

## **Cavitron™ PROPHY-JET®** **Air Polishing** **Prophylaxis System**

### **Directions For Use**

Please read carefully and completely before operating unit.

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## **Introduction**

### **Cavitron™ PROPHY-JET®** **Air Polishing Prophylaxis System**

DENTSPLY® Professional is an ISO9001 and EN46000 certified company. The Cavitron™ PROPHY-JET® Air Polishing Prophylaxis System is classified by Underwriters Laboratories Inc. with respect to electric shock, fire, mechanical hazards only in accordance with UL 2601-1 assigned control #13VA.

The Cavitron™ PROPHY-JET® Air Polishing system is a precision engineered and manufactured instrument. It contains controls and components for air polishing operation.

### **Technical Support**

There are no user serviceable parts in this device except for filter maintenance. Refer to Section 9.0 System Care for maintenance instructions. Refer all other service to a qualified service repair facility. For technical support and repair assistance in the U.S. call 1-800-989-8826 Monday through Friday, 8:00 AM to 5:00 PM (Eastern Time). For other areas, contact your local DENTSPLY representative.

### **Supplies & Replacement Parts**

To order supplies or replacement parts for your PROPHY-JET System, contact your local DENTSPLY® Dealer. If your dealer is unable to assist you, call 1-800-989-8826 Monday through Friday, 8:00 AM to 5:00 PM (Eastern Time). For other areas, contact your local DENTSPLY® representative.

**Caution:** U.S. Federal Law restricts this device to sale by or on the order of a dentist.

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# Section 1: Indications

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## 1.1 Air Polishing Procedures:

- Removal of a variety of extrinsic stains, e.g., tobacco, coffee & tea, chlorhexidine.
- Prophylaxis of orthodontic patients.
- Preparing tooth surfaces prior to bonding and sealant procedures.

# Section 2: Contraindications and Warnings

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## 2.1 Contraindications

- For best performance, use only the Cavitron™ JET air polishing insert manufactured by DENTSPLY® Professional.
- Use only Cavitron® Brand Proply Powder.
  - Cavitron® PROPHY-JET® Proply Powder is a water-soluble sodium bicarbonate powder. Therefore, this powder is not recommended for patients on a sodium-restricted diet.

- Cavitron® JET-Fresh™ Proply Powder is a sodium free powder and can be used on patients who are on a sodium-restricted diet.

## 2.2 Warnings

- Do not direct the air polishing stream at soft tissue or into the sulcus. Tissue emphysema has been reportedly caused when the air/water/powder stream was directed at the soft tissues or into the sulcus.

# Section 3: Precautions

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## 3.1 Precautions for All Systems

- Do not place the System on or next to a radiator or other heat source. Excessive heat may damage the System's electronics. Place the System where air is free to circulate on all sides and beneath it.
- The System is portable, but must be handled with care when moving. See Section 4.3 Water Supply Recommendations.
- Equipment flushing and dental water supply system maintenance are strongly recommended.
- Close the water shut-off valve to the System every night before leaving the office. The use of an in-line water filter is recommended.
- The use of an air dryer on the compressor line supplying the System will prevent condensation from forming in the air line which in turn may cause "caking" of the air polishing powder and clogging in the lines and at the air polishing insert nozzle.
- Cavitron® PROPHY-JET® Proply Powder is a water-soluble sodium bicarbonate powder specially formulated for use in Cavitron® Air Polishing Systems. Cavitron® JET-Fresh™ Proply Powder is a uniquely formulated sodium-free powder that minimizes equipment maintenance. Do not attempt to use any other cleaning materials in the air polishing powder chamber.
- Empty the air polishing powder chamber at the end of the day to prevent "caking" of the powder and clogging the lines and air polishing tip.

## 3.2 Precautions for Air Polishing Procedures

- Only set the air polishing powder flow control to the maximum position (fully Clockwise) when it is necessary to remove particularly difficult stains. Return the powder flow control to the medium position upon the completion of the procedure.
- Avoid prolonged or excessive use on restorative dental materials.
- Avoid prolonged use on cementum or dentin.
- Avoid prolonged use on polished metal surfaces as a matte finish may result.
- Patients who are on a restricted sodium diet, or have severe respiratory illness, should consult their physician before undergoing air polishing prophylaxis procedures.
- Patients wearing contact lenses should remove them prior to air polishing treatment.
- JET Air Polishing insert nozzles that have been bent, damaged or re-shaped are susceptible to in-use breakage and should be discarded and replaced immediately.
- Check O-ring and threads on powder bowl cap to ensure tight seal. If O-ring or threads are worn, replace immediately. Residual Proply powder in threads can result in excessive wear and disengagement of the cap during unit operation.

## Section 4: Infection Control

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### 4.1 Infection Control Information Reference Card

For your convenience, an Infection Control Information reference booklet, has been included with your Cavitron™ PROPHY-JET® Air Polishing Prophylaxis System. If your booklet is missing or misplaced, you can request a replacement in the U.S. by calling Customer Service at 1-800-989-8826 Monday through Friday, 8:00 AM to 5:00 PM (Eastern Time) For other areas, contact your local DENTSPLY representative.

### 4.2 General Infection Control Recommendations

- As with all dental procedures, use standard personal protection equipment (i.e., wear face mask, eyewear or face shield, gloves and protective gown).
- As with high speed handpieces, and other dental devices, the combination of water, air and powder from your Cavitron™ PROPHY-JET® Air Polishing Prophylaxis

System will create aerosols. With proper technique, much of the Cavitron™ PROPHY-JET® System's aerosol dispersion can be effectively controlled and minimized. Please carefully follow the procedural guide lines in this manual regarding the use of your System.

- For maximal operator and patient safety, carefully follow the Infection Control Information procedures detailed on the reference card accompanying your System.

### 4.3 Water Supply Recommendations

It is highly recommended that all dental water supply systems conform to applicable CDC (U.S. Centers for Disease Control and Prevention) and ADA (American Dental Association) standards, and that all recommendations be followed in terms of flushing, chemical flushing, and general infection control procedures. See Sections 5.2 and 9.

## Section 5: Installation Instructions

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### 5.1 General Information

If the installation of your Cavitron™ PROPHY-JET® Air Polishing Prophylaxis System is performed by someone other than trained DENTSPLY® Dealer personnel, care should be taken to observe the following requirements and recommendations.

### 5.2 Water Line Requirements

- A water supply line with user-replaceable filter is factory installed on your Propy JET Prophylaxis system. Do not disconnect the water supply line. See 9.0 System Care for filter replacement instructions.
- Incoming water supply line pressure to the System must be 25 psi (172 kPa) to 60 psi (414 kPa). If your dental water system's supply line pressure is above 60 psi (414 kPa), install a water pressure regulator on the supply line to your Cavitron™ PROPHY-JET® Air Polishing Prophylaxis System.
- A manual shut-off valve on the dental water system supply line should be used so that the water can be completely shut-off when the office is unoccupied.
- In addition to the water filter supplied with your System, it is recommended that a filter in the dental water system supply line be installed so that any particles in the water supply will be trapped before reaching the System.
- After the above installations are completed on the dental water supply system, the dental office water line should be thoroughly flushed prior to connection to the System.

### 5.3 Air Line Requirements & Recommendations

- An air supply line with a user-replaceable filter assembly is factory installed on your PROPHY-JET Prophylaxis system. Do not disconnect the air supply line. A filter-mounting bracket is included for hanging the air filter. The clear bowl should hang downward allowing for moisture separation and drainage of water from the air filter. See 9.0 System Care for replacement instructions.
- Incoming air supply line pressure to the System must be 65 psig (448 kPa) to 100 psig (690 kPa). If your office air line pressure is above 100 psig (690 kPa), install an air pressure regulator on the supply line to your Cavitron™ PROPHY-JET® Air Polishing Prophylaxis System.
- A manual shut-off valve on the office air supply line should be used so that the air line can be completely shut-off, and the line pressure relieved when the office is unoccupied.
- Your System must be supplied with clean, dry air to help prevent water condensation from forming in the air supply line which may cause the system to malfunction. In addition to the air filter supplied with your system, it is strongly recommended that an air dryer be used on the compressor line supplying the System.

### 5.4 Electrical Requirements

Refer to Section 11: Specifications.

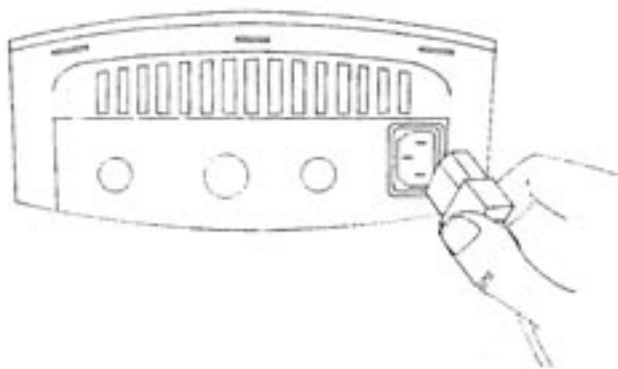
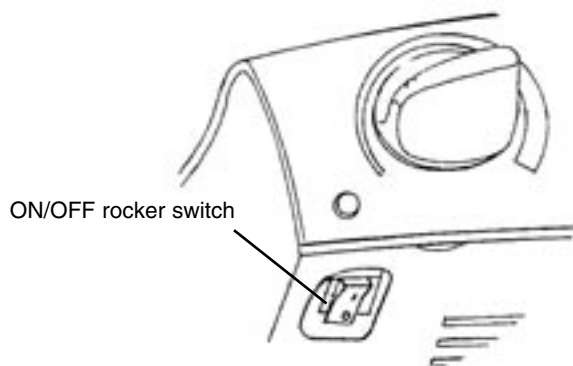
## 5.5 Unpacking the System

Carefully unpack your Cavitron™ PROPHY-JET® Air Polishing Prophylaxis System and verify that all components and accessories are included:

1. Cavitron™ PROPHY-JET® Air Polishing Prophylaxis System with water supply line with filter, air supply line with filter, handpiece and cable connector assembly factory installed.
2. Air Filter Assembly
3. Detachable AC Power Cord set.
4. Cavitron® JET Air Polishing Insert with cleaning tool.
5. Dual position Foot Control Assembly.
6. JetShield™ Aerosol Reduction Device.
7. Literature Packet.
8. PROPHY-JET Prophyl Powder
9. JET-Fresh Propyl Powder

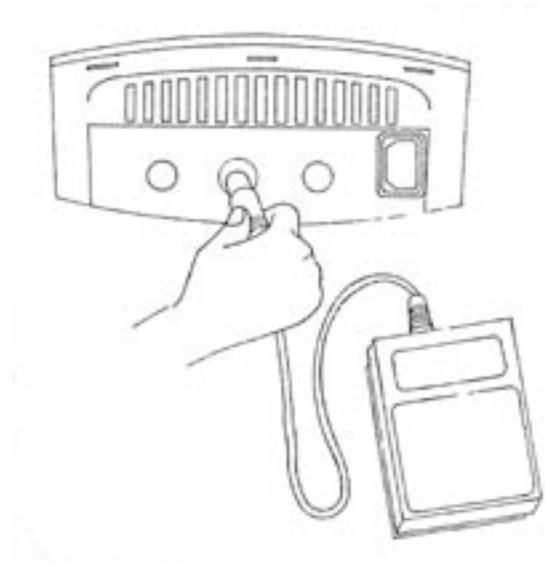
## 5.6 Power Cord/Power Connection

- Verify the Power Control ON/OFF rocker switch located at the left front underside of the System is set to the OFF position before proceeding.
- Plug the detachable AC cord into the back of the System.
- Plug the 3 prong grounded plug into an approved outlet.



## 5.7 Foot Control Cable Assembly Connection

Align the Foot Control plug with the receptacle on the back of the System and push it in until firmly seated.



## 5.8 Incoming Water Supply Line Connection

- Connect the free end of the system's water supply line to office water supply line or a Cavitron® DualSelect™ Dispensing System.
- Inspect all connections to make certain there are no leaks.

## 5.9 Air Supply Line Connection

- Connect the free end of the system's air supply line to office air supply line or a Cavitron™ DualSelect™ dispensing System.
- Inspect all connections to make certain there are no leaks.

# Section 6: Cavitron™ PROPHY-JET® Air Polishing

## Prophylaxis System Description

### 6.1 System Controls

#### Top Grooves

Provide a convenient, temporary placement for the handpiece during treatment procedures. Always place handpiece in holder when not being used.

#### Powder Adjustment

Turn knob to select powder level for operation: clockwise increases powder level, counter clockwise decreases powder level.

#### AC Power Indicator Light

Lighted when System is switched ON.

#### Power Control

ON/OFF switch located at the left front underside of the System.

#### Lavage Flow Adjustment

Turn knob to select Lavage Flow level during System operation. Clockwise increases flow at insert tip, counter clockwise decreases flow.

### 6.2 Handpiece

The handpiece accepts the JET air polishing insert nozzle.

#### Powder Chamber Cap

Removable cap for filling and emptying the powder chamber.

#### Handpiece Holder

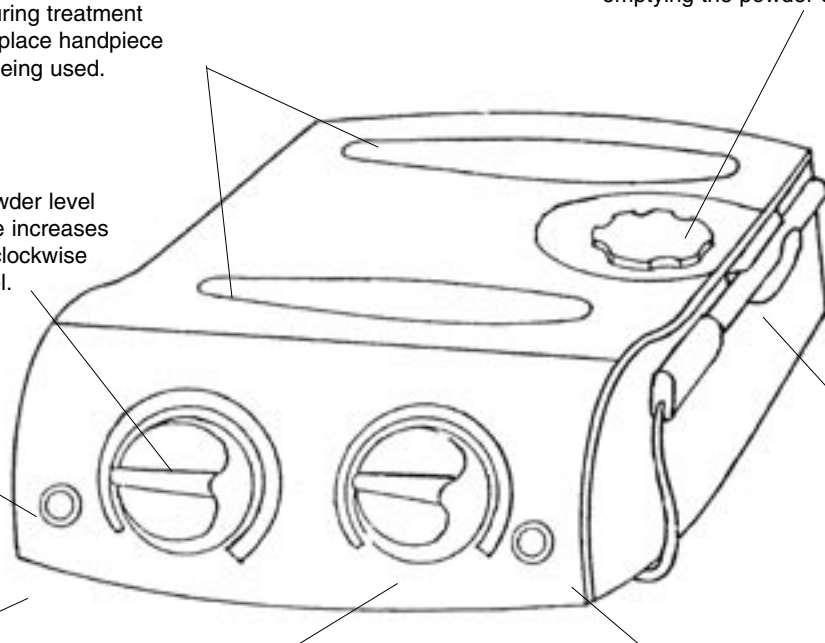
Securely holds the System's Handpiece when system is not being used.

#### Handpiece

Holds the Cavitron® JET Air Polishing insert

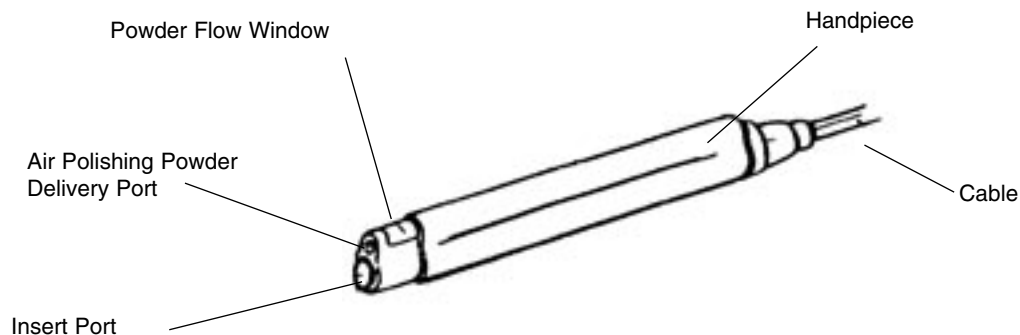
#### Air Polishing

The two-position Foot Control provides the capability to rinse in the first position and air polish in the second position. When lighted, indicates foot control is fully depressed and system is in the air polishing mode.



### 6.3 Cavitron® JET Air Polishing Insert

#### 7.1 Accessories List\*



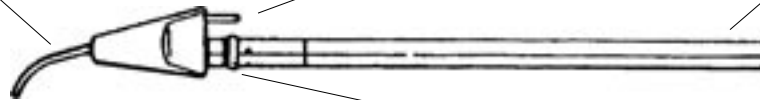
1. AC Power Cord Set
2. Cavitron® JET Air Polishing Insert #63740

#### Air Polishing Insert

**Nozzle:** Tube-in-a-tube design delivers precise air/water/powder mixture at point of delivery.

**Prophy Powder Delivery Tube:**  
Directs air/powder flow to insert tip.

Insert Rod



#### O-Ring:

Seals water when Insert Nozzle is fully seated in Handpiece. O-ring should be replaced when worn.







Lubricate the rubber O-ring on the insert with water before placing it into the handpiece. Place the insert rod into the insert port of the handpiece. Align the powder delivery tube with the powder delivery port and gently push into handpiece until fully seated.

## 6.4 Foot Control Information & Operation ↗

The Foot Control is a two-position momentary switch, which activates both lavage and powder flow and air polishing at the insert tip.

vates both lavage and powder flow and air polishing at the

## 6.5 Operation for Air Polishing Procedures

|   |   |   |
|---|---|---|
| <p>Foot control released.</p>               | <p>Foot control depressed half way.</p>               | <p>Foot control depressed all the way.</p>    |
| <p>Bleed air exits insert nozzle tip.</p>  | <p>Lavage flow (rinsing function) is activated.</p>  | <p>Air Polishing Function is activated.</p>  |

## Section 7: Accessories

3. Dual position Foot Switch Assembly #565138003
4. DualSelect™ Medicament Dispensing System #80528
5. JetShield™ Aerosol Reduction Device #80578
6. Lavage (Water) Filter Replacement, Package of 10 #90158
7. O-Ring to Powder Cap #628052001
8. Air Supplyline Air Filter, #90088
9. Powder Chamber “Duckbill” Filter #60367

\*For detailed information, contact your local DENTSPLY® Representative.

### 8.1 Patient Positioning

- For optimal access to both the upper and lower arches, the backrest of the chair should be adjusted as for other dental procedures. This assures patient comfort and clinician visibility.
- Have the patient turn their head to the right or left. Also position their chin up or down depending upon the quadrant and surface being treated. Evacuate irrigant using either a saliva ejector or HVE.

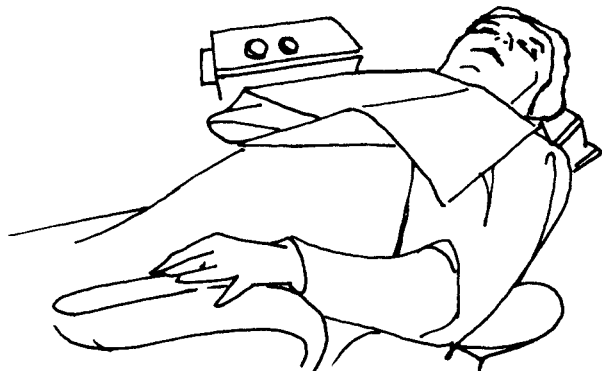
### 8.2 Air Polishing Powder Chamber

**NOTE:** Refer to the Infection Control Information Booklet supplied with your unit for general procedures to be followed at the

## Section 8: Techniques for Use

beginning of each day and between patients.

- Use only Cavitron® prophylaxis powders in your Cavitron™ PROPHY-JET® System. Any other substances or additives may clog the Unit and will void the warranty. For your convenience, the prophylaxis powder is supplied in resealable bottles. Keep bottles sealed and stored in a dry location that does not exceed 95° F (35° C).
- A special container is provided with your System for use in filling and emptying the powder chamber.
- It is strongly recommended that the powder chamber be emptied at the end of each day. This will reduce moisture



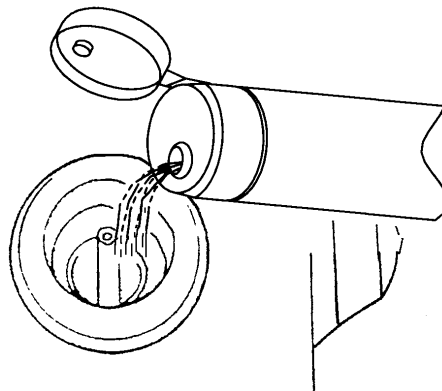
absorption and minimize clogging.

**To fill, or refill, the powder chamber:**

- Turn the Unit OFF.
- Unscrew the powder chamber cap.
- Shake the powder bottle or special container vigorously to break up any lumps that may have formed from settling. Carefully pour powder into the chamber until the level reaches the top of the center tube.
- Replace the powder chamber cap and tighten.

- Turn the Unit ON.

**NOTE:** Use only Cavitron® Prophylaxis Powders in the unit. Cavitron® Prophylaxis Powders should be kept dry and stored in a location that does not exceed 95° F (35° C).



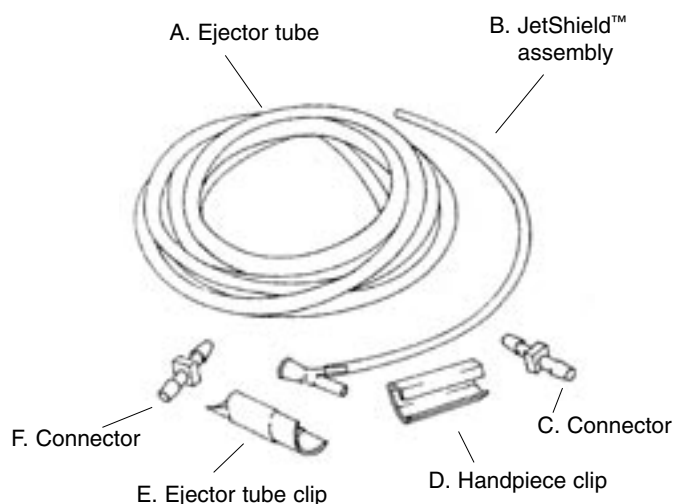
### To adjust the flow of powder:

- Adjust the powder flow rate by rotating the powder control knob on the front panel.
- For heavy stain removal, rotate fully clockwise.
- For light stain removal, rotate fully counter clockwise.
- The control can be set at any position as necessary.
- The view window at the center of the pointer lets you observe the powder flow (a white fluffing of powder) during operation. If no flow is seen, check for clogging or add cleaning powder.

## 8.3 Air Polishing using the JetShield™ Accessory

**Aerosol reduction device for use with air polishing systems.** JetShield™ assembly and accessories—see Fig. 1. The disposable JetShield™ assembly is designed for single use; all other components are reusable and are compatible with standard clinic equipment.

**Figure 1**



### Precautions:

The JetShield™ itself is designed for single use only. Use of chemical or heat sterilization will lead to poor performance and malfunction of product.

The reusable components are wipe-disinfectable, using clean cloths and appropriate non-immersion type disinfectant. Wipe once with disinfectant to remove gross debris, then use fresh cloth and more disinfectant to clean surface. Dry with clean paper towel or air.

### Step-by-Step Instructions:

1. Remove entire assembly from package.
2. Insert air polishing nozzle through JetShield™ cup and seat shoulder flush on nozzle. See Figure 2.
3. Insert connector on JetShield™ assembly into the flexible ejector tube.
4. Insert connector of ejector tube into operator saliva ejector.

**Figure 2**



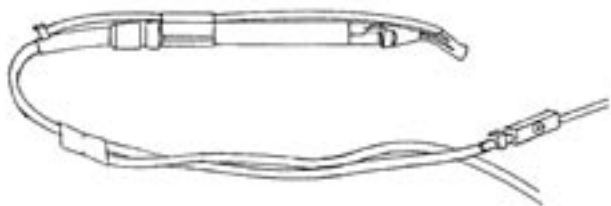
1. Insert air polishing nozzle

2. Seat shoulder flush on nozzle  
3. Incorrect positioning

5. Place ejector tube clip around ejector tube and handpiece cable such that cables drape together for patient and clinician comfort.
6. (Optional) Place handpiece clip along handpiece, close to handpiece/cable connection, such that clip is holding the JetShield™ evacuation tube in place along handpiece.
7. Verify that slurry exits from the JetShield™ when air polishing unit is activated. Adjust saliva ejector as necessary.
8. Proceed with routine air polishing, applying cup to tooth so cup flares slightly. Pivot nozzle inside cup, adapting to mesial and distal surfaces. Apply 2 seconds of spray for each segment of tooth, releasing foot control each time. If spray escapes, readjust cup to maintain flat contact with tooth surface, adjusting angle by pivoting nozzle inside of handpiece.

After completion of each procedure, remove JetShield™ assembly and dispose of JetShield™ according to applicable regulations. Wipe-disinfect all other components before next use.

**Figure 3**



## 8.4 Performing JET Air Polishing Procedures with JetShield™

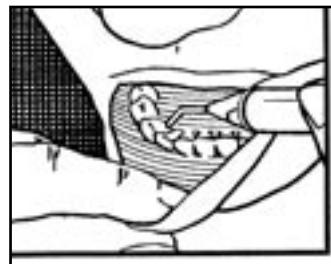
**NOTE:** Refer to the Infection Control Booklet supplied with your System for general procedures to be followed at the beginning of each day and between patients.

- Install JetShield™ on the Cavitron Air Polishing Insert nozzle as indicated on instructions provided.
- Select the appropriate amount of powder using the front panel control on the Cavitron™ PROPHY-JET® air polishing system.
- Verify that slurry exits from the cup when held outside the mouth; adjust saliva ejector as necessary.
- Divide the tooth visually into segments to polish (incisal, middle, and gingival).
- Apply cup to middle third with light pressure so cup flares slightly.
- Pivot nozzle inside the cup to adapt to incisal, gingival, mesial and distal surfaces.
- Apply two seconds of spray for each segment of the tooth, releasing the Foot Control each time. If spray escapes, readjust cup to maintain flat contact with tooth surface. Adjust angle by pivoting nozzle inside the JetShield™ cup.
- The suction from the JetShield™ can be used to remove excess saliva from the patient's mouth.
- After completing each procedure, dispose of clear JetShield™ assembly according to Federal, State, and local regulations. Properly disinfect all other JetShield™ accessories prior to reusing them on future patients.

## 8.5 Performing Air Polishing procedures without JetShield™

- The recommended normal procedure is to clean 2-3 teeth with the air polishing spray (foot control depressed to the second position) and then rinse the area with water only (foot control depressed to the first position) to inspect the work site before proceeding to the next 2-3 teeth. If desired, the bleed air (foot control released) passing through the air polishing insert tip can be used to dry the work site during inspection.
- Flushing the patient's tongue with water only (foot control depressed to the first position) helps reduce the saline taste.
- Place a 2x2 on patient's lip and position saliva ejector.

- Maintain a 3 to 4 mm insert tip-to-tooth operating distance.



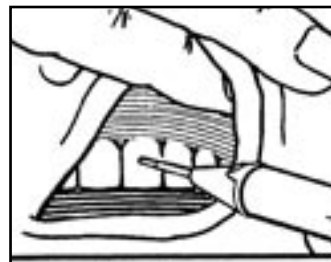
- The patient's lip should be held between the thumb and index finger of your free hand and pulled out and up, or down, to form a "cup". Do not retract the lips.
- Tilt the patient's head toward you to help prevent puddling in the cupped lip and minimize aerosol dispersion.
- Use a saliva ejector or HVE.



- In the upper anterior region, use the upper lip and your hand as a shield to help contain the aerosol spray.

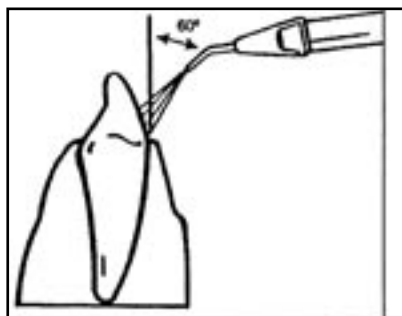


- In the posterior regions, use the cheek to help contain aerosol spray.

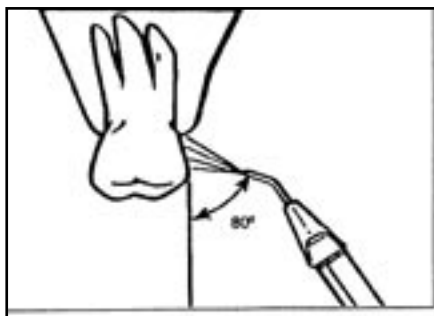


- When air polishing the facial surfaces of the anteriors, center the spray on the middle third of the tooth and use a constant circular motion. The edge of the spray will clean the teeth to the gingiva.
- Do not aim directly at the soft tissue.
- Avoid prolonged use on polished metal surfaces as a matte finish may result.

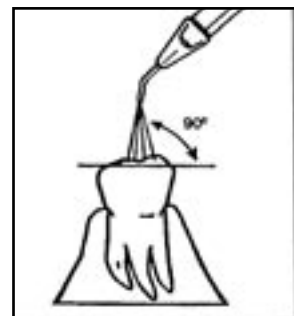
## 8.6 Proper Angulation of the Air Polishing Insert without JetShield™



Recommended angulation on the anterior teeth is 60° with the tip aimed at the middle third of the tooth surface.



Recommended angulation on the buccal and lingual surfaces of posterior teeth is 80° with the tip aimed slightly distally.



Recommended angulation to occlusal surfaces is 90°.

## Section 9: System Care

It is recommended that you perform the following maintenance procedures to help minimize bio-film formation in the lavage path of your Prophy-JET system which could affect the lavage flow to the air-polishing insert and air-polishing performance.

### 9.1 Daily Maintenance

*Start-Up Procedures at the beginning of the day:*

1. Open the manual shut-off valve on the dental water and air supply systems.
2. With the system OFF, unscrew the powder chamber cap. Verify the powder bowl is empty. Turn the Unit ON for 15 seconds to eliminate residual powder or moisture in the lines. Turn the system OFF.
3. Pour the powder into the chamber until it reaches the top of the center tube and screw on powder chamber cap.
4. Turn the system ON. Hold the Handpiece (without an insert installed) over a sink or drain, activate the Foot Control, and flush the water line at maximum water flow for at least 2 minutes.
5. Place a Cavitron® JET Air Polishing Insert into the Handpiece and adjust the powder and Lavage Flow as required.
6. Inspect and replace if threads are worn or scratched.

*Between Patients:*

1. Remove the Cavitron® JET Air Polishing Insert (clean using the wire cleaning tool). Sterilize (See insert instructions).
2. Set Water Control to highest setting. Activate the System and flush at least 30 seconds.
3. Turn the System OFF.
4. Clean and disinfect the surfaces of the cabinet, Power Cord, Handpiece Connector and cable assembly, Foot Control and

cable assembly by applying an approved non-immersion type disinfectant solution\* carefully following the instructions provided by the disinfectant solution manufacturer. To clean system, generously spray disinfectant solution on a clean towel and wipe all surfaces. Discard used towel. To disinfect system, generously spray disinfectant on a clean towel and wipe all surfaces. Allow disinfectant solution to air dry.

5. If using a closed water supply, check for adequate fluid volumes for next patient's scheduled treatment.

*Shut-Down Procedures at the end of the day:*

1. Turn the Unit OFF.
2. Remove Cavitron® JET Air Polishing Insert (clean using the wire cleaning tool). Sterilize.
3. Unscrew the powder chamber cap.
4. Remove the powder chamber from the cabinet. Discard the unused powder from the powder bowl.
5. Hold the open end of the powder chamber away from you. Activate the System for 15 seconds to clear the powder chamber. A high volume evacuator can be used to remove any residual powder.
6. Remove the o-ring seal from the powder chamber cap and clean residual powder from the cap. Be careful not to scratch or otherwise damage the plastic cap.
7. Wipe off the o-ring and place it in the fill cap.
8. If O-Ring is worn, please replace (see section 7.1 for listing).
9. Using a dry cloth, remove powder adhering to cap and bowl threads.
10. Secure the cap on the powder chamber.
11. Clean and disinfect the surfaces of the cabinet, Power Cord, Handpiece Connector and cable assembly, Foot Control and cable assembly by applying an approved non-immersion type

disinfectant solution\* carefully following the instructions provided by the disinfectant solution manufacturer. To clean system, generously spray disinfectant solution on a clean towel and wipe all surfaces. Discard used towel. To disinfect system, generously spray disinfectant on a clean towel and wipe all surfaces. Allow disinfectant solution to air dry.

12. Close the manual shut-off valve on the dental water supply system.

**\*NOTE:** Water-based disinfection solutions are preferred. Some alcohol-based disinfectant solutions may be harmful and may discolor plastic materials.

If the System is connected to a DualSelect™ Medicament Dispensing System, follow the recommended procedures listed in the DualSelect™ manual.

If powder fluffing is observed when Foot Control is not in use, this would indicate an air leak. To correct, turn the Unit OFF, remove the Fill Cap, clean any residual powder from the O-ring seal and threads, replace the Fill Cap, tighten, and turn the Unit back ON.

### 9.2 Weekly Maintenance

Using a soft brush (toothbrush), remove residual Prophy powder from the cap and bowl threads. If not removed, caked powder in threads can result in premature thread wear and cap disengagement.

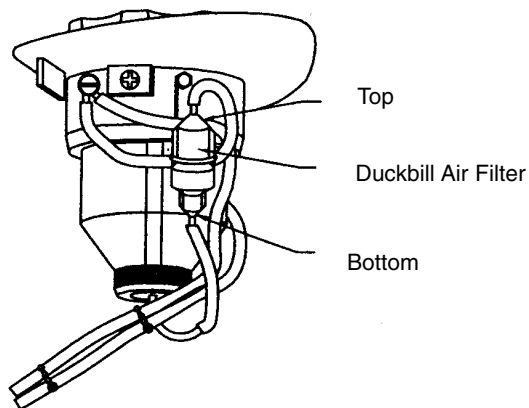
### 9.3 Lavage Filter Maintenance

When the lavage filter becomes discolored, the filter should be replaced to prevent reduced water flow to the Cavitron™ PROPHY-JET® unit. A 10-pack of replacement filters is available by ordering Part Number 90158 from your local DENTSPLY® distributor.

1. Disconnect the water supply hose from the water source. If a quick-disconnect connector is attached to the end of the hose, relieve the water pressure by pressing the tip of the connector in an appropriate container and drain the water.
2. Grasp the fittings on either side of the filter disk and twist counterclockwise. Remove the filter section from either side of the water hose.
3. Install the replacement filter onto the water hose fittings. The filter should be positioned to match up with the correct hose fitting.
4. Hand tighten the two hose fittings in a clockwise direction. Reconnect the water supply hose, operate the unit to bleed the air and test for leaks.

### 9.4 Powder Chamber Air Filter Maintenance

There is a user-replaceable duckbill air filter attached to the side of the powder chamber. If this filter becomes discolored or dirty, it should be replaced. New duckbill air filters (#60367) may be purchased through your local DENTSPLY Professional distributor.



1. Turn off your Cavitron system.
2. Lift and remove the powder chamber from the system.
3. Carefully disconnect the clear tubing from the filter. First disconnect the tubing from the bottom (small end) of the filter. Slide filter from the bracket. Then disconnect the clear tubing from the top (large end) of the filter and discard.
4. Connect the longer clear tubing from the side of the chamber to the top of the new filter and slide filter into the bracket. Connect the smaller clear tubing from the bottom of the chamber to the bottom of the filter. Ensure tubing is fully seated on filter ports.
5. Replace the powder chamber in the system.
6. Operate the system and check for leaks.

### 9.5 Air Supply Line Air Filter Maintenance

Water build up in the air supply line filter should be drained. This can be accomplished by turning the knob on the bottom of the filter counter-clockwise to open. After draining, turn the knob fully clockwise to close. If the inner filter element becomes discolored or dirty, a new filter assembly should be installed. A new filter assembly (#90088) may be purchased through your local DENTSPLY Professional distributor.

1. Disconnect the air supply line from the air source.
2. Using pliers or a wrench, loosen the nuts on the side fittings of the filter. Unscrew the nuts and slide them down the hose. Disconnect hoses from the filter and discard the used filter.
3. Insert the short hose into the input port of the filter and the long hose into the output port of the filter. Slide the nuts up the hoses and screw onto the fittings. Tighten using pliers or a wrench.
4. Check that the bottom knob is fully clockwise (closed).
5. Operate the unit and check for leaks.

## 9.6 Powder Chamber Maintenance

1. Turn off power.
2. Allow the powder chamber to depressurize and unscrew the powder chamber cap.
3. Empty powder from the chamber and use the high suction to remove any residual powder in the chamber.
4. Turn on the power and check for strong airflow from the center tube of the powder chamber.
5. If no or low air is present, turn the power off.
6. Unscrew the knurled ring at the bottom of the chamber assembly and remove the "J-tube" assembly.
7. Using the JET Air-Polishing Insert nozzle cleaning wire tool, clean clogged powder from the "J-tube". Turn on the unit and check for strong airflow.

8. Check that the o-ring is properly positioned in the groove of the "J-Tube" assembly and reassemble the "J-tube" to the chamber. Tighten knurled ring. Place chamber in system.
9. Fill the chamber with fresh prophylaxis powder and test for flow and leaks.

Although service and repair of the Cavitron™ PROPHY-JET® Air Polishing Prophylaxis System should be performed by DENTSPLY® personnel, the following are some basic troubleshooting procedures that will help avoid unnecessary service calls. Generally, check all lines and connections to and from the System, a loose plug or connection will often create problems. Check the settings on the System's knobs.

## Section 10: Troubleshooting

### 10.1 Troubleshooting Guide

#### System will not operate:

(Power Indicator Light is not lighted)

1. Check that the Power switch is in the ON position, and that detachable Power Cord is fully seated in the receptacle on back of System.
2. Check that the System's three-prong plug is fully seated in an appropriate AC receptacle, and that AC current is present.

(Polish Indicator Light is not lighted)

1. Check that the Foot Control Connector is fully seated in the Foot Control Receptacle on the back of the System.

#### System operates:

(No lavage flow at insert nozzle)

1. Assure that Lavage control is properly adjusted.
2. Check that irrigant supply control valves (dental office water supply) are open.
3. If connected to DualSelect™ Dispensing System, check that fluid level in the selected bottle is sufficient. Make sure valves are open when using external water source.
4. Check that lavage filter is clean. Replace lavage filter if needed.

(JET Air Polishing Insert nozzle blocks repeatedly)

1. Powder is moisture contaminated (lumpy). Discard powder.
2. Air Supply Line Air filter is contaminated. Refer to Section 9.5 Air Supply Line Air Filter Maintenance.

(No bleed air)

1. Blocked JET nozzle. Clean JET Nozzle using supplied tool.
2. Blocked air bleed "duckbill" air filter. Have unit serviced by a qualified Service Repair Facility.

(No or poor cleaning action)

1. Very low powder level or empty powder chamber. Fill powder chamber.
2. Blocked JET Air Polishing Insert nozzle. Clean nozzle using supplied tool.
3. Powder chamber cap is loose. Tighten powder chamber cap, and turn System ON. If cap does not fit tightly, check for thread wear and replace cap or bowl assembly if wear is noted.
4. Blocked Powder Chamber Air Filter. Refer to Section 9.4: Powder Chamber Air Filter Maintenance.
5. Clogged "J-Tube" assembly on Powder Chamber. Refer to Section 9.6: Powder Chamber Maintenance.

(Continuous powder agitation)

Powder chamber cap not securely sealed. Shut System OFF. Remove the O-ring seal from the cap and clean residual powder from the cap. Be careful not to scratch or otherwise damage the plastic cap. Replace cap if threads are worn or scratched. Wipe off the O-ring and place it in the cap and turn System ON. Worn caps and O-rings should be replaced when wear is noted.

### 10.2 Technical Support and Repairs

For technical support and assistance, call 1-800-989-8826 Monday through Friday, 8:00 AM to 5:00 PM (Eastern Time). For other areas, contact your local DENTSPLY® representative.

## Section 11: Specifications

Cavitron™ PROPHY-JET® Air Polishing  
Prophylaxis System: 100/115 VAC Systems  
Mode of Operation: Continuous operation with intermittent loading:  
10 minutes ON / 20 minutes OFF

|                    |  |
|--------------------|--|
| Electrical Voltage | 100V Gen 122J  |
|                    | 115V Gen 122   |
| Current            | 1.1/1.1 amps @ 100v/115v   |
| Frequency          | 50/60 Hertz  |
| Water Pressure     | 25–60 psig (172–414 kPa)   |
| Air Pressure       | 65–100 psig (448–690 kPa)  |
| Flow Rate          | Minimum setting (CCW) 0–15 ml/min<br>Maximum setting (CW) >55 ml/min   |
| Weight             | 12 lb. (5,4 kg)  |
| Dimensions         | Height: 4 in.<br>Width: 7 3/8 in.<br>Depth: 9 1/2 in.<br>Handpiece Cable: 81 in.<br>Foot Control Cable: 96 in.<br>Power Cord: 84 in.<br>Water Supply Line: 96 in.<br>Air Supply Line: 98 in. |

Cavitron™ PROPHY-JET® Air Polishing  
Prophylaxis System: 230 VAC Systems  
Mode of Operation: Continuous operation with intermittent loading:  
10 minutes ON / 20 minutes OFF

|                    |   |
|--------------------|---|
| Electrical Voltage | 230V Gen 122U   |
| Current            | .7/.6 amps @ 230v   |
| Frequency          | 50/60 Hertz   |
| Water Pressure     | 172–414 kPa   |
| Air Pressure       | 448–690 kPa   |
| Flow Rate          | Minimum setting (CCW) 0–15 ml/min<br>Maximum setting (CW) >55 ml/min  |
| Weight             | 5,4 kg  |
| Dimensions         | Height: 10,2 cm<br>Width: 18,7 cm<br>Depth: 24,1 cm<br>Handpiece Cable: 2,0 m<br>Foot Control Cable: 2,4 m<br>Power Cord: 2,1 m<br>Water Supply Line: 2,4 m<br>Air Supply Line: 2,5 m |

### OPERATING ENVIRONMENT

|                   |                                     |
|-------------------|-------------------------------------|
| Temperature       | 10 to 25 degrees celsius            |
| Relative Humidity | 30 to 75 percent ( non-condensing ) |

### TRANSPORT AND STORAGE CONDITIONS

|                      |                                     |
|----------------------|-------------------------------------|
| Temperature          | 0 to 70 degrees celsius             |
| Relative Humidity    | 10 to 95 percent ( non-condensing ) |
| Atmospheric Pressure | 500 HPa to 1060 Hpa                 |



AC POWER  
IPX1 classification of increase of water



TYPE B EQUIPMENT



FOOTSWITCH  
Footswitch not for operating theatres  
Protection Class- IPX1



Refer to instruction manual  
for information



POWER ON



POWER OFF

## Section 12: Classification

- Type of protection against electric shock:
- Degree of protection against electric shock:
- Degree of protection against the harmfulness of water:
- Mode of operation:
- Degree of safety of application in the presence of a flammable anaesthetic mixture with air or with oxygen or nitrous oxide:
- According to medical device directive:

Class 1  
Type B  
Ordinary  
Continuous

Equipment not suitable for use in the presence  
of flammable anesthetics or oxygen.  
IIA (rule 9)

## Section 13: Disposal of Unit

- Accordance with local and state laws.