

Synopsis of Dental Amalgam Separators (Project #10-017) (2/11)

Amalgam has many desirable properties as a dental material. Although its use is decreasing, amalgam remains one of the most widely used restorative materials in dentistry. While the safety of dental amalgam in patient care is well established, amalgam entering the sewage system by way of dental vacuum systems may be exposed to conditions that do not occur in the mouth such as incineration of wastewater treatment plant sludge. This can result in release of mercury to the environment. Mercury can be a problem for wastewater treatment plants as the sludge generated by the water treatment process is sometimes incinerated, sometimes disposed of in solid waste landfills, and sometimes applied to agricultural land as fertilizer. Also, a portion of the dissolved amalgam/mercury passes through the plant and is discharged to surface waters.

Most dental offices currently use some type of basic filtration system to reduce the amount of mercury solids passing into the sewer system (e.g., chairside traps, vacuum pump filters). However, the installation of amalgam separators and the use of best management practices have been shown to reduce discharges even further.¹ Amalgam separators are devices designed to remove amalgam particles from dental office wastewater through sedimentation, filtration, centrifugation, chemical removal by ion exchange or a combination of these mechanisms. An amalgam separator typically consists of a canister that is located either in the dental treatment room (DTR) or in the mechanical room adjacent to the vacuum pump. Amalgam separators meeting the International Organization for Standardization (ISO) standard can capture over 95% of the amalgam discharged by dental offices into sewer systems. Just purchasing and installing an amalgam separator does not ensure compliance; amalgam separators require regular monitoring and maintenance to ensure they are functioning properly. This varies depending upon the amalgam separator you chose and your practice volume. For example, the collected amalgam may have to be removed daily with some units or in high-volume practices, while other units may only have to be serviced periodically (e.g., every three to 18 months). It is also important to plan how you will dispose of the amalgam waste and used parts of the amalgam separator (e.g., used cartridges and filters). Some amalgam separator companies offer disposal/recycling of the amalgam waste as part of a package when you purchase their product, while other companies leave it to the user to obtain disposal/recycling services.

Presently, there is no national requirement for amalgam separators. However, some individual states and localities require installation of separators, and recently the Environmental Protection Agency (EPA) announced changes to reduce mercury waste from dental facilities that will take effect in 2012. As a result, United States Air Force (USAF) dental clinics should begin to prepare for the purchase and installation of an amalgam separator system now. For additional information regarding AF policy and amalgam separators, please [Click Here](#).

The purpose of this synopsis is to introduce dental clinics to some options that are available for amalgam separation systems. This synopsis includes amalgam separators that are marketed directly to dentists, and is not intended to include all systems available. Amalgam separator manufacturers and distributors differed in how their products were presented, so a direct comparison from the attached synopsis may be difficult. To select the unit that best meets your needs, you will need to take time to understand how amalgam separators work and the unique differences between the available separators. Some key points to consider are highlighted in the attached [tables](#) and a list of questions and items to consider before purchasing amalgam separators is [attached](#). Clinics must actively involve their facility managers and biomedical engineering technicians in the purchasing decision to ensure compatibility of the amalgam separator with existing facility features, proper installation, future maintenance requirements, and proper disposal of the waste.

The following [synopsis](#) consists of tables providing basic information about ISO-certified amalgam separators listed alphabetically by manufacturer; prices are based on currently available information and are subject to change. The information in the tables has been provided by the manufacturer/distributor and not necessarily confirmed by DECS evaluation.

[Click here](#) to view the amalgam separator product information.

References

1. Environmental Protection Agency, Notice of Final 2008 Effluent Guidelines Program Plan, 73 Fed. Reg. 53,219,53,234 (September 15,2008) (EPA Final 2008 Effluent Guidelines Plan FR Notice).

Synopsis of Dental Amalgam Separators*

Product/Model	Rasch 890-1500	Rasch 890-6000	Rasch 890-7000
Manufacturer or Distributor	AB Dental Trends 211 Grover St. Lynden, WA 98264 (800) 817-6704 (360) 354-4722 (360) 354-7460 FAX www.amalgamseparation.com	AB Dental Trends 211 Grover St. Lynden, WA 98264 (800) 817-6704 (360) 354-4722 (360) 354-7460 FAX www.amalgamseparation.com	AB Dental Trends 211 Grover St. Lynden, WA 98264 (800) 817-6704 (360) 354-4722 (360) 354-7460 FAX www.amalgamseparation.com
ISO 11143 Certification	Yes	Yes	Yes
Separation Technology	Sedimentation, Filtration, Ion Exchange	Sedimentation, Filtration, Ion Exchange	Sedimentation, Filtration, Ion Exchange
Utilities Required	None	None	None
Installation at Input or Output of Vacuum Solids Separator or Waste Collection Tank	Just after waste collection tank (drain) on dry systems just before solids separator on wet system	Just after waste collection tank (drain) on dry systems just before solids separator on wet system	Use with portable pump; pour effluent collector jar into hopper on top of 890-7000 unit
Flow Capacity	12 chairs; 4 liters / min - units can be connected in parallel to increase capacity as needed	12 chairs; 4 liters / min - units can be connected in parallel to increase capacity as needed	12 chairs; 4 liters / min - units can be connected in parallel to increase capacity as needed
Required Maintenance	Flush daily with non-foaming detergent with neutral pH; change canister every 18 months (based on 1 chair doing 25 amalgam removals/wk)	Flush daily with non-foaming detergent with neutral pH; change canister every 18 months (based on 1 chair doing 25 amalgam removals/wk)	Flush daily with non-foaming detergent with neutral pH; change canister every 18 months (based on 1 chair doing 25 amalgam removals/wk)
Projected Annual Maintenance Costs	Replacement Canister – (#890-2000). \$449.00 Retail; \$269.00 Government = \$179.33 / DTR / yr - (DTRs used for other than operative will produce less amalgam waste driving less frequent canister replacement)	Replacement Canister – (#890-2000). \$449.00 Retail; \$269.00 Government = \$179.33 / DTR / yr - (DTRs used for other than operative will produce less amalgam waste driving less frequent canister replacement)	Replacement Canister – (#890-2000). \$449.00 Retail; \$269.00 Government = \$179.33 / DTR / yr - (DTRs used for other than operative will produce less amalgam waste driving less frequent canister replacement)
Recycling Program	Yes	Yes	Yes
Recycling Program Description	Canisters are shipped to recycling company via UPS in pre-paid envelopes provided with purchase	Canisters are shipped to recycling company via UPS in pre-paid envelopes provided with purchase	Canisters are shipped to recycling company via UPS in pre-paid envelopes provided with purchase
Dimensions (W x H x D)	10.25 x 22 x 17 inches	9 x 9 x 12.25 inches	9.5 x 15 x 13 inches
Price	\$695.00 Retail \$417.00 Government	\$525.00 Retail \$315.00 Government	\$985.00 Retail \$591.00 Government
Warranty	5 years	5 years	5 years
Additional Notes and Features	Optional bypass alarm available; other than alarm, no fullness level indicator present; once full, effluent simply bypasses separator	Optional bypass alarm available; other than alarm, no fullness level indicator present; once full, effluent simply bypasses separator	Fully portable unit, with effluent hose that routes directly to a sink and into the sewer system. No fullness level indicator present; once full, flow through unit will stop.

*The manufacturers provided the data in this table. The listing or omission of a product in the following tables does not imply endorsement, approval, or disapproval by DECS.

Abbreviations: DTR=Dental Treatment Room; UPS=United Parcel Service

Synopsis of Dental Amalgam Separators*

Product/Model	ACADIA A 1250	ASDEX AS-10	ASDEX AS-20
Manufacturer or Distributor	Air Techniques 1295 Walt Whitman Road Melville, NY 11747-3062 (800) 247-8324 (516) 433-7676 (516) 433-7684 FAX www.airtechniques.com	Capsule Technologies 3965 Meadowbrook Rd. St. Louis Park MN 55426 (952) 933-4147 (952) 933-2696 FAX www.amalgamas9.com	Capsule Technologies 3965 Meadowbrook Rd. St. Louis Park, MN 55426 (952) 933-4147 (952) 933-2696 FAX www.amalgamas9.com
ISO 11143 Certification	Yes	Yes	Yes
Separation Technology	Filtration	Filtration	Filtration
Utilities Required	None	None	None
Installation at Input or Output of Vacuum Solids Separator or Waste Collection Tank	Just before waste collection tank on dry systems just before solids separator on wet system	Input	Input
Flow Capacity	10 chairs; 2 liters / min	One unit per chair	2-4 Chairs
Required Maintenance	None Visible fill-line indicator or electronic sensor (optional) indicates filter replacement	Not listed (Capsule stated the separator requires no maintenance itself, and since they are not in the dental business, they did not feel qualified to make clinical recommendations like vacuum line cleaning, but that would likely extend life of filter.)	Not listed (Capsule stated the separator requires no maintenance itself, and since they are not in the dental business, they did not feel qualified to make clinical recommendations like vacuum line cleaning, but that would likely extend life of filter.)
Projected Annual Maintenance Costs	Replacement filter - \$250.00 each; replace every 6 months = 5-10 users; 6 to 9 months= 3-4 users; 9 to 12 months = 1-2 users	Replacement filter - \$99.00 each; replace every 6-8 months = \$148.50 - \$198.00 / yr	Replacement filter - \$198.00 each; replace every 6-8 months = \$297.00 - \$398.00 / yr
Recycling Program	No	No	No
Recycling Program Description	Information for recycling source provided with filter; recycled at own expense	Information for recycling source provided with filter; recycled at own expense	Information for recycling source provided with filter; recycled at own expense
Dimensions (W x H x D)	20.6 x 26.9 x 14.7 inches	5 x 14 x 5 inches	5 x 24 x 5 inches
Price	\$1000.00 Retail \$522.00 Government	\$233.00 Retail \$233.00 Government	\$332.00 Retail \$332.00 Government
Warranty	1 year from installation date	Lifetime replacement	Lifetime replacement
Additional Notes and Features	Acadia Alert Monitor Module Kit (P/N A1330) with visual and audible indication and Remote Panel Switch control	When filter is approx 90% full, suction begins to degrade – replace when suction reaches unacceptable level	When filter is approx 90% full, suction begins to degrade – replace when suction reaches unacceptable level

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Synopsis of Dental Amalgam Separators*

Product/Model	DD2009	BU 10	BU 10-5
Manufacturer or Distributor	Dennis J. Duel and Associates Inc. 1127 Magnolia Road, Mundelein, IL 60060 (847) 393-7261 www.chairsidefilter.com	Dental Recycling North America (DRNA) 145 West 58 th St., Ste 8C New York, NY 10019 (800) 360-1001 (866) 600-5377 FAX www.drna.com	Dental Recycling North America (DRNA) 145 West 58 th St., Ste 8C New York, NY 10019 (800) 360-1001 (866) 600-5377 FAX www.drna.com
ISO 11143 Certification	Yes	Yes	Yes
Separation Technology	Filtration	Sedimentation	Sedimentation
Utilities Required	None	110 volt electrical outlet; DRNA pump is 9vdc – 12vdc, 2A (MAX)	110 volt electrical outlet; DRNA pump is 9vdc – 12vdc, 2A (MAX)
Installation at Input or Output of Vacuum Solids Separator or Waste Collection Tank	Neither: Installed near the chair in-line with the high volume evacuation vacuum hose	Input	Input
Flow Capacity	One unit per chair	6 chairs	6 chairs
Required Maintenance	None listed. Chairside filter indicates the filter unit requires no maintenance itself. Units are to be replaced when vacuum levels diminish and fall below recommended levels. Typical change out is 1 month for heavy usage and normal to low usage is 6 months or greater.	Regular dental suction line cleaning protocol with neutral pH cleaner; DRNA recommends replacing separator canister every 12 months	Regular dental suction line cleaning protocol with neutral pH cleaner; DRNA recommends replacing separator canister every 12 months
Projected Annual Maintenance Costs	\$31.30 to \$187.80 per chair per year; replacement depends on usage	Replacement canister - \$500.00 / yr; replace yearly	Replacement canister - \$500.00 / yr; replace yearly
Recycling Program	No [†]	Yes	Yes
Recycling Program Description	NA [†]	Replacement canister cost includes all associated recycling costs to include replacement canister, pre-paid shipping materials for spent canister (provided), & recycling documentation	Replacement canister cost includes all associated recycling costs to include replacement canister, pre-paid shipping materials for spent canister (provided), & recycling documentation
Dimensions (W x H x D)	5 x 5 x 11 inches	8.5 x 20.5 x 8.5 inches	6.6 x 18.5 x 6.6 inches
Price	\$44.00 Retail, \$15.65 Government	\$750.00 Retail \$750.00 Government	\$750.00 Retail \$750.00 Government
Warranty	NA	1 Year	1 Year
Additional Notes and Features	Filter unit comes with ½ and 5/8 inch hose barbs and vinyl caps		

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[†]Recycling program is anticipated to be in place in the future to include mailing unit in or on site pickup.

Synopsis of Dental Amalgam Separators*

Product/Model	BU 30	Liberty BOSS	Amalgam BOSS
Manufacturer or Distributor	Dental Recycling North America (DRNA) 145 West 58 th St., Ste 8C New York, NY 10019 (800) 360-1001 (866) 600-5377 FAX www.drna.com	M.A.R.S. Bio-Med, Inc. 2710 Thomas Ave., Ste. 649 Cheyenne, WY 82001 (866) 594-3648 (716) 852-0136 FAX www.marsbiomed.com	M.A.R.S. Bio-Med, Inc. 2710 Thomas Ave., Ste. 649 Cheyenne, WY 82001 (866) 594-3648 (716) 852-0136 FAX www.marsbiomed.com
ISO 11143 Certification	Yes	Yes	Yes
Separation Technology	Sedimentation	Sedimentation, Filtration, and Ion Exchange	Sedimentation, Filtration, and Ion Exchange
Utilities Required	110 volt electrical outlet; DRNA pump is 9vdc – 12vdc, 2A (MAX)	None – Can be adapted to any diameter vacuum line	None – Can be adapted to any diameter vacuum line
Installation at Input or Output of Vacuum Solids Separator or Waste Collection Tank	Input	Input	Input
Flow Capacity	20 chairs	17 chairs	10 chairs
Required Maintenance	Regular dental suction line cleaning protocol with neutral pH cleaner; DRNA recommends replacing separator canister every 12 months	Regular dental suction line cleaning with neutral pH biodegradable cleanser; sealed separator is never opened in the office to minimize cross-contamination issues	Regular dental suction line cleaning with neutral pH biodegradable cleanser; sealed separator is never opened in the office to minimize cross-contamination issues
Projected Annual Maintenance Costs	Replacement canister - \$750.00 / yr; replace yearly	Replacement unit - \$1,394.00; 1-3 chairs lasts up to 3 yrs; 4-10 chairs up to 2 yrs; 11-17 chairs up to 1 yr – perform periodic visual inspection before scheduled replacement	Replacement unit - \$999.00; 1 chair lasts up to 2 yrs; 2-3 chairs up to 1.5 yrs; 4-10 chairs up to 1 yr – perform periodic visual inspection before scheduled replacement
Recycling Program	Yes	Yes	Yes
Recycling Program Description	Replacement canister cost includes all associated recycling costs to include replacement canister, pre-paid shipping materials for spent canister (provided), & recycling documentation	Recycling cost included in original cost of separator; recycling is performed by Veolia Environmental	Recycling cost included in original cost of separator; recycling is performed by Veolia Environmental
Dimensions (W x H x D)	12 x 25 x 12 inches	12 x 22 x 12 inches	12 x 22 x 12
Price	\$1,395.00 Retail \$1,195.00 Government	\$1,549.00 Retail \$1,394.00 Government	\$999.00 Retail \$899.00 Government
Warranty	1 Year	Lifetime replacement	Lifetime replacement
Additional Notes and Features	Separators can be connected in series to accommodate larger facilities	>17 chairs supported by connecting separators in parallel, which may require plumbing modification; separator fill level can be viewed by shining light through sedimentation leg	Separator fill level can be viewed by shining light through sedimentation leg; leg does not have the exit capability. Sludge capacity is 182 in ³ ; no interim maintenance required.

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Synopsis of Dental Amalgam Separators*

Product/Model	ECO II	CH 12 [§]	CE 18 [§]
Manufacturer or Distributor	Purewater Development Inc. 5001 SW 74 th Court Miami, FL 33155 (305) 663-2989 (305) 662-7479 FAX www.ecotwo.com	R & D Services 8116 Green Lake Dr. N Seattle, WA 98103 (800) 525-2063 (206) 525-2063 FAX www.theamalgamcollector.com	R & D Services 8116 Green Lake Dr. N Seattle, WA 98103 (800) 525-2063 (206) 525-2063 FAX www.theamalgamcollector.com
ISO 11143 Certification	Yes	Yes	Yes
Separation Technology	Sedimentation	Sedimentation	Sedimentation
Utilities Required	None	None	Manual valve – None; Auto siphon valve – 110 volt electrical outlet
Installation at Input or Output of Vacuum Solids Separator or Waste Collection Tank	Input for wet ring pumps; Output for dry vacuum	Input	Input
Flow Capacity	5 chairs	1 chair	4 chairs
Required Maintenance	Regular dental suction line cleaning - recommend daily use of Green&Clean M2 suction line cleaner which is provided with separator	Turn one external valve (to drain water) once per week for 30 seconds	Daily – canister decanting - manually or automatically; every 3 yrs – empty sludge into recycle container or replace canister
Projected Annual Maintenance Costs	Replacement container - \$206.00 + \$128.00 recycling fee; recommend unit be replaced annually	\$0.00 to \$50.00 depending on recycling option chosen	\$0.00 to \$133.33 depending on recycling option chosen
Recycling Program	Yes	No	No
Recycling Program Description	Spent container is sent to METASYS for recycling; \$128.00 recycling fee includes postage and disposal of other scrap amalgam (if desired)	Canister will be full after 4 years. Recycle options: 1) Canister can be opened and sludge emptied into amalgam waste container for recycling, then canister can be reused; or 2) Entire canister can be replaced (\$300.00) – amalgam sludge or spent canister recycling costs are at clinic expense	Canister will be full after 3 yrs. Recycle options (at clinic expense): 1) Canister can be opened and sludge emptied into amalgam waste container for recycling, allowing canister to be reused; or 2) Catchment container on bottom of canister can be replaced (\$250.00) – amalgam sludge or spent canister recycling costs are at clinic expense
Dimensions (W x H x D)	8.7 x 13.8 x 8.7 inches	6 x 12 x 6 inches	6 x 19 x 6 inches
Price	\$560.00 Retail \$560.00 Government	\$595.00 Retail 10 – 25% Government discount depending on volume of purchase	\$825.00 Retail (Auto siphon valve available at additional cost) 10 – 25% Government discount depending on volume of purchase
Warranty	1 Year	30 months	30 months
Additional Notes and Features	Cost includes Green&Clean M2 suction line cleaner	Transparent, circular design for easy monitoring of sludge levels	Transparent, circular design for easy monitoring of sludge levels

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[§] Information current as of October 2009.

Synopsis of Dental Amalgam Separators*

Product/Model	CE 24 ^S	Catch 400	Catch 400 Plus
Manufacturer or Distributor	R & D Services 8116 Green Lake Dr. N Seattle, WA 98103 (800) 525-2063 (206) 525-2063 FAX www.theamalgamcollector.com	Rebec LLC 3511-132 nd St. SW Lynnwood, WA 98087 (800) 569-1088 (800) 964-1412 FAX www.rebecsolutions.com	Rebec LLC 3511-132 nd St. SW Lynnwood, WA 98087 (800) 569-1088 (800) 964-1412 FAX www.rebecsolutions.com
ISO 11143 Certification	Yes	Yes	Yes
Separation Technology	Sedimentation	Sedimentation and filtration	Sedimentation and filtration
Utilities Required	Manual valve – None; Auto siphon valve – 110 volt electrical outlet	None	None
Installation at Input or Output of Vacuum Solids Separator or Waste Collection Tank	Input	Input	Input
Flow Capacity	12 chairs	6 dentists or 1 dentist and 1 hygienist (without air abrasion or prophy jet pumice use)	6 dentists or 2 dentists and 2 hygienists
Required Maintenance	Daily – canister decanting - manually or automatically; every 3 yrs – empty sludge into recycle container or replace canister	Regular dental suction line cleaning protocol with non-oxidizing, enzymatic line cleaner (recommends VacuBlu) and disinfectant; replace spent collector unit once per year	Regular dental suction line cleaning protocol with non-oxidizing, enzymatic line cleaner (recommends VacuBlu) and disinfectant; replace spent collector unit once per year
Projected Annual Maintenance Costs	\$0.00 to \$200.00 depending on recycling option chosen	\$445.00 for replacement collection container (govt discount available)	\$645.00 for 2 replacement collection containers (govt discount available)
Recycling Program	No	Yes	Yes
Recycling Program Description	Canister will be full after 3 yrs. Recycle options (at clinic expense): 1) Canister can be opened and sludge emptied into amalgam waste container for recycling, allowing canister to be reused; or 2) Catchment container on bottom of canister can be replaced (\$300.00) – amalgam sludge or spent canister recycling costs are at clinic expense	Spent collection containers shipped UPS or FEDEX to Rebec in the same box that replacement containers arrive in – recycling cost is included in cost of replacement containers	Spent collection containers shipped UPS or FEDEX to Rebec in the same box that replacement containers arrive in – recycling cost is included in cost of replacement containers
Dimensions (W x H x D)	8 x 24 x 8 inches	14 x 18 x 8 inches	14 x 18 x 17 inches
Price	\$1,245.00 Retail (Auto siphon valve available at additional cost) 10 – 25% Government discount depending on volume of purchase	\$1185.00 Retail Government discount available, call for details	\$1,365.00 Retail Government discount available, call for details
Warranty	30 months	2 years full, 7 years limited	2 years full, 7 years limited
Additional Notes and Features	Transparent, circular design for easy monitoring of sludge levels	Not recommended for clinics using pumice for air abrasion or prophy jet	

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^S Information current as of October 2009.

Synopsis of Dental Amalgam Separators*

Product/Model	Catch 1000	Catch 1000 Plus	Catch 9000 Plus
Manufacturer or Distributor	Rebec LLC 3511-132 nd St. SW Lynnwood, WA 98087 (800) 569-1088 (800) 964-1412 FAX www.rebecsolutions.com	Rebec LLC 3511-132 nd St. SW Lynnwood, WA 98087 (800) 569-1088 (800) 964-1412 FAX www.rebecsolutions.com	Rebec LLC 3511-132 nd St. SW Lynnwood, WA 98087 (800) 569-1088 (800) 964-1412 FAX www.rebecsolutions.com
ISO 11143 Certification	Yes	Yes	Yes
Separation Technology	Sedimentation and filtration	Sedimentation and filtration	Sedimentation and filtration
Utilities Required	None	None	None
Installation at Input or Output of Vacuum Separator Tank	Input	Input	Input
Flow Capacity	10 dentists or 2 dentists and 2 hygienists (without air abrasion or prophy jet pumice use)	15 dentists or 3 dentists and 3 hygienists	Can be customized to handle any size facility
Required Maintenance	Regular dental suction line cleaning protocol with non-oxidizing, enzymatic line cleaner (recommends VacuBlu) and disinfectant; replace spent collector unit once per year	Regular dental suction line cleaning protocol with non-oxidizing, enzymatic line cleaner (recommends VacuBlu) and disinfectant; replace spent collector unit once per year	Regular dental suction line cleaning protocol with non-oxidizing, enzymatic line cleaner (recommends VacuBlu) and disinfectant; replace spent collector unit once per year
Projected Annual Maintenance Costs	\$445.00 for replacement collection container (govt discount available)	\$645.00 for 2 replacement collection containers (govt discount available)	\$895.00 for 3 replacement collection containers (govt discount available); costs will be higher for larger clinics requiring additional collection containers
Recycling Program	Yes	Yes	Yes
Recycling Program Description	Spent collection containers shipped UPS or FEDEX to Rebec in the same box that replacement containers arrive in – recycling cost is included in cost of replacement containers	Spent collection containers shipped UPS or FEDEX to Rebec in the same box that replacement containers arrive in – recycling cost is included in cost of replacement containers	Spent collection containers shipped UPS or FEDEX to Rebec in the same box that replacement containers arrive in – recycling cost is included in cost of replacement containers
Dimensions (W x H x D)	20 x 23.5 x 8 inches	20 x 23.5 x 16 inches	24 x 48 x 22 inches
Price	\$1,995.00 Retail Government discount available, call for details	\$2009.00 Retail Government discount available, call for details	Price varies on custom configuration. Government discount available, call for details
Warranty	2 years full, 7 years limited	2 years full, 7 years limited	2 years full, 7 years limited
Additional Notes and Features	Not recommended for clinics using pumice for air abrasion or prophy jet		

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Abbreviations: UPS=United Parcel Service

Synopsis of Dental Amalgam Separators*

Product/Model	CPB-Tank	Hg 5-Mini	Hg 5
Manufacturer or Distributor	Rebec LLC 3511-132 nd St. SW Lynnwood, WA 98087 (800) 569-1088 (800) 964-1412 FAX www.rebecsolutions.com	Solmetex 50 Bearfoot Rd. Northborough, MA 01532 (508) 393-5115 (800) 216-5505 (508) 393-1795 FAX www.solmetex.com	Solmetex 50 Bearfoot Rd. Northborough, MA 01532 (508) 393-5115 (800) 216-5505 (508) 393-1795 FAX www.solmetex.com
ISO 11143 Certification	Yes	Yes	Yes
Separation Technology	Sedimentation and filtration	Sedimentation	Sedimentation
Utilities Required	None	None	None
Installation at Input or Output of Vacuum Solids Separator or Waste Collection Tank	Output of waste collection tank and on the output of the wet-ring pump	Just before waste collection tank on dry systems; just before solids separator on wet system	Just before waste collection tank on dry systems; just before solids separator on wet system
Flow Capacity	100 + chairs (customized to facility)	4 chairs	10 chairs
Required Maintenance	Regular dental suction line cleaning protocol with non-oxidizing, enzymatic line cleaner (recommends VacuBlu) and disinfectant; replace spent collector unit once per year	Regular dental suction line cleaning protocol with non-oxidizing line cleaner; replace collection container when solid material reaches full line – typically 6-12 months	Regular dental suction line cleaning protocol with non-oxidizing line cleaner; replace collection container when solid material reaches full line – typically 6-12 months
Projected Annual Maintenance Costs	Price will vary for each custom system	\$299.00 per replacement collection container	\$299.00 per replacement collection container
Recycling Program	Yes	Yes	Yes
Recycling Program Description	Spent collection containers shipped UPS or FEDEX to Rebec in the same box that replacement containers arrive in – recycling cost is included in cost of replacement containers	Cost of shipping and recycling included in price of replacement container – full container shipped UPS directly to recycling center	Cost of shipping and recycling included in price of replacement container – full container shipped UPS directly to recycling center
Dimensions (W x H x D)	Size will vary as system is customized per facility, call for more information	11 x 21.5 x 8 inches	10 x 29.5 x 8 inches
Price	Price varies on custom configuration. Government discount available, call for details	\$750.00 Retail \$750.00 Government	\$750.00 Retail \$750.00 Government
Warranty	2 years full, 7 years limited	2 years	2 years
Additional Notes and Features		Clear collection container allows visual determination of fill level	Clear collection container allows visual determination of fill level

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Abbreviations: UPS=United Parcel Service

Synopsis of Dental Amalgam Separators*

Product/Model	Hg 5-HV
Manufacturer or Distributor	Solmetex 50 Bearfoot Rd. Northborough, MA 01532 (508) 393-5115 (800) 216-5505 (508) 393-1795 FAX www.solmetex.com
ISO 11143 Certification	Yes
Separation Technology	Sedimentation
Utilities Required	None
Installation at Input or Output of Vacuum Solids Separator or Waste Collection Tank	Just before waste collection tank on dry systems; just before solids separator on wet system
Flow Capacity	10-20 chairs
Required Maintenance	Regular dental suction line cleaning protocol with non-oxidizing line cleaner; replace collection containers when solid material reaches full line – typically 6-12 months (system uses 2 containers)
Projected Annual Maintenance Costs	\$600.00 for 2 replacement collection containers
Recycling Program	Yes
Recycling Program Description	Cost of shipping and recycling included in price of replacement container – full container shipped UPS directly to recycling center
Dimensions (W x H x D)	18 x 28 x 22 inches
Price	\$2500.00 Retail \$2,500.00 Government
Warranty	2 years
Additional Notes and Features	Clear collection container allows visual determination of fill level

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Abbreviations: UPS=United Parcel Service

Items to Consider Before Purchasing an Amalgam Separator*

General Considerations

1. Number of dental operatories

- Clinics with four or more chairs should consider central, not chairside units.

2. Number of amalgam restorations placed or removed each day

- Clinics performing > 40 amalgam-related procedures/week may need a unit with a large storage capacity.

3. Do you operate wet/dry cuspidors?

- If possible (and if permissible under applicable law), wet cuspidors should be plumbed to a separate line; if not, the separator should have a holding or surge tank with sufficient capacity.

4. Regulatory considerations

- Inquire about state-specific and/or local regulations.

5. Cost

- Consider initial amalgam separator purchase, installation expenses, cost of replacement parts/maintenance, and disposal cost.

Building Configurations

6. Is there sufficient space available to the air/water separator drain-line and sewer-line connection?

- Some separators rely on gravity flow and require adequate space from the air/water separator line to connect to the drain system.

7. Electrical power (voltage)

- Check the power supply needs for each model under consideration.

8. Size and material of existing sewer connection

- Separator installation should not constrict existing vacuum or drain-line requirements.

Vacuum System

9. Do you use a wet or dry vacuum system?

- Wet-ring vacuum pumps generate additional water flow that will require greater storage capacity.

10. Warranty issues

- Some warranties on existing equipment may be invalidated if parts of the system are modified by third parties.

11. Location of the vacuum system (e.g., clinic level or basement)

- Clinic level systems may require smaller units.
- Vacuum systems should be vented to outside air.

12. Space available adjacent to vacuum system

- Access to upstream piping is critical for maintenance and inspection of systems.
- To minimize the effect on vacuum pressure, install the amalgam separator as near as possible to the vacuum pump.

Amalgam Separator Specifications

13. Recommended installation location

- Consider space, workload, and plumbing.
- Investigate state and municipal plumbing code requirements.
- Is the location climate-controlled (e.g., amalgam separator may not function in extreme hot/cold)?

14. Capacity

- Choose a separator that can accommodate your clinic workload.

15. Maximum flow rate

- Choose a separator that can accommodate your clinic capacity.

16. Life-cycle cost

- Consider maintenance, cost of replacement parts, and life expectancy of the main unit.

Equipment Servicing/Maintenance

17. What type of maintenance is required and who will service the equipment?

- Who will be responsible for maintenance (e.g., dental clinic staff, facility management, third party); what are the recommended maintenance requirements and schedule (e.g., some require daily maintenance) and associated costs?
- How often do you have to remove collected amalgam (e.g., daily, weekly, monthly, yearly)?
- Continue to use non-chlorinated line cleaners/disinfectants to minimize the dissolution of amalgam.
- Some equipment may have audible or visual alarms; if this is the case; ensure it is in a location where it will be readily detected.

Disposal/Recycling

18. How will you dispose of your amalgam separator waste?

- Will your base hazardous waste personnel accept the amalgam separator waste and associated components (e.g., used filters, cartridges)?
- Many amalgam separator manufacturers offer recycling programs as part of their package—inquire if they will also accept your other amalgam waste (e.g., scrap amalgam, used capsules and traps, extracted teeth containing amalgam) and provide appropriate documentation required by federal (EPA) and state/local regulations. (Note: As a waste generator, the dental clinic is responsible for ensuring proper disposal of amalgam waste.)

*Adapted from: Mc Manus KR, Fan PL. Purchasing, installing and operating dental amalgam separators: practical issues. J Am Dent Assoc 2003;134:1054–1065 and American Dental Association Council on Scientific Affairs. Professional Product Review. 2007: Volume 2/Issue 4.