



Cabinet-Mounted Procenter Delivery Unit

For Models:
153839 (-001 thru -004)



User's Guide

Style P

003-2196-00 Rev AA5 (7/18/2019)

Product Information

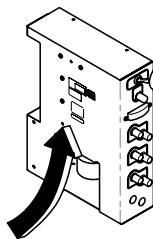
Dealer :

Date of Purchase:

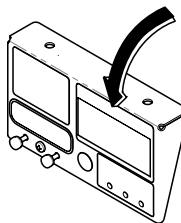
Model / Serial Number:

Midmark Authorized Service Company:

**Model / Serial
Number Location**



**Units with Doctor's
Instruments**



**Units with Assistant's
Instruments Only**

Product Registration

To register your product warranty, go to www.Midmark.com.

Calling for Service

Note

Model / Serial number information is required when calling for service.

If service is required, contact Midmark directly:

1-800-Midmark (1-800-643-6275) or 937-526-3662
8:00 am until 5:00 pm, Monday through Friday (EST)
[excluding standard U.S. holidays]

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Important Information

Safety Symbols

These symbols may appear on your equipment and/or in the manuals. Warning and cautions are provided in the manuals where applicable.



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.



Proper Shipping Orientation



Fragile



Keep Dry



Refer to instruction manual/booklet



Type BF, Applied Part



Manufacturer



Atmospheric Pressure



Relative Humidity



Transportation & Storage Temperature



Type B Applied Part



AC (alternating current)



Catalogue Number



Serial Number

Transportation / Storage / Operation Conditions

Transportation / Storage Temperature Range: 23°F to 100°F (-5°C to 38°C)
Relative Humidity..... 10% to 90% (non-condensing)
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.

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 the 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.



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.

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.

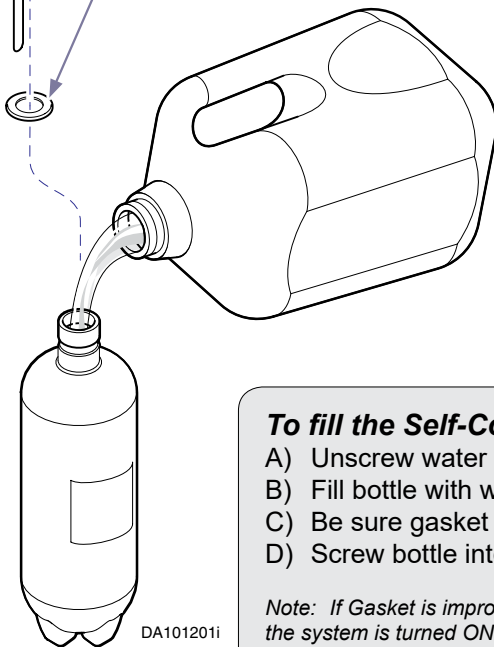


Mounting Cap

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.)

Gasket



NOTE

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

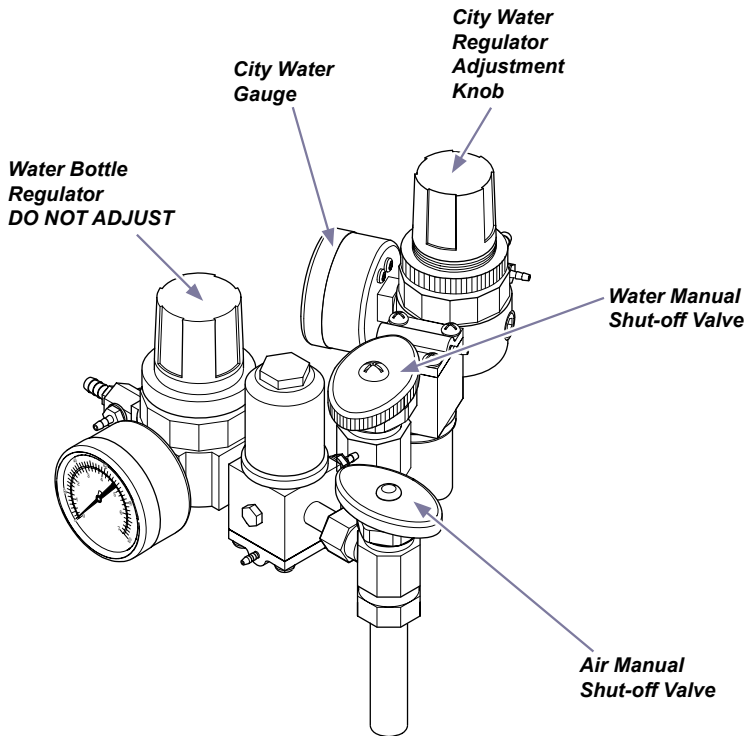
To fill the Self-Contained Water System bottle...

- A) Unscrew water bottle.
- B) Fill bottle with water.
- C) Be sure gasket is in place (in mounting cap).
- D) Screw bottle into mounting cap.

Note: If Gasket is improperly sealed, you will hear a hissing noise when the system is turned ON.

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 operator. Shutting off valves is recommended during extended periods of non-use (ex. vacation, holidays, etc...), or in 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 <u>NOT</u> adjust

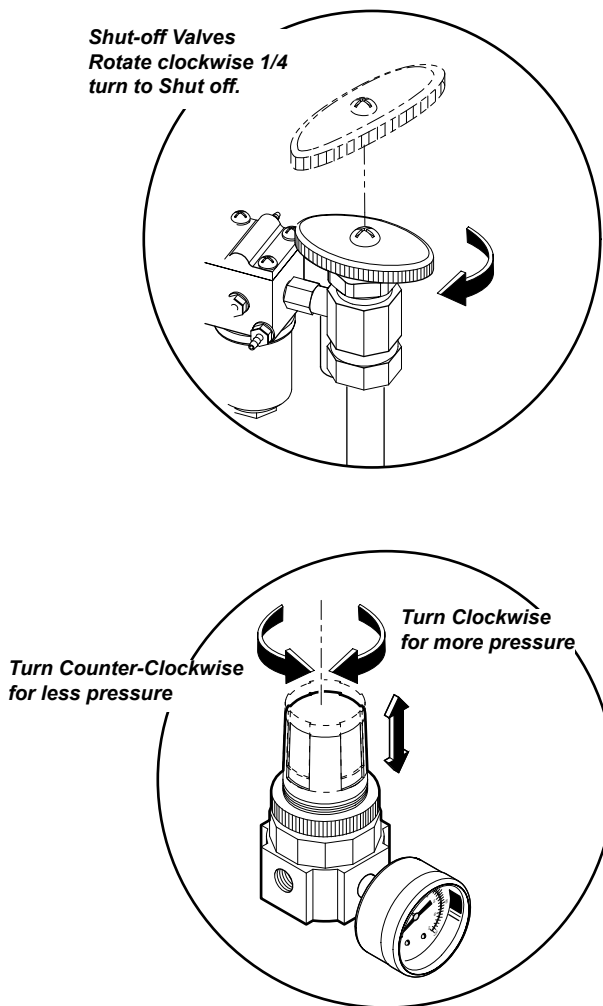


Equipment Alert

Delivery components were designed to operate at the recommended settings. Poor performance or damage to equipment may result if recommended settings are not maintained.

Pressure Regulator Valves

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



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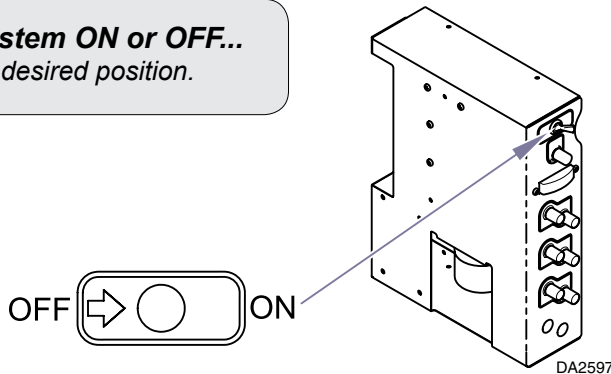
To Adjust the Pressure Regulators...

- 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 delivery system.

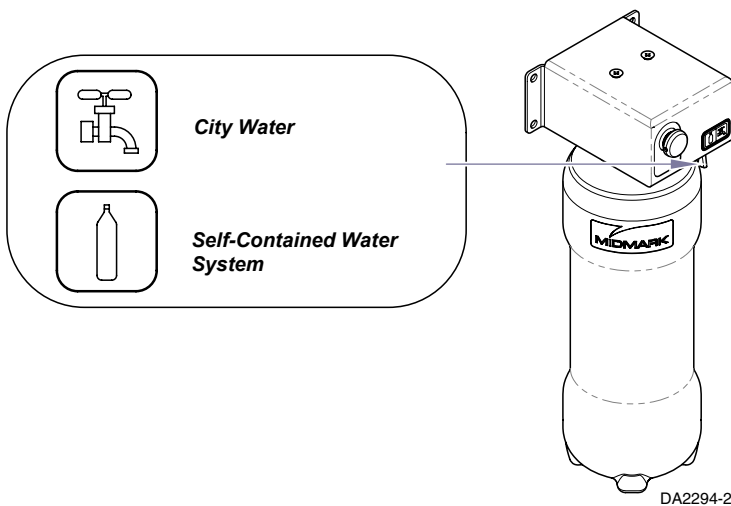
To turn the Delivery System ON or OFF...
Move the Master Switch to desired position.



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.

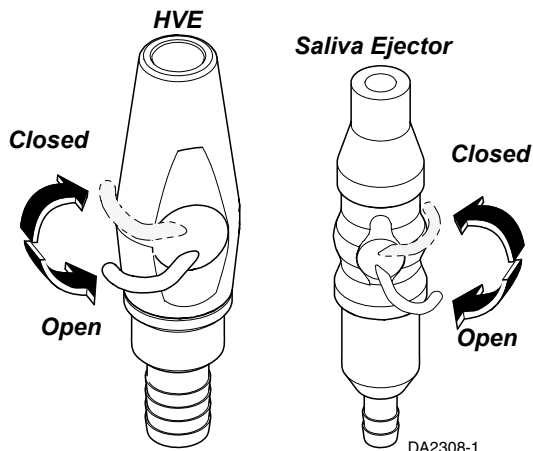
To select a water source...
Toggle the switch to select desired water source.



HVE and Saliva Ejectors

Before you begin...

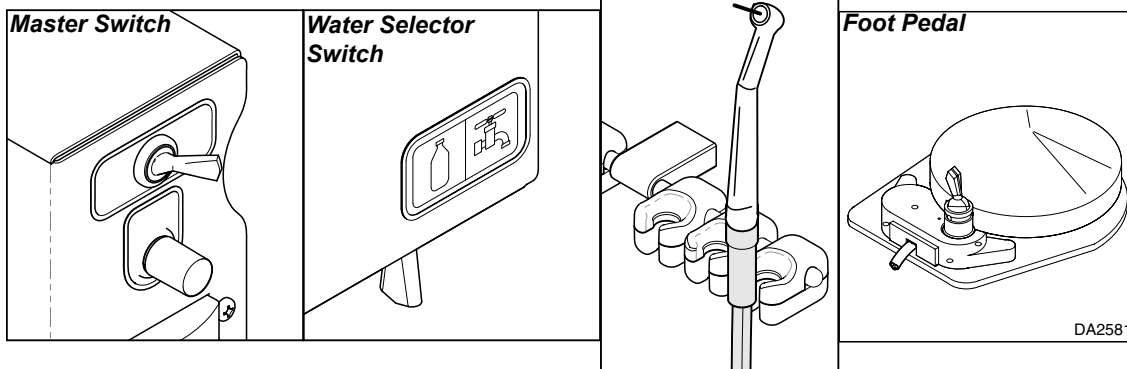
- A) Turn facility vacuum system ON.
- B) Move lever to towards the OPEN position to activate and moderate suction for the HVE / Saliva Ejector.



Operating Handpieces

To operate handpiece...

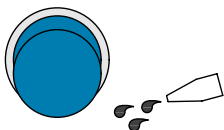
- A) Turn Master Switch ON.
- B) Move Water Selector Switch to desired setting.
- C) Remove handpiece from holder.
- D) Press foot pedal to deliver selected drive air/water to handpiece.



Handpiece Controls

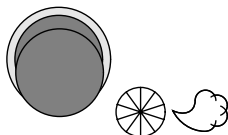
Each handpiece has its own Drive Air control knob and its own Coolant Water control knob.

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



To adjust the Coolant Water...

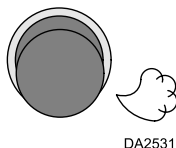
Rotate the Coolant Water control knob for the desired handpiece, until the desired flow is achieved.



To adjust the Drive Air pressure...

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

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



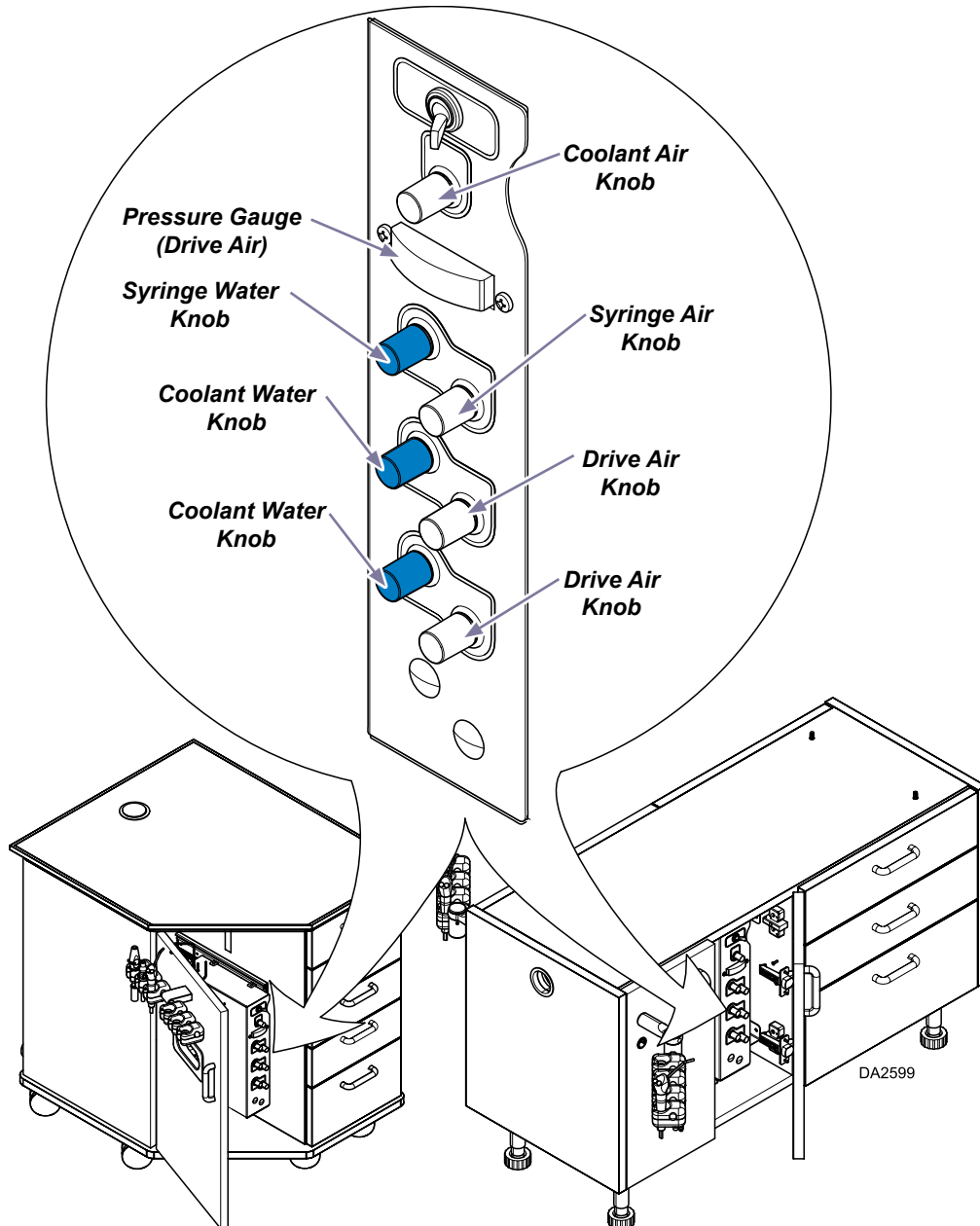
To adjust the air/water Spray Pattern...

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

Doctors Instruments Control Panel

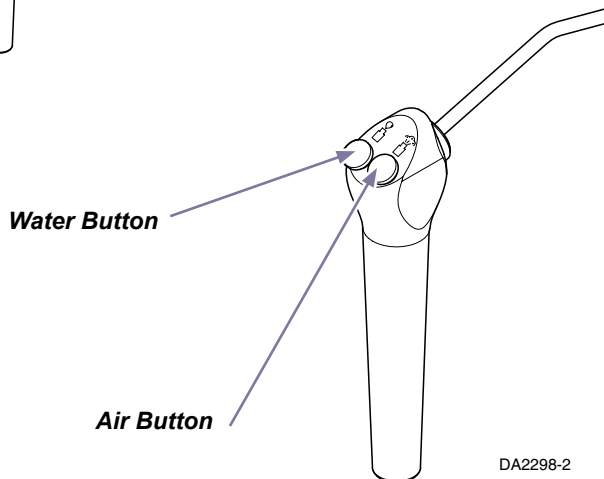
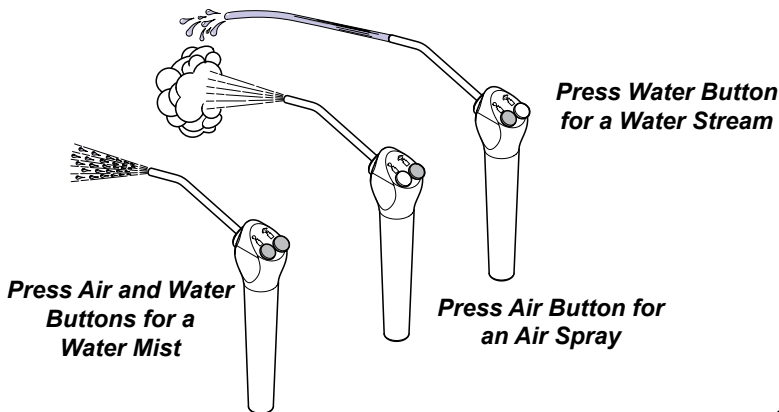
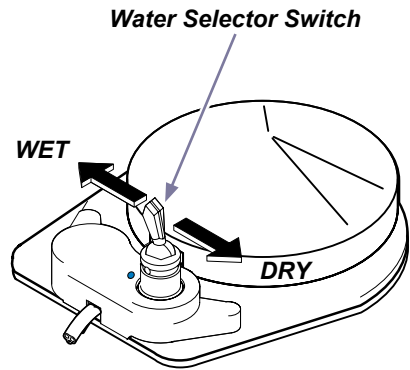


Syringe Operation and Adjustments

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.

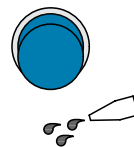


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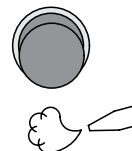
Adjustment Knob Location

Pedo Assistant Syringe

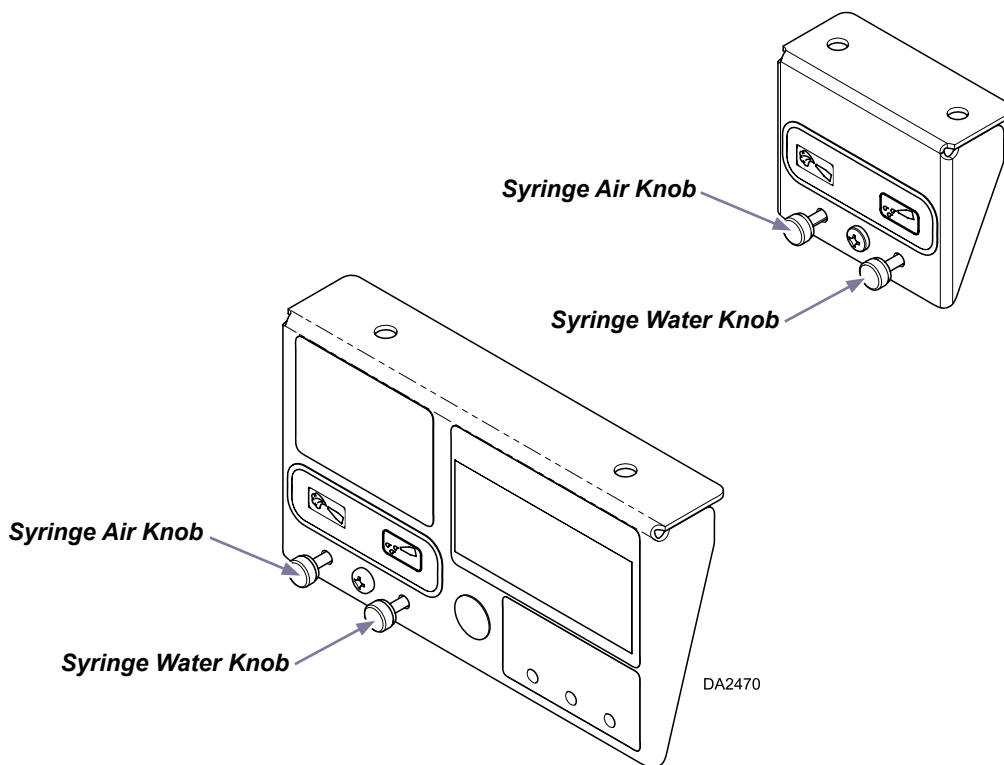
To Adjust the Water stream pressure and Water Spray pattern...
Rotate syringe Water control knob as desired.



To Adjust the Air Spray pressure and Water Spray pattern...
Rotate syringe Air control knob as desired.



Used with Pedo Dr and Assistant System



Use with Pedo Assistants Only

Cleaning / 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 this time this is written..

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

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



Read all labels carefully!



Cleaning and Disinfecting

Cleaning Procedures

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

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 maybe 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.

Cleaning / Maintenance

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.

Additional information is available from the organizations listed below:

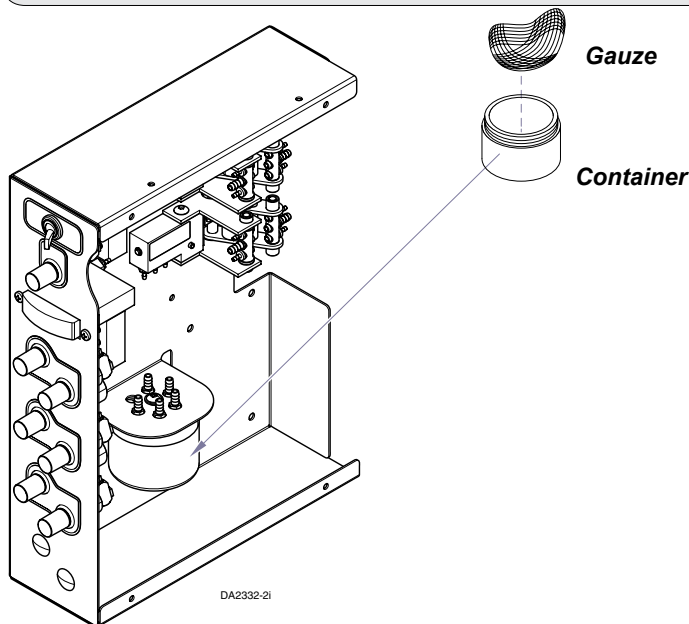
Organization for Safety & Asepsis Procedures: http://www.osap.org	Dept. of Health & Human Resources, Centers for Disease Control & Prevention (CDC): http://www.cdc.gov
American Dental Association: http://www.ada.org	European Dental Association: http://www.eda-eu.org

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 shown below.

To clean the air/oil separator...

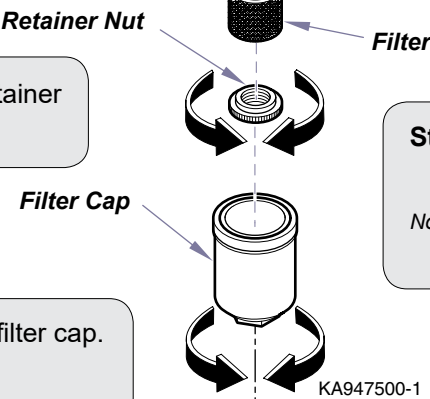
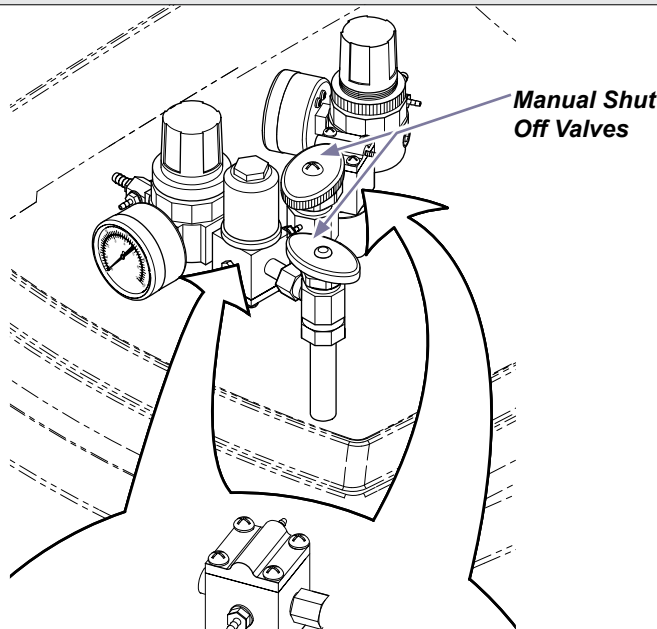
- A) Turn master ON/OFF switch OFF.
- B) Remove (unscrew) air/oil separator container.
- C) Dispose of the fluid and saturated gauze, per local codes.
- D) Disinfect container and mounting cap.
- E) Install clean gauze and reinstall the container.



Cleaning / Maintenance

Maintaining and Replacing the Regulator Filters

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



Step 3: Unscrew retainer nut and remove filter.

Step 2: Unscrew filter cap.

Note: Use 9/16" wrench.

Step 4: Install new filter.
Secure with retainer nut.

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

Step 5: Reinstall filter cap.

Cleaning / Maintenance

Assistant's Units - Cleaning

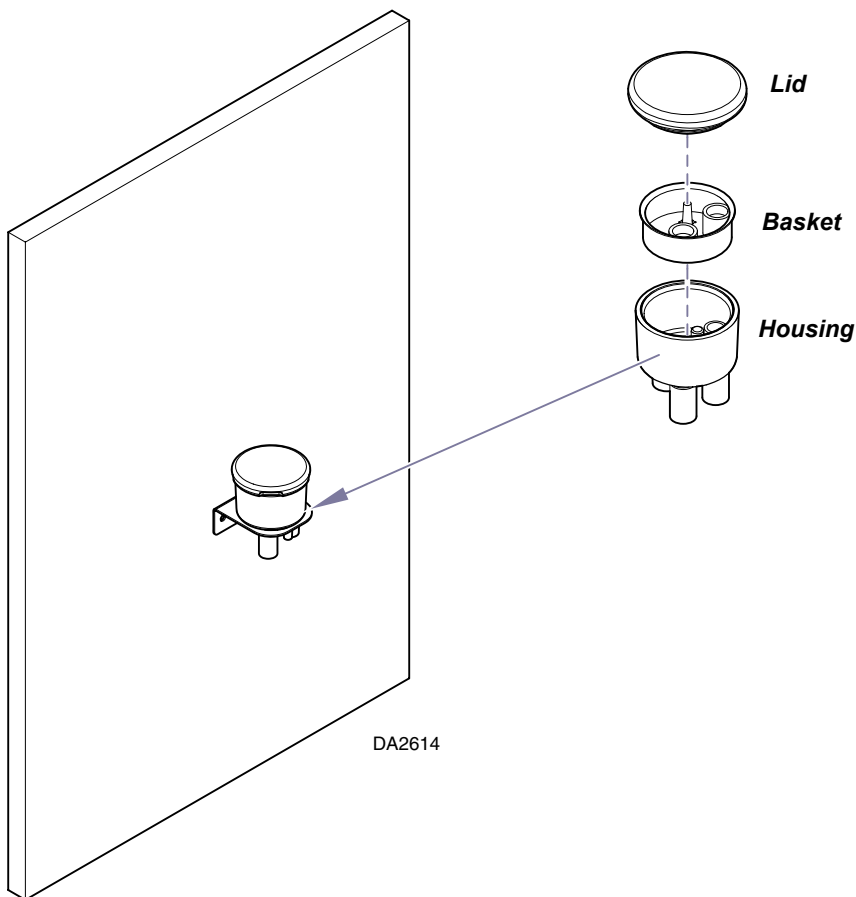


Caution

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.

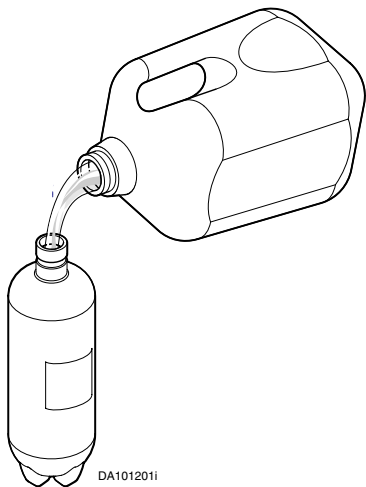


To clean the facility vacuum system...

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

Cleaning / Maintenance

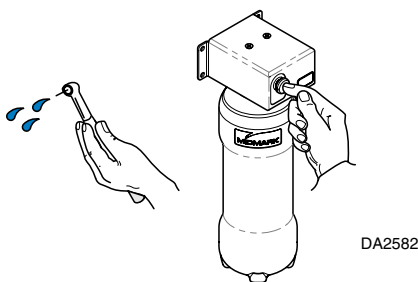
Cleaning the Delivery System



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 described in this manual.



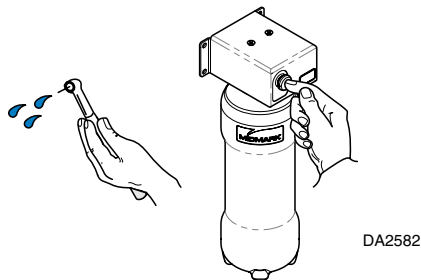
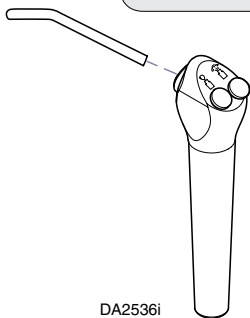
Note:

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

For each new patient...

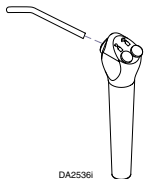
- A) Replace disposable tips, instruments, etc.
- B) Perform a Purging Procedure.

Note: See Purging Procedure described in this manual.



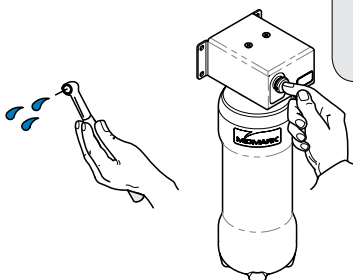
Cleaning the Delivery System -At the end of each day.

At the end of each day...



DA2536i

A) Remove disposable tips, instruments, etc.

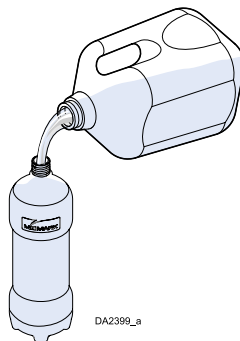


DA2582

B) Clean and disinfect the delivery system (see Cleaning and Disinfecting instructions).

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

Note: See Purging Procedure described in this manual.



DA2399_a

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



DA2538i

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.



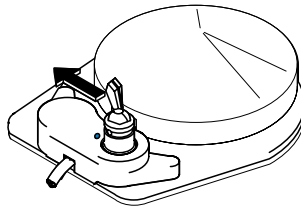
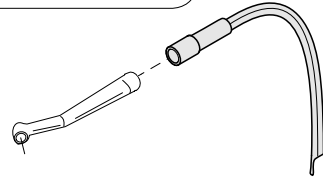
Caution

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



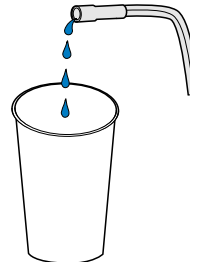
To begin the purging procedure...

- 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.



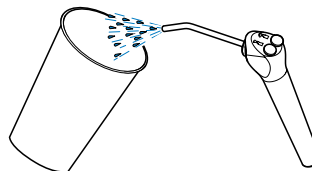
Flush the tubing to the handpieces...

- 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.



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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:		Model Number:
Location:		Serial Number:
Service Technician:		Notes:

Specifications

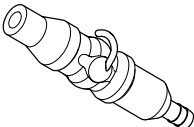
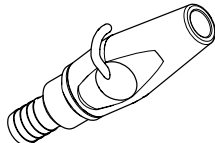

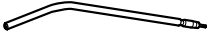
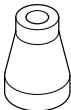

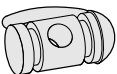

<i>Handpiece</i>	
Connection Type	Midwest 4-Hole Type Handpiece
<i>Water Module</i>	
Reservoirs	Two - 1 Liter - Toggled
Pressurized System	30 PSI
Aseptic	Non-Retracting HPC Coolant
<i>Electrical (Illuminated Handpiece Only)</i>	
Power Supply	115V~, 60Hz, 0.6 amp

Model Identification / Compliance Chart

Model	Description	Complies To:
		UL / IEC 60601-1 CAN / CSA C22.2 No.601.1
153839-001	Pedo Bench w/Doctor's & Assis- tants Instruments	•
153839-002	Pedo-Bench w/ Assistant's Instruments Only	•
153839-003	Ortho Cabinet w/Doctor's & Assistant's Instruments	•
153839-004	Cabinet Mount w/Doctor's Instruments Only	•

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

Midmark Limited Warranty - Dental Products

SCOPE OF WARRANTY

Midmark Corporation (“ Midmark”) warrants to the original retail purchaser that it will at Midmark’s option repair or replace components of the dental products manufactured by Midmark (except for components not warranted under “Exclusions”) that are defective in material or workmanship under normal use and service. Midmark’s obligation under this limited warranty is limited to the repair or replacement of the applicable components. This limited warranty shall only apply to defects that are reported to Midmark within the applicable warranty period and which, upon examination by Midmark, prove to be defective. This warranty extends only to the first retail purchaser of a product and is not transferable or assignable. Replacement components or products may be used and/or refurbished components or products, provided they are of like quality and specifications as new components or products.

APPLICABLE WARRANTY PERIOD

The applicable warranty period, measured from the date of delivery to the original user, shall be as follows: Effective March 1, 2018 these applicable warranty periods are measured from the date of invoice to the original user, shall be as follows:

1. OPERATORY PRODUCTS

- a. Five (5) years for all products (except for the items in (b) through (e)).
- b. Two (2) years for upholstery (chairs and stools).
- c. “KINK-VALVE” module carries a ten (10) year warranty.
- d. The original light bulb on a new light carries a one (1) year warranty.
- e. Accessories not manufactured by Midmark are excluded including but not limited to Bien Air handpiece systems, Dentsply Cavitron scaler, Satelec scaler and curing light, and Sopro cameras.

2. ORAL SURGERY PRODUCTS are warranted for a period of one (1) year.

3. STERILIZER PRODUCTS are warranted for a period of one (1) year.

4. ULTRASONIC CLEANER PRODUCTS are warranted for a period of two (2) years.

5. AIR AND VACUUM PRODUCTS

- a. PowerAir® oil-less compressors – Five (5) years or 3,500 hours of use, whichever occurs first.
- b. PowerVac® and PowerVac® G dry vacuums – Five (5) years or 10,000 hours of use, whichever occurs first (except that the vacuum pump warranty term is ten (10) years or 20,000 hours of use, whichever occurs first).
- c. Classic Series® wet-ring vacuums – Five (5) years or 10,000 hours of use, whichever occurs first.
- d. PowerMax surgical suction – Two (2) years.
- e. Hg5 Series Amalgam Separator - One (1) year. (f) Midmark manufactured accessories - One (1) year.

6. SYNTHESIS™ DENTAL CASEWORK AND ARTIZAN® EXPRESSIONS PRODUCT

- a. Five (5) years for all products and components including door and drawer fronts, casters and slides, except for the items in (b), (c) and (d).
- b. Three (3) years for electrical components such as task lights/LED lights, cords, controls and accessories.
- c. Two (2) years for sliding track monitor mount and components and upholstery. (d) One (1) year for countertops and resin, including accessories.

Warranty Information continued...

7. IMAGING PRODUCTS are warranted for a period of two (2) years except for the ClearVision CR reader which is warranted for a period of one (1) year.
8. MIDMARK Replacement Parts and Accessories carry a ninety (90) day warranty

EXCLUSIONS

This warranty does not cover and Midmark shall not be liable for the following;

1. defects, damage or other conditions caused, in whole or in part, by misuse, abuse, negligence, alteration, accident, freight damage, negligent storage, tampering or failure to seek and obtain repair or replacement in a timely manner;
2. products which are not installed, used, and properly cleaned and maintained as required or recommended in the Midmark "Installation" and/or "Installation/Operation Manual" for the applicable product, including the specified structural and operational environment conditions and electrical power requirements;
3. products considered to be of a consumable or sterile nature;
4. accessories or parts not manufactured by Midmark;
5. charges by anyone for adjustments, repairs, replacement parts, installation or other work performed upon or in connection with such products which are not expressly authorized in writing in advance by Midmark
6. costs and expenses of routine maintenance and cleaning;
7. representations and warranties made by any person or entity other than Midmark;
8. matching of color, grain or texture except to commercially acceptable standards;
9. changes in color caused by natural or artificial light;
10. custom manufactured products;
11. alterations or modifications to the product by any person or entity other than Midmark; and
12. Products that would otherwise be covered under Sections 1 and 2 of this limited warranty, but are acquired: (i) from a person or entity that is not Midmark or one of its authorized dealers; or (ii) from a Midmark dealer that is not authorized to sell the product at issue in the geographic territory where the purchaser is located, or is not authorized to sell the product at issue within the medical, animal health or dental market, as the case may be, in which purchaser intends to use the product.

EXCLUSIVE REMEDY; CONSEQUENTIAL DAMAGES DISCLAIMER

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STATUTE OF LIMITATIONS

No action may be brought against Midmark for breach of this limited warranty, or implied warranty, if any, or for any other claim arising out of or relating to the products, more than ninety (90) days following expiration of the limited warranty period.

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