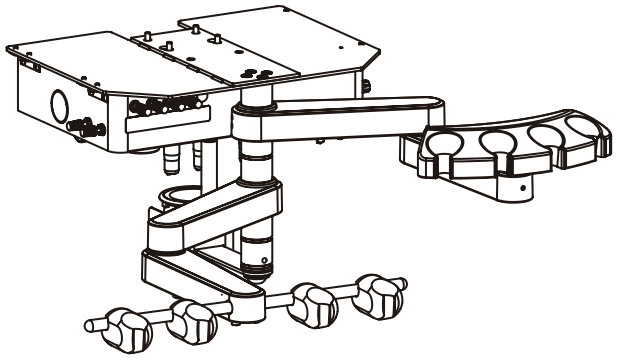
Evogue EVG3561 & EVG3563
Cabinet Mounted
Rear Delivery Dental Units



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 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.

Environmental Requirements

For Operation :

Ambient Temperature 41°F to 104°F (5°C to 40°C)

Humidity 30 % - 75%

Atmospheric Pressure 10 psi – 15.1 psi (700 hPa to 1060 hPa)

For Transportation / Storage :

Ambient Temperature 7°F to 158°F (-20°C to +70°C)

Humidity 10 % - 95%

Atmospheric Pressure 10 psi – 15.1 psi (700 hPa to 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.

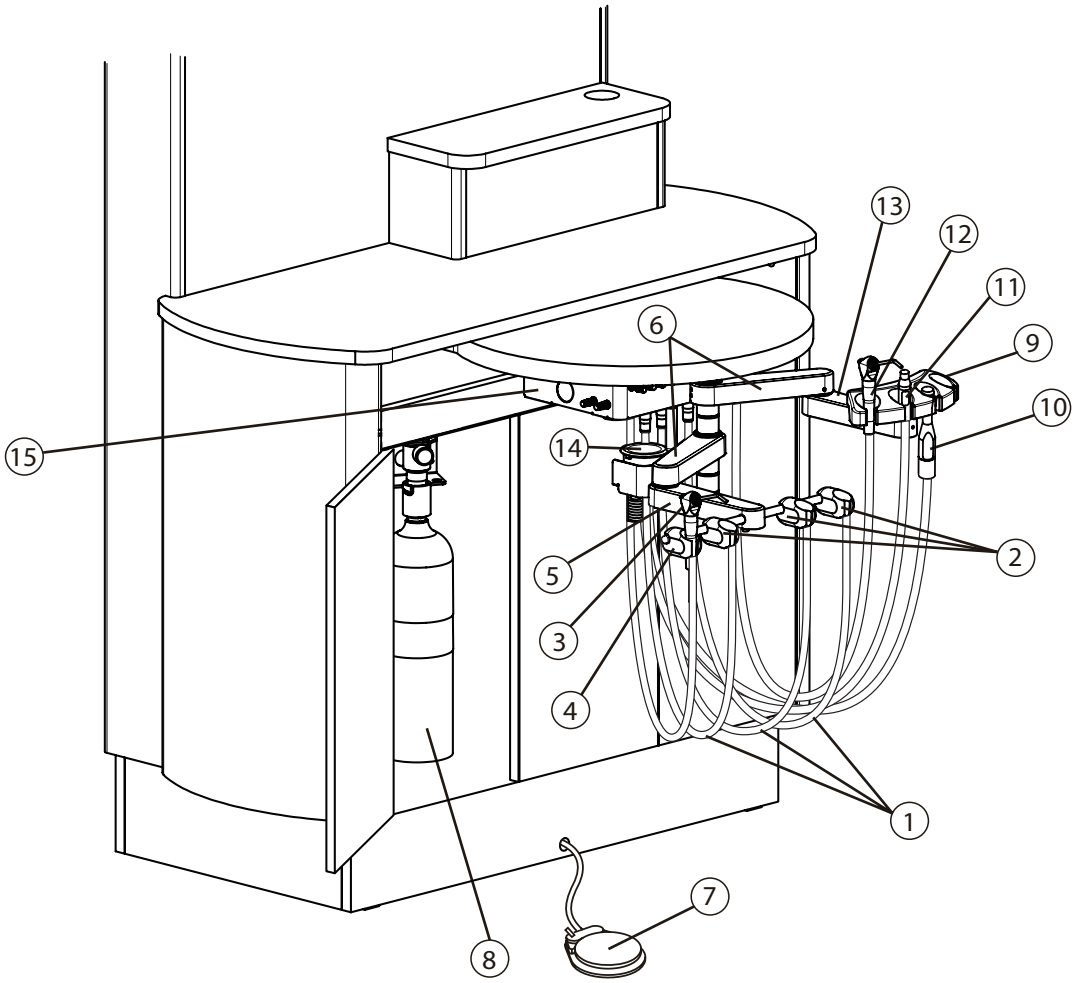
TABLE OF CONTENTS

Page

1. Overview and Major Components ---------- 1
   1-1 Rear Delivery System
2. Dimensions and Specifications ---------- 2
   2-1. Rear Delivery System Dimensions, EVG3561
   2-2. Rear Delivery System Specifications, EVG3561
3. Introduction ---------- 3
   3-1. Precautions for installation
   3-2. Necessary Tools
4. Unpacking of Units ---------- 3
5. How to Install the Rear Delivery (EVG3561 & EVG3563) ---------- 4
6. Connecting Delivery System To The Floor Utilities ---------- 8
7. How to Connect the Foot Control (EVG3561) ---------- 8
8. Installation of the Power Supply Box For Options (EVG3561)---------- 9
9. Check Unit Connections ---------- 9
10. Flow Diagrams (EVG3561) ---------- 10
    10-1 Rear Delivery Umbilical/ Power Supply/ Foot Control Section (Cabinet)
    10-2 Delivery System Doctor Control Housing Section (Control Head)
11. Arm Height Adjustments (EVG3561 & EVG3563) ---------- 12
12. Handpiece Drive Air (EVG3561) ---------- 13
13. Coolant Water (EVG3561) ---------- 14
14. Coolant Air (EVG3561) ---------- 14
15. Doctor's Syringe (EVG3561)---------- 14
16. Assistant's Syringe (EVG3561 & EVG3563) ---------- 14
17. Electrical Diagram (EVG3561) ---------- 15

1. Overview and Major Components

1-1. Rear Delivery System

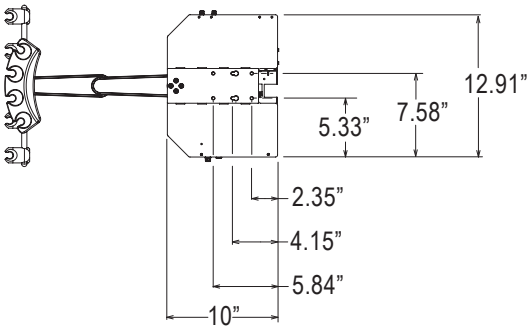


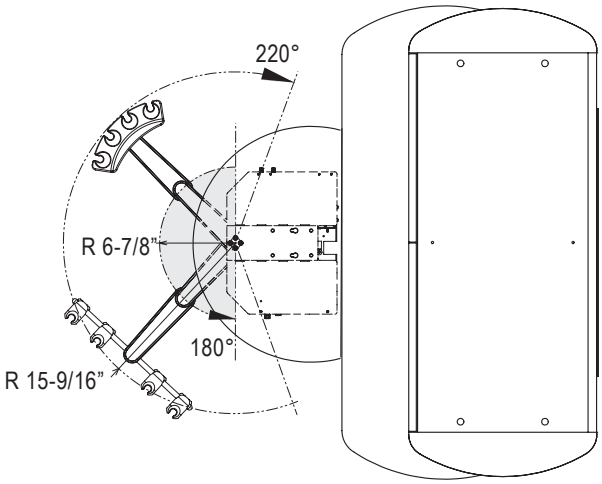
(1) Handpiece Hoses
(2) Handpiece Holders
(3) Dr's Syringe (*)
(4) Syringe Holder
(5) Doctor Arm
(6) First Arm
(7) Foot Control
(8) Water Bottle
(9) Assistant Instrument Holder
(10) HVE
(11) Saliva Ejector
(12) Assistant's Syringe (*)
(13) Assistant Arm
(14) Solids Collector
(15) Delivery System Control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

2. Dimensions and Specifications

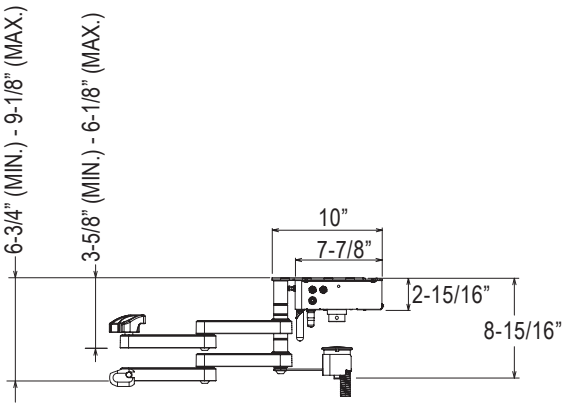
2-1. Rear Delivery System Dimensions (EVG3561)
- Inches(Tolerance ± 10%)

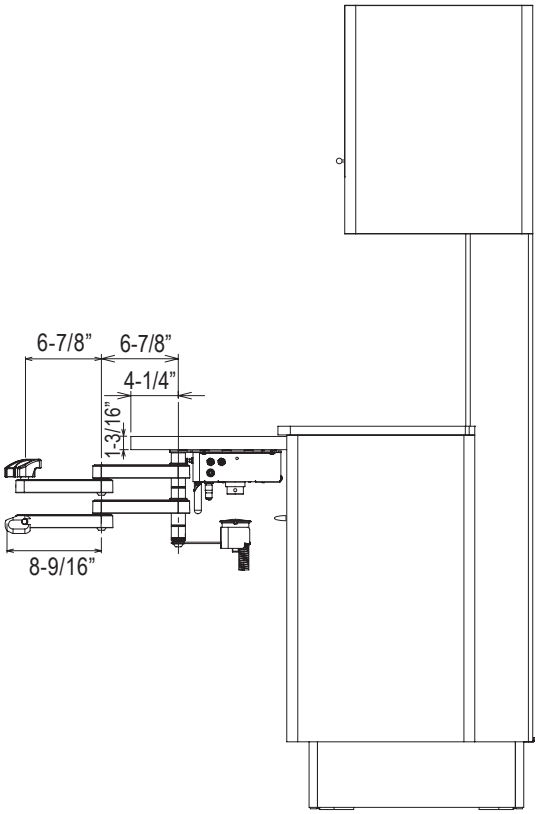
MOUNTING PLATE DIMENSIONS





VERTICAL ARM HEIGHT ADJUSTMENT RANGES
BELOW WORKSURFACE





2-2. Specifications (EVG3561)

Power Consumption----------120 VAC/ 60Hz; 1.6 A
Fuse value ---------- M6AL, 250V
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.
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
- 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.
- Refer to flow diagram in this manual and cabinet template for connection of water, air , power , drain hose and vacuum hose.

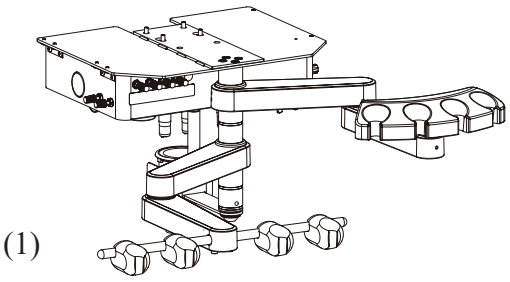
3-2. Necessary Tools

- Phillips screw driver
- Small slotted screw driver
- Hex key wrench (5/32")
- Long nose pliers

4. Unpacking of Units

Carton No.	Module
1	Rear Delivery

Check all the components and parts for damage after unpacking.



(1)

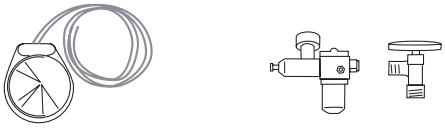
Carton No.1 (Rear Delivery System Assembly)

(1) Rear Delivery System Assembly, 1 ea. (EVG3561 shown)
(2) 2 Liter Water bottle, 1 pc
(3) Quick disconnect adaptor for water bottle, 1pc.
(4) Operating manual, installation manual, 1 set ea.
(5) Syringe parts (with Syringe), 1 set/syringe
(6) Foot control (w/ EVG3561 only) , 1 set
(7) Utility package (air), 1pc.

(2) (3) (4) (5)

Miscellaneous parts for installation (Not Shown):

- Hex key wrench , M6 (1 pc)
- Hex Socket Cap Screw, 10-24 x 5/8"L (4pcs)
- 1/8" Tubing Collar (5 pcs)
- 1/4" Tubing Collar (5 pcs)
- Phillips truss screw, M5 x 20 (4 pcs)



(6) (7)

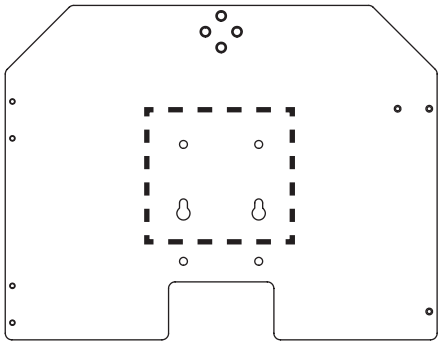
⚠ CAUTION

Opening cartons with a sharp object may cause damage to products. Use Care.

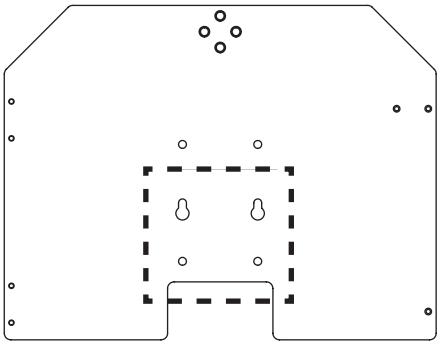
5. How to Install the Rear Delivery (EVG3561 & EVG3563)

5-1. Before installing the Rear Delivery, please refer to Belmont cabinet worksurface mounting hole patterns below:

・E-6 Cabinets
・K-66 Cabinets



・D-66CM Cabinets
・ECO-6 Cabinets



To install the Rear Delivery, attach the unit mounting plate to the cabinet with a 5/32" hex key wrench and (4) 10-24 x 5/8" cap screws.

Mounting plate will only match T-nut hole patterns on the underside of Belmont cabinet worksurfaces, as shown.

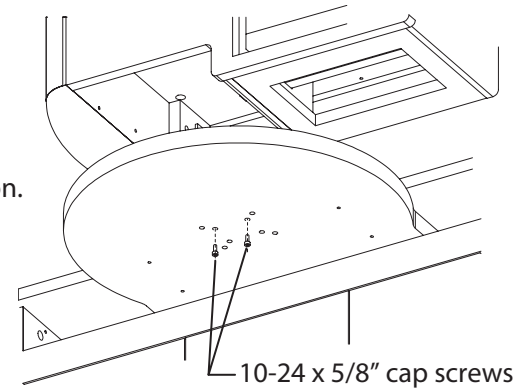
⚠ CAUTION

If the mounting plate is incorrectly positioned, the table chassis may not be able to move properly. Be sure to attach the unit mounting plate to the correct position.

5-2. Installation of Rear Delivery (Example : D-66CM cabinet)

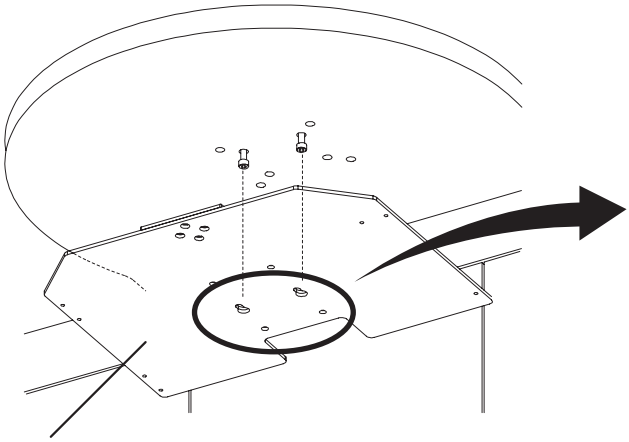
Partially thread-in (2) 10-24 x 5/8" cap screws to holes on the underside of the worksurface (refer to D-66CM cabinet mounting hole pattern as shown above).

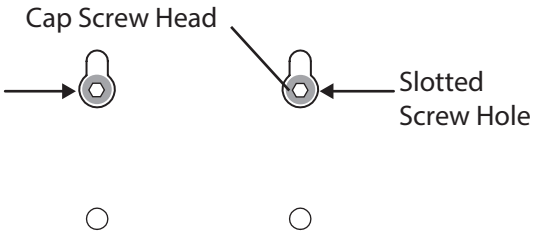
These screws will be used to support the unit during installation.



5-3. Attaching the unit mounting plate to the cabinet.

Insert the large slotted holes on the mounting plate onto the (2)10-24 x 5/8" cap screws from step 2.

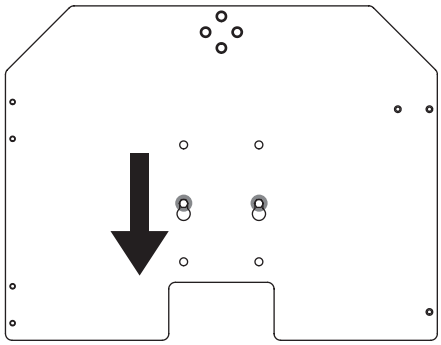




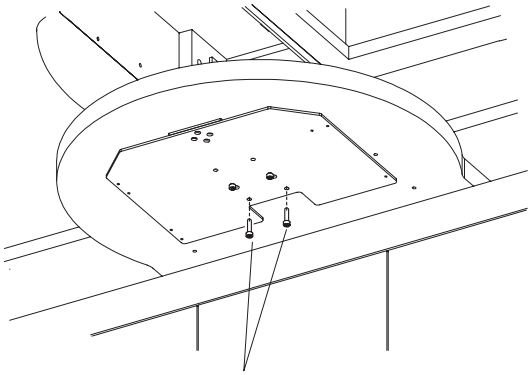
Insert Unit Mounting Plate Slotted Screw Holes over the (2) 10-24 x 5/8"Cap Screws to Hang The Unit From The Worksurface.

Unit Mounting Plate
(Control Housing and Dr/Asst. Arms Not Shown in Illustration)

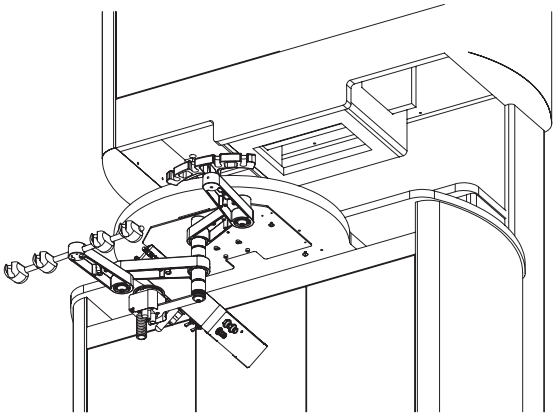
5-4. Slide the mounting plate toward the back of the cabinet, in the direction of the arrow, to hang the unit on the cabinet.



Insert and tighten the (2) remaining 10-24 x 5/8” cap screws through holes in mounting plate. Using a 5/32” hex key wrench, tighten all (4) mounting screws.

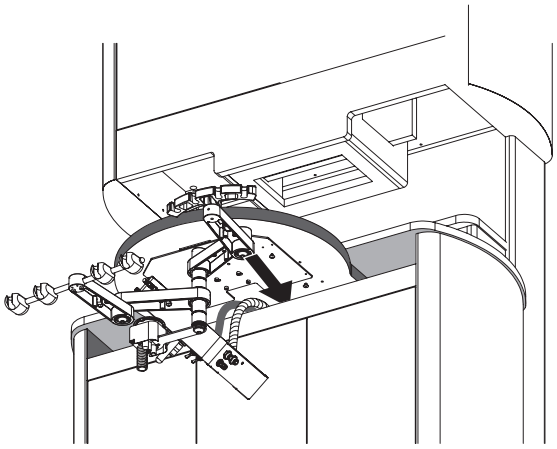


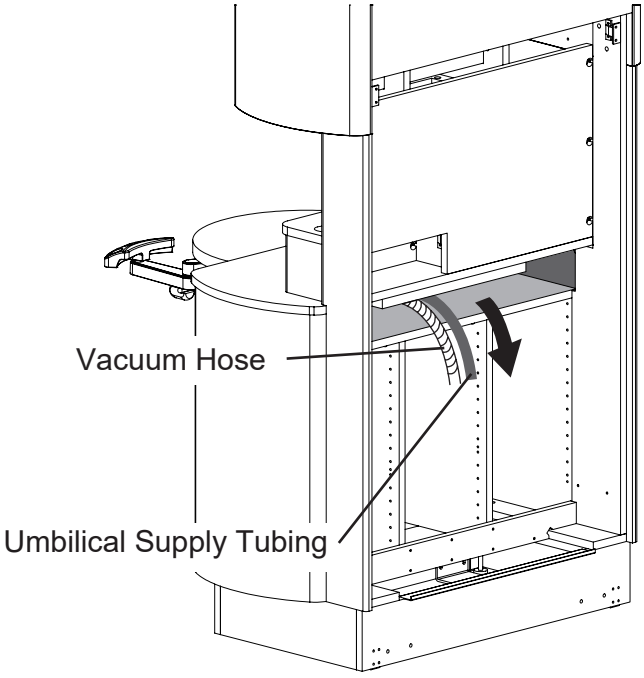
(2) 10-24 x 5/8” Cap Screws
(Unit Control Housing And Dr/Asst Arms Not Shown)



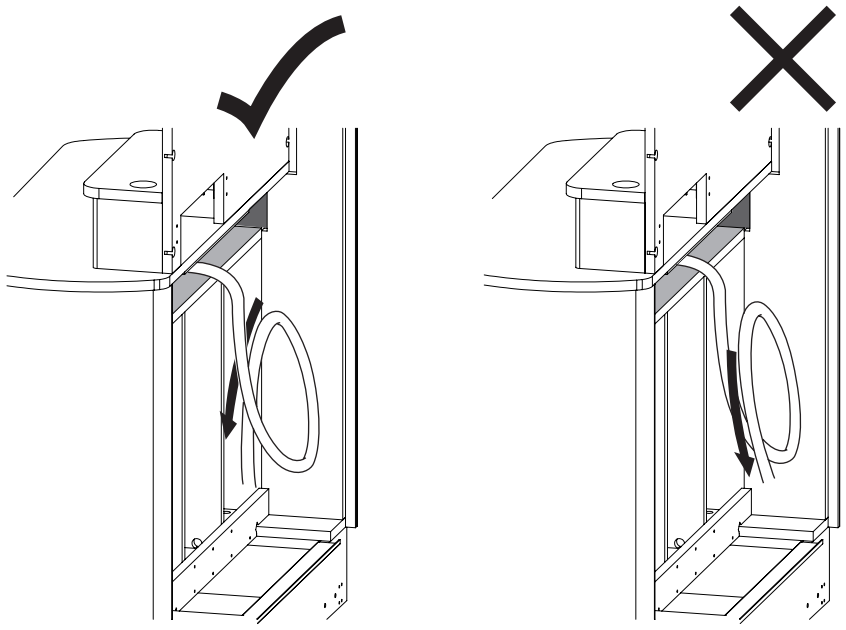
EVG3561 Delivery System Shown Above
After Tightening (4) Cap Screws For Mounting Unit

5-5. Insert the unit umbilical supply tubing and vacuum hose through the opening beneath the cabinet worksurface, as shown in the figure below, and route down along the chase at the back of the cabinet.

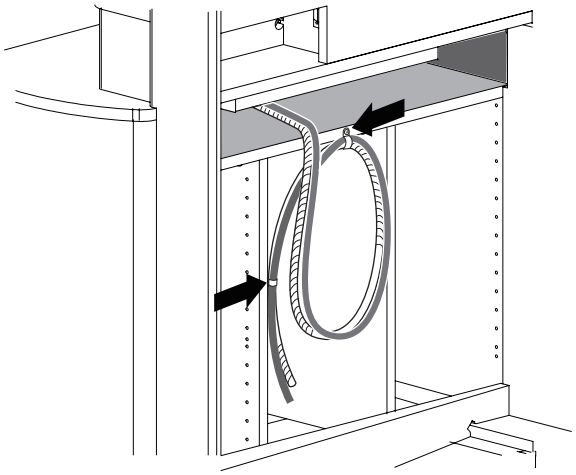




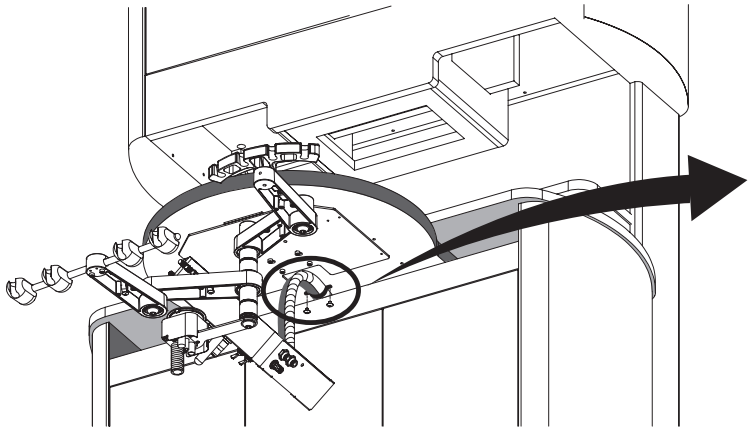
5- 6. Be sure to coil the umbilical and vacuum hose as shown in the figure marked ✓ below.
If coiled incorrectly, the umbilical and vacuum hose may not move smoothly.

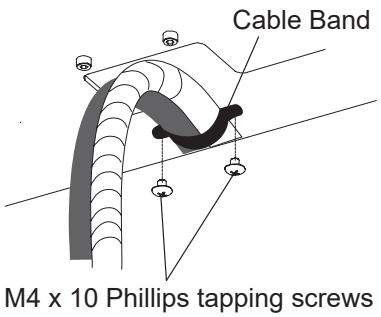


5-7. Attach the umbilical and vacuum hose to the cabinet with the (2) Plastic Clamps, as shown in the diagram below.
* To ensure that the umbilical and vacuum hose move smoothly, be sure to attach the clamps in the correct positions.

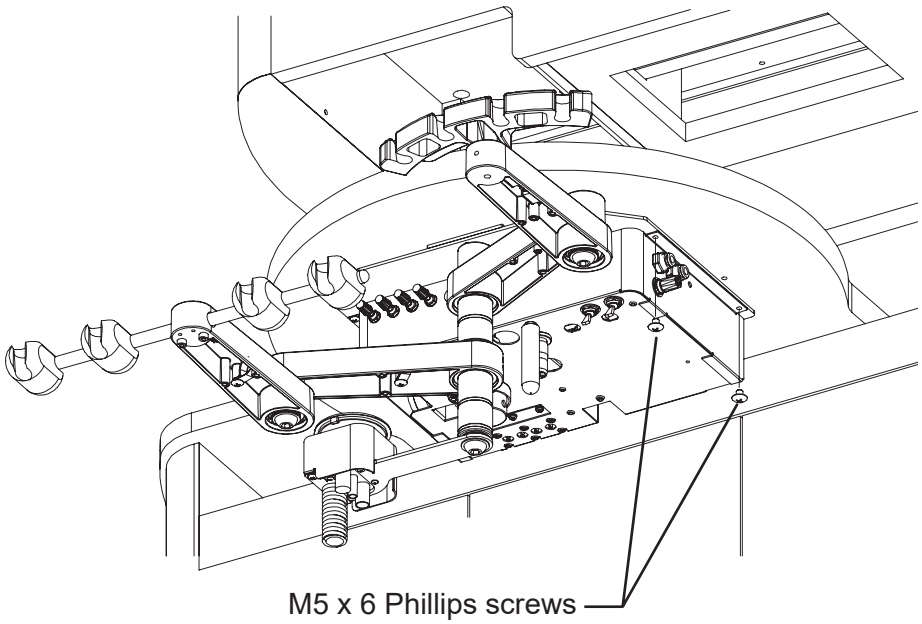


5-8. Secure the umbilical and vacuum hose underneath the cabinet worksurface with the black plastic Cable Band using (2) M4 x 10 Phillips head tapping screws.

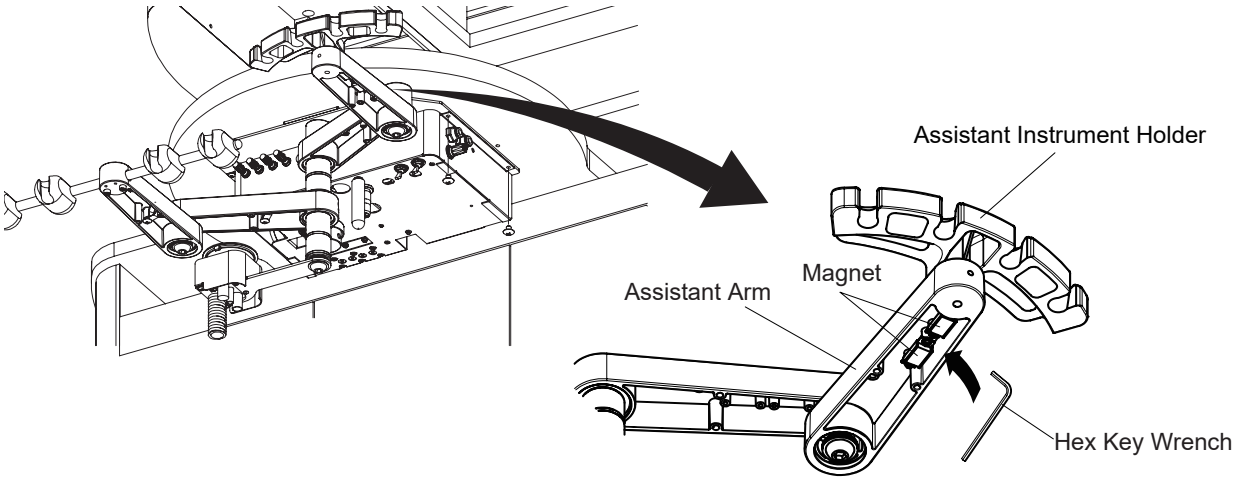




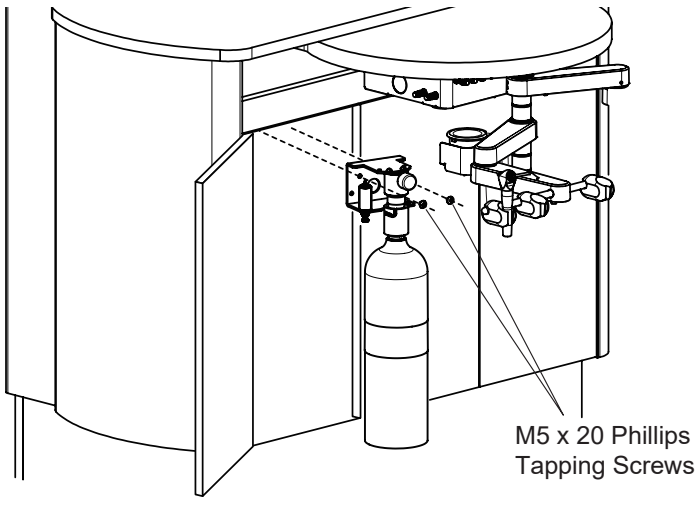
5-9. Close the hinged delivery system control housing and secure it to the mounting plate using the (2) M5 x 6 Phillips screws.



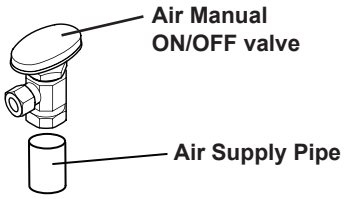
Note: For doctor and assistant arm height adjustments, an M6 hex key wrench is included with the unit and should be stored on the magnetic holder located on the underside of the assistant instrument arm, as shown below.



5-10. Attach the water bottle system to the cabinet with (2) M5 x 20 Phillips tapping screws.



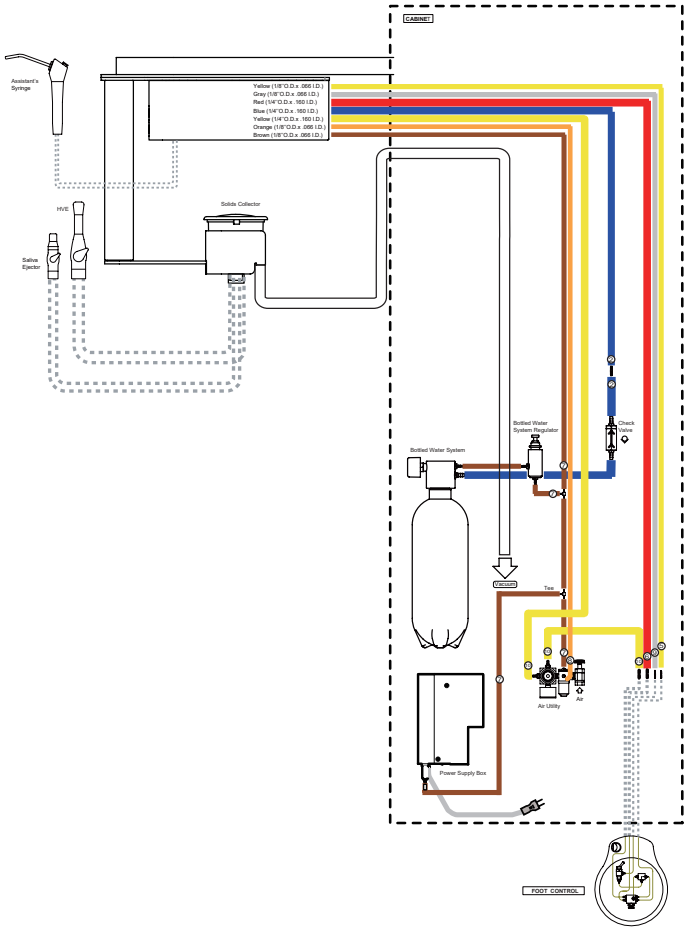
6. Connecting The Delivery System to Floor utilities



6-1. Attach the Air Manual ON/OFF valve to the air supply pipe under the cabinet. Open the Air Manual ON/OFF valve counterclockwise to purge the air line of any debris prior to connecting the Air Filter/Regulator Utility.

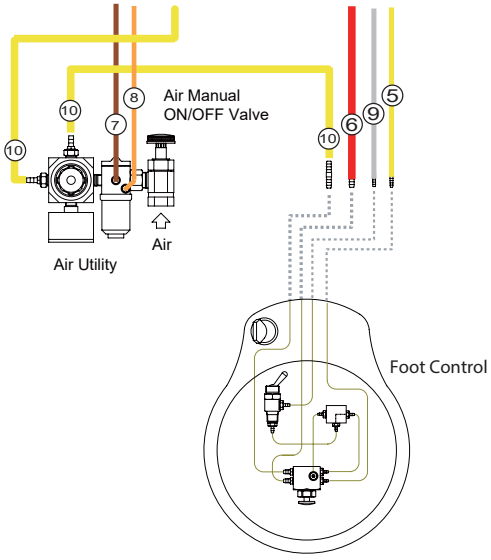
6-2. Connect the delivery system umbilical supply tubing to the Air Filter/Regulator and water bottle system by matching tubing number & color. (Larger Flow Diagrams on Following Pages)

6-3. Connect vacuum hose to vacuum connection.



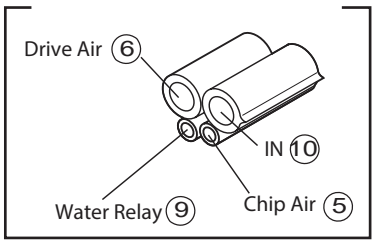
7. How To Connect the Foot Control (EVG3561)

Insert foot control tubing through opening in cabinet base and feed through to connect with the air utility and delivery system umbilical by matching tubing number.

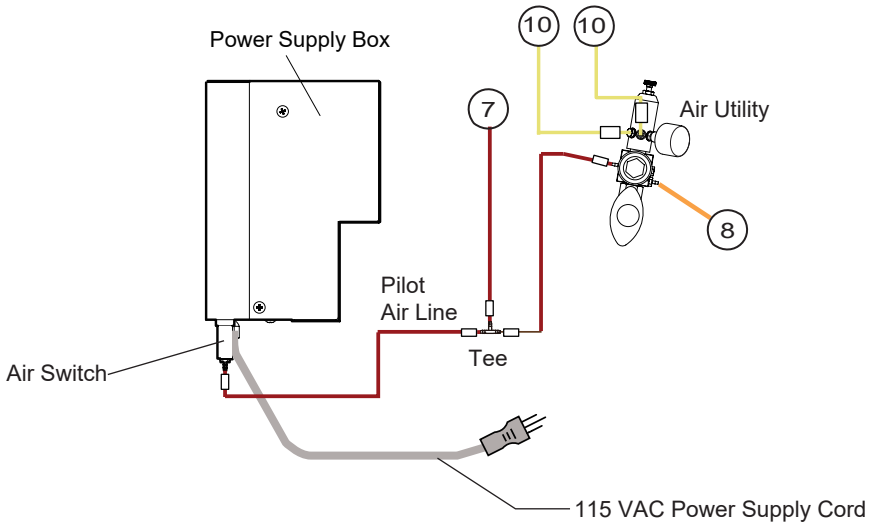


Number	Color (Size)	Function
6	Red (1/4" OD)	Drive Air
10	Yellow (1/4" OD)	In (Regulated Air Supply)
5	Yellow (1/8" OD)	Chip Air
9	Gray (1/8" OD)	Water Relay

Foot Control Tubing Connections

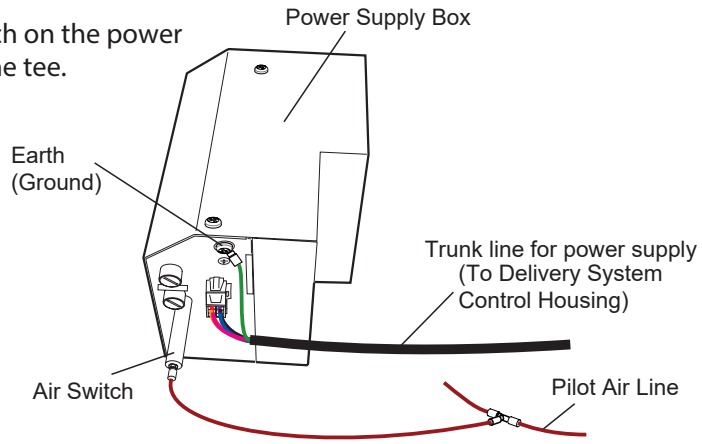


8. Connection of the Power Supply Box (For Options)
This power supply box utilizes an air/electric switch to connect power to the delivery system for attachment of options, such as handpiece fiberoptics. When the delivery system master switch, located on the delivery system control housing, is in the OFF position, power is disconnected to the unit.



8-1. Place the power supply box into the cabinet base area for connection to unit and power supply source.

8-2. Connect 1/8" brown tubing to the air/electric switch on the power supply box and the 1/8" brown pilot air line with the tee.



8-3. Connect the white (6P) connector from the trunk line of the delivery system control housing and the earth line (Ground) to the Power Supply Box

8-4. Connect the power supply to the 115 VAC grounded outlet.

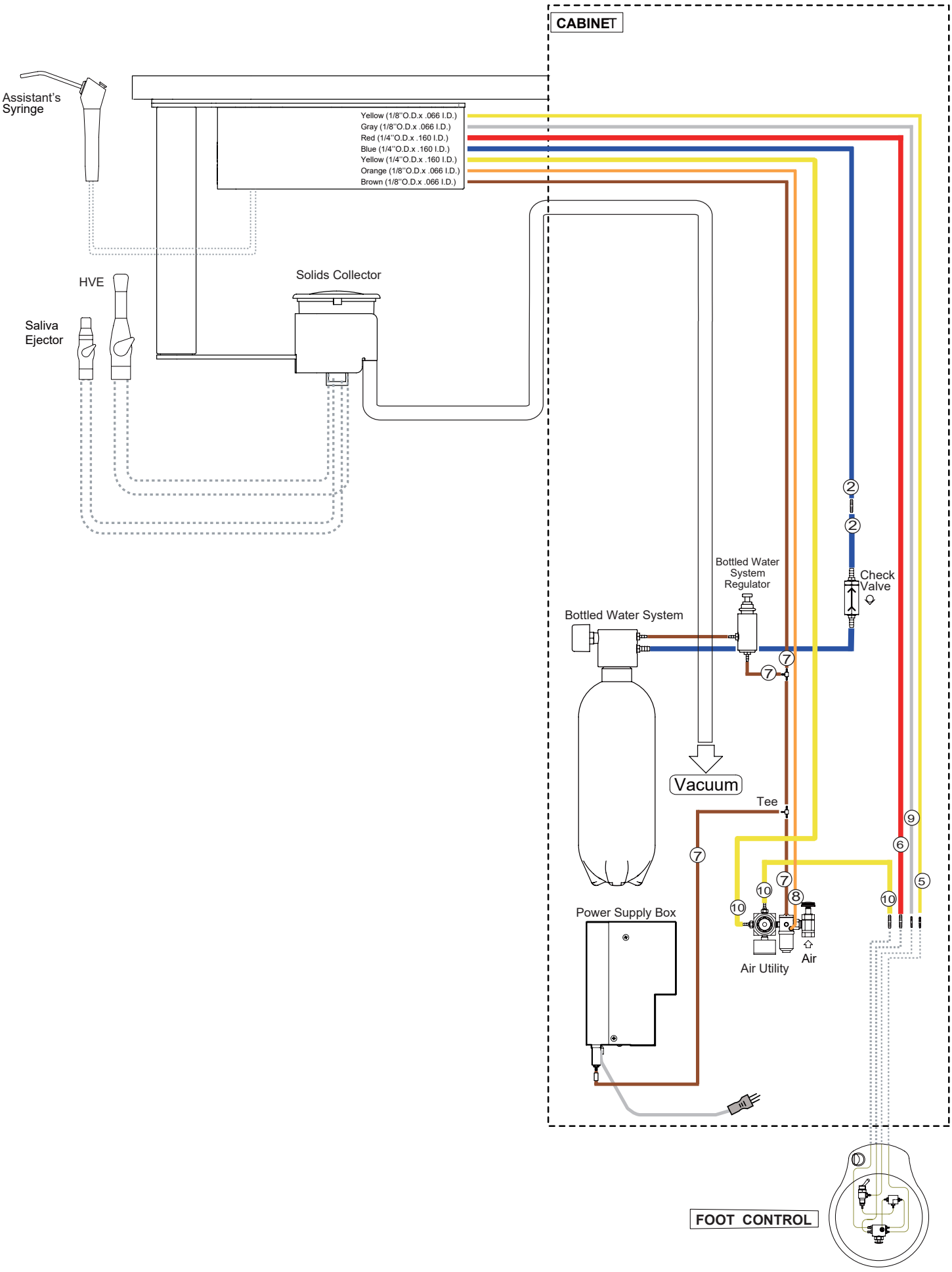
⚠ CAUTION

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

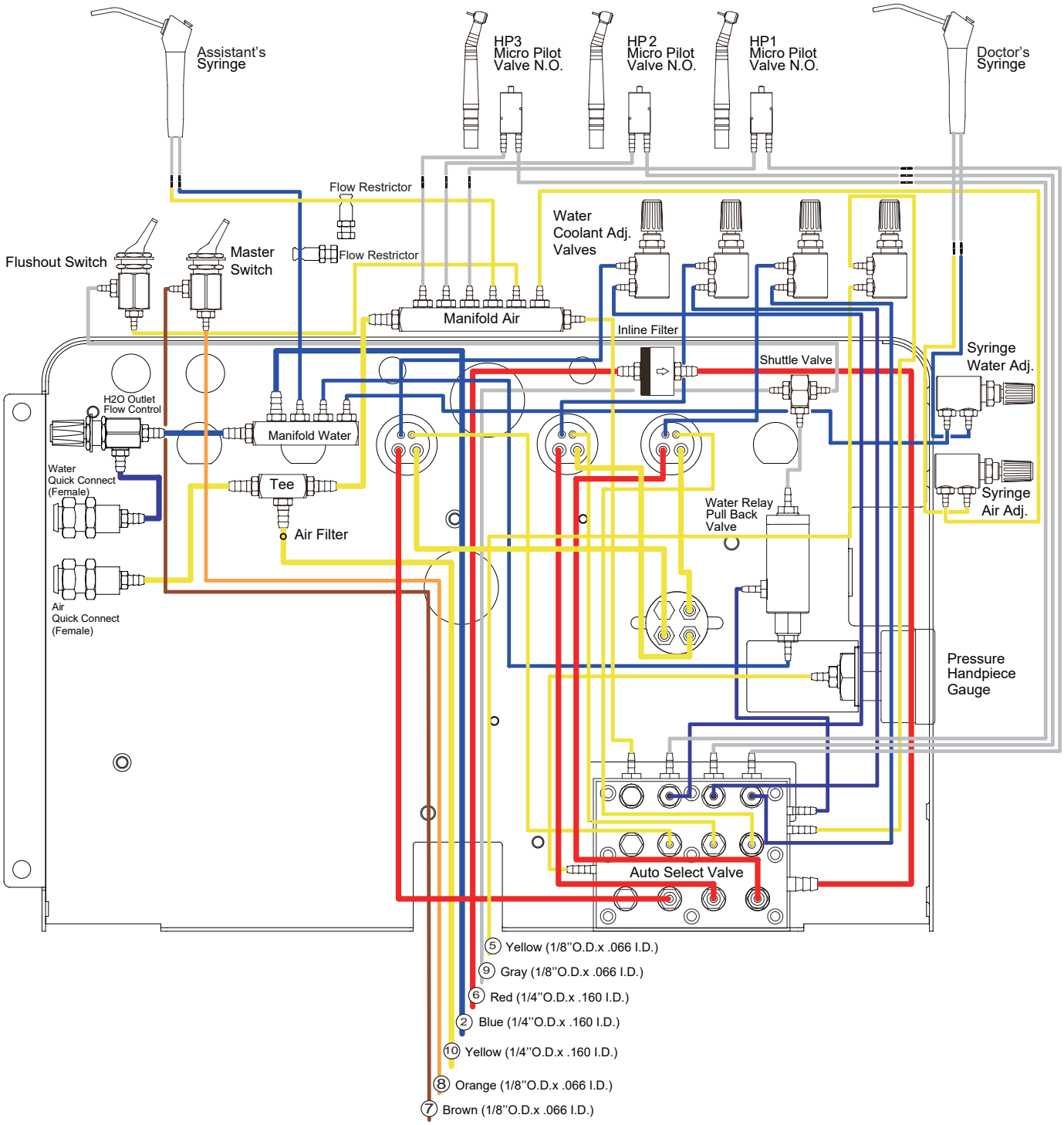
9. Check Unit Connections
Set Air Utility Regulator in cabinet base area to 80 psi regulated air supply.
Set air supply regulator for the Water Bottle System to 35-40 psi air head pressure.
Turn on Delivery System Master Switch Located on the Delivery System Control Housing.
Check Umbilical, Vacuum, Foot Control & Power supply connections to verify that that there are no leaks and that all unit functions work properly.

10 Flow Diagrams

10-1 Rear Delivery Umbilical/ Utility/Power Supply / Foot Control Section (Cabinet)

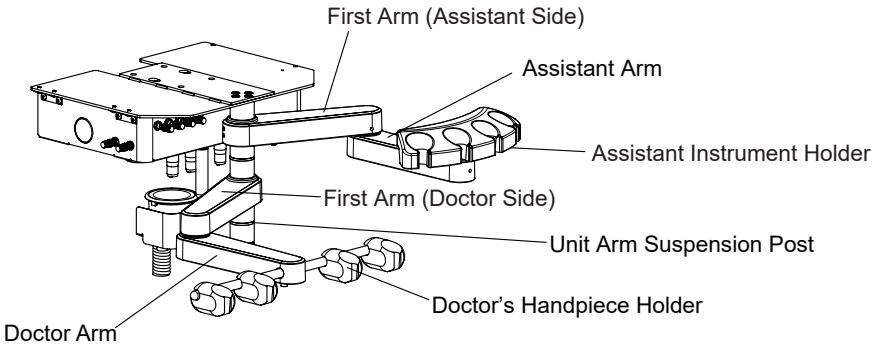


10-2 Delivery System Control Housing Section (Control Head)

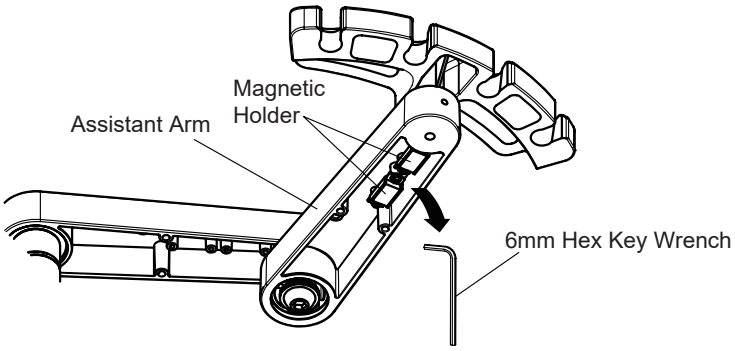


11. Arm Height Adjustment

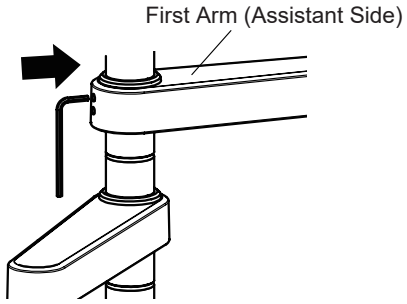
Doctor Arm /Assistant Arm Height Adjustment of Rear Delivery
Height of doctor arms and assistant arms can be adjusted vertically along the unit arm suspension post.



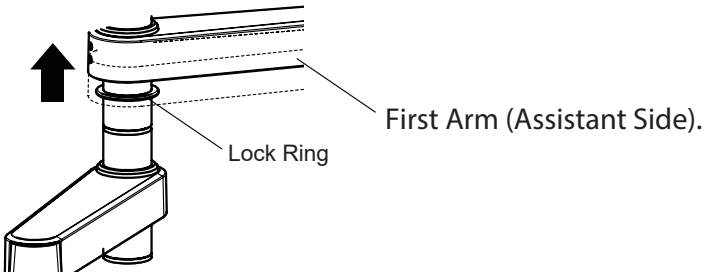
11-1. Remove the hex key wrench from the magnetic holder located underneath the assistant arm.



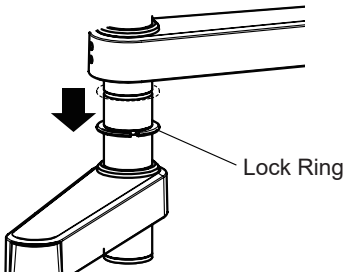
11-2. Loosen the (2) set screws on the first arm (Assistant Side) by using the hex key wrench.



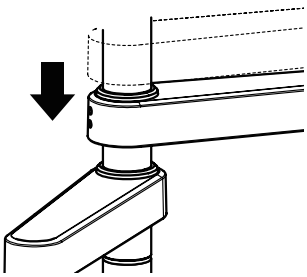
11-3. Lift up the First Arm (Assistant Side).



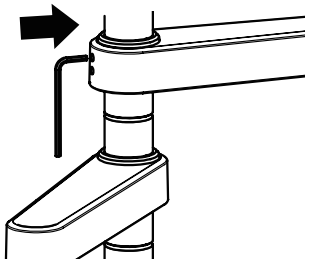
11- 4. Slide the Lock Ring to the desired groove.



11-5. Lower the First Arm (Assistant Side) until it rests on the lock ring set in the new position.

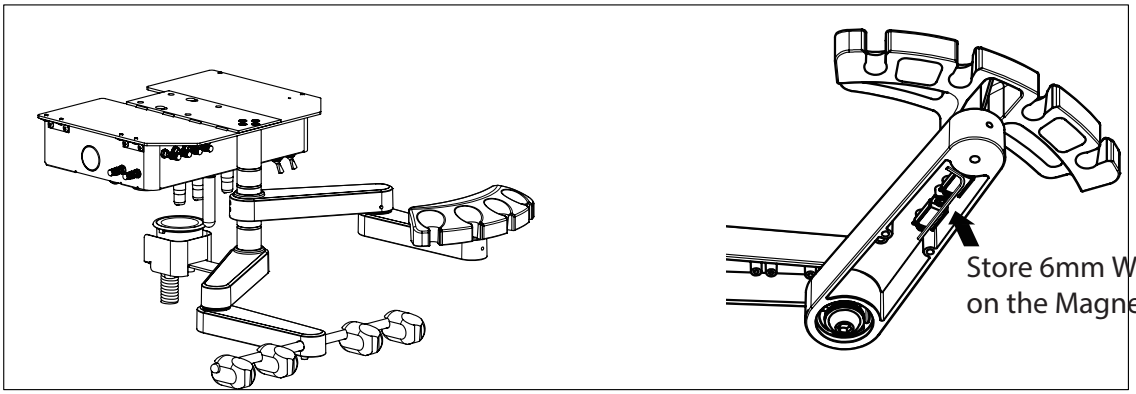


11-6. Re-tighten the (2) set screws on the First Arm (Assistant Side) with the 6mm hex key wrench.



11-7. Adjust height of Doctor Arm by following the same procedures shown in steps 11.1 ~ 11-6.

11-8. Re-attach the hex key wrench onto the the magnetic holder located underneath the assistant arm.



Note : Arm height can be set at 3 separate height positions.
Both arm heights may need to be adjusted, in order to avoid interference.

12. Handpiece Drive Air Adjustment (EVG3561)

⚠ CAUTION

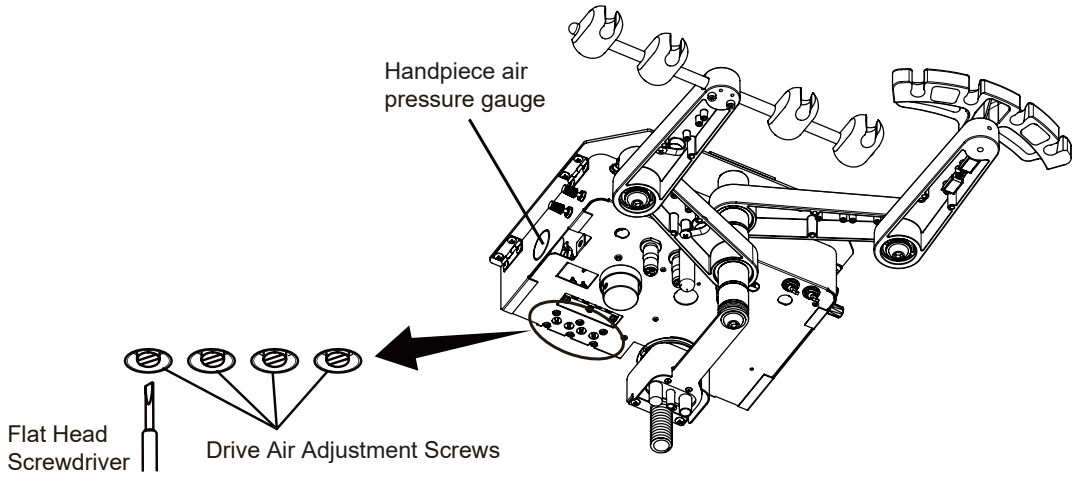
To avoid potential damage to handpieces
- Never operate a handpiece without a bur in the chuck.
- Do not exceed manufacturers recommended pressure setting at the handpiece.

Each handpiece drive air can be adjusted using a small stotted screwdriver by turning the adjustment screw clockwise/ counterclockwise during handpiece operation.

Drive air pressure is decreased by turning the adjustment screw clockwise, and increased by turning the adjustment screw counterclockwise.

Drive air pressure is indicated on the handpiece pressure gauge located on the left side of delivery system Control Housing.

Set handpiece drive air pressure according to the handpiece manufacturer's instruction manual.



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.

13. Coolant Water Adjustment (EVG3561)

The handpiece coolant water adjustment knobs are located on the front of the delivery system control housing.

Handpiece coolant water adjustment knobs are identified by number 1 -3 from the left side: HP1, HP2 and HP3.

Each handpiece coolant water volume can be adjusted individually.

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

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

14. Coolant Air Adjustment (EVG3561)

The handpiece coolant air adjustment knob is located on the front of the delivery system control housing.

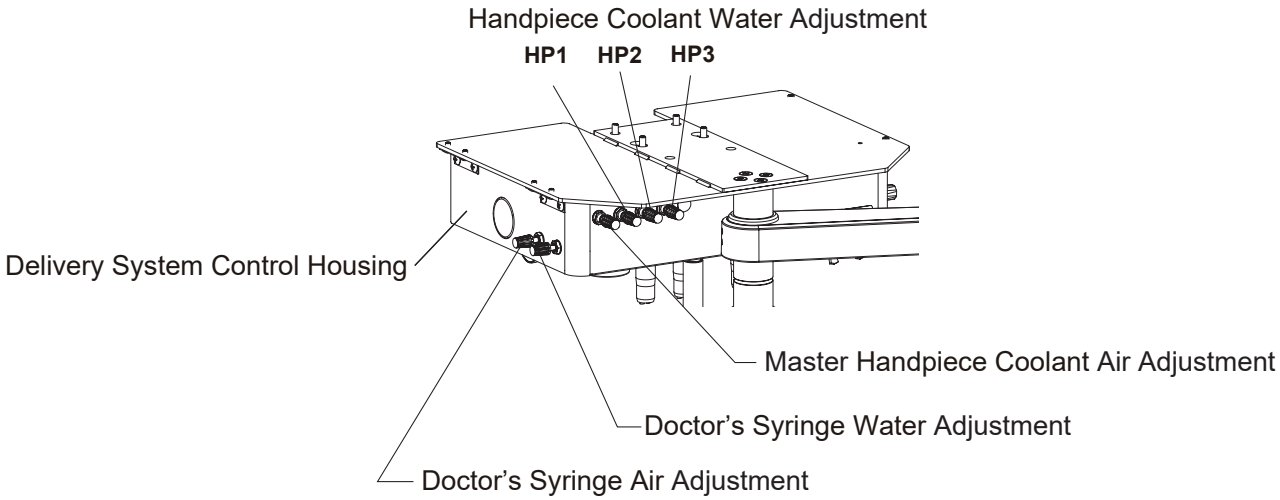
This is a single master air coolant adjustment for all handpieces.

Adjust coolant air volume while running the handpiece, until the desired flow is achieved.

15. Doctor's Syringe Adjustment (EVG3561)

Doctor's syringe air and water flow volume adjustment knobs are located on the left side of the delivery system control housing.

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

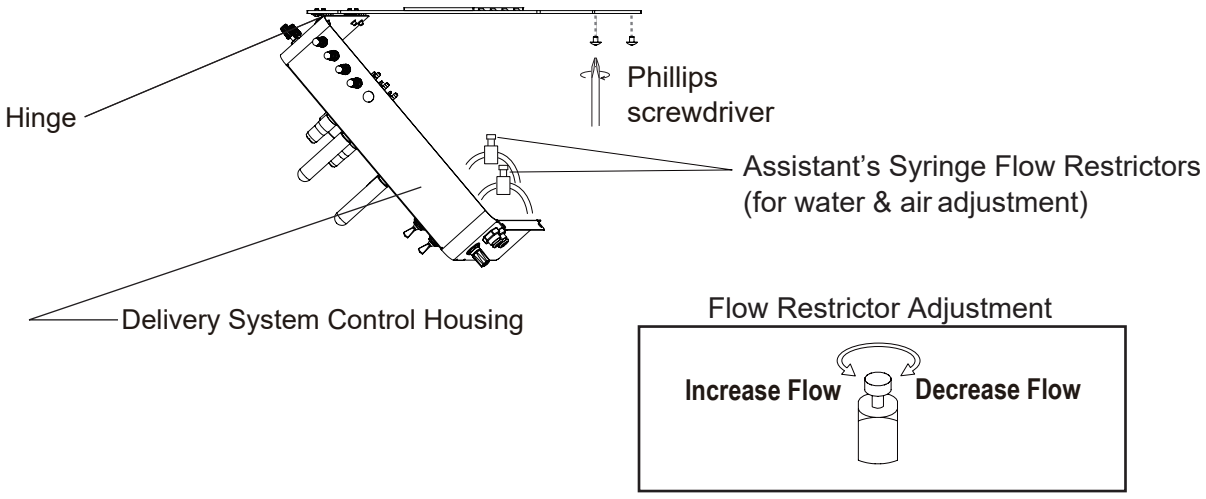


16. Assistant's Syringe (EVG3561 & EVG3563)

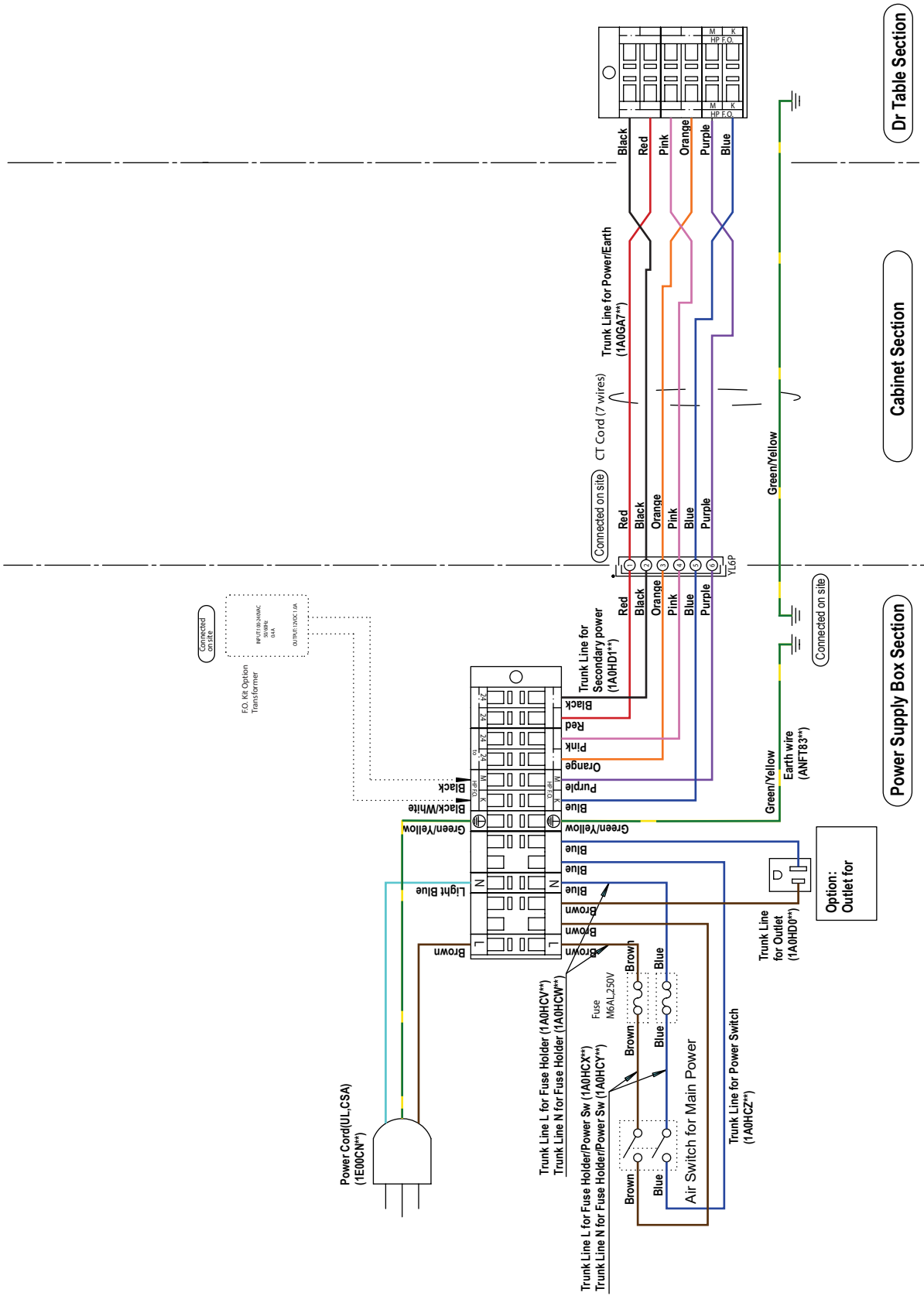
Assistant's syringe air and water flow restrictors are located inside of the delivery system control housing.

Open the control housing by removing the (2) M5 x 6 Phillips head screws.

Adjust the water and airflow restrictors as shown.



17. Electrical Diagram (EVG3561)



NOTE

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