Dentsply Sirona

THE DENTAL SOLUTIONS COMPANY™

Purevac® HVE System

High Volume Evacuation and Mirror in a Single Instrument

TABLE OF CONTENTS

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Creating an environment with fewer potentially harmful aerosols

Procedures that generate aerosols and spatter can present safety risks for all patients and dental professionals.

- Aerosol reduction: HVE removes 90% more aerosols during ultrasonic scaling compared to a low-volume saliva ejector
- Greater fluid reduction: 135% more than a low-volume saliva ejector
- Reduced noise: 14% less than a standard HVE tip and 5% less than a low-volume saliva ejector

RCDSO November 2018:

MINIMIZING DROPLET SPATTER

By their very nature, the provision of dental services can involve the creation of droplets, spatter and spray contaminated with blood, saliva, other bodily fluids and debris.

As previously noted, rubber dam should be used whenever feasible, and high-volume suction must be used whenever the creation of droplets, spatter and spray is possible.

RCDSO Standards of Practice for infection control

For more information on aerosols, watch the following CDHA Webinar:

CLICK HERE FOR
ENGLISH WEBINAR

LIEN VERS LA FORMATION
EN FRANÇAIS

For ordering, please contact
Dentsply Sirona Inside Sales
877-393-3687

Purevac® HVE System
with Mirror Tips and Hose Adapter

User Adaptation Guide

This quick reference guide is not intended as a replacement for a Directions for Use Manual (DFU) for any products shown. Always check your manufacturer's guidelines for recommended use of equipment.

Learn more at dentsplysirona.com

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Advantages of Using HVE

Procedures that generate aerosols and splatter can present safety risks for all patients and dental professionals. At Dentsply Sirona, we are dedicated to reducing aerosols in your work environment—every day, during every procedure.

Aerosol Reduction

The most common reason for dental professionals to miss work is respiratory infection.[1]

The use of high volume evacuation has been shown to reduce aerosols that are generated during ultrasonic scaling by 90%.[2]

Grasp & Adaptation Techniques

Proper hand and arm positioning during procedures contributes to less muscle strain and fatigue. The following grasps have been identified as a way to ensure good alignment and will help to reduce poor ergonomics. **Watch the Grasp Technique video here.**

Purevac HVE Hose Adapter

When using the Purevac HVE hose adapter, Dentsply Sirona recommends utilizing a light balanced grasp.

This grasp allows you full rotation of the 360-degree swivel adapter.

Traditional HVE Hose

When directly connecting the Purevac HVE mirror tip to an existing HVE valve, A palm grasp may be needed to support the weight of the hose.

This type of grasp will facilitate retraction and fluid management.

Grasp Not Recommended

Holding the mirror tip in an over the top manner, will limit the use of the 360 degree rotation of the device.

This may also restrict maneuverability and compromise ergonomics during use and is **NOT RECOMMENDED**.

Fluid Management Recommendations

Procedures such as Ultrasonic Scaling, create additional fluid and in some cases, these residual fluids can pool in areas of the mouth that are more complex to retrieve. The following are techniques to assist in capturing those residual pockets of water.

Watch the Fluid Management video here.

Purevac HVE with Rocking Technique

The Purevac HVE system or mirror tip will aid in fluid control at the work site however, as with any standard HVE it may be necessary to retrieve excess fluid.

To improve fluid control at the work site, it may be helpful to “rock” or tilt the opening towards the water source.

Purevac HVE with Dip and Go Technique

To capture residual fluid at the retromolar pad area, we recommend a “dip and go” technique.

To do this, rotate the opening of the tip over the occlusal surface of the molars and allow the device to remove any excess fluid.

Purevac HVE with Coiled Saliva Ejector in Cheek

If you are unable to perform the “dip and go” technique, these next few tips maybe beneficial for fluid management.

You can utilize a standard saliva ejector in the corner of the mouth.

Purevac HVE with Saliva Ejector

Or another option, leave the Purevac HVE system on as you pause to use a standard saliva ejector to remove residual fluids.

Keeping the Purevac HVE system on during and after the procedure, will create an environment of fewer potentially harmful aerosols.

Visibility, Illumination and Retraction

Utilizing the Purevac HVE mirror tips for suction and visibility gives you two instruments in one hand. This one-handed approach improves efficiency for various procedures. The following tips will assist with keeping the mirror tip clear from water droplets and debris.

Watch the Visibility and Illumination video here.

Coat Mirror with Saliva from Oral Mucosa

The Purevac HVE's mirror is designed for visibility in areas of the mouth where you cannot see with direct vision. As with any dental mirror, providing a surfactant on the mirror surface will allow water to clear.

Prior to turning the device on, coat the mirror with saliva from the inside of the patient's cheek.

Polish Mirror Head with Fine Prophy Paste

In cases with dry mouth, we recommend polishing the mirror with Nupro® Extra Care fine prophy paste.

Rinse the prophy paste from the mirror prior to use.

Illumination

The mirror of the Purevac HVE tip also provides the clinician with illumination to the treatment areas.

Cheek and Tongue Retraction

Improved cheek retraction over saliva ejector during ultrasonic scaling procedures.

Provides improved patient comfort over standard HVE tip for retraction of the oral mucosa.

1. Christensen , R., PhD. (2006, November 1). Aerosols. Retrieved January 23, 2018, from http://www.dentistryiq.com/articles/wdj/print/volume-4/issue-10/you-and-your-practice/aerosols.html
2. Jacks MJ: A laboratory comparison of evacuation devices on aerosol reduction. J Dent Hig 2002, 76, 202-206.

 INF05-0119-1 Rev. 1 (0119)

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Purevac® HVE System

with Mirror Tips and Hose Adapter

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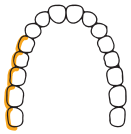
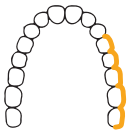
Positioning Guide

This guide is meant to assist you in optimizing the use of the Purevac HVE System during ultrasonic scaling procedures.

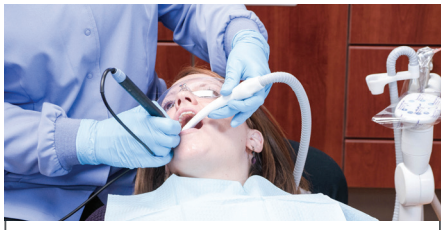


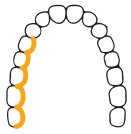
Maxillary Right Buccal
Operator: 8:00 - 11:00
Patient: Turned ***toward*** operator
HVE: Buccal

Maxillary Anterior Facial
Operator: 11:00 - 12:00
Patient: Chin Up
HVE: Facial
Retraction of Upper lip

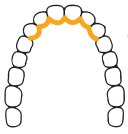


Maxillary Left Buccal
Operator: 8:00 - 11:00
Patient: Turned ***toward*** operator
HVE: Buccal

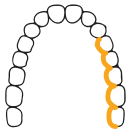




Maxillary Right Lingual
Operator: 8:00 - 11:00
Patient: Turned ***toward*** operator and chin up
HVE: Lingual

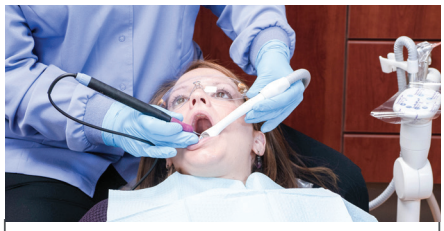


Maxillary Anterior Lingual
Operator: 11:00 - 12:00
Patient: Chin Up
HVE: Lingual

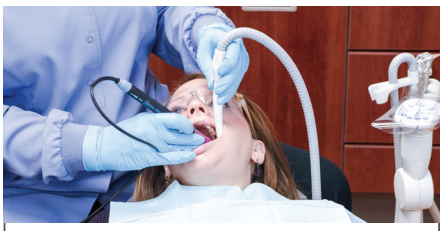


Maxillary Left Lingual
Operator: 8:00 - 11:00
Patient: Turned ***away*** from operator and chin up
HVE: Lingual

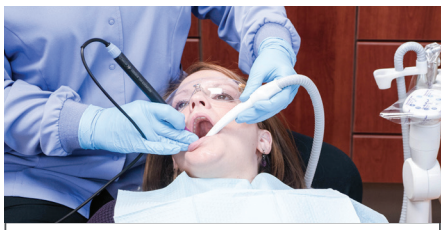
Mandibular Right Buccal
Operator: 8:00 - 11:00
Patient: Turned ***toward*** operator
HVE: Buccal



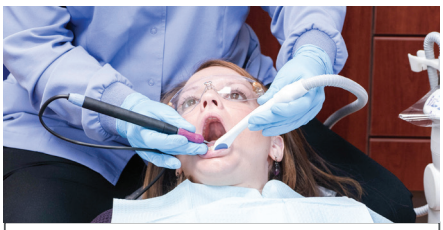
Mandibular Anterior Lingual
Operator: 11:00 - 12:00, (optional 9:00)
Patient: Chin Down
HVE: Lingual



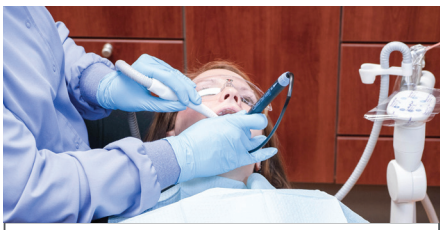
Mandibular Left Buccal
Operator: 11:00
Patient: Turned ***toward*** operator
HVE: Buccal



Mandibular Right Lingual
Operator: 9:00 - 11:00 (optional 12:00)
Patient: Turned ***toward*** operator
HVE: Lingual



Mandibular Anterior Facial
Operator: 11:00 - 12:00
Patient: Chin Down
HVE: Facial
Retraction of lower lip



Mandibular Left Lingual
Operator: 9:00 - 11:00
Patient: Turned ***away*** from operator
HVE: Lingual

Purevac® HVE System

with Mirror Tips and Hose Adapter

High Volume Evacuation and Mirror in a Single Instrument

Better

- 135% greater removal of fluids than a low-volume saliva ejector[1].

Safer

- HVE removes 90% more aerosols generated during ultrasonic scaling compared to a low-volume saliva ejector[2].

Faster

- High Volume Evacuation + Mirror in a single instrument = visibility and suction all in one hand.

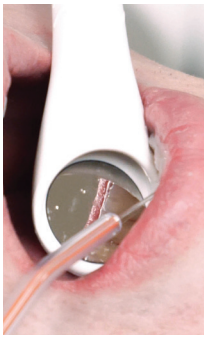
A solution for multiple procedures.

Air Polishing

Rubber Cup Polishing

Ultrasonic Scaling

Sealants



Air / Water Syringe

Packaging & Ordering Information

11000 - Purevac® HVE System Kit with 1 HVE Hose Adapter and 3 HVE Mirror Tips

11010 - Purevac® HVE Mirror Tips - 3 pack

11020-1 - Purevac® HVE Mirror Tips - 12 pack

For more information, visit **www.dentsplysirona.com**

1. Data on file.
2. Jacks MJ: A laboratory comparison of evacuation devices on aerosol reduction. J Dent Hig 2002, 76, 202-206.

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FAQ | Purevac® HVE System

• What does HVE stand for?
High-**V**olume **E**vacuation

• How long is the Purevac HVE hose compared to other HVE hoses?
The Purevac HVE System hose is 5 ft. long and the standard length of other HVE hoses are between 5 ft. and 7 ft. long.

• How many times can each HVE Mirror Tip be autoclaved?
Purevac HVE Mirror Tips are tested for 100 autoclave cycles.

• What is the size of the mirror?
The Purevac HVE has a Rhodium Glass Mirror, made in Germany and is considered #4 (18mm). The HVE Mirror Tip Mirror Diameter: 17.85 mm or 0.703 in. HVE Mirror Tip Bore Opening Area: 90.406 mm or 0.140 in. The working area of the mirror is approx. 1.5cm.

• Will the suction from the Purevac HVE System suck the patient's tongue or cheek in?
This is a comprehensive product design that allows the improvement of cheek bite (or attaching to cheek, lip or tongue) due to the beveled, tapered edge and inlet ports providing continuous airflow, reducing mucosal aspiration and risk of back-flow as well the angled body design allowing for better cheek retraction

• Are there aerosol dental studies for reference that can be distributed?
We cannot provide these studies, but we reference 5 studies in the brochure and this is where you should direct the doctor or hygienist to.

1. Al Maghlouth A, Al Yousef Y, Al Bagieh N. Qualitative and Quantitative Analysis of Bacterial Aerosols. J Contemp Dent Pract 2004 November;(5)4:091-100.
2. Milejczak CB. Optimum Travel Distance of Dental Aerosols in the Dental Hygiene Practice. J Dent Hyg. 2005 October;81(4):20-21
3. Christensen , R., PhD. (2006, November 1). Aerosols. Retrieved January 23, 2018, from http://www.dentistryiq.com/articles/wdj/print/volume-4/issue-10/you-and-your-practice/aerosols.html
4. Harrel SK, Molinari J: Aerosols and splatter in dentistry: a brief review of the literature and infection control implications. J Am Dent Assoc 2004, 135, 429-437
5. Jacks MJ: A laboratory comparison of evacuation devices on aerosol reduction. J Dent Hig 2002, 76, 202-206.

FAQ | Purevac® HVE System

• Are there any CDC/OSHA guidelines in dealing with suck-back when a patient closes their mouth? Is this the new standard of care?
Yes, the CDC recommends that the patient should not close on LVE (Low-Volume Evacuation) due to the potential of cross contamination.

• What makes the tip stay in the HVE hose tubing?
The Purevac HVE System Mirror Tip has a swivel portion that is tapered so it grips or locks in to the hose tip.

• What is the integrity of the swivel after autoclaving?
The swivel occurs on the hose portion of the system and is wiped down using an alcohol based wipe.

• We have two claims that are similar regarding aerosols. What is the difference?
Purevac HVE system provides greater removal of bacterial aerosols during ultrasonic scaling compared to a LVE Saliva Ejector. – General statement made by Dental Advisor Study – Comparison of Aerosol Reduction During Ultrasonic Scaling.

• Purevac HVE system removes 90% more aerosols than a LVE Saliva Ejector. Based on our testing comparing the air flow rate for Purevac HVE and Standard LVE.

"In a research study, HVE removed 90% more aerosols during ultrasonic scaling compared to a low-volume saliva ejector".5

5. Jacks MJ: A laboratory comparison of evacuation devices on aerosol reduction. J Dent Hig 2002, 76, 202-206.

• What is the warranty process?
We are creating a technical bulletin to address the warranty and how we are replacing hoses for any failures but this will require some time. A PDF of the process will be released at a later date.

• What is the refund process/how are we processing the 30-day guarantee?
This will also be addressed in the technical bulletin PDF that will be released at a later date.

• What is the repair process?
There will be no repairs for the Purevac HVE System Kit or Mirror Tips. This will be considered an out-of-box failure and will be addressed in the technical bulletin PDF along with the warranty and refund process.

FAQ | Purevac® HVE System

• Are the smaller lumens on competitor products less than 8mm as recommended by the CDC?
Other competitors have a smaller lumen than 8mm which is why they are not considered a HVE product.

• Were the Purevac HVE Mirror Tips tested in any other solution besides ReSurge? Was there a difference in reaction of the tip color or composition between ReSurge and a competitive cleaner?
The Mirror Tips were tested with other competitive products but no change was noted.

• Is the screw (metal and plastic piece that connects the hose to the tip) autoclavable? It says in the DFU that it only needs to be cleaned if visibly soiled.
We did not validate autoclaving on the adapter. The hose adapter is considered a non-critical component according to the FDA guidelines and therefore was only validated for cleaning and disinfection only.

• Is there specific wording from the CDC regarding an opening needing to be 8mm to be considered HVE?
"The use of a high-volume evacuator, or HVE, has been shown to reduce the contamination arising from the operative site by more than 90 percent. It should be emphasized that for a suction system to be classified as an HVE, it must remove a large volume of air within a short period. An evacuator that pulls a high vacuum but does not remove a large volume of air, such as is used routinely for hospital suction, is not considered an HVE. The usual HVE used in dentistry has a large opening (usually 8 millimeters or greater) and is attached to an evacuation system that will remove a large volume of air. The small opening of a saliva ejector does not remove a large enough volume of air to be classified as an HVE."

This quote and description of how an HVE is classified, comes from the following study (which is also referenced in the brochure) Harrel SK, Molinari J: Aerosols and splatter in dentistry: a brief review of the literature and infection control implications. J Am Dent Assoc 2004, 135, 429-437

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Aerosol Management Resources

CDHA WEBINAR LINKS*

Members FREE

Non-Members $25

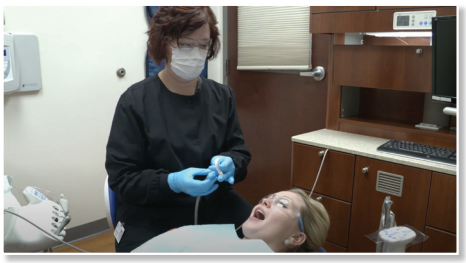
CLICK HERE FOR ENGLISH WEBINAR

CLICK HERE FOR FRENCH WEBINAR

PUREVAC HVE VIDEO LINKS*

PureVac HVE Overview

PureVac HVE User Adaptation Guide (Tips & Tricks)



PureVac HVE Evacuation Device Comparison

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George, M.D., Donely, T.G., & Preshaw, P.M. Ultrasonic periodontal debridement theory and technique. Iowa: John Wiley & Sons; 2014

Harrel, SK & Molinari, J. Aerosols and splatter in dentistry: a brief review of the literature and infections control implications. J Am Dent Assoc. 2004; (135):429-437.

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Veena H.R., Mahantesha S., Joseph, Preethi A., & Patil, Suvarna H. Dissemination of aerosol and splatter during ultrasonic scaling: A pilot study. Journal of Infection and Public Health. 2015; 8(3):260-265. Available from: https://www.sciencedirect.com/science/article/pii/S1876034114001853

Zemouri, C., de Soet, H., Crielaard, W., & Laheij, A. A scoping review on bio-aerosols in healthcare and the dental environment. PLOS One Published: May 22, 2017. Internet – cited January 13, 2019. Available from: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0178007

*View Resource Links Online: https://bit.ly/3enRypC

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LA COMPAGNIE
DE SOLUTIONS
DENTAIRES[MC]

Ressources pour la gestion des aérosols

LIEN FORMATION EN LIGNE DE CDHA/ACHD*

Membres GRATUIT

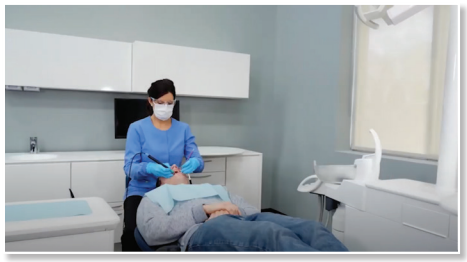
Non-Membres $25

LIEN VERS LA FORMATION EN ANGLAIS

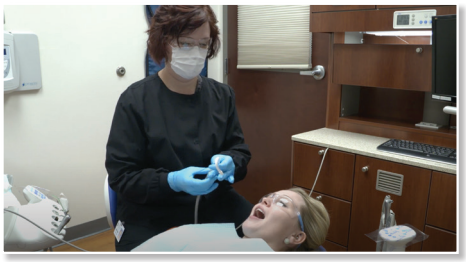
LIEN VERS LA FORMATION EN FRANÇAIS

LIENS POUR LA VIDÉO DE PUREVAC HVE*

PureVac HVE aperçu



PureVac HVE Guide d'adaptation pour l'utilisateur



PureVac HVE Comparaison d'appareils d'évacuation

RÉFÉRENCES

Christensen, Rella. Aerosols. Dentistry IQ. Internet – cited January 11, 2019. Disponible sur: http://www.dentistryiq.com/articles/wdj/print/volume-4/issue-10/you-and-your-practice/aerosols.html

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*Voir le lien pour les ressources en ligne: https://bit.ly/3enRypC