



Installation and Operating Guide

Syclone™ Amalgam Separator | Installation and operating guide

For your safety, please read all instructions prior to installing, operating and servicing the Syclone Amalgam Separator.

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Warning

The waste stream treated by the Syclone™ Amalgam Separator is generated by a dental vacuum system and as such, may contain concentrations of solid and soluble mercury and silver. Full collection canisters should be handled, stored and disposed of according to regulations applying to waste containing mercury.

Remember to wear safety protective gear such as gloves and safety glasses or face shield when handling full Syclone containers and dispose of per local codes and regulations. All spills should be considered as hazardous and handled in accordance with standard hazardous materials (HAZMAT) handling procedures.

Contents of the Syclone Amalgam Separator system:

- Installation and operating guide
- (1) Amalgam separator top chamber
- Plumbing adapters, screws and washers
- (1) Canister
- (1) Mounting Bracket
- (2) Retaining Pins

Where to install:

Instructions

- Choose an appropriate location for the installation of your Syclone Amalgam Separator near your vacuum unit. Place in an easily accessible location for replacement of collection canister, somewhere between the treatment rooms and the vacuum source.
- Do not connect to outlet of separating tank or water ring pump.
- To reduce the chance of backflow into the amalgam separator, **please ensure that the amalgam separator outlet connection is installed 4-6 inches above the inlet of the pump or tank.**

Syclone Amalgam Separator components:

- | | | |
|--|--|--|
|  Inlet (Chair) |  Chamber |  Retaining Pins |
|  Drain Outlet (Pump) |  Canister | |
|  Flow in from treatment rooms | | |
|  Flow out to pump inlet (wet vacuum unit) OR to tank inlet (dry vacuum unit) | | |



Position the Syclone Amalgam Separator at least 4-6 inches above the Syclone outlet and pump/tank inlet.

Easy set-up and installation

Instructions:

-  The unit should be installed so that the outlet is higher than the tank or pump inlet.
- Use provided inlet and outlet couplings.
- Do not glue plumbing to the Syclone Amalgam Separator inlet and outlet.
- Securely mount or support the baseplate.
- If mounting to a wall, use the four (4) included plastic standoffs.
- Write the installation date on the collection container.
- Complete the product registration form online at Crosstex.com.



Mount the Syclone Amalgam Separator bracket to the equipment room wall or floor.



Secure the Amalgam Separator top chamber into the grommet slots as shown.



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



Attach the canister by lining up flow channels.



Lock the canister into place with the retaining pins. To replace the canister, remove the retaining pins and detach. (Detailed instructions are included with replacement canister.)



The Syclone Amalgam Separator may be installed with the plumbing to either the right or the left, depending on location and preference.

Maintenance and troubleshooting

Maintenance

Line rinsing and vacuum line cleaners: Cleaners should have these qualities: Low-foaming, deodorizing, sanitizing and pH between 6 and 8. <i>Use of line cleaners outside of this pH range will void the warranty.</i>	Dental vacuum systems: Follow manufacturer's instructions. Note: It is recommended to rinse no more than 5 rooms every 10 minutes. Limit the total maximum flow to the Cyclone Amalgam Separator system during rinsing to 1 liter per minute. Rinsing too much or too rapidly can overflow the unit and could affect efficiency.	Canister replacement: Follow instructions included with the replacement canister. Check the sediment level of the canister weekly. Please see Visual Inspection Log located on page 7.
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Service & troubleshooting

The Cyclone Amalgam Separator is designed to provide trouble-free service, with minimal attention. In the unlikely event of a system-related problem please consult the troubleshooting and maintenance guide below.

Problem: Little or no vacuum at the handpiece.

- Check the sediment level of the container. Replace if full.
- Check the vacuum gauge.

If the vacuum gauge reads normally but there is little or no vacuum to the handpiece, there is probably a clog or a leak between the handpiece and the Cyclone Amalgam Separator. Further troubleshooting of the whole vacuum system may be required. Please contact your preferred service technician or Crosstex Customer Support.

If the vacuum gauge reads lower than normal and you have a solid collection cup, check, clean or replace element/screen if necessary. Check operation of the vacuum pump and listen for vacuum leaks. Check connections for breaks, cracks, kinks, or loose clamps.

If the vacuum gauge reads lower than normal and you just replaced the canister, check the installation of the new canister. If the vacuum is low there is a possibility that the O-rings on the canister did not seal into the receivers. Check the O-rings and re-install per the installation procedure.

Problem: Water in the upper chamber of the system.

- Check the sediment level of the canister. Replace if full.
- Check the pH of the evacuation line cleaner; if below 6 or above 8, change canister and line cleaner.
- The transition from the upper chamber to the canister could be clogged and require cleaning.

Problem: Solids are at or above Full Line of canister.

- Change the canister. Inspect the top chamber for solids.

Problem: Top chamber contains some solids which has caused the system to back up.

- Turn on the vacuum.
- Remove the pins.
- Tilt the canister towards the outlet pipe to allow air into the top chamber.
- Place the canister back on and insert the pins.

Problem: Top chamber is full with solids which has caused the system to be in bypass.

There may be a reduction in suction and solids may be released into the waste stream.

- Replace top chamber.
- Do not discard the chamber; it must be recycled. Contact Crosstex Customer Service for additional support.

Replacement canister installation

✓ Don't forget!

Save the shipping carton for storage of your full collection canister!

Contents of the Syclone replacement canister and recycle kit:

- Shipping box and cushions
- Instruction and recycling sheet
- (1) Replacement canister
- (2) O-rings (additional, added fitting option)
- (3) Plugs
- (2) Cap seal
- (1) Zip-style disposal bag
- (1) Return shipping label sleeve

Shipping dimensions

Replacement canister:	Full system:
Length: 10 ½"	Length: 28"
Width: 9 ½"	Width: 19"
Height: 12"	Height: 10"
Weight: 4 lbs.	Weight: 26 lbs.



Product specifications

- System dimensions: 12.7" W x 9.1" L x 28.4" H
- Replacement canister capacity: 1.5 Liters
- One Syclone Amalgam Separator will serve up to 10 chairs.
- Classification: Type 2, Sedimentation System
- Maximum temperature: 120° F (52° C)
- Maximum vacuum: 15"Hg (51 kPa)
- Maximum flow rate: 1 liter per minute

⚠ Hazardous Waste Warning

The waste stream treated by the Syclone Amalgam Separator 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.

Note: Crosstex offers a recycling program for the safe disposal/recycle of full canisters. Contact your dental distributor to purchase a Syclone Amalgam Separator Recycle Kit and replacement canister for the safe, eco-friendly disposal of your full canister.

Purchase of the recycle kit also includes processing of the used canister for recycling. Please visit the product webpage at Crosstex.com for information on Syclone canister recycling. The used canister may never be shipped to Crosstex International headquarters and must be sent to a qualifying recycling facility.

Before you begin: Examine the upper chamber of your Syclone Amalgam Separator. If liquid is present, wait until it has drained into the collection canister before proceeding.

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 canister change-out procedure.

- Full canisters should be handled and disposed of according to applicable local, state, and federal regulations.
- **Remember to wear safety protective gear such as gloves and safety glasses or face shield when handling full Crosstex Syclone canisters.**

NOTE: If the system needs to be replaced, it should be handled, sanitized, stored and disposed of according to regulations applying to hazardous waste containing mercury. Remember to wear safety protective gear such as gloves and safety glasses or face shield and dispose of per local codes and regulations.

Replacement canister installation (cont'd)



PPE information

Remember to wear safety protective gear such as gloves and safety glasses or face shield when handling full Syclone canisters.

Installing the replacement canister

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. Please note: record the vacuum gauge reading before removing the canister. Its should be the same once the canister has been replaced.

2. With the vacuum system still running, remove the full canister from the unit as follows:

- Open the zip-style bag (provided), remove all fittings from inside and slip the bag over the canister to be removed.
- Support the canister with one hand while removing the retaining pins with the other hand. Tilt the canister 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 canister.



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

- Decontaminate the contents of the collection canister by pouring 1:100 bleach solution into the canister.
- Place the appropriate plugs into the inlet and outlet fittings of the full canister.
- Place the plastic caps on top of the plugged inlet and outlet fittings of the full canister.
- Squeeze out all excess air and zip the disposal bag closed.

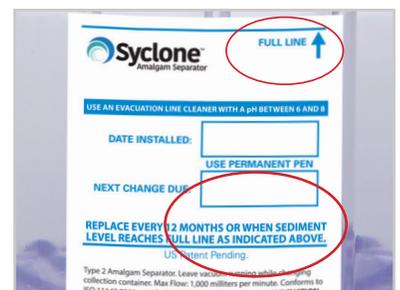
3. With the vacuum system still running, install your new canister:

- The canister can be installed only one way. Note the alignment of the fittings on the canister with the receiver holes in the upper unit.
- Gently insert the fittings into the receiver holes. This can be accomplished by rocking the canister slightly. The O-rings on the fittings should seat easily into the upper unit receivers. (If the O-rings appear loose, exchange them for the large-gauge O-rings included in the kit for a tighter fit.)
- Continue to push the canister into the top chamber until it is fully seated.
- Insert the retaining pins into their holes until seated as per the figure on page 1.
- The canister is now locked into place.



4. Fill out the information label:

- Enter "Date Installed" on the new canister.
- Enter the "Next Change Due" on the new canister, which should be 12 months from the installation date.
- Note the vacuum gauge reading. The reading should be the same as before the canister change.



Your canister must be changed every twelve (12) months or when sediment level reaches the Full Line; whichever occurs first. Check the sediment level of the canister weekly. If you would like to keep a written record of the visual inspection, please refer to the chart on page 8.

Warranty

Warranty

Syclone Amalgam Separators are warranted against defects in material and workmanship for two (2) years from the date of purchase. Syclone replacement canisters are warranted for one (1) year from the date of purchase. During warranty period Crosstex 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, transportation and recycling service charges are specifically not included.

The Syclone replacement canister is warranted for one (1) year when utilized on a compatible/compliant amalgam air/water separator. Crosstex 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 Crosstex. Crosstex 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 8 will void these warranties.

Crosstex recommends the use of Crosstex SANI Vac Evacuation System Cleaner, but other evacuation line cleaners with a pH between 6 and 8 can also be used. The remedies provided herein are the buyer's sole and exclusive remedies. Crosstex 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 Syclone Amalgam Separator is installed remotely from the dental center, a warning signal alarm should be installed for monitoring capability.

System and Replacement Parts

Description	Ref. #
Syclone amalgam separator system	AMLSYS
Syclone replacement canister and recycle kit	AMLSYRC

Evacuation line cleaner

According to the American Dental Association (ADA) and regulators requiring Amalgam Separators, oxidizing line cleaners should not be used because they 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. The use of SANI Vac Evacuation System Cleaner (Ref #: JVAC) with the Syclone Amalgam Separator system is recommended.

Visit Crosstex.com for further details.





For over 65 years, Crosstex has remained dedicated to innovative, high-quality solutions, services and education that ensure maximum compliance and improve outcomes for healthcare professionals and patients.



Certified to ISO 11143



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