midmark®

Procenter Specialty Cabinet-Mounted Delivery Unit

User Guide

For Model 153839-013

003-10728-00 Rev AA1 (07/14/25)
20-42-FO-00014 Rev A4 ECO101412

Contents

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Important Information

Safety Symbols

WARNING
Indicates a potentially hazardous situation which could result in serious injury.

Caution
Indicates a potentially hazardous situation which may result in minor or moderate injury. It may also be used to alert against unsafe practices.

Equipment Alert
Indicates a potentially hazardous situation which could result in equipment damage.

Note
Amplifies a procedure, practice, or condition.

Proper Shipping Orientation

Fragile

Keep Dry

Refer to instruction manual/booklet

Type BF, Applied Part

Manufacturer

Atmosheric Pressure

Relative Humidity

Transportation & Storage Temperature

Type B Applied Part

~

AC (alternating current)

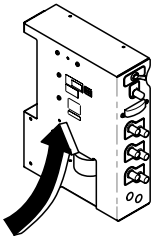
REF

Catalogue Number

SN

Serial Number

Serial Number Location



Units with Doctor's Instruments

Transportation/Storage Conditions

Transportation / Storage Temperature Range	23°F to 100°F (-5°C to 38°C)
Relative Humidity	10% to 90% (non-nondensing)
Atmospheric Pressure	7.2 PSI to 15.3PSI (50 kPa to 106 kPa)
Operating Temperature Range	59°F – 95°F (15°C – 35°C)

Intended Use

Midmark delivery systems are intended to provide dental professionals with air, suction and water to operate dental handpieces, syringes, and Midmark authorized accessories during dental examinations and procedures.

Safety Information

WARNING

Equipment is not suitable for use in the presence of a flammable anesthetic mixture with oxygen, air, or nitrous oxide.

Clarification: Equipment is suitable for use in the presence of oxygen, air, or nitrous oxide.

Electromagnetic Interference

This product is designed and built to minimize electromagnetic interference with other devices. However, if interference is noticed between another device and this product:

- Remove interfering device from room.
- Plug unit into isolated circuit.
- Increase separation between unit and interfering device.
- Contact Midmark if interference persists.

Disposal of Equipment

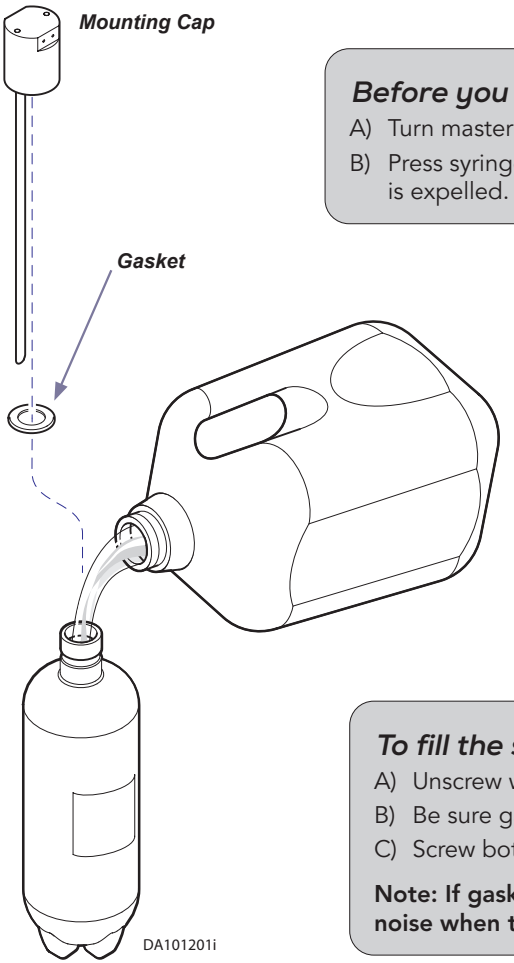
At the end of product life, the unit, accessories, and other consumable goods may become contaminated from normal use. Consult local codes and ordinances for proper disposal of equipment, accessories and other consumable goods.

Operation

Self-Contained Water System

The Self-Contained Water System gives you control of the quality of water used in your delivery system. It also provides a means for disinfecting the system's internal tubing.

> ***Caution***
> **Residual air pressure may cause the water bottle to pop off and spill or spray the contents if not released.**



> ***Before you begin filling the water system...***
> A) Turn master switch OFF.
> B) Press syringe air button and hold until all residual air pressure is expelled. (You can hear the air being expelled.)

> ***Note***
> **Distilled water is not required. Water used must meet all local requirements for drinking water.**

> ***To fill the self-contained water system bottle...***
> A) Unscrew water bottle and fill with water.
> B) Be sure gasket is in place in mounting cap.
> C) Screw bottle into mounting cap.
>
> **Note: If gasket is improperly sealed, you will hear a hissing noise when the system is turned ON.**

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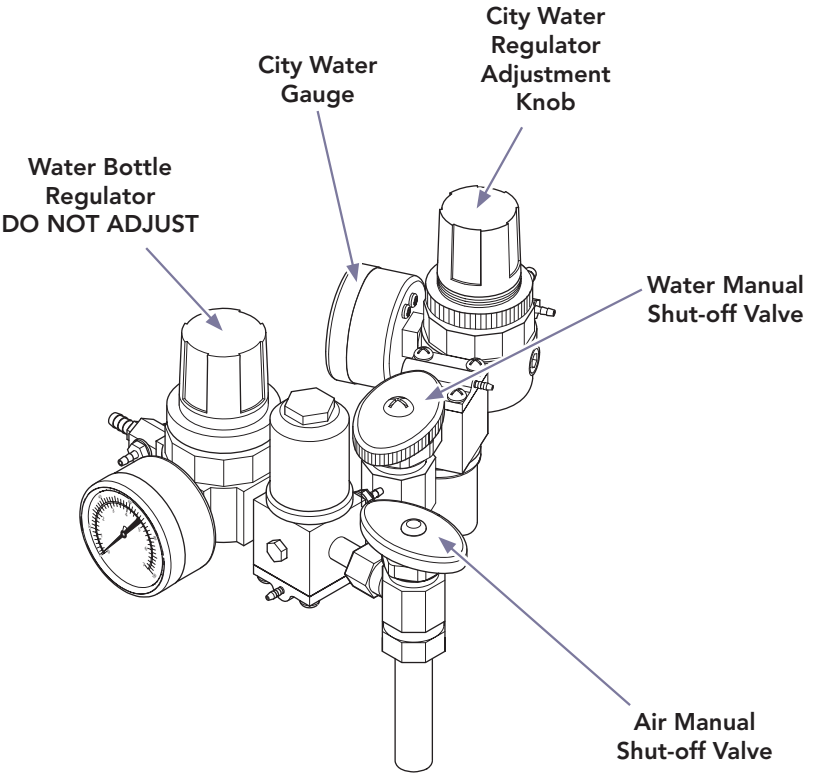
Manual Shut-Off Valves for Water and Air Supply

Manual shut-off valves stop air and/or water supply at the point of input to the operatory. Shutting off valves is recommended during extended periods of non-use (e.g., vacation, holidays) or in the event of an equipment malfunction.



DA2579-1

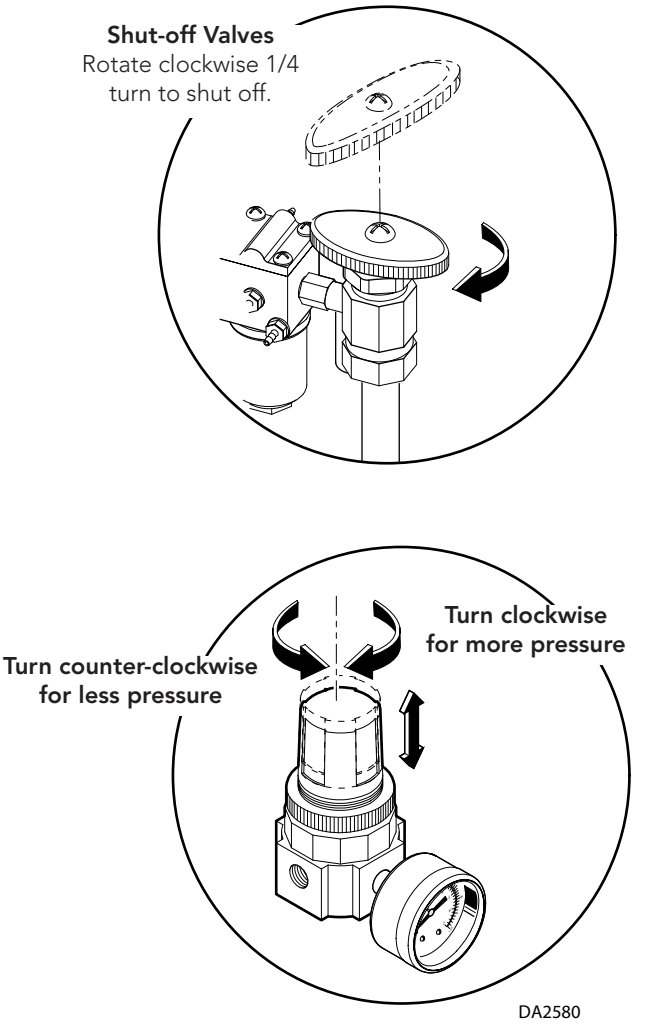
Recommended Settings	
City Water Regulator Gauge Setting	30 psi
Water Bottle Regulator Setting	Factory set to 30 psi *DO NOT adjust.*

Equipment Alert

Delivery components were designed to operate at the recommended settings. Poor performance or damage to equipment may result if extreme conditions.

Pressure Regulator Valves

Pressure regulator valves allow you to control air and water pressure supplied to delivery instruments.



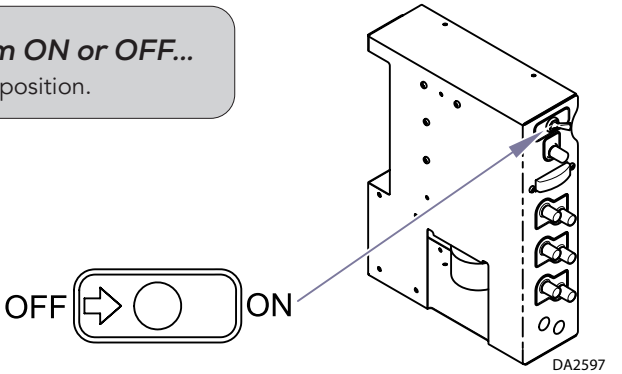
To adjust the pressure regulators...

A) Pull up knob and turn to adjust.
B) Watch regulator gauge as you turn knob to achieve desired setting.
C) Push knob down to lock.

Master ON/OFF Switch (Air/Water)

The Master ON/OFF Switch must be ON to operate the delivery system.

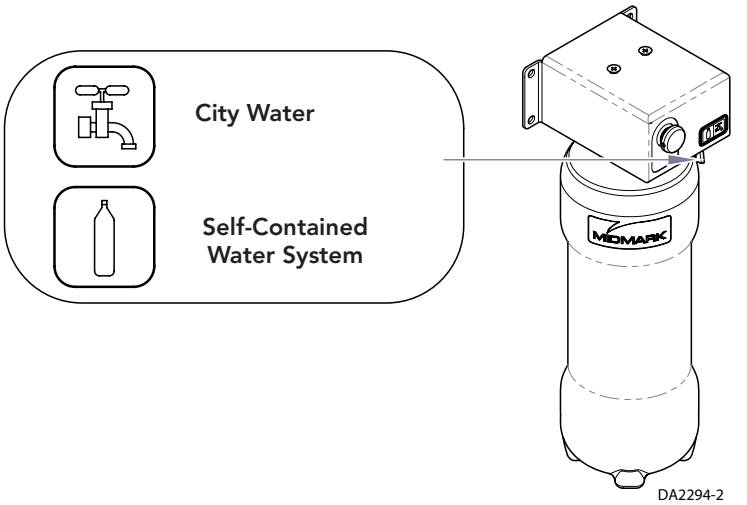
To turn the Delivery System ON or OFF...
Move the Master Switch to desired position.



Water Selector Switch

The Water Selector Switch allows you to choose the water source for the delivery system. You may select either City Water (tap water) or water from the Self-Contained Water System bottle.

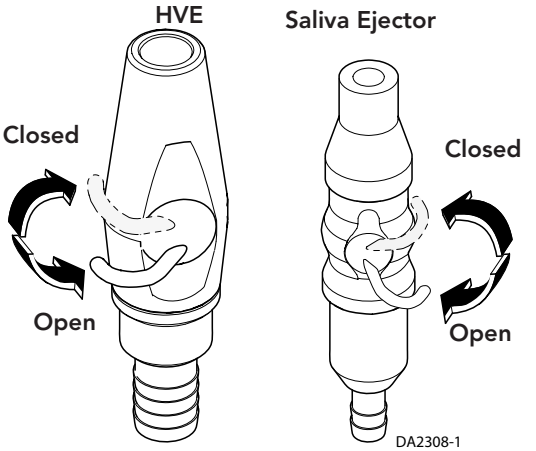
To select a water source...
Toggle the switch to select desired the water source.



HVE and Saliva Ejectors

Before you begin...

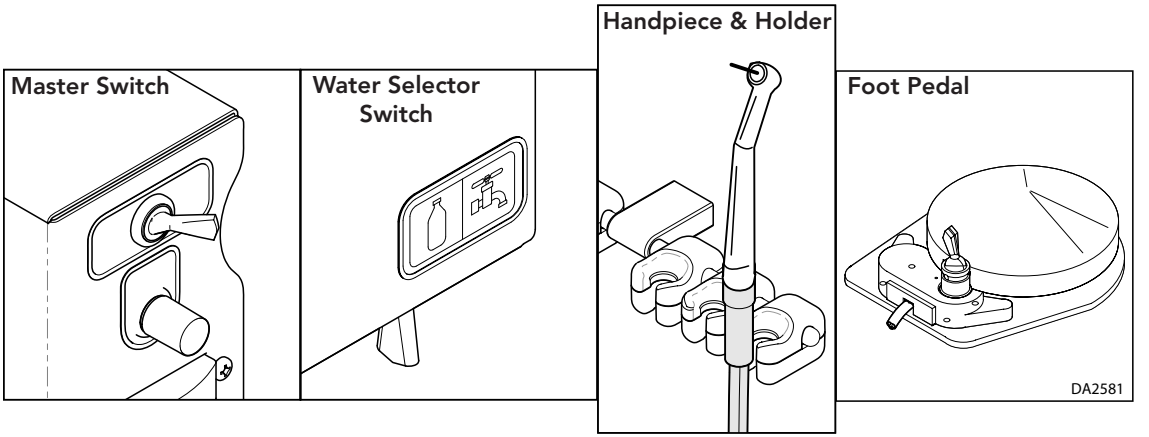
A) Turn facility vacuum system ON.
B) Move lever towards the OPEN position to activate and moderate suction for the HVE / Saliva Ejector.



Operating Handpieces

To operate handpiece...

A) Turn Master Switch ON.
B) Move Water Selector Switch to desired setting.
C) Remove handpiece from holder.
D) Press foot pedal to deliver selected drive air/water to handpiece.



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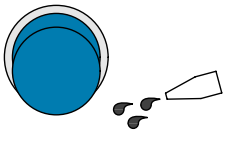
Handpiece Controls

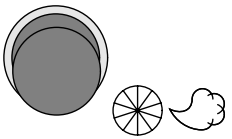
Each handpiece has its own Drive Air control knob and its own Coolant Water control knob.

There is also a Coolant Air control knob that adjusts the coolant air for all handpieces.



To adjust the Coolant Water...

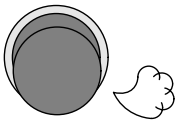
Rotate the Coolant Water control knob for the desired handpiece until the desired flow is achieved.



To adjust the Drive Air pressure...

Rotate the Drive Air control knob for the desired handpiece until the desired air pressure registers on pressure gauge.

Note: Refer to the handpiece manufacturer's literature for the recommended pressure setting.



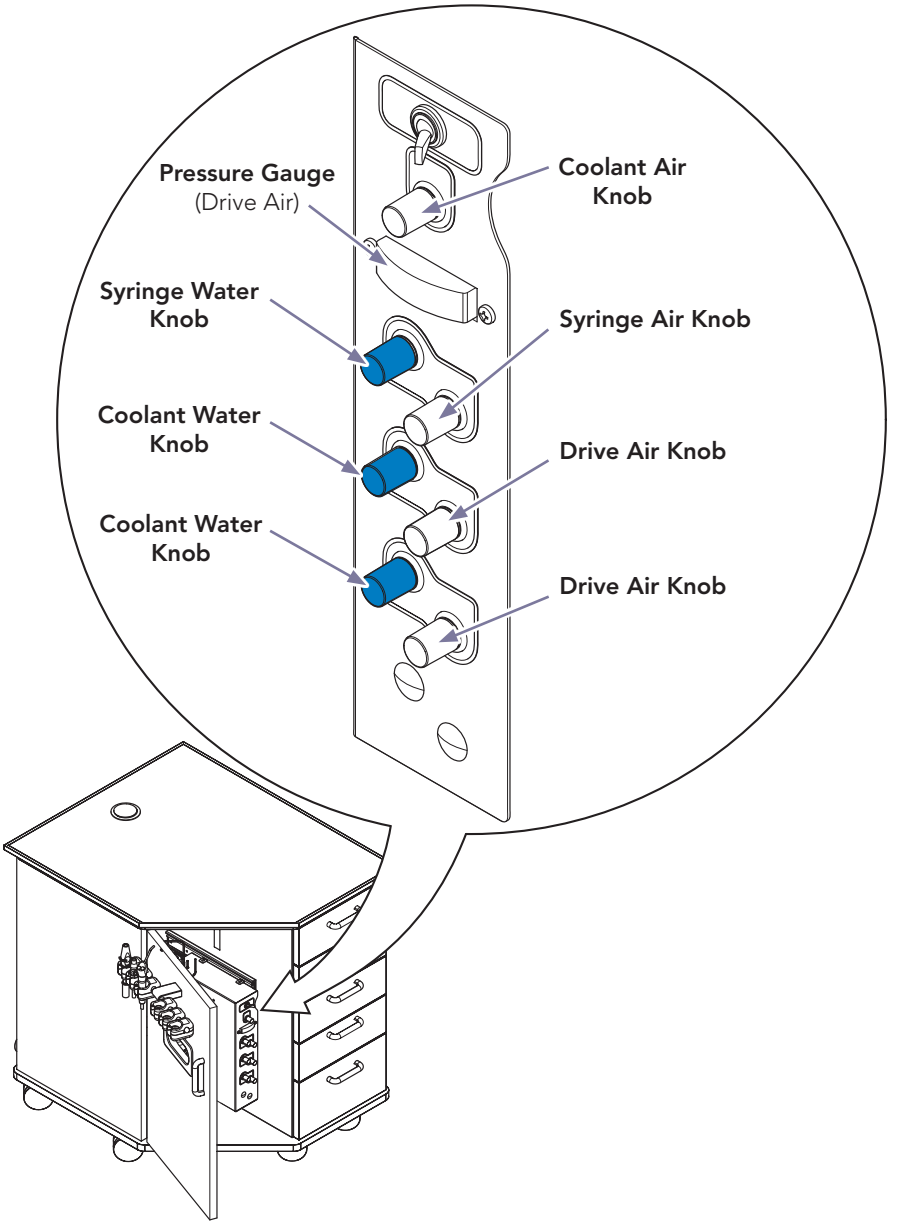
DA2531

To adjust the air/water spray pattern...

Rotate Coolant Air control knob until desired pattern is achieved.

Note: If your handpiece has an internal coolant air connection, this adjustment will have no effect.

Adjustment Knob Locations – Doctor's Instruments Control Panel



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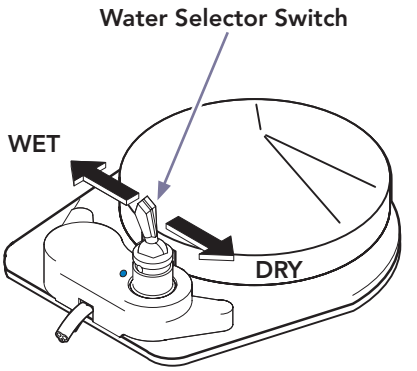
Syringe Operation and Adjustments

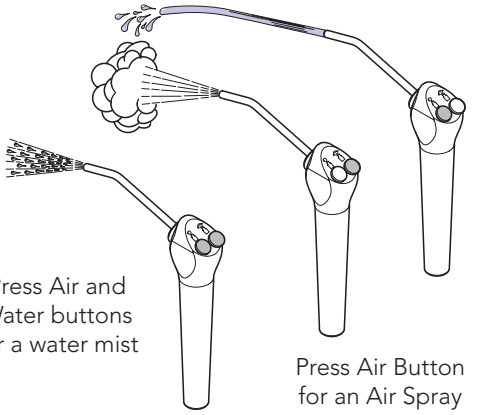
This page shows operation and adjustment for a standard three-way syringe.

Before you begin...

A) Turn Master Switch ON.

B) Position Water Selector Switch to Wet or Dry.

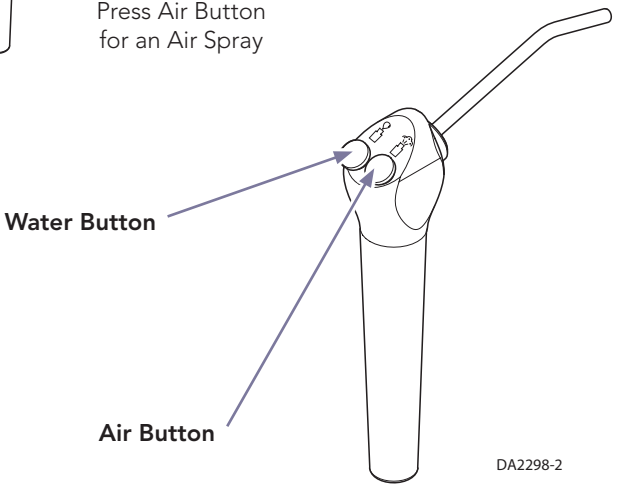




Press Water Button for a Water Stream

Press Air and Water buttons for a water mist

Press Air Button for an Air Spray



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Maintenance

Attention!
Midmark assumes no responsibility or liability for any result—expressed or implied. These are suggested practices based on the best information available at the time this is written.

Calling for Service

If service is required, contact your authorized Midmark dealer.

Note
Model / serial number information is required when calling for service.

Scheduled Maintenance Chart

Area	Frequency
Unit surfaces	as necessary
Hoses	as necessary
Vacuum system	as necessary
Solids collector	daily
Regulator filters (air/water)	every 3 months

Cleaning and Disinfecting

Use cleaners that are appropriate for the situation, such as warm water and mild detergents or a 10% solution of bleach with water.

Read all labels carefully!

Cleaning and Disinfecting Assistance

For assistance with cleaning and disinfecting instructions, contact the Midmark Technical Service Department at 1-800-Midmark. It is helpful to provide the delivery system model number and serial number when asking for assistance.

Below are some organizations to assist you in choosing the best disinfectants available for your practice..

Association for Dental Safety (ADS) [formerly known as OSAP]: myads.org	**Dept. of Health & Human Resources, U.S Centers for Disease Control and Prevention (CDC):** cdc.gov
American Dental Association: ada.org	**European Dental Association:** eda-eu.org

Barriers

Single-use barriers and disposable items significantly reduce the need for chemical cleaners, thus prolonging the life of the equipment. Barrier material must be impervious to moisture / fluids.

Examples of protective barriers:

- Plastic covers (available from your dealer or equipment manufacturer)
- Clear plastic wrap
- Plastic bag
- Plastic sheets
- Plastic tubing
- Plastic-backed paper
- Materials similar to those listed here

Waterline Maintenance

Waterline maintenance is necessary to keep the count of heterotrophic bacteria from rising higher than desired levels. The desired level for a specific location should be determined by any local or regional guidelines. For example, The United States Centers for Disease Control and Prevention (CDC) guideline for heterotrophic bacteria is less than or equal to 500 CFU/mL (colony forming units per milliliter). Midmark recommends keeping this level under 200 CFU/mL.

Treatment can come in many forms. The most popular methods on the market currently are tablets and straw/cartridge based systems. Midmark recommends the use of a straw/cartridge based system that keeps the bacteria levels in check.

Regular monitoring should also take place to ensure that heterotrophic bacteria is not exceeding the desired limit. If the level is higher than desired, a shock treatment of the waterlines should be performed. When performing a shock treatment, be sure to check with the manufacturer of the regular treatment regimen being used to ensure chemical compatibility. Monitoring frequency should be established by your practice. As a suggestion, Midmark would recommend that you begin by monitoring on a monthly basis and make adjustments to the frequency based on test results.

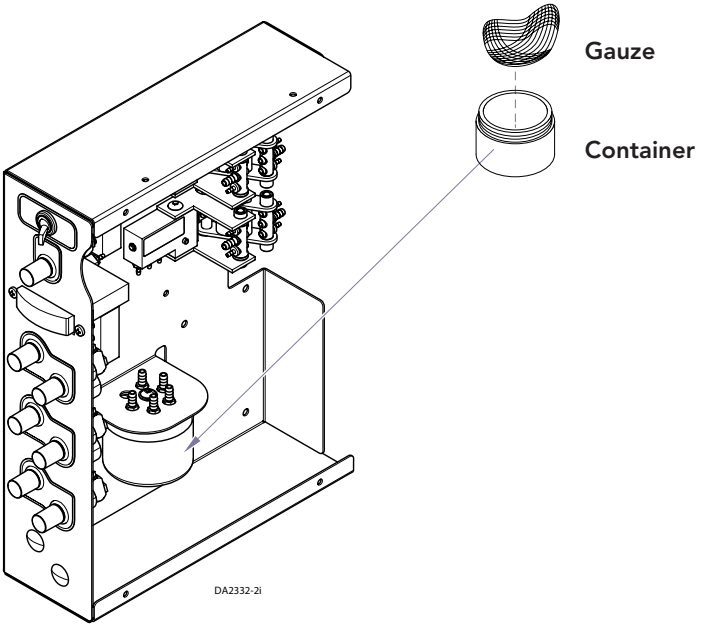
Per the CDC, routine flushing of the waterlines should be performed between every patient. Extra flushing may be needed within Midmark equipment when tablets are used. Undissolved tablet particles can gather over time in places within the waterlines, obstructing the line and causing water flow to slow. By flushing the waterlines, water flow is maximized and should push any undissolved particles through.

Air/Oil Separator – Cleaning and Maintaining

Periodically check the fluid level in air/oil separator container. When container is approximately 2/3 full, clean air/oil separator as described below.

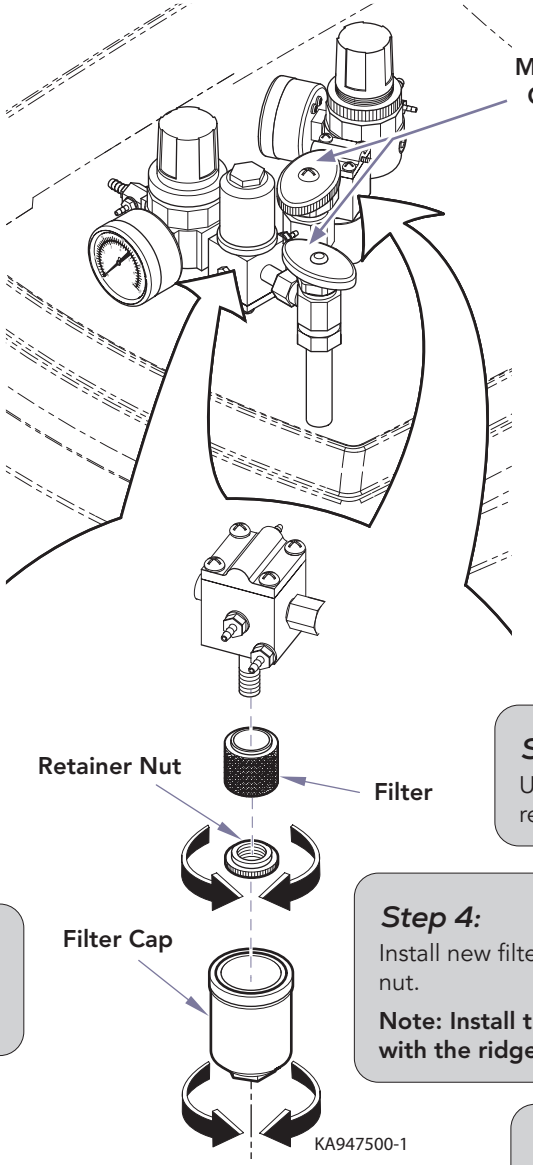
To clean the air/oil separator...

A) Turn master ON/OFF switch to OFF.
B) Remove (unscrew) air/oil separator container.
C) Dispose of the fluid and saturated gauze (per local codes).
D) Disinfect container and mounting cap.
E) Install clean gauze and reinstall the container.



Maintaining and Replacing the Regulator Filters

Step 1:
Close manual valves to turn off water and air supplies to operatory.



Step 2:
Unscrew filter cap.

Note: Use 9/16" wrench.

Step 3:
Unscrew retainer nut and remove filter.

Step 4:
Install new filter and secure with retainer nut.

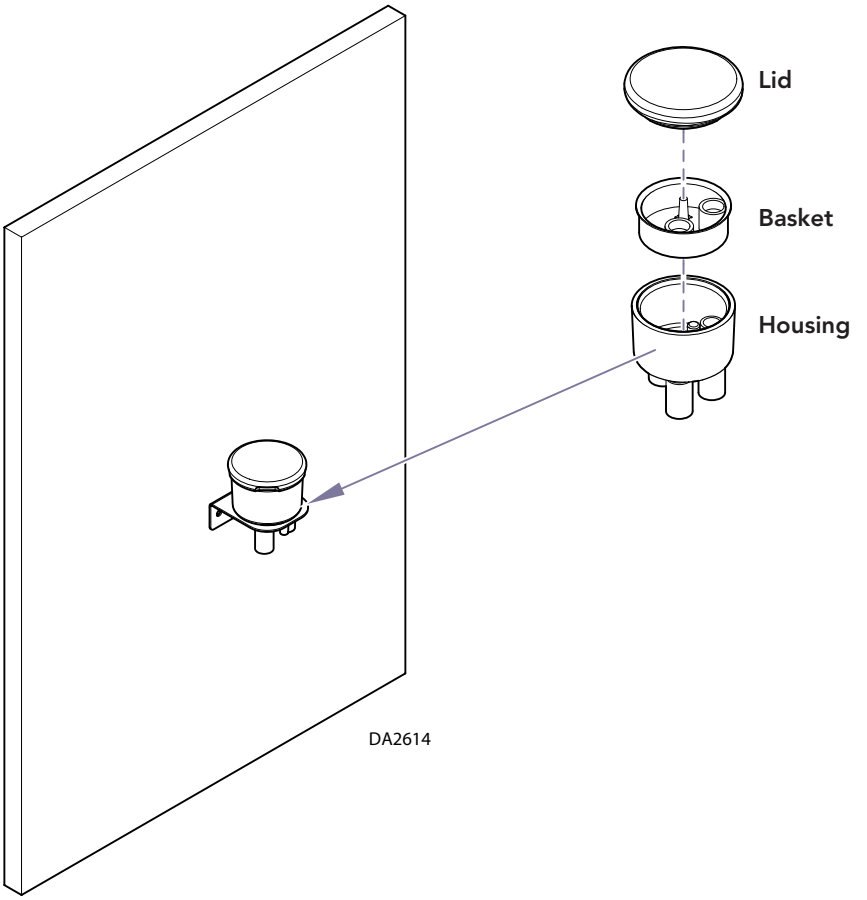
Note: Install the filter and retainer nut with the ridged side up (as shown).

Step 5:
Reinstall filter cap.

Assistant's Unit – Cleaning

Caution
Always dispose of biohazardous debris according to local regulations.

To clean the solids collector...
A) Turn facility vacuum OFF.
B) Remove lid and basket.
C) Clean basket and housing.
D) Re-install basket and lid.



To clean the facility vacuum system...
Refer to instructions provided by the vacuum system's manufacturer.

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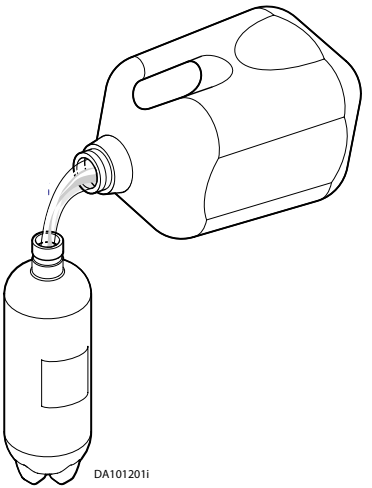
Cleaning the Delivery System (beginning of each day)

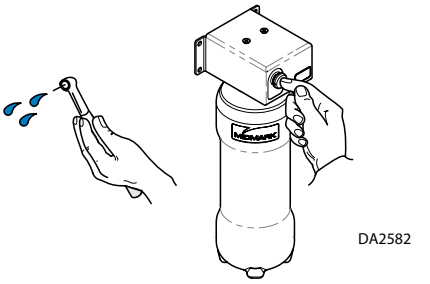

DA101201i

At the beginning of each day...

A) Fill the self-contained water bottle with fresh water.

B) Perform a purging procedure.

Note: See "Purging Procedure for the Delivery" in this guide.


DA2582

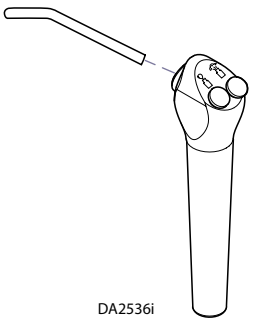
Note:
Water must be safe for drinking. Distilled water is not required.

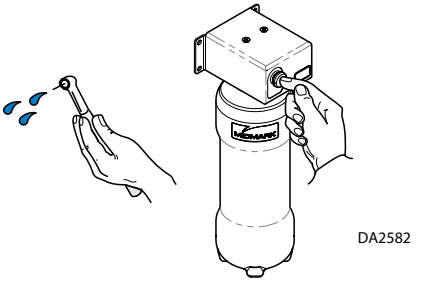
For each new patient...

A) Replace disposable tips, instruments, etc.

B) Perform a purging procedure.

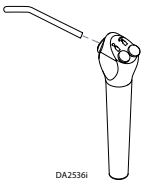
Note: See "Purging Procedure for the Delivery" in this guide.


DA2536i


DA2582

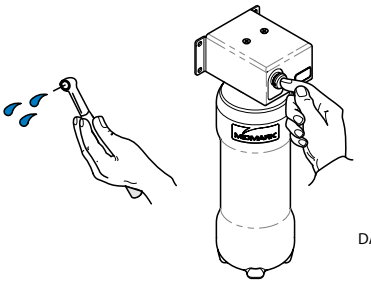
Cleaning the Delivery System (end of each day)

At the end of each day...



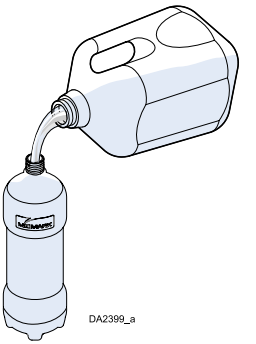
A) Remove disposable tips, instruments, etc.

B) Clean and disinfect the delivery system (see "Cleaning and Disinfecting in this guide).



C) Fill the water bottle with fresh water and perform a purging procedure.

Note: See "Purging Procedure for the Delivery" in this guide.

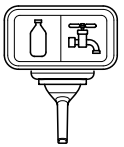


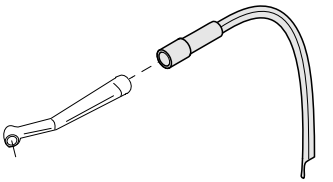
D) Turn Master Switch OFF.
Press and hold the foot control pedal until all pressure is released.

Purging Procedure for the Delivery

Note
Purging procedure removes debris from tubing to the handpieces and syringe. Performing this procedure frequently may help to reduce the accumulation of biofilm on your instruments.

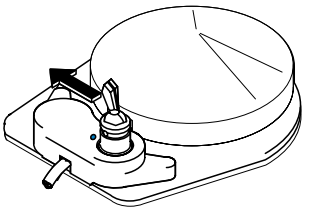
Caution
Hold the tubing and syringe over a container or drain while flushing.

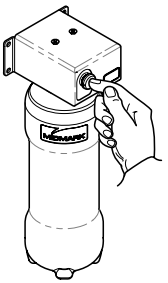


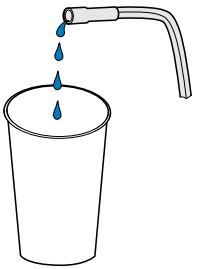


To begin the purging procedure...

A) Turn Master Switch ON.
B) Turn Water Selector Switch to bottle setting
C) Move the foot control switch to the wet setting.
D) Disconnect handpiece from tubing.





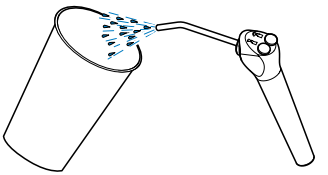


Flush the tubing to the handpieces...

A) Press and hold the foot control pedal for 30 seconds.
B) Press and hold the flush button for 30 seconds.
C) Repeat for all tubing to the handpieces.

Flush the syringe tubing...

A) Press and hold both syringe buttons (air and water) for 30 seconds.



DA2559

Scheduled Maintenance

Interval	Inspection/Service	Description
Weekly	Clean	Wipe painted metal and plastic surfaces with a clean soft cloth and mild soap and water solution.
	Obvious Damage	Visually inspect components for damage that could result in unsafe operation.
Every 6 months	Labels/Decals	Replace any missing or illegible labels.
	Hardware	Check for any loose or missing fasteners. All fasteners must be present and securely fastened.
Date of Service: Location: Service Technician:		Model Number: Serial Number: Notes:

Specifications

Specifications Chart

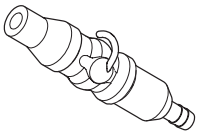
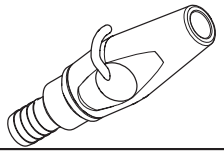
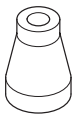
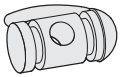
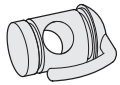
Handpiece	
Connection Type	Midwest 4-Hole Type Handpiece
Water Module	
Reservoirs	Two 1-Liter – Toggled
Pressurized System	30 PSI
Aseptic	Non-Retracting HPC Coolant
Electrical (illuminated handpiece only)	
Power Supply	115V~, 60Hz, 0.6 amp

Model Identification / Compliance Chart

Model	Description	Complies To:
		UL/IEC 60601-1 CAN/CSA C22.2 No.601.1
153839-013	Ortho Cabinet w/ Doctor's and Assistant's Instruments	•

Replacement Parts

These replacement parts can be purchased from your authorized Midmark dealer.

Saliva Ejector Valve Part Number 029-3975-00		HVE Handpiece Valve Part Number 029-5101-00	
Solids Collector Basket Small Assistants Cabinet Mounted (1) 118613 (50) 002-10259-00		Syringe Tip Part Number 120514	
Saliva Ejector Tip Part Number 016-1116-00		Regulator Valve Filter Part Number 053-1166-00	
Saliva Ejector Lever Part Number 016-1113-00		HVE Lever Part Number 016-1109-00	 DA2304-1

Warranty Information

SCAN ME

Warranty Registration

SCAN ME

60 Vista Drive
Versailles, OH 45380 USA
1.800.643.6275
midmark.com

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