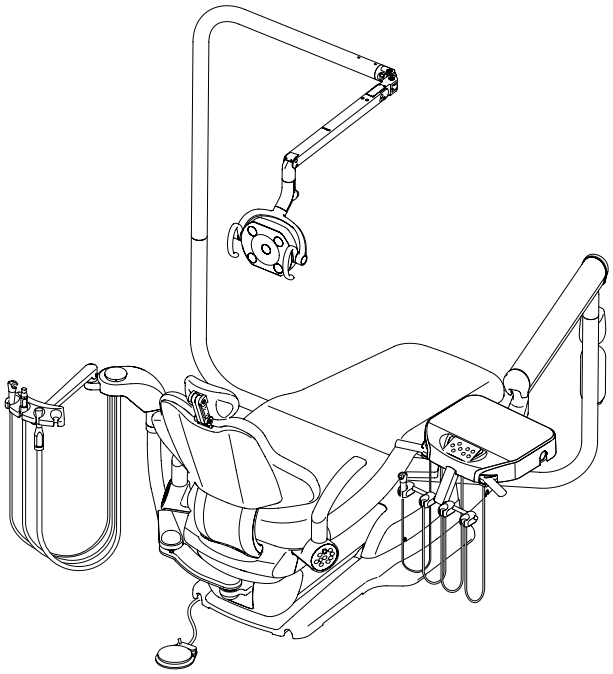
# Evogue Dental Unit



## INSTALLATION INSTRUCTIONS

**IMPORTANT**

- **This manual provides installation instructions for the Evogue unit.**
- **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.**
- **Installation should be conducted by authorized personnel only. Follow instructions on installation manual.**

Belmont®

**Intended Use of the Product**

This product is an active therapeutic device intended to administer or exchange energy of electric, air and water for the exclusive use for diagnoses, treatments and relative procedures of dentistry, and its characteristic is not in a potentially hazardous way between such energy and human body, taking account of the nature, the density and site of application of the energy.

The product must be operated or handled by the qualified dentists or by dental staffs under the supervision of the dentist.

Such dentists or dental staffs should instruct and/or assist the patients to approach to and leave from the product.

Patients should not be allowed to operate or handle the product unless he/she is so instructed.

The product is supplied together with the handpieces like electric micromotor, air turbine and/or motor, scaler and so on.

**Environmental Requirements**

For Operation :

Ambient Temperature 32ºF ~ 104ºF (0ºC ~ 40ºC)

Humidity 10 % ~ 95%

Atmospheric Pressure 10 psi ~ 15.1 psi (700 hPa ~ 1060 hPa)

For Transportation / Storage :

Ambient Temperature 7ºF ~ 158ºF (-20ºC ~ 70ºC)

Humidity 10 % ~ 95%

Atmospheric Pressure 10 psi ~ 15.1 psi (700 hPa ~ 1060 hPa)

Equipment is not suitable for use in environments with, flammable anesthetic gases, oxygen or nitrous oxide.

**Classification of Equipment**

a. Type of shock protection : Class I Equipment

b. Degree of shock protection : Type B Applied part

c. Degree of protection against water ingress : Ordinary Equipment (All Products)

d. Mode of operation : Continuous Operation

e. Flammable Gases : Not suitable for use in the presence of a flammable anesthetic mixture with air, oxygen, or nitrous oxide.

f. Earth : Protective earth (ground)

g. Hospital Grade Plug : Grounding reliability can be achieved only when the equipment is connected to an equivalent receptacle marked hospital only or hospital grade.

**⚠ CAUTION**

**Ground reliability can only be achieved when the equipment is connected to an equivalent receptacle marked HOSPITAL only or HOSPITAL GRADE.**

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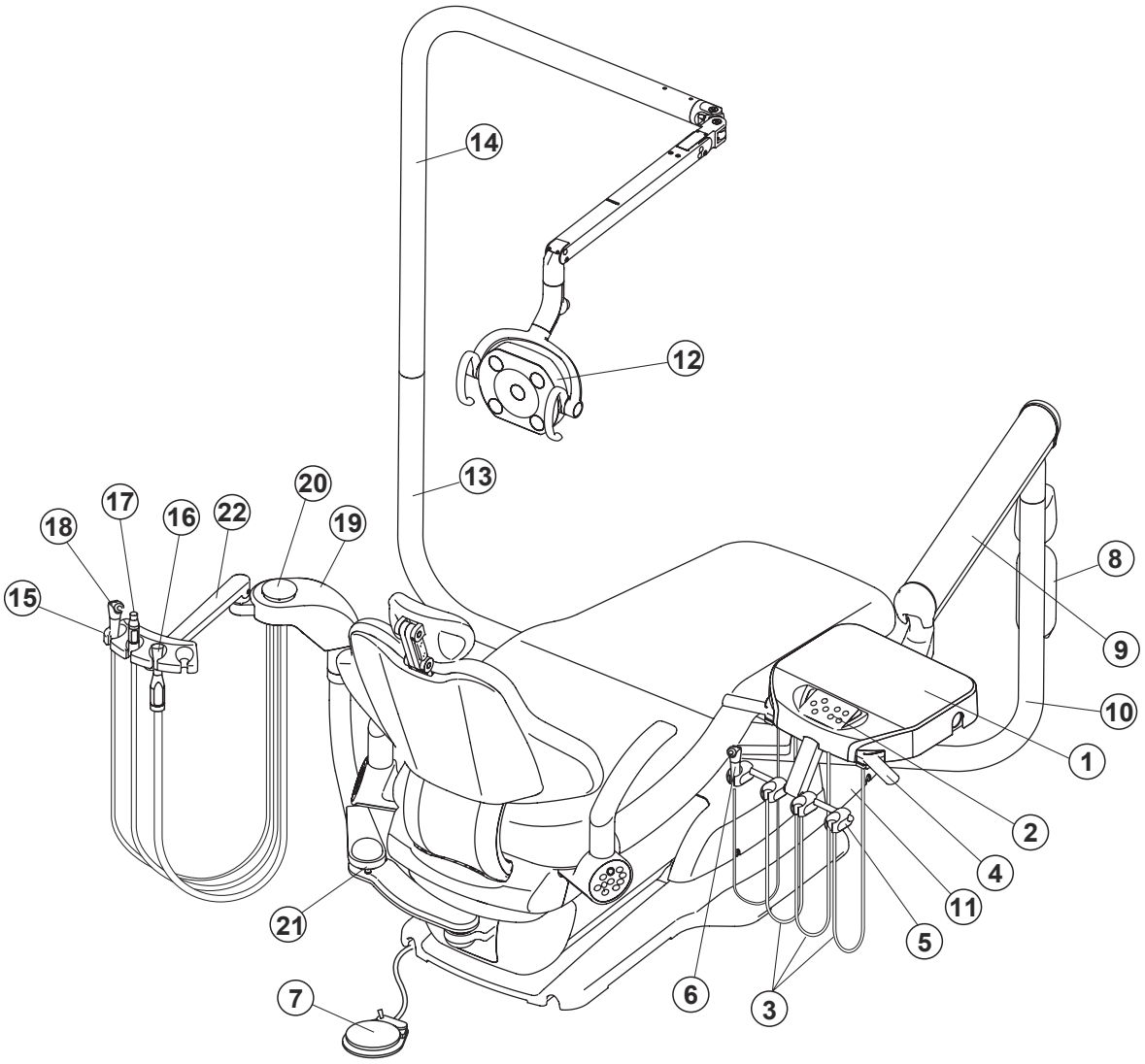
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## 1. Overview and Major Components

### 1-1. Swing Mounted Delivery System with Vac Pac and CLESTA LED Light

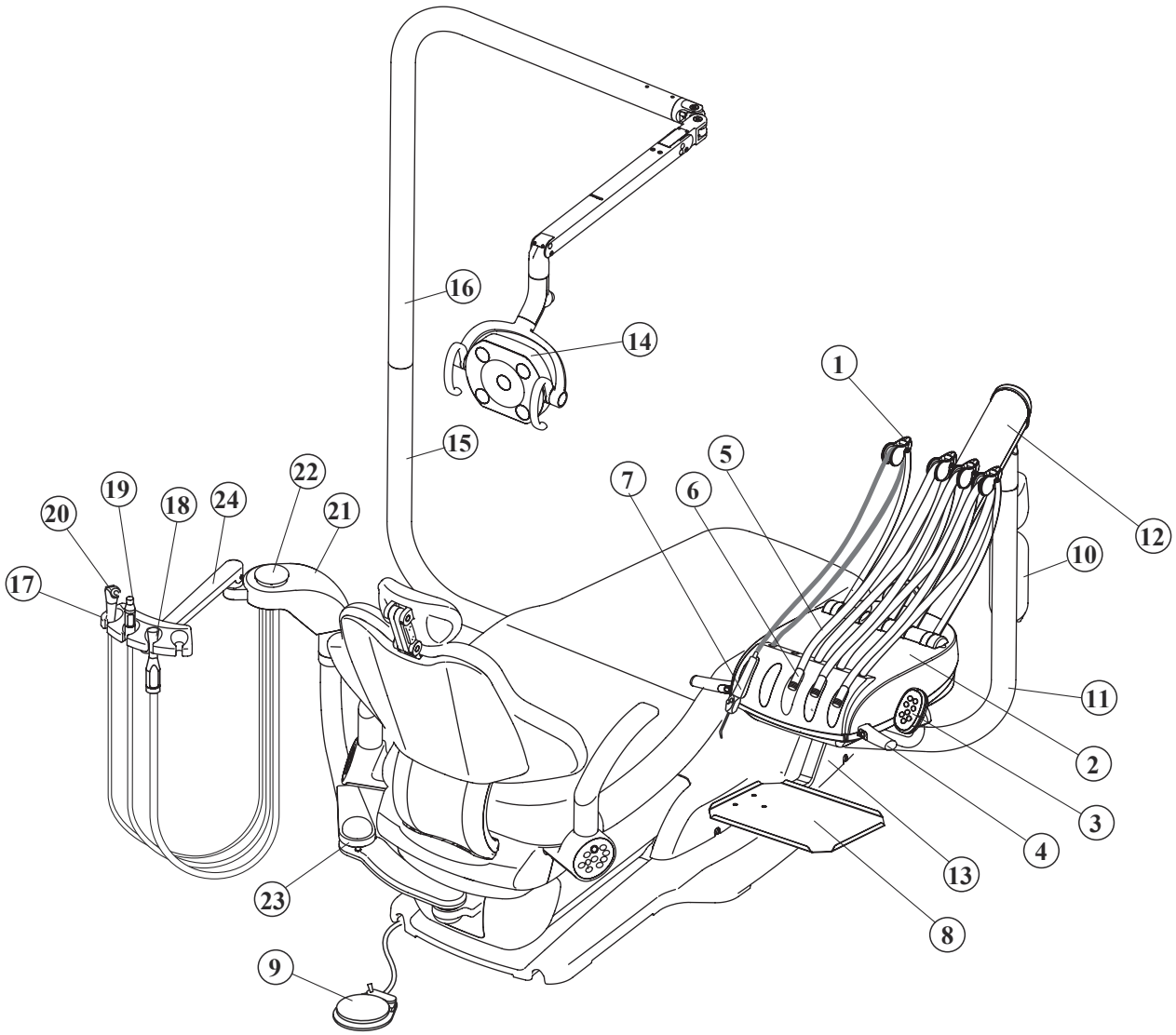



(1) Control Head
(2) Main Control Panel
(3) Handpiece Hose
(4) Handle
(5) Handpiece Holders
(6) Dr's Syringe (*)
(7) Foot Control
(8) Water Bottle
(9) Balance Arm
(10) Dr Swing Arm
(11) Junction Box
(12) Dental Light
(13) Dental Light Swing Arm
(14) Light Pole
(15) Assistant Instrument Holder
(16) HVE
(17) Saliva Ejector
(18) Assistant's Syringe (*)
(19) Vac Pac Housing
(20) Solids Collector
(21) Assistant Swing Arm
(22) Assistant Holder Arm

*(*Note) Evogue does not include syringe tips. Syringe tips manufactured by DCI are compatible with syringes used with this delivery system.*

## 1. Overview and Major Components

### 1-2. Swing Mounted Delivery System with Rod Type and Vac Pac and CLESTA LED Light (Quolis Chair)

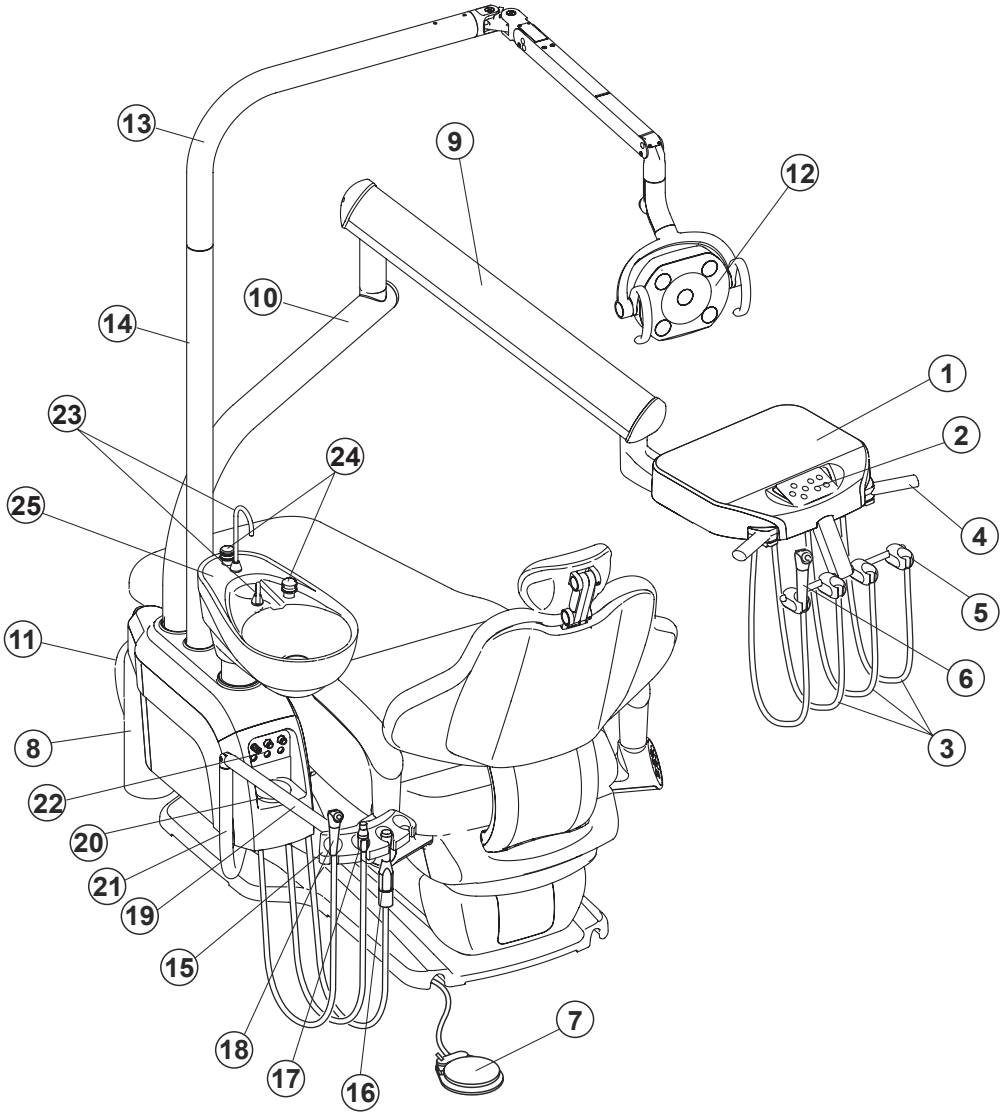



(1) Rod Mecha
(2) Control Head
(3) Main Control Panel
(4) Handle
(5) Handpiece Hose
(6) Handpiece Rest
(7) Dr's Syringe (*)
(8) Sub Tray
(9) Foot Control
(10) Water Bottle
(11) Balance Arm
(12) Dr Swing Arm
(13) Junction Box
(14) Dental Light
(15) Dental Light Swing Arm
(16) Light Pole
(17) Assistant Instrument Holder
(18) HVE
(19) Saliva Ejector
(20) Assistant's Syringe (*)
(21) Vac Pac Housing
(22) Solids Collector
(23) Assistant Swing Arm
(24) Assistant Holder Arm

*(*Note) Evogue does not include syringe tips. Syringe tips manufactured by DCI are compatible with syringes used with this delivery system.*

## 1. Overview and Major Components

### 1-3. Over the Patient Delivery System with Cuspidor and CLESTA LED Light

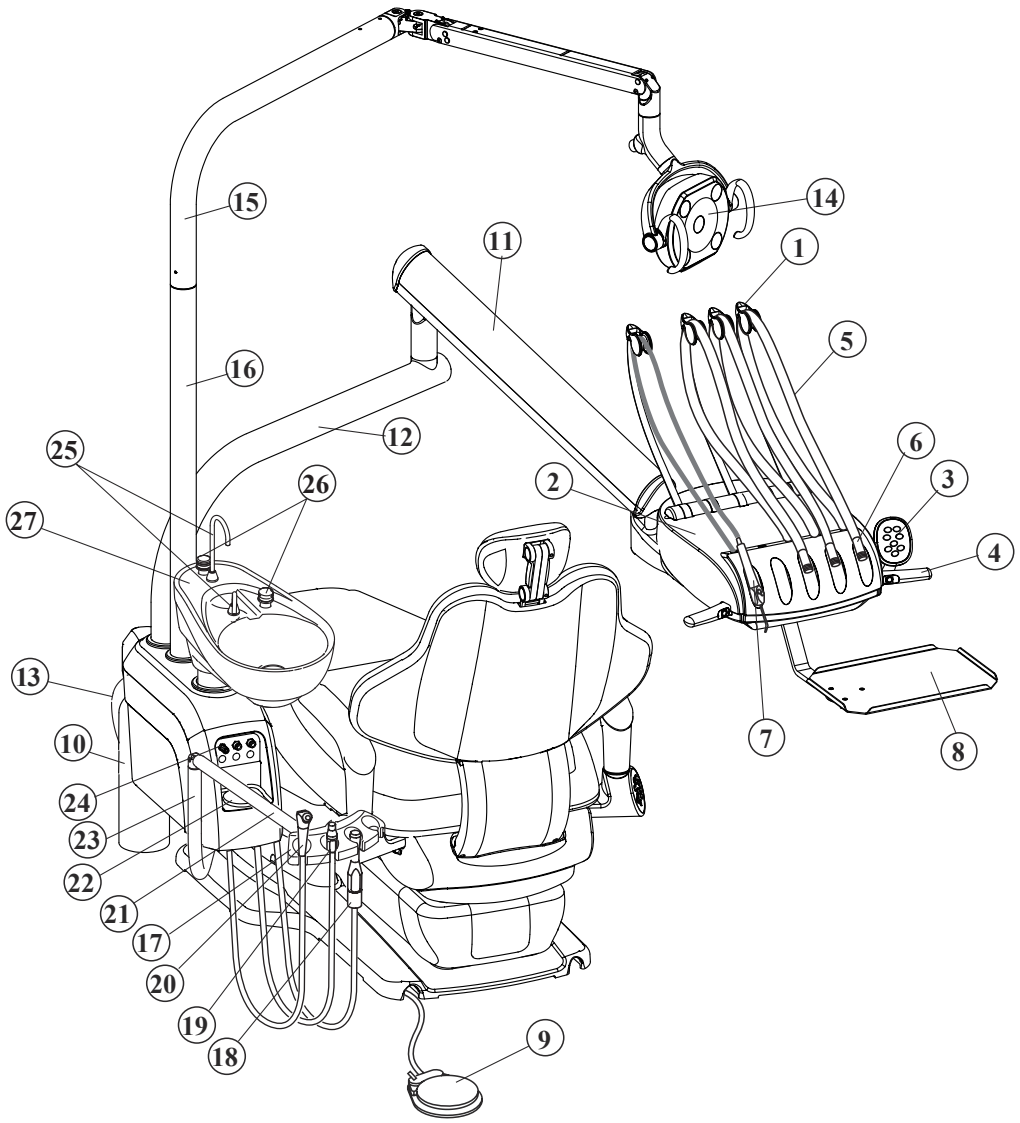



(1) Control Head
(2) Main Control Panel
(3) Handpiece Hose
(4) Handle
(5) Handpiece Holders
(6) Dr's Syringe (*)
(7) Foot Control
(8) Water Bottle
(9) Balance Arm
(10) Dr Swing Arm
(11) Junction Box
(12) Dental Light
(13) Dental Light Swing Arm
(14) Light Pole
(15) Assistant Instrument Holder
(16) HVE
(17) Saliva Ejector
(18) Assistant's Syringe (*)
(19) Assistant Holder Arm
(20) Solids Collector
(21) Assistant Swing Arm
(22) PMU front panel
(23) Cupfill nozzle and bowl flush nozzle
(24) Cupfill switch and bowl flush switch

*(*Note) Evogue does not include syringe tips. Syringe tips manufactured by DCI are compatible with syringes used with this delivery system.*

## 1. Overview and Major Components

### 1-4. Over the Patient Delivery System with Rod Type Table and Vac Pac and CLESTA LED Light (Quolis Chair)

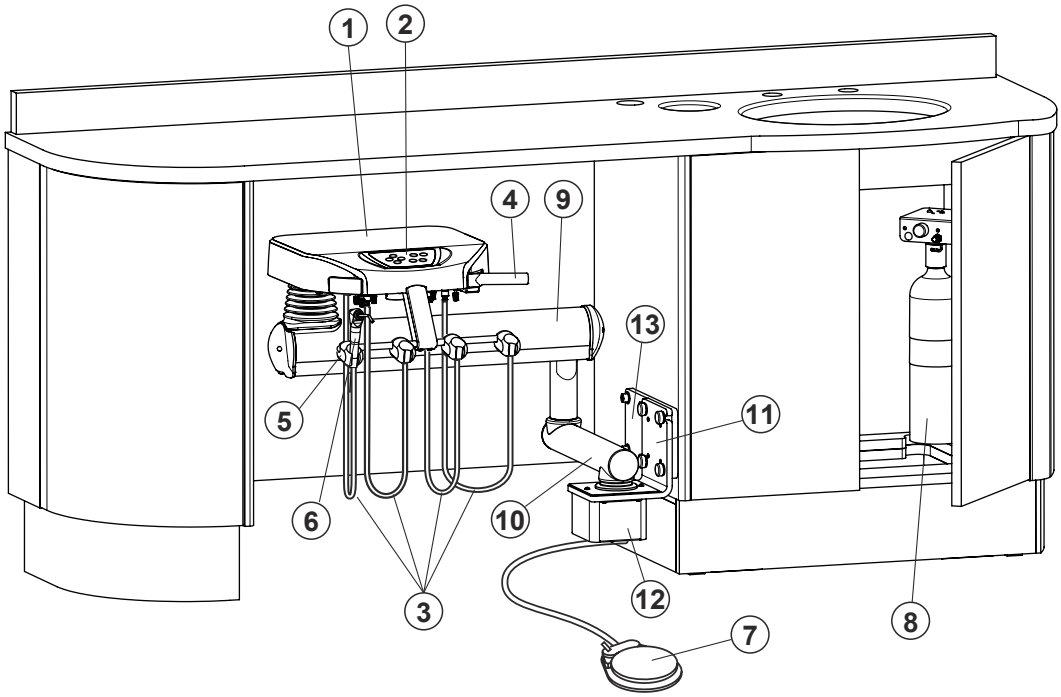



(1) Rod Mecha
(2) Control Head
(3) Main Control Panel
(4) Handle
(5) Handpiece Hose
(6) Handpiece Rest
(7) Dr's Syringe (*)
(8) Sub Tray
(9) Foot Control
(10) Water Bottle
(11) Balance Arm
(12) Dr Swing Arm
(13) Junction Box
(14) Dental Light
(15) Dental Light Swing Arm
(16) Light Pole
(17) Assistant Instrument Holder
(18) HVE
(19) Saliva Ejector
(20) Assistant's Syringe (*)
(21) Assistant Holder Arm
(22) Solids Collector
(23) Assistant Swing Arm
(24) PMU front panel
(25) Cupfiller nozzle and bowl flush nozzle
(26) Cupfiller switch and bowl flush switch
(27) Cuspidor bowl

*(*Note) Evogue does not include syringe tips. Syringe tips manufactured by DCI are compatible with syringes used with this delivery system.*

## 1. Overview and Major Components

### 1-5.Side Delivery System

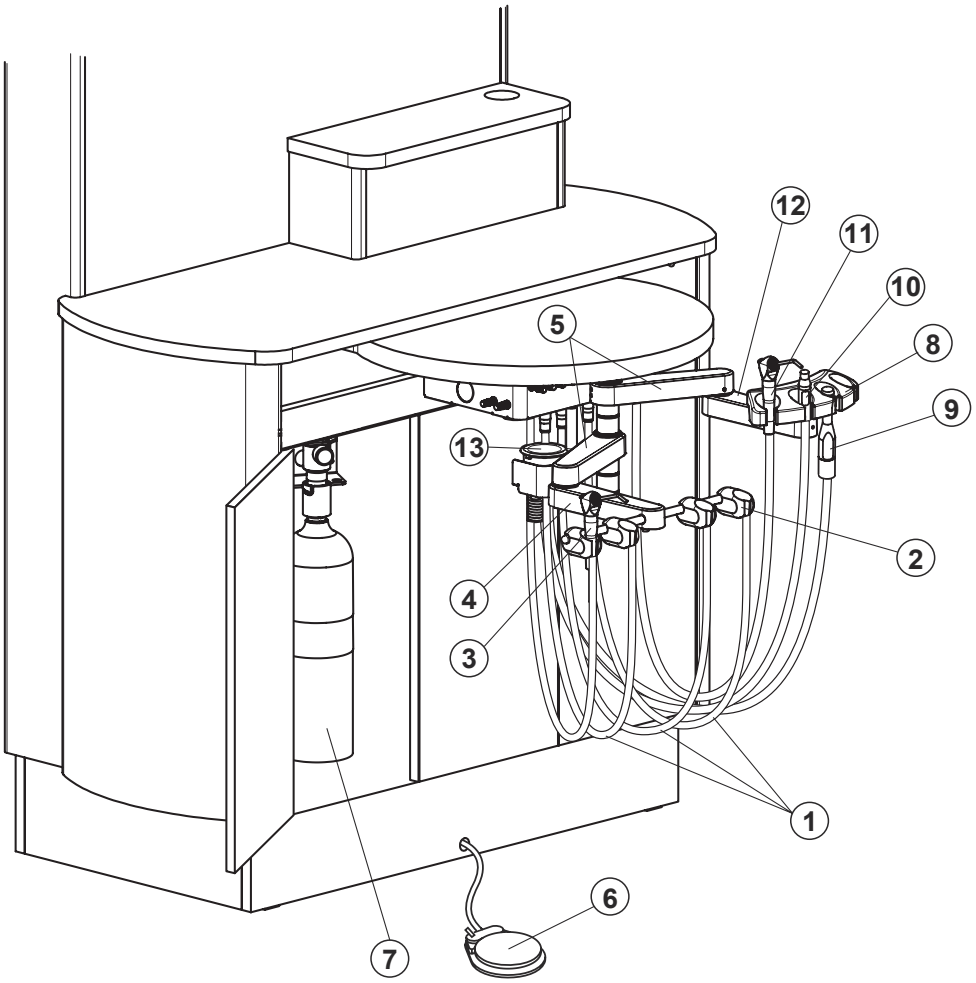



(1) Control Head
(2) Main Control Panel
(3) Handpiece Hose
(4) Handle
(5) Handpiece Holders
(6) Dr's Syringe (*)
(7) Foot Control
(8) Water Bottle
(9) Balance Arm
(10) First Arm
(11) Mounting Bracket
(12) Mounting Bracket Cover
(13) Mounting Plate

*(*Note) Evogue does not include syringe tips. Syringe tips manufactured by DCI are compatible with syringes used with this delivery system.*

## 1. Overview and Major Components

### 1-6.Rear Delivery System




(1) Handpiece Hose
(2) Handpiece Holders
(3) Dr's Syringe (*)
(4) Doctor Arm
(5) First Arm
(6) Foot Control
(7) Water Bottle
(8) Assistant Instrument Holder
(9) HVE
(10) Saliva Ejector
(11) Assistant's Syringe (*)
(12) Assistant Arm
(13) Solids Collector

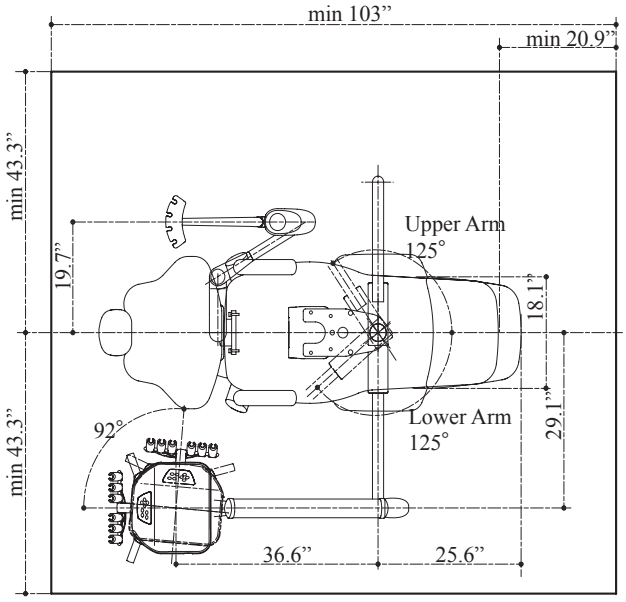
*(*Note) Evogue does not include syringe tips. Syringe tips manufactured by DCI are compatible with syringes used with this delivery system.*

## 2. Dimensions and Specifications

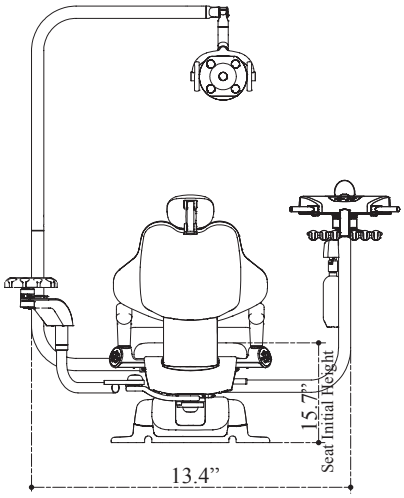
### 2-1. Swing Mounted Delivery System with Vac Pac and CLESTA LED Light (Quolis Chair)

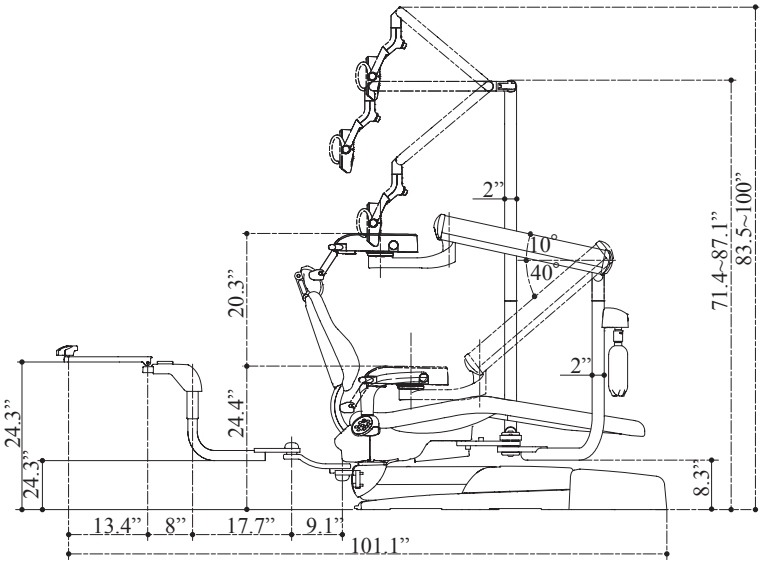
#### 2-1-1. Dimensions

- Inch / (mm) - Tolerance (± 10%)




Minimum dimension for change to right and left position excluding treatment space.




#### 2-1-2. Specifications

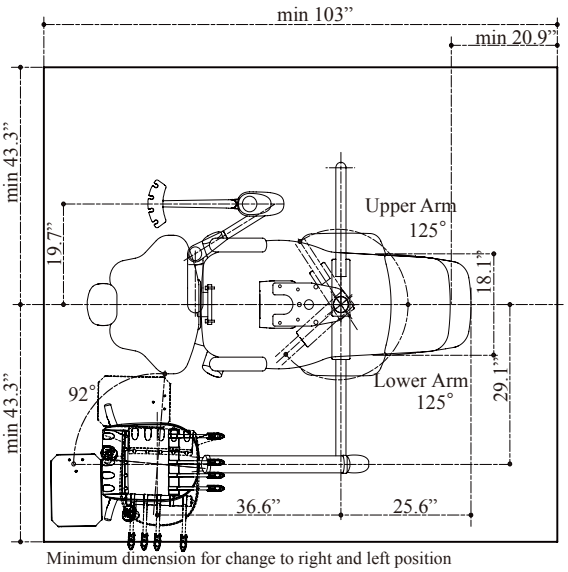
Power Consumption---------- AC120V 1.6A
Frequency---------- 60 Hz
Fuse value---------- M6AL, 250V (Fuse Size : $\phi$ 6.3 x 30 mm)
Dr’s control Net Weight---------- 44 lbs. (20 kg)
Swing Arm Net Weight---------- 55 lbs. (25 kg) (Without Dental Light)
Vacuum Pack Net Weight---------- 44 lbs. (20 kg)
Junction Net Weight---------- 9 lbs. (4 kg)
Doctor Table Maximum Load---------- 4.40 lbs. (2 kg)
Operating Pressure---------- Water 29 psi (0.2 MPa), Air 75 psi (0.5 MPa)
Vacuum ---------- Minimum 200L/min.
Dental Light---------- CLESTA LED Dental Light
BEL HALO Dental Light
Classification of foot controller---------- IPX1 (applicable standard IEC60529)
Protection class against electric shock---------- Class I equipment
Service Life---------- 10 years

## 2. Dimensions and Specifications

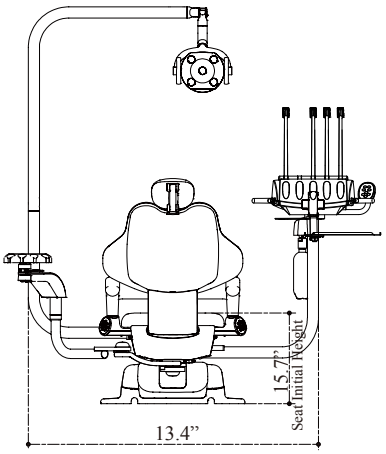
## 2-2. Swing Mounted Delivery System with Rod Type and Vac Pac and CLESTA LED Light (Quolis Chair)

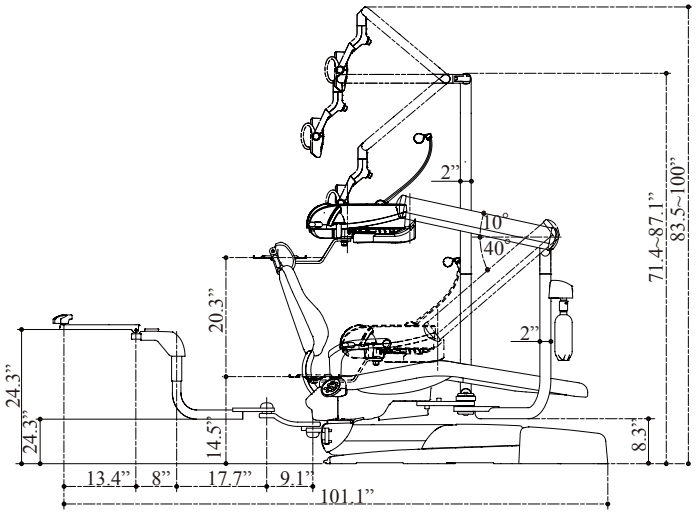
### 2-2-1. Dimensions

- Inch / (mm) - Tolerance (± 10%)




Minimum dimension for change to right and left position excluding treatment space.




**Specifications**

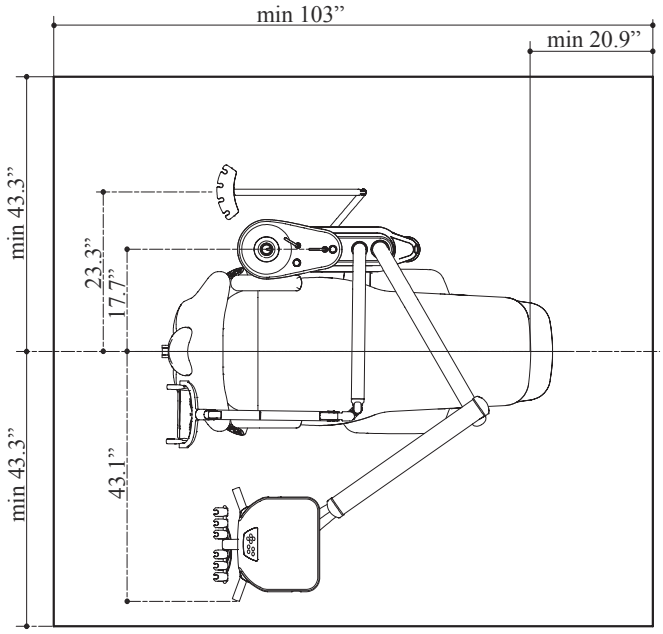
Power Consumption---------- AC120V 1.6A
Frequency---------- 60 Hz
Fuse value---------- M6AL, 250V (Fuse Size : $\phi$ 6.3 x 30 mm)
Dr’s control Net Weight---------- 57 lbs (26 kg)
Swing Arm Net Weight---------- 55 lbs (25 kg) (Without Dental Light)
Vacuum Pack Net Weight---------- 44 lbs (20 kg)
Junction Net Weight---------- 9 lbs (4 kg)
Doctor Table Maximum Load---------- 4.40 lbs (2 kg)
Operating Pressure---------- Water 29 psi (0.2 MPa), Air 75 psi (0.5 MPa)
Vacuum ---------- Minimum 200L/min.
Dental Light---------- CLESTA LED Dental Light
---------- BEL HALO Dental Light
Classification of foot controller---------- IPX1 (applicable standard IEC60529)
Protection class against electric shock---------- Class I equipment
Applied parts---------- Type B applied parts : Handpiece for unit
(List of compatible handpieces)
Service Life---------- 10 years

## 2. Dimensions and Specifications

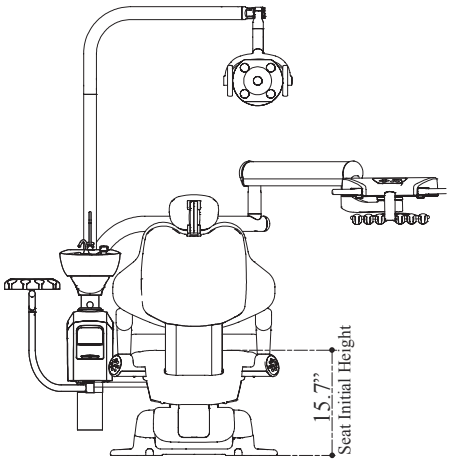
### 2-3. Over the Patient Delivery System with Cuspidor and CLESTA LED Light (Quolis Chair)

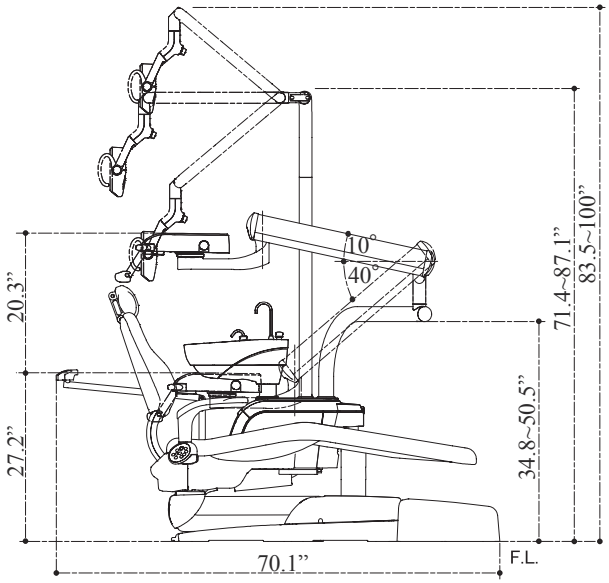
#### 2-3-1. Dimensions

- Inch / (mm) - Tolerance (± 10%)




Minimum dimension excluding treatment space




#### 2-3-2. Specifications

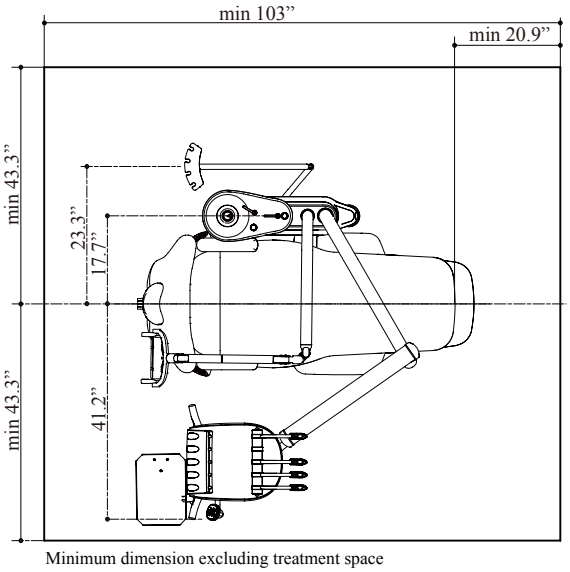
Power Consumption---------- AC120V 1.6A
Frequency---------- 60 Hz
Fuse value---------- M6AL, 250V (Fuse Size : $\phi$ 6.3 x 30 mm)
Dr’s control Net Weight---------- 44 lbs. (20 kg)
Swing Arm Net Weight---------- 55 lbs. (25 kg) (Without Dental Light)
Cuspidor Section Net Weight---------- 66 lbs. (30 kg)
Junction Net Weight---------- 9 lbs. (4 kg)
Doctor Table Maximum Load---------- 4.40 lbs. (2 kg)
Operating Pressure---------- Water 29 psi (0.2 MPa), Air 75 psi (0.5 MPa)
Vacuum ---------- Minimum 200L/min.
Dental Light---------- CLESTA LED Dental Light
BEL HALO Dental Light
Classification of foot controller---------- IPX1 (applicable standard IEC60529)
Protection class against electric shock---------- Class I equipment
Service Life---------- 10 years

## 2. Dimensions and Specifications

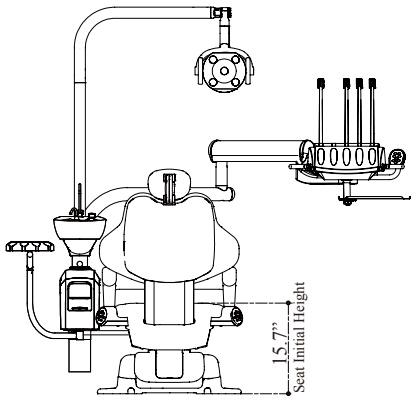
### 2-4. Over the Patient Delivery System with Rod Type and Cuspidor and CLESTA LED Light (Quolis Chair)

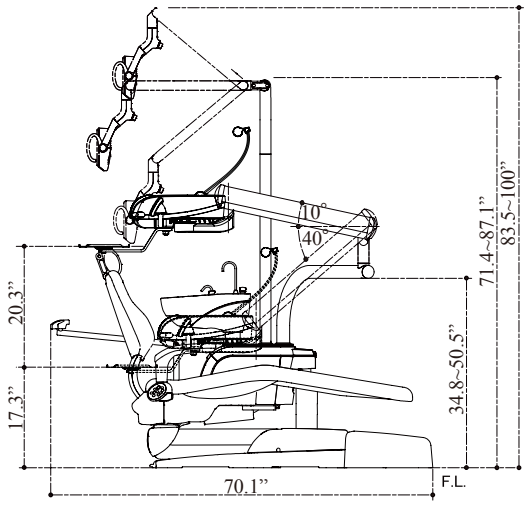
#### 2-4-1. Dimensions

- Inch / (mm) - Tolerance (± 10%)




Minimum dimension excluding treatment space




**Specifications**

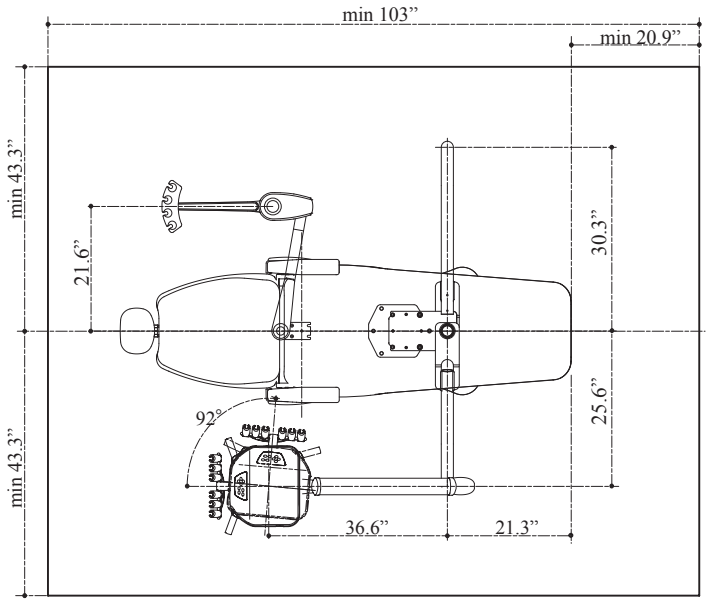
Power Consumption---------- AC120V 1.6A
Frequency---------- 60 Hz
Fuse value---------- M6AL, 250V (Fuse Size : $\phi$ 6.3 x 30 mm)
Dr’s control Net Weight---------- 57 lbs (26 kg)
Swing Arm Net Weight---------- 55 lbs (25 kg) (Without Dental Light)
Cuspidor Section Net Weight---------- 66 lbs (30 kg)
Junction Net Weight---------- 9 lbs (4 kg)
Doctor Table Maximum Load---------- 4.40 lbs (2 kg)
Operating Pressure---------- Water 29 psi (0.2 MPa), Air 75 psi (0.5 MPa)
Vacuum ---------- Minimum 200L/min.
Dental Light---------- CLESTA LED Dental Light
---------- BEL HALO Dental Light
Classification of foot controller---------- IPX1 (applicable standard IEC60529)
Protection class against electric shock---------- Class I equipment
Applied parts---------- Type B applied parts : Handpiece for unit
(List of compatible handpieces)
Service Life----------10 years

## 2. Dimensions and Specifications

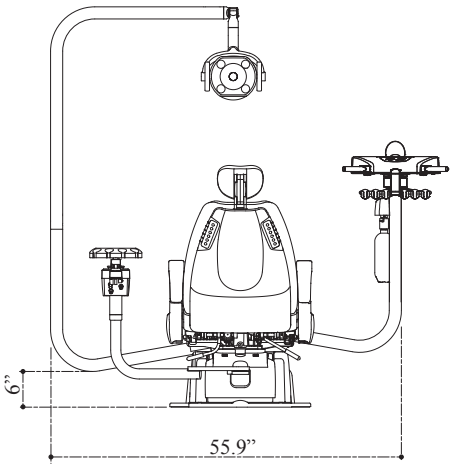
## 2-5. Swing Mounted Delivery System with Vac Pac and CLESTA LED Light (Bel-50 Chair)

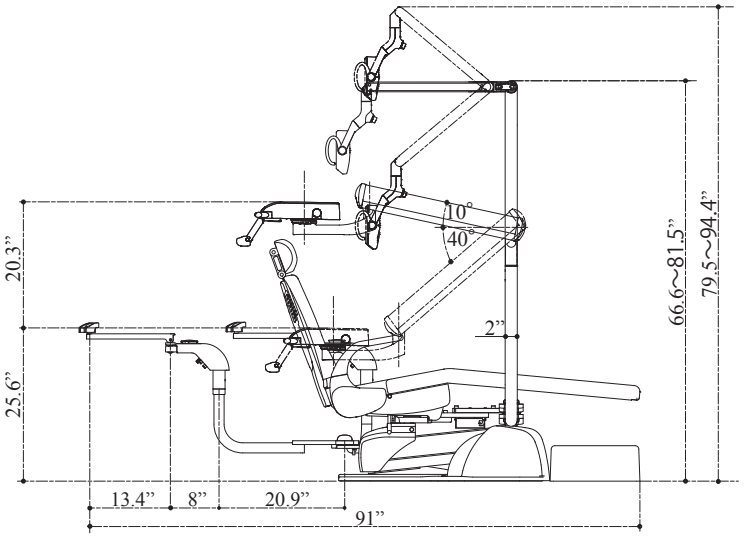
### 2-5-1. Dimensions

- Inch / (mm) - Tolerance (± 10%)




Minimum dimension for change to right and left position excluding treatment space.




### 2-5-2. Specifications

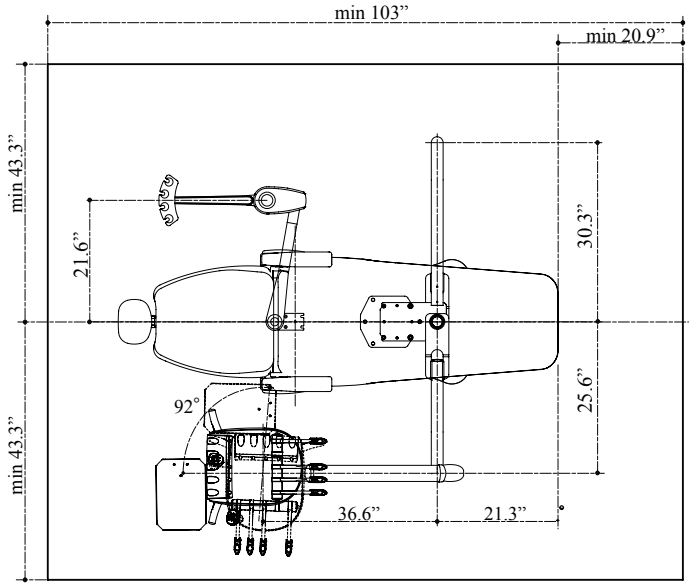
Power Consumption---------- AC120V 1.6A
Frequency---------- 60 Hz
Fuse value---------- M6AL, 250V (Fuse Size : $\phi$ 6.3 x 30 mm)
Dr’s control Net Weight---------- 44 lbs. (20 kg)
Swing Arm Net Weight---------- 55 lbs. (25 kg) (Without Dental Light)
Vacuum Pack Net Weight---------- 44 lbs. (20 kg)
Junction Net Weight---------- 9 lbs. (4 kg)
Doctor Table Maximum Load---------- 4.40 lbs. (2 kg)
Operating Pressure---------- Water 29 psi (0.2 MPa), Air 75 psi (0.5 MPa)
Vacuum ---------- Minimum 200L/min.
Dental Light---------- CLESTA LED Dental Light
BEL HALO Dental Light
Classification of foot controller---------- IPX1 (applicable standard IEC60529)
Protection class against electric shock---------- Class I equipment
Service Life---------- 10 years

## 2. Dimensions and Specifications

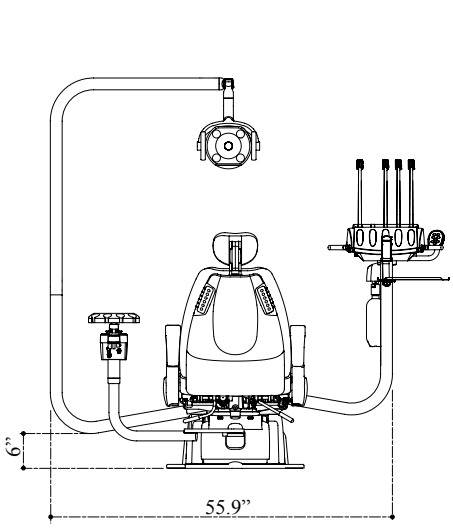
## 2-6. Swing Mounted Delivery System with Continental Type Table and Vac Pac and CLESTA LED Light (Bel-50 Chair)

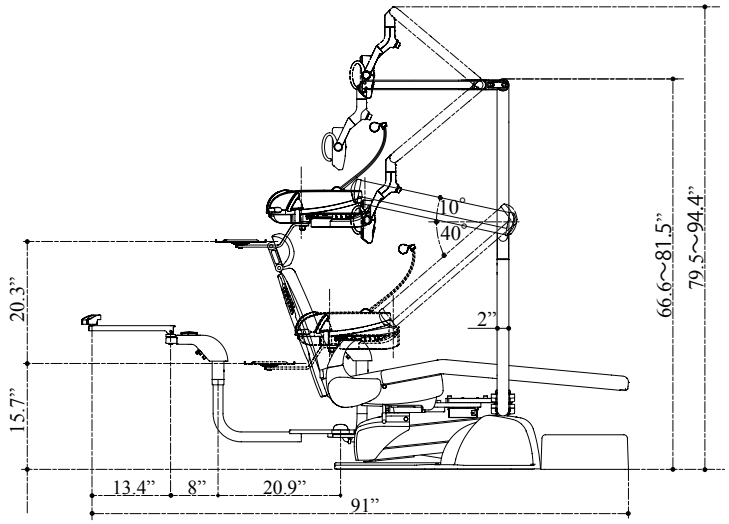
### 2-6-1. Dimensions

- Inch / (mm) - Tolerance (± 10%)




Minimum dimension for change to right and left position excluding treatment space.




### Specifications

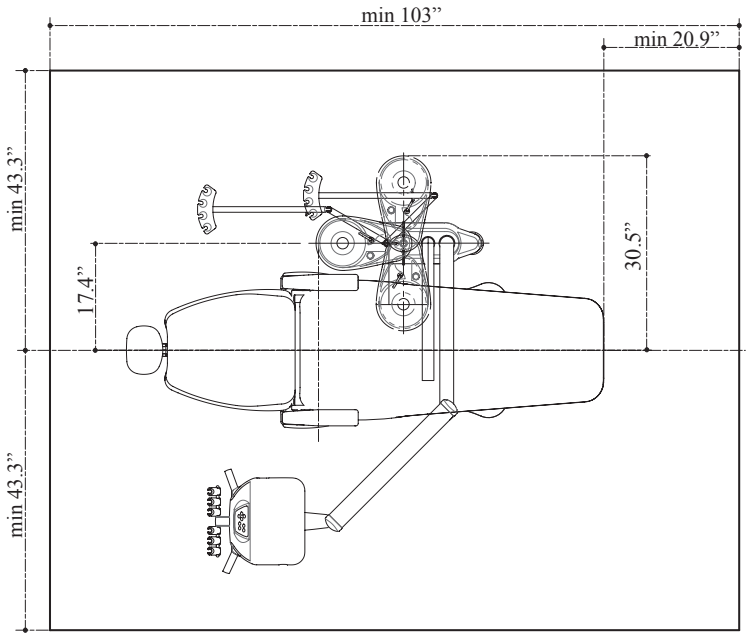
Power Consumption---------- AC120V 1.6A
Frequency---------- 60 Hz
Fuse value---------- M6AL, 250V (Fuse Size : $\phi$ 6.3 x 30 mm)
Dr’s control Net Weight---------- 57 lbs. (26 kg)
Swing Arm Net Weight---------- 55 lbs. (25 kg) (Without Dental Light)
Vacuum Pack Net Weight---------- 44 lbs. (20 kg)
Junction Net Weight---------- 9 lbs. (4 kg)
Doctor Table Maximum Load---------- 4.40 lbs. (2 kg)
Operating Pressure---------- Water 29 psi (0.2 MPa), Air 75 psi (0.5 MPa)
Classification of foot controller---------- IPX1 (applicable standard IEC60529)
Dental Light---------- CLESTA LED Dental Light
BEL HALO Dental Light
Protection class against electric shock---------- Class I equipment
Service Life---------- 10 years

## 2. Dimensions and Specifications

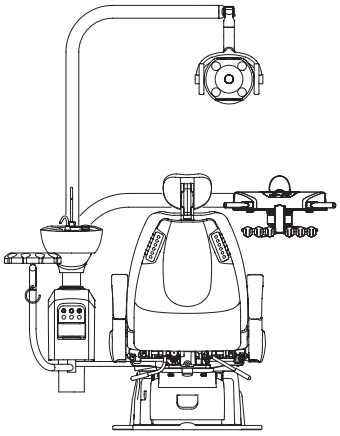
### 2-7. Over the Patient Delivery System with Cuspidor and CLESTA LED Light (Bel-50 Chair)

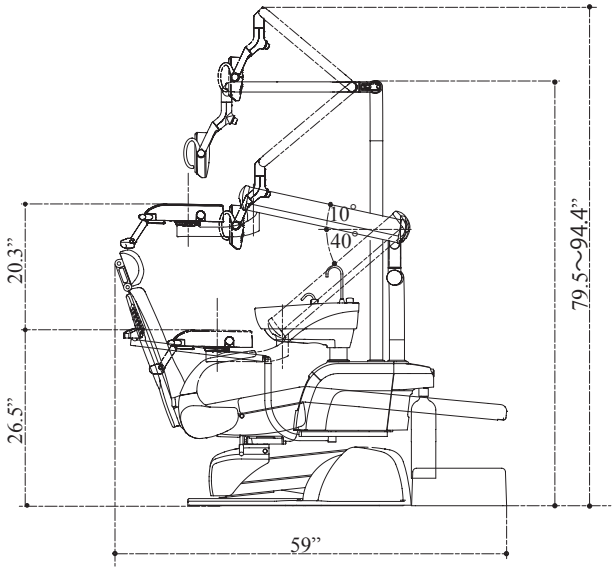
#### 2-7-1. Dimensions

- Inch / (mm) - Tolerance (± 10%)




Minimum dimension for change to right and left position
excluding treatment space.






#### 2-7-2. Specifications

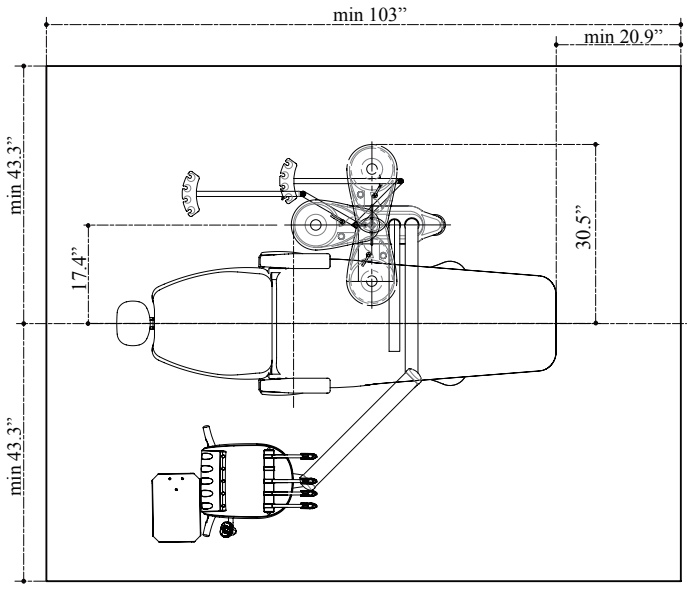
Power Consumption---------- AC120V 1.6A
Frequency---------- 60 Hz
Fuse value---------- M6AL, 250V (Fuse Size : $\phi$ 6.3 x 30 mm)
Dr’s control Net Weight---------- 44 lbs. (20 kg)
Swing Arm Net Weight---------- 55 lbs. (25 kg) (Without Dental Light)
Cuspidor Section Net Weight---------- 66 lbs. (30 kg)
Junction Net Weight---------- 9 lbs. (4 kg)
Doctor Table Maximum Load---------- 4.40 lbs. (2 kg)
Operating Pressure---------- Water 29 psi (0.2 MPa), Air 75 psi (0.5 MPa)
Vacuum ---------- Minimum 200L/min.
Dental Light---------- CLESTA LED Dental Light
BEL HALO Dental Light
Classification of foot controller---------- IPX1 (applicable standard IEC60529)
Protection class against electric shock---------- Class I equipment
Service Life---------- 10 years

## 2. Dimensions and Specifications

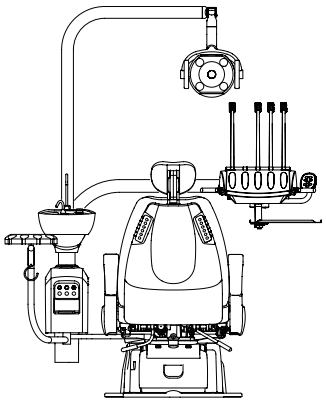
### 2-8. Over the Patient Delivery System with Rod Type and with Cuspidor and CLESTA LED Light (Bel-50 Chair)

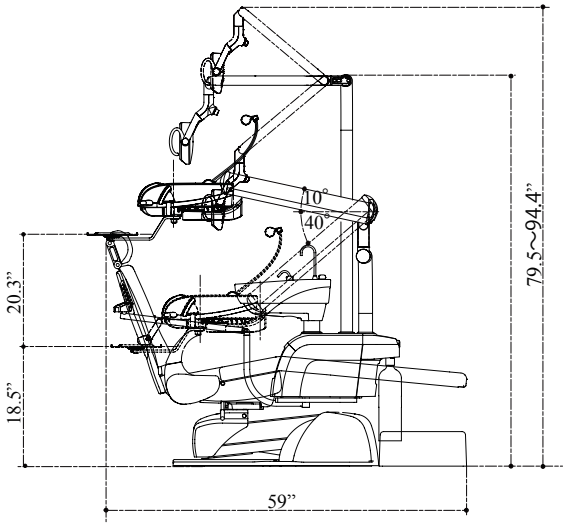
#### 2-8-1. Dimensions

- Inch / (mm) - Tolerance (± 10%)




Minimum dimension for change to right and left position excluding treatment space.






**Specifications**

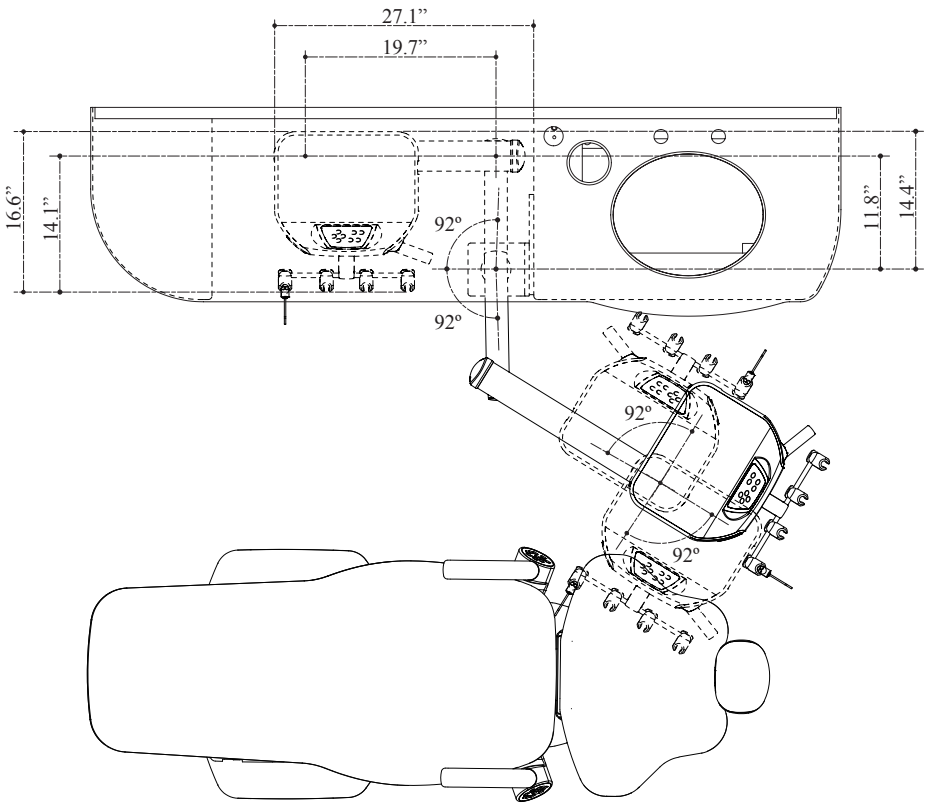
Power Consumption---------- AC120V 1.6A
Frequency---------- 60 Hz
Fuse value---------- M6AL, 250V (Fuse Size : $\phi$ 6.3 x 30 mm)
Dr’s control Net Weight---------- 57 lbs. (26 kg)
Swing Arm Net Weight---------- 55 lbs. (25 kg) (Without Dental Light)
Cuspidor Section Net Weight---------- 66 lbs. (30 kg)
Junction Net Weight---------- 9 lbs. (4 kg)
Doctor Table Maximum Load---------- 4.40 lbs. (2 kg)
Operating Pressure---------- Water 29 psi (0.2 MPa), Air 75 psi (0.5 MPa)
Classification of foot controller---------- IPX1 (applicable standard IEC60529)
Dental Light---------- CLESTA LED Dental Light
BEL HALO Dental Light
Protection class against electric shock---------- Class I equipment
Service Life---------- 10 years

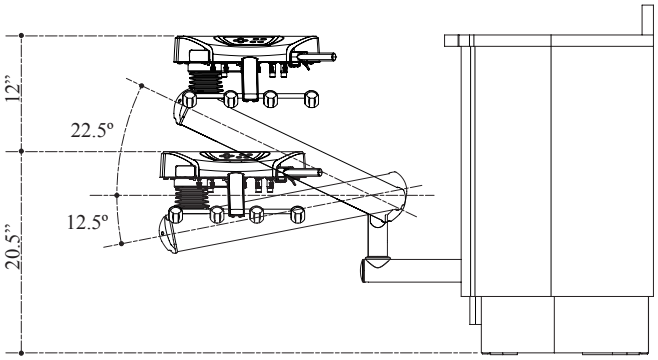
## 2. Dimensions and Specifications

### 2-9. Side Delivery System

#### 2-9-1. Dimensions

- Inch / (mm) - Tolerance (± 10%)




#### 2-9-2. Specifications

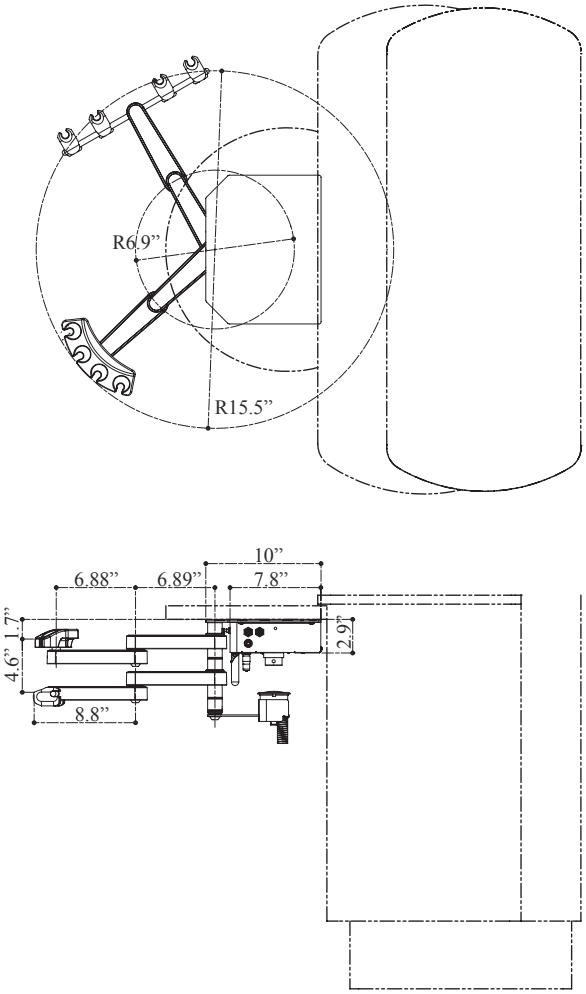
Power Consumption---------- AC120V 1.6A
Frequency---------- 60 Hz
Fuse value---------- M6AL, 250V (Fuse Size : $\phi$ 6.3 x 30 mm)
Side Delivery Net Weight---------- 54.0 lbs (24.5 kg)
Operating Pressure---------- Water 29 psi (0.2 MPa), Air 75 psi (0.5 MPa)
Classification of foot controller---------- IPX1 (applicable standard IEC60529)
Protection class against electric shock---------- Class I equipment
Applied parts---------- Type B applied parts : Handpiece for unit
Service Life----------10 years

## 2. Dimensions and Specifications

### 2-10. Rear Delivery System

#### 2-10-1. Dimensions

- Inch / (mm) - Tolerance (± 10%)




#### 2-10-2. Specifications

Power Consumption---------- AC120V 1.6A
Frequency---------- 60 Hz
Fuse value---------- M6AL, 250V (Fuse Size : $\phi$ 6.3 x 30 mm)
Rear Delivery Net Weight---------- 27.6 lbs (12.5 kg)
Operating Pressure---------- Water 29 psi (0.2 MPa), Air 75 psi (0.5 MPa)
Vacuum ---------- Minimum 200L/min.
Classification of foot controller---------- IPX1 (applicable standard IEC60529)
Protection class against electric shock---------- Class I equipment
Applied parts---------- Type B applied parts : Handpiece for unit
Service Life----------10 years

## 3. Introduction

### 3-1. Precautions for installation

- Do not connect to power supply other than 120V/60Hz.
- Ground the unit properly.
- Attach the junction box firmly to the floor.
- When electric micromotor (option) or electric scaler (option) is installed, please refer to the manual for the each device.
- Do not drop or hit the chair.
- When the installation process has been completed, verify that all the mechanical and electrical functions are working properly and that there is no evidence of oil, water or air leakage.
- Attach the dental chair to the floor before mounting the unit.
- Refer to the installation manual of Quolis 5000 dental chair to know how to install the dental chair.
- Refer to Floor Template for connection of water, air, power, drain hose and vacuum hose.

### 3-2. Necessary Tools

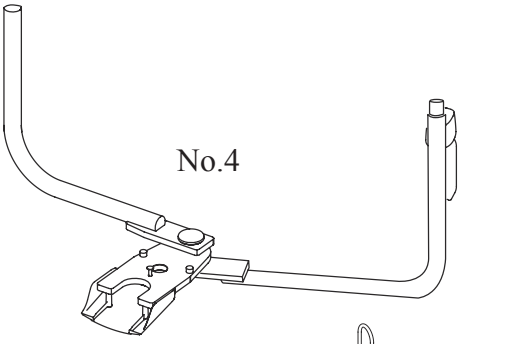
- Phillips screw drivers set #1, #2.
- Slotted screw driver
- Hex key wrenches set (metric, 2.5mm – 8mm)
- Adjustable wrench (over 24mm)
- Long nose pliers
- Wire cutter
- Socket set 17mm, 7mm, 1/4”
- Level

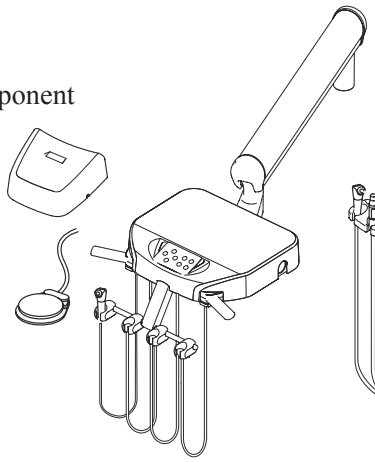
## 4. Unpacking of units

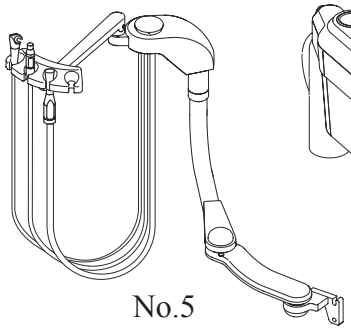
Each carton number corresponds to a component

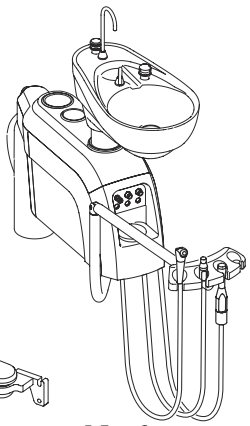
| Box No. | Module |
|---|---|
| 3 | Doctor's control |
| 4 | Swing arm (s) |
| 5 | Vac pac |
| 6 | PMU |
| 7 | Side Delivery |
| 8 | Rear Delivery |
| 9 | Rod Type Delivery |

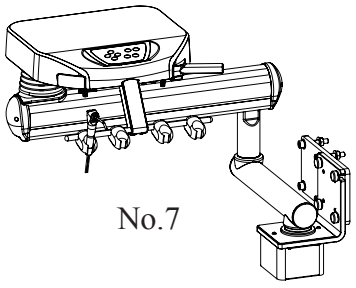
Check all the components and parts damage after unpacking.

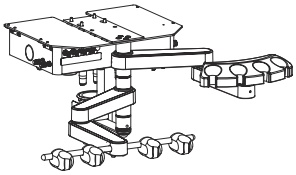

No.4

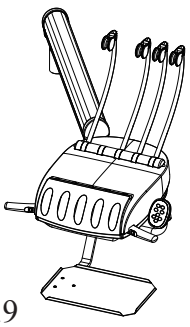

No. 3


No.5


No.6


No.7


No.8


No.9

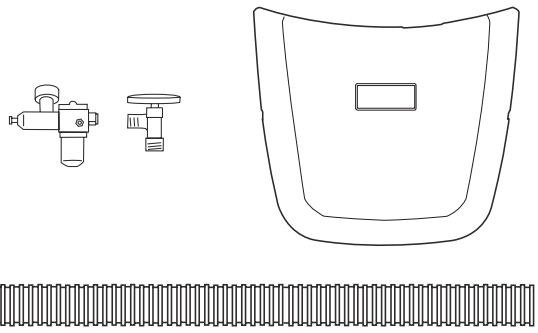
**⚠ CAUTION**

**Opening cartons with a sharp object may cause damage to parts**

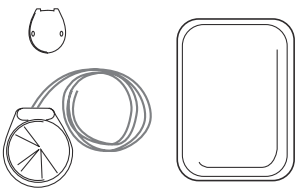
**Box No.3 (Doctor's control)**

(1) Doctor's control assembly 1 set
(2) Junction box assembly 1 set
- Junction box with cover 1 set
- Duct hose 800mm 1 pc.
- Utility package (air)

(3) Balance arm end cap 1pc.
(4) Stainless tray and non-slip pad 1 set
(5) Foot controller 1 set
(6) Syringe parts 1 set
(7) Operating manual, installation manual 1 set
(8) Miscellaneous parts for installation as follow
- Sleeve for 1/4" OD tubing 14 pcs.
- Sleeve for 1/8" OD tubing 12 pcs.
- Barb fitting for 1/4" OD tubing 3 pcs.
- Barb fitting for 1/8" OD tubing 3 pc.
- Hex plug 2 pcs.
- Tubing 1/8" OD brown 500mm 1 pc.
- Tubing 1/4 Green 500mm 1 pc.
- Pan head Philips screw M4 x 10mm 2 pcs
- Round head Philips wood screw M5 x 25mm 3 pcs.



(2)



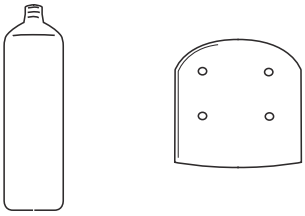
(3), (4), (5)



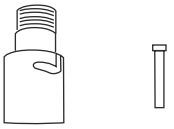
(6)

**Box No.4 (Swing arms)**

(9) Swing arm Assembly 1 set
(10) Water bottle 1 pc
(11) Lower tubing cover 1 pc.
(12) Quick disconnect adaptor for water bottle 1pc.
(13) Swing arm locking pin for dental light 1 pc. (For the swing mounted light only)
(14) Miscellaneous Parts for installation as follow.
- Socket screw M10 x 40mm (for mounting) 4 pcs.
- Socket screw M10 x 20mm (for level) 4 pcs.
- Pan head Phillips screw M5 x 16mm 4 pcs.
- Flat head screw M10×35mm 1 pc.
- 1/4 sleeve 2 pcs.
- 1/8 sleeve 1 pc.



(10) , (11)



(12) , (13)

**Box No.5 (Vac Pac)**

(15) Vac Pac Assembly 1 set
(16) Syringe parts 1 set
(17) Miscellaneous Parts for installation as follow.
- Socket screw M10 x 40mm (for mounting) 4 pcs.
- 1/4 sleeve 2 pcs.
- Barb fitting for 1/4 OD tubing 2 pcs.

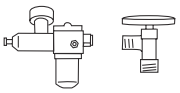


(16)

**Box No.6 (PMU)**

(18) PMU Assembly 1 set
(19) Junction Box Assembly 1 set
(20) Syringe parts 1 set
(21) Cuspidor Bowl Section
- Cup filler nozzle 1pc.
- Bowl Rinse nozzle 1pc.
- Basket Strainer & Cap 1pc.

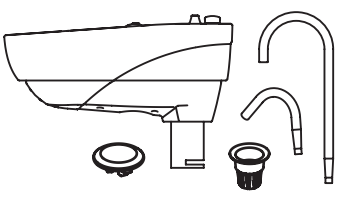
(22) Miscellaneous Parts for installation as follow.
- Socket screw M10 x 40mm (for mounting) 4 pcs.
- 1/4 sleeve 8 pcs.
- Barb fitting for 1/4 OD tubing 5 pcs.



(19)



(20)

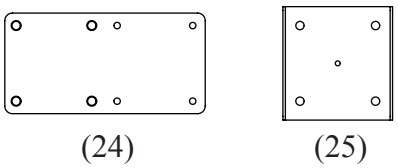


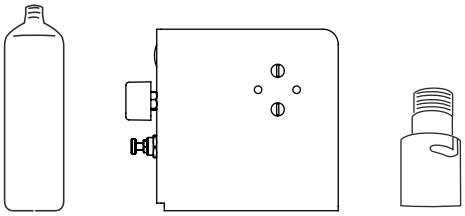
(21)

**Box No.7 (Side Delivery)**

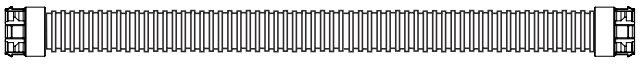
(23) Side Delivery Assembly 1 set
(24) Mounting plate 1 pc.
(25) Reinforce plate 1 pc.
(26) Water bottle 1 pc.
(27) Water bottle BKT Assembly 1 set
(28) Quick disconnect adaptor for water bottle 1 pc.
(29) Operating manual, installation manual 1 set
(30) HP tubing 3 set
(31) Syringe parts 1 set
(32) Foot controller 1 set
(33) Utility package (air)
(34) Duct hose with two clanp 1 pc.
(35) Miscellaneous parts for installation as follow

- Tapping screws (M5 x 16) 3 pcs.
- Flat washer (M10 x 22 x 1.6 SUS) 12 pcs.
- Hexagon head nut (M10 SUS) 4 pcs.
- Hex socket head cap bolt (M10 x 60) 4 pcs.
- Hexagon head bolts (M10 x 25) 4 pcs.
- Bolt cap M16 4 pcs.
- 1/8 Sleeve 5 pcs.
- 1/4 Sleeve 5 pcs.
- Tubing Assembly 1/4 Yellow 300mm
  (For connect Foot controller and Utility package) 1 pcs.


(24) (25)


(26) (27) (28)


(31) (32) (33)

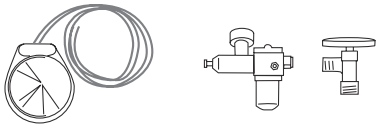

(34)

**Box No.8 (Rear Delivery)**

(36) Rear Delivery Assembly 1 set
(37) Water bottle 1 pc.
(38) Quick disconnect adaptor for water bottle 1pc.
(39) Operating manual, installation manual 1 set
(40) Syringe parts 1 set
(41) Foot controller 1 set
(42) Utility package (air)
(43) Miscellaneous parts for installation as follow

- Hex wrench M6 1 pcs.
- Cap screw No. 10-24 unc 5/8
- 1/8 Sleeve 5 pcs.
- 1/4 Sleeve 5 pcs.
- Tp M5x20 4 pcs.


(37) (38) (40)


(41) (42)

## 5. Installation for Swing Mounted Delivery System with Vac Pac for Quolis Chair

### 5-1. How to Install the Dr. Swing Arm

The swing arm assembly shall be mounted at the front of the chair under the seat.

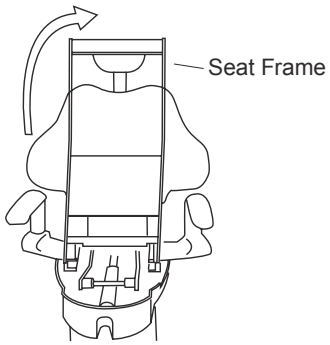
**⚠ CAUTION**

**Be sure to remove the carriage bolt from the chair before lift the chair by upper structure. This could cause damage to the chair if operate the chair without removing the carriage bolt. Refer to the chair installation manual for preparation and installation of the chair.**

1. Raise the seat frame of the chair as shown.

**⚠ CAUTION**

**Failure to lift seat frame as shown can result in damage to paint finish of swing arm in subsequent steps.**




2. Insert M10 x 35mm flat head screw in the threaded hole on the top side of the swing arm plate center and leave 1" from the top of screw to plate surface.

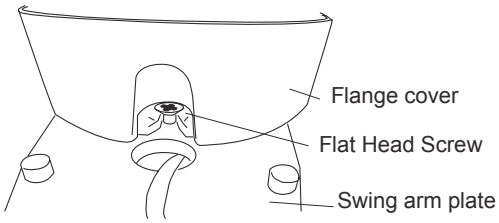
3. Raise the seat.

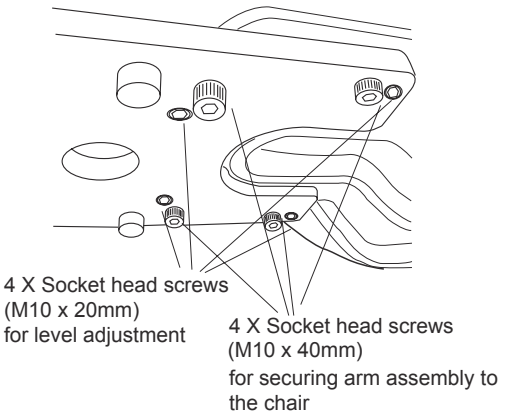
4. Attach swing arm assembly to chair by aligning M10 x 35mm screw with recess in front of the seat and slide screw into slot.

5. Locate 4 - M10 x 20mm leveling set screws and insert into bottom side of swing arm plate.

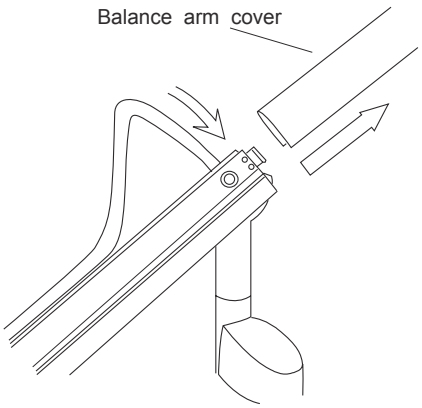
6. Adjust the level of the swing arm plate with the four socket set screws.

7. Tighten the 4 - M10 x 40 mm socket head screws. Lift the swing arm if needed.



## 5-2. How to Install the Balance Arm for the Doctor's Control



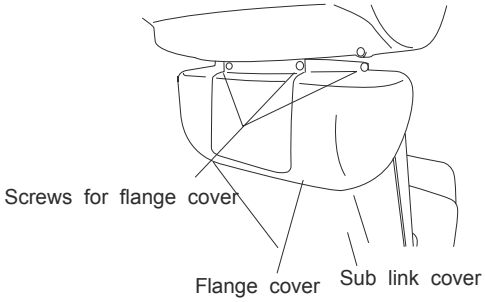

**⚠ CAUTION**

**If Vac Pac is installed with Dr. table, run tubings for Vac Pac at the same time.**

1. Lower the chair.

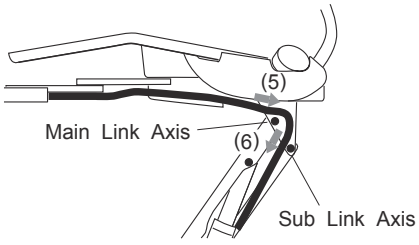
2. Insert the balance arm into the top of the swing arm.

3. Slide the balance arm cover off balance arm and route tubing and cables down into the swing arm. Make sure that the hoses are not twisted.

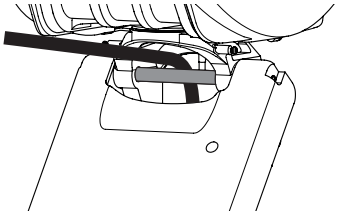



4. Remove the seat flange cover from chair by removing four M5 x 15mm screws and sub-link cover by removing two M5 x 15mm screws on the back of the chair cantilever lift arm.

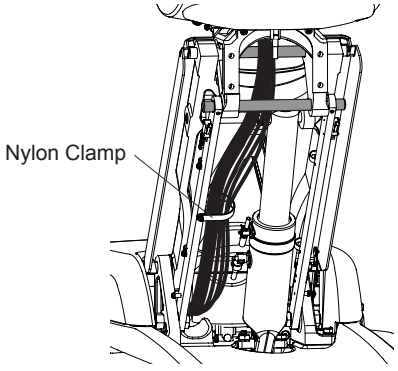
5. Route umbilical tubing & wires from swing arm into chair. Tubing & wires should be routed over the top of the Main Link Axis in front of the cantilever arm.

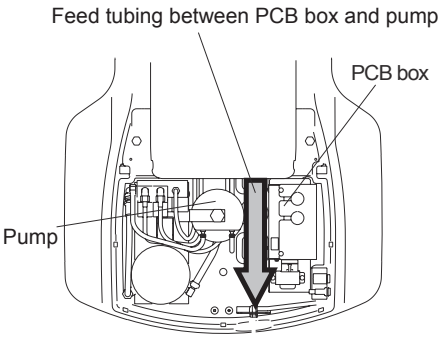



6. Feed umbilical down between Main Link Axis and Sub Link Axis. Tie the tubing and wires with white Nylon Clamp.



Route tubing and wires over the top of the Main Link Axis in front of the chair

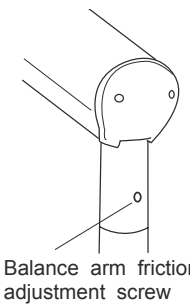


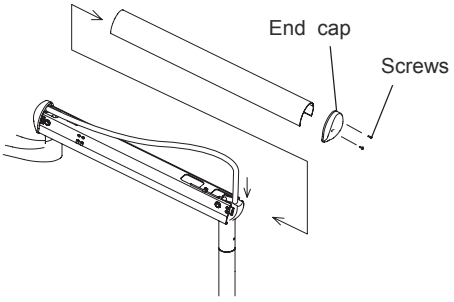




7. Feed tubing between PCB box and pump and out to the front of the chair.

8. Slide in the balance arm cover and into the channels along the balance arm and the balance arm end cap with two M4 x 10mm screws.

9. Adjust M6 x 5mm balance arm friction adjustment screw (M6 x 5mm).

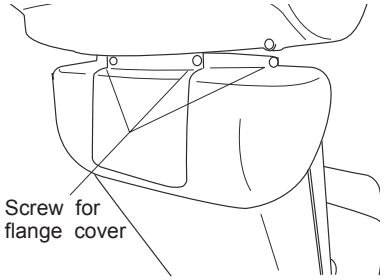


### 5-3. How to Install the Vac Pac Section

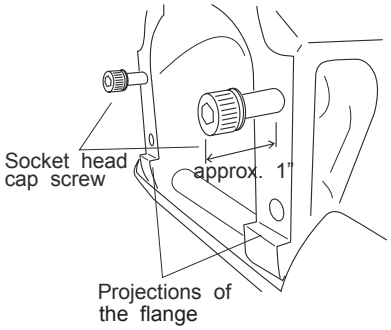
**⚠ CAUTION**

**If swing arm Dr. table is installed with Vac Pac, run tubings for Dr. table or at the same time.**




1. Remove four screws M5 x 15mm and the flange cover of the chair.

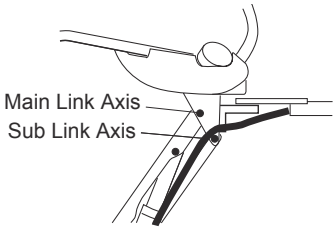
2. Insert two M10 x 40mm socket head cap screws into the top threaded hole on the rear side of the chair. Screws should extend approximately 1" from chair.

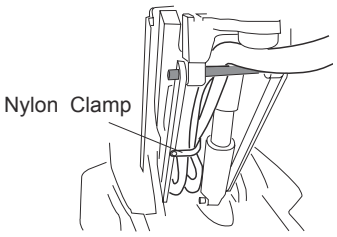


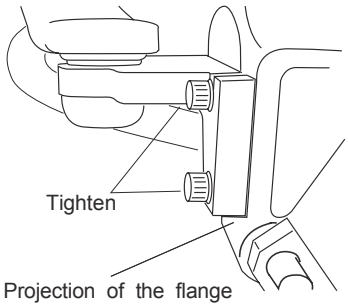

3. Hook the assistant arm mounting bracket underneath the two socket head cap screws. Tilt the bracket slightly and lift it.
   Place the lower edge of the mounting bracket on the projections of the flange.

4. Tighten lower M10 x 40mm socket head cap screws through swing arm mounting bracket. Tighten all four screws.

5. Route the umbilical tubing with unit umbilical down through chair, between the main link and sub link Axis, and bring the end to the junction box. Tie the tubing with the white Nylon Clamp.
   Make sure that hoses are not kinked

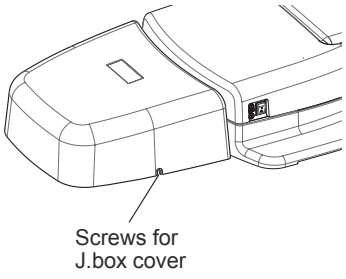


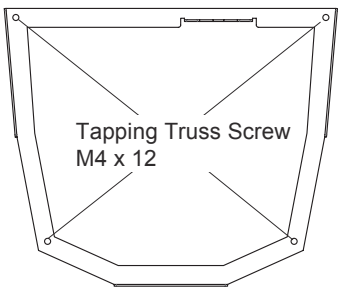

### 5-4. How to Install the Junction Box

Refer to floor template for connection of water, air, power, drain hose and vacuum hose.




1. Open the junction box cover by removing two slotted M5 x 10mm screws from each side of the Junction box cover.

2. Place the junction box frame in front of the chair. (The plan of the plumbing position needs to be done in advance. See the flow diagram)



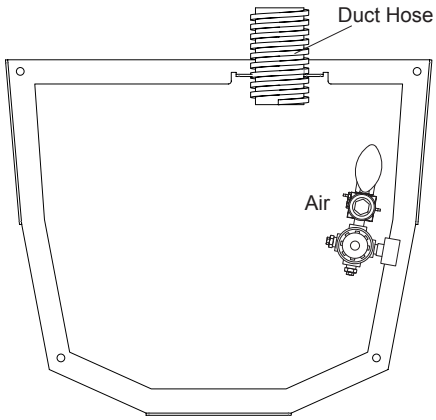

3. Attach the junction box frame to the floor with four M4 x 12mm tapping truss screws.

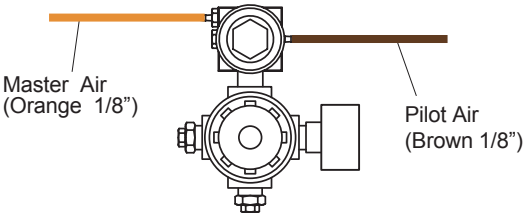
## 5-5. How to Plumb the Junction Box

1. Cut the duct hose to desired length and insert it between retainers inside of the pump cover and the junction box.

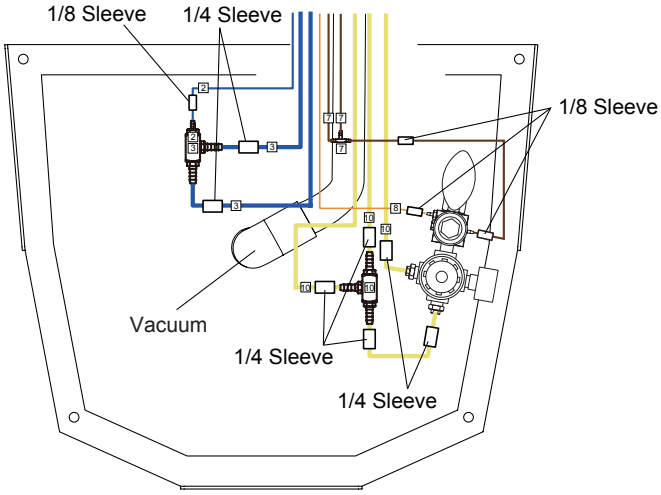
2. Attach the manual on/off valve to the air supply pipe.
   Purge air through valve to clean debris.
   Attach automatic valve assembly for air to manual valve.

3. Connect tubings and 5/8 vacuum hose as below drawing shows.

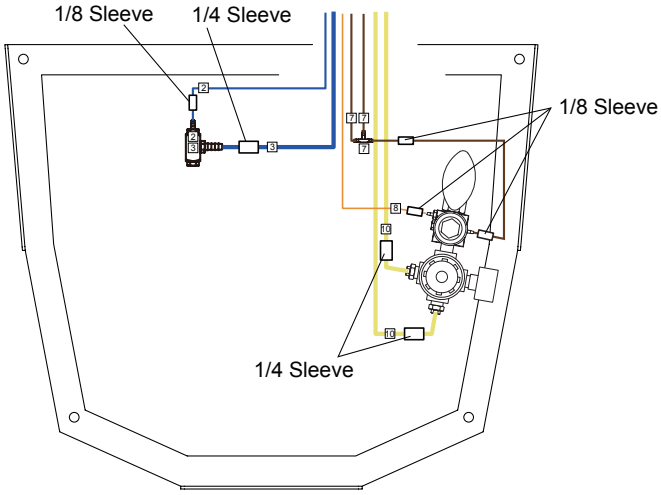



Swing Arm Dr.table + Vac Pac




Swing Arm Dr.table

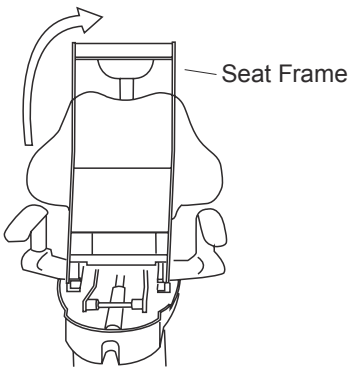


## 6. Installation for Over the Patient Delivery System with Cuspidor (PMU) for Quolis Chair

### 6-1. How to Install the PMU

The PMU shall be mounted at the front of the chair under the seat.

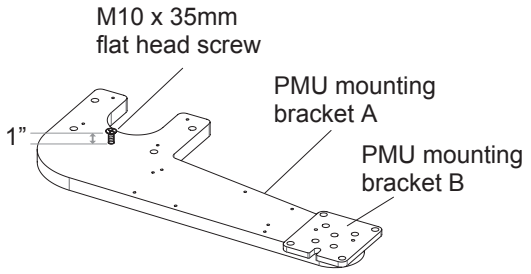
1. Raise the seat frame of the chair as shown.




**⚠ CAUTION**

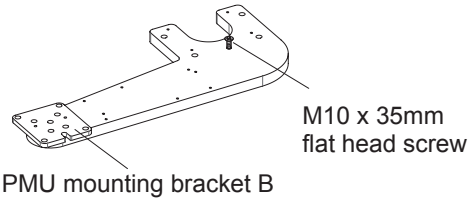
**Failure to lift seat frame as shown can result in damage to paint finish of swing arm in subsequent steps.**

2. Insert M10 x 35mm flat head screw in the threaded hole on the top side of the PMU mounting bracket A and leave 1" from the top of screw to plate surface.



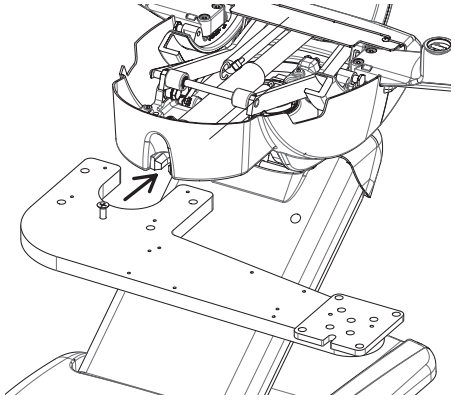

Note: In case of mount PMU onto right side of the chair. Remove the bracket B from bracket A. Turn the bracket A over and reattach the bracket B opposite side.

In case of mount PMU onto the chair right




3. Raise the seat.

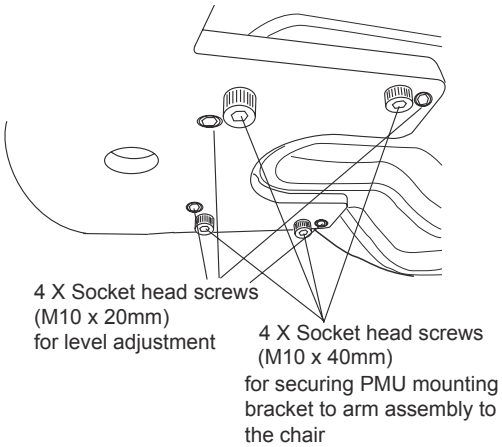
4. Attach PMU mounting bracket to chair by aligning M10 x 35mm screw with recess in front of the seat and slide screw into slot.



5. Locate 4 - M10 x 20mm leveling set screws and insert into bottom side of PMU mounting bracket.

6. Adjust the level of the swing arm plate with the four socket set screws.

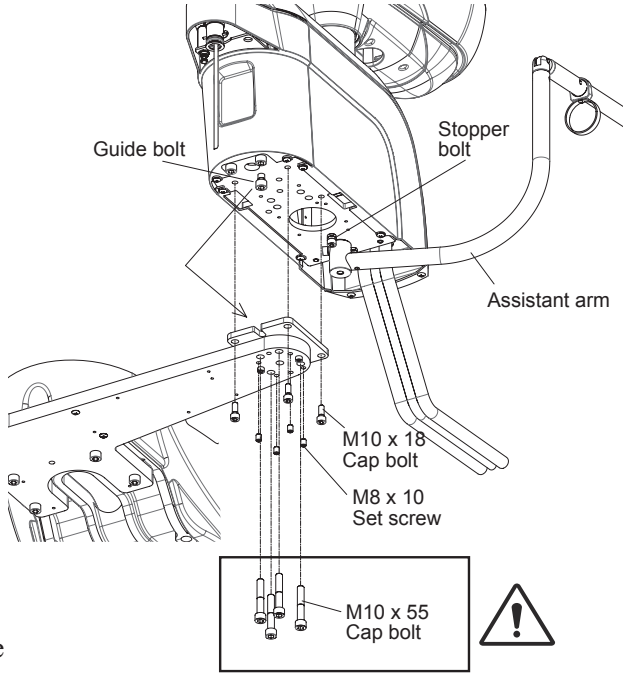
7. Tighten the 4 - M10 x 40 mm socket head screws. Lift the PMU mounting bracket if needed.



8. Attach PMU onto the PMU mounting bracket by aligning guide bolt with recess in front of the PMU mounting bracket and slide guide bolt into slot. Temporarily fix with three M8 x 18 cap bolts.

9. Adjust the level of the PMU with four M8 x 10 set screws.

10. Tighten the four M10 x 55 cap bolts and three M10 x 18 cap bolts.

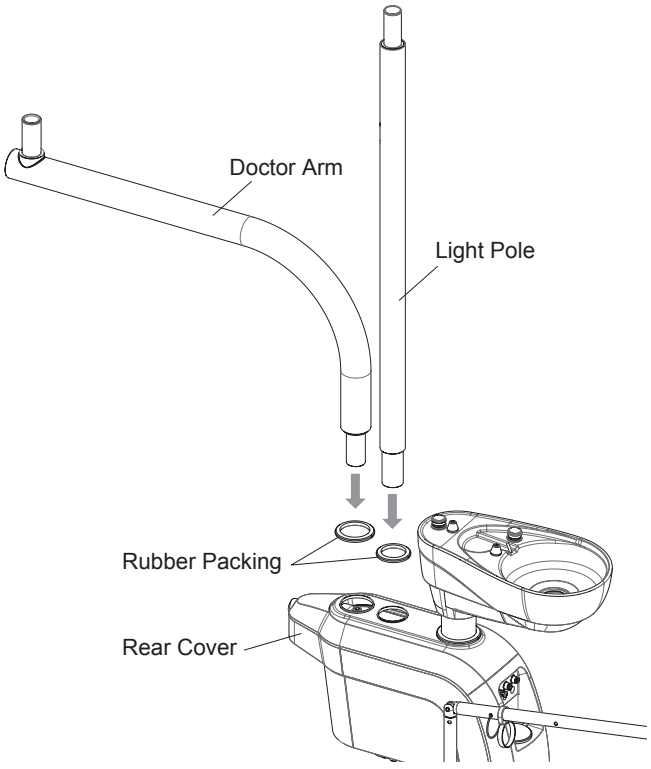


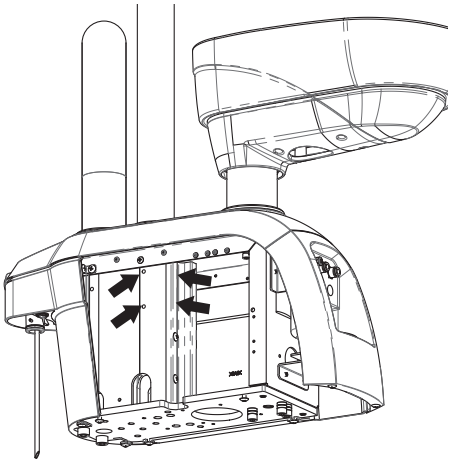

**⚠ WARNING**

**Be sure to fix the PMU to the mounting bracket together with four M10 x 55 cap bolts. If not, the PMU may fall over.**

Note : In the case of that the PMU mount to other side.
Remove the stopper bolt from the cuspidor bottom.
Change the position of the assistant arm to other side and re-attach the stopper bolt to same position.
Make sure attach the stopper bolt after changing the assistant arm position. If not, the assistant arm and hoses hit each other and it could cause damage to the handpiece hoses.

11. Insert the light pole and doctor arm with rubber packing.
Fix the light pole to cuspidor chassis with 4 screws before install power box of light in it.
To brake the rotation of the doctor arm, remove the rear cover of cuspidor and tighten the adjustment screw.

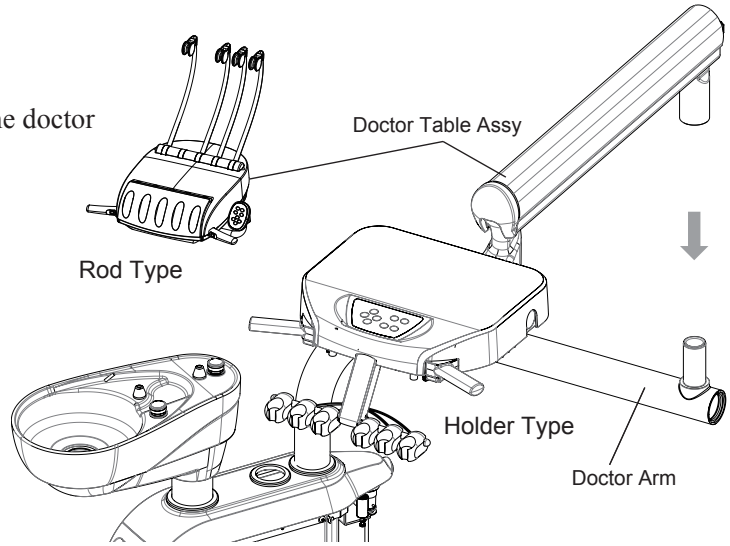


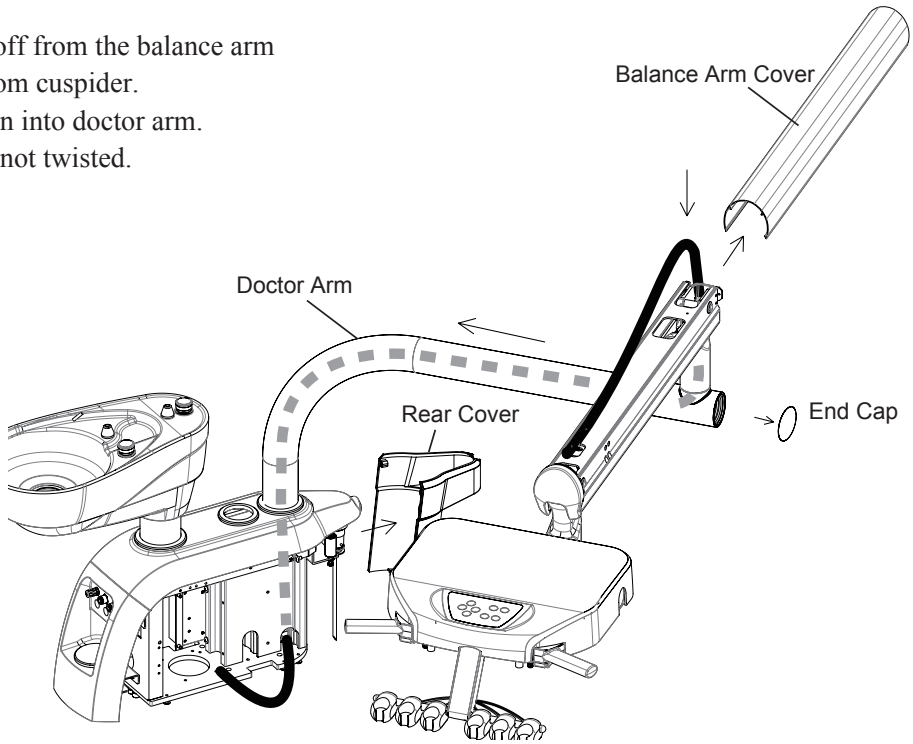
## 6-2. How to Install the Doctor Table

### 6-2-1. Holder Type / Continental Type

1. Insert the doctor table assy into the top of the doctor arm.

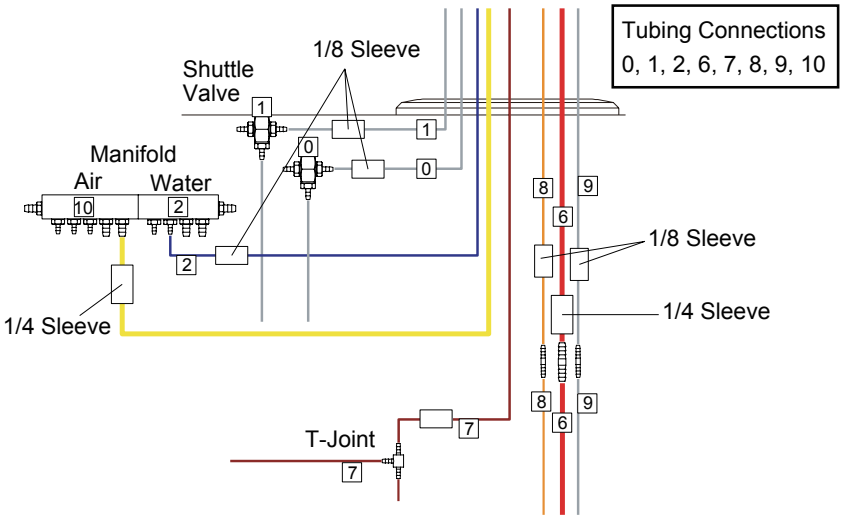



2. Slide the balance arm cover off from the balance arm and remove the rear cover from cuspider.
   Route tubing and cables down into doctor arm.
   Make sure that the hoses are not twisted.

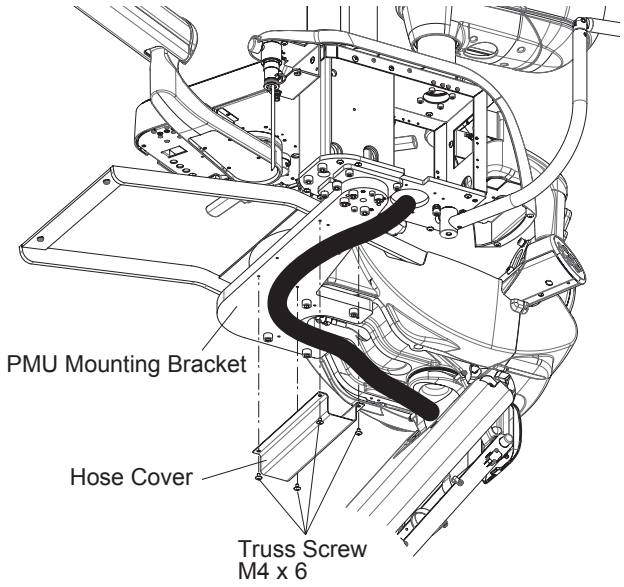



3. Connect the tubing labeled 0, 1, 2, 6, 7, 8, 9, 10 into the PMU.

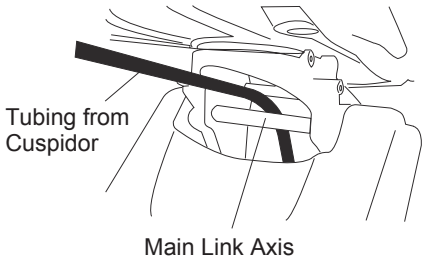
   0 : Pilot air for bowl flush
   1 : Pilot air for cupfiller
   2 : Bottle water to table
   6 : Drive air to foot controller
   7 : Pilot air for main switch out / water bottle pressure air
   8 : Pilot air for main switch in
   9 : Coolant air
   10 : Input air to doctor table

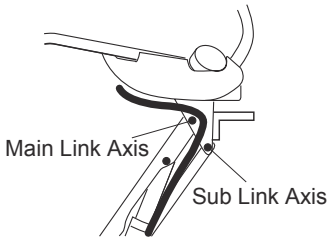


4. Route the tubing from cuspidor through under the PMU mounting bracket.
   Attach the hose cover to bottom of PMU mounting bracket and fit it with truss four screws M4 x 16.

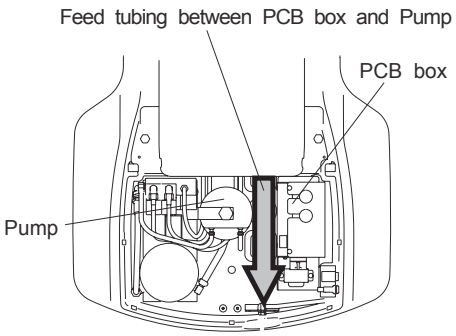



5. Route tubing down through the chair between the main link axis and sub link axis.

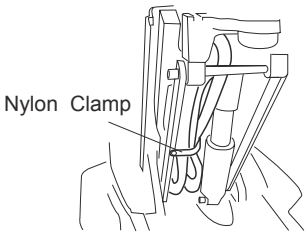



6. Feed tubing between PCB box and pump and out to the front of the chair.




7. Tie the tubing with the wire nylon clamp.
   Make sure that hoses are not kinked.



**6-2-2. Rod Type**

**① How to Install the "Sub Tray" to the Delivery Head for Rod Type**

1. Install the tray arm to the delivery head with M16 nut.
   Insert the washer and bearing as shown in figure 1.

2. Insert the sub tray to the tray arm.

3. Adjust the friction of arm and tray with the sub tray friction adjustment screw and tightening nut power.

4. Cover the M16 nut with CAP nut M16.

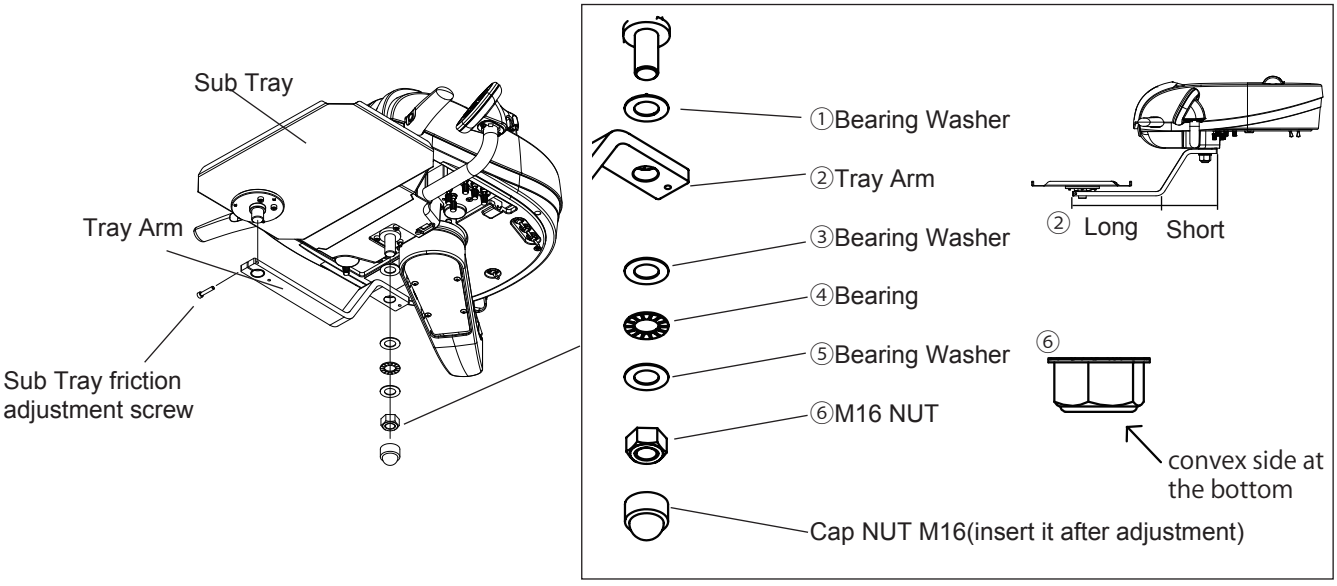



Fig.1 Order of Attachment

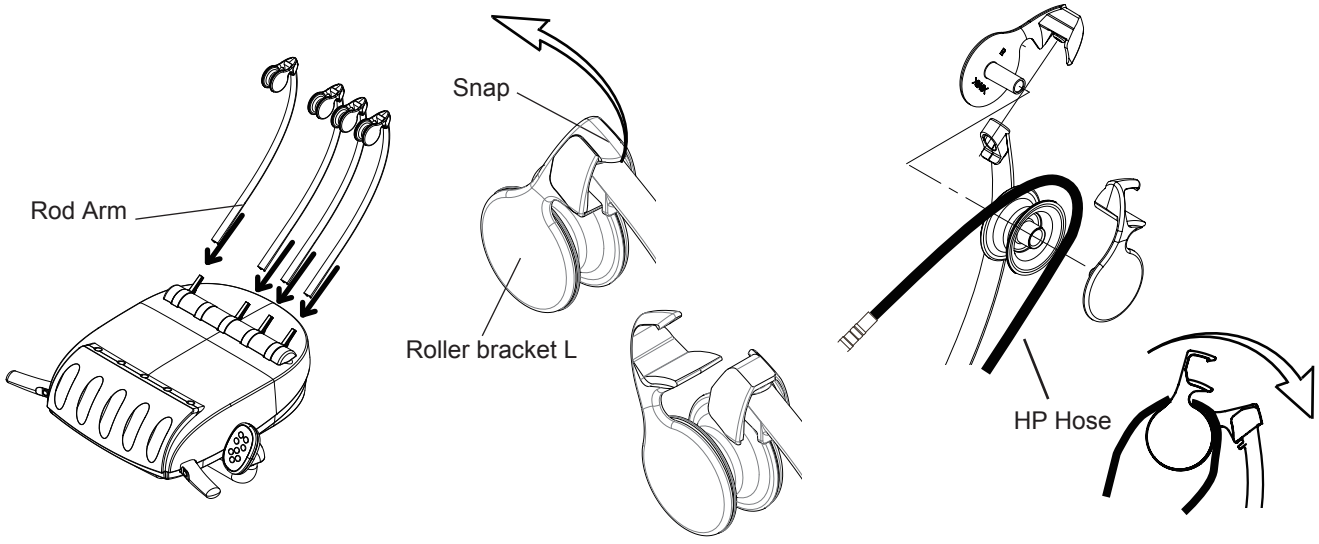
**② How to set up HP Hose**

1. Install the rod arm to the delivery head.

2. Remove the fixed roller bracket by Snap.

3. Insert the HP hose between roller.

4. Fix the HP hose to the roller.




(1) (2) (3) • (4)

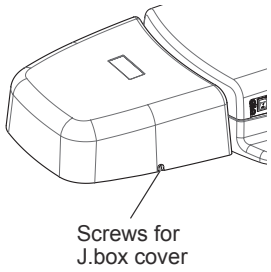
### 6-3. How to Install the Junction Box

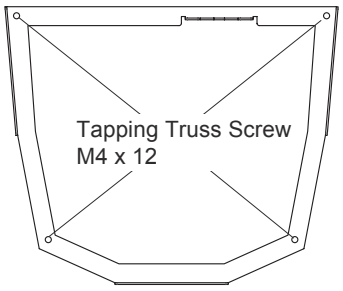
Refer to floor template for connection of water, air, power, drain hose and vacuum hose.

1. Open the junction box cover by removing two slotted M5 x 10mm screws from each side of the Junction box cover.

2. Place the junction box frame in front of the chair. (The plan of the plumbing position needs to be done in advance. See the flow diagram)

3. Attach the junction box frame to the floor with four M4 x 12mm tapping truss screws.

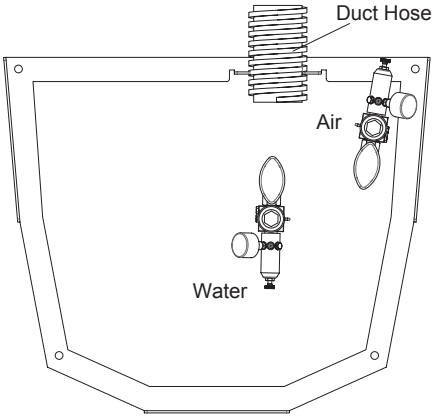


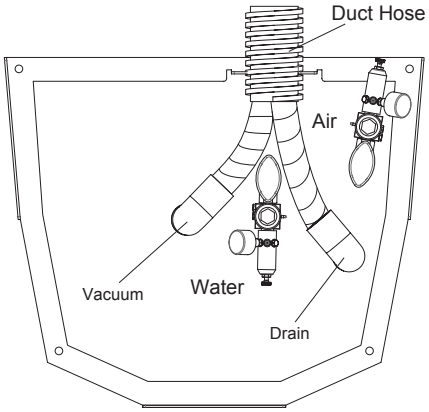

### 6-4. How to Plumb the Junction Box

1. Cut the duct hose to desired length and insert it between retainers inside of the pump cover and the junction box.

2. Attach the manual on/off valve to the air supply pipe.
   Purge air through valve to clean debris.
   Attach automatic valve assembly for air to manual valve.
   Do the same thing for the water assembly ordered with unit models.

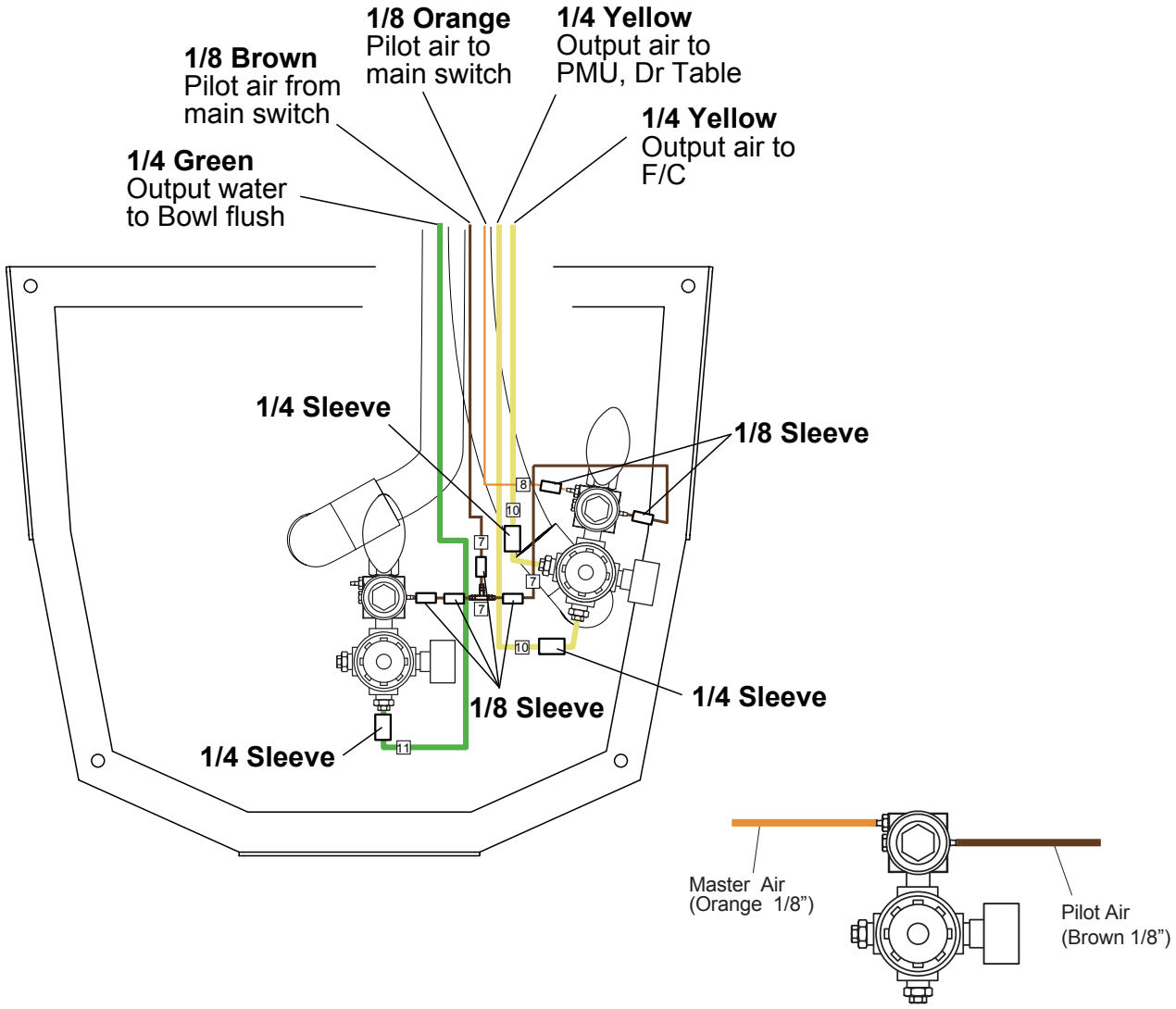



3. Connect vacuum hose (5/8) and Drain Hose (3/4) to the floor. Vacuum hose has uneven surface.
   We supply long hose as needed and cut them accordingly.



4. As below drawing shows, connect tubings.

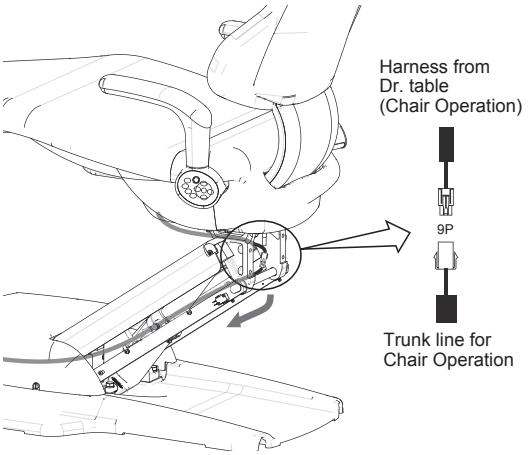
PMU Type (Table + Spittoon + Vacuum)



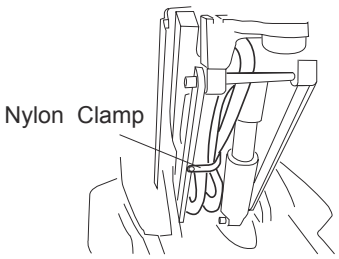
## 7. How to Connect Chair Operation Cable of the Dr table for Quolis Chair

1. Connect the trunk line of the chair operation to the harness from Dr.table. (Note : Trunk line of the chair operation is supplied from unit package)

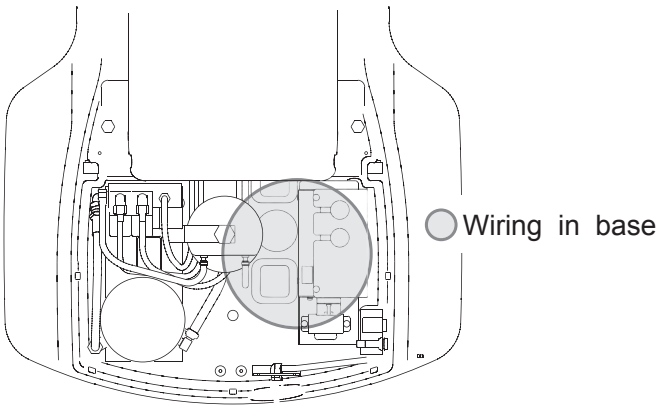
2. Route the trunk line of the chair operation into the chair and bring to the front of the chair base.



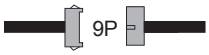

3. Tie the trunk line for chair operation and other tubings with the wire nylon clamp.
   Make sure that hoses are not kinked.




4. Connect the trunk line of the chair operation to the harness from chair control pcb in the base.




Dr.Table operating line




From Dr,table
Membrane switch

From Chair Control PCB.

## 8. Installation for Swing Mounted Delivery System with Vac Pac for Bel-50 Chair

### 8-1. How to Install the Dr. Swing Arm

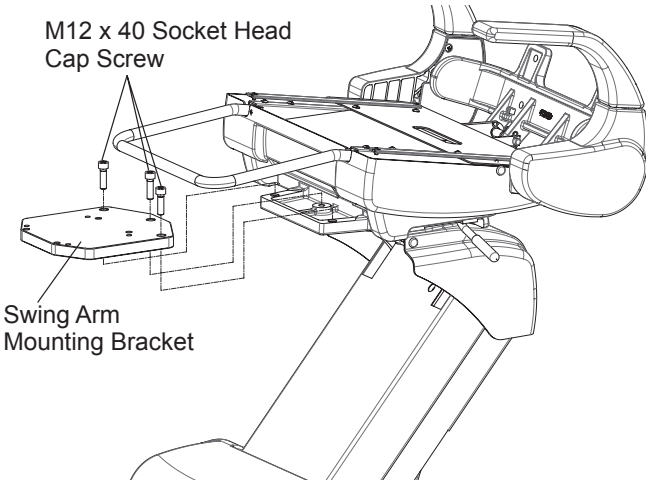
The swing arm assembly shall be mounted at the front of the chair under the seat.

**⚠ CAUTION**

**Be sure to remove the carriage bolt from the chair before lifting the chair.**
**Failure to remove the carriage bolt could cause damage to the chair.**
**Refer to the chair installation manual for preparation and installation of the chair.**

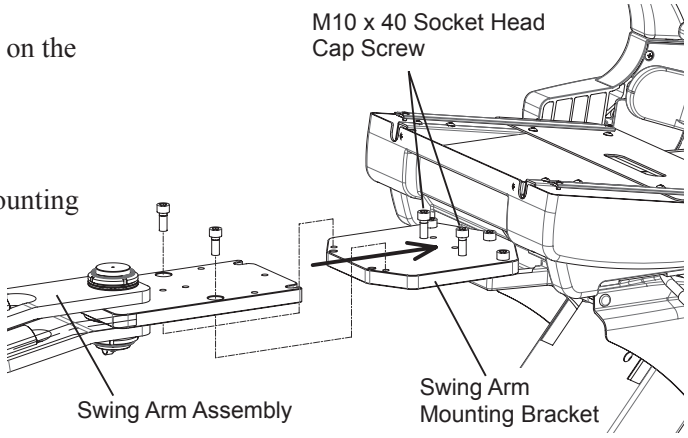
1. Raise the seat to the highest position.

2. Attach swing arm mounting bracket to chair by using 3 - M12 x 40 socket head cap screws.




3. Premount the 2 - M10 x 40 socket head cap screws on the swing arm mounting bracket.

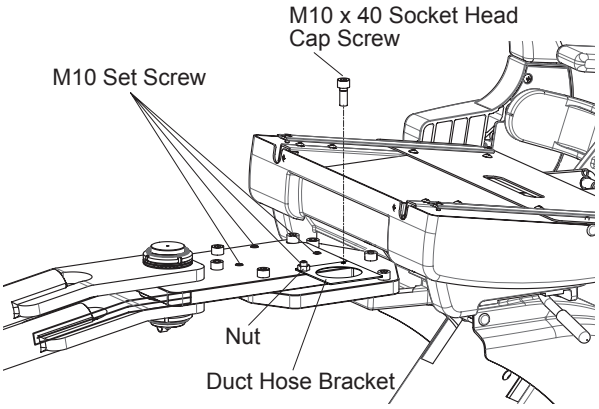
4. Insert the swing arm assembly to the swing arm mounting bracket and tighten it with 2 screws temporarily.



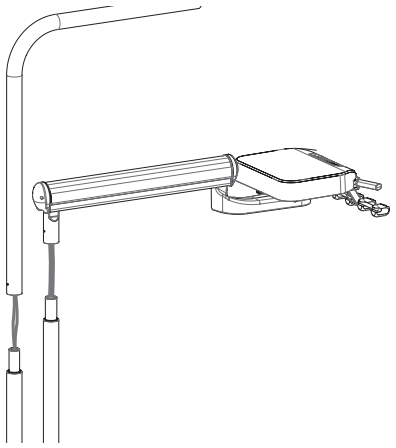

5. Remove 1 - socket head cap screw that is fixing the swing arm assembly and attach the duct hose bracket on the plate of the swing arm assembly by using same screw.
   Insert the leveling set screw with locking nut through hole in duct hose bracket. Nut should be tightened after final leveling of swing arm assembly.

6. Adjust the level of the swing arm assembly with 4 - M10 set screws.

7. Tighten the 4 - M10 x 40 socket head cap screws to secure swing arm assembly to the swing arm mounting bracket.



### 8-2. How to Install the Balance Arm for the Doctor's Control



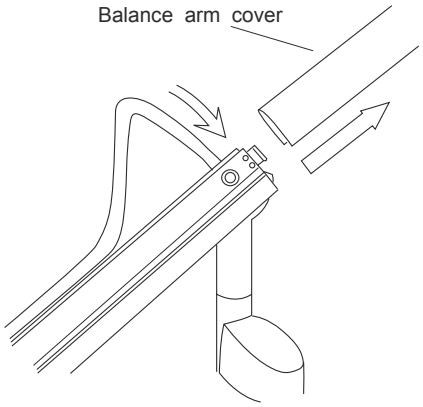
**⚠ CAUTION**

**If Vac Pac is installed with Dr. table, run tubings for Vac Pac at the same time.**

**Note : Installation of dental light, switch box and power supply box, refer to dental light installation instructions.**

1. Insert the balance arm into the top of the swing arm.

2. Slide the balance arm cover of the balance arm and route tubing and cables down into the swing arm. Make sure that the hoses are not twisted.



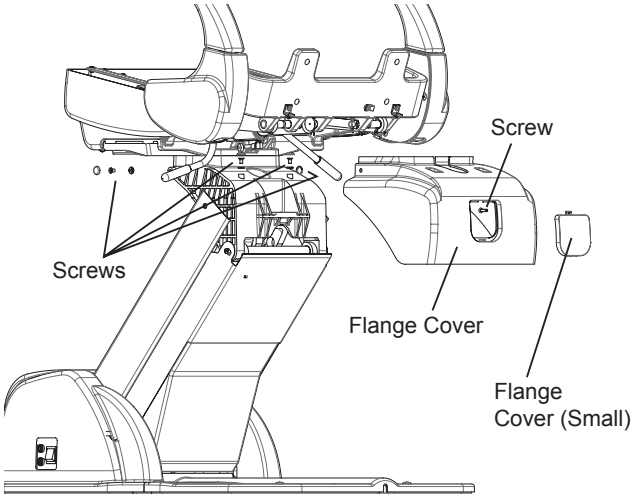

### 8-3. How to Install the Vac Pac Section

**⚠ CAUTION**

**If the Dr. swing arm is installed with Vac Pac, run tubings for Dr. table or at the same time.**

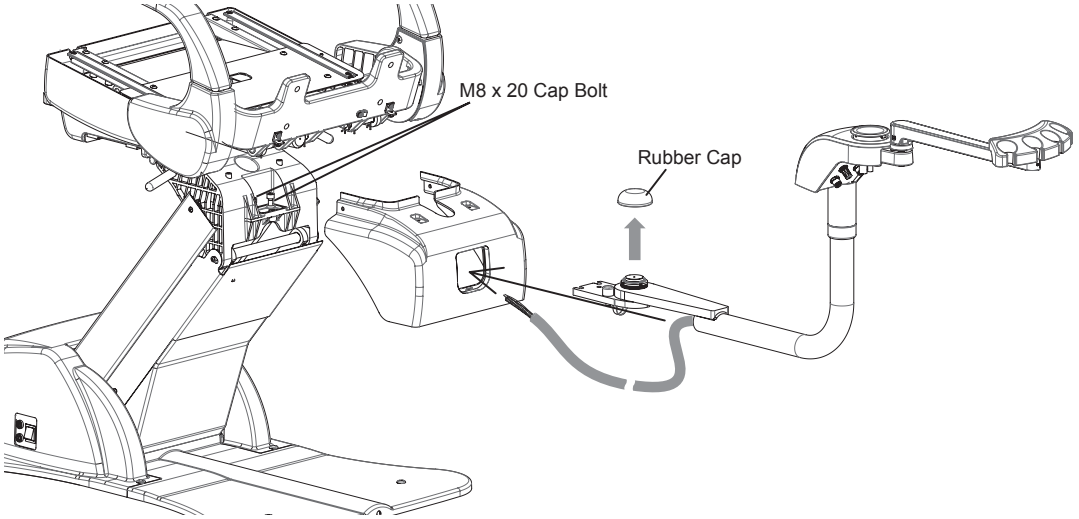
1. Remove the flange cover by loosening (4) screws.

2. Remove a flange cover (small) by loosening (1) screw from the inside of the flange cover.

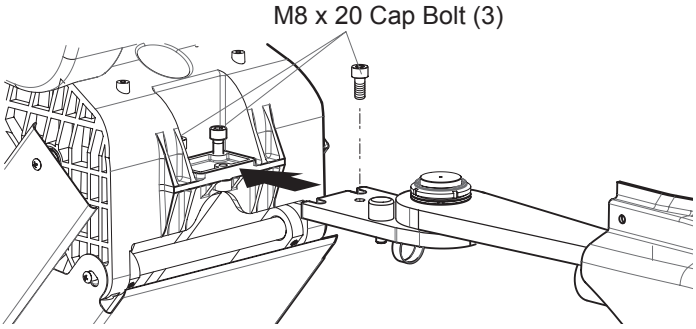


3 Attaching the Vac Pac to the chair

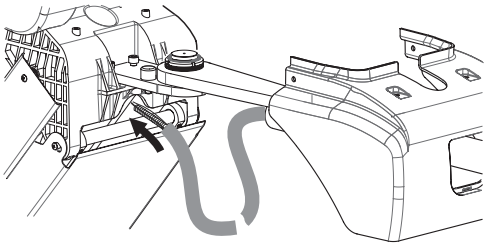
Temporarily insert two M8 x 20 cap bolt to the top threaded hole on the rear side of the chair flange. Remove the rubber cap from the mounting bracket. (After installing the flange cover, attach the rubber cap to the mounting bracket.) Slide the flange cover over the end of the mounting bracket with tubings.

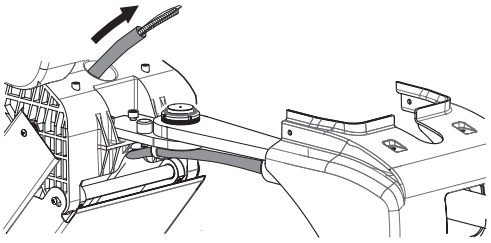



4. Fix the mounting bracket to the chair flange by using (3) M8 x 20 cap bolt.

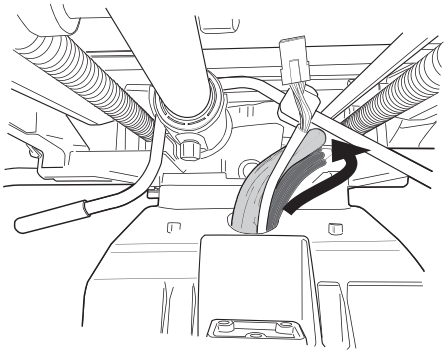



5. Pass the Vac Pac tubings from the under seat flange through the hole in the seat flange.

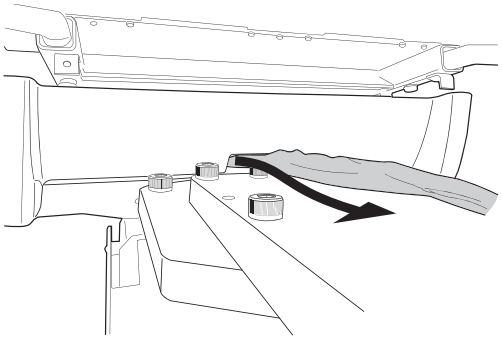




6. Root the tubing upward and underneath seat area. (View from rear of chair, looking toward legrest)



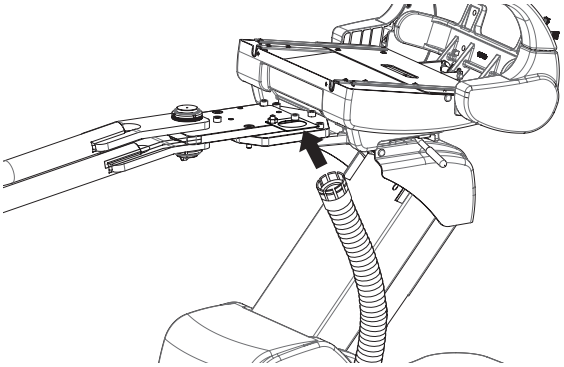
7. Pull the tubing out through the notched cut out in front of the seat flange cover as shown in the right figure.
   Feed Vac pac tubing through opening on the side of the umbilical retaining bracket.



Vac pac tubing exits through notched cut-out in front of the seat

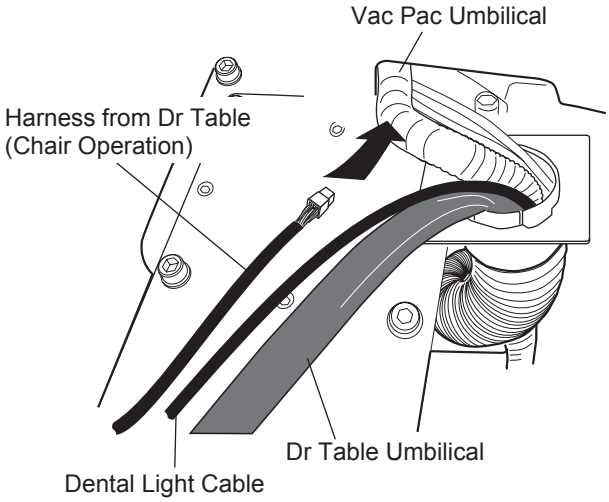
**8-4. Route the Dr table umbilical and Vac Pac Umbilical to the Umbilical Duct Hose**

1. Attach the duct hose to the duct hose bracket.



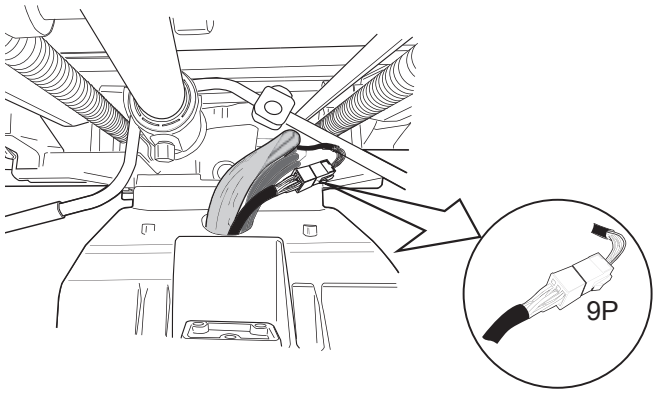
2. Route the harness for chair operation from Dr table to the notched cut-out in front of the seat flange cover as shown in the right figure.

3. Dr table umbilical and Vac Pac umbilical are both feed together into the outer umbilical duct hose and bring it them to the J-Box.




**Note : Installation of dental light, switch box and power supply box, refer to dental light installation instructions.**
**Pass the dental light cable to the duct hose at the same time.**

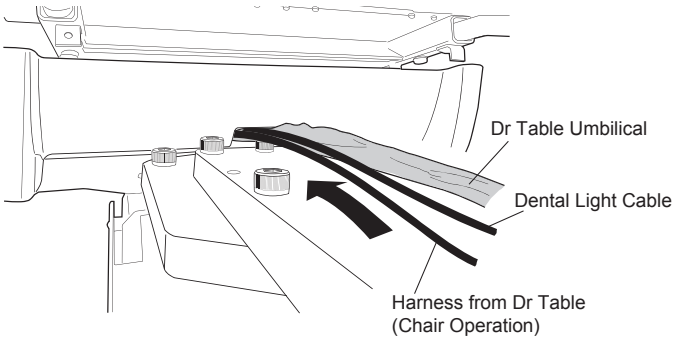
4. Connect the connector of the chair operation from Dr table to the connector from chair control pcb in the flange section.



**8-5. If the umbilical duct hose is not used, follow the instructions below.**

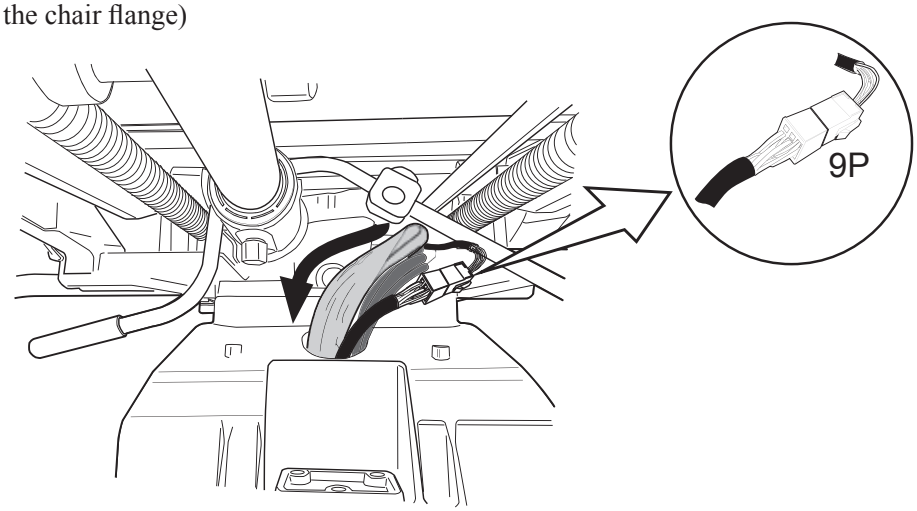
**Note: Installing the Swing Mounted Delivery System and Vac Pac System, Please refer to 8-1, 8-2 and 8-3 sections.**

1. Feed the Dr table umbilical, dental light cable and harness for the chair operation from the Dr table through to the notched cut-out in front of the seat flange cover as shown in the right figure.
   Feed the umbilical and cables through along the seat potentiometer and bring it to behind the chair.



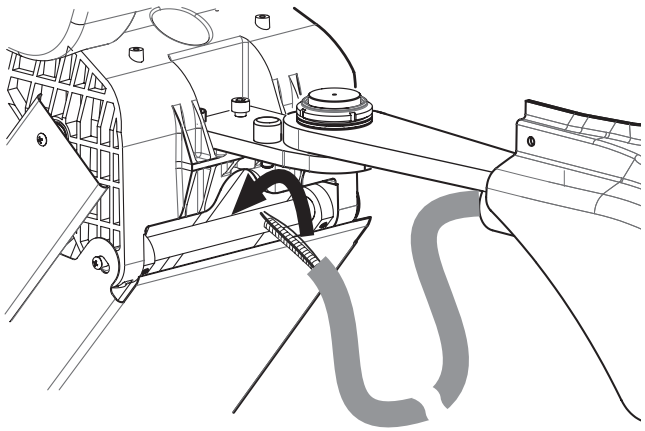

2. Connect the connector (9P) from the Dr table and connector (9P) from the chair control pcb in the flange section.

3. Pass the umbilical and cable through the hole of the seat flange.
   (View from rear of the chair flange)



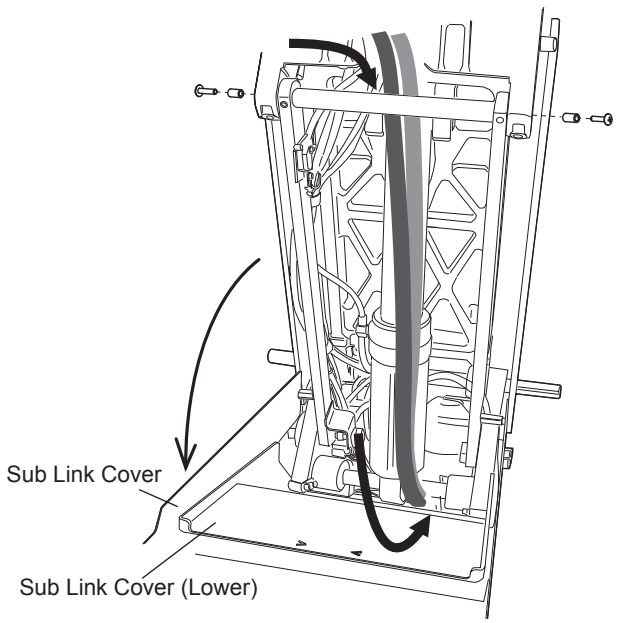

View from rear of the chair

4. Root the Vac Pac umbilical between the hole of the chair flange and the link bar.

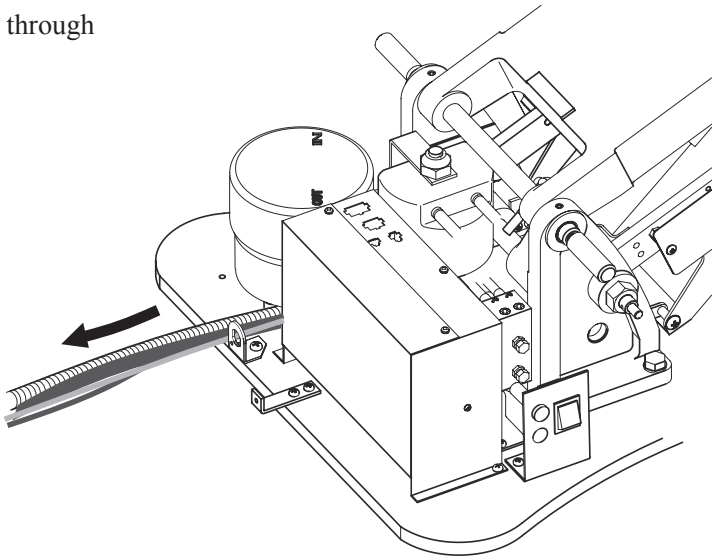


**Note: Installing the Vac Pac Section, refer to section "8-3. How to Install the Vac Pac Section (3 & 4)"**

5. Open the sub link cover by removing two screws. Route Dr umbilical and Vac Pac umbilical down through the chair between the main link axis and sub link axis.




6. Pass the Dr umbilical and Vac Pac umbilical through between the PCB box and the motor pump.

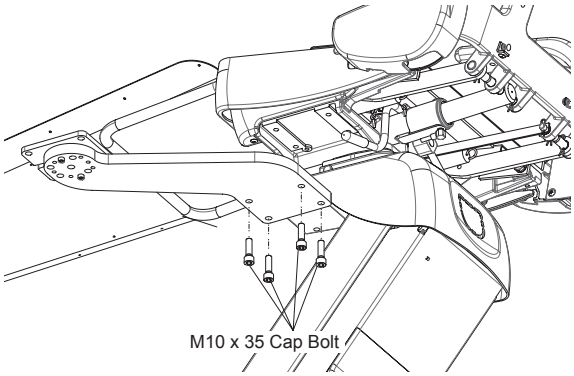


**Note : Please confirm that the Dr umbilical and Vac Pac umbilical are not excessively pulled by operating the chair up & down, backrest reclining & raising and seat rotation.**

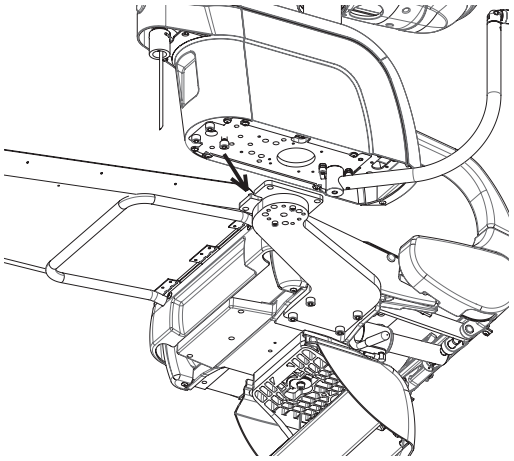
## 9. Installation for Over the Patient Delivery System with Cuspidor (PMU) for Bel-50 Chair

### 9-1. How to Install the UMP

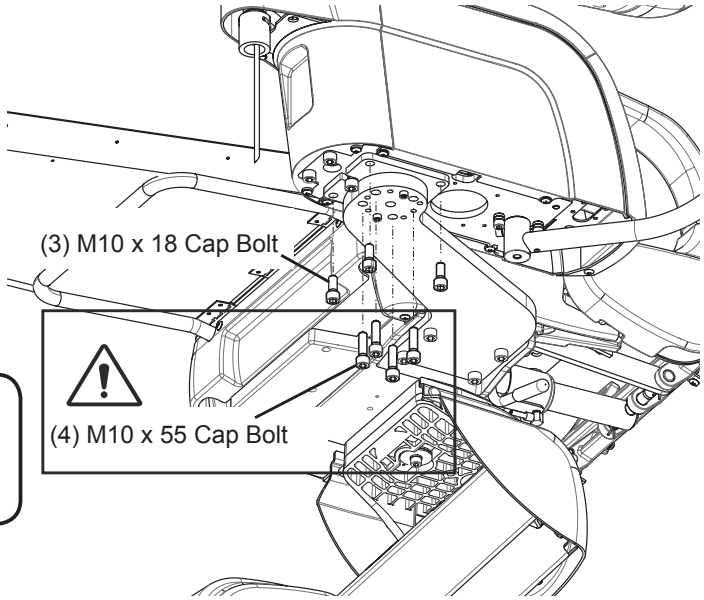
1. Attach PMU mounting bracket to chair by using M10 x 35 Cap bolts.




2. Attach PMU onto the PMU mounting bracket by aligning guide bolt with recess in front of the PMU mounting bracket and slide guide bolt into slot.



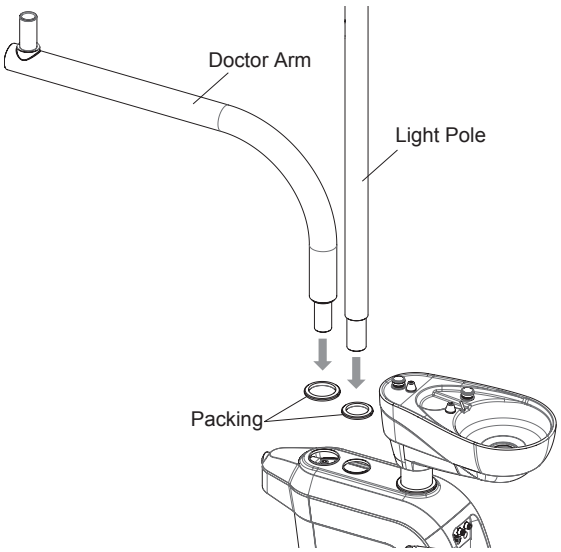
3. Secure PMU to the mounting bracket by using (3) M10 x 18 Cap bolt and (4) M10 x 55 Cap bolt.

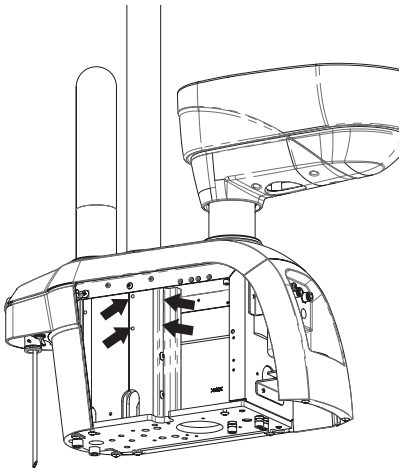



**⚠ WARNING**

**Be sure to fix the PMU to the mounting bracket together with four M10 x 55 cap bolts. If not, the PMU may fall over.**

4. Insert the light pole and doctor arm with rubber packing. Fix the light pole to cuspidor chassis with 4 screws.

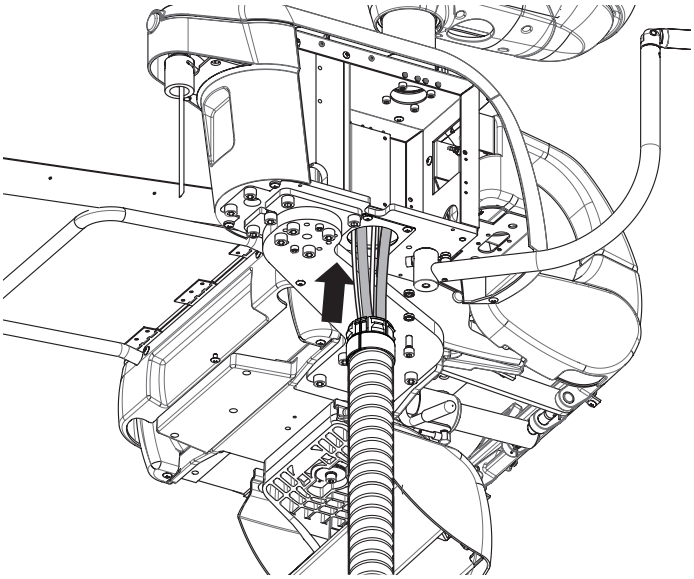


5. Installing the Doctor table section. Please refer to **6-2. How to Install the Doctor Table (1~3)** sections.

6. Installing the Dental Light. Please refer to installation instruction of the dental light.

7. Snap the upper umbilical duct hose into the circular hole in the bottom of the PMU.



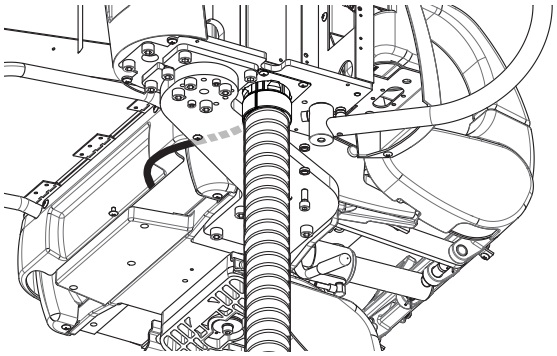
8. Connect tubing from the upper umbilical inside of the PMU with tubing from the Doctor table. Connect tubing by matching numbered tags on tubing or simply match by tubing color.

9. Connect drain hose to drain hose joint from the cuspidor bowl by using the hose clamp.

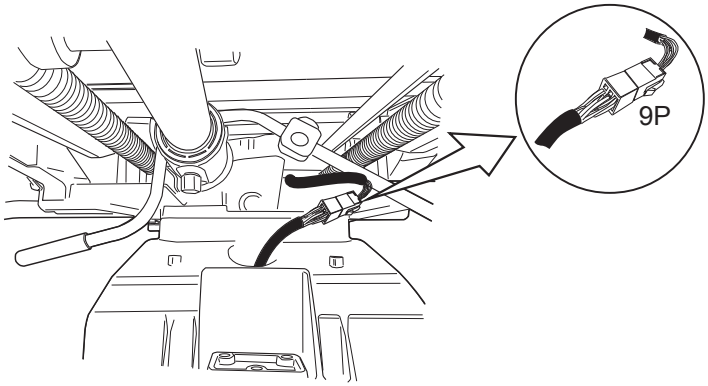
10. Connect vacuum hose to vacuum hose joint from the solid corrector by using the hose clamp.

11. Attach electric lines (6P for 24V, Optic and 1P for earth) from umbilical inside of the PMU.

12. Pass the harness of the chair operation from the Dr table through the notched cut-out in front of the seat flange cover.



13. Connect the connector from Dr table to the connector from chair control pcb in the flange section.




**9-2. How to Install the J-Box**

1. Secure J-Box frame to the floor by using mounting holes provided, at desired location.

2. Connect lower end of Umbilical Duct Hose to J-Box.

3. Attach the manual shut-off valve to the J-Box air and water supply pipes. Purge lines prior to attaching air/ water assemblies and umbilical tubing to shut-off valves. Attach Air & Water regulator assemblies to umbilical tubing.

4. Test the Delivery System to verify that there is no air or water leakage and that the unit is fully functional. Place J-Box Cover over the Frame and secure with (4) 10-32 x 1/2 " slotted screw provided.

Note: Also refer to the **6-3, 6-4, 10, 13, 21-12** sections for installation of the J-Box

## 10. How to install the Foot Controller

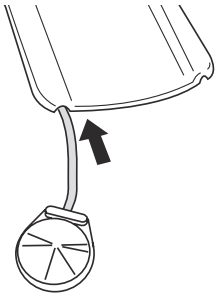
| Number | Color (Size) | Function |
|---|---|---|
| 6 | Red (1/4" OD) | Drive |
| 10 | Yellow (1/4" OD) | In |
| 5 | Yellow (1/8" OD) | Chip (Air for spray, not used) |
| 9 | Gray (1/8" OD) | Water (Pilot air for water for spray, not used) |

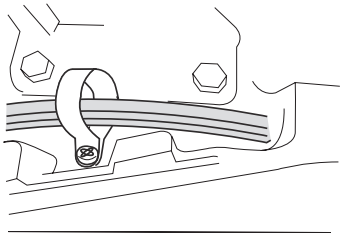
1. Insert foot control tubing through channel in chair base and feed through chairs into J-box.

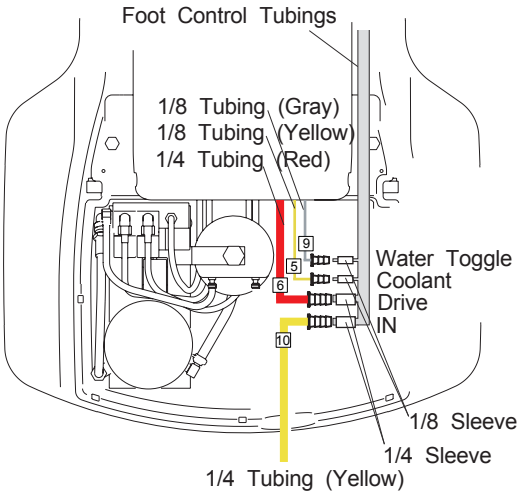
2. Connect the tubing labeled 5, 6, 9 and 10 to the tubing from the doctor table.

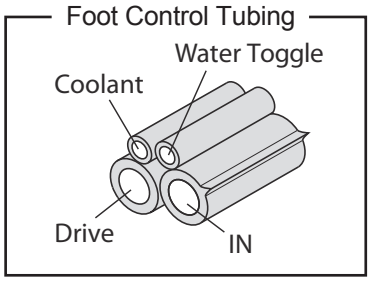
Note : Although the 1/8" OD gray tubing and yellow 1/8" OD tubing are not used, connect to prevent air leaks.

3. Attach the foot control tubing to the chair base with a nylon clamp (see photo).








## 11. How to Install the Monitor Arm

1. Install the monitor arm to the swing arm. See in **5-1. How to install the Dr. swing arm**.

2. Feed the cables thought the swing arm and the chair, and bring the end into the junction box.

3. Install the monitor mount to the monitor arm.

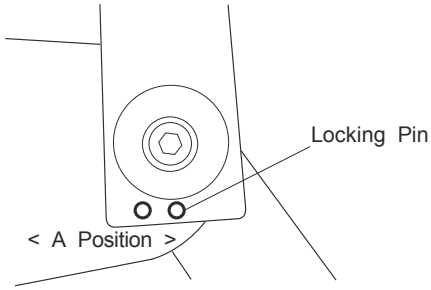
4. Connect the cables inside Junction box.

Note : LCD monitors are not supplied from Belmont. The mounting holes on back of monitor should be designed for attachment of 75 or 1000 mm VESA mgt pattern.

## 12. How to Install the Dental Light

1. Installation of the dental light. Please refer to the installation instruction of the dental light.

2. Position the swing arm to either side of the chair and lock it in place with the dental light locking pin.
   When you combine Dr. Table and PMU with a water bottle.
   Set Lock Pin on A position to avoid the interference of a bottle and a swing arm.




### ⚠ CAUTION

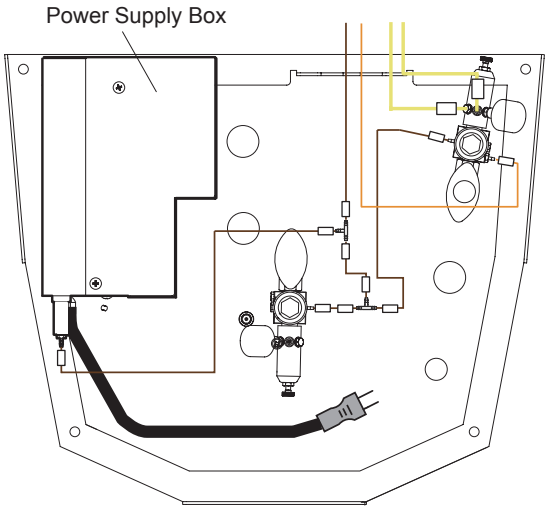
**Do not remove the cardboard paper put on the swing arm until the seat cushion has been attached to the seat frame with screws, otherwise the surface of the light pole will be scratched off when swinging the arm.**

## 13. Installation for Power Supply Box (Micromotor, Electric Scaler and Fiber Optic)

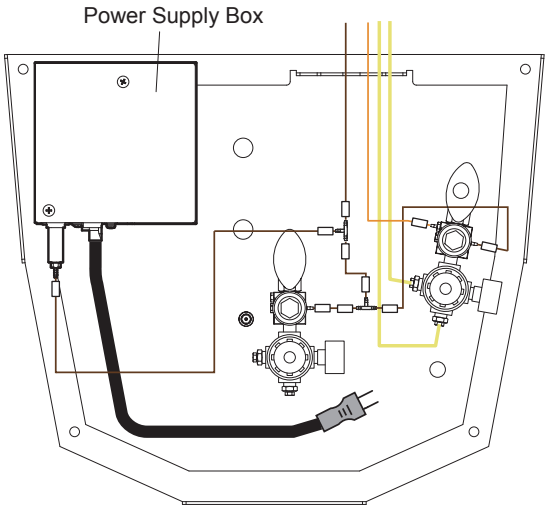
This power supply box is power of the micromotor, electric scaler and fiber optic.

1. Place the power supply box into the junction box. Connect the power supply cable to the outlet.

AU-HV3801~3807




AU-HV3808

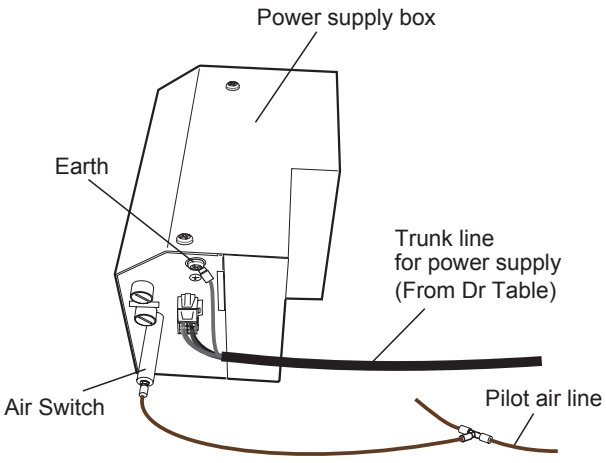



**⚠ CAUTION**

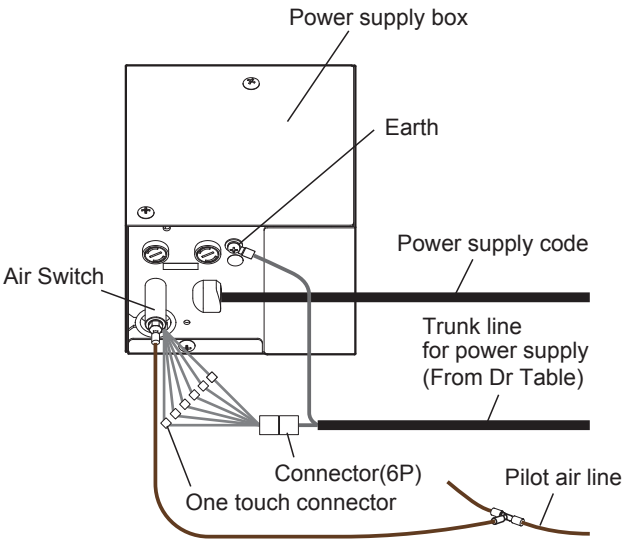
**Ground reliability can only be achieved when the equipment is connected to an equivalent receptacle marked HOSPITAL only or HOSPITAL GRADE.**

2. Connect brown tubing to the air switch of the power supply box and pilot air line with T-joint.
Connect connector (6P) and earth line of the trunk line from Dr table to the power supply box.

AU-HV3801~3807




AU-HV3808

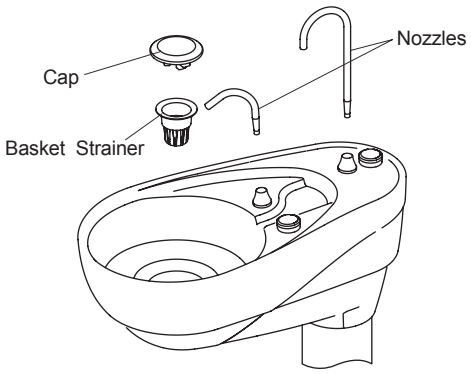



## 14. Installation of the Dental Light Power PCB.

**Installation of the dental light power pcb. refer to installation manual attached to dental light.**

## 15. Installation of Accessories

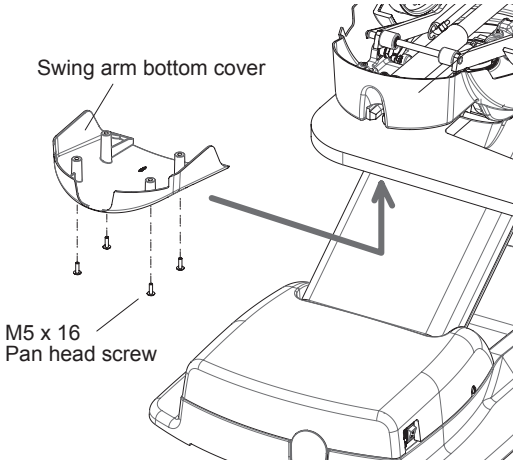
Install the cupfiller nozzle, bowl flush nozzle, cap and basket strainer to spittoon.




## 16. Installation of Covers

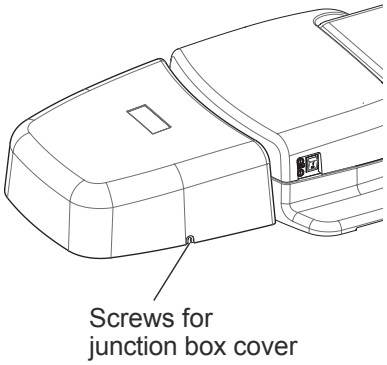
### 16-1. Swing Arm Bottom Cover

Attach the lower tubing cover to the bottom of the swing arm mounting bracket with four M5 x 16mm.




### 16-2. Junction Box Cover

Attach the junction box cover and fasten with M5 x 10mm screw and tighten firmly with a slotted screw driver.




**⚠ CAUTION**

**Fasten the pump cover and junction box cover firmly with a screw driver with screws provided and tighten.**

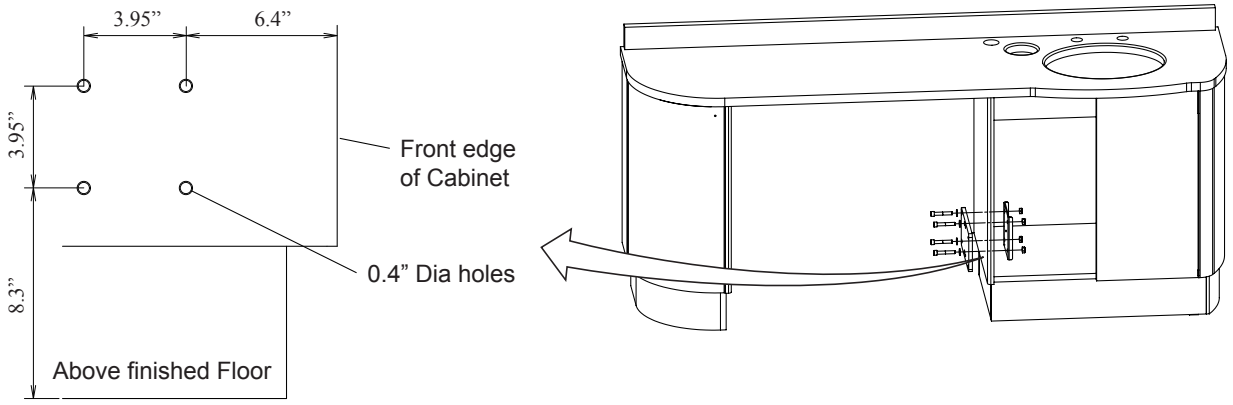
## 17. How to Install the Side Delivery

1. Installation of mount plate

To install the side delivery, fix the mounting plate and reinforcing plate to the cabinet by using four hex socket head cap bolts (M10 x 60) , four flat washers (M10 x 22 x 1.6 SUS) and four hexagon head nuts (M10 SUS). At this time, make the mounting plate level.

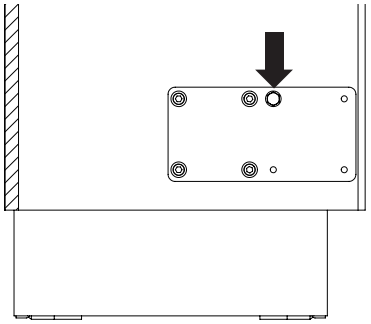
But the location of fixing holes may differ depending on the cabinet type. Check the figure below for recommended position of the fixing holes.

If necessary, use tapping screw M5 x 16 for fixing the reinforcing plate. When the reinforcing plate can not be used, use four install flat washers (M10 x 22 x 1.6 SUS) with nut to install the mounting plate.



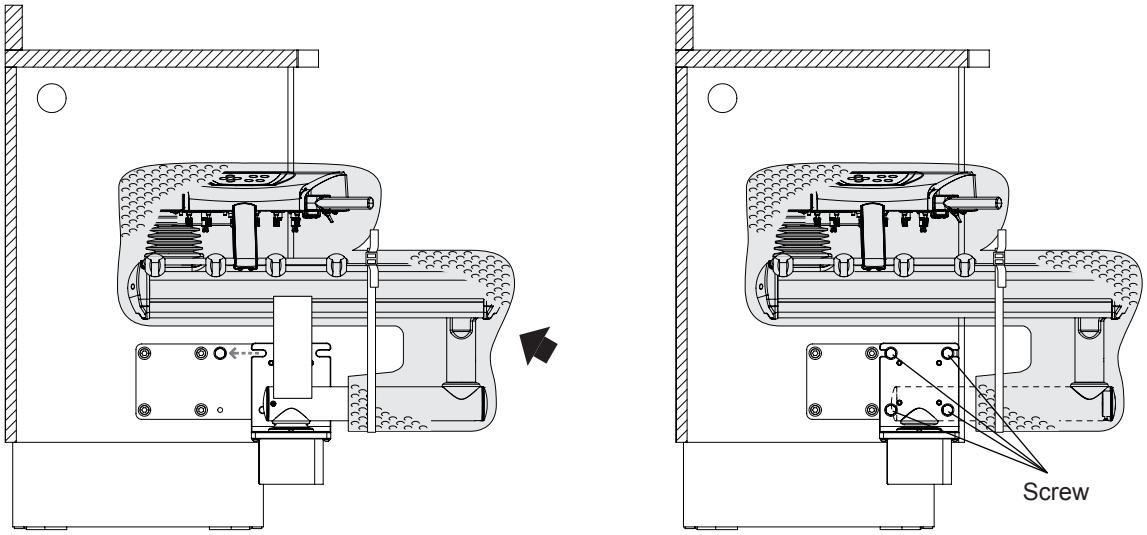

2. Installation of Side Delivery

(1) Tighten a hexagon head bolt (M10 x 25) slightly with a flat washer (M10 x 22 x 1.6 SUS) on the mounting plate at the position shown figure below.

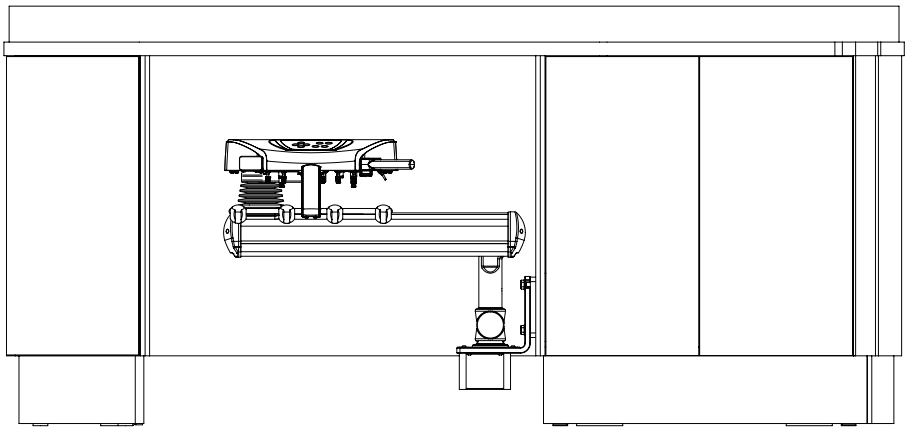


To support the unit, hook the cutout of the mounting bracket onto the hexagon bolt M10 x 25 attached by (1) , then tighten the hexagon head bolt(1). Fix the rest of three hexagon bolts(M10 x 25).

Do not remove the packing of the unit until fixing the mounting bracket.

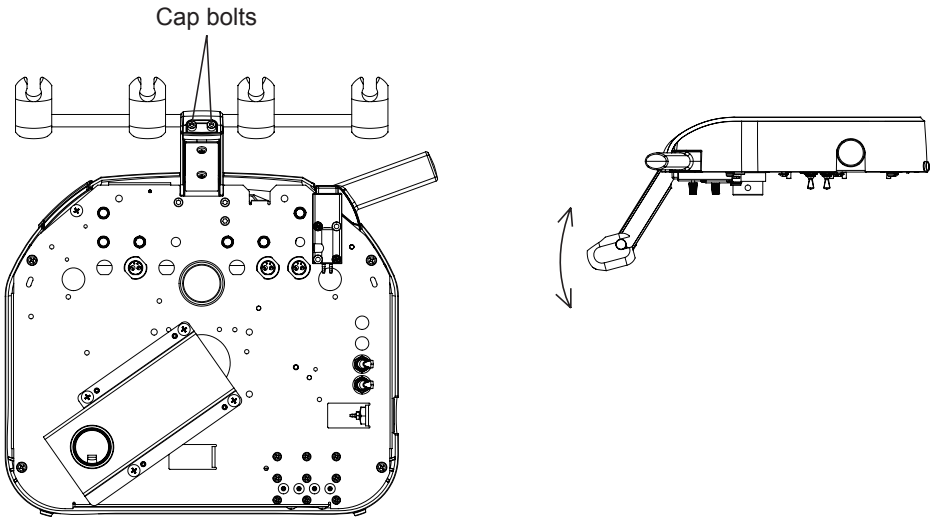


Remove the packing of the unit.



Loosen the two cap bolts at the bottom of the HP holder bracket and turn holder bar to adjust the angle of HP holder.

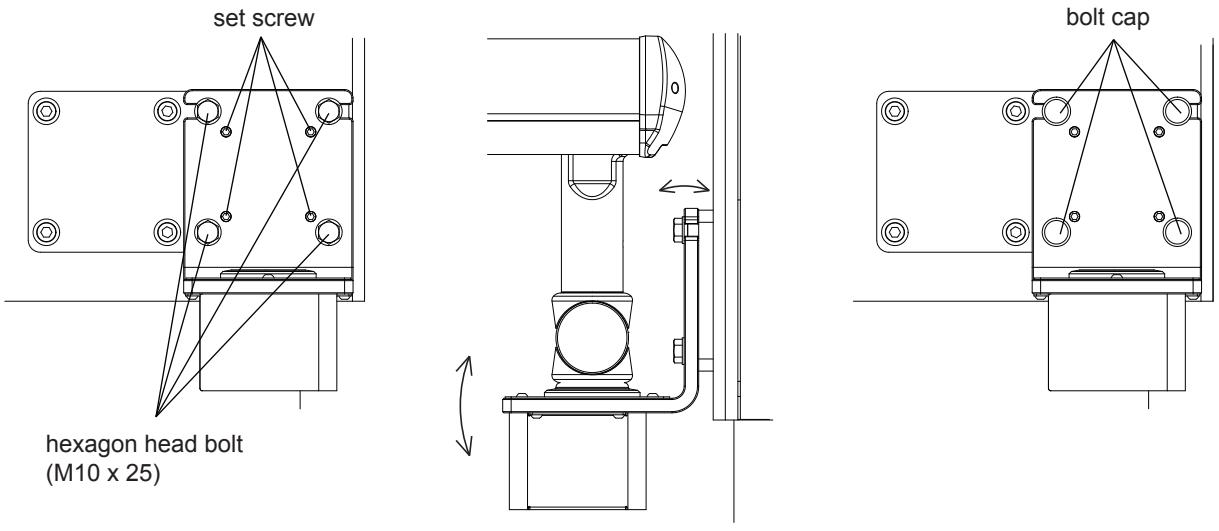
Tighten two cap bolts after adjusting angle of HP holder.




3. Horizontal adjustment of mounting bracket

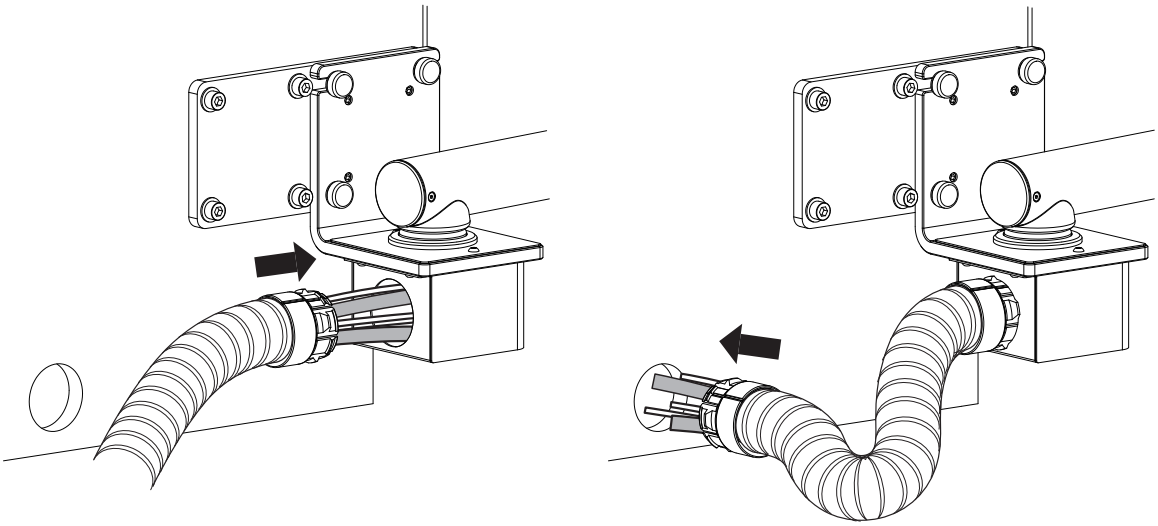
Adjust the mounting bracket horizontally to make it level by loosening or tightening the four hexagon head bolts (M10 x 25) and the four set screws.

Attach the bolt cap to the four hexagon head bolts (M10 x 25) .



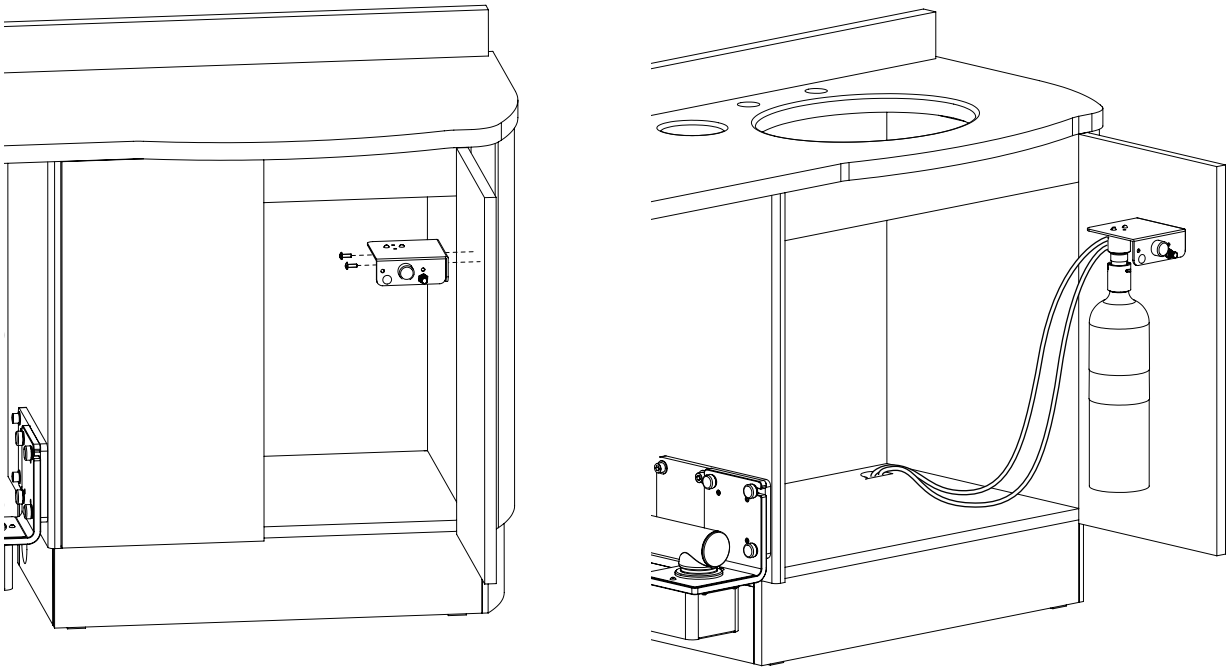
4. Installation of duct hose

Pass the tubes and wires from the bracket cover through the duct hose and attach the duct clamp to the bracket cover. Pass the tubes and the wires coming out of the other side of the hose through the hole of the cabinet.



5. Installation of water bottle

Install the water bottle bracket using two tapping screws(M 5 x 16). For the recommended position of the water bottle, refer to figure below. Attach the quick connectors and water bottle. Pass two tubes(1: blue, 1: brown) through the hole of the bottom panel.



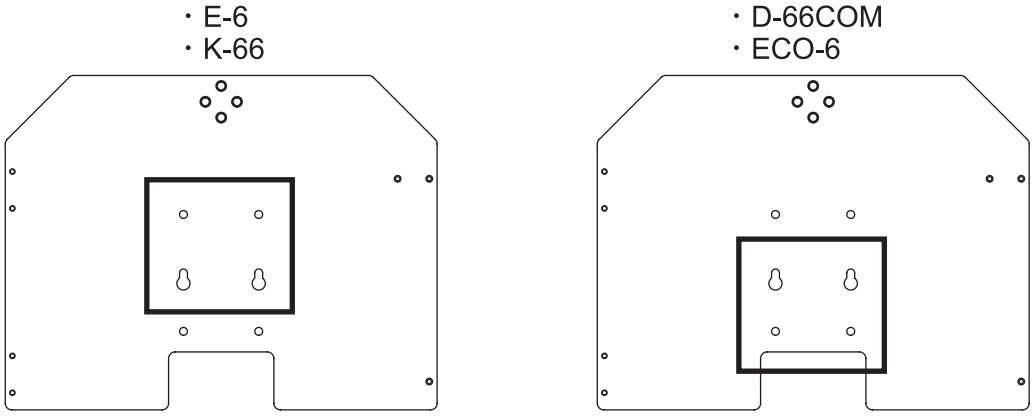
6. Connection of utility with foot controller and tubes and wires from doctor side.

Refer to the flow diagrams on p.79 and p.80.

Also refer to installation manual attached into the table.

## 18. How to Install the Rear Delivery

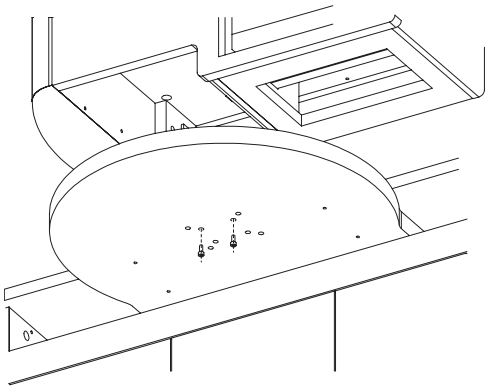
1. Before installing the Rear Delivery, please check the followings.
   To install the Rear Delivery, fix the mounting base to the cabinet by using (4) 5/8 cap screws (No. 10-24 UNC). But fixing holes may differ depending on the cabinet type.



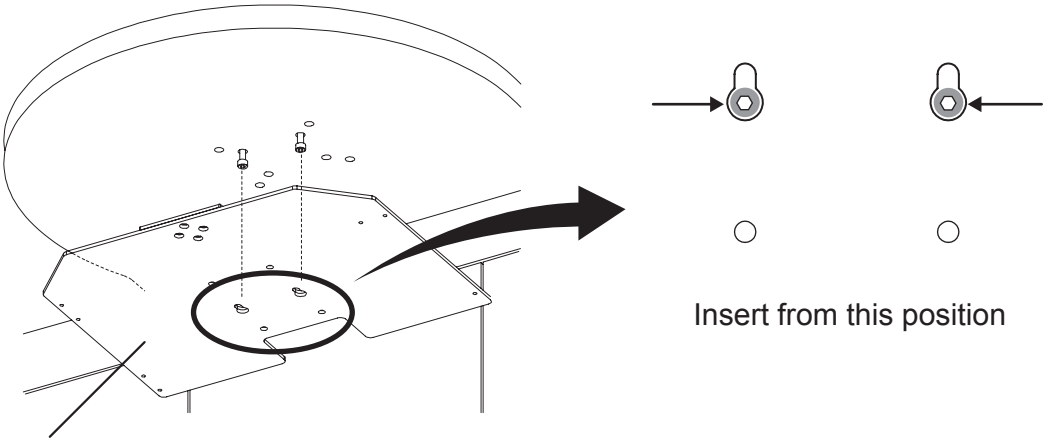

**⚠ CAUTION**

**If the mounting base is incorrectly positioned, the table chassis may not be able to move properly. Be sure to fix the mounting base to the connect position.**

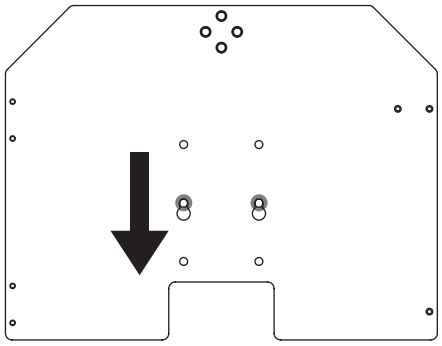
2. Installation of Rear Delivery (Example : D-66COM)
   Premount (2) cap screws to the cabinet underneath.
   (Be sure premount the screws tp prevent fall down the mounting base after hanging it.)
   * Fixing positions may differ depend on the type of cabinet.



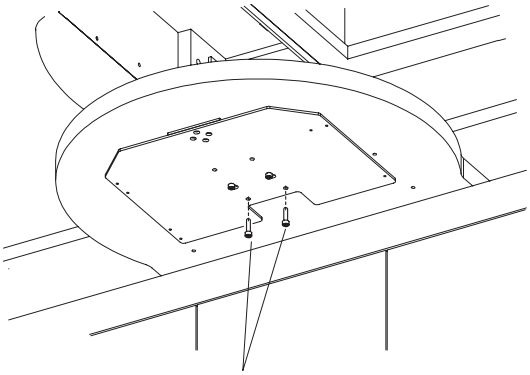
3. Attach the mounting base to the cabinet.
   Insert the large holes of the mounting base to the 5/8 cap screws (NO. 10-24 UNC).



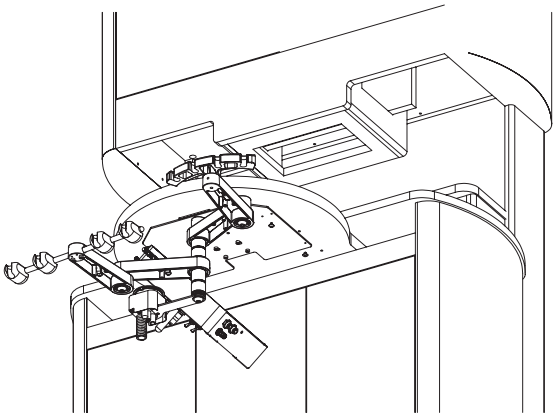
4. Slide the mounting base in the direction of an arrow to hold the mounting base to the cabinet.



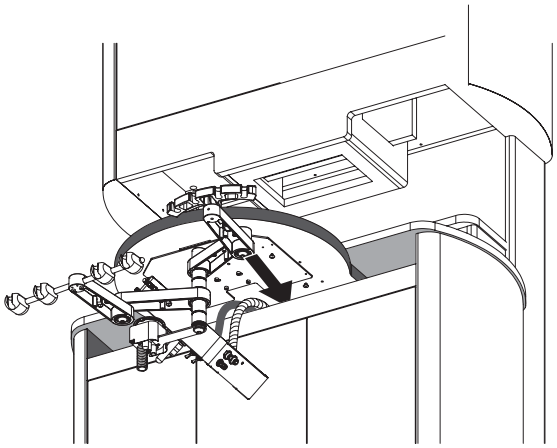
Fix the mounting base to the cabinet with remaining two holes by using two 5/8 cap screws (NO.10-24 UNC).

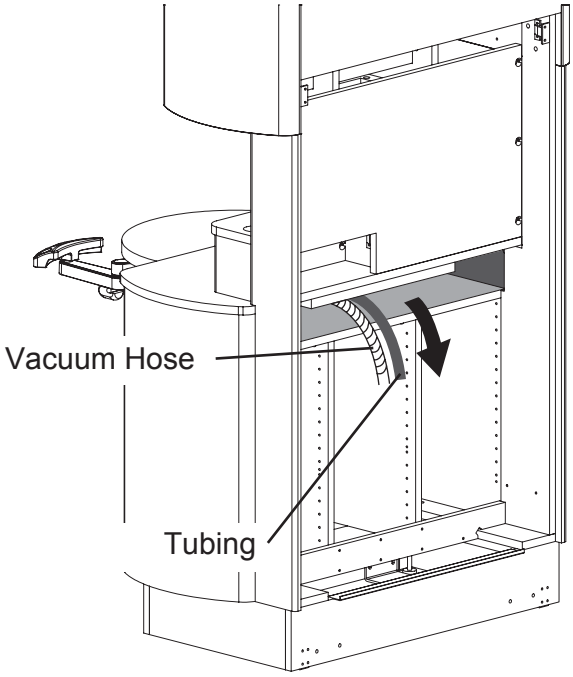


Cap Screw
NO.10-24 UNC 5/8

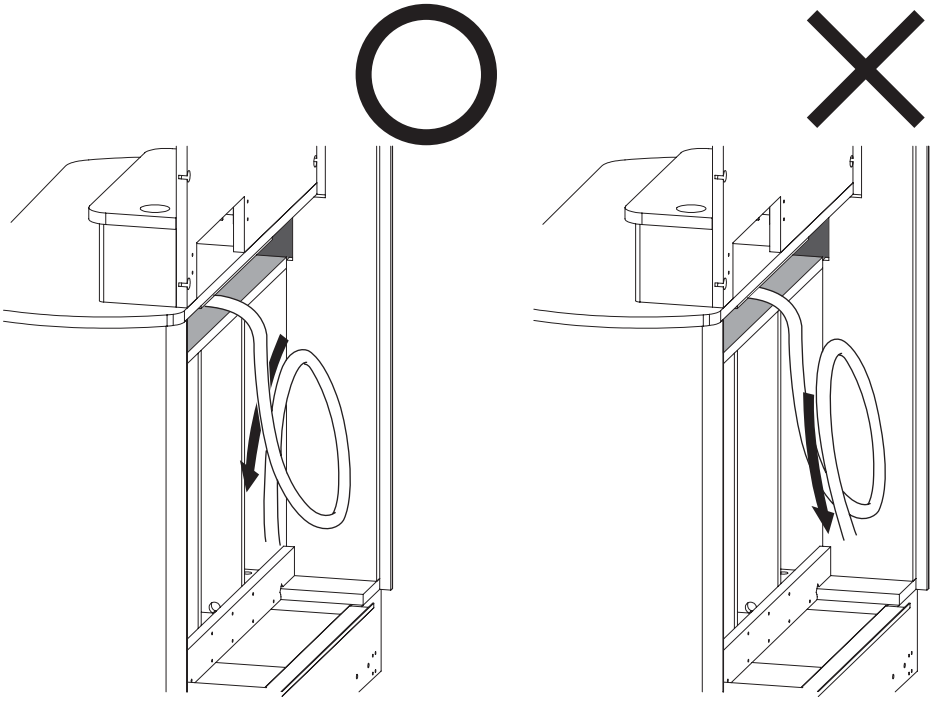


5. Pass the two tubings and vacuum hose through the opening space from the cabinet front as show in the figure below and bring it to behind the cabinet.



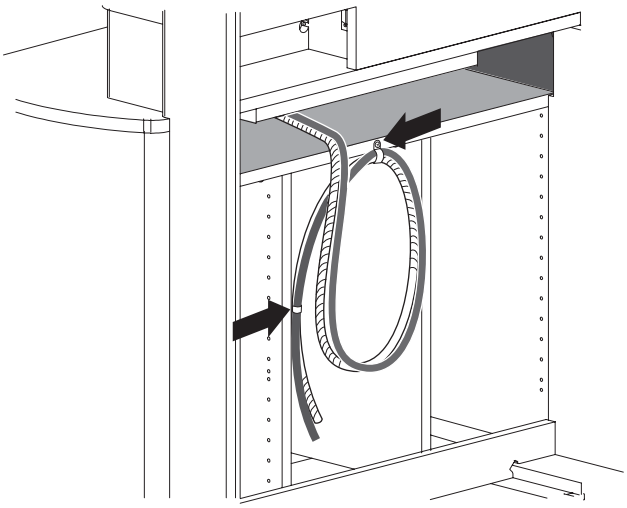


6. Be sure to reel the two tubings and vacuum hose as show in the figure below. If reeled it wrong direction, tubings may not move smoothly

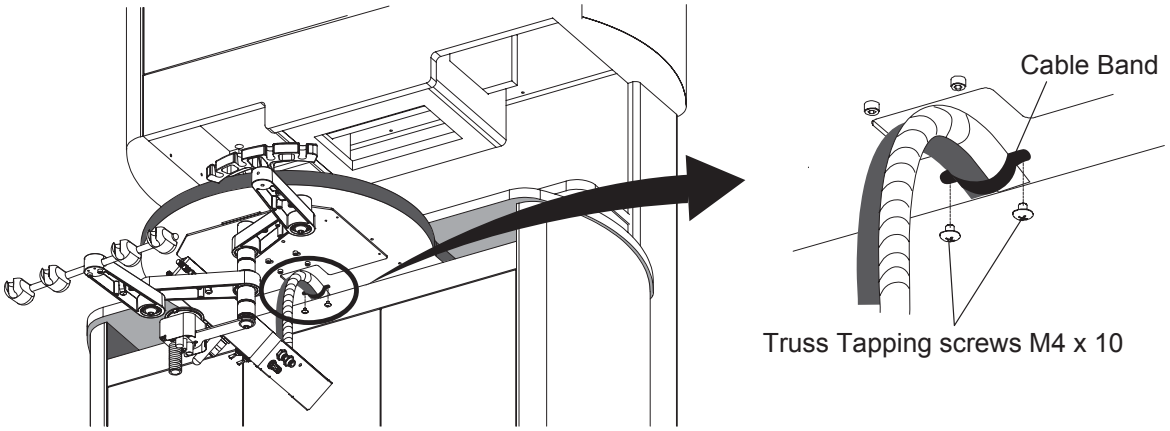


7. Fix the tubings and vacuum hose together by using two clamps.

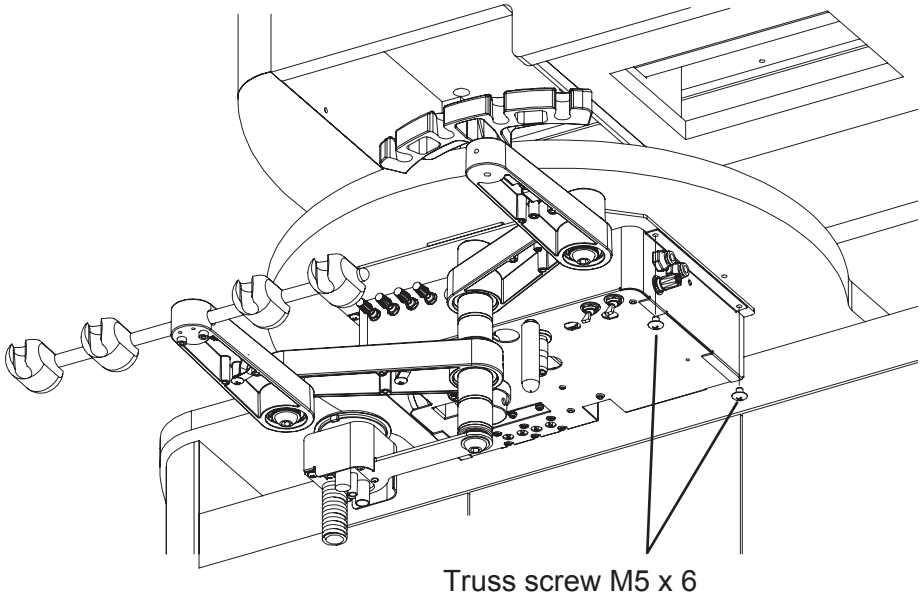
* To ensure that the tubings and vacuum hose moves smoothly, be sure to fix the clamps at correct position as described below.



8. Fix the tubing and vacuum hose to the underneath of the cabinet by using cable band with two truss tapping screws.

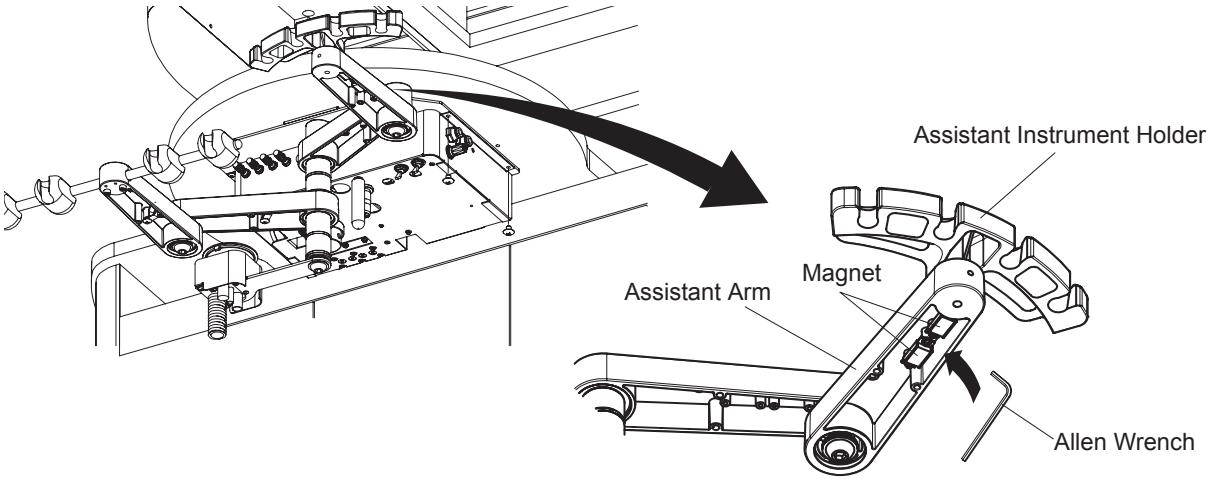


9. Finally, attach the table chassis and fix it with two M5 x 6 truss screws.

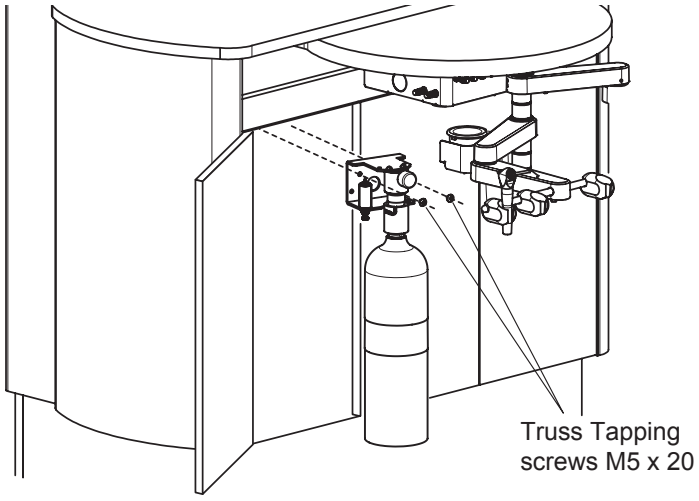


Truss screw M5 x 6

Note: For the future adjustment, the allen wrench (M6) must always be attached magnetically underneath of the assistant arm after doctor arm and assistant arm height adjustment. Height adjustment of doctor arm and assistant arm, refer to page 54.




10. Fix the water bottle to the cabinet by using two M5 x 20 truss tapping screws.




Connection of foot controller, tubings and vacuum hose, please refer to P82 flow diagrams.
Also refer to installation manual attached to the cabinet.

## 19. Final Adjustment

### ⚠ CAUTION

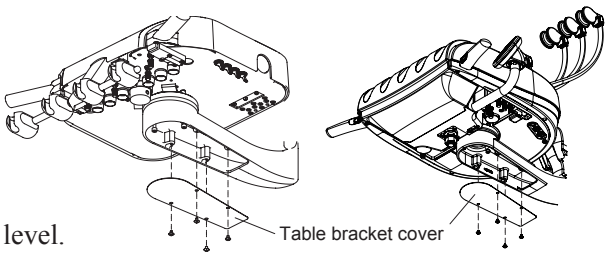
**Be careful when opening the Dr table top cover during installation or repair.**
**Harness from membrane switch of the table top cover is connected to the Dr table section.**
**Do not pull the Dr table top cover excessively. This could cause damage to the harness of the membrane switch.**

### 19-1. How to Adjust the Horizontal Level of the Dr Table (Swing Mount / PMU / Side Delivery)

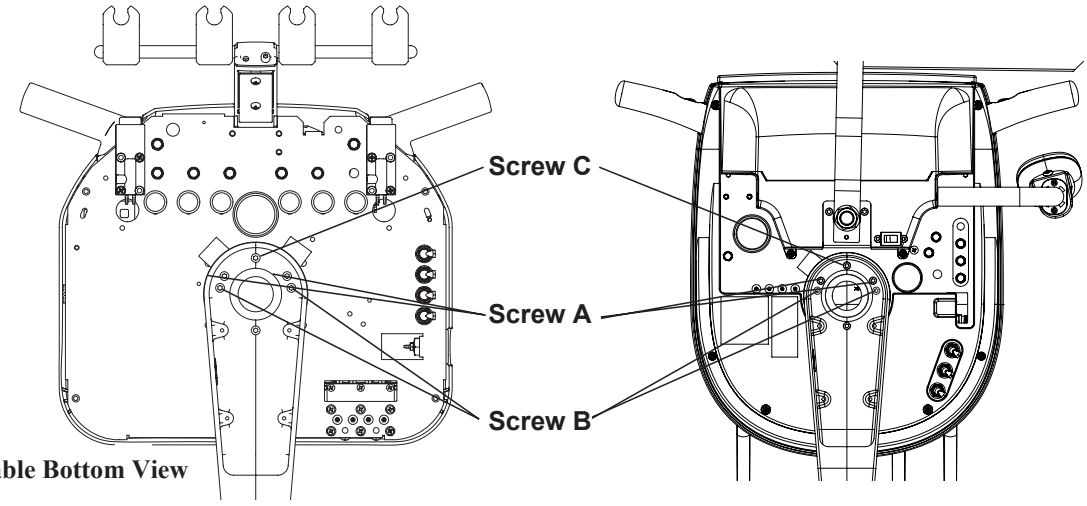
The horizontal level of the Dr table can be adjusted. Adjust horizontal level of the Dr table by below procedures during installation if the Dr table is not horizontally leveled.
Before adjusting horizontal level of the Dr table, adjust the level of the swing arm or PMU section or Table BKT(Side).

① Swing Mount / PMU type

1. Open the table bracket cover by removing 4 screws.

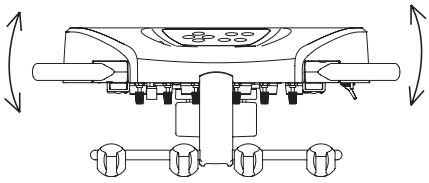



2. Loose screw A (2 screws) before adjusting horizontal level.

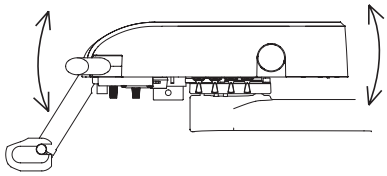



**Dr Table Bottom View**

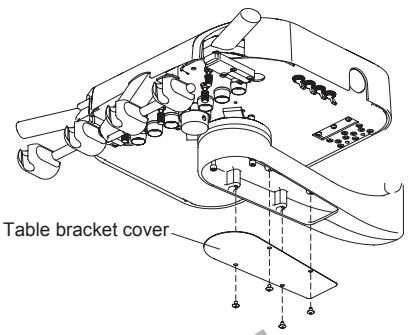
3. Left or right horizontal level of the Dr table can be adjusted by loosening or tightening screw B (2 screws).



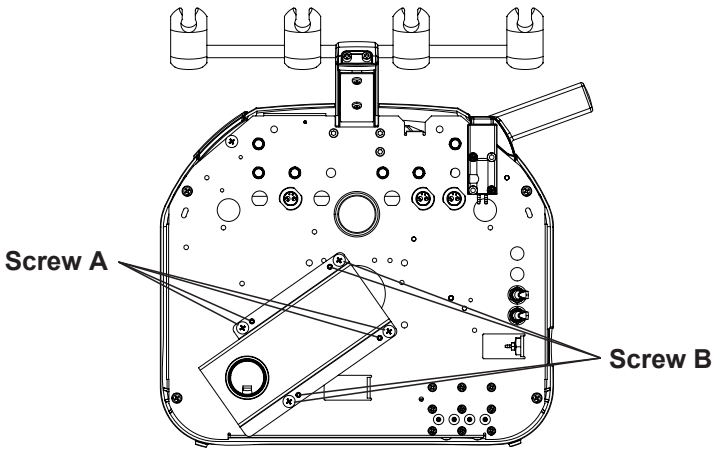
4. Front or rear horizontal level of the Dr table can be adjusted by loosening or tightening screw C.



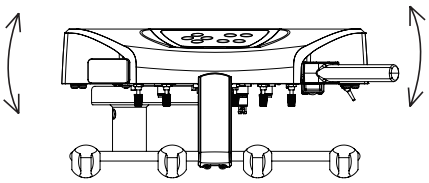
5. After adjustments, tighten screw A (2 screws) and reattach the table bracket cover with 4 screws.



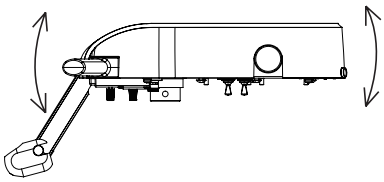
② Side Delivery type




1. Horizontal level, left and right, can be adjusted by loosening or tightening screws A (4 screws).



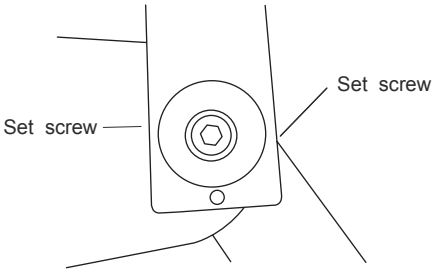
2. Horizontal level, front and rear, can be adjusted by loosening or tightening screws B (4 screws).



**19-2. How to Adjust the Swing Arm Friction**

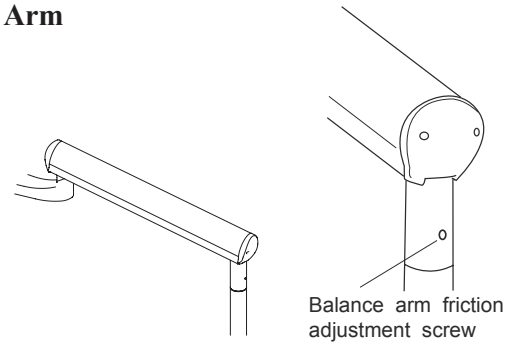
The friction of the swing arm for Doctor's control, dental light and monitor must be adjusted independently.

Adjust the M6 x 5mm socket set screw beneath the swing arm.



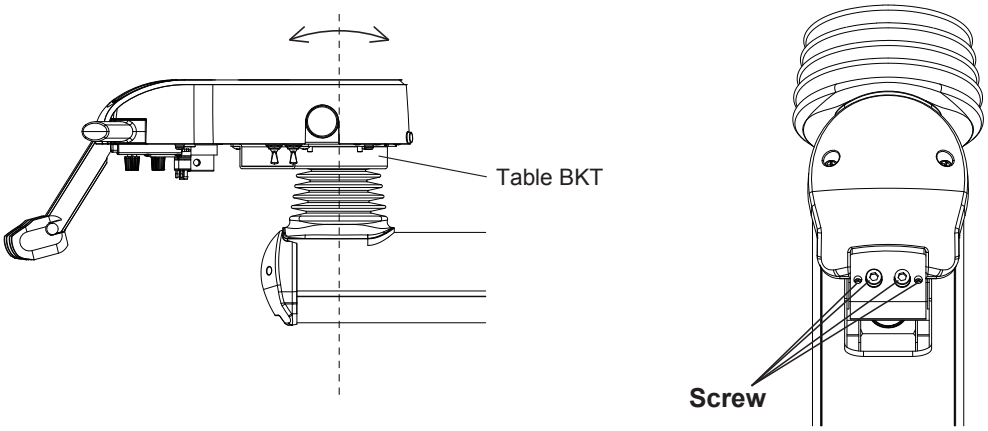

**19-3. How to Adjust the Rotation Friction of Table Balance Arm (Swing Mount / PMU / Side Delivery)**

Adjust rotation friction of the balance arm with M6 x 5mm adjustment screw.



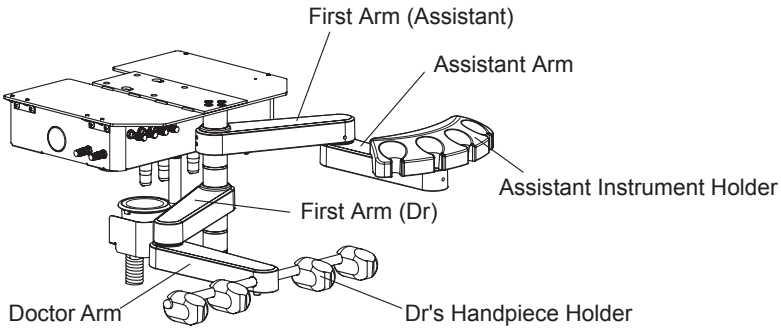
### 19-4. How to Adjust the Vertical Level of Dr Table (for Side Delivery type)

Vertical level of table bracket can be adjusted by loosening or tightening four screws.

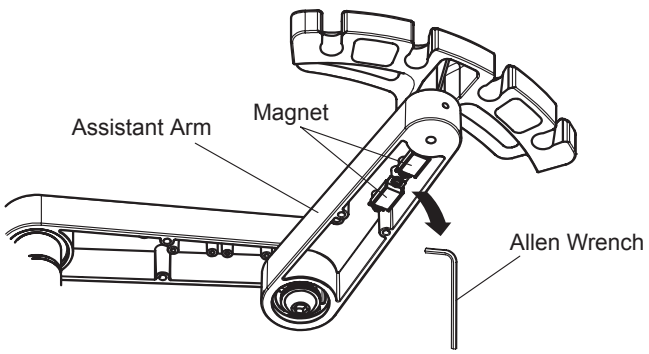



### 19-5. Doctor Arm / Assistant Arm Height Adjustment (Rear Delivery)

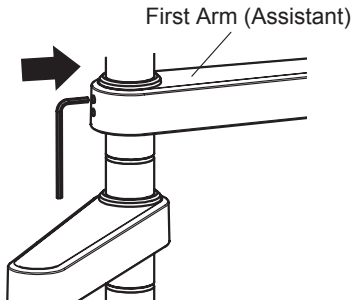
Height of doctor arm and assistant arm can be adjusted. Also this adjustment can be done by users themselves. This is why the allen wrench (M6) must always be attached magnetically underneath of the assistant arm after doctor arm and assistant arm are adjusted.



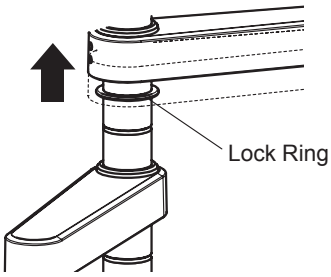

1. Take allen wrench out from underneath the assistant arm.



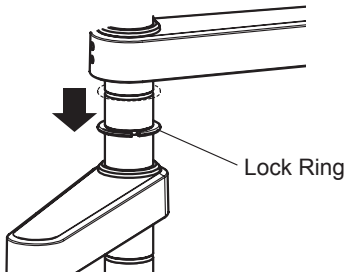

2. Loosen the (2) set screws on the first arm (Assistant) by using allen wrench.



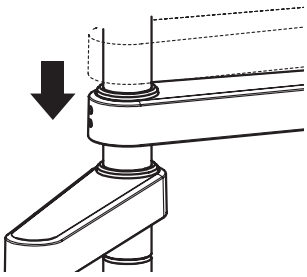
3. Lift up the first arm (Assistant).



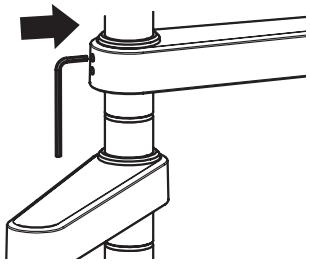

4. Slide down the lock ring.



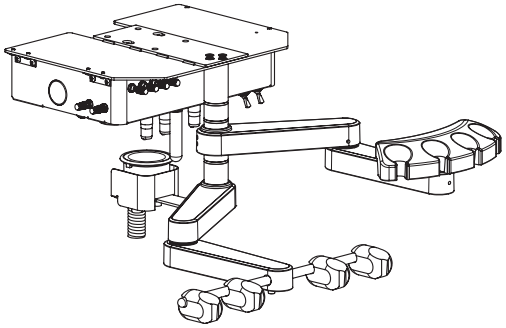

5. Lower the first arm (Assistant) until arm hits the lock ring.



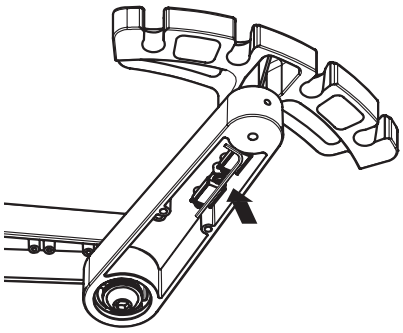
6. Tighten the (2) set screws on the first arm (Assistant) by using allen wrench.



7. Adjust height of Doctor Arm by following the same procedures shown in 2 ~ 6.



8.Re-attach the allen wrench to underneath the assistant arm.



Note : Arm height can be adjusted at 3 positions.
If one of the arms is adjusted, you may need to adjust another arm to avoid interference of arms.

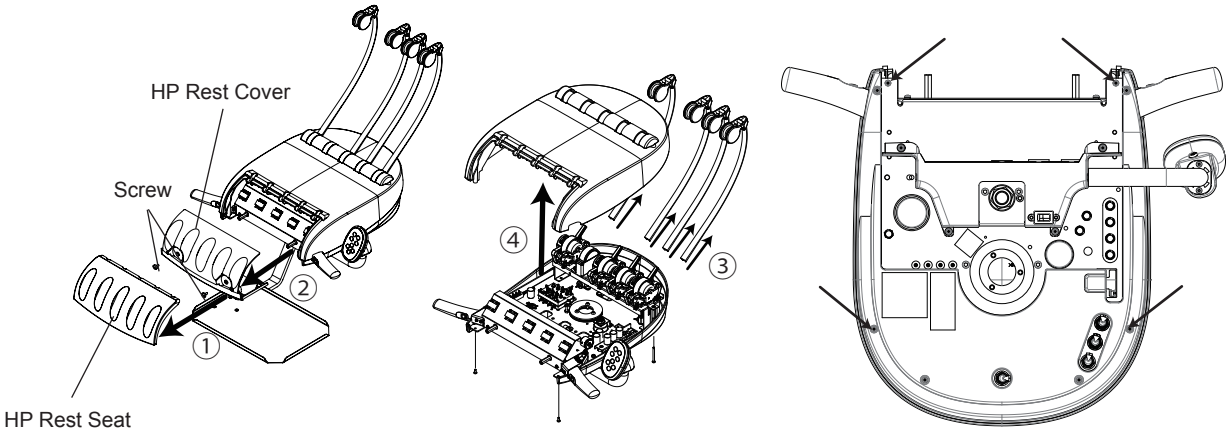
## 19-6. How to Adjust the Rod Mechanism for tension of the HP (Rod Type)

① Remove the HP rest seat.

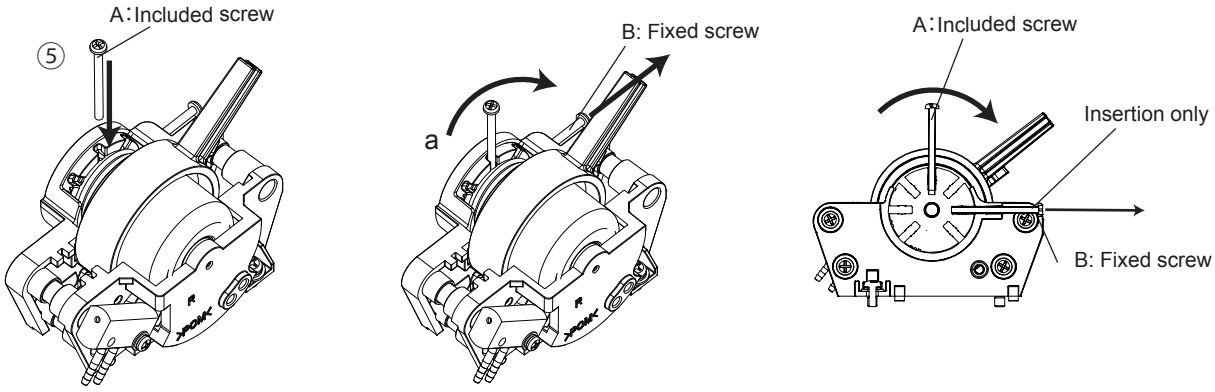
② Remove the HP rest cover by removing 2 screws with hands.

③ Remove the rod arm.

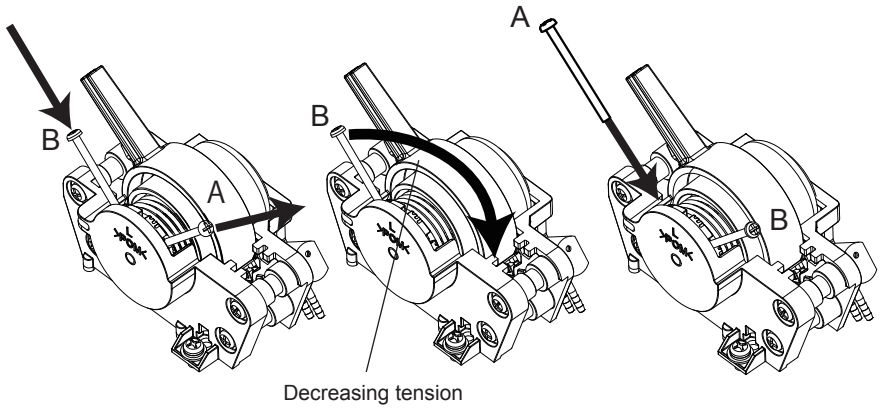
④ Remove the table cover by removing 4 screws at the bottom.



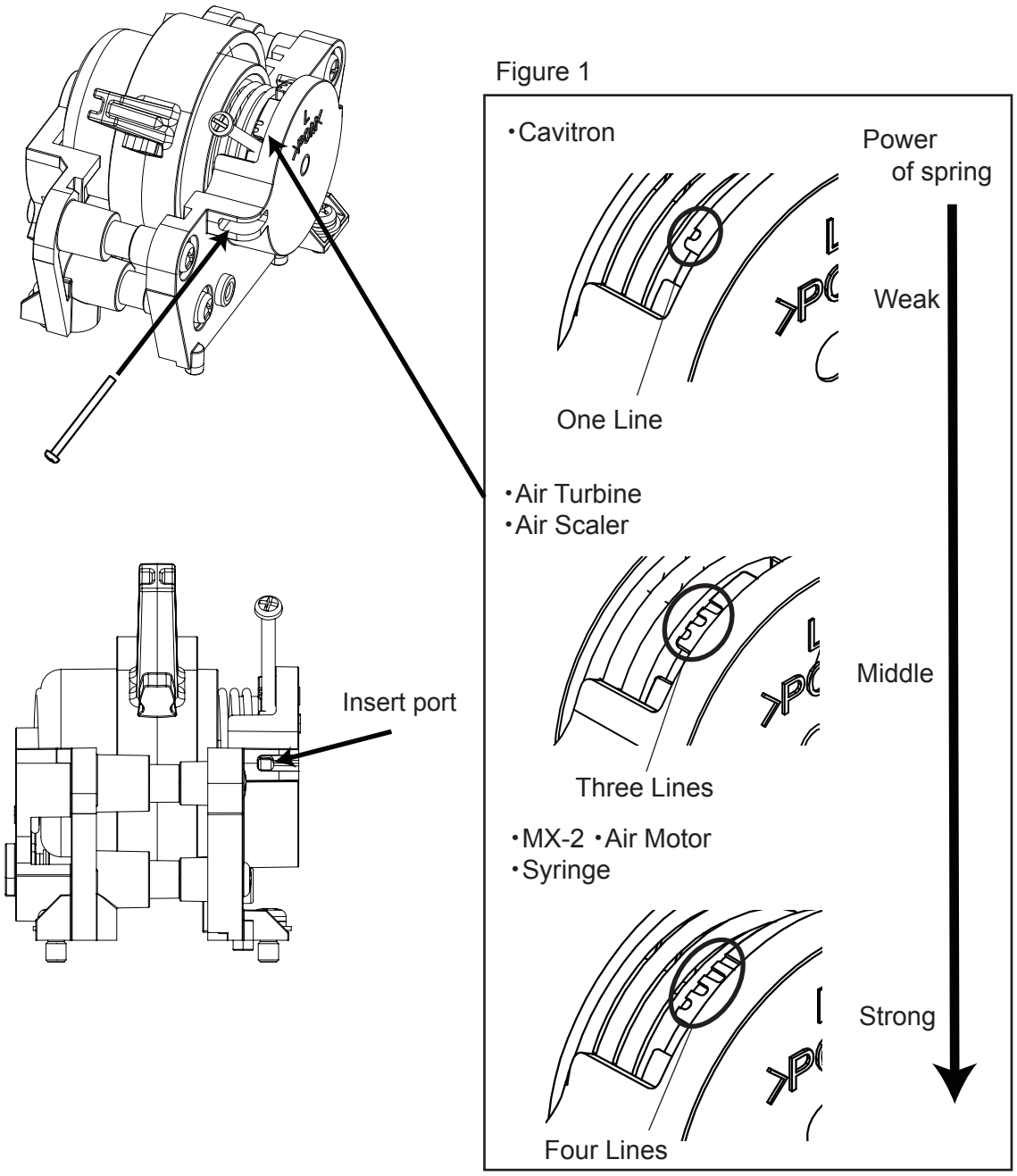

⑤ Insert the A (Included screw) to the groove at the rotation part
and while pushing the screw A in the direction of arrow “a” then pull off the B (Fixed screw) .




⑥ It is possible to adjust the tension using the A (Included screw) and B (Fixed screw).

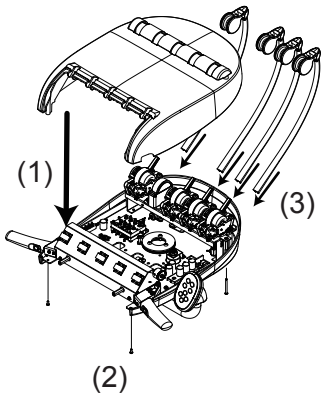


⑦ Set the spring tension according to the HP (see figure 1) , insert the screw and fix it.

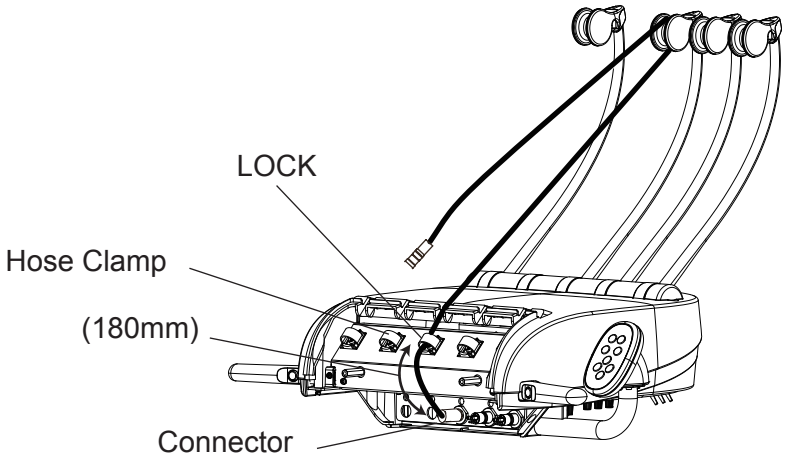



Note：
Turn the rotation part to increase tension until one-line slit appears.
Do not turn the rotation part beyond three-line slit.

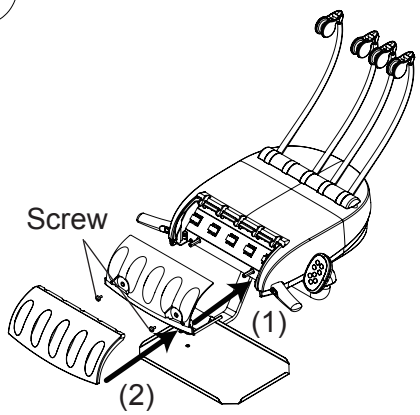
⑨ Put the table cover back in place and install the rod arm.



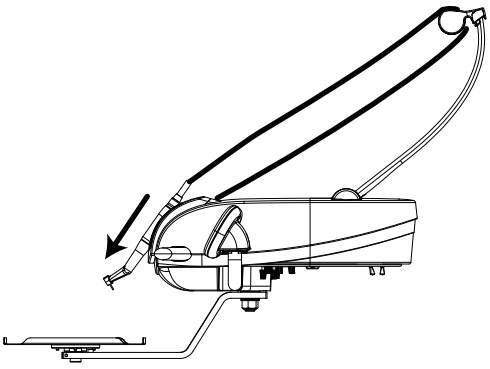

⑩ To set the position for picking the head of handpiece from the handpiece rest seat easily, adjust the length of hose and fix the handpiece hose by hose clamp.
(Our designated HP is fixed 180 mm from the connector.)



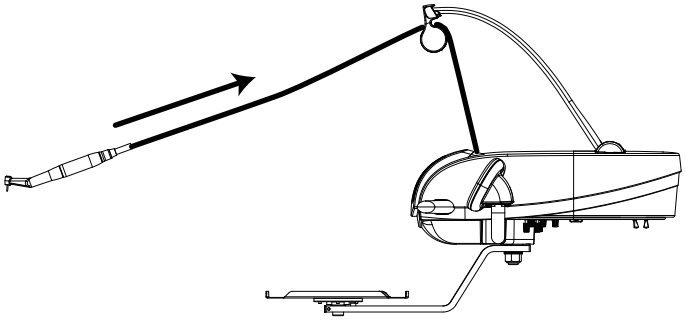

⑪ Put the HP rest cover and HP rest seat back in place.




⑫ Confirm the adjustment of rod rotation friction.



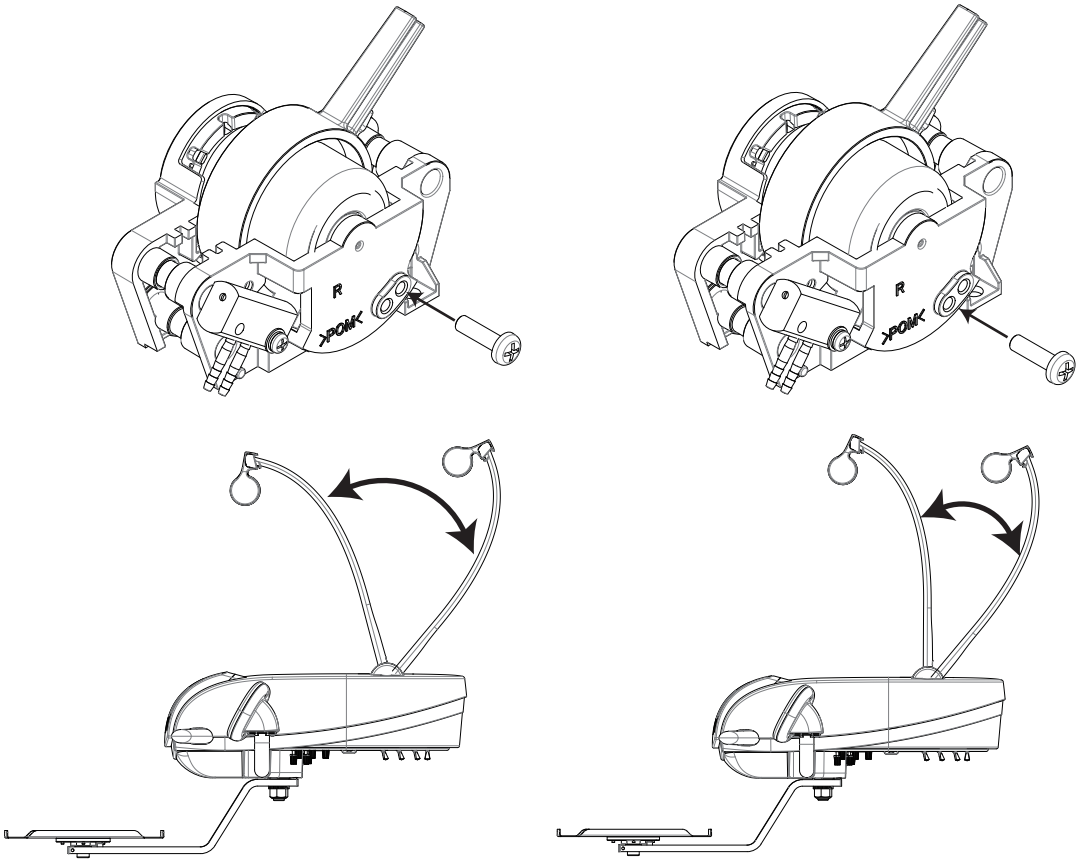
The position of HP does not go down by its weight when putting HP on the HP rest.
→If it goes down, increase the tension.
(refer to ⑤, ⑥, ⑦)



The tension of HP is not too strong when picking it.
→If it's too strong, decrease the tension.
(refer to ⑤, ⑥, ⑦)

**Adjusting the swing angle of the rod arm**

Inserting the screw (M4×16) contained in the package reduces the angle of the rod movement. This adjustment can prevent the HP, when at the most forward position, from accidental drop. Note that the reach will be shortened.



### 19-7. Water and Air Manual ON/OFF Valves

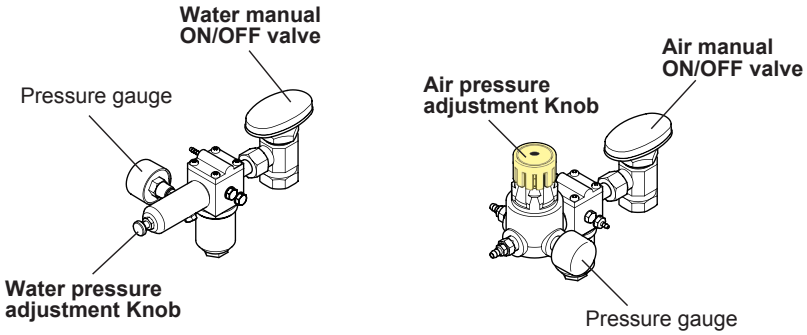
Open the water and air manual ON/OFF valve counterclockwise in the floor utility. Turn on the master switch and check that water and air are not leaking.

### 19-8. Main Air Pressure

The main air pressure has been adjusted in the factory. Confirm that the main air pressure is at 75 psi (0.5 MPa) by the main air pressure gauge. The main air pressure can be regulated by the main air regulator in the floor utility.

### 19-9. Main Water Pressure

The main water pressure has been adjusted in the factory. Confirm the main water pressure is at 29 psi (0.2 MPa) by the main water pressure gauge. The main water pressure can be regulated by the main water regulator in the floor utility.

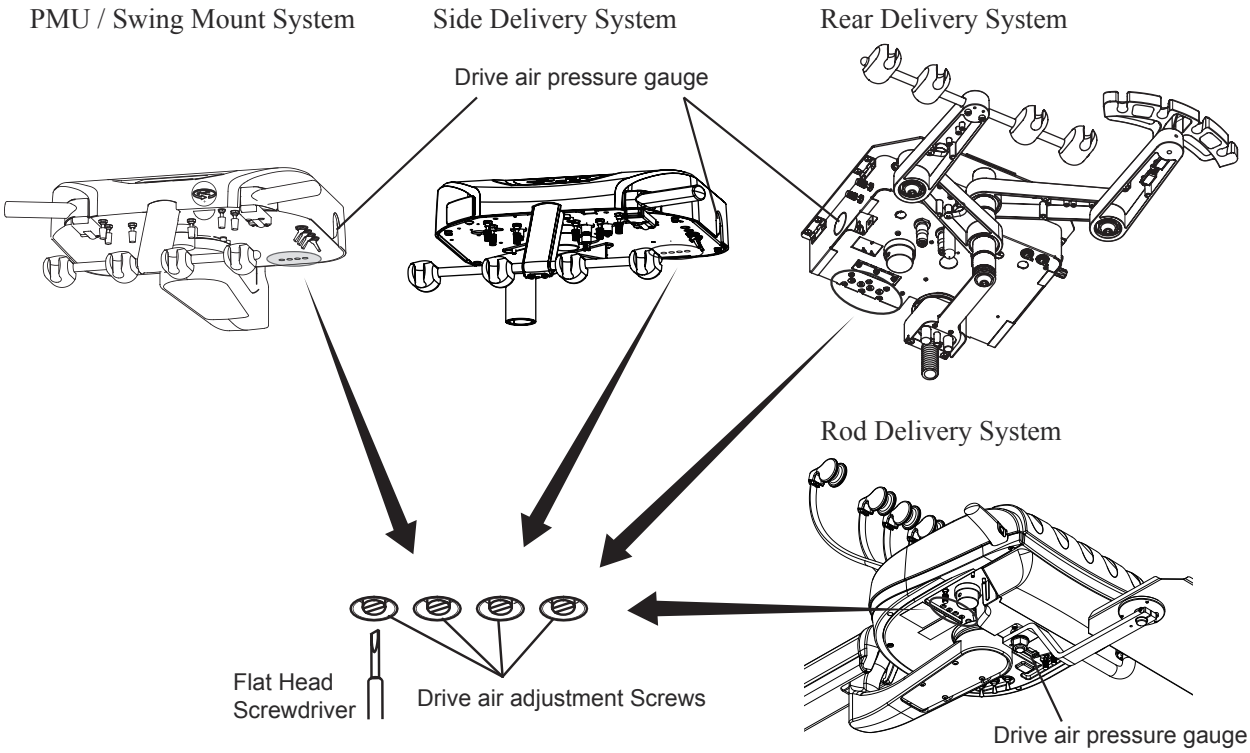


**19-10. Drive Air**

## ⚠ CAUTION

**To avoid potential damage to handpieces**
- **Never operate a handpiece without a bur in the chuck.**
- **Do not exceed manufacturers recommended pressure setting at the handpiece.**

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.




Note : The reading at the pressure gauge will be approximately 5 psi (0.034MPa) higher than the actual pressure at the handpiece, due to line loss. To attain the desired handpiece pressure setting, adjust the drive air adjustment screw until the gauge pressure is 5 psi (0.034MPa) above target pressure. If the adjust is made using a special in-line gauge attached at the handpiece connector, then set the pressure at this gauge directly, as specified by the handpiece manufacturer.

### 19-11. Coolant Water

The handpiece coolant water control knobs are located underneath the doctor table.

Each handpiece coolant water control knob is identified as number 1 to 3 from the left side HP1, HP2 and HP3.

The handpiece coolant water volume can be controlled independently.

Flip the toggle on foot control to switch to the "wet" position. (Toggle toward inside of the foot controller)

Install a bur in the handpiece to be adjusted. Step on the foot controller and run the handpiece, adjust the water coolant flow knob until a fine mist is achieved.

### 19-12. Coolant Air

The handpiece coolant air control knob is located underneath the doctor table and all handpieces coolant air can be controlled. (Except syringe).

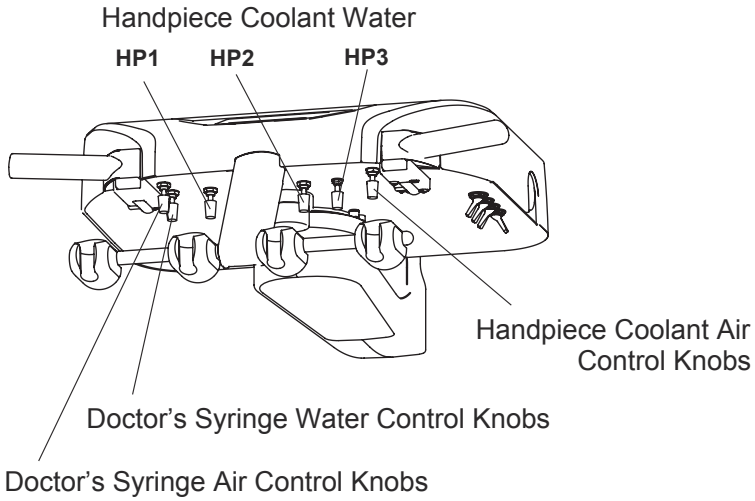
Adjust coolant air volume during run the handpiece until the desired flow is achieved.

### 19-13. Doctor's Syringe

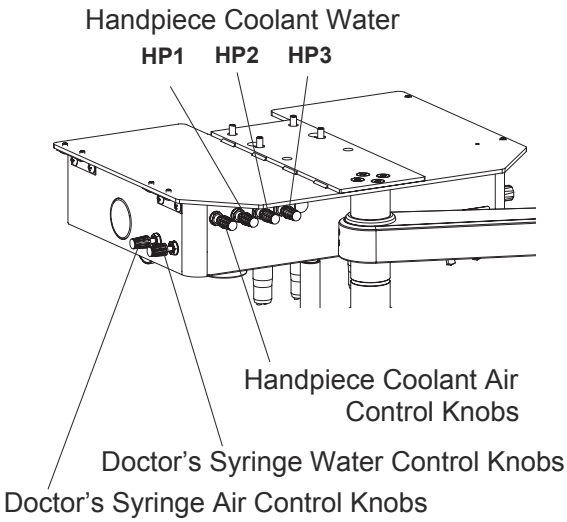
Doctor's syringe flow control knobs are located underneath the doctor table. The flow control knobs adjust the doctor's syringe air and water flow volume.

The yellow capped knob is the air flow control knob, the blue capped knob is the water flow control knob.

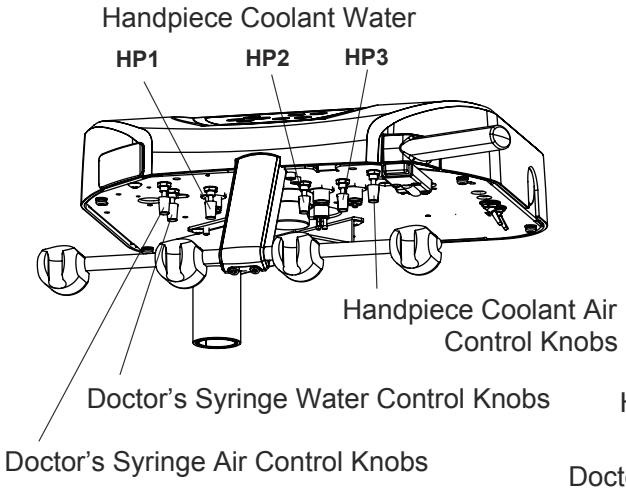
PMU / Swing Mount System



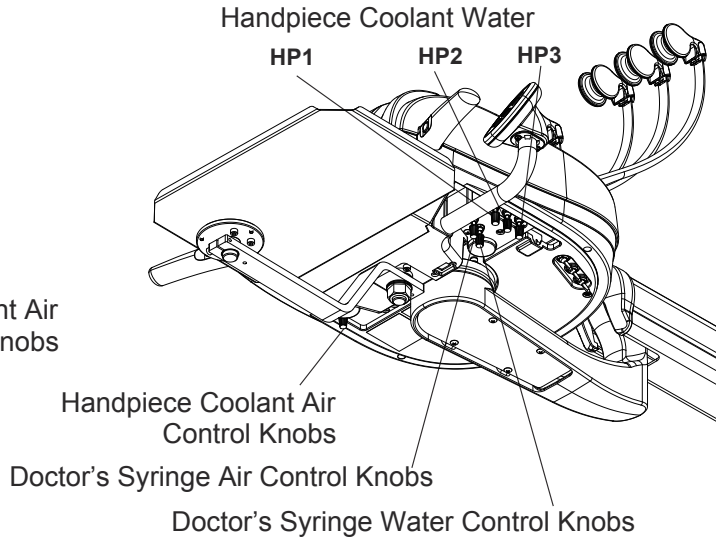

Rear Delivery System




Side Delivery System



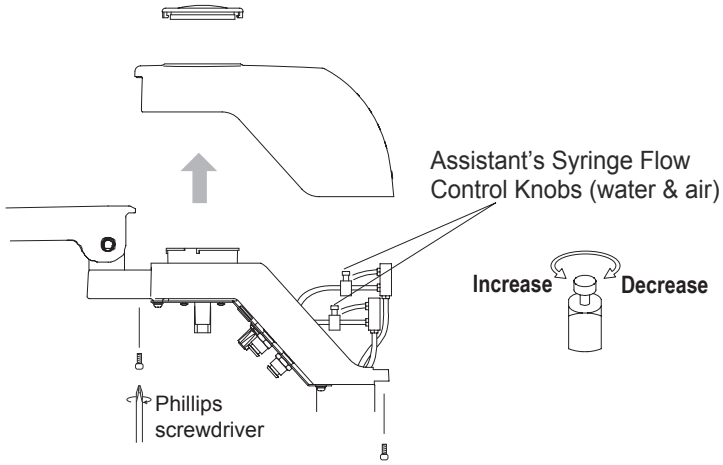

Rod Delivery System



### 19-14. Assistant's Syringe (Vac Pac)

Assistant's syringe flow control pinch valves are located inside the Vac Pac utility center.

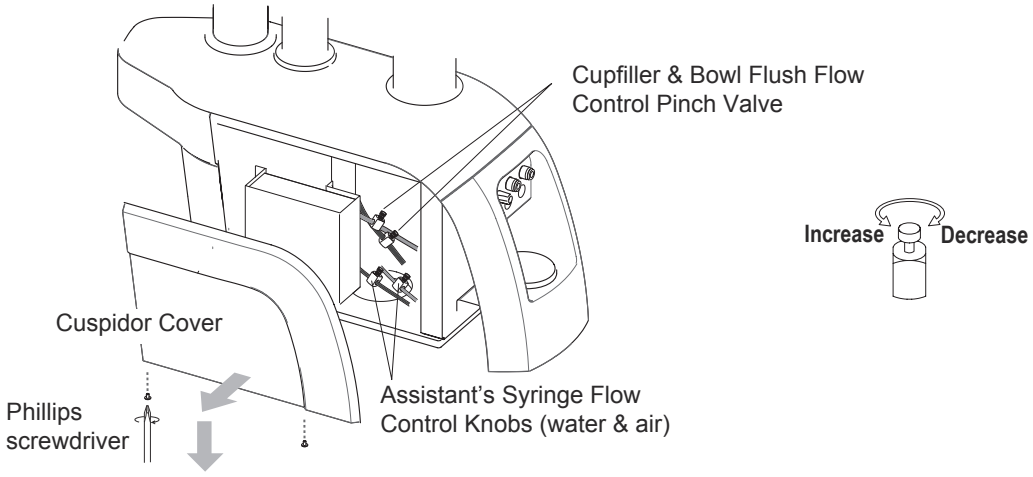
Open the upper cover by loosen the screws. Adjust the water and air flow by pinch valves.




### 19-15. Cupfiller, Bowl Flush and Assistant's Syringe (Cuspidor Unit)

Cupfiller, bowl flush and assistant's syringe flow control pinch valves are located inside the cuspidor.

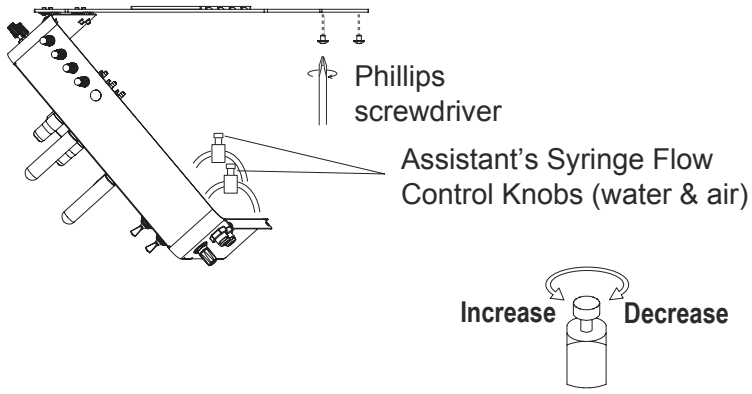
Open the cuspidor side cover by loosening the screws. Adjust the water and air flow by pinch valves.




### 19-16. Assistant's Syringe (Rear Delivery)

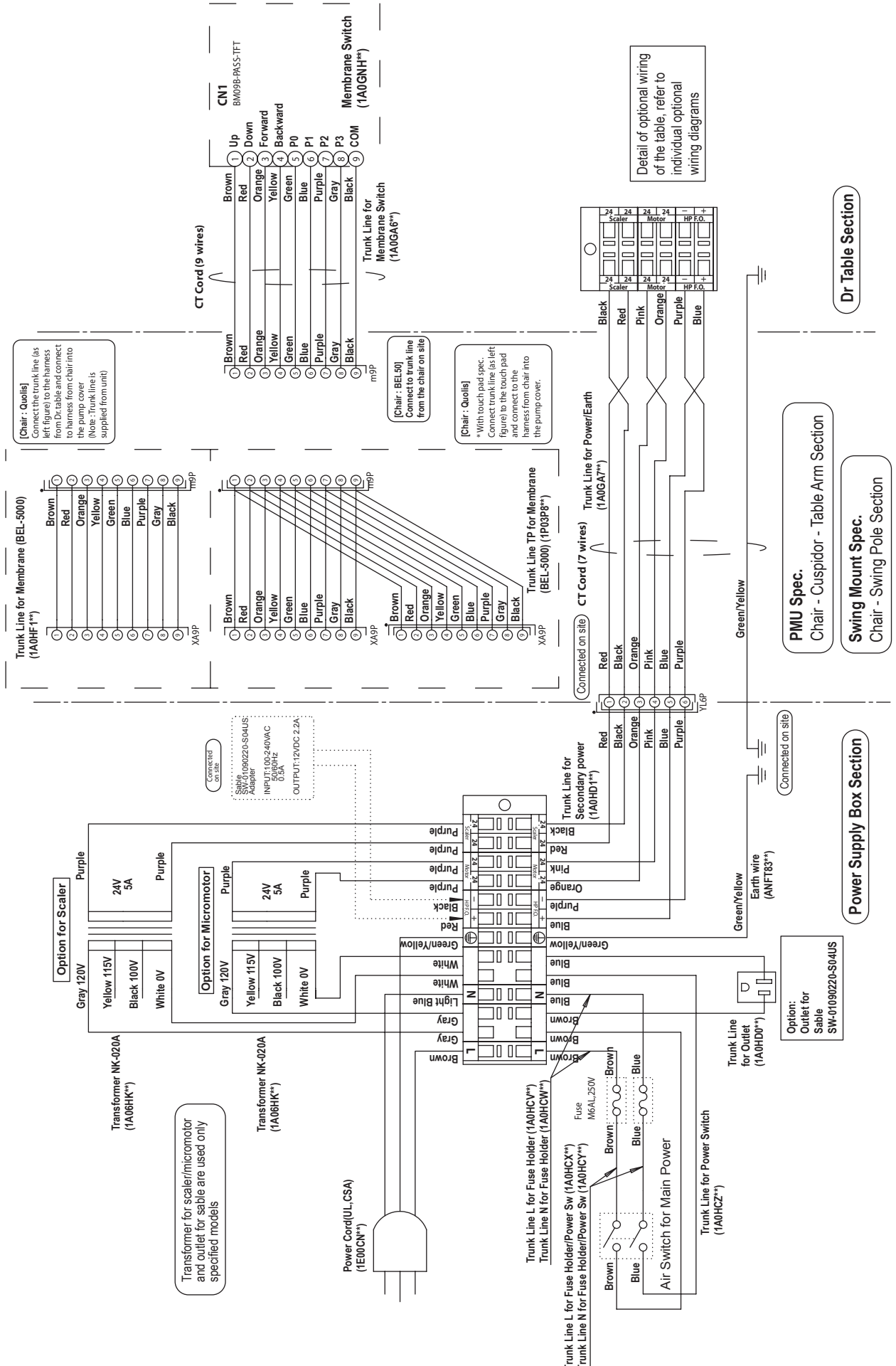
Assistant's syringe flow control pinch valves are located inside the Rear Delivery.

Open the table chassis by loosening the screws. Adjust the water and airflow by pinch valves.

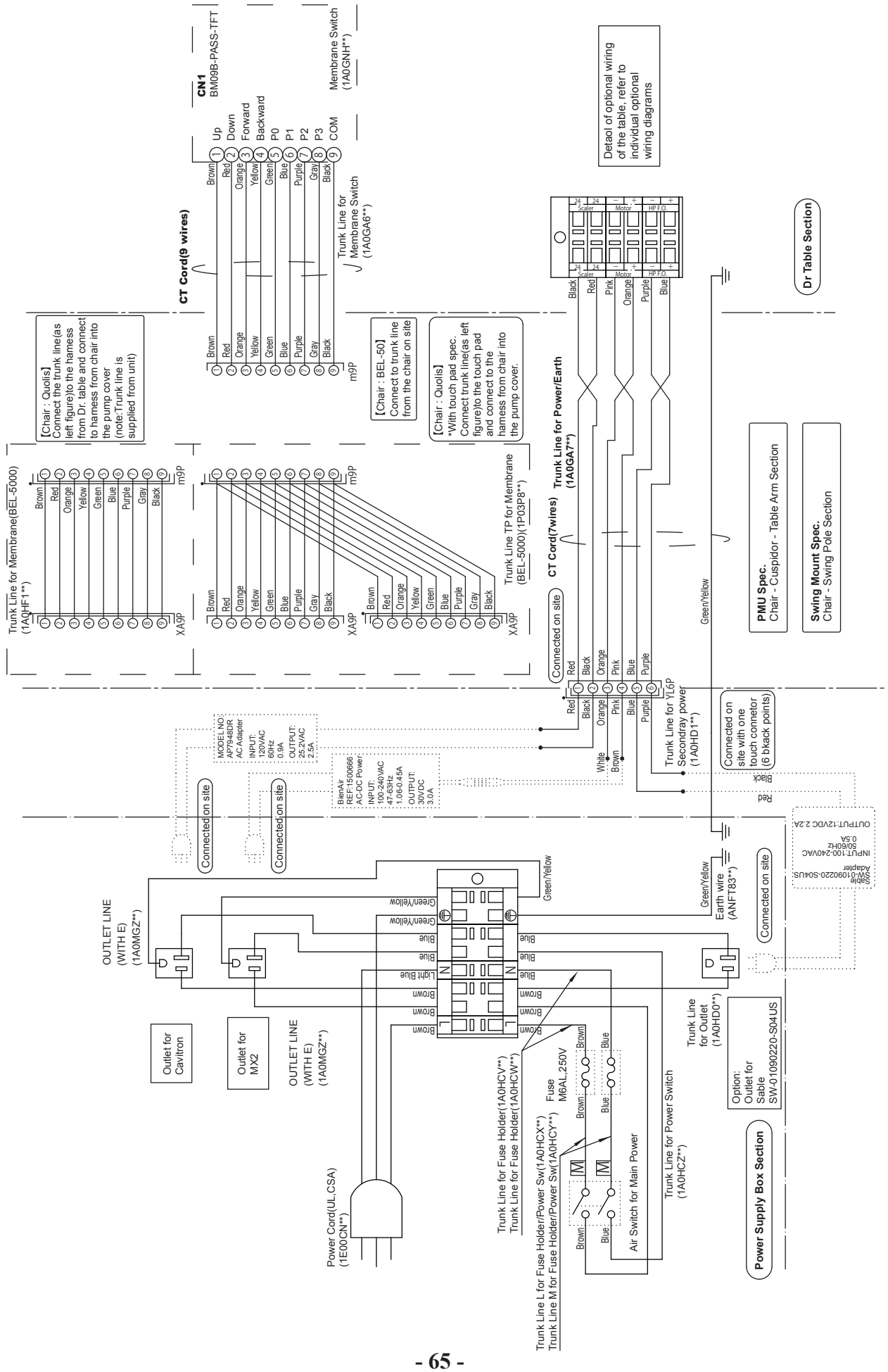


## 20. Electrical Diagram (with Mocromotor, Electric Scaler, Handpiece Optic)

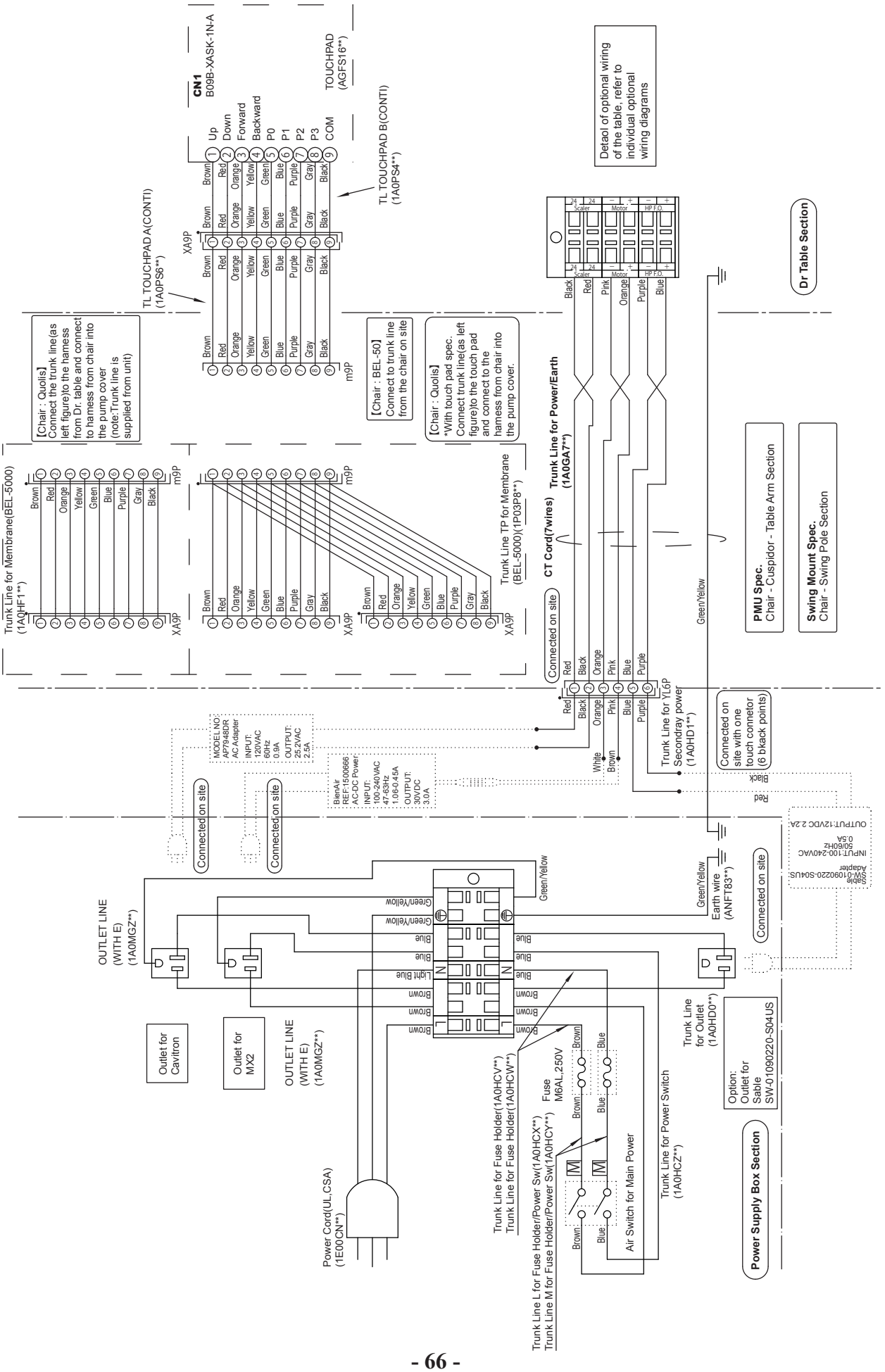
### 20-1. AU-HV3801~3807



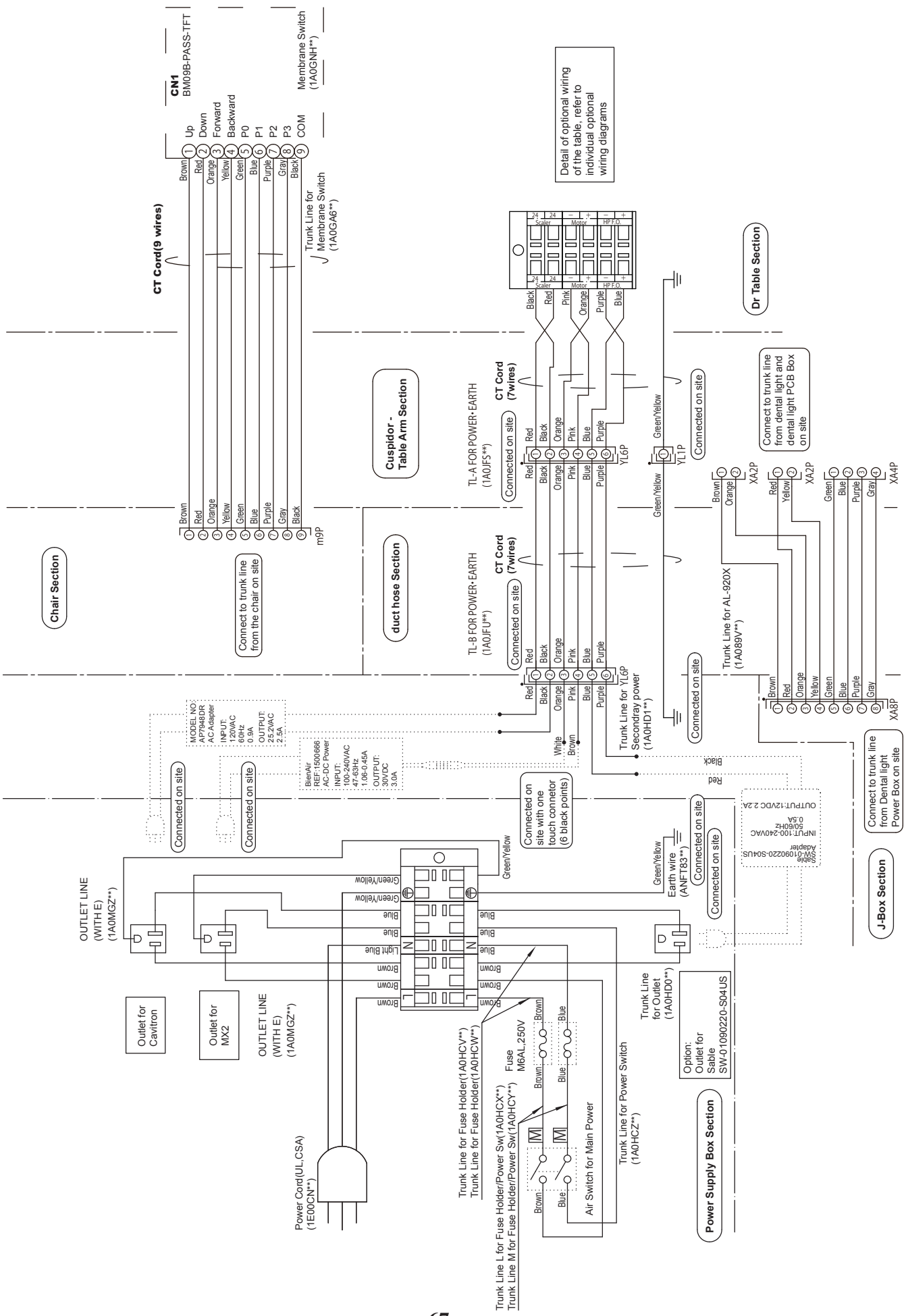
## 20-2. AU-HV3808 Swing Mounted Delivery System with Bel-50 Chair / Quolis Chair



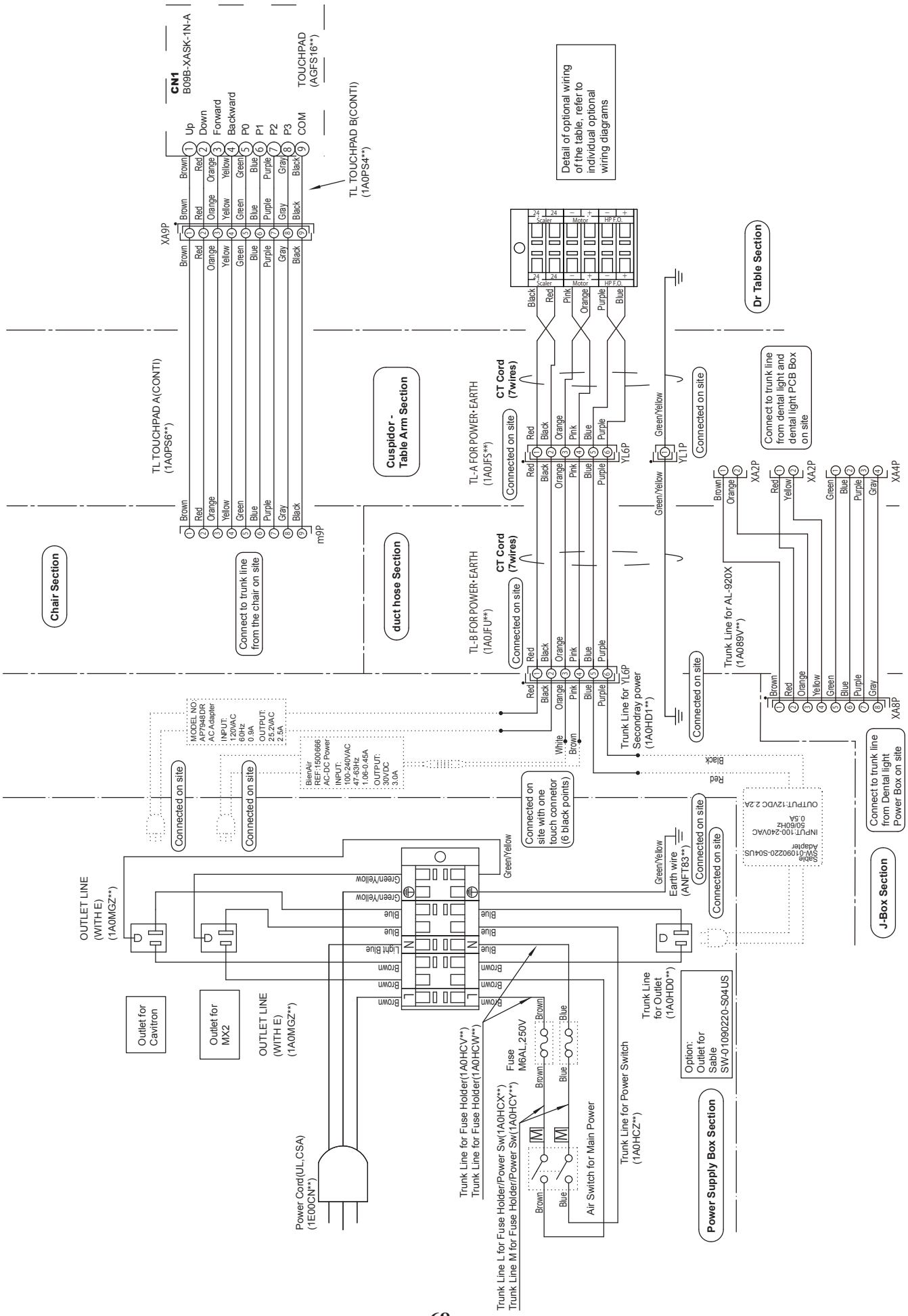
## 20-3. AU-HV3808 Swing Mounted Delivery System with Rod Type (Bel-50 Chair / Quolis Chair)



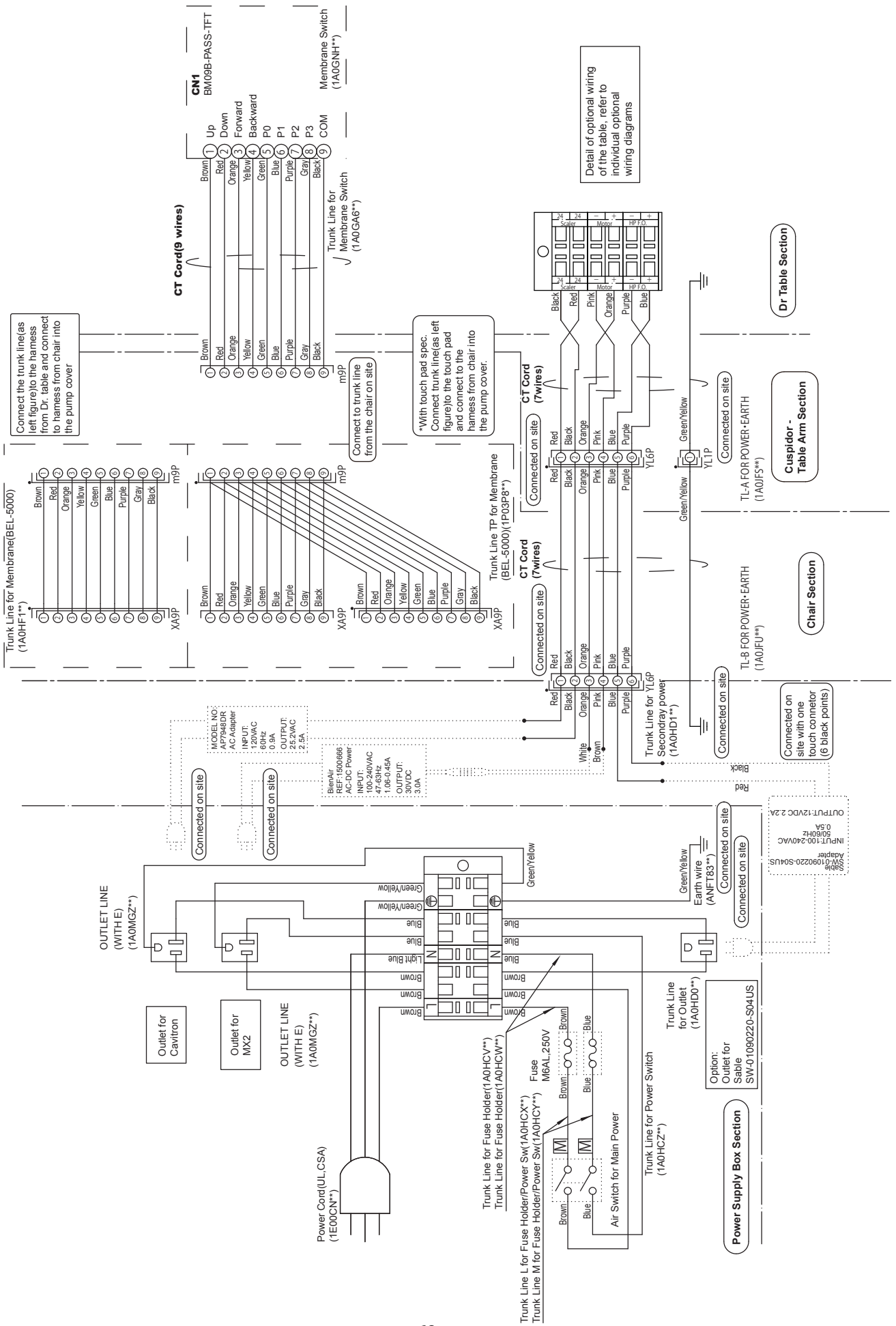
## 20-4. AU-HV3808 Over the Patient Delivery System with Bel-50 Chair



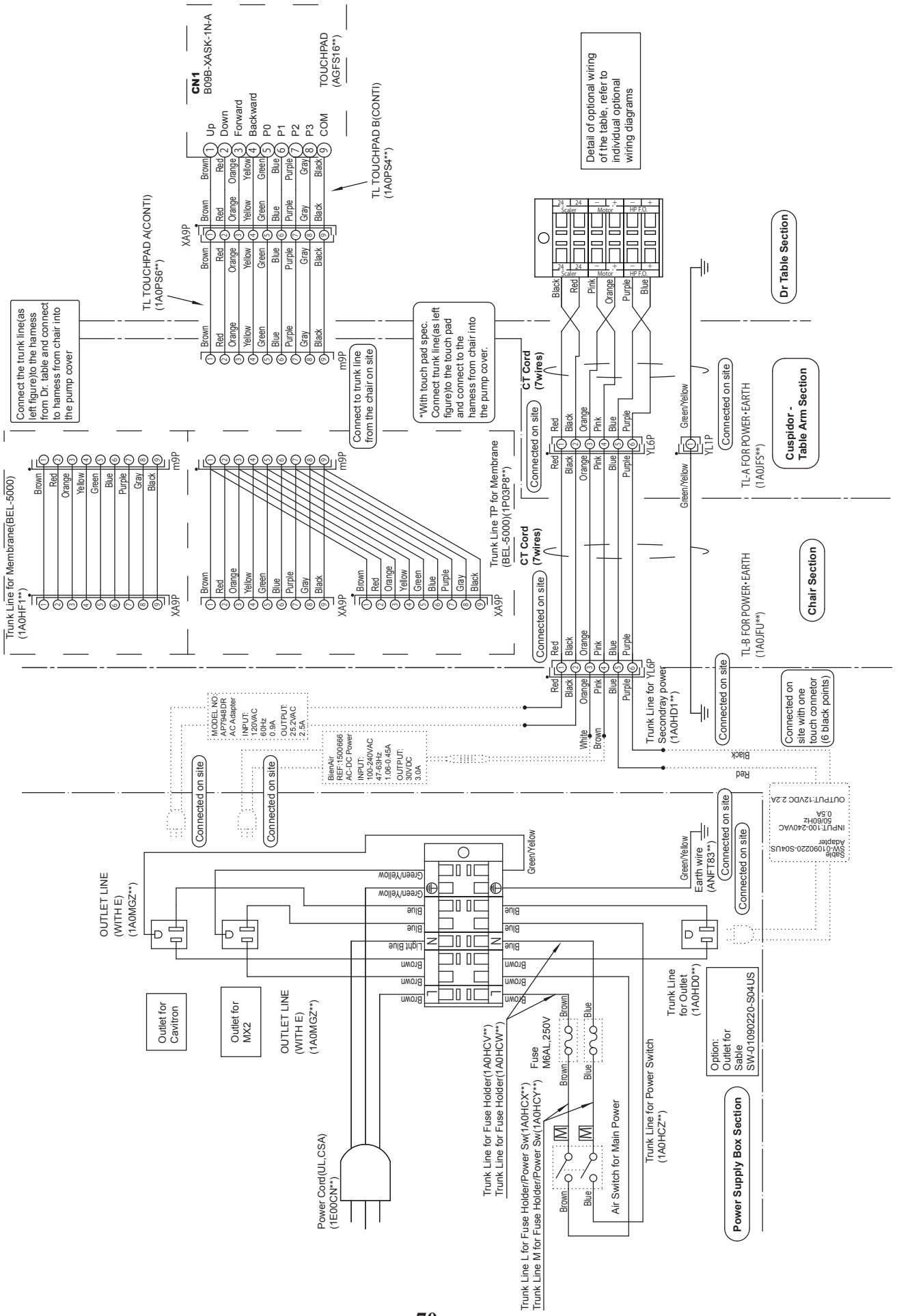
## 20-5. AU-HV3808 Over the Patient Delivery System with Rod Type (Bel-50 Chair)



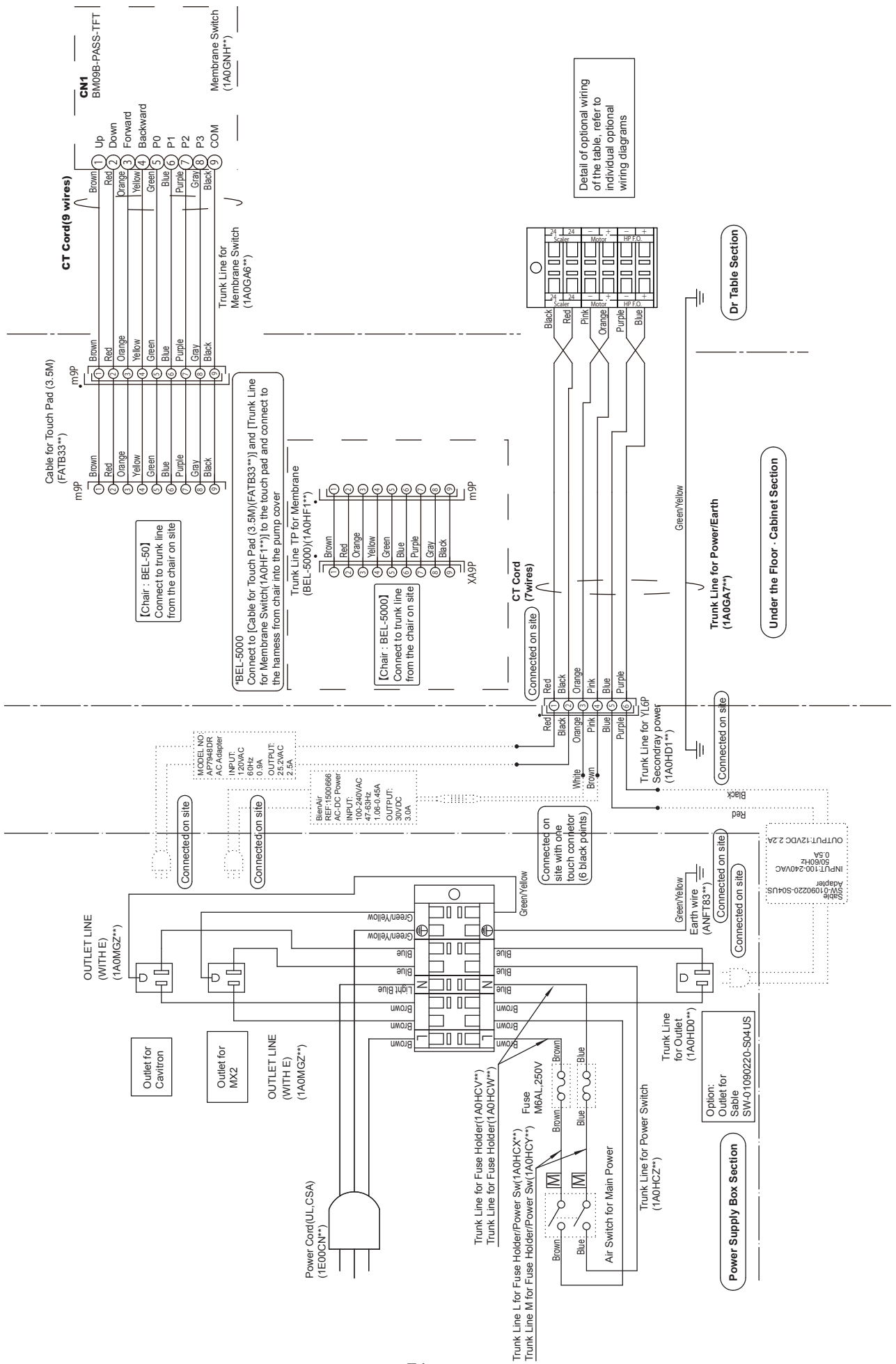
## 20-6. AU-HV3808 Over the Patient Delivery System with Quolis Chair



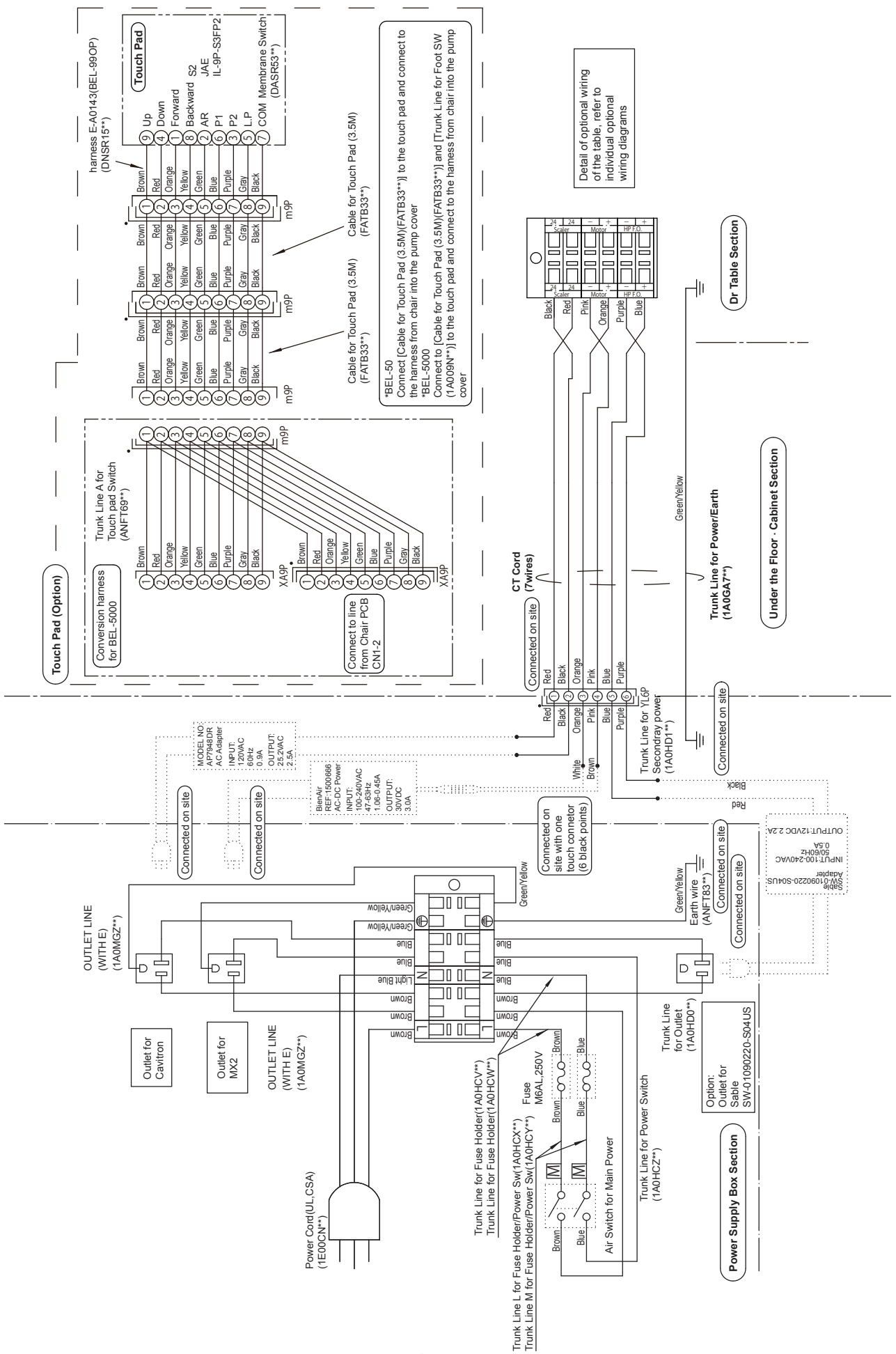
## 20-7. AU-HV3808 Over the Patient Delivery System with Continental Type Table (Quolis Chair)



## 20-8. AU-HV3808 Side Delivery System with Bel-50 Chair / Quolis Chair

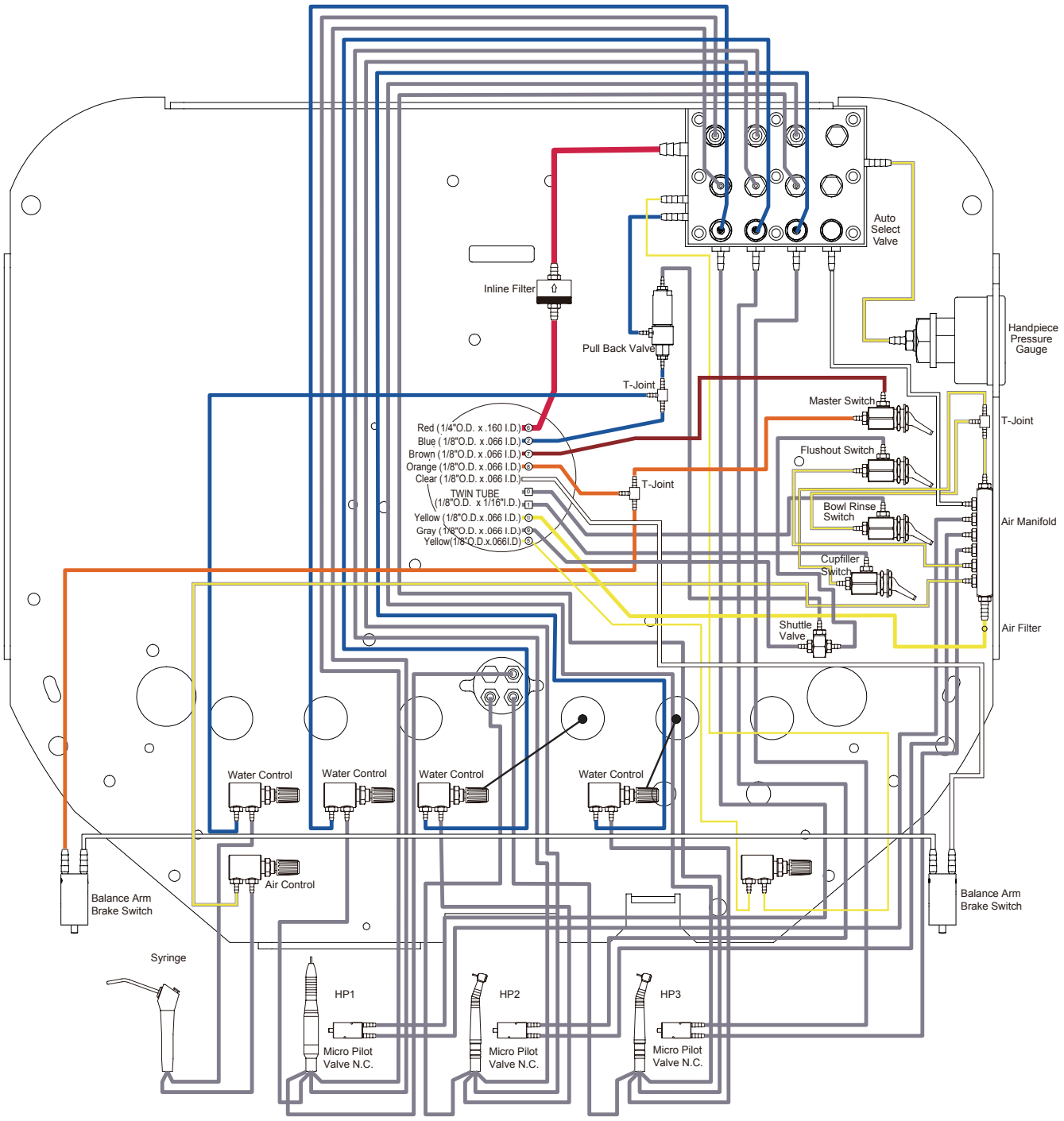


## 20-9. AU-HV3808 Rear Delivery System with Bel-50 Chair / Quolis Chair

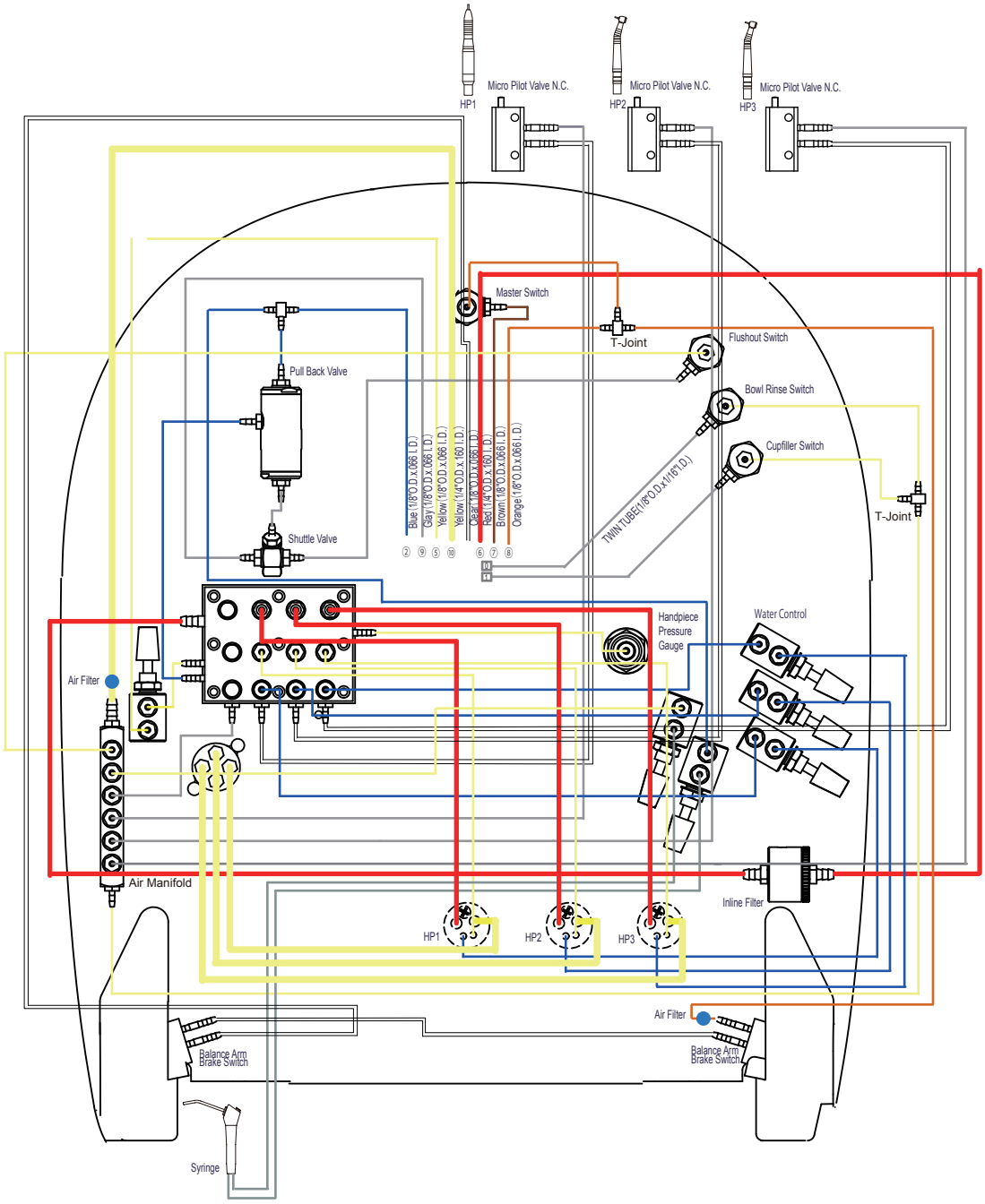


## 21. Flow Diagram

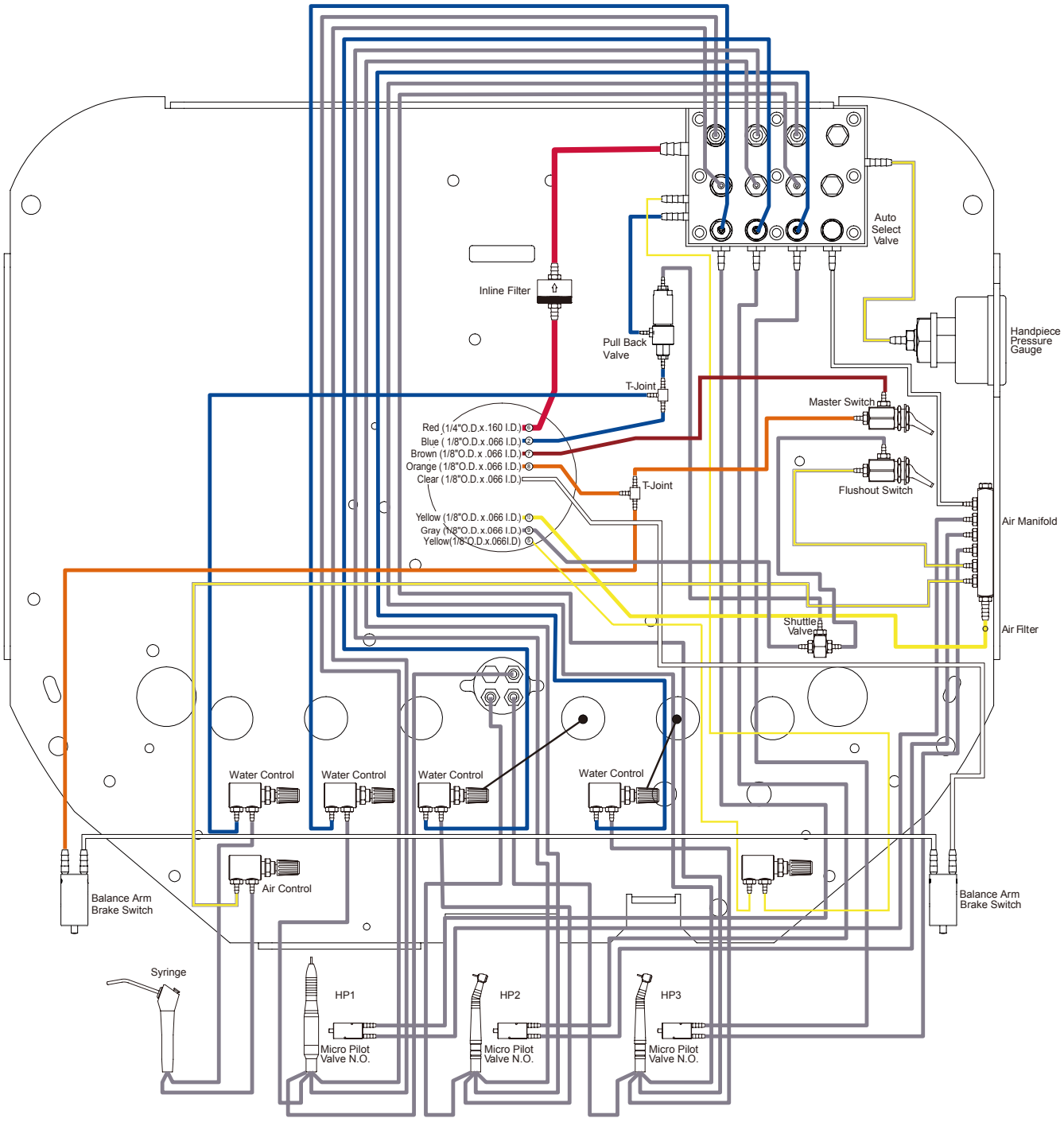
## 21-1. Doctor's Control Section (with spittoon)



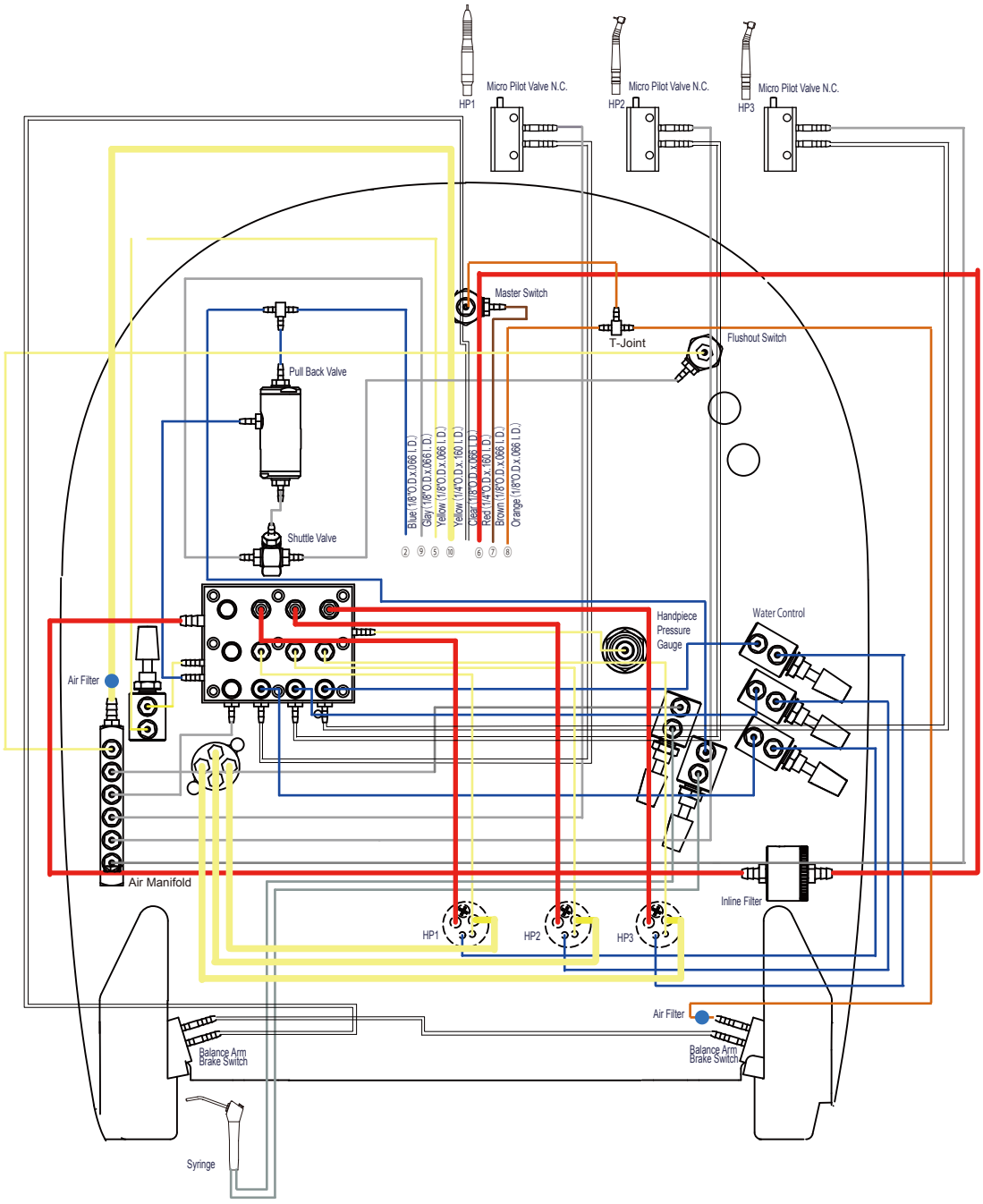
## 21-2. Doctor's Control Section Rod Type (with spittoon)



## 21-3. Doctor's Control Section (without spittoon)

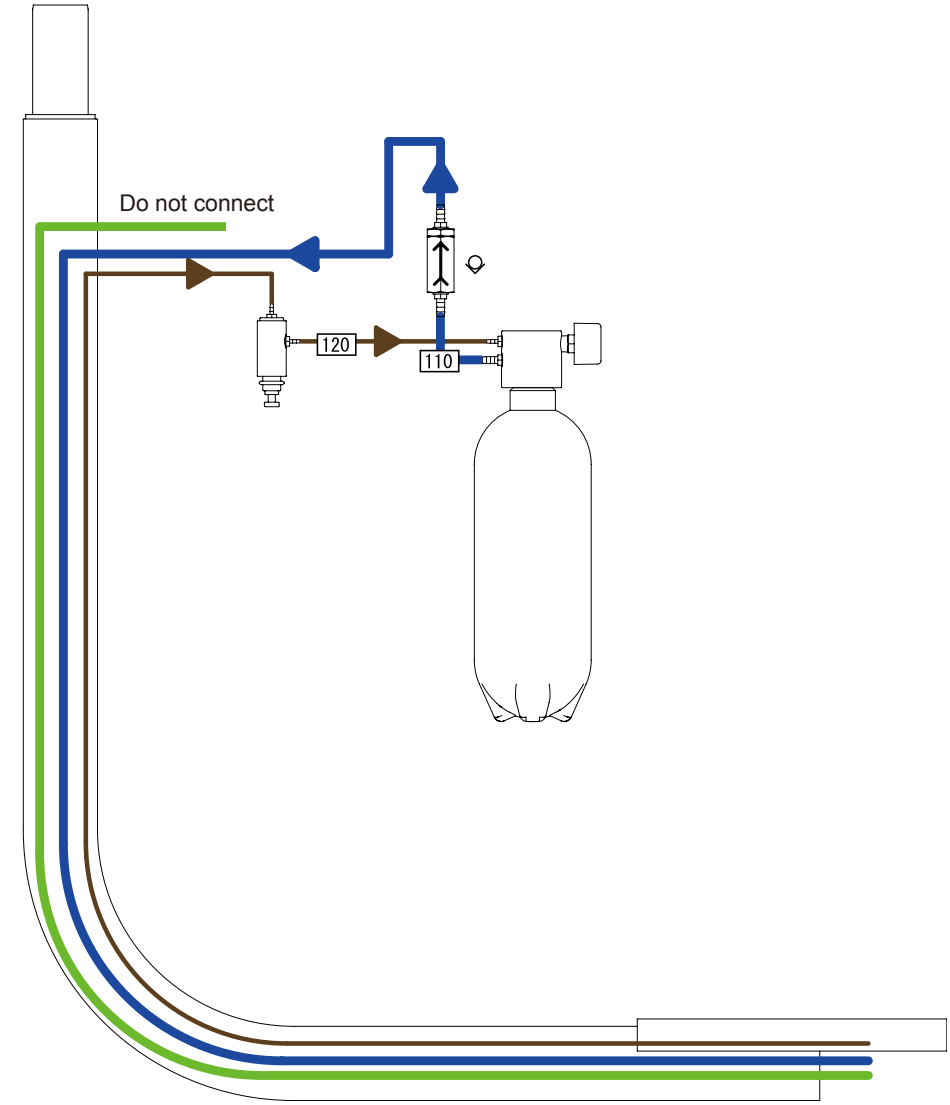


## 21-4. Doctor's Control Section Rod Type (without spittoon)

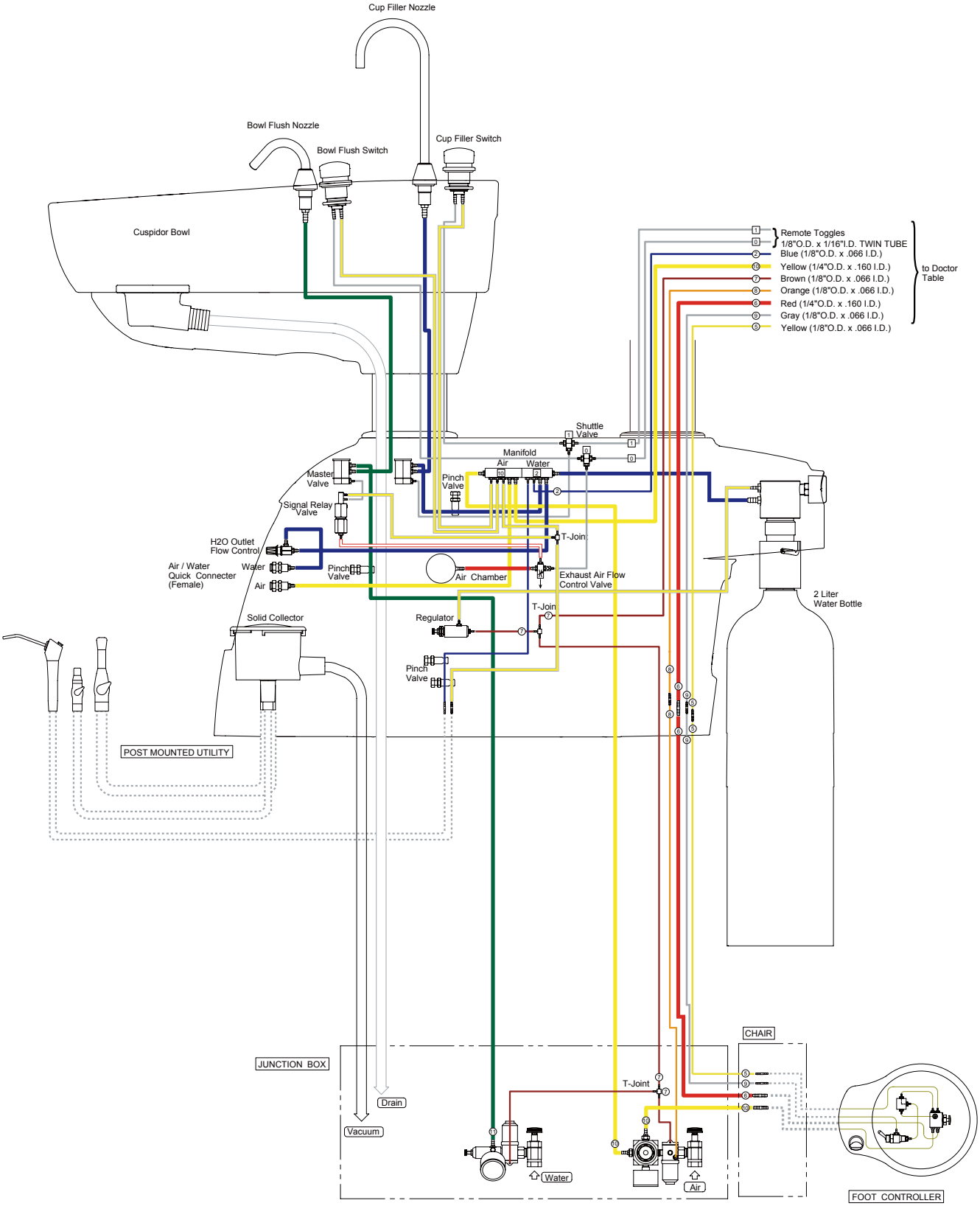


## 21-5. Swing Arm Section

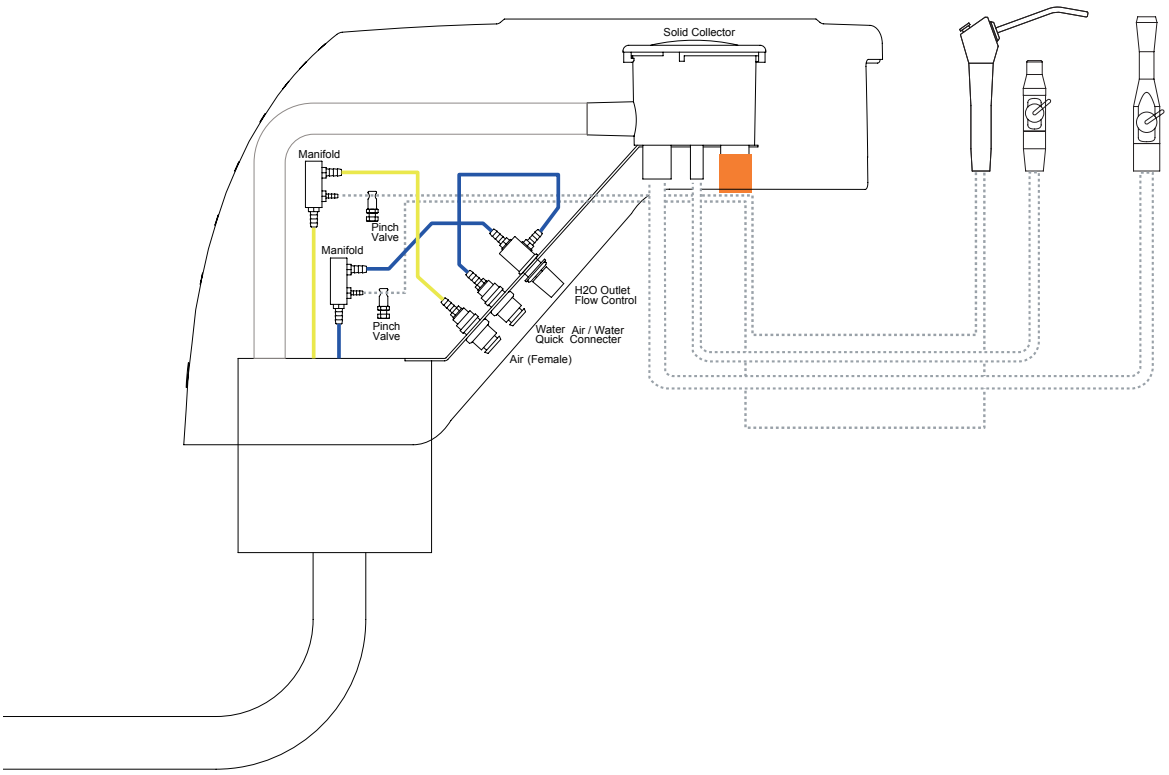
Swing Arm



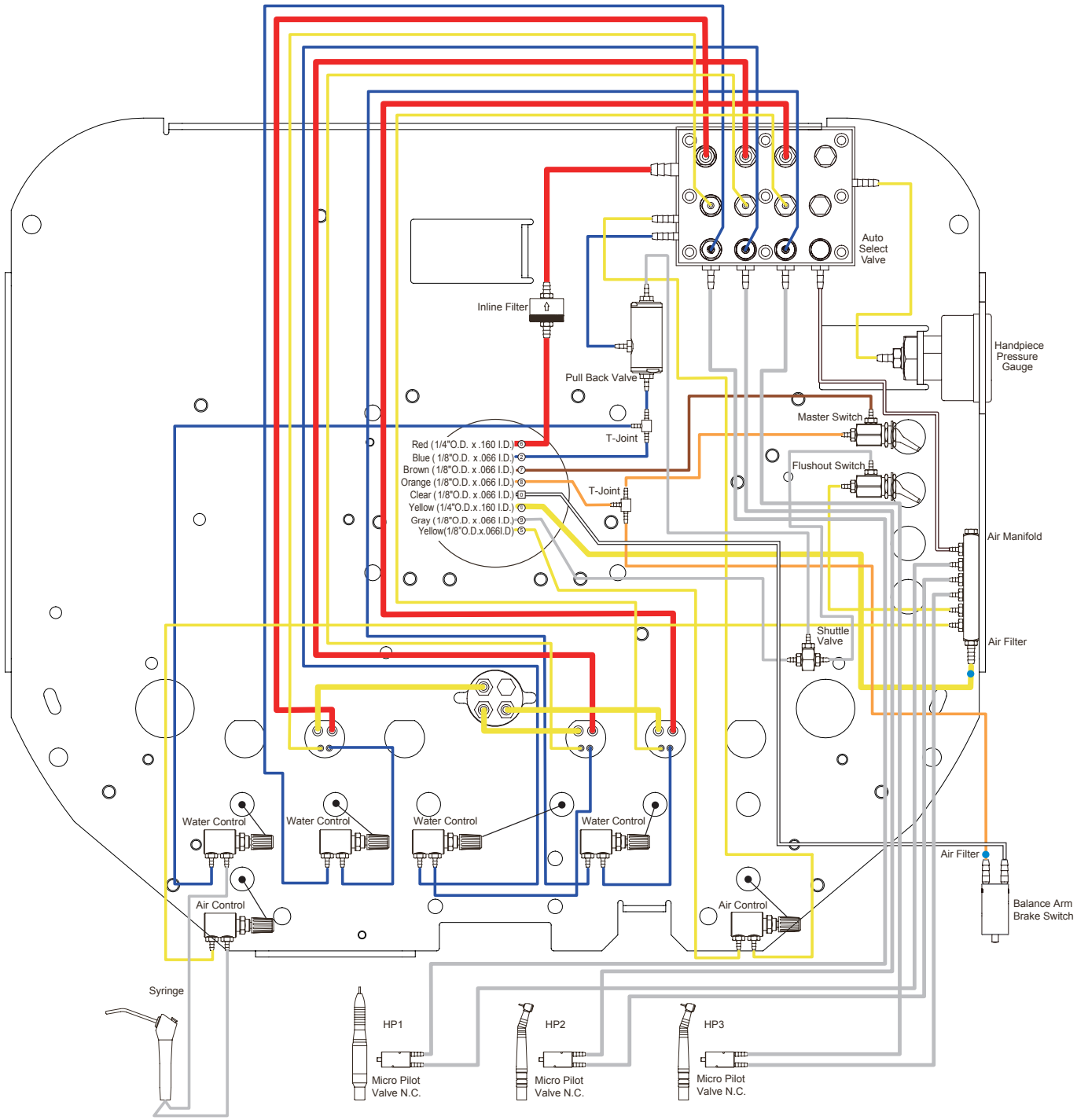
## 21-6. PMU Section



## 21-7. Vac Pac Section



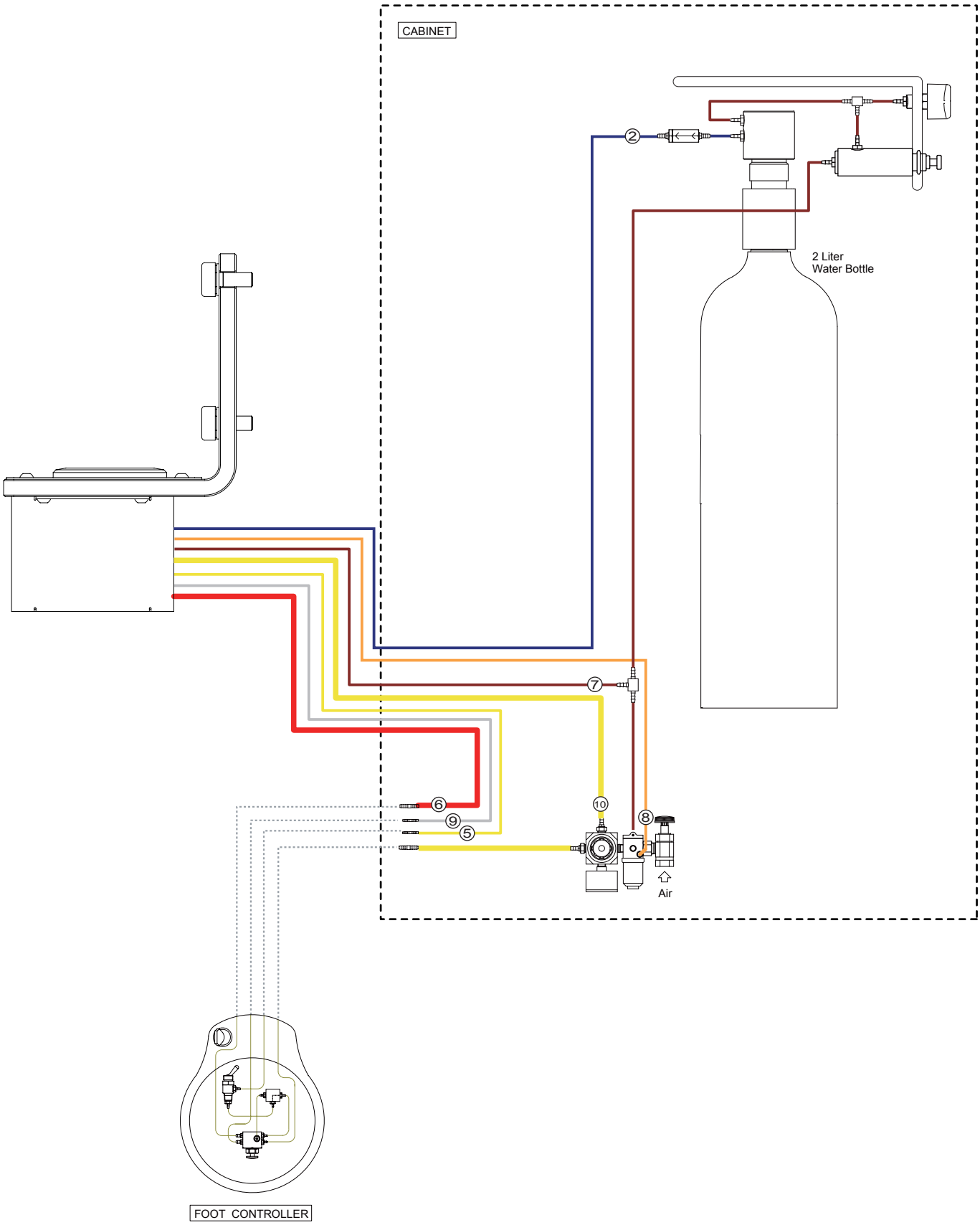
## 21-8. Side Delivery Section(Table)



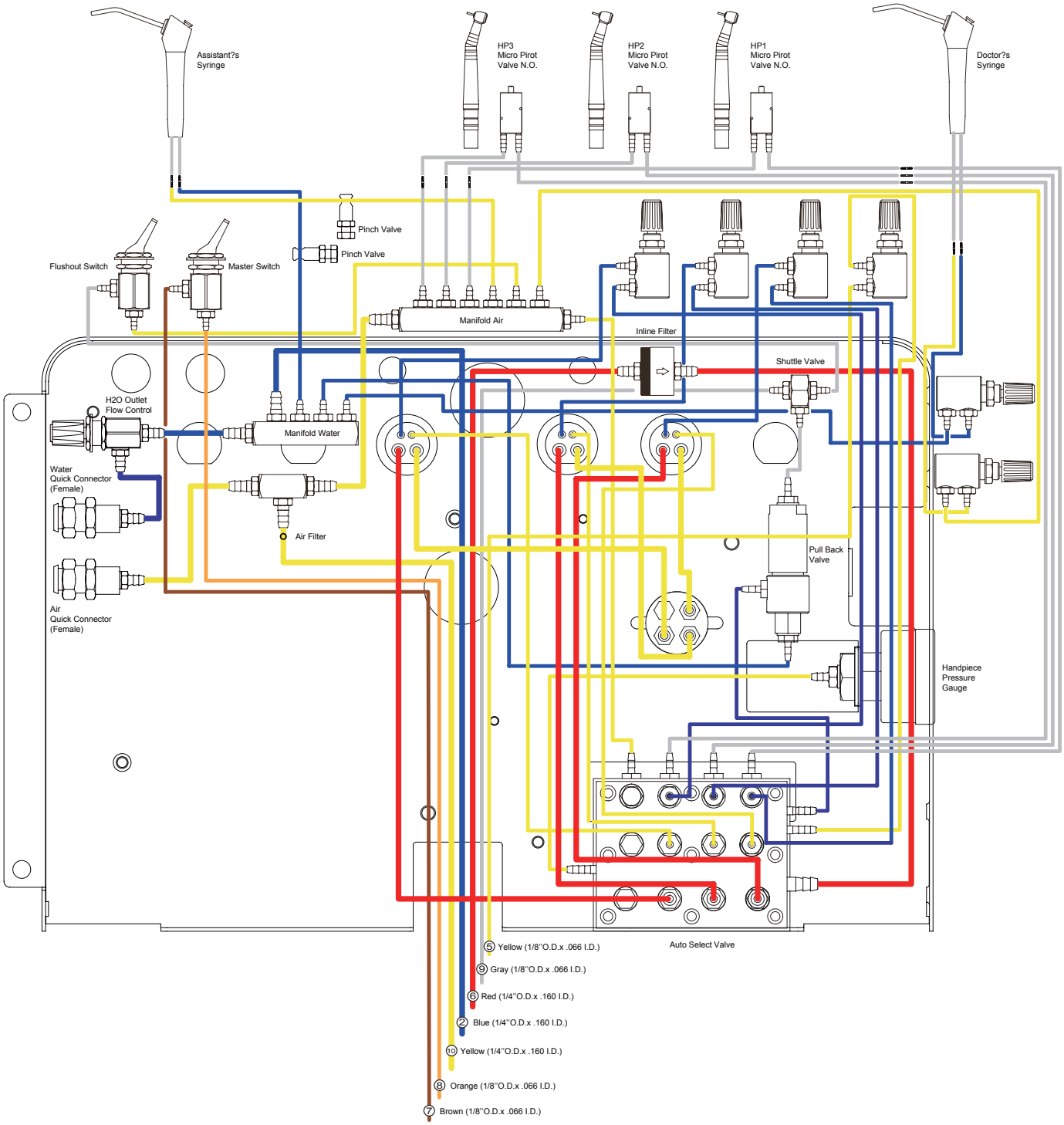

**⚠ CAUTION**

Do not pinch the tube when closing the table chassis. After the table chassis is closed, turn on the master switch and check the operation of equipment proprely to confirm the tube is not pinched.

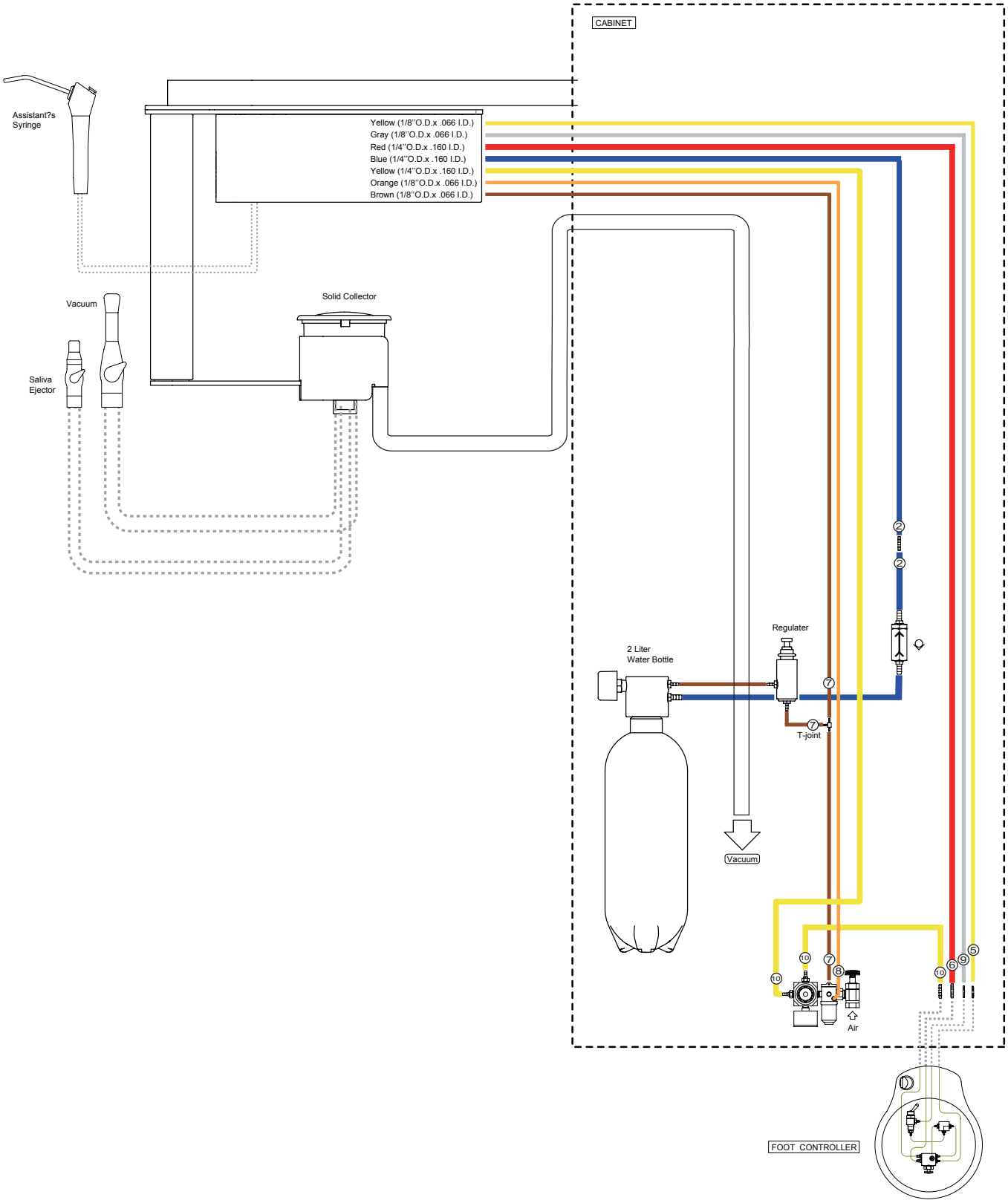
## 21-9. Side Delivery Section(Cabinet)



## 21-10. Rear Delivery Section(Table)

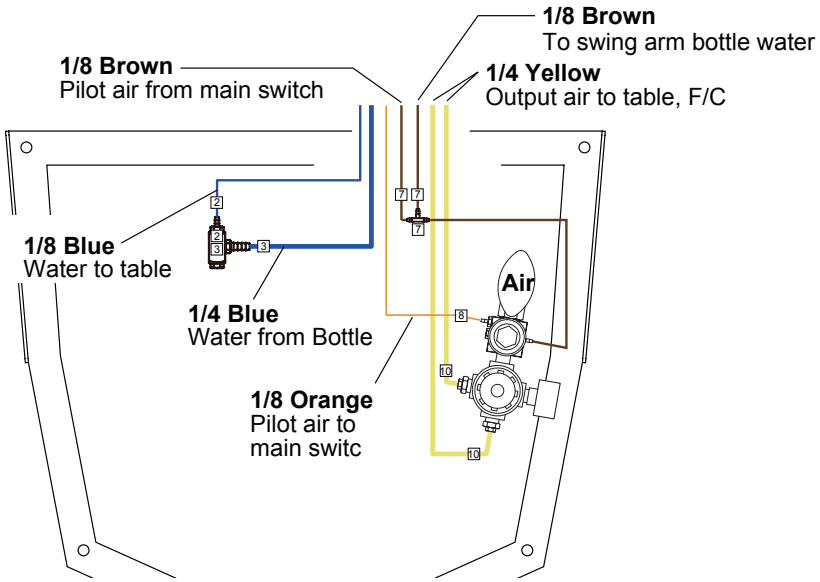


## 21-11. Rear Delivery Section(Cabinet)

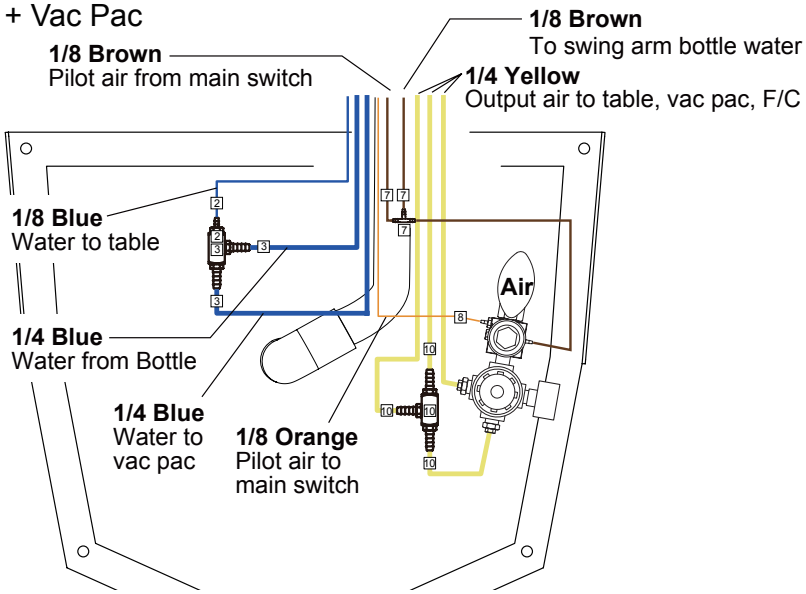


## 21-12. Junction Box Section

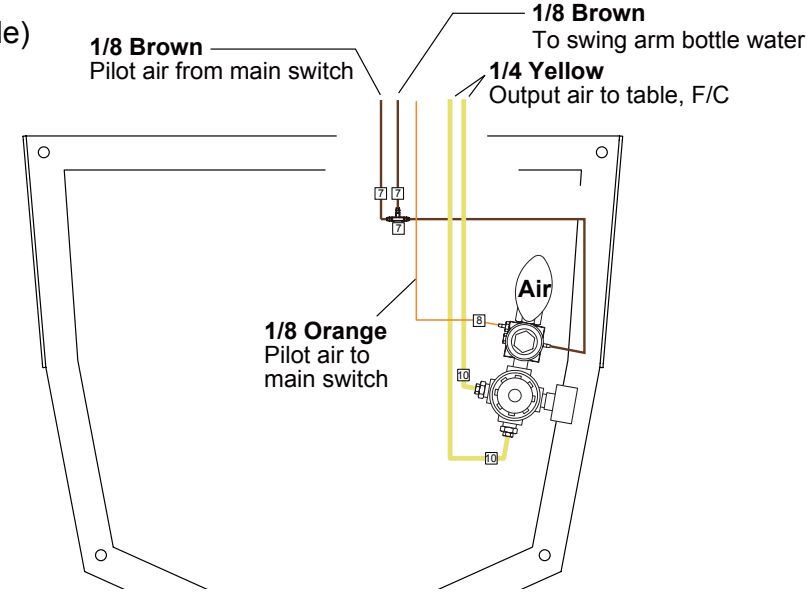
Swing Arm Table



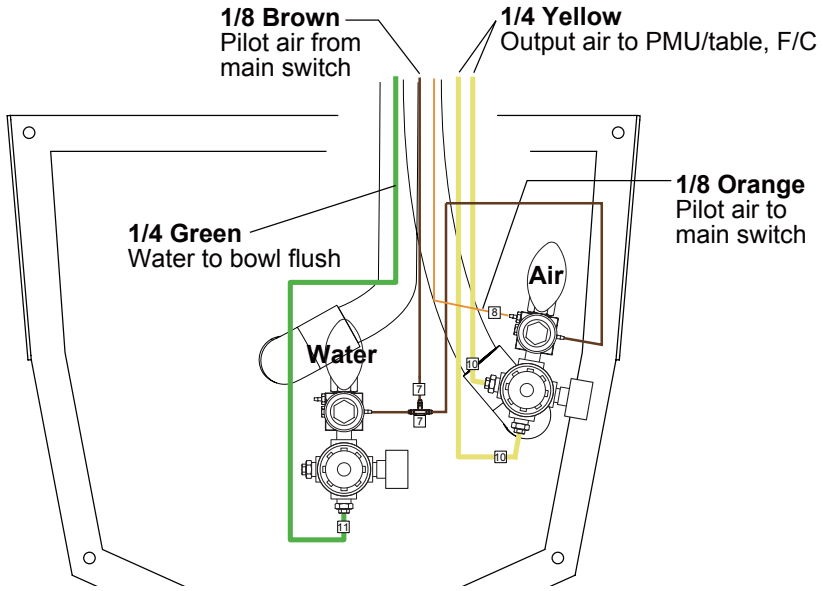

Swing Arm Table + Vac Pac



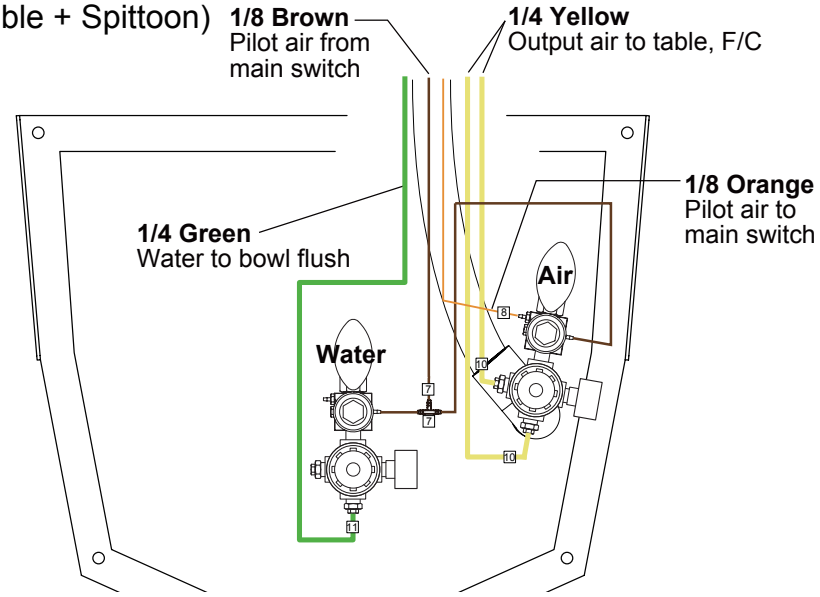

PMU Type (Table)



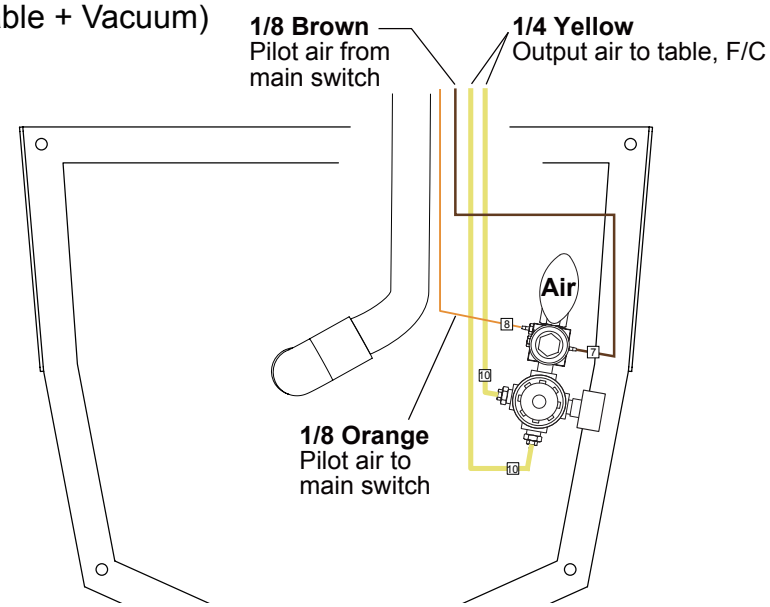
PMU Type (Table + Spittoon + Vacuum)



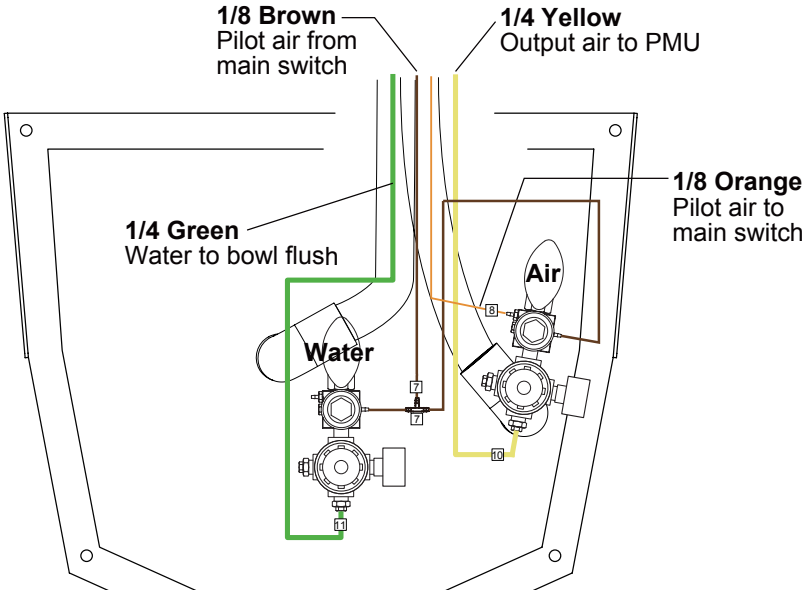

PMU Type (Table + Spittoon)



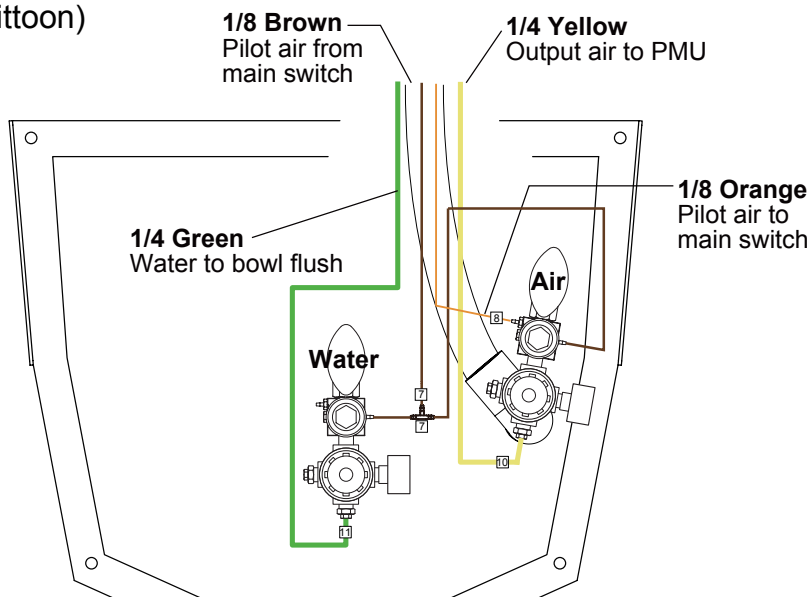

PMU Type (Table + Vacuum)



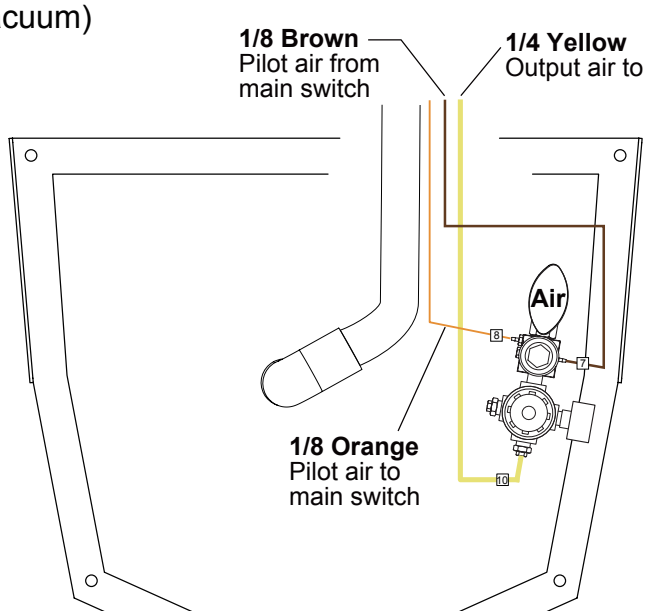
PMU Type (Spittoon + Vacuum)




PMU Type (Spittoon)



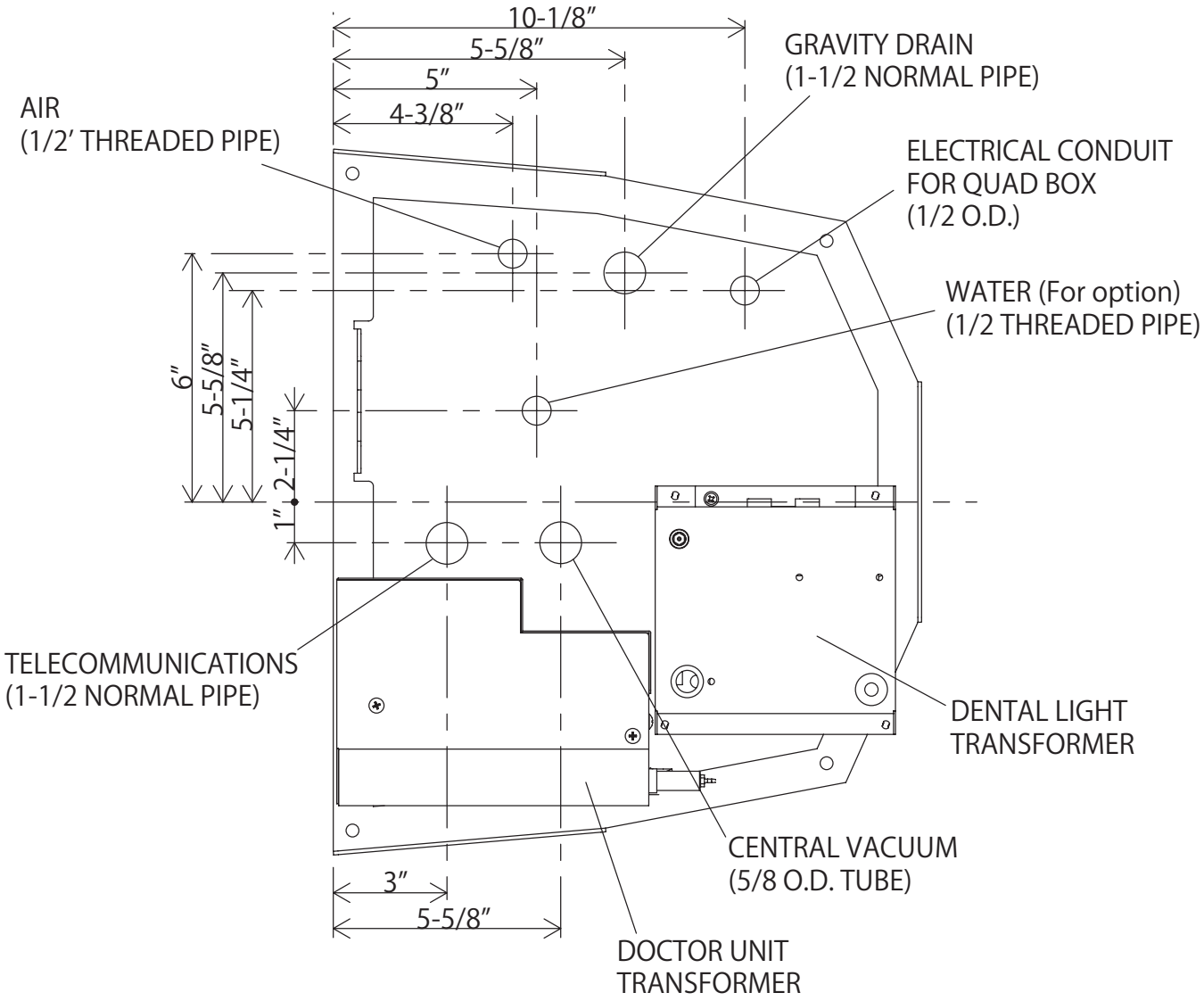

PMU Type (Vacuum)

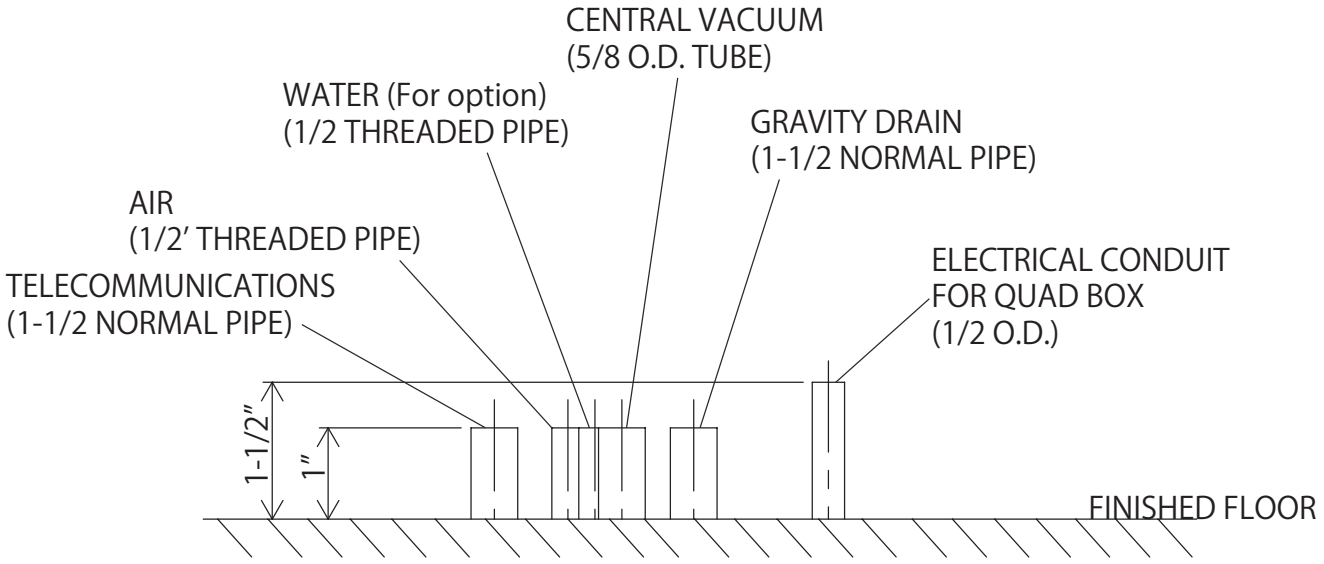


**22. Floor Template**

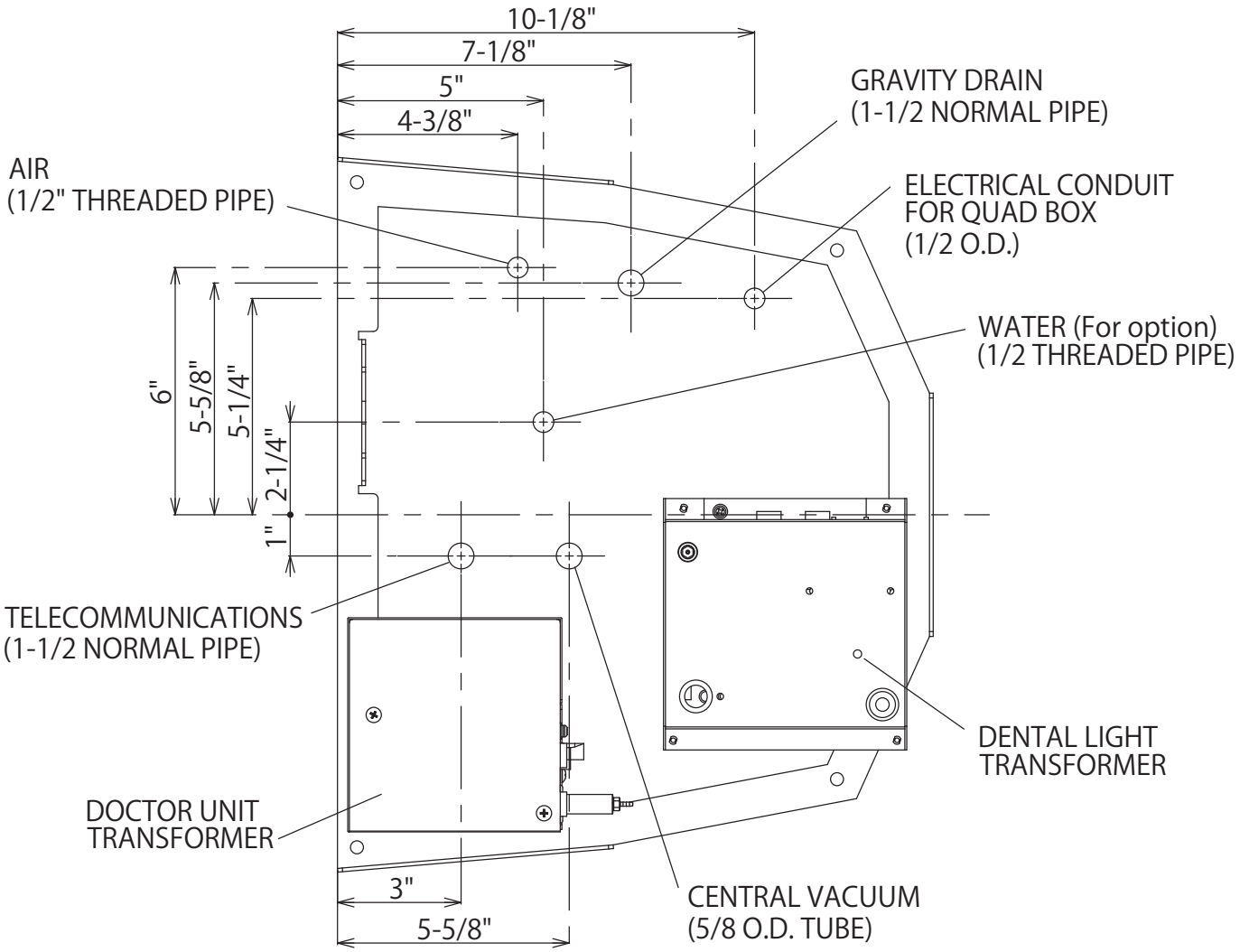
* Floor template of the Rear Delivery, See in cabinet installation manual.

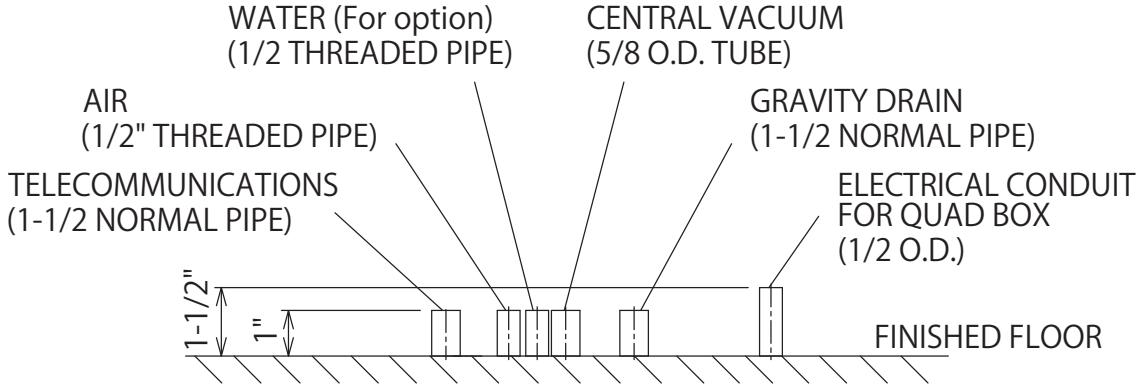
**22-1. AU-HV3801~3807**



**22-2. AU-HV3808**



## NOTE

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