

Instructions for Use

Cascade[®] 2671 Duo Cart

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Regulatory Information

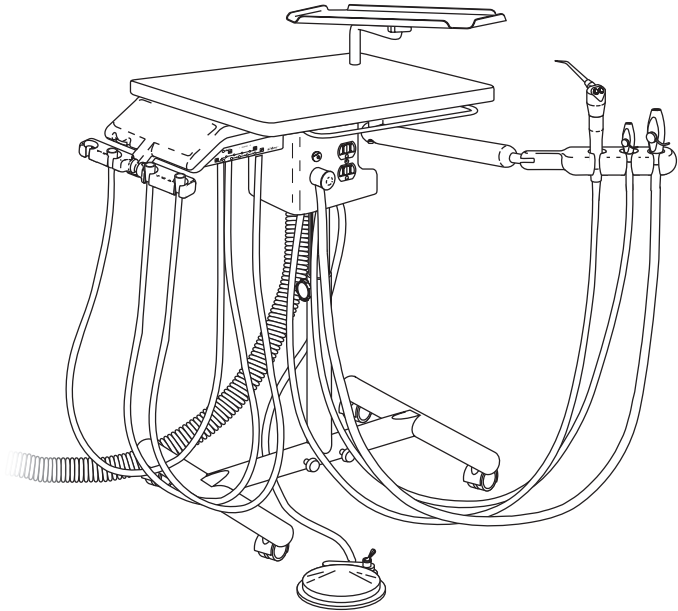
Regulatory information mandated by agency requirements is provided in the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00), which is available in the Document Library at www.a-dec.com.

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.

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Cascade 2671 Duo Cart
(with Optional Tray Holder)

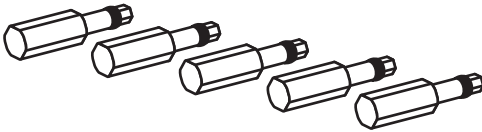
Your Cascade 2671 Duo Cart

Your duo unit includes the Cascade handpiece delivery system and assistant's instrumentation. The handpiece delivery system is built around A-dec's proven Century Plus® control block for three handpieces.

Handpiece activation is automatic. When you lift a handpiece from its holder, the handpiece becomes active and will run when you press on the foot control disc or move the lever on the lever foot control. See page 4. Return the handpiece to its resting position to deactivate it.

Adjustment keys are provided for your use when making adjustments to the recessed controls, including coolant air, coolant water, and handpiece flush. If the adjustment keys are ever misplaced, you can use a 1/8" hex key. You may order additional or replacement keys from your authorized A-dec dealer.

Figure 1. Autoclavable Adjustment Keys

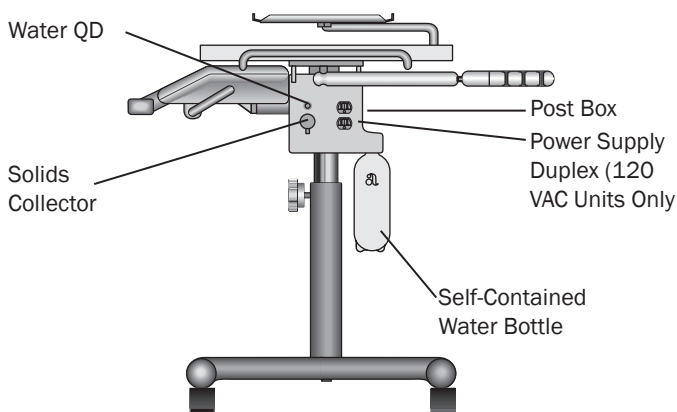


The assistant's instrumentation includes A-dec's autoclavable syringe, saliva ejector, and HVE (a second HVE is optional).

The unit post box (see Figure 2) includes the self-contained water bottle, solids collector, water quick-disconnect (QD), and duplex power outlet (120 VAC units only).

An optional tray holder is easily converted for right- or left- hand use. See page 16.

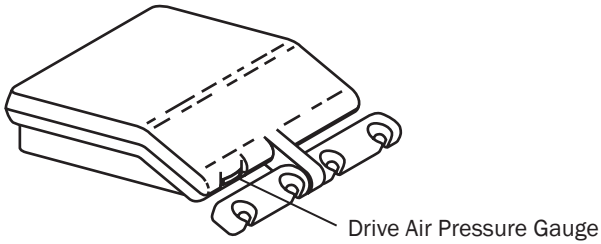
Figure 2. Cart Post Box



Drive Air Pressure Gauge

The drive air pressure gauge indicates, in psi and kg/cm², the drive air pressure to the active handpiece.

Figure 3. Drive Air Pressure Gauge

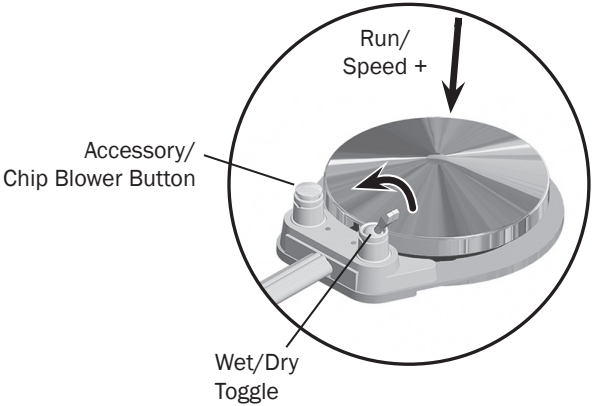


Foot Control

The foot control modulates drive air to the active handpiece and provides an air signal that activates the coolant air and coolant water flow.

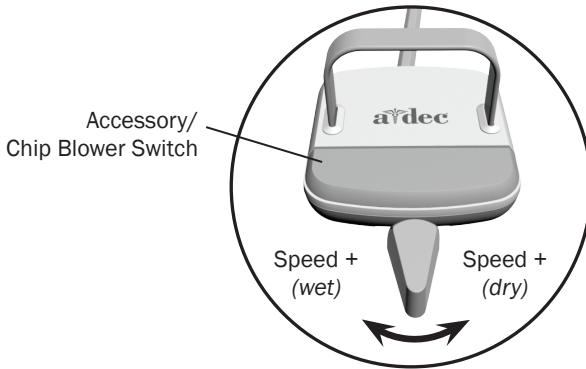
To activate a handpiece, lift it from the holder. Use the foot control to perform the desired handpiece operation.

Figure 4. Disc Foot Control



Operation	Procedure
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.*

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

Figure 5. Lever Foot Control

Operation	Procedure
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.*

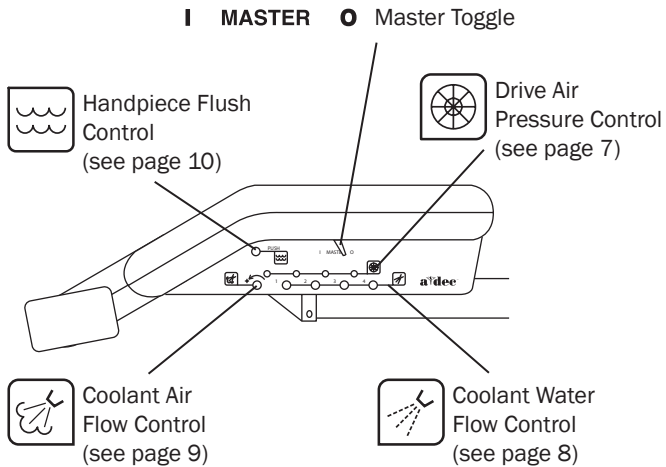
** Contact your authorized A-dec dealer for questions about the operation or configuration of your integrated A-dec accessories.*



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.

Handpiece Controls

Figure 6. Handpiece Controls



Master Toggle

I MASTER O

The master toggle turns air, water, and electricity on or off to the system. See Figure 6.



CAUTION The master toggle should be in the off (0) position whenever the unit is not in use.

This will prevent the possibility of water damage should a leak occur while the unit is unattended.

Making sure the unit is off will also prevent the possibility of self-activation and the resulting burn-out of your electrical accessories.

Drive Air Pressure Controls



The drive air pressure controls are used to adjust the drive air pressure to each handpiece. See Figure 6 on page 6.

You will need a 3/32" hex key to complete this adjustment.

1. Install a bur in the handpiece.
2. Locate the drive air gauge on the front of the control head. See Figure 3 on page 3.
3. Turn the drive air control clockwise until the valve seats.
4. Lift the handpiece from the holder and do one of the following:
 - On a disc foot control: flip the wet/ dry toggle to dry, and press the disc all the way down.
 - On a lever foot control: move the lever all the way to the right.
5. While running the handpiece, watch the drive air gauge and adjust the handpiece dynamic drive air pressure to meet the manufacturer's specifications. Counterclockwise increases the pressure.



CAUTION See your handpiece documentation for the drive air pressure specification. Exceeding manufacturer's recommendations increases the risk of damage and may significantly decrease the life of your handpiece components.



NOTE Do not turn the control counterclockwise beyond the point where the drive air pressure no longer increases. The control adjustment screw may come completely out of the unit.

Coolant Water Flow Controls

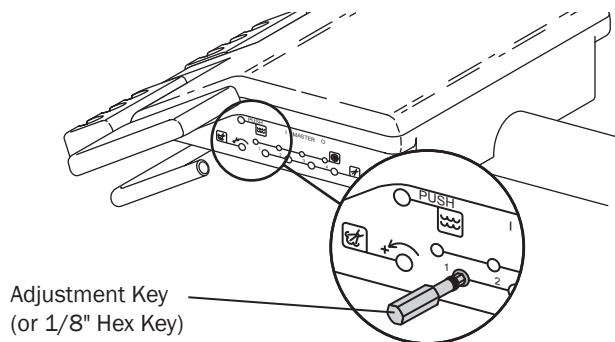


The coolant water flow controls are used to adjust the flow of coolant water to each handpiece.

You will need an adjustment key or a 1/8" hex key to complete this adjustment. See Figure 1 on page 1.

1. Install a bur in the handpiece.
2. Locate the coolant water flow controls.

Figure 7. Coolant Water Flow Control



3. Insert an adjustment key, or a 1/8" hex key, into the coolant water flow control for the handpiece being adjusted.
4. Hold the handpiece over a receptacle. Be sure to hold the handpiece so that the water will be directed away from you and into the receptacle.
5. Do one of the following:
 - On a disc foot control: flip the wet/dry toggle to water, and press the disc all the way down.
 - On a lever foot control: move the lever all the way to the left.
6. Adjust the coolant water flow to fit your needs. Clockwise decreases the flow.
7. Adjust the coolant water for each handpiece.

Coolant Air Flow Control

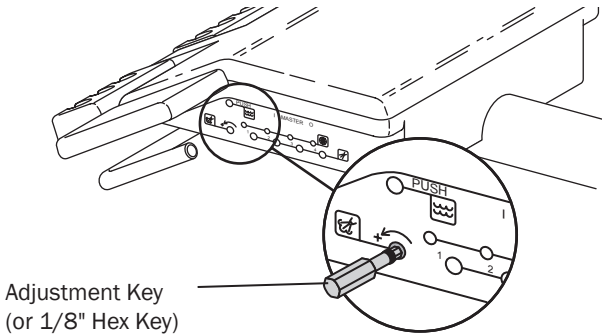


The coolant air flow control is used to adjust the coolant air flow to all handpieces.

You will need an adjustment key or a 1/8" hex key to complete this adjustment. See Figure 1 on page 1.

1. Install a bur in the handpiece.
2. Locate the coolant air control.

Figure 8. Coolant Air Flow Control



3. Insert an adjustment key, or a 1/8" hex key, into the coolant air flow control.
4. Lift the handpiece from the holder and do one of the following:
 - On a disc foot control: flip the wet/ dry toggle to dry, and press the disc all the way down.
 - On a lever foot control: move the lever all the way to the right.
5. Adjust the coolant air flow to fit your needs. A strong flow of air is recommended. Counterclockwise increases the flow.

The coolant air has been set for all handpieces.

Handpiece Tubing Flush

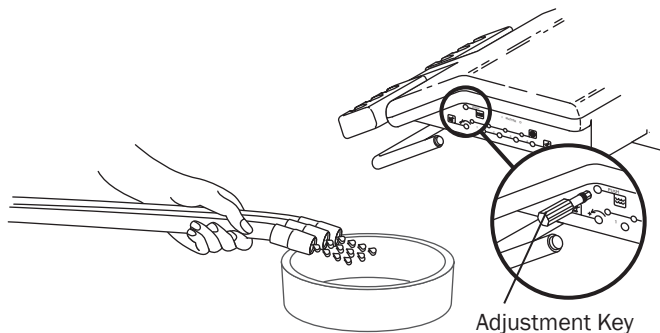


Use the flush control to move a high volume of water through the handpiece tubing.

Flushing the Handpiece Tubing

1. Disconnect the handpieces.
2. Hold all of the handpiece tubing that uses water coolant over a sink, cuspidor bowl, or basin.

Figure 9. Handpiece Tubing Flush



3. Insert an adjustment key or 1/8" hex key into the handpiece tubing flush control on the side of the control head. Push in and hold the key for 20-30 seconds.



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

4. Remove the key and replace the tubing in their holders. Be careful to replace each in the proper holder.

Handpiece Holder Adjustments

The holder tension was set at the factory. However, if a holder is difficult to reposition or repositions too easily, the holder tension can be adjusted.

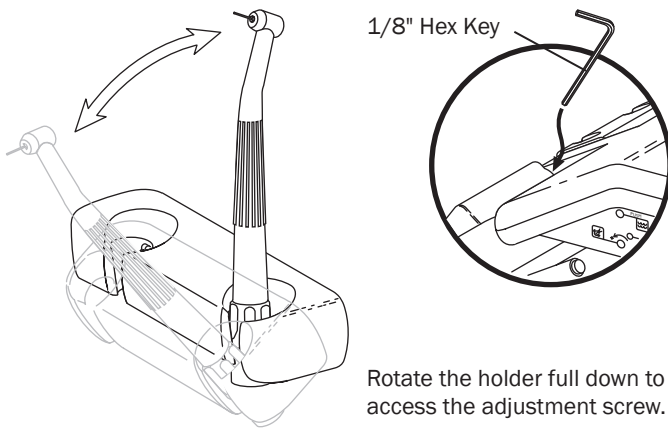
To adjust the holder tension:

- Loosen or tighten the tension adjustment screw.

To reposition a holder:

- Rotate the holder to the desired angle.

Figure 10. Unitized Handpiece Holder



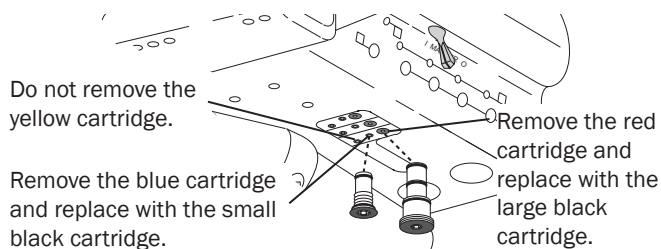
Handpiece Dry Block Conversion

Your handpiece delivery system has three to four handpiece control blocks with coolant water to the handpiece. If a control block does not have coolant water, a dry block is required, and a conversion kit is included with your system.

Install the Dry Block Conversion Kit

1. Move the master toggle to the off position. Bleed the system water by operating the syringe and flushing the handpiece tubing.
2. Locate the handpiece control block position that will be the dry block. Access the control blocks underneath the control head.
3. Use a 3/32" hex key to remove the large red cartridge from the control block. Install the large black cartridge from the dry block conversion kit into the control block.

Figure 11. Handpiece Dry Block Conversion



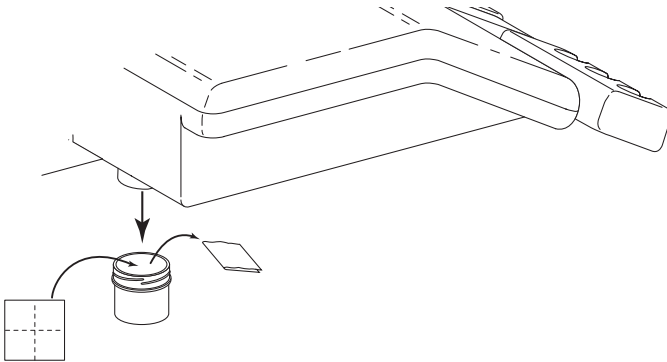
4. Use a 3/32" hex key to remove the small blue cartridge from the same control block. Install the small black cartridge from the dry block conversion kit into the control block.
5. Turn your handpiece control system on, and then check the function of the dry block handpiece conversion. A small amount of residual water may be discharged from the handpiece tubing but should dry after a few seconds.

Oil Collector

The oil collector on your unit needs to be cleaned once a week for normal usage. Clean more often for heavier use.

1. Remove the oil collector jar from the unit and discard the old gauze.

Figure 12. Oil Collector



2. Fold a new two-inch square gauze pad into quarters and place it against the spring inside the jar.
3. Screw the oil collector jar onto the unit. Do not overtighten.

Assistant's Instrumentation

HVE and Saliva Ejector

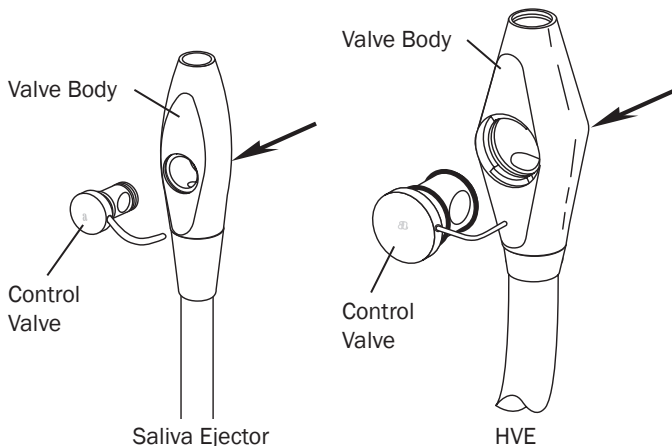
To operate the HVE and saliva ejector, turn the control valve.

The HVE and saliva ejector can be easily converted for right- or left-hand operation. To convert, press the control valve out of the valve body. Rotate the control valve 180°, and then press it back into the valve body.



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.

Figure 13. Right- to Left-Hand Conversion

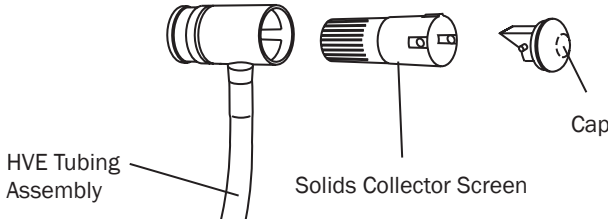


Refer to your *A-dec Assistant's Instrumentation Instructions for Use* (p/n 85.2610.00) for complete instructions on cleaning your HVE and saliva ejector.

Solids Collector

The solids collector prevents solids from entering the central vacuum system.

Figure 14. Solids Collector



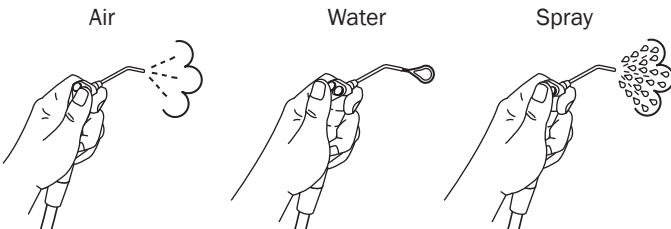
See the *A-dec Assistant's Instrumentation Instructions for Use* (p/n 85.2610.00) for complete solids collector maintenance instructions.

Autoclavable Syringe

To operate the syringe:

- Move the on/off toggle to the on position.
- Air — Press the right button down.
- Water — Press the left button down.
- Spray — Press both buttons down.

Figure 15. Autoclavable Syringe



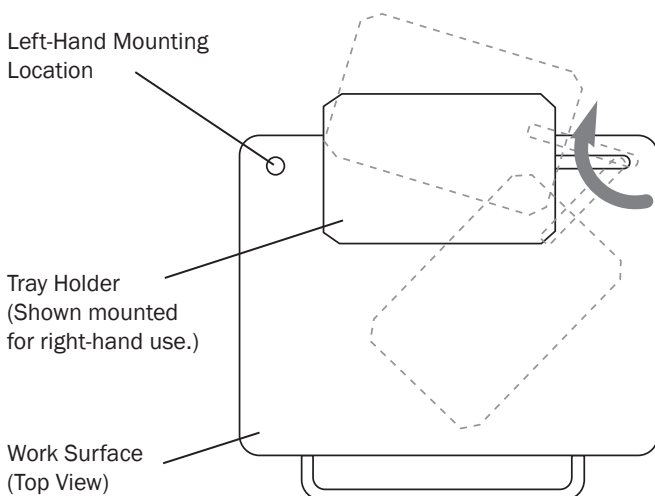
Refer to your *A-dec Syringes Instructions for Use* (p/n 85.0680.00) for complete syringe operation and maintenance instructions.

Tray Holder (Optional)

Left/Right Conversion

The optional tray holder can be mounted on either side of the unit's work surface.

Figure 16. Tray Holder Left/Right Conversion



1. Remove the plug from the work surface corner opposite the current tray holder location.
2. Remove the tray holder from the unit's work surface and set aside.
3. Remove the brass tray holder bushing from the work surface by removing the 9/16" hex nut (located on the underside of the unit's work surface) that secures the bushing to the work surface.
4. Lift the brass bushing from its seat and move it to the opposite side of the unit work surface.
5. Install the 9/16" hex nut to the new position and tighten the hex nut.
6. Install the tray holder into the brass bushing.
7. Place the plug into the open tray holder hole.

System Air and Water Pressure

For system air and water pressure adjustments, see the *A-dec Floor Boxes Instructions for Use* (p/n 85.2611.00).

Care Instructions

For recommended asepsis instructions, see the *A-dec Equipment Asepsis Guide* (p/n 85.0696.00).

For recommended self-contained water system care, see the *A-dec Self-Contained Water System Instructions for Use* (p/n 86.0609.00).

Cart Adjustments

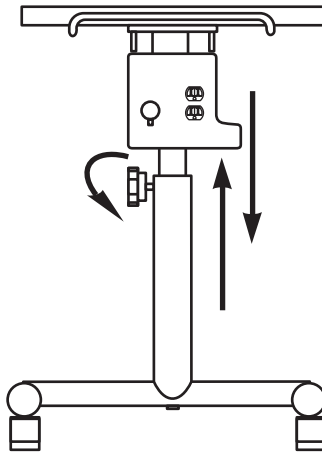
Cart Height



WARNING The cart is very heavy. The cart height adjustment requires two people to safely complete it. Firmly tighten the knob after adjusting the cart height. Serious bodily injury may result if the knob is not secure.

Lift or lower the cart top until the work surface is at the desired height, and then firmly tighten the knob. If the top lowers, the knob was not tightened firmly enough.

Figure 17. Cart Height Adjustment



Shown without control head or assistant's arm for clarity.

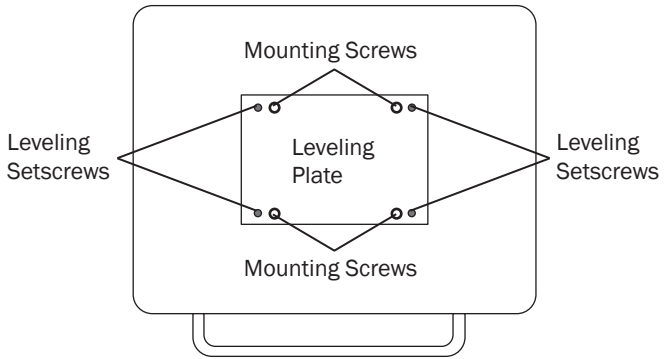
Work Surface Leveling

Leveling Your Assistant's Unit Work Surface

1. Place a leveling device on the work surface.
2. Check for level front-to-back and side-to-side.
3. Using a 3/16" hex key, loosen but do not remove the four mounting screws found on the bottom of the leveling plate. See Figure 18 on page 20.
4. Locate the four leveling setscrews. See Figure 18 on page 20.
5. Face the work surface handle.
6. To level front to back:
 - If the work surface tilts toward you, use a 3/16" hex key and tighten the two leveling setscrews closest to you until the work surface is level.
 - If the work surface tilts away from you, tighten the two leveling setscrews furthest away until the work surface is level.
7. To level side to side:
 - If the work surface tilts to the left, tighten the two leveling setscrews on the left side of the leveling plate until the work surface is level.
 - If the work surface tilts to the right, tighten the two leveling setscrews on the right side of the leveling plate until the work surface is level.

8. When you have completed these steps, tighten the four mounting screws, and then check the work surface again for level.

Figure 18. Leveling the Work Surface



Clean/Maintain

Barrier Protection

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.



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



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).

Refer to the following A-dec documentation for more maintenance information:

Assistant's Instrumentation

<i>A-dec Assistant's Instrumentation</i>	
<i>Instructions for Use</i>	85.2610.00
<i>A-dec Syringes Instructions for Use</i>	85.0680.00

Care Instructions

<i>A-dec Equipment Asepsis Guide</i>	85.0696.00
<i>A-dec Self-Contained Water System</i>	
<i>Instructions for Use</i>	86.0609.00

Power Supplies

<i>A-dec Floor Boxes Instructions for Use</i>	85.2611.00
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Specifications



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

Service Requirements for Unit Operation

Minimum Air:

2.50 cfm (70.80 L/min) at 80 psi (551 kPa)

Minimum Water:

1.50 gpm (5.68 L/min) at 40 psi (276 kPa)

Minimum Vacuum:

12 cfm (339.84 L/min) at 8 inHg (27 kPa)

Cart Specifications

25 lb (11.34 kg) vertical load is the maximum safe load capability of the work surface.

5 lb (2.27 kg) vertical load is the maximum safe load capability of the optional tray holder.

Weights of optional cart attachments

Touch Pad: .5 lb (.23 kg)

Tooth Dryer: 1 lb (.45 kg)

Intra-Oral Light Sources: 1 lb (.45 kg)

Scaler: 2 lb (.91 kg)

Curing Light: 3 lb (1.36 kg)

Duplex Receptacle Ratings

120 VAC, 20A maximum, branch circuit breaker limited.



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.

Refer to the following A-dec documentation for more adjustment and specification information:

System Air and Water Pressure Adjustments

A-dec Floor Boxes Instructions for Use.....85.2611.00

Touch Pad Programming

Cascade 1040 Chair Instructions for Use.....85.2605.00

Decade 1011 and 1021 Dental Chair

Instructions for Use.....85.2635.00

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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