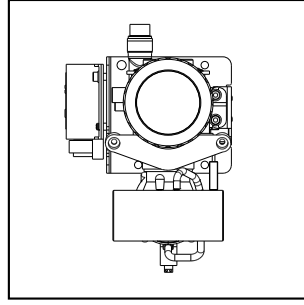


# METTASYS

**GB** **INLET VALVE for spittoon bowl**  
**Installation, operation and maintenance**



## Description of the pictograms

### General instructions

*The footnote found on each page defines the user group at which that particular information is aimed.*

#### 1. Description of the pictograms:



*A warning that ignorance of the following instructions could lead to personal injury, disruption of operation or damage to the apparatus!*



*means that the attention of especially the servicing personnel and the technicians is being drawn to an important point.*

#### 2. General instructions:



***METASYS can only guarantee the safety, reliability and performance of the apparatus when :***

- ▶ Installation, changes or repairs are carried out by authorized service personnel in compliance with the Standard EN 60601-1 : General Rules for Safety (International norm for electrically operated medical apparatus, especially part 1: General Rules for Safety).
- ▶ The electrical installation of the apparatus complies with IEC regulations (International Commission for Electrical Engineering).
- ▶ The apparatus is assembled, operated and maintained only in accordance with the instructions provided.
- ▶ Only original parts are used for repairs or replacements.
- ▶ When requested by an authorized engineer, METASYS agrees to make all relevant documents available for the use of technically qualified servicing personnel.
- ▶ METASYS will take no responsibility for damages caused by external factors outside their influence, such as poor (insufficient) installation, improper use of the apparatus or unauthorized technical intervention.
- ▶ The duplication and distribution of this document may only be undertaken after obtaining a prior permission from METASYS.

# Application

## Description of type plates

### Technical data

#### 3. Application:

The inlet valve for the spittoon bowl serves the purpose of draining the waste from the spittoon bowl off into the suction hose of wet suction systems.

This prevents suction noises in the mouth-washing basin.

The spittoon valve also enables emptying the cuspidor completely in order to clean the discharge pipe.

In doing so the suction system is automatically triggered.

An integrated prefilter holds back coarse parts that are washed into the spittoon valve. The installation of a prefilter into the spittoon is absolutely necessary and prescribed!

#### 4. Description of type plates:

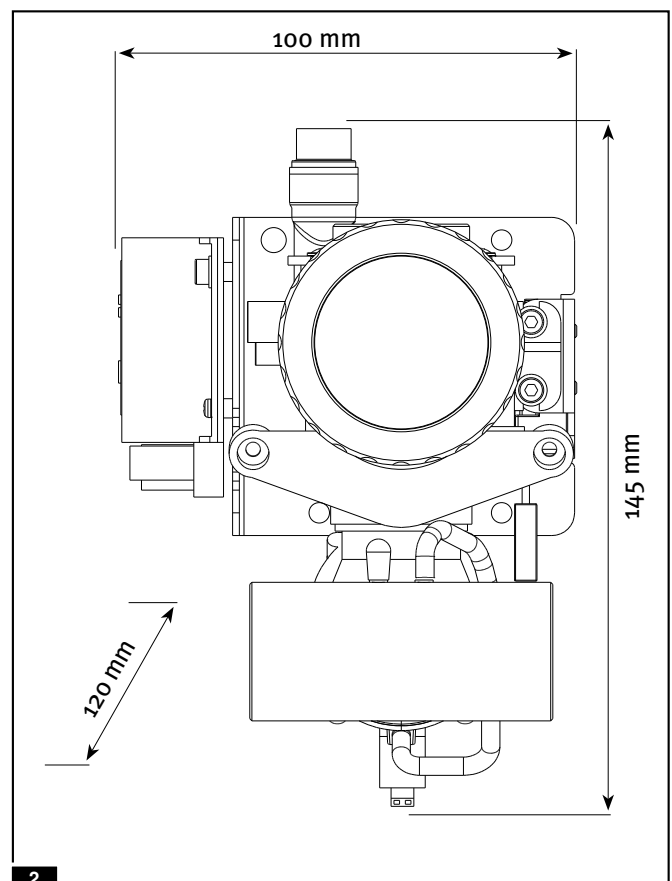
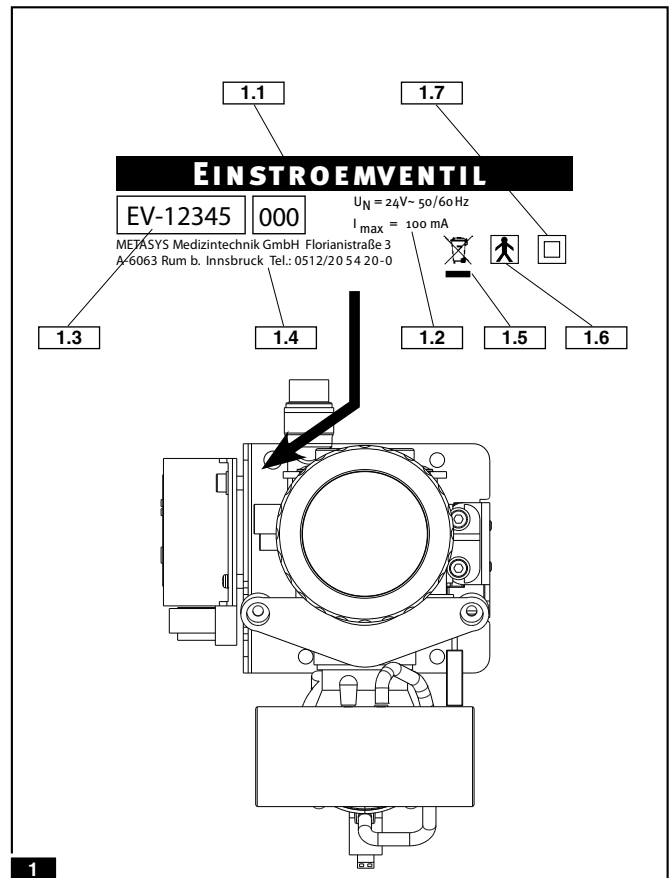
The type plate is located at the inside of the wall-mounting for the spittoon valve.

**1** See diagram

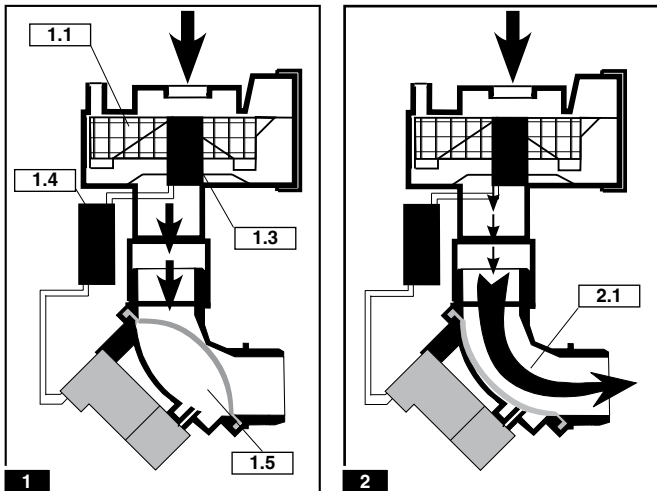
- 1.1** Equipment type
- 1.2** Main supply data
- 1.3** Serial number
- 1.4** Address of the manufacturer
- 1.5** Separate collection electrical / electronic equipment
- 1.6** Type BF symbol
- 1.7** Protection class II

#### 5. Technical data:

Power supply:	24 V AC/DC
Max. current consumption:	100 mA
Power output:	3 W
Equipment fuse:	T 500 mA
Low pressure range:	80 mbar - 250 mbar
Max. water flow rate:	4 l/min
Max. ambient temperature:	70 °C
<b>2</b> See diagram	
Dimensions: (H x B x D)	145 x 100 x 120 mm



## Functional description Assembly



### 6. Functional description:

**1** See diagram

The spittoon's waste water runs through the prefilter **1.1** into the prefilter base part.

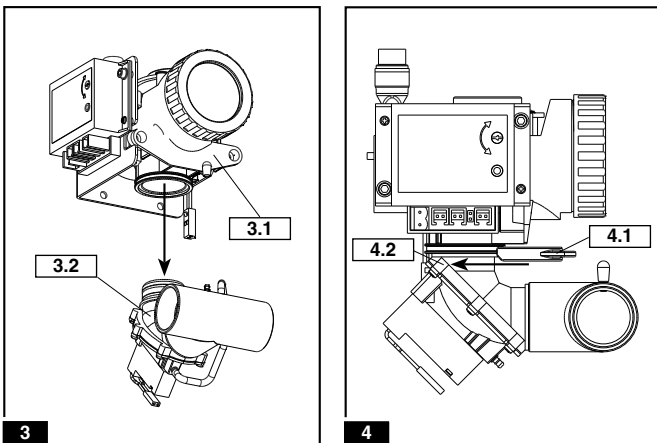
As soon as enough water has been collected in the prefilter base part, the capacitive sensor **1.3** is activated, which first sets off the central suction system via electronics **1.4** and then opens the closure valve **1.5**.

**2** See diagram

Due to the opening of this valve, the fluids inside the prefilter base part are drained off into the suction hose. The valve **2.1** gets closed again, after a period, which can be preset.

Here, the opening cycles increase with increasing amount of water.

The following time of the suction machine is about 10 seconds.



### 7. Assembly:

#### Assembly of spittoon valve:

**3** See diagram

Slide prefilter **3.1** onto valve **3.2**

**4** See diagram

Push supplied clip **4.1** frontally onto the slide rail on the prefilter until it touches the valve's elbow **4.2**

*The spittoon valve has been assembled correctly if prefilter and valve cannot be separated, but a 360° turn of both parts around their own axis is still possible.*

**5** See diagram

The fastening must be done by screwing two bolts into their respective bores (4,5 mm) in the holding elbow of the supporting parts in the interior of the spittoon bowl.

If it is not possible to carry out the mounting in the interior of the spittoon bowl, the inlet valve must be placed inside an easily accessible housing.

For this, the drain hose of the spittoon bowl should be kept as short as possible.

We would recommend fitting of a place selection valve **5.2** additionally, inside the suction hose.

**5.1** Hose socket

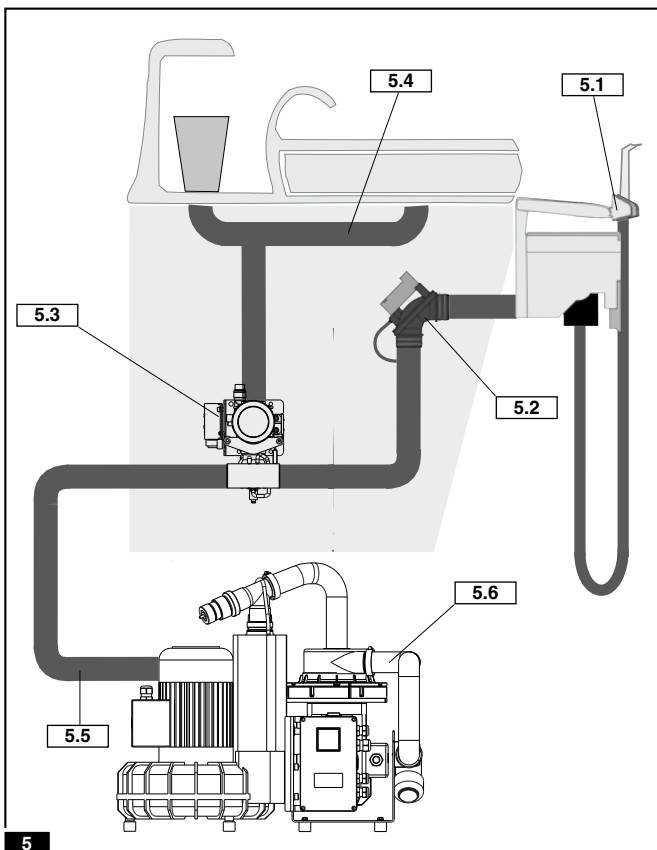
**5.2** Place selection valve

**5.3** Air-Inlet valve

**5.4** Spittoon bowl's drain hose

**5.5** Suction hose

**5.6** Central suction system (EXCOM)



# Hose connections

## Electrical connections

### 8. Hose connections:

In order to prevent pre-sedimentation, the lengths of the hoses should be kept as short as possible.

Contaminated dental tubes must be replaced, and disposed off by DENTAL ECO SERVICE, at the time of installation.

**4** See diagram

- 4.1** Connection for the spittoon bowl's drain hose
- 4.2** Connection for overflow tubes (e.g. filler for oral glass)
- 4.3** Suction hose

The connection for the suction hose has been designed using a T-piece, which can accept any 26mm- connections (O-ring or glued joint). The drain hose for the spittoon bowl can be connected using any of the hose nozzles provided by METASYS (METASYS Adapter Kit: Item No. 40400007).

It is possible to fit drainage for drinking glass, or any similar drain hose on the hose connection at the rear of the filter housing.

All hose connections must be secured using hose clips!

### 9. Electrical connections:

**5** See diagram

**5.1** Plug for power supply 24 V AC/DC



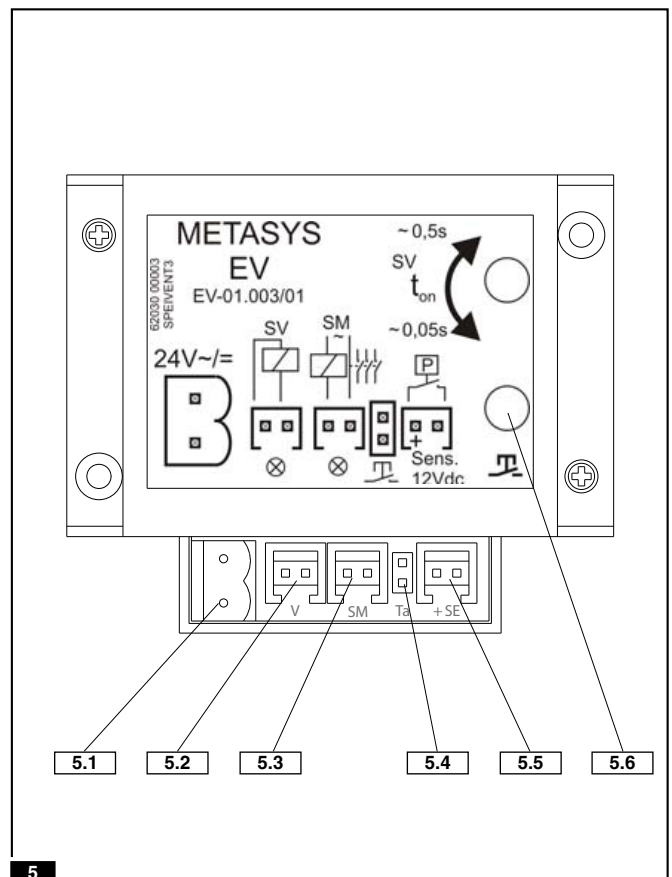
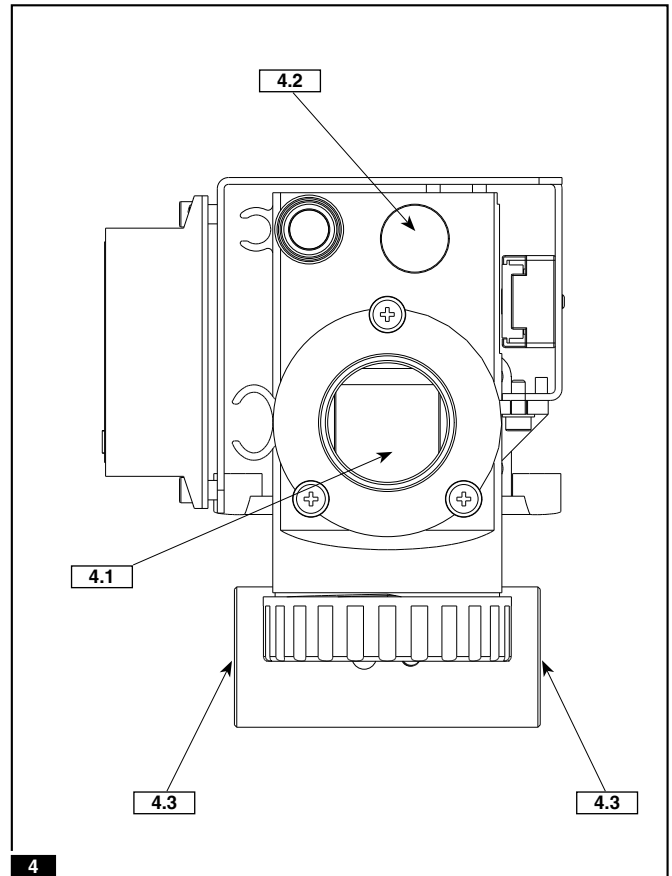
*The supply voltage must be drawn from a fuse transformer, which complies with the requirements of the EN 60601-1 and EN 61558-2-4.*

- 5.2** SV/V: Internal connection of the magnetic valve
- 5.3** SM: Driving mechanism for the suction machine (Parallel connection with the panel switches)

**This output contact SM must be triggered from a cut-off relay, which fulfils the EN 60601-1 requirements.**

**This cut-off relay is connected through the output terminal SM, for which the same operational voltage has to be supplied for its excitation, as is for the spittoon valve.**

- 5.4** Ta: Connection for the servicing switch (optional)
- 5.5** SE: Internal connection of the capacitive sensor
- 5.6** Internal service key



## Setting the valve-opening period

### Fittings

### Spare parts

#### 10. Setting the valve-opening period:

**1** See diagram

The valve-opening period of the stop-valve can be adjusted by means of the setting screw **1.1** on the electronic housing.

By turning the screw clock-wise, the opening period can be lengthened, and by turning it anti-clockwise, it can be shortened.

The setting must be done in such a manner that while operating the spittoon bowl, no suction noise is audible, and that the drainage takes place at a sufficient speed.

#### 11. Optional fittings:

**2** See diagram

**2.1** **Servicing switch with connecting cable** (l = 1 m) and plug to activate the suction-process of the spittoon bowl basin manually

Item No.: 40500004 (1 pc.)

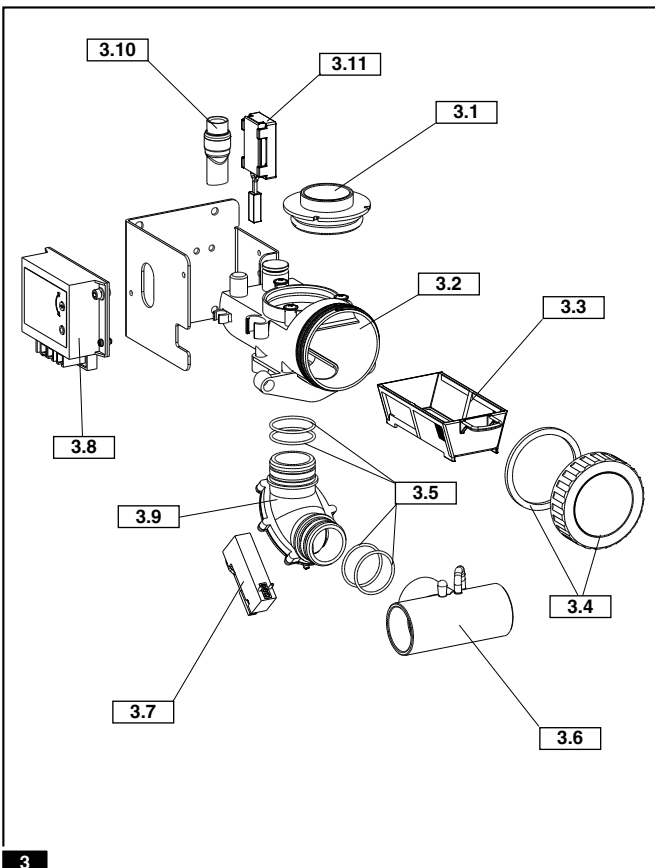
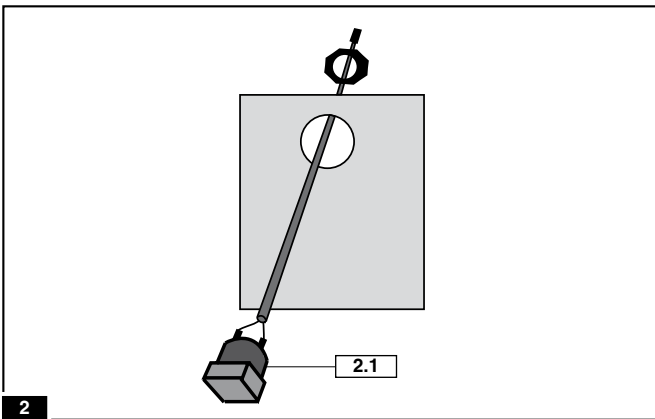
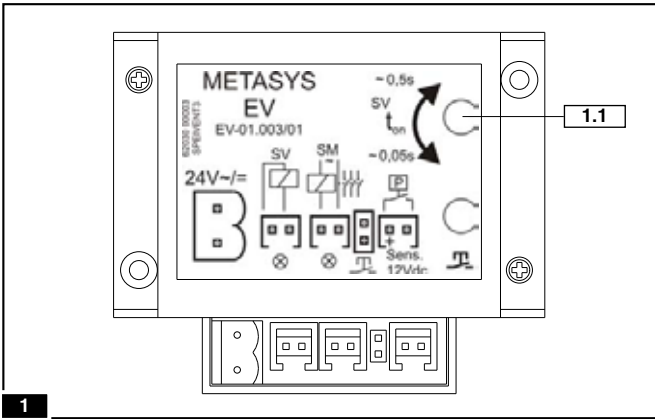


Hose nozzles, adapter and adhesives can be referred to from our price list.

#### 12. Spare parts:

**3** See diagram

- |             |  |           |
|-------------|--|-----------|
| <b>3.1</b>  | <b>Inlet item 26 mm</b>                | (1 pc.)   |
| Item No.:   | 50020108                               |           |
| <b>3.2</b>  | <b>Filter housing</b>                  | (1 pc.)   |
| Item No.:   | 50020052                               |           |
| <b>3.3</b>  | <b>Filter drawer</b>                   | (10 pcs.) |
| Item No.:   | 55010002                               |           |
| <b>3.4</b>  | <b>Screw cap</b>                       | (1 pc.)   |
| Item No.:   | 50020028                               |           |
| <b>3.5</b>  | <b>O-Ring 23 x 1,5 mm</b>              | (10 pcs.) |
| Item No.:   | 50110014                               |           |
| <b>3.6</b>  | <b>T-distributor</b>                   | (1 pc.)   |
| Item No.:   | 40010043                               |           |
| <b>3.7</b>  | <b>Magnetic valve</b>                  | (1 pc.)   |
| Item No.:   | 50120001                               |           |
| <b>3.8</b>  | <b>Electronic circuit board compl.</b> | (1 pc.)   |
| Item No.:   | 50120005                               |           |
| <b>3.9</b>  | <b>Place selection valve EV</b>        | (1 pc.)   |
| Item No.:   | 50020116                               |           |
| <b>3.10</b> | <b>Air supply hose EV</b>              | (1 pc.)   |
| Item No.:   | 50020115                               |           |
| <b>3.11</b> | <b>Capacitive sensor with brace EV</b> | (1 pc.)   |
| Item No.:   | 50120026                               |           |



# Care, cleaning and disinfection with GREEN&CLEAN M2

## Emptying the drainage of the spittoon bowl

### Disposal by DENTAL ECO SERVICE

#### 13. Maintenance, cleaning and disinfection:

**4** See diagram

Shortly flush spittoon bowl after each treatment!

**5** See diagram

Suck some water through all suction hoses after every treatment.

**6** See diagram

Twice daily, after the water has been drained off, the specifically designated disinfectant GREEN&CLEAN M2 has to be used.

This treatment with the disinfectant GREEN&CLEAN M2 must ideally be done prior to long periods of non-use, such as before lunch breaks, after work, or before holidays.

**7** See diagram

Also flush spittoon with GREEN&CLEAN M2 twice a day and additionally clean with the cuspidor cleaner GREEN&CLEAN MB.

**8** See diagram

The filter box **8.1** must be cleaned at least once a week, and replaced whenever necessary.

**Operating the spittoon valve without the filter box is not allowed!**

Please make sure that the yellow screw-cap **8.2** is always tightened ( keep greasing the black gasket with a little Vaseline, from time to time).

**9** See diagram

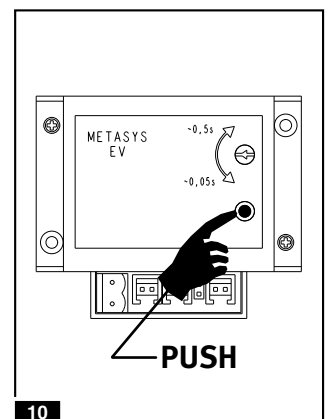
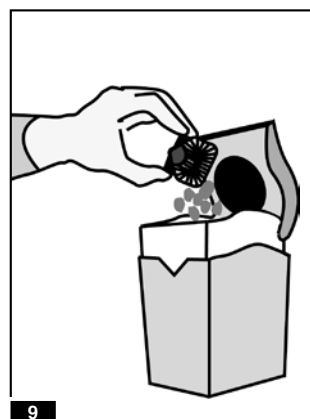
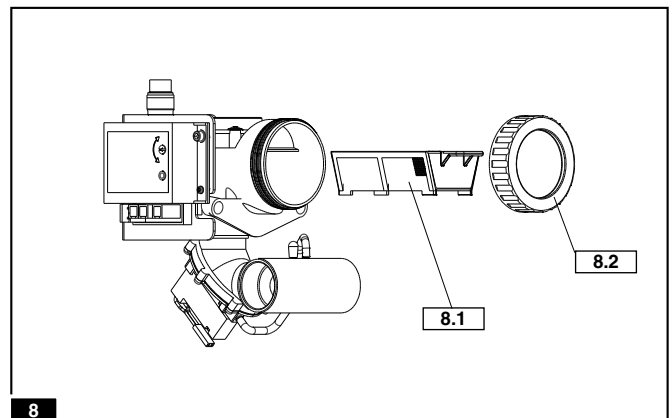
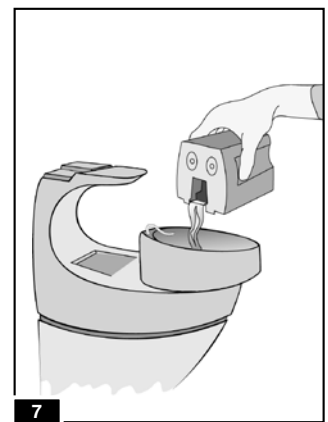
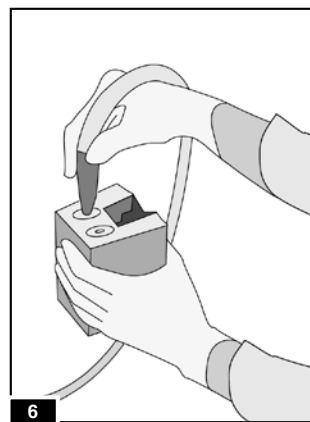
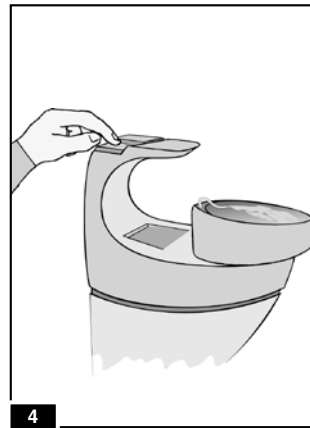
The amalgam residue, which is emptied from the filter box must be collected into the appropriate container METASYS ECOCENTER and has to be sent with the authorized disposal ECOTRANSFORM to DENTAL ECO SERVICE.

#### 14. Emptying the drain hoses of the spittoon bowl:

**10** See diagram

When pressing the internal service key the suction engine is set off and the connection between cuspidor and suction hose is established.

This function allows you to suck off residual water and you have the facility to avoid any possible clogging in the drainage of the spittoon bowl, because of low pressure.





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