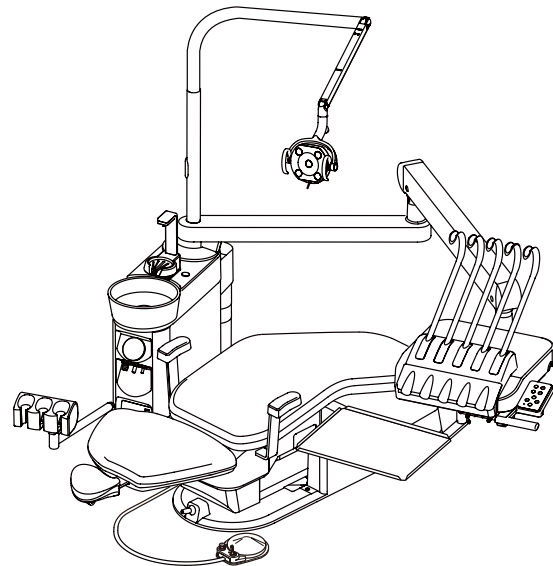
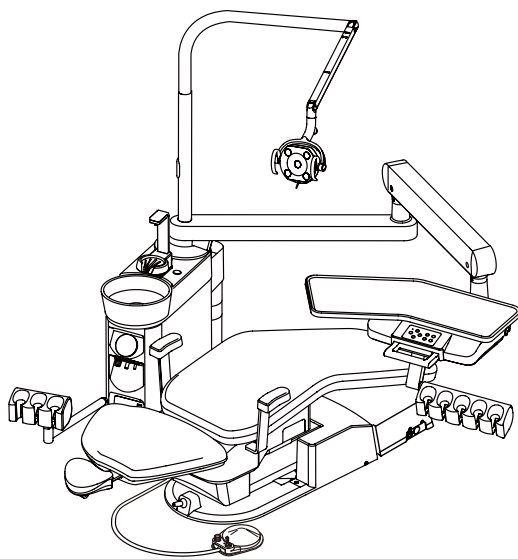


DENTAL UNIT

CREDIA G1

INSTALLATION INSTRUCTIONS



IMPORTANT

This manual provides installation instructions for the CREDIA G1.

The instructions contained in this booklet should be thoroughly read and understood before installing the chair and unit.

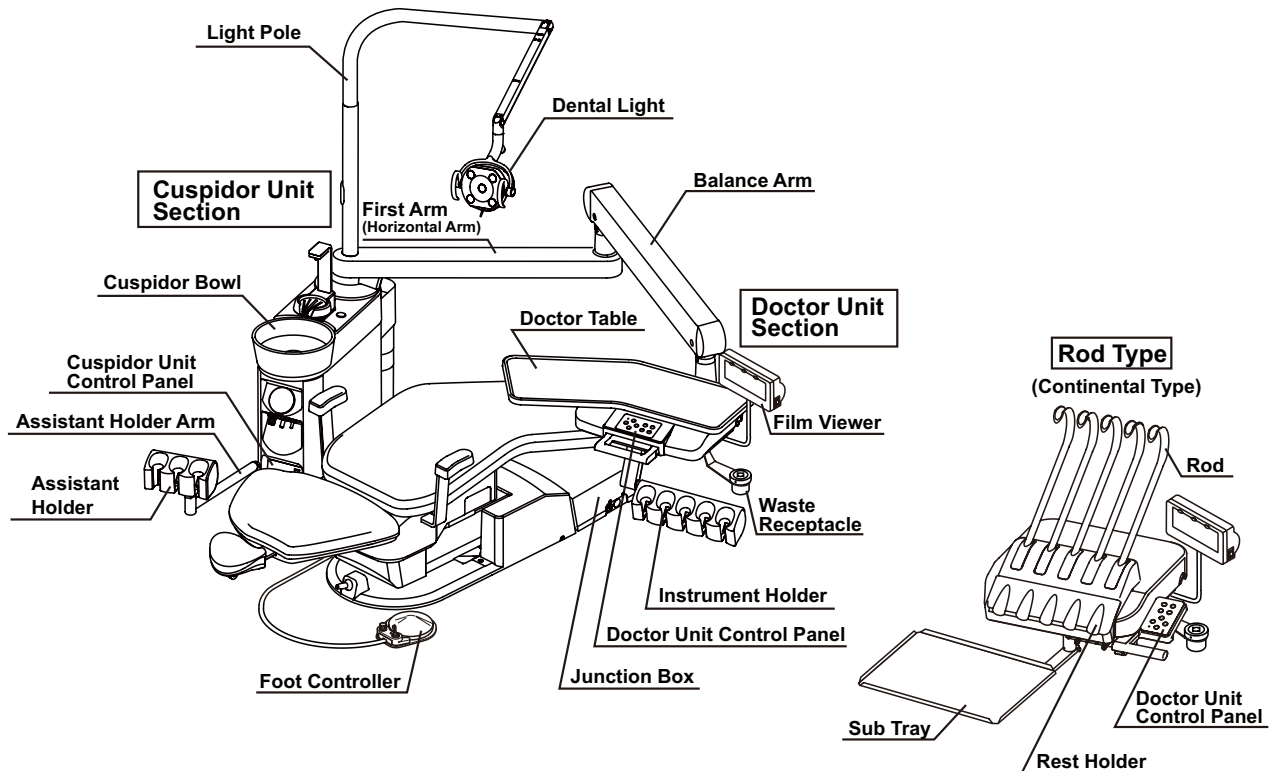
After the installation has been completed, keep this manual in a safe place and refer to it for future maintenance.

 **Belmont**

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1. Overview and Major Components



2. Specifications and Dimensions

2-1. Specifications

Rated power supply	: AC110V 60Hz AC120V 60Hz AC220V 50/60Hz AC230V 50/60Hz AC240V 50Hz
Fuse	: 110V 120V 10A/125V 220~240V 5A/250V
Air main pressure	: 0.45 ~ 0.5MPa
Water main pressure	: 0.1 ~ 0.2MPa
Weight	: 70kg (Without dental light)
Dental Light	: 300LED Dental light (Type 320M)
Chair	: CREDIA G1 Chair
Usage environment	: Temperature +10°C ~ +40°C Humidity 30% ~ 75% Air pressure 700 hPa ~ 1060 hPa
Transportation / Storage environment	: Temperature -20°C ~ +70°C Humidity 10% ~ 95% Air pressure 700 hPa ~ 1060 hPa
Service Life	: 10 Years

Equipment that is not suitable for use in air, flammable anesthetic gas, oxygen or nitrous oxide.

Following symbols are printed on the packing which is necessary information for storage and transportation.



THIS WAY
UP Mark



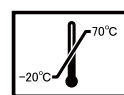
FRAGILE,
HANDLE WITH
CARE Mark



STACKING
LIMIT BY
NUMBER
Mark



KEEP DRY
Mark



TEMPERATURE
LIMITATION
Mark



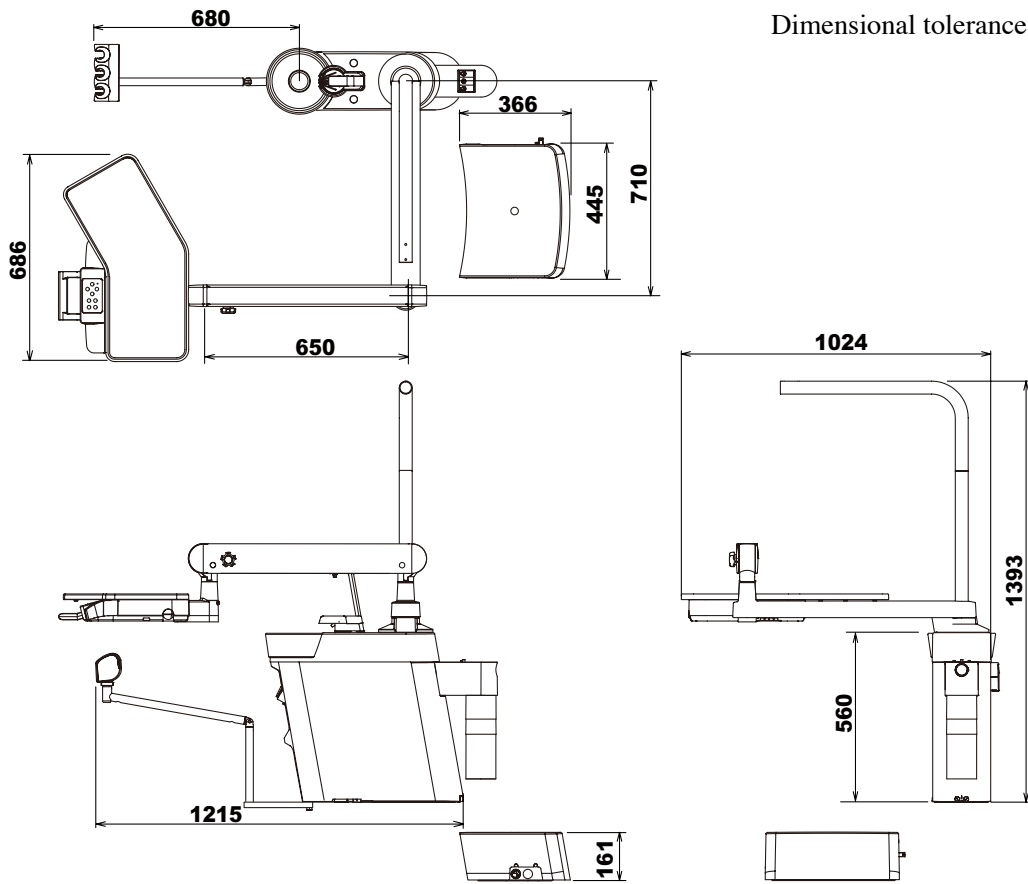
CE Mark
(EU member nations)

2-2. DIMENSIONS

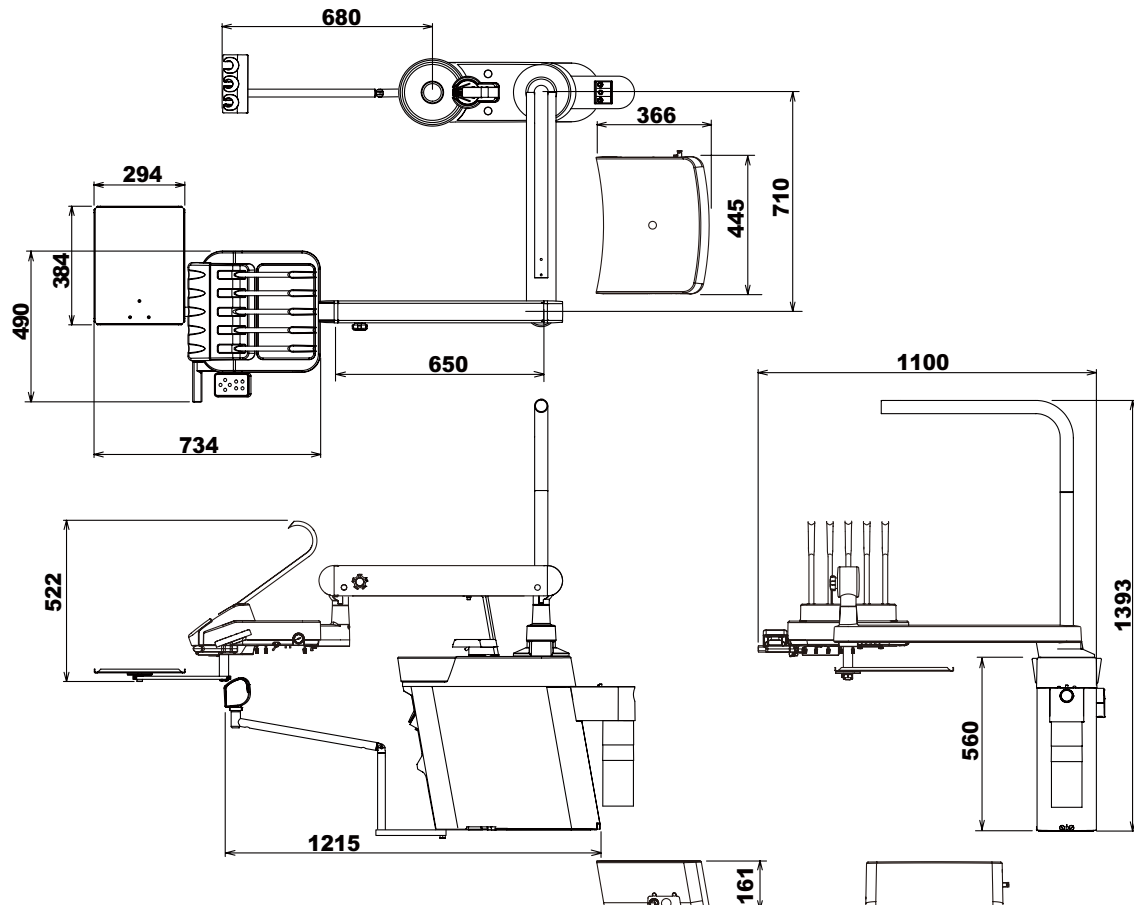
■ Over the Patient, Holder Type

Unit : mm

Dimensional tolerance: $\pm 10\%$



■ Over the Patient, Rod Type (Continental Type)



3. Installation Requirements

General Requirements

- (1) The contractor is to supply the necessary service and materials to complete the installation to the satisfaction of the dentists and the installation engineer.
- (2) This includes the supply and installation of the electric power supply cables with main isolating switch and fuses, air supply piping, water supply piping, suction piping including vacuum pump and its control wires and drain piping as noted on the installation diagrams.

Setting Requirements

- (1) The CREDIA G1 dental unit comprises of a Chair section, Cuspidor section, Doctor table section and Light section.
- (2) The CREDIA G1 should be mounted taking the opening end of drain pipe into due consideration.
- (3) The area on which the CREDIA G1 is to be installed must have endurance force of 490kg/m².
- (4) The installation position of the CREDIA G1 is shown in Fig-3 as a recommended example.

Piping and Plumbing Requirements

- (1) All piping and conduit for cables are to be laid under the floor and to come out from the floor in the positions shown Fig-3.
- (2) The installation position and height from the floor of each pipe and cable conduit are shown in Fig-3.
- (3) The recommended sizes, materials and end piece are shown in Table 1.
- (4) Regarding installation of the vacuum pump and its connection to the main suction line, follow the specifications of central vacuum pump system manufacture's recommendation.
- (5) All Piping should be arranged avoiding bends as much as possible.

Item	Material	Size	End Piece
Compressed Air Supply Pipe	Shock Resistance P.V.C. Pipe HI-13	Out. Dia.18mm In. Dia. 13mm	PT1/2
Water Supply Pipe	Shock Resistance P.V.C. Pipe HI-13	Out. Dia.18mm In. Dia. 13mm	PT1/2
Suction Pipe	P.V.C. Pipe VP-20	Out Dia. 26mm IN. Dia. 20mm	
Drain Pipe	P.V.C. Pipe VP-50	Out. Dia.58mm In. Dia. 50mm	
Power Supply Cable Conduit	P.V.C. VE-16	In. Dia. 16mm	
Vacuum Control Wire Conduit	P.V.C. VE-16	In. Dia. 16mm	

Table-1

Note : The suction pipe and drain pipe should be laid under the floor with an inclination of 1/200 - 1/400.
Air vacuum type does not require suction pipe, vacuum control wire and its conduit.

Air Supply Requirements

- (1) Compressed air to be supplied should be filtered.
Dirt and moisture in the air may cause trouble in unit air system.
- (2) Air Pressure
Between 0.5-0.7MPa (5.0-7.0kg/cm²) air pressure in junction box is required from compressor.
- (3) Compressed Air Supply Capacity
Compressed air supply capacity is at least 100 l/min.

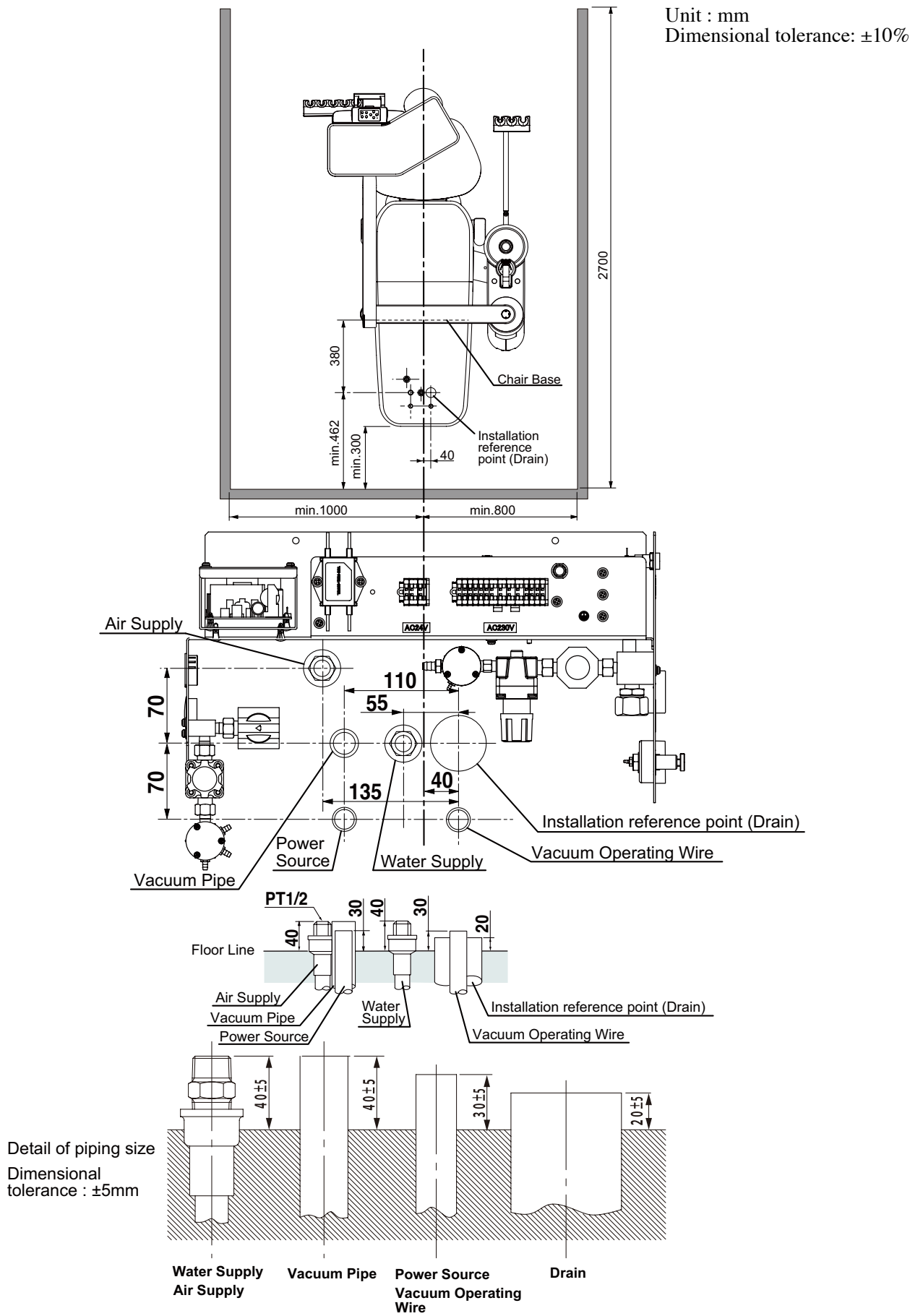
Water Supply Requirements

- (1) The supply water should be clean.
Dirty water may cause trouble in unit water line.
- (2) Water Pressure
Between 0.2-0.4MPa (2.0-4.0 kg/cm²) water pressure in junction box is required for operating unit efficiently at any time. Water supply capacity is at least 4.5 l/min.

Electric Supply Requirements

- (1) The connection of the power supply cable is to be carried out in accordance with the local electrical regulation.
- (2) Capacity of the power supply (Include the CREDIA G1 Chair)

110V Type	Single Phase 60 Hz	: 10A
120V Type	Single Phase 60 Hz	: 10A
220V Type	Single Phase 50/60 Hz	: 5A
230V Type	Single Phase 50/60 Hz	: 5A
240V Type	Single Phase 50Hz	: 5A
- (3) Power supply line should be provided with fuses or circuit breaker in accordance with power consumption.
- (4) The earth wire (ground wire) should be proved in the junction box.
- (5) All cables should have at least 500mm surplus from the floor so that they are long enough to be connected to the terminals in the junction box.



Air vacuum type does not need vacuum pipe, vacuum operating wires and conduit.

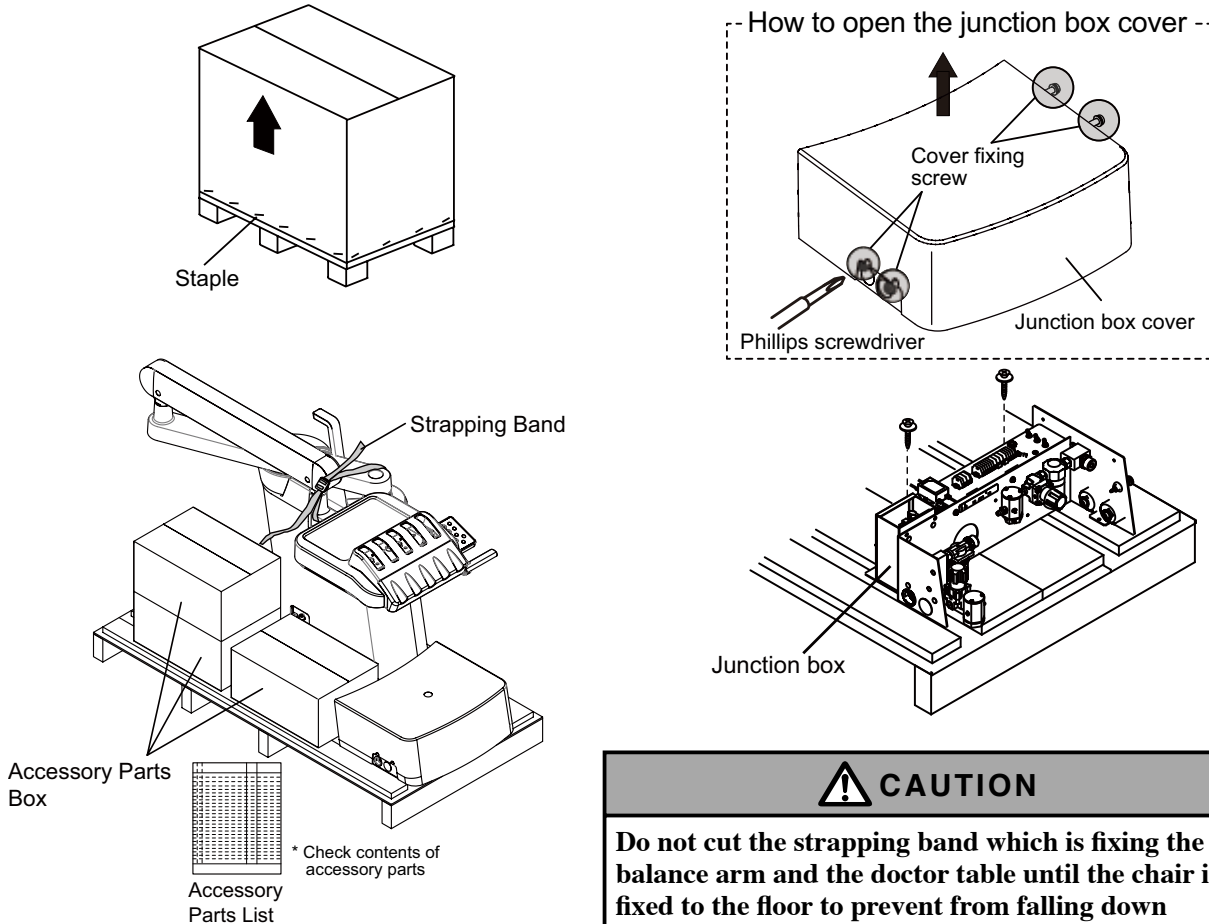
Fig-3. Installation Position and Plumbing Layout (Central Vacuum Type)

4. Installation Instructions

4-1. Unit Section Unpacking

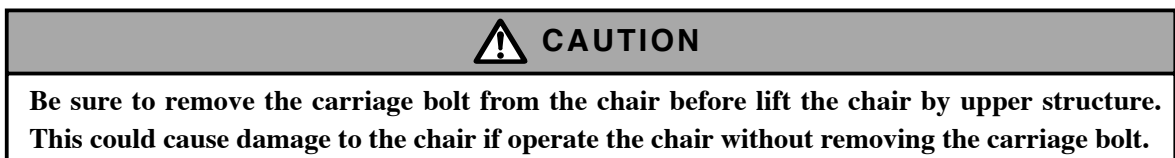
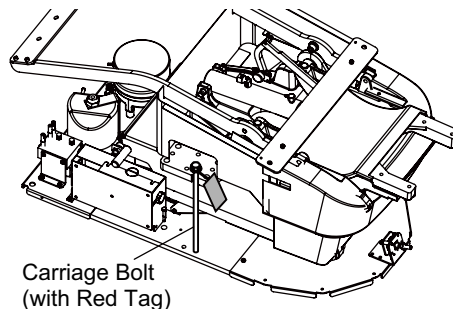
1. Remove all staples fixing the carton to the pallet and lift up to remove the carton.
2. Installation parts and accessory parts are packing in the small carton boxes. Open the parts boxes and check the contents of each packing with the accessory parts list attached in the parts box.
3. Loosen the cover fixing screws by phillips screwdriver and remove the junction box cover.

Remove the two screws fixing the junction box to the pallet.



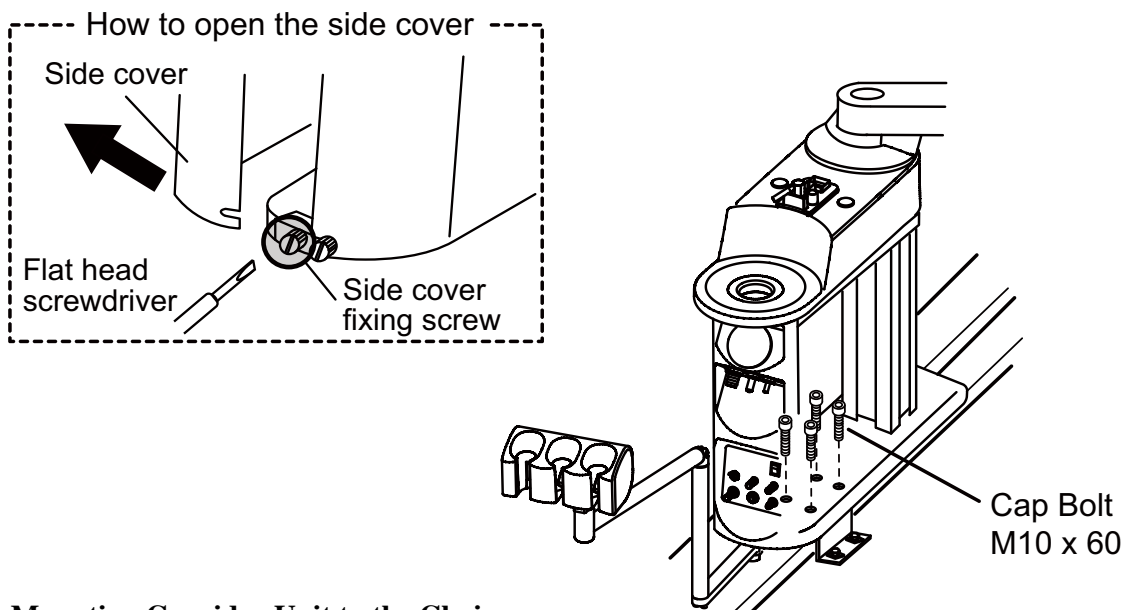
4-2. Chair Section Preparation

1. Remove the carriage bolt from the chair.
 - * Refer to the chair installation manual for preparation of the chair.
 - * Do not attach the backrest and seat section until the unit installation has been completed.



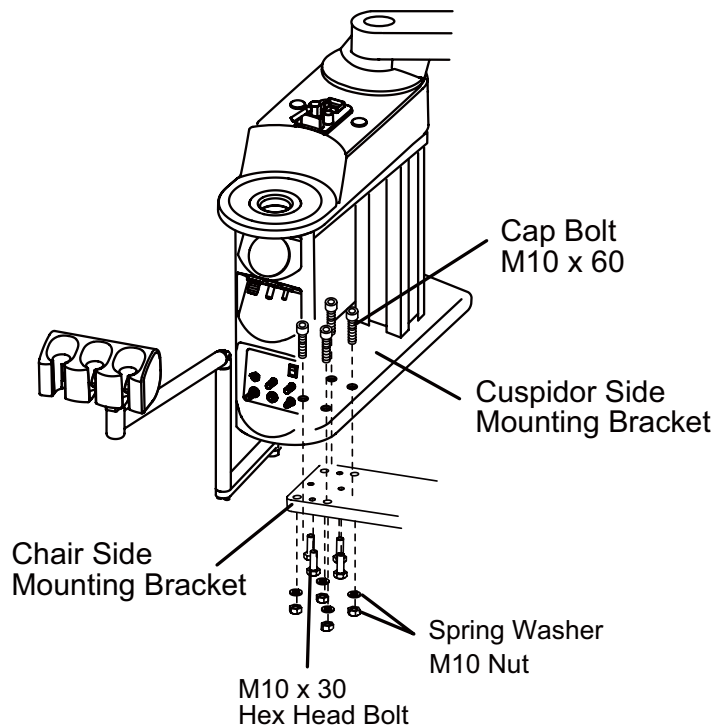
4-3. Unit Section Preparation

1. Loosen the side cover fixing screw by flat head screwdriver on the rear side of the cuspidor unit. Open the side cover to outside as shown on the below figure.
2. Remove four cuspidor fixing bolts (M10 x 60) and hold the cuspidor unit.
Four cap bolts are used when fix the cuspidor to the chair.



4-4. Mounting Cuspidor Unit to the Chair

1. Raise the dental chair to the highest position.
2. Mount the cuspidor unit on the mounting bracket of the chair and fix with four M10 x 60 cap bolts, spring washers and M10 Nuts. Adjust the level of the cuspidor unit with four M10 x 30 level adjustment hex head bolts.



CAUTION

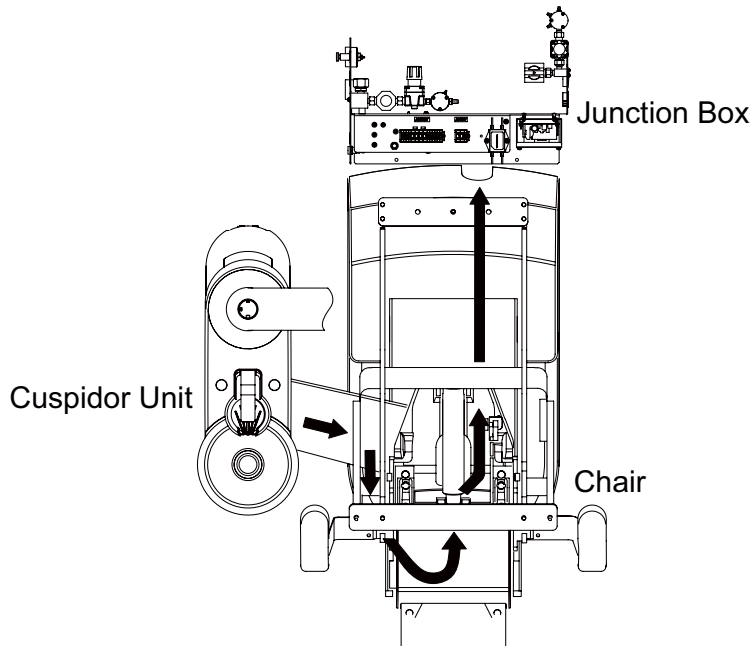
Carry the unit by holding the cuspidor at the bottom and mounting bracket.

Do not carry by holding the arm, cupfiller nozzle or cuspidor bowl.

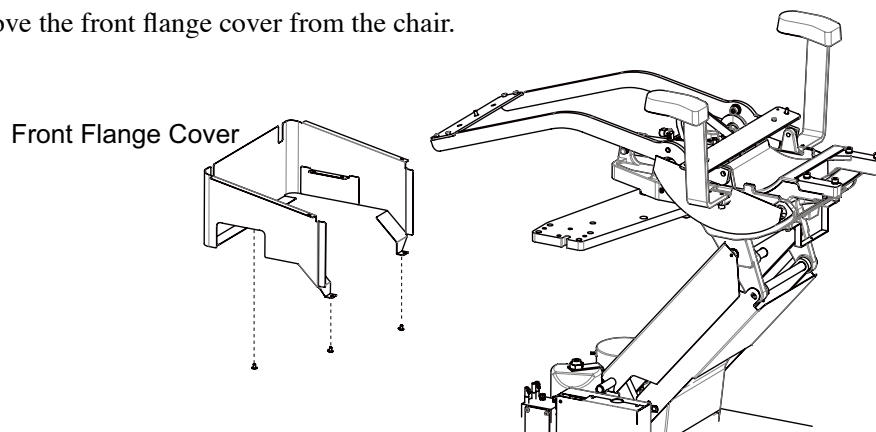
When mounting the cuspidor unit onto the chair, keep the assistant arm to the out side of the chair.

4-5. Fixing the Unit Hose to the Chair

Pass the vacuum hose, drain hose, tubings and wires from cuspidor to the junction box through to inside of the chair.

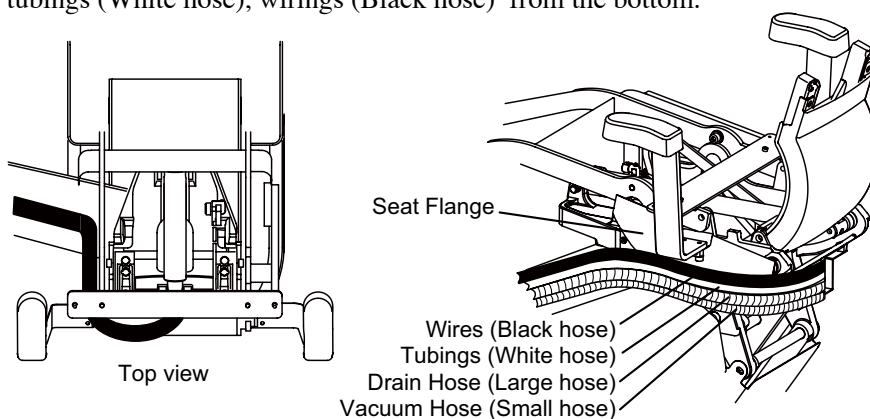


1. Remove the front flange cover from the chair.



2. Pass through the hoses between the front flange cover and the seat flange.

Pass the hoses through to the chair in the following order, vacuum hose (Small hose), drain hose (Large hose), tubings (White hose), wirings (Black hose) from the bottom.

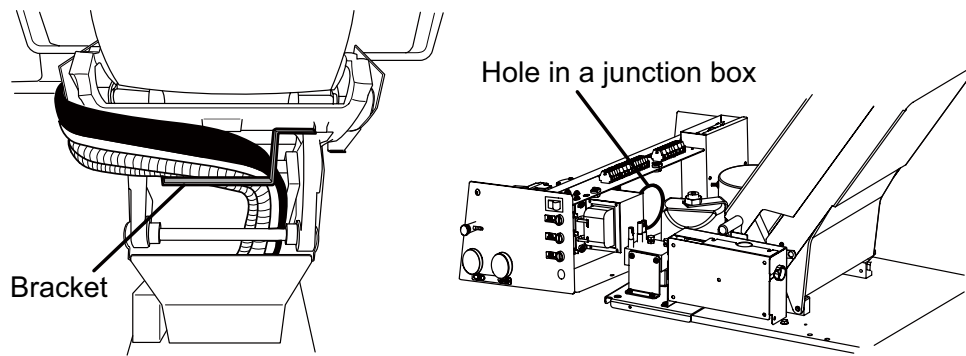


⚠ CAUTION

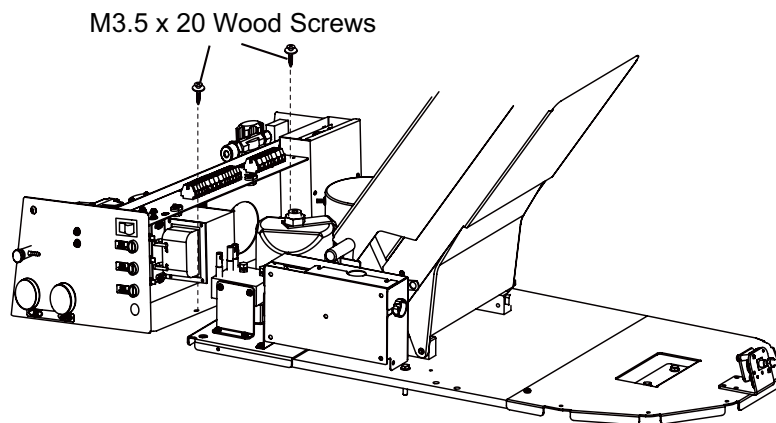
Hoses must be routed tightly against seat flange.

It becomes hard to attach the flange cover to the chair or it may cause damage to the chair cover.

3. Pass through the hoses into the bracket and right side of the lower flange. Run the hoses to hole in the junction box.



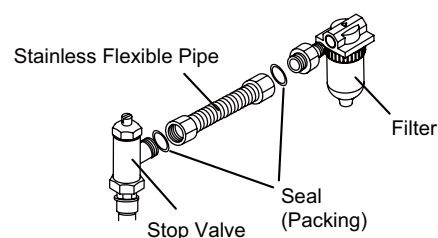
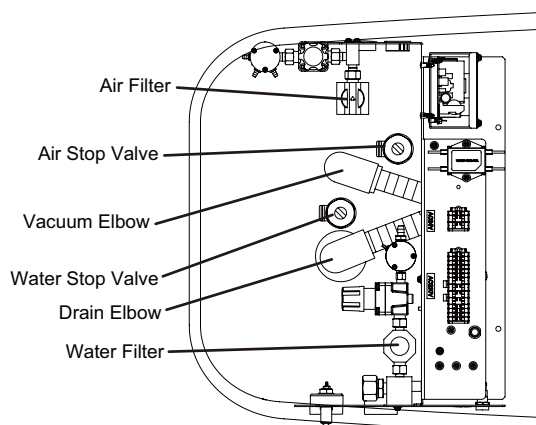
4. Fix the junction box to the floor with two M3.5 x 20 wood screws.



4-6. Installation of Junction Box (Plumbing)

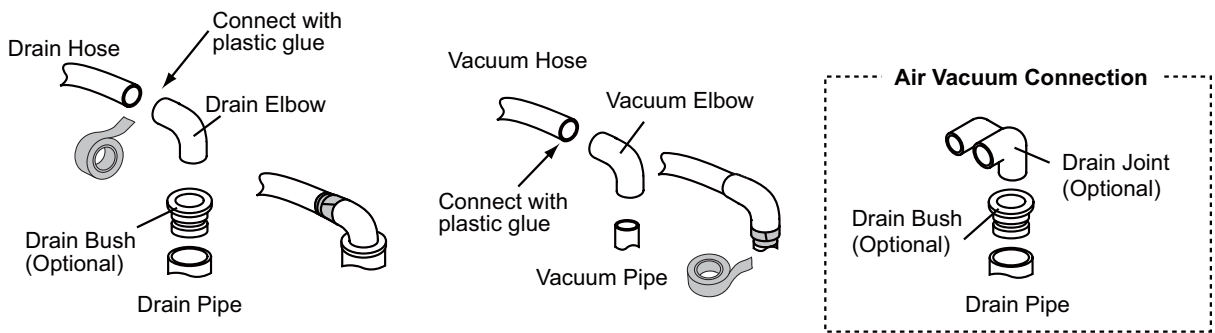
1. Install the water stop valve and the air stop valve to each supply pipe. The positioning of the stop valves are shown in page 5.
2. Drain Hose and Vacuum Hose Connection
 - 1) Cut the drain hose and vacuum hoses at suitable length and connect them to each elbow with plastic glue.(Pipe solvent)
 - 2) Insert the drain hose elbow and vacuum hose elbow into each pipe.

Note : The Drain pipe should be sealed with silicone sealant or taping.
Attaching Drain Bushing (Optional) to the Drain Pipe is desirable, and Drain Elbow should be bonded firmly into the Drain Pipe.
 - 3) For Air Vacuum specification, prepare the Drain Joint (Optional) and the drain line and the vacuum drain line may be inserted together into the Drain Pipe.



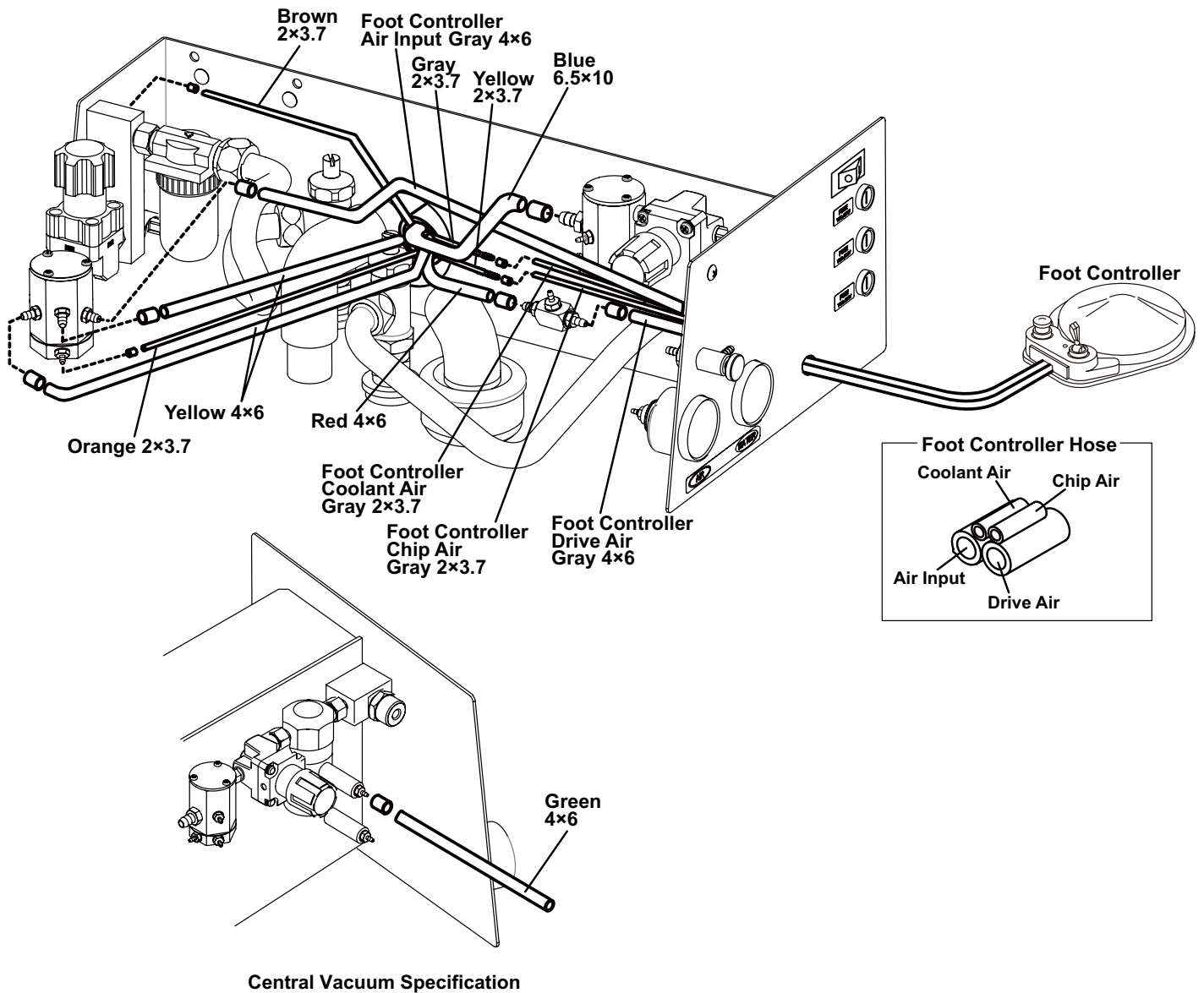
Water and Air Supply Line Connection

3. Connect Water Shut Off Valve and Water Filter with Stainless Flexible Pipe and Packing.
 Connect Air Shut Off Valve and Air Filter in the same way.



4-7. Tubing Connections in the Junction Box

Connect the tubings from the cuspidor and foot controller to junction box.
 For central specification, connect the green tubing (4 x 6) to the air switch.



4-8. Electrical Connections in The Junction Box

* Turn off the main switch before connect the wirings.

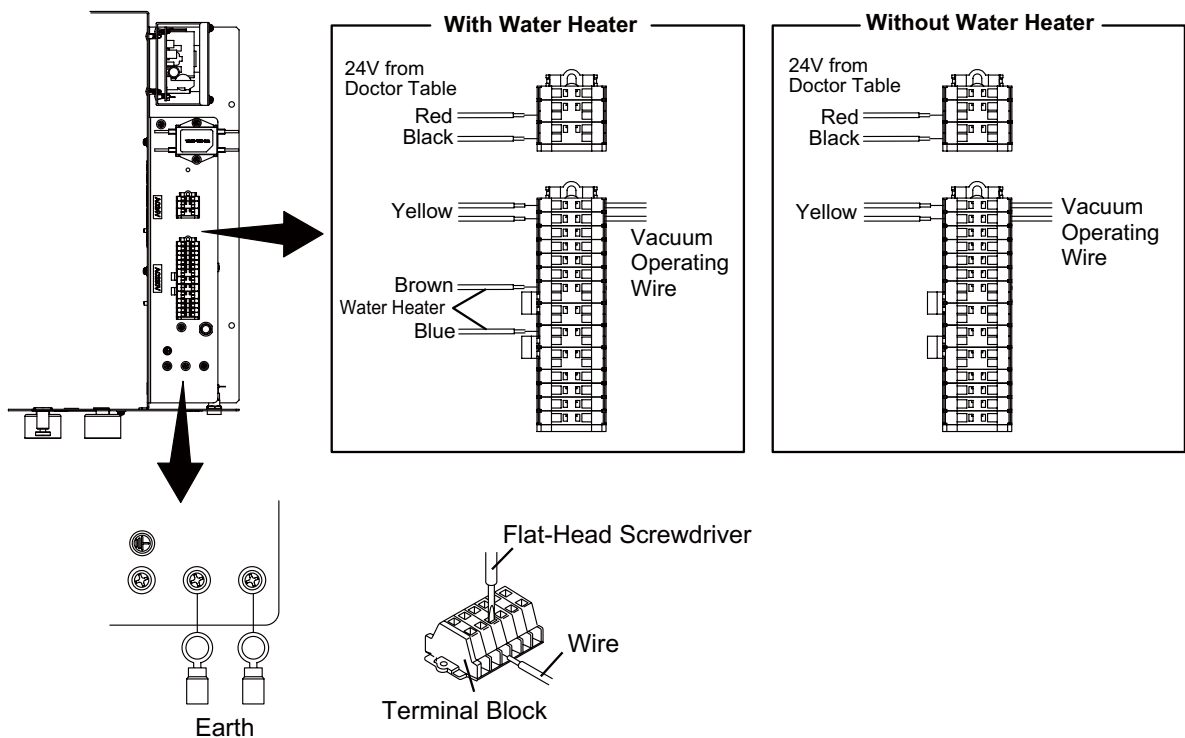
1. Connect the central vacuum operating wires from floor, water heater wires (Blue, Brown) from cuspidor and 24V from doctor table (Red, Black) to the terminal block.

Be sure to connect the earth wires from doctor table and cuspidor into the junction box.

(This connection is central vacuum type only. The air vacuum type does not have vacuum operating wire connection.)

* How to connect terminal block

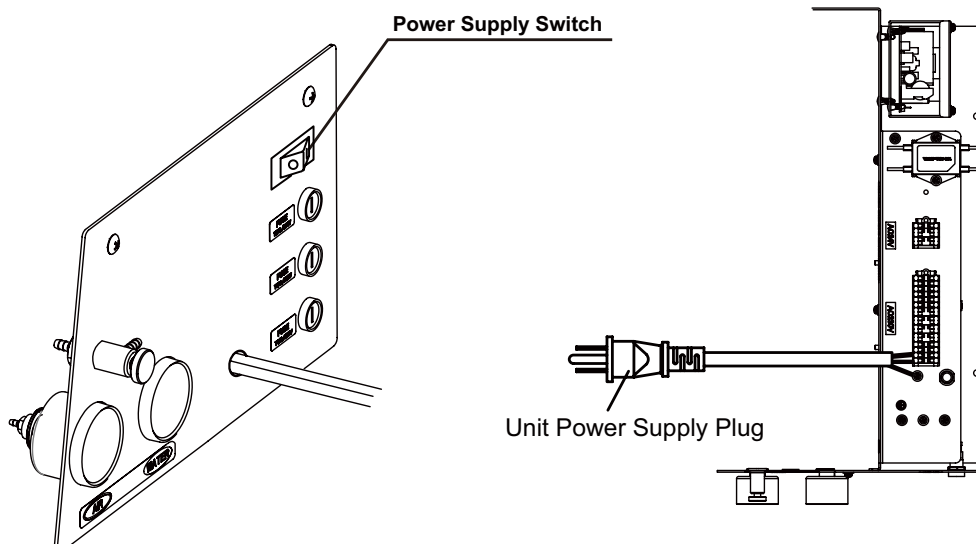
While pressing the slot of the terminal with a flat head screwdriver, insert the wire to the terminal and release the screwdriver. Confirm that the wire is connected securely.



2. Connect the unit side connectors (2P, 4P and 9P) to the chair side connectors (2P, 4P and 9P) in the junction box. Refer to chair electrical diagram.

3. Plug the unit power supply plug into the suitable power supply line in the junction box.

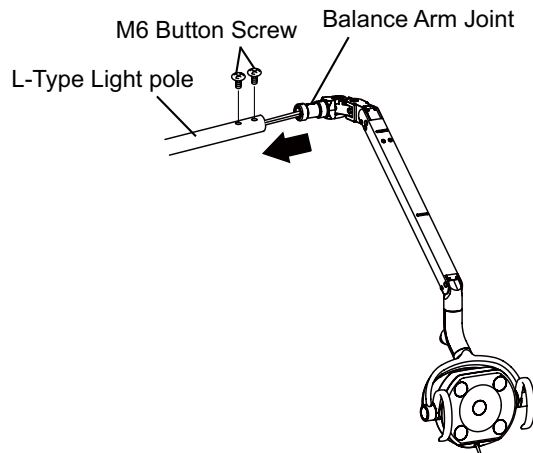
Turn on the power supply switch to the marked with [I].



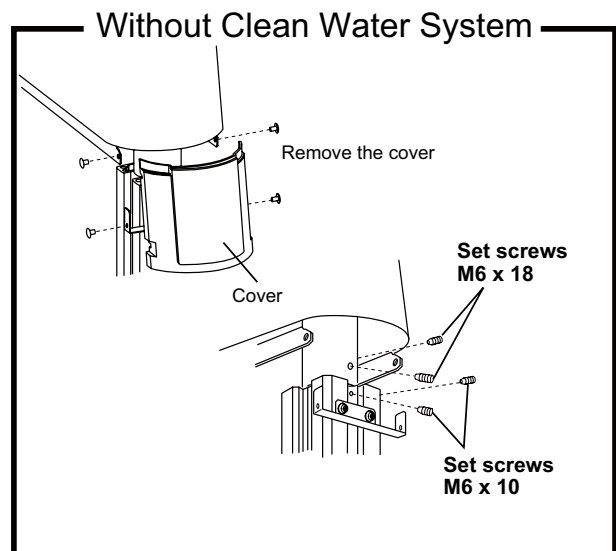
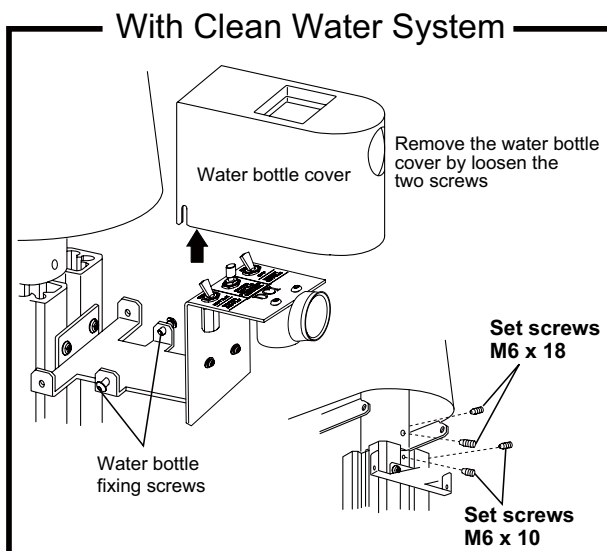
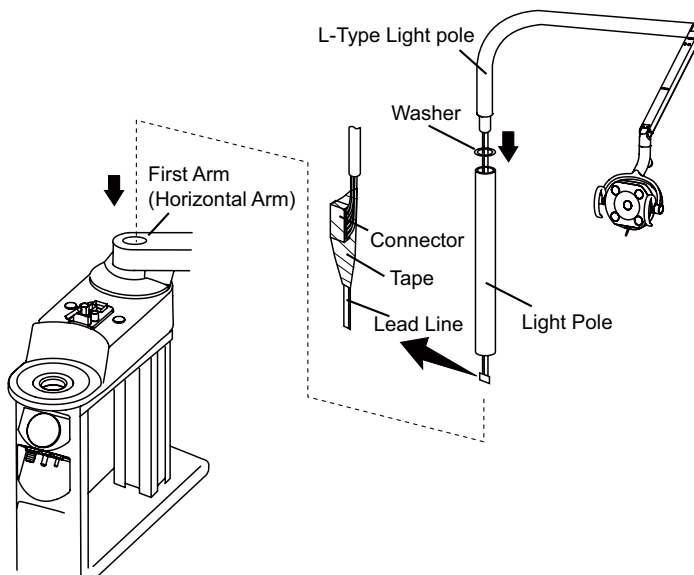
4-9. Installation of the Dental Light

* Refer to the dental light installation manual for installing the dental light.

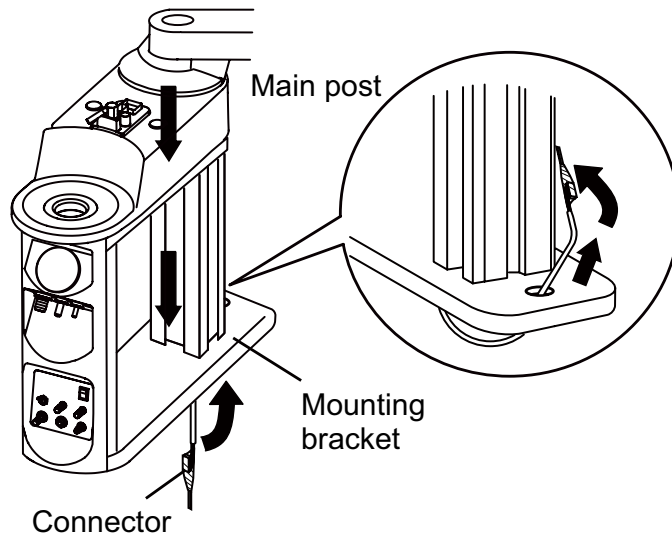
1. Pass the light cable through the L-type light pole and insert the balance arm joint into the light pole, fix it with two M6 button screws supplied with dental light.



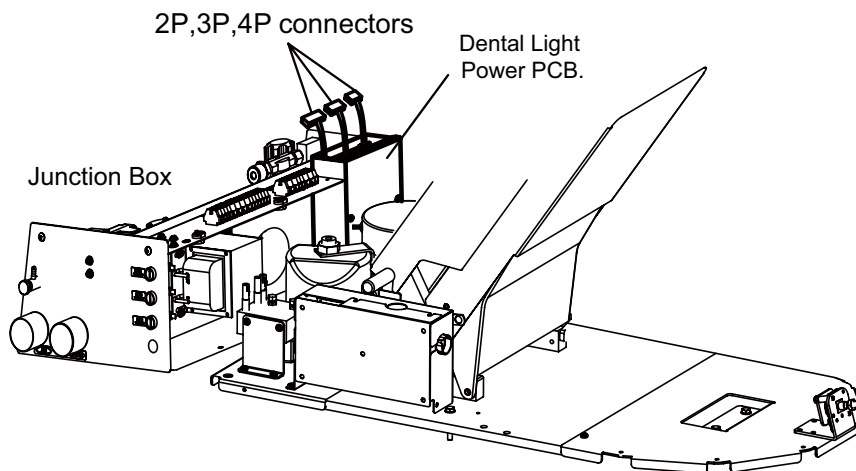
2. Put washer on the light pole. Pass the light cable through the light pole and attach the dental light section to the first arm (horizontal arm). Fix the light post to the cuspidor unit with two M6 x 10 set screws and two M6 x 18 set screws. Refer to the following instructions for fixing the set screws depending on the option with or without clean water system.



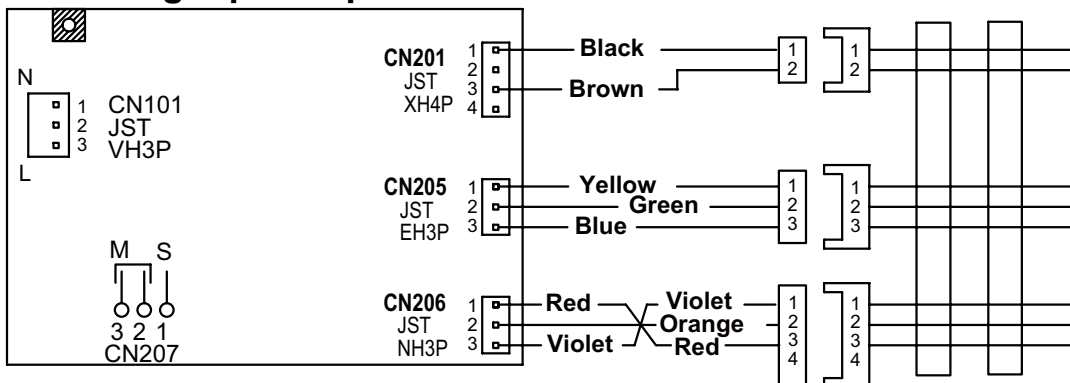
3. Pass the light cable through the main post and hole of the mounting bracket. Connect the 2P, 3P and 4P connectors from the dental light to the connectors from the junction box in the cuspidor unit.



4. Connect the connectors of the dental light to the connectors (2P, 3P, 4P) from dental light power pcb as shown on the following figure.



Light power pcb.

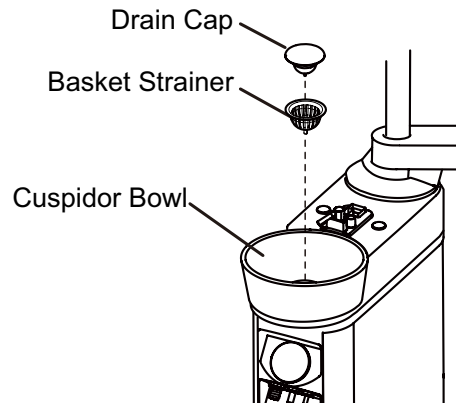


5. Installation of Accessories

5-1. Cuspidor Bowl, Drain Cap and Basket Strainer

Insert the cuspidor bowl to the cuspidor unit. Fit the drain cap and the basket strainer in the cuspidor bowl.

* To easily attach the cuspidor bowl, moist the insertion part, rotate and push down the cuspidor bowl.

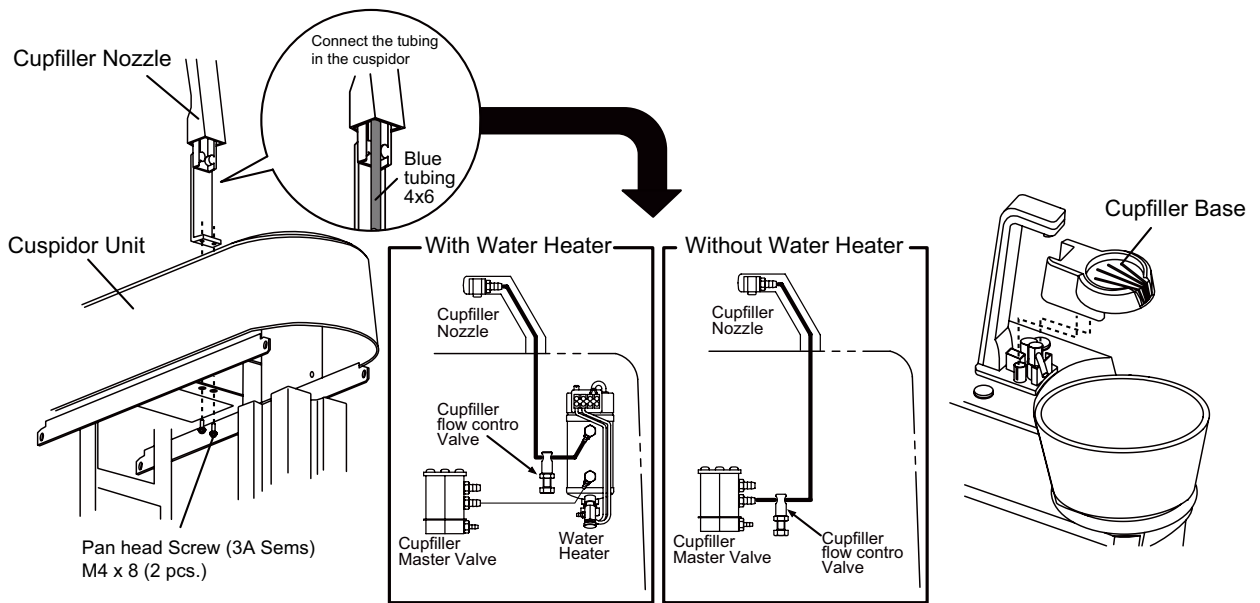


5-2. Cupfiller Nozzle, Cup Base

1. Insert the cupfiller nozzle to the cuspidor unit and fix with two M4 x 8 pan head screws.

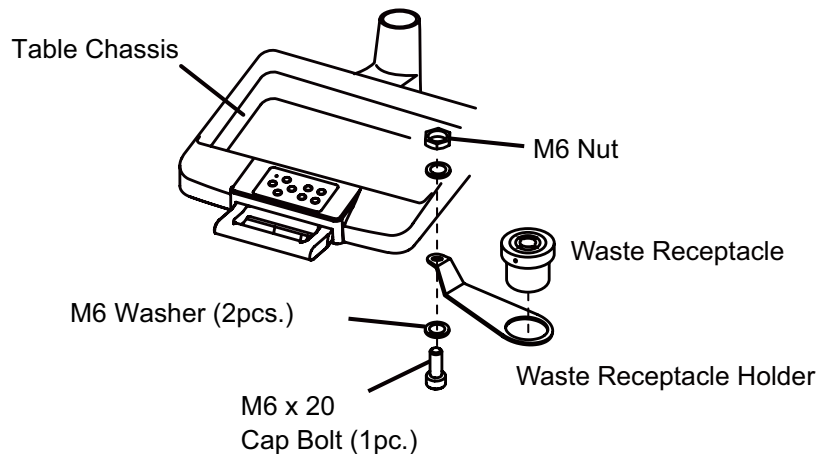
2. Connect the blue tubing (4 x 6) in the cuspidor as shown on the following figure.

3. Attach the cupfiller base to the cuspidor unit.



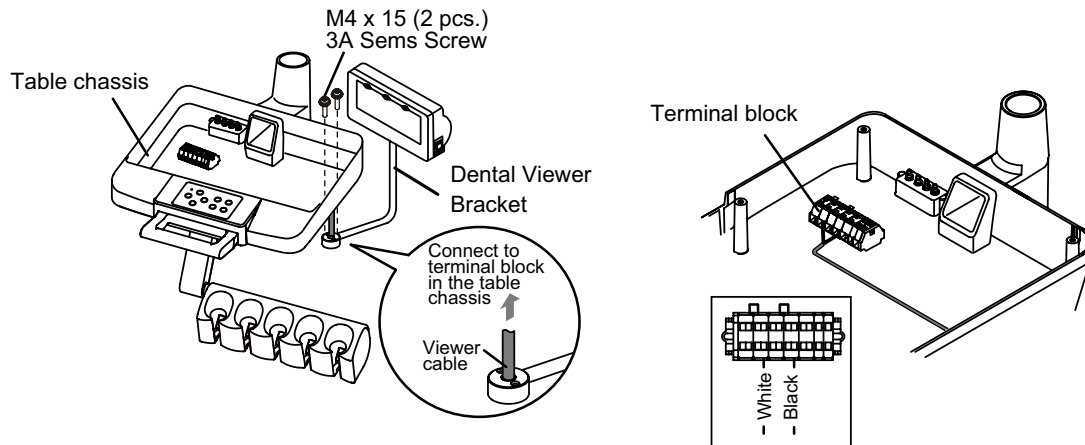
5-3. Waste Receptacle

Fix the waste receptacle holder to the table chassis with M6 x 20 cap bolt, two M6 washers and M6 Nut.



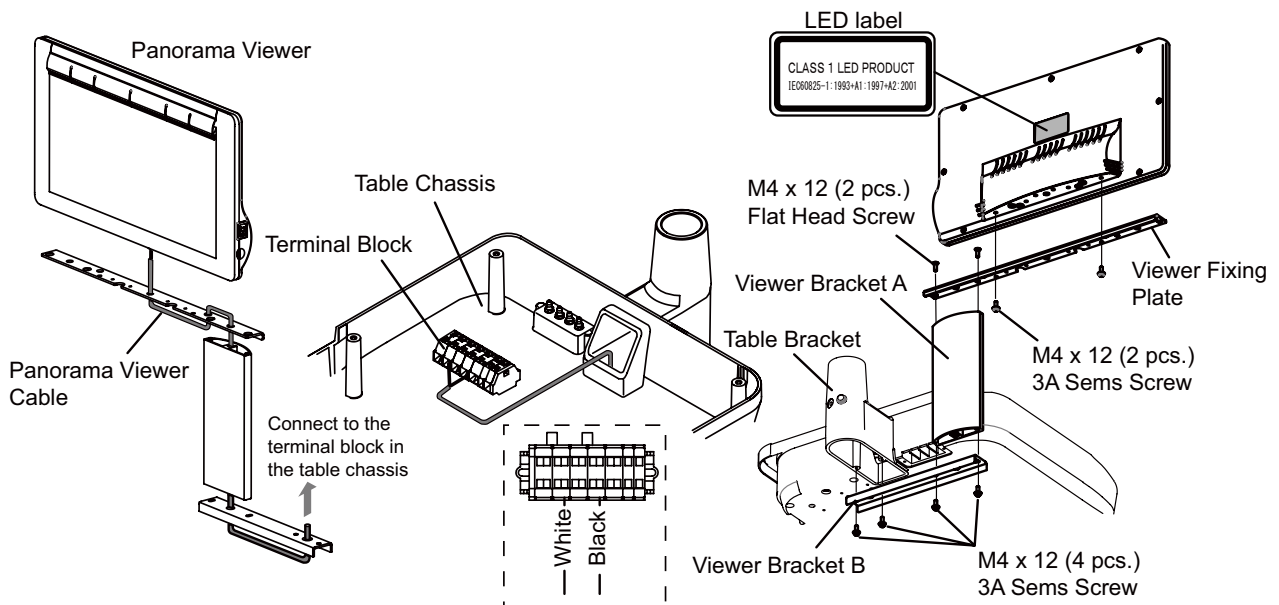
5-4. Dental Viewer

1. Pass the viewer cable through to the table chassis and connect to the terminal block.
2. Fix the dental viewer bracket to the table chassis with two M4 x 15 3A sems screws.



5-5. Panorama Viewer

1. Pass the panorama viewer cable through to the table chassis and connect to the terminal block in the table chassis as following figure.
2. Fix the viewer bracket B to the table bracket with two M4 x 12 3A sems screws.
Fix the viewer bracket A to the viewer bracket B with two M4 x 12 3A sems screws.
3. Fix the viewer fixing plate to the viewer bracket A with two M4 x 12 flat head screws, then fix the panorama viewer to the viewer fixing plate with two M4 x 12 3A sems screws.

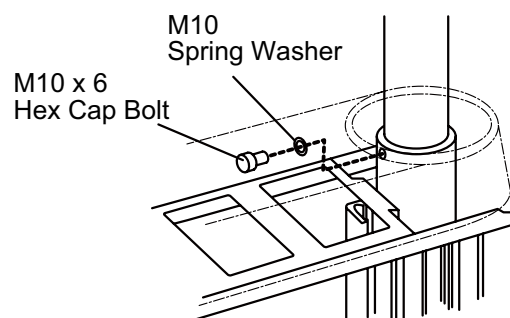


⚠ CAUTION

Your eyes could be dazzled by LED light not only under dark environment but also under normal environment.
Be careful about the brightness of the ambient.

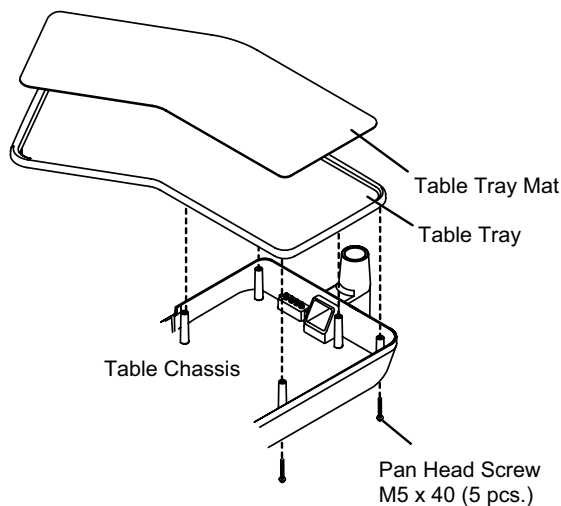
5-6. Table Arm Rotation Stopper Bolt

1. Fix the table arm rotation stopper bolt (M10 x 16) with washer (M10) into the cuspidor.



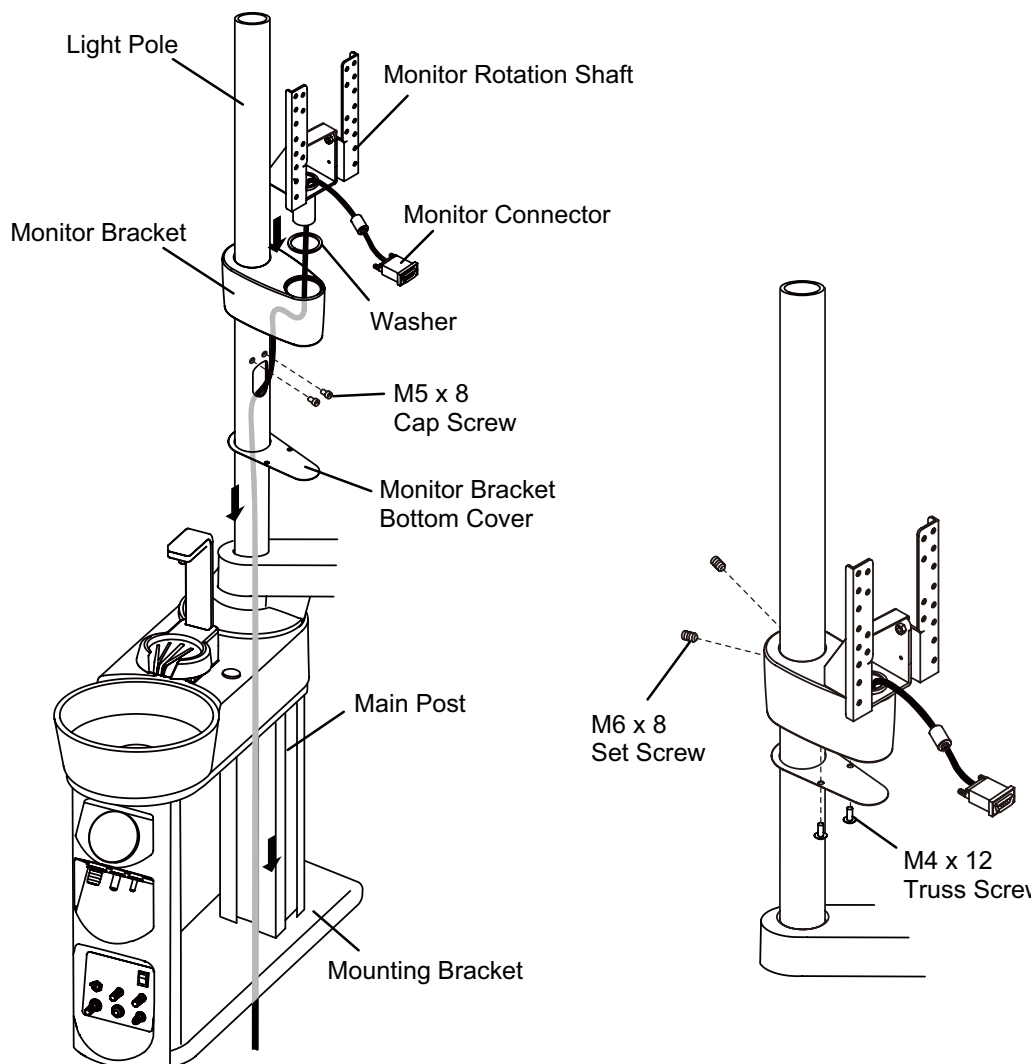
5-7. Table Tray and Table Tray Mat (Holder Type)

Fix the table tray to the table chassis with five M5 x 40 pan head screws. Place the table tray mat on the table tray.



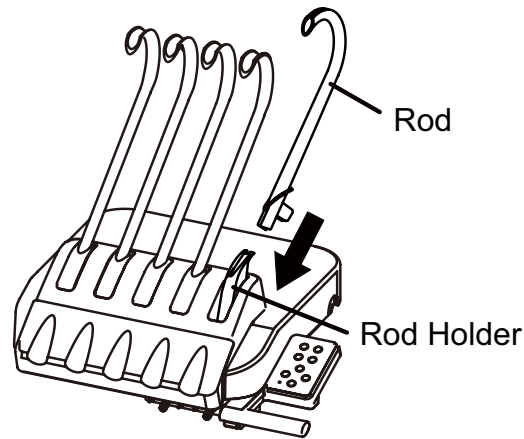
5-8. Monitor Bracket

1. Insert the monitor bracket bottom cover and fix the two M5 x 8 cap screws (stopper for monitor bracket) to the light post, then insert the monitor bracket to the light pole.
2. Put washer on the monitor bracket. Pass the monitor cable through the monitor bracket and the light pole, then insert the monitor rotation shaft to the monitor bracket.
3. Fix the monitor bracket to the light post with two M6 x 8 set screws and fix the monitor bracket bottom cover to the monitor bracket with two M4 x 12 truss screws.



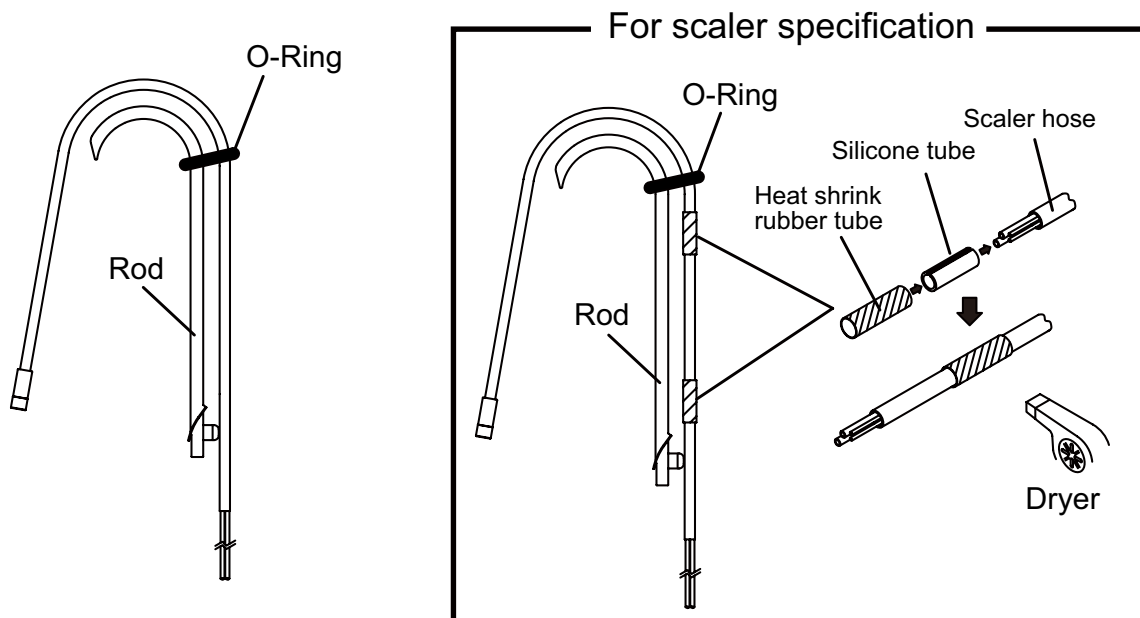
5-9. Rod, Fix the hose to the rod (Rod Type/Continental Type)

Lift up the rod holder and insert the rod part into the rod holder.



Attach the O-ring to prevent the handpiece hose slipping off from the rod.

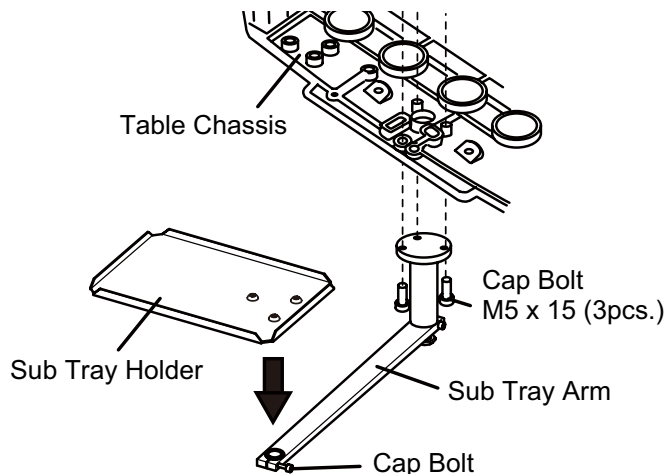
In case of the scaler hose, pass the silicone tube and heat shrink rubber tube through to the scaler hose to hold it into the rod. * Use a hair dryer to shrink heat shrink rubber tube.



5-10. Sub Tray (Rod Type/Continental Type)

Fix the sub tray arm to the table chassis with three cap bolts (M5 x 13).

Insert the sub tray holder to the sub tray arm and fix with cap bolt (M5 x 25).

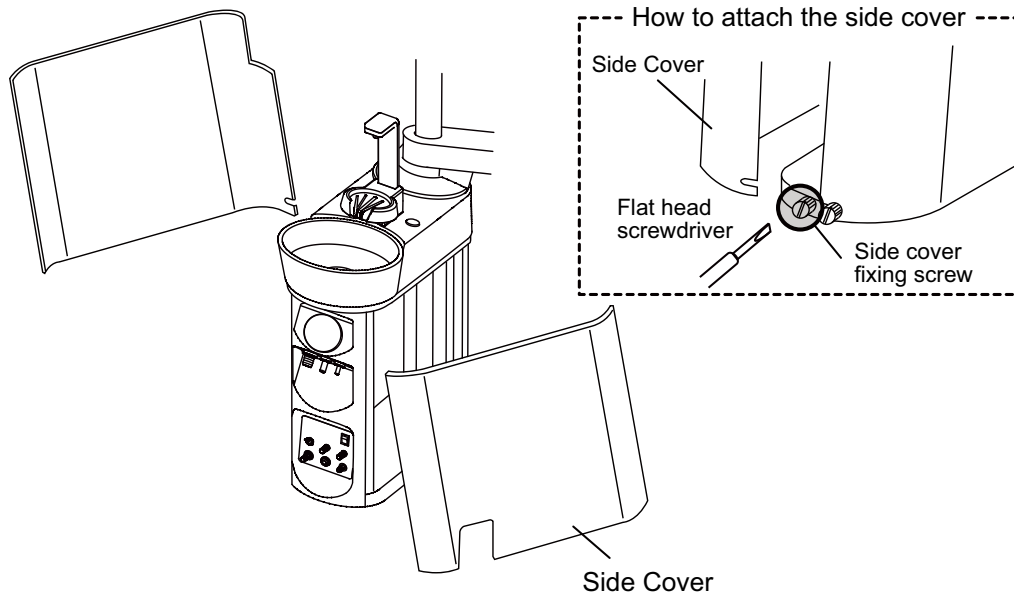


6. Attach the Cover

After the wirings, tubings and installation of the accessory parts has been completed, attach the covers to the unit. Refer to the chair installation manual for attach the covers to the chair.

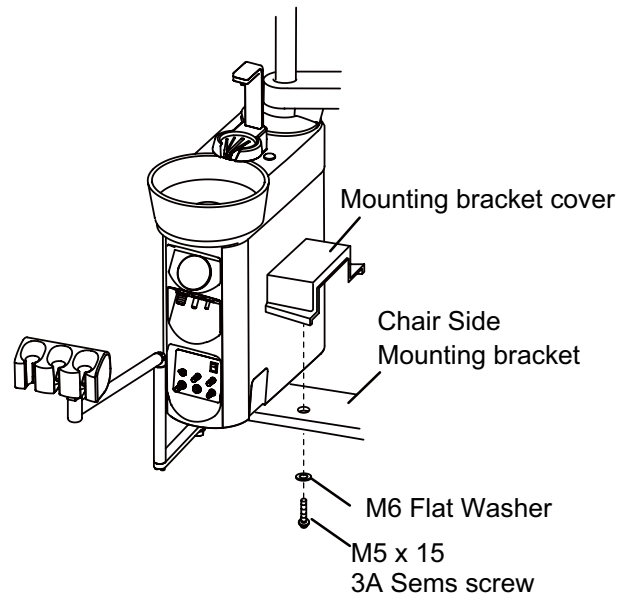
6-1. Attach the Cuspidor Cover

Attach the side covers to the cuspidor. Fix it with cover fixing screw by flat head screwdriver.



6-2. Attach the Mounting Bracket Cover

Attach the mounting bracket cover on the chair side mounting bracket and fix it with M5 x 15, M6 flat washer.



7. Adjustment

7-1. Water and Air Stop Valves

Open the water stop valve and the air stop valve in the junction box section. Turn on the main switch and check that water and air are not leaking.

7-2. Main Air Pressure

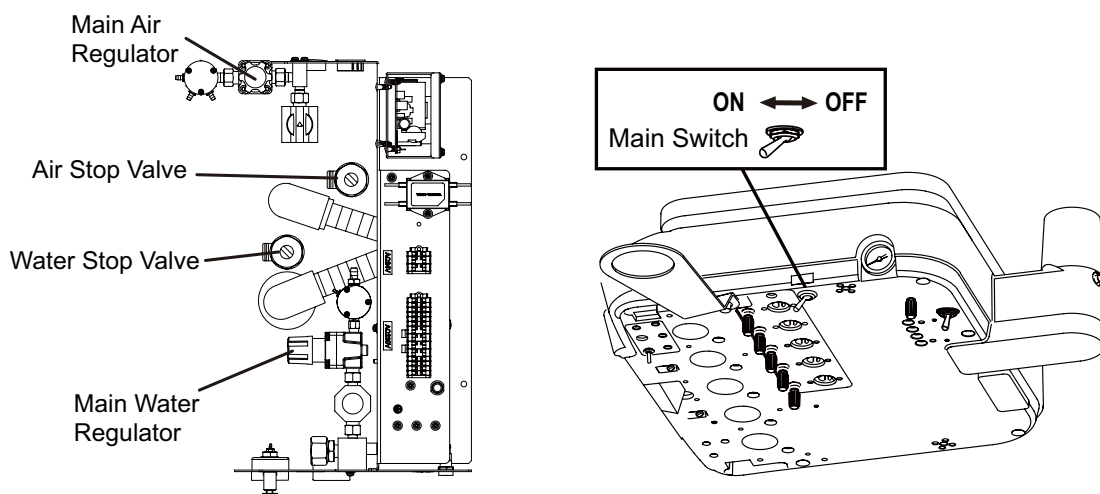
The main air pressure has been adjusted in the factory. Confirm that the main air pressure is at 0.45-0.5MPa by the main air pressure gauge.

The main air pressure can be regulated by the main air regulator in the junction section.

7-3. Main Water Pressure

The main water pressure has been adjusted in the factory. Confirm the main water pressure is at 0.1-0.2MPa by the main water pressure gauge.

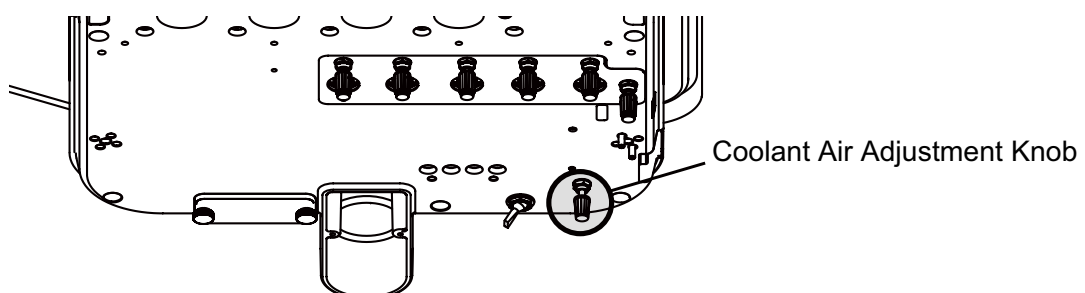
The main water pressure can be regulated by the main water regulator in the junction section.



7-4. Handpiece Adjustment (Coolant Air)

Handpiece coolant air can be adjusted by turning the coolant air adjustment knob during the operation to optimize spray amount. The coolant air adjustment knob is located under the doctor table.

* Coolant air has been adjusted in factory. Do not change the setting under normal conditions.

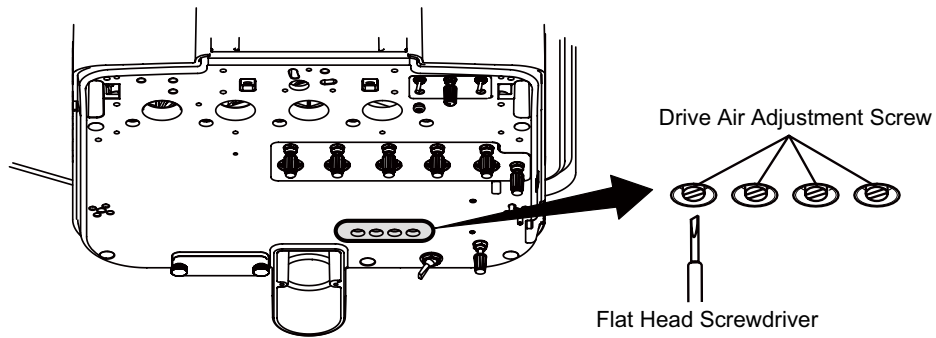


7-5. Handpiece Adjustment (Drive Air)

Each handpiece drive air can be adjusted by turning the drive air adjustment screw during the operation. Drive air pressure is decrease by turning the adjustment screw clockwise and increase by turning the adjustment screw counterclockwise use a flat head screwdriver.

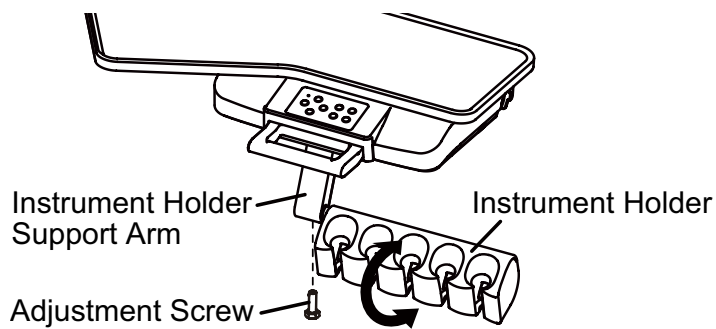
Drive air pressure is indicated on the handpiece pressure gauge located on the rear side of table and set the drive air pressure according to the instruction manual attached to individual handpiece.

* Drive air has been adjusted in factory. Do not change the setting under normal conditions.



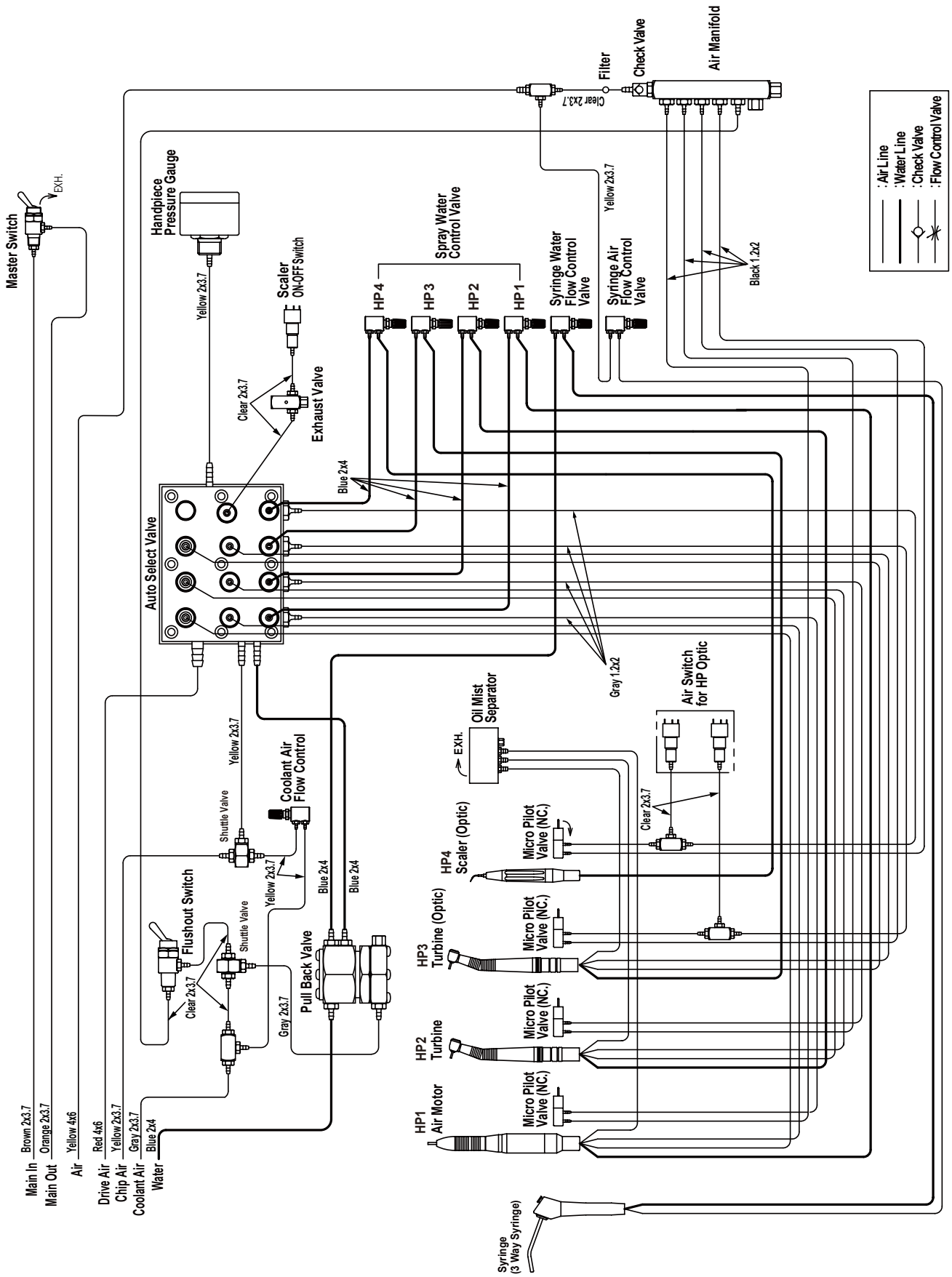
7-6. Instrument Holder Angle Adjustment

Loosen the adjustment screw located on the underside of the holder support arm. Set the holder at the client's favorite position and fix by tightening the adjustment screw. Holder angle can be adjusted between 20 to 30 degrees.

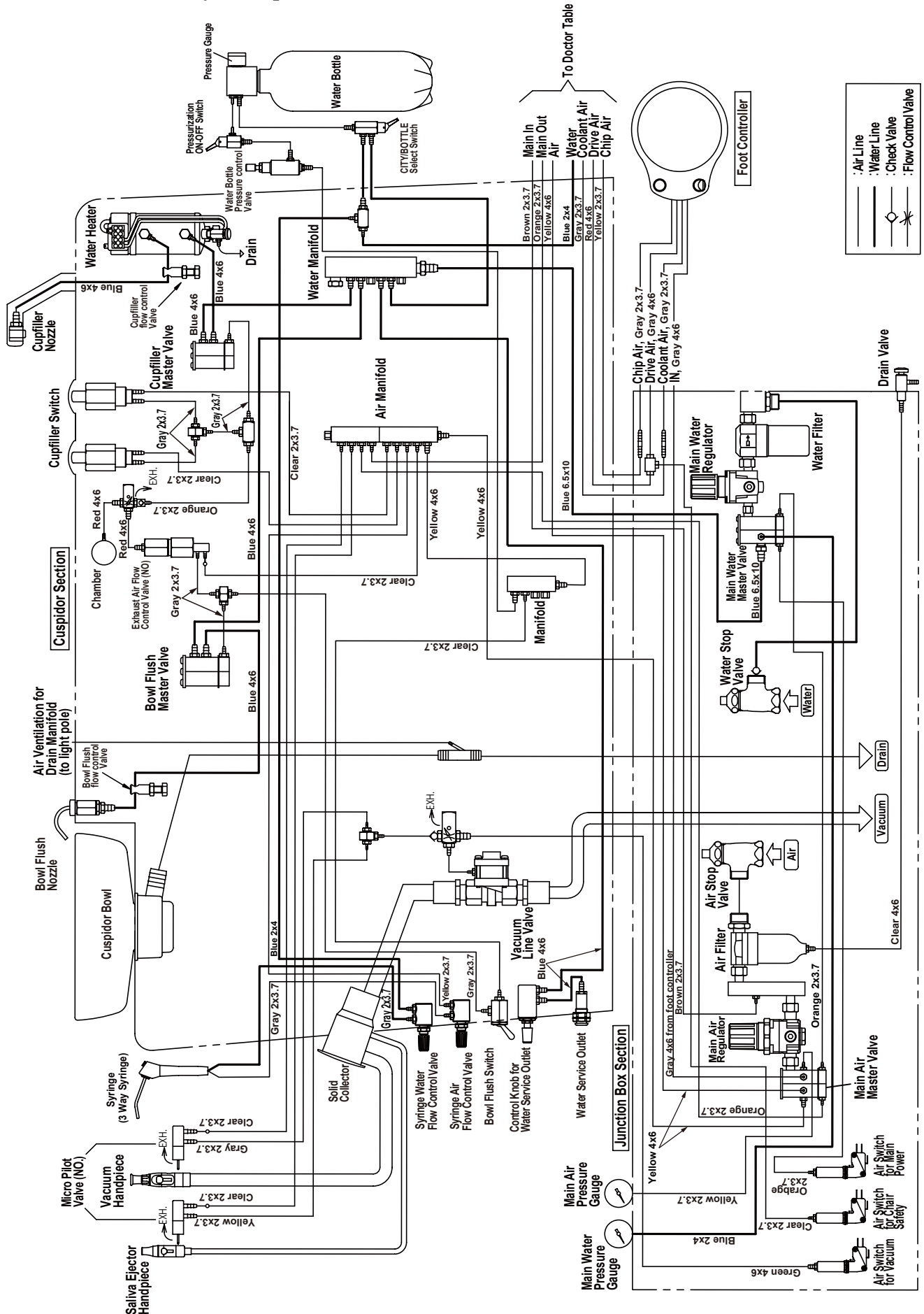


8. Unit Flow Diagram

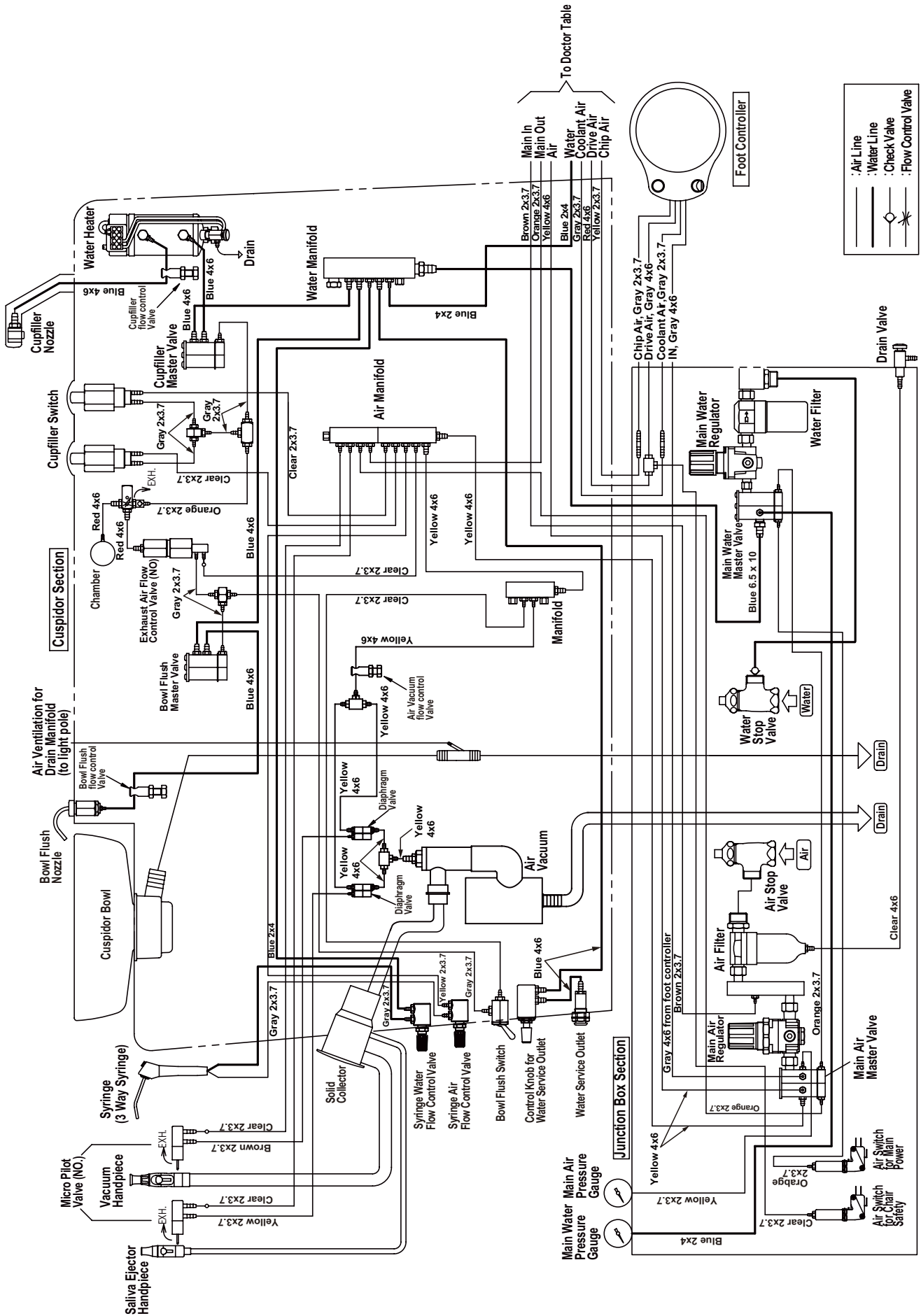
8-1. Doctor Table Section



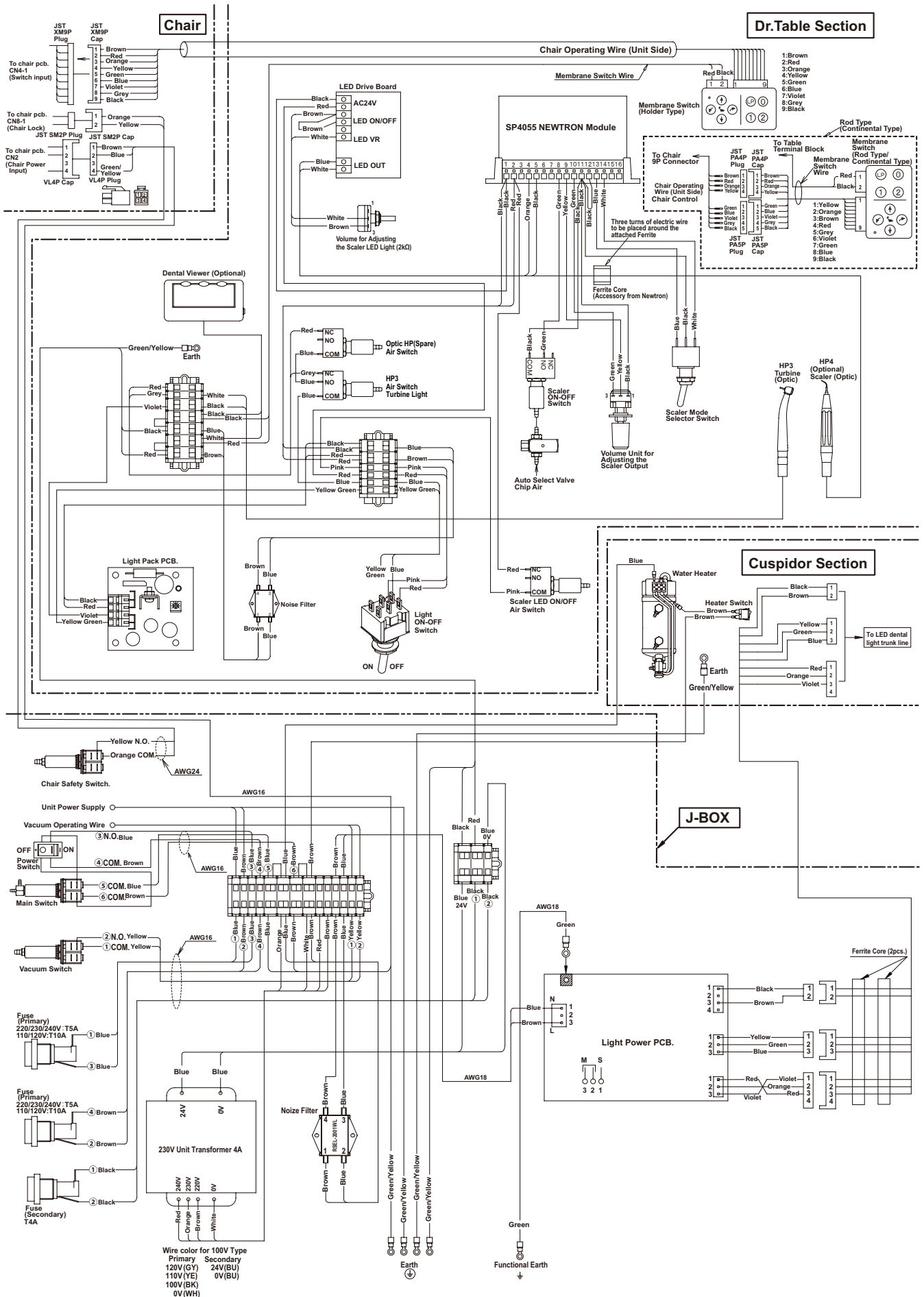
8-2. Cuspidor & Junction Box Section (Central Vacuum, Central Saliva Ejector, Clean Water System Specifications)



8-3. Cuspidor & Junction Box Section (Air Vacuum, Air Saliva Ejector Specifications)



9. Unit Electrical Diagram



NOTE



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