

VC 45 Surgical Suction Unit



EN

Installation and Operating Instructions

CE 0297

9000-606-70/30



 **DÜRR
DENTAL**

2016/11SE

Contents



Important Information

1. General	4
1.1 Evaluation of conformity	4
1.2 General notes	4
1.3 Appliance disposal	4
1.4 Notes on Medical Products	4
1.5 Notes on EMC for medical products	5
1.6 Correct Usage	5
1.7 Incorrect use	5
2. Safety	5
2.1 General safety notes	5
2.2 Safety notes concerning protection from electrical current	5
2.3 Information about infection protection	5
3. Warnings and Symbols	6
3.1 Model identification plate	6
4. Overview	7
4.1 Delivery contents	7
4.2 Accessories	7
4.3 Special accessories	7
4.4 Disposable materials	7
5. Technical data	8
5.1 Suction Unit VC 45	8
6. Functional description	8



Installation

7. Set-up	9
7.1 Room for set-up	9
7.2 Set-up alternatives	9
8. Electrical Connection	9



Use

9. Preparation for usage	10
10. Operating the appliance	12
10.1 Switch the appliance On/Off.	12
10.2 Adjusting the vacuum	13
10.3 Suction	13
10.4 Checking the bacteria filter/excess vacuum stop	13
11. Disposable bag	14
11.1 Disposable bag with gelling agent	15
12. Foot switch	16
12.1 Connecting the foot switch	16
12.2 Foot switch function	16
13. VC Cart	17
13.1 Fixture of suction unit	17
13.2 Moving with the VC Cart	17
14. Disposable bag	18
15. Dispose of the disposable bags and suction hoses	20
16. Preparation	21
16.1 Pre-cleaning and disinfection	21
16.2 Removing the container	22
16.3 Disinfection and cleaning	22
16.4 Steam sterilising	23
16.5 Checking and testing the functioning	24
16.6 Storage	24
16.7 Disinfection and cleaning of the appliance surfaces	24
17. Maintenance	25
18. Fuse changing	25



Troubleshooting

19. Tips for Operators and Service Technicians	26
---	----

EN



Important Information

1. General

1.1 Evaluation of conformity

This product has been tested for conformity as laid down under directive 93/42/EEG of the European Union and has been found to conform to all the requirements therein.

1.2 General notes

- These Installation and Operating Instructions form an integral part of the unit. They must be kept close to the unit at all times for the operator. Precise observance of these operating instructions is a precondition for use of the unit for the intended purpose and for its correct operation, new personnel must be sufficiently trained and instructed in its use. New personnel must be made aware of the contents of the assembly and operating instructions, and they should be passed on to future operating staff.
- Safety for the operator as well as trouble-free operation of the unit are only ensured if use is made of original equipment parts. In addition, only those accessories may be used which are specifically mentioned in the Installation and Operating Instructions or have been authorised by Dürr Dental. If other accessories are used with this appliance, Dürr Dental cannot guarantee safe operation or proper functioning. No liability on the part of the manufacturer will be accepted in the case that damage arises through the use of non-approved accessories.
- Dürr Dental are only responsible for the equipment with regard to safety, reliability and proper functioning where assembly, resetting, changes or modifications, extensions and repairs have been carried out by Dürr Dental or an agency authorised by Dürr Dental and if the equipment is used in conformity with the Installation and Operating Instructions.
- These Installation and Operating Instructions conform to the relevant version of the equipment and the underlying safety standards valid at the time of going to press. All circuits, processes, names, software and appliances

quoted are protected under industrial property rights.

- The translation of these Installation and Operating Instructions has been carried out in good faith. No liability can be accepted for mistakes in the translation. The enclosed German version of these Installation and Operating Instructions is the reference version. If there is any doubt about the translation please consult your dealer.
- Any reprinting of the assembly and operating instructions, in whole or in part, is subject to prior approval of Dürr Dental being given in writing.
- Retain the packaging for possible return of the product to the manufacturers. **Ensure that the packaging is stored away from children.** Only the original packaging provides adequate protection during transport of the unit. Should return of the product to the manufacturers be necessary during the guarantee period, Dürr Dental accepts no responsibility for damage occurring during transport where the original packaging was not used!

1.3 Appliance disposal

The EU Directive 2002/96/EC - WEEE (Waste Electric and Electronic Equipment) from the 27th January, 2003 and their current implementation in national law determines that dental products are subject to this above mentioned directive and must be disposed of in line with the these special requirements within the European Economic Area.

If you have any questions concerning disposal of the product, please contact Dürr Dental or your specialist dental supplier.

1.4 Notes on Medical Products

- This product is a technical medical appliance and, as such, may only be operated by such persons who, as a result of training or experience, can be confidently expected to operate it correctly and safely for patients and staff alike.
- Do not use a multi-socket connection cable in order to extend the supply cable length.

1.5 Notes on EMC for medical products

Notes on electro-magnetic compatibility and medical appliances can be found in the enclosed leaflet, order number 9000-606-67/30

1.6 Correct Usage

This surgical suction unit VC 45 is a specially designed suction unit for use in dental medical fields or clinics and for use in surgeries or other dental operating rooms. The VC 45 has been specially designed for the aspiration of fluids, tissue and bony splinters which must be extracted during surgical operations on the patient's mouth.

1.7 Incorrect use

Any use of this appliance/these appliances above and beyond that laid down in the Installation and Operating Instructions is deemed to be incorrect usage. The manufacturer cannot be held liable for any damage resulting from incorrect usage. The operator will be held liable and bears all risks.

- This product is not designed for operation in an area at risk through explosion, or where the atmosphere could contribute to combustion arising. Areas where explosions could occur are those where flammable anaesthetic material, skin cleansers, oxygen and skin disinfectants are present. This appliance is not to be used in areas where the atmosphere could cause fire.



This appliance must never be used for the aspiration of combustible or explosive fluids or gases.

2. Safety

2.1 General safety notes

This appliance has been designed and constructed by Dürer Dental so that correct usage of the appliance is virtually free of any possible injury or danger. In spite of this, we feel it is our duty to mention the following safety measures in order to prevent any possible danger.

- When operating the appliance, observe all local rules and regulations!

Converting or modifying the appliance in any way is strictly prohibited. In such cases, any and all guarantees immediately become invalid. The operation of modified appliances

can be punishable by law. In the interests of trouble-free operation, the owner and operator is responsible for observing these regulations.

- Installation must be carried out by suitably qualified personnel.
- Before every use, the operator must check the functional safety and the condition of the appliance.
- The operator must be familiar with the operation of the appliance.

2.2 Safety notes concerning protection from electrical current

- This appliance may only be connected to a correctly installed electrical socket outlet.
- Before connecting the appliance, it is required to check that the supply voltage and the electrical frequency of the appliance correspond to the values of the mains power supply.
- Before initial start up, all equipment and supply lines must be checked for signs of damage. Damaged supply lines and connections must be replaced immediately.
- Never come into contact with patients and open plug-in connections on the appliance at the same time.
- When working on and with the appliance, always observe the local electrical safety procedures.

2.3 Information about infection protection

- The national accident prevention regulations, as well as the biological agent regulations that apply for dental practices and dental hospitals, must be observed during work with the VC 45 and during disposal.



3. Warnings and Symbols

The following terminology and symbols are used in these Installation and Operating Instructions to denote especially important information:



Information and/or mandatory regulations or prohibitions for the prevention of personal injury or substantial property damage.



Information and/or instructions or prohibitions regarding personal safety or extensive material damage



Warning - dangerous electrical voltage



Steam sterilise at 134 °C



Comply with the operating instructions

3.1 Model identification plate

The model identification plate can be found on the underside of the appliance near the power supply connection.



Order no. / Type no.



Serial no.



Batch code



Observe accompanying documentation!



Manufacturer



Type BF application



Protection class II

IPX1

Protection against infiltration of harmful damp (e.g. water droplets)

4. Overview

4.1 Delivery contents

The following parts are included in the scope of delivery:

VC 45.....0670-01/001

- Surgical suction unit 230 V AC, 50-60 Hz
- Handpiece holder
- Handpiece
- Surgical cannulae ø 2,5 mm (20 pieces)
- Installation and Operating Instructions
- Information about the EMC

VC 45.....0670-02/001

- Surgical suction unit with foot switch
230 V AC, 50-60 Hz
- Handpiece holder
- Handpiece
- Surgical cannula ø 2,5 mm (20 pieces)
- Installation and Operating Instructions
- Information about the EMC

4.2 Accessories

The following articles are necessary to operate the appliance (depending on particular application):

- Collector 1.5 l0670-980-00
- Collector 3 l0670-980-04
- Disposable collector kit, single ...0670-987-00
- Disposable collector kit, double ...0670-987-50

4.3 Special accessories

The following are optional and can be used with the unit:

- VC 45 Cart0670-150-00
- Collector for disposable bags ...0670-980-05E
- Surgical cannula ø 2,5 mm0700-007-50
- Hose adapter 6 mm (5 pieces) ...0670-981-03

4.4 Disposable materials

The following materials are required when operating the unit and must be ordered separately:

- Bacteria filter (10 pieces)0670-982-00
- Suction hose silicone (can be sterilised)0670-981-01
- Collector, 1.5 litres0670-980-00
- Collector, 3 litres0670-980-04
- Suction handpiece0670-100-11E
- Disposable hose (50 pieces) ...0670-981-05E
- Adapter piece7600A020-12
- Disposable bag 2 l (24 pieces) ...0670-980-06E
- Disposable bag 2 l with gelling agent (22 pieces)0670-980-09E
- Vacuum hose with T-piece.0670-980-07E
- Connection hose with angle piece0670-980-08E
- Securing clip0670-987-02E
- Disposable hose with integrated cannula ø 5.8 mm (50 pieces) ...0670-981-04E
- Surgical cannula for single use, ø 2.5 mm
- 20 pieces0700-007-50
- 100 pieces0700-007-51

5. Technical data

5.1 Suction Unit VC 45

Model 0670		-01 / -02
Voltage	V	230 / 1~
Electrical frequency	Hz	50 - 60
Current consumption	A	0.6 / 0.75
Starting current	A	
Electrical output	W	Approx. 138 / 173
Fusing		T 800 mA
Air flow rate *	l/min	45 ±4
Pressure	mbar (hPa)	max. -910
Weight	kg	6.7
Dimensions	WxHxD cm	24x33x36
with cart	WxHxD cm	36x101x44
Noise levels **	dB(A), +4	48 / 51
Duty cycle	%	100
Type of protection		IPX1
Protection class		II
Application part		Type BF
Hose connection	mm	Ø 6

* measured under standard conditions

** depending on vacuum, according to EN ISO 1680 Airborne noise; measured in sound-proofed room. In rooms with poor sound-proofing characteristics, higher values may be obtained.

Ambient conditions during operation

Temperature (°C).....+5 to +40
Relative humidity (%)..... max. 80

Ambient conditions during storage and transport

Temperature (°C)..... -15 to +50
Rel. humidity (%)..... max. 95

6. Functional description

This appliance has been developed to aspirate secretions, blood, tissue and bone, as well as fluids accumulating during drilling, from the patient's oral cavity. This unit is especially recommended for mouth and mandible surgery, e.g. in implantology, where large amounts of blood are likely to be produced and which has a tendency to coagulate. Conventional suction machines and/or separation units cannot usually cope.

Both vacuum and delivery have been specially adapted for this special usage and can be regulated from the unit itself.

After switching on the VC 45 at the main power supply switch, the vacuum pump in the unit starts up. On the upper side of the VC 45 there is a pressure gauge which displays the level of vacuum being produced. To regulate the vacuum, close the suction handpiece adjust the amount of vacuum required by turning the rotating thumb screw. Once a surgical cannula has been inserted into the suction handpiece, the VC 45 is operational. The aspirated material passes directly to the collector vessel. Inside the collector vessel, the air is separated from the aspirated fluids and other particles. Within the collector lid there is a bacteria filter, which is designed so that fluids are prevented from flowing to the vacuum pump. Below this bacteria filter there is a spray shield, which stops any fluids being splashed towards the bacteria filter. Once work has ceased, the unit should be switched off at the main power supply switch.

Before removing the collector vessel in order to empty it, be sure to allow a few moments for the vacuum pressure within the unit to subside.



Installation

7. Set-up

7.1 Room for set-up

- Medical treatment rooms or operating rooms.
- Room temperature must not fall below +5 °C in winter and must not exceed +40 °C in summer.
- If the appliance is first connected during winter months, allow sufficient time after transport and unpacking for the unit to warm to room temperature before initial operation. (Danger of short circuit due to build up of condensation.)

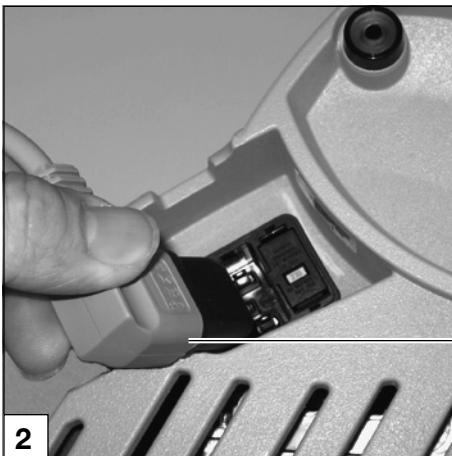
7.2 Set-up alternatives

- Set up the VC 45 on a stable flat and raised surface next to the treatment unit.



Operation of the VC 45 directly on the floor is not permitted

- Set up the VC on the special cart (available as special accessory)



8. Electrical Connection

Before first use (during commissioning), check that the supply voltage is the same as that given on the model identification plate.

- Connect to the power supply using the low power socket (10) on the underside of the VC 45 and a plug for low power units.



Only use a cable with an angled plug connection.

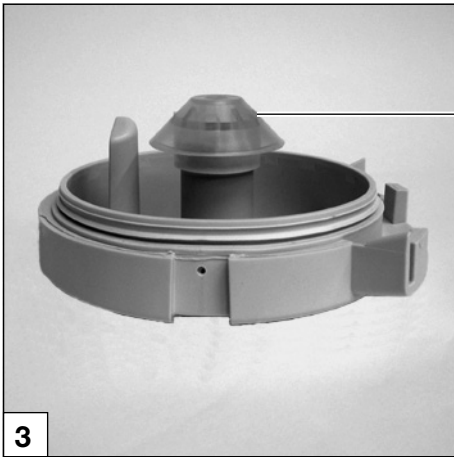
10



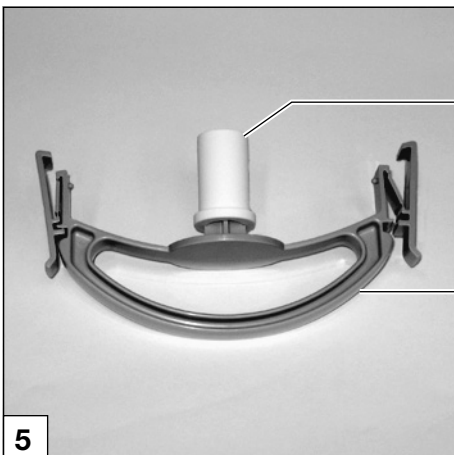
Use

9. Preparation for usage

- Place the splash protector (13) onto the filter housing in the collector lid.

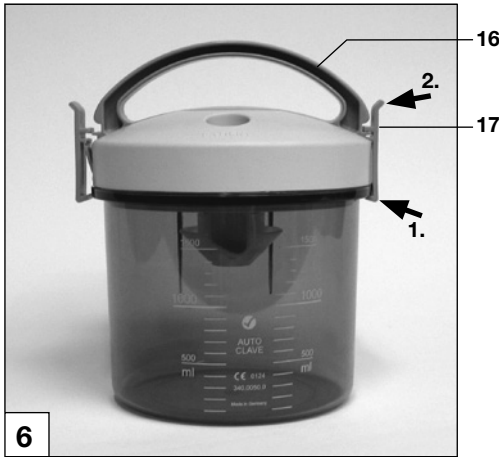


- The collector lid (14) must be set up vertically on top of the collector which must itself be on an absolutely level surface.
- Press the cover carefully down using both hands until the cover engages.



The bacteria filter/excess suction stop is only to be used once and must be changed at least once a day. If the unit is to be used continuously for longer periods (several hours), it is important to change the bacteria filter after each patient.

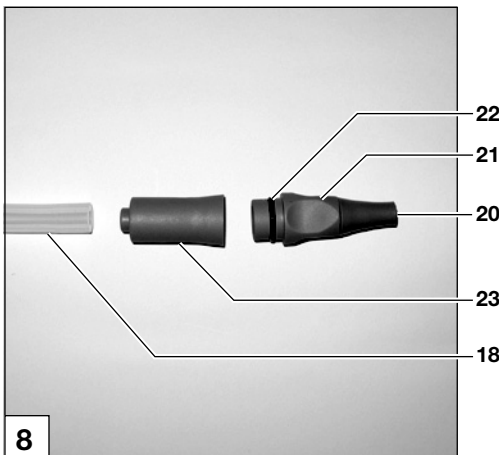
- Place the bacteria filter (15) onto the mouldings of the collector vessel handle (16) until it locks.



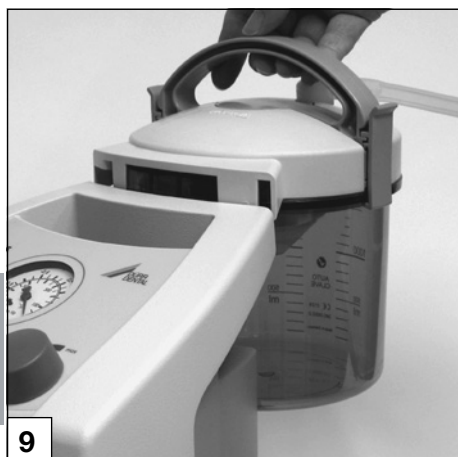
- Slide the collector vessel handle (16) with locking hooks (17) in the open position into the guide on the cover.
- Hang the locking clip (1) under the lip of the collector vessel and press the upper end (2) in the direction of the middle of the collector until it locks into place.



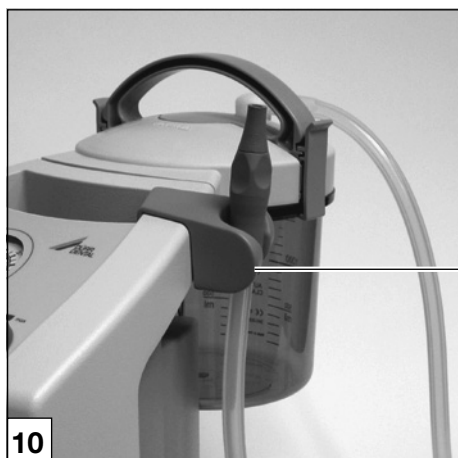
- Slide the suction hose (18) onto its adapter (19).
- Plug the hose adapter into the opening of the collector lid, slightly turning it to increase the locking effect.



- Clip the cannula retainer (20) onto the front of suction handpiece (21).
- Fit the O-ring (22) onto the rear of suction handpiece.
- Press the suction handpiece and hose adapter piece (23) together.
- Slide the suction hose (18) onto the prepared suction handpiece.

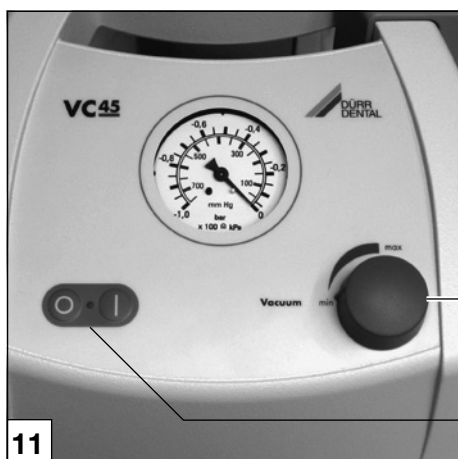


- Now place the collector vessel vertically downwards into the retaining clip mouldings on the basic unit.



- Hang the handpiece holder (24) into position on the basic unit.
- Place the suction handpiece into the handpiece holder.

When ready to use the appliance, insert the suction cannula into the cannula retainer piece on the suction handpiece. This cannula retainer is designed for cannulae up to 6 mm in diameter.



10. Operating the appliance

Before treating a patient, we strongly recommend that two capfuls (approx. 40 ml) of Orotol Plus (or any other agent specifically approved by Dürr Dental) be poured into the collector vessel.

10.1 Switch the appliance On/Off.

Appliance switch has LEDs (25)

- To switch on the appliance, press switch symbol "I".
- To switch off, press the symbol "0"



Model 0670-02

When using the foot switch, the appliance switch should be in the OFF position

10.2 Adjusting the vacuum

- Close the suction hose and use the pressure regulator (26) to set the max. vacuum using the arrow markings.



Do not use excessive force to rotate the vacuum setting against the closed position.



If the desired vacuum cannot be acquired, check the system for any signs of leaks; if necessary, change the bacteria filter.

10.3 Suction

To produce suction, only use suitable suction cannulae.

- Before any aspiration, check all collector parts and hoses for signs of wear including cracks. Damaged collectors must not be used.



Before treating every patient, be sure to check collector, suction hose, handpiece and suction cannula have been sterilised.

- During aspiration, observe the level of fluid in the collector vessel.



The bacteria filter/excess vacuum stop prevent fluids from getting into the pump. Nevertheless, the collector should be changed when the fluid level reaches approx. 1 litre.

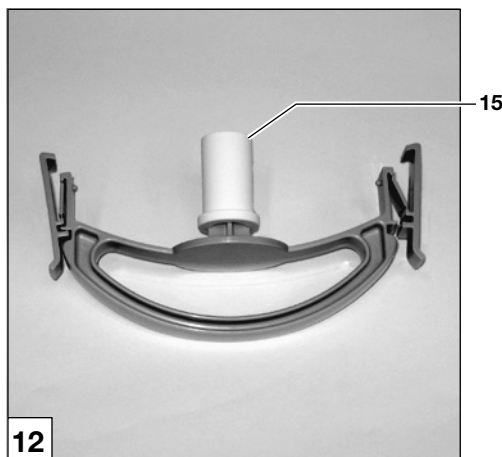
10.4 Checking the bacteria filter/ excess vacuum stop



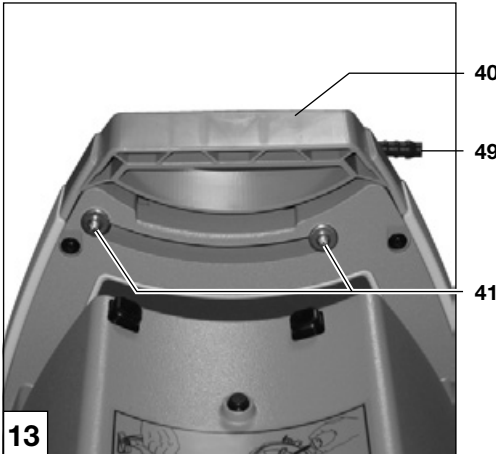
The bacteria filter/excess suction stop is only to be used once and must be changed at least once a day. If the unit is to be used continuously for longer periods (several hours), it is important to change the bacteria filter after each patient.

Never operate the appliance without the bacteria filter/excess vacuum stop.

- Before every application, check that the bacteria filter (15) is clean and dry. Damp or dirty bacteria filters must be replaced. The bacteria filter is no longer in an optimal condition when the vacuum at "max."



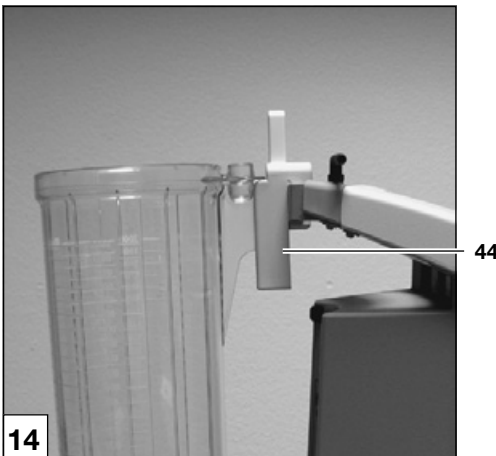
on the vacuum setting with an open suction hose shows more than 0.3 bar.



11. Disposable bag

Use of the disposable bags when using the VC 45 table mounted.

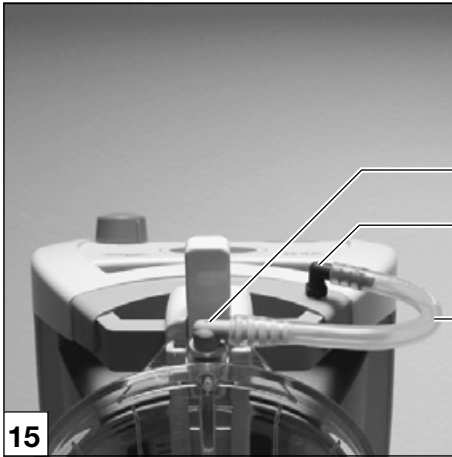
- Place the standard guide adapter (40) onto the basic unit from above.
- Secure the standard adapter from below using two screws (41) and flat washers.



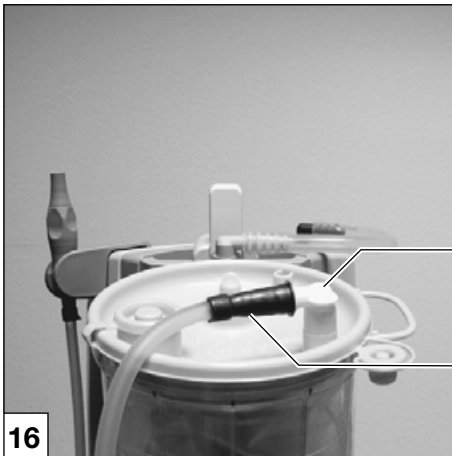
- Place the securing clip (44) onto the adapter.
- The collector should now hang in the adapter guide.



Before every application, carry out a visual check of the complete appliance including the collector. If the collector shows any signs of fatigue (small cracks) because of frequent disinfection or sterilisation, it should be replaced as soon as possible.



- Slide the elbow joint (45) into position on the collector.
- Place the connection hose (46) onto the elbow piece (49) and onto the standard adapter piece of the collector.



- Unfold the disposable bag and place inside the collector.
- The elbow piece (50) must now be inserted into the disposable bag.
- Switch on the VC 45, close the connector piece and simultaneously apply slight pressure to the middle of the cover of the disposable bag. Briefly wait until the bag has completely unfolded.
- Slide the suction hose (51) onto the suction handpiece and elbow piece of the collector.

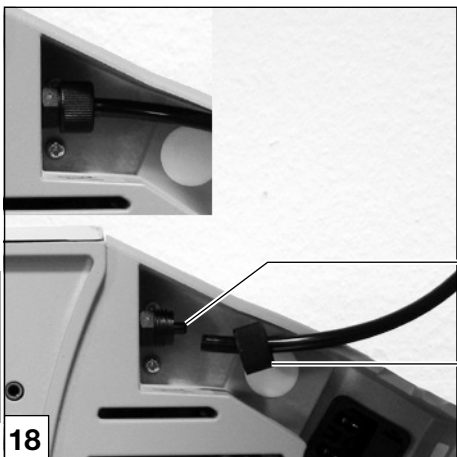


11.1 Disposable bag with gelling agent



The gelling agent influences the extracted fluid by the amount of powder itself, as well as by an additional approx. 5% due to the swelling of the sodium polyacrylate.

It is, therefore, recommended to only extract approx. 1.8 l of liquid into the 2 l disposable bag.



12. Foot switch

Model 0670-02

12.1 Connecting the foot switch

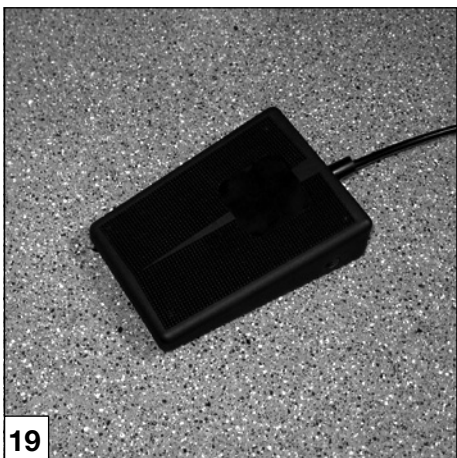
- Slide the knurled screw (30) onto the hose.
- Connect the connecting sleeve to the fitting (31).
- Tightening the knurled screw

12.2 Foot switch function



The foot switch operates pneumatically and has no electrical connection to the VC 45.

- The unit operating switch (25) for foot pedal operation must be switched to the OFF position. The unit is started via an internal switch.
- To switch the appliance ON, apply pressure briefly once to the foot switch. Another press of the switch will switch the appliance OFF again.





20

13. VC Cart

For OP operation, a special VC Cart is available as a special accessory.

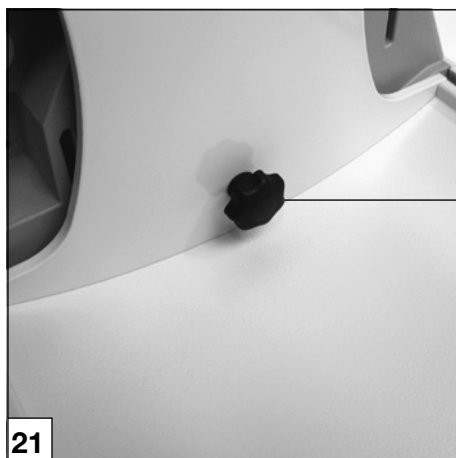
13.1 Fixture of suction unit



Safe operation as a mobile suction system can only be ensured where the appliance is used in combination with the specially prepared VC Cart.

Set up the suction unit on top of the VC Cart so that the legs of the suction unit fit snugly into the prepared holes of the VC Cart. Fix the suction unit in place on the VC Cart from below using the thumb screws (11) provided.

EN



21

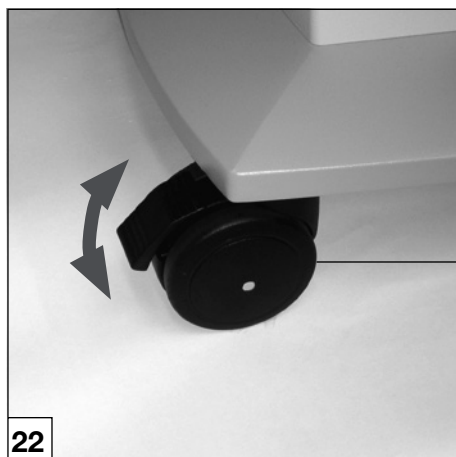
11



Never leave the VC Cart on a sloping surface or incline.

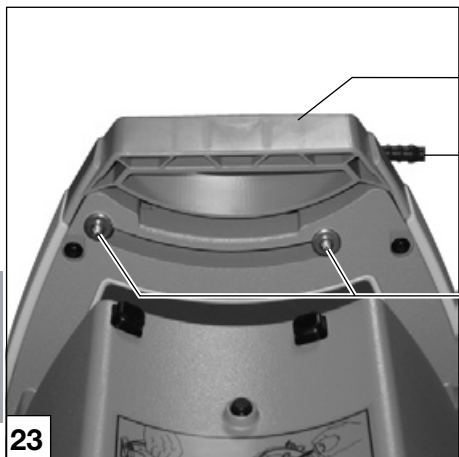


While working with the suction unit, make sure the rollers (12) of the VC Cart are in the locked position.



22

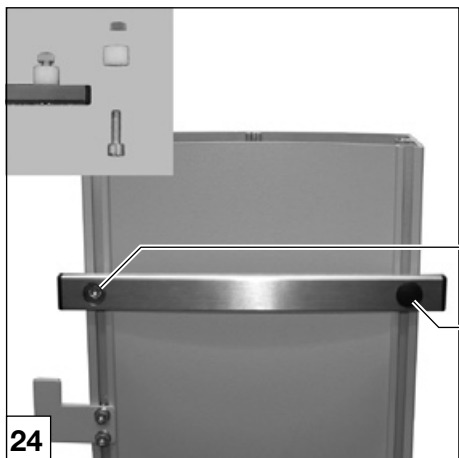
12



14. Disposable bag

Using the disposable suction bag on the VC Cart.

- Place the standard guide adapter (40) onto the basic unit from above.
- Secure the standard adapter from below using two screws (41) and flat washers.



- Fix the screws (42), spacers and nuts in place on the adapter.
- Slide the adapter approx. 10 cm along the rails provided under the VC Cart and lock in place.
- Place the protective caps (43) over the screws.



- Slide the collector mount (44) onto the adapter guide.
- The collector should now hang in the adapter guide.



Before every application, carry out a visual check of the complete appliance including the collector. If the collector shows any signs of fatigue (small cracks) because of frequent disinfection or sterilisation, it should be replaced as soon as possible.

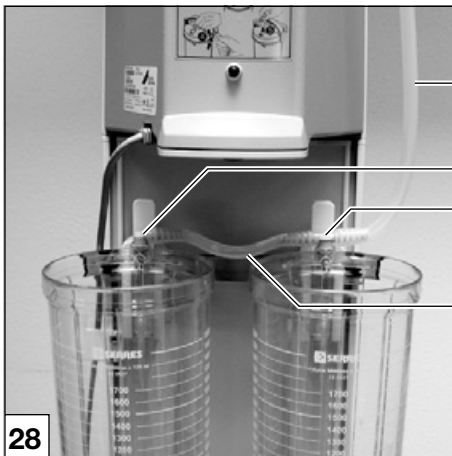


1 collector

- Slide the elbow joint (45) into position on the collector.
- Place the connection hose (46) onto the elbow piece (49) and onto the standard adapter piece of the collector.



- Unfold the disposable bag and place inside the collector.
- The elbow piece (50) must now be inserted into the disposable bag.
- Switch on the VC 45, close the connector piece and simultaneously apply slight pressure to the middle of the cover of the disposable bag. Briefly wait until the bag has completely unfolded.
- Slide the suction hose (51) onto the suction handpiece and elbow piece of the collector.



2 collector

- Slide the T-joint (47) into position on the collector.
- Slide the elbow joint (45) into position on the collector.
- Slide the connection hose (48) onto the elbow piece and T-piece.
- Place the connection hose (46) onto the elbow piece (49) and onto the standard adapter piece of the collector.



- Unfold the disposable bag and place inside the collector.
- The elbow piece (50) must now be inserted into the disposable bag on the right.
- Open the cap of the bag on the left. Slide the elbow joint (52) into position on the opening. Connect the connection hose (53).
- The elbow piece (50) must now be inserted into the disposable bag on the left.
- Switch on the VC 45, close the elbow piece and simultaneously apply slight pressure to the middle of the cover of the disposable bag. Briefly wait until the bags have completely unfolded.
- Slide the suction hose (51) onto the suction handpiece and elbow piece of the collector.

15. Dispose of the disposable bags and suction hoses



The disposable bags are to be disposed of according to the customary national regulations for contaminated disposable materials from dental surgeries.



During disinfection and cleaning, it is absolutely vital that the valid accident prevention procedures for the surgery are observed (e.g. gloves, protective glasses, mouth protection)

- Remove the suction handpiece from the suction hose and disinfect, clean and sterilise according to national rules and regulations (see section "Disinfection, Cleaning and Sterilisation").
- Carefully remove the suction hose together with the elbow piece. Close the opening of the disposable bag.
- For systems with two disposable bags, slide off the connection hose between the two bags and close.
- Remove the disposable bags from the collector and dispose of as required.
- After each treatment, clean and disinfect the collector using a disinfectant wipe. If there are any signs of contamination, the collector must also be sterilised.

16. Preparation



During disinfection and cleaning, it is absolutely vital that the valid accident prevention procedures for the surgery are observed (e.g. gloves, protective glasses, mouth protection)



The measures described concerning disinfection and cleaning or sterilisation in no way replace the surgery rules and regulations.

Before treating every patient, check that the following parts have been sterilised:

- suction hose including the hose adapter, suction handpiece and suction cannula
- collector with its cover, splash guard and handle.

Risk assessment and classification

The VC 45 is a medical product that comes into contact with blood and internal tissues. In the Federal Republic of Germany, for example, a risk evaluation must be carried out and medical products used in dentistry are to be categorised prior to preparation according to the "Recommendations of the Commission on Hospital Hygiene and the Prevention of Infections".

- Collector with its cover, splash guard and handle, suction hose with hose adapter, suction handpiece and suction cannula:

"Semicritical B"

with the increased requirements to the preparation in each case



The instructions described below have been validated by Dürr Dental as suitable and are recommended for the preparation of VC 45 components before and after use.

The surgery manager is responsible for ensuring that the correct and safe preparation of the instruments is carried out using suitable appliances, materials and trained personnel in order to produce the desired results. Validation and routine monitoring of the preparation procedures are necessary. Any and every deviation from the procedures described below by preparation staff is solely the responsibility of the personnel in terms of effectivity and the possible negative repercussions.

Preparation process

The preparation process (disinfection, cleaning, sterilisation and storage) of the VC 45 components after every use is in accordance with the **preparation information according to EN ISO 17664**.

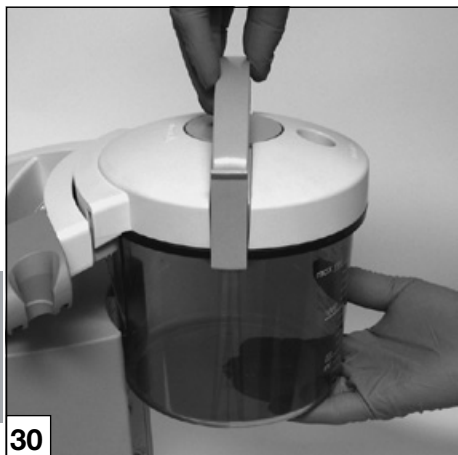
16.1 Pre-cleaning and disinfection

Before removing the collector vessel, the suction hose should be disinfected. Draw up approx. 0.5 l disinfectant (e.g. Orotol Plus or another agent specifically approved by Dürr Dental) and allow sufficient time to work.



Observe the max. level permitted in the collector.

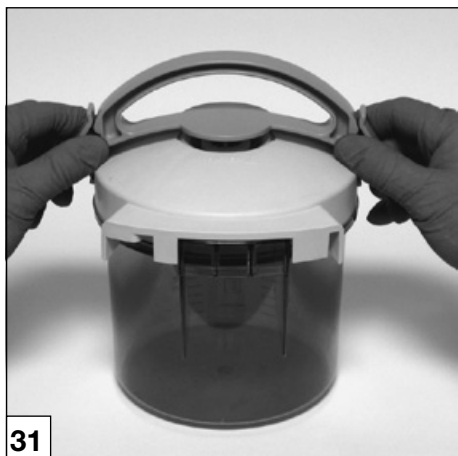
- Remove the suction hose with the hose adapter piece out of the collector lid using a slight twisting motion. Finally, take the complete suction hose apart.



30

16.2 Removing the container

- Lift the complete container vertically upwards with one hand firmly holding the handle and guide. With the other hand on the base of the collector, guide the collector vessel upwards so that it does not tilt while being lifted out.
- Release the engaging catches of the handle to the collector. Pull the two catches outwards so they are no longer holding onto the sides of the cover and pull the handle carefully upwards. Remove the bacteria filter/excess vacuum stop from the handle section.
- Use both hands to remove the lid from the collector. Remove the spray guard.
- Dispose of the contents of the collector as appropriate.



31

16.3 Disinfection and cleaning

Use cleaning and disinfection devices strictly according to manufacturer's instructions.

- Place the individual parts into the unit in such a way that the interior surfaces will be rinsed thoroughly and the water can drain off.
- Set up the cleaning and disinfection cycles according to the manufacturer's instructions.
- After the cleaning and disinfection cycles have finished, carefully check the individual parts for signs of residual dirt and repeat the cycles if necessary.



32



33



34

16.4 Steam sterilising

Individual parts can be sterilised either unpacked or packed in a container or in sterile product packaging. Use suitable sterile product packaging.



Warning

Incorrect sterilisation inhibits effectiveness and can damage the product

- Only steam sterilisation is permitted.
- Do not exceed 134 °C.
- Observe the process parameters.
- Do not use any other procedures.
- Place filter paper on the sterilisation tray.
- Always sterilise the parts for sterilisation together with instruments, as this ensures even temperature distribution.
- Avoid any metal contact of the parts for sterilisation with either any other instruments or with the sides of the tray.
- Place parts for sterilisation away from the heating rods and on the middle rack so there is no contact with the inside walls of the system.
- The product must be sterilised in a disassembled state only.



Temperature: 134 °C

Pressure above the ambient surroundings: 2.16 bar / 0.216 MPa

Working time: 5 min

- Parts for sterilisation must be placed in a small steam steriliser before every use in accordance with EN 13060 and with sterilisation cycle Type B with subsequent drying.
- Carefully observe the manufacturer's instructions regarding usage of the steam steriliser and the correct placement of parts to be sterilised.
- Observe all national and local guidelines and standards regarding the sterilisation of medical products.

16.5 Checking and testing the functioning

Frequent reprocessing in this way can have a slight effect on plastic and rubber parts, such as collector, collector lid, handle and suction hose. The end of the product's life cycle is determined by the amount of wear and tear or damage during use. Always check plastic and rubber parts and replace where necessary, disposing of damaged parts as appropriate. Before disposal, the parts should be disinfected and sterilised.

EN 16.6 Storage

Store individual parts protected against contamination.

16.7 Disinfection and cleaning of the appliance surfaces



Before disinfection and cleaning of the appliance, unplug at the mains and remove all power.

- Always clean the surfaces using a damp cloth. Do not use a dry cloth.
- In the case of coarse organic contamination, pre-clean with cellulose.
- As a surface disinfectant, we recommend a material compatible disinfectant in accordance with the usual dental health standards, e.g. Dürre Dental FD 322, FD 366 or FD 350 disinfection wipes.



36

17. Maintenance

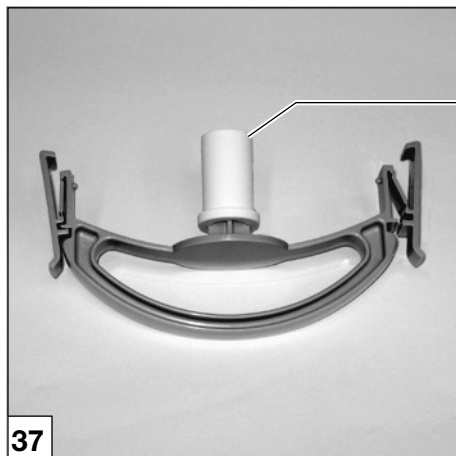


The bacteria filter/excess suction stop (15) is only to be used once and must be changed at least once a day. If the appliance is to be used continuously for longer periods (several hours), it is important to change the bacteria filter after each patient.

Never operate the appliance without bacteria filter/excess vacuum stop. Only use original Dürr bacteria filters.

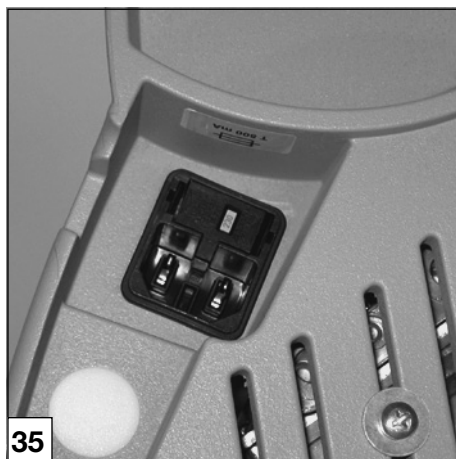
- Before every application, carry out a visual check of the appliance including hoses, hand-piece and collector. If the collector, its cover or its handle section show signs of wear, such as minute cracks, these parts should be replaced.

EN



37

15



35

18. Fuse changing



Before replacing the fuse, remove the plug and the connector on the bottom of the appliance.

- Use a small screwdriver to disengage the spring clips on each side of the fuse by pressing carefully and pull the fuse out.
- Insert a new fuse and replace the holder until both clips engage again.
- Connect to the mains cable again.



Troubleshooting

19. Tips for Operators and Service Technicians

Any repairs above and beyond routine maintenance must be carried out by suitably qualified personnel or one of our service technicians.



Before any service, unplug at the mains and remove all power.

EN

Problem	Probable cause	Solution
1. Appliance does not start	<ul style="list-style-type: none">• Plug not correctly inserted• No supply voltage• Fuse defect	<ul style="list-style-type: none">• Check socket outlet connections• Check mains supply• Replace fuse
2. Performance too low or lacking	<ul style="list-style-type: none">• Hose connection has leaks or cover not tight• Bacteria filter is blocked (display shows vacuum)• Pump valve reeds are stuck	<ul style="list-style-type: none">• Carefully check that collector lid and all hose connections are tight, and check seals around collector lid• Change bacteria filter, check fluid level in the collector if necessary and empty the collector if required• Replace pump (requires service technician)
3. Secretions or blood have been sucked into the pump	<ul style="list-style-type: none">• Working without bacteria filter/excess vacuum stop	<ul style="list-style-type: none">• Clean the pump of all contamination or replace (call service technician)
4. Collector shows signs of cracks	<ul style="list-style-type: none">• Collector was disinfected using a non-approved disinfectant• Collector shows signs of age. End of service life reached	<ul style="list-style-type: none">• Use a suitable disinfectant• Replace collector
5. Seal in cover loose	<ul style="list-style-type: none">• Ageing and wear of seal	<ul style="list-style-type: none">• Replace cover
6. Catch mechanism of collector handle broken off at hinge	<ul style="list-style-type: none">• End of service life reached due to material fatigue	<ul style="list-style-type: none">• Replace collector handle



Hersteller/Manufacturer:

DÜRR DENTAL SE
Höpfigheimer Str. 17
74321 Bietigheim-Bissingen
Germany
Fon: +49 7142 705-0
www.duerrdental.com
info@duerrdental.com

