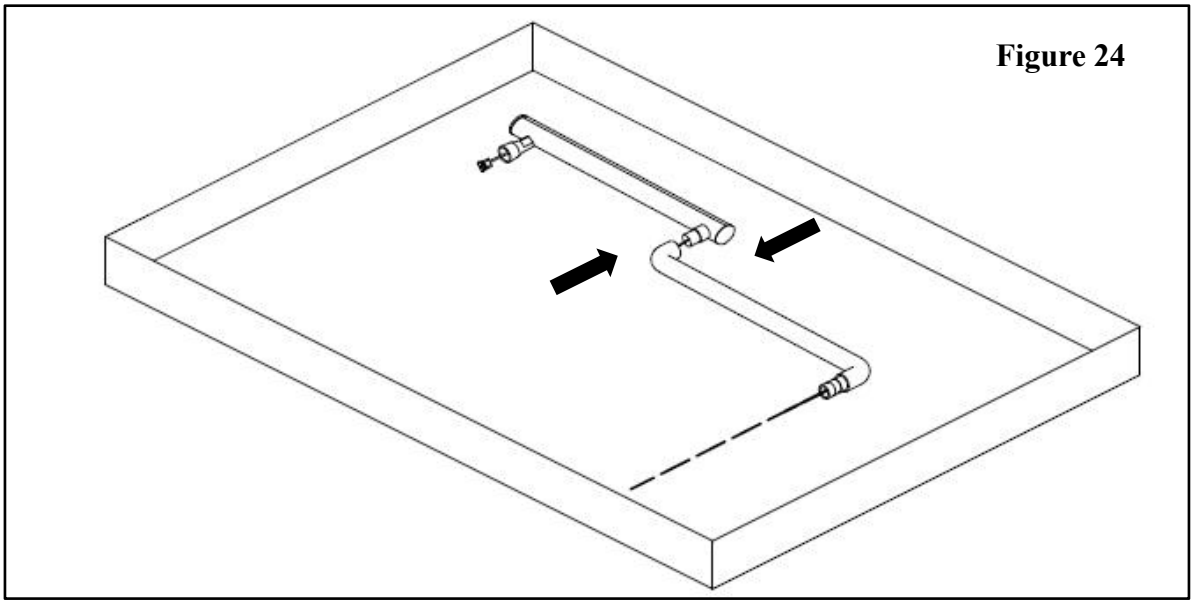
3. Joint the intermediate post and the rotary arm, the jag on the post is screw position .

Figure 23



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

Figure 24



5. Tie the light wire and the guide line together, pull the guide line to lead the wire pass through the post and the lamp arm .

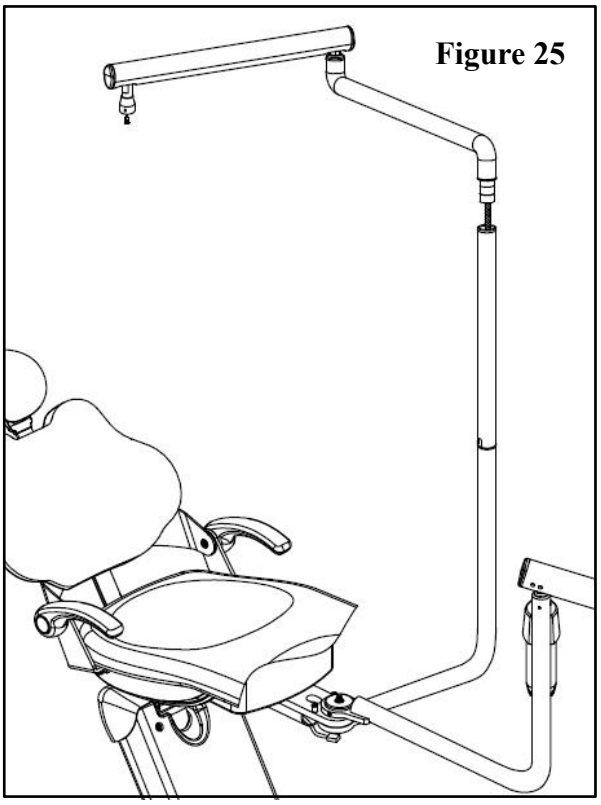


Figure 25

6. Connect the light wires and the reserved wires brown to brown, yellow to yellow.

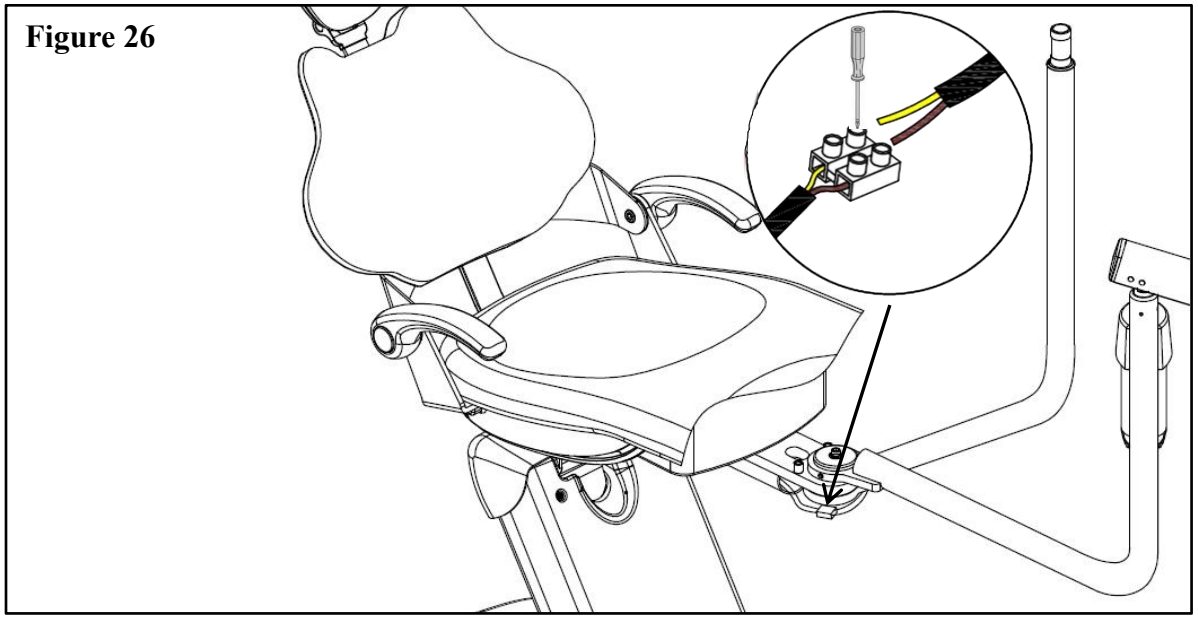


Figure 26

7. Take out the lamp from the package, pass the wire through the cosmetic ring and connect the wire terminals, then joint the light head and the level arm together, fully fasten with a M5*12 screw.

Note: Hold the lamp , do not drop it to avoid damage.

Tools:

4mm Allen wrench

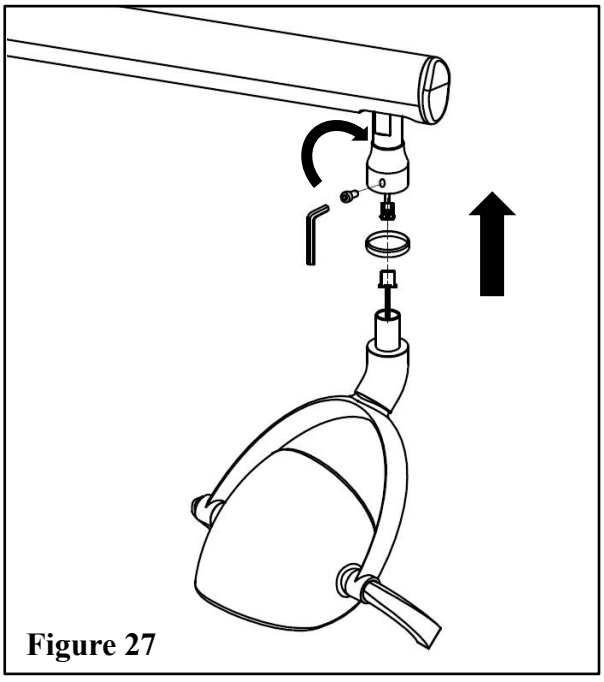
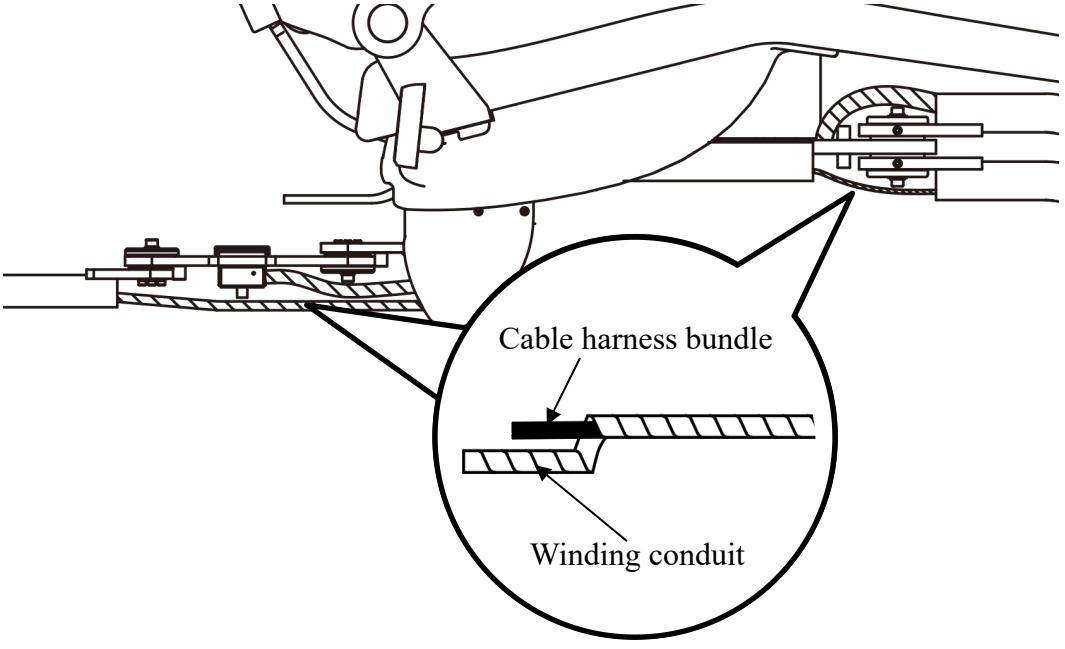


Figure 27

6.6 Post-Installation Wire Harness Protection

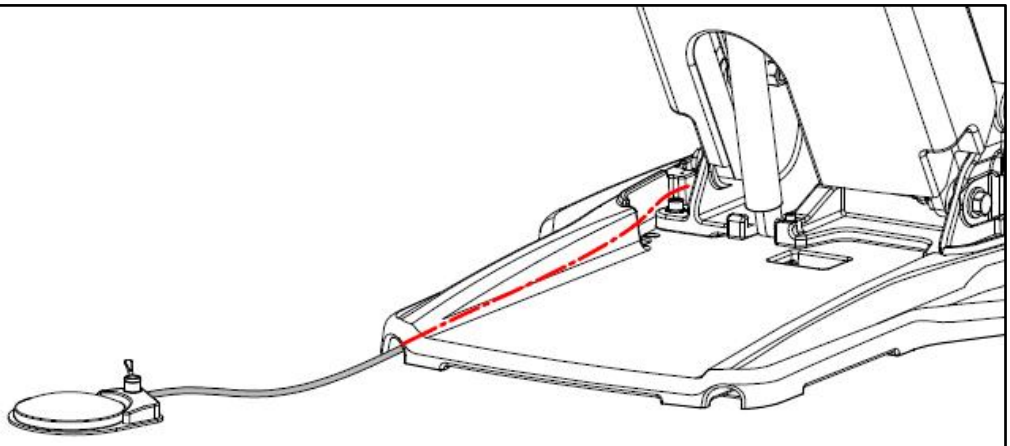
1. Upon completion of dental chair installation procedures, enclose any exposed sections of the internal wire harness bundle within a flexible winding conduit.



6.7 Install foot control

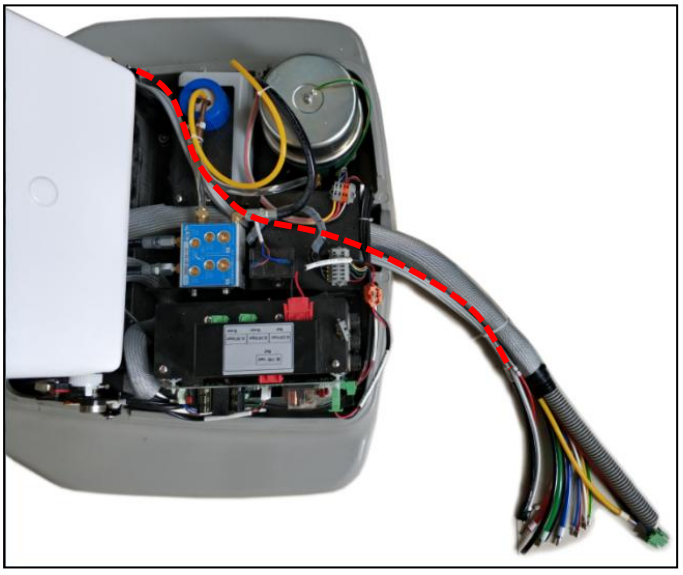
1. Pass the foot control tubes through the left part of the chair base.

Figure 28



2. Foot control tubes shall bypass the oil can and be tied together with the tube bundle.

3. Pass the bundle through the corrugated pipe, the two ends of the pipe shall be respectively fixed on the chair and junction box, then cover the shells.



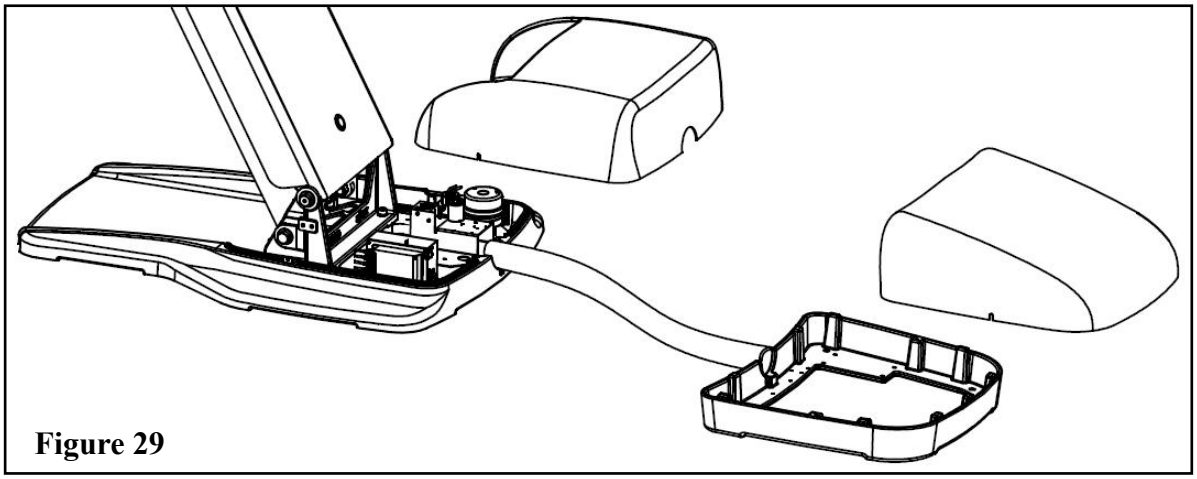


Figure 29

6.8 Junction box connections

Figure 30

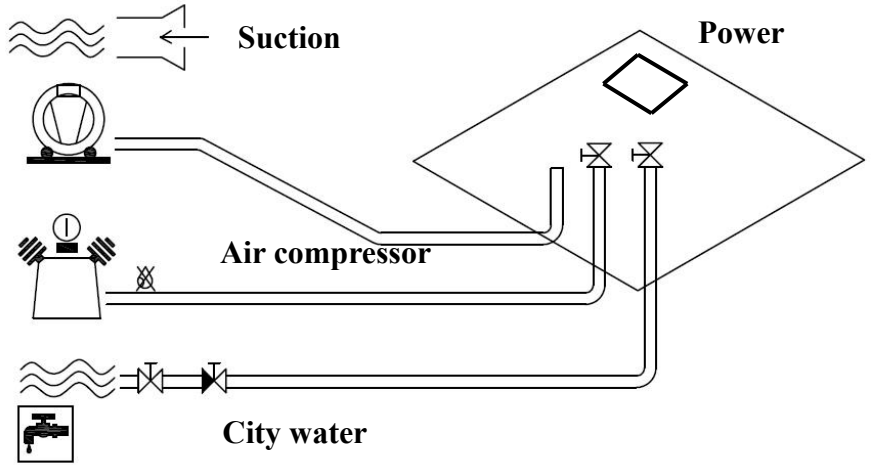
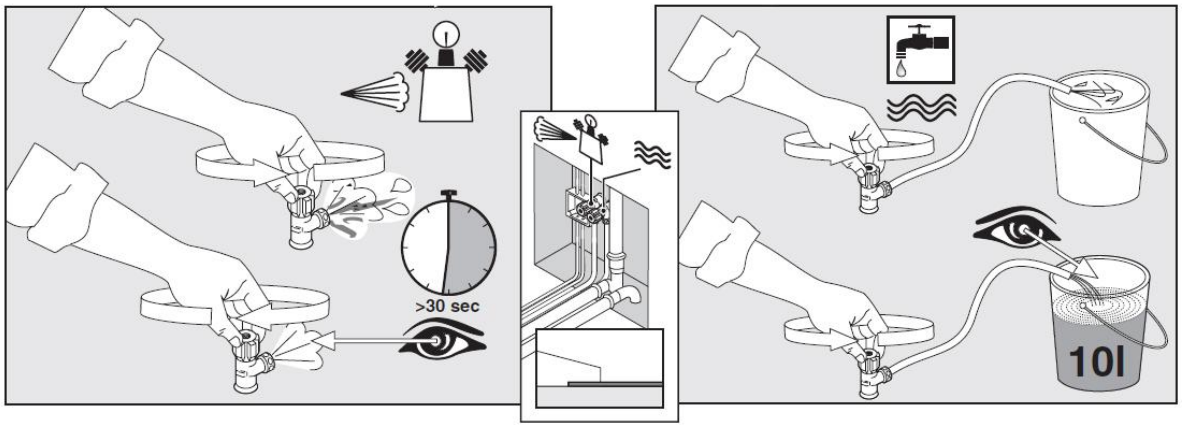


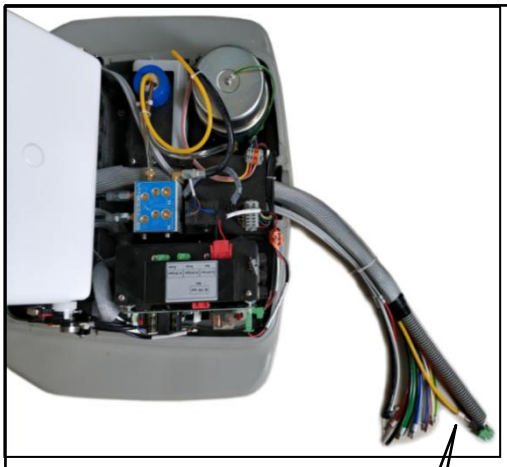
Figure 31

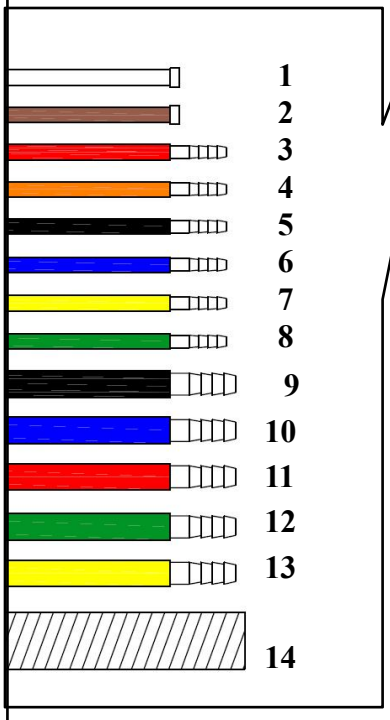


The tubes & wires are in the tubing zone or inside the external junction box, their places depend on your chair configurations.

1. Open the valves to exhaust water and air, clean the tubes before connecting.
2.. Open the cover of the 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.

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





1. 1/8" white, reserved for dentist unit
2. 1/8" brown, reserved for dentist unit
3. 1/8" red, reserved for dentist unit
4. 1/8" orange, reserved for dentist unit
5. 1/8" black, reserved for dentist unit
6. 1/8" blue, reserved for dentist unit
7. 1/8" yellow, reserved for dentist unit
8. 1/8" green, reserved for dentist unit
9. 1/4" black, reserved for dentist unit
10. 1/4" blue, reserved for dentist unit
11. 1/4" red, reserved for dentist unit
12. 1/4" green, reserved for assistant's control
13. 1/4" yellow, reserved for assistant's control
14. drainage tube

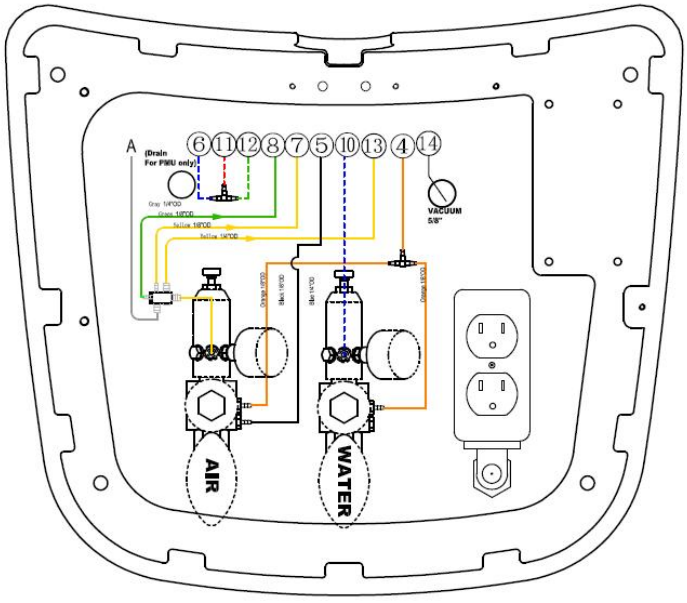




Figure 32

We reserve the right to make any alterations which may be due to technical improvements.





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