

Installation & Operating Manual

amalsed[®] Silver powered by Apavia



GENERAL INFORMATION

This manual contains information on how to install, operate and maintain the amalsed® Silver amalgam separator.



The amalsed® Silver, powered by Apavia (registered as AVTMax®), is a type 2 amalgam separator, its US and International Patents are pending. Its mass flow is 1,000 milliliters per minute. The amalsed® Silver amalgam separator, powered by Apavia, confirms to ISO 11143:2008 and is certified by NSF International.

CONTACT INFORMATION

Distributor: medentex LLC
181 East Halsey Road
Parsippany, NJ 07054

Phone: 888-640-2527 (toll free)
E-mail: info@medentex.com

Manufacturer: Apavia LLC
Registered as Apavia® AVTMax®
34899 Curtis Boulevard
Eastlake, OH 44095

Phone: 844-235-3838 (toll free)
Fax: 440-571-4152

PRODUCT SUPPORT

If you have any questions or if you are encountering any difficulties while setting up or using our product, please contact **medentex** for further assistance. Our service professionals will be happy to assist you.

FOR YOUR SAFETY, PLEASE READ ALL INSTRUCTIONS PRIOR TO INSTALLING, OPERATING AND SERVICING THE amalsed® Silver AMALGAM SEPARATOR.

TABLE OF CONTENTS

Warnings and Product Specifications	Page 3
Warranty and Part Numbers	Page 4
Instructions	Page 5
Installation and Set-Up	Page 6
Maintenance, Service and Troubleshooting	Page 7
Separator Cartridge Replacement and Recycling	Page 8-10
Line Cleaning Solutions	Page 11

DISCLAIMER



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



Full separator cartridges are considered HAZMAT and should be handled, stored and disposed of according to regulations applying to hazardous waste containing mercury. Remember to wear safety protective gear such as gloves and goggles when handling full amalsed® Silver cartridges and dispose of per local codes and regulations.

PRODUCT SPECIFICATIONS

Overall Dimensions	(W x L x H) 9" x 11.5" x 16"
Capacity Separator Cartridge	1.5 L
Maximum number of chairs	10
Classification	Type 2 (Sedimentation System)
Maximum Temperature	120 °F / 52 °C
Maximum Vacuum	15 "Hg / 51 kPa
Maximum Flow Rate	1 L/min

WARRANTY

The amalsed® Silver air/water separators are warranted against defects in material and workmanship for two (2) years from the date of purchase. The amalsed® Silver separator cartridges are warranted for one (1) year from the date of purchase. During warranty period, medentex will at its sole discretion repair and/or replace products that prove to be defective at the original install point with established proof of purchase.

Labor and transportation are specifically not included.

The amalsed® Silver separator cartridges are warranted for one (1) year when utilized on a compatible/compliant amalgam air/water separator. medentex will honor all compatible/compliant amalgam air/water separator warranties.

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 in shipping due to improper repackaging of equipment for return to medentex. medentex specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

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

For a list of approved line cleaners, please see page 11 of this manual.

The remedies provided herein are the buyer's sole and exclusive remedies. medentex shall not be liable for any direct, indirect, incidental or consequential damages, whether based on contract, tort or any other legal theory. No other warranty is expressed or implied.

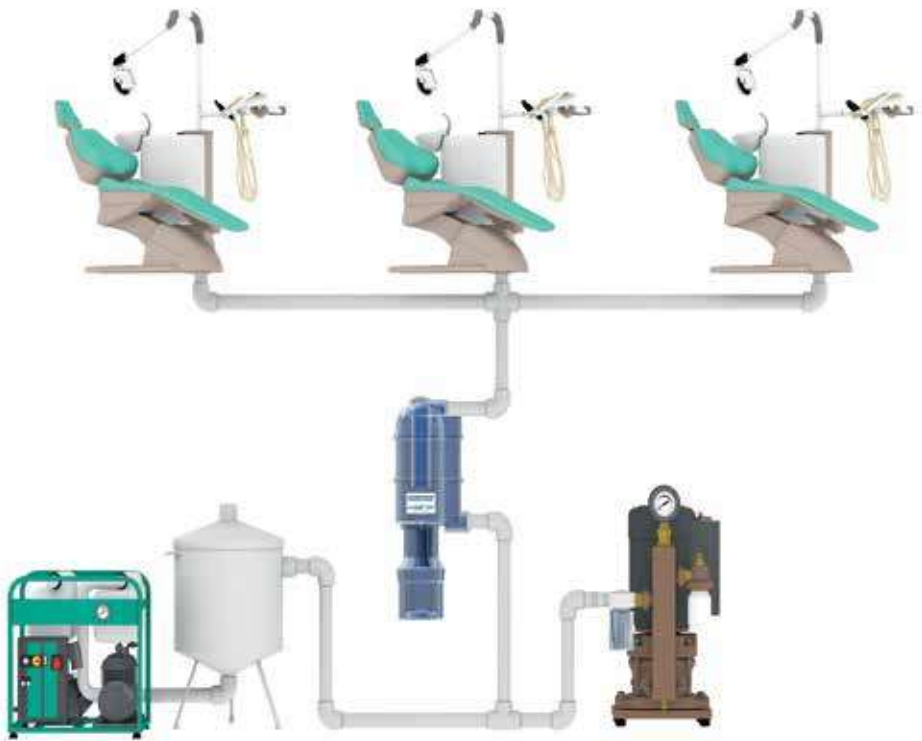
NOTE: If the amalsed® Silver amalgam separator is installed remotely from the dental center, a warning signal alarm should be installed for monitoring capability.

SERVICE AND REPLACEMENT PARTS

DESCRIPTION	PART NUMBER
amalsed® Silver system excl. separator cartridge	A0US2001
Silver Service Disposal Box incl. separator cartridge	A0US2000

INSTRUCTIONS

- Place in an easily accessible location for replacement of separator cartridge.
- Place between treatment rooms and vacuum source. Do not connect to outlet of separating tank or water ring pump.
- Use provided inlet and outlet couplings. Do not glue plumbing to the amalsed® Silver inlet and outlet.
- Securely mount or support the baseplate.
- If mounting to a wall, use the four (4) included plastic standoffs.
- Write down the installation date on the separator cartridge.
- Complete the registration form and return to **medentex**.



INSTALLATION AND SET-UP

1. Mount the amalsed® Silver bracket to any equipment room wall or floor.

The amalsed® Silver may be installed right handed as shown or left handed to fit your practice.



2. Secure the amalsed® Silver into the grommet slots as shown.



3. Use a Phillips-head screwdriver to tighten the top bracket with included screws and washers until snug.



4. Attach the separator cartridge to the amalsed® Silver air/water separator by lining up the flow channels.

Lock the cartridge into place with the retaining pins.

To remove the container, e.g. for replacement, remove retaining pins and detach. For detailed instructions, see page 7.



MAINTENANCE

Line rinsing & vacuum line cleaners:

Cleaners should be non-foaming, deodorizing, sanitizing and have a pH between 6 and 10. USE OF LINE CLEANERS OUTSIDE OF THIS pH RANGE WILL VOID THE WARRANTY!

With dental vacuum systems:

Follow manufacturer's instructions. **NOTE:** Plan to rinse no more than 5 rooms every 10 minutes. Limit the total maximum flow to the amal^{sed}® Silver during rinsing to 1 L/min. Rinsing too much or too rapidly can overfill the unit and could affect efficiency.

Separator Cartridge Replacement:

Follow the instructions included in the Silver Service Disposal Box.

SERVICE AND TROUBLESHOOTING

Fault	Possible causes	Solution
Vacuum gauge reads normally, but there is little to no vacuum at the hand piece	<ul style="list-style-type: none"> Clog or leak between hand piece and the amal^{sed}® Silver 	<ul style="list-style-type: none"> Remove the clog or seal the leak
Vacuum gauge reads lower than normal	<ul style="list-style-type: none"> Separator cartridge has not been installed correctly 	<ul style="list-style-type: none"> Check if the o-rings on the cartridge have correctly sealed into the receivers If the o-rings have not sealed correctly, re-install the cartridge, following the instructions in the replacement guide on page 8
	<ul style="list-style-type: none"> Clogged solids collector 	<ul style="list-style-type: none"> Check, clean or replace the collector/the screen if necessary
	<ul style="list-style-type: none"> Leaking vacuum pump 	<ul style="list-style-type: none"> Check operation of the pump and listen for vacuum leaks
	<ul style="list-style-type: none"> Loose or broken connections 	<ul style="list-style-type: none"> Check connections for breaks, cracks, kinks or loose clamps
Water in the upper chamber (air/water separator)	<ul style="list-style-type: none"> Wrong line cleaner 	<ul style="list-style-type: none"> Check the pH of your current vacuum line cleaner If it is below 6 or above 10, change the separator cartridge and choose a different line cleaner
	<ul style="list-style-type: none"> Clogged transition between the air/water separator and the cartridge 	<ul style="list-style-type: none"> Clean the transition carefully

The amalsed® Silver is designed to provide trouble-free service, with minimal attention. In the unlikely event of system-related problems, please consult the troubleshooting and maintenance guide on page 7.

If you have tried the previously listed methods and were not able to resolve your issue, please contact **medentex** for further assistance and ask to speak with a service professional.

Our customer hotline: 888-640-2527 (toll free)

REPLACING THE SEPARATOR CARTRIDGE

YOUR amalsed® Silver SEPARATOR CARTRIDGE HAS TO BE REPLACED ONCE A YEAR IN SMALL OFFICES (1-4 CHAIRS) OR EVERY SIX MONTHS IN LARGE DENTAL OFFICES (5-10 CHAIRS).



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



Full separator cartridges are considered HAZMAT and should be handled, stored and disposed of according to regulations applying to hazardous waste containing mercury. Remember to wear safety protective gear such as gloves and goggles when handling full amalsed® Silver cartridges and dispose of per local codes and regulations.

NOTE: medentex offers free recycling with all Silver Service packages. If you have misplaced your free return shipping labels or have any other questions regarding recycling, please contact **medentex** and ask to speak with a recycling expert.

THIS PROCEDURE SHOULD BE PERFORMED ONLY WHEN NO PATIENTS ARE BEING WORKED ON, AS A LOSS OF CHAIRSIDE VACUUM MAY OCCUR. LEAVE THE VACUUM RUNNING DURING THE ENTIRE SEPARATOR CARTRIDGE REPLACEMENT PROCEDURE.

Before you begin, view the upper chamber of your amalsed® Silver amalgam separator. If liquid is present, wait until it has drained into the separator cartridge, before proceeding.

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.

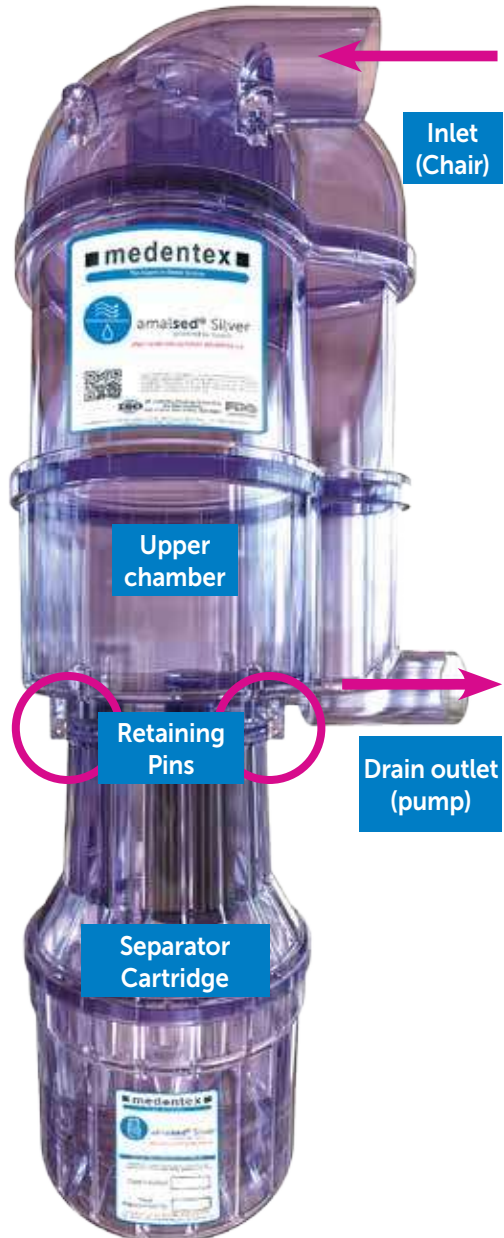
2. With the vacuum system still running, remove the full separator cartridge from the amalsed® Silver as follows:

a. Support the cartridge with one hand, removing the retaining pins with the other hand. Tilt the cartridge 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 separator cartridge.

b. Remove the plastic caps from the inlet and outlet fittings of the new separator cartridge.

c. Place caps into the inlet and outlet fittings of the full cartridge.

d. Put the full cartridge into its slot in your Silver Service Disposal Box by **medentex** until shipping.



3. With the vacuum system still running, install your new separator cartridge:

a. The cartridge can be installed only one way. Note the alignment of the fittings on the cartridge with the receiver holes in the upper unit.

b. Gently insert the fittings into the receiver holes. This can be accomplished by rocking the separator cartridge slightly. The O-rings on the fittings should seat easily into the upper unit receivers.

c. Continue to push the cartridge into the upper unit until it is fully seated.

d. Insert the retaining pins into their holes until seated. The cartridge is now locked into place.



4. Fill out the information label:

a. Note "Date Installed" on the new cartridge.

b. Note the "Next Replacement By" on the new cartridge.

c. Note the vacuum gauge reading. The reading should be the same as before the cartridge replacement.



LINE CLEANING SOLUTIONS

According to the American Dental Association (ADA) and regulators requiring Amalgam Separators, oxidizing line cleaners should not be used. Oxidizing cleaners can break down 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.

medentex 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 **amalsed® Silver**. Please note that all pH data is collected from manufacturer MSDS.

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

