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Solmetex Hg5® Amalgam Separator

Type 2 - Maximum Flow = 1000 ml/min

Installation and Maintenance Instructions

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Thoroughly read and understand instructions prior to installing, operating and servicing the Hg5® Amalgam Separator.



The waste stream treated by the Solmetex Hg5® is generated by a dental vacuum system and as such may contain concentrations of solid and soluble mercury and silver. Because of this, any spills should be considered hazardous and should be handled in accordance with standard hazardous materials (HAZMAT) handling procedures.

Full Collection Containers are a HAZMAT and should be handled, stored and disposed of according to regulations applying to hazardous waste containing mercury. Always wear protective gear when handling full Solmetex Hg5® collection containers (latex gloves, safety glasses or face shield) and dispose of per local regulations and codes.

Solmetex Warranty

Solmetex Hg5® Air Water Separators are warranted against defects in material and workmanship for a period of two (2) years from the date of purchase, established by proof of purchase or formal warranty registration. During the warranty period Solmetex will at its option repair or replace products that prove to be defective.

Solmetex Hg5® Collection Containers are warranted against defects in material and workmanship for a period of one (1) year from the date of purchase, established by proof of purchase or formal warranty registration. During the warranty period Solmetex will at its option repair or replace products that prove to be defective.

Labor, transportation and service charges are not included.

Limitations of Warranty

The warranty shall not apply to defects resulting from improper installation, maintenance, abuse, unauthorized modification, or operation outside of the environmental specifications for the product or damages that occur due to improper repackaging of equipment for return to Solmetex.

USE OF LINE CLEANERS HAVING A pH LESS THAN 6 OR GREATER THAN 10 WILL VOID THESE WARRANTIES.

For a complete list of recommended cleaners, visit our web site www.solmetex.com.

No other warranty is expressed or implied. Solmetex specifically disclaims the implied warranties of merchantability and fitness for particular purpose.

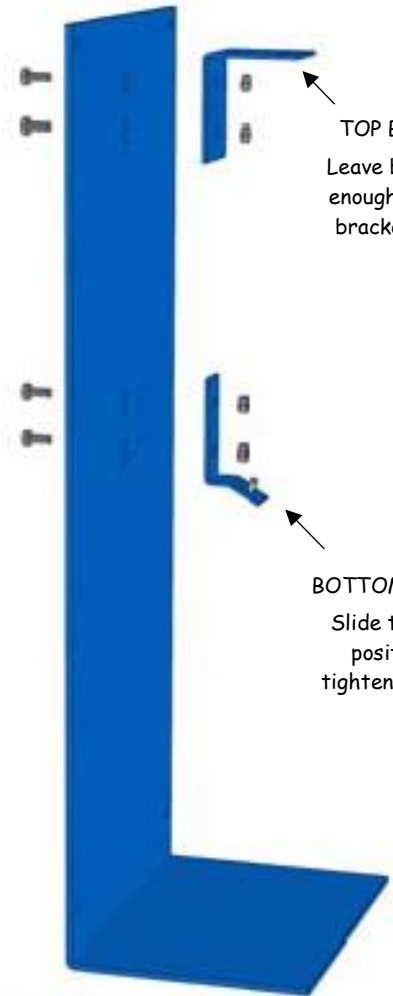
Exclusive Remedies

The remedies provided herein are the buyer's sole and exclusive remedies. Solmetex shall not be liable for any direct, indirect, special, incidental or consequential damages, whether based on contract, tort or any other legal theory.

Hg5® Amalgam Separator - Initial Set-Up



1




TOP BRACKET
Leave bolts loose enough to adjust bracket height.

BOTTOM BRACKET
Slide to highest position and tighten until snug.

2

A. Engage slot on pin (see detail). Rotate assembly into place (keeping slot engaged on pin). Push top bracket down over tabs until unit is secured in place.

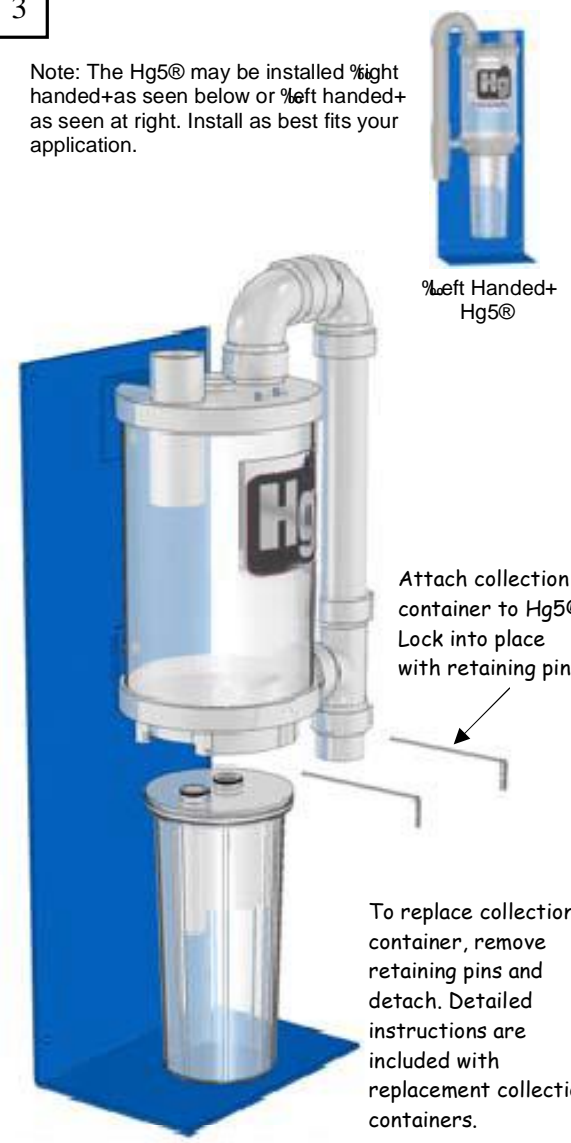
B. Tighten top bracket bolts until snug.



Detail: Slot must fully engage pin on lower bracket.

3

Note: The Hg5® may be installed right handed+as seen below or left handed+as seen at right. Install as best fits your application.



Attach collection container to Hg5®. Lock into place with retaining pins.

To replace collection container, remove retaining pins and detach. Detailed instructions are included with replacement collection containers.

Always wear protective gear when handling a full collection container.

Hg5® Installation Diagram



Treatment Rooms

Instructions

- Place in an easily accessed location for replacement of collection container.
- Place between treatment rooms and vacuum source. **DO NOT** connect to outlet of separating tank or water ring pump.
- See installation examples on page 4.
- Use provided inlet and outlet couplings. **DO NOT** glue plumbing to the Hg5® inlet and outlet.
- Securely mount or support the baseplate.
- If mounting to a wall, use the four (4) plastic standoffs (included), one on the back of each hole in the baseplate.
- Write the installation date on the collection container.
- Complete the registration form and return to SolmeteX.

Environmental Specifications

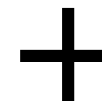
- Overall Dimensions:
11" W x 29" H x 8" D
- One Hg5® will serve up to five doctors.
- Minimize water lift height.
- Maximum Temperature = 120° F (52° C)
- Maximum Vacuum = 15" Hg (51 kPa)
- For dental use **ONLY**.



Tank Inlet



DO NOT connect Hg5®
to outlet of tank.

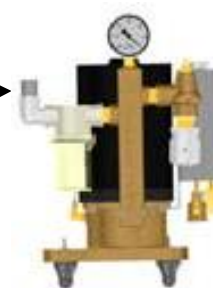


Dry vacuum unit



OR

Pump Inlet



DO NOT connect Hg5® to
outlet of the water ring pump.

Hg5® Installation Examples & Maintenance



INSTALLATION EXAMPLES



Hg5 w/ 15 Gallon Tank



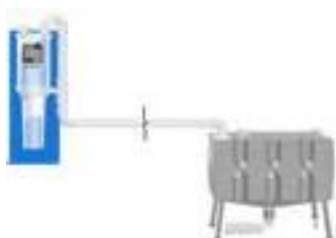
Hg5 w/ 50 Gallon Tank



Hg5 w/ 30 Gallon Tank



Hg5 w/ Water ring pump



Remote Hg5 w/ 15 Gallon Tank



Remote Hg5 w/ 50 Gallon Tank



Remote Hg5 w/ 30 Gallon Tank



Remote Hg5 w/ Dual water ring pump

MAINTENANCE

Line Rinsing & Vacuum Line Cleaners

Cleaners should have these qualities: Non-Foaming, De-Odorizing, Sanitizing & pH between 6 and 10.

USE OF LINE CLEANERS OUTSIDE OF THIS pH RANGE WILL VOID THE WARRANTY.

For a complete list of recommended cleaners, visit our web site www.solmetex.com.

WITH DENTAL VACUUM SYSTEMS: Follow manufacturers instructions.

Note: Plan to rinse no more than 5 rooms every 10 minutes. Limit the total maximum flow to the Hg5® during rinsing to 1 liter per minute. Rinsing too much or too rapidly can overflow the Hg5® and could affect the unit's efficiency.

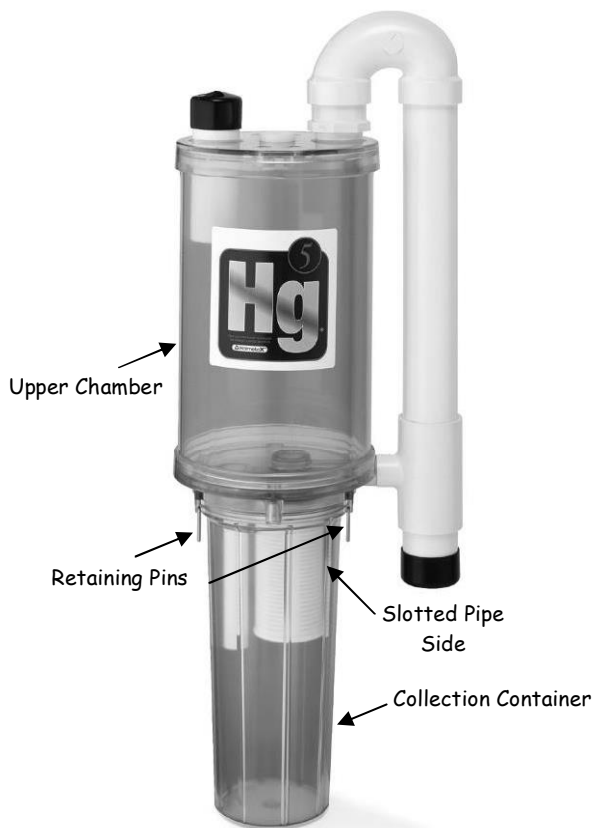
Collection Container Replacement - Follow instruction packed with replacement collection container.

CHECK THE SEDIMENT LEVEL OF THE COLLECTION CONTAINER WEEKLY.

Warning

The waste stream treated by the Hg5® is discharge from a dental vacuum system and as such may contain concentrations of solid and soluble mercury and silver. Because of this any spills should be considered hazardous and should be handled in accordance with standard hazardous materials (HAZMAT) handling procedures. Full Collection Containers are a HAZMAT and should be handled, stored and disposed of according to regulations applying to hazardous waste containing mercury. Always wear protective gear when handling full Hg5® collection containers (latex gloves, safety glasses or face shield) and dispose of per local regulations and codes.

NOTE: Solmetex offers a recycle kit for the safe disposal/recycle of full collection containers. Please contact your dental distributor to purchase an Hg5® Recycle Kit for the safe disposal of your full collection container.



Before you begin, observe the upper chamber of your Hg5® Amalgam Separator. If liquid is present in the upper chamber, wait until the liquid has drained down into the collection container before proceeding to replace the collection container.



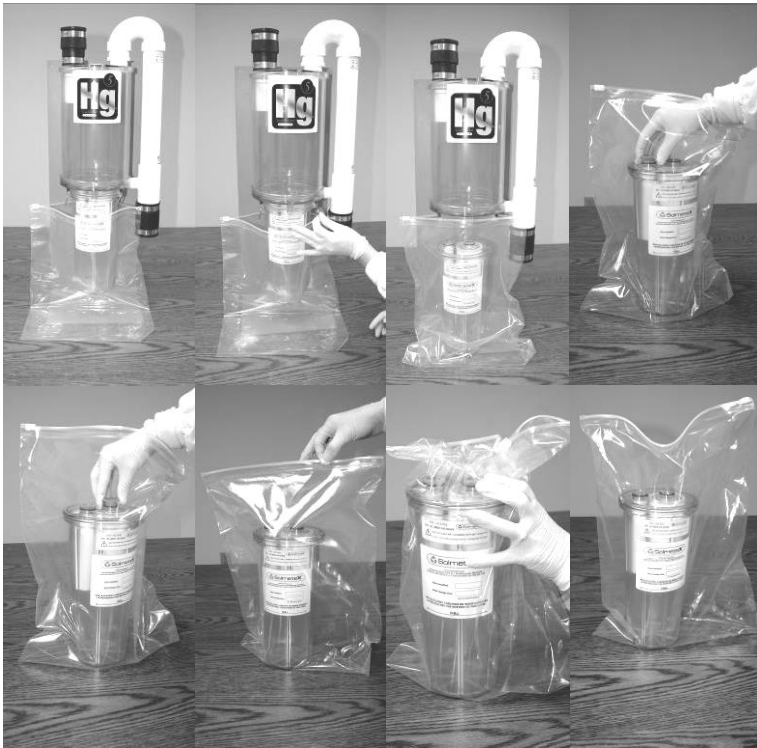
THIS PROCEDURE SHOULD BE PERFORMED ONLY WHEN NO PATIENTS ARE BEING WORKED ON AS LOSS OF CHAIRSIDE VACUUM MAY OCCUR. LEAVE THE VACUUM SYSTEM RUNNING DURING THE ENTIRE COLLECTION CONTAINER CHANGE OUT PROCEDURE!

1. Sanitize the vacuum system using the sanitization procedure established at your facility. It is good practice to leave the vacuum pump running for 5 to 10 minutes every time the system is sanitized in order to allow excess liquid time to evacuate the lines.

2. **SAVE THE SHIPPING CARTON FOR STORAGE OF YOUR FULL COLLECTION CONTAINER!**

Contents:

- a. One (1) Hg5® Instruction Sheet.
- b. One (1) Hg5® Collection Container.
- c. One (1) "zip lock" style Disposal Bag.



3. **With the vacuum system still running**, remove the full collection container from the Hg5® Unit as follows:
 - a. Open the slider lock bag (supplied) and slip it over the collection container to be removed.
 - b. Support the collection container with one hand, removing the retaining pins with the other hand. Tilt the collection container to release the element side receiver first (slotted pipe side - RIGHT side for right handed installation or LEFT side for left handed installation) and then pull down to release the entire collection container.

WARNING

Hold bag securely in the unlikely event that the upper chamber may contain some residual liquid that may drain during removal of the collection container.

- c. Remove the plastic caps from the inlet and outlet fittings of the new collection container.
- d. Place these caps into the inlet and outlet fittings of the full collection container.
- e. Squeeze out all excess air and zip the disposal bag closed.

4. **With the vacuum system still running**, Install your new collection container:

- a. The collection container can be installed only one way. Note the alignment of the fittings on the collection container with the receiver holes in the upper unit.
- b. Gently insert the fittings into the receiver holes. This can be accomplished by rocking the collection container slightly. The O-Rings on the fittings should seat easily into the upper unit receivers.
- c. Continue to push the collection container into the upper unit until it is fully seated.
- d. Insert the retaining pins into their holes until seated. The collection container is now locked into place.



5. Fill out the information label:

- a. Enter the "Date Installed" on the new collection container.
- b. Enter the "Next Change Due" on the new collection container.

NOTE: YOUR COLLECTION CONTAINER MUST BE CHANGED ONCE EVERY TWELVE (12) MONTHS OR WHEN THE SEDIMENT LEVEL REACHES THE FULL LINE, WHICHEVER OCCURS FIRST.

CHECK THE SEDIMENT LEVEL OF THE COLLECTION CONTAINER WEEKLY.

6. Note the vacuum gauge reading. The reading should be the same as before the collection container change.



SERVICE

The Hg5® is designed to provide years of trouble-free service, with minimal attention. In the unlikely event of system related problems, please consult the troubleshooting and maintenance chart below.

Problem: Little or No vacuum at the hand piece

1. Check sediment level of collection container, if full change the collection container.
2. If the vacuum gauge reads normally but there is little or no vacuum to the hand piece, there is probably a clog or a leak between the hand piece and the Hg5®.
3. If the vacuum gauge reads lower than normal these are the possible causes:
Did you just replace the collection container?
Yes:
Check installation of the new collection container. If the vacuum is low there is a possibility that the o-rings on the collection container did not seal into the receivers. Remove the collection container, check the o-rings and re-install per the collection container installation procedure.
No
If you have a solid collection cup (installed by others) - Check & Clean or replace element/screen if necessary.
Check operation of the vacuum pump.
 - b. Listen for vacuum leaks.
 - c. Check all connections for breaks or cracks.
 Check all flexible hose for kinks, breaks, or loose clamps.

Problem: Water in the Upper Chamber (Air Water Separator)

1. Check sediment level of collection container, if full change collection container.
2. Check the pH of vacuum line cleaner, if below 6 or above 10 change collection container and line cleaner. Visit www.solmetex.com for a recommended list of cleaners.
3. The transition from the Upper Chamber to the Collection Container could be clogged and require cleaning.
Procedure:
 - a. Turn off vacuum to the system.
 - b. Remove the rubber coupling at the top of the air/water separator.
 - c. Prepare a solution of line cleaner per manufacturer's specification and pour into the air/water separator.
 - d. Replace the rubber coupling at the top of the air/water separator.
 - e. Turn the vacuum on, and check the system for proper operation.
 - f. Remove the collection container (with the vacuum on).
 - g. Re-Insert the collection container and check to see that water exits the upper chamber.
3. Call your dental dealer.
 - a. If the problem cannot be solved easily, call or e-mail your dealer for support.

PARTS

Description	SolmetexX Part Number
Hg5® Mercury Removal Unit	HG5-001
Hg5® Collection Container & Recycle Kit	HG5-002CR
Hg5® Recycle Kit	HG5-002R
Hg5® Backplate	HG5-003
Hg5® Retaining Pins	HG5-009
Hg5® Air/Water Separator w/Manifold	HG5-AWSEP

Vacuum Line Cleaning Solution pH and Hg5® Performance

According to the American Dental Association (ADA) and regulators requiring Amalgam Separators, oxidizing line cleaners should not be used. Oxidizing cleaners can breakdown amalgam particles. Cleaners containing bleach (chlorine bleach, sodium hypochlorite) should never be used as chlorine is known to cause mercury to be released from amalgam.

Regulators have also become aware of pH related to line cleaners. Sewage treatment plants require discharges from their users to be between 5.5 and 10 on a pH scale. Some new amalgam separator regulations now require the use of line cleaners with neutral pH. Acidic (low pH) line cleaners have been known to hinder the operation of Amalgam Separators. Basic (high pH) cleaners can cause premature wear on materials used in amalgam separators.

Recommendations:

SolmeteX recommends the use of vacuum line cleaners that have a pH between 6 and 10. There are several cleaners with a pH near neutral (pH 7). Most of these rely on enzymatic processes. Below is a list of readily available cleaners that have pH ranges most compatible with the Hg5®. If the line cleaner you are currently using is not on the list feel free to contact SolmeteX for further information.

NAME	MANUFACTURER	pH (a, b)	
PureVac SC	Sultan	9.4	Recommended
BioVac	Micrylium	8.5	Approved
Bio-Pure eVacuation System Cleaner	Bio-Pure Products	6.6 . 7.4	Approved
BLAST	Preferred Dist., Inc.	6 . 7	Approved
Citrizyme	Pascal Company	7.7	Approved
EmPower	Metrex	6.5 . 8.6	Approved
Enzymax	Hu-Friedy	8.5 - 9	Approved
FRESH-VAC	Ecolab, Inc/Huntington	6.5 . 8	Approved
Hayes Evacuation Cleaner	Hayes Hendpiece	7.5	Approved
Medical Enzyme Detergent	Enzyme Solutions	6.5 . 7	Approved
Microvac	Microbex	9 . 10	Approved
Neutravac	Biotrol	7 . 8	Approved
Precision Clense Plus	Midmark	9 . 10	Approved
ProEZ	Cetrol Internation	7.4 . 8.3	Approved
Quala	Enzyme Industries	7.3 . 9.3	Approved
Sani-Soak Ultra	Enzyme Industries	8.5	Approved
SlugBuster	RAMVAC	8 . 8.5	Approved
SRG Evacuation Line Cleaner	Mydent International	6.4	Approved
Super Vac 40 Plus	EPR Industries	7 . 7.5	Approved
VacuCleanse Evacuation	Infection Control Tech	7.1	Approved

a) The pH data is taken from manufacturer MSDS sheets.

b) The Massachusetts Department of Environmental Protection requires the use of line cleaners with pH between 6.5 and 9.