



## HVE and SE Vacuum Valves

### HVE/SE CARE AND MAINTENANCE

#### After Each Patient:

- 1 Draw clean water through the instrument. Work the control valve open and closed several times to free up and clear debris build-up inside the valve body.
- 2 Replace disposable tip or tips. If using a reusable tip, the tip must be cleaned and sterilized after each patient (refer to “To clean and sterilize a reusable HVE/SE tip”).
- 3 Replace barrier film if used. If barrier film is not used, clean and sterilize instruments after each patient.

#### Daily Care:

- 1 Use supplied brushes and a mild detergent to clean the internal surfaces of the instruments.
- 2 Draw a vacuum system cleaner, such as Eco Vac, through the instruments.

#### Weekly Care:

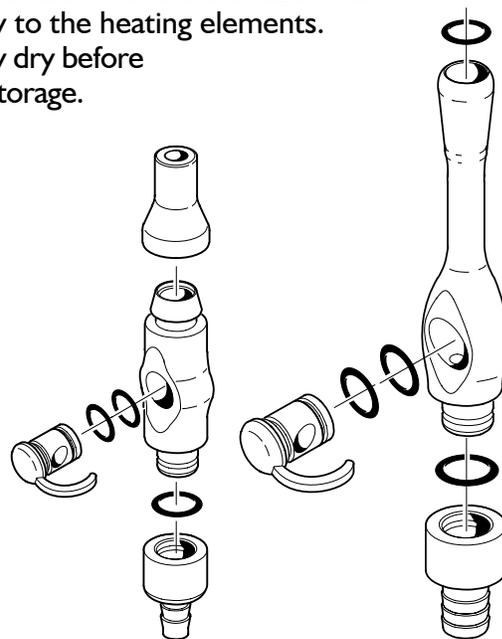
- 1 Turn off vacuum before disconnecting the HVE and/or SE.
- 2 Remove the tip from the HVE and SE.
- 3 Pull the valve bodies away from the QD swivels then press out the valve lever.
- 4 Clean and rinse the instruments with a mild detergent, water and supplied brushes.
  - Allow the instruments to completely dry.
- 5 Inspect O-rings for nicks, missing sections and excessive wear. Replace O-rings as necessary.
- 6 Lubricate the O-rings with a silicone lubricant, such as Parker Super O Lube, and reassemble the vacuum valve.
- 7 Sterilize the instruments: Vacuum Valves with Plastic Bodies Can Not Be Autoclaved.
  - Sterilization should not exceed 275°F (135°C).
  - Holding time of 4 minutes.
  - Avoid instrument contact with the sterilizer wall and close proximity to the heating elements.
  - Allow to completely dry before handling and clean storage.



**CAUTION:** Disposable HVE and SE tips cannot be sterilized and should not be reused. Replace with a new tip after each patient.

#### To clean and sterilize a reusable HVE/SE tip:

- 1 Remove tip from the HVE/SE.
- 2 Clean and rinse the tip with a mild detergent and water.
  - Allow the tip to completely dry.
- 3 Sterilize the tip using steam autoclave at a temperature of 275°F (135°C) for 4 minutes.





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### CLEANING, DISINFECTING AND STERILIZATION

#### Cleaning - General information

##### Ultrasonic cleaning of the vacuum valves is **NOT Recommended**.

The external surfaces can be cleaned with a solution of mild detergent and warm water. A variety of surface disinfectants are available for use in dental treatment rooms. Some of these can cause discoloration of painted, plated or anodized surfaces with repeated use. This can be minimized by careful adherence to the disinfectant manufacturer's instructions and by frequent washing with soap and water.



**CAUTION:** Do not use powdered cleansers, scouring pads or abrasive scrubbers on any of the painted, plastic or metal surfaces of the instruments. To remove dried-on material, use a soft-bristled brush and a solution of mild detergent.

#### Valve Bodies with QD Connection

If barrier film is used to protect the main body of the High Volume Evacuator (HVE) and the Saliva Ejector (SE), valve bodies may be cleaned and sterilized weekly or more frequently as needed by removing them from the QD Swivel.

If barrier film is not used or if oral surgery is performed, clean and sterilize the instruments after each patient.

#### Valve Bodies without QD Connection

Do not attempt to remove the valve body from the vacuum tubing. The valve body is permanently attached to the vacuum tubing.

Use barrier film to protect the valve body and replace barrier film after each use. Clean and disinfect weekly.

#### Disinfection – General Information

The use of chemical disinfecting agents is not necessary if the instrument is going to be sterilized. While their use may be easy and quick, it is important to know the effectiveness of any chemical disinfectant against the various agents of infection that may be encountered.

Your dental supply dealer will have current information from all disinfectant manufacturers regarding their product's effective-

ness. Always follow the product manufacturer's recommendations for use.

Regardless of the chemical disinfectant used, it is imperative that the instruments be thoroughly washed with mild soap and warm water at least once per day. This wash down will minimize the harmful effects of chemical disinfectant residues being allowed to accumulate on the instrument. When using chemical

disinfectants, always pay strict attention to the manufacturer's disinfectant directions. When using concentrated disinfectants, measure the concentrate carefully and mix according to package directions. Disinfectant solutions that are relatively harmless to surfaces at their recommended strengths can be corrosive at higher than recommended dilution ratios.



**CAUTION:** These disinfectants will harm the surface finishes of instruments and are not recommended. Strong Phenols/Phenol Alcohol combinations, Sodium Hypochlorite/Household Bleach, Sodium Bromide, Strong Alcohol, Household Cleaners (Dental Equipment Only), Citric Acids, \*\*Iodophors, Ammonium Chloride and Accelerated Hydrogen (0.5%).

#### **\*\*Iodophor-based disinfectants will cause yellow staining on many surfaces.**

Disinfectants that will not adversely affect the instruments are, but not limited to: BIREX SE®, SPORICIDIN®, COLDSPOR, PROCIDE-D® SPRAY, STERALL PLUS SPRAY, ASETICIDE, BIOCID, PROMEDYNE, IODO-FIVE, WESCODYNE and CAVICIDE.



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### CLEANING, DISINFECTING AND STERILIZATION CON'T ...

There are several methods of sterilization that may be used. It is important to remember, however, that regardless of the method you choose, temperatures should never exceed 275° Fahrenheit (135° Celsius).

Any of the following sterilization methods may be safely used on your autoclavable instruments:

- Steam Autoclave
- Ethylene Oxide Gas
- Chemical Vapor Process

Vacuum valves having plastic bodies or bodies permanently attached to vacuum tubing cannot be autoclaved.

Vacuum valves with QD swivels: remove the body from the swivel to clean, disinfect and sterilize accordingly.

Do not allow the instruments to come into contact with the walls of the sterilizer. Avoid placing the instruments in close proximity to the sterilizer heating element.

Dry heat sterilization is not recommended because of the difficulty in maintaining the precise temperature control necessary to prevent damage to the instruments.



**CAUTION:** When using the chemical vapor process, it is essential to rinse out all cleaning agents with clear water. The internal surfaces and passages must be thoroughly purged of residual cleaning agents by flushing with water then isopropyl alcohol. This will prevent the formation of a crystalline residue resulting from reactions between the chemical vapor solutions and cleaning agents.