

**Amalgamabscheider
ECO II/ECO II Tandem
ECO II D/ECO II Tandem D**

Gerätedokument
Einbau, Betrieb und Wartung

**Amalgam separator
ECO II/ECO II Tandem**

Equipment Logbook
Assembly, operation and maintenance

**Récupérateur d'amalgame
ECO II/ECO II Tandem**

Livret d'appareil
Installation, fonctionnement et entretien

**Separatori d'amalgama
ECO II/ECO II Tandem**

Verbale d'installazione
Montaggio, funzionamento e manutenzione

ECO II

Economy System Typ 2



METASYS

EN

Index · Explanation of the pictograms

Practice personnel, technicians

1. Index

The header on each page defines the user group particular information is aimed at.

Chapter	Page
1. Index	2
2. Explanation of the pictograms	2
3. General information	3
4. Application	4
5. Construction	4
6. Explanation of the type plate	4
7. Technical data	5
8. Functional description	5
9. Installation options	6
10. Replacement intervals	7
11. Installation ECO II	7
12. Installation ECO II Tandem	8
13. Hose connections between ECO II / ECO II Tandem and EXCOM hybrid central suction systems	9
14. EXCOM hybrid A1 / A2 / A5 suction systems with ECO II amalgam separation	10
15. Replacing the collection container	11
16. Disposal of the full collection container	12
17. Maintenance, cleaning and disinfection	13

2. Explanation of the pictograms



Information



Caution!



General warning sign

General information

Practice personnel, technicians

3. General information

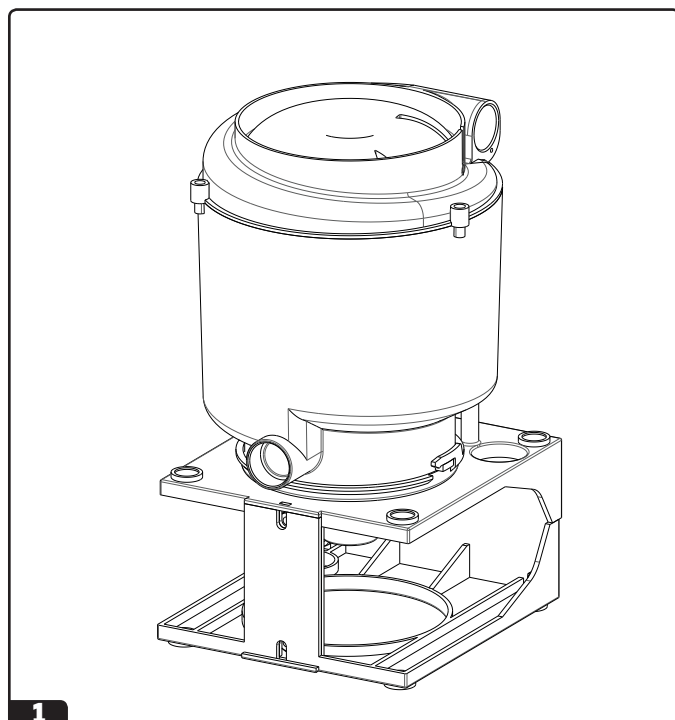


The safety, reliability and performance of the appliance is only guaranteed by METASYS if the following instructions are observed:

- Assembly, alterations or repairs may exclusively be carried out by authorized service personnel in compliance with EN Standard 60601-1 (International Standard for Medical Electrical Apparatus, in particular Part 1: General Rules for Safety).
- The electrical installation must comply with the regulations of the IEC (International Commission for Electrical Engineering).
- The appliance must exclusively be used in conformity with the instructions for installation, operation and maintenance.
- Only original parts may be used for repairs or replacements.
- All the guidelines provided by the manufacturer on the correct use of the amalgam separator must be followed.
- Following the commissioning of the amalgam separator, the Installation Proof must be completed and returned to METASYS to establish the guarantee period.
- Every inspection and servicing must be recorded in the Equipment Logbook.
- When requested by an authorized engineer, METASYS agrees to make all documents available for the use of technically qualified service personnel.
- METASYS accepts no responsibility for damages caused due to external factors, such as wrong installation, improper use of the apparatus or unauthorized technical intervention.
- Users must study equipment and assure themselves of its good condition before every use.
- Certificates of recycling for the amalgam waste (provided by recycling company) must be kept in accordance with national regulations.



The equipment is not suitable for use in explosive or combustible environment.



4. Application

1 ECO II

The METASYS ECO II is a sedimentation amalgam separator for the installation after a central suction system or in the waste water pipe of the dental unit.

When used in a liquid ring system, the ECO II can be installed in the suction line before the liquid ring pump.

5. Construction

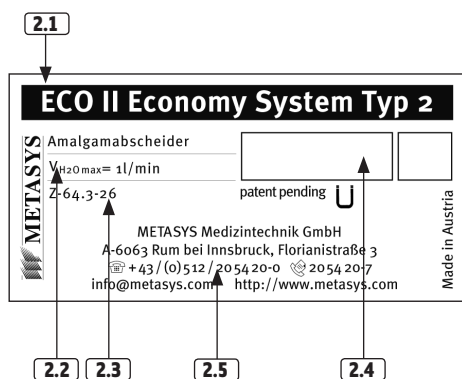
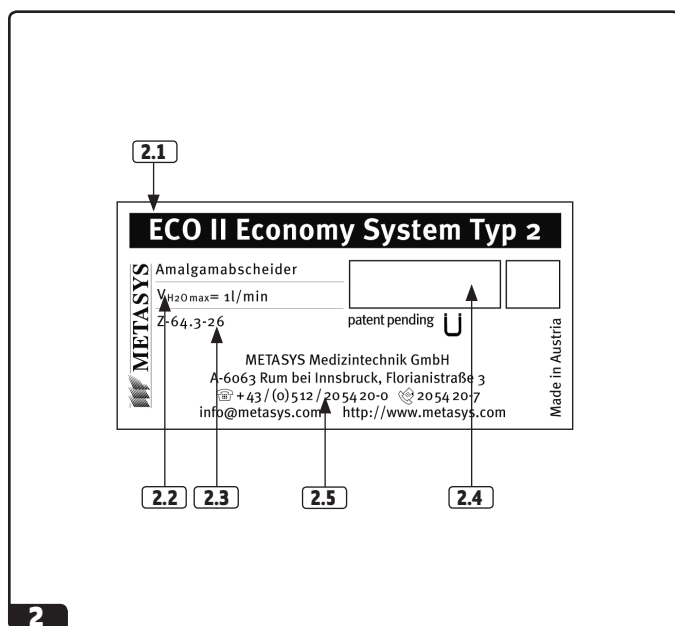
The amalgam separator ECO II consists of 2 modules:

- **Module 1** is the central mounting element and at the same time wall bracket.
- **Module 2** is the sedimentation amalgam separator with water connections.

6. Explanation of the type plate

2 See illustration

- 2.1** Equipment type
- 2.2** Mains supply data
- 2.3** German Institute for Construction Technology registration number
- 2.4** Serial number
- 2.5** Address of manufacturer



Technical data · Functional description

Practice personnel / technicians

7. Technical data

Separation rate	≥ 95%
Collection container volume	700 cm ³
Max. ambient temperature	40 °C
Max. water flow rate (via air/water separation)	1 l / min
Dimensions	308 x 164 x 201 mm

Possible suction systems:

- dry-line vacuum generators with air/water separation, e.g. central suction system METASYS EXCOM
- liquid ring systems



With the ECO II a separation rate of 95% is achieved. The use of air abrasion granulate does not affect the separation rate of the amalgam separator!

8. Functional description

4 See illustration

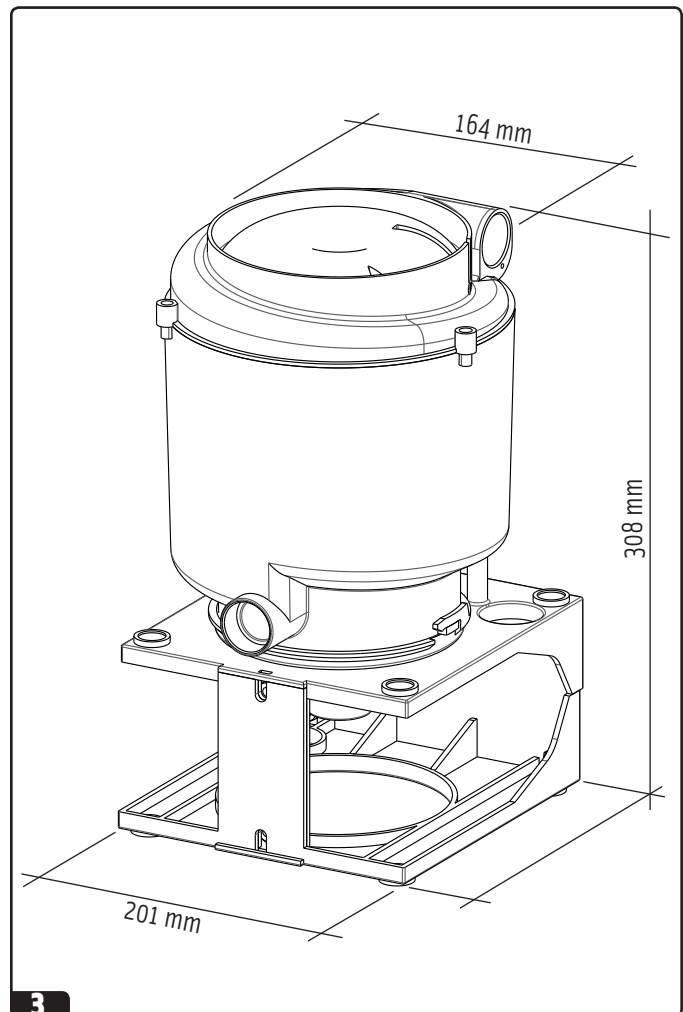
The amalgam separator ECO II works on the principle of sedimentation, divided into several sections.

The waste water from the dental units runs from the central suction system with air/water separation into the inlet nozzle **4.1** of the ECO II.

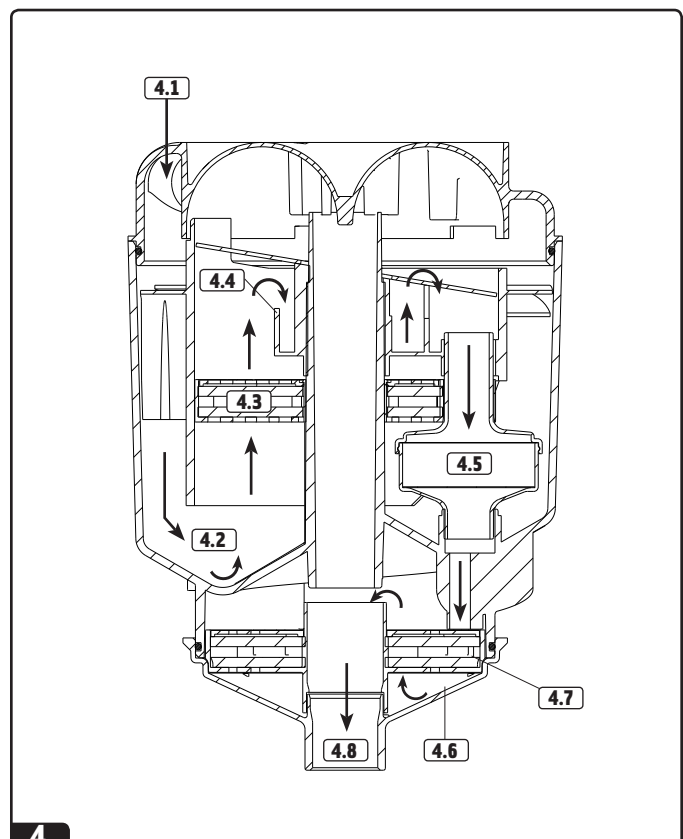
In liquid ring systems, the water flow from the suction line into the inlet nozzle.

From there the waste water is led through the first large sedimentation chamber **4.2**. Afterwards it is led through the first sedimentation cartridge **4.3**, through cascades **4.4** and the second sedimentation cartridge **4.5** into the second sedimentation chamber **4.6**. Through the third sedimentation cartridge **4.7** the cleaned water is led directly into the sewage pipe **4.8**.

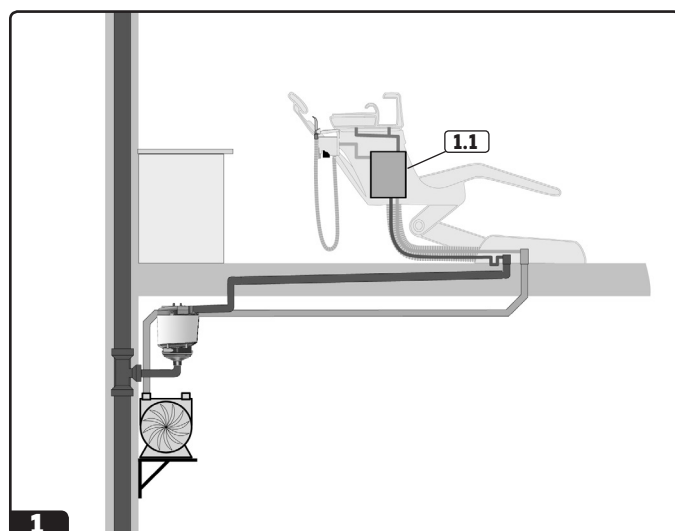
In liquid ring systems, the clean water is led into the liquid ring pump.



3



4



9. Installation options

The ECO II allows a variety of different installation options.

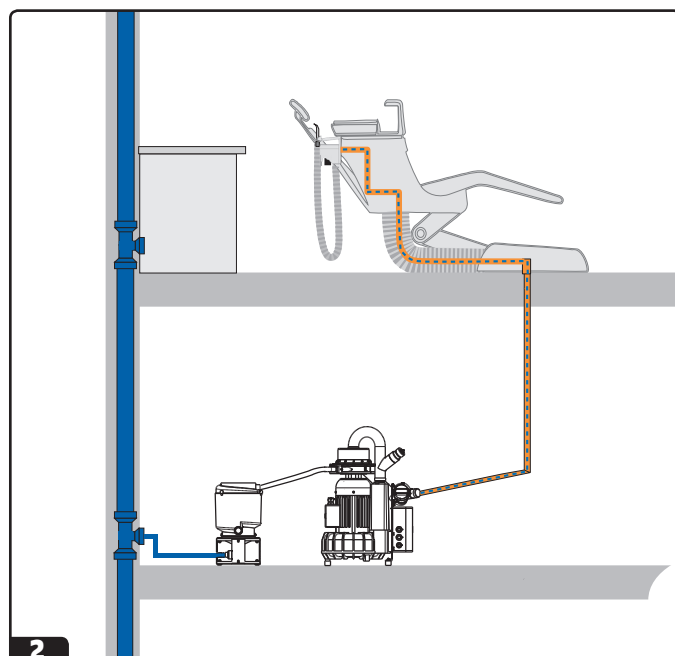
It is necessary to check if the possible water input from simultaneously operated units can exceed 1 l/min.

If the maximal amount of water can exceed 1 l/min or if the waste water from several units is brought together, then the ECO II Tandem must be used, if necessary with a sufficiently dimensioned expansion container. The use of **ECO II D** / **ECO II Tandem D** is mandatory in Germany.

1 See illustration

Installation directly into the waste water pipe of the dental units

The **ECO II** is installed after the air/water separation **1.1** directly into the waste water pipe of the dental unit.



2 See illustration

Installation after a central suction system

Volume of waste water <1 l/min:

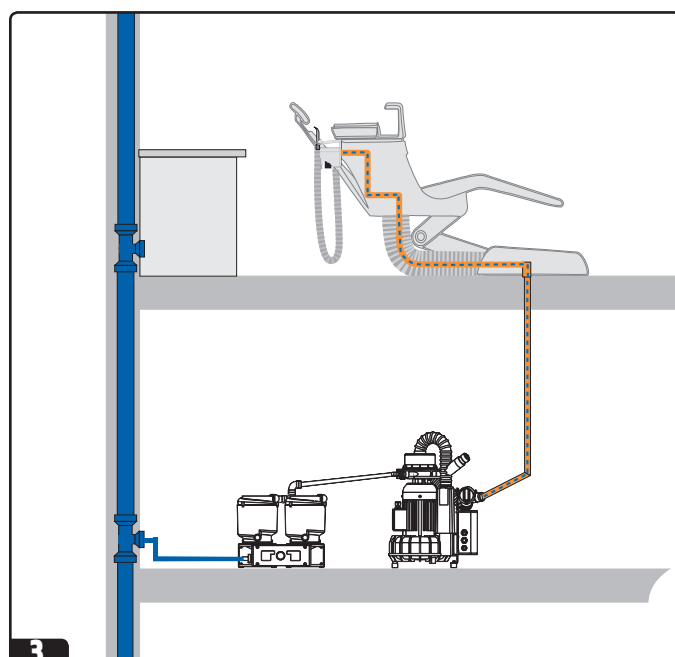
The **ECO II** is installed after the central suction system with air/water separation (waste water outlet) into the waste water pipe.

3 See illustration

Installation after a central suction system

Volume of waste water >1 l/min:

The **ECO II Tandem** is installed after the central suction system with air/water separation (waste water outlet) into the waste water pipe.



4 Installation in the suction line before a liquid ring pump

In liquid ring systems, the **ECO II** and the **ECO II Tandem** are installed in the suction line before the liquid ring pump.

Replacement intervals · Installation ECO II

Practice personnel / technicians

10. Replacement intervals

6 Replacement intervals

The maximum service life (replacement interval) of the ECO II amalgam separator results from the chosen installation option and the number of operators.

Please mark the appropriate box! **6**



The resulting exchange interval must be adhered to!
The ECO II must be replaced as soon as the maximum filling level has been reached, or 1x a year even if the maximum filling level has not yet been reached.

7 Filling level

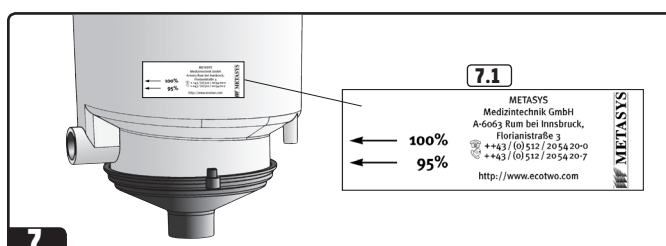
A label on the ECO II collection container **7.1** shows the filling level (100%, 95%) The label enables the user to monitor the filling level.



When using insoluble air abrasion powders the service life/ replacement intervals need to be defined in the applicant's responsibility considering the expected consumption of the abrasion powder.

Separator ECO II	No. of operators	Max. service life (months)	
1	1	12	<input type="checkbox"/>
	2	6	<input type="checkbox"/>
2	3	9	<input type="checkbox"/>
	4	6	<input type="checkbox"/>
	5	5	<input type="checkbox"/>
	6	4	<input type="checkbox"/>

6



7

11. Installation ECO II

8 Mounting module 1 (mounting element/wall bracket)

Slide the two mounting elements together as in the picture.

9 Fixing:

Screw together at the marked spots with the supplied screws and screw-nuts. For the mounting the following minimal space is required (H x W x D): 360 x 165 x 202 mm.

Position mounting element on an even floor space or fix onto wall with suitable screws **9.1**.

10 Mounting module 2:

Place module 2 with the supplied bolts **10.1** onto the fixture and fasten with the screws.

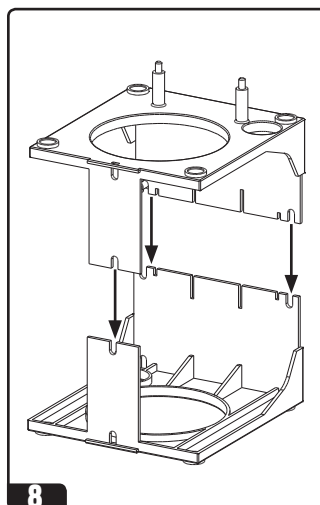
11 Hose connections:

11.1 Waste water inlet: waste water from the dental unit or from the central suction system

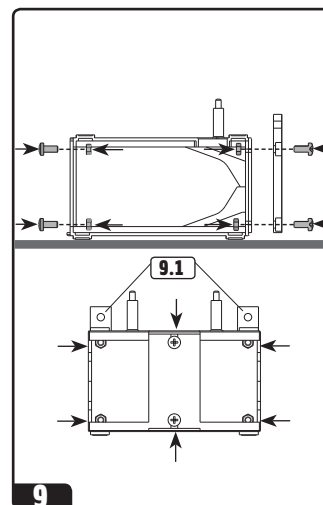
11.2 Waste water outlet: cleaned waste water directly to the sewage pipe



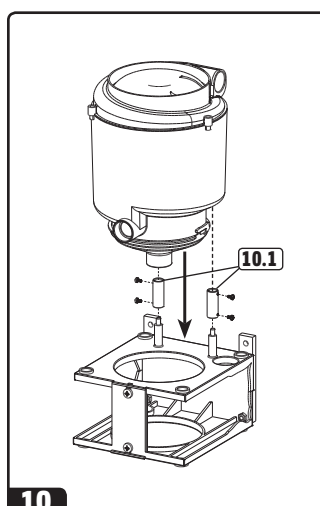
The waste water must be able to drain off freely into the sewage pipe!
Secure fittings and tubes with clips!



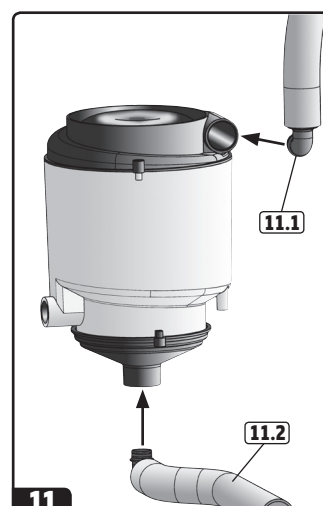
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9



10



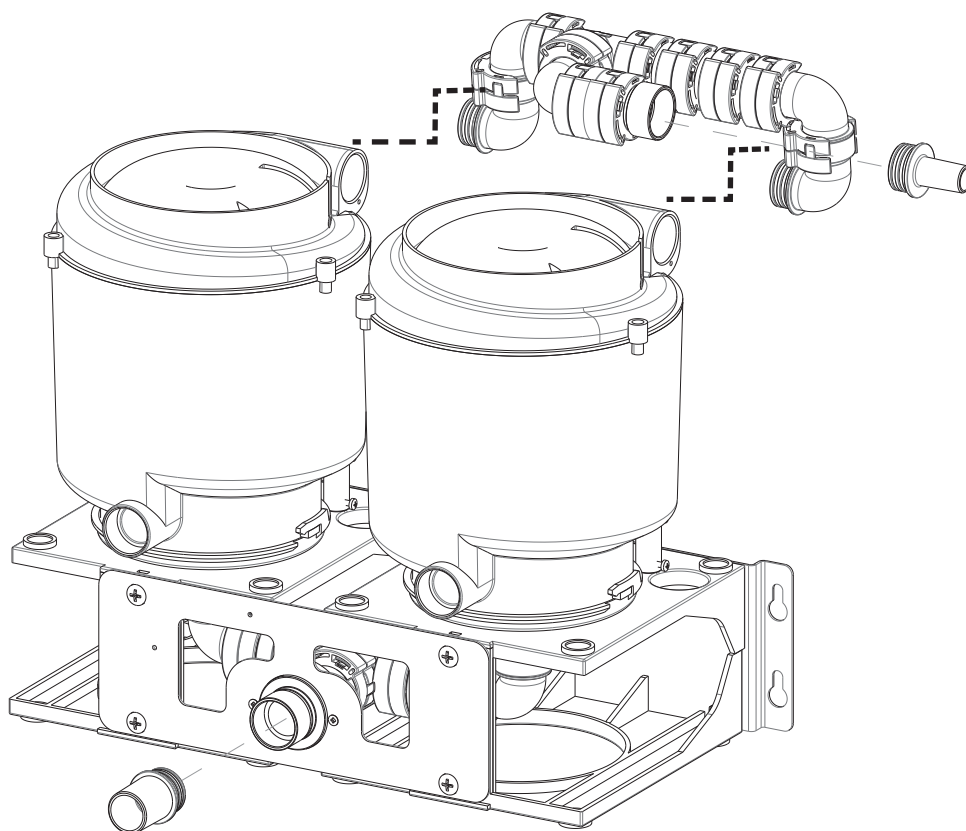
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EN

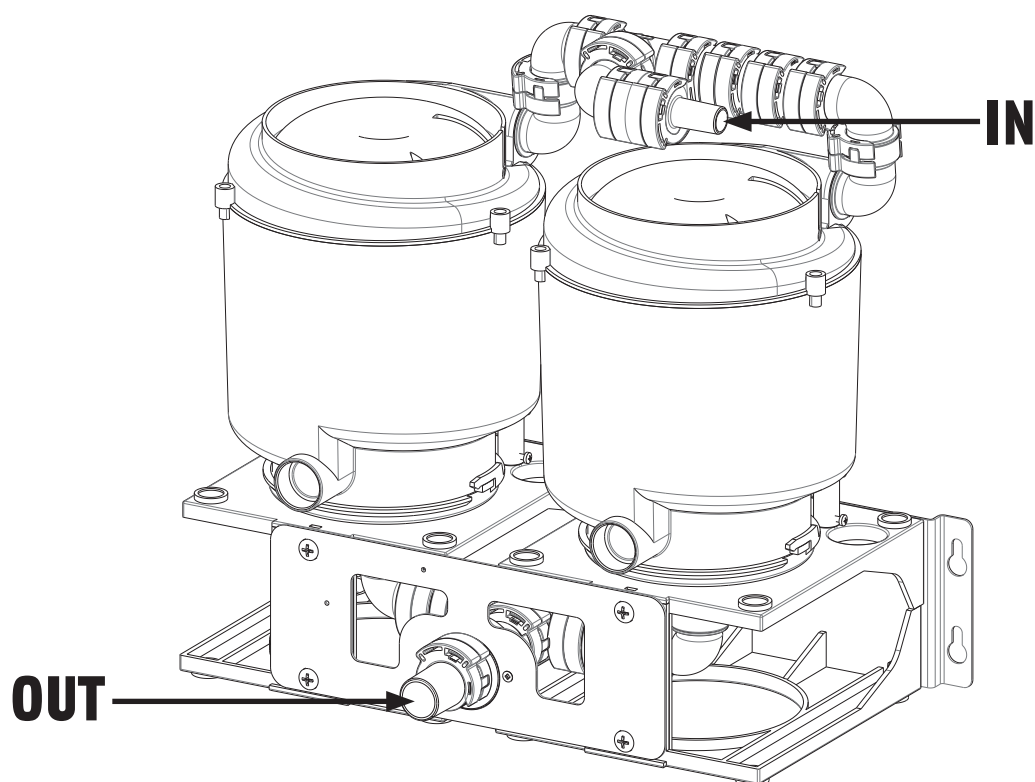
Installation ECO II Tandem

Technicians

12. Installation ECO II Tandem



1

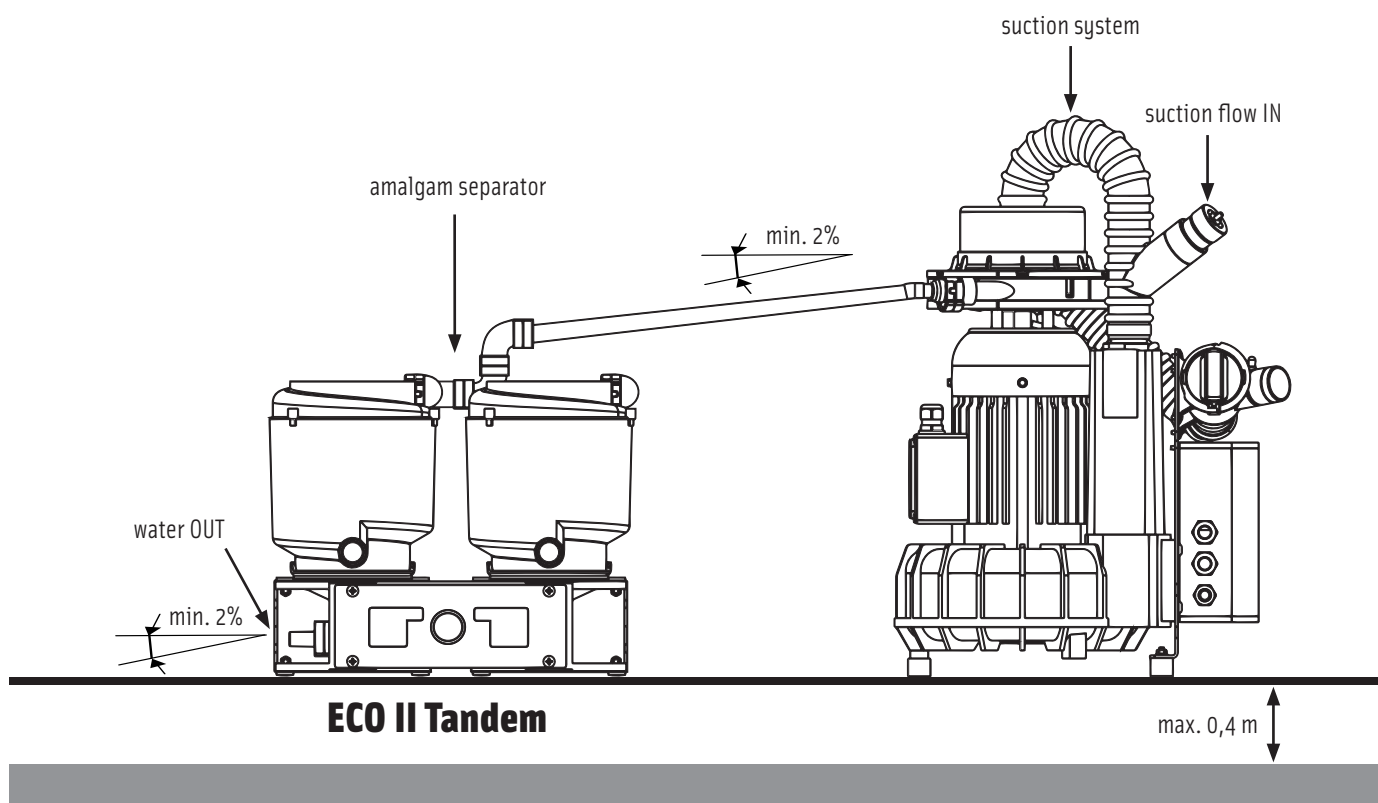
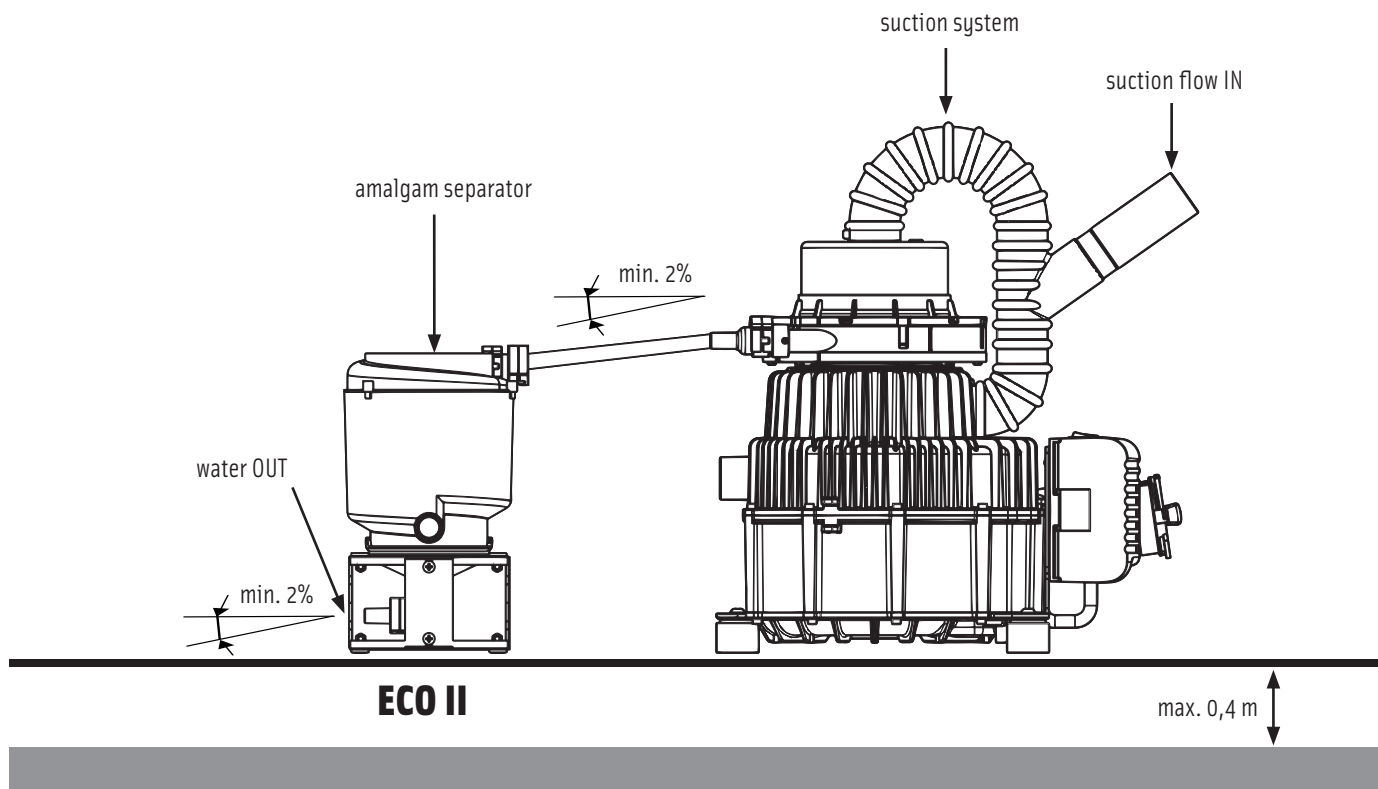


2

Hose connections between ECO II / ECO II Tandem and EXCOM hybrid

Technicians

13. Hose connections between ECO II / ECO II Tandem and EXCOM hybrid central suction systemss

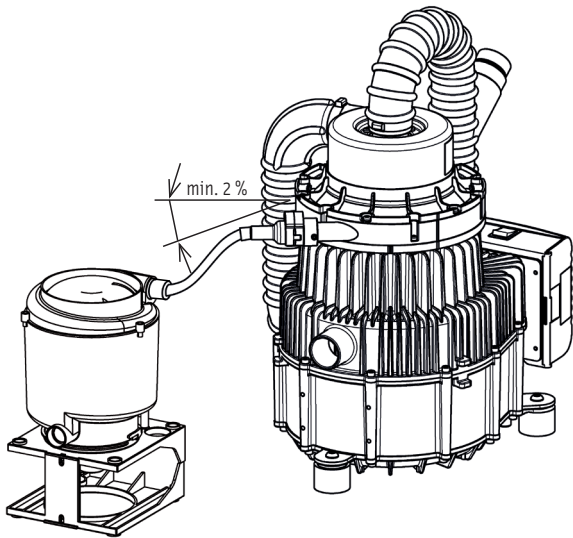


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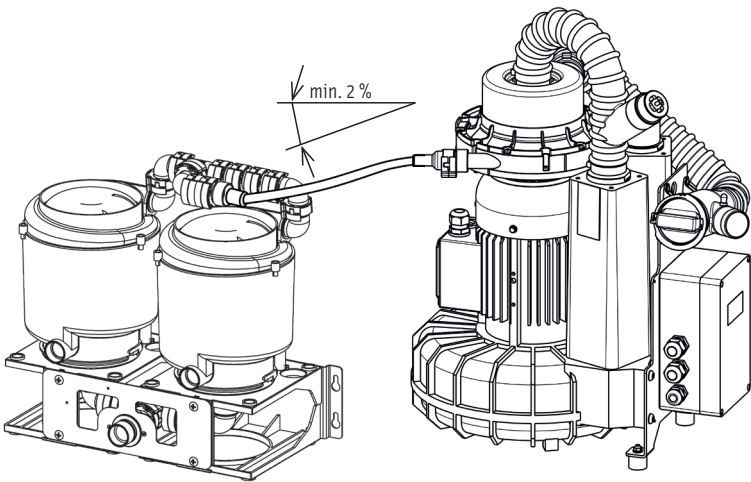
EXCOM hybrid A1 / A2 / A5 suction systems with ECO II amalgam separation

Technicians

14. EXCOM hybrid A1 / A2 / A5 suction systems with ECO II amalgam separation



Model	EXCOM hybrid A1 - ECO II	
Order no.	230 V: 02010251	
	-	



Model	EXCOM hybrid A2 - ECO II (international)	EXCOM hybrid A5 - ECO II Tandem (international)
Order no.	230 V: 02010221	230 V: 02010222
	400 V: 02010223	400 V: 02010224

Replacing the collection container

Practice personnel / technicians

15. Replacing the collection container

The ECO II collection container must be exchanged according to the replacement intervals as defined in the replacement interval table (cf. page 7, chapter 10).



Wear protective gloves and face mask! Avoid contact with the contents of the amalgam separator!

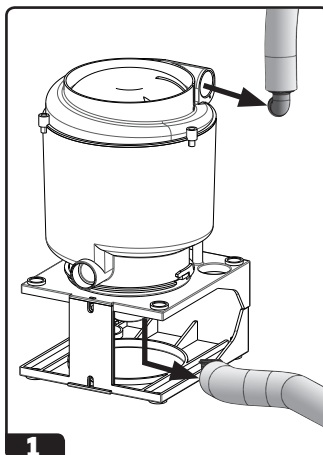


It is not possible to open the ECO II and reuse it! Every attempt to open the amalgam separator results in the malfunction of the device. Moreover, the required separation rate will no longer be achieved!

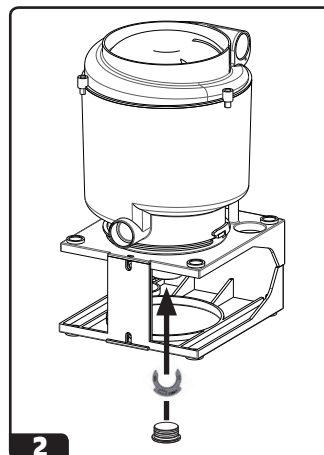
- 1** Remove the adapter with the tube at the waste water inlet and waste water outlet.
- 2** Tightly close the outlet of the full amalgam separator with the sealing plug (supplied with the amalgam separator) and secure with a clip.
- 3** Detach the screws from the bolts **3.1** and take out the full amalgam separator by lifting it off upwards.
- 4** Position the full amalgam separator horizontally onto an even surface, make sure that the inlet opening is pointing upwards!
Cut open the disinfection pouch for final disinfection (supplied with new amalgam separator) at one corner and pour its content into the inlet opening of the full amalgam separator.
- 5** Afterwards also tightly close the inlet opening with the sealing plug and secure with a clip.
- 6** Put the amalgam separator into the styrofoam shells, then place into the cardboard box.
- 7** Install the new amalgam separator **7.1** and secure it with the bolts and screws.
- 8** Reconnect the adapter with the tube to the "IN" and "OUT" openings.



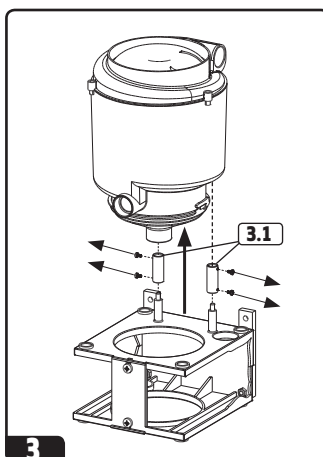
Check inlet and outlet of the ECO II for tightness!



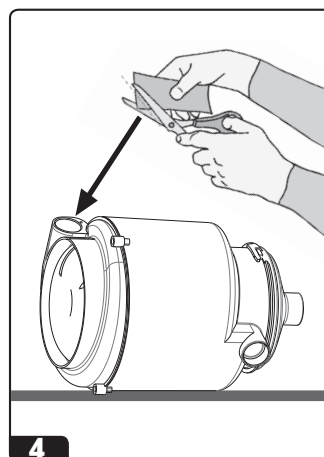
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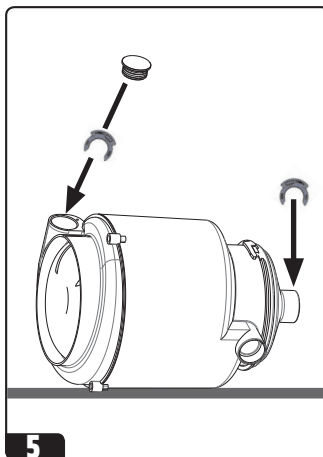
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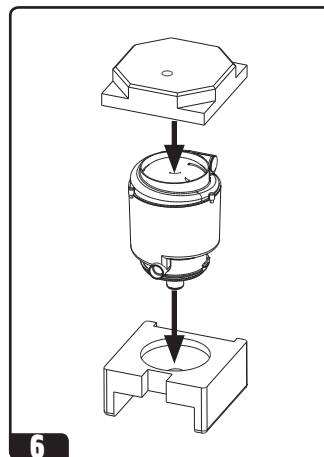
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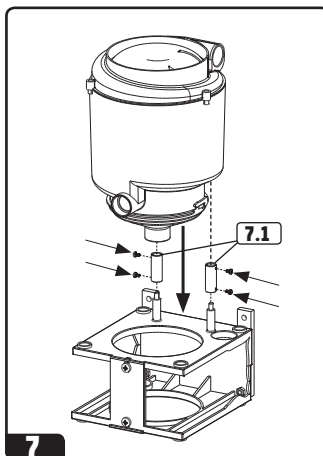
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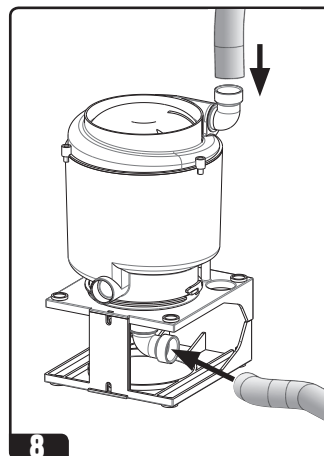
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6



7

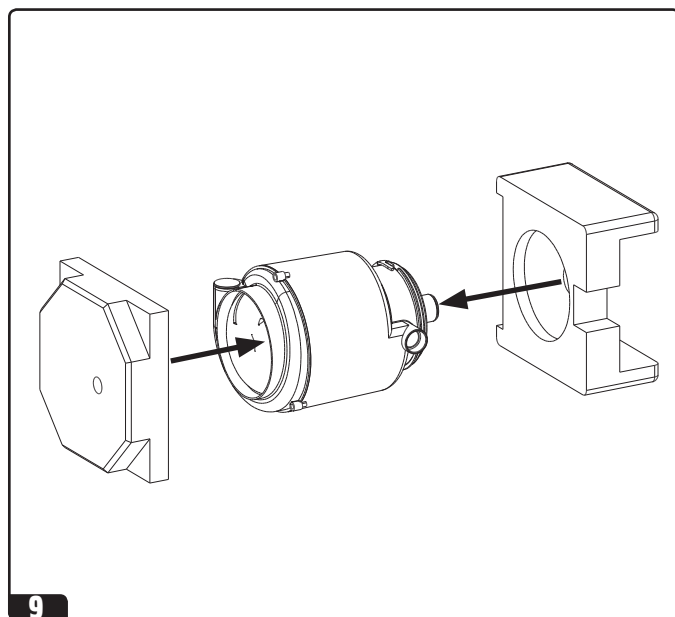


8

EN

Disposal of the full collection container

Practice personnel / technicians



16. Disposal of the full collection container



Wear protective gloves and face mask!
Avoid contact with the contents of the container!

For technical and hygienic reasons the collection container is designed for single use. The reuse of a used container can lead to malfunction and violates the warranty regulations!

The full amalgam separator can be disposed of at the in-house recycling company DENTAL ECO SERVICE – METASYS Group.

Certificates of recycling need to be stored according to national law.

The simplest method of disposal: ECOT^{TRANSFORM}!

9 See illustration

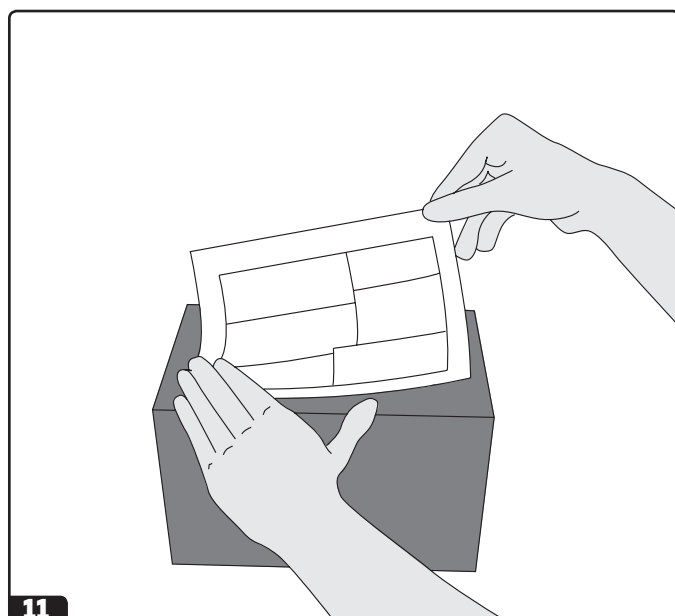
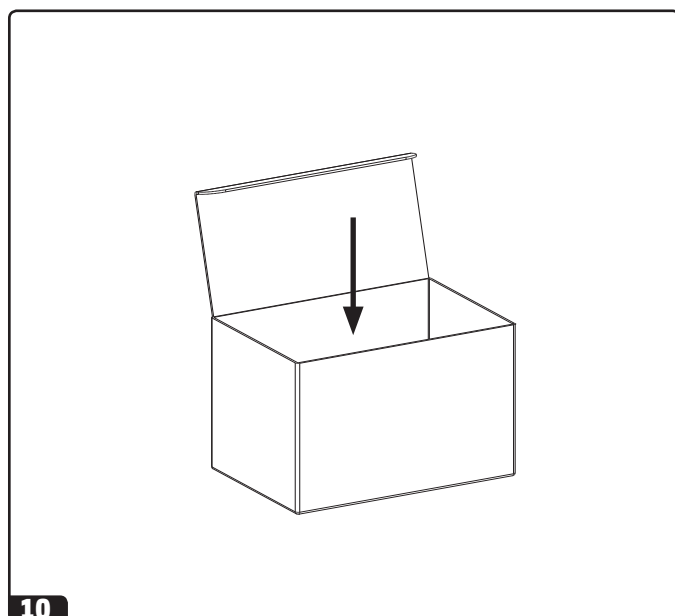
Place the properly sealed amalgam separator into the two styrofoam shells.

10 See illustration

Put the amalgam separator in the Styrofoam shells into the transport box (with postal certification) and close it.

11 See illustration

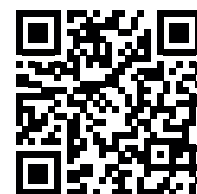
Place the appropriate return label onto the transport box for recycling at DENTAL ECO SERVICE (more information on the recycling options in your country on www.metasys.com) .



Visit
www.metasys.com
or scan this QR code
to receive more information
about ECOT^{TRANSFORM}!



You Tube



www.youtube.com/user/METASYSMedizintech

Maintenance, cleaning and disinfection

Practice personnel / technicians

17. Maintenance, cleaning and disinfection

1 See illustration

Shortly operate the rinsing basin after every treatment!

2 See illustration

Suck off some water with each of the suction tubes after every treatment.

3 See illustration:

Twice a day, after having sucked off some water, use GREEN&CLEAN M2, the disinfectant prescribed by METASYS, for cleaning and disinfection.

GREEN&CLEAN M2 should be used before longer periods of downtimes of the dental unit (e.g. lunch break, end of the working day or holidays).

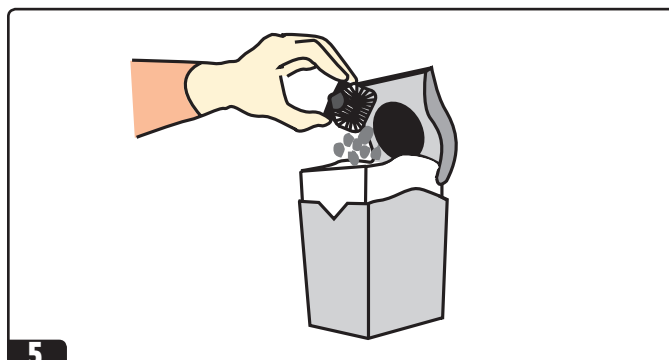
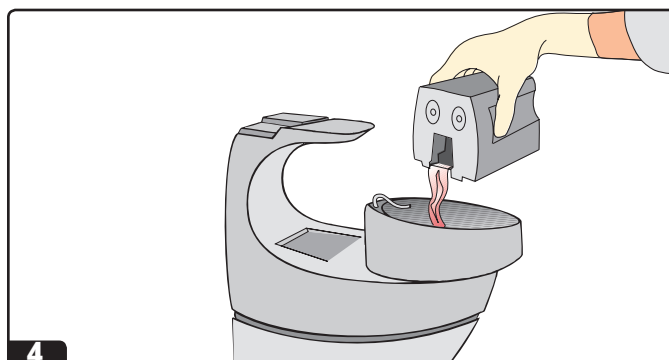
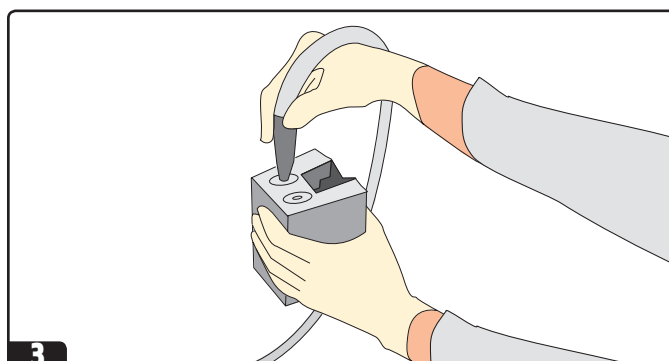
4 See illustration

The spittoon bowl should also be rinsed with GREEN&CLEAN M2 twice a day.

The operation of the amalgam separator ECO II without prefilter at the dental unit and/or at the central suction system is not permitted!

5 See illustration

The amalgam residue from the prefilter box must be collected in the METASYS ECOCENTER and disposed of properly with ECOTRANSFORM.

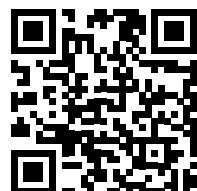


Visit
www.metasys.com
or scan this QR code
to receive more information
about **GREEN&CLEAN M2!**



large suction tube

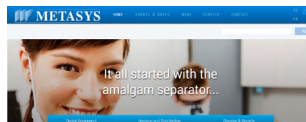
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