

Instructions for Use

A-dec 200

Dental Chair, Delivery and Support Systems, Cuspidor, Dental Light

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For required regulatory information and the A-dec warranty, see the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00) available in the Resource Center at www.a-dec.com.

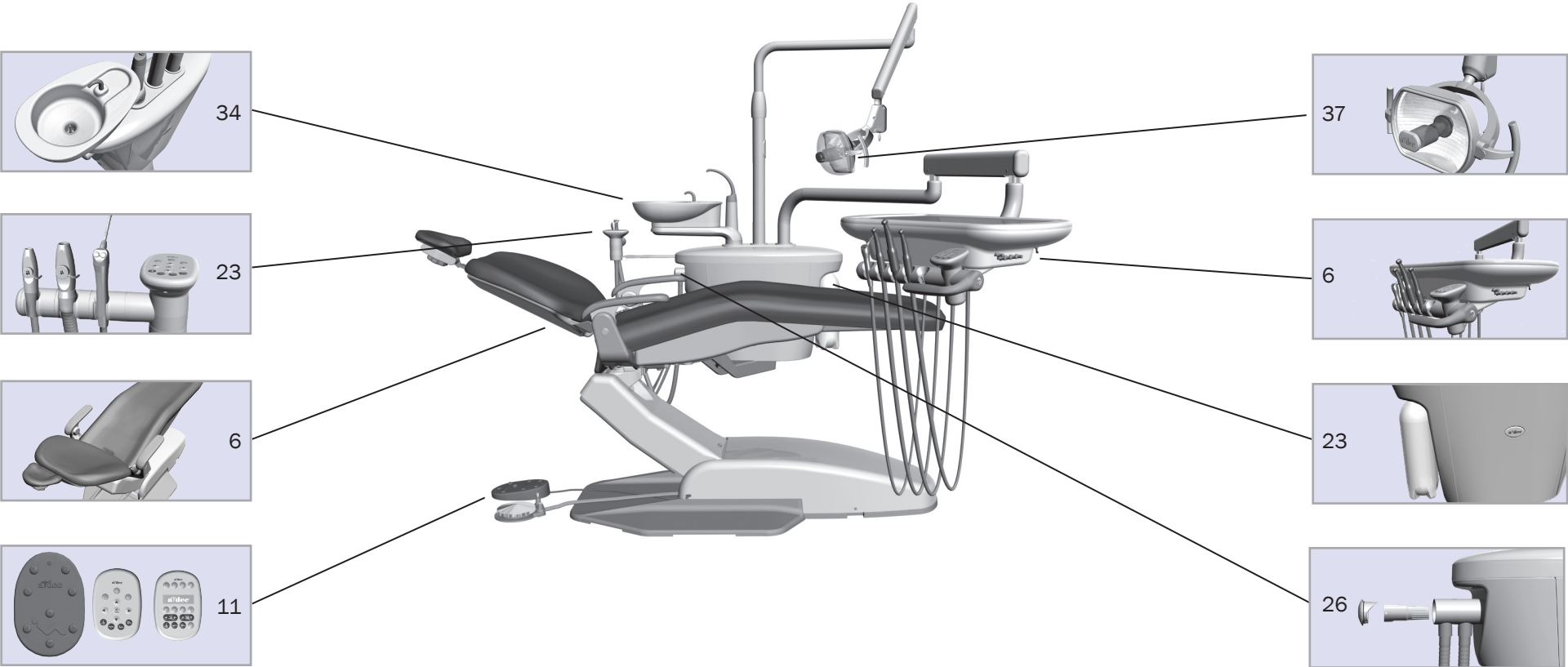
Product Service

Product service is available through your local authorized A-dec dealer. For service information, or to locate an authorized dealer, contact A-dec at 1.800.547.1883 in the USA and Canada or 1.503.538.7478 worldwide, or visit www.a-dec.com.

Product Models and Versions Covered in This Document

Model	Version	Description
200	A	Dental Chair/Assistant's Instrumentation
200	B	Delivery System/Support System

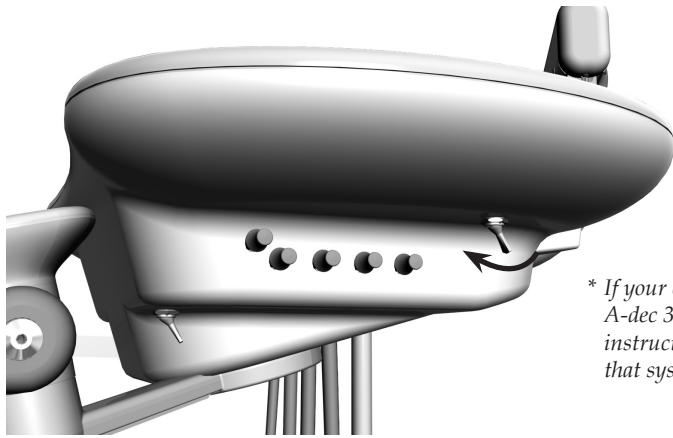
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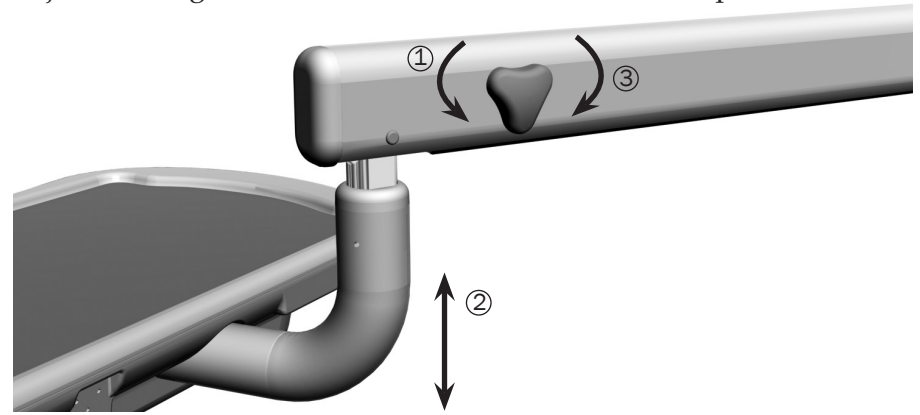
Quick Start

Turn the system* on.



** If your chair includes an A-dec 300 delivery system, see the instructions for use that came with that system.*

Turn the knob counterclockwise to disengage the flexarm brake and adjust the height. Turn the knob clockwise to lock the position.



Check the water bottle and fill if near empty.

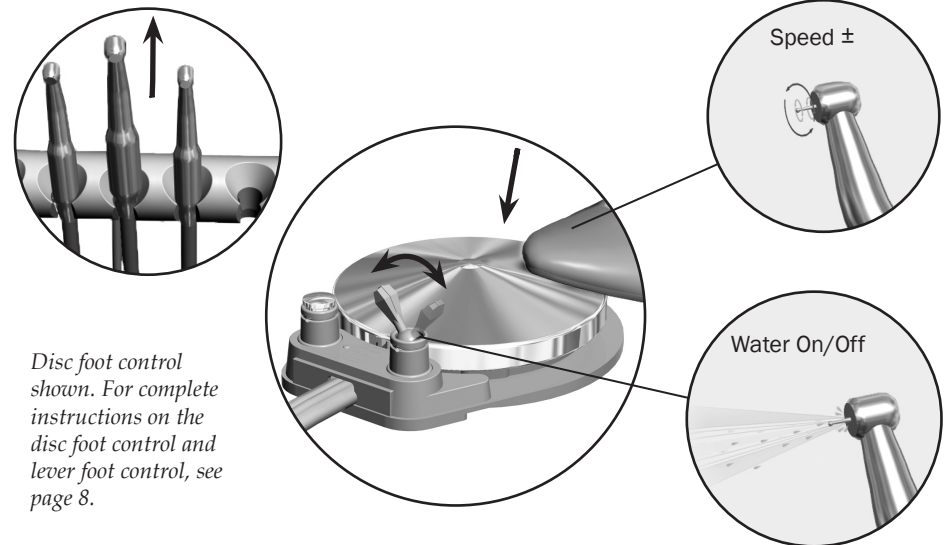


For more instructions on the self-contained water system, see page 42.



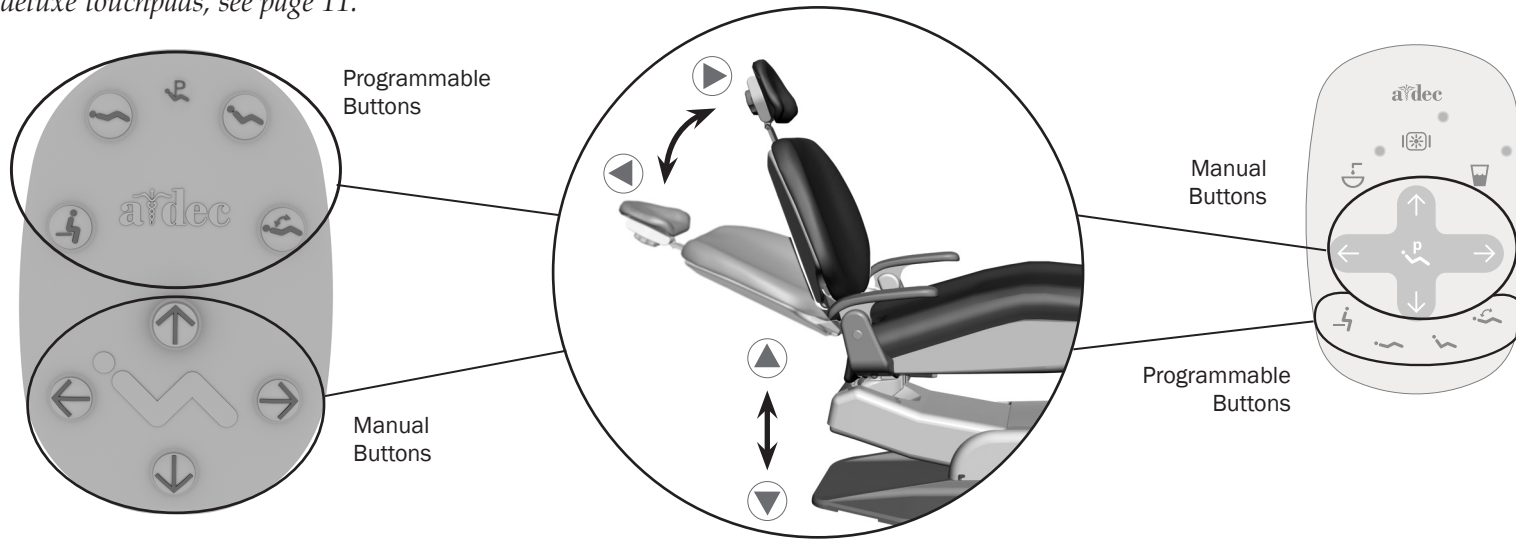
A-dec ICX® Waterline Treatment Tablets

Lift to activate the handpiece. Flip the foot control toggle to turn the water coolant on or off. Step on the disc to operate.

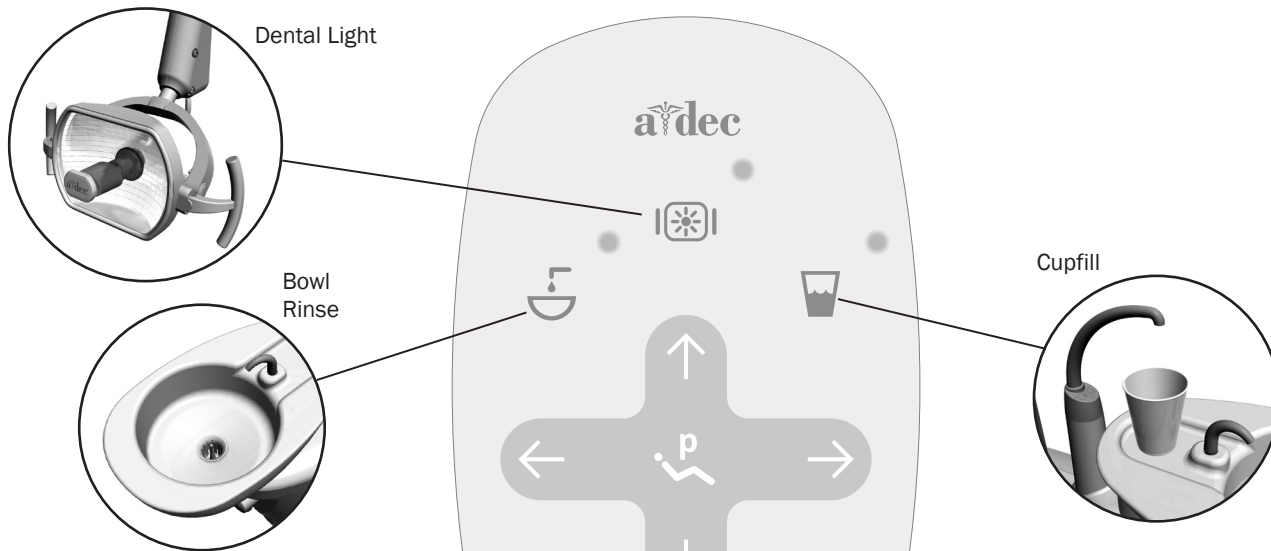


Disc foot control shown. For complete instructions on the disc foot control and lever foot control, see page 8.

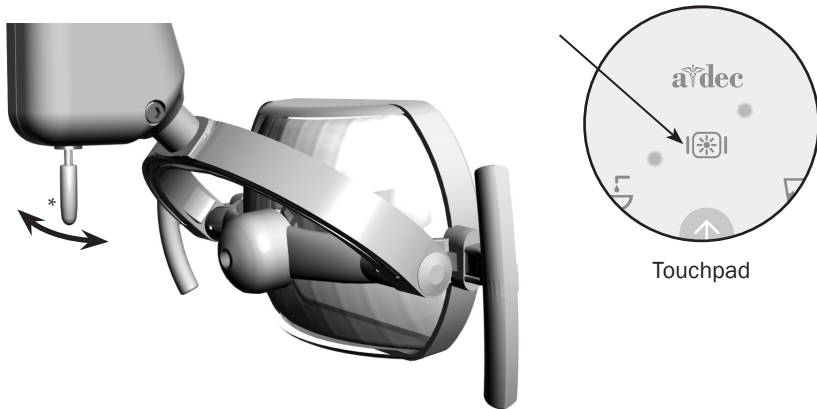
Use the manual or programmable buttons to position the chair (standard touchpad shown). *For complete programming instructions for the standard and deluxe touchpads, see page 11.*



Use the touchpad to activate the dental light and cuspidor functions. *For complete programming instructions, see pages 34 and 35.*

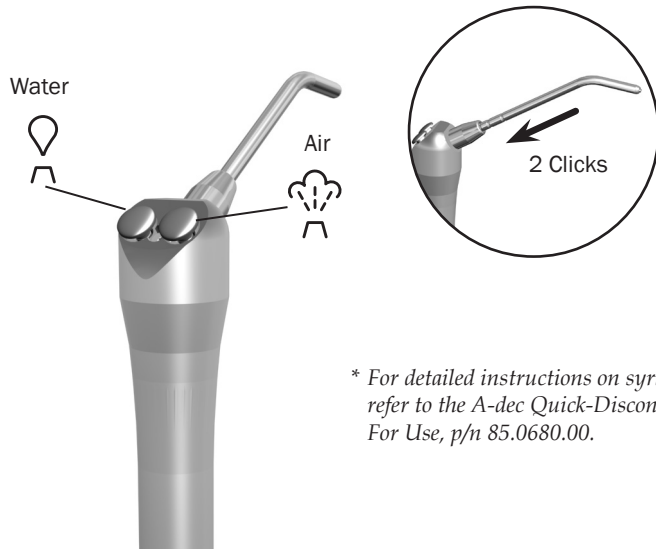


Flip the dental light toggle switch or press the dental light button on the touchpad to turn the light on high or low intensity*.



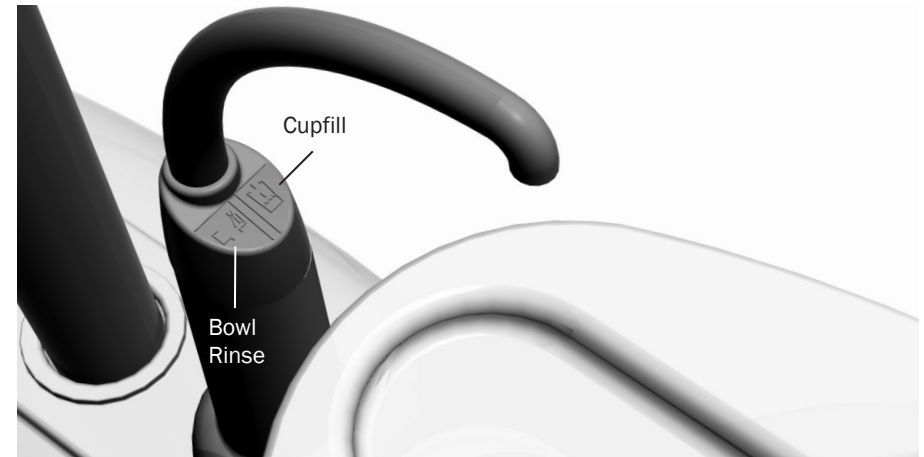
* This switch does not change light intensity on chairs with a touchpad. For more information, see page 37.

To install the A-dec syringe tip, push in the tip until you feel two clicks. Press both buttons simultaneously for the air/water spray.*

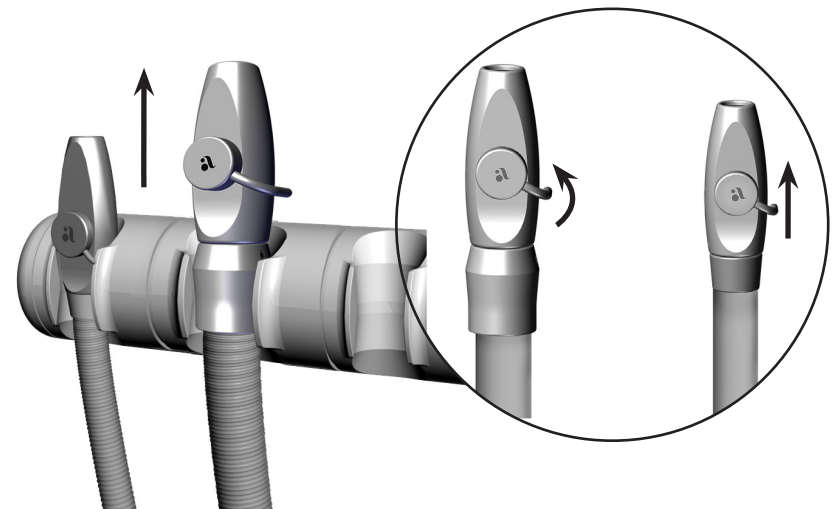


* For detailed instructions on syringe usage and maintenance, refer to the A-dec Quick-Disconnect Syringes Instructions For Use, p/n 85.0680.00.

Control cupfill and bowl rinse functions from the cuspidor tower.



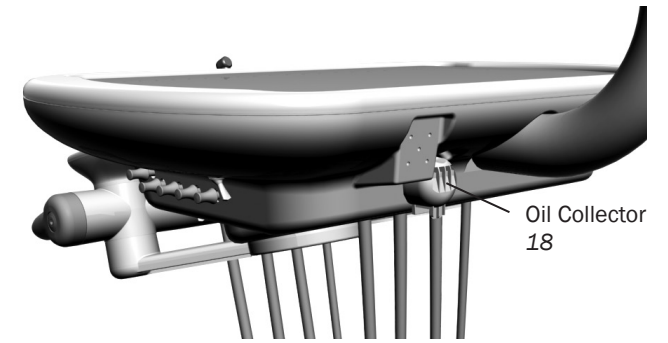
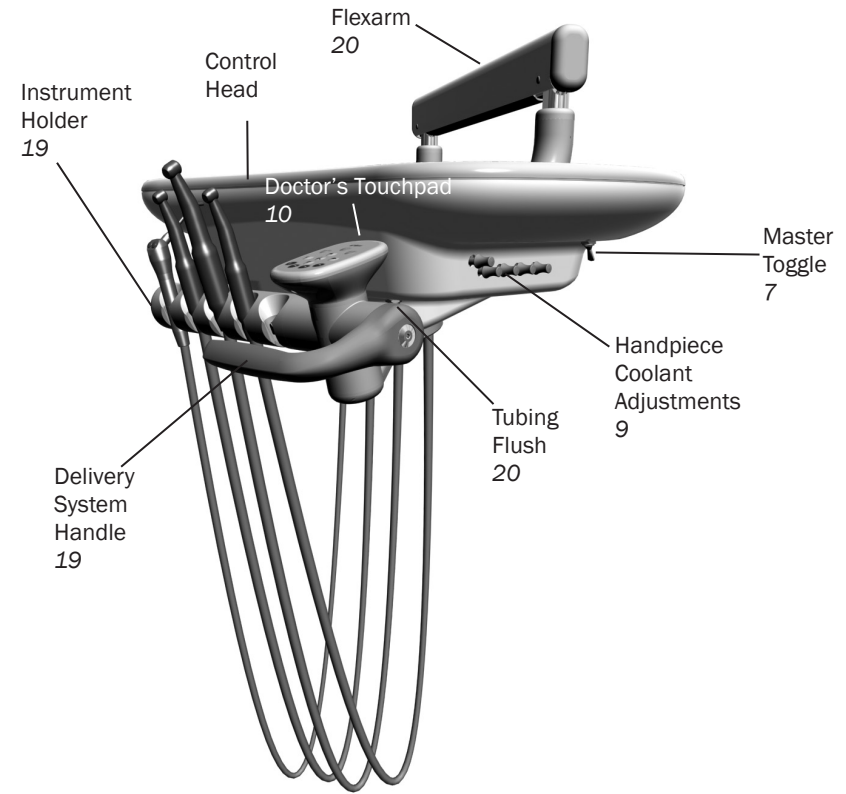
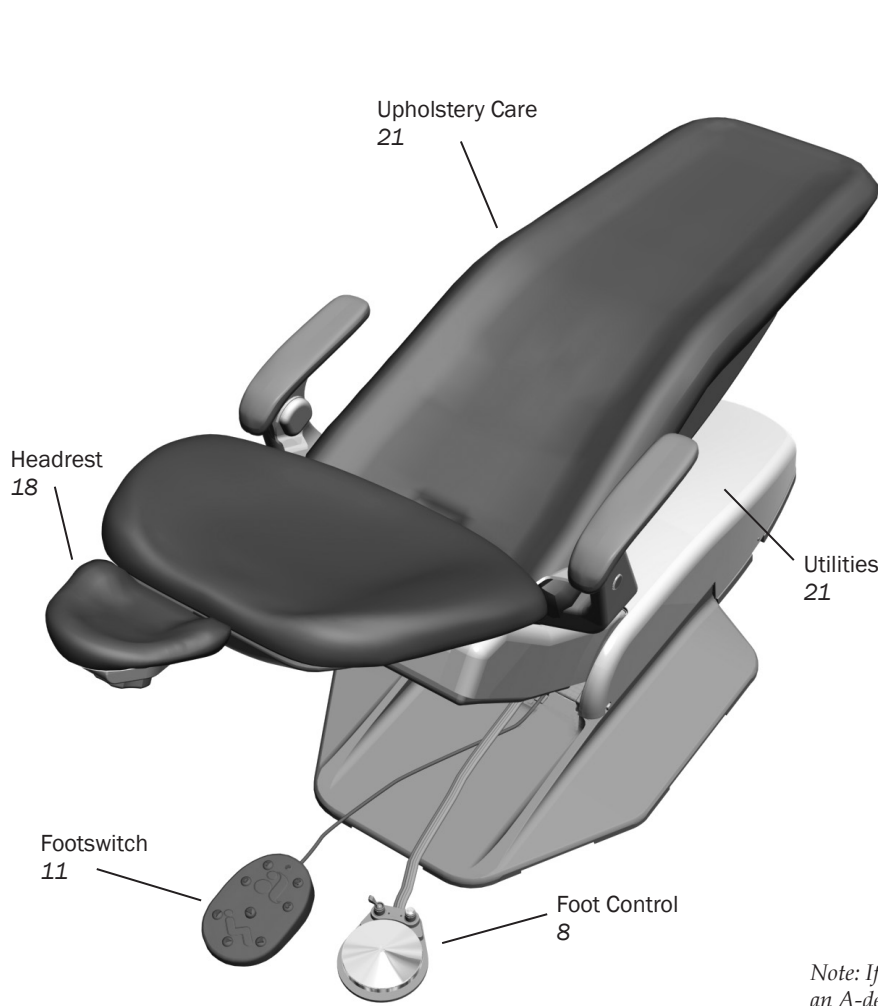
Lift from the holder and open the valve to activate vacuum instruments (A-dec instruments shown). For instructions on Dürer and A-dec instruments, see pages 28 through 33.



A-dec 200 Reference Section

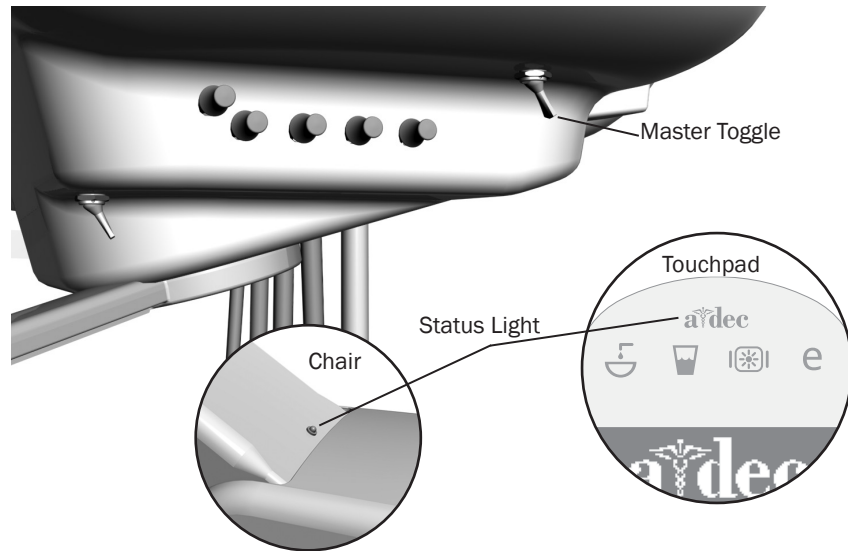
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Dental Chair and Delivery System



Note: If your chair includes an A-dec 300 delivery system, see the instructions for use that came with that system.

Power and System Status

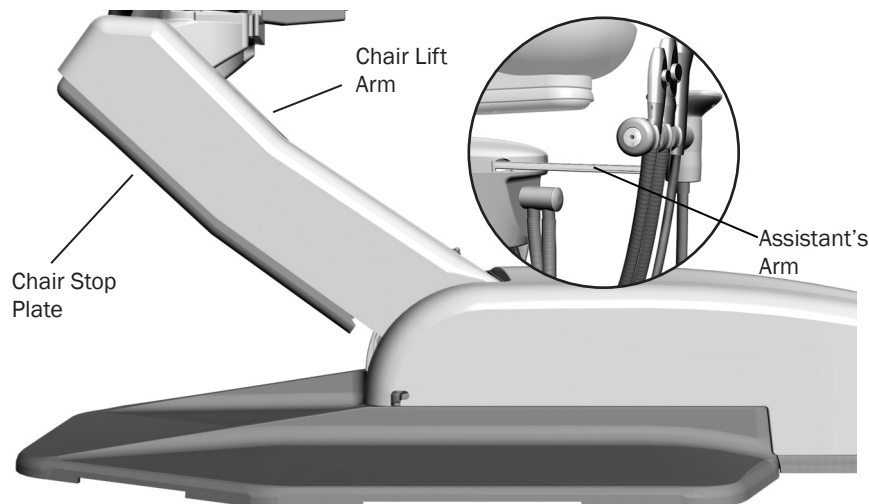


NOTE A-dec recommends that you perform a shock treatment on the dental unit waterlines before you use the system for the first time. For more information, see “Waterline Maintenance” on page 25.

The chair and system power is controlled by the master toggle on the delivery system. To save energy, turn the power off at the end of the work day and during longer periods of non-use. The power should always be turned off before service.

When the A-dec logo on the touchpad or the status light on the chair lift arm illuminates, the system is on and ready for use. If the status light blinks, the stop switch has been activated.

Safety Features



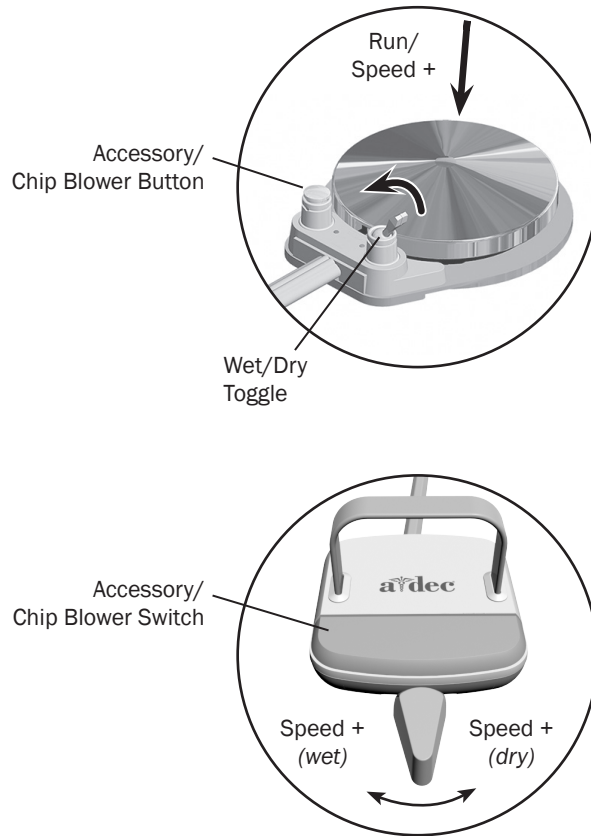
A-dec dental chairs and systems include several features designed to improve safety. Activated stop switches may halt the chair or prevent it from moving. To help ensure uninterrupted chair motion:

- remove any potential obstructions under the chair and attached modules
- avoid pressing the foot control disc or lever
- keep handpieces properly seated in their holders

If the Chair Stops Unexpectedly

Check the actions listed above to correct the condition. If the downward movement of the chair stopped because of an obstruction, use the touchpad or footswitch to raise the chair and remove the obstruction.

Handpiece Activation and Operation



To activate a handpiece, lift it from the holder. Use the foot control to perform the desired handpiece operation.

Control	Operation	Procedure
Disc Foot Control	Run a handpiece.	Press on the disc. Push down to increase speed.
	Run a handpiece with or without water coolant.	Move the wet/dry toggle toward the blue dot for wet operation or away from the blue dot for dry operation. Then press on the disc.
	Run the optional accessory or chip blower.	Press the accessory/chip blower button.*
	Operate the intraoral camera.	Press on the disc to capture an image.*
Lever Foot Control	Run a handpiece with water coolant.	Move the lever to the left. Move farther to increase speed.
	Run a handpiece without water coolant.	Move the lever to the right. Move farther to increase speed.
	Run the optional accessory or chip blower.	Press the accessory/chip blower switch.*
	Operate the intraoral camera.	Move the lever to the left or right to capture an image.*

* Contact your authorized A-dec dealer for questions about the operation or configuration of your integrated A-dec accessories.

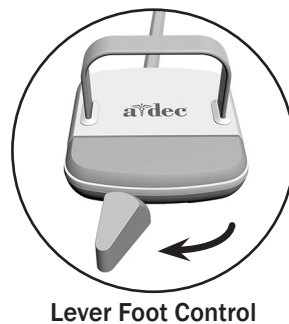
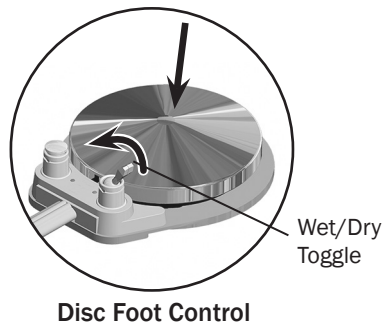
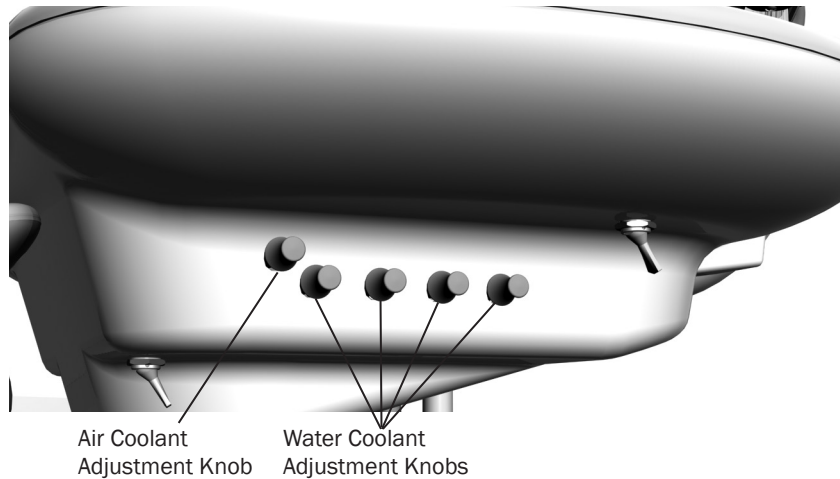


NOTE The lever foot control function can be reversed by a technician (change left direction to dry, right direction to wet). For more details, contact your authorized A-dec dealer.

For handpiece coolant adjustments, see page 9.

Handpiece Coolant Adjustments

The air coolant knob on your delivery system simultaneously adjusts air flow to all handpiece positions. Each water coolant knob adjusts water flow to a single position. Use the following process to adjust for the desired handpiece coolant atomization:



1. Insert a bur into the handpiece you are adjusting.



CAUTION When performing this procedure, do not attempt to completely shut off the water or air flow. The adjustment knobs are not designed to completely shut off flow and can damage the control block if you apply too much force.

2. Turn the air coolant adjustment knob clockwise until coolant flow stops.
3. Lift the handpiece from the holder and do one of the following:
 - On a disc foot control: flip the wet/dry toggle to water (toward the blue dot) and press the disc all the way down.
 - On a lever foot control: move the lever all the way to the left.
4. Locate the water coolant adjustment knob for the handpiece position you are adjusting and turn it clockwise until coolant flow stops.
5. Slowly turn the water coolant adjustment knob counterclockwise until water droplets are expelled from every water port on the handpiece head. Return the handpiece to the holder.
6. Repeat steps 3 through 5 for each handpiece.
7. To set the air coolant for the system, lift the handpiece from the holder.
8. Turn the air coolant adjustment knob counterclockwise until you achieve the desired atomization at the cutting surface of the bur.



CAUTION Do not continue turning the air coolant adjustment knob counterclockwise after the air coolant stops increasing. The stem may come out of the control block.

9. If you require more water coolant, increase the water output in step 5 as needed.

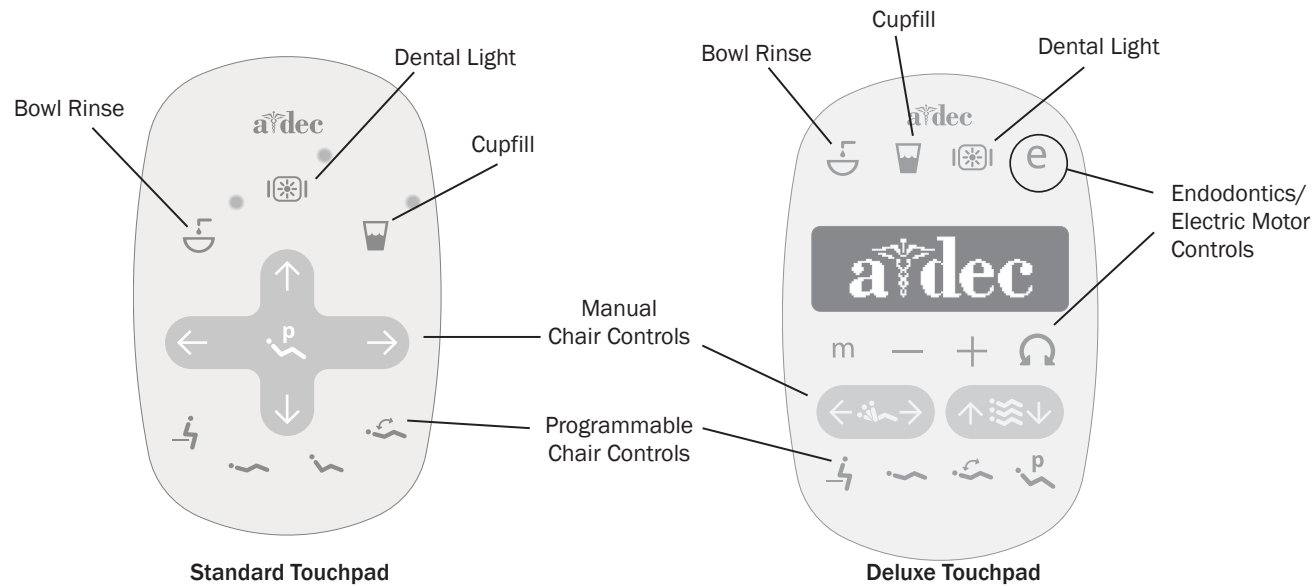
Touchpad Controls



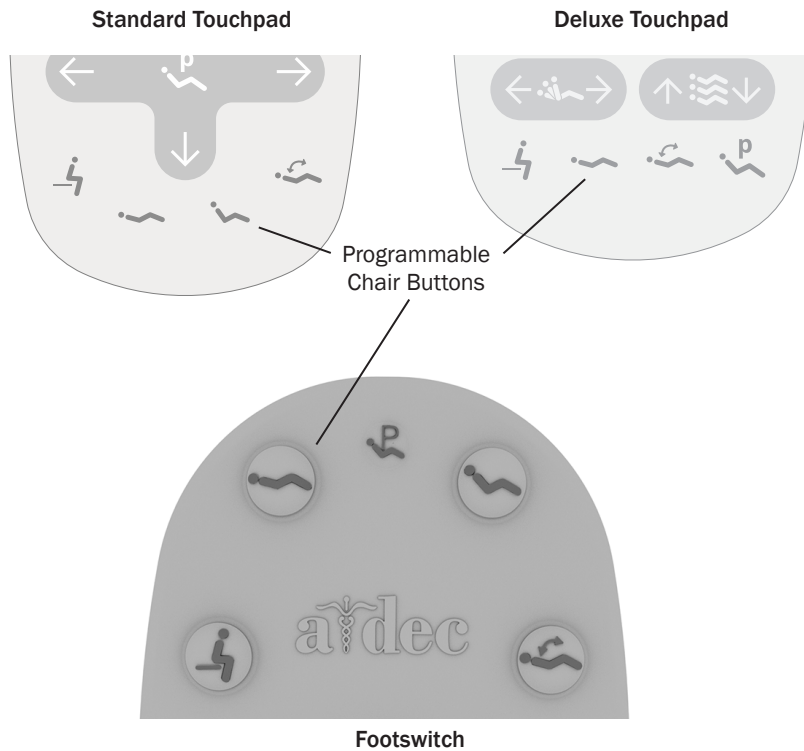
The A-dec touchpad and footswitch control chair movement in the same way. See pages 11 and 12 for information about your footswitch controls.

Basic Touchpad Functions

Your A-dec 200 system may include a standard or deluxe touchpad, or both. The standard touchpad operates the chair, cuspidor, and dental light functions. The deluxe touchpad adds functions for electric motors and other integrated clinical devices. Both touchpads provide manual and programmable controls.



Touchpad Controls *(continued)*



Programmable Chair Positions

You can operate the chair manually or by using the programmed presets from the footswitch or optional touchpad. See page 3 for manual controls. The programmable buttons vary depending on which device you use to control the chair:

Footswitch/Touchpad	Description and Action
	Entry/Exit: Positions the chair for patient entry/exit. On systems with a doctor's touchpad, also turns the dental light off.
	Treatment 1: Positions the chair base and back down. On systems with a doctor's touchpad, also turns the dental light on.
	Treatment 2*: Positions the chair base down and back up. On systems with a doctor's touchpad, also turns the dental light on.
	X-Ray/Rinse: Moves the chair to either x-ray or rinse position. Press again to move the chair to the previous position. On systems with a doctor's touchpad, also turns the dental light off or back on.

**The deluxe touchpad does not include a Treatment 2 button.*

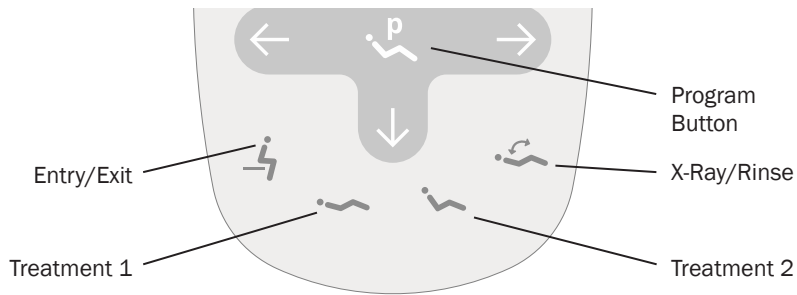


WARNING Ensure that the patient is positioned safely before using the manual or programmable chair controls. Never leave the patient unattended while the chair is in motion. Always take extra care with small children and patients with limited mobility.

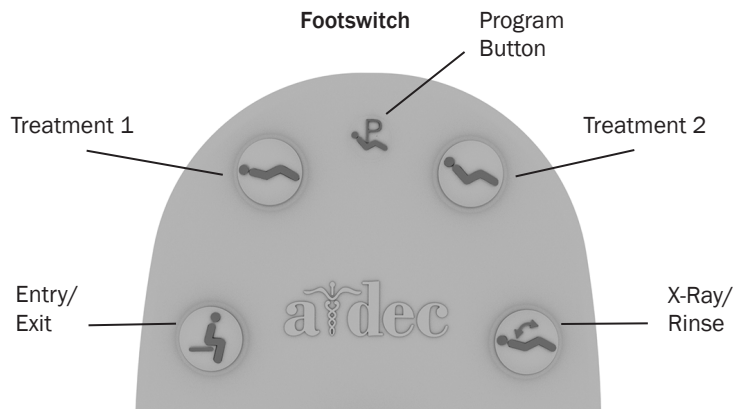
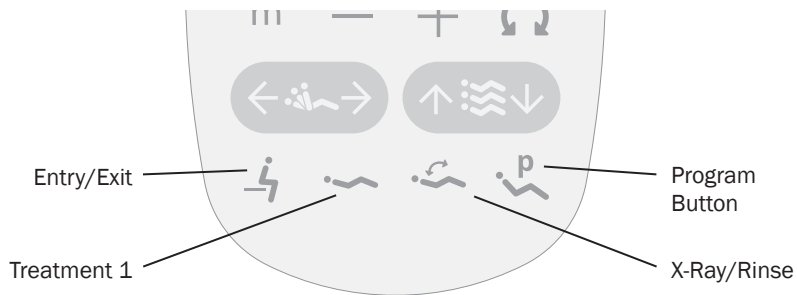
To stop the chair at any point during programmed movement, push any chair positioning button on the footswitch or touchpad.

Touchpad Controls *(continued)*

Standard Touchpad



Deluxe Touchpad



Reprogram Entry/Exit, Treatment 1 and 2* Buttons

To change the factory preset chair positions assigned to the entry/exit and treatment buttons (⚙️, ⚡️, ⚡️*):

1. Use the manual controls to position the chair as desired.
2. Press and release ⚡️. One beep indicates that the programming mode is on.
3. Within five seconds, press the chair position button you wish to reprogram (for example, press ⚙️). Three beeps confirm that the new setting is programmed into memory.

* Note: The deluxe touchpad does not include a Treatment 2 button.

Reprogram X-Ray/Rinse Button

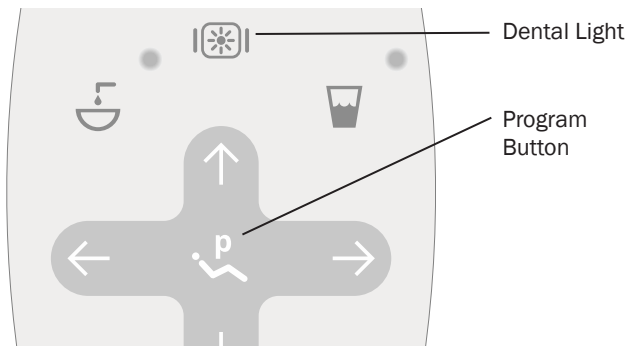
The x-ray/rinse button (⚡️) is preset to move the chair and patient into an upright position for x-rays or cuspidor access. A second press of ⚡️ returns the chair to the previous position.

You can reprogram ⚡️ to function in a similar way to the other programmable chair preset buttons. To change its function:

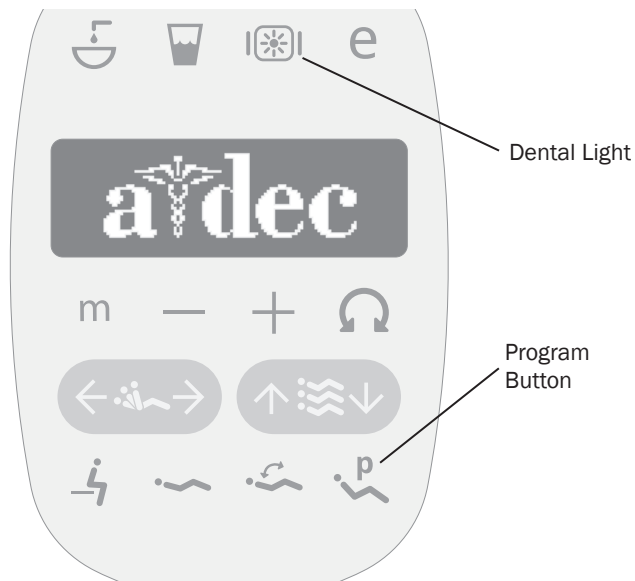
1. Press and hold ⚡️ and ⚡️ at the same time for three seconds.
 - One beep indicates ⚡️ is set as another programmable chair preset button.
 - Three beeps confirm that ⚡️ is configured as the x-ray/rinse factory preset (which toggles between the x-ray/rinse and the previous chair position).
2. If you reprogram ⚡️ as another programmable button and want to assign a different chair position, follow the steps outlined in "Reprogram Entry/Exit, Treatment 1 and 2* Buttons" above.

Touchpad Controls *(continued)*

Standard Touchpad







Deluxe Touchpad





Dental Light Auto On/Off Feature

The auto on/off feature turns the A-dec light on once the chair reaches a preset treatment position.

When you press  or , the dental light turns off and the chair moves to that preset position.

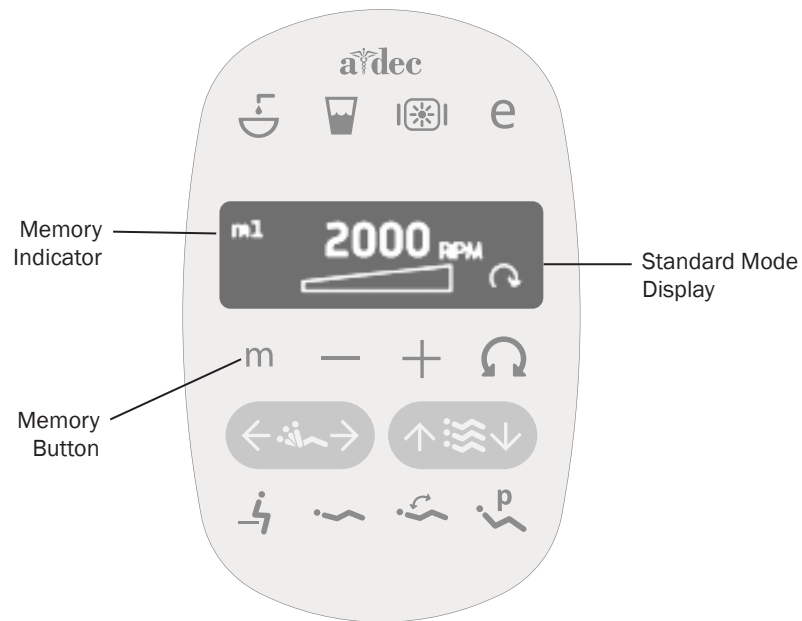
To disable the auto on/off feature, press and hold the program button  and  at the same time for three seconds until you hear one beep.

To enable the auto on/off feature, press and hold  and  at the same time for three seconds until you hear three beeps.



IMPORTANT For more information about dental light functions, see your dental light Instructions for Use.

Electric Handpiece Settings *(deluxe touchpad only)*



Standard Mode

To activate the electric motor, lift the handpiece from the holder. The touchpad screen displays the previous settings used for that handpiece position. Standard mode provides four factory preset speeds for electric motors:

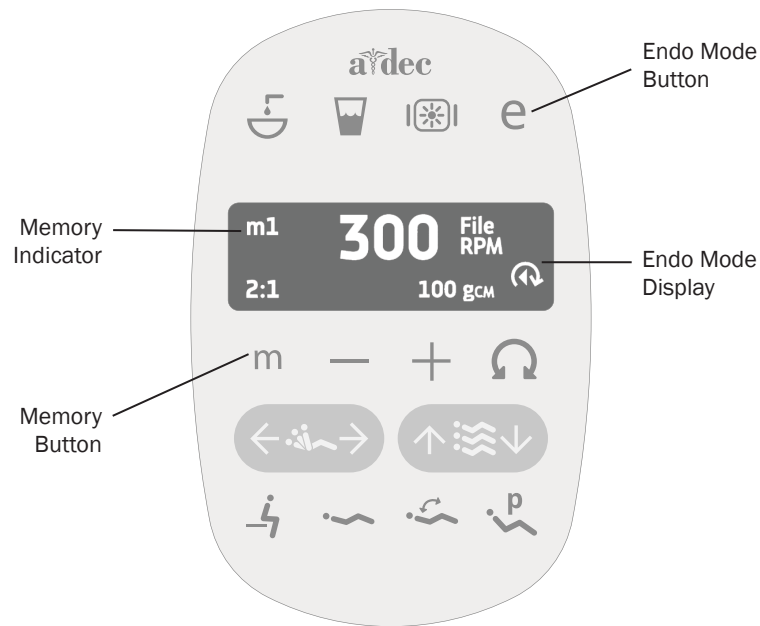
Memory Setting	Factory Preset Speed
m1	2,000 rpm
m2	10,000 rpm
m3	20,000 rpm
m4	36,000 rpm

You can reprogram these memory settings with your own specific preset speeds. A total of eight customized settings per handpiece is possible (four in standard mode and four in endodontics mode).

To program the handpiece setting:

1. Press **—** or **+** until the rpm setting you want displays on the touchpad screen.
2. Press **Ⓜ** to save it to memory. One beep sounds.
3. Press **m** to display the **m1** through **m4** memory settings. When the desired memory setting displays, press **Ⓜ**. Three beeps confirm the setting.

Electric Handpiece Settings *(deluxe touchpad only) (continued)*



Endodontics (Endo) Mode

In addition to handpiece speed adjustments, the endo mode allows you to change a number of settings based on the specific file and desired handpiece behavior. Icons on the touchpad screen reflect the settings.



NOTE For more information regarding speed and torque limits for a specific file, consult the file manufacturer.

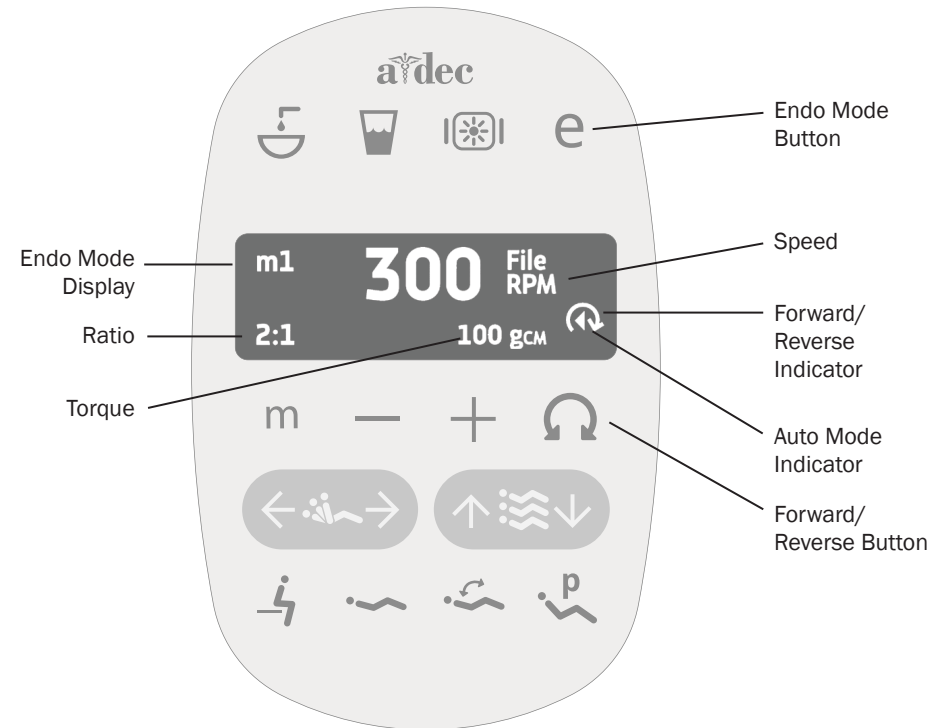
To program the handpiece setting:

1. Lift the handpiece from the holder.
2. If the touchpad screen does not display the endo mode, press **e**.
3. To change settings in endo mode, press **-** or **+**. A white reverse video box displays on the touchpad screen.
4. Use the chair positioning buttons to move from setting to setting on the touchpad screen.
5. Use **-** or **+** to change the setting as desired.
6. To set the speed limit, torque limit, or ratio into memory, press **P**. One beep sounds.
7. Press **m** to display the **m1** through **m4** memory settings. When the desired memory setting displays, press **P**. Three beeps confirm the setting.

Electric Handpiece Settings *(deluxe touchpad only) (continued)*

Endo Mode Touchpad Screen Icons

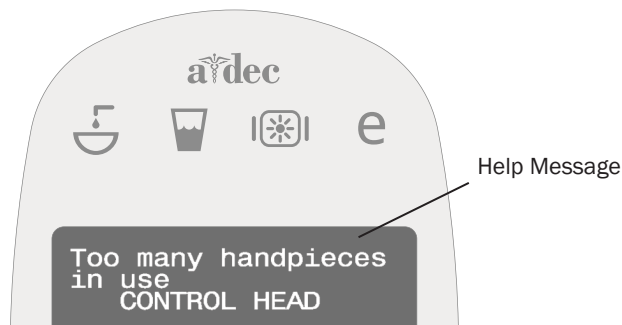
Icon	Setting	Description
	Speed	Setpoint for file speed limit. For more information, consult your file manufacturer.
	Torque	Setpoint for file torque limit. For more information, consult your file manufacturer.
	Torque Units	Toggles between newton centimeters (N·cm) and gram centimeters (g·cm). Adjusting this setting for one handpiece changes it for all handpiece settings. <i>Note: 1 N·cm = 102 g·cm.</i>
	Ratio	Sets the handpiece ratio. For more information, consult your handpiece manufacturer.
	Auto Modes	Adjusting this setting for one handpiece changes it for all handpiece settings. The auto mode indicator displays inside of the forward/reverse indicator.
	Auto Stop	<ul style="list-style-type: none"> When the file reaches the torque limit, the motor shuts off.
	Auto Reverse	<ul style="list-style-type: none"> When the file reaches the torque limit, the motor stops and reverses direction.
	Auto Forward	<ul style="list-style-type: none"> When the file reaches the torque limit, the motor stops, reverses 3 turns, then changes back to forward again <i>Note: If the file is stuck, the auto forward cycle repeats three times before the motor stops.</i>



Forward/Reverse Button

The forward/reverse button changes the electric motor's direction. The system defaults to the forward position when you return the motor to the holder or turn off the system. In reverse mode, the screen icon flashes continuously.

Electric Handpiece Settings *(deluxe touchpad only) (continued)*



Touchpad Help Messages

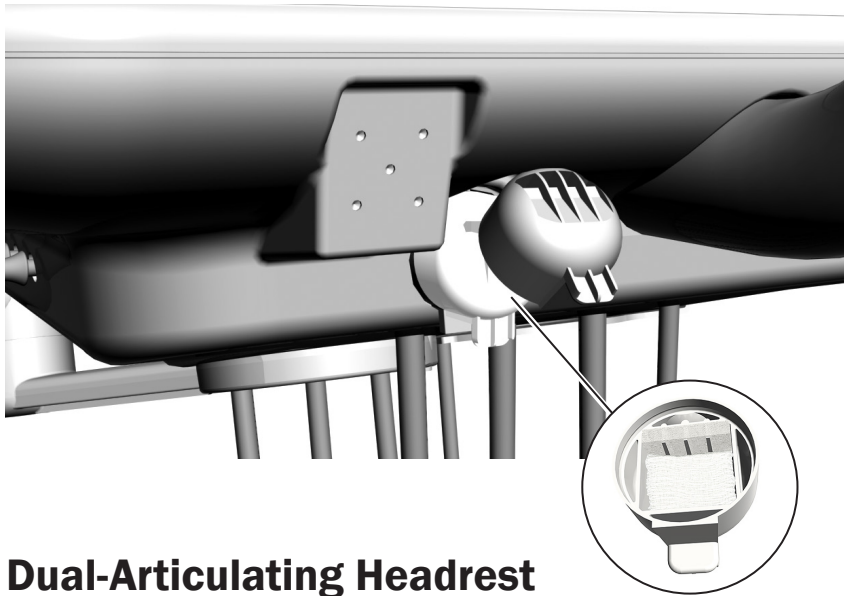
The deluxe touchpad screen displays help messages for disabled operations. When a help message appears, record the screen message and the function you were performing in case service is required. For complete details on help messages, see the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00), which is available in the Document Library at www.a-dec.com.

Other Handpiece and Accessory Settings

See your authorized A-dec dealer to change any of these handpiece and accessory settings, if applicable:

- **Auto-Off Delay** – determines how long the handpiece light remains on if the foot control is released. The default setting is 5 seconds.
- **On When Selected** – specifies whether the handpiece light turns on or remains off when the handpiece is removed from the holder. The default setting is on.
- **On in Endo** – specifies whether the handpiece light turns on or off when the endo mode is selected. The default setting is off, which is recommended to reduce heat and extend bulb life.
- **Ultrasonic Colors** – for Acteon® ultrasonic instruments, specifies whether color-coded tip categories are on or off. The default is on.
- **Voltage Adjustment** – allows for customized light output voltage for each handpiece position. The default setting is 3.2 VDC.

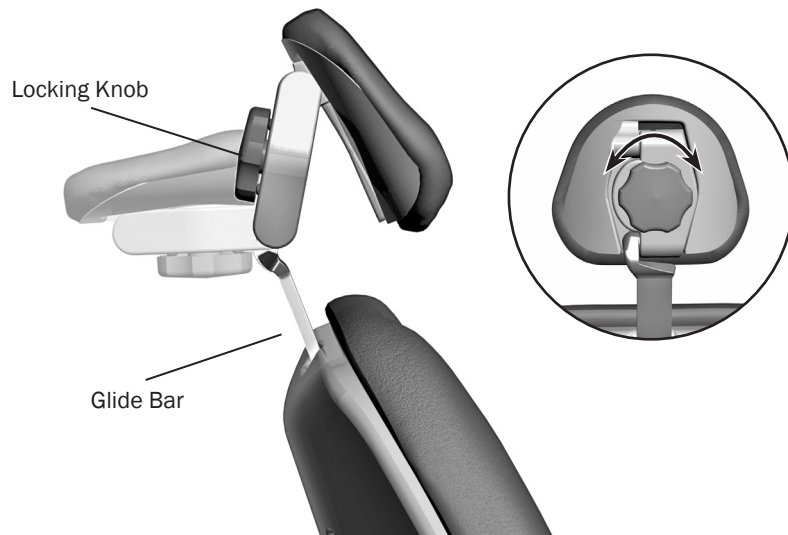
Oil Collector



Service the oil collector on the delivery system once a week for normal use and more often for heavier use. To service:

1. Unsnap the oil collector cover located under the control head and discard the old gauze. Do not remove the foam muffler attached to the inside of the cover.
2. Fold a new gauze pad (51 mm x 51 mm [2" x 2"]) into quarters and place inside the cover.
3. Snap the oil collector cover closed.

Dual-Articulating Headrest

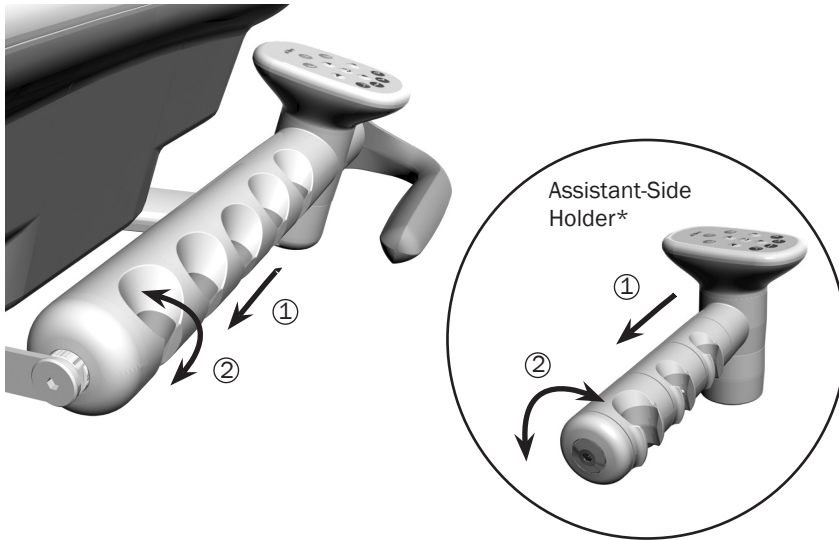


The locking knob allows you to secure the headrest in a full range of positions. Release the headrest by turning the locking knob counterclockwise. Then adjust the headrest for a proper fit. Lock the headrest in the desired position by turning the knob clockwise. For height adjustment, slide the headrest and glide bar up or down.



WARNING If the glide bar has exceeded its maximum recommended working height, a warning will be visible on the patient's side of the glide bar. Do not use the headrest in a position where this warning is visible.

Instrument Holder Adjustment

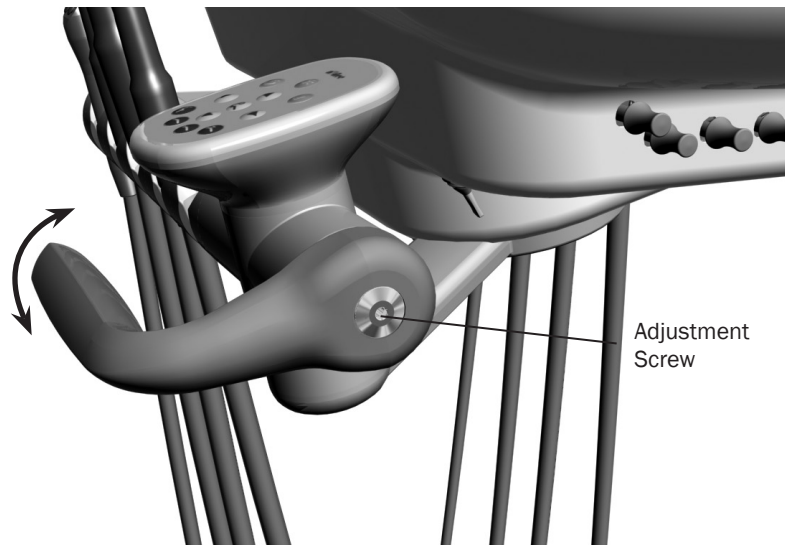


CAUTION Twisting the holder without pulling it away from the adjacent one will damage the mechanism.

The instrument holders rotate independently to allow customized positioning for each handpiece. Pull the holder slightly away from the adjacent one, rotate to the desired position, and then release.

** If your assistant-side instrumentation includes the auto-air feature, the holder rotates as a complete set.*

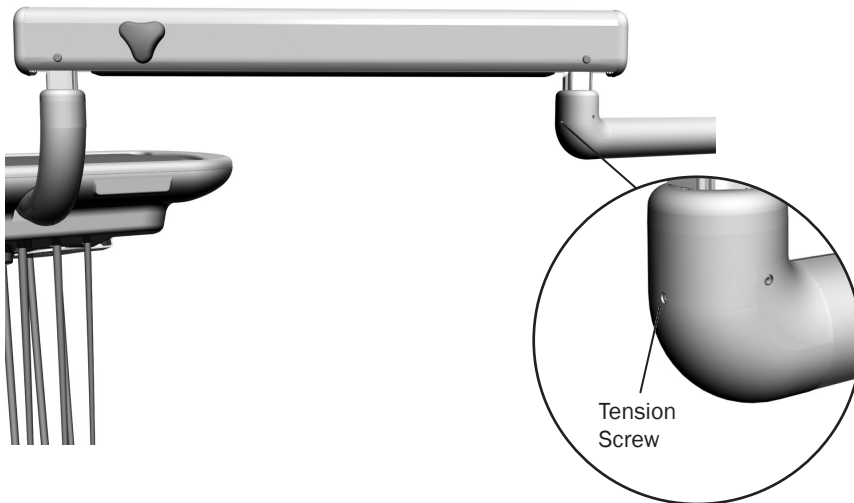
Delivery System Handle Adjustment



CAUTION Make sure the handle is flush against the holder before you tighten the adjustment screw to prevent damage to the mechanism.

Use a 5/32" hex key to adjust the handle position. Turn the adjustment screw counterclockwise to loosen, position the handle, and then tighten the screw to secure the handle in place.

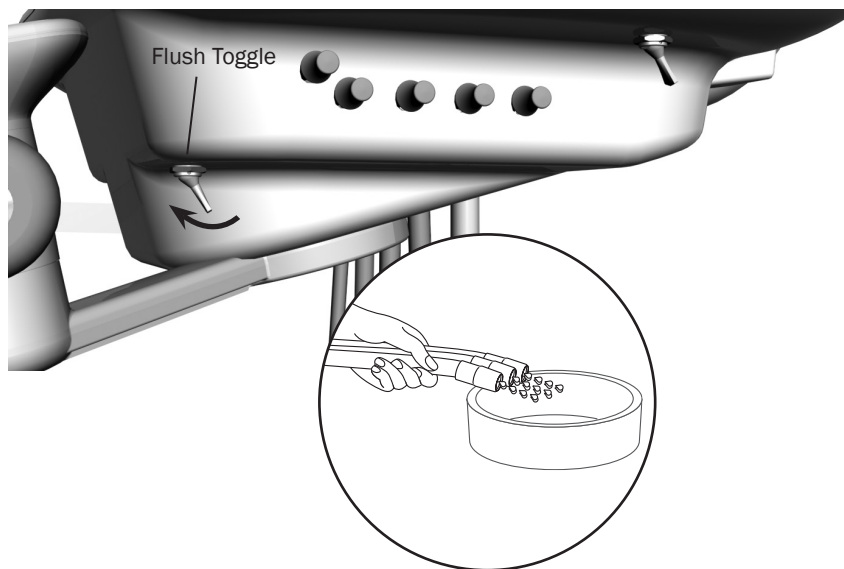
Tension Adjustments



Flexarm Rotation

If the control head flexarm begins to drift right or left, use a 3/32" hex key to adjust the tension setscrew. Turn the screw clockwise to tighten or counterclockwise to loosen the tension.

Cleaning and Asepsis Recommendations



Handpiece Tubing Cleaning and Care

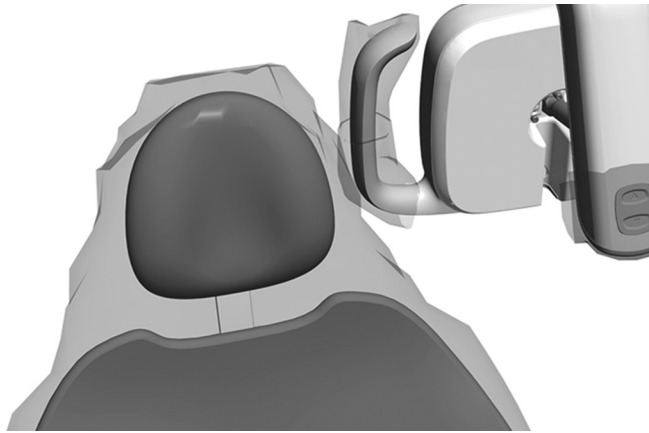
Use the handpiece tubing flush system to move more water through the tubing in less time than using the foot control. To flush the tubing after each patient:

1. Disconnect the handpieces.
2. Hold all of the handpiece tubing that uses water coolant over a sink, cuspidor bowl, or basin.
3. Locate the flush toggle under the control head (next to the air/water coolant adjustment keys).
4. Pull the toggle toward the handpiece holder for 20–30 seconds.



NOTE Discharge all tubing air and water lines for 20-30 seconds after each patient.

Barrier Protection



NOTE For proper use and disposal of barriers, see the instructions provided by the barrier manufacturer.

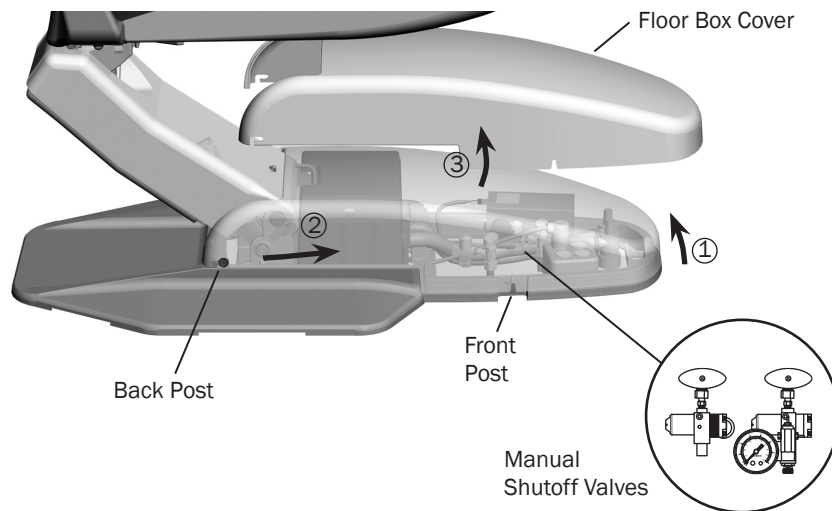
A-dec recommends barrier protection for all applicable touch and transfer surfaces. Touch surfaces are areas that come into contact with hands and become potential cross-contamination points during dental procedures. Transfer surfaces are areas that come into contact with instruments and other inanimate objects.

In the USA, barriers must be produced under the Current Good Manufacturing Practice (CGMP) as specified by the U.S. Food and Drug Administration (USFDA). For regions outside the USA, refer to the medical device regulations specific to your location.



IMPORTANT For recommendations on cleaning and chemical disinfection of touch and transfer surfaces (where barrier protection is not applicable or when barriers are compromised), please see the *A-dec Equipment Asepsis Guide* (p/n 85.0696.00).

Additional Periodic System Maintenance

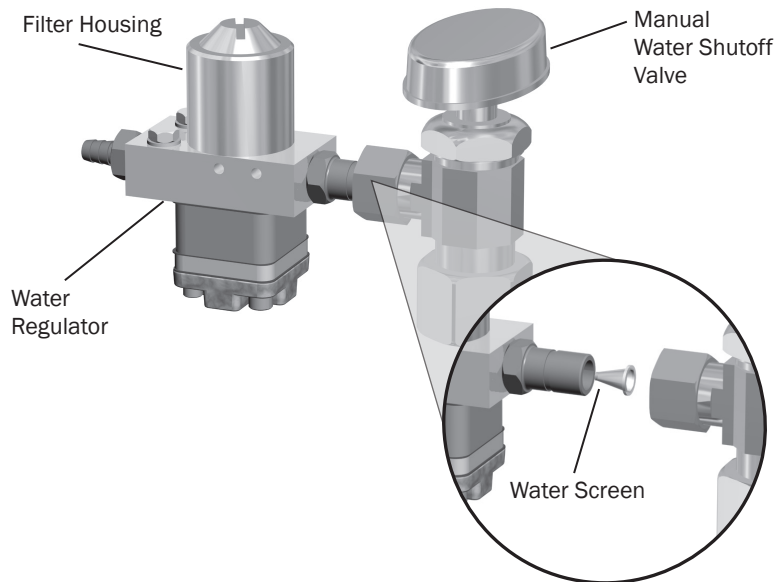
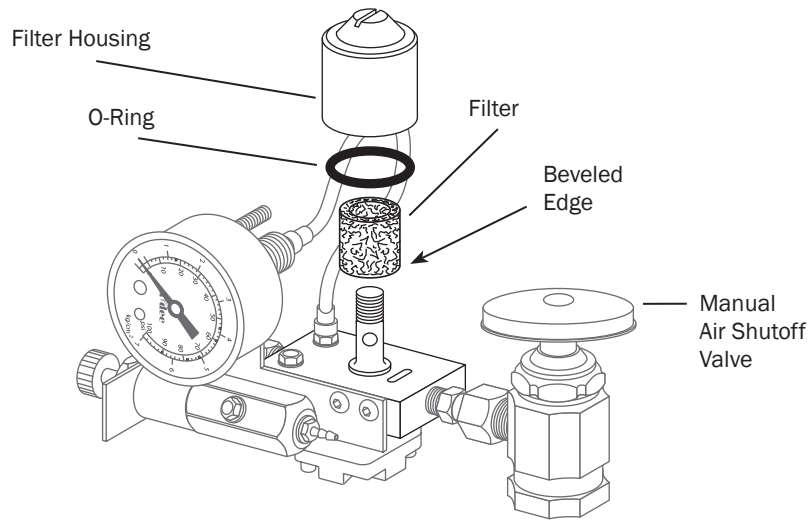


Utilities and Shutoff Valves

The utilities for your system are located under the chair floor box. To access the utilities, pull the floor box cover up at the front posts (1), then forward (2) and up (3) to slide the cover off the back posts.

The manual shutoff valves control the air and water to the system. To prevent leaks, these valves should remain fully open (turned counterclockwise), except while your system is being serviced.

Air and water pass through separate filters before entering the regulators. Replace these filters when they become clogged and cause restricted flow.



To check for a clogged air or water filter:

1. Turn on the master toggle.
2. While watching the air pressure gauge, press the syringe air button. If the system air pressure drops by more than 15 psi, replace the air filter.
3. While watching the cuspidor, press the bowl rinse button. If the bowl rinse water pressure fades or if the water flow stops, replace the water filter.

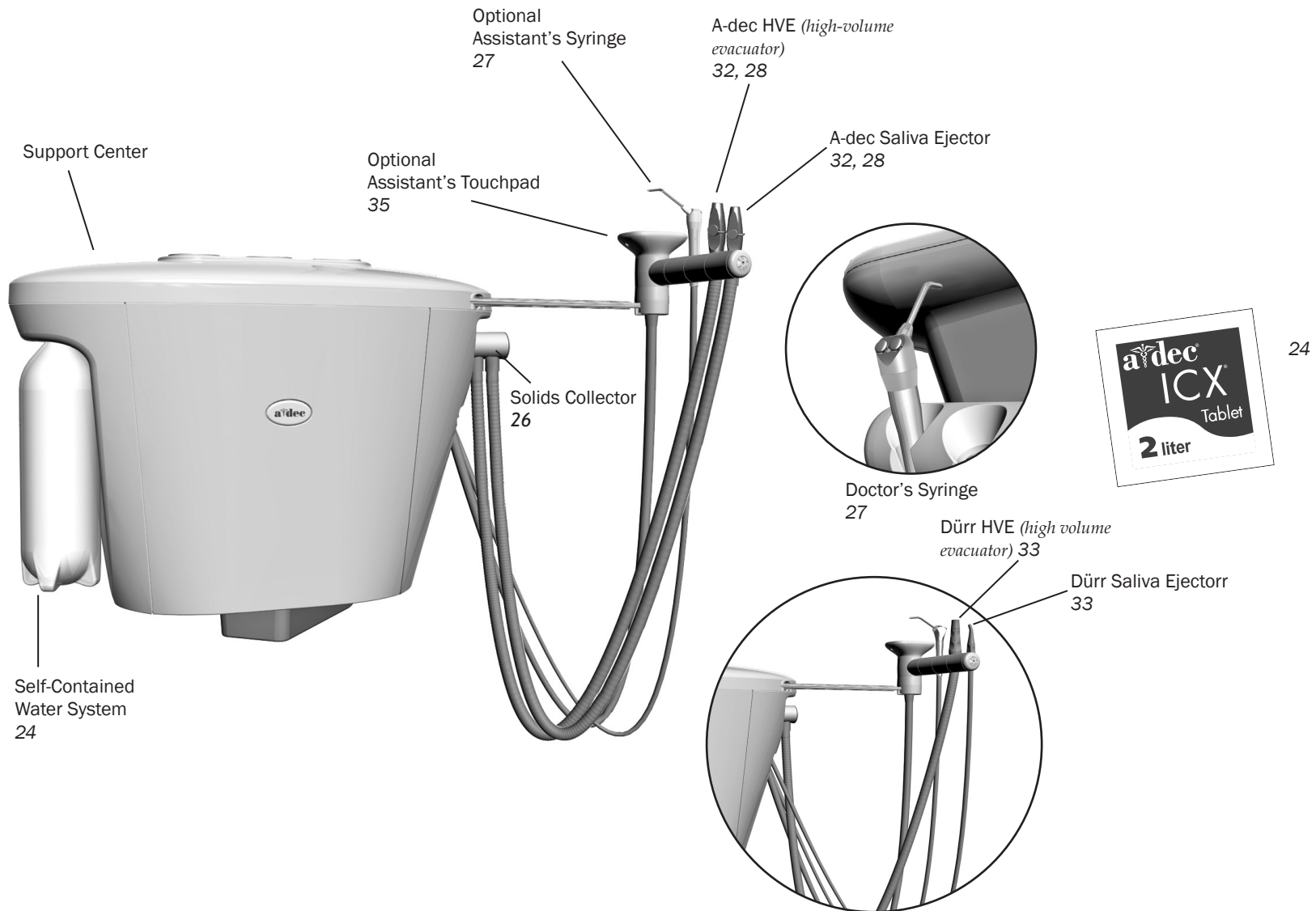


CAUTION To ensure proper delivery system operation, install the filter with the beveled edge facing the manifold.

To inspect and replace the filter:

1. Turn off the master toggle and close the shutoff valves (turn clockwise).
2. Bleed the system of air and water pressure by operating the syringe buttons until air and water no longer flow.
3. Using a standard screwdriver, remove the filter housing from the air or water pre-regulator assembly and remove the filter.
4. Replace the filter if it is clogged or discolored. Install the filter with the beveled edge facing the manifold.

Assistant's Instrumentation and Support Center



Self-Contained Water System



The self-contained water system supplies water to the syringe and water QD. The system includes a .07-liter water bottle that provides an easy way to control the quality of your treatment water.

A-dec recommends that you perform a shock treatment on the dental unit waterlines before you use the system for the first time.

For on-going waterline maintenance, A-dec recommends a three-part protocol: continuous use of A-dec ICX® waterline treatment tablets, regular dental unit water quality monitoring, and shock treatment.



IMPORTANT For complete details on how to maintain good water quality in your system, see the Instructions for Use for ICX and your self-contained water bottle:

A-dec ICX p/n 86.0613.00

A-dec Self-Contained Water System p/n 86.0609.00

Waterline Maintenance Guide p/n 85.0983.00

How to Choose Treatment Water

The correct water to use in the A-dec self-contained water system depends on the quality of your municipal water. It's important to choose a source that consistently provides good water quality. A-dec recommends using tap or bottled drinking water with the following guidelines:

- **Tap Water** – If you have confidence in the quality of your municipal water supply, consider using tap water in your self-contained water bottle.

- **Softened Water** – In areas where water hardness is greater than 200 mg/L as calcium carbonate (11.7 grains per gallon, 2.0 mmol/L), A-dec recommends the use of a water softener to prevent the buildup of mineral deposits that may impact delivery system functionality. Water pH should be compliant with local drinking water regulations.
- **Bottled Spring or Artesian Drinking Water** – If you have concerns about the quality of your municipal water supply, use bottled spring or artesian water from a commercial source. Various types of bottled water are commercially available. Bottled spring and artesian water tend to have a mineral content that is neither too high (causing mineral deposits associated with hard water) nor too low.



WARNING A-dec does not recommend the regular use of distilled, deionized, reverse osmosis, or other ultra-pure water types. Long-term use of these water types may damage the delivery system and degrade the system performance.

For additional guidance, refer to the regulations specific to your location.

Waterline Maintenance

A-dec recommends that you perform a shock treatment on the dental unit waterlines before you use the system for the first time.

For on-going waterline maintenance, A-dec recommends a three-part protocol: continuous use of A-dec ICX® waterline treatment tablets, regular dental unit water quality monitoring, and shock treatment.



Solids Collector



WARNING Infectious waste may be present. Follow asepsis protocol to prevent cross contamination.

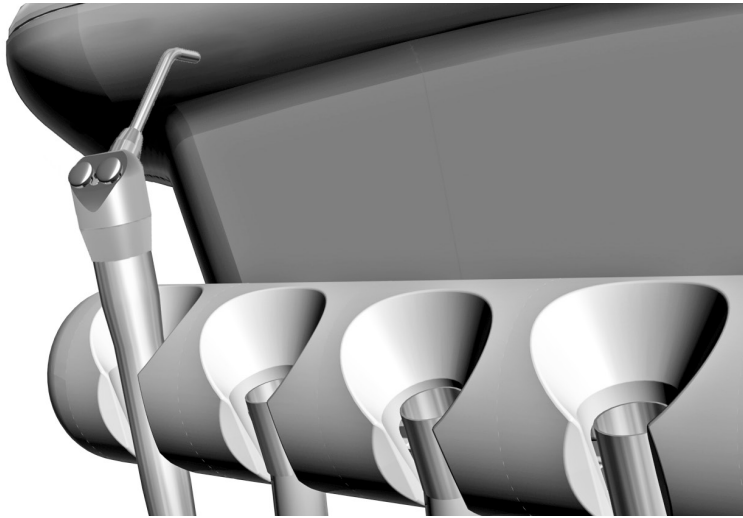


CAUTION Do not empty the screen into your cuspidor. Doing so could plug the drain.

To ensure proper suction from the central vacuum and to maintain proper treatment room asepsis, discard and replace the solids collector screen at least twice a week. To replace the screen:

1. Turn off the vacuum.
2. Remove the solids collector cap.
3. Remove the solids collector screen.
4. Discard the screen according to your local regulations.
5. Insert the new screen in the collector and replace the cap.

Syringe Tip Cleaning and Sterilization



WARNING Use only A-dec syringe tips in A-dec syringes. A-dec syringe tips have been engineered and manufactured for use with A-dec syringes. Using syringe tips manufactured by a company other than A-dec may result in syringe tip ejection. Tip ejection may result in ingestion or aspiration of the tip, requiring immediate medical attention.

All syringe tips are considered critical items and must be heat sterilized or disposed of after each use.

Precleaning

Always preclean the syringe tips before sterilization.

1. Remove the tip from the syringe.
2. Immerse the tip in a holding solution until ready for ultrasonic cleaning.
3. Clean the tip ultrasonically. Follow the manufacturer's instructions that came with the ultrasonic cleaning device.
4. Purge all cleaning agents from the tip before sterilization.

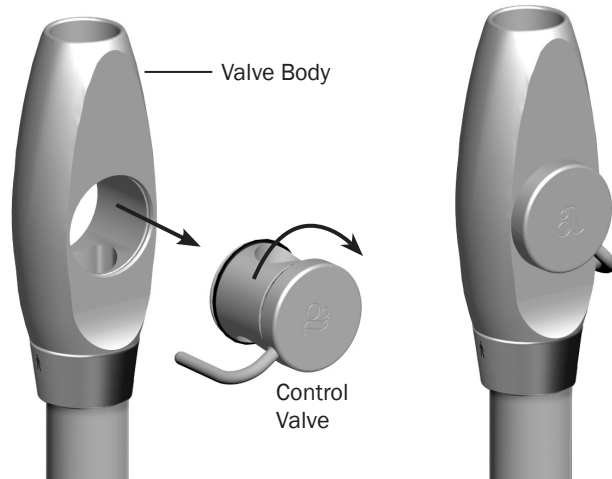
Sterilization

1. Follow these steps to sterilize syringe tips:
2. Rinse the syringe tips in clear water.
3. Flush with isopropyl alcohol or equivalent sterilant-disinfectant solution.
4. Heat sterilize using a steam autoclave for at least 4 minutes at a dwell temperature of 134°C (273°F).



IMPORTANT For detailed instructions on syringe usage, flow adjustment, and maintenance, see the *A-dec Quick-Disconnect Syringes Instructions For Use* (p/n 85.0680.00).

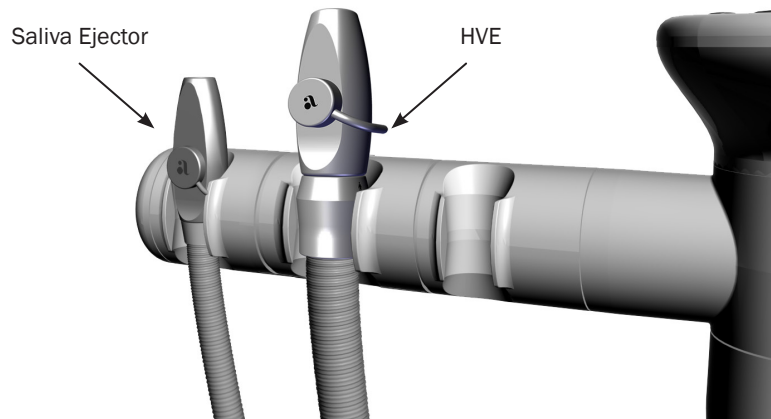
A-dec HVE/Saliva Ejector Left/Right Conversion



NOTE Be sure to reinstall the valve on the same side of the valve body. Otherwise, the HVE or saliva ejector will not operate properly.

To convert the standard high-volume evacuator (HVE) and saliva ejector for left-handed operation, push the control valve out of the valve body, rotate the control valve 180°, and push it back into place.

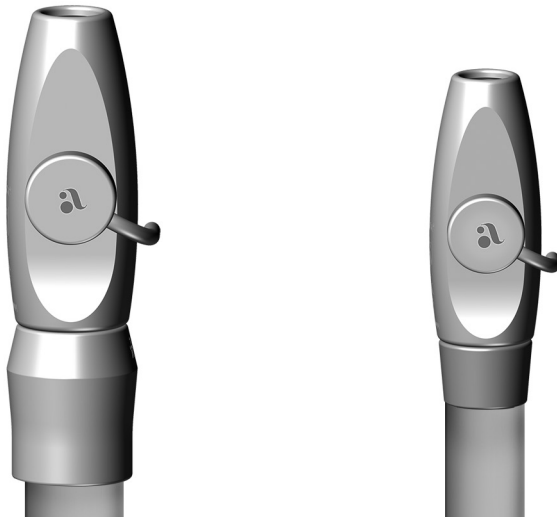
A-dec Air Vacuum System (AVS)



The AVS option on the A-dec HVE and saliva ejector includes a self-contained air vacuum generator.

To activate the HVE or saliva ejector, lift the instrument from the holder.

A-dec HVE/Saliva Ejector Valve Body Assembly Asepsis



NOTE Vacuum lines should be flushed at the end of each day or more frequently according to your clinic's protocols.

If you use barriers to protect the main body of the HVE and saliva ejector, replace the barriers after each patient. Clean and disinfect these instruments at the end of each day or after each patient if the barriers have been compromised. If you do not use barriers, or if you perform oral surgery, always clean and disinfect these instruments after each patient.

Cleaning and Disinfection



CAUTION Clean the valve body assembly as soon as possible after treating each patient. Do not allow blood and debris to dry on instruments. If you cannot clean it immediately, keep the valve body assembly moist.



NOTE Use an intermediate-level EPA-registered hospital-grade disinfectant containing a tuberculocidal claim with one of the following compositions: high-dilution water-based phenolic formulation or quaternary ammonium compound with less than 25% isopropanol.

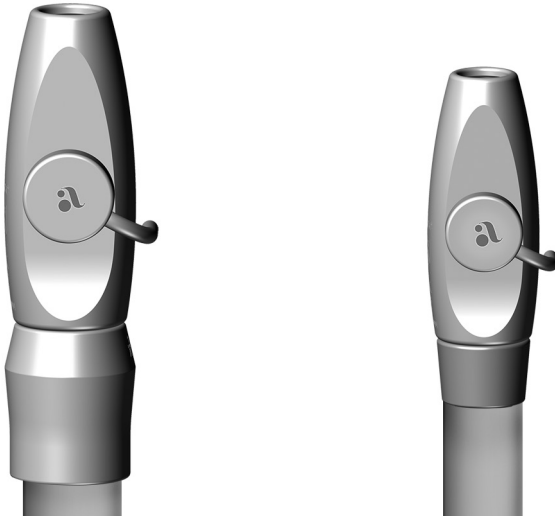


NOTE If using a spray solution, spray on a soft, low-lint wipe to apply solution to the valve body assembly.

To clean and disinfect the HVE and saliva ejector valve body assembly without disconnecting from the vacuum system:

1. Remove the vacuum tip from the HVE or saliva ejector valve body assembly. Discard disposable vacuum tips.

A-dec HVE/Saliva Ejector Valve Body Assembly Asepsis *(continued)*



2. Clean the valve body assembly to remove visible soil using a disinfectant wipe or spray solution. Keep the valve body assembly wet according to the manufacturer's recommended contact time. Repeat, if necessary, until the valve body assembly is visibly clean.
3. Disinfect the valve body assembly using a new disinfectant wipe or spray solution. Keep the valve body assembly wet according to the manufacturer's recommended contact time.
4. Allow the valve body assembly to air dry.
5. Operate the HVE and the saliva ejector valves several times to verify that they rotate smoothly.



NOTE A-dec valve body assemblies are heat tolerant for sterilization. Users may sterilize at their discretion.

Routine Maintenance and Sterilization

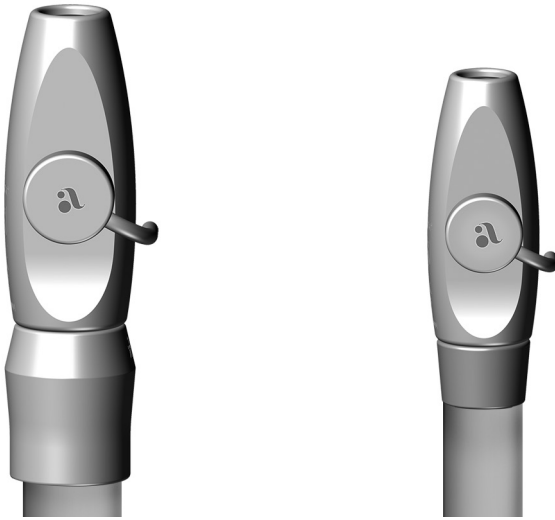
To routinely maintain and sterilize the HVE and saliva ejector when disconnected from the vacuum system (frequency determined by the user):



CAUTION Clean the valve body assembly as soon as possible after treating each patient. Do not allow blood and debris to dry on instruments. If you cannot clean it immediately, keep the valve body assembly moist.

1. Remove the valve body assembly from the vacuum line by pulling it away from the tubing at the tailpiece.
2. Disassemble the valve body by pushing the control valve out of the valve body.
3. Clean soiled valve body components using a soft, low-lint wipe.

A-dec HVE/Saliva Ejector Valve Body Assembly Asepsis *(continued)*



4. Prepare a warm (32-43°C [90-110°F]) detergent solution (neutral pH enzymatic detergent or alkaline non-enzymatic detergent), according to the manufacturer's recommended instructions.
5. Soak soiled valve body components in the prepared detergent solution for at least one minute.
6. Remove and inspect O-rings. Discard and replace, if damaged.
7. Use a soft, nylon-bristle brush, or equivalent, to scrub the:
 - Exposed surfaces of the valve body components and O-rings, while submerged, for a minimum of 30 seconds or until all visible soil has been removed.
 - Interior lumen of the valve body at least three times (in and out), clearing any visible soil from brush bristles.
8. Rinse the cleaned valve body components under flowing, warm (32-43°C [90-110°F]) potable water for a minimum of 30 seconds.
9. Allow valve body components to air dry.
10. Sterilize the valve body components according to the following:
 - Dynamic air-removal sterilizers: 4 minutes at 132-135°C (270-275°F)
 - Gravity-displacement sterilizers: 30 minutes at 121-123°C (250-254°F)
11. Allow the load to dry for 30 minutes before removing it from the sterilizer. Ensure the valve body components are completely dry before proceeding.



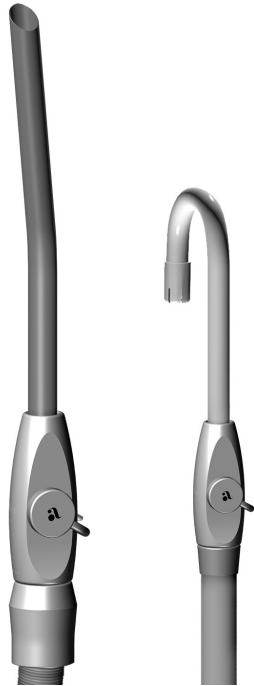
CAUTION Use only silicone lubricant when lubricating the black O-rings in A-dec instruments. Petroleum-based products will cause permanent damage to the O-rings.

12. Prior to use, lubricate O-rings with A-dec silicone lubricant, and reassemble the valve body assembly.

HVE/Saliva Ejector Valve Body Assembly Asepsis *(continued)*

13. Reinstall the valve body assembly on the tubing tailpiece.
14. Operate the HVE and the saliva ejector control valves several times to verify that they rotate smoothly.

HVE/Saliva Ejector Tip Asepsis



NOTE Select tips that are compatible with your HVE and saliva ejector openings. See “Durr and A-dec HVE and Saliva Ejector Connections” on page 42 for specifications.

Disposable Tips

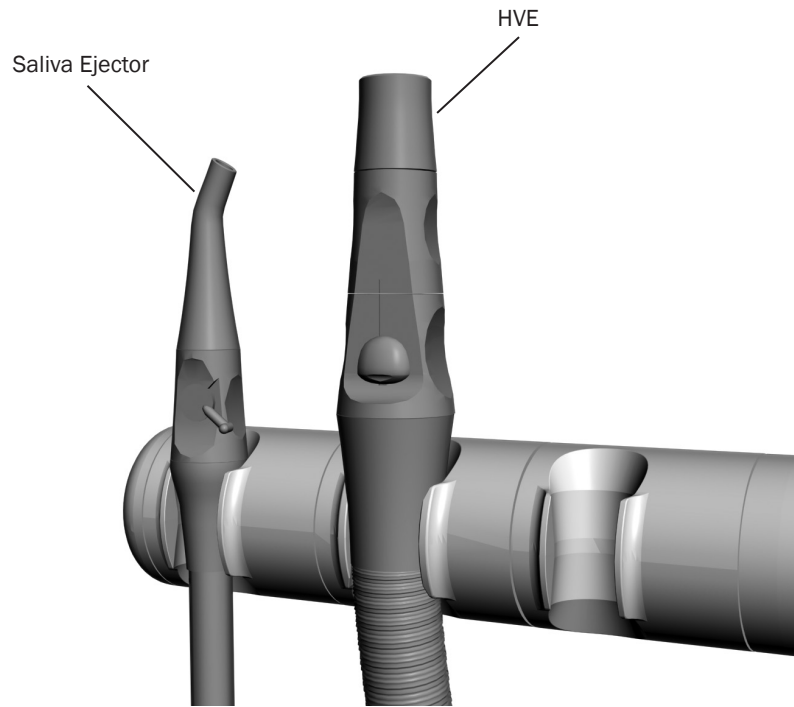


CAUTION Disposable HVE and saliva ejector tips are not sterilizable and should not be reused.



Replace disposable HVE and saliva ejector tips after each use.

Dürr HVE and Saliva Ejector Asepsis



CAUTION Disposable HVE and saliva ejector tips are not sterilizable and should not be reused.



If you use barrier film to protect the main body of the Dürr HVE and saliva ejector, clean and sterilize these instruments weekly, or more frequently as needed. If you do not use barrier film, or if you perform oral surgery, clean and sterilize these instruments after each patient.

To clean and sterilize the HVE and saliva ejector:

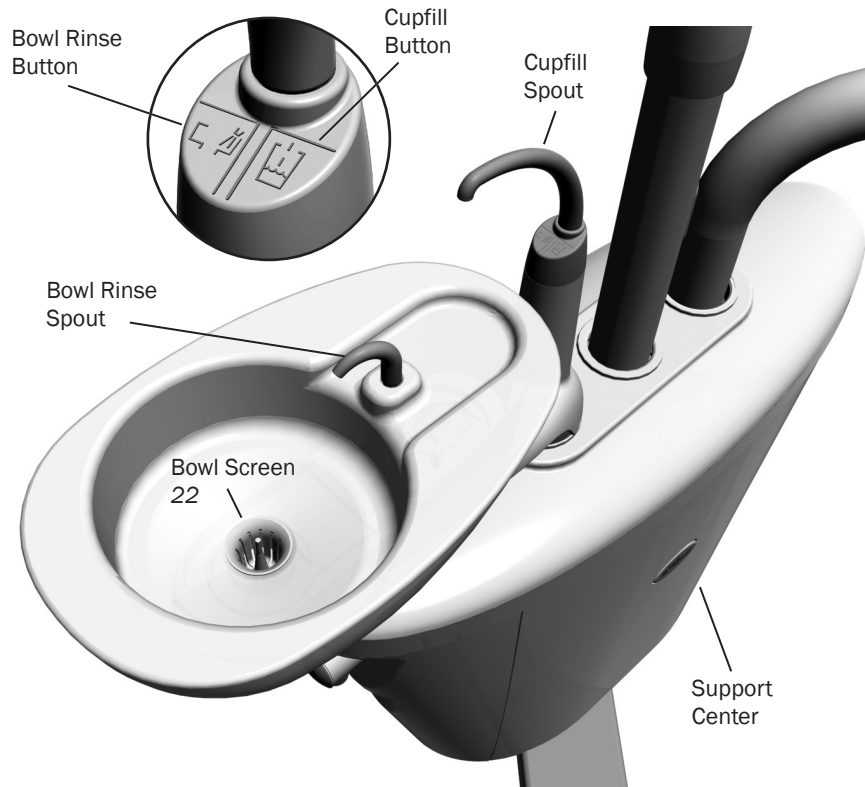
1. Turn off the vacuum.
2. Remove the tip from the HVE or saliva ejector.
3. Remove the HVE or saliva ejector valve body by pulling it away from the tubing at the tailpiece.
4. Clean and rinse the valve body using a mild detergent, water, and a brush.
5. Allow the instruments to dry completely.
6. Heat sterilize the instruments using a steam autoclave for at least 6 minutes at a dwell temperature of 134°C (273°F).



CAUTION Use only petroleum-based lubricant on red O-rings in Dürr instrumentation. Silicone lubricants will cause permanent damage to the red O-rings.

7. Apply a light coat of petroleum-based lubricant on the red O-ring seal.
8. Reinstall the valve body on the tubing tailpiece.
9. Verify that the HVE and the saliva ejector operate and rotate smoothly.

Cuspidor



The cuspidor cupfill and bowl rinse functions depend on your specific configuration.

Standard Cuspidor

Press and hold the cupfill button on the cuspidor for the desired amount of water. Release the button to stop the flow.

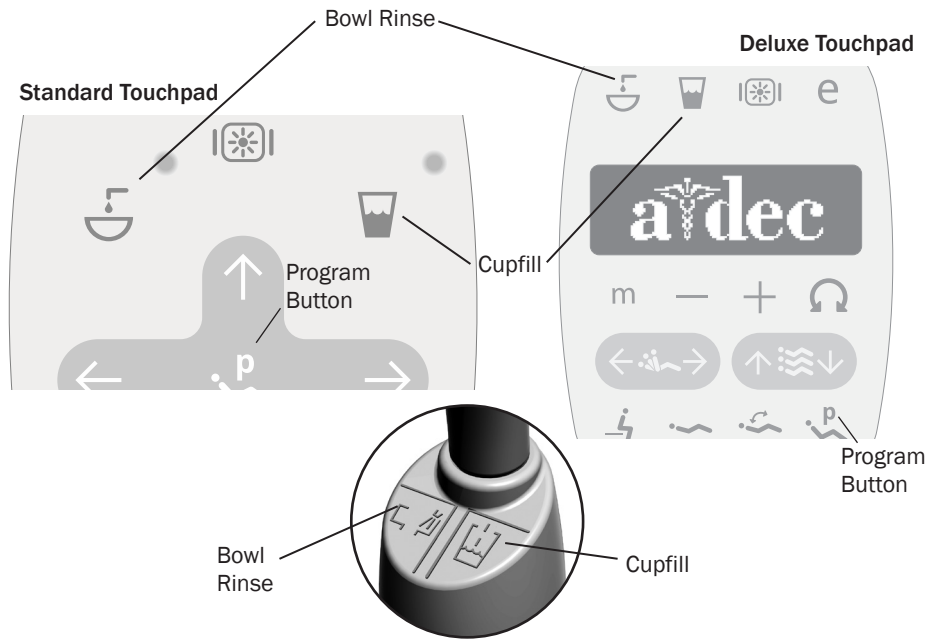
Press the bowl rinse button on the cuspidor once for a 30-second rinse. For continuous rinse, hold the button down. When you release the button, the water will continue to flow for 15 additional seconds.


Cuspidor with Doctor's Touchpad

If your system includes a doctor's touchpad, you can use the buttons on the touchpad or the cuspidor to operate and program bowl rinse and cupfill functions:

Button	Description and Action
	<p>Cupfill Button:</p> <ul style="list-style-type: none"> Press and release the cupfill button for a timed operation. The factory preset is a 2.5-second fill. Press and hold the cupfill button for manual operation.
	<p>Bowl Rinse Button:</p> <ul style="list-style-type: none"> Press the bowl rinse button for a timed operation. The factory preset is a 30-second rinse. Press and hold the bowl rinse button for manual operation.

Programming (only systems with doctor's touchpad)

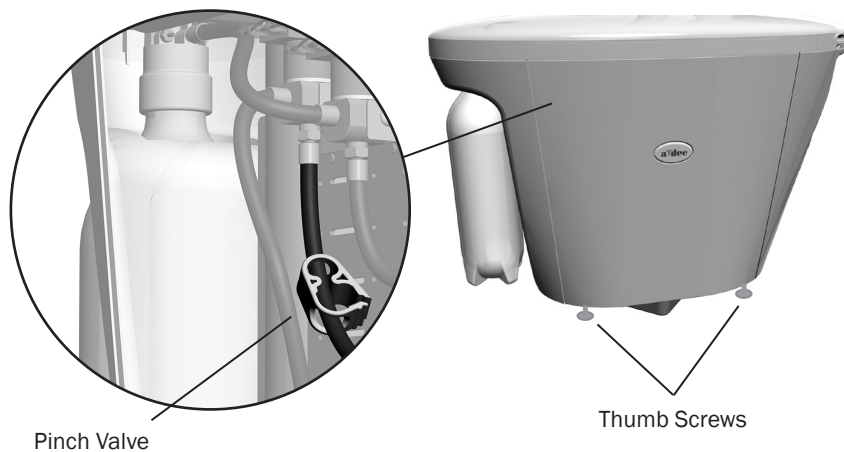


TIP Press  twice in less than two seconds to activate the continuous operation mode. Press the button once to end the continuous bowl rinse mode.

To reprogram the timed cupfill or bowl rinse functions:

1. Press the program button on the touchpad or press and hold both the cupfill and bowl rinse buttons on the cuspidor. Release them when you hear one beep.
2. Press and hold the cupfill or bowl rinse button for the desired time.
3. Release the button. You'll hear three beeps confirming the program has changed.

Bowl Rinse Flow Adjustment



Adjustments to the cuspidor bowl rinse flow are made inside the support center. To make an adjustment:

1. Loosen the two thumb screws at the bottom of the support center and carefully pull the cover out.
2. With the cuspidor bowl rinse on, tighten or loosen the pinch valve to adjust the flow.
3. For the best rinsing action, adjust the flow pattern by rotating the bowl rinse spout.

Cleaning and Maintenance



Cuspidor Bowl



CAUTION Do not remove the spouts when cleaning the cuspidor. This will help prevent cleaning solutions from damaging the equipment and contaminating the cupfill water.



CAUTION Do not empty the solids collector or bowl screens into your cuspidor. Doing so could plug the cuspidor drain. After cleaning, always install the bowl screen in the cuspidor bowl drain to prevent debris from plugging the drain.



WARNING Infectious waste may be present. Follow asepsis protocol to prevent cross contamination.

The contoured spouts and smooth bowl of the cuspidor provide for quick and easy cleaning. Remember to empty and clean the bowl screen every time you clean the cuspidor.



Bowl Screen

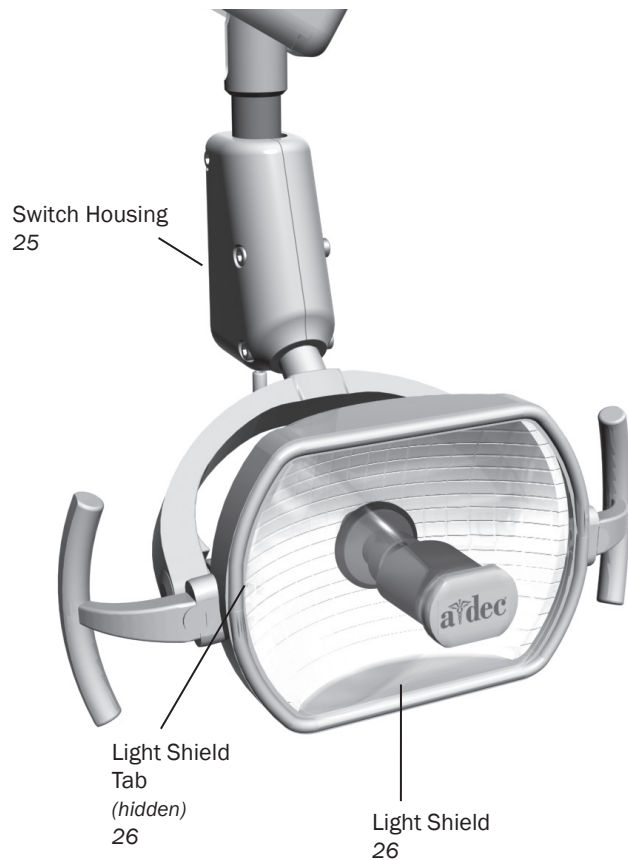
Gravity Drain Cleaning

At the end of each day, flush the cuspidor to remove debris from the flexible drain tubing. If the cuspidor is not flushed regularly, debris may build up and impair draining. To flush the cuspidor, run the bowl rinse for about 60 seconds.

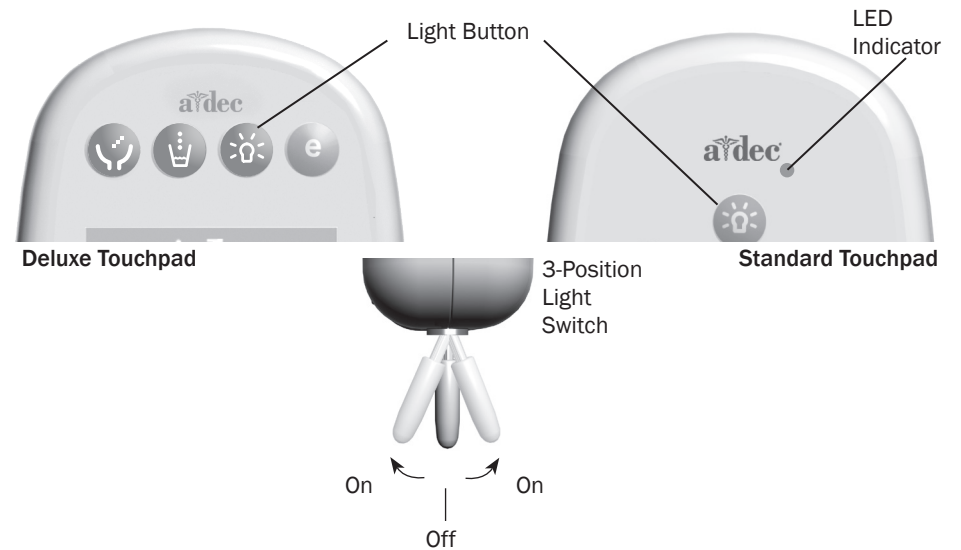
Maintenance Parts

For replacement cuspidor bowl screens, order p/n 75.0032.02.

Dental Light



Note: If your chair includes a different style of dental light, see the instructions for use that came with the dental light.

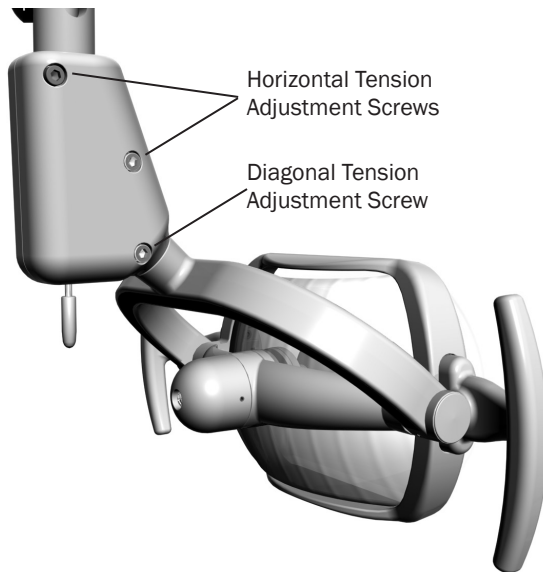
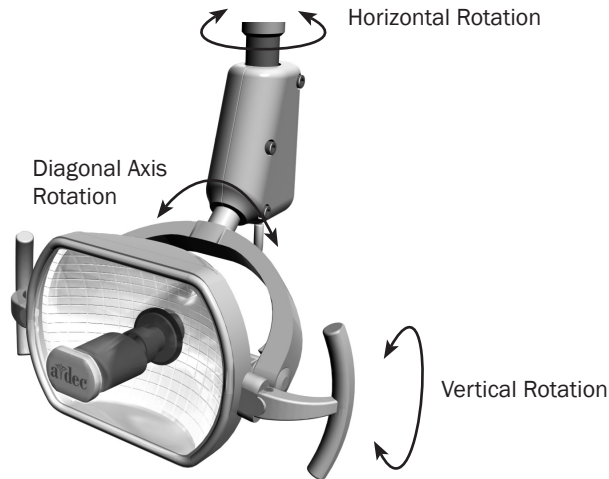


WARNING Take appropriate precautions when operating and maintaining the dental light. Avoid contact with components that may become hot when the light is on. To avoid burns, touch only the light handles and switches during operation. Always turn off the light and allow it to cool completely before maintenance or service.

The A-dec 200 dental light can be operated from the manual 3-position switch or the optional touchpad. The dental light is always off when the manual switch is in the center location. To turn the light on from the touchpad, press and release the dental light button. Press and hold the button to turn the light off.

The dental light features two intensities: high and composite (low). For systems without a touchpad, flip the 3-position switch to either side of center to select the intensity. On the touchpad, press the light button to choose the intensity. When the light is in the composite setting, the LED indicator on the standard touchpad flashes.

Rotation Adjustments



WARNING Always turn off the dental light and allow it to cool completely before maintenance or service.

If the light head is difficult to position, moves too easily, or tends to slip out of position, you can adjust the horizontal, diagonal, and vertical rotation tension.

Horizontal Rotation

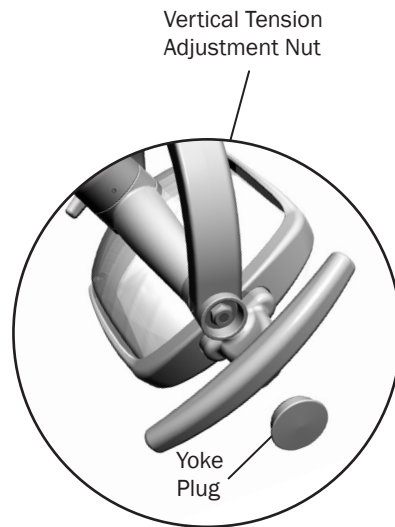
1. Use a hex key to make left/right rotation adjustments, beginning with the top screw on both sides of the switch housing.
2. If the light head moves too easily, or tends to drift out of position, increase the tension by turning the screws right.
3. If the light is difficult to move, loosen the tension by turning the screws left.

Diagonal Axis Rotation

For diagonal axis rotation, adjust the screws at the bottom of the switch housing.

1. If the light head moves too easily, or tends to drift out of position, increase the tension by turning the screw right.
2. If the light head is difficult to move, loosen the tension by turning the screw left.
3. To eliminate all movement in the diagonal axis, tighten the adjustment screw until it is tight.

Rotation Adjustments *(continued)*

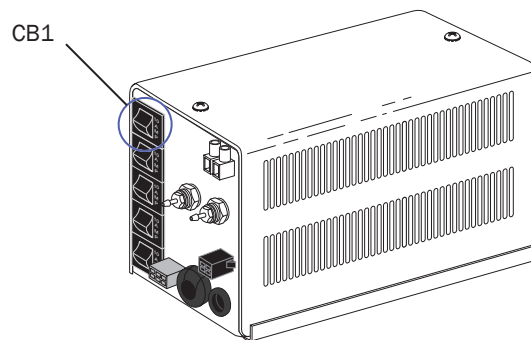


Vertical Adjustment

For vertical rotation tension, follow these steps:

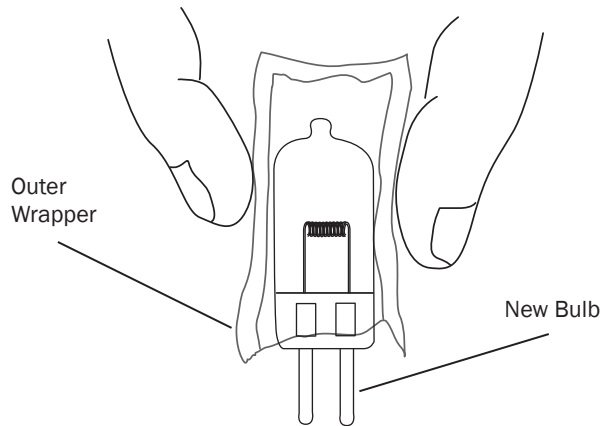
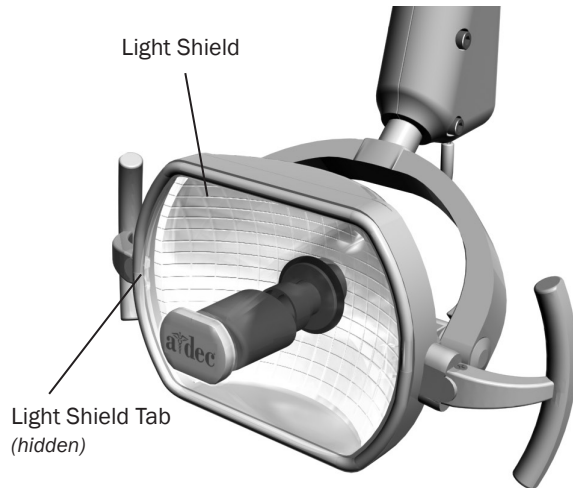
1. Remove the yoke plug on one side of the light.
2. Using a 5/16" nut driver, turn the adjustment nut clockwise to increase tension or counterclockwise to decrease tension.
3. Reinstall the yoke plug.

Circuit Breaker Location



Under abnormal conditions, the circuit breaker interrupts the flow of electricity. If the circuit breaker should trip, reset it by pushing the circuit breaker button on the power supply. The power supply is located in the utilities area under the floor box cover.

Bulb Replacement



Follow these steps when replacing the dental light bulb:



WARNING To avoid burning your fingers, allow the bulb to cool before removing. Never operate the dental light with the light shield removed. The clear shield contains UV blocking additives and is also your protection in the unlikely event that the bulb shatters.



CAUTION Take care when handling the bulb. The bulb base is fragile and can break under excessive pressure. Do not remove the outer wrapper when handling the new bulb. Finger oils can affect light performance and severely limit bulb life. If you should inadvertently touch the bulb, gently clean it with cotton dampened with isopropyl or ethyl alcohol.



CAUTION Do not install the light shield if it has a broken tab. A broken tab can cause the light shield to fall off and lead to product damage or injury.

1. Turn the light off and allow it to cool.
2. Hold the light shield and gently squeeze one side while pulling the shield away from the dental light. Set the light shield aside.
3. Using a gauze pad or cloth to protect your fingers, carefully pull the old bulb from its socket. Discard the bulb.
4. Holding the new bulb in its outer wrapper, carefully insert the bulb pins into the socket. A small section of each pin is still visible when the bulb is fully seated.
5. Remove and discard the outer wrapper. Then reinstall the light shield.
6. Verify the operation of the light by turning it on and operating it at each intensity setting.

Dental Light Shield Maintenance



CAUTION Use only soap and water to clean the shield. Do not allow alcohol-based solutions or other chemical disinfectants to come into contact with the dental light shield. These solutions and chemicals will shorten its life.



WARNING To avoid burning your fingers, allow the dental light to cool before removing the light shield. Never operate the light with the shield removed. The clear shield contains UV blocking additives and is also your protection in the unlikely event that the bulb shatters.

For optimal performance and maximum life of your dental light shield, use only soap and water to clean the shield. Do not use alcohol-based solutions. Follow these steps to remove and clean the shield:

1. Turn off the light and allow it to cool completely.
2. Hold the light shield and gently squeeze one side while pulling the shield away from the dental light.
3. Use a small amount of mild, non-abrasive liquid soap and warm water to clean the shield.
4. Rinse and dry with a non-abrasive, lint-free cloth.
5. Ensure that the shield is completely dry before reinstalling it and turning on the dental light.

If the shield becomes scratched or damaged, replacements are available from your authorized A-dec dealer.

Contact your authorized A-dec dealer for available dental light maintenance parts.

Common Dental Light Replacement Parts

Description	Part Number
Bulb	041.709.00
Light Shield	97.0411.00

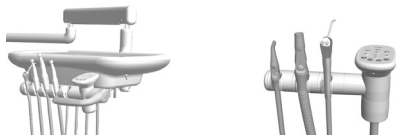


Specifications



Maximum Chair Capacity

Patient Load: 181 kg (400 lb)



Minimum Air, Water, and Vacuum Service Requirements

Air: 2.5 scfm (71 sL/min) at 80 - 125 psi (550 - 860 kPa) minimum

Water: 1.5 gpm (5.7 L/min) at 60±20 psi (410±140 kPa) minimum

Vacuum:

(wet): 9 scfm (255 sL/min) at 10±2 inches of Hg (34±7 kPa) minimum

(dry): 12 scfm (340 sL/min) at 4.5±1 inches of Hg (16±3.5 kPa) minimum

Dürr and A-dec HVE and Saliva Ejector Opening for Tips

Standard HVE: 11 mm (0.433") (HVEs may also be altered to accommodate 15 mm tips)

Saliva Ejector: 6 mm (0.236") diameter opening (standard SE tips)



Dental Light Operating Specifications

Focal Range: 305 mm - 686 mm (12" - 27")

Bulb: Quartz Halogen Xenon, single-end

Lamp Rating: 17V/ 95W

Color Temperature: 4800 Kelvin (*nominal; at high intensity*)

Light Pattern: 230 mm x 110 mm at 700 mm (9" x 4.3" at 27.6")

Nominal Light Intensity

Composite: 5,500 lux (511 fc)

High: 20,000 lux (1394 fc)

Heat Output: 325 BTU/hour



IMPORTANT For chair accessory load capacity, electrical specifications, identification of symbols, and other regulatory requirements, see the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00), which is available in the Document Library at www.a-dec.com.



NOTE Specifications are subject to change without notice. Requirements may vary depending on your location. For more information, contact your authorized A-dec dealer.

Warranty



Warranty information is provided in the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00), which is available in the Document Library at www.a-dec.com.



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