

System 6000, Model #6500 Dental Unit Installation Instructions

The Model 6500 System Comes With the Following Items:

- * Arm and control head assembly, including a stainless steel tray and non-skid pad, with handpiece tubings and umbilical installed.
- * Telescoping assistant's arm and assistant's instrumentation including:
 - Autoclavable HVE
 - Autoclavable SE
 - Deluxe Autoclavable Syringe
- * Post mounted utility center, including:
 - Vacuum canister
 - Self-contained water system
- * Gravity drain cuspidor
- * Floor utility sub-assembly, including:
 - Two manual shut-off valves, one for air, one for water
 - One master shut-off valve for air and water
 - Two mini-regulators
- * Mounting post
- * Wet/Dry foot control
- * Straight light post
- * Chair adaptor

You Will Need the Following Tools and Materials:

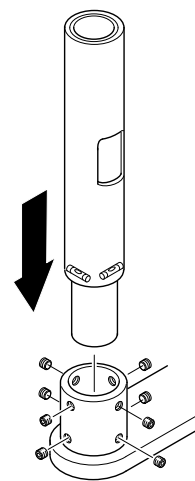
- * Level, preferably with built-in magnet
- * 5/32", 1/8", 1/4" and 3/16" hex keys
- * 9/16" open end or box end wrench
- * 3/32" ball driver (provided in syringe kit)
- * 1/4" and 1/8" tubing sleeves and sleeve tools
- * Teflon tape
- * Large crescent wrench
- * Appropriate hardware and tools to mount the chair adaptor

Install the Chair Adaptor

1. Follow the chair manufacturer's recommendations.

Install the Post on the Chair Mount Bracket

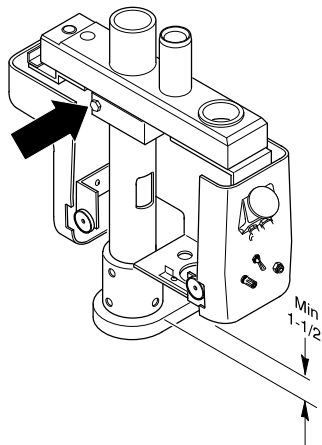
1. Place the post in the chair mount collar. Make sure the end of the post with the reduced diameter goes into the collar, to the stop.
2. Position the post in the collar so that the slot for the umbilical faces the head of the chair. This will ensure proper placement of the post-mounted utility and other components when they are installed.
3. Using the built-in levels and a 5/32" hex key, adjust the eight set screws in the chair mount bracket to set the post in a perfectly vertical position. Tighten the set screws.



*Figure 1:
Post Installation*

Install the Post Mount Utility Center on the Post

1. In order to install the post mount utility center (PMU), you will need to remove the side covers which are held in place with magnets. Pull the side covers off of the PMU and set them aside. You will also need to remove the set screw from the top of the post in order for the PMU bearing to clear.
2. Slide the PMU onto the mounting post and position it so that:
 - The slot in the post for the umbilical is inside the PMU.
 - There is at least 1-1/2" of clearance between the bottom of the PMU housing and the chair mount bracket.
 - The cuspidor clears the chair arm.
 - The cuspidor module faces the head of the chair.



*Figure 2: Installing the Post
Mount Utility Center*

Within these limits, the height of the PMU can be set to the user's preference.

3. Tighten the mounting bolt shown in *Figure 2* with a 9/16" wrench. Leave the covers off so you can make tubing connections after all of the system components are installed.
4. Screw the self-contained water bottle into place on the post mount utility center.

Install the Cuspidor

The cuspidor module is already installed on the PMU and plumbing connections have been made. However, the bowl, spouts and cover are shipped separately to protect them from damage.

1. To install the bowl, simply press the bottom of the bowl into the gray drain socket in the cuspidor module. There are two large black o-rings in the bottom of the cuspidor bowl. Press until you feel the o-rings seat securely into the drain fitting.
2. Lay the cover over the top of the cuspidor module so that the holes in the cover align with the spout connections on the module. On the module, there is a small stud next to the hole for the cup-fill spout. Make sure it goes through the hole provided for it in the cover. The bowl fits into a cut-out in the end of the cover. The cup-fill and flush spouts will hold the cover in place.
3. Install the cup fill spout. Just above the o-rings on the spout, there is a flange. On the underside of the flange, there is a small hole which mates with the stud on the module to ensure proper placement of the spout over the cover. Make sure the stud and the hole are aligned, then press the spout into place.

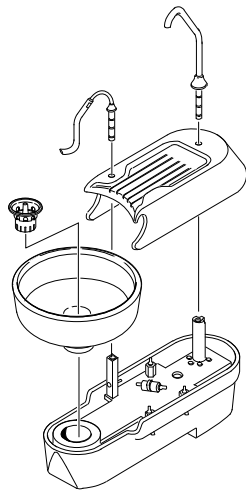


Figure 3: Installing the Cuspidor

4. Install the flush spout. Press the spout into its mounting hole next to the bowl. The flange on the spout contacts the cover. The flush spout swivels to allow a variety of positions in the bowl.

Install Telescoping Arm and Assistant's Instruments

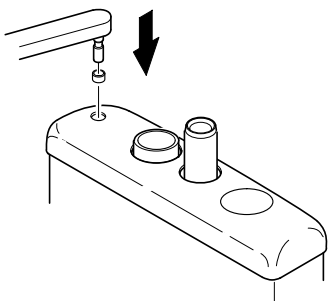


Figure 4: Installing the Telescoping Arm

1. Position the thrust washer over the mounting hole in the PMU. Slide the pin on the end of the telescoping arm through the washer and into the hole.
2. Place the HVE, the SE and the autoclavable syringe in the three position holder.

Install the Arm Assembly and the Control Head

WARNING

The arm assembly for this unit is spring loaded. Do not remove the shipping strap from the arm assembly until the unit is fully installed. Bodily injury could result from working with the arm assembly unrestrained.

1. Position the thrust washer and the trim collar over the bushing in the end of the mounting post as shown in *Figure 5*.
2. Thread the umbilical from the end of the arm into the top of the post.
3. Slide the stud on the end of the arm through the washer and into the bushing in the top of the post.
4. Re-install the set screw in the top of the post. Tighten the set screw until the desired tension of the unit rigid arm is achieved. This friction adjusting set screw will prevent the arm from drifting should the post not be perfectly level.
5. Pull the umbilical out of the post through the slot and into the post mount utility center.

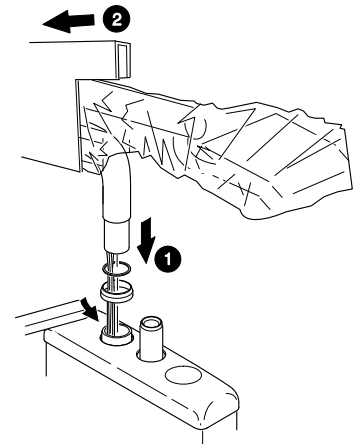


Figure 5: Installing the Arm Assembly

Install the Light Post

1. Place the light post onto its mounting hub, routing the light cable end through this hub and into the PMU.

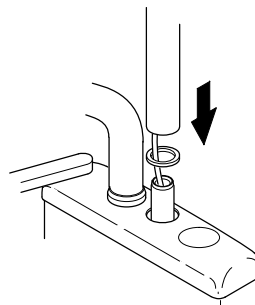


Figure 6: Installing the Light Post

Install the Floor Utility Sub-Assembly

1. Using the template provided, drill holes into the floor and mount the floor utility frame in the desired position.
2. Route the umbilical and the floor utility sub-assembly from the PMU to the floor box.
3. Thread the manual shut-off valves for air and water onto the air and water supply pipes. Purge the air and water lines before connecting them to the unit.
4. Connect the compression fittings to the air and water source. Blue connects to the water source. Yellow connects to the air source.

5. Connect the 5/8" gray corrugated hose to the central vacuum system.
6. Place the white corrugated drain tube into the floor drain.

Connect Tubing in the Post Mount Utility Center

1. Control Head:

- 1/8" gray from the control head to 1/8" gray (pilot air)
- 1/8" clear from the control head to 1/8" clear (unregulated air)
- 1/8" yellow from the control head to regulated air (multi-connector)
- 1/8" Blue from the control head to 1/8" blue (regulated water)
- The 1/8" white line is unconnected in the control head. To use this line for a chip blower, see the section that follows on foot control connections.
- The 1/8" red line in the umbilical is unconnected too. It is intended for use when installing a syringe water heater to the system.
- The 1/8" orange line is unconnected in the control head and is used when installing a circulating syringe.

2. Foot Control: (Refer to Figures 7 and 8)

Route the free end of the foot control tubing through the bottom of the PMU and connect:

- 1/4" gray ribbed from foot control (air supply) to regulated air, 1/4" yellow, in the PMU (multi-connector).
- 1/4" gray unribbed from foot control (drive air) to 1/4" gray from the control head.

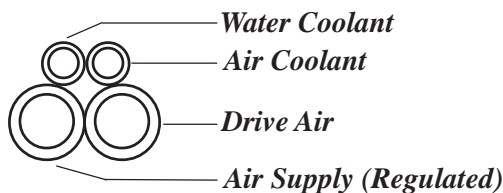


Figure 7: Free End of Foot Control Tubing (as it faces you)

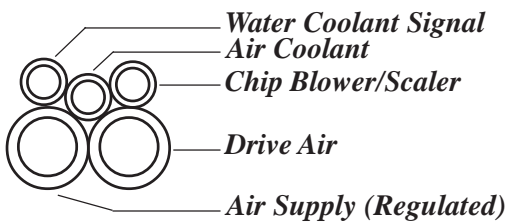


Figure 8: Free End of Foot Control Tubing (as it faces you)

- 1/8" water coolant signal line from foot control to 1/8" green from the control head.
- 1/8" air coolant line from the foot control to 1/8" brown from the control head.

- 1/8" chip blower/scaler line from foot control to the unconnected 1/8" white line from the control head (if applicable). If used for chip blower, connect to air coolant in the control head.

3. Quick Clean Syringe: (Refer to Figure 9)

- Route the syringe tubing through the small hole in the front cover of the PMU. Split the end of the tubing for about 1" in length so that there are two independent strands.
- Locate the syringe block in the PMU. One of the input bars on the block will have a blue line (water), the other will have a yellow line (air). Connect the ribbed line (air) from the syringe to the barb opposite the yellow line. Connect the unribbed line (water) from the syringe to the barb opposite the blue line.

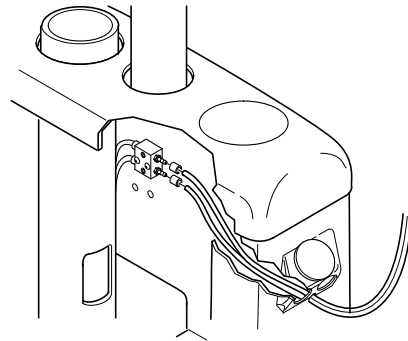


Figure 9: Connecting the Quick Clean Syringe

4. Assistant's Instruments:

- 1/2" gray tubing from HVE to 1/2" Q.D. fitting beneath the solids collector.
- 3/16" gray tubing from SE to 3/16" Q.D. fitting beneath the solids collector.

Level the Control Head

1. The control head has been leveled prior to shipping. Use a level to determine if it needs to be readjusted.
2. If the control head requires leveling, remove the end cap from the flex arm closest to the control head.
3. Using a 7/16" end wrench, loosen the nut surrounding the set screw. With a 1/8" hex key, rotate the set screw clockwise to lift the front of the control head, or counter-clockwise to lower the front of the control head.
4. When the control head is level, tighten the nut and replace the end cap.

Turn on and Adjust Air and Water Supply

1. Open the manual shut-off valves in the floor box. Adjust regulated air to 80 psi, and regulated water to 40 psi. The mini-regulators in the floor box are non-relieving. When adjusting for a lower pressure, make the knob adjustment, then press the syringe button to relieve pressure and give an accurate gauge reading.

Install the Optional Syringe Water Heater

- You will need the following tools to install the Syringe Water Heater in your delivery system:
 - Phillips head screwdriver
 - 1/8" Sleeve tool
 - 1/4" Open-end or socket wrench

It is recommended that the water heater be located in the floor utility. This provides easy access to the duplex outlet. See important notes that follow on how to orient your water heater when mounting, to ensure safe operation.

WARNING

The syringe water heater should always be connected to city water. Do not connect your water heater to a bottled water supply. If the water supply to the heater is interrupted, the water heater may overheat, causing failure. This instruction sheet provides a connection scheme which will isolate the water heater from bottled water.

Installing the Water Heater in the Floor Utility

- Turn off air and water to your system at the manual shut-off valves before installing the water heater.
- Locate the water regulator in the utility center (See Figure 10). Remove the plug from the extra port, and install a 1/16" barb fitting.
- Connect the water inlet barb on the syringe water heater to the 1/16" barb on the water regulator.
- Connect the water outlet barb on the water heater to the 1/8" red line in the umbilical.
- If your water heater is air actuated (model #3111), you will need to connect the air actuated switch to master air. Locate the master air line (1/8" gray), and attach a tee connector. Run a 1/8" line from the barb fitting on the air actuated switch to the tee on the master air line.

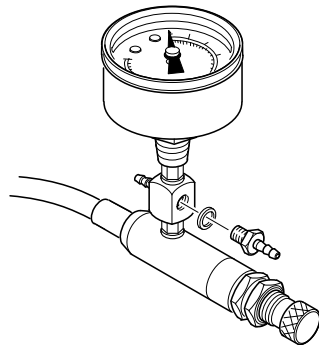


Figure 10: Water Regulator

Do not connect the power cord at this time.

NOTE

The water heater must be mounted in order to operate safely. It can be mounted either upright or on its side. However, if the water heater is mounted on its side, it must be oriented with the inlet and outlet barbs, and the DCI label facing up. Orienting the heater any other way could cause it to fail (See Figure 11).

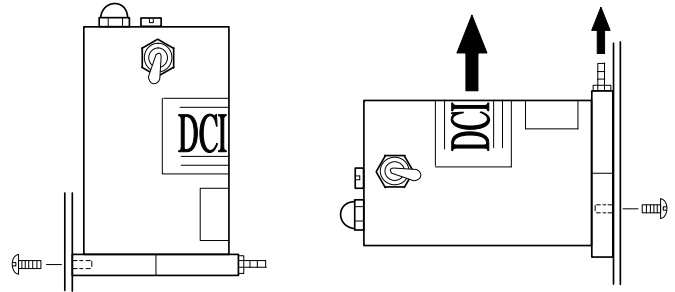


Figure 11: Water Heater Mounting

Connecting the Water Heater in the PMU

- Locate the cross connector with four 1/4" blue lines. One of the 1/4" blue lines goes to the city/bottle routing valve. Remove this line and plug the port in the cross connector. Replace the 1/8" barb at the routing valve with a 1/16" barb.
- Locate the 1/8" red line in the umbilical (the one that's connected to the water outlet barb on the water heater). Connect this line to the 1/16" barb at the city/bottle routing valve

NOTE

The water heater and the water lines must be purged of air before turning on the heater.

- Flip the master toggle on the control head to the on position.
- Press on the syringe water button until a steady stream of water comes out of the syringe.
- Connect the power cord to 110VAC. If you have purchased the 220/240 VAC water heater (#3112), you will need to install a plug on the end of the power cord. Connect the wires as indicated:
 - Green - Ground
 - Black - High
 - White - Low
- If your water heater is air actuated, it will turn on when you flip the master toggle on your delivery system to the on position. Manually controlled water heaters have a power switch, located just above the DCI label.
- Water temperature is adjusted by turning the screw on top of the water heater. Turning the screw clockwise increases water temperature. Turning the screw counter-clockwise decreases the temperature.