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INSTRUCTIONS FOR USE

Dental unit

DIPLOMAT CONSUL DC 170

DIPLOMAT CONSUL DC 180

DIPLOMAT ADEPT DA 110A



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1 ABOUT

These Instructions for Use are intended to provide you with necessary information about **DIPLMAT CONSUL DC 170, DIPLOMAT CONSUL DC 180, DIPLOMAT ADEPT DA110A** dental unit. Please, familiarize yourself with information provided in this handout before operating the unit. It is expected, that dental unit will be used by a specialist, familiar with the following instructions for use as well as with the instructions for any other products and applications that are being used in conjunction with a unit. To ensure proper operation installations and/or adjustments should be done by authorized technicians of authorized organization. The utilities requirements as well as the installation requirements specified in **DIPLMAT CONSUL DC 170, DIPLOMAT CONSUL DC 180, DIPLOMAT ADEPT DA110A** Instructions for Use must be observed.



Fig. 1.1 Diplomat Consul DC 170



Fig. 1.2 Diplomat Consul DC 180



Fig. 1.3 Diplomat Adept DA 110A

- 1. Data plate location
- 2. Main switch location

2 PRODUCT DESCRIPTION

The **DIPLOMAT DC 170** and the **DIPLOMAT DC 180** are chair-mounted-type dental units with chair-integrated energy unit. The **DIPLOMAT DA 110A** is a stationary-type dental unit.

This unit can be mounted on the DM 20 or on the DE20 chairs. The pantographs of a control panel with instruments and handpieces and of a operating light are mounted on the spittoon block. The instruments and handpieces, except for syringe, saliva ejector, large and small aspirators, polymerizing lamp, and DP7 camera are controlled with the foot controller. The keyboard with control buttons and light indicators is located on the control panel. The handle enables a smooth repositioning of control panel. In the standard configuration the handle is mounted on the right side of the control panel. The control panel with left-side handle or both left- and right- handles are available upon request. Depending upon the model, spittoon block can be equipped with saliva ejector and with large and small aspirators. The glass cuspidor bowl, rinsing and cup-filling spouts are detachable. The silicone pads on the tray table as well as the silicone handles are detachable and sterilizable. Large and small aspirators' handpieces are also detachable and are disinfection- and sterilization-friendly. Saliva ejector's tips are for single use only.

As an optional furnishing, light console-mounted tray tables as well as the pantograph monitors are available upon request. All the **DIPLOMAT DC 170**, **DIPLOMAT DC 180**, **DIPLOMAT DA 110A** units are equipped with a syringe on a control panel.

The following control panel configurations are available:

- 1x syringe
- max. 3 rotary instruments, among which are
 - max. 2 turbines
 - max. 2 micromotors (max. 2x DC motor or max. 2x BLDC motor)
 - up to 2 brushed motors (max. 2x DC motor or max. 2x BLDC motor)
 - up to 2 brushless motors
- 1x ultrasonic calculus remover (hereafter UOZK)
- max. 5 instruments with lighting (DA 110A max. 4 instruments with lighting)
- 1x polymerizing lamp



Note

You can only configure the dental unit with one specific motor type.

The spittoon block can be fitted with the following instruments:

- 1x large aspirator
- 1x small aspirator
- 1x saliva ejector
- 1x DP7 camera
- 1x polymerizing lamp
- 1x syringe



Notes

UOZK – ultrasonic calculus remover /scaler

PLM - polymerizing lamp

DC motor – brushed motor

BLDC motor – brushless motor



Note

Optional equipment and supplementary equipment (see the current price list).

3 TECHNICAL DATA

Supply voltage	230V ± 10%
Frequency	50 Hz ± 2 %
Max. power input at 230V/50 Hz	400 VA + 10%
Input air pressure	from 0,45 to 0,8 MPa
Input water pressure	from 0,3 to 0,6 MPa
Dental unit weight	50 kg + max.20 kg acc.to equipment
Type of shock protection	Class I equipment
Degree of shock protection	Applied parts of B type
Water temperature for the cup	33 ± 5°C (with heater fitted)
Tray table recommended max. load	0,5 kg
Side table recommended max. load	3 kg



To eliminate the risk of electric shock, equipment must be connected to the mains supply with a reliable connection to protective earth.
Operation mode is continuous with intermittent loading, common to the dental practice.

4 GENERAL DESCRIPTION OF THE DENTAL UNIT DC 170

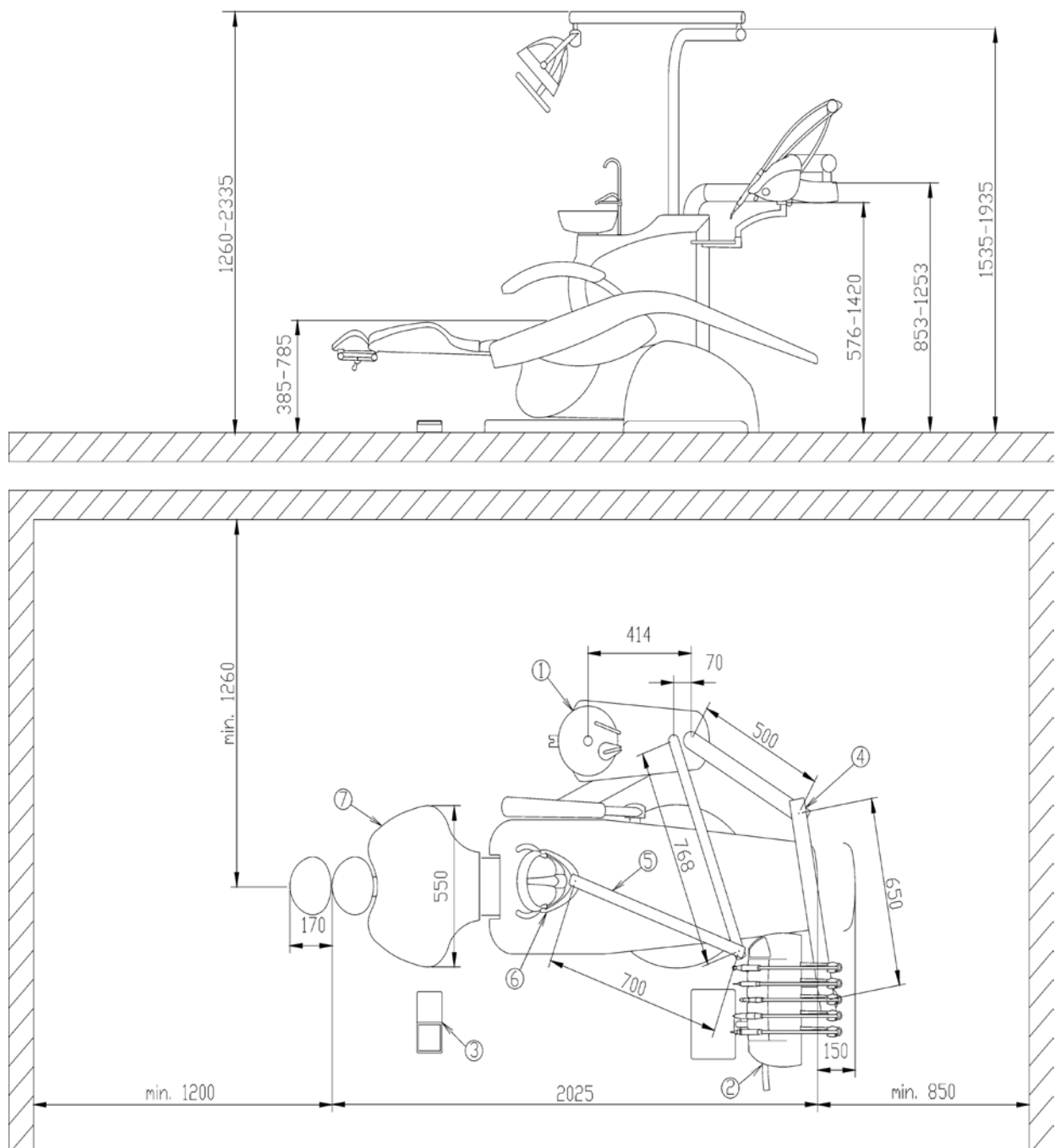
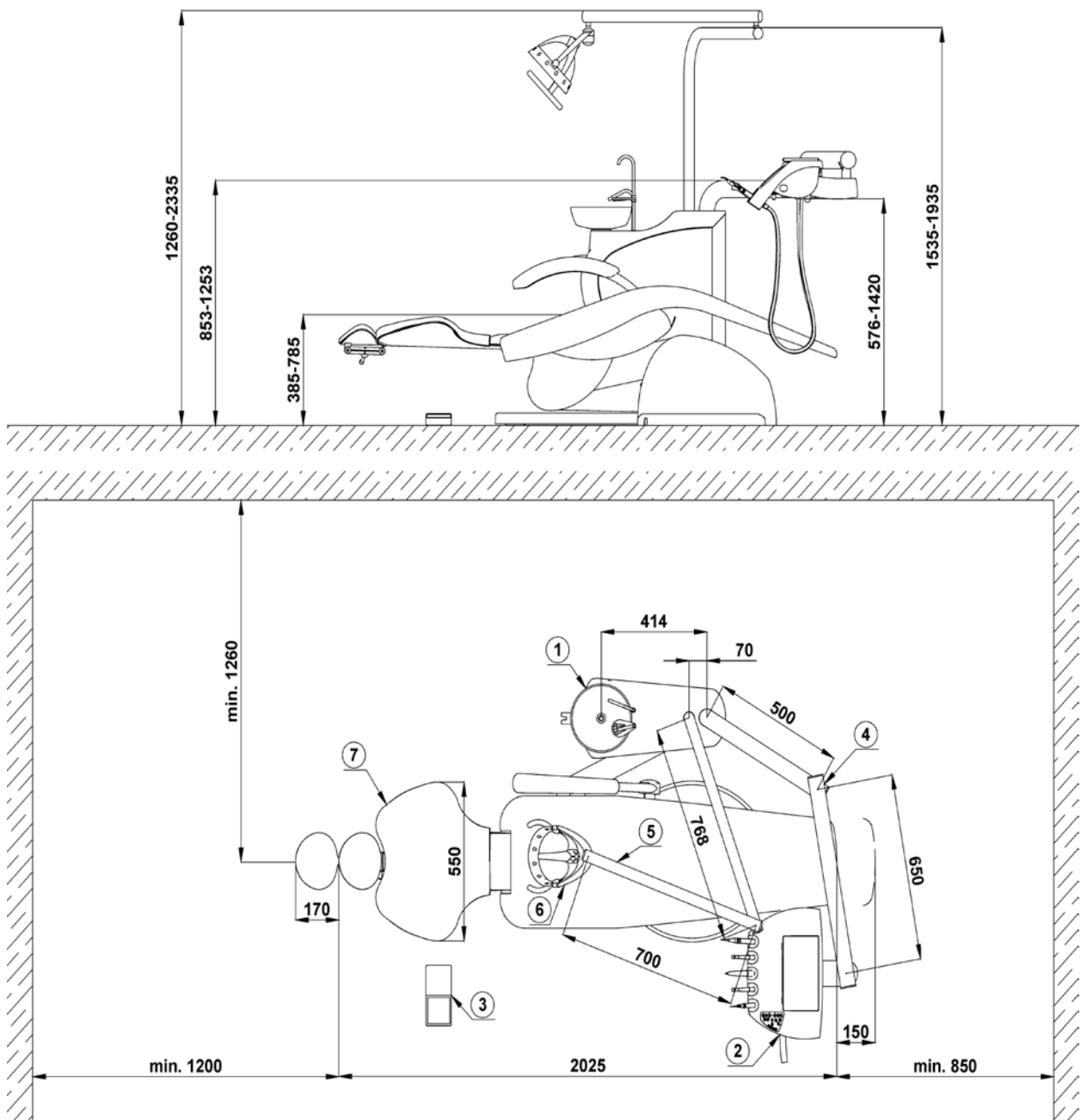


Fig. 4.1

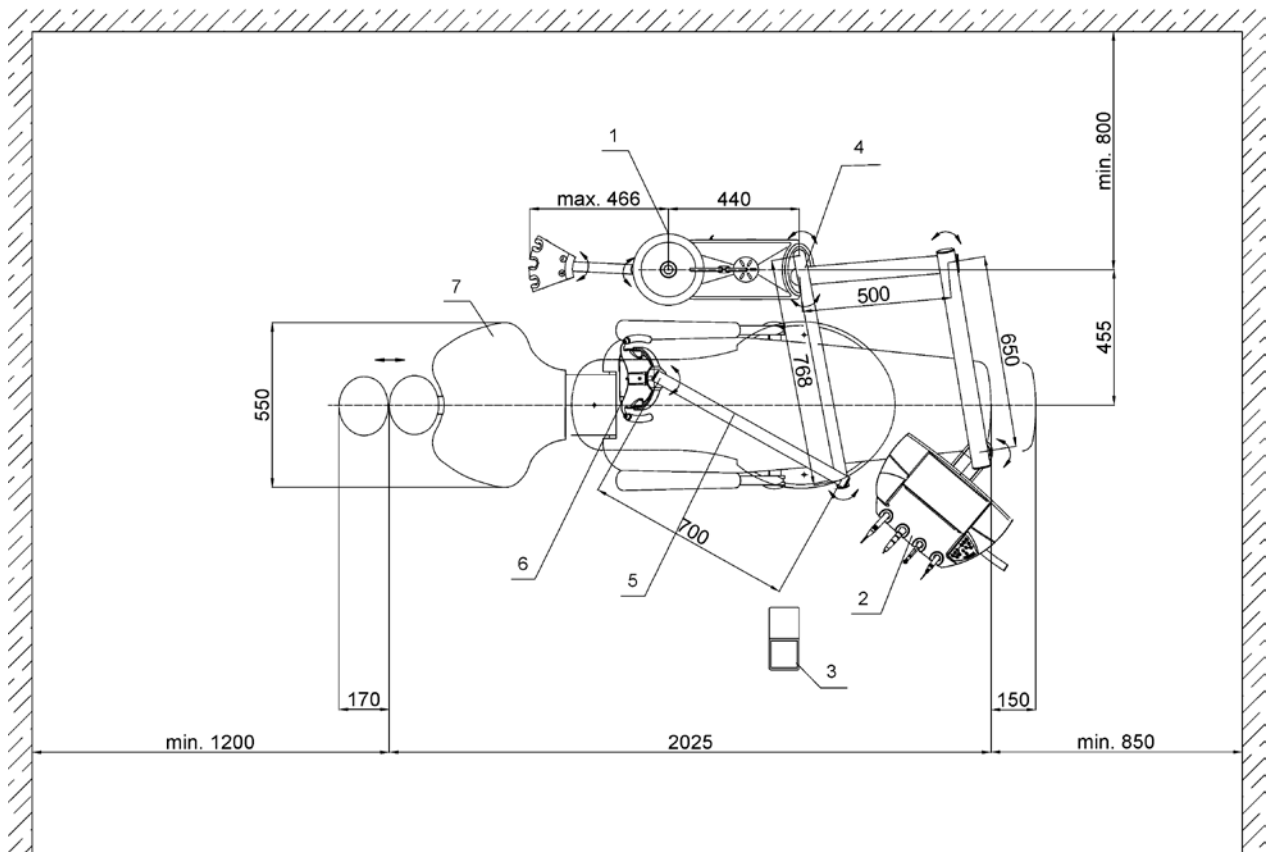
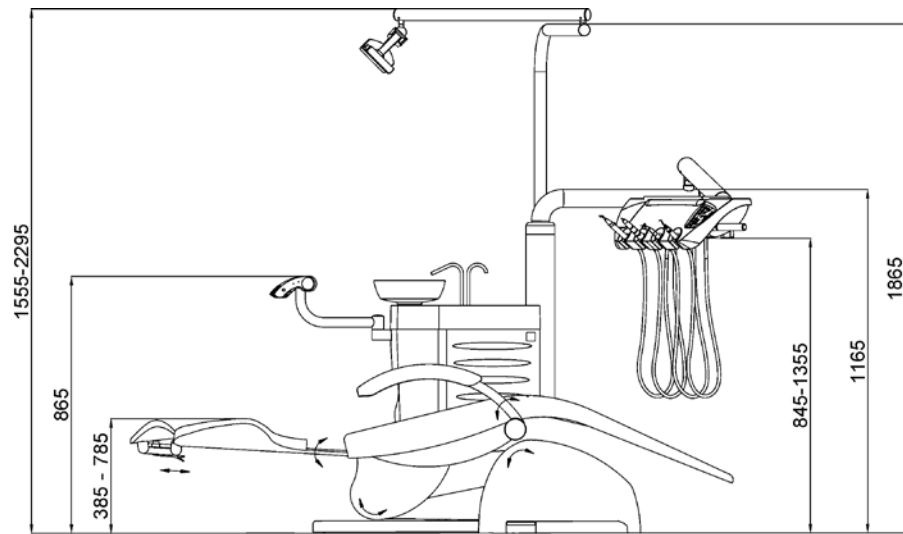
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|--------------------------|----------------------------|
| 1. Spittoon block | 5. Dental light pantograph |
| 2. Control panel | 6. Operating light |
| 3. Foot controller | 7. DIPLMAT Dental chair |
| 4. Control panel console | |

GENERAL DESCRIPTION OF THE DENTAL UNIT DC 180



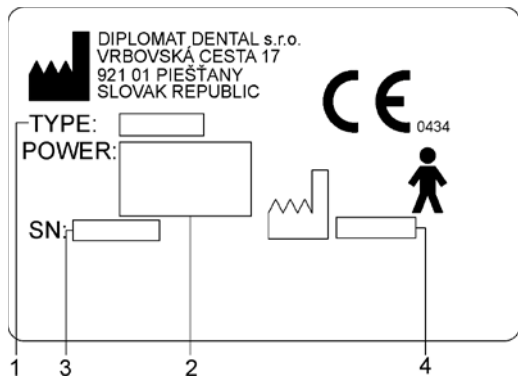
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|--------------------------|----------------------------|
| 1. Spittoon block | 5. Dental light pantograph |
| 2. Control panel | 6. Operating light |
| 3. Foot controller | 7. DIPLOMAT Dental chair |
| 4. Control panel console | |

GENERAL DESCRIPTION OF THE DENTAL UNIT DA 110A



- 5. Spittoon block
- 6. Control panel
- 7. Foot controller
- 8. Control panel console
- 8. Dental light pantograph
- 9. Operating light
- 10. DIPLOMAT Dental chair

4.1 Data plate



1. Designation of the unit type
2. Basic electrical parameters
3. Serial number
4. Production date

5 PRE-INSTALLATION REQUIREMENTS

5.1 Environmental conditions

Do not install in premises with a potential explosion hazard!

5.2 Utility Requirements

Water

It is required to use only drinkable water with input pressure of 0,3 MPa to 0,6 MPa and with min.4 l/min. flowrate. Water should contain no particles larger than 50 µm or in case of occurrence of such 50 the µm advance filter /strainer/ should be installed to prevent pipes' cross-sections from clogging.

Air

Oil-free, clean and dry air, with a minimum flow of 55 l/min and a pressure of 0,45 to 0,8 MPa.

Suction (for cuspidor block configuration with large and small aspirators)

Static vacuum index must be measured at the spot and must be within the range of min. 0,005 MPa (50 mbar) to max. 0,02 MPa (200 mbar). If the static vacuum index is higher than 0,02 MPa, then suction CONTROL valve should be connected to the suction branch in order to limit the max. vacuum to 0,02 MPa. This regulating valve is not a part of the kit. The suction unit must produce the flowrate of at least 450l/min. measured at the spot.

Waste

The waste /drain/ branch must have continuous slope of min. 1% and min. flowrate of 10l/min. and must have no sharp bends and sections that might cause backflow. Do not use the same waste branch in conjunction with another dental unit or a basin! It is allowed to use polypropylene or cured polyethylene tubes.



Caution

All of the pre-installation and installation operations must be performed in accordance with the applicable standards of the particular country and in coherence with the valid product documentation, which every authorized representative of Diplomat poseses.



Note

If the local regulations require an installation of an amalgam catcher, then the cuspidor block without such must be connected to an external amalgam catcher. Amalgam catcher should be installed according to the manufacturer's instructions packed with the product.

Recommended mains fuse rating

Recommended fuse rating for the supply main is 16A. (If using a circuit breaker, use circuit breaker "C" type). No other equipment should be connected to the supply main! Max. Electrical power input of dental unit is 400 VA. The supply main must conform to prevailing local codes.

Recommendation

The manufacturer recommends installation of an instantaneous residual-current device with 30mA sensitivity, if installation of such does not contradict local regulations.

If all the conditions fit the pre-installation requirements, the dental unit can be installed and connected to the utilities.

5.3 Floor surface

The floor must have at least 100mm thick concrete foundation. The floor slope should not exceed 1%. Antistatic floor is recommended.

5.4 Environment

Ambient temperature range	from +10 °C	to +40 °C
Relative humidity range	from 30 %	to 75 %
Atmospheric pressure range	from 700 hPa	to 1060 hPa

6 ASSEMBLY AND INSTALLATION**Unpacking the unit and inspecting the delivery**

Examine the package for any outside indication of damage. If any damage is found do not open the package and notify the forwarding agent or the seller immediately. In case no outside damage is found, carefully open the package and unpack the individual parts of the dental unit. Check all the parts for damage, quantity, etc. according to the list provided in chapter 13 of this Instruction for Use and according to the enclosed check-list.

The installation must be done by the certified service technician only; otherwise no possible future warranty claims will be accepted. The warranty form must be filled out and sent to the manufacturer or the seller.

Note:

Feed the sieves (attached in the small parts pack) in the suction bottle end pieces according to the figure Nr. 10.2.

7 PUTTING THE UNIT INTO OPERATION

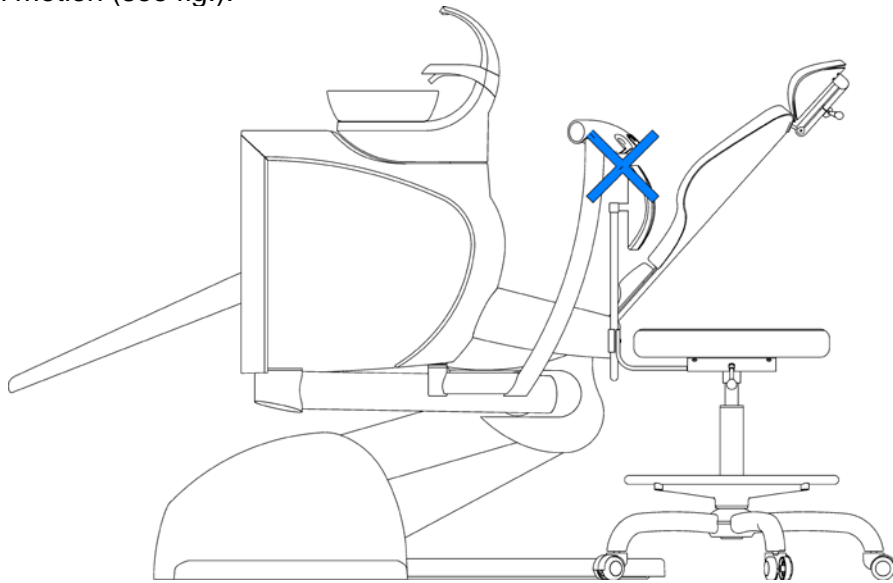
1. switch on the compressor and let it get pressurized
2. open the central water supply
3. turn on the suction unit (for cuspidor block configuration with large and small aspirators)
4. turn on the main switch located on the chair (fig. 1.1) – position I, the indication light lights on

The unit is connected to the water and air distribution. After approx. 5s have passed, the unit is ready for work. It is necessary to wait for approx. 2 mins. For the water to be warmed up to the desired temperature, if the electrical water heater is installed. Do not take out any instruments or press keyboard buttons when turning the dental unit on. The foot controller should be at a standstill.



Caution

Assistant's arm and panel should be positioned so that they do not obstruct dental chair or dentist's stool motion (see fig.).



Caution

Except for the saliva ejector, large and small aspirators (depending on modification) polymerizing lamp and syringe (on the control panel and on the assistant table) only one instrument can be used or taken out at a time.

8 PRODUCT OPERATION

8.1 Control panel and handpieces

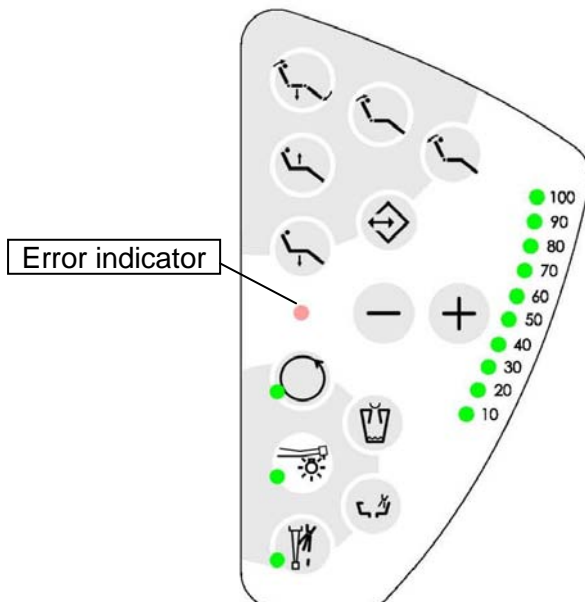


Fig. 8.1 Keyboard

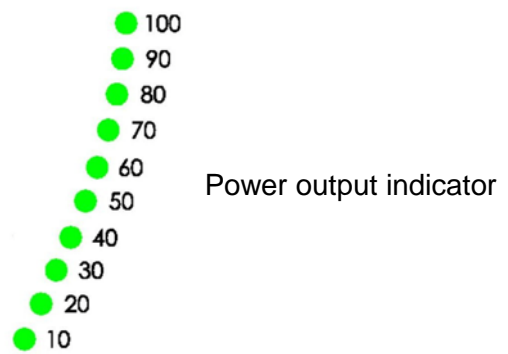















Fig. 8.2 Indicator


Control panel buttons description

Button	Description	Button	Description
	Increasing output (RPM)		Chair Base up
	Decreasing output (RPM)		Chair Base down
	Reverse rotation of the micromotor/ENDO with indication		Backrest forward
	Handpiece lighting with indication		Backrest backward
	Instrument cooling with indication		Automatic entry-exit chair position
	Cup fill		Saving settings/quick key for programmed positions (valid only for the chairs with programming)
	Spittoon bowl rinse		

8.1.1 Buttons descriptions




Instrument cooling

To turn instrument cooling on while using micromotors, turbine or UZOK press . When indicator light is on or blinking means that "instrument cooling" is on.

Instrument cooling has 2 modes:

- Cooling ON - LED indicator is on (spray coolant) or LED indicator is blinking (water coolant)
- Cooling OFF - LED indicator is off

To toggle between spray coolant and water coolant press and hold the button  for approx. 11 - 16 sec.



Reversing rotation of the micromotor

Pressing this button will reverse the micromotor rotation or enable the ENDO function for the scaler. The indicator next to the button shows the status (lit when on).



Cup fill

To fill the patient's cup Press and hold this button for more than 1 sec. (factory preset). Pressing and holding the button for more than 4 sec. will allow you to control the amount of water in the patient's cup manually (the cup will be filling until the button is released). Pressing the button fast in less than 1sec. will end the cup filling. Maximum programmed cup filling time is 25 sec. Cup filling time is automatically saved in the memory and will activate automatically next time you use the unit.



Bowl rinse

To rinse the bowl press and hold the button for more than 1 sec. Pressing and holding the button for more than 4sec. will allow you to control rinsing time manually (rinsing will end when the button is released). Pressing the button fast in less than 1 sec. will end the bowl rinsing. Maximum programmed bowl rinsing time is 40 sec. Bowl rinsing time is automatically saved and will activate automatically next time you use the unit.



Handpiece lighting

Pressing this button will turn on the lighting of the rotary instruments (turbine, micromotors) and UZOK on or off. (Depending upon modification, this feature is compatible with Amdent Bi-11, Satelec SP NEWTRON LED only). Take the handpiece out of the holder and press the button to turn on the lighting for this particular handpiece. The indicator next to the button shows the status (lit when on). The lighting turns on after a handpiece is put into operation by moving the lever of the foot controller to the right. The lighting turns off automatically when a handpiece is not in use for more than 10 sec. As soon as a handpiece is returned to its initial position the lighting turns off.

Saving the customized settings (see chapter 8.1.2).



Plus and minus

Pressing this buttons will increase (decrease) the parameter being set from minimum up to the maximum value.

The buttons set the following:

- the micromotor revolutions /speed/
- the output, if an instrument with output control is used (e.g. ultrasonic scaler)



Chair adjustment buttons

The buttons serve to adjust the dental chair to the desired position. See chapter **8.4 Operating the dental chair** for details.

8.1.2 Saving the customized settings

By pressing the instrument illumination button while all the instruments are in their basic positions, the set values of the parameters of the instruments are saved in the internal memory of the unit and are read at starting the unit. Saving of the parameters is indicated by triple beep. The unit remembers the set parameters even after it has been turned off.

8.1.3 Adjusting water coolant flow

Use the needle valve on the right bottom side of the control panel to control a water coolant flow.

An individual water coolant flow control for each handpiece is available upon request. In this case, the needle valve is located on the bottom of a control panel directly under the handpiece.



Fig. 8.3

8.1.4 Tray table

A tray table with a holder for a unit with overhead delivery system is available upon request. Tray table is made of stainless steel and has closed corners. Its dimensions are: 177 mm x239mm. To remove tray table from the holder lift it up. (as shown on fig. 8.4).

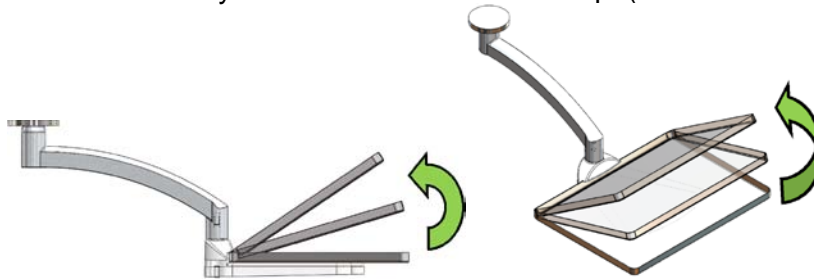


Fig. 8.4

Stainless tray with open corners is available upon request. Its dimensions are: 181 mm x 280 mm (fig. 8.5).

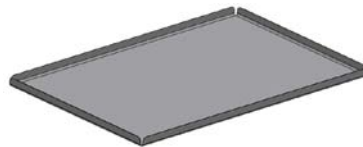


fig. 8.5



fig. 8.6

The size of both tray table models allows placing „Mini Tray“ -type plastic dishes (dimensions: 162 x 238 x 22,2 mm) by „ZIRC Color Code System“ on them (fig. 8.6). DA 110A and DC180 units are supplied with a tray (140x260 mm.) made of stainless steel.

8.1.5 Operation of individual instruments

Control panel

In addition to below listed instructions, please, follow the instructions given by the manufacturer of a specific product.

Syringe




The syringe is active straight away after withdrawal from the holder. For air press the right button, for water rinse, press the left button and for spray, press both buttons simultaneously.

Turbine

Activate the turbine by withdrawing it from the holder and press a foot controller pedal. To turn the turbine off, release the pedal. It is recommended to run CHIPBLOWER function after use. (If modified with UNO or NOK foot controllers). It is impossible to adjust rotations of a turbine.

Micromotor

Activate the micromotor by withdrawing it from the holder and press a foot controller pedal. To turn the micromotor off, release the pedal. It is recommended to run CHIPBLOWER function after use. (Only possible with UNO or NOK foot controllers).

Press  or  button to adjust the RPM in a range of 0-100%. To change micromotor's direction, press  button on the keyboard or press and hold "spray" button on the foot controller for more than 2 and up to 8 sec. It is impossible to change the direction when micromotor is active.

It is possible to adjust RPM from "0" and up until the desired value is reached (as shown on the indicator). Adjust RPM by moving the lever (pedal) on the foot controller. (Only possible with UNO or NOK multi-function foot controllers.)


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Micromotor Bien Air MCX

The MCX micromotor by Bien Air:1000-40,000 RPM, max torque 2.5 Ncm. To activate the motor, withdraw it from the holder and then press the pedal (lever) on the foot controller. Release the pedal to turn off the motor. It is recommended to run CHIPBLOWER function every time after using the motor (function is available for UNO or NOK foot controllers). Use **+** and **-** keys to adjust RPM from 0-100 %. See Table 1.


Bar graph [%]	10	20	30	40	50	60	70	80	90	100
RPM	4000	8000	12000	16000	20000	24000	28000	32000	36000	40000

Table 1

To reverse the direction of rotation, press the  key on the keyboard or press and hold (2 to 8 seconds) the "spray" key on the foot controller. Reversing of rotation is only possible when the motor is idle.


If you use a multifunctional foot controller (UNO or NOK), you can increase the RPM value by pressing down the pedal. The RPM can be adjusted from 100 to the max. preset value.

Note

 Pedal's initial position equals 0 and a minimum rpm for motor's activation is 1000 rpm. Thus, when set to 10% (= 4000 RPM), you need to press the pedal quarter way down to activate the motor.

Scaler

Activate the scaler by withdrawing it from the holder and pressing the lever on the foot controller.

Press **+** or **-** button to adjust the output either when scaler is out of the holder or in operation. Press  to enable ENDO function. When ENDO function is active the light indicator is on.

It is possible to adjust output from "0" and up until the desired value is reached (as shown on the indicator). Adjust output by moving the lever on the foot controller. (Only possible with UNO or NOK multi-function foot controllers.)

Polymerizing lamp

The polymerizing lamp is active straight away after withdrawal from a holder. Before using polymerizing lamp reference the manual that came with it.

8.2 Foot controller

Foot controller MARQUARDT



Fig. 8.7

- 1. lever (pedal)
- 4. chair programming

Foot controller UNO



Fig. 8.8

- 2. chipblower
- 5. entry-exit position

Foot controller NOK

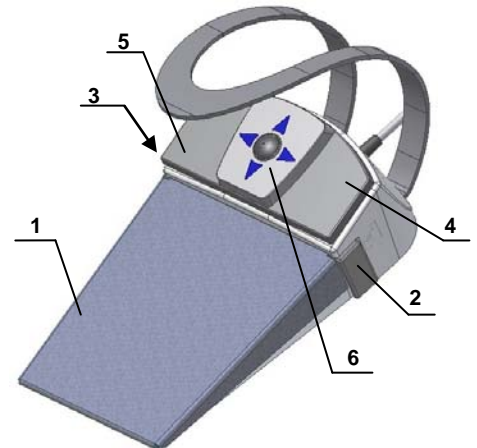




Fig. 8.9


- 3. spray (reverse/endo)
- 6. joystick for controlling the chair

The **CHIPBLOWER** function sets a jet of a cooling air through the micromotor and turbine handpieces. Press "Chipblower" button for activation.


The **SPRAY (REVERSE/ENDO)** button on the foot controller has the following 3 functions:

1. Pressing the button once in less than **2 s** will turn instrument cooling on or off.

Function status is shown on the indicator next to the button  on the control panel. The button has an identical function as  on control panel.

2. Pressing and holding the button from **2 s** up to **8 s**, will change the micromotor's rotation direction; if UOZK scaler is active, press to enable SCALLING/ENDO mode. Function status is shown on the indicator next to the button .

3. Pressing and holding the button from **10 s** up to **16 s**, will switch cooling modes between the spray cooling and the water cooling mode.

Selected mode is indicated by the indicator next to the button .

- Cooling ON - LED indicator is on (spray coolant) or LED indicator is blinking (water coolant)
- Cooling OFF - LED indicator is off

Pressing the foot controller lever activates the instruments and adjusts micromotor's and UOZK output from the lowest to the highest value. (Index is shown on the indicator).

To control the dental chair use **ENTRY-EXIT POSITION**, **CHAIR PROGRAMMING** and **JOYSTICK** buttons. See chapter **8.4 Operating the dental chair** for details.



Caution

If all instruments are in their initial positions:

- **Holding the lever (pedal)** for more than **1 s**, will activate bowl rinse. Holding lever for more than **4 s**, will activate continuous manual bowl rinse until the lever is released. Moving the lever fast in less than **0,2 s** will end the bowl rinsing.

- **Pressing the CHIPBLOWER button for 1 s**, will activate cup fill. Holding button for more than **4 s**, will activate continuous manual cup fill until the button is released. Pressing the right button fast in less than. **0,2 s** will end the cup fill.

When cleaning the floor (PVC floor covering) with a disinfecting agent, it is forbidden to place the foot controller onto the wet floor.

8.3 Spittoon block

Possible spittoon configuration (depending upon request):

- distilled water connections
- swiveling or fixed spittoon bowl (DA110A only fixed-type spittoon bowl)
- spittoon bowl flush and cup fill
- Cattani miniseparator system
- Cattani Mechanical amalgam trap
- saliva ejector
- depressurization for the bottle
- DP7 camera
- monitor
- electric water heater for the cup

The spittoon bowl is detachable and sterilizable.

Distilled water bottle

The distilled water bottle is located inside the spittoon block and can be accessed after the door on the side of the block is opened. Distilled water from the bottle supplies the micromotor, turbine, scaler, syringe on the dentist's control panel and syringe on the assistant table.

How to refill distilled water bottle:

- turn off the main switch - position „0“
- open the door on the spittoon block
- screw the water bottle loose
- refill the bottle with distilled water
- screw the bottle. Avoid air leakage during the work
- turn on the main switch, position „I“
- check the bottle for air leakage
- close the door on the spittoon block

In case of air penetration to the water system caused by low water level in the bottle, it is recommended to de-aerate water paths of the instruments. It can be done by letting the water flow through the water paths until there is no air bubbles observed in the water.



Caution

Use caution when refilling the bottle. Do not allow any substances to penetrate the water. Not doing so may result in the change in water quality or in its composition. Only distilled water for medical purposes must be used! Never use water for industrial purposes!

We recommend changing the water bottle once a year. Changing and refilling the bottle is only possible when the dental unit is turned off. Depressurization system that allows a bottle refill when the dental unit is on is available upon request.

8.3.1 3-position handpiece holder

3-position holder allows various handpiece configurations. With the large aspirator in the middle socket, small aspirator



or saliva ejector, or polymerizing lamp, or syringe can be fitted in the right and left sockets.

The mounting of external fourth holder for DP7 camera on the side is also possible. All the handpieces are immediately activated after withdrawn from the holder. There are also „cup fill“ and „bowl rinse“ buttons with functions identical to that of the buttons on the control panel.

8.3.2 Saliva ejector

Saliva ejector is activated automatically after withdrawal from a holder. If the output is insufficient, check and clean the sieve. See **Chapter 10. Cleaning and Disinfecting** for details.

Fig. 8.10



Fig. 8.11

8.3.3 Spittoon block configuration

Large and small aspirators

Aspirator activates immediately after withdrawal from the holder. To turn the aspirator off place it back in the holder. To control the suction, slide the regulating flap on the aspirator up or down (when the regulating flap is in the lowest position, suction is shut down). It is recommended to rinse both aspirators with 1dl of water after each patient! Inside the aspirator there is the sieve which needs to be cleaned at least once a day (see Chapter 10 CLEANING AND DISINFECTION).

Polymerizing lamp

Polymerizing lamp activates immediately after withdrawal from the holder. Please, consult accompanying instructions before using the lamp.

Intraoral camera

The camera serves to provide better visualization during the dental treatment but not to establish final diagnosis.

Constituent parts:

- holder
- connection - connector
- camera





Caution

The product must be protected against water. Keep it dry!

8.4 Operating the dental chair

Chair can be controlled either from the control panel or with a multi-function foot controller (UNO/NOK) or with a chair foot controller.

Buttons allow to adjust the chair position as desired.  . To bring the chair in

entry/exit position press the quick key  . On the model DM20  used for programming or activating previously saved chair positions. Please, refer to DM 20 or DE 20 Instructions for Use for more detailed information.

While working with a handpiece controlled with a foot controller the safety block function is on. The dental chair is protected from any accidental movement caused by pressing the buttons on the foot controller or on the control panel.

8.5 Dental operating light

Sírius or Xenos

Please, consult accompanying instructions before using the dental operating light.

8.6 Completion of work

It is important to do the following:

- toggle the main switch to position „0“ to depressurize the whole system
- shut off the main water supply at the workplace
- turn off the compressor – open the sludge valve
- turn off the aspirator (depending upon the model)

9 PRODUCT MAINTENANCE

For appropriate handpieces and instruments maintenance, please, follow the instructions given by the manufacturer. If the cuspidor block is connected to the central distribution system, check the cleanliness of the strainer and the water hardness treatment system condition (in reference to the manufacturer's instructions).

Inspections within the warranty period

It is required to have the dental unit checked by authorized service technician every 3 months within the warranty period.

The preventive inspection focuses on the following:

- checking the input filters (with regard to the cleanliness of utilities)
- checking the suction system
- checking the waste hose
- providing additional information and practical advices concerning the maintenance dental unit
- check if the dental unit and the instruments are used and maintained properly (according to the Instructions for Use)
- the manufacturer estimates the duration of a service check to be approx. from 1 up to 1,5 hours
- checking and/or adjusting all utilities (input, setting of turbine pressures etc.)
- authorized service technician is obliged to confirm the periodical inspection in the warranty card.

Inspection and revision upon the expiration of the warranty period:

It is required to have the dental unit checked by authorized service technician every 6 months.

The following should be done:

- complex inspection of the dental unit and its functional parts
- checking and adjustment of the water and air working pressure
- checking the input air filter in the power block
- checking of the integrity of the electronics and electrical wiring (electrical safety).

Revision of electrical safety

Is performed according to prevailing local codes of the country where the unit is installed.

10 CLEANING, DISINFECTION AND DECONTAMINATION

Disinfecting the internal distilled water tubings

It is recommended to use "Alpron" cleaning agent. A 1% "Alpron" solution with distilled water is poured into reservoir for distilled water and can be used continuously. The 1% concentration is harmless to the patient. The continuous use of Alpron solution helps to keep the cooling system clean and it is not necessary to use other disinfecting agents. Alpron cleaning agent is produced by Alpro Medical (Germany). For additional information and purchase details, please, contact your dealer.

Decontaminating the cuspidor bowl

It is recommended to use SAVO Prim cleaning agent, if the dental unit is configured with saliva ejector only. Decontamination of the cuspidor bowl should be performed at least once a day (e.g. after finishing the work). Pour at least 200ml of a 1% SAVO Prim solution into the cuspidor bowl.

It is required to use PULI - JET PLUS cleaning agent, if the unit is configured with an aspirator and Cattani separator. Use at least 200ml. of a 0,8% solution to clean the cuspidor bowl.

Cleaning and decontaminating the saliva ejector

It is required to perform a decontamination of the saliva ejector at least once a day (e.g. after finishing the work). Prepare at least 1 dcl of a 1% SAVO Prim solution and suck in this solution with the tip of a saliva ejector. Rinse ejector's hose with min. 1dcl of water after each patient. Saliva ejector handpieces are for single use only! Clean the ejector's sieve at least once a day to avoid contamination. fig. 10.1.

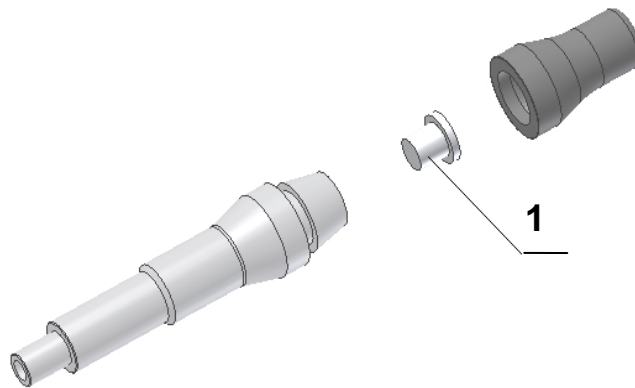


Fig. 10.1

1. saliva ejector sieve

Cleaning and decontaminating the large and small aspirators

It is required to check the catcher sieve in the cuspidor for solid particles at least once a day. Clean the sieve if needed to avoid contamination. Rinse aspirators' hoses with min. 1dcl of water after each patient



Caution

Aspirator tips are sterilizable up to the 135°C

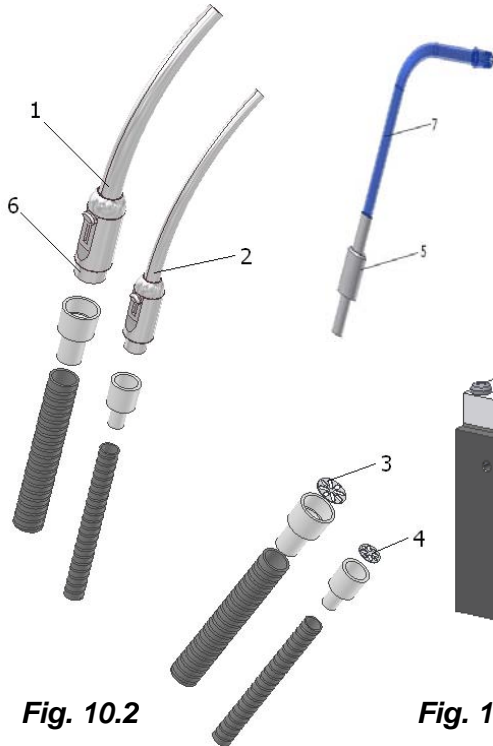


Fig. 10.2



One-valve version

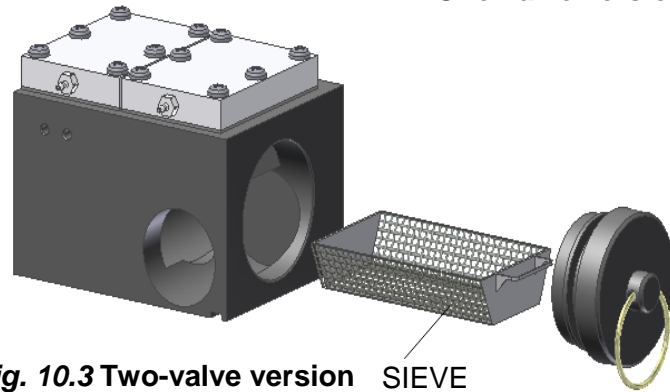


Fig. 10.3 Two-valve version SIEVE

1. big aspirator – tip
2. small aspirator- tip
3. filter, rough P22
4. filter, rough P16
5. adapter for single-use saliva ejector tip
6. regulating flap
7. single-use handpiece of the saliva ejector

Cleaning other parts of the dental unit

Clean the external surfaces of the unit with a wet cloth. Use the INCIDIN FOAM – spray (HENKEL – ECOLAB) agent (refer the instructions for use) at least once a day or when the equipment surface was incidentally contaminated with biological material.

Clean the following parts at least once a day (depending upon the model):

- aspirator sieve inside the large and small aspirator on the assistant arm (fig. 10.2)
- suction sieve inside the spittoon block (fig. 10.3)
- saliva ejector sieve (fig. 10.1)
- spittoon bowl sieve

It is recommended to rinse the large and small aspirator hoses with **max. 0,5 l water** at the end of each shift!



Caution

When cleaning the floor (PVC floor) with a cleaning agent, it is forbidden to place the foot controller on the wet floor. Do not use phenol- and aldehyde-based cleaning agents; they can permanently damage the structure of varnish and plastic surfaces.

The manufacturer will take no responsibility for the damage resulted from using inappropriate cleaning agents.

Instruments and handpieces

Before cleaning a handpiece, please, reference its "care and maintenance instructions" that came with it, for the accurate information.

Cattani disinfecting anti-foaming tablets for dental aspirators. Instructions for Use

Even if the unit is regularly and properly cleaned, blood and mucus under negative pressure create a great amount of foam anyway. This may result in frequent undesired abruption of suction.

Simply place the tablet (do not remove the protective dissolvable film, that ensures safe keeping and handling, even though the product is not classified as dangerous) in the filter of the tip and suck in the small amount of water through it for immediate antifoaming effect. When placing the tablet in very small slots, protective film should be removed (wear suitable gloves) and the pill broken in two parts (press along the marked line) to allow insertion of the two halves into the filter system. As the liquid passes through the tablet will release disinfecting and anti-foaming agents for the whole working day.

High efficiency is enabled by ortho-ftalaldehyde as the active disinfecting component. Its efficiency has been proven by the official tests for Staphylococcus aureus, Pseudomonas aeruginosa, Enterococcus hirae and Candida Albicans.

Internal disinfection of the suction system and sucked-off debris is combined with the anti-foaming effect for safe and odour-free system operation. According to the CE I classification, this product is classified as a „medical substance“. Certified quality system UNI EN ISO 9001/2000.

PULI – JET PLUS cleaning agent.

PULI – JET PLUS is a non-foaming aldehyde-free concentrate used for disinfection, deodorizing, cleaning and maintaining dental aspirators of all types (semi-wet, wet, dry). It is recommended to disinfect the suction system at the end of each working day and clean it at least once in the middle of the day. PULI – JET PLUS leaves a residue on the inside of the pipes to prevent the accumulation of bacterial growth. PULI – JET PLUS is certified as germ-killer, fungicidal and antiviral agent. It is generally recommended to improve and refine the quality of disinfecting procedures to minimize the contamination risk.

Instructions for use

How to fill the doser: place the bottle in the vertical position, preferable on a flat surface. Unscrew the lid and fill the doser to the edge by squeezing the bottle gently at the points marked with two labels (take care not to overfill it). Release the pressure: excessive amount of the liquid returns back to the bottle while the exact amount (10ml) of the concentrate remains in the doser. Concentrated PULI – JET PLUS after dilution to 0,8% cleans and disinfects, to 0,4% it is only sanitary cleaning agent. Free sample of concentrated Puli-Jet PLUS (10 ml) equals to the content of one doser. 1,25l disinfecting and 2,5l sanitary solution can be prepared out of it. For cleaning and disinfection dilute two doses of the doser (two free samples) in 2,5l of warm water (50°C) and suck 1l with big aspirator and 1l with small aspirator and pour 0,5l into the bowl. For the very cleaning of the system dilute one dose of the doser (one free sample). Do not rinse, proteolytic and disinfecting effect of PULI – JET PLUS reveals with time.

Useful notes

Puli-Jet PLUS is supplied commercially in 1 liter bottles: out of 1 liter of Puli-Jet PLUS concentrate you will prepare 250 liters of sanitary solution or 125 liters of disinfecting solution. Puli-Jet PLUS enables you to save on transport cost (70 %), the dispersive nozzle fitted in the lid, 1-litre bottle is easy to handle and it is not graduated. We recommend Puli-Jet PLUS as, when used regularly, it contributes to good maintenance of the aspirator by keeping it clean and protecting it against corrosion and wearing. The product is a „medical substance“ CE 0434. Certified quality system UNI EN ISO 9001/2000.

11 DISPOSAL OF THE EQUIPMENT

Part	Basic material	Recyclable material	Storable material	Hazardous material
Metal	Steel Aluminum	X X		
Plastic	PUR PVC PA, ABS Laminated glass Other plastic	X X	X X	X
Rubber			X	
Ceramics (glass)			X	
Instruments			X	
Electronics		X		
Cables	Copper	X		
Transformer		X		
Amalgam separator	Filters Collecting vessel with amalgam			X X
Package	Wood Cardboard Paper PUR	X X X	X	



Note

Equipment has to be disposed according to the regulations specific to your local area. Clean the surface, rinse the suction and waste systems, remove the amalgam from the trap and pass it on to a scrap material collecting facility. It is recommended to hire a specialist for disposing the unit. Cleaning should be done prior to dismantlement!



Caution

Not to be disposed of with the communal waste! Waste material can be handed in at destined places, e.g. electro waste drop-off!

12 REPAIR SERVICE

In case of a breakdown, contact the nearest service centre or your dealer, who will provide you with information about the service network.

13 CONTENTS OF THE PACKAGING/PACKAGE CHECK LIST

Standard configuration:

	DC 170 DC 180, DA110A
Control panel pantograph with the control panel	1
Spittoon block	1
Spittoon block holder (DC170, DC180)	1
Light pantograph	1
Dental operating light	1
Foot controller	1
Tray table (depending upon order)	1
Side table (depending upon order)	1
Power block	1
Cuspidor Bowl	1
Instruments, accessories, small parts and completion sheet, sealed in cardboard	1

Accompanying documentation:

- Instructions for Use
- Warranty Card
- Manuals from subcontractors
- Completion sheet (in the sealed together with instruments)
- Warranty and registration form
- Wiring diagrams

14 WARRANTY

The manufacturer covers the warranty in accordance with the warranty card.

The responsibility for any damage is shifted to the buyer after the item has been passed over to the forwarding agent for expedition and/or after the item is has been received directly by the buyer

The information in these *Instructions for use* is subject to change subsequently to the further product innovations without notice.



Caution

The warranty does not cover the damage resulting from misuse or/and failure to maintain the product in accordance with instructions for use that came with it.

15 TRANSPORTING AND STORAGE**15.1 Transporting**

Packages should be transported in covered vehicles in max. 3 plies and secured to prevent movement. Do not drop or tilt the package while loading or unloading.

15.2 Storage

Dental units can be stored in dry indoor warehouses in max. 3 plies with no dramatic temperature changes. Protect non-varnished parts from corrosion with rust-preventive treatment. Do not store together with chemicals! Required environmental conditions: relative humidity at max. 75 %, temperature range for transporting and storage: -25 °C to +50 °C.