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Intego/Intego Pro Intego Ambidextrous Intego Pro Ambidextrous

Operating Instructions (not valid for USA)

English



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1 General Information

1.1 Dear customer, ...

We are pleased that you have equipped your practice with the Dentsply Sirona treatment center Intego / Intego Pro.

Our aim is to recognize our customers' demands in good time and to create innovative solutions. Together with your trade partner, you have configured the unit to suit your individual tastes. The new hub of your treatment room has been tailored to your personal needs.

With Intego / Intego Pro you have selected a treatment center that stands for easy operation, high-quality design, and cost effectiveness.

The Intego / Intego Pro treatment center with Ambidextrous option can be converted from a right-handed to a left-handed version in a short period of time by just one person and without any parts being disassembled. Identical working conditions can therefore be created and you can work optimally, no matter if you are left-handed or right-handed.

These Operating Instructions are designed to assist you prior to initial use and whenever you require information later on.

We wish you a great deal of success and pleasure with Intego / Intego Pro.

Your Intego team

1.2 Contact information

Customer service center

Manufacturer's address



For technical questions, use the contact form on the internet at the following address:

<http://srvcontact.sirona.com>

Sirona Dental Systems GmbH
Fabrikstrasse 31
64625 Bensheim
Germany

Tel.: +49 (0) 6251/16-0

Fax: +49 (0) 6251/16-2591

e-Mail: contact@dentsplysirona.com

www.dentsplysirona.com

1.3 Notes on these operating Instructions

1.3.1 General information on the operating Instructions

Observe the Operating Instructions

Please familiarize yourself with the unit by reading through these Operating Instructions before putting it into operation. It is essential that you comply with the specified warning and safety information.

Tip: A quick guide containing brief operating instructions has been provided to help you look up functions quickly.

Always keep the Operating Instructions handy in case you or another user require(s) information at a later point in time. Save the Operating Instructions on the PC or print them out.

If you sell the unit, make sure that the Operating Instructions are included with it either as a hard copy or on an electronic storage device so that the new owner can familiarize himself with its functions and the specified warning and safety information.

Online portal for technical documents

We have set up an online portal for the Technical Documents at www.dentsplysirona.com/manuals. From here, you can download these Operating Instructions along with other documents. Please complete the online form if you would like a hard copy of a particular document. We will then be happy to send you a printed copy free of charge.

Help

If you continue to have difficulties despite having thoroughly studied the Operating Instructions, please contact your dental depot.

1.3.2 Scope of these operating Instructions

System versions

These operating instructions apply to the following treatment centers:

- Intego TS (Compact water unit and dentist element with hanging hoses)
- Intego CS (Compact water unit and dentist element with swivel arms)
- Intego Pro TS (Comfort water unit and dentist element with hanging hoses)
- Intego Pro CS (Comfort water unit and dentist element with swivel arms)

The treatment centers can be delivered from the factory with the Ambidextrous option. The Ambidextrous accessory stands for a convertible version for both right-handed and left-handed people. Convertible treatment centers are equipped with the Ambidextrous water unit.

Equipment options

This document describes the full version of your system. It may therefore cover components that are not included in the system you purchased.

Firmware

This document is valid for systems with software versions from:

Version 2.3

The current software version is shown in the setup, see "Configuration of the treatment center (setup)" [→ 198].

1.4 Other valid documents

Your treatment center can be equipped with additional components that are described in separate operating instructions. The instructions as well as all warning and safety information they contain must also be followed.

There are separate operating instructions for each of the following Dentsply Sirona products:

- Treatment instruments and accessories
- LEDlight, LEDlight Plus, or LEDview Plus operating light
- 22" monitor AC model 2017
- Heliodent Plus X-ray tube unit
- Hugo, Carl, and Paul dental working stools

The document "Installation Requirements" is also available. It contains detailed technical specifications, dimension sheets, and information about operating the treatment center with regard to electromagnetic compatibility.

1.5 Warranty and liability

Maintenance

Maintenance must be performed at scheduled intervals to ensure the operational and functional reliability of your product and to protect the safety and health of patients, users and other persons. For more information, please refer to "Maintenance by the service engineer" [→ 304].

The owner is responsible for making sure that all maintenance activities are performed.

As manufacturers of medical electrical equipment, we can assume responsibility for the safety properties of the unit only if maintenance and repairs on the unit are performed either by us or by agencies which we have expressly authorized and if components of the unit are replaced by original spare parts in case of failure.

Exclusion of liability

In the event that the system owner fails to fulfill its obligation to perform maintenance activities or ignores error messages, Dentsply Sirona or your authorized dealer cannot assume any liability for any damage thus incurred.

1.6 Intended use

This dental treatment center is intended for use on humans in the area of dentistry and may only be used by trained dental professionals.

Contraindications for the use of the treatment center, if any, are listed in the individual chapters, e.g. Treatment instruments.

This unit is not intended for operation in areas subject to explosion hazards.

This unit is permanently installed. Operation is not permitted in mobile vehicles.

Intended use also includes compliance with these operating instructions.

1.7 Formats and symbols used

The formats and symbols used in this document have the following meaning:

<ul style="list-style-type: none"> ✓ Prerequisite 1. First action step 2. Second action step or ➤ Alternative action ↪ Result ➤ Individual action step 	Prompts you to do something.
See "Formats and symbols used [→ 14]"	Identifies a reference to another text passage and specifies its page number.
• List	Designates a list.
"Command / menu item"	Indicates commands / menu items or quotations.

2 Safety instructions

2.1 Identification of the danger levels

To prevent personal injury and material damage, please observe the warning and safety information provided in these operating instructions. Such information is highlighted as follows:



DANGER

An imminent danger that could result in serious bodily injury or death.



WARNING

A possibly dangerous situation that could result in serious bodily injury or death.



CAUTION

A possibly dangerous situation that could result in slight bodily injury.

NOTE

A possibly harmful situation which could lead to damage of the product or an object in its environment.

IMPORTANT

Application instructions and other important information.

Tip: Information for simplifying work.

2.2 Information on the unit

Accompanying documents



This symbol can be found next to the rating plate on the unit.

Meaning: Observe the Operating Instructions when operating the unit.

This symbol can be found on the rating plate on the unit.

Meaning: The accompanying documents are available on the manufacturer's homepage.

Electrostatic discharge (ESD)



Connector pins or sockets bearing ESD warning labels must not be touched or interconnected without ESD protective measures. See also "Electrostatic discharge" [→ 21] and "Electromagnetic compatibility" [→ 20].

2.3 On-site installation

The on-site installation must have been performed according to our requirements. The details are described in the document "Installation Requirements".

2.4 Installation of the treatment center

Installation must be carried out by authorized personnel according to the installation instructions.

2.5 Media quality

The air and water supplies must meet the requirements specified in the installation requirements.

As the owner of the treatment center, you are generally responsible for the water quality.

The bacterial count must comply with the national regulations for drinking water and must not exceed 500 CFU/ml under any circumstances (CFU: colony forming unit).

If the bacterial count is too high, the building water system must be checked and the cause of contamination eliminated. Alternatively, a self-sufficient water supply can also be installed. In addition, for Intego the optional fresh water bottle, or for Intego Pro the empty disinfectant tank can be used as a water container. For treatment centers with the Ambidextrous option, depending on the equipment, the fresh water bottle or the empty disinfectant tank can be used as a water container.

Before installation of the treatment center, an acceptable microbiological water quality for the domestic water supply must be ensured and documented in the form of the bacterial count. Sampling and the bacterial count must be performed by a competent laboratory.

Test the water quality from the treatment center at regular intervals and after it has not been used for >1 week, see "Microbiological water test" [→ 212]. Please contact your specialized dealer or your dental association for the respective national requirements and measures.

Further information on the media quality requirements are listed in the "Installation conditions" document.



WARNING

Highly immunosuppressed patients or patients with specific pulmonary diseases should not come in contact with the water of the treatment unit. The use of sterile solutions is recommended.

2.6 Connection to the public drinking water system

Treatment center isolated from the public drinking water supply

The Intego Pro treatment center, if it is equipped with a disinfection system, complies with the requirements of EN 1717 (free discharge with an isolation distance ≥ 20 mm) and the DVGW German Gas and Water Association). It is intrinsically safe according to the W540 worksheet and thus also complies with W270 and KTW (Guideline on the use of



plastics in contact with drinking water). It can be connected directly to the public drinking water system.

The Intego treatment center, provided it is equipped with a fresh water bottle not connected to the public drinking water supply, also complies with the requirements of EN 1717 and the DVGW German Gas and Water Association).

In both cases, the treatment center has the "DVGW" label next to the rating plate.

Treatment center not isolated from the public drinking water supply

If compliance with EN 1717 is required in the country, the respective measures for the protection of public drinking water must be taken outside the treatment center.

This applies to the following unit versions:

- Intego Pro without disinfection system
- Intego without fresh water bottle
- Intego with a fresh water bottle connected to the public drinking water supply.

The treatment center then does not have the "DVGW" label.

Please comply with the national requirements with regard to connecting treatment centers to the public drinking water system.

2.7 Maintenance and repair

Authorized technical personnel and spare parts

As manufacturers of dental medical units and in the interest of the operational safety of your system, we stress the importance of having maintenance and repair of this unit performed only by ourselves or by agencies expressly authorized by us. Furthermore, faulty components must always be replaced with original spare parts.

We suggest that you request a certificate showing the nature and extent of the work performed from those who carry out such work; it must contain any changes in rated parameters or working ranges (if applicable), as well as the date, the name of the company and a signature.

Maintenance intervals

Despite the outstanding quality of your treatment center and regular care by the practice team, in the interest of operational safety, it is essential to have preventive maintenance performed at scheduled intervals.

In order to ensure the operational safety and reliability of your treatment center and to avoid damage due to natural wear, as the system owner you must have your system checked regularly by an authorized service technician from your dental depot. Furthermore, safety checks must be performed. Please contact your dental depot to obtain a maintenance offer. For more information, please refer to "Maintenance by the service engineer" [→ 304].

2.8 Trouble-free operation

Use of this unit is permissible only if it works properly without malfunctions. If trouble-free operation cannot be ensured, the unit must be taken out of service, checked by authorized technicians for malfunctions and, if necessary, repaired or replaced.

2.9 Vacuum system

The suction removal of aluminum and other metal oxides from blasting devices via the amalgam separator and the automatic separator installed in the treatment center is prohibited! This would result in extreme wear and clogging of the vacuum and drain lines.

A separate vacuum system must be used in connection with metal oxide blasting devices. Treatment centers equipped with a central standard wet suction are generally suitable for suction removal of the above material. However, make sure to observe the instructions provided by the manufacturer of your vacuum system.

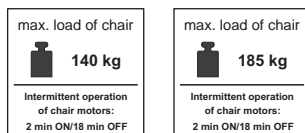
No restrictions apply when using salt blasting devices in connection with Dentsply Sirona treatment centers. However, in such cases, make sure that the system is subsequently flushed with an adequate amount of water.

2.10 Patient chair

Please observe the maximum load capacity for the patient chair.

140 kg (308.6 lbs) forIntego, 185 kg (407.9 lbs) as option

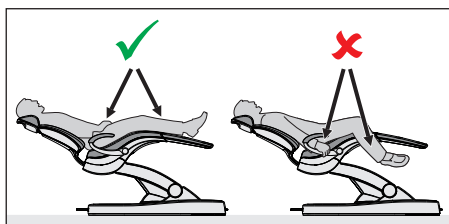
185 kg (407.9 lbs) forIntego Pro



The permissible maximum load capacity is indicated on a plate next to the rating plate of the treatment center.

The weight distribution complies with ISO 6875. The mechanical stability is tested with a multiple safety factor acc. to IEC 60601-1.

The maximum permissible weight of accessories mounted on the patient chair is 5 kg (11 lbs).



The patient's arms and legs must be resting on the upholstery of the chair.

2.11 Intermittent operation



The motors of the treatment center and of the treatment instruments are designed for intermittent operation corresponding to the dental mode of treatment.

Drive motors for patient chair and backrest: max. 10% duty cycle, (max. 2 min "ON" / 18 min "OFF")

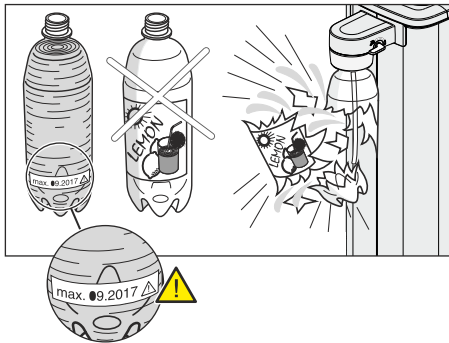
2.12 Ventilation slots

Under no circumstances may the ventilation slots on the unit be covered, since otherwise the air circulation will be obstructed. This can cause the unit to overheat.

Do not spray liquids such as disinfectants into the ventilation slots. This may lead to malfunctions. Only wipe to disinfect these areas.



2.13 Fresh water bottle



The Compact and Ambidextrous water units can be equipped with a fresh water bottle for stand-alone water supply for the treatment instruments and for tumbler filling.

Use only Dentsply Sirona fresh water bottles, see "Spare parts, consumables" [→ 311]! Compressed air is added to the bottle when it is screwed into the holder. Beverage bottles could burst.

Misshapen, scratched, or discolored fresh water bottles must be replaced immediately. Do not use fresh water bottles after the expiry date. The date is marked on the bottle.

2.14 User interface

The dentist element of your treatment center can be equipped with a control panel with seven-segment displays (EasyPad) or a pressure-sensitive monitor (EasyTouch).

The touchscreen must not be operated with pointed objects such as ball-point pens, pencils, etc. Such objects could damage or scratch its surface. Operate the touchscreen only by pressing it gently with your fingertip.

2.15 Care, cleaning, and disinfecting agents

Unsuitable care and cleaning agents or disinfectants may corrode the surface of the unit or impair its functioning.

Therefore, use only care and cleaning agents and disinfectants which have been approved by the manufacturer. For more information, see the chapter "Care, cleaning, and disinfecting agents" [→ 212].

2.16 Care and cleaning instructions for the practice team

Inappropriate care and cleaning of the device can result in failure or damage. Technical personnel must be trained in the handling of medical devices.

2.17 Modifications and extensions of the system

For reasons of product safety, this product may be operated only with original Dentsply Sirona parts or third-party parts expressly approved by Dentsply Sirona. In the event of changes which were not foreseen, Dentsply Sirona is not liable for resulting damages.

All units connected to this product must comply with the applicable standards:

- IEC 60601-1, Medical electrical equipment
- IEC 60950-1, Information technology equipment
- IEC 62368-1, Audio/video, information and communication technology equipment

2.18 Electromagnetic compatibility



Medical electrical devices are subject to special precautionary measures with regard to electromagnetic compatibility (EMC). They must be installed and operated as specified in the document "Installation Requirements".

Portable HF communication equipment, including accessories, should not be used in the vicinity of the device. Non-observance can impair the performance of the device.

Operating an HF surgical device

Treatment with HF surgical devices creates strong electromagnetic fields, which may affect other electronic devices. Do not place external HF surgical device on the surfaces of the treatment center. Do not run the cable of the HF handpiece over the surfaces of dentist or assistant element, user interfaces, or other keys such as the On/Off key on the X-ray image viewer. Electromagnetic interference can often be reduced by operating the external HF surgical device with a neutral electrode.

Turn on the treatment center with the Clean button inactive, to avoid malfunction. See section "Display mode / Clean" [→ 41] on the EasyPad or "Clean button" [→ 44] on the EasyTouch.

Sivision Digital and USB interface

The presence of electromagnetic interference in the vicinity of the treatment center may cause image degradation and interruptions in the data transmission via the USB interface to the PC. In such cases, repeat the image recording or other operations.

In the event of strong interference, it may be necessary to restart the PC and treatment center. Do not use the PC for controlling other devices that perform essential tasks.

2.19 Electrostatic discharge

Protective measures

ESD stands for **E**lectro**S**tatic **D**ischarge.

Electrostatic discharge from people can damage electronic components when the components are touched. Damaged components usually have to be replaced. Repairs must be performed by qualified personnel.

Measures to protect against ESD include:

- Procedures to avoid electrostatic charging via
 - air conditioning
 - air humidification
 - conductive floor coverings
 - non-synthetic clothing
- discharging the electrostatic charges from your own body through contact with
 - a metallic unit casing
 - a larger metallic object
 - any other metal part grounded with the protective earth
- Wearing an antistatic band that creates a connection between the body and a protective ground wire.

Areas at risk are indicated on the unit with the ESD warning label:

We recommend that all persons working with this system are made aware of the significance of the ESD warning label. A training course should also be held to inform users about the physics of electrostatic charges.

Physics of electrostatic charges

An electrostatic discharge requires prior electrostatic charging.

There is a danger of electrostatic charges building up whenever two bodies rub against each other, e.g. when:

- walking (soles of shoes against the floor) or
- moving (chair casters against floor).

The amount of charge depends on several factors. The charge is:

- higher at low air humidity than at high air humidity, and
- higher with synthetic materials than with natural materials (clothing, floor coverings).

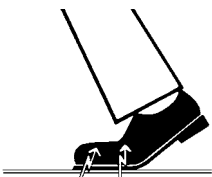
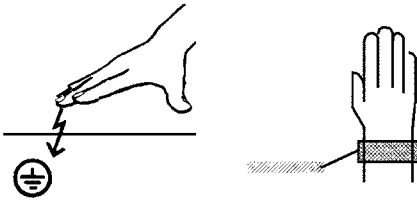
The following rule of thumb can be applied to assess the transient voltages resulting from an electrostatic discharge.

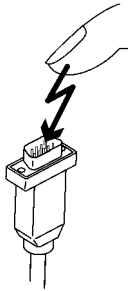
An electrostatic discharge is:

- perceptible at 3,000 V or higher
- audible at 5,000 V or higher (cracking, crackling)
- visible at 10,000 V or higher (arc-over)

The transient currents resulting from these discharges have a magnitude of over 10 amps. They are not hazardous for humans because they last for only several nanoseconds.

Note: nanosecond = 1/1,000,000,000 second = 1 billionth of a second





Voltage differentials exceeding 30,000 volts per centimeter may lead to a charge transfer (electrostatic discharge, lightning, spark-over).

Integrated circuits (logical circuits and microprocessors) are used in order to implement a wide variety of functions in a device. The circuits must be miniaturized to a very high degree in order to include as many functions as possible on these chips. This leads to structure thicknesses as low as a few ten thousandths of a millimeter. Integrated circuits that are connected to wires leading externally are therefore particularly at risk from electrostatic discharge.

Even voltages that are imperceptible to the user can cause breakdown of the structures, thus leading to a discharge current that melts the chip in the affected areas. Damage to individual integrated circuits may cause malfunction or failure of the unit.

2.20 Dismantling/Installation

When dismantling and reinstalling the unit, proceed according to the installation instructions for new installation in order to guarantee its proper functioning and stability.

3 Unit description

3.1 Standards/Approvals

The Intego / Intego Pro treatment centers comply with the following standards:

- IEC 60601-1 (electrical, mechanical, and software safety)
- IEC 60601-1-2 (electromagnetic compatibility)
- IEC 60601-1-6 / IEC 62366 (usability)
- IEC 62304 (Software Process)
- ISO 6875 (patient chair)
- ISO 7494-1 (dental treatment units)
- ISO 7494-2 (dental treatment units, water and air supply)
- ISO 9680 (operating light)
- ISO 11143 (amalgam separator), see also below (provided amalgam separator option is available)
- EN 1717 (connection to the drinking water system), see also below and chapter "Connection to the public drinking water supply" [→ 16]

Original language of this document: German



Intego / Intego Pro bear the CE marking in accordance with the provisions of Council Directive 93/42/EEC of June 14, 1993 concerning medical devices.

Intego / Intego Pro comply with the requirements of the RoHS Directive 2011/65/EU.



The treatment center meets the requirements of CAN/CSA-C22.2 No. 60601-1 And AAMI/ANSI ES 60601-1.



The amalgam separator achieves a separation efficiency of >95%. The unit thus fulfills the requirements of ISO 11143.



Separating procedure type 1: Centrifuge system

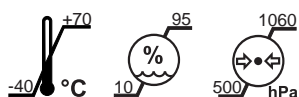
The amalgam separator is approved by the German institute for building technology (DIBt) and AFNOR (France).

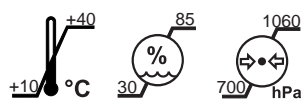


When equipped with a disinfection system or fresh water bottle without switchover to the public drinking water supply, the treatment center complies with the technical rules and requirements on safety and hygiene for connection to the public drinking water supply. The unit is certified according to the requirements of the German Technical and Scientific Association for Gas and Water (DVGW). It is intrinsically safe in accordance with worksheet W540. The unit thus also meets the requirements of standard EN 1717; see also the chapter entitled "Connection to the public drinking water system" [→ 16].

3.2 Technical data

Model designation:	Intego / Intego Pro
Power connection:	100 – 240 V AC \pm 10% 50/60 Hz
Rated current:	3.3 A – 1.5 A at 100 – 240 V also max. 6 A for external devices
Type of ground connection:	TN-C-S system or TN-S system (acc. to IEC 60364-1)
Overvoltage category:	2 acc. to IEC 60664-1
Average power consumption (for dimensioning an air conditioning system):	100 W
Power consumption when switched off:	0 W (power switch present)
Main building fuse:	Type B automatic circuit breaker 100 - 115 VAC: 20 A medium-blow 220 – 240 V AC: 16 A medium-blow
Protection class:	Class I device
Device class in accordance with Directive 93/42/EEC:	Class IIa equipment
Degree of protection against electrical shock:	 Type B applied parts External intraoral camera SiroCam F / AF / AF+. These are:  Applied part type BF
Degree of protection against ingress of water:	Ordinary equipment (without protection against ingress of water) The foot switch has an IPX1 degree of protection against liquids (drip-proof).
Mode of operation	Continuous operation with intermittent loading corresponding to the dental mode of working. [→ 18] Drive motors for chair operation: intermittent use, max. 2 minutes on and 18 minutes off Permanently connected unit. Operation is not permitted in mobile vehicles.
Transport and storage conditions:	Temperature: -40°C – +70°C (-40°F – 158°F) Relative humidity: 10% – 95% Air pressure: 500 hPa – 1060 hPa





Operating conditions:

Ambient temperature: 10°C – 40°C
(50°F – 104°F)

Relative humidity: 30% – 85%
without condensation

Air pressure: 700 hPa – 1060 hPa

Installation location:

≤ 3000 m above sea level

This treatment center is not suitable for
operation in areas subject to explosion
hazards.

Pollution degree:

2 acc. to IEC 60664-1

Load capacity of the patient
chair:

140 kg (308.6 lbs) or 185 kg
(407.9 lbs), depending on the model

The max. load capacity is indicated on
a sticker next to the rating plate of the
treatment center.

Tests/Approvals:

See "Standards/Approvals" [→ 23].

Date of manufacture:



20yy-mm-dd

(on the rating plate)

USB port:

corresponds to USB 2.0 standard

IMPORTANT

Minimum requirements for the PC

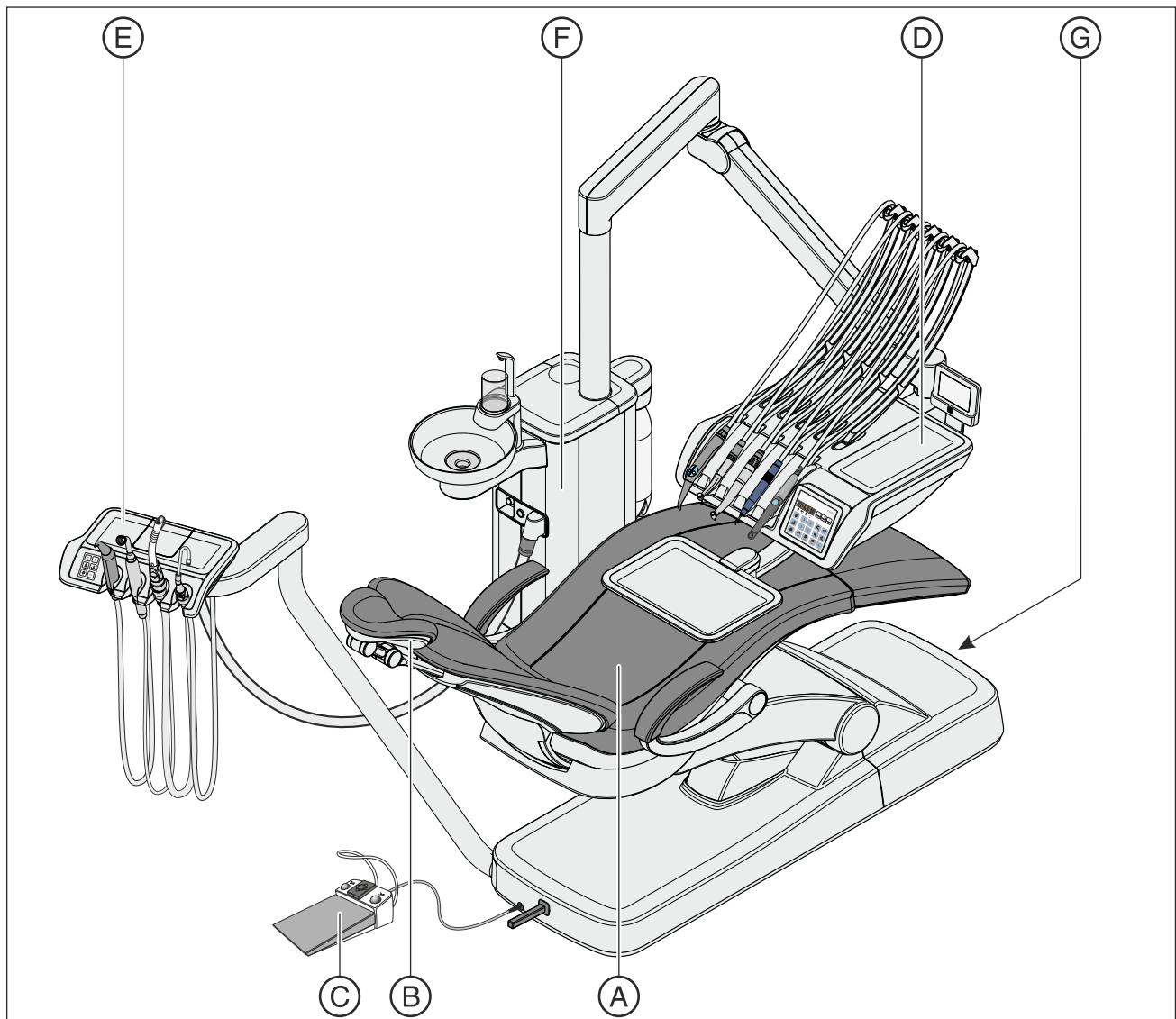
See document "Installation instructions and system requirements for
PC configuration," (REF 61 94 075) Sivation Digital.

The Intego treatment center comprises the following main components:

A detailed line drawing of the Stryker Sirona 2000 operating table. The table is shown in a slightly elevated and tilted position. It features a large, dark, padded table top. To the left of the table is a control console with a large screen and various buttons. A long, articulated arm extends from the top of the table, holding a rectangular light panel. A circular foot pedal is connected to the base of the table. Various cables and hoses are connected to the table. Callout lines point to specific components: A points to the base of the table, B points to the foot pedal, C points to a circular component on the floor, D points to the control console, E points to a control panel on the left side of the table, F points to the main vertical support structure, and G points to the articulated arm holding the light panel.

A	Patient chair
B	Flat headrest (shown here) or double articulating headrest
C	Pneumatic foot switch (shown here) or C+ electronic foot switch
D	Intego TS dentist element with hanging hoses
E	Compact (shown here) or Comfort assistant element
F	Compact water unit
G	Main switch and external device connection (optional)

Intego CS treatment center

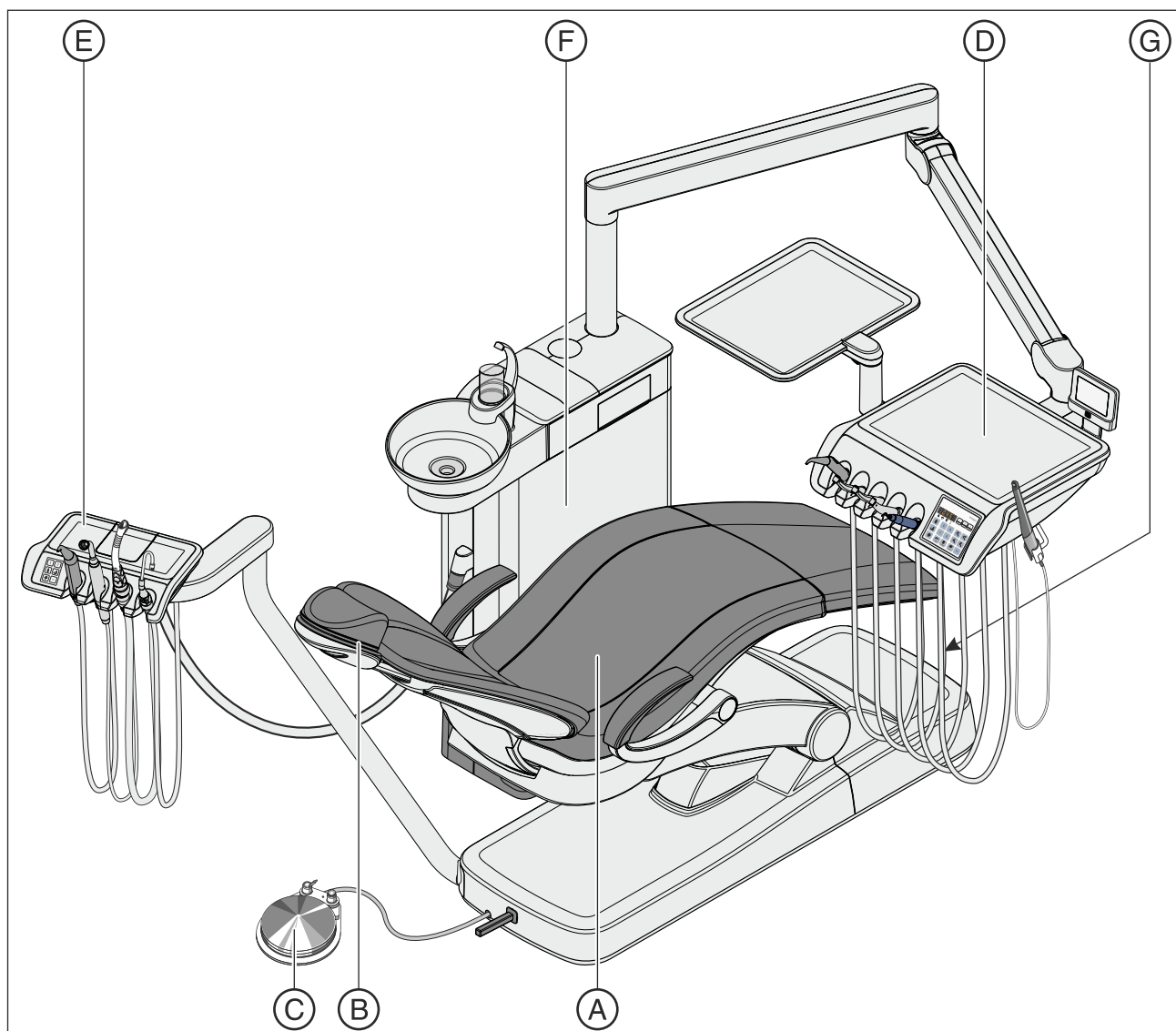


A	Patient chair
B	Flat headrest or double articulating headrest (shown here)
C	Pneumatic foot switch or C+ electronic foot switch (shown here)
D	Intego CS dentist element with swivel arms
E	Compact or Comfort (shown here) assistant element
F	Compact water unit
G	Main switch and external device connection (optional)

3.4 System overview Intego Pro

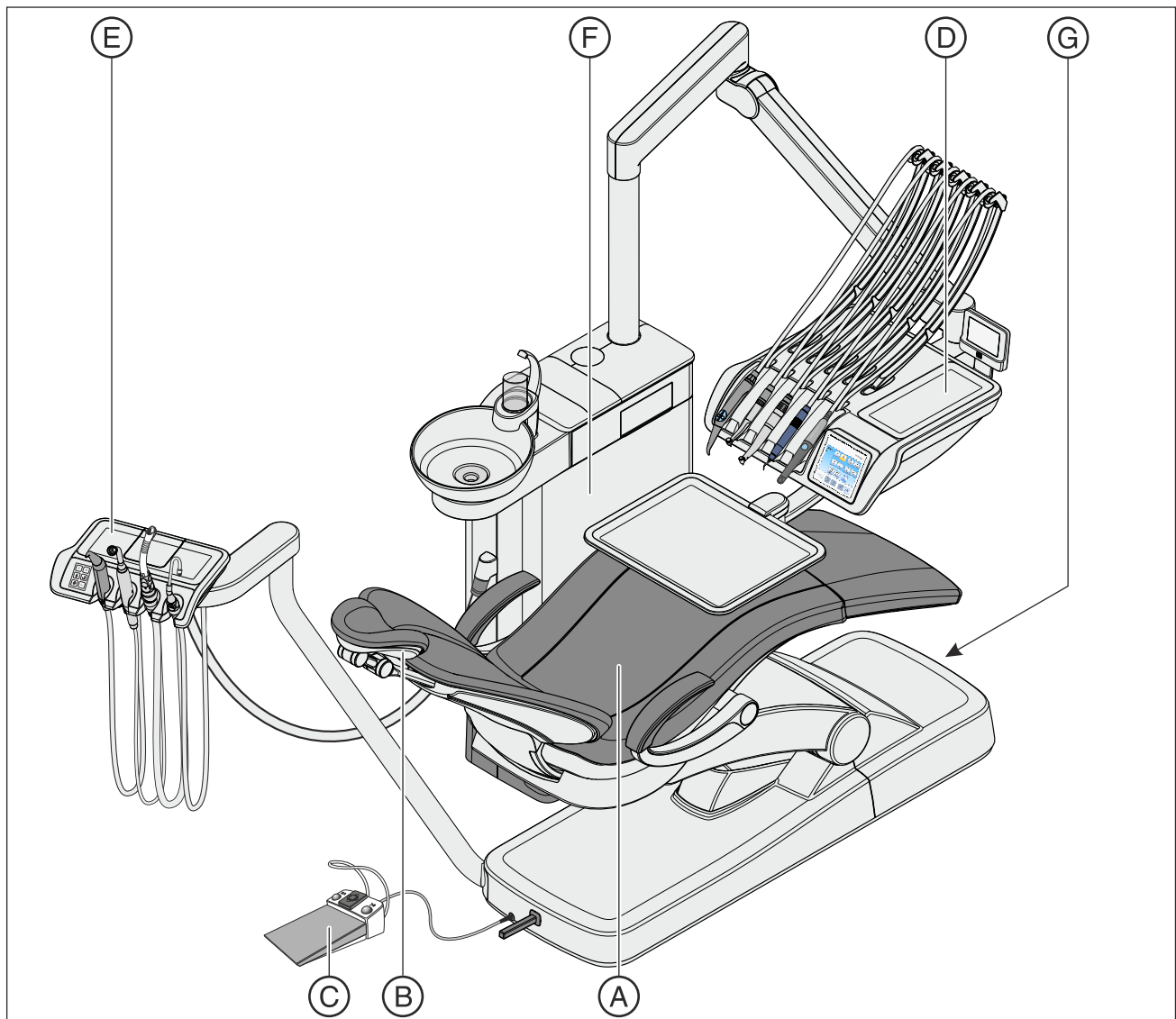
The Intego Pro treatment center comprises the following main components:

Intego Pro TS treatment center



A	Patient chair
B	Flat headrest (shown here) or double articulating headrest
C	Pneumatic foot switch (shown here) or C+ electronic foot switch
D	Intego Pro TS dentist element with hanging hoses
E	Comfort assistant element
F	Comfort water unit
G	Main switch and external device connection (optional)

Intego Pro CS treatment center

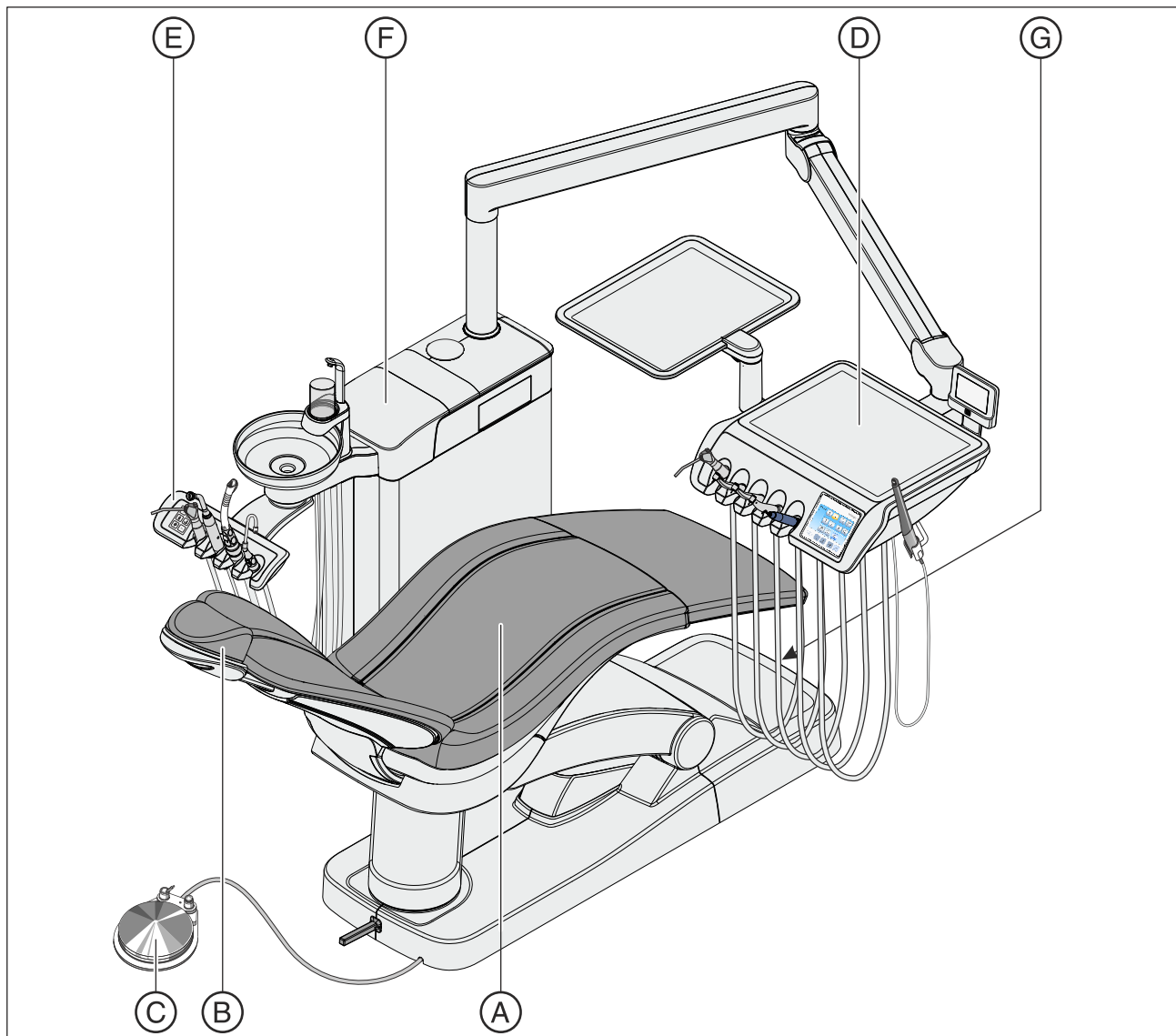


A	Patient chair
B	Flat headrest or double articulating headrest (shown here)
C	Pneumatic foot switch or C+ electronic foot switch (shown here)
D	Intego Pro CS dentist element with swivel arms
E	Comfort assistant element
F	Comfort water unit
G	Main switch and external device connection (optional)

3.5 System overview Intego / Intego Pro with Ambidextrous option

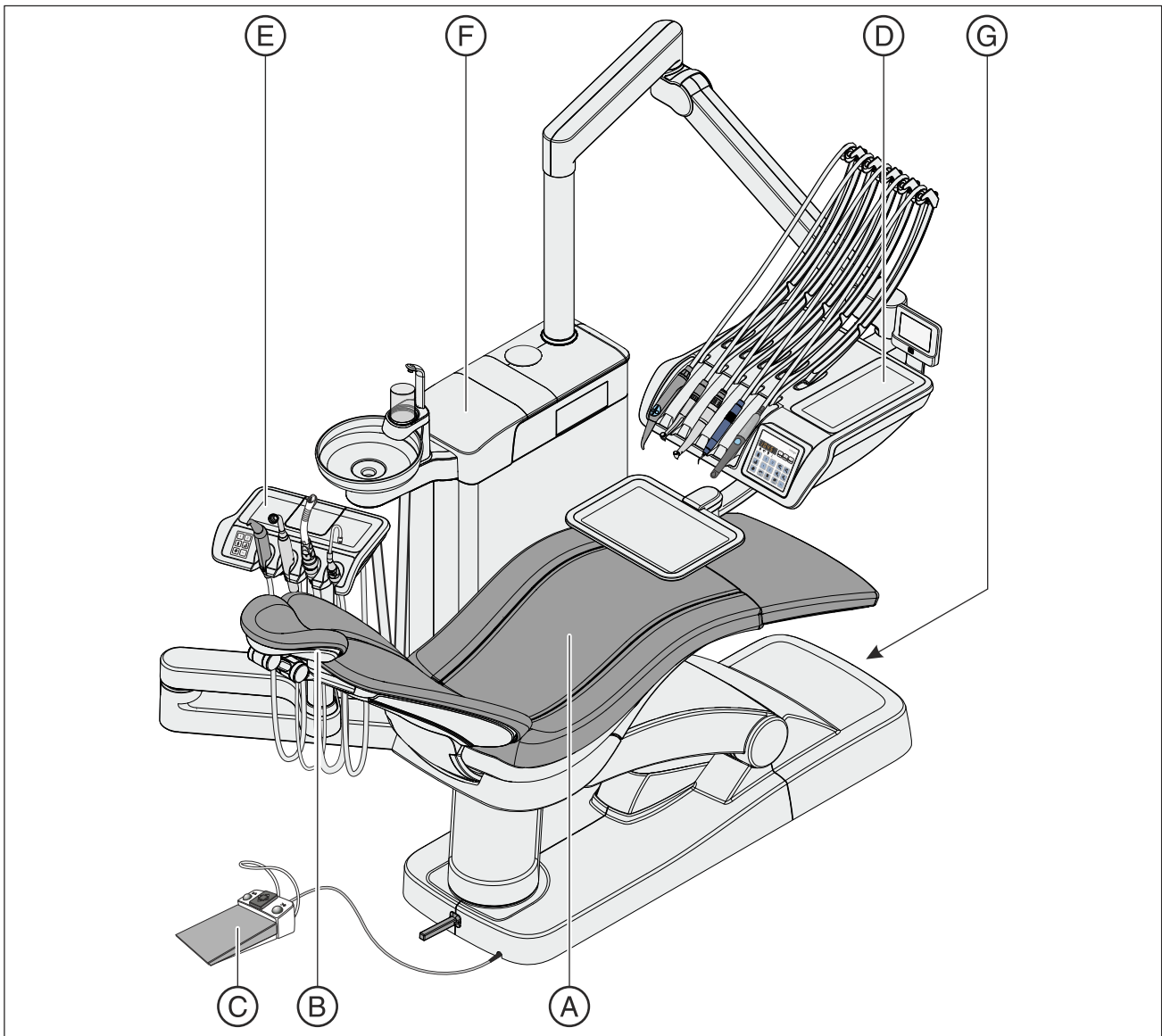
The Intego and Intego Pro treatment centers with the Ambidextrous option comprise the following main components:

Intego TS / Intego Pro TS treatment center with Ambidextrous option



A	Patient chair
B	Flat headrest (shown here) or double articulating headrest
C	Pneumatic foot switch (shown here) or C+ electronic foot control
D	Intego TS dentist element with hanging hoses
E	Compact (shown here) or Comfort assistant element
F	Ambidextrous water unit
G	Main switch and external device connection (optional)

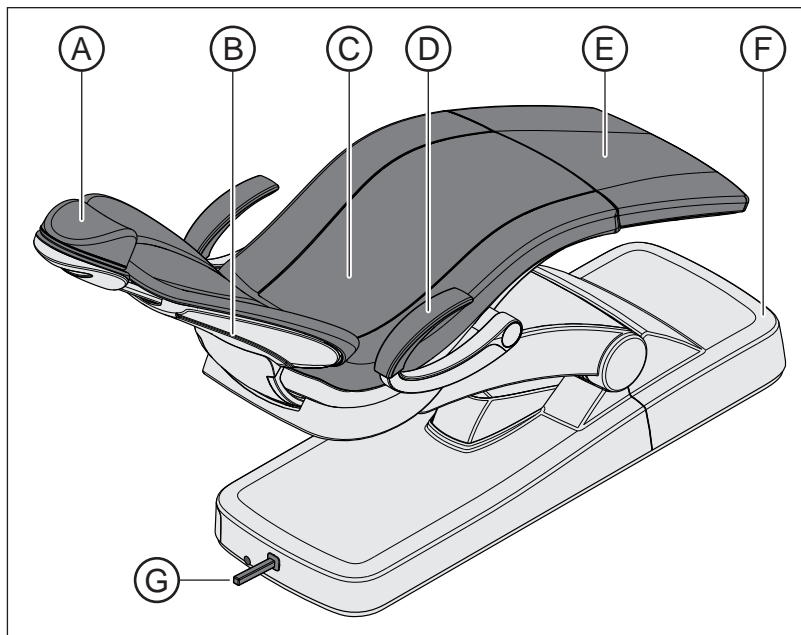
Intego CS / Intego Pro CS treatment center with Ambidextrous option



A	Patient chair
B	Flat headrest or double articulating headrest (shown here)
C	Pneumatic foot switch or C+ electronic foot control (shown here)
D	Intego CS dentist element with swivel arms
E	Compact or Comfort (shown here) assistant element
F	Ambidextrous water unit
G	Main switch and external device connection (optional)

3.6 Patient chair

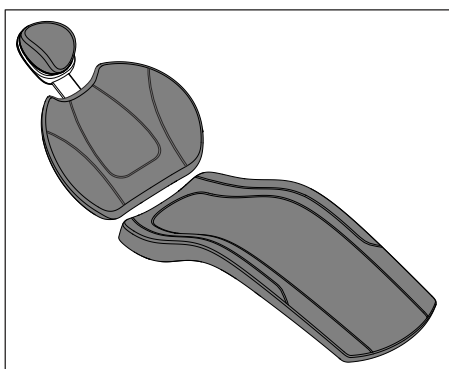
The patient chair features a variety of adjustment options to optimally adjust the patient's position during treatment.



A	Flat headrest (shown here) or double articulating headrest
B	Backrest
C	Seat
D	Armrest
E	Footrest
F	Chair base
G	4-way foot control

The patient chair can be equipped with the ErgoMotion option. The movement of the chair seat and backrest is compensated so there is no compression or stretching of the patient.

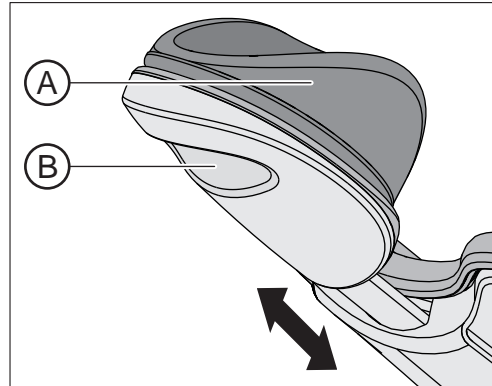
The patient chair can come with lounge upholstery featuring enhanced comfort and double seams. The lounge upholstery has no footrest; the surface is padded throughout.



3.7 Head support

3.7.1 Flat headrest

The headrest extension can be pulled in or out depending on the patient's height. For upper jaw treatment, the magnetic head pad can be rotated and used as a neck rest.

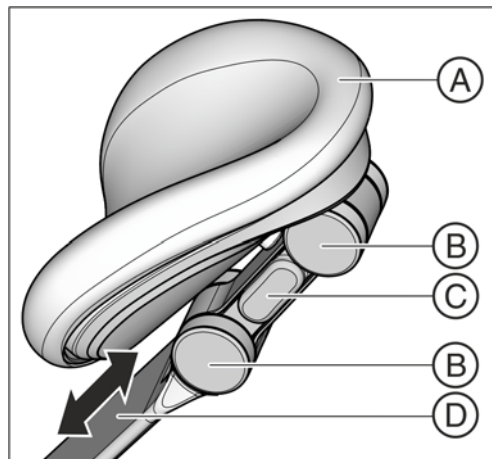


A	Removable magnetic head pad
B	Handle for adjusting height

For details, see "Adjusting the headrest" [→ 73].

3.7.2 Double-jointed head support

The double articulating headrest is equipped with two rotary joints. They allow the head inclination to be manually adjusted over a wide range for maxillary/mandibular treatment. The headrest extension can be pushed in or pulled out to manually adjust it to the height of the patient.



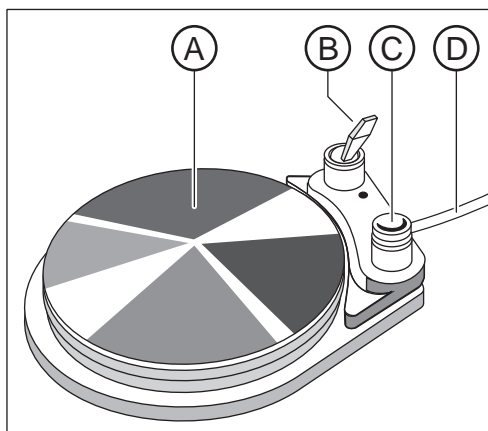
A	Head pad
B	Rotary joints
C	Unlock button (one-sided)
D	Support bar for adjustment to patient height

For details, see "Adjusting the double articulating headrest." [→ 74]

3.8 Foot control

3.8.1 Pneumatic foot switch

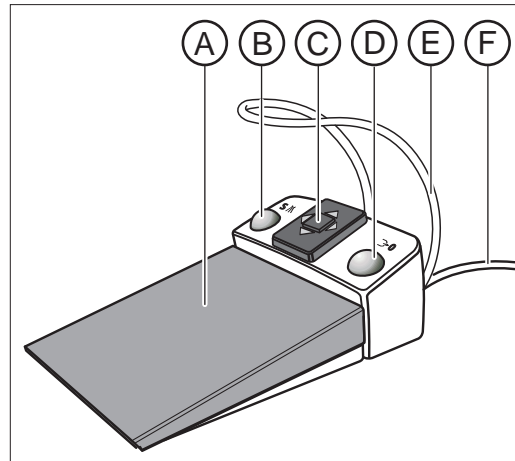
With a pneumatic foot control, the compressed air valve for activating the highspeed handpieces is integrated into the foot control. The highspeed handpieces are therefore continuously adjustable. For electric motors and the scaler, the foot control is operated as a direct starter (i.e. at a preset speed and intensity).



A	Foot pedal
B	Toggle switch for activating spray
C	Button for chip blower
D	Connection cable

3.8.2 C+ electronic foot switch

The C+ electronic foot control can be set as a foot control or direct starter for electric motors and the scaler. The compressed air for high-speed handpieces cannot be adjusted.



A	Foot pedal
B	Left key (program key S or spray)
C	4-way switch for operating the chair programs and instrument settings
D	Right key (program key 0 or chip blower)
E	Positioning bar
F	Connection cable

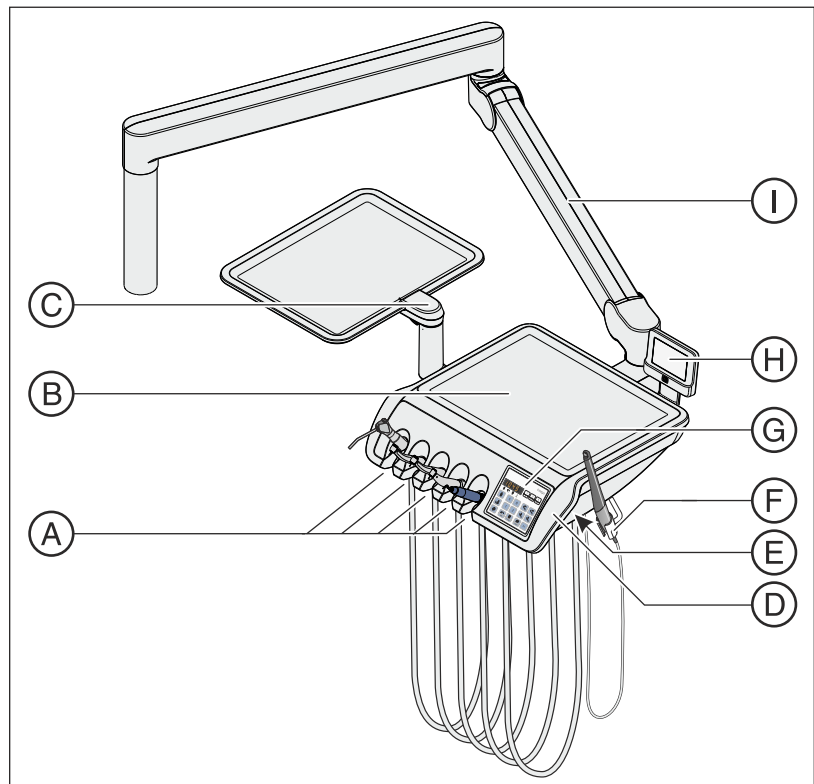
3.9 Dentist element

Intego and Intego Pro can be equipped with a TS dentist element (with hanging hoses) or a CS dentist element (with whip arms).

All functions of the treatment center can be controlled via the control panel on the dentist element.

3.9.1 TS dentist element hanging hoses

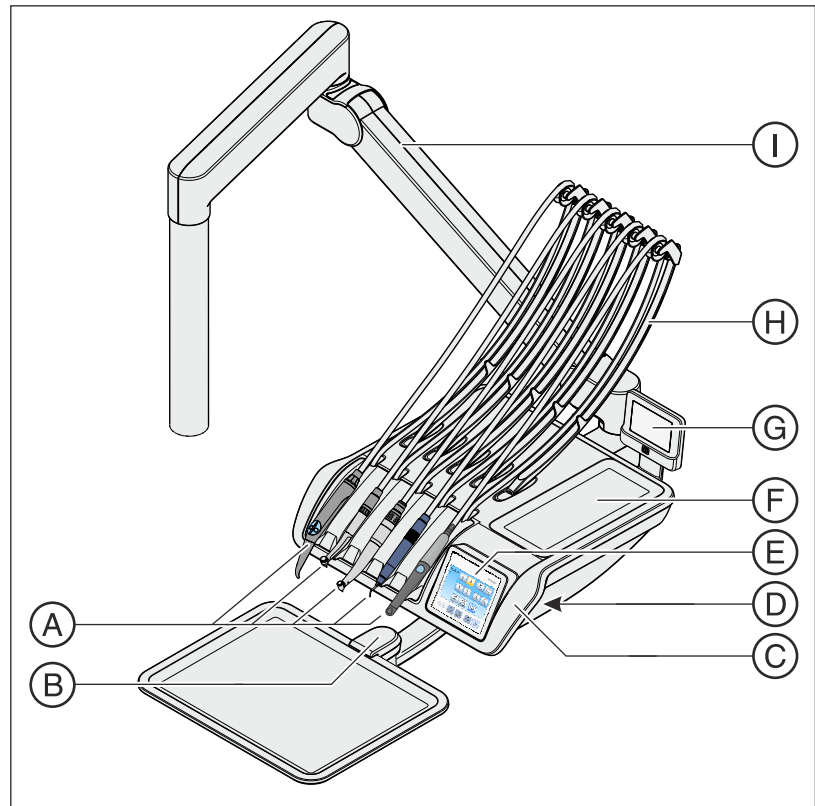
With the TS dentist element, instruments are placed upright in the instrument holders. The instrument hoses hang freely under the dentist element.



A	Instrument holder (max. 5 instruments)
B	Holder with non-slip silicone mat for 2 standard trays
C	Swiveling tray holder on the TS dentist element for two standard trays
D	Removable handle covers (left/right)
E	Button to release the support arm brake for adjusting height For treatment centers without the Ambidextrous option there is a push button only on the right-hand side, with the Ambidextrous option there is a button on both sides.
F	Additional holder for intraoral camera
G	EasyPad (shown here) or EasyTouch user interface
H	X-ray image viewer
I	Support arm

3.9.2 CS dentist element with swivel arms

On the CS dentist element, instruments are placed on the instrument holder horizontally and facing downwards. The instrument hoses are placed above the dentist element over the whip arms.



A	Instrument holder (max. 5 instruments)
B	Swiveling tray holder on the CS dentist element for one or two (shown here) standard trays
C	Removable handle covers (left/right)
D	Button to release the support arm brake for adjusting height (left/right)
E	EasyPad or EasyTouch user interface (shown here)
F	Holder with non-slip silicone mat
G	X-ray viewer
H	Swivel arms
I	Support arm

3.9.3 Instrument positions

The following instrument positions are available:

Holder 1	Holder 2	Holder 3	Holder 4	Holder 5	Additional holder ⁵
Standard 3-way syringe ¹	Turbine	Turbine	Turbine	Scaler ³ : • SiroSonic L • Cavitron	Intraoral camera ³ : • SiroCam F • SiroCam AF • SiroCam AF+
Sprayvit E 3-way syringe	Motor ² : • BL E • BL ISO E	Motor ² : • BL E • BL ISO E	Motor ² : • BL E • BL ISO E	Mini LED curing light ⁴	
			Scaler ³ : • SiroSonic L • Cavitron	Intraoral camera ³ : • SiroCam F • SiroCam AF • SiroCam AF+	

¹ The Standard 3-way syringe is only available for Intego.

² The Intego / Intego Pro treatment centers can be fitted with a maximum of two motors.

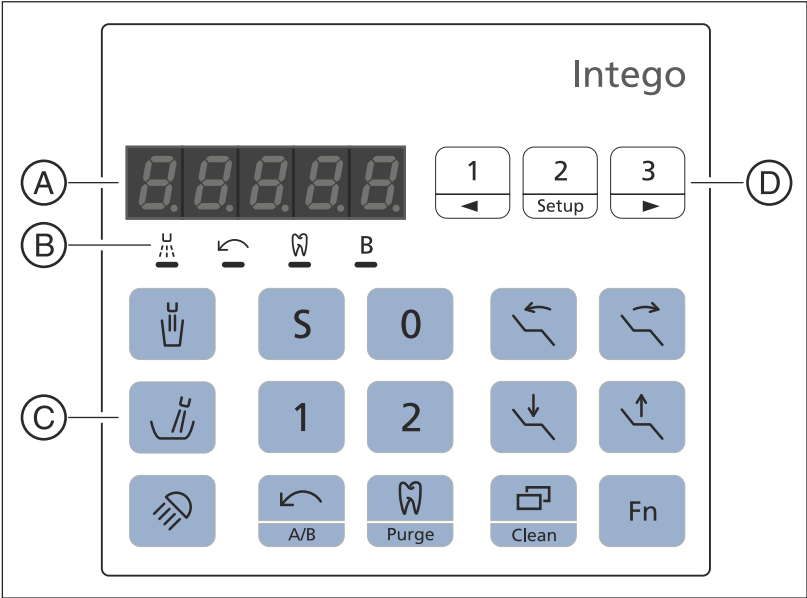
³ A maximum of one scaler and one intraoral camera can be connected.

⁴ Only the Intego Pro dentist element for the treatment center can be equipped with the mini LED curing light.

⁵ The additional holder for an intraoral camera is only available for the TS dentist element.

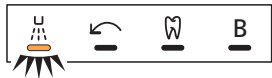
Changes in the instrument positions can be made only by your service technician.

3.9.4 Standard EasyPad user interface



A	EasyPad display
B	Status displays
C	Fixed keys (membrane keyboard)
D	Favorite key pad (membrane keyboard)

3.9.4.1 EasyPad display and status displays



EasyPad display

For indicating speed, intensity, and torque and for configuring and servicing the treatment center. The time, timer function, and error messages are also displayed.

Status displays

Indicate activation of spray (only for C+ electronic foot switch), counterclockwise rotation, Endo function, and user profile B.

3.9.4.2 Fixed keys

Favorites key pad

Resets the speed of the electric motor or intensity of the scaler.

For saving the instrument settings speed or intensity and maximum torque if the Endo function is activated and activation of the spray (only for C+ electronic foot switch) to the function keys 1, 2, and 3.

Used for individual configuration of the treatment center by the user, see "Configuration of the treatment center (Setup)" [-> 198].

Changing other settings, such as flushing and purging times.

Tumbler filling

Starts or stops the tumbler filling function.



Pressing the *tumbler filling key* (> 2 s) displays the setting text for coupling the tumbler filling to mouth rinsing position S and filling time, see "Tumbler filling on the EasyPad" [→ 153].

Flushing

Starts or stops cuspidor flushing.

Pressing the *flushing key* (> 2 s) displays the setting text for coupling flushing to mouth rinsing position S and flushing time, see "Flushing of the cuspidor on the EasyPad" [→ 156].



Operating light

Switches the operating light on, to the composite function, or off.

The composite function delays the curing of composite materials.

With the LEDlight and LEDlight Plus, light intensity is set using the non-touch sensor. With the LEDview Plus, when the *Operating light* key is pressed (> 2 s), the operating context for the light appears. With the LEDview Plus, the color temperature is adjustable.

For details, please refer to the section "Operating light" [→ 175].



Chair programs

Mouth rinsing position S with last-position memory function (programmable)



Entry/exit position 0 (programmable)

Chair programs 1 and 2 (programmable)

For details, see "Moving the patient chair via chair programs" [→ 75] and "Programming chair programs" [→ 80].



Backrest tilt

Moving the seat and backrest without any compression or stretching effects for the patient, see "Inclining the backrest and ErgoMotion" [→ 78].



Chair height

See "Adjusting the chair height" [→ 79].



Counterclockwise rotation / user profile

With the motor removed: switching counterclockwise rotation on/off, see "Setting the rotation on the EasyPad" [→ 105].

With instruments in place: changing the user profile, see "Selecting a user profile" [→ 61].

With motor removed and the Endo function switched on: Switch the AutoReverse function on/off when maximum torque is reached by pressing and holding the key (> 2 s), see "Switching AutoReverse ON/OFF" [→ 112]. Press briefly (< 2 s) to switch counterclockwise rotation on/off.

Depending on the context, an ongoing process can be stopped and switched to the standard operating context, e.g. ending the autopurge process.



Purge

Endo / Purge

With the motor removed: switching the Endo function on/off, see "Switching Endo function on/off" [→ 107]

With the ultrasonic handpiece removed: switching the Endo mode on/off (limiting power), see "Setting the intensity on the EasyPad" [→ 132].

With motor removed and the Endo function switched on: activating the calibration process (> 2 s), see "Calibrating the burr drive" [→ 108]

With instruments in place: selecting the purge, autopurge, sanitize, and stand-alone water supply functions



Clean

Display mode / clean

With motor removed and the Endo function switched on: Switching between torque and speed display, see "Setting the speed" [→ 111] in the section "Endo function".

With instruments in place: Deactivates the entire user interface of the dentist element. The instruments of the dentist and assistant elements can no longer be activated. The Sivation monitor and the camera are switched off. Pressing it again > 3 s reactivates the treatment center. This function is used to clean the surface and protect against interference from an external HF surgical unit so that no unwanted functions can be accidentally triggered, see "Disinfecting user interfaces" [→ 216]. Electromagnetic disturbances can often be reduced by operating the external HF surgical unit with a neutral electrode. As long as the suction removal system is required with the external HF surgical unit during the treatment, the suction handpiece must be removed from the holder before blocking the treatment center. The suction unit remains switched on until the block is removed and the suction handpiece is put down again.

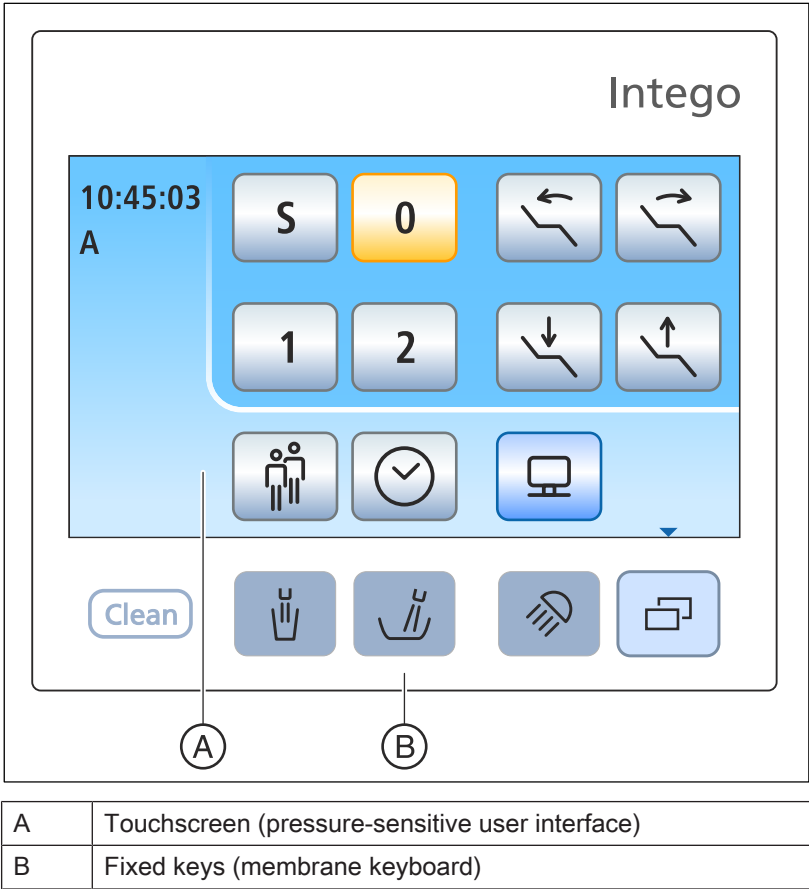
Fn

Function key

Starts and stops timer, see "Timer function" [→ 141].

3.9.5 Comfort EasyTouch user interface

The EasyTouch option is available for the Intego and Intego Pro treatment centers.



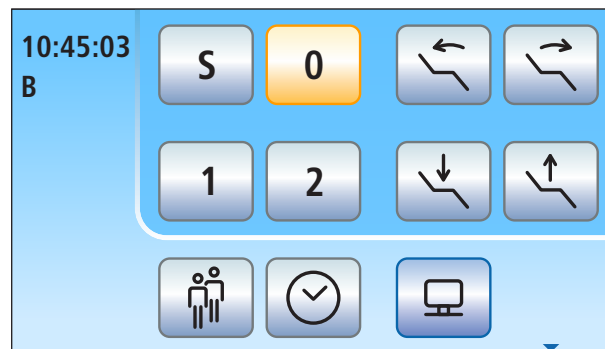
3.9.5.1 Touch screen

The touchscreen displays virtual function keys according to the program selected. A list of all function keys is provided in the Appendix of this document, see "Overview of all function keys" [→ 313].

Some programs are divided into main programs and sub-screens. The main programs are briefly introduced below:

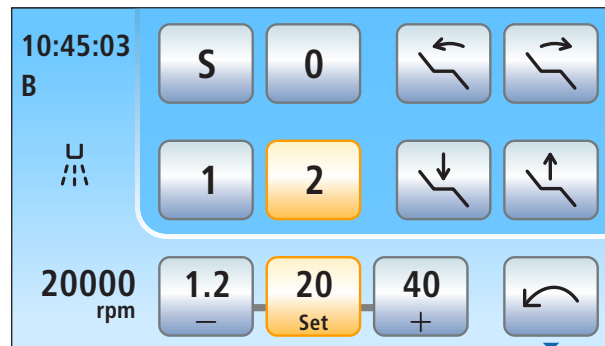
Start program

After the treatment center is switched on, the start program automatically appears. The start program displays the function keys for the chair programs, manual chair adjustment, and other general functions.



Instrument program

The Instrument program that corresponds to the instrument removed from the holder is displayed on the touchscreen (for example, motor).



Sivision program

The Sivision program enables certain computer programs running on the PC to be controlled directly from the treatment center. For details, see "Operation with a PC" [→ 191].



Sivision program for Sidexis 4 (left) und Sidexis XG (right)

3.9.5.2 Fixed keys of the EasyTouch user interface



Clean key

Pressing this key deactivates the complete user interface of the dentist element. Pressing it again > 3 s reactivates the user interface.

Deactivates the complete user interface of the dentist element. The instruments of the dentist and assistant elements can no longer be activated. The Sivation monitor and the camera are switched off. Pressing again > 3 s reactivates the treatment center. This function is used to clean the surface and protect against interference from an external HF surgical unit so that no unwanted functions can be accidentally triggered, see "Disinfecting user interfaces" [→ 216]. Electromagnetic disturbances can often be reduced by operating the external HF surgical unit with a neutral electrode. As long as the suction removal system is required with the external HF surgical unit during the treatment, the suction handpiece must be removed from the holder before blocking the treatment center. The suction unit remains switched on until the block is removed and the suction handpiece is put down again.



Tumbler filling

Starts or stops the tumbler filling function.

Pressing the *tumbler filling key* (> 2 s) displays the setting text for coupling the tumbler filling to mouth rinsing position S and filling time, see "Tumbler filling on the EasyTouch" [→ 154].



Flushing

Starts or stops cuspidor flushing.

Pressing the *flushing key* (> 2 s) displays the setting text for coupling flushing to mouth rinsing position S and flushing time, see "Flushing of the cuspidor on the EasyTouch" [→ 157].



Operating light

Switches the operating light on, to the composite function, or off.

The composite function delays the curing of composite materials.

With the LEDlight and LEDlight Plus, light intensity is set using the non-touch sensor. With the LEDview Plus, when the *Operating light* key is pressed (> 2 s), the setting program for the light appears. With the LEDview Plus, the color temperature is adjustable.

For details, please refer to the section "Operating light" [→ 175].



Sub-screen

Some programs are divided into a main program and sub-screens.

Only function keys for the basic functions are displayed in the main programs. The *Sub-screen* key (two rectangles) leads to additional setting options.

3.10 Assistant element

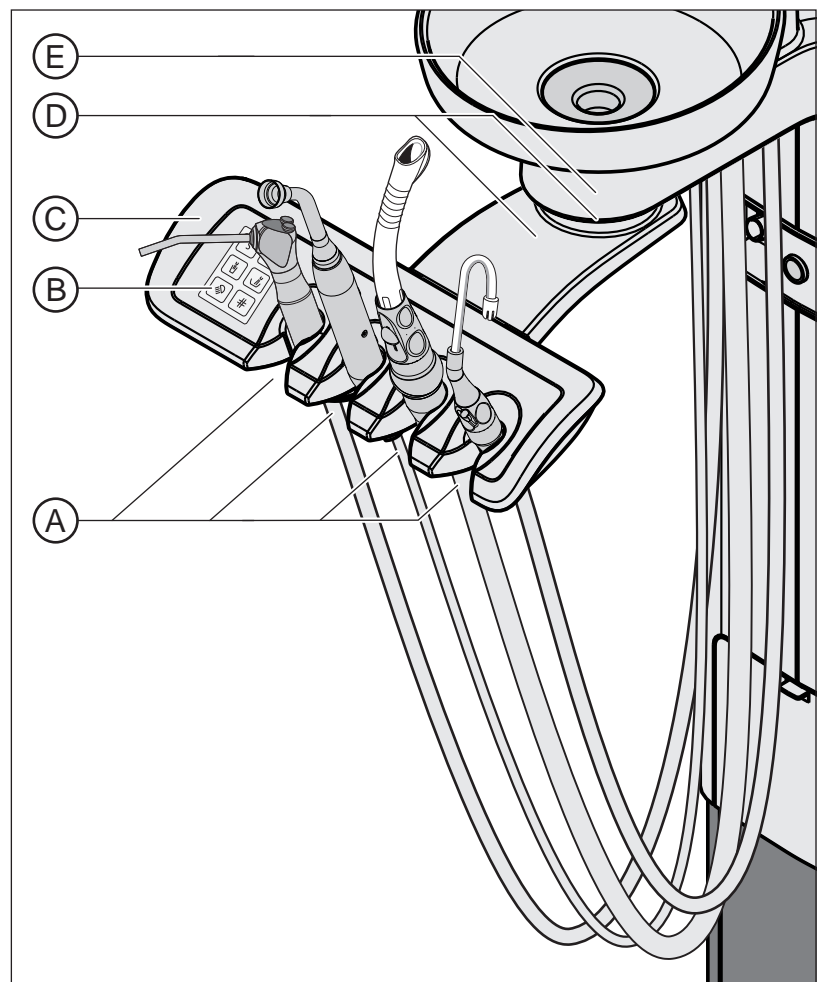
The scope of functions of the assistant element is adapted to the dental assistant's field of activity.

The Intego treatment center and Intego Pro with Ambidextrous option can be equipped with the Compact or Comfort assistant element. Intego Pro without the Ambidextrous option is available only with the Comfort assistant element. The user interface on the assistant element is optional.

Compact assistant element

The Compact assistant element can be swiveled and attached directly to the water unit.

If the Compact assistant element is attached to the water unit, the assistant element is automatically moved away to prevent collisions when swiveling the cuspidor. The assistant element is equipped with a safety shutdown on the water unit Ambidextrous.

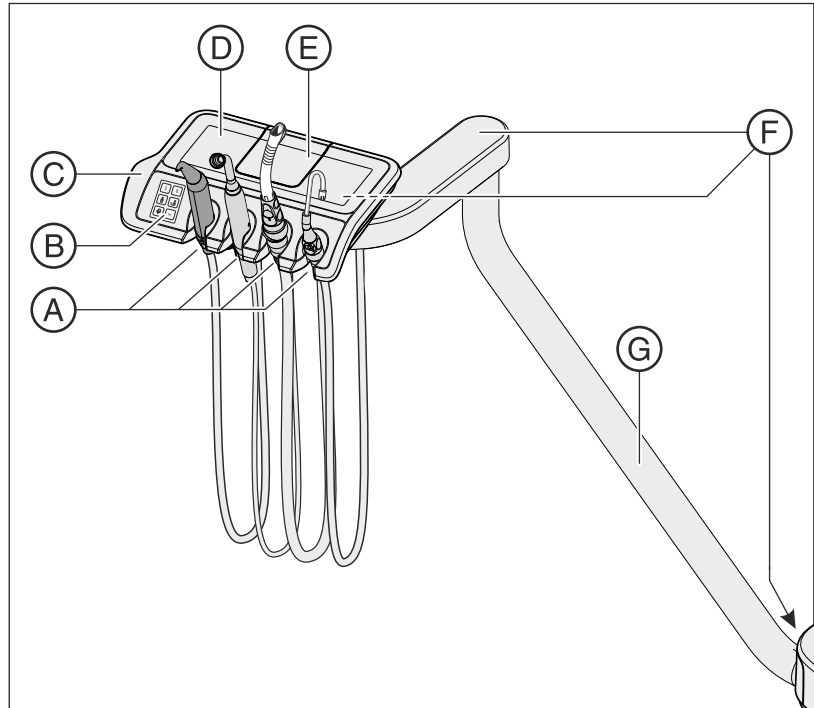


A	Holders 1 to 4 (from left to right) for instruments
B	User interface
C	Handle

D	Support arm and rotary joint
E	Central suction sieve under the removable cuspidor bowl

Comfort assistant element with treatment centers without Ambidextrous option

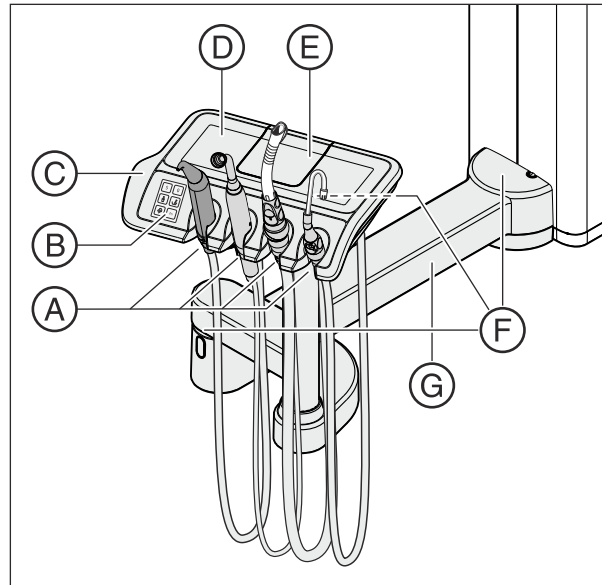
The Comfort assistant element is attached to the base of the patient chair by a support arm. It can be positioned so that the instruments can be reached by the dentist if he/she is performing treatment on his/her own.



A	Holders 1 to 4 (from left to right) for instruments
B	User interface
C	Handle
D	Holder surface with silicone mat
E	Cocer for the central suction sieve
F	3 rotary joints for flexible positioning
G	Support arm

Comfort assistant element with treatment centers with Ambidextrous option

The Comfort assistant element is attached to the water unit with a support arm. It can be positioned so that the instruments can be reached by the dentist if he/she is performing treatment on his/her own.



A	Holders 1 to 4 (from left to right) for instruments
B	User interface
C	Handle
D	Holder surface with silicone mat
E	Cocer for the central suction sieve
F	3 rotary joints for flexible positioning
G	Support arm

3.10.1 Instrument positions

The following instrument position assignments are possible:

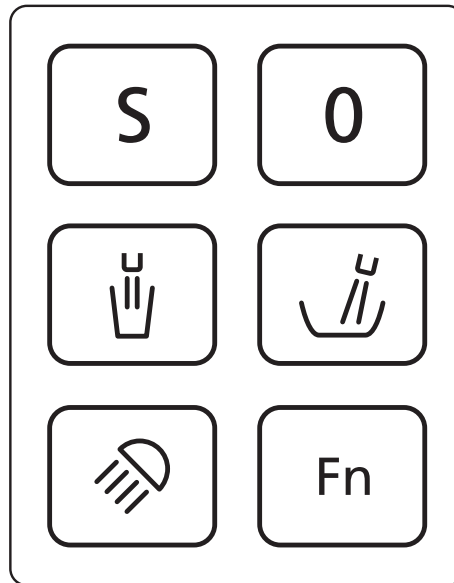
Holder 1	Holder 2 ²	Holder 3	Holder 4
Sprayvit E 3-way syringe	Additional spray aspirator	Spray aspirator	Saliva ejector
Standard 3-way syringe ¹	Mini LED curing light		
	Intraoral camera: • SiroCam F • SiroCam AF • SiroCam AF+		

¹ The Standard 3-way syringe is only available for Intego.

² A mini LED curing light, an intraoral camera or an additional spray aspirator can be connected to the treatment center.

Changes to holder 2 can only be made by your service engineer.

3.10.2 User interface



3.10.3 Fixed keys on the assistant element



Chair program S

Mouth rinsing position with last-position memory function (programmable), see "Programming chair positions" [→ 80]



Chair program 0

Entry/exit position (programmable)



Tumbler filling

On/Off



Flushing the cuspidor

On/Off



Operating light / Composite function

Switches the operating light on, to the composite function, or off.

The composite function delays the curing of composite materials.



Function key

Starts and stops the timer

3.11 Water unit

The treatment center Intego is equipped with the water unit Compact or Ambidextrous, the treatment center Intego Pro with the water unit Comfort or Ambidextrous.

The water units can be optionally equipped with an automatic separator (separation of suction air and waste water) combined with an amalgam separator / sediment container for dry suction or with a standard wet suction. Standard wet suction can be combined with a position selector valve and an optional additional cuspidor valve (e.g. for a central amalgam separator). The Compact water unit can be operated with an air jet pump (Air Venturi) instead of a suction device.

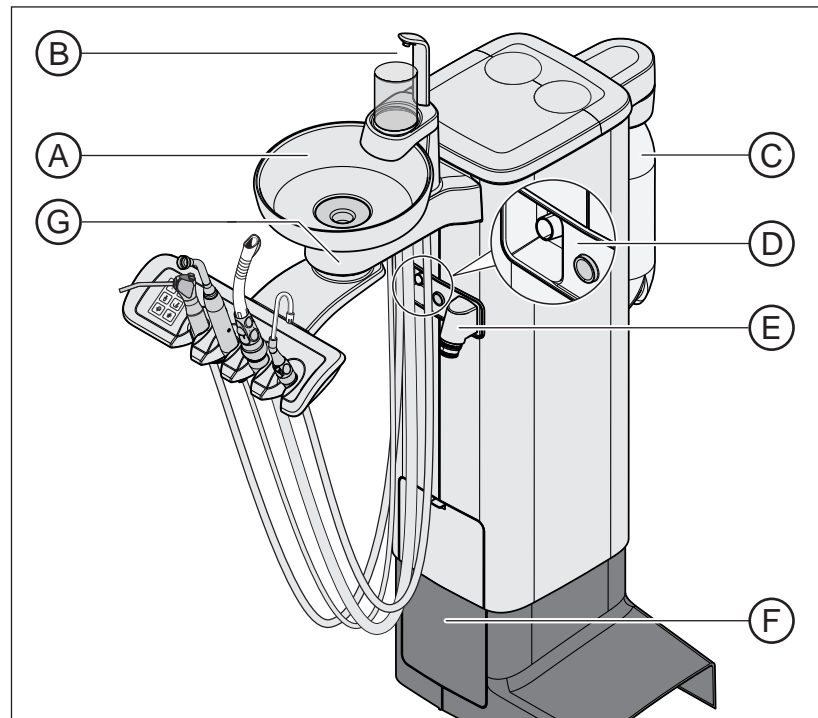
The heater for the treatment water is in the water unit. For the Intego, the water heater is optional.

3.11.1 Compact water unit

The Compact water unit is available only without a disinfection system. However, it can be equipped with a fresh water bottle for stand-alone water supply. Switching between the fresh water bottle and public drinking water supply is another equipment option. Please note the information given in the chapters "Media quality" [→ 16] and "Standards/ approvals" [→ 23].

The function for sanitizing the treatment center, see "Sanitizing with the fresh water bottle" [→ 280] and flushing the water paths (Purge) is optional. A fresh water bottle is needed to sanitize the treatment center.

Automatic cleaning of the suction system is optional. An intake for a suction hose is integrated below the cuspidor on the water unit for automatic cleaning. Water is pumped into a container behind the suction hose intake and suctioned off from there, see "Suction hose cleaning on the Compact water unit" [→ 243].



A	Manually swiveling cuspidor (removable)
B	Tumbler filler
C	Fresh water bottle, see "Stand-alone water supply" [→ 159]
D	Intake for suction hose cleaning
E	Connection for the suction hose to the assistant element (only with the Comfort assistant element)
F	Maintenance flap for accessing flushing valve, amalgam separator, sediment container, or filter insert for standard wet suction, or collector for the air jet pump (Air Venturi)
G	Central suction sieve under the removable cuspidor bowl (with the Compact assistant element)

3.11.2 Comfort water unit

The water unit can be optionally equipped with a disinfection system. In normal operation, this will automatically inoculate the water that will come into contact with the patient (also called treatment water) with an agent to disinfect the water paths. This leads to a decrease in bacterial growth and to the reduction of the bacteria in the water. Furthermore, the disinfection system can also be used to disinfect the water paths, see "Sanitizing with disinfection system" [→ 288]. If you operate the treatment center without the disinfection system, please refer to the information in chapters "Media quality" [→ 16] and Standards/Approvals" [→ 23].

WARNING

Microorganisms can multiply in the water.

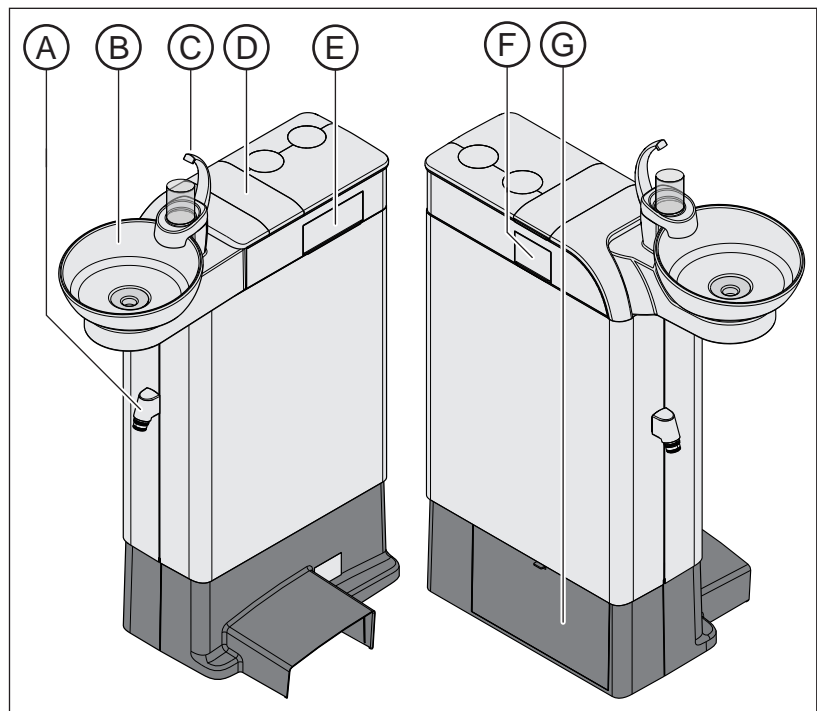
These microorganisms could increase the risk of damage to one's health.

- If the treatment center is equipped with a disinfection system, never operate this to disinfect the water paths without disinfectant.

If the water unit is equipped with a disinfection system, it can be switched to operation with a stand-alone water supply. After switching, distilled water must be mixed with the disinfectant used to disinfect the water paths in a 100:1 ratio (1 liter of water, 10 ml of the disinfectant) and filled into the storage tank of the water unit, see "Stand-alone water supply" [→ 159].

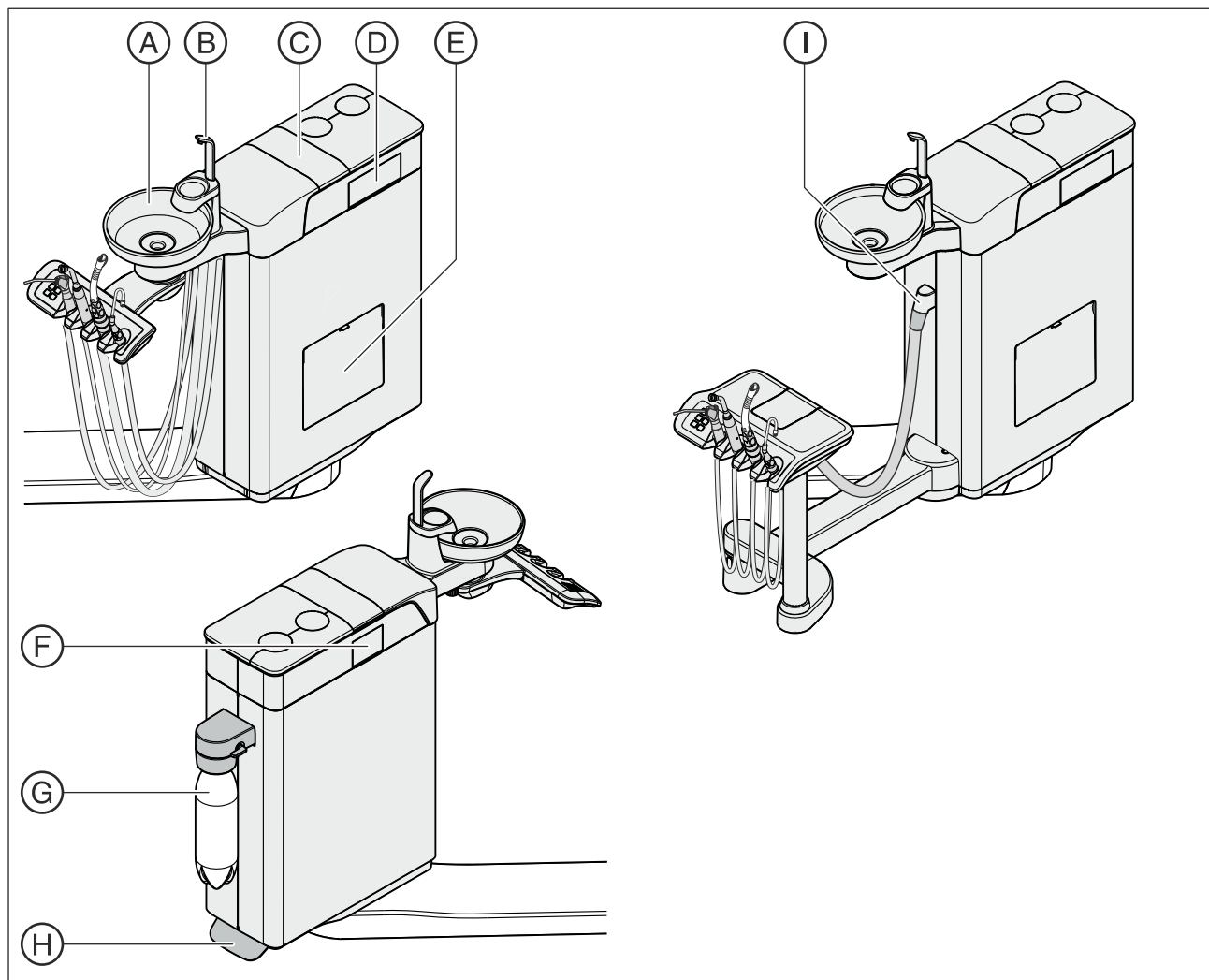
The top cover of the water unit has integrated cleaning adapters for water-carrying instruments and a suction hose. The dentist element and assistant element instruments can be inserted on both sides of the water unit using these adapters. The openings are covered with flaps. The adapters are needed for sanitizing the treatment center, automatically purging the water paths (AutoPurge), and cleaning the suction hoses.

To clean the suction system, water is pumped into a tank behind the suction hose intake and suctioned off from there. A cleaning agent is automatically added to the water if the dental treatment center is equipped with the chemical suction hose cleaning option. For more information, see "Suction hose cleaning on the Comfort water unit" [→ 245].



A	Suction hose connection for assistant element
B	Manually swiveling cuspidor (removable)
C	Tumbler filler
D	Cover of the storage tank for the disinfectant used to disinfect the water paths or for the stand-alone water supply
E	Cleaning adaptor for water-carrying instruments of the dentist element for sanitizing and auto purge.
F	Cleaning adapter for the Sprayvit E and for a suction hose of the assistant element
G	Maintenance flap for accessing the cleaning agent tank to chemically clean the suction hoses, the flushing valve, the amalgam separator, sediment container, or filter insert for standard wet suction

3.11.3 Ambidextrous water unit



A	Manually swiveling cuspidor (removable)
B	Tumbler filler
C	Cover of the storage tank for the disinfectant used to disinfect the water paths or for the stand-alone water supply (only for Intego Pro)
D	Cleaning adaptor for water-carrying instruments of the dentist element for sanitizing and auto purge.
E	Maintenance flap for accessing the cleaning agent tank to chemically clean the suction hoses, the flushing valve, the filter cartridge for standard wet suction The amalgam separator and sediment container are removed from underneath with the Ambidextrous water unit.
F	Cleaning adapter for the Sprayvit E and for a suction hose of the assistant element
G	Fresh water bottle (only with the Intego)

H	Foot pedal for unlocking the water unit
I	Suction hose connection to the Comfort assistant element

Ambidextrous water unit with Intego

With the Intego, the Ambidextrous water unit is available only without a disinfection system. However, it can be equipped with a fresh water bottle for stand-alone water supply. Switching between the fresh water bottle and public drinking water supply is another equipment option. Please note the information given in the chapters "Media quality" [→ 16] and "Standards/approvals" [→ 23].

The function for sanitizing, this is the disinfection of the treatment water paths and flushing the water paths (Purge) is optional. A fresh water bottle is needed to sanitize the treatment center, see "Sanitizing with the fresh water bottle" [→ 280].

Automatic cleaning of the suction system is optional. An intake for a suction hose for automatic cleaning is integrated into the water unit. Water is pumped into a container behind the suction hose intake and suctioned off from there, see "Suction hose cleaning on the Ambidextrous water unit" [→ 247]

Ambidextrous water unit with Intego Pro

With Intego Pro, the Ambidextrous water unit can be optionally equipped with a disinfection system. In normal operation, this will automatically inoculate the water that will come into contact with the patient (also called treatment water) with an agent to disinfect the water paths. This leads to a decrease in bacterial growth and to the reduction of the bacteria in the water. Furthermore, the disinfection system can also be used to disinfect the water paths, see "Sanitizing with disinfection system" [→ 288]. If you operate the treatment center without the disinfection system, please refer to the information in chapters "Media quality" [→ 16] and Standards/Approvals" [→ 23].

WARNING

Microorganisms can multiply in the water.

These microorganisms could increase the risk of damage to one's health.

- If the treatment center is equipped with a disinfection system, never operate this to disinfect the water paths without disinfectant.

If the water unit is equipped with a disinfection system, it can be switched to operation with a stand-alone water supply. After switching, distilled water must be mixed with the disinfectant used to disinfect the water paths in a 100:1 ratio (1 liter of water, 10 ml of the disinfectant) and filled into the storage tank of the water unit, see "Stand-alone water supply" [→ 159].

The top cover of the water unit has integrated cleaning adapters for water-carrying instruments and a suction hose. The dentist element and assistant element instruments can be inserted on both sides of the water unit using these adapters. The openings are covered with flaps. The adapters are needed for sanitizing the treatment center,

automatically purging the water paths (AutoPurge), and cleaning the suction hoses.

To clean the suction system, water is pumped into a tank behind the suction hose intake and suctioned off from there. A cleaning agent is automatically added to the water if the dental treatment center is equipped with the chemical suction hose cleaning option. For more information, see "Suction hose cleaning on the Ambidextrous water unit" [→ 247].

3.12 External device connection

External medical accessories can be connected to the external device connection. They must comply with the requirements of the 93/42/EEC Medical Devices Directive.

NOTE

If the treatment center is equipped with a disinfection system or fresh water bottle option, additional devices on the external device connection are exposed to a hydrogen peroxide concentration (H₂O₂) of 0.1‰-0.2‰.

If the additional devices are not suitable for the specified hydrogen peroxide concentration, they may be damaged.

- > Before connecting any additional devices, check to make sure that they can be exposed to the above hydrogen peroxide concentration. Contact the manufacturer of the relevant additional device, if necessary.
- > Prior to sanitation, additional devices must be unplugged from the external device connection (water connection), see "Sanitation" [→ 279].

IMPORTANT

DVGW approval

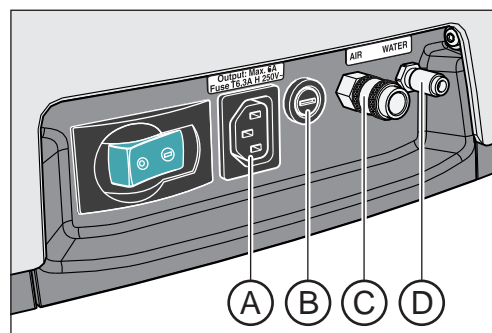
As the treatment center is designed according to EN 1717 (DVGW requirements), the connected additional devices also fulfill the requirements of the above standards when a disinfection system is integrated or a fresh water bottle not connected to the public drinking water supply is used, see "Standards and Approvals" [→ 23].

IMPORTANT

Self-contained power supply

The IEC socket remains live when the power switch is turned off. The connected external devices therefore must have their own power switch.

However, the air and water connections are switched off.



A	IEC outlet socket with power supply (max. 6 A)
B	Fuse for IEC outlet socket (6.3 A slow-blow)
C	Quick coupling for air
D	Quick coupling for water

	Print	Flow
Water	2.2 ± 0.2 bar	max. 300 ml/min
Air	4.4 ± 0.5 bar	max. 50 NI/min

IMPORTANT

The removal of media at the external device connection can reduce the performance of integrated consumers, e.g., the filling quantity of the tumbler or the highspeed handpiece.

4 Operation

4.1 Starting up the treatment center

4.1.1 Initial Operation

Sanitizing must be performed prior to initial startup of your treatment center if the treatment center is equipped with this option.

In the Intego, the purging and sanitizing functions and the fresh water bottle are available as options. Both options must be present to sanitize the water paths. If it is not possible to sanitize the treatment center, the water paths of the instrument and tumbler filling must be flushed manually before the initial start-up, see "Switch spray on/off" [→ 88] and "Purge water paths" [→ 222].

The Intego Pro has the sanitize function if the water unit is equipped with a disinfection system.

For sanitizing, the water-carrying lines are filled with the undiluted disinfectant to disinfect the water paths to reduce the bacterial load in the water paths.

If the service engineer skipped the sanitizing procedure after installing your treatment center based on an agreement with you or sanitizing has not been performed for more than one week, please carry out sanitization yourself, see "Sanitization" [→ 279].

Sanitization takes at least 24 hours.

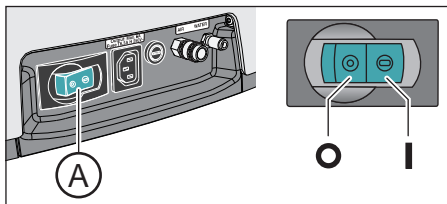
4.1.2 Switching the treatment center on/off

The treatment center has a main switch with integrated fuse on the base of the chair.

At the end of the working day, the treatment center should be switched off to save energy and for safety reasons. This switches off the air and water supply as well as all electronic components. The treatment center then consumes no power.

Following switch-on, the operating system is booted and an automatic self-test is performed.

Switching the treatment center on



- ✓ The treatment center is installed by authorized technical personnel according to the "Installation Instructions".
- Turn on mains switch **A**.
- ⚡ The treatment center is connected to the power grid and air and water supply.
- ⚡ The treatment center powers up and establishes operational readiness.

Self-test for chair drive

After switching on the treatment center, an automatic self-test for the chair drive is performed. The patient chair moves up and down briefly. The test is only performed at the start of the day or if the chair has not been moved for longer than 6 hours.

CAUTION

During this self-test, there must not be a patient on the chair.

If a safety switch has been triggered, the self-test will not be performed. The test, however, starts immediately after the cause has been remedied, e.g., after swiveling the cuspidor outwards. There is a risk of collision for the patient.

- Do not allow anyone to sit on the chair until the treatment center has been switched on and is ready for use.

Next maintenance call

If the next maintenance call is due in less than 42 days or the maintenance deadline has already been exceeded, a message appears on the user interface. For more information, please refer to "Inspection and maintenance" [→ 304].

Switching the treatment center off

- Turn off mains switch **A**.
- ⚡ The treatment center is disconnected from the power supply. The air and water supply is blocked.

4.1.3 Selecting a user profile

If your treatment center is equipped with the EasyPad standard user interface, it can manage up to two user profiles. The EasyTouch Comfort user interface can manage up to four user profiles. This allows multiple users to operate the treatment center without losing their own individual settings for treatment and operation.

The following is stored in the user profiles:

- For chair program settings see "Programming chair programs" [→ 80]
- For configurations in the setup, see "Configuration of the treatment center (Setup)" [→ 198]
- For settings in the operating contexts and dialogs on the instruments, see "Saving the instrument settings" [→ 93]
- Configuration of the Sivation program for PC control. The configuration is saved in the PC application Siucom Plus installed on the PC.

When the user profile is selected, the preset configurations and settings become available.

Selecting a user profile on the EasyPad

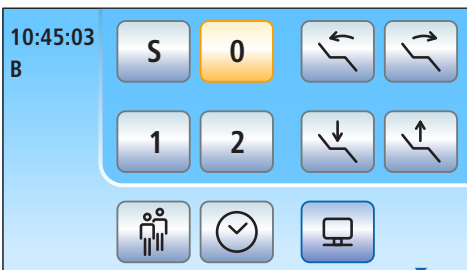
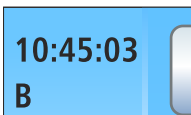
If the status display *user profile* lights up, user profile B is pre-selected; if it does not light up, user profile A. The user profile used last is automatically loaded when the treatment center is switched on.

- ✓ All instruments are placed in the holders.
- Press the *Counterclockwise rotation / User profile* key.
 - ✎ The status display *User profile* lights up or turns off. This switches between the user profiles.

Selecting a user profile on the EasyTouch

The user profiles are distinguished with the letters A to D. The active user profile, here B, is displayed in the status field of the touchscreen. If only one user profile is set up, nothing is displayed. The user profile used last is automatically loaded when the treatment center is switched on.

- ✓ The *Start dialog* is displayed on the touchscreen.



- Touch the *User profile* as often as necessary until the desired user profile is selected.
 - ✎ The user profile displayed in the status field is active.

On the EasyTouch user interface, if any of the user profiles are not required, their number can be limited, see "Preselecting the number of user profiles" [→ 206].

4.2 Concept of the user interface

4.2.1 Standard EasyPad user interface

EasyPad displays



The EasyPad user interface is equipped with seven segment displays. Each display can show five digits or letters. Depending on the operating context, they can be used to display speed, intensity, and torque values as well as for the purpose of configuring and maintaining the treatment center. In addition, they display the time, the timer function, and malfunction messages.



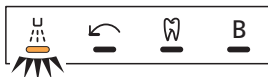
Running processes, such as the flushing of instruments with the purge function, the exposure phase during sanitation or the calibration of the drill drive during the endo function, are displayed on the EasyPad display with a rotating element at the end of the line.



If two elements flash alternately at the end of the EasyPad display, the user needs to act, e.g. when the agent for disinfecting the water paths or water needs to be refilled.

For information about the display of malfunction messages, please refer to "Easy Pad malfunction messages" [→ 306].

Status displays



Status lights are mounted below the EasyPad displays. These indicate spray activation (only with C+ electronic foot control), counterclockwise rotation, Endo function, and user profile B.

Favorites keypad



These fixed buttons are used to:

- Adjust the speed of the electric motor or the intensity of the scaler
- Save and retrieve the following instrument settings on function keys 1, 2, and 3:
 - Speed or intensity
 - Maximum torque with Endo function activated
 - Spray activation (only with C+ electronic foot switch)
- Call the setup and browse through the setup settings
- Change other adjustment values, e.g. flushing and purging time

Dual assignment of fixed buttons



Depending on the operating context and whether instruments have been removed/set down or Endo function has been activated, different functions can be assigned to the same fixed buttons. For example: the *Counterclockwise rotation/User profile* button, see also "Fixed buttons in the Easy Pad user interface" [→ 39].

Fixed buttons with no function

Where certain functions are not available on the treatment center, the associated fixed buttons on the user interface do not respond. This only concerns the buttons with dually assigned functions for the Endo function:



It may not be possible to activate the Endo function.



It is not possible to switch between speed and torque display.



Calling functions

Functions are triggered by the fixed buttons on the user interface.

Press and hold the tumbler filling and flushing buttons (> 2 s) to access the setting context.



Terminating processes

Depending on the operating context, you can use the *Counterclockwise rotation/User profile* button to terminate a process that is in progress. Press the button again to switch to the standard operating context.

4.2.2 Comfort EasyTouch user interface

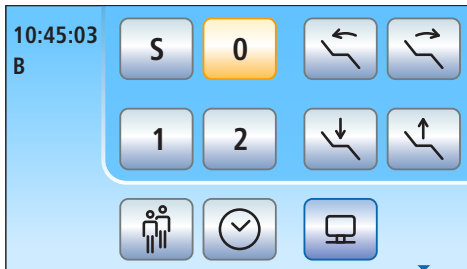
4.2.2.1 Virtual function keys

The touchscreen displays virtual function keys according to the program selected. Required functions can be activated by touching the function keys with your finger.

Missing function keys

The adjacent illustration shows the touchscreen of a treatment center as supplied to the customer with all features.

Function keys for functions not included with the treatment center are not displayed on the touchscreen. Moreover, the touchscreen user interface may vary due to individual setup settings, see "Configuration of the treatment center (Setup)" [→ 198].



In the *Start dialog* this refers to the function key for the **feature option** "Network interface".



Furthermore, in the *Start dialog* the *User profile* key can be hidden with the **setup setting** "Preselect the number of user profiles".

Key background color

General functions are represented by gray keys. If the corresponding function is switched on or active, the key is displayed in orange.



Keys that initiate a dialog change or lead to sub-dialogs and settings dialogs are displayed blue.

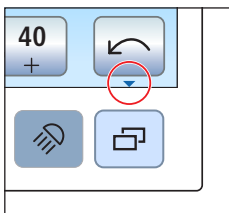


As long as a key remains activated, its active state is marked by a bold black border.

4.2.2.2 Sub-screens and settings screens

Sub-screens

Some programs are divided into a main program and sub-screens. This is indicated by a small arrow at the bottom right of the touchscreen. It points to the fixed key *Sub-screen* below the touchscreen.

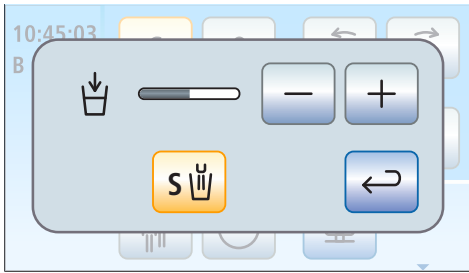


Only function keys for the basic functions are displayed in the main dialogs. The *Sub-dialog* key (two rectangles) leads to more setting options.



Sub-screens usually are generally hidden automatically after a certain period has elapsed. The *Return* key (return arrow) closes the opened sub-screen immediately.

Settings screens

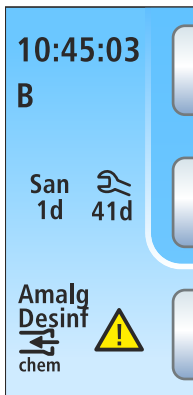


In many cases, functions not only can be switched on or off, but also can be set. If a function key is pressed and held (> 2 s), the corresponding settings screen appears. This screen is superimposed on the current screen. The dialog in the background has a semitransparent appearance and is temporarily disabled for inputs.



Settings screens are usually automatically hidden after a certain period has elapsed. The *Return* key (return arrow) closes the opened settings screen immediately.

4.2.2.3 Status column



There is a column for status displays at the left edge of the touchscreen. Here the current time with the seconds below is shown and if several user profiles are pre-selected, the active user profile A to D is also displayed.

In addition, the days until the next sanitation and maintenance or status messages such as change the amalgam separator or add the disinfectant to disinfect the water paths, refill the cleaning agent for chemical cleaning of suction hoses, or error messages are displayed.

4.3 Foot control

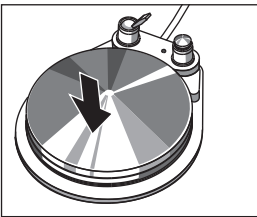
The treatment center can be operated with a pneumatic foot switch or the C+ electronic foot switch.

4.3.1 Pneumatic foot switch

When the instrument is removed from the holder, the speed or intensity are automatically displayed on the EasyPad. On the EasyTouch, the instrument dialog is called up.

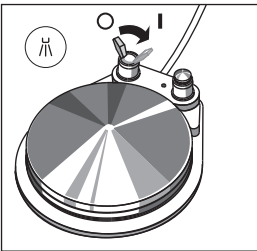
Foot pedal

- > Remove an instrument (electric motor, highspeed handpiece/air motor, scaler) and step on the foot pedal.
 - ↳ The instrument is switched on with the set speed and intensity. For highspeed handpieces/air motors, the speed is controlled by the pedal action.



Spray switch

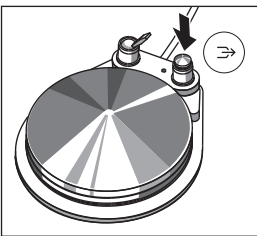
- > Move the toggle switch.
 - ↳ Left position: Spray off
 - ↳ Right position: Spray onThe spray is either switched on or off when an instrument is activated.



Chip blower

With the chip blower, an air jet comes out of the bur.

- > Remove an instrument and press on the right button.
 - ↳ The chip blower remains switched on as long as the button is pressed.

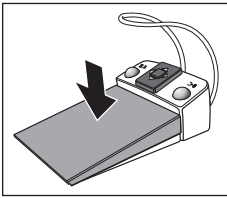


4.3.2 C+ electronic foot switch

The C+ electronic foot control operating elements are assigned different functions depending on whether the instruments are all in place or an instrument is removed from its holder.

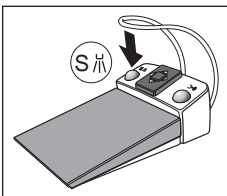
When an instrument is removed from the holder, the last speed or intensity settings are automatically displayed on the EasyPad. On the EasyTouch, the instrument dialog is called up. If the intraoral camera is removed, the Sivation dialog appears.

Foot pedal



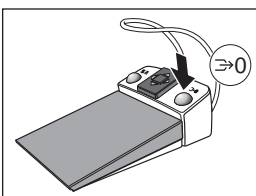
- ✓ All instruments are **in their holders**.
- Press the foot pedal.
 - ↳ The EasyPad switches to the standard operating context (initial situation), the EasyTouch displays the start dialog.
- ✓ An instrument is **removed**.
- Step on the foot pedal.
 - ↳ The instrument is activated. With the EasyPad, the motor and the scaler are activated with the set speed or intensity (direct starter). When the control foot control function is set on the EasyTouch, the motor and the scaler can be controlled depending on the pedal position, see "Set C+ electronic foot control as direct starter or control foot control" [→ 92]. If the intraoral camera is removed, the camera image will be focused if necessary and switched to still or moving image.

Left button



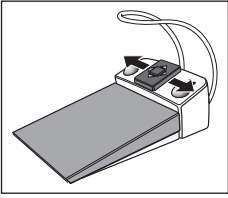
- ✓ All instruments are **in their holders**.
- Press the left button.
 - ↳ The chair moves to mouth rinsing position S.
- ✓ An instrument is **removed**.
- Press the left button.
 - ↳ With the EasyPad, the spray is switched on and off, with the EasyTouch, the cooling medium preset in the sub-dialog (spray or air). If the intraoral camera is removed, the video still image is saved in Sidexis; the live image is displayed in the next quadrant in SI Video.

Right button

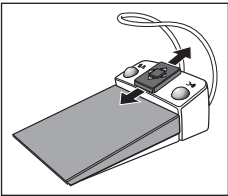


- ✓ All instruments are **in their holders**.
- Press the right button.
 - ↳ The chair moves to entry/exit position 0.
- ✓ An instrument is **removed**.
- Press the right button.
 - ↳ The chip blower remains switched on as long as the button is pressed. When the intraoral camera is removed, it is possible to toggle between single image and quad image in SI Video.

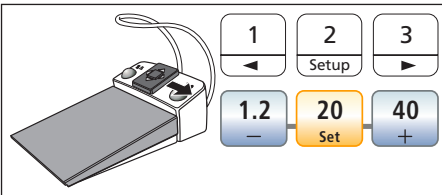
4-way switch plate



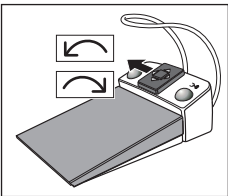
- ✓ All instruments are **in their holders**.
- Move the 4-way foot switch plate to the left or right.
 - ↩ Left: Chair program 1 is started.
 - ↩ Right: Chair program 2 is started.



- ✓ The electric motor or the scaler is **removed**.
- Slide the 4-way foot switch plate up or down.
 - ↩ Up: The speed or intensity is increased.
 - ↩ Down: The speed or intensity is reduced.



- ✓ The electric motor or the scaler is **removed**.
- Slide the 4-way foot switch plate to the right.
 - ↩ This calls up the instrument settings saved for the favorite key, e.g. speed, intensity, and activation of spray.



- ✓ An electric motor is **removed** from the holder.
- Slide the 4-way foot switch plate to the left.
 - ↩ The clockwise/counterclockwise rotation of the electric motor is activated.

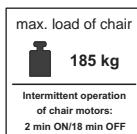
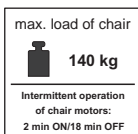
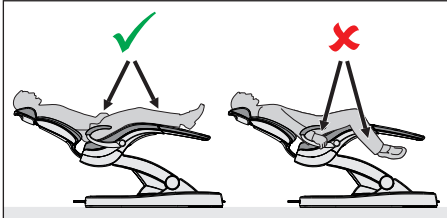
IMPORTANT

The allocation of functions may differ when the Endo function is active.

- When the Endo function is activated, observe the remarks for operating the foot switch, see "Endo function" [-> 106].

4.4 Patient chair

4.4.1 Safety instructions



CAUTION

The free space under the patient couch and up to the water unit can be decreased due to chair movements.

Parts of the patient's or user's body may be pinched or crushed.

- Do not allow any limbs to stick out in the space between the chair upholstery, armrests and chair base. Please make sure that the patient's arms and legs rest on the upholstery of the chair.
- Do not place any objects on the base of the chair.

CAUTION

The maximum load capacity of the patient chair is 140 kg (308.6 lbs) or 185 kg (407.9 lbs), depending on the model (tested with multiple safety acc. to IEC 60601-1).

If the maximum load capacity is exceeded, there is a risk of damage to the treatment chair and injury of the patient.

- Never allow any persons who weigh more than 135 kg (297.6 lbs) or 180 kg (396.8 lbs) to sit on the patient chair. The permissible maximum load capacity is indicated on a plate next to the rating plate of the treatment center.
- The maximum additional weight of accessories mounted on the patient chair is 5 kg (11 lbs).

CAUTION

Objects may protrude into the movement range of the chair.

There is a risk of crushing the patient and damaging the objects.

- Make sure that no objects such as e.g. windows, drawers or other devices protrude into the movement range of the treatment chair.

IMPORTANT

Chair interlock

As long as a treatment instrument is activated, all functions for moving the patient chair are disabled for safety reasons.

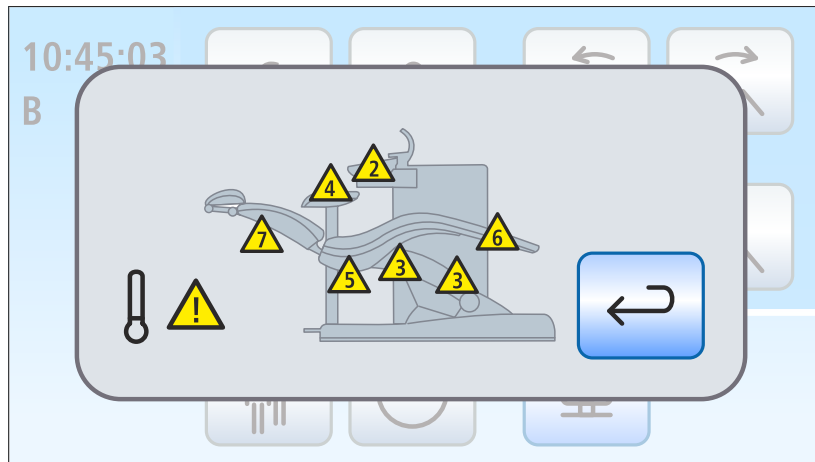
If chair movement is permanently blocked, please contact your service technician.

4.4.2 Safety stop


The treatment center is equipped with various safety stops to prevent crushing and damage. The cutoff trigger points are shown in the following illustration:



Display of triggered safety switch 2 on the EasyPad



Display of triggered safety switches (all shown in one illustration) on the EasyTouch

2	Cuspidor bowl
3	Lift frame
4	Assistant element
5	Rear facing, right/left
6	Footrest
7	Backrest
 <p>Motor for adjusting the chair height or backrest was switched off to avoid overheating. The chair can be moved again once it has cooled down.</p>	

The following occurs when one or more safety switches are triggered:

- All safety switches cause an acoustic signal to be played twice each time a movement stops or starts. Exception cuspidor: only when movement starts
- All chair movements stop immediately
- The triggered safety switches are displayed on the EasyPad display or on the touchscreen

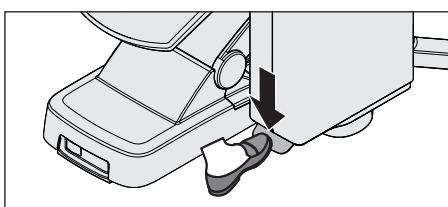
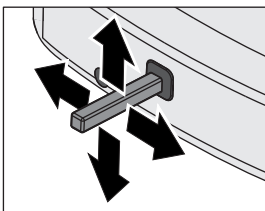
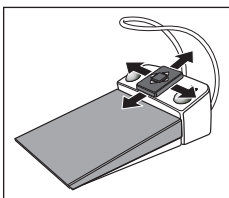
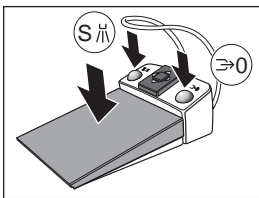
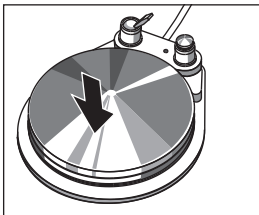
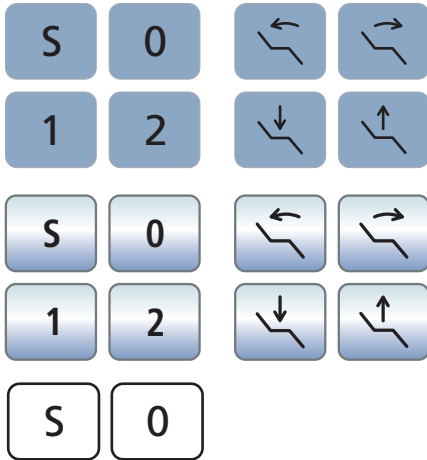
As long as a safety switch is activated, the operation of the treatment center is restricted!

If a safety switch is permanently blocked, please contact your service technician.

4.4.3 Triggering an immediate movement stop

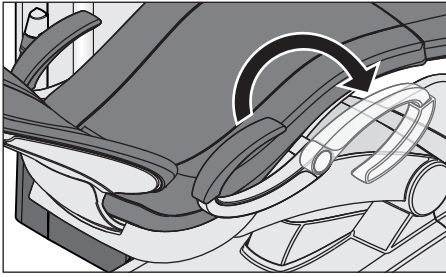
You can stop the movement of the chair to a programmed position as follows:

- > Touch one of the patient chair keys on the EasyPad or EasyTouch.



- > Press one of the patient chair keys on the control panel of the assistant element.
- > Press the pedal of the pneumatic foot switch.
- > With all instruments in place, press the pedal or the left or right button of the C+ electronic foot control.
- > With an instrument removed from the holder, press the pedal of the C+ electronic foot control.
- > Move the 4-way switch plate on the C+ electronic foot control in any direction.
- > Move the 4-way foot control in any direction.
- > For treatment centers with the Ambidextrous option: press the foot pedal to convert the water unit.

4.4.4 Armrests



Armrests are available for the patient chair.

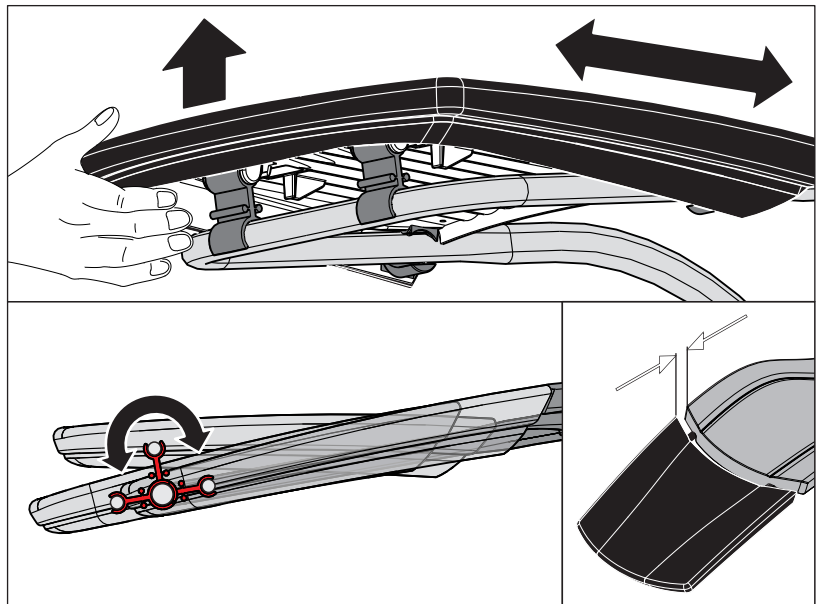
The right armrest can be swiveled forward to facilitate getting in and out of the chair. In treatment centers with the Ambidextrous option, both armrests can be swiveled.

CAUTION

Always swivel the armrest completely to one of the stops. Do not leave the armrest in a middle position to prevent injuries.

4.4.5 Vario footrest

The footrest can be folded forward by approximately 10 cm to adjust it to the patient's height.



> Lift the foot end and pivot the footrest forward or backwards.

CAUTION

Make sure while adjusting that the footrest is locked securely in place of the corresponding end position.

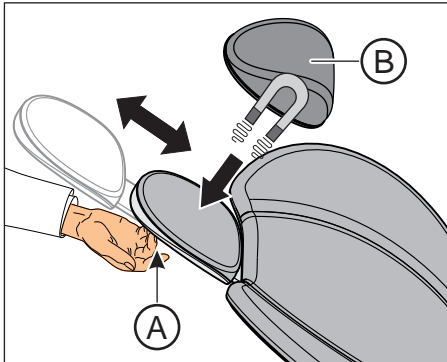
Make sure to avoid trapping fingers while adjusting.

If the patient chair features lounge upholstery, there is no footrest. The entire reclining surface is upholstered.

4.4.6 Adjusting the flat headrest

The headrest extension can be pulled in or out manually depending on the patient's height.

- Pull the headrest out of the backrest or push it back in at the recessed grip **A**.



The head pad **B** is held in place magnetically.

Note: For upper jaw treatment, the magnetic head pad can be rotated and used as a neck support.

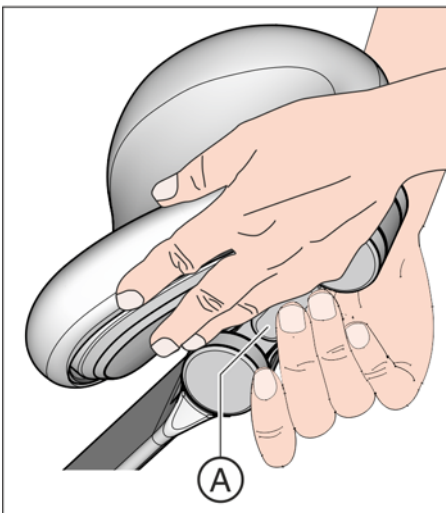
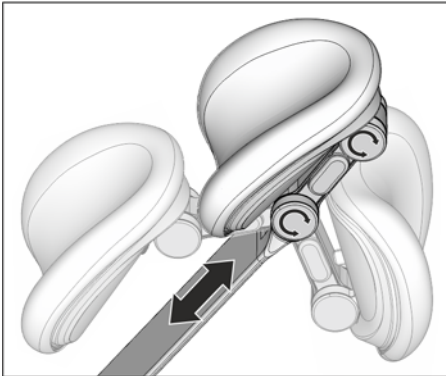
WARNING

The head pad contains a strong magnet on its bottom side.

The magnet could affect any active implant located nearby. Furthermore, direct contact of the head pad with magnetic cards can delete data stored on the cards.

- Therefore, make sure that the magnet is never located in the immediate vicinity of any patients, users or technical personnel with an active implant. If necessary remove the head pad from the headrest.
- Make sure that no magnetic cards or any other data storage media are located in the immediate vicinity of the head pad.

4.4.7 Adjusting the double articulating headrest



The double articulating headrest is equipped with two rotary joints. They facilitate manual adjustment of head inclination for maxillary/mandibular treatments. The headrest extension can be pushed in or pulled out manually to adjust it to the height of the patient.

⚠ CAUTION

When the lock on the double articulating headrest is released, the both rotary joints lose their holding power.

If the headrest is not supported when the lock is released, the patient's head might suddenly fall backward.

- Always support the headrest and thus the patient's head prior to releasing the locking mechanism on the double articulating headrest!
- Place your hands so your fingers will not be pinched.
- Tell the patient that you are going to adjust the headrest.
- Before releasing the headrest, always ensure that both joints are securely locked.

1. Place one hand under the headrest to support the patient's head.
2. Use the other hand to press the release button **A**.
 - ↪ Both rotary joints are now freely movable.
3. Adjust the headrest to the desired treatment position. Then let go of the release button **A**.
 - ↪ Both rotary joints lock into place. Ensure that the joints are securely positioned! The headrest is secure again.

4.4.8 Moving the patient chair via chair programs

The chair programs can be selected using the fixed keys on the EasyPad or the touchscreen on the EasyTouch. They can also be selected using the C+ electronic foot switch. The entry/exit and mouth rinsing positions can also be selected using the fixed keys on the assistant element.

You can individually reprogram the factory preset chair programs to suit your own wishes; see "Creating chair programs" [→ 80].

WARNING

The dentist element can be positioned within the movement range of the patient chair.

During an automatic program run, such as moving toward the entry/exit or mouth rinsing positions, the patient may collide with the dentist element or its support arm. The patient could be injured.

- Before moving the patient chair, position the dentist element to make a collision with the patient or the patient chair impossible.

IMPORTANT

Chair movements with cuspidor swiveled in Intego

With the cuspidor bowl swiveled in, the chair cannot be moved. This prevents the patient from colliding with the cuspidor. Swing the cuspidor outward before initiating chair movement.

4.4.8.1 Moving the patient chair to the entry/exit position

The following functions are factory preset in the entry/exit position to facilitate patient entry and exit:

- The patient chair moves to an upright position
- The operating light switches off

Via fixed keys on the EasyPad

- Press the 0 key briefly (< 2 s).

0

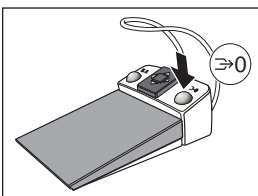
Via the touchscreen on the EasyTouch

- ✓ The *Start* or *Instrument dialog* is displayed on the touchscreen.
- Touch the 0 key briefly (< 2 s).

0

Via C+ electronic foot switch

- ✓ All instruments are in place.
- Press the right button of the C+ electronic foot switch.



0

Via the assistant element

- Press the 0 key on the assistant element briefly (< 2 s).

4.4.8.2 Moving the patient chair to the mouth rinsing position

The following functions are factory preset to be activated in the mouth rinsing position:

- The chair moves the patient to an upright position
- The operating light switches off

The tumbler filling and cuspidor flushing function can be set to switch on automatically when the chair's mouth rinsing position is activated, see "Tumbler filling" [→ 153] and "Cuspidor flushing" [→ 156].

Via fixed keys on the EasyPad

- Press the S key briefly (<2 s).

S

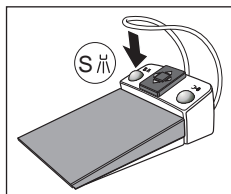
Via the touchscreen on the EasyTouch

- ✓ The *Start* or *Instrument program* is displayed on the touchscreen.
- Touch the S key briefly (< 2 s).

S

Via C+ electronic foot control

- ✓ All instruments are in their holders.
- Press the left button of the C+ electronic foot control.



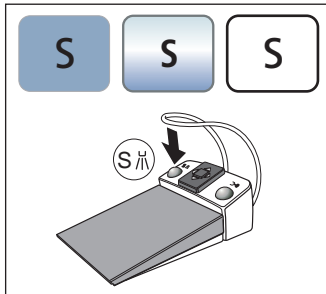
S

Via the assistant element

- Press the S key on the assistant element briefly (< 2 s).

4.4.8.3 Using the last position memory function

The last chair position is stored before the patient chair moves to mouth rinsing position S. When mouth rinsing position key S is pressed again, the treatment center returns to the previously set treatment position.



- ✓ The patient chair can be in any treatment position.
- 1. Press the S key on the EasyPad or on the touchscreen, or press the S key on the user interface of the assistant element, or press the left button of the C+ electronic foot switch (with all instruments in place in their holders).
 - ↳ The treatment center moves to the mouth rinsing position.
- 2. Press the button S again.
 - ↳ The treatment center automatically returns to the position where the patient chair was located prior to the mouth rinsing position.

4.4.8.4 Activating other chair programs

Via fixed keys on the EasyPad



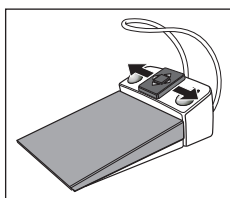
- > Press the 1 or 2 key briefly (< 2 s).

Via the touchscreen on the EasyTouch



- ✓ The *Start* or *Instrument dialog* is displayed on the touchscreen.
- > Touch the 1 key or the 2 key briefly (< 2 s).

Via C+ electronic foot switch



- > Move the 4-way foot control plate of the C+ electronic foot switch to the left or right.
 - ↳ Left: Chair program 1 is started.
 - ↳ Right: Chair program 2 is started.

4.4.9 Moving the chair manually

WARNING

The dentist element could be positioned within the movement range of the patient chair.

Moving the patient chair may cause the patient to collide with the dentist element or its support arm. The patient could be injured.

- Before moving the patient chair, position the dentist element to make a collision with the patient or the patient chair impossible.

IMPORTANT

Chair movements with cuspidor swiveled in Intego

With the cuspidor bowl swiveled in, the chair cannot be moved. This prevents the patient from colliding with the cuspidor. Swing the cuspidor outward before initiating chair movement.

4.4.9.1 Inclining the backrest and ErgoMotion

The backrest can be inclined to position the patient ergonomically.

The patient chair can be equipped with the ErgoMotion option. The movement of the chair seat and backrest is compensated so there is no compression or stretching of the patient.

Via fixed keys on the EasyPad

- Press the *Incline backrest* key.



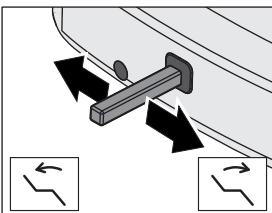
Via the touchscreen on the EasyTouch

- ✓ The *Start* or *Instrument program* is displayed on the touchscreen.
- Touch the *Incline backrest* key.



Via the 4-way foot control

- ✓ If the 4-way foot switch is allocated to the aspirator in the setup program, the spray aspirator must be in place. See "Coupling suction to the 4-way foot switch" on the EasyPad [→ 200], on the EasyTouch [→ 207].
- Slide the 4-way foot control to the left or right.



4.4.9.2 Adjusting the chair height

Via fixed keys on the EasyPad

- Press the *Adjust the chair height* key.



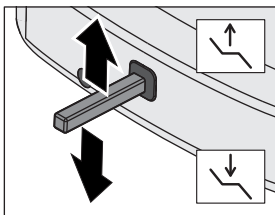
Via the touchscreen on the EasyTouch

- ✓ The *Start* or *Instrument program* is displayed on the touchscreen.
- Touch the *Adjust the chair height* key.

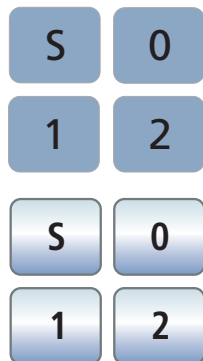


Via the 4-way foot control

- ✓ If the 4-way foot switch is allocated to the aspirator in the setup program, the spray aspirator must be in place. See "Coupling suction to the 4-way foot switch" on the EasyPad [→ 200], on the EasyTouch [→ 207].
- Slide the upper 4-way switch upward or downward.



4.4.10 Programming chair programs



The four chair programs preset in the factory:

- Mouth rinsing position S
- Entry/exit position 0
- 1 and 2

can be individually programmed for both user profiles (A and B) on the EasyPad and each of the four user profiles (A to D) on the EasyTouch.

- ✓ On the EasyTouch, the *Start* or *Instrument dialog* is displayed on the touchscreen.
1. Move the patient chair to the required treatment position; see "Moving the chair manually" [→ 78].
 2. Switch the operating light on or off (this will be included in the program), see "Operating light" [→ 175].
 3. Press and hold the desired program key (S, 0, 1, 2) (> 2 s).
 - ✎ An acoustic signal sounds. Your settings are now stored under the desired program key.

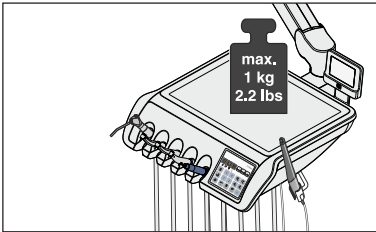
Note: Chair programs S and 0 can also be programmed on the assistant element side.

4.5 Dentist element

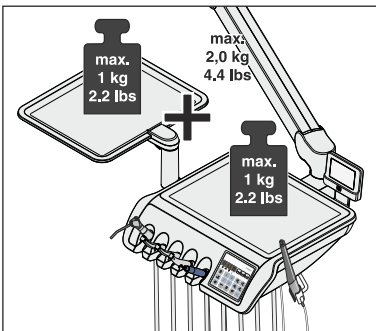
4.5.1 Maximum load capacity

TS dentist element

The maximum load on the TS dentist element without a tray holder is 1 kg (2.2 lbs).

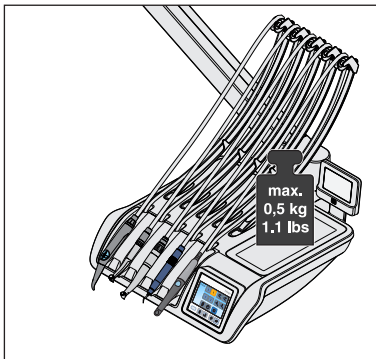


The maximum load on the TS dentist element with a tray holder is 2 kg (4.4 lbs). In this case, the maximum load on the dentist element and the tray is 1 kg (2.2 lbs) each.

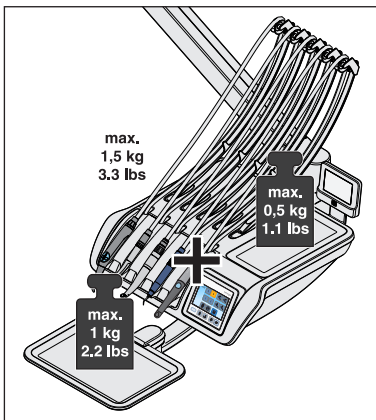


CS dentist element

The maximum load on the CS dentist element without a tray holder is 0.5 kg (1.1 lbs).



The maximum load on the CS dentist element with a tray holder is 1.5 kg (3.3 lbs). In this case, the maximum load on the dentist element is 0.5 kg (1.1 lbs) and on the tray 1 kg (2.2 lbs).



4.5.2 Positioning the dentist element

WARNING

The dentist element could be positioned within the movement range of the patient chair.

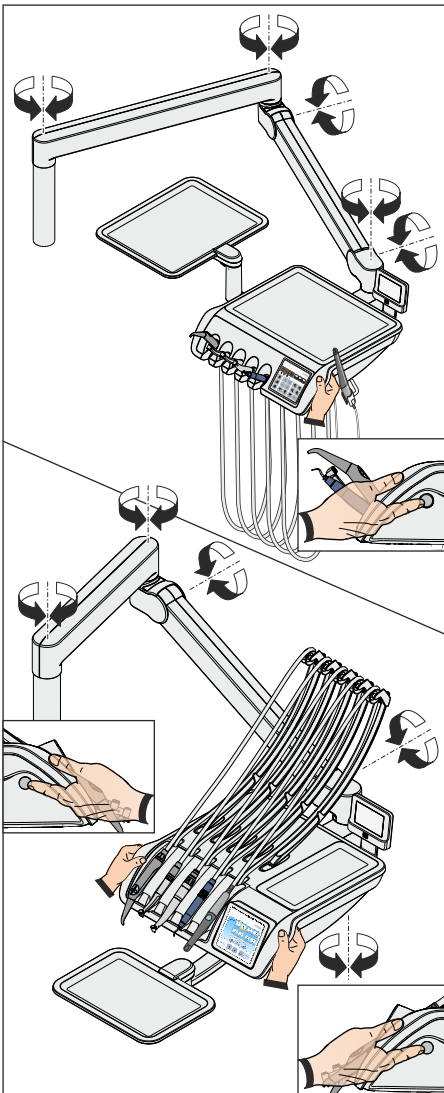
Moving the patient chair may cause the patient to collide with the dentist element or its support arm. The patient could be injured.

- Before moving the patient chair, position the dentist element to make a collision with the patient or the patient chair impossible.

NOTE

Sudden movements can cause instruments to fall out of the holder in the dentist element.

- Try to avoid sudden movements of the dentist element.



The dentist element is attached to the water unit with a flexible support arm. The dentist element is held in place at the adjusted height with a pneumatic locking brake in the support arm.

With the CS dentist element and on the TS dentist element with the Ambidextrous option there is a push button near to the two handles on the side of the dentist element to release the brake. The TS dentist element without the Ambidextrous option only has one button on the right side.

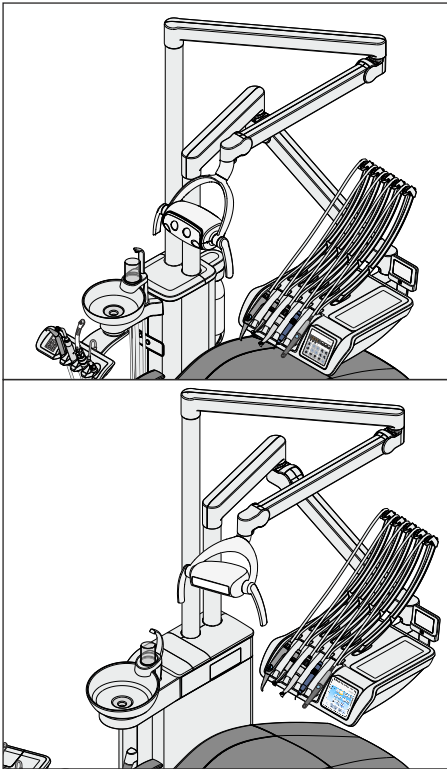
The button must only be pressed to move the chair vertically. Horizontal movements are also possible without releasing the brake.

1. Grip a handle with your hand and keep the button pressed.
 - ✎ The locking brake is released with the sound of pressurized air. The dentist element can be raised and lowered.
2. Position the dentist element and release the button.
 - ✎ The dentist element is secured at the height set.

Depending on the equipment of the dentist element, the retention force of the locking brake can be changed by the technician.

Positioning the CS dentist element (standard position)

In the standard position, the support arm of the CS dentist element is attached to the right mount of the Compact water unit and to the rear mount of the Comfort water unit.

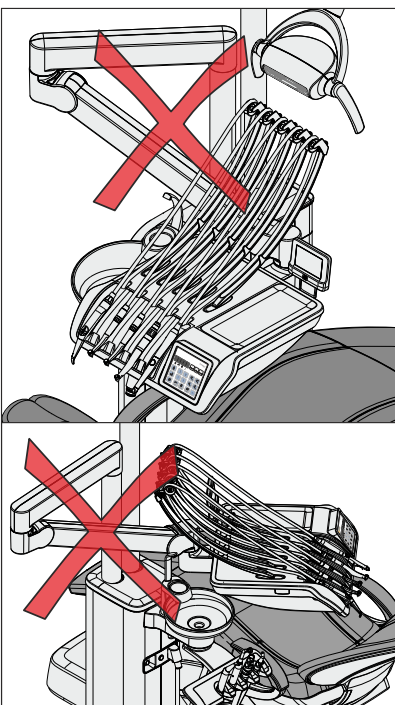
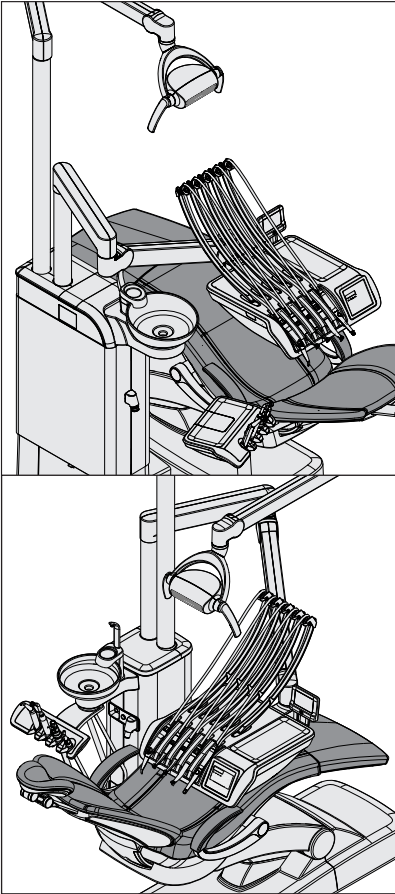


Positioning the CS dentist element (special position)

Alternatively, the support arm of the CS dentist element can be attached to the left mount on the Compact water unit (special position) and with the Comfort water unit to the front mount. This type of mounting minimizes the travel distance of the dentist element and makes it easier for the patient to get in and out of the chair.

With the Compact water unit, the support arm of the operating light is attached to the right mount and with the Comfort water unit to the rear mount.

With the Ambidextrous water unit, the CS dentist element cannot be installed in the special position.



NOTE

In the special position, there is an increased danger of collision with the following components:

- Between the support arm and tumbler filler
- Between the support arm and tumbler
- Between the support arm and cuspidor
- Between the support arm and the instruments of the assistant element

Always move the dentist element carefully to avoid collision.

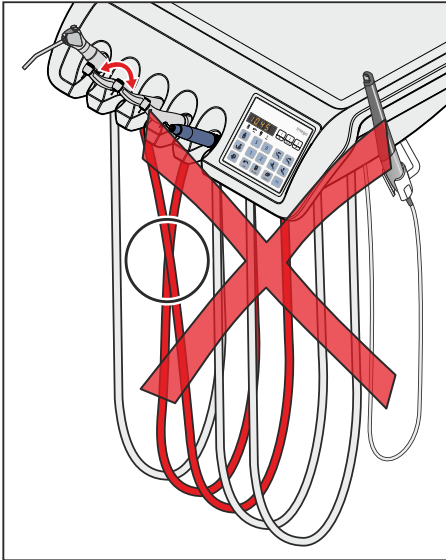
Do not position the support arm behind the tumbler filler.

4.5.3 Fixed keys on the dentist element

An overview of the fixed keys on the EasyPad and EasyTouch can be found in the Description of Device, see "EasyPad standard user interface" [→ 39] and "EasyTouch comfort user interface" [→ 42].

4.5.4 Placing the instruments in their holders

Automatic opening of instrument dialogs



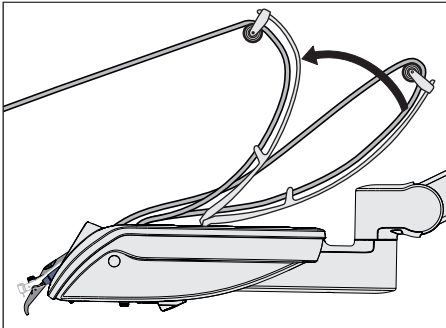
On the EasyPad, the speed or intensity is shown automatically on the display depending on which instrument is removed from the holder. On the EasyTouch, the respective instrument program appears on the touchscreen.

If more than one instrument is removed from the holder, the speed or intensity or instrument dialog of the instrument removed first is displayed.

Therefore, always ensure that all instruments are placed in the correct instrument holders. If any instruments are placed in the wrong holders, the wrong instrument dialog will be opened when they are removed from the holders.

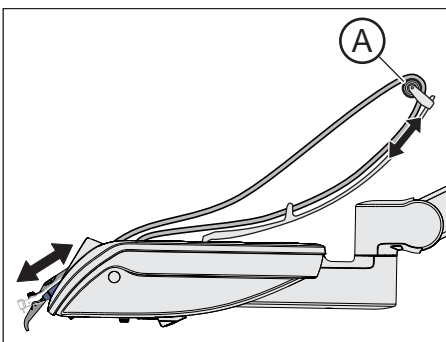
Swivel arm on the CS dentist element

Spring elements in the dentist element pull the whip arm back into its original position, preventing instrument hoses from hanging down.

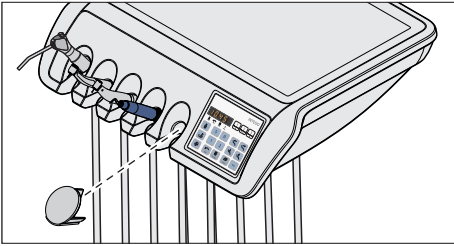


- > Remove the required instrument from its holder and pull it toward you.

↳ The swivel arm is pulled forward along the instrument hose. On the EasyPad, the speed or intensity of the respective instrument is shown on the display, with the EasyTouch, the instrument dialog appears on the touchscreen. The instrument can be activated via the foot switch.



The positions of the instruments on the holder can be optimized by moving the guide rollers **A** on the whip arms.



Cover for TS dentist element

A cover can be purchased as an accessory for an instrument holder which is not used.

Insert the cover into an unassigned instrument holder. This prevents accidental deposit of an instrument in this holder.

To reorder the cover, see "Spare parts and consumables" [→ 311].

Instrument hoses

NOTE

The instrument hoses contain electrical cables and media pipes.

Over-tensioning or pinching the hoses may cause the electrical cables to break and the media pipes to leak.

- Ensure that you do not pull or bend the instrument hoses too much.

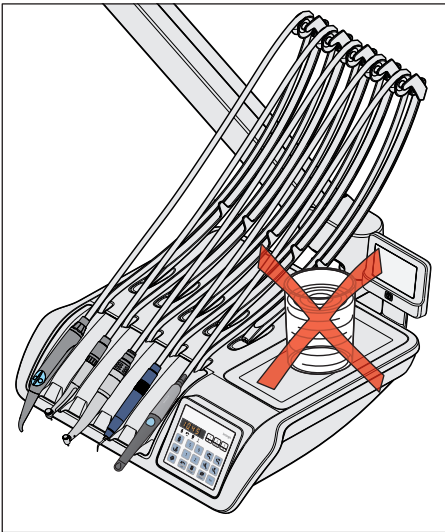
Holder on the CS dentist element

NOTE

Fluids can enter the dentist element through the openings in the swivel arm.

This can damage the electronics in the dentist element.

- Do not place any liquids on the CS dentist element.



4.5.5 General instrument functions

EasyPad

Settings for the coolant, instrument light, and foot switch can be made for the instrument removed from the holder.

EasyTouch

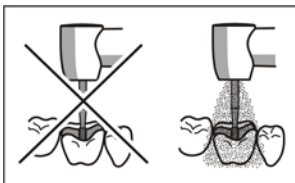
Settings for the coolant, instrument light, and foot switch can be made in the sub-screen of the instrument removed from the holder.

The sub-screens vary according to the instrument removed. Functions not available for the respective instrument are not displayed in the sub-screen.

4.5.5.1 Instrument functions on the EasyPad

4.5.5.1.1 Switching spray ON/OFF

The spray is switched on when the foot switch is activated in combination with the instrument. On the EasyPad, the spray is switched on/off via the foot switch.



⚠ CAUTION

Instrument can be operated without coolant.

Tooth substance can be damaged by frictional heat.

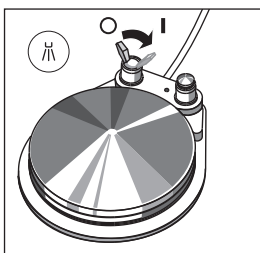
- Always make sure that the treatment area does not overheat whenever you switch the coolant off.

⚠ CAUTION

If air and water are taken from an external connection, the flow rate in the instruments can drop.

Tooth substance can be damaged by frictional heat.

- Avoid the removal of water from additional devices during treatment with treatment center instruments.



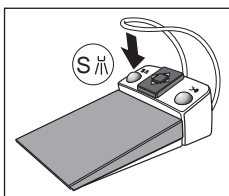
With a pneumatic foot switch

- Toggle the switch on the pneumatic foot switch.
 - ↩ Left position: Spray off
 - Right position: Spray on
- The spray is switched on/off when the instrument is activated.

Activation of the spray is not displayed on the EasyPad when a pneumatic foot switch is used. The status display *Spray* does not light up.

On the C+ electronic foot switch

- ✓ An instrument is removed.
- Press the left button of the C+ electronic foot control.





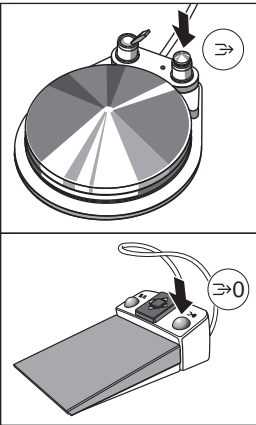
- ✎ When the status display *Spray* lights up on the EasyPad, spray is switched on when the instrument is activated.

Activation of the spray is saved on the favorite keys, see section "Setting the speed on the EasyPad" [→ 101], "Setting the intensity on the EasyPad" [→ 132] and "Endo function on the EasyPad" [→ 107].

4.5.5.1.2 Activating the chip blower

With the chip blower, an air jet comes out of the burr instrument nozzle.

- ✓ A highspeed handpiece or motor is removed from the holder.
- Press the right button of the pneumatic or C+ electronic foot switch.
 - ✎ The chip blower remains switched on as long as the button is pressed.

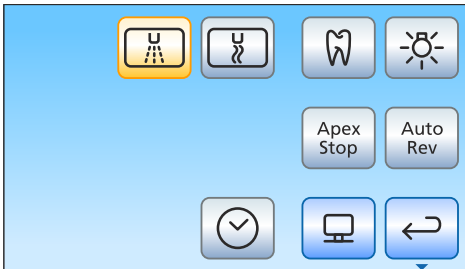


4.5.5.2 Instrument functions on the EasyTouch

4.5.5.2.1 Opening the sub-screen

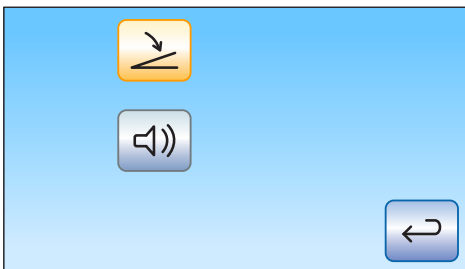
- ✓ An instrument is removed from the holder.
- ✓ The *Instrument program* of the removed instrument is displayed on the touchscreen.

1. Press the *Sub-dialog* fixed key.



➤ The sub-screen is displayed.

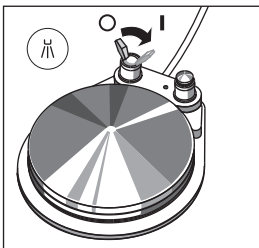
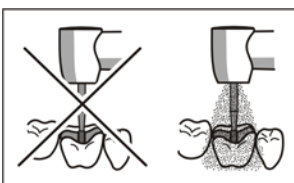
2. To get to the second sub-screen, press the *Sub-dialog* fixed key again.



➤ The second sub-dialog is displayed.

4.5.5.2.2 Switch spray on/off on the pneumatic foot switch.

The spray is switched on when the foot switch is activated in combination with the instrument. The spray can be switched on/off via the foot switch.



⚠ CAUTION

Instrument can be operated without coolant.

Tooth substance can be damaged by frictional heat.

- Always make sure that the treatment area does not overheat whenever you switch the coolant off.

- Toggle the switch on the pneumatic foot switch.

➤ Left position: Spray off

Right position: Spray on

The spray is switched on/off when the instrument is activated.

When spray is activated by the pneumatic foot switch, it is not displayed on the EasyTouch. The *Spray* and *Air* key is not displayed in the sub-dialog.

4.5.5.2.3 Preset and switch coolant on/off by the C+ electronic foot switch.

Selecting a coolant

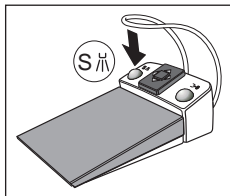
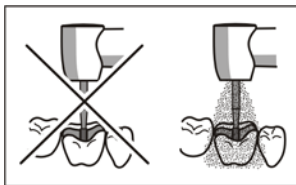
Air or spray can be preselected as the instrument coolant in the sub-dialog. The preselected coolant can be switched on/off via the left button on the C+ electronic foot control.



- ✓ The *sub-dialog* of the removed instrument is displayed on the touchscreen.
- Select the coolant required for the instrument removed from the holder. Touch the *Spray* (left) or *Air* (right) key.
 - ✚ The key of the preselected coolant is highlighted orange in the sub-dialog. In the instrument dialog, the preselected coolant is indicated in the status column with a spray or air symbol.

Switching the coolant on/off

The preselected coolant is switched on when the foot pedal is pressed while the instrument is activated. The spray can be switched on/off via the foot switch.



CAUTION

Instrument can be operated without coolant.

Tooth substance can be damaged by frictional heat.

- Always make sure that the treatment area does not overheat whenever you switch the coolant off.

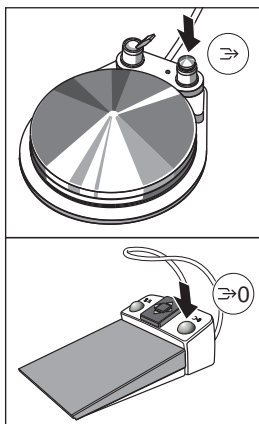
- ✓ An instrument is removed.
- Press the left button of the C+ electronic foot control.
 - ✚ If the pre-selected coolant is switched on, it will be displayed in the status column of the start and instrument dialog with a spray or air symbol. When the instrument is activated, the pre-selected medium will be switched on.

Activation of the spray is saved on the favorite keys, see section "Setting the speed on the EasyTouch" [→ 103], "Setting the intensity on the EasyTouch" [→ 135] and "Endo function on the EasyTouch" [→ 113].

4.5.5.2.4 Activating the chip blower

With the chip blower, an air jet comes out of the burr instrument nozzle.

- ✓ A highspeed handpiece or motor is removed from the holder.
- Press the right button of the pneumatic or C+ electronic foot switch.
 - ✚ The chip blower remains switched on as long as the button is pressed.



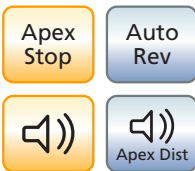
4.5.5.2.5 Switch instrument light on/off



- ✓ The *sub-screen* of the removed motor is displayed on the touchscreen .
- Switch the instrument light on or off.
 - ✎ If the key is highlighted orange, the instrument light can be activated using the foot pedal.

For high-speed handpieces, the operating voltage of the instrument light can be set, see "Setting the handpiece light" [→ 96].

4.5.5.2.6 Setting the ApexLocator



If your treatment center is equipped with the ApexLocator option, you can configure this in the first and second *Motor* sub-screen. For more information, refer to the chapter "ApexLocator" [→ 122], section "Endodontic treatments with ApexLocator and torque limitation handpiece" [→ 129].

The ApexLocator is available only with the EasyTouch Comfort user interface.

4.5.5.2.7 Setting the C+ electronic foot switch as a direct starter or speed control foot switch

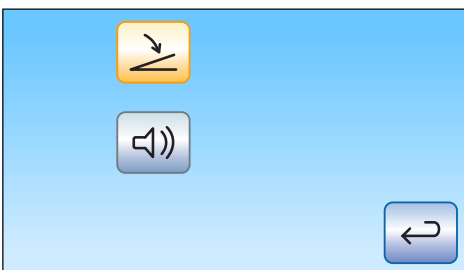
To operate the motor or scaler, the C+ electronic foot control can be set as a direct starter or a control foot control:

- Direct starter

When the foot control is actuated, the instrument is switched on with the set speed and intensity.
- Control foot control

Depending on the setting of the foot control, the instrument controls the speed and intensity continuously up to the maximum value set.
- ✓ The *sub-dialog* of the removed instrument is displayed on the touchscreen.

1. Only in the *Motor* sub-dialog: Press the fixed *Sub-dialog* key again.



- ✎ The second sub-dialog is displayed.

2. Touch the *Direct starter/control foot control* key.
 - ✎ If the key is highlighted gray, the direct starter function is switched on. If the key is highlighted orange, the control foot control function is switched on.

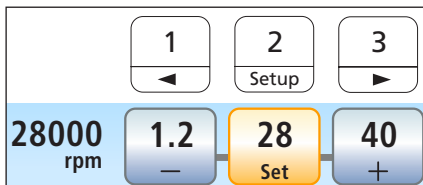
4.5.5.3 Saving instrument settings

DropMode

When placing an instrument back in the holder, the instrument settings made are always saved in the user profile (DropMode).

The next time the instrument is removed, the last settings made are available again.

Favorite keys



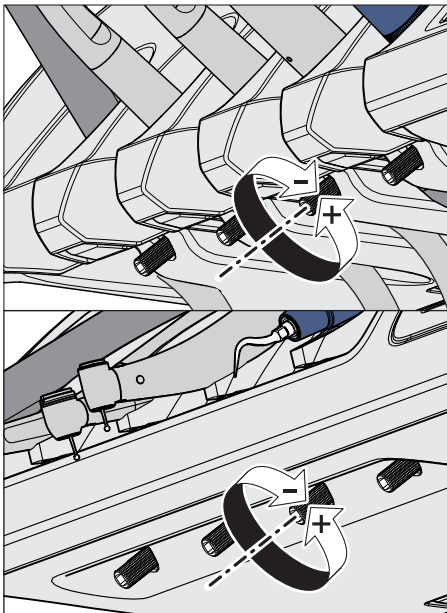
The instrument settings speed or intensity, maximum torque if the Endo function is activated, and activating spray (only with C+ electronic foot control) can be saved on one of the three favorite keys. The instrument settings can be called up again by pressing the key or the C+ foot switch, see section "Setting the speed" [→ 101], "Setting the intensity" [→ 132] and "Endo function" [→ 107].

4.5.5.4 Setting the amount of spray water

The amount of spray air or water is factory preset for the instruments. This basic setting and the compressed air for the turbines can be changed by the service technician.

The amount of spray water can be adjusted for each individual instrument by the user. The amount of air remains constant. To do this, rotating water controls are located under the instrument holder of the dentist element.

If the control for an instrument is completely closed, the treatment site is cooled only with air.



1. Rotate the water knob on the respective instrument.
Reduce water quantity in spray: Turn knob clockwise to close
Increase water quantity if spray: Turn knob counterclockwise to open
2. Test the setting for spray water. Correct the setting if necessary.

4.5.6 Standard and Sprayvit E 3-way syringe

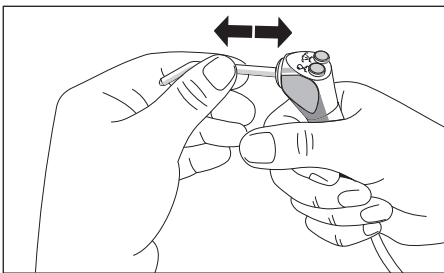
The 3-way syringe is used to clean the treatment areas and blow them dry. It supplies air and preheated water media. The heater for the treatment water is in the water unit.

The water heater is optional on the Intego.

IMPORTANT

Please note the Sprayvit E operating instructions and the care instructions for the Standard 3-way syringe in section "3-way syringe standard sterilization" [→ 238].

4.5.6.1 Safety instructions



⚠ WARNING

The nozzle of the Standard 3-way syringe must lock into the holder.

Otherwise, the jet could fall out during usage.

- Prior to usage, ensure that the jet is securely in place.

⚠ CAUTION

Leakage of air or water leak when the instrument or hose is replaced

If the Standard or Sprayvit E 3-way syringe is removed from the instrument hose while the treatment center is in use, water and air will escape from the hose coupling. When the instrument hose is unscrewed from the treatment center, water and air also leaks out under the dentist or assistant element.

Only the Comfort water unit with disinfection system has a valve that prevents water leakage. Air can still escape.

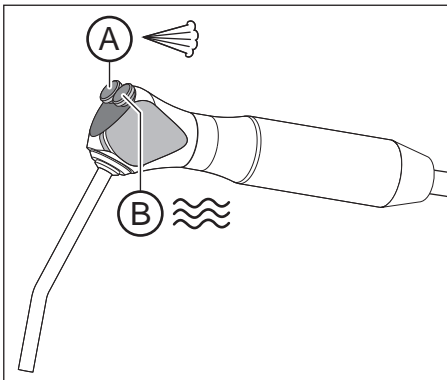
- You should therefore switch off the treatment center before changing an instrument or hose.
- Release any remaining air and water pressure by actuating a 3-way syringe Standard or Sprayvit E before changing the hose or the instrument.

IMPORTANT

Temperature monitoring of the water heater

If the electronic temperature monitor detects excessive heating of treatment water ($>42\text{ }^{\circ}\text{C}$ / $>107.6\text{ }^{\circ}\text{F}$), the water heater is switched off and an error message is given, see "Error messages" [→ 308].

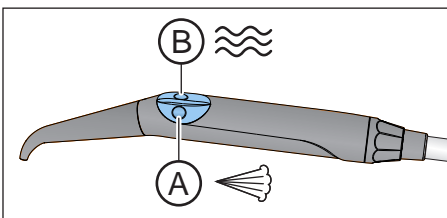
4.5.6.2 Using the standard 3-way syringe



- > Press the *Air* key **A**.
 - ↳ Air flows out of the instrument tip.
- > Press the *Water* key **B**.
 - ↳ Water flows out of the instrument tip.
- > Press the *Air* key **A** and the *Water* key **B** simultaneously.
 - ↳ Spray flows out of the instrument tip.

For more information on lubrication, see the "Cleaning and sterilizing the standard 3-way syringe" [→ 238] section.

4.5.6.3 Operating the Sprayvit E 3-way syringe



- > Press the *Air* key **A**.
 - ↳ Air flows out of the instrument tip.
- > Press the *Water* key **B**.
 - ↳ Water flows out of the instrument tip.
- > Press the *Air* key **A** and the *Water* key **B** simultaneously.
 - ↳ Spray flows out of the instrument tip.

For more information on operation and care, please refer to the Sprayvit E operating instructions.

4.5.7 Turbine / air motor / other air-driven instruments

IMPORTANT

Please see the operating instructions for the various turbines, air motors, or air-driven instruments.

The turbine hose has a standardized coupling as per ISO 9168.

If your treatment center is equipped with the pneumatic foot switch, the drive air for the turbine can be regulated by the foot pedal.

If instruments with a high air flow rate (e.g., SIROBoost from Dentsply Sirona) are operated with the pneumatic foot switch, the operating pressure is reduced from 2.9 bar to 2.7 bar.

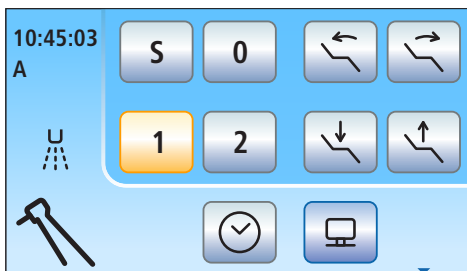
4.5.7.1 Using the highspeed handpiece

EasyPad user interface



When the highspeed handpiece is removed from the holder, a short vertical bar appears on the right side of the EasyPad display. Press the foot switch to start the instrument.

EasyTouch user interface



When the highspeed handpiece is removed from the holder, a highspeed handpiece signal appears on the touchscreen.

4.5.7.2 Setting the light of the highspeed handpiece

The instrument light supply is optional in Intego.

Halogen lamps cannot be operated with the Intego / Intego Pro treatment centers.

The voltage or current can be limited for the LED lamp of the highspeed handpiece. The power supply for the instrument light can also be switched off.

The original Dentsply Sirona LED lamps are usually operated at 3.6 V. For lamps made by other manufacturers, the settings may have to be adjusted.

NOTE

The operating voltages and operating currents of different lamps may vary.

Overvoltages or excess current can lead to damage.

➤ When changing lamps, make sure that the operating voltage or operating current is properly set for the new lamp.

4.5.7.2.1 Setting the highspeed handpiece lamp on the EasyPad

Accessing the turbine light operating context

1. Detach the turbine to be set from the holder.
2. Press and hold the function key *2 / Setup* (> 2 s).



↗ The *Instrument light* operating context is displayed on the EasyPad screen. The selection focus *Voltage* (U) flashes.

Limiting voltage

- ✓ The selection focus *Voltage* (U) flashes.



1. Press the function key *2 / Setup*.

↗ The setting focus *Setting the voltage* flashes.



2. Set the voltage for the lamp of the turbine selected in volts using favorite keys 1 and 3.
3. Confirm the setting by pressing the function key *2 / Setup*.

↗ The voltage is limited to the level set. The operating context *Turbine* appears.

Limiting current

- ✓ The selection focus *Voltage* (U) flashes.



1. Press favorite key 3.

↗ The selection focus flashes *Current strength* (A) flashes.



2. Press the function key *2 / Setup*.

↗ The setting focus *Setting the current strength* flashes.



3. Use favorite keys 1 and 3 to set the current (A) for the lamp in the handpiece removed in amperes (0.12 A = 120 mA).

4. Confirm the setting by pressing the function key 2 / Setup.

✎ The current is limited to the level set. The operating context *Turbine* appears.

Switching instrument light off

- ✓ The selection focus *Voltage (U)* flashes.

1. Press the favorite key 3 twice.

✎ The selection focus *Light off (-)* flashes.

2. Confirm your choice by pressing the function key 2 / Setup.

✎ The power supply for the removed highspeed handpiece is switched off. The operating context *Highspeed handpiece* appears.

Switching instrument light on

- ✓ The selection focus *Light off (-)* flashes.

1. Press the favorite key 3 twice.

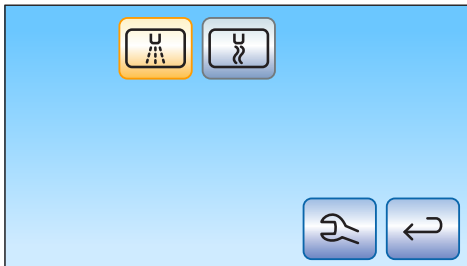
✎ The selection focus *Voltage (U)* flashes.

2. Confirm your choice by pressing the function key 2 / Setup.

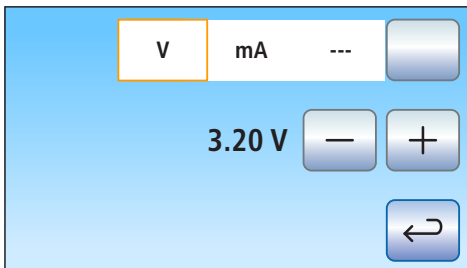
✎ The power supply for the removed highspeed handpiece is switched on. The operating context *Highspeed handpiece* appears.

4.5.7.2.2 Setting the highspeed handpiece light on the EasyTouch

1. Detach the turbine to be set from the holder.
2. Press the *Sub-dialog* fixed key.



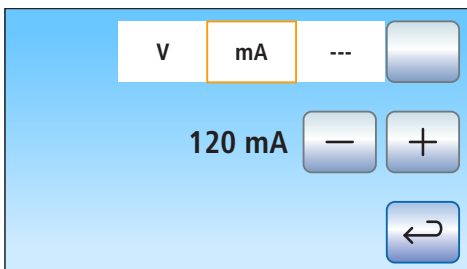
✎ The *Highspeed handpiece* sub-dialog is displayed on the touchscreen.



3. Touch the *Instrument Setup* key.

✎ The instrument setup *Highspeed handpiece* appears on the touchscreen.

4. To set the voltage for the lamp of the highspeed handpiece which has been removed, touch the key *V / mA / ---*, until the field *V (Volt)* is highlighted orange. Use the – and + keys to set the voltage in volts. Use the – and + keys to set the voltage in volts.
5. Touch the *V / mA / ---* key.



✎ The *Milliampere (mA)* field is highlighted orange.

6. Use the – and + keys to set the current for the lamp of the highspeed handpiece removed from the holder in milliampere.

If the --- field is highlighted the power supply for the instrument light of the handpiece removed from the holder is switched off.

4.5.8 Electric motor

IMPORTANT

Also observe the operating instructions for the motor.

4.5.8.1 Motor versions

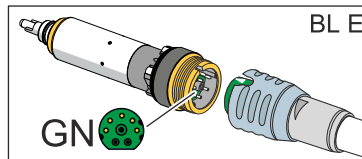
Depending on the handpiece coupling, the BL E and BL ISO E brushless motors are available. Brushless motors are designed as three-phase motors (without carbon brushes). They are characterized by their precise controllability and durability.

The speed range of the motors for Intego / Intego Pro is between 1,200 and 40,000 rpm. If the treatment center features the eControl option, the motor can be down-regulated to 100 rpm.

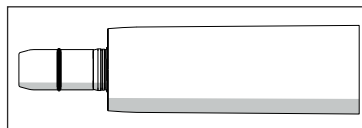
The motors can be sterilized.

The **green** (GN) coded instrument hose must be used for the motors BL E and BL ISO E.

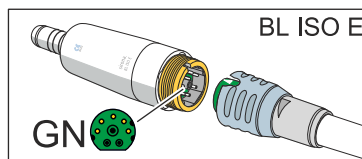
BL E motor



The BL E motor is designed for the direct operation of the T1 Classic handpieces. To use the handpieces of the T1 Line, for example, the Basic (Apex) adapter must be used.



BL ISO E motor



The BL ISO E motor is equipped with an ISO coupling. T1 Line handpieces, for example, can thus be used without an adapter.

For information on performing apex measurement using the instrument, refer to the section "Preparing to use the ApexLocator" [→ 123].

WARNING

The magnetic field of the electric motor is strengthened when the motor is switched on.

This magnetic field could affect any cardiac pacemaker located nearby.

- Do not place the electric motor on the patient's chest. Never switch a motor which is placed on the chest on.

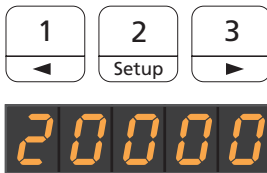
4.5.8.2 Setting the speed on the EasyPad

Speeds are stored on the favorite keys 1, 2, and 3 that can be accessed by pressing them. Individual speeds can be saved for each user profile on the favorite keys.

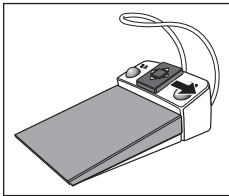
On the C+ electronic foot control, spray activation is saved on the favorite keys. The settings can also be made via the 4-way switch plate.

Accessing saved speed setting

- ✓ The electric motor is removed from the holder.
- ✓ The set speed is shown on the EasyPad display.
- Press one of the favorite keys briefly (<1 s).



- ✎ The speed saved on the favorite key is shown in rpm (revolutions per minute) on the EasyPad display.



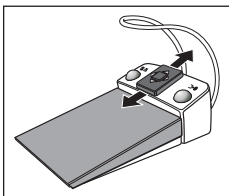
By moving the 4-way switch plate of the C+ electronic foot switch to the right, the settings of the favorite keys can be accessed consecutively.

Changing the speed

- Press and hold the favorite key 1 or 3 (> 1 s).



- ✎ The speed is increased or reduced.



The speed can also be increased or reduced by moving the 4-way switch plate of the C+ electronic foot switch up or down.

IMPORTANT

Increments

The size of the increments depends on the speed range setting.

From 100 to 1,000 rpm = 100 rpm increments (with eControl option)

From 1,000 to 2,000 rpm = 200 rpm increments

From 2,000 to 5,000 rpm = 500 rpm increments

From 5,000 to 10,000 rpm = 1,000 rpm increments

From 10,000 to 20,000 rpm = 2,000 rpm increments

From 20,000 to 40,000 rpm = 5,000 rpm increments

Please note that the speed of the burr depends on the selected straight or contra-angle handpiece.

Saving the speed

- ✓ The desired speed is set.
- ✓ Via the C+ electronic foot switch: The spray is switched on or off (will be saved).

1. Press and hold the favorite key 2 / *Setup* (> 2 s).



✎ The speed flashes on the EasyPad display.

2. Press the favorite key 1, 2, or 3.

✎ An acoustic signal sounds. The set speed and if applicable, activation of spray is saved on the favorite key.

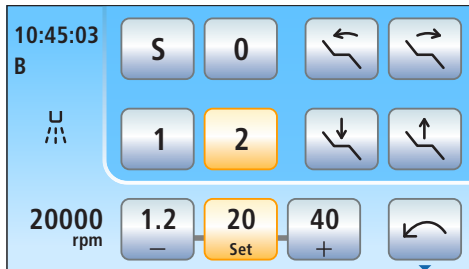
While the speed flashes and is displayed on the EasyPad display, pressing the *Counterclockwise rotation/user profile* key will cancel saving to a favorite key.

4.5.8.3 Setting the speed on the EasyTouch

Speeds are saved on the three favorite keys that can be accessed by pressing them. Individual speeds can be saved for each user profile on the favorite keys.

On the C+ electronic foot control, spray activation is saved on the favorite keys. The settings can also be made via the 4-way switch plate.

Accessing saved speed



- ✓ The electric motor is removed from the holder.
- ✓ The *Motor dialog* is displayed on the touchscreen.
- Touch one of the favorite keys in the bottom line briefly (< 1 s).
 - ✎ The favorite key is highlighted orange. At the left of the favorite keys, the selected speed is displayed in rpm (revolutions per minute).

IMPORTANT

Speeds on the favorite keys

The speed of the motor in rpm equals 1,000 times the speed shown on the key. Example:

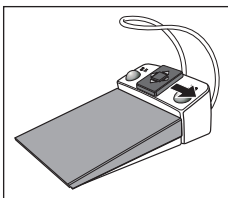
Key value 0.1 = 100 rpm (with eControl option)

Key value 1.2 = 1,200 rpm

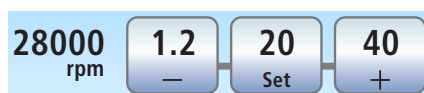
Key value 20 = 20,000 rpm

Key value 40 = 40,000 rpm

Please note that the speed of the burr depends on the selected straight or contra-angle handpiece.

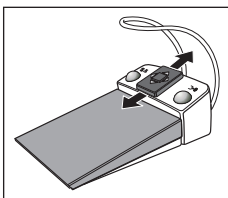


By moving the 4-way switch plate of the C+ electronic foot switch to the right, the settings of the favorite keys can be accessed consecutively.



Changing the speed

- Press and hold the left or right favorite key (> 1 s).
 - ✎ The speed is increased or reduced. The favorite keys are shaded gray for intermediate values.



The speed can also be increased or reduced by moving the 4-way switch plate of the C+ electronic foot switch up or down.

IMPORTANT

Increments

The size of the increments depends on the speed range setting.

From 100 to 1,000 rpm = 100 rpm increments (with eControl option)

From 1,000 to 2,000 rpm = 200 rpm increments

From 2,000 to 5,000 rpm = 500 rpm increments

From 5,000 to 10,000 rpm = 1,000 rpm increments

From 10,000 to 20,000 rpm = 2,000 rpm increments

From 20,000 to 40,000 rpm = 5,000 rpm increments

Please note that the speed of the burr depends on the selected straight or contra-angle handpiece.



Saving the speed

- ✓ The desired speed is set.
 - ✓ Via the C+ electronic foot switch: The spray is switched on or off (will be saved).
1. Press and hold the middle favorite *Set* (> 2 s).
 - ☞ The speed flashes on the touchscreen.
 2. Press one of the three favorite keys.
 - ☞ An acoustic signal sounds. The set speed and if applicable, activation of spray is saved on the favorite key. The speed set is displayed on the favorite key.

While the speed flashes and is displayed on the touchscreen, pressing any other key on the touchscreen will interrupt saving to a favorite key.

4.5.8.4 Setting the direction of rotation

The direction of rotation can be changed only when the motor is at a standstill.

Tip: After starting the electric motor with the foot switch, an audible warning signal sounds 6 times if counterclockwise rotation is activated.

Via EasyPad

- ✓ An electric motor is removed from the holder.
- Press the *Counterclockwise rotation / User profile* key.



- ✚ The *Counterclockwise rotation* status display lights up when counterclockwise rotation is set.

Via the touchscreen of the EasyTouch

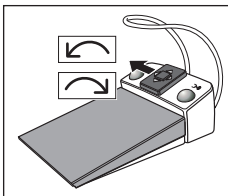
- ✓ An electric motor is removed from the holder.
- ✓ The *Motor dialog* is displayed on the touchscreen.
- Touch the *Counterclockwise rotation* key on the touchscreen.
 - ✚ For counterclockwise rotation: The key is highlighted orange.
 - For clockwise rotation: The key is displayed in gray.



Via C+ electronic foot switch

The rotational direction of the motor can also be set via the 4-way foot control plate of the C+ electronic foot switch.

- ✓ An electric motor is removed from the holder.
- 1. Move the 4-way foot control plate to the left.
 - ✚ When counterclockwise rotation is switched on, the *Counterclockwise* status display lights up on the EasyPad, the *Counterclockwise* key is marked orange on the EasyTouch.
- 2. Move the 4-way foot control plate to the left again to reverse the rotational direction.



4.5.9 Endo function

The speed and torque of the rotating instrument can be set precisely using the Endo function.

With the Endo function on the EasyPad standard user interface, speed and torque can be saved for up to three steps; on the EasyTouch Comfort user interface for up to six steps.

The option for reciprocal rotating files and the ApexLocator is available only with the EasyTouch Comfort user interface.

CAUTION

If your treatment center is not equipped with the Endo function, no electronic torque limitation is available.

Root canal files can easily break during operation without torque limitation.

- Never perform endodontic treatments without torque limitation. Use an endodontic handpiece with mechanical torque limitation. e.g. SironiTi from Dentsply Sirona.

CAUTION

Torque limitation does not always protect against file breakage!

The Endo function maintains the torque values which you have set with a tolerance safety margin.

Please note: The limiting values stated by the file manufacturers are, as standard, defined by means of uniform friction over the entire defined working length. As a rule, this is physically not the practice-relevant therapy situation.

CAUTION

Root canal files are subject to material fatigue

Fatigued files may break during treatment.

- Use files only for the service life specified by the manufacturer.

CAUTION

Only the Dentsply Sirona Endo 6:1 (SN 6407 and above / July 2010) and Endo 6 L contra-angle handpieces may be used for the Endo function.

Instruments from other manufacturers can lead to malfunctions. Third-party instruments may be improperly calibrated for endodontics.

- For endodontics, use only Dentsply Sirona Endo 6:1 (SN 6407 and above / July 2010) or Endo 6 L contra-angle handpieces.

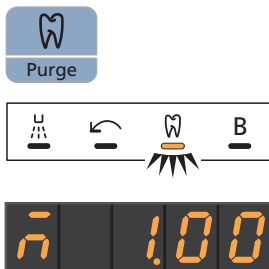
4.5.9.1 Endo function on the EasyPad

4.5.9.1.1 Switching Endo function on/off

Switching on the Endo function

The Endo function is assigned to the burr drive removed from the holder.

- ✓ The desired electric motor for the Endo function is removed from the holder.
- ✓ The motor speed is shown on the EasyPad display.
- Press the *Endo / Purge* key.



✚ If the Endo function is switched on, the *Endo function* status display will illuminate.

✚ The preset torque of 1.00 Ncm (Newton centimeters) is displayed on the EasyPad display.

Switching off the Endo function

If the Endo function is switched on, when the burr drive assigned to the Endo function is removed from the holder, the torque or speed of the contra-angle handpiece is displayed instead of that of the motor on the EasyPad display. To show the motor speed again when the burr drive is removed, the Endo function must first be switched off.

- Press the *Endo / Purge* key briefly (< 1 s).
 - ✚ The *Endo function* status display goes out. When the burr drive is removed from the holder, the speed of the motor is shown on the EasyPad display.



4.5.9.1.2 Calibrating the burr drive

Calibration is required when the Endo function is started, every time the contra-angle handpiece is changed, and every time the contra-angle handpiece is lubricated. Recalibration is not necessary when a file is changed.



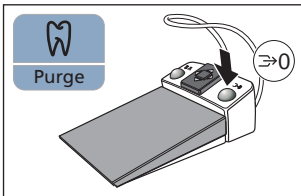
An uncalibrated bur is marked with an "n" on the EasyPad display. The horizontal bar above it shows that the AutoReverse function is switched on, see "Switching AutoReverse ON/OFF" [→ 112]. If the auto-reverse function is switched on, the burr drive automatically switches to counterclockwise rotation when the torque set is reached.

The contra-angle handpiece is automatically checked during calibration. This includes a measurement of motor current at different speeds to assess the properties of the system.

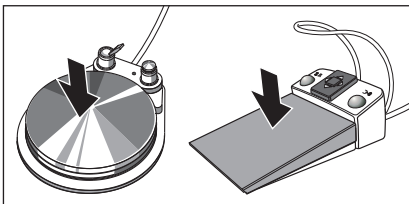
⚠ CAUTION

To ensure proper calibration, use only Dentsply Sirona instruments.

- ✓ The Endo function is switched on. The *Endo function* status display is illuminated.
- ✓ The torque is shown on the EasyPad display.
- 1. Attach the contra-angle handpiece that you wish to use with Endo function to the electric motor.
- 2. Insert a file in the contra-angle handpiece. This ensures that the file is taken into account in the measurement.
- 3. Press and hold the *Endo / Purge* key (> 2 s) or press the right button of the C+ electronic foot control.



- ↪ A revolving element is shown on the EasyPad display. The burr drive is ready for calibration.



- 4. Hold down the foot pedal throughout the duration of the calibration.
- ↪ The revolving element is still displayed. During calibration, increasing speeds are set on the motor.



- ↪ When the burr drive is calibrated, a "c" is displayed on the EasyPad display. Calibration is then completed.

4.5.9.1.3 Setting the torque

With the Endo function switched on, torque and speed of the contra-angle handpiece are indicated, but not of the motor. The control electronics of the burr drive calculate the motor control based on the specified contra-handpiece gear reduction and the set torque and speed.

Torque values for the steps of the endodontic treatment can be stored on the favorite keys 1, 2 and 3. The set speed remains unchanged. The speed will remain unchanged in doing so.

Instrument settings can be made without using your hands on the 4-way switch plate of the C+ electronic foot control.

CAUTION

Improperly selected speeds and torque values endanger the patient.

Treatment errors, e.g. breaking of a file, may result from incorrect settings.

➤ Observe the manufacturer's instructions regarding file systems.

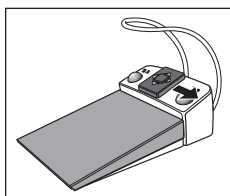
IMPORTANT

Torque adjustment

The maximum adjustable torque depends on the system motor and the speed settings.

Accessing saved torque

- ✓ The electric motor is removed from its holder with the Endo function switched on.
- ✓ The set torque is shown on the EasyPad display.
- Press one of the favorite keys briefly (<1 s).



↪ The torque saved on the favorite key is shown on the EasyPad display in Ncm (Newton centimeters).

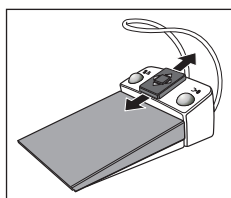
By moving the 4-way switch plate of the C+ electronic foot control to the right, the torque settings of the favorite keys can be accessed consecutively.

Changing torque

- Set the desired torque for the contra-angle handpiece. Press and hold the favorite keys 1 or 3 (> 1 s).

↪ The torque is increased or reduced.





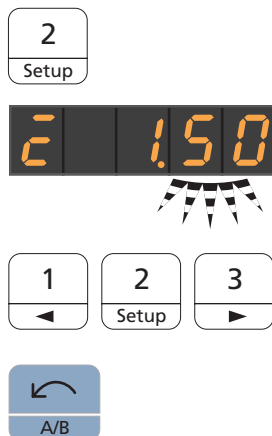
The torque can also be increased or reduced by moving the 4-way switch plate of the C+ electronic foot control up or down.

Saving torque

✓ The desired torque is set.

1. Press and hold the favorite key 2 / *Setup* (> 2 s).

✎ The torque flashes on the EasyPad display.

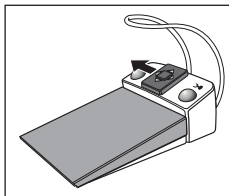
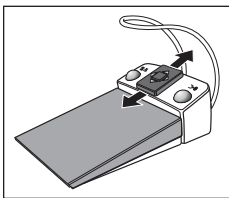


2. Press the favorite key 1, 2, or 3.

✎ An acoustic signal sounds. The torque setting is saved on the favorite key.

While the torque flashes and is displayed on the EasyPad display, pressing the *Counterclockwise rotation/user profile* key will interrupt saving to a favorite key.

4.5.9.1.4 Setting the speed



When the Endo function is switched on, the EasyPad display can be toggled between torque and speed to set the speed.

To differentiate between torque and speed settings, the display shows burr drive calibrated/not calibrated and AutoReverse function on/off only for the torque.

Speed is not saved on the favorite keys, only torque.

✓ The torque is shown on the EasyPad display.

1. Press the *Display mode / Clean* key.

↪ The selected speed is shown on the EasyPad display in rpm (revolutions per minute).

2. Set the desired speed for the contra-angle handpiece. Press and hold the favorite keys 1 or 3 (> 1 s).

↪ The speed is increased or reduced.

The speed can also be increased or reduced by moving the 4-way switch plate of the C+ electronic foot switch up or down.

Moving the 4-way switch plate of the C+ electronic foot control to the left also toggles between torque and speed.

4.5.9.1.5 Switching AutoReverse ON/OFF

If the auto-reverse function is switched on, the burr drive automatically switches to counterclockwise rotation when the torque set is reached. If the foot pedal is pressed again, the burr drive switches back to clockwise rotation.

- ✓ The electric motor is removed from its holder with the Endo function switched on.
- > Press and hold the *Counterclockwise rotation / User profile* key (> 2 s).



- ✎ The AutoReverse function is switched on/off. On the EasyPad display, a horizontal bar appears above the display *Burr drive calibrated* or *Burr drive not calibrated*.

4.5.9.1.6 Changing direction of rotation

The direction of rotation can be changed only with the motor stopped.

Counterclockwise rotation is performed without torque limitation.

Tip: After starting the electric motor with the foot switch, an audible warning signal sounds 6 times if counterclockwise rotation is activated.

- ✓ The electric motor is removed from its holder with the Endo function switched on.
- > Press the *Counterclockwise rotation/user profile* key briefly (< 2 s).



- ✎ The *Counterclockwise rotation* status display lights up when counterclockwise rotation is set.

When the Endo function is switched on, counterclockwise rotation cannot be activated via the C+ electronic foot control.

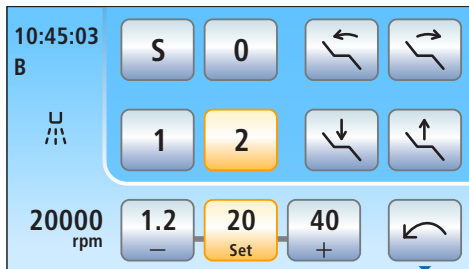
4.5.9.2 The Endo function on the EasyTouch

4.5.9.2.1 Switching Endo function on/off

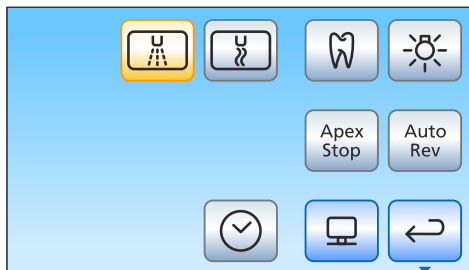
Switching on the Endo function

The Endo function is assigned to the burr drive removed from the holder.

- ✓ The desired electric motor for the Endo function is removed from the holder.
- ✓ The motor speed and favorite keys are shown.



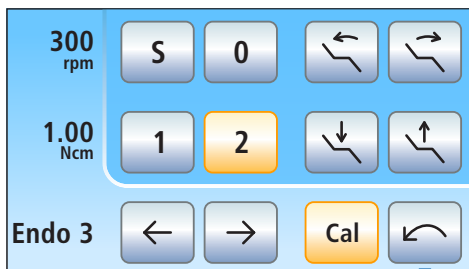
1. Press the *Sub-dialog* fixed key.



- The *Motor* sub-dialog is displayed.



2. Touch the *Endo function* key.

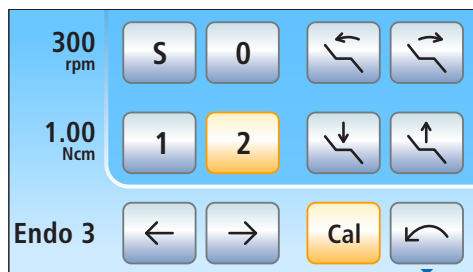


- The *Endodontics program* is displayed on the touchscreen.

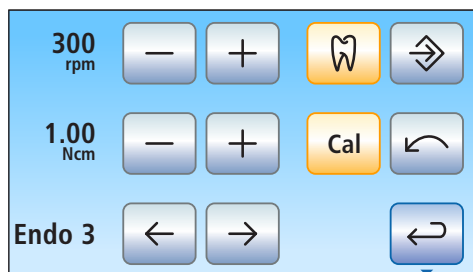
Switching off the Endo function

If the Endo function is activated, the *Endodontics dialog* is displayed on the touchscreen instead of the *Motor dialog* when the burr drive assigned to the Endo function is removed. To show the motor speed again when the burr drive is removed, the Endo function must first be switched off.

- ✓ The electric motor assigned to the Endo function is removed.
- ✓ The *Endodontics* program is displayed on the touchscreen.



1. Press the *Sub-dialog* fixed key.



- ↗ The *Endodontics* sub-dialog is displayed.



2. Touch the *Endo function* key.
 - ↗ If the key is blue, the Endo function is deactivated. The *Motor screen* opens when the burr drive is removed from its holder.

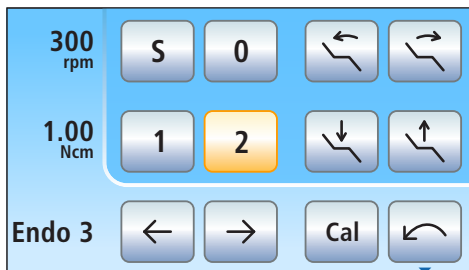
4.5.9.2.2 Calibrating the burr drive

Calibration is required when the Endo function is started, every time the contra-angle handpiece is changed, and every time the contra-angle handpiece is lubricated. Recalibration is not necessary when a file is changed.

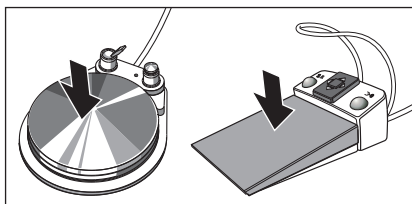
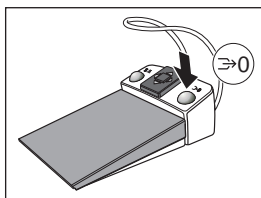
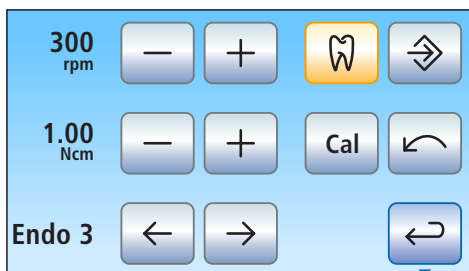
The contra-angle handpiece is automatically checked during calibration. This includes a measurement of motor current at different speeds to assess the properties of the system.

CAUTION

To ensure proper calibration, use only Dentsply Sirona instruments.





- ✓ The *Endodontics dialog* or the *Endodontics* sub-dialog is displayed on the touchscreen.
- 1. Attach the contra-angle handpiece that you wish to use with Endo function to the electric motor.
- 2. Insert a file in the contra-angle handpiece. This ensures that the file is taken into account in the measurement.



- 3. Touch the *Cal* key on the touchscreen.

or

- Press the right button of the C+ electronic foot control.
 The key flashes. The burr drive is ready for calibration.

- 4. Hold down the foot pedal throughout the duration of the calibration.
 The *Cal* key continues to flash. During calibration, increasing speeds are set on the motor. If the burr drive is calibrated, the key permanently remains highlighted orange. Calibration is then completed.

4.5.9.2.3 Changing direction of rotation

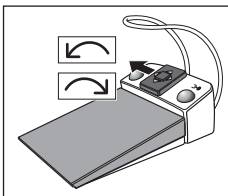
The direction of rotation can be changed only with the motor stopped.

Counterclockwise rotation is performed without torque limitation. The torque setting keys are hidden when counterclockwise rotation is selected.

Tip: After starting the electric motor with the foot switch, an audible warning signal sounds 6 times if counterclockwise rotation is activated.

- ✓ The *Endodontics dialog* or the *Endodontics* sub-dialog is displayed on the touchscreen.

1. Touch the *Counterclockwise rotation* key on the touchscreen.



or

- Press the left button of the foot switch.
 - ✎ For counterclockwise rotation: The key *Counterclockwise rotation* is highlighted orange and an orange counterclockwise rotation arrow appears.
 - For clockwise rotation: The key *Counterclockwise rotation* is displayed in gray and the orange counterclockwise arrow is hidden.

4.5.9.2.4 Selecting a working step

Speed and torque values can be saved for up to six working steps. At the end of each work step, the required settings can be accessed immediately by selecting the next step.

- ✓ The *Endodontics dialog* or the *Endodontics* sub-dialog is displayed on the touchscreen.

- Select the required endodontics working step. Touch the *previous step* or *next step* key.

- ✎ The selected work step is displayed on the touchscreen. The settings saved in the work step are preset.

Endo 3



4.5.9.2.5 Setting the speed and torque

With the Endo function switched on, torque and speed of the contra-angle handpiece are indicated, but not of the motor. The control electronics of the burr drive calculate the motor control based on the specified contra-handpiece gear reduction and the set torque and speed.

CAUTION

Improperly selected speeds and torque values endanger the patient.

Treatment errors, e.g. breaking of a file, may result from incorrect settings.

- Observe the manufacturer's instructions regarding file systems.

IMPORTANT

Torque adjustment

The maximum adjustable torque depends on the system motor and the speed settings.



- ✓ The *Endodontics* sub-dialog is displayed on the touchscreen.
- ✓ The working step with which the speed and torque are to be changed is selected.
- Use the – and + keys to set the speed and torque of the contra-angle handpiece. You can also hold down the keys for this purpose.
 - ✎ The selected speed is displayed in the first line in rpm (revolutions per minute); the second line indicates the speed in Ncm (Newton centimeters).

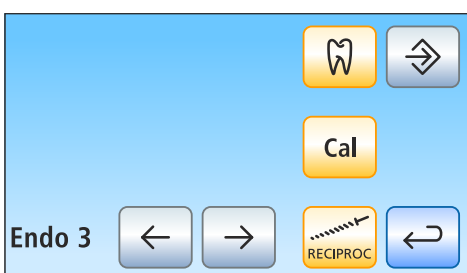
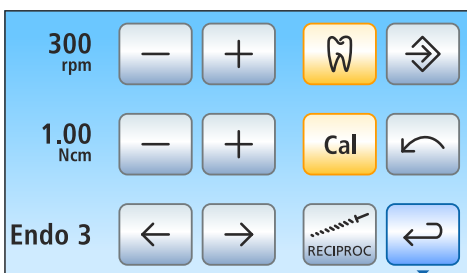
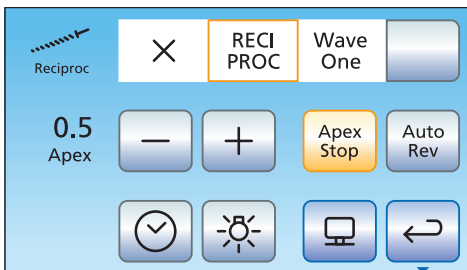
4.5.9.2.6 Using reciprocal rotating files

When using reciprocal rotating files, the rotational speed and torque values recommended by the manufacturer are preset. They cannot be changed.

If the treatment center is equipped with the ApexLocator option, it can also be used with reciprocal rotating files.

The values stored for Wave One and Wave One Gold are identical.

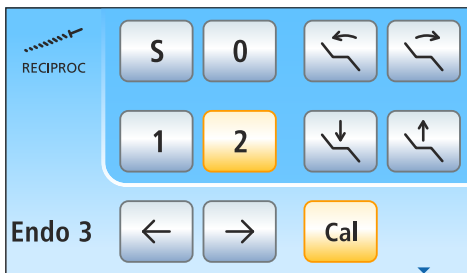
- ✓ The second *Endodontics* sub-screen is displayed on the touchscreen.



1. Select a reciprocal rotating file. Selecting the X symbol switches off the reciprocal function.
2. Touch the *Return* key.
 - ✎ The *Endodontics* sub-screen is displayed using the button *Switch on/off reciprocal*.
3. Select the required endodontics working step for the reciprocal rotating file. Touch the *previous step* or *next step* key.

4. Touch the *Switch on/off reciprocal* key.

- ✎ If the key is highlighted orange, the reciprocal function for the selected working step is activated. The keys for setting the speed and torque and the counterclockwise key are hidden.



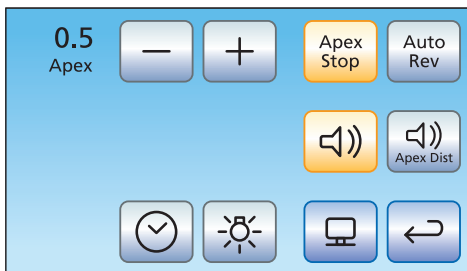
In the Endodontics screen, a reciprocal symbol is displayed in the top left of the screen when the reciprocal function is activated.

4.5.9.2.7 Switch instrument light on/off

The instrument light of the motor can be used when the Endo function is activated if the treatment center is equipped with the Comfort EasyTouch user interface.

Please note that only the Endo 6 L handpiece has a light guide and therefore the instrument light can be used only with this Endo handpiece.

The instrument light can be switched on and off separately in the motor and endodontics program. In the factory settings, the instrument light is switched off when the Endo function is activated.

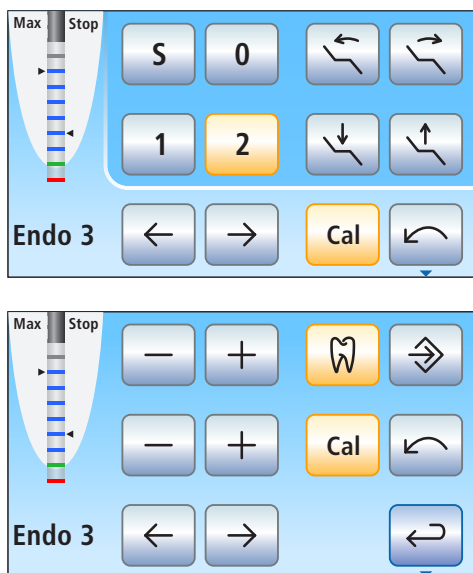


- ✓ The second *Endodontics* sub-screen is displayed on the touchscreen.



- Switch the instrument light on or off.
 - ↳ If the key is highlighted orange, the instrument light can be activated using the foot pedal.

4.5.9.2.8 Using the ApexLocator



- ✓ The treatment center is prepared for apex measurements using the instrument, see section "Preparing to use the ApexLocator" [→ 123].
 - ✓ The *Endodontics dialog* or *Endodontics sub-dialog* is displayed on the touchscreen.
1. Select a working step, see "Selecting a working step" [→ 116]. If necessary, change the preset speed and torque, see "Setting the speed and torque" [→ 116].
 2. You can make a setting to ensure that the motor stops automatically at a preset distance from the apex. If you want to use the automatic motor stop, this can be preset in the second *Endodontics* sub-dialog. The automatic motor stop can be combined with the *Auto-reverse* function, see "Setting the automatic motor stop of the ApexLocator" [→ 119].

IMPORTANT

Preventing incorrect measurements

When performing the apex measurement, wear non-conductive gloves to avoid measurement errors caused by unwanted leakage current.

During the measurement, the instrument must not come into contact with the patient's mucosa, metallic tooth restorations, or the mucosal electrode. It is recommended to pull the silicone isolation sleeve over the handpiece and perform the treatment using a cofferdam.

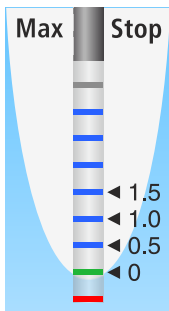
3. Attach the correct file for the working step to the handpiece.
4. Short the electrical measurement system. Plug in the files and hold them directly against the mucosal electrode. This cancels out any inaccuracies caused by jumps in impedance in the measurement setup (standardization).
 - ✎ If a short signal is heard and the distance display appears with no bars, standardization was successful. If not, check the electrical connections for signs of damage.
5. Place the mucosal electrode in the patient's mouth and perform the treatment. Activate the bur using the foot pedal.
 - ✎ The measured root canal depth is displayed by a colored bar in the distance display. The maximum root canal depth reached is displayed by a black triangle to the left of the distance display. To the right, the distance of the motor stop set in the second *Endodontics* sub-dialog is displayed. For more information, please refer to "Distance display" [→ 125].

4.5.9.2.9 Setting the automatic motor stop of the ApexLocator

If your treatment center is equipped with the ApexLocator option, the motor can be set to stop automatically at a preset distance from the apex. The motor stop can be combined with the *AutoReverse* function, see "Switching the AutoReverse function on/off" [→ 120].

- ✓ The second *Endodontics* sub-screen is displayed on the touchscreen.
1. Touch the *Apex stop* key.
 - ✎ If the key is highlighted orange, the automatic motor stop is activated. The – and + keys are displayed.





2. Use the – and + keys to set the required apex distance from 1.5 to 0. If the distance is 0, the motor does not stop until it reaches the physiological apex. Please note that the distance values are not a metric length measurement!

✎ The set distance is displayed to the left of the – and + keys. In the *Endodontic dialog* and in the *Endodontics* sub-dialog, the set motor stop position is shown as a black triangle to the right of the distance display under the text "Stop".

4.5.9.2.10 Switching AutoReverse ON/OFF

A setting can be made so that the bur drive automatically switches to counterclockwise rotation when the preset torque value is reached.

If your treatment center is equipped with the ApexLocator option, you can determine that the bur drive stops automatically at a preset distance from the apex, see "Setting the automatic motor stop of the ApexLocator" [→ 119]. If the AutoReverse function is switched on, the next time the foot pedal is activated following a motor stop, the motor is switched to counterclockwise rotation. When the file is withdrawn, the bur drive automatically switches back to clockwise rotation.

- ✓ The second *Endodontics* sub-screen is displayed on the touchscreen.
- Touch the *AutoRev* key.
 - ✎ If the key is highlighted orange, the AutoReverse function is activated.



4.5.9.2.11 Switching the torque signal and apex signal tones on/off

This can be used to set the acoustic signal that sounds whenever 75% of the currently set torque value is exceeded.

If your treatment center is equipped with the ApexLocator option, this button also switches the apex signal tones on or off. A beep is emitted when the apex or a set motor stop position is reached. If the AutoReverse function is activated, three acoustic signals are emitted when the motor switches to counterclockwise rotation. For more information on the acoustic signals during apex measurement, see the section "Acoustic signals" [→ 127].

- Press the *Torque signal and apex acoustic signals* key.
 - ✎ If the key is marked in orange, the torque signal and the apex acoustic signals are switched on.



4.5.9.2.12 Switching the apex distance signal tones on/off

If your treatment center is equipped with the ApexLocator option, you can adjust a setting so that distance signal tones are emitted in addition to the graphical distance display. If the automatic motor stop is switched off, the intervals between the acoustic signals vary according to the measured distance from the physiological apex. If this function is switched on, the acoustic signals vary depending on the measured distance to the preset motor stop position. For more information on the acoustic signals during apex measurement, see the section "Acoustic signals" [→ 127].



- Press the *Apex distance acoustic signals* key.
 - ✎ If the key is highlighted orange, the apex distance acoustic signal is activated.

4.5.9.2.13 Saving settings

In the *Endodontics* sub-dialog, working step-specific settings such as changed speed and torque values [→ 116] as well as activating the reciprocal function [→ 117] can be saved.

In addition, the following settings that apply for the overall Endo function are saved:

- Automatic motor stop [→ 119]
- AutoReverse function [→ 120]
- Selecting a reciprocal rotating file [→ 117]
- ✓ The corresponding settings are made.
- ✓ The *Endodontics* sub-screen is displayed.
- Press and hold the *Memory* key (> 2 s).
 - ✎ An acoustic signal sounds. The settings you have made will be saved for every working step.

All the settings which apply to the overall Endo function are automatically saved when the Endo function is switched off.



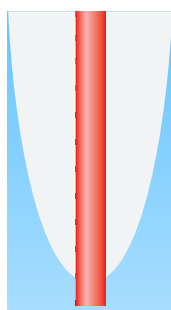
4.5.10 ApexLocator

The ApexLocator is available only with the EasyTouch Comfort user interface.

The ApexLocator can be used to measure the working length of the root canal file in endodontic treatments using electrical impedance.

The ApexLocator can be used as follows:

- For manual measurement using a file clamp
- For measurement during treatment with the motor, without electronic torque limitation
- For measurement during treatment with the motor and the Endo function with electronic torque limitation



⚠ CAUTION

The ApexLocator can be influenced by electromagnetic fields.

This may lead to measurement errors. Strong interference is indicated by a flashing red bar in the distance display. A warning signal sounds.

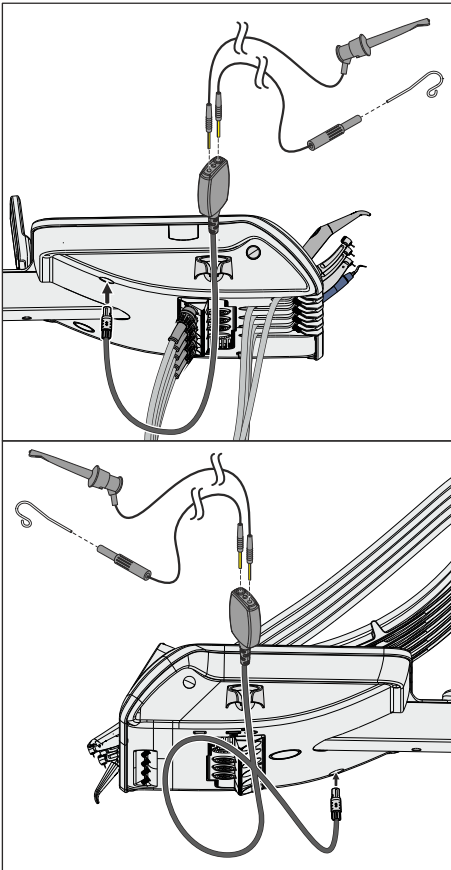
- Ensure that there are no sources of electromagnetic interference close to the treatment center.

If the ApexLocator detects a defect, the distance display and Apex operating keys are not shown on the touchscreen. An error message appears in the status column, see "Error messages" [→ 308].

For more information about the distance display, see "Distance display." [→ 125]

4.5.10.1 Preparing to use the ApexLocator

Apex adapter, mucosal electrode and file clamp



The mucosal electrode and the file clamp are connected to the socket of the dentist element using the apex adapter. The socket is located on the left and to the rear, below the dentist element.

1. Insert the apex adapter into the dentist element.
The apex adapter can be placed in the apex holder during treatment.
2. Insert the connector of the mucosal electrode into the large socket of the apex adapter.
3. For manual measurement: Insert the connector of the file clamp into the small socket of the apex adapter.

CAUTION

Following treatment with the ApexLocator, the Apex adapter must be disconnected from the dentist element.

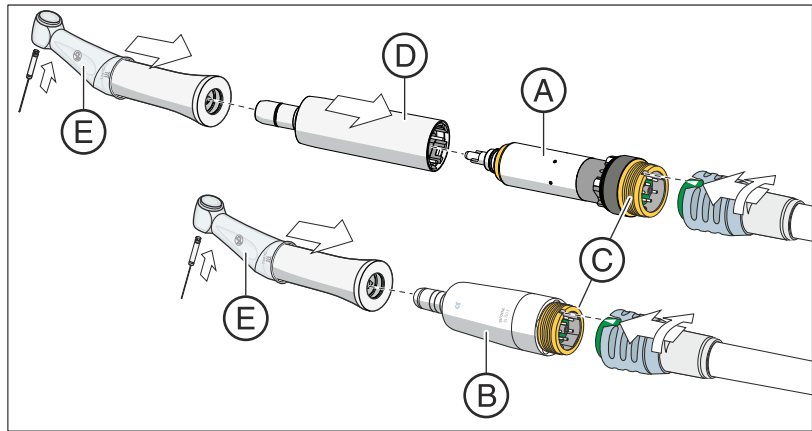
If the apex adapter is placed in the holder during treatment, the file clamp and mucosal electrode must be removed or placed under sterile conditions.

Care and cleaning of the ApexLocator components is described in the chapter "Care and cleaning instructions for the practice team", see "Cleaning and disinfecting/sterilizing the components of the ApexLocator" [→ 239].

Apex measurement via the instrument

The apex is measured by means of an impedance measurement between the root canal file and mucosal electrode. The Apex measurement signal is as follows:

- Apex cable in the instrument hose
- Metal housing of the motor
- Metal housing of the ISO adapter, if applicable
- Endodontic handpiece
- Root canal file
- Mucosal electrode
- Apex adapter



For endodontic treatments with the ApexLocator, the Dentsply Sirona Endo 6:1 (SN 6407 and above / July 2010) or Endo 6 L contra-angle handpieces are required for the Endo function. When using the ApexLocator in the motor program (without Endo function), the Dentsply Sirona SiroNiTi Apex contra-angle handpiece is required.

One Apex instrument hose exists for each of the motors BL E A and BL ISO E B, in which the Apex cable runs. The connecting threads C of these motors have gold-plated contact surfaces. The gold-plating ensures the electrical conductivity.

When using the BL E motor, a basic adapter (Apex) D must be used. This also has a gold-plated contact.

The motor end of the Apex instrument hoses is identified by a blue connecting nut.

Pull the silicone insulation sleeve E over the contra-angle handpiece and wear insulating gloves to prevent faulty measurements due to leakage current. During the measurement, the instrument must not come into contact with the patient's mucosa or the mucosal electrode. We recommend the use of a cofferdam for treatment.

WARNING

The silicone isolation sleeve is a disposable item and must be sterilized before use.

Details can be found in the section "Cleaning and disinfecting/sterilizing the components of the ApexLocator" [→ 239].

Standardizing the measuring system

Before starting the apex measurement, a functional check or standardization of the measuring system can be performed by shorting the electrodes. This cancels out any inaccuracies caused by skips in impedance in the measurement setup.

- Short the electrical measurement system. Plug in the files and hold them directly against the mucosal electrode.
 - ✎ If a short signal is heard and the distance display appears with no bars, the standardization was successful. If not, check the electrical connections for signs of damage.

4.5.10.2 Distance display

The measured root canal depth is shown in the distance display on the touchscreen. A bar with 11 display levels shows the distance from the root canal file to the physiological apex (apical constriction). The root canal is divided into four colored sections in the distance display.

CAUTION

The distance display is not a metric specification of length.

The ApexLocator should be used as an additional aid to supplement the usual root canal treatment measures. It is not intended to replace the radiological determination of the working length.

- To determine the exact length, also prepare the relevant X-ray images.

Automatically show and hide the distance display

For measurement during the treatment using the instrument, the distance display is automatically displayed on the touchscreen in the *motor screen* and in the *Advanced Endodontics Program*. This appears as soon as the measurement begins, i.e. when electric current flows between the root canal file and the mucosal electrode. After the measurement, the distance display disappears again after a certain time, so that any hidden setting values are visible again. The distance display can be displayed again by standardizing the measuring system.

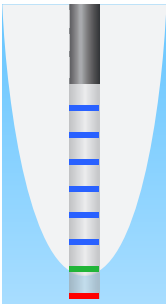
For manual measurements using the file clamp in the *Start* subscreen, the distance display can be shown/hidden by pressing the *Apex measurement with file clamp* button.



Colored regions of the distance display

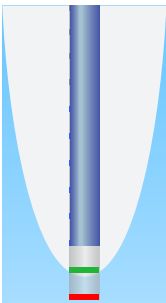
Gray region

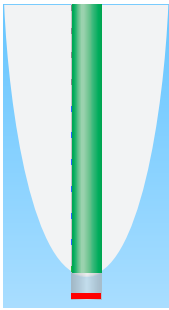
The tip of the root canal file is in the middle region of the root canal.



Blue region

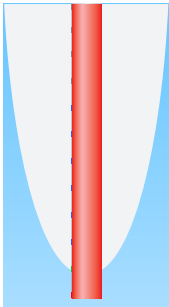
The tip of the root canal file is near the apex.





Green region

The tip of the root canal file has reached the physiological apex.



Red region

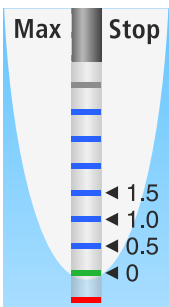
The tip of the root canal file has pierced the physiological apex. The instrument overshoot is displayed.

In the event of electromagnetic interference, the red bar flashes.

Maximum root canal depth reached

The maximum root canal depth reached is displayed as a black triangle to the left of the distance display under the text "Max". The triangle is displayed as soon as the gray region is exceeded.

After standardization of the measuring system by shorting the mucosal electrode and root canal file, the position of the triangle is automatically reset. With the Endo function, this also occurs after another step is selected.



Automatic motor stop for a preset apex distance

You can make a setting to ensure that the motor stops automatically at a preset distance from the apex. The preset distance is displayed as a black triangle to the right of the distance display under the text "Stop".

The motor stop can be combined with the *AutoReverse* function. Following the motor stop, the next time the foot control is operated, the motor switches to counterclockwise rotation. When the root canal file is withdrawn, the burr drive automatically switches back to clockwise rotation.

The automatic motor stop can be switched off or set to four different levels, for more information see the section "Endodontics treatments with ApexLocator and torque control handpiece" [→ 129] and the section in the "Endo function" chapter "Setting the automatic motor stop of the ApexLocator" [→ 119]. If the distance is 0, the motor does not stop until it reaches the physiological apex. Please note that the distance values are not a metric length measurement!

4.5.10.3 Beeps

In addition to the graphical distance display on the touchscreen, the position of the file in the root canal can also be indicated as an acoustic signal.

Apex acoustic signals



The ApexLocator always plays the following acoustic signals:

- One beep sounds when the physiological apex is reached and the motor stops automatically once it has reached the preset motor stop position.
- Three beeps sound if the motor is switched to counterclockwise rotation when the auto-reverse function is activated and the foot pedal is pressed again.

For manual measurements using the file clamp in the *Start* sub-screen, Apex signal tones are not output.

Apex distance acoustic signals



If the *Apex distance signal tones* key is highlighted in orange, the following signal tones are issued in addition to the Apex signal tones:

- No acoustic signal is played if the file is at least five display levels (on the distance display) away from the apex.
- Beeps with long intervals are played if the file is three or four display levels away from the apex.
- Beeps with short intervals are played if the file is one or two display levels away from the apex.
- A constant signal is played when the file has reached or passed the apex.

If both types of acoustic signal are switched on simultaneously, the continuous signal sounds when the motor automatically stops after it reaches the apex and the motor stop function is switched on. The three beeps continue to sound if auto-reverse is switched on.

4.5.10.4 Performing manual measurements with the file clamp

For an endodontic examination, manual measurements can be made using the file clamp and a root canal file.

- ✓ The treatment center is prepared for manual measurements using the file clamp, see section "Preparing to use the ApexLocator" [→ 123].
 - ✓ The *Start* sub-screen is displayed on the touchscreen.
1. Touch the *Manual Measurement with File Clamp* key.
 - ✎ If this function is activated, the *Manual measurement with file clamp* key is highlighted in orange.
 - ✎ The distance display is shown on the touchscreen.



2. If the distance to the apex is to be indicated with an acoustic signal, press the *Apex distance signal tones* button.
 - ✎ If the button is colored orange, acoustic signals will be played in addition to the distance display diagram. The intervals between the acoustic signals vary according to the measured distance to the apex.

⚠ CAUTION

Preventing incorrect measurements

When performing the apex measurement, wear non-conductive gloves to avoid measurement errors caused by unwanted leakage current.

During the measurement, the root canal file must not come into contact with the patient's mucosa, metallic tooth restorations, or the mucosal electrode. We recommend the use of a cofferdam for treatment.

3. Attach a root canal file to the file clamp.
4. Short the electrical measurement system. Hold the clamped files directly against the mucosal electrode. This cancels out any inaccuracies caused by jumps in impedance in the measurement setup (standardization).
 - ✎ If a short signal is heard and the distance display appears with no bars, standardization was successful. If not, check the electrical connections for signs of damage.
5. Place the mucosal electrode in the patient's mouth and perform the measurement.
 - ✎ The measured root canal depth is displayed by a colored bar in the distance display. For more information, please refer to "Distance display" [→ 125].

The manual measurement in the *Start* sub-screen is ended automatically when you exit the program or display another program.

4.5.10.5 Endodontic treatment with ApexLocator and torque limitation handpiece

If your treatment center is equipped with the ApexLocator option but does not have the Endo function, the Apex function in the Motor program can be used for endodontic treatments.

The ApexLocator is available only with the EasyTouch Comfort user interface.

IMPORTANT

SiroNiTi Apex

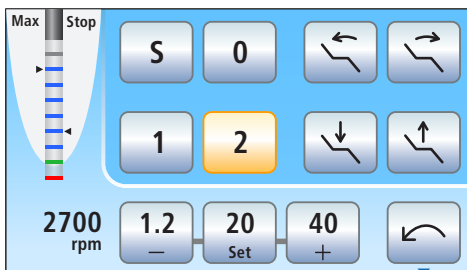
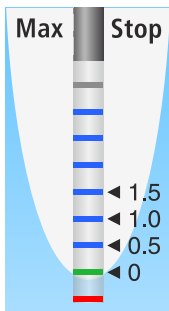
Only Dentsply Sirona SiroNiTi Apex must be used to perform apex measurement using a torque-limiting handpiece! The electrical conductivity can be ensured only using this handpiece.

The SiroNiTi handpiece can also be used to perform endodontic treatments without the ApexLocator.

- ✓ The treatment center is prepared for apex measurements using the instrument, see section "Preparing to use the ApexLocator" [→ 123].
- ✓ The *Motor dialog* is displayed on the touchscreen.
- 1. Set the appropriate motor speed according to the handpiece and the root canal file used, see "Setting the speed on the EasyTouch" [→ 103].
- 2. You can set the motor so that it stops automatically when the physiological apex is reached. If you want to use the automatic motor stop, this can be preset in the *Motor* sub-dialog. To do this touch the *Sub-dialog* key.
 - ✎ The *Motor* sub-dialog is displayed.



- 3. Touch the *Apex stop* key.
 - ✎ If the key is highlighted orange, the motor stops automatically when the physiological apex is reached. The – and + keys and the *AutoReverse* key are displayed.
- 4. Use the – and + keys to set the required apex distance from 1.5 to 0. If the distance is 0, the motor does not stop until it reaches the physiological apex. Please note that the distance values are not a metric length measurement!



✎ The set distance is displayed to the left of the – and + keys. The preset motor stop position is displayed in the *Motor dialog* as a black triangle to the right of the distance display under the text "Stop".

5. To combine the automatic motor stop with the automatic switching to counterclockwise rotation, press the *AutoReverse* key.
 - ✎ If the button is orange, the motor automatically switches to counterclockwise rotation following the motor stop the next time the foot pedal is operated. When the file is withdrawn, the bur drive automatically switches back to clockwise rotation.
6. In the second *Motor* sub-dialog, the apex acoustic signals and apex distance signals can be switched on. To do this touch the *Sub-dialog* key.
 - ✎ The second *Motor* sub-dialog is displayed.
7. To switch on the apex acoustic signals, press the *Apex acoustic signals* key.
 - ✎ If the key is colored orange, an acoustic signal is issued when the apex or the set motor stop position is reached. If the Auto-reverse function is activated, three acoustic signals are issued when the motor switches to counterclockwise rotation.
8. To switch on the apex distance acoustic signals, press the *Apex distance acoustic signals* key.
 - ✎ If the key is colored orange, distance acoustic signals will be issued in addition to the distance display diagram. If the automatic motor stop is switched off, the intervals between the acoustic signals vary according to the measured distance from the physiological apex. If this function is switched on, the acoustic signals vary depending on the measured distance to the preset motor stop position. For more information on the acoustic signals during apex measurement, see the section "Acoustic signals" [→ 127].
9. Return to the main dialog. Touch the *Return* key, if necessary twice.

✎ The apex distance display is shown in the *Motor dialog*.

⚠ CAUTION

Preventing incorrect measurements

When performing the apex measurement, wear non-conductive gloves to avoid measurement errors caused by unwanted leakage current.

During the measurement, the instrument must not come into contact with the patient's mucosa, metallic tooth restorations, or the mucosal electrode. It is recommended to pull the silicone isolation sleeve over the handpiece and perform the treatment using a cofferdam.

10. Attach the required root canal file to the handpiece.

11. Short the electrical measurement system. Plug in the files and hold them directly against the mucosal electrode. This cancels out any inaccuracies caused by jumps in impedance in the measurement setup (standardization).
 - ✎ If a short signal is heard and the distance display appears with no bars, standardization was successful. If not, check the electrical connections for signs of damage.
12. Place the mucosal electrode in the patient's mouth and perform the treatment. Activate the bur using the foot pedal.
 - ✎ The measured root canal depth is displayed by a colored bar in the distance display. For more information, please refer to "Distance display" [→ 125].

4.5.11 SiroSonic L scaler

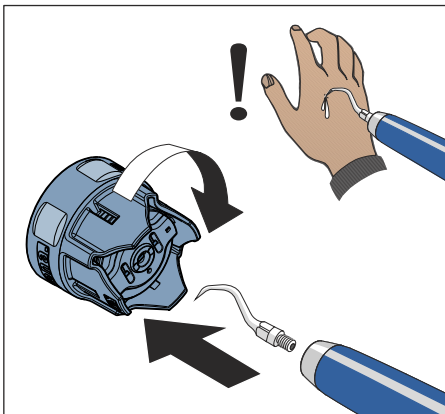
The SiroSonic L scaler is used for removing plaque and rinsing the root canal for endodontic treatments.

IMPORTANT

See also the SiroSonic L operating instructions.

4.5.11.1 Safety instructions

The torque wrench is used as a tool for screwing in instrument tips and, at the same time, to protect against injury.



⚠ CAUTION

Ultrasonic tips are sharply pointed.

There is a risk of injuring one's hand on the deposited scaler.

- Always attach the torque wrench to the scaler for protection as soon as you deposit the handpiece.

⚠ CAUTION

Ultrasonic tips from other manufacturers do not guarantee safe operation.

- Use only ultrasonic tips from Dentsply Sirona.

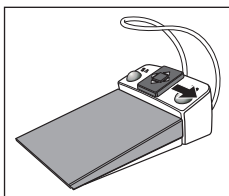
4.5.11.2 Setting the intensity on the EasyPad

Intensities are saved on the favorite keys 1, 2, and 3, which can be accessed by pressing them. Individual intensities can be saved on the favorite keys for each user profile.

With the C+ electronic foot control, spray activation can be saved on the favorite keys. The settings can also be made via the 4-way switch plate.

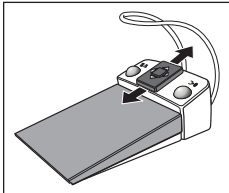
Accessing intensity settings

- ✓ The SiroSonic L scaler is removed.
- ✓ The intensity setting is shown on the EasyPad display.
- Press the favorite keys briefly (< 1 s).



- ✎ The intensity saved on the favorite key is shown as a percentage on the EasyPad display.

By moving the 4-way switch plate of the C+ electronic foot switch to the right, the settings of the favorite keys can be accessed consecutively.



Changing the intensity

- Press and hold the favorite key 1 or 3 (> 1 s).

↪ The intensity is increased or reduced.

The intensity can also be increased or reduced by moving the 4-way switch plate of the C+ electronic foot control up or down.

IMPORTANT

Increments

The size of the increments depends on the intensity range setting.

From 1 to 5% = 1% increments

From 5 to 50% = 5% increments

From 50 to 100% = 10% increments

Saving intensity

- ✓ The desired intensity is set.
- ✓ Via the C+ electronic foot control: The spray is switched on or off (will be saved).

1. Press and hold the 2 / Setup favorite key (> 2 s).

↪ The intensity flashes on the EasyPad display.



2. Press the favorite key 1, 2, or 3.

↪ An acoustic signal sounds. The intensity set and, if applicable, activation of spray will be saved on the favorite key.

While the intensity flashes on the EasyPad display, pressing the *Counterclockwise rotation / user profile* key will interrupt saving to a favorite key.

Switching on the Endo mode

The intensity of the endodontics function is limited for safety reasons, e.g., in order to prevent broken needles.

IMPORTANT

Intensities in endodontics mode

The intensity can be set from 1e to 5e. Please note that the intensity values of 1e to 5e (endodontics mode) do not correspond with the values of 1 to 5 in the scaler mode (ultrasound mode).

Always use the endo mode for endodontics!

- ✓ The SiroSonic L scaler is removed.
- ✓ The ultrasonic intensity setting (ultrasonic mode) is shown on the EasyPad display.



1. Press the *Endo / Purge* key.

✎ The endodontics intensity (Endo mode) is displayed instead of ultrasonic intensity (ultrasonic mode).

2. Use favorite keys 1 and 3 to set the desired endodontics intensity (En 1 to En 5).

By pressing the *Endo / Purge* key again, the user is returned to ultrasonic mode.

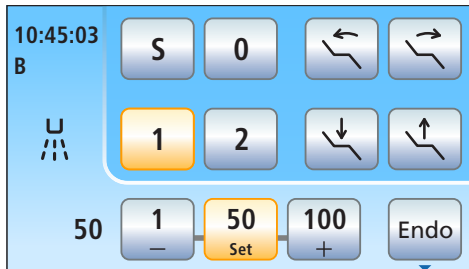
The intensity settings cannot be saved on the favorite keys in Endo mode.

4.5.11.3 Setting the intensity on the EasyTouch

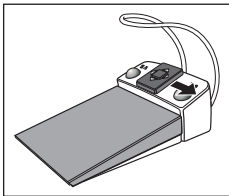
Intensities are saved on the three favorite keys that can be accessed by pressing them. Individual intensities can be saved on the favorite keys for each user profile.

With the C+ electronic foot control, spray activation can be saved on the favorite keys. The settings can also be made via the 4-way switch plate.

Accessing intensity settings



- ✓ The SiroSonic L scaler is removed.
- ✓ The *Ultrasonic dialog* is displayed on the touchscreen.
- Touch one of the favorite keys in the bottom line briefly (< 1 s).
 - ✦ The favorite key is highlighted orange. The selected intensity is displayed to the left of the favorite keys.

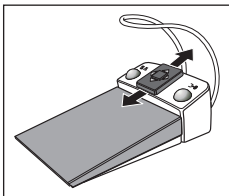


By moving the 4-way switch plate of the C+ electronic foot switch to the right, the settings of the favorite keys can be accessed consecutively.

Changing the intensity



- Press and hold the left or right favorite key (> 1 s).
 - ✦ The intensity is increased or reduced. The favorite keys are shaded gray for intermediate values.



The intensity can also be increased or reduced by moving the 4-way switch plate of the C+ electronic foot control up or down.

Saving intensity

- ✓ The desired intensity is set.
 - ✓ Via the C+ electronic foot control: The spray is switched on or off (will be saved).
1. Press and hold the middle favorite *Set* key (> 2 s).
 - ✦ The intensity flashes on the touchscreen.
 2. Press one of the three favorite keys.
 - ✦ An acoustic signal sounds. The intensity set and, if applicable, activation of spray will be saved on the favorite key. The selected intensity is displayed on the favorite key.

While the intensity flashes on the touchscreen, pressing any other key on the touchscreen will interrupt saving to a favorite key.

Switching on the Endo mode

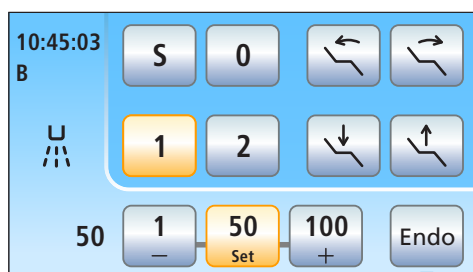
The intensity of the endodontics function is limited for safety reasons, e.g., in order to prevent broken needles.

IMPORTANT

Endo intensity values

The intensity can be adjusted from 1e to 5e. Please note that the endodontics intensity values of 1e to 5e do not match the values of 1 to 5 in the scaler mode.

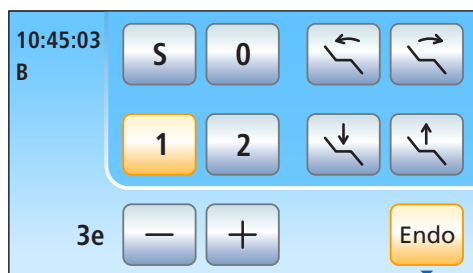
Always use the Endo mode for endodontics!



- ✓ The SiroSonic L scaler is removed.
- ✓ The *Ultrasonic dialog* is displayed on the touchscreen.



- > Touch the *Endo* key.



- ✎ The key is highlighted orange. In the ultrasonic program, the endodontics intensity is displayed instead of the ultrasonic intensity.

4.5.12 Cavitron scaler

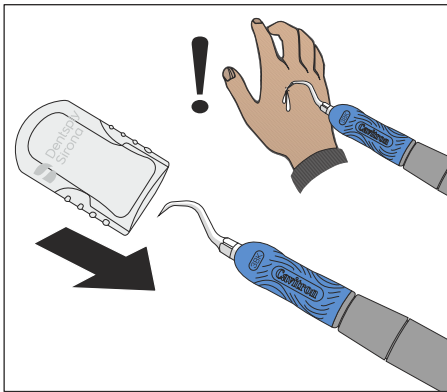
The built-in Cavitron scaler is used to remove plaque.

IMPORTANT

Please also read the operating instructions for the "Cavitron Built-In Ultrasonic Scaler, Model G139 with Cavitron Steri-Mate 360° Handpiece". It is enclosed with the retrofit kit.

4.5.12.1 Safety Instructions

To prevent injuries, a tip protector is included with the handpiece.



⚠ CAUTION

Ultrasonic tips are very sharp.

There is a risk of injuring the hand when the scaler is in the holder.

- Always attach the tip protector to the scaler for protection as soon as you return the handpiece to the holder.

⚠ CAUTION

Ultrasonic tips from other manufacturers do not guarantee safe operation.

- Use only ultrasonic tips from Dentsply Sirona.

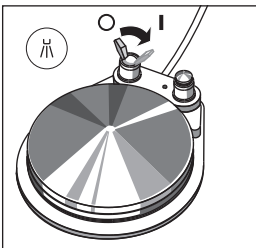
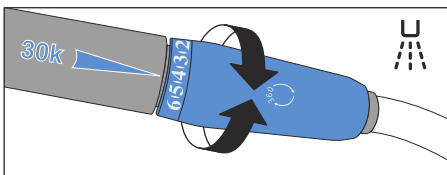
⚠ CAUTION

The Cavitron device must not be used on patients if the incoming treatment water is warmer than 25 °C / 77 °F

The spray water in the handpiece can heat up further due to ultrasonic vibrations.

- Check the temperature of the treatment water, in particular when operating the treatment center with its own independent water supply via fresh water bottles or via the disinfectant tanks of the water unit.

4.5.12.2 Setting spray



The spray is set using the adjustment ring at the end of the Cavitron handpiece.

The spray can be switched on/off using the tilting level on the pneumatic foot control.

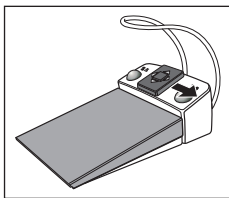
The C+ electronic foot control can be used to switch off the spray simply by turning the adjustment ring. The spray cannot be switched on/off via the user interface of the treatment center.

4.5.12.3 Setting the intensity on the EasyPad

Intensities are saved on the favorite keys 1, 2, and 3, which can be accessed by pressing them. Individual intensities can be saved on the favorite keys for each user profile.

Accessing intensity settings

- ✓ The Cavitron scaler is removed.
- ✓ The intensity setting is shown on the EasyPad display.
- Press the favorite keys briefly (< 1 s).

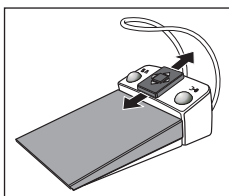


- ✎ The intensity saved on the favorite key is shown as a percentage on the EasyPad display.

By moving the 4-way switch plate of the C+ electronic foot switch to the right, the settings of the favorite keys can be accessed consecutively.

Changing the intensity

- Press and hold the favorite key 1 or 3 (> 1 s).



- ✎ The intensity is increased or reduced.

The intensity can also be increased or reduced by moving the 4-way switch plate of the C+ electronic control switch up or down.

IMPORTANT

Increments

The size of the increments depends on the intensity range setting.

From 1 to 5% = 1% increments

From 5 to 50% = 5% increments

From 50 to 100% = 10% increments

Saving intensity

- ✓ The desired intensity is set.
- 1. Press and hold the favorite key 2 / Setup (> 2 s).



- ✎ The intensity flashes on the EasyPad display.



- 2. Press the favorite key 1, 2, or 3.
 - ✎ An acoustic signal sounds. The intensity is saved on the favorite key.



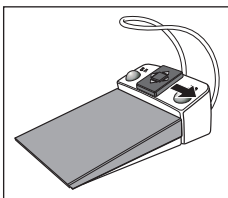
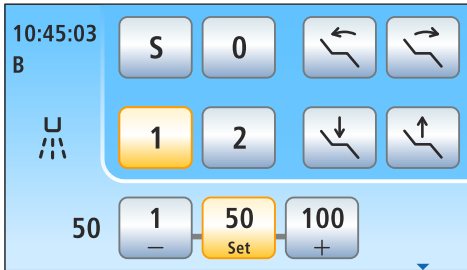
While the intensity flashes on the EasyPad display, pressing the *Counterclockwise rotation / user profile* key will interrupt saving to a favorite key.

4.5.12.4 Setting the intensity on the EasyTouch

Intensities are saved on the three favorite keys that can be accessed by pressing them. Individual intensities can be saved on the favorite keys for each user profile.

Accessing intensity settings

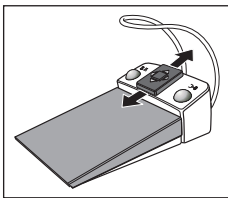
- ✓ The Cavitron scaler is removed.
- ✓ The *Ultrasonic dialog* is displayed on the touchscreen.
- Touch one of the favorite keys in the bottom line briefly (< 1 s).
 - ✚ The favorite key is highlighted orange. The selected intensity is displayed to the left of the favorite keys.



By moving the 4-way switch plate of the C+ electronic foot switch to the right, the settings of the favorite keys can be accessed consecutively.

Changing the intensity

- Press and hold the left or right favorite key (> 1 s).
 - ✚ The intensity is increased or reduced. The favorite keys are shaded gray for intermediate values.



The intensity can also be increased or reduced by moving the 4-way switch plate of the C+ electronic control switch up or down.

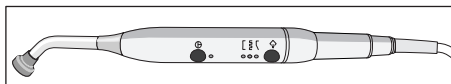
Saving intensity

- ✓ The desired intensity is set.
- 1. Press and hold the middle favorite *Set* key (> 2 s).
 - ✚ The intensity flashes on the touchscreen.
- 2. Press one of the three favorite keys.
 - ✚ An acoustic signal sounds. The intensity is saved on the favorite key. The selected intensity is displayed on the favorite key.



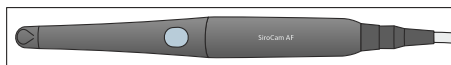
While the intensity flashes on the touchscreen, pressing any other key on the touchscreen will interrupt saving to a favorite key.

4.5.13 Mini LED curing light



The function is described in the chapter on the assistant element, see "Mini LED curing light" [→ 149].

4.5.14 SiroCam F/AF/AF+ intraoral camera



Functionality is described in the "Sivision digital video system" section, see "SiroCam F / AF / AF+ intraoral camera" [→ 182].

4.5.15 Timer function

4.5.15.1 Timer function on the EasyPad

The *Fn* function key is assigned to the timer function.

Presetting the timer

A set time can be counted down to zero with the timer function.

The timer is preset in the *Setup* of the treatment center, see "Presetting the timer" [→ 199].

Starting, stopping/resetting the timer

- ✓ The time or speed/intensity is shown on the EasyPad display.
- Press the *Fn* key.



- ✎ The timer is started immediately. The preset time counts down on the EasyPad display.
- ✎ When the time is up, a short acoustic signal sounds.

Press again to stop the timer and reset the countdown. It can then be restarted.

4.5.15.2 Timer function on the EasyTouch

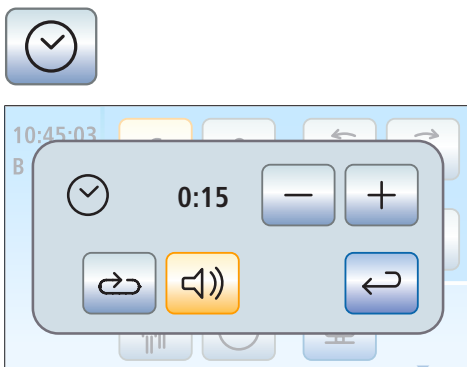
A set time can be counted down to zero with the timer function. A time loop (automatic restart of the countdown) and an acoustic signal (when the set time has expired) can be added to each timer.

Presetting the timer

The maximum time setting is 9 minutes and 30 seconds.

- ✓ The *Start dialog* of the *highspeed handpiece* or the *sub-dialog* of an instrument is shown on the touchscreen.

1. Press and hold the *Timer* key on the touchscreen (> 2 s).



- ✎ The *Timer Function* setting dialog is displayed on the touchscreen.

2. Use the – and + keys to set the required time.

Increments:

- From 00:05 to 1:00 = 5 s steps
- From 1:00 to 3:00 = 10 s steps
- From 3:00 to 9:30 = 30 s steps



3. Select whether you want to switch the time loop (i.e. the timer restarts automatically after the time is up) and the acoustic signal for the selected timer on or off. Touch the *Time loop* and/or *Acoustic signal* key.

- ✎ If a function is switched on, the corresponding key is highlighted orange.

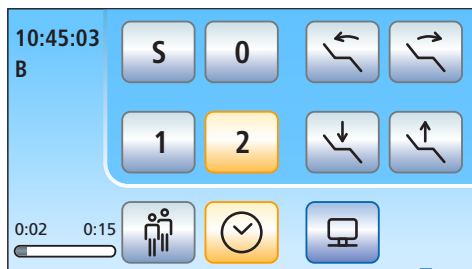
4. Close the setting dialog with the *Back* key.

- ✎ The setting is automatically saved when the dialog is closed.



Starting the timer

- Press the *Timer* key on the touchscreen briefly.



- ✎ The preset timer is started immediately. The set and elapsed time are displayed on the left side of the touchscreen.

Stopping/resetting the timer

Briefly touching the key stops the timer. Touching it again continues the countdown.

Pressing and holding the *Timer* key (> 2 s) serves to display the *Timer function* setting dialog. This resets the timer to zero.

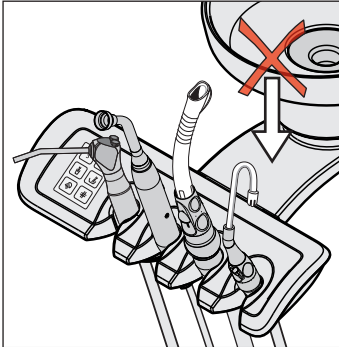


4.6 Assistant element

4.6.1 Maximum load capacity

Compact assistant element

The Compact assistant element has no tray.

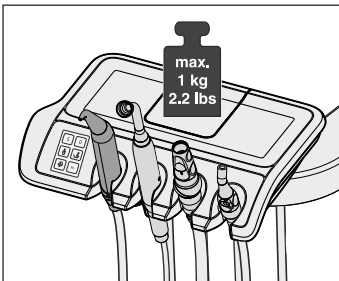


CAUTION

To prevent injuries caused by falling objects, never place anything on the support arm of the assistant element.

Comfort assistant element

The maximum load of the assistant element is 1 kg (2.2 lbs). Additionally, a skid-proof silicone mat can be placed on top of it.



4.6.2 Positioning

CAUTION

The assistant element can be positioned above or below the patient chair.

The patient could be pinched during chair movements or the chair could be damaged.

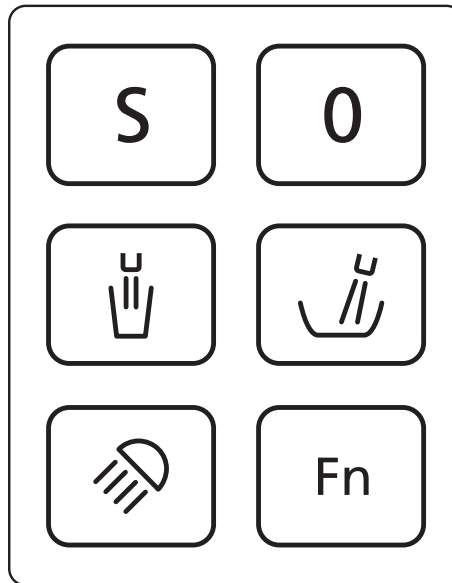
- Move the assistant element out of the collision zone before moving the patient chair.

IMPORTANT

Safety stop

The patient chair cannot be moved when the cuspidor is swiveled in.

4.6.3 Fixed keys on the assistant element



The functions assigned to the keys can be switched on/off on the assistant element. The operating contexts or setting screens can be accessed only on the dentist element. To make settings, see "Fixed keys on the dentist element" [→ 85].

The user interface on the assistant element is optional.

4.6.3.1 Chair programs S and 0



The chair programs Mouth rinsing position (S) and Entry/exit position (0) can be selected on the assistant element:

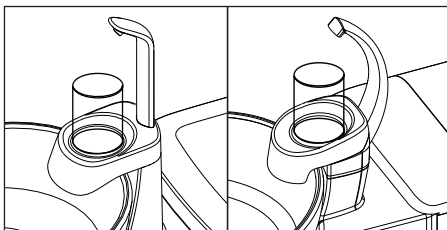
For details, see "Moving the patient chair via chair programs" [→ 75].

Mouth rinsing position and Entry/exit position programs can also be programmed from the assistant element side, see "Programming chair programs" [→ 80].

4.6.3.2 Tumbler filling

If the your treatment center is equipped with the Tumbler filling option with automatic sensor control, see "Tumbler filling with automatic sensor control" [→ 155].

1. Place the tumbler under the tumbler filler.



2. Press the *Tumbler Filling* fixed key.

☞ The tumbler is filled with water for the preset time.

Pressing the *Tumbler Filling* fixed key again stops the filling function immediately.

4.6.3.3 Flushing the cuspidor

The flushing function can be used for rough cleaning of the cuspidor during treatment.



- Press the *Flushing* fixed key.
 - ↳ The flushing function is activated for the preset flushing time.

4.6.3.4 Operating light

Repeatedly press the *Operating light* fixed key to set the following switching positions at the assistant element:

1. Switched on: The operating light is switched on at the preset brightness level.
2. Composite function: This function delays the curing of composite materials.
3. Switched off



- Press the *Operating light* fixed key, repeat if necessary.
 - ↳ The operating light switches to "switched on," "composite function," or "switched off".

4.6.3.5 Fn key

The *Fn key* starts and stops the timer. It is preset in the Setup of the treatment center, see "Presetting the timer" [→ 199].

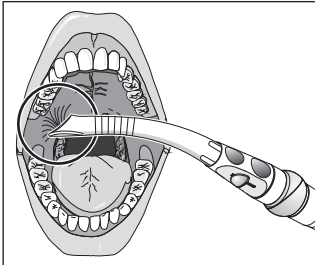
- ✓ The time or speed/intensity is shown on the EasyPad display.
- Press the *Fn key*.
 - ↳ The timer is started immediately. The preset time counts down on the EasyPad display of the dentist element.
 - ↳ When the time is up, a short acoustic signal sounds.



Press again to stop the timer and reset the countdown. The timer can then be restarted.

4.6.4 Suction handpieces

The assistant element can be equipped with up to two spray aspirators and one saliva ejector.



CAUTION

The tip attaches itself to the oral mucosa.

The patient's oral mucosa can be irritated by the vacuum.

- Make sure that you hold the suction tip in such a way that the opening cannot accidentally attach to the oral mucosa. Dentsply Sirona recommends using spray aspirator cannulas with additional air intake, see "Spare parts, Consumables" [→ 311].

CAUTION

The suction handpieces can be closed using the slide. Suction can be switched off with the 4-way foot switch.

Due to the lack of suction flow, fluid may run back out of the suction handpieces and into the patient's mouth.

- Ensure that the slide is opened and there is suction flow before holding an aspirator in the patient's mouth. Return the aspirator to the holder with the slide open.
- Always remove the aspirator from the mouth before closing the slide.
- Before suction flow can be switched off with the 4-way foot switch, the spray aspirator and saliva ejector must be removed from the patient's mouth.

NOTE

Suction removal of metal oxides from blasting devices

Observe the safety information on the "Vacuum system" [→ 18].

Tip: The factory-set suction power can be adjusted in the water unit by a service engineer.

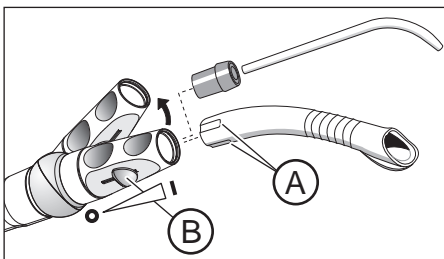
Spray aspirator

You can angle the suction handpiece by turning it.

To prevent completely interrupting the suction flow when the cannulae attach to the oral mucosa, spray aspirator cannulae with lateral air intakes **A** should be used. This prevents backflow from the hose into the oral cavity if the cannulae attach themselves.

The suction flow can be stopped and regulated using the slide **B**.

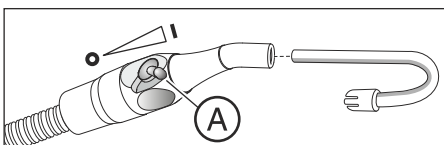
The thick suction hose can be used for surgical suction. To insert a surgical cannula, please attach the adapter supplied.

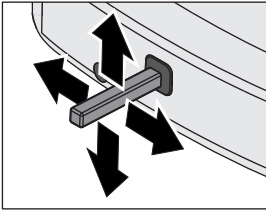


Saliva ejector

A curved tip that can be placed in the corner of the mouth is provided for saliva ejection.

The suction flow can be stopped and regulated using the **A** rotating knob.

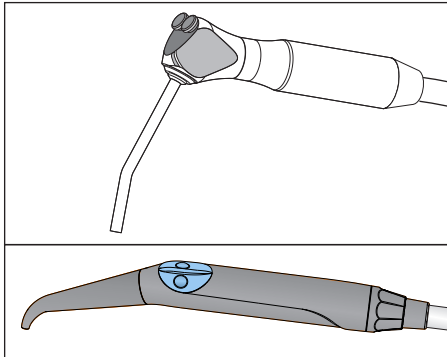




Interrupting suction flow with the 4-way foot control

If the treatment center is equipped with a position selector valve for the suction system, it can be set so suction flow can be interrupted or restarted by moving the 4-way foot control switch at the base of the chair in any direction, on the EasyPad, see "Coupling suction to the 4-way foot switch" [→ 200], on the EasyTouch [→ 207]

4.6.5 Standard and Sprayvit E 3-way syringe

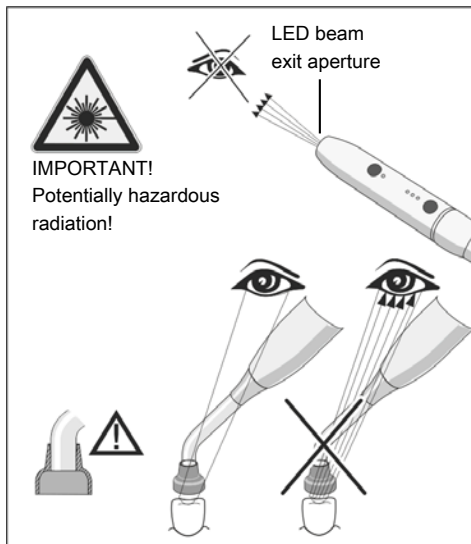


The function is described in the chapter on the assistant element, see "Standard and Sprayvit E 3-way syringe" [→ 94].

4.6.6 Mini LED curing light

The curing light is used to cure composite material with short-wave light.

4.6.6.1 Safety instructions



⚠ CAUTION

The curing light contains powerful LEDs. In accordance with IEC 62471, they are classified in risk group 2 with the light bar removed.

- Do not stare into the beam path for longer periods, as this can damage your eyes.
- Do not observe the light aperture with optical instruments which can decrease the beam cross-section (e.g. magnifying lenses).
- Do not under any circumstances stare into the beam path when the glass rod is removed.
- Never aim the laser beam at the user's or the patient's eyes, even if he or she is wearing protective goggles.
- Never work without the glare shield.
- Never look into the light reflected by the tooth surface.
- Aim the light only at the treatment area in the oral cavity.

Any condensation forming in the handpiece of the Mini L.E.D. may cause impairment (e.g. fogging of the LED). When moving the handpiece from a cool environment to a warm room, always wait for it to reach room temperature before using it.

Curing lights must not be used on persons who are suffering from or have in the past been afflicted by photobiological reactions (including solar urticaria and erythropoetic porphyria). Nor should they be used on persons currently being treated with any medications which increase one's sensitivity to light (including methoxsalene and chlorotetracycline).

Persons who had diseases of the retina or lens in the past or have had eye surgery, especially for cataracts, must consult their ophthalmologist prior to treatment with the Mini L.E.D. Even if the patient consents, caution is required because the light intensity can cause accidents.

It is especially advisable to always wear appropriate protective goggles. For the frequency range of the light, refer to "Technical data" [→ 152].

4.6.6.2 Symbols on the mini LED

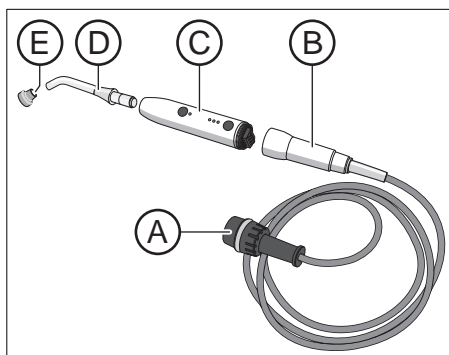
These symbols are on the Mini L.E.D. They have the following meanings:

Follow the operating instructions



Wear eye protection

4.6.6.3 Connecting the Mini L.E.D.

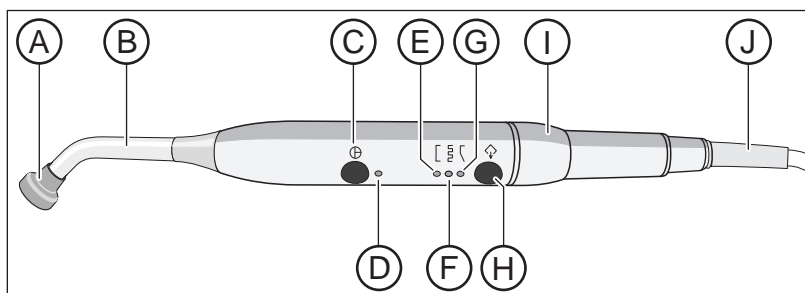


The Mini L.E.D. is connected to the assistant element in holder 2.

1. Connect the supply cable **A** to the treatment center.
2. Screw hose coupling **B** onto the Mini L.E.D. **C**.
3. Screw the sterilized light guide **D** onto the Mini L.E.D. **C**. Make sure to insert the fiber optic correctly.
 - ↳ The fiber optic clicks into place audibly.
4. Slip the glare shield **E** onto the light guide **D**.
 - ↳ The glare shield protects your eyes against reflecting curing light.

4.6.6.4 Functional description

Operational Elements



A	Glare shield	F	Pulse curing mode light
B	Fiber	G	"Soft start" mode lamp
C	On/off button	H	Mode button
D	Status control lamp	I	Handpiece
E	Quick curing mode light	J	Supply cable

Status control lamp

The status control lamp **D** signals the following states:

Status control lamp	Mode
OFF	Instrument in holder
Green	Normal mode
Red flashing	Overheat protection

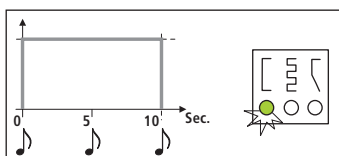
The Mini L.E.D. has three operating modes, which you can select with the *Mode H* key:

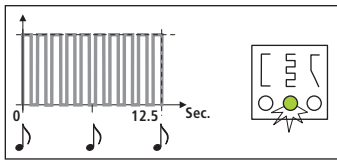
Quick curing mode

In the quick curing mode, the Mini L.E.D. operates at full power for 10 seconds.

In this mode, the light intensity output is as follows:

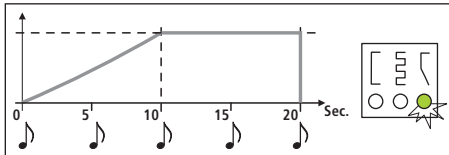
- 1250 mW/cm² (± 10%) with the standard light guide, dia. 7.5 mm
- 2000 mW/cm² (± 10%) with the booster light guide, dia. 5.5 mm





Pulsed curing mode

In the pulsed curing mode, the Mini L.E.D. radiates in 10 consecutive light pulses of 1 s each. There is a 250 ms break between the individual pulses.



"Soft start" mode

The "soft start" mode features:

- A 10-second "soft start" from 0 to 1250 mW/cm², or from 0 to 2000 mW/cm² with the "booster light guide," dia. 5.5 mm.
- Full power for 10 seconds.

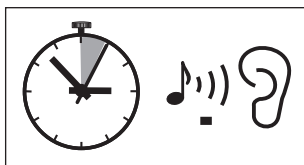
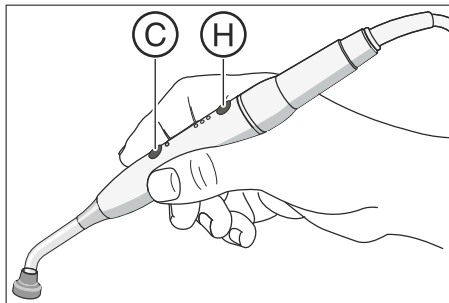
4.6.6.5 Operating the Mini LED

IMPORTANT

Contact with the material to be cured

Make sure that the light guide never touches the material to be cured, as this may cause damage to the light guide and reduce its effectiveness.

When the Mini L.E.D. is removed from its holder, the operating mode last used before it was deposited is selected.



1. Use the *Mode* key **H** to select the quick curing, pulse curing or "soft start" mode.
 - ↳ The corresponding lamp shows which mode is selected. The Mini L.E.D. is ready for operation.
2. Hold the light guide as close as possible to the composite material surface you want to photopolymerize.
3. Start the curing cycle. Press the on/off button **C** briefly.
 - ↳ An acoustic signal sounds. The curing cycle is started.
 - ↳ The acoustic signal sounds every 5 seconds.
 - ↳ The end of the curing cycle is also indicated by an audible signal.

You can interrupt the curing cycle immediately by pressing the on/off button **C**.

For care and cleaning, see "Disinfecting and sterilizing the Mini L.E.D. curing light" [→ 240].

4.6.6.6 Technical data

General Technical Data on Mini L.E.D.

Model:	Mini L.E.D.
Weight of handpiece without hose:	105 g
Dimensions:	Dia. 23 mm x 240 mm
Current consumption of handpiece:	5 V DC / 0.65 A
Thermal safety:	Overheat protection

Optical specification of Mini L.E.D.

Wavelength: Max. intensity:	420 nm – 480 nm ¹ at 450 nm
Light power dia. 7.5 mm (standard version):	1250 mW/cm ²
Light power dia. 5.5 mm (available from Satelec):	2000 mW/cm ²
Light power:	450 mW – 500 mW
Classification acc. to IEC 62471	Risk group 2 with light bar removed

¹ Only composite materials can be cured which react to the stated wavelength. The Mini L.E.D. is not suitable, e.g. for Lucirin® (absorption maximum 380 nm).

Hazard distance (HD) and exposure hazard value (EHV) according to IEC 62471

	HD	EHV
Blue light Free group	907 mm	20.6
Blue light Risk group 1	323 mm	2.6
Blue light Risk group 2	–	0.01
Thermal hazard to the cornea Free group	–	0.97

4.7 Water unit

4.7.1 Swiveling the cuspidor bowl

The cuspidor on the water unit can be manually swiveled approx. 110 mm toward the patient chair.

IMPORTANT

Chair movements with cuspidor swiveled in Intego

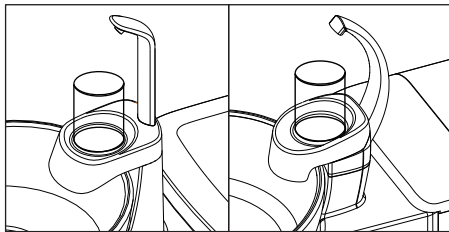
With the cuspidor bowl swiveled in, the chair cannot be moved. This prevents the patient from colliding with the cuspidor. Swing the cuspidor outward before initiating chair movement.

4.7.2 Tumbler filling

The heater for the treatment water is in the water unit. The water heater is optional in the Intego.

4.7.2.1 Tumbler filling on the EasyPad

Filling the tumbler



1. Place a tumbler under the tumbler filler.

2. Press the *Tumbler Filling* fixed key.

↳ The tumbler is filled with water for the preset time.

Pressing the *Tumbler Filling* fixed key again stops the filling function immediately.

Coupling tumbler filling to the mouth rinsing position S and setting the filling time

- Press and hold the *Tumbler Filling* fixed key (> 2 s).

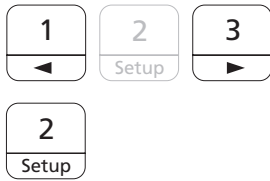
↳ The *Tumbler filling* operating context is displayed. The setting focus *Link tumbler filling to the mouth rinsing position S* flashes.



1. Press on the left or right arrow of the favorite key pad.

↳ The display switches between "S.0" and "S.1". If "S.1" is selected, the tumbler filling function will automatically be switched on for the duration of the preset filling time when the mouth rinsing position S chair program is activated.

2. Confirm your selection with the favorite key 2 / *Setup*.



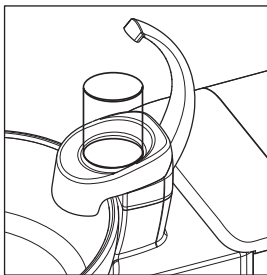
✎ The setting focus *Filling time* flashes.

3. Set the filling time in seconds. Press the left or right arrow on the favorite key field to prolong or shorten the filling time.
4. Confirm your setting with the 2 / *Setup* favorite key.
✎ The time is displayed.

4.7.2.2 Tumbler filling on the EasyTouch

Filling the tumbler

1. Place a tumbler under the tumbler filler.



2. Press the *Tumbler Filling* fixed key.

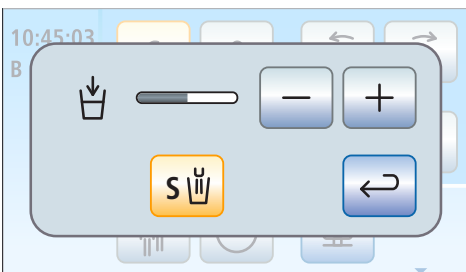
✎ The tumbler is filled with water for the preset time.

Pressing the *Tumbler Filling* fixed key again stops the filling function immediately.

Coupling tumbler filling to the mouth rinsing position S and setting the filling time

1. Press and hold the *Tumbler Filling* fixed key (> 2 s).

✎ The *Tumbler Filling* settings screen is displayed.



2. Touch the *Link tumbler filling to mouth rinsing position* key.
✎ If the key is marked orange, the tumbler filling function will automatically be switched on for the duration of the preset filling time when the mouth rinsing position chair program (S) is activated.
3. Use the – and + keys to set the filling time.

4.7.2.3 Tumbler filling with automatic sensor control

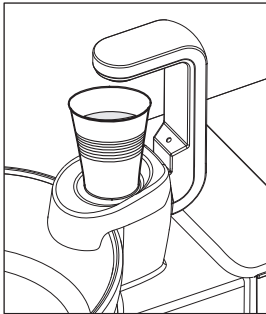
The automatic sensor control is an option on the Comfort water unit and is not available in all countries.

With this tumbler filler, the sensor control automatically detects the filling level of the tumbler.

If the tumbler is removed before the preset filling level has been reached, the water flow stops immediately.

Filling the tumbler

- ✓ The tumbler must not be transparent.
- ✓ The tumbler must always be placed in the center of the area provided for it.
- Place the tumbler under the tumbler filler.
- ✚ The tumbler is filled automatically.
- ✚ After the preset filling level has been reached, the water flow stops automatically.



If required, the tumbler can be refilled manually by the *Tumbler filling* key, see "Tumbler filling on the EasyPad" [→ 153] or "Tumbler filling on the EasyTouch" [→ 154].

IMPORTANT

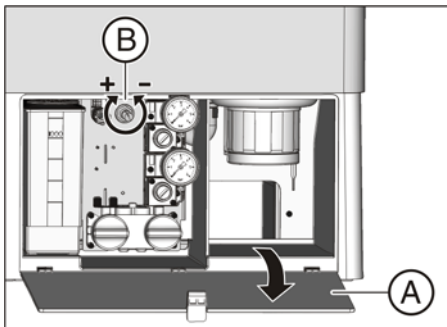
Tumbler filling after switch-on

If an empty tumbler is standing below the tumbler filler when the treatment center is switched on, the tumbler will not be filled automatically. To activate automatic tumbler filling, remove the tumbler briefly and then put it back again.

Setting the filling level

The tumbler filling level can be preset.

1. Open the maintenance flap **A** on the base of the water unit.
2. Set the filling level with control knob **B**.



4.7.3 Flushing the cuspidor

The flushing function can be used for rough cleaning of the cuspidor during treatment.

The cuspidor is always flushed using the public drinking water supply. It is not taken from the fresh water bottle or the tank for stand-alone water supply.

4.7.3.1 Flushing the cuspidor on the EasyPad

Switching flushing on/off

- > Press the *Flushing* fixed key.
 - ↳ The flushing function is activated for the preset flushing time.



Coupling flushing to mouth rinsing position S and setting flushing time

1. Press and hold the *Flushing* key on the dentist element (> 2 s).



- ↳ The operating context *Flushing* is displayed. The setting focus *Link flushing to mouth rinsing position* flashes.

2. Press on the left or right arrow of the favorite key pad.
 - ↳ The display switches between "S.0" and "S.1". If S.1 is selected, the flushing function will automatically be switched on for the duration of the preset flushing time when the chair is moved to mouth rinsing position S.
3. Confirm your selection with the favorite key 2 / *Setup*.

- ↳ The setting focus *Flushing time* flashes.

4. Set the filling time in seconds. Press the left or right arrow on the favorite key pad to prolong or shorten the flushing time.
5. Confirm your setting with the 2 / *Setup* favorite key.
 - ↳ The time is displayed.

4.7.3.2 Flushing the cuspidor on the EasyTouch

Switching flushing on/off



- > Press the *Flushing* fixed key.
 - ↳ The flushing function is activated for the preset flushing time.

Setting the flushing time



1. Press and hold the *Flushing* key on the dentist element (> 2 s).

↳ The *Flushing* settings screen appears on the touchscreen.

2. Set the flushing time with the + and – keys.



Linking flushing to mouth rinsing position S

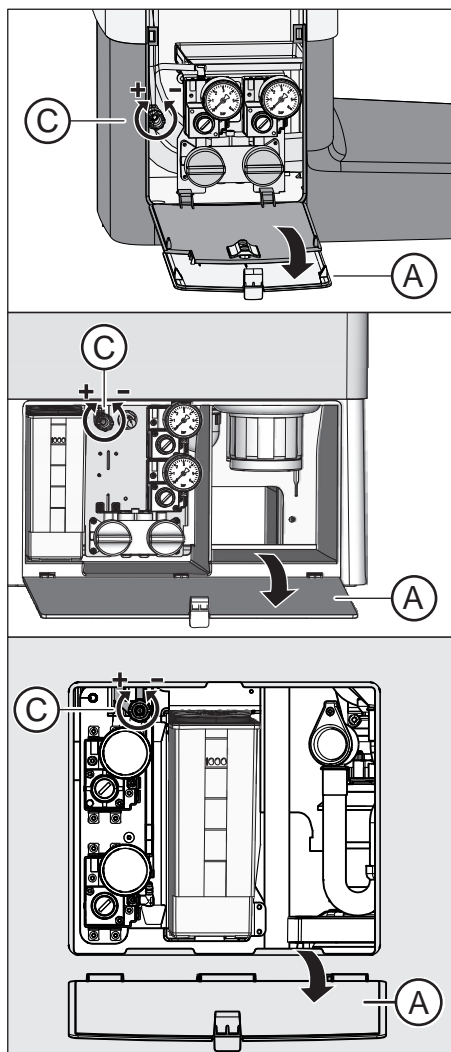


- > Touch the *Link flushing to mouth rinsing position S* key.
 - ↳ If the key is marked orange, flushing is automatically activated for the duration of the flushing time set when the chair is moved to the mouth rinsing position S.

4.7.3.3 Adjusting the water amount for flushing

The water quantity and water pressure for flushing can be set using a valve.

1. Open the maintenance flap **A** on the base of the water unit.
2. Adjust the water amount with the control knob **C**.



4.7.4 Stand-alone water supply

If the water quality of the public drinking water supply is not suitable for treating patients, the treatment center can be operated with a self-sufficient water supply.

In this case, food-grade water is mixed with the agent for disinfecting the water paths in a 100:1 ratio (1 liter of water, 10 ml of the disinfectant) and filled into the fresh water bottle or disinfectant tank of the water unit. The disinfectant will reduce the microbial growth in the water paths.

Please note that drinking water, e.g., water from bottles, must never be filled into the disinfectant tank of the Comfort water unit (due to the minerals they contain). Aqua purificata or aqua destillata can be used as distilled water. Water from bottles can be used without any restrictions for the fresh water bottle.

Regularly sanitize the water paths (every 4 weeks) and always after switching to the public drinking water supply from the stand-alone water supply (see "Sanitization" [→ 279]).

The stand-alone water supply functionality of the Intego is only available if the treatment center is equipped with a fresh water bottle. The Intego Pro treatment center must be equipped with the integrated water disinfection system.

In every mode, the cuspidor is flushed from the public drinking water supply.

CAUTION

Microorganisms can multiply in the water.

These microorganisms could increase the risk of damage to one's health.

- Dentsply Sirona recommends never operating the treatment center without the agent for disinfecting the water paths.
- Mix fresh water for the self-sufficient water supply every day. At the end of the work day, the fresh water bottle must be emptied and remaining water must be flushed out of the disinfectant tank using the tumbler filler.
- Check the amount of bacteria in the water of the treatment center at regular intervals. In particular, if no disinfection system is available or if the water has to be used without the agent for disinfecting the water paths. See "Microbiological water test" [→ 212].

4.7.4.1 Water supply for the Intego

The Compact water unit can be equipped with the optional fresh water bottle for stand-alone water supply for treatment instruments and tumbler filling.

The stand-alone water supply with fresh water bottle is designed for continuous operation. However, the treatment center must be sanitized regularly.

⚠ CAUTION

If the stand-alone water supply is used more than 28 days, the treatment center must be sanitized.

Details on sanitization can be found in the section "Sanitizing with the fresh water bottle" [→ 280].

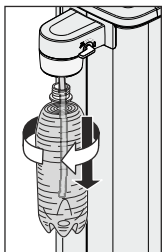
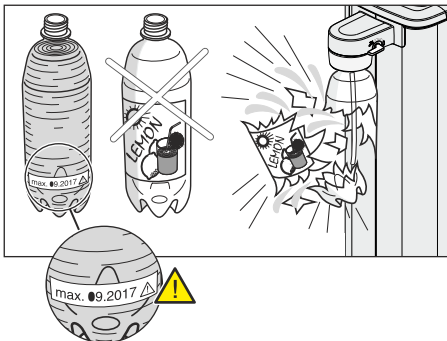
Filling the fresh water bottle

⚠ CAUTION

The fresh water bottle is treated with compressed air when it is screwed into the holder.

Unsuitable bottles such as beverage bottles can burst.

- Use only Dentsply Sirona fresh water bottles!
- Please also observe the general safety instructions (see "Fresh water bottle" [→ 19] section).

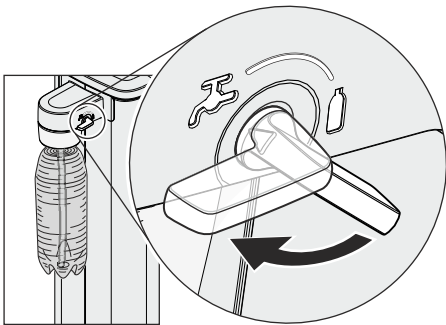


To reorder the fresh water bottle, see "Spare parts and consumables." [→ 311]

1. Remove the fresh water bottle from the holder on the water unit.
 - ↳ The compressed air supply is automatically switched off when the bottle is turned. The existing pressure escapes.
2. Mix food-grade water (< 100 CFU/ml) with the agent for disinfecting the water paths at a ratio of 100:1 (1 liter of water, 10 ml of the disinfectant) and fill this into the fresh water bottle. The bottle has a capacity of approx. 1.3 liters.
3. Attach the hose to the fresh water bottle and screw the bottle into the holder.
 - ↳ When the treatment center is switched on, compressed air is added to the bottle immediately. Treatment can be continued.

Switching between the public drinking water supply and fresh water bottle

If the treatment center is equipped with the optional fresh water bottle in the version which allows switching to the public drinking water supply, the water supply can be switched by turning a lever.



1. For the water supply from the fresh water bottle, turn the lever clockwise to the bottle symbol.
For operation with the public drinking water supply, turn the lever counterclockwise to the faucet symbol.
2. Sanitize the water paths after switching to the public drinking water supply, see "Sanitizing with the fresh water bottle" [→ 280].

⚠ CAUTION

After switching to the water supply via the fresh water bottle, there will still be water without the agent for disinfecting the water paths in the water paths.

- Rinse the water paths through for at least 30 seconds after switching. This ensures the water without the agent for disinfecting the water paths is rinsed out of the treatment center and is replaced by the mixture of water and disinfectant, see "Purge function on the EasyPad" [→ 223].

4.7.4.2 Water supply for the Intego pro

In the Comfort and Ambidextrous water units, the stand-alone water supply should be set only as a temporary operating state if the public drinking water is contaminated and not as a permanent operating state.

The disinfection system option is necessary for stand-alone water supply.

CAUTION

If the stand-alone water supply is used more than 28 days in exceptional cases, the treatment center must be sanitized.

For details on the sanitizing procedure, please see the section "Sanitizing with disinfection system" [→ 288].

NOTE

Always fill distilled food-grade water (< 100 CFU/ml), never drinking water e.g. from beverage bottles (due to the minerals contained therein), into the disinfectant tank of the Comfort water unit.

Aqua purificata or aqua destillata can be used as distilled water.

4.7.4.2.1 Switching to stand-alone water supply on the EasyPad

Accessing the operating context of the stand-alone water supply

✓ All instruments are in their holders.

1. Press the fixed key *Endo / Purge*.



↪ The *Purge* operating context is shown on the EasyPad display.

2. Press favorite key 3 three times.

↪ The *Stand-alone water supply* operating context is displayed.

If there is a "0" next to the text "AqU", the treatment center takes its water from the public drinking water supply. If there is a "1", the treatment center is switched to the stand-alone water supply. To change the mode of operation, proceed as follows:

Changing disinfection system to self-sufficient water supply

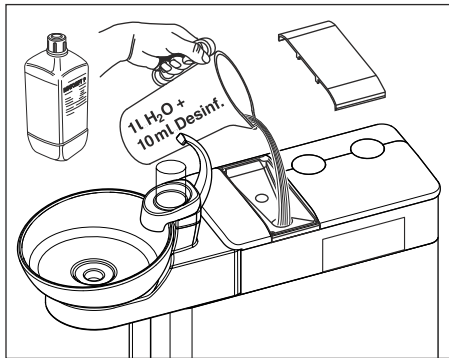
1. Press the favorite key *2 / Setup*.



↪ The selection focus flashes. The treatment center is set for operation with the public drinking water supply.

2. Press favorite key 3.





3. A "1" flashes in the selection focus. The treatment center should be switched to stand-alone water supply.

4. Confirm your selection by pressing the favorite key 2 / *Setup*.

↪ Switching starts. A revolving element is shown on the EasyPad display. If there is still agent for disinfecting the water paths in the tank, it is rinsed down the drain.

↪ The *Refill water* display appears.

5. Mix distilled water with the agent for disinfecting the water paths at a ratio of 100:1 (1 liter of water, 10 ml of the disinfectant) and fill this into the disinfectant tank of the water unit. The tank has a capacity of approx. 1.3 liters. It is full when the water surface is visible on the filter of the filling funnel.

↪ The revolving element is displayed again on the EasyPad display.

6. Wait until switching the mode of operation is complete.

↪ The adjacent message "Aqua" is shown. The disinfection system is now changed to the self-sufficient water supply.

7. Acknowledge the message by pressing the favorite key 2 / *Setup*.

↪ The time is displayed.

Resetting the disinfection system to the public drinking water supply and the agent for disinfecting the water paths

Resetting the disinfection system to public drinking water is performed in the same manner as changing to self-sufficient water supply. Instead of the *Refill water* display, the *Refill agent for disinfecting the water paths* display appears on the EasyPad.

1. Fill approx. 0.5 liters of the agent for disinfecting the water paths into the disinfectant tank.
2. Sanitize the water paths after switching to the public drinking water supply, see "Sanitizing with disinfection system" [→ 288].

Level control

If the *Refill water* or *Refill agent for disinfecting the water paths* display appears during the treatment, the reservoir is almost empty (< 400 ml). Pressing the *Counterclockwise rotation/user profile* key hides the display and the treatment is continued. Refill the tank as soon as possible.

IMPORTANT

400 ml are approximately sufficient for:

- 6.5 min. spray operation (motor, high-speed handpiece, scaler) or
- 2.5 min. Sprayvit Eoperation or
- 5 x tumbler fillings

The actual values depend on the instrument types and settings used.

4.7.4.2.2 Switching to stand-alone water supply with the EasyTouch

Opening the Start sub-screen

- ✓ All instruments are in their holders.
- ✓ The *Start dialog* is displayed on the touchscreen.
- Press the *Sub-dialog* fixed key.

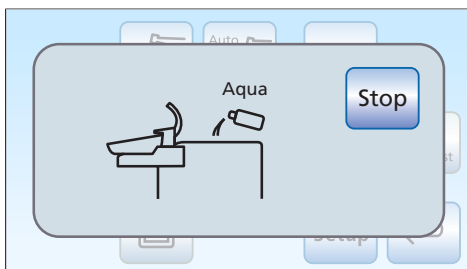


✎ The *Start* sub-dialog is displayed.

Changing disinfection system to self-sufficient water supply

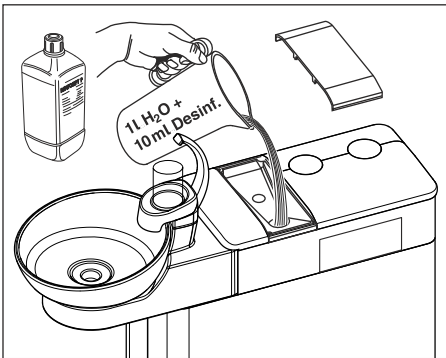
If the *Aqua* key is displayed gray in the *Start* sub-dialog, the treatment center obtains water from the public water supply (municipal water). If the key is highlighted orange, the treatment center is switched to self-sufficient water supply. To change the mode of operation, proceed as follows:

1. Press and hold the *Aqua* key (> 2 s).



✎ The *Aqua* key flashes orange until the disinfectant tank is emptied. In addition, the *Switching to self-sufficient water supply* display appears.

✎ If there is still agent for disinfecting the water paths in the tank, it is rinsed down the drain. This can take up to 6 minutes. The *Refill water* display then appears on the touchscreen.



2. Mix distilled water with the agent for disinfecting the water paths at a ratio of 100:1 (1 liter of water, 10 ml of the disinfectant) and fill this into the disinfectant tank of the water unit. The tank has a capacity of approx. 1.3 liters. It is full when the water surface is visible on the filter of the filling funnel.

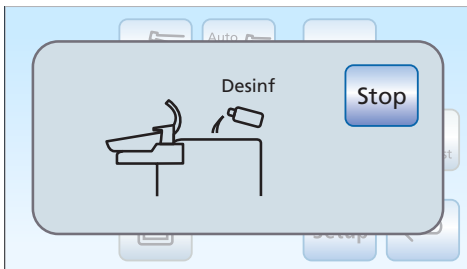


- ↳ In the *Start* sub-screen, the *Aqua* key is highlighted in orange. The disinfection system is now changed to the self-sufficient water supply.

Resetting the disinfection system to the public drinking water supply and the agent for disinfecting the water paths

Resetting the disinfection system to public drinking water is performed in the same manner as changing to self-sufficient water supply. Instead of the *Refill water* display, the *Refill agent for disinfecting the water paths* display appears on the touchscreen.

1. Fill approx. 0.5 liters of the agent for disinfecting the water paths into the disinfectant tank.
2. Sanitize the water paths after switching to the public drinking water supply, see "Sanitizing with disinfection system" [→ 288].



Level control

If the *Refill water* or *Refill agent for disinfecting the water paths* display appears during the treatment, the reservoir is almost empty (< 400 ml). By pressing the *Return* key, the display can be hidden and the treatment can be continued. Refill the tank as soon as possible.

IMPORTANT

400 ml are approximately sufficient for:

- > 6.5 min. spray operation (motor, high-speed handpiece, scaler) or
- > 2.5 min. Sprayvit Eoperation or
- > 5 x tumbler fillings

The actual values depend on the instrument types and settings used.

4.7.5 Converting the Ambidextrous water unit for right and left-handed people

CAUTION

There must be no patient in the chair during conversion.

The patient would otherwise collide with treatment center components.

- Move the patient chair to the entry/exit position 0 and guide the patient out of the movement range.

CAUTION

To prevent injuries caused by falling objects, never place or hang anything on the dentist or assistant element, the tray or its support arms during conversion.

NOTE

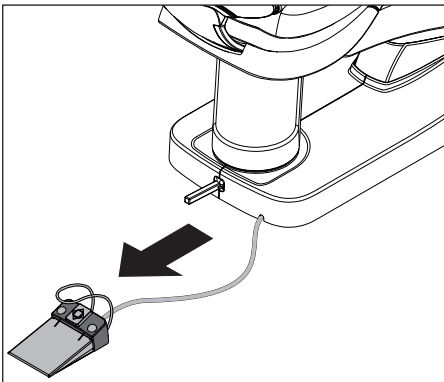
During conversion the water unit with the dentist element, assistant element and operating light are moved on the opposite side of the treatment center.

Hereby components of the water unit could collide with obstacles such as walls, furniture and windows.

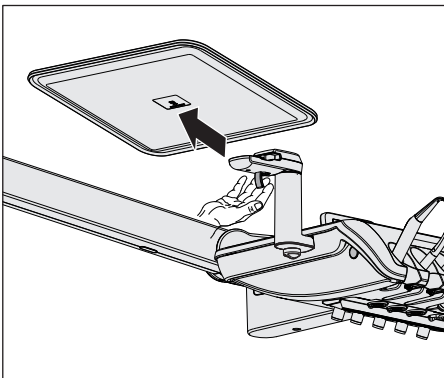
- Observe the following instructions to convert the treatment center with the smallest possible space requirements.
- Always move the components with extreme care.

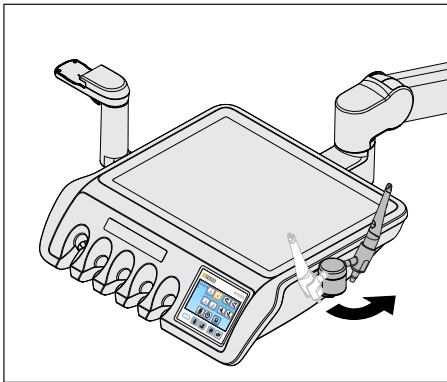
Preparing the treatment center

1. If an electric foot switch is available; bring the electric foot switch out of the swiveling area of the water unit.

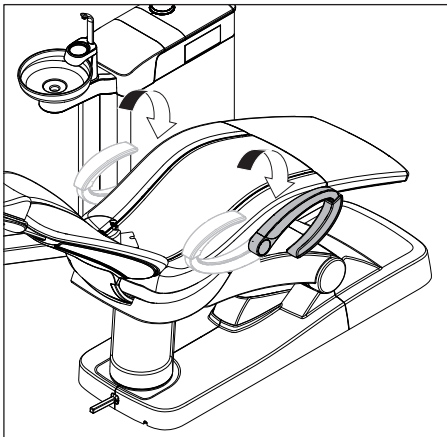


2. If a tray is available on the dentist element: remove the tray from the holder.

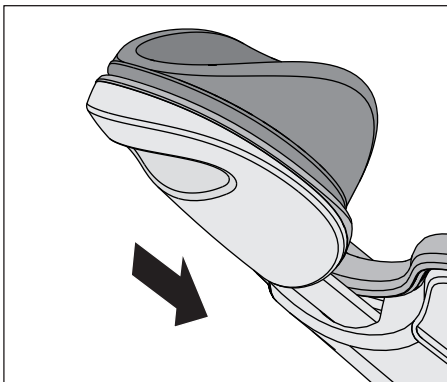




3. If an additional holder has been installed on the dentist element: turn the additional holder inwards.



4. If armrests have been installed on the treatment center: fold the armrests downwards.

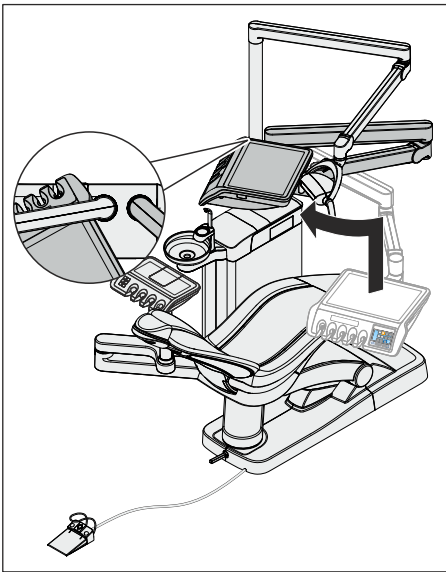


5. Push the head rest in completely.

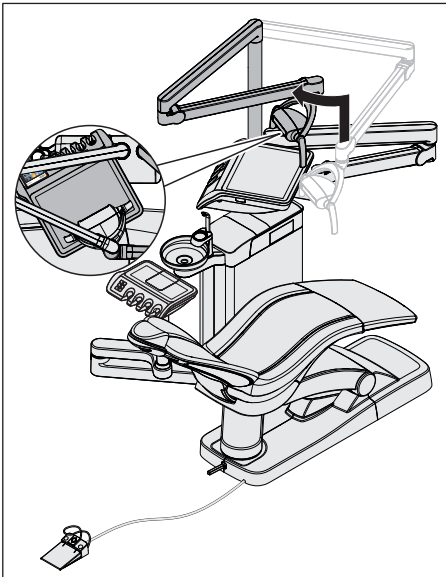
NOTE

The head rest must be fully retracted for conversion.

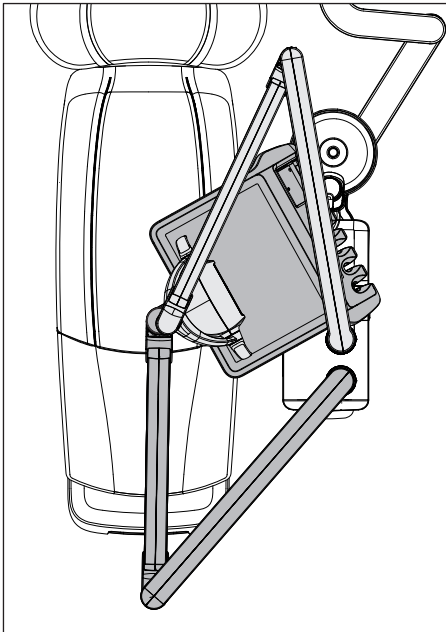
Otherwise the support arm of the dentist element will collide with the head rest.



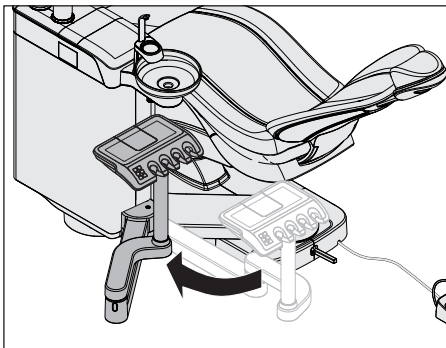
6. Move the dentist element right to the top.
7. Swivel the dentist element so that it is positioned closely in the grip area of the light support bar.



8. Position the operating light above the dentist element. The joint of the support arm must now point towards the head rest.



9. If a Comfort assistant element is present; swivel the Comfort assistant element to the water unit underneath the cuspidor bowl.



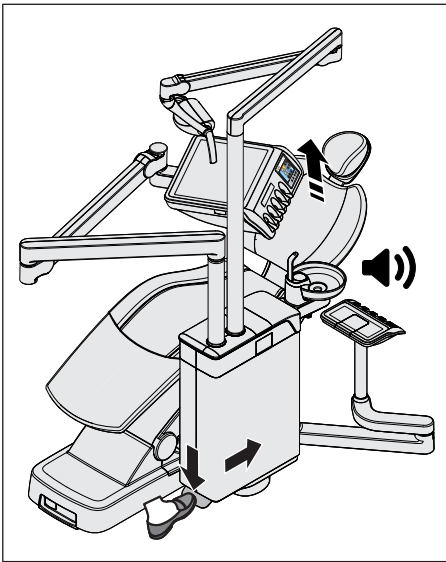
Turn the water unit

⚠ CAUTION

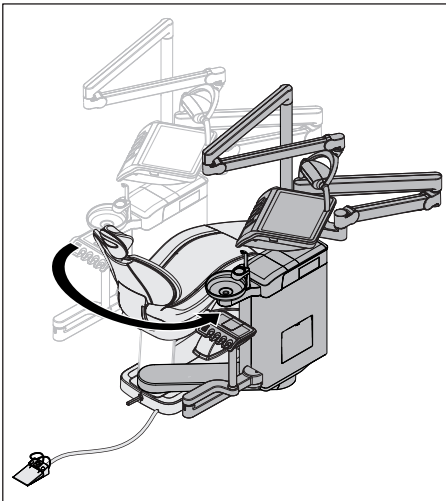
The water unit is now guided with a rotary motion to the opposite side of the treatment center.

Here the user's foot can become trapped under the water unit.

- Always stand behind the foot pedal at the water unit during conversion. Move the water unit by pushing and not pulling it.



1. Press the foot pedal and move the water unit slightly upwards.
 - ↳ The patient chair will move automatically into a position in which the water unit can be rotated. An acoustic signal will also be given.



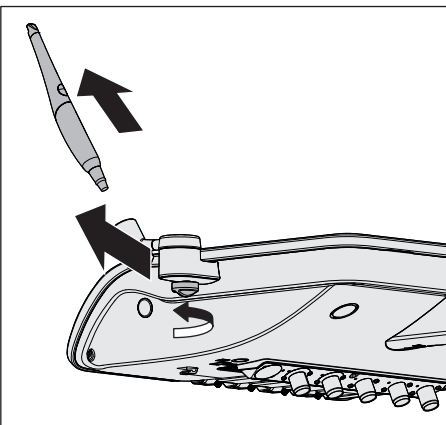
2. Move the water unit up until the stop to the other side of the patient chair.
 - ↳ The water unit will snap in automatically.

⚠ CAUTION

The water unit must snap in the end position.

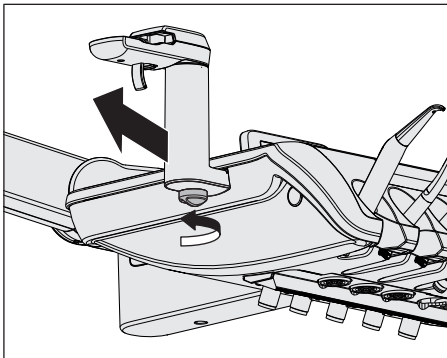
If the water unit is not locked into position, there is a risk of collisions and crushing for the patient and user.

➤ Check whether the water unit is snapped in.

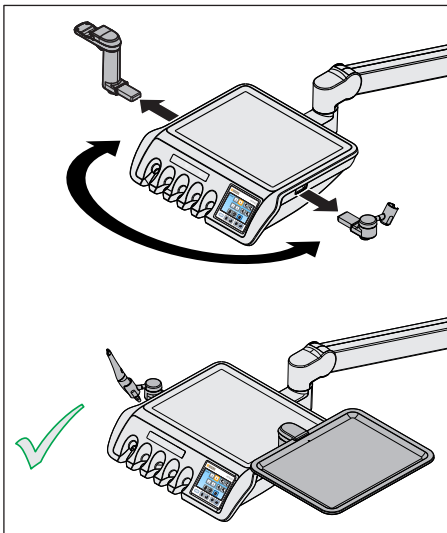


Re-connecting the tray holder and additional holder

1. If an additional holder on the dentist element is present: remove the intraoral camera from the additional holder. Remove the screw by hand and take the additional holder out of the dentist element.



2. If a tray holder on the dentist element is present: remove the screw by hand and take the tray holder out of the dentist element.



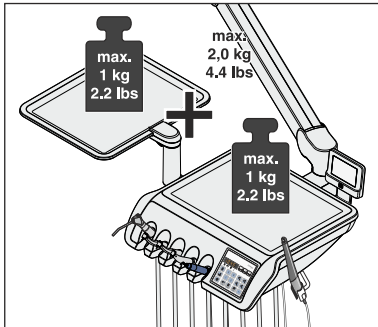
3. Install both the tray holder and the additional holder on the other side of the dentist element.
4. Place the intraoral camera in the additional holder and secure the tray in the tray holder.

Completing the conversion

- Bring the dentist element, operating light and Comfort assistant element (if present) back into the working position.

4.8 Swiveling tray holder

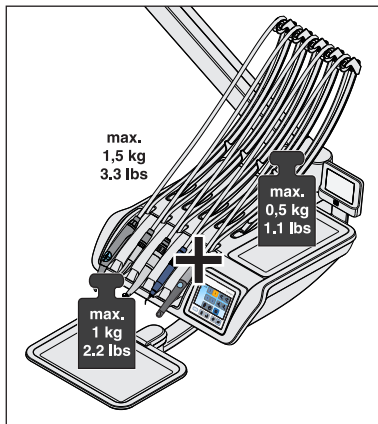
Maximum load capacity



The TS dentist element can be equipped with a tray. The holder has room for two standard trays.

For treatment centers without the Ambidextrous option, the tray is mounted on the left of the assistant element. With the Ambidextrous option, the tray holder can be removed from the dentist element and positioned on both sides by the user.

The maximum load on the TS dentist element with a tray holder is 2 kg (4.4 lbs). In this case, the maximum load on the dentist element and the tray is 1 kg (2.2 lbs) each.

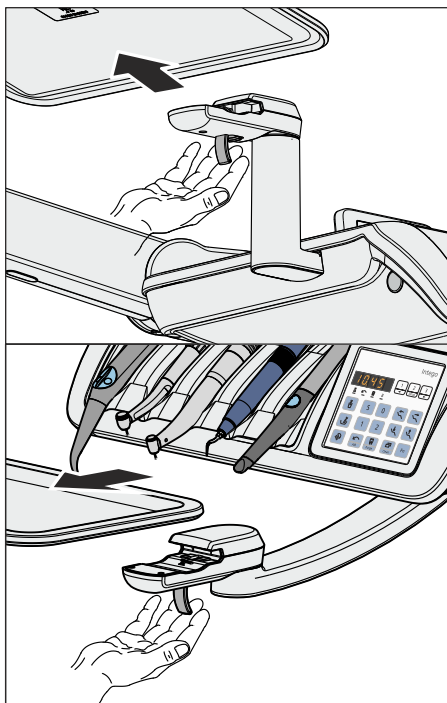


The CS dentist element can be equipped with a tray holder mounted under the dentist element. The holder is available in two sizes for one or two standard trays

The maximum load on the CS dentist element with a tray holder is 1.5 kg (3.3 lbs). In this case, the maximum load on the dentist element is 0.5 kg (1.1 lbs) and on the tray 1 kg (2.2 lbs).

Removing the tray

1. Hold the tray tightly.
2. Open the lock by turning the lever downwards.
3. Remove the tray.
4. Let the lever fall back into its original position.



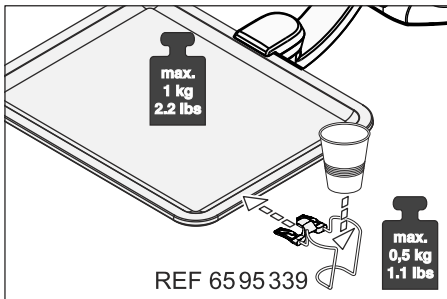
To insert the tray holder, simply guide it into the mount. The mechanism locks automatically.

CAUTION

If the tray is not locked in place, it can disengage from the tray holder.

- After installing the tray, make sure it is securely attached to the tray holder.

4.9 Cup holder



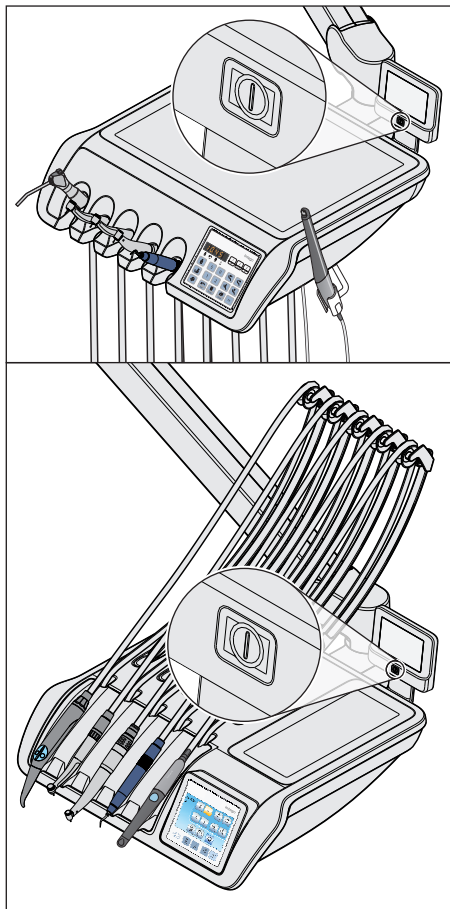
A cup holder can be attached to the tray to collect waste. It is suitable for disposable 0.2-liter cups.

The cup holder may not be attached to the front edge of the tray.

The maximum load of the cup holder is 0.5 kg (1.1 lbs). The load on the tray and the cup holder may not exceed a total of 1 kg (2.2 lbs).

The cup holder can be ordered from a specialized dealer.

4.10 X-ray image viewer



The TS and CS dentist elements can be equipped with an X-ray viewer.

The ON/OFF switch is on the X-ray viewer. It switches off automatically after 10 minutes.

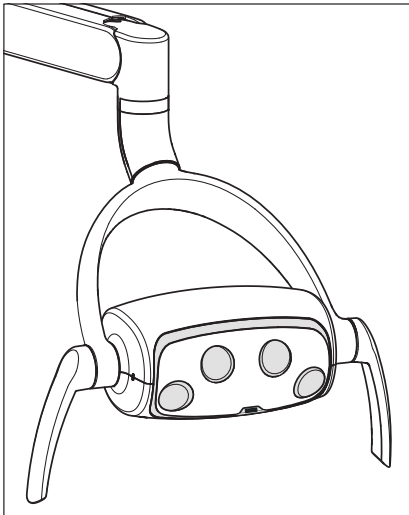
If the treatment center does not have an X-ray viewer, but is equipped with a Sivation monitor, it can be switched to a white screen in the *Start* sub-screen. The white screen function is available only with the EasyTouch.

WARNING

Misdiagnoses of X-ray images are possible

Use the white screen of the Sivation monitor **not for diagnosis** of X-ray images. The light intensity of the monitor is not sufficient.

4.11 Operating light



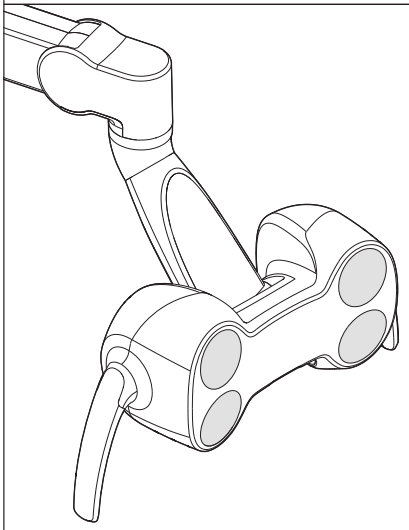
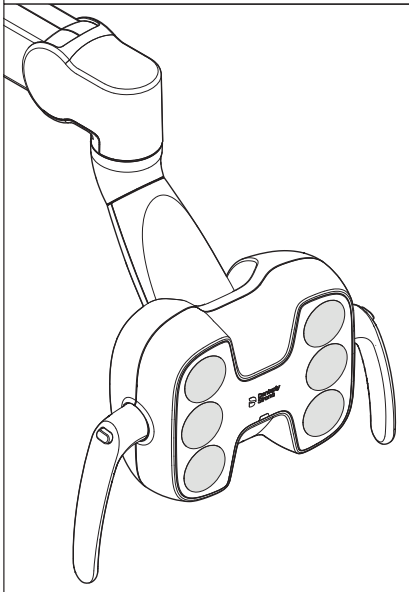
The operating light is mounted on a multi-joint support arm. It can be easily adjusted to the operating field using the handles. Brakes in the support arm hold the operating light in the desired position.

The clearly defined light field illuminates the treatment area without blinding the patient.

Tip: The ideal working distance between the light and the patient's mouth is 70 cm/27.5 inches.

NOTE

Also observe the operating instructions of your operating light.



4.11.1 Switching the operating light on/off

Repeatedly press the *Operating light* fixed key to set the following switching positions at the assistant element:

1. Switched on: The operating light is switched on at the preset brightness level.
 2. Composite function: This function delays the curing of composite materials.
 3. Switched off
- Press the *Operating light* fixed key on the dentist or assistant element (several times if necessary).
- ✎ The operating light switches to "switched on", "composite function" or "switched off".



At the bottom of the LEDlight, LEDlight Plus, and LEDview Plus operating lights, a non-touch sensor is attached. It can be used to switch the operating light on and off or to the composite function with a hand movement. With the LEDview Plus, the sensor control can be switched on or off via the user interface of the dentist element. Additionally, it is possible to set the distance at which the non-touch sensor should react to movement.

4.11.2 Setting the brightness of the LEDlight and LEDlight Plus

The operating light is always switched on at the programmed brightness. With the LEDlight and LEDlight Plus, the brightness is programmed via the non-touch sensor. For details, please see the operating instructions for the operating light.

4.11.3 Setting the brightness, color temperature, and sensor control of the LEDview Plus

The operating light is always switched on with the programmed brightness level. The setting is carried out using the user interface of the dentist element.

Setting the LEDview Plus on the EasyPad



1. Press and hold the *Operating light* key on the dentist element (> 2 s).

↪ The *Brightness* operating context is displayed on the EasyPad screen. The setting focus flashes.

2. Use the left and right arrows on the favorite key pad to adjust the brightness of the operating light (7 levels). The left arrow key decreases the brightness, the right arrow key increases it.
3. Confirm your setting with the 2 / *Setup* favorite key.

↪ The *Light temperature* operating context is displayed on the EasyPad screen. The setting focus flashes.

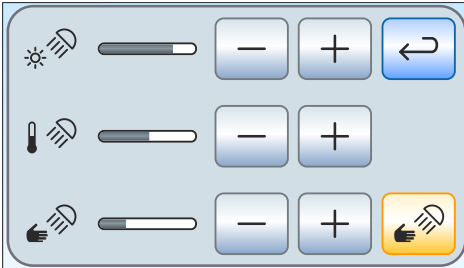
4. Use the left and right arrows on the favorite key pad to adjust the light temperature of the operating light (3 levels). The left arrow key decreases the light temperature, the right arrow key increases it.
5. Confirm your setting with the 2 / *Setup* favorite key.

↪ The *Sensor control* operating context is displayed on the EasyPad screen. The setting focus flashes.

6. Use the left and right arrows on the favorite key pad to adjust the operating distance of the contactless sensor (5 levels). The left arrow key decreases the operating distance, the right arrow key increases it. You can try out the setting directly on the operating light without leaving the setting program. The setting should be selected so that the contactless sensor cannot be operated unintentionally. Set the operating distance to "0" to deactivate the contactless sensor.
7. Confirm your setting with the 2 / *Setup* favorite key.

↪ The time is displayed.

Setting LEDview Plus on the EasyTouch



1. Press and hold the *Operating Light* fixed key on the dentist element (> 2 s).

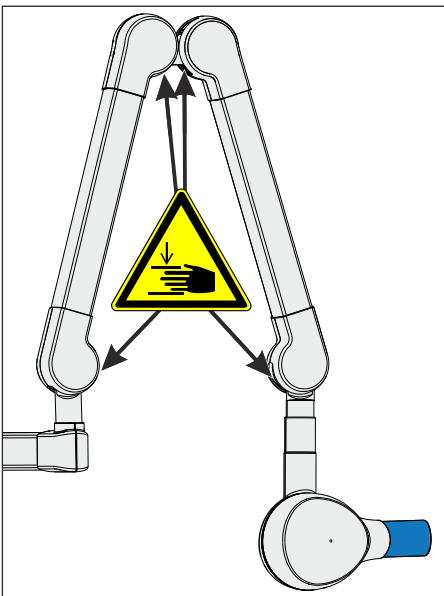
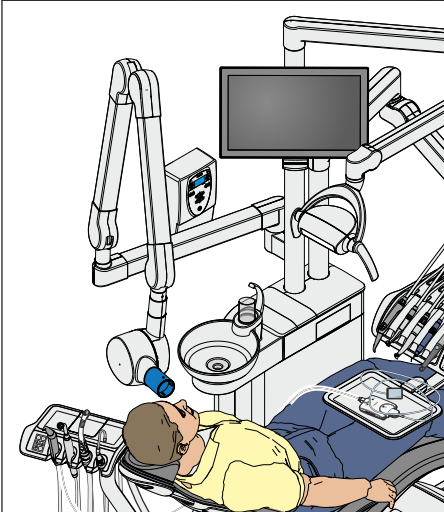
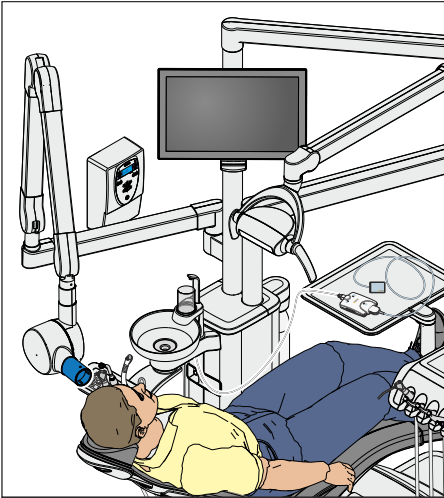
✎ The settings screen of the operating light is displayed on the touchscreen.

2. Use the – and + keys to set the desired brightness of the operating light (7 levels). The – key decreases the brightness and the + key increases it.
3. Use the – and + keys to set the desired light temperature of the operating light (3 levels). The – key decreases the light temperature and the + key increases it.
4. Touch the *Sensor control* key.

✎ If the key is highlighted in orange, the operating light can be controlled with the contactless sensor. The keys for adjusting the operating distance are displayed.

5. Use the – and + keys to set the desired operating distance (5 levels). The – key decreases the operating distance and the + key increases it. You can try out the setting directly on the operating light without leaving the setting program. The setting should be selected so that the contactless sensor cannot be operated unintentionally.
6. Touch the Sensor control key again to switch off the sensor control.
 - ✎ The key is no longer highlighted in orange and the keys for adjusting the operating distance are faded out.

4.12 X-ray tube unit



The Intego and Intego Pro treatment centers can be equipped with the Heliodent Plus X-ray tube unit. No X-ray tube unit is available for treatment centers with the Ambidextrous option.

The X-ray tube unit is attached to the light post of the treatment center using a multi-jointed support arm that can be adjusted both horizontally and vertically. Brakes in the support arm hold the X-ray tube unit in the position to which it has been adjusted.

The X-ray parameters are set on the wall adapter of the X-ray tube unit or on a "remote timer".

The intraoral X-ray system Xios XG USB module can be connected to the PC via the USB interface on the dentist and assistant element. For details, please refer to the section "USB interface" [→ 197].

WARNING

The X-ray tube unit can be positioned within the movement range of the patient chair.

Moving the patient chair may cause the patient to collide with the X-ray tube unit or its support arm. The patient could be injured.

- Before moving the patient chair, position the X-ray tube unit to make a collision with the patient or the patient chair impossible.

CAUTION

Gaps appear between the internal hinges when moving the support arm.

Fingers may be crushed in these gaps.

- Ensure that you never place your fingers in the gaps between the hinges, neither during operation nor for cleaning purposes.

IMPORTANT

See also the Heliodent Plus operating instructions.

4.13 Sivation Digital video system

The Sivation Digital video system enables intraoral and extraoral images to be made. The SiroCam F / AF / AF+ intraoral camera generates digital image data that can be transmitted via a USB 2.0 port (high-speed universal serial bus) to a connected PC and stored there. This computer can then display the images on the Sivation monitor of the treatment center.

The video images represent an outstanding possibility for improving patient communication.

CAUTION

The video images are not suitable for diagnosis.

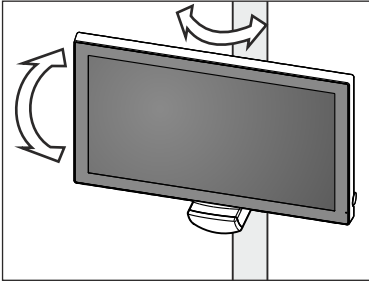
The Sivation Connect and/or Siucom Plus application must be installed in order to transmit the camera images to the PC. Siucom Plus enables PC control. Furthermore, a video application, e.g. Sidexis 4 or Sidexis XG and/or SI Video must be installed on the PC in order to display the camera images. For details, refer to the "Installation and configuration of Siucom Plus / Sivation Connect" manual.

4.13.1 Sivation monitor

22" AC Monitor (REF 6576248 D3678)

The monitor is equipped with loudspeakers. There is an IEC socket on the back of the monitor for the power supply. Please refer to the operating instructions for the 22" AC monitor for details.

The monitor is mounted on the lamp support rod. It can be rotated and swiveled.



The back of the 22" AC monitor has threaded holes at a distance of 100 mm (VESA standard MIS-D 100).

Monitors with threaded holes at a distance of 75 mm can be mounted on the monitor holder of the LEDlight, LEDlight Plus, and LEDview Plus lamp support rod (VESA standard MIS-D 75). Monitors with threaded holes at a distance of 100 mm can also be mounted on the monitor holder of the LEDlight Plus and LEDview Plus lamp support rod (VESA standard MIS-D 100).

The 22" AC monitor can thus be mounted directly on the monitor holder on the LEDlight Plus and LEDview Plus lamp support rod. The adapter plate REF 6626001 must be used to assemble the monitor on the LEDlight lamp support rod.

WARNING

Monitors without approval must not be connected.

They endanger the product safety of the treatment center.

- Use only monitors that are approved according to IEC 60950-1, IEC 62368-1 (office equipment) or IEC 60601-1 (medical devices).

WARNING

Unsuitable devices can be connected to the loudspeaker port of the monitor.

The connection of unsuitable devices endangers the product safety of the treatment center.

- The loudspeaker port of the monitor may be connected only to a device that complies with IEC 60950-1, IEC 62368-1 (office equipment such as PCs) or IEC 60601-1 (medical devices). Under no circumstances should it be connected e.g. to a stereo system.

4.13.2 SiroCam F/AF/AF+ intraoral camera

4.13.2.1 Safety instructions

The SiroCam F / AF / AF+ intraoral camera is a sensitive optical instrument and must therefore always be handled with care.

NOTE

The lens window is sensitive to scratches.

The lens window can be damaged by hard objects. Deep scratches in the lens window impair image quality.

- > Always place the intraoral camera in the designated holder and clean the lens window with a soft cloth.

IMPORTANT

The intraoral camera is heated during operation due to the LEDs in the camera head.

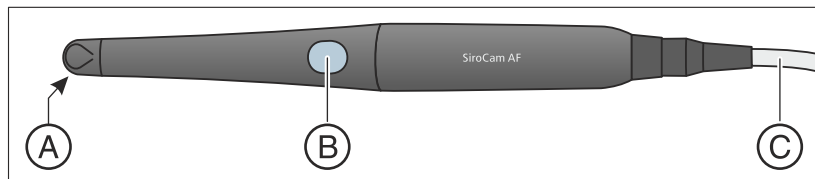
The following temperatures are reached:

Duty time	Temperature at 25 °C room temperature	Temperature at 37 °C in oral cavity
1 min	31 °C	43 °C
Continuous operation	46 °C	58 °C

4.13.2.2 Functional description

The camera generates digital image data with the help of a CMOS sensor.

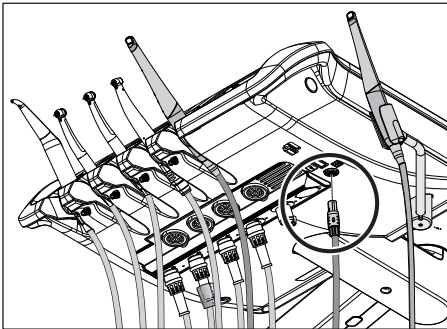
The cameras SiroCam AF and SiroCam AF+ feature automatic focus and can thus be used for both intraoral and extraoral images. In the SiroCam F, focusing is set for the close-up range.



A	Lens window (covered)
B	Key for automatic focus (auto focus) in the SiroCam AF and SiroCam AF+, no function in the SiroCam F
C	Connection cable

4.13.2.3 Connecting the SiroCam F / AF / AF+ intraoral camera

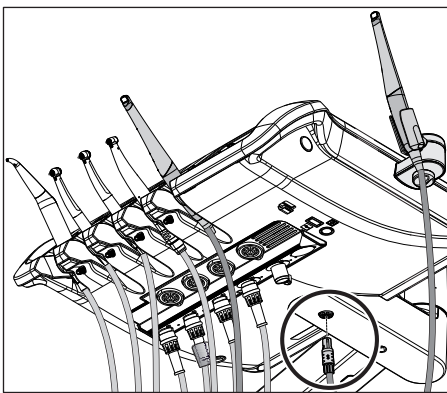
Connecting the intraoral camera to the TS dentist element



Depending on the equipment version, the intraoral camera can be placed at instrument position five or in the additional holder.

The intraoral camera is connected on the bottom side of the dentist element.

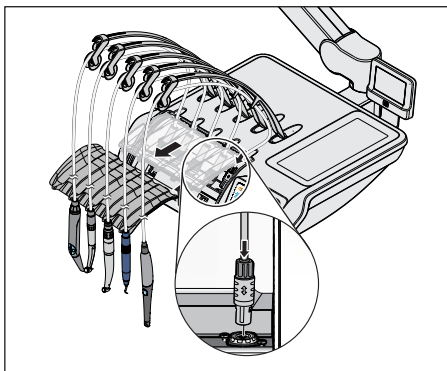
- Plug the connector of the intraoral camera into the socket on the dentist element.
- The plug locks in place.



If with treatment centers with the Ambidextrous option the intraoral camera is placed in the additional holder, the socket is located in the middle on the bottom of the TS dentist element.

Connecting the intraoral camera to the CS dentist element

The connecting cable of the intraoral camera is guided through a swivel arm. The camera connection is located underneath the instrument holder. The holder is fixed on the front edge with two internal clamps on the dentist element.

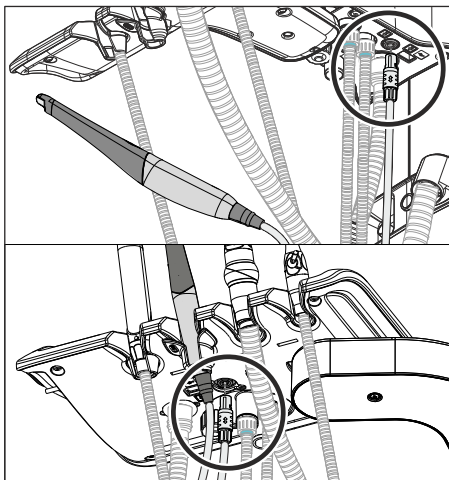


1. The instruments must be removed from the instrument holder. To do this, remove all instruments one after the other and allow these to hang down in front of the dentist element.
2. Lift the instrument holder by the front edge until the clamps are released and the holder can be removed.
3. The connection for the intraoral camera is located at the fifth instrument position. Insert the connection cable of the camera in the swivel arm and insert the camera connector into the socket.
➤ The plug locks in place.
4. First insert the rear edge of the instrument holder into the groove on the dentist element. Then push the holder forward and down until it locks into place.
5. Place the instruments in their holders. Make sure that the instrument hoses and the connection cable of the camera are located in the guide rollers of the swivel arm.

Connecting the intraoral camera to the assistant element

The intraoral camera can be operated at the second instrument position of the assistant element. The camera connection is located underneath the assistant element instead of the connection for the curing light.

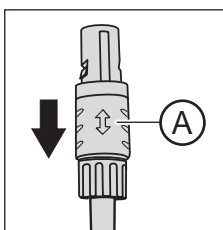
- > Plug the connector of the intraoral camera into the socket on the assistant element.
 - ↳ The plug locks in place.



Removing the intraoral camera

The plug of the intraoral camera is secured against unintentional removal.

- > Grasp the plug by its locking device **A** and pull this out without tilting, if possible.



4.13.2.4 Operating SiroCam F / AF / AF+ intraoral camera

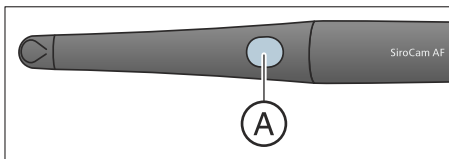
An external or internal PC is required in order to display the video images of the SiroCam F / AF / AF+ intraoral camera on the Sivation monitor. The Sidexis or SI Video can be used as a PC video application. For details please refer to chapter "Operation with a PC" [→ 191].

The video applications can be operated via the user interface of the dentist element or the C+ electronic foot control.

4.13.2.4.1 Focusing SiroCam AF / AF+ intraoral camera

The SiroCam AF / AF+ intraoral camera adjusts the image focus at the touch of a button. It is focused continuously.

1. Direct the camera to the subject to be acquired.
↳ The image is displayed on the Sivation monitor.
2. Press the *Auto focus* key **A**.
↳ The intraoral camera adjusts the image focus according to the distance from the object to be scanned. The adjustment remains until the key is pressed again.



If the treatment center is equipped with the C+ electronic foot switch, it can be configured in the setup that the foot control can be used to focus the camera, see "Switch intraoral camera focus ON/OFF with the C+ electronic foot switch" at for Easy Pad [→ 201], at for EasyTouch [→ 207].

4.13.2.4.2 Focusing the SiroCam F intraoral camera

With the SiroCam F, focusing is set only for close-up range. The **A** key has no function

4.13.2.4.3 Using the camera with SI Video



Using SI Video, up to four still images can be generated with the SiroCam F / AF / AF+ intraoral camera. These can be displayed on the Sivation monitor either as a sequence of single images or simultaneously as a quad image. The active quadrant is marked with an orange square. The quadrants are run through in a clockwise direction.

The generated still images remain until the treatment center or the PC is disconnected from the power supply.

- Pull out the intraoral camera.
 - ✎ The live image is displayed on the Sivation monitor as a single image.
 - ✎ The text "CAM" is displayed on the EasyPad.



- ✎ The *Sivation dialog* is displayed on the EasyTouch touchscreen.

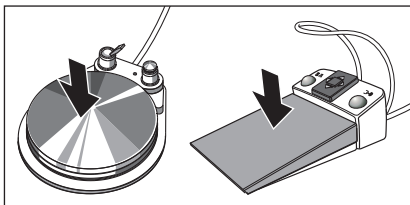
When the intraoral camera is put in the holder, the live image is no longer displayed on the monitor. The generated still images remain displayed.

Operation of Si Video with the camera removed

When the camera is removed, the SI video is controlled via the C+ electronic foot control, the keys of the EasyPad, or the virtual keys of the EasyTouch in the *Sivation dialog*.

Switching between live and still image

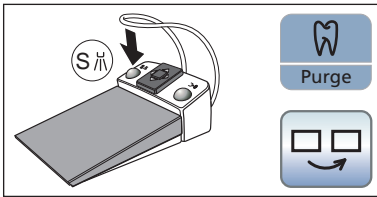
- ✓ The intraoral camera is removed from its holder.
- 1. Press the **foot pedal**.
 - ✎ The display switches from live to still image.
- 2. Step on the foot control again.
 - ✎ The live image is displayed again.



If the treatment center is equipped with an autofocus camera and the C+ electronic foot control, it can be configured in the setup that the camera image can be focused with the foot control, see "Switching on/off focusing of the intraoral camera with the C+ electronic foot control" for Easy Pad [→ 201], for EasyTouch [→ 207]. In this case, the foot pedal must be pressed down fully to switch between live and still images.

Selecting the next quadrant

In order to produce another still image, another quadrant must be selected. If there is already a still image in the desired quadrant, it can be replaced by a new image.



- ✓ The intraoral camera must be removed to allow for operation via the foot switch.

1. Press the **left button** of the C+ electronic foot control.

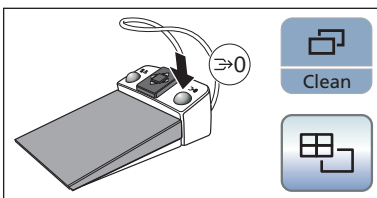
or

- Press the *Endo / Purge* key on the EasyPad, on the EasyTouch the *Select next quadrant* key.

↳ The orange square highlights the selected quadrant. When the intraoral camera is removed, the live image is displayed.

Switching between quad image and single image

When switching from quad to single image, the previously marked quad image is displayed as a single image. Conversely, the displayed single image is marked in the quad image.



- ✓ The intraoral camera must be removed to allow for operation via the foot switch.

1. Press the **right button** of the C+ electronic foot control.

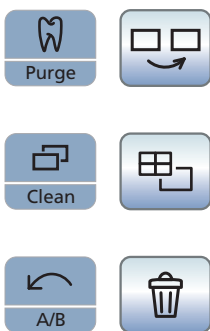
or

- Press the *Display mode / Clean* key on the EasyPad, on the EasyTouch the *Quad image* key.

↳ The mode changes between quad and single image.

Operation of Si Video with the camera in place

When the camera is in its holder, SI Video is controlled via the EasyPad using three fixed keys, and via the EasyTouch using the Sivation program buttons.



Selecting the next quadrant

In single image mode, the still image in the next quadrant is displayed. In quad image mode, the next quadrant is highlighted.

Quad image

Display quad image or single image. Up to four single images are simultaneously displayed on the Sivation monitor in quad image mode.

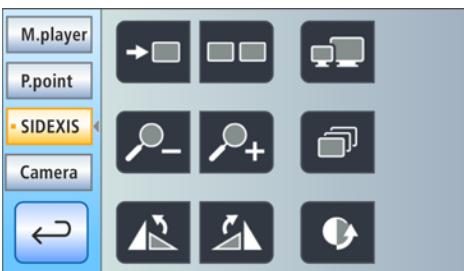
Deleting images

All generated still images are deleted.

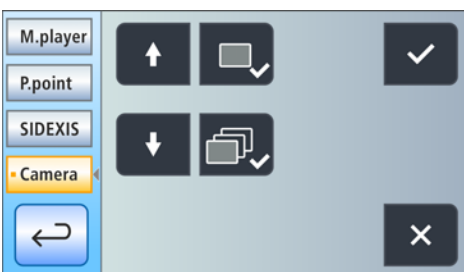
4.13.2.4.4 Using the camera with Sidexis



In addition to displaying and processing X-ray images, Sidexis XG and Sidexis 4 can also be used as a video application for the SiroCam F / AF / AF+ intraoral camera. Sidexis displays live and still images in separate windows. Still images are saved in the patient's database.



Some functions of Sidexis 4 and Sidexis XG can be controlled via the user interface of the treatment center, see "Communication with Sidexis" [→ 194].



If the intraoral camera is used with Sidexis 4, a video plugin must also be installed. For details on installation and use of the plugin, please see the user manual "Video plugin for Sidexis 4." Versions 2.0 and higher of the video plugin for Sidexis 4 can be controlled via the user interface of the treatment center, see "Communication with the video plugin" [→ 196].



Switching the SiroCam F / AF / AF+ intraoral camera on/off

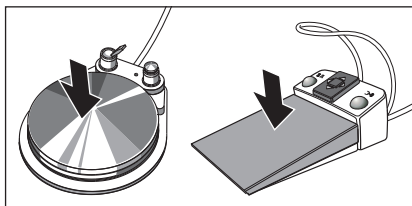
- ✓ The PC is in operation and the Sivation Connect or Siucom Plus PC application is started.
- Take the SiroCam F / AF / AF+ intraoral camera from the holder.
 - ✚ Sidexis is started and the live image appears on the Sivation monitor.
 - ✚ The text "CAM" is displayed on the EasyPad.
 - ✚ The *Sivation dialog* is displayed on the EasyTouch touchscreen.

When the intraoral camera is deposited, the live image window closes. Sidexis remains active on the PC.

Generating a still image

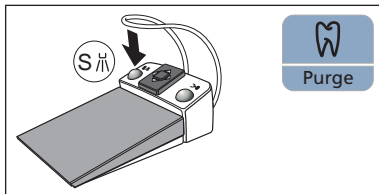
- ✓ The live image is displayed on the Sivation monitor.
- 1. Press the **foot pedal**.
 - ✚ The display switches from live to still image.
- 2. Step on the foot control again.
 - ✚ The live image is again displayed on the Sivation monitor.

If the treatment center is equipped with an autofocus camera and the C+ electronic foot control, it can be configured in the setup that the camera image can be focused with the foot control, see "Switching on/off focusing of the intraoral camera with the C+ electronic foot control" for Easy Pad [→ 201], for EasyTouch [→ 207]. In this case, the foot pedal must be pressed down fully to switch between live and still images.



Saving an image

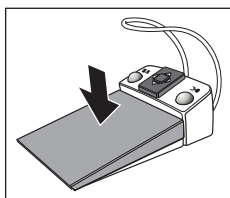
- ✓ The patient must be registered in Sidexis.
- ✓ The still image to be saved is displayed on the Sivation monitor.
- Press the **left button** of the C+ electronic foot control or press the *Endo / Purge* key on the EasyPad.
 - ✚ An acoustic signal sounds. The still image is displayed in an additional Sidexis window and saved in the patient database.



Focusing and automatically saving the image

When using Sidexis 4 version 4.2 or higher in combination with the video plugin version 2.0 or higher, we recommend selecting the third option in the setup program for focusing the intraoral camera, see "Switching focusing the intraoral camera with the C+ electronic foot control on/off" on the Easy Pad [→ 201], on the EasyTouch [→ 207]. The images are then displayed automatically in an image bar on the Sivation monitor. Saving the still image with the left button (S) of the foot control and switching between live and still image are thus omitted.

- ✓ The live image is displayed on the Sivation monitor.
- Press the **foot pedal**.
 - ✚ The camera image is focused and saved automatically.



4.13.3 Technical camera data

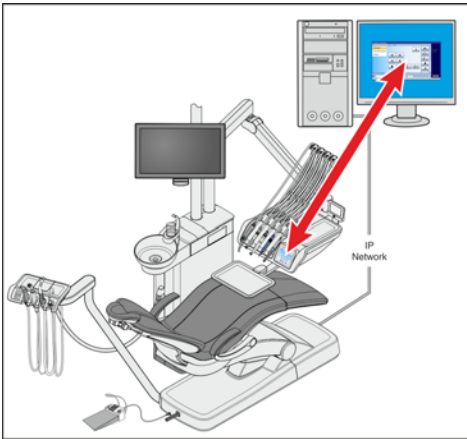
General technical data

Model:	Intraoral camera		
	SiroCam F	SiroCam AF	SiroCam AF+
Weight of handpiece without cable:	approx. 80 g	approx. 80 g	approx. 85 g
Dimensions:	diam. 27.5 x 207 mm		
Operating temperature:	+10 to +40 °C		
Power supply and signal output:	5 V via USB 2.0 interface (modified plug-in connection)		

Characteristics of the image acquisition

	SiroCam F	SiroCam AF	SiroCam AF+
Lighting:	2 white light LEDs		
Image sensor:	1/4" CMOS		
Focusing:	Permanently set to close-range	Autofocus	Autofocus
Live image resolution:	824 x 514		
Resolution of saved images:	824 x 514	1024 x 640	1276 x 796
White balance:	Permanently set to 4800 K		

4.14 Operation with a PC



The treatment center can be connected to a PC via an Ethernet cable. The Sivation Connect and/or Siucom Plus PC application enables communication between the treatment center and the PC. **For operating from the PC, Siucom Plus the EasyTouch comfort user interface are required.** The PC can then be directly operated using the touchscreen and in connection with the SiroCam F / AF / AF+ intraoral camera, using the C+ electronic foot control as well.

For details, please refer to the "Installation and configuration of Siucom Plus / Sivation Connect" manual.

⚠ CAUTION

Integrating the Intego / Intego Pro into an IT network that includes other devices can lead to previously unknown risks.

The following changes to the IT network can lead to new risks:

- Changes to the IT network configuration
- Connecting additional elements to the IT network
- Removing elements from the IT network
- Updating devices that are connected to the IT network
- Upgrading devices that are connected to the IT network

The provider of the IT network must determine, analyze, assess, and control the risks (e.g. IEC 80001-1).

The treatment center can be operated with the following PC versions:

- External PC
The treatment center is connected to an external PC via an Ethernet cable. PC applications such as Sidexis, Microsoft® PowerPoint®, Windows Mediaplayer and SI Video can be controlled from the treatment center.
- Operation without PC
The use of Sivation is not possible.

The SI Video application is used in treatment centers with an external PC on which Sidexis is not installed. In these cases, SI Video serves as a video application for the camera.

IMPORTANT

The PC's HDMI outlet and graphics card should be hot-plug capable.

When the PC is switched on before the treatment center, the Sivation monitor may remain black in some PC models.

- In this case, switch the treatment center on first, then the PC..
- Equip your PC with a hot-plug capable HDMI outlet. Then the devices can be switched on in any order.

4.14.1 Sivation program

Various PC applications of the PC can be started and operated in the Sivation program.

The PC applications to be operable via the treatment center can be set in Siucom Plus. The keys displayed on the touchscreen and their arrangement can be adjusted individually. See the "Installation and configuration of Siucom Plus / Sivation Connect" manual.

The network connection of the treatment center must be configured in the setup program before using the Sivation program, see "Configuring the network connection" [→ 209].

PC applications can be controlled from the treatment center only if they were started via Siucom Plus.

4.14.1.1 Starting PC communication

Opening the Sivation dialog

✓ All PC applications which were started from the treatment center have been terminated.

✓ Siucom Plus has been started, e.g. via autostart.

1. Touch the *Sivation program* key on the touchscreen.

or

> If intraoral images are desired: Remove the SiroCam F / AF / AF+ intraoral camera from the holder. The Sidexis PC application or SI Video starts immediately.

✎ The *Sivation* program appears on the touchscreen.

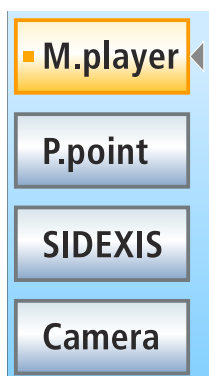
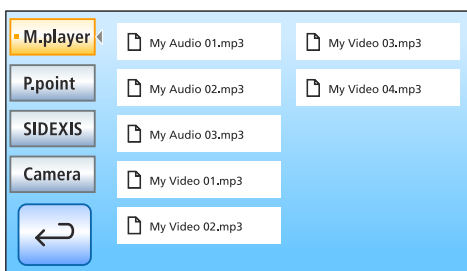
Starting other PC applications

1. Select the desired PC application from the left side of the touchscreen.

✎ The key of the selected PC application is highlighted orange and the corresponding control keys are displayed on the right side of the touchscreen; see the following sections. The PC application is automatically started on the PC.

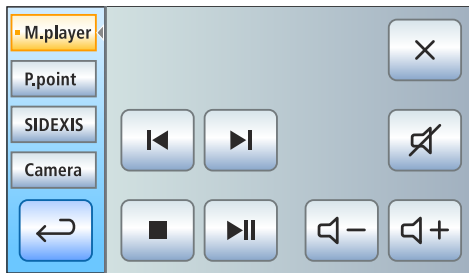
2. The *File selection* program opens for PC applications that can access files of the PC. Select the desired file by touching it.

✎ The control keys of the relevant PC application are displayed on the touchscreen.



The treatment center starts the PC applications automatically. An orange square located in front of the respective PC application on the touchscreen indicates whether the application has been started and is ready for operation on the PC. If the orange square is not displayed, communication with the PC application is not yet possible.

4.14.1.2 Communication with the media player



The treatment center has the option of playing back multimedia files stored on the external PC using the Windows Media Player. Audio or video files can be selected from the file system and the Media Player can be controlled from the treatment center. Video images can be viewed on the Sivation monitor.



Previous/next title



Stop playback



Start/interrupt playback

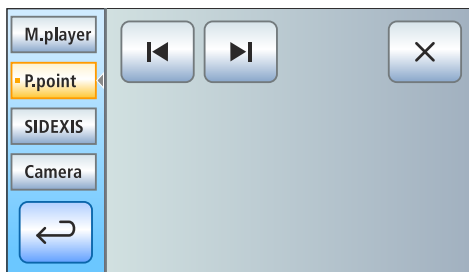


Mute



Adjust volume

4.14.1.3 Communication with Microsoft PowerPoint



For effective patient communication, Microsoft® PowerPoint® presentations stored on the external PC can be displayed on the Sivation monitor. The presentations in the file system can be selected and the display of slides can be controlled from the treatment center.



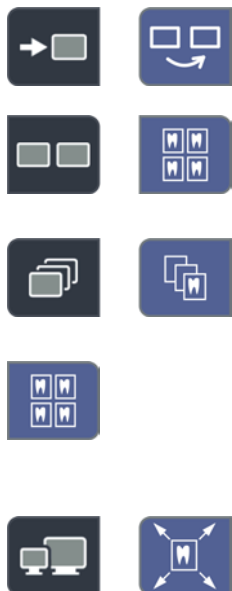
Previous/next slide

4.14.1.4 Communication with Sidexis



The Sidexis 4 and Sidexis XG PC applications can display X-ray and intraoral camera images on the Sivation monitor. They can save images taken with the SiroCam F / AF / AF+ intraoral camera in the patient database. The following Sidexis functions can be controlled from the treatment center:

For more details, please refer to the "Sidexis 4" or "Sidexis XG" user manual.



Next image

The next image window is activated.

Tiled layout

All open image windows are scaled to a uniform size in the display area and arranged without overlapping.

Cascaded layout

The opened windows are "cascaded", i.e. arranged slightly displaced behind one another. All image window titles are thus visible.

Overview layout

The opened image windows are scaled in the display area so that no scroll bars or as few scroll bars as possible must be displayed. The image windows are arranged without overlapping.

Full frame

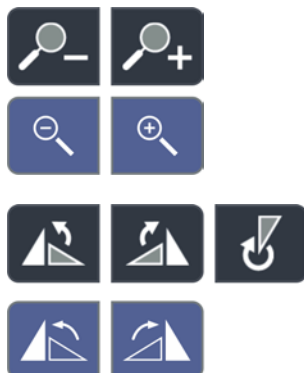
The active image window is enlarged so that it covers the entire display area. The control elements of the Sidexis user interface are not concealed in the process.

Zoom in/out

This magnifies and decreases the active image window and the size of the image displayed in it on the Sivation monitor.

Rotate image

Rotates the image 90° counterclockwise or clockwise. With Sidexis 4, the image can be rotated 180° by pressing a key.





Contrast optimization filter

This image filter analyses and optimizes the current grayscale distribution of an image. In this way, for instance, details within a very low-contrast, "faint" image can be made visible.

Relief display filter

Image details with high contrast are displayed brighter or darker. Edges or contours within the image are thus clearly accentuated. The result is a relief-like image distortion.

Smooth image

To mitigate high-contrast or high-interference effects in images, the contrast between neighboring pixels is reduced or averaged. The overall definition of the image is reduced.

Sharpen image

Contrasts between neighboring pixels are increased. This function helps to accentuate edges or contours. The impression of a sharper image is created.

Invert image

This function inverts the brightness values of the image pixels, thus enabling a positive or negative display of the image. The inversion can be canceled by pressing the key once again.

Display image in pseudocolors

To enable better distinction of image details, an image can be displayed in what is called pseudo color mode. The grayscale values of the image are replaced by colors which the human eye can distinguish better from one another than the corresponding gray levels.

Filter black dots

Single pixel errors may occur when taking digital X-rays. These pixel errors appear as individual black dots when the optimum resolution (100%) is selected. They are removed by Sidexis.

Reducing noise

Individual scattered pixels and minor disturbing information which lead to a noisy image are eliminated without reducing the overall definition of the image.

Undo

The effect of the last filter operation is undone.

Restore original image

The changes previously made, e.g. via filters, are canceled. The most recently saved version of the image is restored.

Close current media window

Close all media windows



Cancel/confirm entry



Accept an order

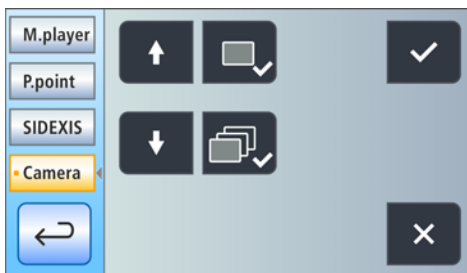
Accepts an order that was placed and is waiting in Sidexis, e.g. for creating an intraoral image with the X-ray unit of the treatment center or a video recording with the intraoral camera.



Readiness for intraoral X-ray exposure

Establishes readiness for an X-ray exposure. A Sidexis window then opens where the image type can be selected and the image can be described in detail.

4.14.1.5 Communication with video plugin



The video plugin for Sidexis 4 can be controlled via the user interface of the treatment center in versions 2.0 and higher. After replacing the SiroCam F / AF / AF+ intraoral camera, the last image taken is displayed in the main window of the video plugin. In an image bar at the side, a preview of all images taken is displayed. The image displayed in the main window is highlighted orange. Via the touchscreen of the treatment center, the images taken can be selected and marked for final export to Sidexis. Unmarked images are discarded.

For more details, refer to the "Video plugin for Sidexis 4" user manual.



Scroll up / select previous still image



Scroll down / select next still image



Mark selected still image for import to Sidexis 4



Mark all still images for export to Sidexis 4



Import marked still images to Sidexis 4

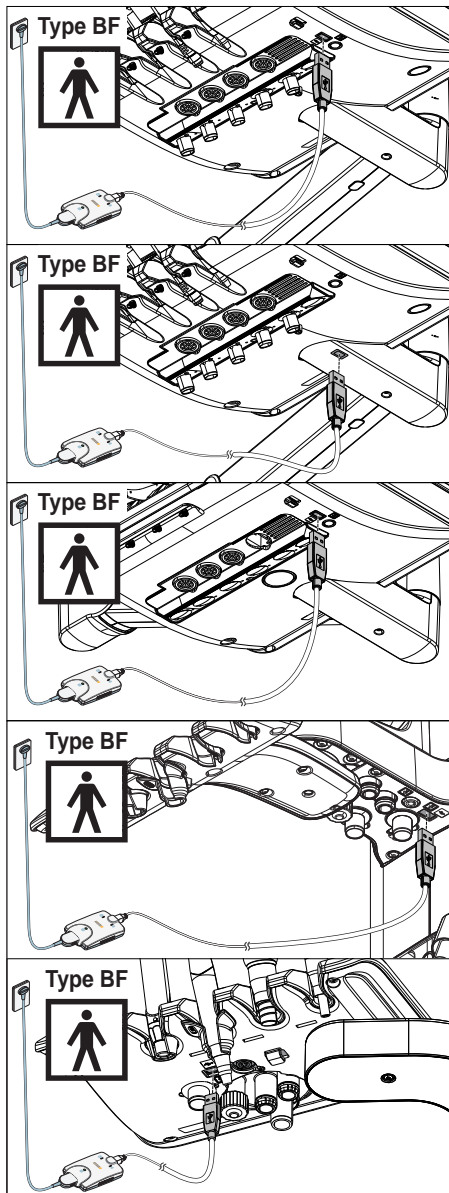


Discard all still images

Note: The Siucom Plus PC application can be used to configure the layout of the keys.

For a description of the *SI video* Sivation program, please refer to the section "Using the camera with SI Video" [→ 186].

4.14.2 USB interfaces



The dentist and assistant element can be equipped with a USB 2.0 interface.

CAUTION

Only type BF medical devices and applied parts according to IEC 60601-1, e.g. the Dentsply Sirona Xios XG USB module intraoral X-ray system, may be connected to the USB interface.

CAUTION

USB devices with their own voltage supply (e.g., via a power supply unit) may lead to increased leakage current.

This endangers the safety of patients and users.

- Connect only USB devices that use the USB connection as their exclusive power source.

4.15 Configuration of the treatment center (setup)

Various treatment center functions can be individually configured via the Setup settings. The treatment center can therefore be adapted to match each user's personal method of treatment.

4.15.1 Configuring the treatment center on EasyPad

4.15.1.1 Access the Setup program

- ✓ All instruments are in place.
- ✓ The required user profile is active.
- Press and hold the favorite key 2 / *Setup* (> 2 s).



- ✎ The *Setup* operating context opens. The first *Time* selection context appears on the EasyPad display.

The *Setup* operating context contains several selection contexts. The active focus flashes.

Press favorite key 2/*Setup* to select the next focus item or display the next selection context.

Use favorite keys 1 and 3 to set.

IMPORTANT

Storing settings in setup

If no key is pressed for > 25 s, the *Setup* dialog closes automatically. All settings made are saved.

Pressing the *Counterclockwise rotation/User profile* button immediately hides the *Setup* operating context.

IMPORTANT

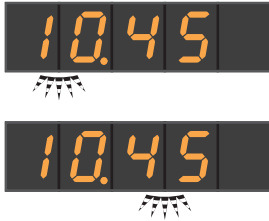
Missing menus

Menus for functions not included with the treatment center are not displayed in setup

4.15.1.2 Setting the time and date

Setting the time

Time is shown in the format hour.minute.



- ✓ The *hour* setting focus flashes.
- 1. Use favorite keys 1 and 3 to set the hour.
- 2. Press the favorite key 2 / *Setup*.
- ✎ The *Minute* setting focus flashes.
- 3. Use favorite keys 1 and 3 to set the minutes.
- 4. Confirm with the 2 / *Setup* favorite key.

Setting the date

The date is displayed in the format day-month-year.



- ✓ The *day* setting focus flashes.
- 1. Use favorite keys 1 and 3 to set the day.
- 2. Press the favorite key 2 / *Setup*.
- ✎ The *month* setting focus flashes.
- 3. Repeat this procedure for the month and year.
- 4. Confirm with the 2 / *Setup* favorite key.

Switching 12/24 hour display

The 12-hour display is switched only in the standard operating context of the EasyPad display. It will continue to use the 24-hour system in the *Setup* operating context.



- ✓ The setting focus *12/24 hour display* flashes.
- 1. Use favorite keys 1 and 3 to select the hour display.
- 2. Confirm with the 2 / *Setup* favorite key.

4.15.1.3 Presetting the timer

The maximum time setting is 9 minutes and 30 seconds.



- ✓ The *timer function* setting focus is displayed.
- 1. Use favorite buttons 1 and 3 to set the required time.
Increments:
From 0.05 to 1.00 = 5 s steps
From 1.00 to 3.00 = 10 s steps
From 3.00 to 9.30 = 30 s steps
- 2. Confirm with the 2 / *Setup* favorite key.

If the time or speed/intensity is shown on the EasyPad display, the timer can be started by pressing the *Fn* button on the dentist or assistant element. Press again to stop the timer and reset the countdown. It can then be restarted.

4.15.1.4 Switching the key sound on/off

A setting can be made to issue an acoustic signal when the operator presses a button on the dentist or assistant element.

- ✓ The setting focus *Key tone* flashes.
- 1. Change the value with the favorite keys 1 or 3.
 - ↳ If there is a 1 in the setting focus, the key tone is switched on.
- 2. Confirm with the 2 / *Setup* favorite key.



4.15.1.5 Coupling suction to the 4-way foot switch.

If the treatment center is equipped with a position selector valve for the suction system, it can be set so suction flow can be interrupted or restarted by moving the 4-way foot control switch at the base of the chair in any direction. Follow the safety instructions, see "Suction handpieces" [→ 146]

- ✓ The setting focus *Couple suction at 4-way foot switch* flashes.
- 1. Change the value with the favorite keys 1 or 3.
 - ↳ If a 1 is in setting focus, the suction can be turned on/off at the 4-way foot switch.
- 2. Confirm with the 2 / *Setup* favorite key.

If you put the suction hose in the holder while the suction flow is interrupted, the suction flow is automatically restarted when you pick it up again.



4.15.1.6 Switching the water heater on/off

The optional heater for the treatment water can be switched on/off.

- ✓ The *water heater* setting focus flashes.
- 1. Change the value with the favorite keys 1 or 3.
 - ↳ If there is a 1 in the setting focus, the water heater is switched on.
- 2. Confirm with the 2 / *Setup* favorite key.



4.15.1.7 Setting the purging time for the purge function

The purging time for the purge function may be set between 20 and 120 seconds.

- ✓ The setting focus *purge function* flashes.
- 1. Use favorite keys 1 and 3 to set the purge time.
- 2. Confirm with the 2 / *Setup* favorite key.



4.15.1.8 Setting the purging time for the autopurge function

The autopurge function is only available on the Intego Pro treatment center.

The purging time for the autopurge function can be set between 60 and 180 seconds.

- ✓ The setting focus *purge function* flashes.
- 1. Use favorite keys 1 and 3 to set the purge time.
- 2. Confirm with the 2 / *Setup* favorite key.



4.15.1.9 Adjusting the cleaning agent mixture for chemical suction hose cleaning

The chemical suction hose cleaning option is only available for the Intego Pro.

The suction system can be automatically cleaned by pumping water into a tank behind the receptacle of the suction hoses and extracting it from there. A cleaning agent is added to the water if the dental treatment center is equipped with the chemical suction hose cleaning option. For more information, see the section "Suction hose cleaning on the Compact water unit" [→ 245].

It is possible to set how much cleaning agent should be added to the water for chemical suction hose cleaning. The quantity is dependent on the cleaning agent used and the type of treatment. Please follow the manufacturer's instructions for the cleaning agent.



✓ The setting focus *Cleaning agent mixture* flashes.

1. Use the favorite keys 1 and 3 to adjust the cleaning agent mixture for chemical suction hose cleaning (0 to 5%).
2. Confirm with the 2 / *Setup* favorite key.

4.15.1.10 Switching afterblow on/off

After a foot control pedal has been released, the cooling spray remaining in the instrument head or in the tip of the instrument can be automatically blown out by a brief activation of the chip blower.



✓ The setting focus *Afterblow* flashes.

1. Change the value with the favorite keys 1 or 3.
 ↳ If there is a 1 in the setting focus, the afterblow is switched on.
2. Confirm with the 2 / *Setup* favorite key.

4.15.1.11 Switching on/off the foot control function for intraoral camera focus

If the treatment center is equipped with an autofocus camera and the C + electronic foot control, it can be configured in the setup that the camera image can be focused with the foot control.

- Field 0: The display switches between a still or live image when the foot pedal is pressed. The knob on the camera can be used to focus the image.
- Field 1: The camera is focused by pressing the foot pedal. The display switches between a still or live image only when the foot pedal is pressed down fully. Focusing via the camera knob still works.
- Field 2: When the foot pedal is pressed, the camera image is focused and a still image is automatically taken. Focusing via the camera knob still works.



✓ The setting focus *Focusing by foot switch* flashes.

1. Change the value with the favorite keys 1 or 3.
2. Confirm with the 2 / *Setup* favorite key.

Please note that the setting focus *Focusing by foot control* is displayed in the *Setup* program only when the PC is switched on and the autofocus camera is configured for use on this treatment center. The

latest version of the SIUCOM Plus / Sivation Connect application must be installed on the PC. For details, please refer to the "Installation and configuration of Siucom Plus / Sivation Connect" manual.

When using Sidexis 4 version 4.2 or higher in combination with the video plugin version 2.0 or higher, we recommend selecting the third option in the setup program for focusing the intraoral camera. The images are then displayed automatically in an image bar on the Sivation monitor. Saving the still image with the left button (S) of the foot control and switching between live and still image are thus omitted. For details, please refer to the section "Using the camera with Sidexis" [→ 188] and the "Video plugin for Sidexis 4" user manual.

4.15.1.12 Opening the service function

The Service domain is intended to be used only by service engineers.

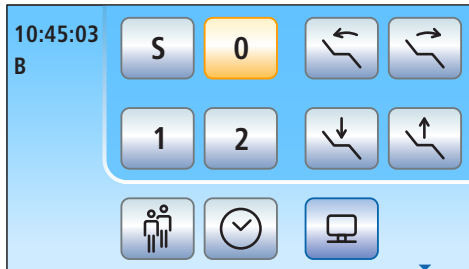
CAUTION

A user operating error may cause malfunctions and hazards.

> Please contact your service technician or your dental depot.

4.15.2 Configuring the treatment center on EasyTouch

4.15.2.1 Opening the setup dialogs



- ✓ All instruments are in place. The Start dialog is displayed on the touchscreen.
- ✓ The required user profile is active.



1. Press the *Sub-dialog fixed key*.



- ↳ The *Start* sub-dialog is displayed.



2. Hold down the *Setup* button (> 2 s).



- ↳ Four setup dialogs are offered for selection.

Key symbols of the four setup dialogs line by line from left to right:

- Date and time
- Control options
- Network connection
- Service domain (for service engineers only)

The current software version of the treatment center is displayed on the left side of the touchscreen.

- > Touch the corresponding key to open the Setup dialogs.



Some of the setup dialogs comprise several pages. Using the *Scroll forward* key, you can switch to the next Setup dialog page.

IMPORTANT

Setup program, storing settings

The setup program closes automatically if no key is activated in 25 seconds. All of the settings you have made will be accepted when you leave the setup program.

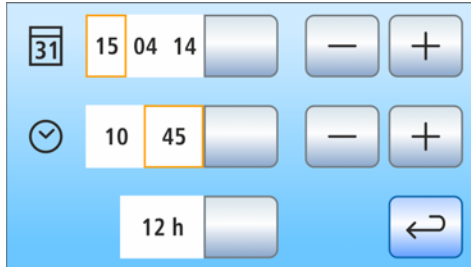
IMPORTANT

Missing function keys

Function keys for functions which the treatment center equipment does not include are not displayed on the touchscreen.

4.15.2.2 Setting the time and date

> In the setup dialog touch the key *Date and time*.



✎ The sub-dialog opens.

Setting the date

The date is displayed in the format day/month/year.

1. Use the – and + keys to set the day.
2. Touch the *Date* key.
✎ The month field is highlighted orange.
3. Repeat this procedure for the month and year.



Setting the time

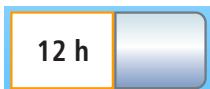
1. Use the – and + keys to set the hour.
2. Touch the *Time* key.
✎ The minutes field is highlighted orange.
3. Use the – and + keys to set the minutes.



Switching 12/24 hour display

The 12-hour display is changed in the status column of the touchscreen only. The setup dialog will continue to display a 24-hour system.

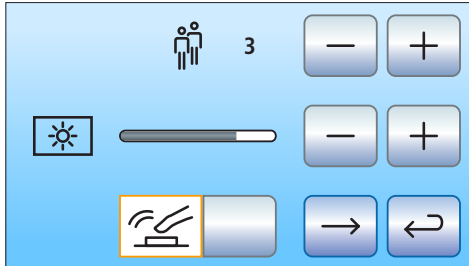
- > Touch the *12/24 hour display* key.
✎ If the field is highlighted orange, the 12-hour display is set.



4.15.2.3 Configuring control options

Operation of the entire treatment center operation can be configured in this dialog.

- > Touch the *Control options* key in the setup program.



- ↳ The sub-dialog opens.

4.15.2.3.1 Preselecting the number of user profiles

If fewer user profiles are required, their number can be limited so that only the specified users can be selected after the treatment center is switched on.

- > Use the – and + keys to set the number of user profiles.

If the number of user profiles is limited to one, the *User profiles* key is hidden in the start dialog.



4.15.2.3.2 Adjusting the touchscreen brightness

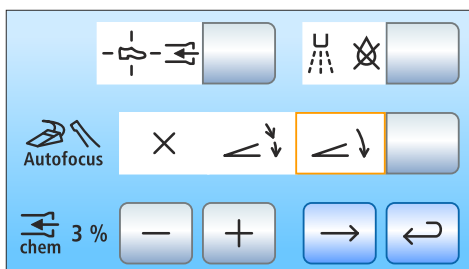
- > Use the – and + keys to set the brightness of the touchscreen.



4.15.2.3.3 Switching the key sound on/off

The program can be set to issue an acoustic signal that sounds when the operator touches a key on the touchscreen or a fixed key.

- > Touch the *Key tone* key.
- ↳ If the key is highlighted orange, the key tone is activated.



- > Change to the next setup dialog page.

4.15.2.3.4 Coupling suction to the 4-way foot switch.

If the treatment center is equipped with a position selector valve for the suction system, it can be set so suction flow can be interrupted or restarted by moving the 4-way foot control switch at the base of the chair in any direction. Also observe the safety information, see "Suction handpieces" [-> 146].



- > Touch the *Coupling suction to the 4-way foot switch* button.
 - ↳ If the key is highlighted orange, suction can be switched on/off with the 4-way foot switch.

If you put the suction hose in the holder while the suction flow is interrupted, the suction flow is automatically restarted when you pick it up again.

4.15.2.3.5 Switching afterblow on/off

After the foot control pedal has been released, the cooling spray remaining in the instrument head or in the tip of the instrument can be automatically blown out by briefly activating the chip blower.



- > Touch the *Afterblow* key.
 - ↳ If the key is highlighted orange, the afterblow function is activated.

4.15.2.3.6 Switching on/off the foot control function for intraoral camera focus

If the treatment center is equipped with an autofocus camera and the C + electronic foot control, it can be configured in the setup that the camera image can be focused with the foot control.

- Field 1: The display switches between a still or live image when the foot pedal is pressed. The knob on the camera can be used to focus the image.
- Field 2: The camera is focused by pressing the foot pedal. The display switches between a still or live image only when the foot pedal is pressed down fully. Focusing via the camera knob still works.
- Field 3: When the foot pedal is pressed, the camera image is focused and a still image is automatically taken. Focusing via the camera knob still works.



- > Touch the *Autofocus* key.
 - ↳ The selected field is highlighted orange.

Please note that the *Autofocus* key is displayed in the setup dialogue only when the PC is switched on and the autofocus camera is configured for use on this treatment center. The latest version of the SIUCOM Plus / Sivation Connect application must be installed on the PC. For details, please refer to the "Installation and configuration of Siucom Plus / Sivation Connect" manual.

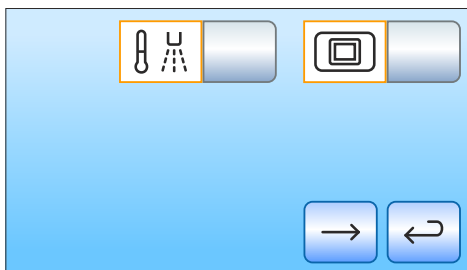
When using Sidexis 4 version 4.2 and higher in combination with the video plugin version 2.0 or higher as a PC application for the intraoral camera, we recommend selecting the third option for focusing the camera. The images are then displayed automatically in an image bar on the Sivation monitor. Saving the still image with the left button (S) of the foot switch and switching between live and still image is thus no longer necessary. For details, please see the section "Using the camera with Sidexis" [-> 188] and the "Video plugin for Sidexis 4" user manual.

4.15.2.3.7 Adjusting the cleaning agent mixture for chemical suction hose cleaning

The chemical suction hose cleaning option is only available for the Intego Pro.

The suction system can be automatically cleaned by pumping water into a tank behind the receptacle of the suction hoses and extracting it from there. A cleaning agent is added to the water if the dental treatment center is equipped with the chemical suction hose cleaning option. For more information, see the section "Suction hose cleaning on the Compact water unit" [→ 245].

It is possible to set how much cleaning agent should be added to the water for chemical suction hose cleaning. The quantity is dependent on the cleaning agent used and the type of treatment. Please follow the manufacturer's instructions for the cleaning agent.



- > Use the – and + keys to adjust the cleaning agent mixture for chemical suction hose cleaning (0 to 5%).
 - ↳ The adjusted percentage is displayed on the touchscreen.
- > Change to the next setup program page.

4.15.2.3.8 Switching the water heater on/off

The optional heater for the treatment water can be switched on/off.



- > Touch the *Water heater* key.
 - ↳ If the key is highlighted orange, the water heater is activated.

4.15.2.3.9 Key for showing/hiding white screen on Sivation monitor

If the treatment center has no X-ray viewer, however, is equipped with a Sivation monitor, the Sivation monitor can be set to the white screen mode.



- > Touch the *White screen* key.
 - ↳ If the key is highlighted orange, the *White screen* key is displayed in the *Start* sub-screen.

4.15.2.4 Configuring the network connection



IP
192.168.50.50

Subnet (24)
255.255.255.0

Gateway
192.168.0.1

DHCP

→ ←

1. Touch the *Network connection* key in the setup dialog.

↳ The sub-dialog *Network connection* opens. It shows the currently used network configuration.



2. Change to the next setup dialog page.

Intego Nr 2

Ethernet
13-E7-15-31-A3-0C

Name

→ ←

↳ In this dialog, the name of the treatment center in the practice network and the MAC address of the center are shown.

Call in your data processing specialist for network configuration.

Network configuration is described in detail in the "Intego / Intego Pro installation instructions".

4.15.2.5 Opening the service function



The Service domain is intended to be used only by service engineers.

⚠ CAUTION

A user operating error may cause malfunctions and hazards.

> Please contact your service technician or your dental depot.

5 Care, cleaning and maintenance by the practice team

5.1 Basics

Handling mainly involves the following steps:

- Cleaning
- Disinfection
- Sterilization if possible

It is recommended to clean the unit as soon as possible after use. Preliminary cleaning should be done with disposable/paper towels.

Inappropriate care and cleaning of the device can result in failure or damage. Technical personnel must be trained in the handling of medical devices.

5.1.1 Intervals

To maintain the value and safe functioning of your treatment center, it is necessary to have it regularly maintained, cleaned, and disinfected by the practice team. This will minimize the risk of contamination for patients and users and ensure proper functioning.

The national requirements and recommendations for hygiene and disinfection must be observed, e.g. Robert Koch Institute (RKI), American Dental Association (ADA), Centers for Disease Control and Prevention (CDC), etc.

IMPORTANT

Maintenance, cleaning, and disinfecting intervals

The time intervals specified for maintenance, cleaning, and disinfection/sterilization are reference values.

Please adapt the time intervals to suit your personal method of working and your national requirements.

After each patient

Clean/disinfect surfaces [→ 215]

- Disinfecting the upholstery [→ 220]
- Disinfect the user interface [→ 216]
- Lubricate, disinfect/sterilize the treatment instruments [→ 238]
- Clean and disinfect/sterilize the components of the ApexLocator [→ 239]
- Disinfect handles [→ 217]
- Disinfect the tray [→ 219]
- Disinfect the cup holder [→ 219]
- Maintaining and cleaning the operating light (see separate operating instructions for the operating light)
- Clean/disinfect the cuspidor [→ 258]

Clean the gold trap [→ 257]

Cleaning the suction hoses [→ 243]

Sterilize/disinfect the suction handpieces [→ 254]

Purge the water paths (purge function) [→ 222] or Manually purge the water paths [→ 236]

Daily

Automatically purge the water paths (AutoPurge function) [→ 228],
Purge the water paths (purge function) [→ 222] or Manually purge the water paths [→ 236]

Rinse water lines [→ 222]

Empty the central suction sieve [→ 255]

Cleaning the suction system using the cleaning adapter in the cuspidor or via external container [→ 250] (if the suction hose cleaning option or chemical suction hose cleaning option are not available)

Clean the suction hoses [→ 256]

Disinfect dentist and assistant element [→ 217]

Sterilize silicone mats and handle covers [→ 217]

Weekly

Clean and care for upholstery [→ 220]

Cleaning the bottom surface of the mount for the backrest component. [→ 220]

Clean outlet lines [→ 259] (if chemical suction hose cleaning option available)

Change the cotton roll on the high-speed handpiece hose and oil collector [→ 241]

Clean the foot control [→ 221]

Monthly or as required

Change the water and air filters [→ 263]

Microbiological water test [→ 212]

Sanitize the treatment center [→ 279]

Change the amalgam rotor [→ 265] or
empty the sediment container [→ 271] or
clean the filter insert of the standard wet suction [→ 274] or
empty the receiving tank of the air jet pump [→ 277]

Check the message system of the amalgam separator [→ 268]

For a quick overview of the work involved, see the “Maintenance, cleaning, and disinfection schedule” for the Intego / Intego Pro treatment center.

5.1.2 Care, cleaning, and disinfecting agents

NOTE

Approved care, cleaning, and disinfecting agents

Use only care, cleaning, and disinfecting agents approved by Dentsply Sirona!

A continuously updated list of approved agents can be downloaded from the Internet on the online portal for technical documents. You can reach this portal at the address:

www.dentsplysirona.com/manuals

.Click on the menu item *"General documents"* and then open the *"Care, cleaning and disinfection agents"* document.

If you do not have access to the internet, please contact your dental depot to order the list (REF 59 70 905).

5.1.3 Conduct a microbiological water test

Perform the microbiological test of the water from the treatment center at regular intervals and after longer periods of disuse > 1 week; see "Media quality" [→ 16]. Start the checkups in intervals of no more than two weeks and adjust the time intervals depending on the results. In addition to running laboratory tests, you can also use the "Total Count Tester" as a simple means of performing this test.

To order the motor total count tester, see "Spare parts and consumables" [→ 311].

IMPORTANT

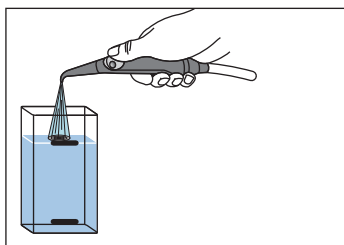
Shelf life of the total count tester

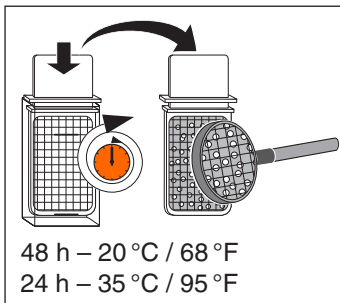
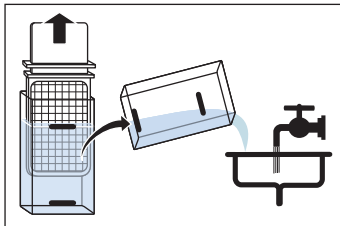
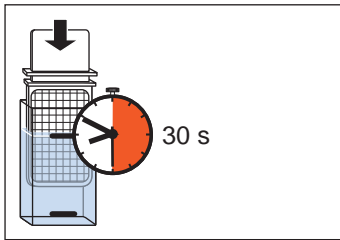
The maximum shelf life of the total count tester is 1 year after the date of receipt.

The cardboard disk contains a dehydrated culture medium. It is activated by the sample and serves as culture medium for a number of bacteria. The bacterial count provides information on the hygiene quality of the water.

Be careful not to touch the inside of the test container or the part of the tester to be immersed (with nutrient medium) prior to incubation.

1. Press the tumbler filler for at least one minute.
2. Allow water to run out of the 3-way syringe into the cuspidor for about 1 minute.
3. Use the 3-way syringe to fill cold water into the test container up to its upper mark.
4. To neutralize the disinfecting agent of the water sample, add approx. 1.5 g of fixing salt (sodium thiosulfate). Fixing salt can be obtained in pharmacies or from chemical dealers.





5. Immerse the tester in the filled container for 30 seconds.

↳ The cardboard disk with the culture medium will now absorb 1 ml of the water sample.

6. Remove the tester from the container. Shake out any excess water. Empty the tank.
7. Place the tester in the container for incubation either for two days at a room temperature of 20°C/68°F or for 24 hours at a temperature of 35°C/95°F.

8. Count all colonies found on the surface of the tester.

If the number of germs is well over 100, the water must be treated, see "Sanitizing" [→ 279] and "Biofilm removal by the service technician" [→ 302].

5.1.4 General handling instructions

The general handling instructions generally apply to the treatment center provided there are no other product-specific reprocessing instructions in this operating manual. The manufacturer's instructions on the disinfectants should be followed (temperature, concentration, application times, etc.).

Manual cleaning

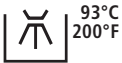
Manual cleaning can be done with a cloth or soft brush. Unless specified otherwise, use lukewarm drinking water for cleaning surface dirt.

Machine cleaning

Thermal disinfection at up to 93°C (200°F) according to ISO 15883-1 is possible for all marked components. Use an alkaline cleaning agent. A laboratory dishwasher (e.g. Miele G7781) can be used. See the operating instructions for the respective device for the setting of the cleaning equipment and the kind and quantity of cleaning agent.

Manual disinfection

The treatment center can be disinfected by wiping. Use a soft, colorless cloth for this as well as an approved disinfectant. Unless specified otherwise in the operating manual, other disinfection methods (spray disinfection, immersion, etc.) may not be used. Please observe the information regarding the use of disinfectants in the treatment center operating manual (temperature, concentration, application times, etc.).



Machine disinfection

Thermal disinfection at up to 93°C (200°F) according to ISO 15883-1 is possible for all marked components. Use an alkaline cleaning agent. A laboratory dishwasher (e.g. Miele G7781) can be used as disinfection device. See the operating instructions for the respective device for the setting of the disinfecting equipment and the kind and quantity of disinfectant.

Manual drying

With the wipe disinfection method, drying is not necessary because excess disinfectant evaporates. Excess water from the cleaning process can be removed with a soft cloth.



Sterilization

Sterilization may be conducted for components that are marked accordingly. Dentsply Sirona recommends sterilization in a steam sterilizer (autoclave) according to ISO 13060, Class B (e.g., DAC PREMIUM / DAC PROFESSIONAL).

The sterilization must be carried out with a multiple fractionated suction system (Class B sterilizer). The process parameters can be found on the embossed marking of the respective component and this operating manual. In addition, please follow the operating instructions for the sterilizer.

5.1.5 Inspection, maintenance and testing

Unless otherwise specified in this operating manual, test all components for proper functioning on a regular basis and carry out a visual inspection for damage and wear. Exchange damaged components if necessary.

5.2 Surfaces

5.2.1 Clean/disinfect surfaces

The surfaces can be disinfected by spraying and wiping with surface disinfectants.

NOTE

Drugs have a chemical reaction with the surface of the unit.

Due to their high concentrations and the substances they contain, many drugs can dissolve, etch, bleach, or stain surfaces.

- Wipe any drug residues off the unit immediately with a moist, white cloth!

NOTE

Liquids can enter the unit during cleaning or disinfection.

Electrical components of the treatment center can be destroyed by liquids.

- Do not spray any liquids into the unit.
- To clean near openings, first spray the liquid onto a cleaning cloth. Then wipe over the unit with the cleaning cloth.

NOTE

Disinfectants can dissolve dyes in cleaning clothes.

The outer surface of the unit may then be discolored by the dye.

- Do not clean or disinfect the unit with colored cleaning cloths.
- Remove any dirt and disinfectant residues regularly using a mild commercial cleaning agent.

5.2.2 Disinfect user interfaces

The user interfaces on the dentist and assistant element and the touchscreen of the EasyTouch can be switched off for disinfecting. This means that no unintended functions can be activated.

NOTE

Approved care, cleaning, and disinfecting agents

Use only care, cleaning, and disinfecting agents that have been approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].

Switching off functions on the EasyPad user interface

On the EasyPad, this function also protects the treatment center and the Sivation monitor from disturbances from HF fields.

✓ The electric motors are placed in the holders.

1. Press the *Display mode / Clean* fixed key on the dentist element.

✎ The message "C.L.E.A.N." appears on the EasyPad display. The treatment center is blocked for data input. The instruments of the dentist and assistant elements can no longer be activated. The Sivation monitor and the camera are switched off.

2. Disinfect the user interfaces by wiping them.

3. Press and hold the *Display mode/clean* fixed key on the dentist element (> 3 s).

✎ The user interfaces are now reactivated.

Switching functions on the EasyTouch user interface off

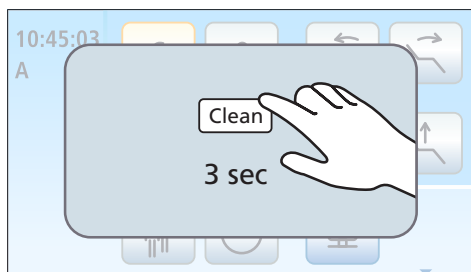
1. Actuate the *Clean* fixed key on the dentist element.

✎ A display on the touchscreen shows that it and fixed keys on the dentist and assistant element are deactivated.

2. Disinfect the user interfaces by wiping them.

3. Press and hold the *Clean* fixed key on the dentist element (> 3 s).

✎ The touchscreen and user interfaces are now reactivated.



5.2.3 Sterilize silicone mats and handle covers

NOTE

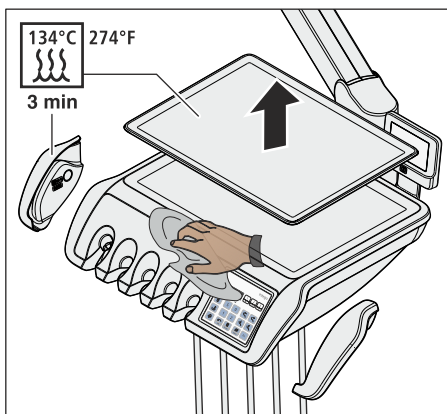
Approved care, cleaning, and disinfecting agents

Use only care, cleaning, and disinfecting agents that have been approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].

The dentist element features a removable silicone mat and silicone covers for the handles. A removable silicone mat is available for the Comfort assistant element.

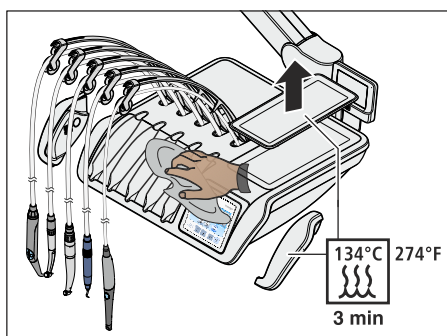
The silicone mats and handle covers can be sterilized.

TS dentist element



1. Remove both silicone covers from the handles and lift the silicone mat off the dentist element.
2. Take the instruments out of the instrument holders.
3. Clean and disinfect the dentist element, see "Cleaning and disinfecting surfaces" [→ 215].
4. Replace the handles after sterilization. Place the sterilized silicone mat on the dentist element. Return the instruments to the instrument holders.

CS dentist element

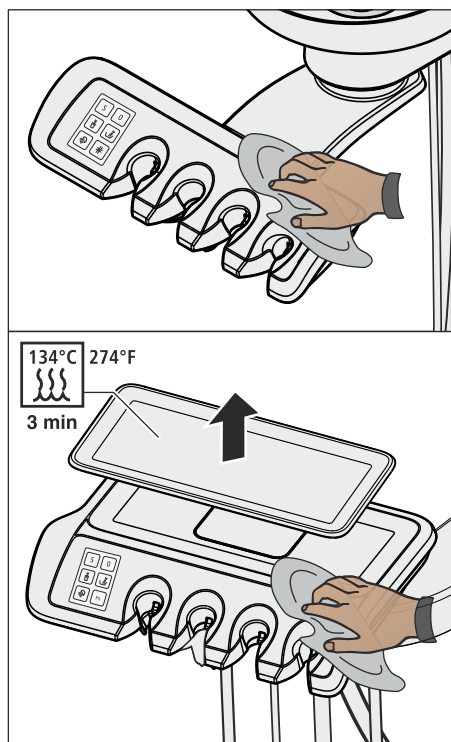


1. Remove both silicone covers from the handles and lift the silicone mat off the dentist element.
2. Remove all instruments one after the other and allow them to hang down in front of the dentist element.
3. Clean and disinfect the dentist element, see "Cleaning and disinfecting surfaces" [→ 215].
4. Replace the handles after sterilization. Place the sterilized silicone mat on the dentist element.
5. Place the instruments in their holders. Make sure that the instrument hoses are once again located in the guide rollers of the swivel arm.

Assistant element

The silicone mat of the Comfort assistant element is identical with that of the CS dentist element.

1. Switch the treatment center off and remove the suction hoses and instruments from the holders of the assistant element.
2. Clean and disinfect the assistant element, see "Cleaning and disinfecting surfaces" [→ 215].
3. For the Comfort assistant element, place the sterilized silicone mat on the assistant element.
4. Place the suction hoses and instruments back in their holders.



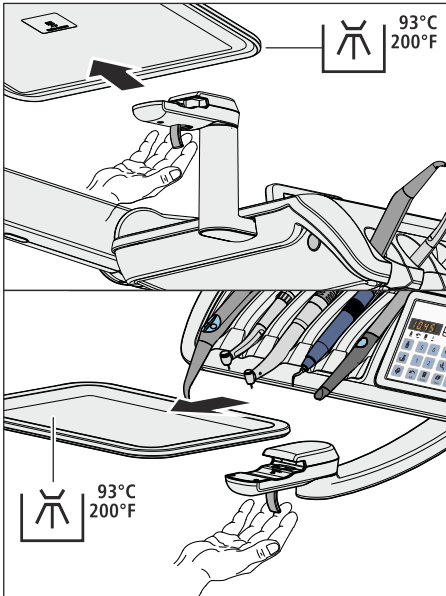
5.2.4 Disinfect the tray

The tray can be removed to facilitate cleaning or thermal disinfection.

NOTE

Approved care, cleaning, and disinfecting agents

Use only care, cleaning, and disinfecting agents that have been approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].



1. Hold the tray tightly.
2. Open the lock by swiveling the lever downwards.
3. Remove the tray.
4. Let the lever fall back into its original position.
5. If a cup holder is attached to the tray, it must be removed, see "Disinfecting the cup holder" [→ 219].
6. Thermally disinfect the tray.

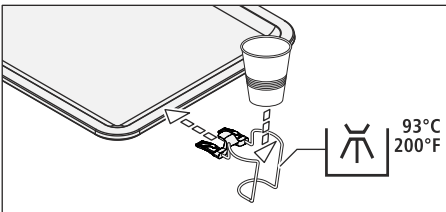
To insert the tray, simply guide it into the mount. The mechanism locks automatically.

⚠ CAUTION

If the tray is not locked in place, it can disengage from the tray holder.

- After installing the tray, make sure it is securely attached to the tray holder.

5.2.5 Disinfecting the cup holder



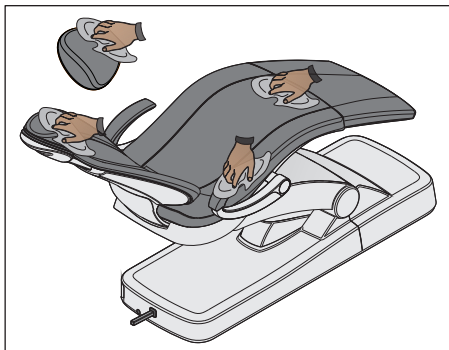
The cup holder can be disinfected by wiping or thermally. The disposable cup must be replaced after each patient.

NOTE

Approved care, cleaning, and disinfecting agents

Use only care, cleaning, and disinfecting agents that have been approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].

5.2.6 Care for, clean, and disinfect upholstery



Special care, cleaning, and disinfecting agents are recommended by Dentsply Sirona for the care, cleaning, and disinfection of the upholstery.

NOTE

Approved care, cleaning, and disinfecting agents

Use only agents approved by Dentsply Sirona for the upholstery, see "Care, cleaning, and disinfecting agents" [→ 212]!

The upholstery of the patient chair and the headrest can be spray and wipe disinfected.

The armrests can also be spray and wipe disinfected using the recommended surface disinfectant. After use, wipe the chair down with an absorbent cloth so no disinfectant remains on the upholstery.

The imitation leather upholstery must be cared for and cleaned regularly (at least once a week), especially light colored upholstery.

NOTE

Please note that the FD 360 cleaning and care agent for imitation leather from Dürr must not be used on the chrome-plated surfaces of the armrests or double articulating headrest.

Otherwise, there is a risk of discoloration.

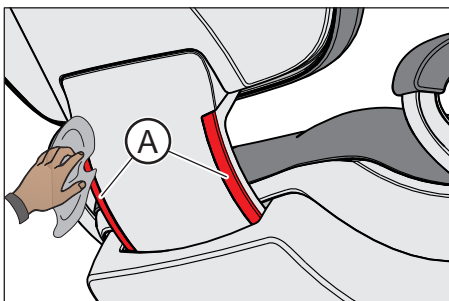
NOTE

The special sponge included with FD 360 may not be used on lounge upholstery.

Lounge upholstery could be damaged by the special foam.

Note: The upholstery of the Hugo, Carl and Paul dentist stools is identical to that of the premium upholstery of the patient chair. Therefore, the patient chair can also be cleaned in the same way; refer to the operating instructions for the respective dentist stool.

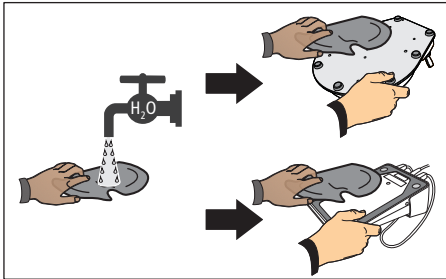
5.2.7 Cleaning the bottom surface of the mount for the backrest component.



The bottom surface of the mount **A** must be cleaned regularly on both sides. This ensures that the backrest moves smoothly and easily.

- > Clean the mount with a damp cloth.

5.2.8 Clean the foot switch



Regular cleaning of the foot control improves its stability.

- Clean the bottom plate of the foot control with a moist cloth (water).

5.3 Instruments and instrument hoses

5.3.1 Rinse water paths

Microorganisms can grow in the water paths of the treatment center. Use a large amount of water for rinsing the lines prior to starting patient appointments.

- > Flush the cuspidor for at least one minute.



5.3.2 Purge the water paths (purge function)

To reduce the amount of germs, the water paths of the water-carrying instruments of the dentist element and the Standard or Sprayvit E 3-way syringe of the dentist or assistant element can be purged with water.

For the purge function, individual instruments are removed from the holder and held over the cuspidor for purging. If your treatment center is not equipped with a cuspidor, hold the instruments over a watertight container with sufficient capacity. The water paths of all removed instruments are then purged consecutively. **Press the water key of the 3-way syringe for purging.**

Purge the water paths of all instruments:

- Before starting work
- the used instruments after each patient
- At the end of the work day

With the Intego Pro treatment center, it is also possible to automatically purge the water paths, see "Automatically purge water paths (autopurge function)". [→ 228].

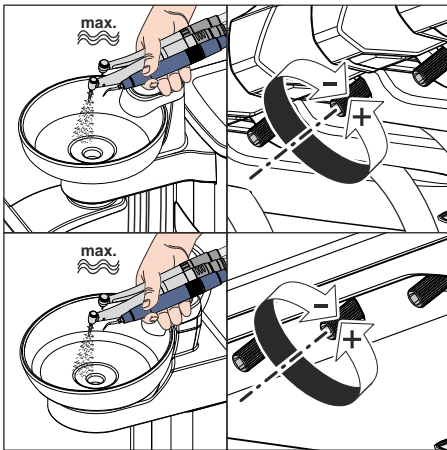
With the Intego treatment center, the purge and sanitize function is optional. If this function is not available, purging of the water paths must be carried out manually, see "Purging water paths manually" [→ 236].

Preparation

The following preparations should be made before you begin to purge the water paths.

1. If your treatment center is equipped with a cuspidor, activate the cuspidor flushing for at least one minute. This flushes the water paths.





2. Set all of the instruments to be purged to their maximum water flow rate. The water regulators under the instrument holder must be turned counterclockwise.

IMPORTANT

The water flow rate to the instruments is not checked by the treatment center.

- Make sure that the maximum water flow rate is set for all instruments to be purged.

3. Put all instruments in place.

5.3.2.1 Purge function on the EasyPad

Setting the purging time

The purging time of the removed instruments can be set between 20 and 120 seconds in the setup for the treatment center, see "Setting the purging time for the purge function" [→ 200].

Switching on the purging function

- ✓ All instruments are in their holders.

1. Press on the *Endo / Purge* key.

↪ The *Purge* operating context is shown on the EasyPad display.

2. Press the *2 / Setup* favorite key.



Error message: Refill water (only for stand-alone water supply with the Comfort water unit)

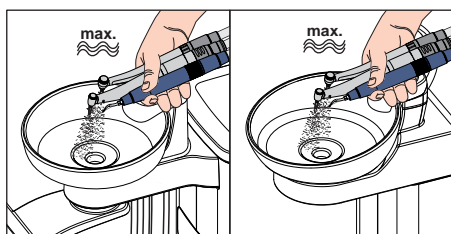
If the *Refill water* display appears on the EasyPad display after the purge function has been started, there is not sufficient water in the disinfectant tank of the water unit to purge the water paths. The purge function cannot be started with insufficient water.

- Mix distilled water with the agent for disinfecting the water lines at a ratio of 100:1 (1 liter of water, 10 ml of the disinfectant) and fill this into the disinfectant tank of the water unit. For more information please refer to the section Water supply for Intego" [→ 160].
- ↪ When sufficient water has been refilled, the purge program continues.

Purging water lines

- ✓ A revolving element is shown on the EasyPad display next to the *Purge* display. Tumbler filling is automatically activated.





1. Remove the instruments to be purged from the holder and hold them over the cuspidor or over a watertight container with sufficient capacity. With the CS dentist element: Move the swivel arm of the instruments to be purged into the operating position so that the weight of the instrument hoses allows them to remain in this position.

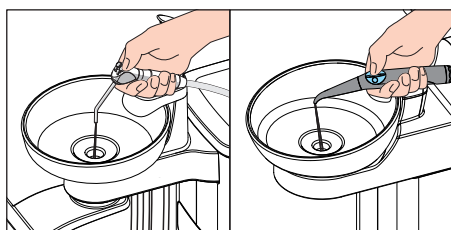
➤ After an instrument is removed, the purge process starts automatically after about 5 seconds (except for the 3-way syringe). The removed instruments are purged with water for the duration of the set purging time.

⚠ CAUTION

Do not purge more than two burs simultaneously.

If the treatment center features the option of a third burr drive, the water flow rate is reduced when purging simultaneously.

- Do not remove more than two burr drives for purging. Purge the third burr drive separately afterwards.



2

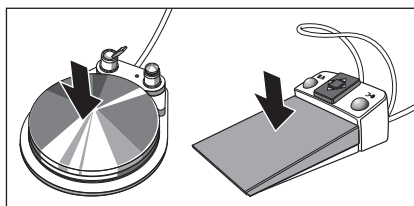
Setup

2. Place the removed instruments back in their holders after the purging process.
3. Hold the 3-way syringe of the dentists and assistant element over the cuspidor or a watertight container with sufficient capacity and press the water button for at least 20 seconds.

4. Press the *2 / Setup* favorite key to end the purge program.
 - The time is displayed on the EasyPad display.
 - The treatment center is again ready for operation.

Stopping the purging process

- Press the foot pedal to interrupt the purging process. If the instrument is not put back in the holder, the purging process can be continued by pressing the foot pedal again up to the end of the set purging time.



Canceling the purge function

The purging function can be stopped at any time.

- Press the *Counterclockwise rotation/user profile* fixed key.
 - The time is displayed on the EasyPad display.



5.3.2.2 Purging function on the EasyTouch

Opening the purging dialog

- ✓ All instruments are in their holders.
 - ✓ The *Start dialog* is displayed on the touchscreen.
1. Press the *Sub-screen* fixed key.

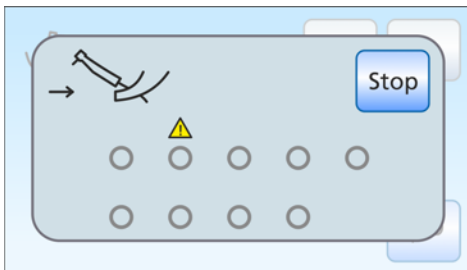


- ✎ The *Start* sub-dialog is displayed.



2. Touch the *Purge function* key.

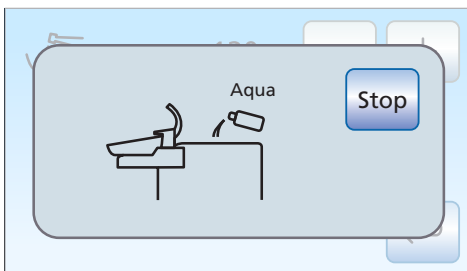
Error message: Deposit instruments



If the *Deposit instruments* display appears after the purge function has been started, the treatment center has detected that not all of the instruments have been placed in their holders.

- Check the instruments marked with a warning triangle on the touchscreen.
- ✎ When all of the instruments have been put in the holders, the purge program will continue.

Error message: Refill water (only for self-sufficient water supply)



If the *Refill water* display appears after the purge function has been started, there is not sufficient water in the disinfectant tank of the water unit to purge the water paths. The purge function cannot be started with insufficient water.

- Mix distilled water with the agent for disinfecting the water lines at a ratio of 100:1 (1 liter of water, 10 ml of the disinfectant) and fill this into the disinfectant tank of the water unit. For more information please refer to the section "Water supply for Intego Pro" [→ 162].
- ✎ When sufficient water has been refilled, the purge program continues.

Setting the purge time and starting the purge function

The purge time of the removed instruments can be set between 20 and 120 seconds.

✓ The *Purge* dialog is displayed on the touchscreen.



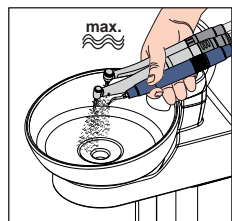
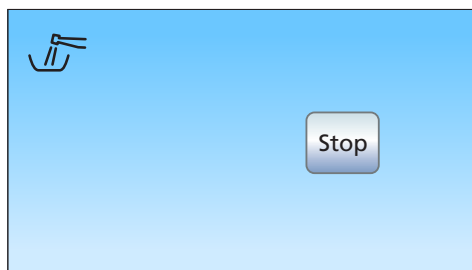
1. Use the – and + keys to set the purging time.



2. Touch the *Start* key.

Purging water lines

✓ The *Purge function activated* display is shown on the touchscreen.



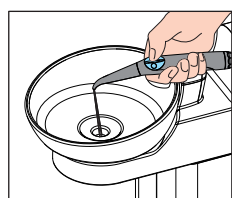
1. Remove the instruments to be purged from the holder and hold them over the cuspidor or over a watertight container with sufficient capacity. With the CS dentist element: Move the swivel arm of the instruments to be purged into the operating position so that the weight of the instrument hoses allows them to remain in this position.
 - ✎ After an instrument is removed, the purge process starts automatically after about 5 seconds (except for the 3-way syringe). The removed instruments are purged with water for the duration of the set purging time.

⚠ CAUTION

Do not purge more than two burs simultaneously.

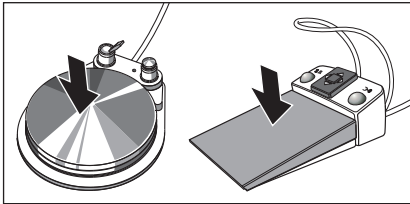
If the treatment center features the option of a third burr drive, the water flow rate is reduced when purging simultaneously.

- Do not remove more than two burr drives for purging. Purge the third burr drive separately afterwards.



2. Place the removed instruments back in their holders after the purging process.
3. Hold the 3-way syringe of the dentists and assistant element over the cuspidor or a watertight container with sufficient capacity and press the water button for at least 20 seconds.

Stop



Stop

4. Touch the *Stop* key to end the purge program.
 - After all instruments have been put back in their holders, the *Purge function activated* display disappears. The *Start* program is shown.
 - The water path purging procedure is finished. The treatment center is again ready for operation.

Stopping the purging process

- Press the foot pedal to interrupt the purging process. If the instrument is not put back in the holder, the purging process can be continued by pressing the foot pedal again up to the end of the set purging time.

Canceling the purge function

In the case of the error message *Deposit instruments* or during purging, the purge function can be canceled.

- Touch the *Stop* key on the touchscreen.

5.3.3 Automatically purge water paths (autopurge function)

The AutoPurge function is only available on the Intego Pro treatment center.

The autopurge function enables automatic purging of all water-carrying instruments in the dentist element, of the 3-way Sprayvit E syringe in the dentist and assistant elements and of the tumbler filling.

All of the instruments inserted in the water unit will be purged when the autopurge function is activated. If the instruments remain in the water unit after the treatment center is switched off, the purging process will automatically be started again the next time the treatment center is switched on.

Execute the AutoPurge function:

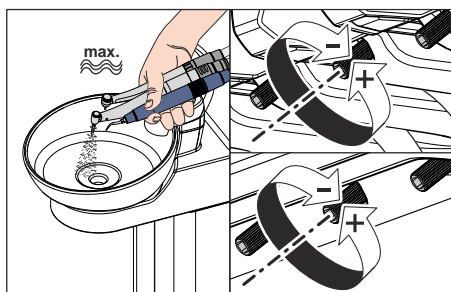
- Before starting work
- At the end of the work day

When the treatment center is switched to stand-alone water supply mode, the AutoPurge function is no longer available (function hidden). It is still possible to purge individual instruments; see "Purging water paths (purge function)" [→ 222].

Preparation

The following preparations must be made before you start purging the water paths:

1. If your treatment center is equipped with a cuspidor, activate the cuspidor flushing for at least one minute. This flushes the water paths.
2. Set all burr drives and the scaler to the maximum water flow rate. The water regulators under the instrument holder must be turned counterclockwise.



IMPORTANT

The water flow rate to the instruments is not checked by the treatment center.

- Make sure that the maximum water flow rate is set for all instruments to be purged.

3. Put all instruments in place.
4. Do **not** remove the tumbler holder from the cuspidor. Place the empty tumbler under the tumbler outlet.

5.3.3.1 Autopurge function on the EasyPad

Setting the autopurge time

The purge time for automatic purging may be set between 60 and 180 seconds in the treatment center setup, see "Setting the purging time for the autopurge function" [→ 200].

Switching the autopurge function on

- ✓ All instruments are in their holders.
1. Press on the *Endo / Purge* key.





✎ The *Purge* operating context is shown on the EasyPad display.

2. Press favorite key 3.

✎ The *AutoPurge* operating context is shown.

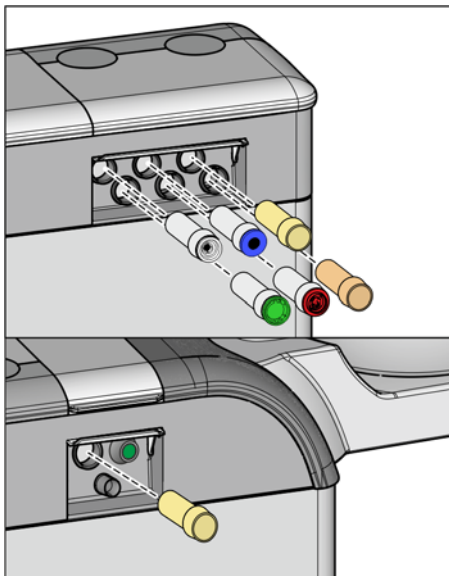
3. Press the *2 / Setup* favorite key.

Inserting water-carrying instruments into the cleaning adapters of the water unit.

Cleaning adapters for water-carrying instruments are integrated into the Comfort and Ambidextrous (with Intego Pro) water units. These enable all instruments to be purged with water. For this purpose, water-carrying instruments must be inserted into adapters on the water unit.

✓ The "Start" text is shown on the EasyPad display.

1. Remove the Sprayvit E sleeves from the valve bodies and the straight and contra-angle handpieces from the water-carrying instruments.
2. If the adapters are not yet located in the receptacles of the water unit, insert them into the receptacles until they lock into place. The Sprayvit E adapters can be inserted only into the two receptacles on the right side of the dentist element with the guide rib facing upward. A Sprayvit E adapter must also be inserted into the assistant element side. The adapters always remain in the water unit.

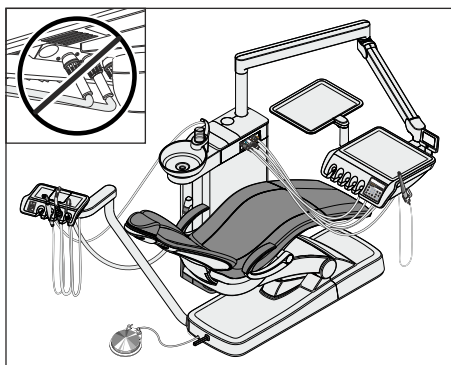
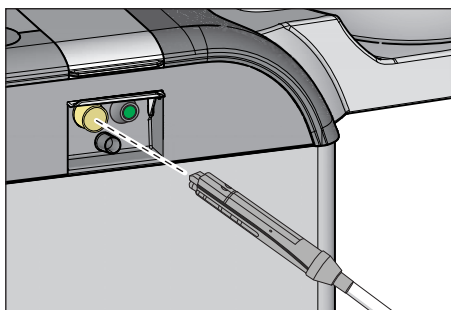
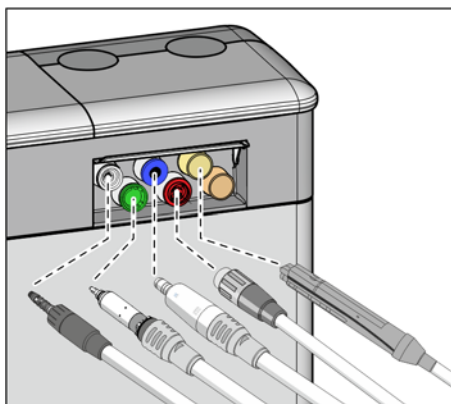


IMPORTANT

Arrangement of adapters

The adapters for the instrument couplings are color coded:

- Yellow = Sprayvit E, water on the right button
- Orange = Sprayvit E, water on the left button
- White = highspeed handpiece
- Green = BL E motor
- Blue = BL ISO E motor (ISO interface)
- Red = SiroSonic L scaler or in its position
- Light blue = Cavitron scaler



3. Dentist element side: Insert the couplings of all water-carrying treatment instruments into the adapter in the Comfort water unit (for Sprayvit E: valve lever in up position, locking knob in the down position).

Also for the CS dentist element: Move the swivel arm of the instruments to be purged into operating position so that the weight of the instrument hoses keeps them in this position.

4. Assistant element side: Insert the valve bodies of the Sprayvit E into the adapter in the water unit.

IMPORTANT

Pinching of the instrument hoses

Be careful not to pinch the instrument hoses when inserting the instruments.

With treatment centers with the Ambidextrous option: convert the water unit to the left side so that the adapters on the water unit point towards the patient chair, see "Converting the Ambidextrous water unit for right-handers / light-handers" [→ 166].

If the hoses are pinched, the water flow will be obstructed during purging.

The water flow rate to the instruments is not checked by the treatment center.

- ✎ All water-carrying instruments are inserted into the cleaning adapters.

5. Press the favorite key 2 / Setup.

- ✎ Automatic purging of the water paths will start. A revolving element is shown next to the *AutoPurge* display on the EasyPad.

Purging water lines

The removed instruments are purged with water for the duration of the set purge time. Then the tumbler filler is purged.

Following the purging process, the *End* display appears.

2

Setup

APURGE

End

There are now two options for continuing:

- **Leave the instruments in the water unit**

The autopurge function remains activated.

The instruments remain in the Comfort water unit and the treatment center can be switched off at the mains. On the next day, the autopurge function is automatically performed again on all of the instruments remaining in the water unit as well as on the tumbler filling unit immediately after the treatment center is switched on. Then you can prepare the treatment center for daily practice operation.

If the treatment center is out of operation over a prolonged period of time, you can briefly switch it on every day and then switch it off again when the purging process is finished. This ensures that the number of microorganisms in the water paths will not increase excessively. Empty the rinsing tumbler after each purging process and place the empty tumbler again below the tumbler outlet.

If any instruments are removed from the water unit or new instruments are connected to the treatment center while the latter is switched off, they must be plugged into the adapters of the water unit or returned to the instrument holder again before switching the treatment center back on.

- **Deposit instruments**

The AutoPurge function is completed.

- > Remove the instruments from the Comfort water unit and put them back in place.
- ✎ The AutoPurge procedure is finished. The treatment center is again ready for operation and can be prepared for the working day.

Canceling the AutoPurge function

In the case of the error message *Deposit instruments* or during purging, the autopurge function can be canceled.

- > Press the *Counterclockwise rotation/user profile* fixed key.



5.3.3.2 Autopurge function on the EasyTouch

Opening the AutoPurge screen

- ✓ All instruments are in their holders.
- ✓ The *Start dialog* is displayed on the touchscreen.

1. Press the *Sub-screen* fixed key.



✎ The *Start* sub-dialog is displayed.

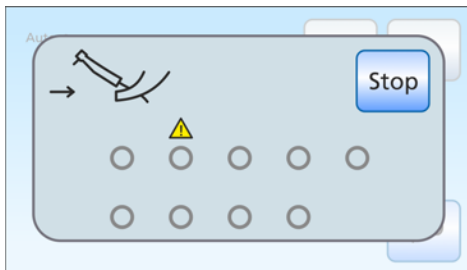


2. Touch the *Autopurge* function key.

Error message: Deposit instruments

If *Deposit instruments* is displayed after the AutoPurge function has been started, the treatment center has detected that not all of the instruments have been placed in their holders.

- > Check the instruments marked with a warning triangle on the touchscreen.
- ✎ The AutoPurge program will continue when all instruments have been deposited in the holder.



Setting the instrument purge time and starting the AutoPurge function

The purging time of the instruments may be set between 60 and 180 seconds.

- ✓ The *AutoPurge* screen is displayed on the touchscreen.

1. Use the – and + keys to set the purging time.

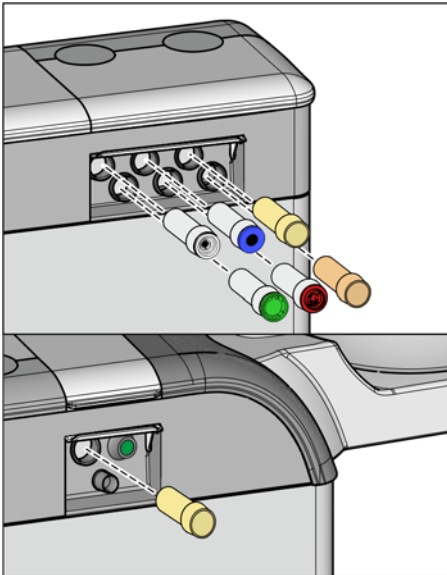


2. Touch the *Start* key.

Inserting water-carrying instruments into the cleaning adapters of the water unit.

The water unit has integrated cleaning adapters for water-carrying instruments. These enable all instruments to be purged with water. For this purpose, water-carrying instruments must be inserted into adapters on the water unit.

1. Remove the Sprayvit E sleeves from the valve bodies and the straight and contra-angle handpieces from the water-carrying instruments.
2. If the adapters are not yet located in the receptacles of the water unit, insert them until they lock into place. The Sprayvit E adapters can be inserted only into the two receptacles on the right side of the dentist element with the guide rib facing upward. A Sprayvit E adapter must also be inserted into the assistant element side. The adapters always remain in the water unit.

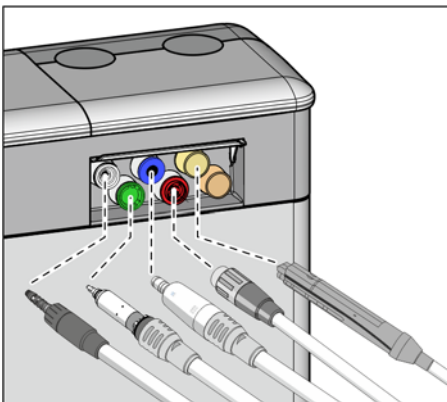


IMPORTANT

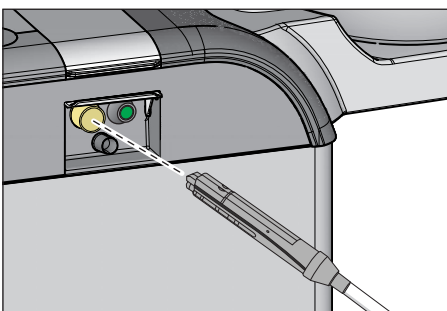
Arrangement of adapters

The adapters for the instrument couplings are color coded:

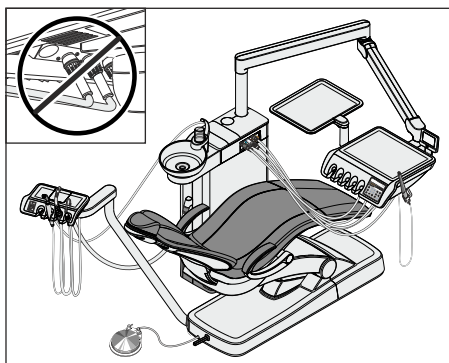
- Yellow = Sprayvit E, water on the right button
- Orange = Sprayvit E, water on the left button
- White = highspeed handpiece
- Green = BL E motor
- Blue = BL ISO E motor (ISO interface)
- Red = SiroSonic L scaler or in its position
- Light blue = Cavitron scaler



3. Dentist element side: Insert the couplings of all water-carrying treatment instruments into the adapters in the water unit (for Sprayvit E: valve lever in the up position, locking knob in the down position).
Also for Intego Pro CS: Move the swivel arm of the instruments to be purged into the operating position so the weight of the instrument hoses keeps them in this position.



4. Assistant element side: Insert the valve bodies of the Sprayvit E into the adapter in the water unit.



IMPORTANT

Pinching of the instrument hoses

Be careful not to pinch the instrument hoses when inserting the instruments.

With treatment centers with the Ambidextrous option: convert the water unit to the left side so that the adapters on the water unit point towards the patient chair, see "Converting the Ambidextrous water unit for right-handers / light-handers" [→ 166].

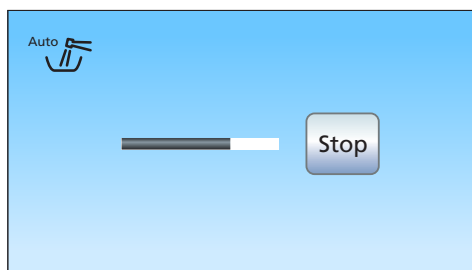
If the hoses are pinched, the water flow will be obstructed during purging.

The water flow rate to the instruments is not checked by the treatment center.

- ✎ All water-carrying instruments are inserted into the cleaning adapters.

5. Touch the *Start* key on the touchscreen.

- ✎ The purging process begins.



Purging water lines

The removed instruments are purged with water for the duration of the set purge time. Then the tumbler filler is purged. The progress bar displayed on the touchscreen refers to the entire AutoPurge program, not to the set instrument purge time.

There are now two options for continuing:

- **Leave the instruments in the water unit**

The autopurge function remains activated.

The instruments remain in the water unit and the treatment center can be switched off at the mains. On the next day, the autopurge function is automatically performed again on all of the instruments remaining in the water unit as well as on the tumbler filling unit immediately after the treatment center is switched on.

Then you can prepare the treatment center for daily practice operation.

If the treatment center is out of operation over a prolonged period of time, you can briefly switch it on every day and then switch it off again when the purging process is finished. This ensures that the number of microorganisms in the water paths will not increase excessively. Empty the rinsing tumbler after each purging process and place the empty tumbler again below the tumbler outlet.

If any instruments are removed from the water unit or new instruments are connected to the treatment center while the latter is switched off, they must be plugged into the adapters of the water unit or returned to the instrument holder again before switching the treatment center back on.

- **Deposit instruments**

The AutoPurge function is completed.

- Remove the instruments from the water unit and put them back in place.

- ✎ When all of the instruments have been put in the holders, the *Purge function activated* display disappears. The *Start* program is shown.



- ✎ The AutoPurge procedure is finished. The treatment center is again ready for operation and can be prepared for the working day.

Canceling the AutoPurge function

In the case of the error message *Deposit instruments* or during purging, the autopurge function can be canceled.

- > Touch the *Stop* key on the touchscreen.

5.3.4 Purging water paths manually

With the Intego treatment center, the purge and sanitize function is optional. If this function is not available, purging of the water paths must be carried out manually. The water-carrying instruments of the dentist element, the 3-way syringe of the dentist and assistant element and the tumbler filling must be purged.

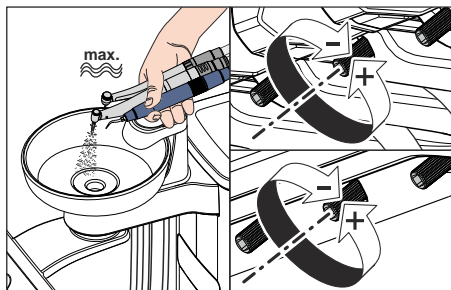
For the purge function, individual instruments are removed from the holder and held over the cuspidor for purging. If your treatment center is not equipped with a cuspidor, hold the instruments over a watertight container with sufficient capacity.

Purge the water paths of all instruments:

- Before starting work
- the used instruments after each patient
- At the end of the work day

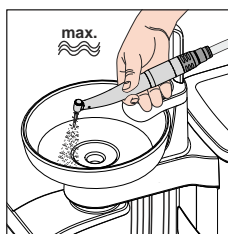
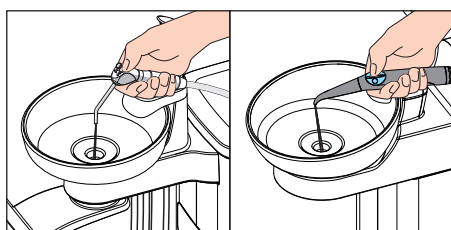
Preparation

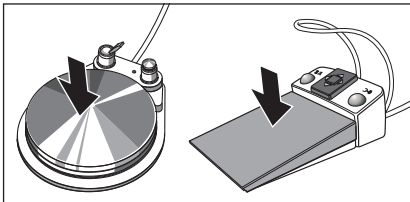
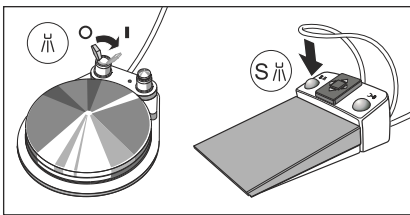
1. If your treatment center is equipped with a cuspidor, activate the cuspidor flushing for at least one minute. This flushes the water paths.
2. Set all of the instruments to maximum water flow. The water regulators under the instrument holder must be turned counterclockwise.



Purging water paths

1. Press the tumbler filler three times.
2. Hold the 3-way syringe of the dentist and assistant element over the cuspidor or over a watertight container with sufficient capacity and press the water key for at least 20 seconds.
3. Afterward, return the 3-way syringe back to the holder.
4. Remove a single instrument from holder and hold it over the cuspidor or over a watertight container with sufficient capacity. For the CS dentist element: Move the swivel arm of the instrument into working position.





5. Activate the spray.
Toggle the switch on the pneumatic foot switch to the right.
Activate the left key on the C+ electronic foot control.
6. Set a low speed and intensity for the instrument. Press favorite key 1.
7. Press and hold the foot pedal for at least 60 seconds.
8. Afterward, return the instrument to the instrument holder.
9. Repeat the procedure for all other instruments.
- ↩ The manual purging process is finished. The treatment center is again ready for operation.

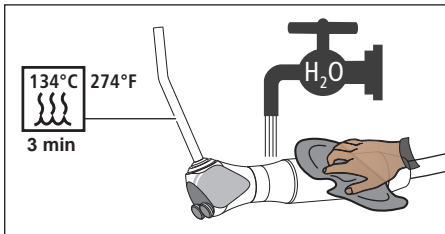
5.3.5 Lubricate, disinfect/sterilize the treatment instruments

5.3.5.1 Treatment instruments

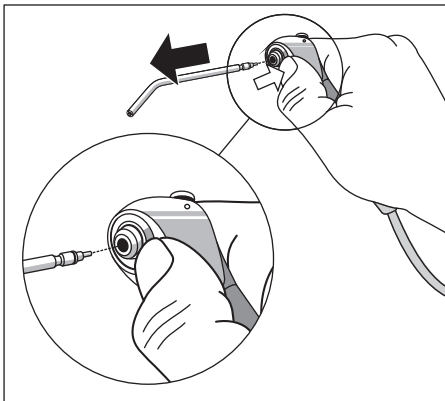
The procedures required for the following treatment instruments are described in the following separate operating instructions:

- BL E motor
- BL ISO E motor
- Straight and contra-angle handpieces in various versions
- Highspeed handpieces
- 3-way syringe Sprayvit E
- Standard 3-way syringe, see "Cleaning and sterilizing the standard 3-way syringe" [→ 238]
- SiroSonic L Scaler
- Cavitron scaler

5.3.5.2 Cleaning and sterilizing the standard 3-way syringe



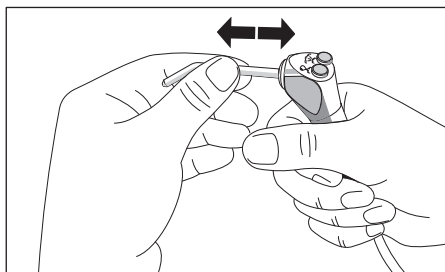
The Standard 3-way syringe can be cleaned under running water. Spray and wipe disinfection can be used. The jet can be removed from the tip for sterilization.



➤ Press on the ring-shaped unlock button.

✎ The jet adapter is released. The jet will fall out.

To attach the jet, press it in until it clicks audibly into place.



⚠ WARNING

The nozzle of the Standard 3-way syringe must lock into the holder.
Otherwise, the jet could fall out during treatment.

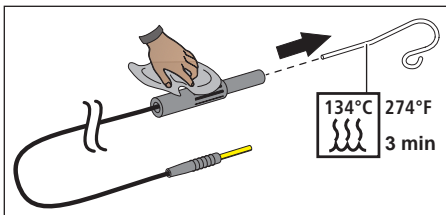
➤ Prior to treatment, ensure that the jet is securely in place.

5.3.5.3 Clean and disinfect/sterilize the components of the ApexLocator

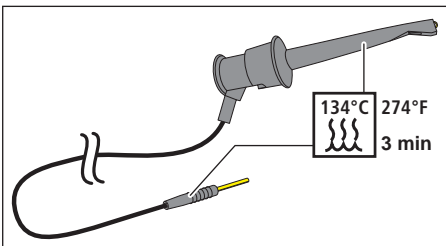
NOTE

Approved care, cleaning, and disinfecting agents

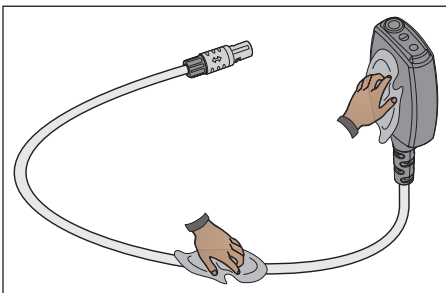
Use only care, cleaning, and disinfecting agents that have been approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].



Disconnect the mucosal electrode from the connection cable. The metal hook can be sterilized, and the connection cable can be disinfected by wiping.



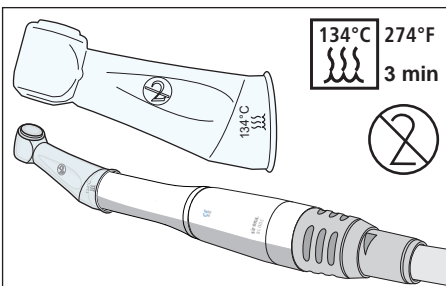
The file clamp for manual measurement can be sterilized with the connection cable.



The apex adapter and its connection cable can be disinfected by wiping.

IMPORTANT

To guarantee conductivity, no disinfectant must be allowed to penetrate the electrical contacts.



The silicone isolation sleeve is a disposable item. It must be changed after each patient. The silicone isolation sleeve must be sterilized prior to initial use.

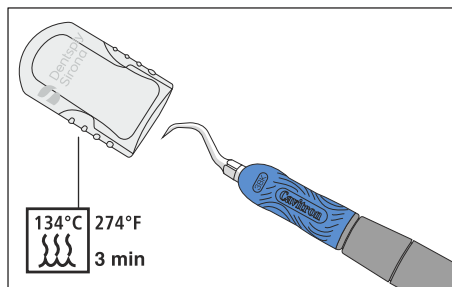
To reorder the silicone isolation sleeve, see "Spare parts and consumables" [→ 311].

Sterilize the root canal files according to the manufacturer's instructions.

5.3.5.4 Cleaning, disinfecting/sterilizing the Cavitron scaler

IMPORTANT

The work steps for sterilizing the Cavitron scaler are described in the operating instructions for the "Cavitron Built-In Ultrasonic Scaler, Model G139 with Cavitron Steri-Mate 360° Handpiece". They are enclosed with the retrofit kit.



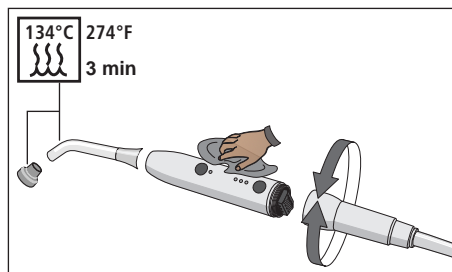
The silicon tip protector can be cleaned using mild commercially available cleaning agents. It can be cleaned using spraying or wiping and can be sterilized.

5.3.5.5 Disinfecting/sterilizing Mini L.E.D. curing light

NOTE

Approved care, cleaning, and disinfecting agents

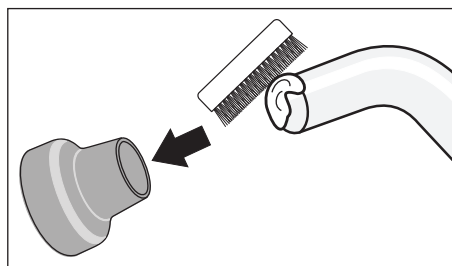
Use only care, cleaning, and disinfecting agents that have been approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].



1. Remove the connection cable of the Mini L.E.D. by turning the handpiece.
2. Pull out the light guide and remove the glare shield.
3. Sterilize the light guide and the glare shield at 134° C, 2 bar for 3 min.
4. Disinfect the handpiece of the Mini L.E.D.
5. Screw the sterilized light guide and glare shield back onto the Mini L.E.D.
6. Reconnect the handpiece of the Mini L.E.D. to the connecting cable.

The following points should also be observed when operating the Mini L.E.D.:

- Always use the glare shield to protect your eyes.
- Check the light guide after each use. Make sure that the light guide is in perfect condition.
- There should be no traces of composite material on the light guide. Immediately remove any residue.
- If you find any damage, replace the light guide, since damage will impair its performance considerably.



5.3.5.6 Cleaning/disinfecting the SiroCam F / AF / AF+ intraoral camera



The shape of the SiroCam F / AF / AF+ intraoral camera complies with hygienic requirements and therefore has no areas that are difficult to reach. It can be wipe disinfected.

NOTE

Approved care, cleaning, and disinfecting agents

Use only care, cleaning, and disinfecting agents that have been approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].

NOTE

The lens window is sensitive to scratches.

Deep scratches in the lens window impair image quality.

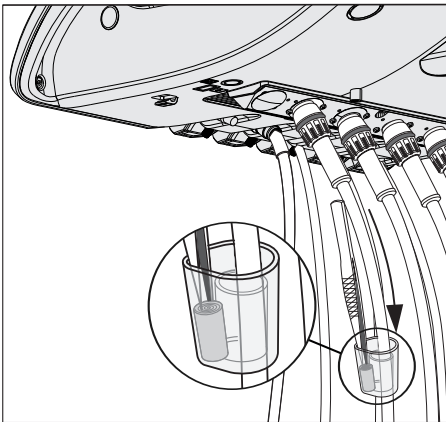
- Protect the lens window against scratching. Disinfect it with a soft, lint-free cloth.

5.3.6 Change the cotton wool roll on the turbine hose and oil collector

At the unit end of the high-speed handpiece hose, return air leaks out along with a small amount of high-speed handpiece oil. This oil is collected in a drip container by the cotton wool roll.

TS dentist element

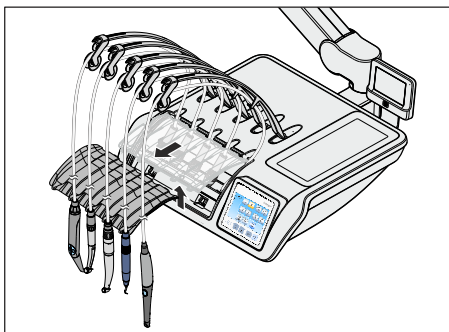
1. Slide the drip container down and remove the cotton wool roll.
2. Insert a new cotton wool roll and slide the container back up.



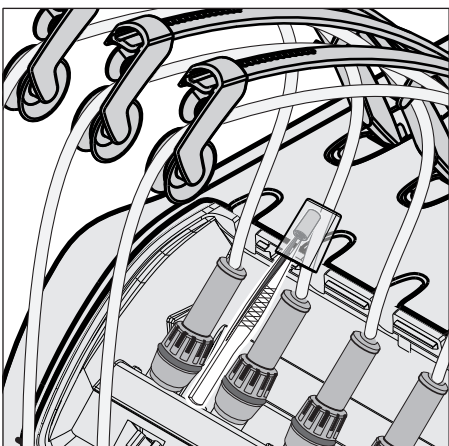
CS dentist element

Cotton wool roll on the high-speed handpiece hose

The instrument connections are located below the instrument holder. The holder is fixed on the front edge with two internal clamps on the dentist element.



1. The instruments must be removed from the instrument holder. Remove all instruments one after the other and allow these to hang down facing forward.
2. Lift the instrument holder by the front edge until the clamps are released and the holder can be removed.



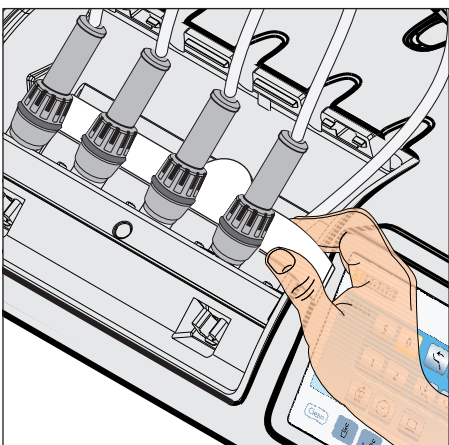
3. Slide the drip container on the high-speed handpiece hose up and remove the cotton wool roll.
4. Insert a new cotton wool roll and slide the container back down.
5. First insert the rear edge of the instrument holder into the groove on the dentist element. Then push the holder forward and down until it clicks into place.
6. Place the instruments in their holders. Make sure that the instrument hoses are located in the guide rollers of the swivel arm.

Oil collector

The CS dentist element is also equipped with an oil collector. It is located below the instrument connections and collects any liquids that leak out.

1. Remove the instrument holder from the dentist element, as described above.
2. Pull out the oil collector located under the instrument connections and replace it.

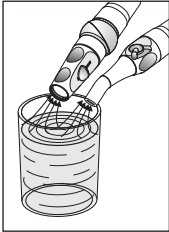
To reorder the oil collectors, see "Spare parts and consumables" [→ 311].



5.4 Vacuum system

5.4.1 Purge the vacuum system.

If the treatment center is equipped with the suction hose cleaning option, proceed according to the instruction in section "Cleaning the suction hoses" (below).



If the suction hose cleaning option is not available, you must aspirate a large glass of clear, cold water through the suction hoses used after each patient, especially after each intervention during which the patient loses blood, to ensure that the vacuum system is always ready for use

During prolonged treatments, you must aspirate a glass of water at least every 60 minutes.

The suction system must be cleaned at regular intervals, see "Cleaning the suction system using the cleaning adapter in the cuspidor or via an external container" [→ 250].

5.4.2 Cleaning the suction hoses

The suction system is exposed daily to secretions, saliva, and blood that contain bacteria. Therefore, for reasons of hygiene, the used suction hoses must be cleaned after each patient, in particular after every treatment involving blood. For long-duration treatments, the suction hose must be cleaned at least every 60 minutes.

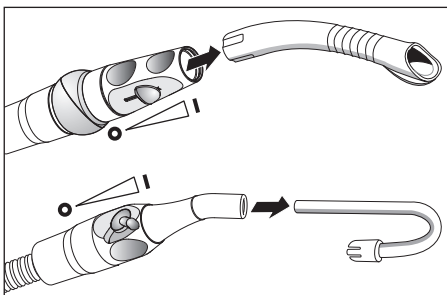
To clean the suction system, water is pumped into a tank behind the suction hose intake and suctioned off from there.

5.4.2.1 Cleaning the suction hose on the Compact water unit

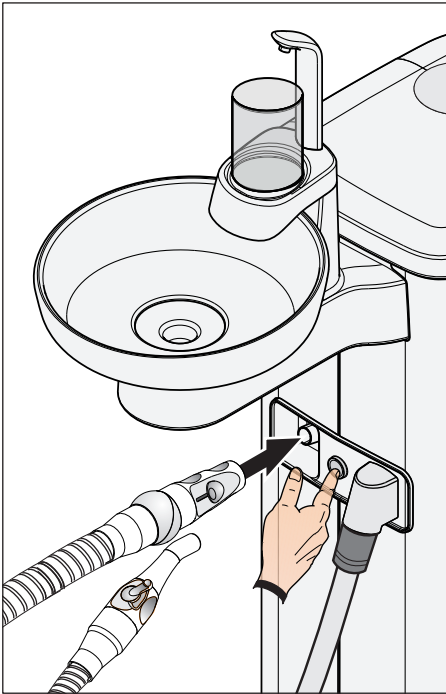
In the Compact water unit, the suction hose cleaning is optional. The suction hose cleaning option is not available in combination with an air jet pump (Air Venturi). The chemical suction hose cleaning option is not available for the compact water unit.

If the treatment center is not equipped with the suction hose cleaning option, a large glass of cold, clear water must be regularly aspirated instead, see "Purging the suction system" [→ 243].

The mount for the suction hose cleaning is connected under the cuspidor on the Compact water unit. This can be used to purge the suction hoses consecutively.



1. Remove the suction tips from the suction hoses.
2. Set maximum suction flow on the suction handpiece to be cleaned. All the other suction handpieces must be completely closed.



3. Attach the open suction handpiece to the receptacle.
4. Press the button.
 - ✎ Water is pumped into the suction hose cleaning container and suctioned out of the suction hoses. The end of the suction hose cleaning can be heard by the suction noise. If the Compact water unit is equipped with an amalgam separator, a signal can be heard at the end of the suction hose cleaning.

⚠ CAUTION

Suction hose cleaning must not be interrupted to ensure that no residual water remains in the container.

5. Then place the suction hose back into the holder on the assistant element.
6. Repeat this procedure for the other suction handpieces.

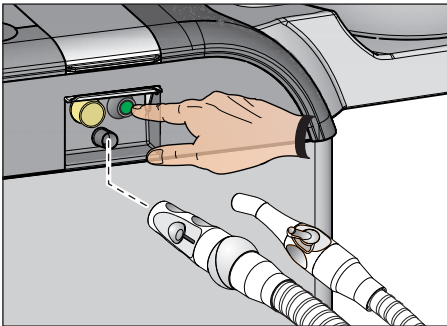
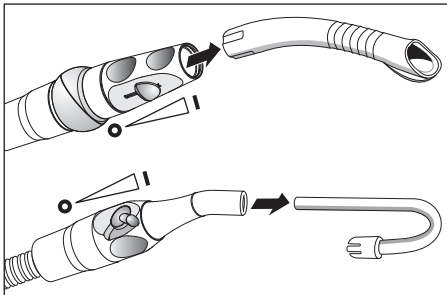
⚠ CAUTION

Disinfect the hose fittings on the water unit after each patient.

5.4.2.2 Suction hose cleaning on the Comfort water unit

The Comfort water unit is always equipped with an adapter for the suction hose cleaning function. This can be used to purge the suction hoses consecutively. A cleaning agent is automatically added to the water if the dental treatment center is equipped with the chemical suction hose cleaning option.

Cleaning suction hoses and suction system



1. Remove the suction tips from the suction hoses.
2. Set maximum suction flow on the suction handpiece to be cleaned. All the other suction handpieces must be completely closed.
3. Swivel the cover cap on the assistant's side of the water unit upward for fitting the suction hoses.
4. Attach the open suction handpiece to the receptacle.
5. Press the button.
 - ↳ The mixture of water and cleaning agent (optional) is pumped into the suction hose cleaning container and drawn off by the suction hoses. An acoustic signal will sound after completing the suction hose cleaning.

CAUTION

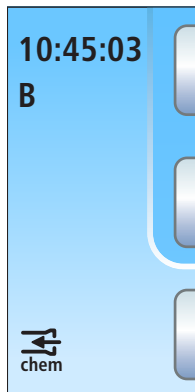
Suction hose cleaning must not be interrupted to ensure that no residual water remains in the container.

6. Then place the suction hoses back into their holders on the assistant element.
7. Repeat this procedure for the other suction handpieces.

CAUTION

Disinfect the hose fittings on the water unit after each patient.

CHEM



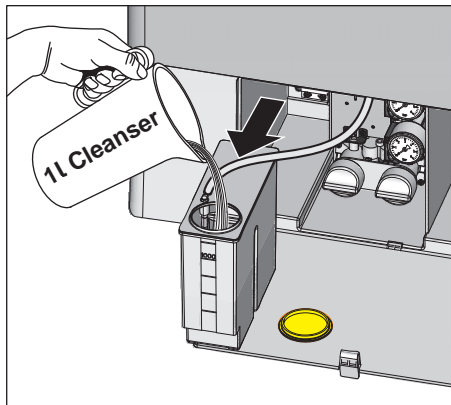
Refilling the cleaning agent

When the adjacent display appears on the EasyPad or in the status column of the touchscreen, the cleaning agent for cleaning the suction system is almost all gone. It should then be refilled as soon as possible.

CAUTION

It is possible that the cleaning agent for the suction system and the agent for disinfecting the water paths could get mixed up.

- Do **not** fill the agent for disinfecting the water paths into the cleaning agent tank for chemical suction hose cleaning! Use only "Agents for the suction lines" approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].



1. Open the maintenance flap on the base of the water unit. The cleaning agent tank for chemical suction hose cleaning is located on the left side.
2. Pull the tank slightly out of the water unit. At the same time, check the hose line.
3. Open the lock of the tank and add the cleaning agent. The cleaning agent tank has a capacity of 1 liter.
4. Close and slide the tank back into the water unit after filling. The filling opening must face the front.

With the option chemical suction hose cleaning, the drain outlets of the cuspidor are not cleaned/disinfected. If the treatment unit is equipped with this option, the drains of the cuspidor must therefore be cleaned weekly, see "Cleaning the drain outlets of the cuspidor" [→ 259].

Adjusting the cleaning agent mixture for chemical suction hose cleaning

In the Setup of the treatment center, it is possible to set the amount of cleaning agent to be mixed with water, see "Adjusting the cleaning agent mixture for chemical suction hose cleaning" for the EasyPad [→ 201], for the EasyTouch [→ 208].

5.4.2.3 Suction hose cleaning on the Ambidextrous water unit

Suction hose cleaning with the Intego Pro

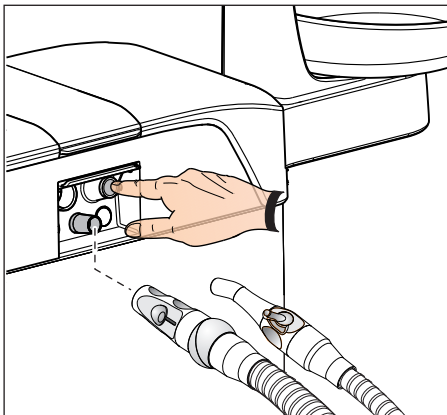
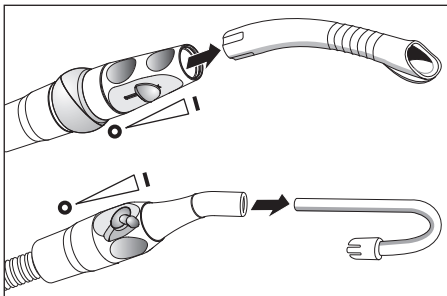
With the Intego Pro treatment center, the Ambidextrous water unit is always equipped with an adapter for the suction hose cleaning function. This can be used to purge the suction hoses consecutively. A cleaning agent is automatically added to the water if the dental treatment center is equipped with the chemical suction hose cleaning option.

Suction hose cleaning with the Intego

With the Intego treatment center, the suction hose cleaning for the Ambidextrous water unit is optional. Chemical suction hose cleaning for the Intego treatment center is not available.

If the Intego treatment center is not equipped with the suction hose cleaning option, a large glass of cold, clear water must be regularly aspirated instead, see "Purging the suction system" [→ 243].

Cleaning suction hoses and suction system



1. Remove the suction tips from the suction hoses.
2. Set maximum suction flow on the suction handpiece to be cleaned. All the other suction handpieces must be completely closed.
3. Attach the open suction handpiece to the receptacle.
4. Press the button.
 - ↳ Water and a mixture of water and cleaning agent is pumped into the suction hose cleaning container and suctioned out of the suction hoses. The end of the suction hose cleaning can be heard by the suction noise. If the Ambidextrous water unit is equipped with an amalgam separator, a signal can be heard at the end of the suction hose cleaning.

CAUTION

Suction hose cleaning must not be interrupted to ensure that no residual water remains in the container.

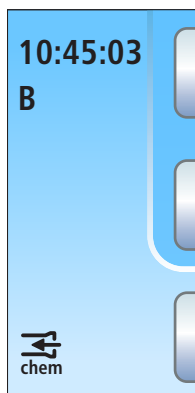
5. Then place the suction hose back into the holder on the assistant element.
6. Repeat this procedure for the other suction handpieces.

CAUTION

Disinfect the hose fittings on the water unit after each patient.

Refill cleaning agent (for the Intego Pro with chemical suction hose cleaning option)

CHEM

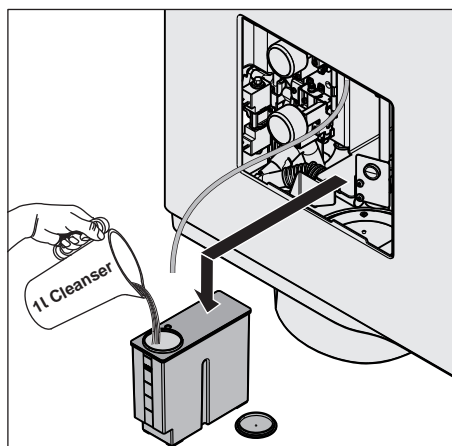


When the adjacent display appears on the EasyPad display or in the status column of the touchscreen, the cleaning agent for cleaning the suction system is almost all gone. It should then be refilled as soon as possible.

CAUTION

It is possible that the cleaning agent for the suction system and the agent for disinfecting the water paths could get mixed up.

- Do **not** fill the agent for disinfecting the water paths into the cleaning agent tank for chemical suction hose cleaning! Use only "Agents for the suction lines" approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].



1. Remove the maintenance flap from the water unit.
2. Take the cleaning agent tank from out of the water unit and pull out the hose.
3. Place the cleaning agent tank onto the ground or onto a firm surface.
4. Open the lock of the cleaning agent tank and add the cleaning agent. The cleaning agent tank has a capacity of 1 liter.
5. Lock the cleaning agent tank.
6. Reconnect the hose to the cleaning agent tank again and push the cleaning agent tank into the water unit. The filling opening must face the front.
7. Reattach the maintenance flap.

With the chemical suction hose cleaning option, the drain outlets of the cuspidor are not cleaned/disinfected. If the treatment unit is equipped with this option, the drains of the cuspidor must therefore be cleaned weekly, see "Cleaning the drain outlets of the cuspidor" [→ 259].

Adjusting the cleaning agent mixture for chemical suction hose cleaning

In the Setup of the treatment center, it is possible to set the amount of cleaning agent to be mixed with water, see "Adjusting the cleaning agent mixture for chemical suction hose cleaning" for the EasyPad [→ 201], for the EasyTouch [→ 208].

5.4.2.4 Central supply for chemical suction hose cleaning

For clinical use, Intego / Intego Pro treatment centers can be equipped with a central cleaning agent supply for chemical suction hose cleaning. The CDS 60 system of Dürr Dental is intended for this purpose.

The cleaning agent is pumped from the central supply station to the treatment centers via an in-house tubing or hose system. Here it is mixed with water and suctioned off at the water unit via the suction hose adapter.

NOTE

The CDS 60 station may be operated only with a cleaning agent approved by Dürr Dental and Dentsply Sirona, e.g., Orotol plus.

IMPORTANT

Also observe the installation and operating instructions for the CDS 60 from Dürr Dental.

5.4.3 Cleaning vacuum system using cleaning adapter in the cuspidor or via external container

If the Compact water unit is not equipped with the suction hose cleaning option, the suction system must be cleaned daily using the cleaning adapter in the cuspidor or via external container.

If the Comfort water unit is not equipped with the chemical suction hose cleaning option, only water is used for cleaning the suction hoses. The suction system therefore must be cleaned daily using the cleaning adapter in the cuspidor or via external container.

The suction system is exposed to secretions, saliva, and blood that contain bacteria. Cleaning at regular intervals is therefore absolutely mandatory for hygienic reasons.

NOTE

Approved care, cleaning, and disinfecting agents

Use only care, cleaning, and disinfecting agents that have been approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].

NOTE

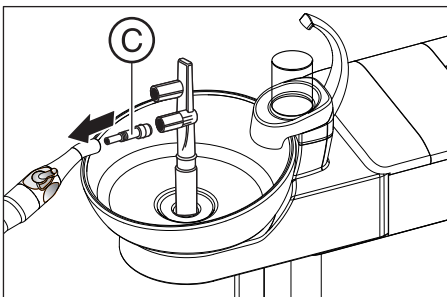
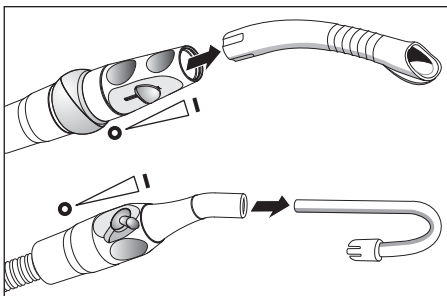
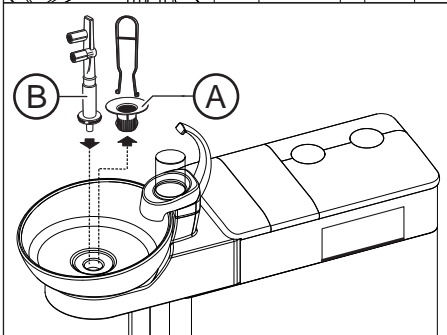
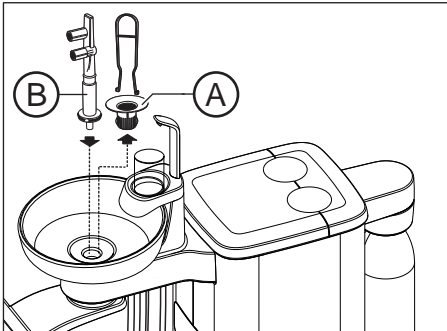
Domestic cleaning agents foam up.

Foaming cleaning agents often cause foam and water to be sucked into the dry suction system. This can cause damage to the suction machine.

- Use only care, cleaning, and disinfecting agents approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].

5.4.3.1 Cleaning vacuum system using cleaning adapter in the cuspidor

Preparation for cleaning



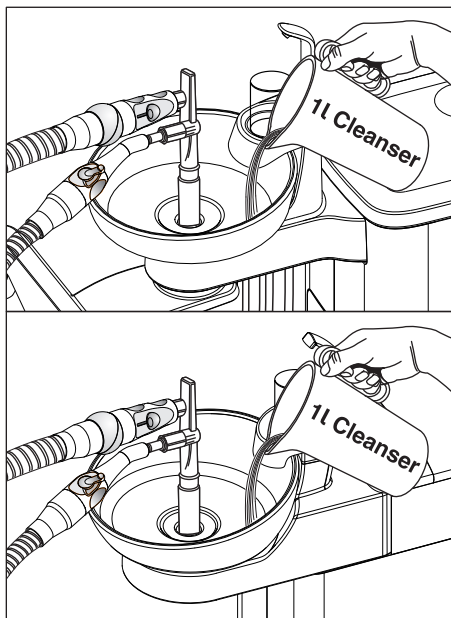
1. Prepare 1 liter of cleaning solution in a separate container according to the manufacturer's instructions and mix it thoroughly.
2. Remove the gold trap **A**.
3. Clean the cuspidor.
4. Insert the cleaning adapter **B** as far as it will go.

5. Remove the suction tips from the suction hoses.
6. Set maximum suction flow on the suction handpieces.

7. Attach the adapter **C** to the saliva ejector.

Cleaning procedure

1. Pour 1 liter of cleaning solution into the cuspidor.
2. Remove the suction hoses from their holders and attach them to the side of the cleaning adapter as simultaneously as possible.
 - ↳ Two thirds of the cleaning solution will be suctioned off by the suction hoses; one third will flow into the drain of the cuspidor.
3. Allow the cleaning solution to act. Observe the reaction time specified for the cleaning solution by the manufacturer.



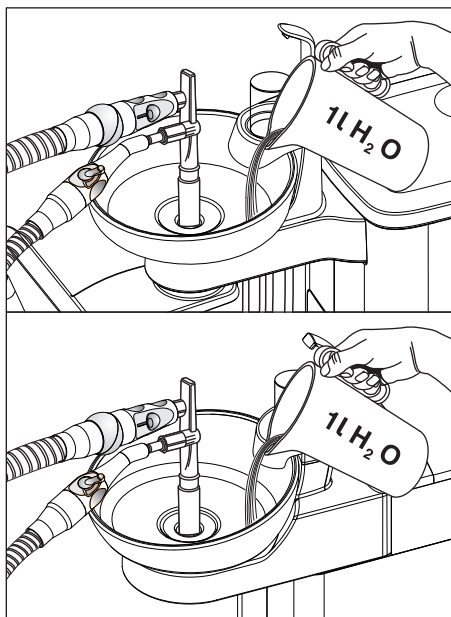
Rinsing the cleaning agent

1. Following the cleaning process, pour at least 1 liter of water into the cuspidor.
 - ↳ The water is drawn off, thus preventing any cleaning agent residues from remaining in the suction hoses.
2. When the aspiration process has been completed, detach the hoses. Place the suction hoses back in their holders.
3. Remove the cleaning adapter **B** and insert the gold trap **A**.

If the treatment center is equipped with a third suction hose, repeat the above procedure.

If the water unit is equipped with a standard wet suction, the filter insert of the standard wet suction must also be cleaned once a month after cleaning the suction system; see "Cleaning the filter insert of the standard wet suction" [→ 274].

If the Compact water unit is equipped with an air jet pump (Air Venturi), the collector should be emptied weekly after cleaning the suction system, see "Emptying the receiving tank of the air jet pump" [→ 277].



5.4.3.2 Cleaning the suction system via external container

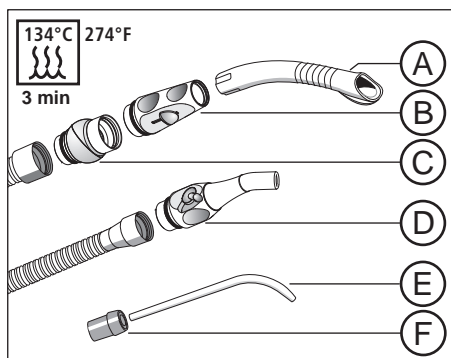
If the treatment center is not equipped with a cuspidor, the suction system must be cleaned via external container.

1. Prepare 1 liter of cleaning solution in a separate container according to the manufacturer's instructions and mix it thoroughly.
2. Fill the cleaning solution into a suitable container.
3. If the container is equipped with suitable adapters for the suction hoses, take the suction cannulae from the suction hoses. Otherwise, the cleaning solution is to be aspirated with plugged on suction cannulas.
4. Set maximum suction flow on the suction handpieces.
5. Remove the suction hoses from their holders and aspirate the cleaning solution simultaneously with all the suction hoses from the container.
6. Allow the cleaning solution to act. Observe the reaction time specified for the cleaning solution by the manufacturer.
7. Following the cleaning process, pour at least 1 liter of water into the container. Aspirate the water in the same way to ensure that no cleaning agent residues remain in the suction hoses.
8. After finishing, place the suction hoses back in their holders.

5.4.4 Sterilize/disinfect the suction handpieces

Sterilization/disinfection

All parts of the suction handpieces can be sterilized and thermally disinfected.



A	Suction tip
B	Suction Handpiece
C	Rotary joint
D	Saliva ejector handpiece
E	Surgical suction tip
F	Intermediate piece

Lubricating suction handpieces

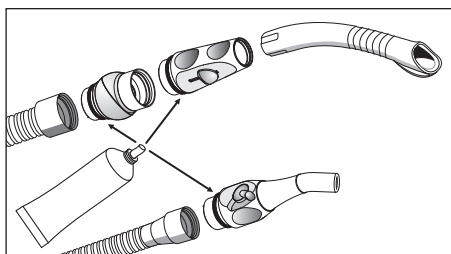
The disconnection points of the suction handpieces must be lubricated once a week and after each thermal disinfection or sterilization process.

CAUTION

Unsuitable lubricants

Lubricants that are not food safe may endanger the patient's health. Rubber materials such as O-rings are corroded by unsuitable lubricants.

- Never use petroleum jelly or similar lubricants.
- Use only lubricants approved by Dentsply Sirona.



1. Detach the handpiece of the spray aspirator and the saliva ejector from the suction hoses.
2. Detach the rotary joint of the handpiece from the spray aspirator.
3. Regrease the disconnection points and O rings of the handpieces.

5.4.5 Empty the central suction sieve.

Depending on the options, there is a central suction sieve in the Compact water unit or Comfort assistant element to retain solid materials (e.g. amalgam). The suction sieve must be emptied when the suction force deteriorates.

CAUTION

Amalgam residues must not enter the public sewage system.

Amalgam is a mercury compound that is hazardous to water.

- Do not dispose of amalgam residues in a sink.
- Collect amalgam residues in a closed container with water.
Dispose of amalgam residues, e.g. when replacing the amalgam rotor by filling the amalgam residues into the amalgam rotor or when emptying the sediment container.



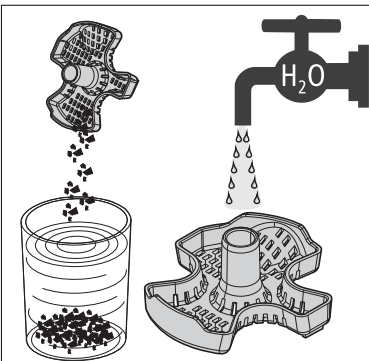
WARNING

Wear gloves when performing the following work.

Empty central suction sieve in the Compact or Ambidextrous water unit

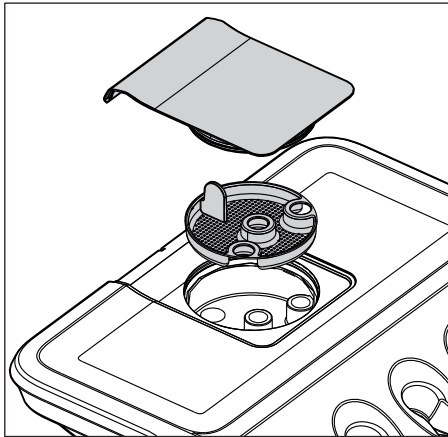
If the treatment center is equipped with the Compact assistant element, the central suction sieve is in the swivel arm of the cuspidor. It is accessible from the top.

1. Remove the cuspidor.
2. Remove the sieve cover and remove the sieve.

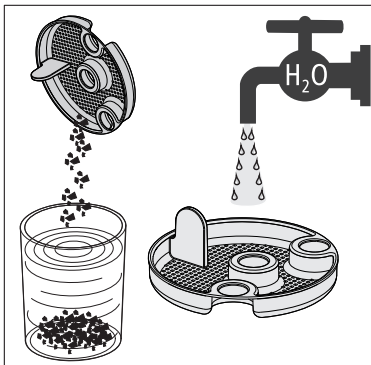


3. Collect amalgam from the suction sieve. Amalgam residues must be disposed of separately.
4. Clean the sieve under running water and put it back into the water unit.

Emptying the central suction sieve in the Comfort assistant element



1. Open the cover on the suction sieve on the assistant element and remove it.



2. Collect amalgam from the suction sieve. Amalgam residues must be disposed of separately.
3. Clean the sieve under running water and put it back into the assistant element.

5.4.6 Cleaning and disinfecting the suction hoses

The hoses of the spray aspirator and the saliva ejector and the connection hose to the water unit (only on the Comfort water unit) can be detached for rinsing under running water.

The outside of the suction hoses can be disinfected by spraying or wiping.

NOTE

Powdering suction hoses with talcum

If the surfaces of the hoses have become sticky from disinfectants, clean them with a commercially available dishwashing liquid and then powder them with a light coat of talcum if necessary.

5.5 Components of the water unit

5.5.1 Clean the gold trap

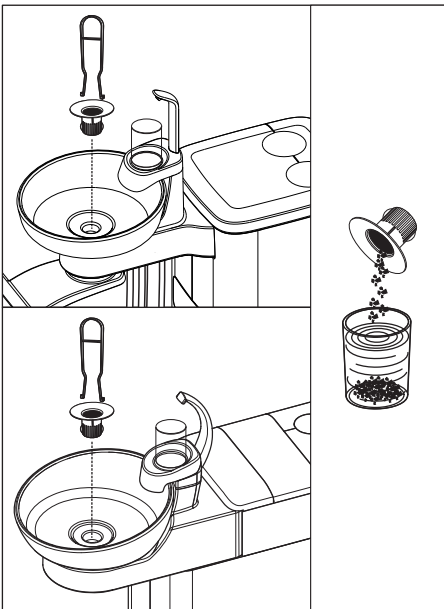
The gold trap retains larger solid particles to prevent them from being washed down the drain in the cuspidor bowl. This means that the amalgam rotor must be replaced less often and the sediment container or collector of the air jet pump must be emptied less often.

CAUTION

Amalgam residues must not enter the public sewage system.

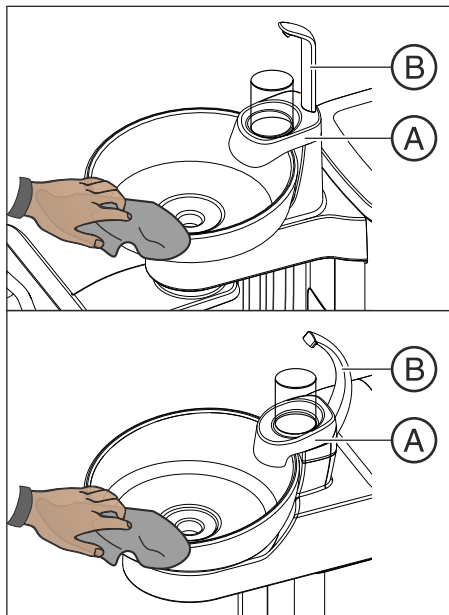
Amalgam is a mercury compound that is hazardous to water.

- Do not dispose of amalgam residues in a sink.
- Collect amalgam residues in a closed container with water. Dispose of amalgam residues, e.g. when replacing the amalgam rotor, by filling the amalgam residues into the amalgam rotor or when emptying the sediment container or collector of the air jet pump.



1. Remove the gold trap from the drain of the cuspidor bowl.
2. Remove the amalgam residues from the gold trap. Amalgam residues must be disposed of separately.
3. Clean the gold trap.
4. Reinsert the gold trap.

5.5.2 Clean/disinfect the cuspidor



The cuspidor bowl, the tumbler holder **A** and the tumbler outlet **B** can be sprayed and wiped with surface disinfectants.

Clean and disinfect the cuspidor bowl with a special cleaning agent. This agent will also care for the drain lines of the cuspidor bowl.

NOTE

Domestic cleaning agents foam up.

Foaming cleaning agents often cause foam and water to be sucked into the dry suction system. This can cause damage to the suction machine.

- Use only care, cleaning, and disinfecting agents approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].

The cuspidor bowl is attached to the water unit via a bayonet catch and can be removed for thorough cleaning. The tumbler holder **A** can be left attached when doing this.

⚠ CAUTION

If the treatment center is switched on, the flushing and tumbler filling functions can be activated even with the cuspidor bowl removed.

In this case, water would run onto the floor and could enter the treatment center.

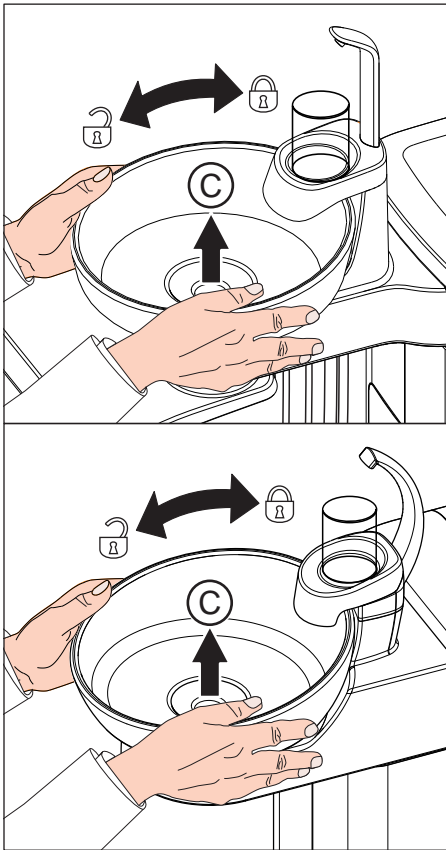
- Switch the treatment center off at the main switch before removing the cuspidor bowl.

⚠ CAUTION

In the Compact water unit, tumbler filling can be switched on even if the tumbler filler is attached.

In this case, water would run onto the floor and could enter the treatment center.

- Do not press the *Tumbler filling* key when the tumbler filler is removed.



1. Remove the gold trap **C**.
2. Hold the cuspidor bowl firmly with both hands. Loosen the bayonet catch by twisting the cuspidor bowl counterclockwise.

A rubber gasket is attached to the bayonet catch of the water unit to seal its closure. Lubricate this gasket before reinserting the cuspidor bowl. For lubricants, see "Care, cleaning and disinfecting agents." [→ 259]

Make sure that the bayonet catch snaps into place when you reinsert it.

After snapping into place, the higher side of the cuspidor bowl must be located below the tumbler outlet.

5.5.3 Cleaning the outlet lines of the cuspidor

With the option chemical suction hose cleaning, the drain outlets of the cuspidor are not cleaned/disinfected. If the treatment center is equipped with this option, the drains of the cuspidor must therefore be cleaned weekly. Use the same agent as for the suction lines.

NOTE

Approved care, cleaning, and disinfecting agents

Use only care, cleaning, and disinfecting agents that have been approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].

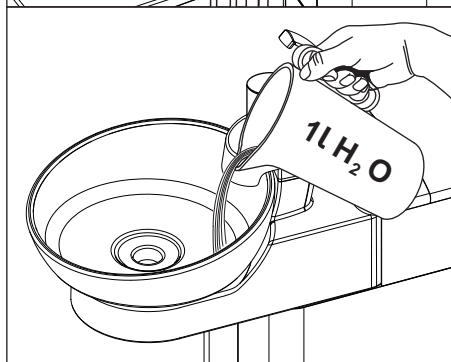
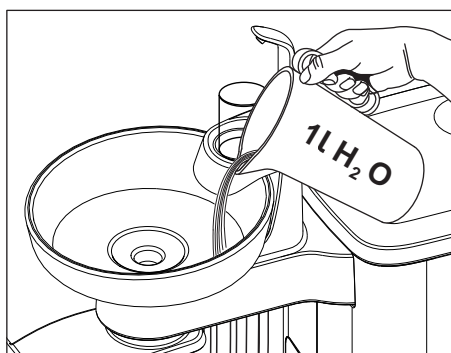
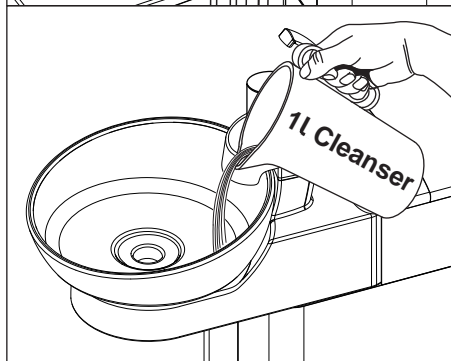
NOTE

Domestic cleaning agents foam up.

Foaming cleaning agents often cause foam and water to be sucked into the dry suction system. This can cause damage to the suction machine.

- Use only care, cleaning, and disinfecting agents approved by Dentsply Sirona, see "Care, cleaning, and disinfecting agents" [→ 212].

1. Prepare 1 liter of cleaning solution in a separate container according to the manufacturer's instructions and mix it thoroughly.



2. Fill the cuspidor with the cleaning solution and leave it to take effect. Observe the reaction time specified for the cleaning solution by the manufacturer.

3. Rinse the cleaning solution away. To do this, pour at least 1 liter of water into the cuspidor.

5.5.4 Filling with agent for disinfecting the water paths

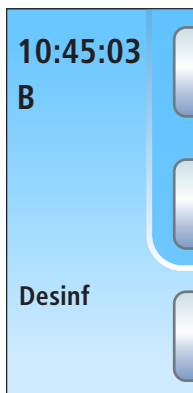
The Comfort and Ambidextrous water units can be optionally equipped with a disinfection system. In normal operation, this will automatically inoculate the water that will come into contact with the patient (also called treatment water) with an agent to disinfect the water paths. This leads to a decrease in bacterial growth and to the reduction of the bacteria in the water. Furthermore, the disinfection system can also be used to disinfect the water paths, see "Sanitizing with disinfection system" [→ 288]. If you decide to operate the treatment center without the disinfection system, please refer to the information in the chapter "Media quality" [→ 16].

WARNING

Microorganisms can multiply in the water.

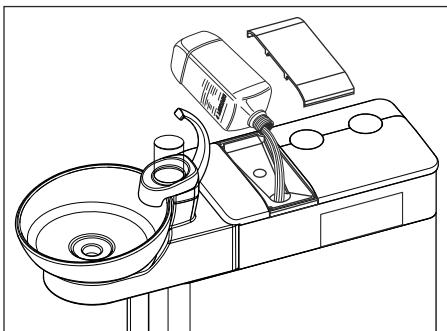
These microorganisms could increase the risk of damage to one's health.

- If the treatment center is equipped with a disinfection system, never operate this to disinfect the water paths without disinfectant.



When the supply of agent for disinfecting the water paths in the reservoir begins to run short (< 300 ml), the *Disinf* display appears in the status column of the touchscreen. Treatment can nevertheless be continued. Refill the disinfectant as soon as possible.

If the *Disinf* display does not appear, agent for disinfecting the water paths should not be refilled. The treatment center may detect that consumption of disinfectant is too low due to regular refilling and report an error. See "Error messages," [→ 308] Code 14.



1. Open the cover of the disinfectant tank.
 2. Refill the agent for disinfecting the water paths. The refill container has a capacity of approx. 1.3 liters. It is full when the disinfectant is visible at the filter of the funnel tube.
- 👉 The *Disinf* display is grayed out.

WARNING

It is possible that the cleaning agent for the suction system and the agent for disinfecting the water paths could get mixed-up.

- Do **not** fill the agent for chemical suction hose cleaning into the disinfectant tank of the water unit. Use the agent for disinfecting the water paths, see "Care, cleaning, and disinfecting agents" [→ 212].

NOTE

Splashes of undiluted disinfectant for sanitizing the water paths can result in discoloration of surfaces if left for too long.

Any splashes should therefore be removed immediately using a moist cloth.

To reorder the agent for disinfecting the water paths, see "Spare parts and consumables" [→ 311].

NOTE

Approved care, cleaning, and disinfecting agents

Use only the agent for disinfecting the water paths that has been approved by Dentsply Sirona for the disinfection system; see "Care, cleaning, and disinfecting agents" [→ 212].

5.5.5 Change the water and air filters

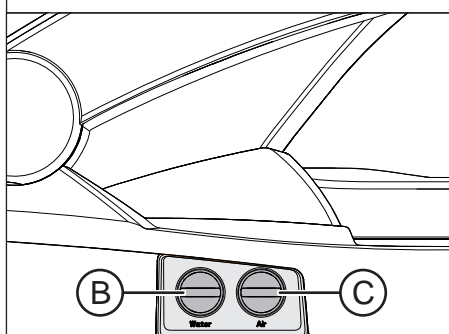
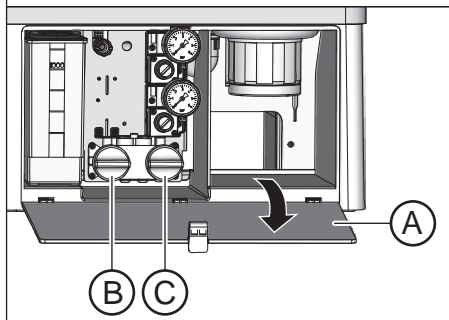
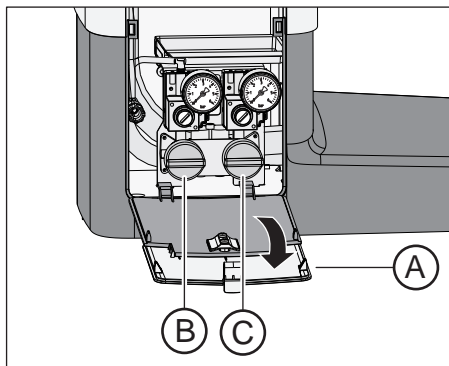
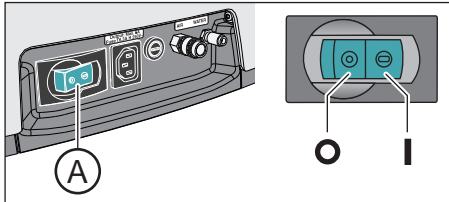
If you notice any changes in media flows, check the water and air filters for permeability. The filters must be changed, if necessary.

With treatment centers without the Ambidextrous option, the water and air filters are located in the water unit. With treatment centers with the Ambidextrous option, the water and air filters are located in the base of the chair.

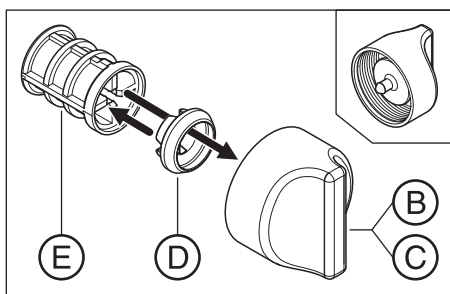
To reorder the filters, see "Spare parts and consumables" [→ 311].

1. Turn the treatment center OFF at the mains switch.

⚡ The water and air supply are switched off.



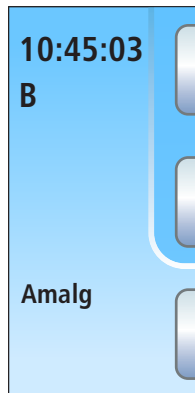
2. With treatment centers without the Ambidextrous option: open the maintenance flap A of the water unit.
With treatment centers with the Ambidextrous option: convert the water unit to the right side so that the filters are accessible, see [Converting the Ambidextrous water unit for right-handers / light-handers](#) [→ 166].
3. Any remaining water flows out of the water filter when it is opened. You should therefore place an absorbent cloth underneath the filter. Then unscrew and remove the screw cap of the water filter B and/or the air filter C.
4. Check the filters and replace them if necessary.



5. Put the seal **D** back on the filter **E**. Then insert both into the screw cap **B**, **C** as shown.
↳ The filter **E** clicks into the screw cap **B**, **C**.
6. Screw the screw-on cap(s) **B**, **C** back onto the water unit.

5.5.6 Change the amalgam rotor

Amalg



Amalgam residues and other solid particles are trapped in the amalgam rotor according to the centrifugal principle.

When the *Amalg* display appears on the EasyPad display or the status column of the touchscreen, the amalgam rotor is almost full and must be replaced as soon as possible. An acoustic signal sounds when the rotor is completely filled. In this case, a safety shutoff function ensures that the rotor is exchanged before the treatment center can be used again.

Regardless of whether or not the *Amalg* display lights up, the amalgam rotor must be replaced **at least once a year**.

CAUTION

Amalgam residues must not enter the public sewage system.

Amalgam is a mercury compound that is hazardous to water.

- Do not dispose of amalgam residues in a sink.
- Collect amalgam residues, e.g. from the gold trap of the cuspidor bowl, in a closed container with water. Dispose of amalgam residues when replacing the amalgam rotor by filling the amalgam residues into the amalgam rotor.

CAUTION

Disposal of the amalgam rotor

When a replacement rotor is supplied, a package for the return shipment of the filled amalgam rotor is attached.

Authorize only certified waste management companies to dispose of rotors.

Cleaning the suction system

The amalgam rotor is exposed to secretions, saliva and blood that contain bacteria. It is therefore important to clean the suction system before changing the amalgam rotor.

If the treatment center is equipped with the chemical suction hose cleaning option, see "Cleaning the suction hoses" [→ 243]. If this option is not available, see "Cleaning vacuum system using cleaning adapter in the cuspidor or via external container" [→ 250].

Removal and disposal of the amalgam rotor

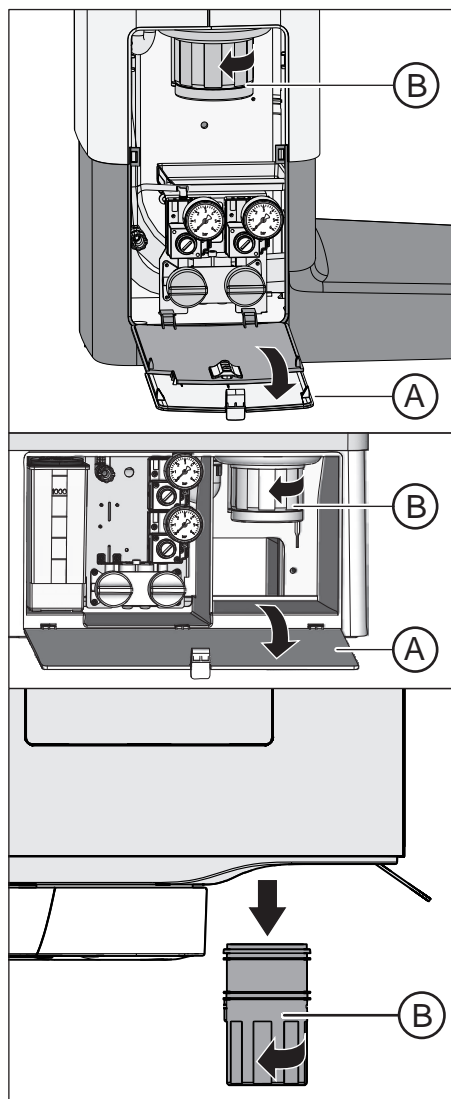
WARNING

Wear gloves when performing the following work.



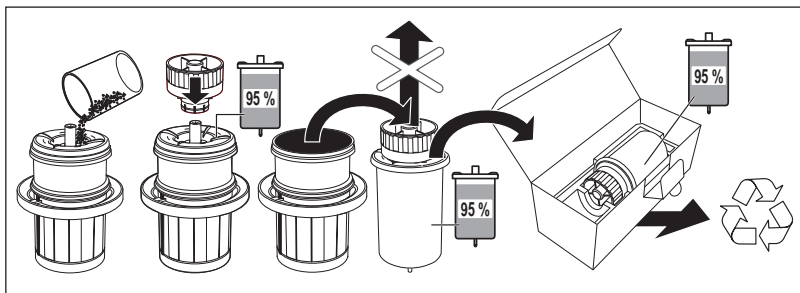
With the Compact and Comfort water units, the amalgam rotor is removed and installed via the service flap in the water unit.

With the Ambidextrous water unit, the amalgam rotor is removed from below.



✓ The treatment center is switched on.

1. With the Compact or Comfort water unit: Open the flap **A** on the base of the water unit.
2. Loosen the bayonet catch by turning the lower part of the amalgam separator **B** counterclockwise. Remove the lower part of the amalgam separator along with the amalgam rotor located inside it.
 - ↳ The message "Amalg" appears on the touchscreen and an acoustic signal sounds.



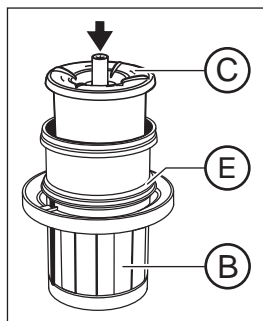
3. Dispose of the amalgam residues collected from the cuspidor and suction hoses in the amalgam rotor, see "Cleaning the gold trap" [→ 257] and "Emptying the central suction sieve" [→ 255]. Fill the amalgam residues into the amalgam rotor.
4. Hold the lower part of the amalgam separator upright. Attach the transport cap to the amalgam rotor.
 - ↳ The transport cap clicks into place. Do not remove the transport cap after closing it.
5. Remove the amalgam rotor with the transport cap from the lower part of the amalgam separator.
6. Place the container in the special packaging and ship it for disposal or authorize a certified waste management company.

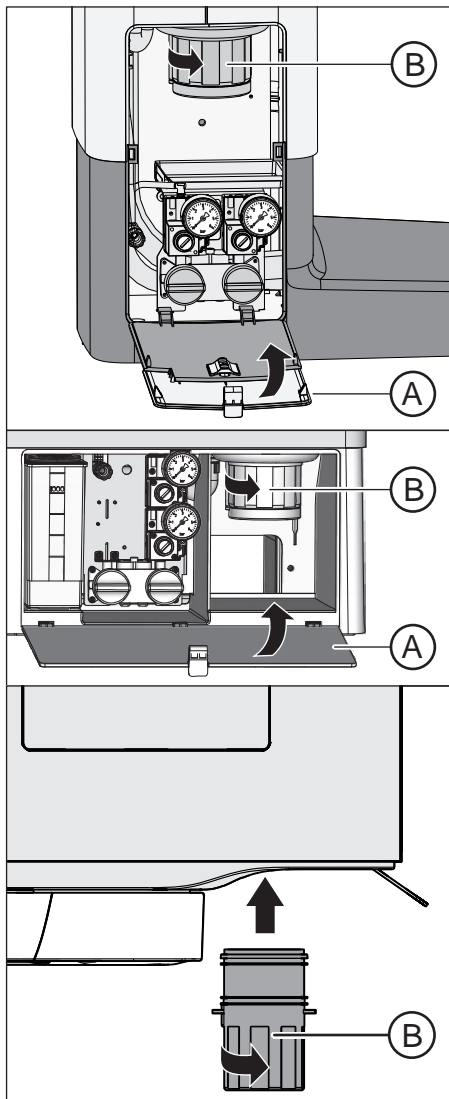
Installing the amalgam rotor

Use only original Dentsply Sirona accessories. Never use a used or recycled amalgam rotor.

To reorder the amalgam rotor, see "Spare parts and consumables" [→ 311].

1. Grease the O-ring **E** on the lower part of the amalgam separator. For lubricants, see "Care, cleaning and disinfecting agents" [→ 212].
2. Insert the new amalgam rotor **C** in the lower part of the amalgam separator **B**.





3. Hold the lower part of the amalgam separator **B** so that the latching noses of the bayonet catch are positioned transverse to the water unit. Screw the lower part of the amalgam separator **B** onto its upper part by rotating it clockwise.

NOTE

Amalgam separator message

If the message *Amalg* is still displayed on the EasyPad or touchscreen and the acoustic signal persists after the amalgam rotor has been inserted, the lower part of the amalgam separator is not properly locked.

4. With the Compact or Comfort water unit: Close the flap **A**.
5. In Germany: Document the exchange of the amalgam rotor in the "D3181 II amalgam separator operation log".
International: Document in accordance with the national regulations.

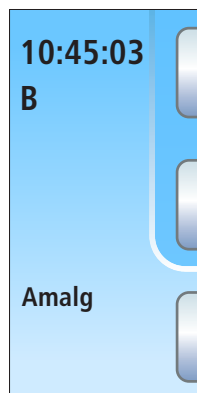
Amalgam separator operation log

In Germany, users are obligated by law to keep an operation log for the amalgam separator. This log is included with the treatment center. Please note the user duties as described in the operation log:

- Document the replacement of the amalgam rotor.
- Check the functioning of the amalgam separator system annually, see "Checking the message system of the amalgam separator" [→ 268].
- Arrange an inspection every five years.

5.5.7 Check the message system of the amalgam separator

Amalg



10.45



10.100



Amalg



An electronic control monitors the function of the amalgam separator. SIt detects any mechanical blocking or failure of the drive motor. The error is indicated by the *Amalg* display on the user interface and by an acoustic signal.

The functionality of this message system must be checked at least **once per year**.

Inform your service technician if the error occurs during regular operation.

In Germany: Document the test in the operation log of the amalgam separator in the section "Testing the function of display and message systems".

Testing the message system on the EasyPad

✓ All instruments are in place.

1. Press and hold the function key 2 / *Setup* (> 2 s).

✎ The *Setup* operating context opens. The first *Time* selection context appears on the EasyPad display.

2. Press and hold the function key 2 / *Setup* again (> 2 s).

✎ The *Service* operating context opens. The firmware version of the treatment center is displayed on the EasyPad display (example in adjacent image).

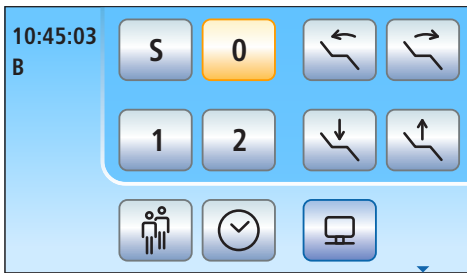
3. Briefly press the function key 2 / *Setup* several times (< 2 s) until the selection focus "Amalg" appears.
4. Test the message system. To do this, press and hold the function key 1 or 3.
 - ✎ The message system is working if a signal sounds as long as function key 1 or 3 is pressed.

Inform your service technician if the acoustic signal does not sound or if the *Amalg* display does not appear.

Press on the *Counterclockwise rotation/user profile* key to exit the *Service* operating context.

Testing the message system on the EasyTouch

- ✓ All instruments are in place. The Start dialog is displayed on the touchscreen.



1. Press the *Sub-dialog* fixed key.

↳ The *Start* sub-dialog is displayed.



2. Hold down the *Setup* button (> 2 s).

↳ The *Setup dialog* appears.



3. In the setup dialog, hold and press the *Service* key (> 2 s).

↳ The service dialog is shown.



4. Test the message system. Press and hold the *Amalg* key for an extended period.

↳ The message system is working if a signal sounds as long as the *Amalg* key is pressed.

Inform your service technician if the acoustic signal does not sound.



Press the *Back* key to exit the service dialog.

5.5.8 Empty the sediment container

In addition to other solid particles, a large proportion of the amalgam residues are trapped in the sediment container by gravitational force.

Empty the sediment container in cycles that are appropriate for your work method, but at least every 4 weeks.

The sediment container is present only if neither an amalgam separator, a standard wet suction, or an air jet pump is installed.

Cleaning the suction system

The sediment container is exposed to secretions, saliva and blood that contain bacteria. It is therefore important to clean the suction system before removing the sediment container.

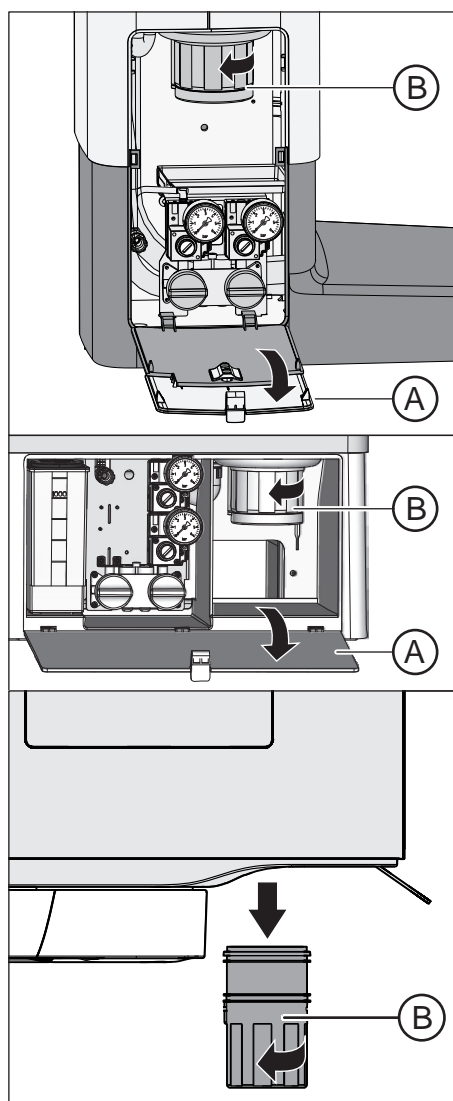
If the treatment center is equipped with the chemical suction hose cleaning option, see "Cleaning the suction hoses" [→ 243]. If this option is not available, see "Cleaning vacuum system using cleaning adapter in the cuspidor or via external container" [→ 250].

Removing and emptying the sediment container



WARNING

Wear gloves when performing the following work.

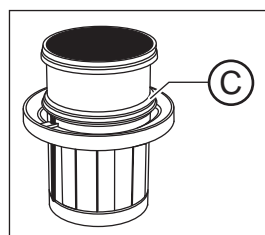


1. Open the flap **A** on the base of the water unit.
2. Loosen the bayonet catch by turning the sediment container **B** counterclockwise.

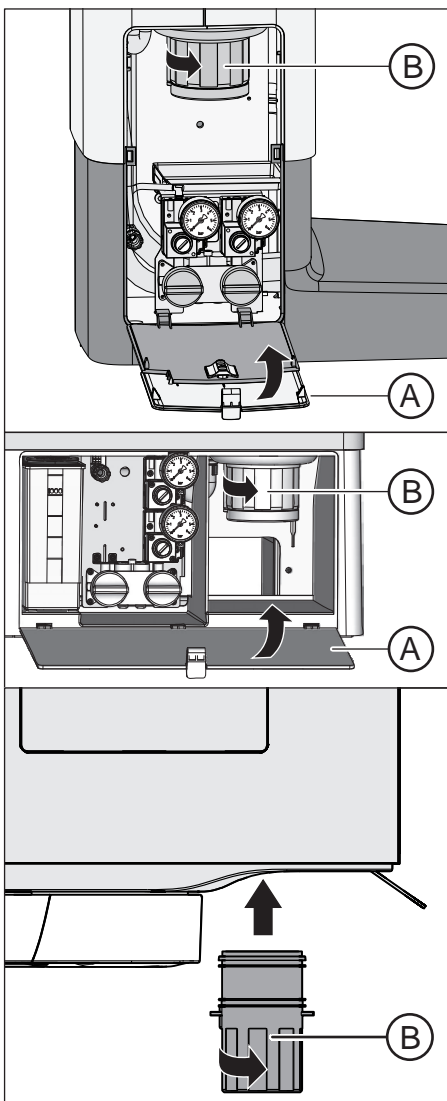


3. Pour the excess water out of the sediment container and collect the amalgam residues. Properly dispose of the amalgam residues together with the amalgam residues collected from the cuspidor and from the suction hoses, see "Cleaning the gold trap" [→ 257] and "Emptying the central suction sieve" [→ 255]. Authorize a certified waste management company for this purpose.

Installing the sediment container



1. Lubricate the O-ring **C** on the sediment container. For lubricants, see "Care, cleaning and disinfecting agents" [→ 212].



2. Hold the sediment container **B** so that the latching noses of the bayonet catch are positioned transverse to the water unit. Rotate the sediment container **B** clockwise.
🔑 The sediment container is locked in place.
3. Close the flap **A**.

5.5.9 Cleaning the filter insert of the wet suction device with cuspidor valve

The automatic separator and amalgam separator / sediment container or air jet pump are not installed in the water unit for standard wet suction. The separation of air and water and amalgam separation are performed centrally in this case.

In order to ensure that larger solid particles nevertheless cannot enter the separating unit, the suction line in the water unit is equipped with a filter. The filter insert must be cleaned when the suction power decreases.



WARNING

Wear gloves when performing the following work.

Cleaning the suction system

Before the filter insert of the standard wet suction is cleaned, the suction system should be cleaned

If the treatment center is equipped with the chemical suction hose cleaning option, see "Cleaning the suction hoses" [→ 243]. If this option is not available, see "Cleaning vacuum system using cleaning adapter in the cuspidor or via external container" [→ 250].

Suctioning off remaining water completely, removing and cleaning the filter insert

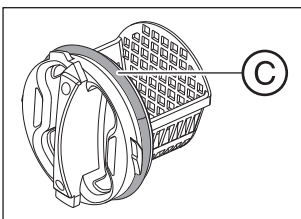
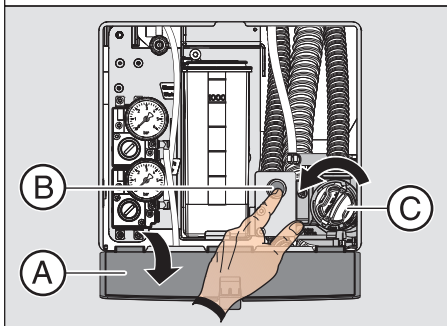
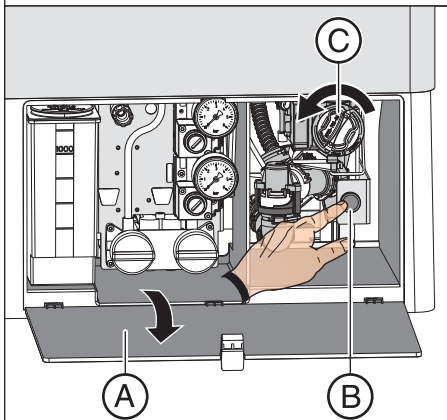
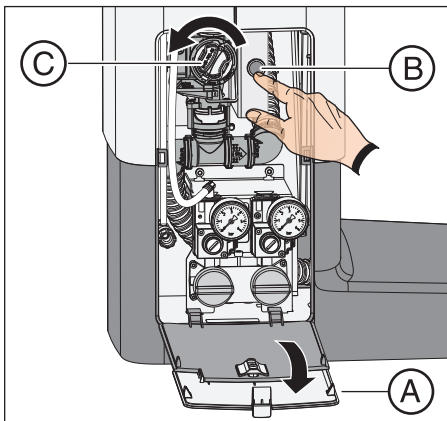
As long as the treatment center is switched on, water remains in the suction line for technical reasons. Therefore, in order to clean the filter insert, this water must be completely extracted beforehand. Otherwise the remaining water will flow out when the filter housing is opened.

NOTE

The flushing and tumbler filling functions may not be activated when the filter housing is open.

Otherwise, water could escape from the open filter housing.

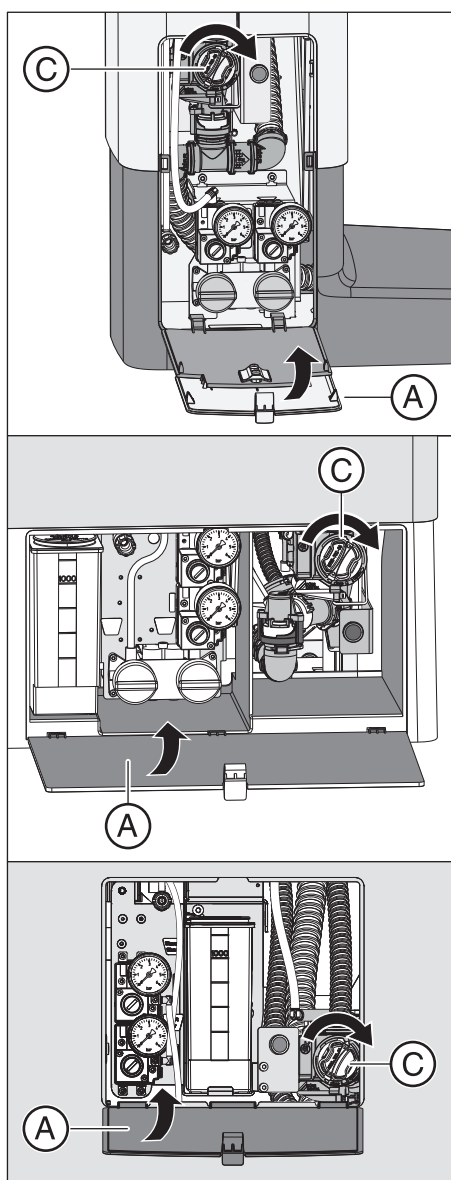
- Do not switch the flushing and tumbler filling functions on whenever the filter housing is open.



1. Open the flap **A** on the base of the water unit.
2. Allow the remaining water to be extracted completely. Press button **B** on the standard wet suction.
↳ A slurping noise indicates that the water unit is completely empty.
3. Loosen the bayonet catch of the filter insert **C**. Unscrew the filter insert from the filter housing of the standard wet suction counterclockwise.

4. Properly dispose of the amalgam residues together with the amalgam residues collected from the cuspidor and from the suction hoses. Then clean the filter insert under running water in a sink (not in the cuspidor!).

5. Grease the O-ring **C** of the filter insert. Lubricants, see "Care, cleaning, and disinfecting agents" [→ 212].



6. Reinsert the filter insert in the filter housing. Rotate the filter insert **C** clockwise.

7. Close the flap **A**.

👉 The treatment center is again ready for operation.

5.5.10 Emptying the collector of the air jet pump

The air jet pump (Air Venturi) is an option available for the Compact water unit.

The air jet pump is installed only if neither an amalgam separator or sediment container nor a standard wet suction is installed.

In the air jet pump, compressed air flows through a Venturi jet. The suction caused by this is used for the vacuum system.

In addition to other solid particles, a large portion of the amalgam residues are trapped in the collector of the air jet pump by gravitational force.

Empty the container of the air jet pump in cycles that are appropriate for your work method, but at least every week.

Cleaning the suction system

The air jet pump is exposed to secretions, saliva and blood containing bacteria. It is therefore important to clean the vacuum system before removing the collector.

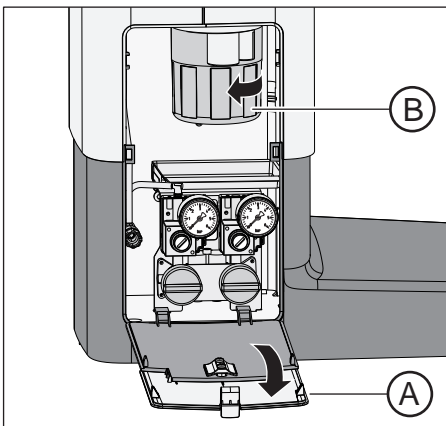
If the treatment center is equipped with the chemical suction hose cleaning option, see "Cleaning the suction hoses" [→ 243]. If this option is not available, see "Cleaning vacuum system using cleaning adapter in the cuspidor or via external container" [→ 250].

Removing and emptying the collector of the air jet pump

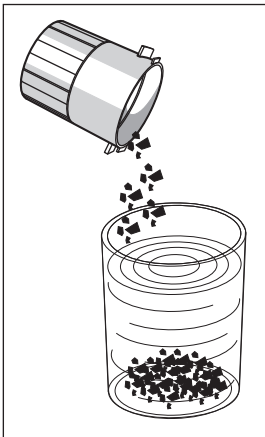


WARNING

Wear gloves when performing the following work.

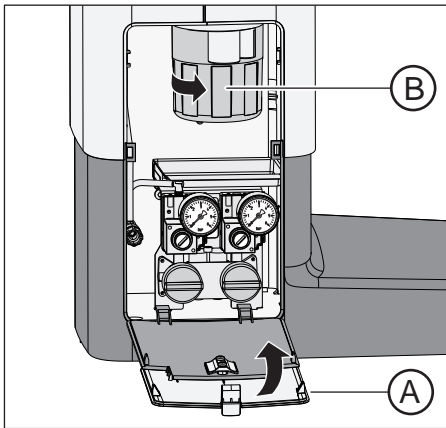


1. Open the flap **A** on the base of the water unit.
2. Loosen the slide lock by turning the sediment container **B** counterclockwise.



3. Pour the excess water out of the container and collect the amalgam residue. Dispose of it properly with the amalgam residue collected from the cuspidor and central sieve, see "Cleaning the gold trap" [→ 257] and "Emptying the central suction sieve" [→ 255]. Use a certified disposal company.

Installing the collector of the air jet pump



1. Hold the sediment container **B** so that the latching noses of the slide lock are positioned transverse to the water unit. Rotate the sediment container **B** clockwise.
↳ The collector is locked in place.
2. Close the flap **A**.



3. Flush the cuspidor for at least one minute.

5.6 Sanitizing

Sanitizing effectively combats the reproduction of microorganisms in the water paths.

Sanitizing using fresh water bottle with the Intego

The purging and sanitizing functions and the fresh water bottle are available as options for the Compact and Ambidextrous water units. Both options must be present to sanitize the water paths.

If the Compact or Ambidextrous water unit is equipped with the purging and sanitizing option, but does not have a fresh water bottle, the sanitizing function can be selected on the EasyPad, but it has no function. Without the fresh water bottle, only the purge function can be used.

Sanitizing with the Intego Pro

With the Intego Pro, the water paths can only be sanitized if the Comfort or Ambidextrous water unit is equipped with an integrated water disinfection system. Operation with a stand-alone water supply is also possible only with a disinfection system.

Sanitizing is performed in operation with the public drinking water supply and in operation using a stand-alone water supply on the EasyPad and EasyTouch.

Please see also the information in the section "Stand-alone water supply" [→ 159].

5.6.1 Sanitizing with the fresh water bottle

If the Compact or the Ambidextrous water unit is fitted with a fresh water bottle, manual sanitation, that is the disinfection of the treatment water paths must be performed. During this sanitation, the treatment water shall first be emptied according to a pre-defined process, the agent for disinfecting the water paths is then filled undiluted into the treatment water paths and this is then flushed out again at the end. Sanitation takes at least 24 hours and should not exceed 3 days.

Manual sanitizing must be performed:

- every 4 weeks
- After longer periods of disuse (> one week)
- If the germination index exceeds 100 germs per milliliter, see "Microbiological water test" [→ 212].

NOTE

Additional devices connected to the external device connection must not be sanitized with the treatment center.

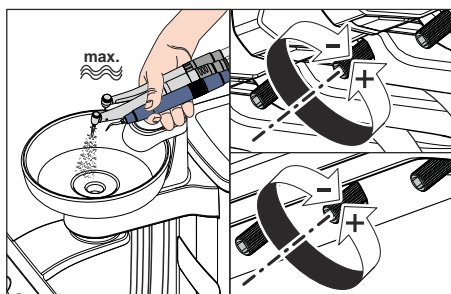
The additional devices could be damaged. Residues of the agent for disinfecting the water paths can remain in the additional devices.

- Disconnect any additional devices from the treatment center prior to sanitization.

Preparation

The following preparations should be made prior to beginning the sanitizing process.

1. Set all burr drives and the scaler to the maximum water flow rate. The water regulators under the instrument holder must be turned counterclockwise.

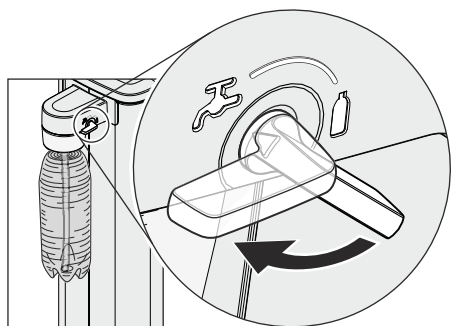


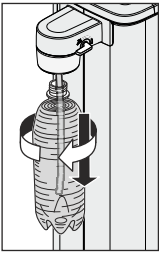
IMPORTANT

The water flow rate to the instruments is not checked by the treatment center.

- Make sure that the maximum water flow rate is set for all instruments to be purged.

2. Put all instruments and suction hoses in their holders.
3. Do **not** remove the tumbler holder from the cuspidor. Put an empty glass with a volume ≥ 200 ml under the tumbler outlet to prevent discoloration from the agent for disinfecting the water paths.
4. If the Compact water unit is equipped with the option to switch to the public drinking water supply, it must be switched to operation with the stand-alone water supply from the fresh water bottle for sanitizing. Turn the lever clockwise to the bottle symbol. For more information, please refer to the section "Water supply for Intego" [→ 160].





5. Unscrew the fresh water bottle from the holder on the water unit and empty the fresh water bottle completely.
6. Fill the fresh water bottle with approx. 0.4 to 0.5 liters of the undiluted agent for disinfecting the water paths.
7. Attach the hose to the fresh water bottle and screw the bottle into the holder.

5.6.1.1 Sanitizing on the EasyPad

Displaying the sanitizing operating context

- ✓ All instruments are in their holders.

1. Press the fixed key *Endo / Purge*.



↪ The *Purge* operating context is shown on the EasyPad display.

2. Press favorites button 3.

↪ The *Sanitizing* operating context is displayed.

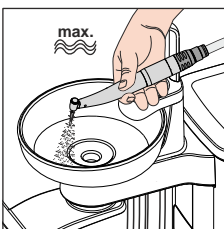
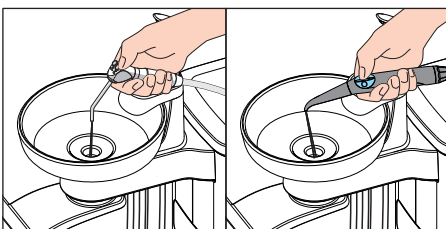
3. Press the favorite key *2 / Setup*.

↪ A revolving element is shown on the EasyPad display next to the text "dis". The tumbler filler switches on and is treated with the agent for disinfecting the water paths.

Treating the water paths with the agent for disinfecting the water lines

The water lines of the instrument hoses, Sprayvit E hoses, and the tumbler filler are filled with the undiluted disinfectant for the water lines.

- ✓ The tumbler filler was automatically flushed with the agent for disinfecting the water paths.



1. Hold the 3-way syringe of the dentists and assistant element over the cuspidor or a watertight container with sufficient capacity and press the water button for at least 15 seconds.

2. Remove a single instrument from holder and hold it over the cuspidor or over a watertight container with sufficient capacity. For the CS dentist element, move the swivel arm of the instrument into the working position.

3. Step on the pedal of the foot control briefly.

↪ The removed instrument is purged with the agent for disinfecting the water paths for approx. 15 seconds. The purging process stops automatically.

4. Afterward, return the instrument to the instrument holder.
5. Repeat the procedure for all other instruments.

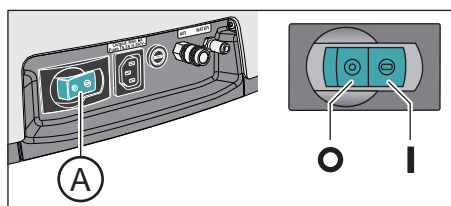
NOTE

Splashes of undiluted disinfectant for sanitizing the water paths can result in discoloration of surfaces if left for too long.

Any splashes should therefore be removed immediately using a moist cloth.

Allow 24 hours reaction time

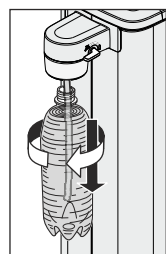
In order to effectively combat bacteria, you must let the disinfectant for the water paths react for at least 24 hours and not longer than 3 days (maximum sanitization time).



1. Switch the treatment center off via the mains switch **A** on the base of the chair. Make sure that the treatment center is switched off for at least 24 hours, but not longer than 3 days (maximum sanitization time).
 2. Empty the rinsing tumbler and return the empty tumbler below the tumbler outlet.
- Switch the treatment center on again after 24 hours and before 3 days have elapsed.

Filling the fresh water bottle with water

- ✓ The display *Refill water* appears on the EasyPad.



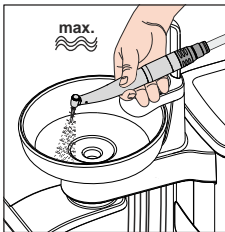
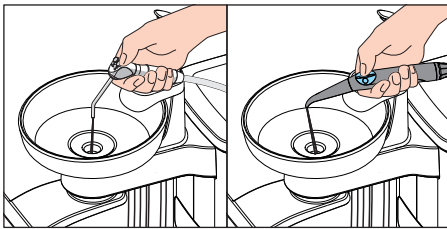
1. Unscrew the fresh water bottle counterclockwise from the holder on the water unit and empty the fresh water bottle completely.
2. Mix food-grade water (< 100 CFU/ml) with the agent for disinfecting the water paths at a ratio of 100:1 (1 liter of water, 10 ml of the disinfectant) and fill this into the fresh water bottle. The bottle has a capacity of approx. 1.3 liters.
3. Attach the hose to the fresh water bottle and screw the bottle clockwise into the holder.
4. Press the favorite key **2 / Setup**.

- ✎ A revolving element is shown on the EasyPad display next to the text "AqU". Tumbler filling is switched on and is flushed with water.

Purge water paths with water

The disinfectant for the water paths is rinsed out of the instrument hoses, Sprayvit E hoses, and tumbler filling unit with water.

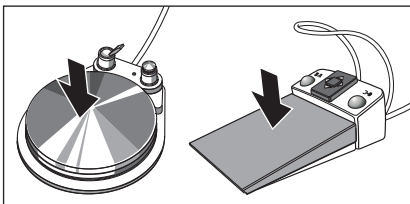
- ✓ The tumbler filler was automatically flushed with water.



1. Hold the 3-way syringe over the cuspidor or over a watertight container with sufficient capacity and press the water key for at least 15 seconds.
 2. Remove a single instrument from holder and hold it over the cuspidor or over a watertight container with sufficient capacity. For the CS dentist element, move the swivel arm of the instrument into the working position.
 3. Step on the pedal of the foot control briefly.
 - ✦ The removed instrument is purged with water for approx. 15 seconds. The purging process stops automatically.
 4. Afterward, return the instrument to the instrument holder.
 5. Repeat the procedure for all other instruments.
 6. After you have flushed the last instrument, press favorite key 2 / *Setup*.
 - ✦ The time is displayed on the EasyPad display.
 7. Empty the rinsing tumbler and return the empty tumbler below the tumbler outlet.
- ✦ The sanitation process is finished. The treatment center is again ready for operation.

Interrupting instrument purging

- Step on the foot pedal to interrupt the instrument purging process. If the instrument is not put back in the holder, the purging process can be continued by pressing the foot pedal again.



Canceling the sanitizing process

The sanitizing process can be canceled, e.g., if the treatment center must be switched on again before 24 hours have passed.

- ✓ The sanitizing process has started.
- Press the *Counterclockwise rotation/user profile* key.
 - ✦ The sanitization process is canceled. If the water paths have already been treated with the agent for disinfecting the water paths, they have to be rinsed with water before use. If the display *Refill water* appears, see "Filling the fresh water bottle with water" (above).



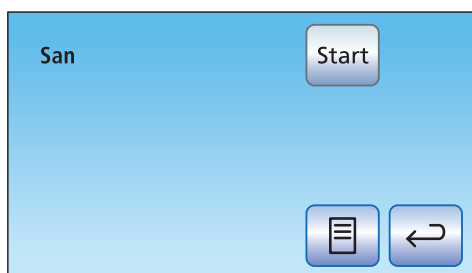
Cleaning the suction hoses

After sanitizing with the fresh water bottle, the suction hoses should also be chemically cleaned, see "Cleaning suction system using cleaning adapter in the cuspidor or via external container" [→ 250].

5.6.1.2 Sanitizing on the EasyTouch

Opening the sanitization dialog via the touchscreen

- ✓ All instruments are in their holders.
- ✓ The *Start dialog* is displayed on the touchscreen.
- 1. Press the *Sub-screen* fixed key.
 - ↳ The *Start* sub-dialog is displayed.
- 2. Touch the *San* key.

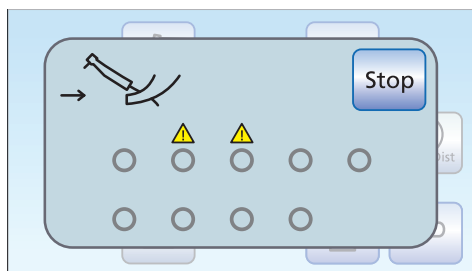


↳ The *Sanitation* dialog is displayed on the touchscreen.

Error message: Deposit instruments

If the *Deposit instruments* display appears after sanitation has been started, the treatment center has detected that not all of the instruments have been placed in their holders.

- > Check the instruments marked with a warning triangle on the touchscreen.
 - ↳ When all of the instruments have been deposited, the message disappears.



Start sanitization

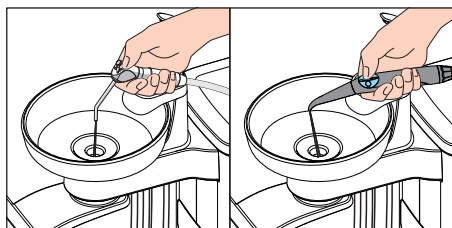
- > Touch the *Start* key.
 - ↳ The program for sanitation starts. The *Stop* key flashes orange on the touchscreen. The tumbler filler switches on and is treated with the agent for disinfecting the water paths.

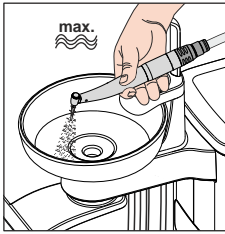


Treating the water paths with the agent for disinfecting the water lines

The water lines of the instrument hoses, Sprayvit E hoses, and the tumbler filler are filled with the undiluted disinfectant for the water lines.

- ✓ The tumbler filler was automatically flushed with the agent for disinfecting the water paths.
- 1. Hold the 3-way syringe of the dentists and assistant element over the cuspidor or a watertight container with sufficient capacity and press the water button for at least 15 seconds.





2. Remove a single instrument from holder and hold it over the cuspidor or over a watertight container with sufficient capacity. For the CS dentist element, move the swivel arm of the instrument into the working position.
3. Step on the pedal of the foot control briefly.
 - ✦ The removed instrument is purged with the agent for disinfecting the water paths for approx. 15 seconds. The purging process stops automatically.
4. Afterward, return the instrument to the instrument holder.
5. Repeat the procedure for all other instruments.

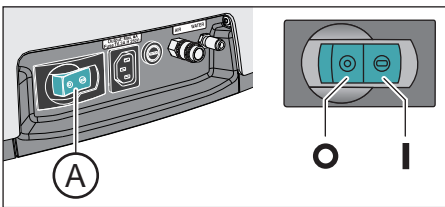
NOTE

Splashes of undiluted disinfectant for sanitizing the water paths can result in discoloration of surfaces if left for too long.

Any splashes should therefore be removed immediately using a moist cloth.

Allow 24 hours reaction time

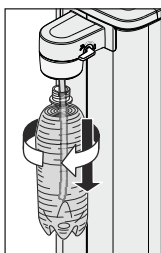
In order to effectively combat bacteria, you must let the disinfectant for the water paths react for at least 24 hours and not longer than 3 days (maximum sanitization time).



1. Do **not** press the *Stop* button when it is flashing orange.
2. Switch the treatment center off via the mains switch **A** on the base of the chair. Make sure that the treatment center is switched off for at least 24 hours, but not longer than 3 days (maximum sanitization time).
3. Empty the rinsing tumbler and return the empty tumbler below the tumbler outlet.
 - Switch the treatment center on again after 24 hours and before 3 days have elapsed.

Filling the fresh water bottle with water

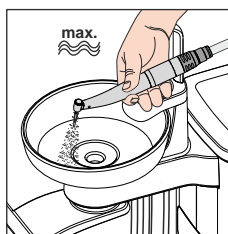
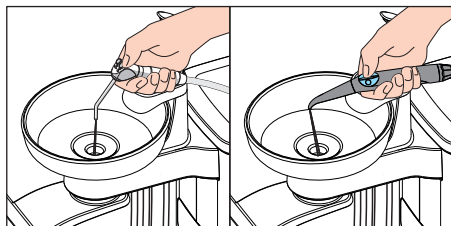
- ✓ The display *Refill water* appears on the touchscreen.
1. Unscrew the fresh water bottle counterclockwise from the holder on the water unit and empty the fresh water bottle completely.
 2. Mix food-grade water (< 100 CFU/ml) with the agent for disinfecting the water paths at a ratio of 100:1 (1 liter of water, 10 ml of the disinfectant) and fill this into the fresh water bottle. The bottle has a capacity of approx. 1.3 liters.
 3. Attach the hose to the fresh water bottle and screw the bottle clockwise into the holder.
 4. Touch the *OK* key.
 - ✦ The *Stop* key flashes orange on the touchscreen. Tumbler filling is switched on and is flushed with water.



Purge water paths with water

The disinfectant for the water paths is rinsed out of the instrument hoses, Sprayvit E hoses, and tumbler filling unit with water.

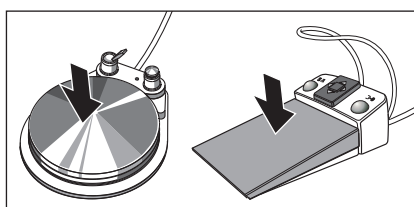
✓ The tumbler filler was automatically flushed with water.



1. Hold the 3-way syringe over the cuspidor or over a watertight container with sufficient capacity and press the water key for at least 15 seconds.
2. Remove a single instrument from holder and hold it over the cuspidor or over a watertight container with sufficient capacity. For the CS dentist element, move the swivel arm of the instrument into the working position.
3. Step on the pedal of the foot control briefly.
 - ↳ The removed instrument is purged with water for approx. 15 seconds. The purging process stops automatically.
4. Afterward, return the instrument to the instrument holder.
5. Repeat the procedure for all other instruments.
6. After you have flushed the last instrument, press the orange flashing *Stop* key.
 - ↳ The sanitation process is finished. The treatment center is again ready for operation.
7. Empty the rinsing tumbler and return the empty tumbler below the tumbler outlet.

Interrupting instrument purging

- Step on the foot pedal to interrupt the instrument purging process. If the instrument is not put back in the holder, the purging process can be continued by pressing the foot pedal again.



Canceling the sanitizing process

The sanitizing process can be canceled, e.g., if the treatment center must be switched on again before 24 hours have passed.

- ✓ The sanitizing process has started.
- Touch the *Stop* key on the touchscreen.
 - ↳ The sanitization process is canceled. If the water paths have already been treated with the agent for disinfecting the water paths, they have to be rinsed with water before use. If the display *Refill water* appears, see "Filling the fresh water bottle with water" (above).



Cleaning the suction hoses

After sanitizing with the fresh water bottle, the suction hoses should also be chemically cleaned, see "Cleaning suction system using cleaning adapter in the cuspidor or via external container" [→ 250].

5.6.2 Sanitizing with disinfection system

Sanitizing, that is the disinfection of the treatment water paths can be performed by using the disinfection system. During this sanitation, the treatment water shall first be emptied according to a pre-defined process, the agent for disinfecting the water paths is then filled undiluted into the treatment water paths and this is then flushed out again at the end. Sanitizing takes at least 24 hours and should not exceed 3 days.

Sanitizing must be performed:

- Regularly every 4 weeks when operating with the public drinking water supply or if stand-alone water supply is used more than 28 days in exceptional cases

If the treatment center features a disinfection system, the display *Days until next sanitation* appears on the EasyPad or touchscreen. It first appears three days before the date of sanitation.

- After longer periods of disuse (> one week)
- If the bacterial count exceeds 100 bacteria per milliliter, see "Microbiological water test" [→ 212].
- After changing from stand-alone water supply to public drinking water supply and the agent for disinfecting the water paths

SAN 3

10:45:03
B
San
3d

NOTE

Additional devices connected to the external device connection must not be sanitized with the treatment center.

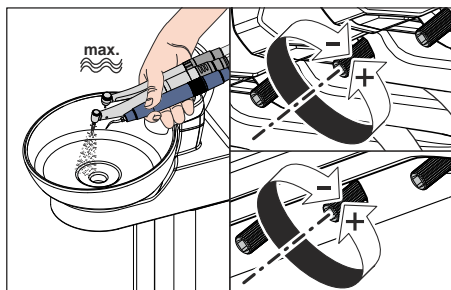
The additional devices could be damaged. Residues of the agent for disinfecting the water paths can remain in the additional devices.

- Disconnect any additional devices from the treatment center prior to sanitization.

Preparation

The following preparations should be made prior to beginning sanitation.

1. If your treatment center is equipped with a cuspidor, activate the cuspidor flushing for at least one minute. This flushes the water paths.
2. Set all burr drives and the scaler to the maximum water flow rate. The water regulators under the instrument holder must be turned counterclockwise.



IMPORTANT

The water flow rate to the instruments is not checked by the treatment center.

- Make sure that the maximum water flow rate is set for all instruments to be purged.

3. Put all instruments and suction hoses in place.
4. Do **not** remove the tumbler holder from the cuspidor. Put an empty glass with a volume ≥ 200 ml under the tumbler outlet to prevent discoloration from the agent for disinfecting the water paths.

5.6.2.1 Sanitizing on the EasyPad

Displaying the sanitizing operating context

✓ All instruments are in their holders.

1. Press the fixed key *Endo / Purge*.



✎ The *Purge* operating context is shown on the EasyPad display.

2. Press the favorite key 3 twice.

✎ The *Sanitizing* operating context is displayed.

3. Press the favorite key 2 / *Setup*.

Error message: Filling with agent for disinfecting the water paths

If the *Refill agent for disinfecting the water paths* display appears after the sanitation process has been started, the supply of disinfectant in the reservoir of the water unit is not sufficient to sanitize the treatment center. Sanitizing cannot be started with too little agent for disinfecting the water paths, see "Filling with agent for disinfecting the water paths" [→ 261].

For operation with a stand-alone water supply, the water is first pumped out of the refill container of the water unit. The *Refill agent for disinfecting the water paths* display then appears.

➤ Fill approx. 0.6 liter of agent for disinfecting the water paths into the refill container of the water unit.

✎ When sufficient agent for disinfecting the water paths has been added, the sanitizing program will continue.

Error message: Deposit instruments

If "In.X-" or "In.-X" (the X stands for the instrument position on the dentist or assistant element) appears on the EasyPad display, the treatment center has detected that not all instruments are in the holders.

The two error messages below mean the following:

The instrument in the first instrument holder of the assistant element is not in place.



The instrument in the second instrument holder of the dentist element is not in place.



➤ Check the instruments indicated on the EasyPad display.

✎ When all of the instruments have been deposited, the sanitizing program will continue.

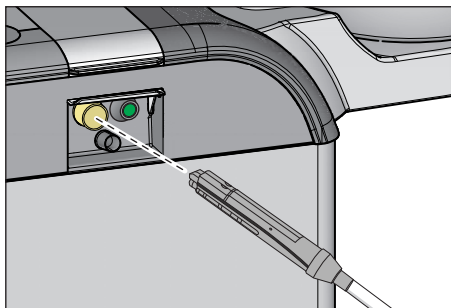
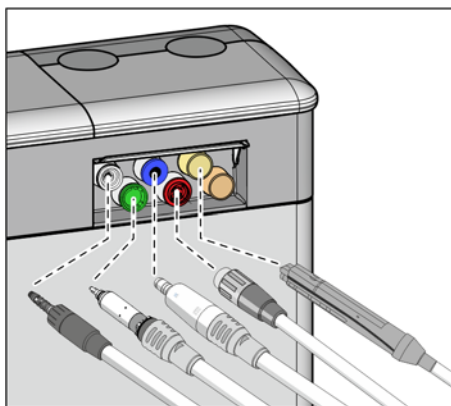
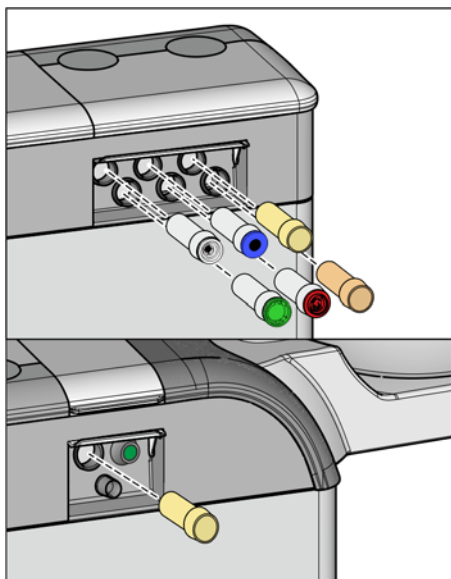
Inserting instruments into the cleaning adapters of the water unit

The Comfort water unit has integrated cleaning adapters for water-carrying instruments. This allows all instruments to be simultaneously treated with a high concentration of sanitation solution and then rinsed with water. For this purpose, sanitizable instruments must be inserted into the adapters on the water unit.

Start

✓ The "Start" text is shown on the EasyPad display.

1. Remove the Sprayvit E sleeves from the valve bodies and the straight and contra-angle handpieces from the water-carrying instruments.
2. If the adapters are not yet located in the receptacles of the water unit, insert them into the receptacles until they lock into place. The Sprayvit E adapters can be inserted only into the two receptacles on the right side of the dentist element with the guide rib facing upward. A Sprayvit E adapter must also be inserted into the assistant element side. The adapters always remain in the water unit.



IMPORTANT

Arrangement of adapters

The adapters for the instrument couplings are color coded:

Yellow= Sprayvit E, water on the right button

Orange = Sprayvit E, water on the left button

White = highspeed handpiece

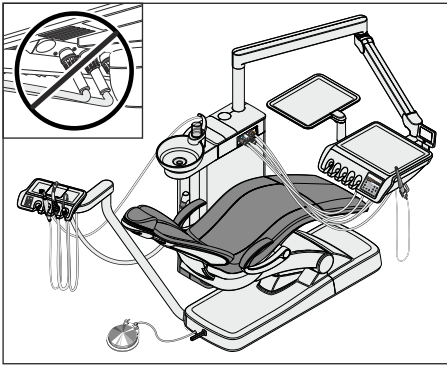
Green = BL E motor

Blue = BL ISO E motor (ISO interface)

Red = SiroSonic L scaler or in its position

Light blue = Cavitron scaler

3. Dentist element side: Insert the couplings of all water-carrying treatment instruments into the adapter in the Comfort water unit (for Sprayvit E: valve lever in up position, locking knob in the down position).
Also for the CS dentist element: Move the swivel arm of the instruments to be purged into operating position so that the weight of the instrument hoses keeps them in this position.
4. Assistant element side: Insert the valve bodies of the Sprayvit E into the adapter in the water unit.



IMPORTANT

Pinching of the instrument hoses

Be careful not to pinch the instrument hoses when inserting the instruments.

With treatment centers with the Ambidextrous option: convert the water unit to the left side so that the adapters on the water unit point towards the patient chair, see "Converting the Ambidextrous water unit for right-handers / light-handers" [→ 166].

If the hoses are pinched, the water flow will be obstructed during purging.

The water flow rate to the instruments is not checked by the treatment center.

- ✎ All water-carrying instruments are inserted into the cleaning adapters.

5. Press the favorite key 2 / Setup.

- ✎ The sanitizing program is started provided at least one instrument is removed from its holder. A revolving element is shown on the EasyPad display next to the text "SAN".



Error message: No water flow

If the treatment center detects no water flow through an instrument or through the tumbler filler, you can try to restore water flow. If this is not possible, the instrument concerned can be excluded from the sanitation process.

1. Check the water flow of the instruments at the instruments position, which is marked on the EasyPad display. Set the instrument to maximum water flow. Leave all instruments plugged into the water unit.
 - ✎ If the treatment center detects the water flow, the message will disappear automatically and the program continues.
2. If you want to exclude the concerned instruments from the sanitation process, press favorite key 2 / Setup.
 - ✎ The instrument marked on the EasyPad display is not included in the sanitation process.



If it is impossible to restore the flow to the tumbler filler, sanitization is not possible. The tumbler filler cannot be excluded from the sanitization process.

Treating the water paths with the agent for disinfecting the water lines

The water lines of the instrument hoses, Sprayvit E hoses, and the tumbler filler are filled with the undiluted disinfectant for the water lines.

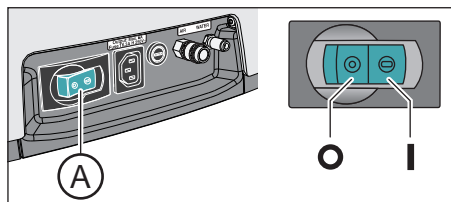
NOTE

Splashes of undiluted disinfectant for sanitizing the water paths can result in discoloration of surfaces if left for too long.

Any splashes should therefore be removed immediately using a moist cloth.

Allow 24 hours reaction time

In order to effectively combat bacteria, you must let the disinfectant for the water paths react for at least 24 hours and not longer than 3 days (maximum sanitization time).



1. Switch the treatment center off via the mains switch **A** on the base of the chair. Make sure that the treatment center is switched off for at least 24 hours, but not longer than 3 days (maximum sanitization time).

IMPORTANT

Blocking water and air supply

If the treatment center is turned on again after 24 hours, the sanitization process continues automatically. However, if the water and air supplies are blocked, the agent for disinfecting the water paths cannot be rinsed out of the water paths.

Switch the treatment center back on after 24 hours only when the water and air supply lines are open.

2. Empty the rinsing tumbler and return the empty tumbler below the tumbler outlet.
- Switch the treatment center on again after 24 hours and before 3 days have elapsed.

Error message: Inserting instruments in the water unit

If an instrument is accidentally deposited in its holder during the reaction time, the message *Insert instruments into water unit* is displayed on the EasyPad display after the treatment center is switched on. The sanitizing process is then completed anyway.

1. Place the accidentally removed instrument back in the adapter on the water unit so that it can be flushed.
2. If you want to exclude the concerned instruments from the sanitation process, press favorit key **2 / Setup**.
 - ✎ The instrument marked on the EasyPad display will not be flushed.

Stand-alone water supply only: refilling water

When operating with a stand-alone water supply, *Refill water* is displayed.

- Mix distilled water with the agent for disinfecting the water paths in a ratio of 100:1 (1 liter of water, 10 ml of disinfectant) and fill this into the disinfectant tank of the water unit.
- ✎ When sufficient water has been refilled, the sanitizing program will continue.

Purge water paths with water

The disinfectant for the water paths is purged from the instrument hoses, Sprayvit E hoses, and tumbler filling unit with water. This takes several minutes.





Returning instruments to their holders

After the water paths have been rinsed, the instruments can be removed from the cleaning adapters on the water unit and returned to their holders.

- ✓ The text *End* is displayed on the EasyPad display.
- 1. Put the Sprayvit E sleeves and the straight and contra-angle handpieces back onto the instruments. Return all instruments to their holders.
 - ↳ The time is displayed on the EasyPad display.
- 2. Empty the rinsing tumbler and return the empty tumbler below the tumbler outlet.
 - ↳ The sanitation process is finished. The treatment center is again ready for operation.

Canceling the sanitizing process

The sanitizing process can be canceled, e.g., if the treatment center must be switched on again before 24 hours have passed.

- ✓ The sanitizing process has started.
- Press the *Counterclockwise rotation/user profile* key.
 - ↳ The sanitization process is canceled. If the water paths have already been treated with the agent for disinfecting the water paths, they have to be rinsed with water before use. If *Refill water* appears during operation with a stand-alone water supply, see "Stand-alone water supply only: refilling water" (above).



Cleaning the suction hoses

After sanitization, all suction hoses should also be chemically cleaned:

- If the treatment center is not equipped with the chemical suction hose cleaning option, see "Cleaning suction system using cleaning adapters in the cuspidor or an external container" [→ 250].
- If the treatment center is equipped with the chemical suction hose cleaning option, see "Suction hose cleaning on the Comfort water unit" [→ 245].

5.6.2.2 Sanitizing on the EasyTouch

Opening the sanitization dialog via the touchscreen

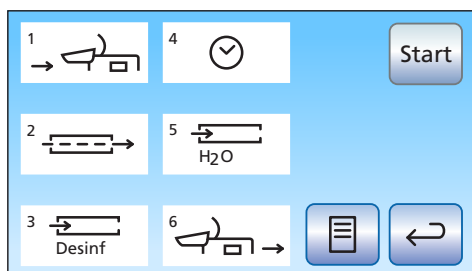
- ✓ All instruments are in their holders.
- ✓ The *Start dialog* is displayed on the touchscreen.

1. Press the *Sub-screen* fixed key.



➤ The *Start* sub-dialog is displayed.

2. Touch the *San* key.



➤ The *Sanitation* dialog is displayed on the touchscreen.

Symbols 1 to 6 stand for the individual sanitation phases as described below. The current sanitation phase is highlighted by an orange rectangle.

Symbol legend

The status of the individual instruments is represented by symbols on the touchscreen as operational help and for support in case of an error. These symbols have the following meaning:



- Empty gray circle
Instrument cannot be sanitized
- Solid gray circle
Instrument not yet sanitized
- Solid orange circle
Instrument sanitized
- Crossed-out solid gray circle
Instrument excluded from sanitizing if an instrument was returned during the reaction time
- Warning triangle
Check instrument or tumbler filling

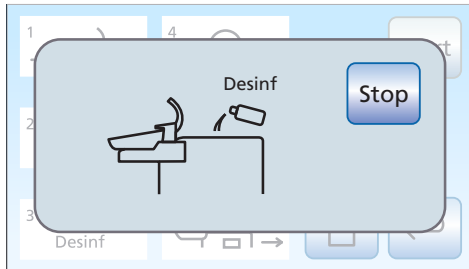
The top row of symbols indicates the instrument positions in the dentist element, while the bottom row indicates the instrument positions in the assistant element.



Start sanitization

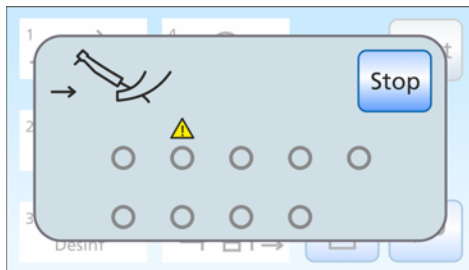
- > Touch the *Start* key.
- ↳ The sanitization process starts.

Error message: Filling with agent for disinfecting the water paths



If the *Disinf* display appears after the sanitization process has been started, the supply of disinfectant for the water paths in the reservoir of the water unit is not sufficient to sanitize the treatment center. Sanitizing cannot be started with too little disinfectant, see "Filling with agent for disinfecting the water paths" [→ 261].

Error message: Deposit instruments

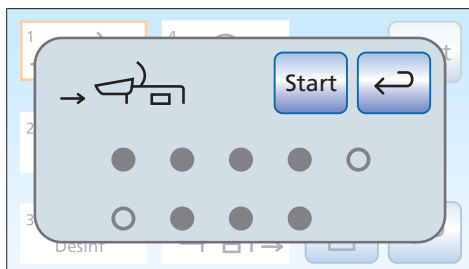


If the *Deposit instruments* display appears after sanitation has been started, the treatment center has detected that not all of the instruments have been placed in their holders.

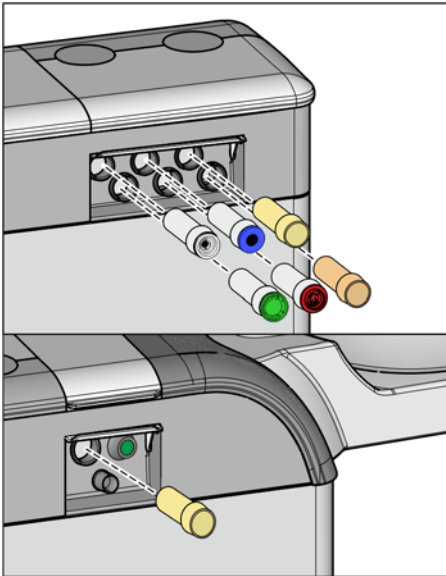
- > Check the instruments marked with a warning triangle on the touchscreen.
- ↳ When all of the instruments have been deposited, sanitation phase 1 begins automatically.

Sanitization phase 1 – Inserting instruments into the cleaning adapters on the water unit

The Comfort water unit has integrated cleaning adapters for water-carrying instruments. This allows all instruments to be simultaneously treated with a high concentration of sanitation solution and then rinsed with water. For this purpose, sanitizable instruments must be inserted into the adapters on the water unit.



- ✓ Sanitization phase 1 is highlighted on the touchscreen.
 - ✓ The *Insert instruments in water unit* display appears on the touchscreen.
1. Remove the Sprayvit E sleeves from the valve bodies and the straight and contra-angle handpieces from the instruments that can be sanitized.



2. If the adapters are not yet located in the receptacles of the water unit, insert them until they lock into place. The Sprayvit E adapters can be inserted only into the two receptacles on the right side of the dentist element with the guide rib facing upward. A Sprayvit E adapter must also be inserted into the assistant element side. The adapters always remain in the water unit.

IMPORTANT

Arrangement of adapters

The adapters for the instrument couplings are color coded:

Yellow= Sprayvit E, water on the right button

Orange = Sprayvit E, water on the left button

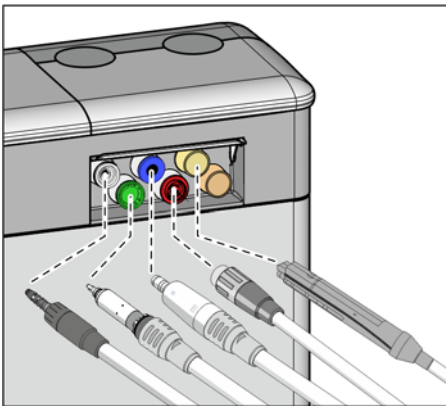
White = highspeed handpiece

Green = BL E motor

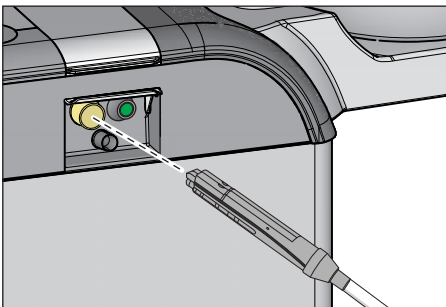
Blue = BL ISO E motor (ISO interface)

Red = SiroSonic L scaler or in its position

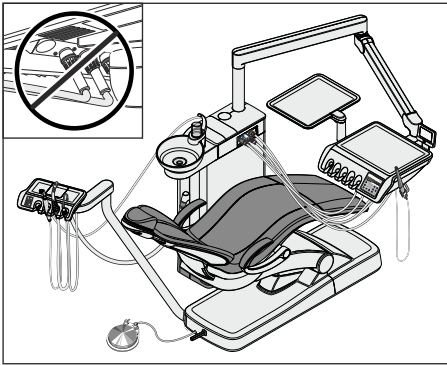
Light blue = Cavitron scaler



3. Dentist element side: Insert the couplings of all water-carrying treatment instruments into the adapters in the water unit (for Sprayvit E: valve lever in the up position, locking knob in the down position).
Also for Intego Pro CS: Move the swivel arm of the instruments to be purged into the operating position so the weight of the instrument hoses keeps them in this position.



4. Assistant element side: Insert the valve bodies of the Sprayvit E into the adapter in the water unit.



IMPORTANT

Pinching of the instrument hoses

Be careful not to pinch the instrument hoses when inserting the instruments.

With treatment centers with the Ambidextrous option: convert the water unit to the left side so that the adapters on the water unit point towards the patient chair, see "Converting the Ambidextrous water unit for right-handers / light-handers" [→ 166].

If the hoses are pinched, the water flow will be obstructed during purging.

- All instruments which can be sanitized are inserted into the cleaning adapters.

5. Touch the *Start* key on the touchscreen.

Sanitization can be started only if at least one instrument is removed from the holder.

Sanitization phase 2 – Checking the water flow

First, the treatment center checks whether there is water flow through the instruments.

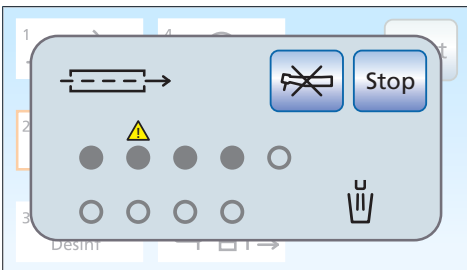
- ✓ Sanitization phase 2 is highlighted on the touchscreen.
- Wait briefly until the water flow has been checked.
 - If sufficient water flow is present, the treatment center continues with sanitation phase 3.

Error message: No water flow

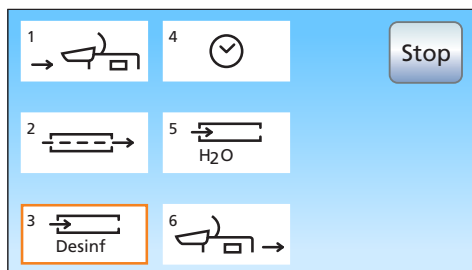
If the treatment center detects no water flow through an instrument or through the tumbler filler, you can try to restore water flow. If this is not possible, the instrument concerned can be excluded from the sanitation process.

1. Check the water flow through the instruments in the instrument positions marked with a warning triangle on the touchscreen. Set the instruments to maximum water flow. Leave all instruments plugged into the water unit.
 - If the treatment center detects the water flow, the warning triangle will disappear. If there is sufficient water flow through all instruments, sanitation phase 3 automatically continues.
2. If you want to exclude the instruments concerned from sanitation, touch the *Exclude instrument* key.
 - The treatment center continues with sanitation phase 3. The water paths you excluded are not included in the sanitation process.

If it is impossible to restore the flow to the tumbler filler, sanitization is not possible. The tumbler filler cannot be excluded from the sanitization process.



Sanitizing phase 3 - Treating the water paths with the agent for disinfecting the water paths



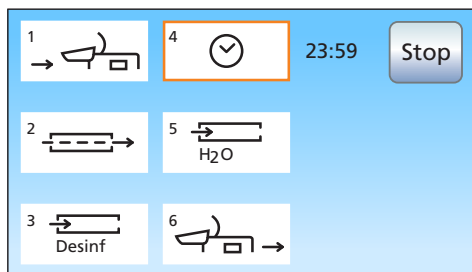
The water is pumped out of the water tank of the water unit using the tumbler filling function. Then the water tank is automatically filled with the undiluted disinfectant for the water paths. The instrument hoses, the Sprayvit E hoses, and the tumbler filler are then rinsed with the disinfectant.

NOTE

Splashes of undiluted disinfectant for sanitizing the water paths can result in discoloration of surfaces if left for too long.

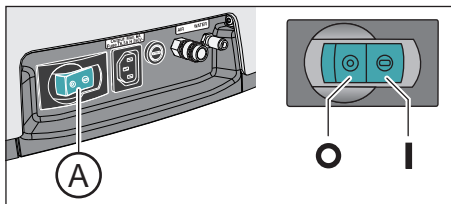
Any splashes should therefore be removed immediately using a moist cloth.

Sanitization phase 4 – Allow 24 hours reaction time



In order to effectively combat bacteria, you must let the disinfectant for the water paths react for at least 24 hours and not longer than 3 days (maximum sanitization time).

- ✓ Sanitization phase 4 is highlighted on the touchscreen.
 - ✓ The treatment center displays the remaining reaction time on the touchscreen next to the sanitation phase 4 field, starting from 24 hours.
 - ✓ The treatment center has automatically switched to Standby mode.
1. Leave all instruments plugged into the water unit.
 2. Switch the treatment center off via the mains switch **A** on the base of the chair. Make sure that the treatment center is switched off for at least 24 hours, but not longer than 3 days (maximum sanitation time).



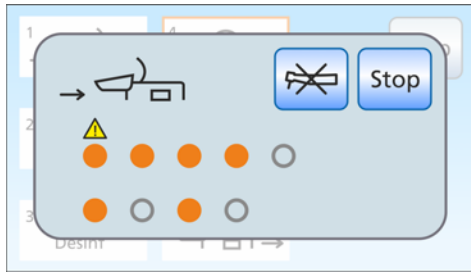
IMPORTANT

Blocking water and air supply

If the treatment center is turned on again after 24 hours, then sanitization phase 5 continues automatically. However, if the water and air supplies are blocked, the agent for disinfecting the water paths cannot be rinsed out of the water paths.

Switch the treatment center back on after 24 hours only when the water and air supply lines are open.

3. Empty the rinsing tumbler and return the empty tumbler below the tumbler outlet.
4. Switch the treatment center on again after 24 hours and before 3 days have elapsed.



Error message: Inserting instruments in the water unit

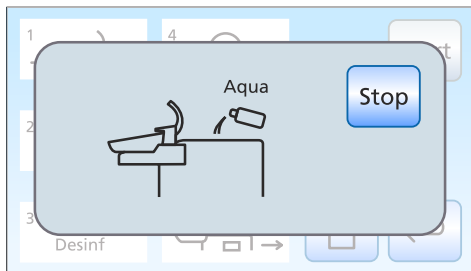
If an instrument is accidentally deposited in its holder during the reaction time, the message *Insert instruments into water unit* is displayed on the touchscreen after the treatment center is switched on. The sanitizing process is then completed anyway.

1. Remove the accidentally removed instrument and place it back in the adapter on the water unit so that it can be rinsed in sanitation phase 5.
2. If you want to exclude the instruments from sanitation, touch the *Exclude instrument* key.
 - ↳ Excluded instruments will not be rinsed in sanitation phase 5.

Stand-alone water supply only: refilling water

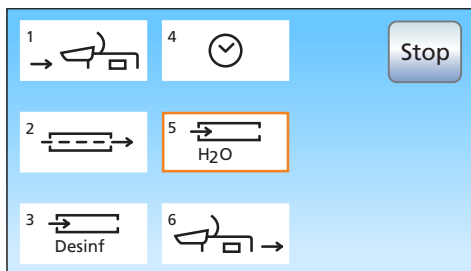
When operating with a stand-alone water supply, *Refill water* is displayed.

- Mix distilled water with the agent for disinfecting the water paths in a ratio of 100:1 (1 liter of water, 10 ml of disinfectant) and fill this into the disinfectant tank of the water unit.
 - ↳ When sufficient water has been refilled, the sanitizing program will continue.



Sanitization phase 5 – Rinsing water paths with water

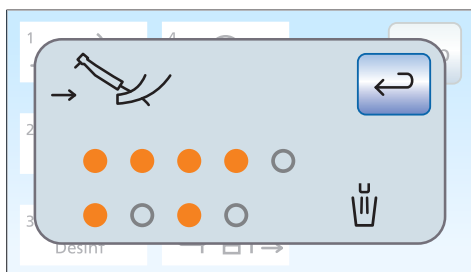
The disinfectant for the water paths is purged from the instrument hoses, Sprayvit E hoses, and tumbler filling unit with water. This takes several minutes.

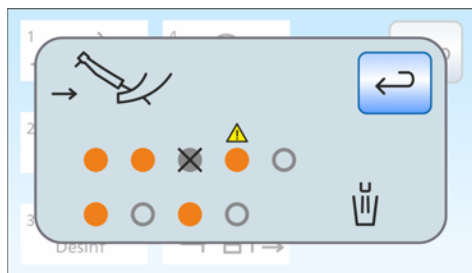


Sanitation phase 6 – Returning instruments to their holders

After the water paths have been rinsed, the instruments can be removed from the cleaning adapters on the water unit and returned to their holders.

- ✓ The *Return instruments to their holders* display appears on the touchscreen.
1. Put the Sprayvit E sleeves and the straight and contra-angle handpieces back onto the instruments. Return all instruments to their holders.
 2. Empty the rinsing tumbler and return the empty tumbler below the tumbler outlet.
 - ↳ The sanitation process is finished. The treatment center is again ready for operation.





Displays in case of incomplete sanitation

The sanitization program detects whether the sanitization of all instruments and the tumbler filling was completed. Errors that occurred during sanitization will be displayed on the touchscreen as follows:

- Crossed-out, solid gray circle: The instrument was excluded from sanitization before it had been filled with the disinfectant for the water paths.
- Orange circle with warning triangle: The instrument or tumbler filling was not (sufficiently) rinsed, the agent for disinfecting the water paths is still located in the water paths
 - In the latter case, rinse the affected instruments and tumbler filling manually after sanitization.

Canceling the sanitizing process

Sanitization can be canceled during some sanitation phases, e.g. if the treatment center must be switched back on before the 24 hours have expired. The *Stop* key shows whether cancellation is possible.

- ✓ The sanitizing process has started.
- Touch the *Stop* key on the touchscreen.
 - ✚ The sanitization process is canceled. If the water paths have not yet been treated with the agent for disinfecting the water paths (prior to sanitization phase 3), the treatment center automatically proceeds directly to sanitization phase 6. If the sanitization process is canceled during the reaction time, the water paths are initially rinsed with water (sanitization phase 5).



Cleaning the suction hoses

After sanitization, all suction hoses should also be chemically cleaned:

- If the treatment center is not equipped with the chemical suction hose cleaning option, see "Cleaning suction system using cleaning adapters in the cuspidor or an external container" [→ 250].
- If the treatment center is equipped with the chemical suction hose cleaning option, see "Suction hose cleaning on the Comfort water unit" [→ 245].

5.6.3 Display sanitation report

If the treatment center is equipped with the EasyTouch comfort user interface, sanitation processes with a reaction time of at least 24 hours can also be displayed on the touchscreen.

- ✓ The *Sanitation program* is displayed on the touchscreen.
- Press the *Sanitation program* key to display the log.
- 🔍 The sanitation report is displayed.



AE					ASE			
1	2	3	4	5	1	2	3	4
5	+	+	+	+	+	-	-	-
6	+	+	-	+	+	-	-	-
7	+	+	+	+	-	-	-	-
8	+	+	+	+	+	-	-	-
9	+	-	+	+	-	-	-	-
10	+	+	+	+	+	-	-	-
---	---	---	---	---	---	---	---	---

The sanitation report contains the following data:

Column	Description
1	Sequential number
2	Status of sanitized instruments in dentist element, holder 1 to 5
3	Status of sanitized instruments in assistant element, holder 1 to 4
4	Date of sanitization
5	Time

The status of column 3 and 4 can assume the following values:

- + = successful sanitation
- = Sanitation was not completed (e.g., interruption)

5.6.4 Biofilm removal by the service technician

If the microbiological test of the water from the treatment center does not correspond with the hygiene requirements in spite of regular sanitization of the water paths and/or regular purge/autopurge cycles, the biofilm must be removed using special chemicals.

Biofilm removal should be performed if the bacterial count is significantly above 100 colony forming units per milliliter.

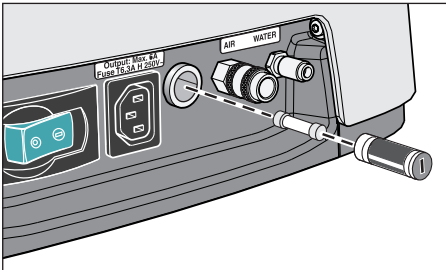
Biofilm removal may only be done by a trained service technician. In this case, please contact your dental depot.

Before initiating biofilm removal it must be ensured that the reason for the raised bacterial count is not due to inflowing water.

5.7 Fuse of the external device connection

The inlet connector remains live even when the power switch is turned off. The fuse can nevertheless be changed.

To reorder the fuse, see "Spare parts and consumables" [→ 311].



- ✓ The inlet connector is not supplying any power.
 - 1. Pull the plug of the connected device out of the inlet connector.
 - 2. Use a screwdriver to unscrew the fuse sleeve.
 - 3. Replace the fuse (T 6.3 A, 250 VAC) and screw the fuse sleeve back in.
 - 4. Reconnect the external device to the inlet connector.
- ⚠ If the inlet connect still is not supplying any power, contact the manufacturer of the connected device or your local distributor.

6 Maintenance by the service engineer

6.1 Inspection and maintenance

In order to ensure the operational safety and reliability of your treatment center and to avoid damage due to natural wear, **annual** inspection and maintenance must be performed on your treatment center. This is done by an authorized service technician from your dental depot.

When the next servicing date is less than 42 days away, the servicing prompt appears each time the unit is switched on.



On the EasyPad display, the text "Sr." and the number of days until the servicing date will appear. On the EasyTouch, a wrench symbol appears in the status column on the touchscreen. The days until the servicing date are counted down (e.g. 13 d = 13 days). You should now contact your dental depot and make an appointment.

The work steps to be performed as well as the parts which must be replaced are specified in the document "Maintenance Certificate".

An overview of the inspection and servicing carried out is additionally recorded by the service technician in the "Installation Book".

6.2 Safety checks

Medical equipment is designed in such a way that the first occurrence of a fault does not create a hazard to the safety of patients, users or other persons. It is therefore important to detect such faults before a second fault occurs, which might then lead to safety hazards.

For that reason it is essential to perform safety checks **every 2 years** in which electrical faults (e.g. defective insulation) in particular can be detected. This is done by an authorized service engineer from your dental depot, most practically together with the work to be performed according to "Inspection and maintenance" [→ 304].

Safety tests must also be performed and documented during initial startup, after extensions / upgrades (conversion) of your treatment center and after repair work which might affect the electrical safety of the system.

WARNING

The treatment center must not be operated if it has failed to pass the safety tests!

The safety check includes a visual inspection as well as measurements of the protective ground wire connections and the equivalent leakage currents.

The inspections and measurements to be performed are specified in the "Maintenance Manual". The measured values must be documented there by the service technician.

6.3 Maintenance Manual

Keep this Maintenance Manual near your treatment center.

Any inspection and maintenance work as well as all safety tests are documented by the service engineer in the Maintenance Manual.

We recommend to the user to always keep the documentation in the chapter "Reporting of incidents to authorities / manufacturers" up to date, regardless of any legal requirements.

7 Malfunctions

7.1 Messages on the EasyPad

Errors on the EasyPad display

Messages are shown on the EasyPad display, such as:

Safety switch triggered [→ 70]

Days until next sanitation [→ 279]

Days until next maintenance date [→ 304]

Change amalgam separator [→ 265]

Refill with agent for disinfecting the water paths [→ 261]

Refill water for stand-alone water supply [→ 159]

Refill cleaning agent for chemical suction hose cleaning [→ 245]

Error messages with error code [→ 308]

SAF 2

SAN 3

Sr. 0

AMALG

DES

AQUA

CHEM

Er 24

Time of error message

The messages will be displayed after the treatment center is switched on. If an error occurs during treatment, it will be displayed after the instruments are put in the holder.

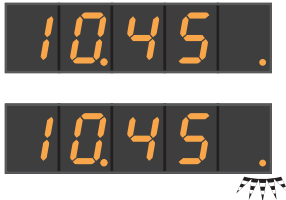
Only single messages can be displayed on the EasyPad. If there is more than one message, a dot at the end of the EasyPad display will light up or flash when the instruments are put in the holder.

Acknowledging messages

The flashing dot means that not all messages have been acknowledged by the user. If the dot remains lit, all messages have been acknowledged, but the errors have not been eliminated.

- ✓ All instruments are in their holders.
- ✓ A dot lights up or flashes at the end of the EasyPad display.





1. Press favorite key 3.
↳ The next message is displayed.
2. Acknowledge the individual messages by pressing the favorite key 2 / *Setup* or pressing the favorite key 3 several times until all the messages have been shown.
↳ The time is displayed on the EasyPad display.
↳ When all messages have been displayed, they are considered to have been acknowledged. The dot that was flashing is now permanently lit.
↳ If only one of the additional messages is acknowledged with the favorite key 2 / *Setup*, the dot continues to flash.

Cancel acknowledging messages

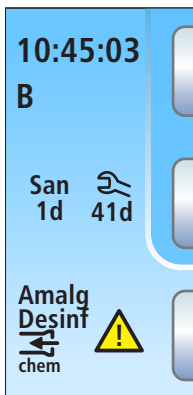
Pressing the *Counterclockwise rotation/user profile* key serves to hide the messages without acknowledging them. The time will appear.

7.2 Messages on the EasyTouch

Below the time and the active user profile, the days to the next sanitation and to the next maintenance date or status messages such as change amalgam separator, refill the agent for disinfecting the water paths, refill cleaning agent for chemical suction hose cleaning, or error messages are displayed.

A message is displayed until the error is remedied.

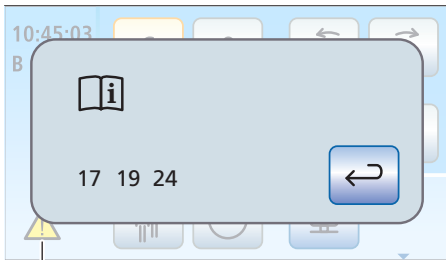
Safety switches that have been triggered are displayed in a superimposed screen, see "Safety shutdown" [→ 70].



7.3 Error Messages

Any error states of the treatment center that cannot be immediately recognized by the user and must nevertheless be corrected are displayed on the user interface.

If there is an error, "Er" and the error code are displayed on the EasyPad.



A warning triangle **A** is shown in the status column of the touchscreen of the EasyTouch. The error code appears when touched.

The error codes have the following meaning:

Code	Anomaly	Description	Measure
14	Consumption of the agent for disinfecting the water paths too low	The disinfectant tank was not emptied since its last filling even though many disinfection cycles were performed.	Inform your service technician
15	Water supply too low	The maximum filling time for the mixing tank is exceeded.	Change the water filter, see "Changing the water and air filters" [→ 263]. Check whether the public drinking water supply has the necessary water pressure, see the document on Intego / Intego Pro installation requirements.
17	Emergency pump operation	Malfunctioning of pump sensors in the water unit.	Inform your service technician.
18	Chair drive position not plausible	The motor speed is suddenly reduced or the motor moves unbraked into the movement limit.	Move the motor to its movement limits. Inform your service technician if the error occurs repeatedly.
19	Injection valve for the agent for disinfecting the water paths defective	No agent for disinfecting the water paths will be added if the injection valve is defective.	Inform your service technician.
23	Apex locator	After switching on the treatment center, the apex self-test failed or an error occurred during the measurement.	Inform your service technician if the error occurs repeatedly. The mucosal electrode must not be used on the patient in this state.
24	Buffer battery empty	The time and date are reset after the treatment center is switched back on.	Inform your service technician.

Code	Anomaly	Description	Measure
26	Software inconsistency	An error must be acknowledged after the treatment center is switched on. The functions of the treatment center may be impaired.	Inform your service technician.
27	Suction hose cleaning	Too little water is used for suction hose cleaning.	Inform your service technician. Instead, aspirate a glass of water regularly, see "Rinsing the suction system" [→ 243].
28	Chair motor	If a drive motor of the patient chair heats up excessively, the chair will not move.	Wait until the motor cools down. Please observe the maximum load capacity of the chair, see "Patient chair" [→ 18]. Inform your service technician if the error occurs repeatedly.
30	Central unit memory	The treatment center was reset to factory settings. Settings are not saved.	Inform your service technician.
31	Chemical suction hose cleaning	The cleaning agent tank for chemical suction hose cleaning has not been emptied since the last filling despite several suction hose cleanings.	Inform your service technician.
32	Motor configuration	Configuration of the motor control does not correspond with the connected motor. The motor does not operate at the set speed or comes to a standstill.	Connect the BL E motor to the instrument hose instead of the BL ISO E or vice versa. The motor control can be set to the motor version used in the service area of the setup dialog. Inform your service technician.
33	Cuspidor bowl valve	The water container of the cuspidor valve is not emptied. The tumbler filling, flushing, suction hose cleaning, sanitation, purge and autopurge functions cannot be activated.	Check whether the suction device is switched on. Inform your service technician.
34	LEDview Plus	The operating light has excessively overheated. It can no longer be operated at full brightness. In the event of further heating, the light will switch itself off.	Protect LEDview Plus against strong sunlight. Switch the treatment center off and on again. For further details please refer to LEDview Plus operating instructions, section "Faults".

The error message or warning triangle automatically disappears when the error has been remedied. If it does not disappear, please inform your service technician.

7.4 Remote diagnosis

Functional description

With remote diagnosis, you enable the staff of your dental depot or our Customer Service Center, see "Contact data" [→ 11], to connect to the PC of your treatment center. The contents of your PC monitor are then transmitted to the computer of the service specialist and remote access to your PC is enabled.

Advantages

This offers you the following advantages:

- Fast support through remote access
- Remote diagnosis via readout of error codes
- Effective help during the application
- Fewer service calls by service engineers due to remote diagnosis
- Shorter downtimes

Prerequisites

In order to utilize remote diagnosis, your treatment center must be connected to a PC. In addition, the PC must have Internet access.

Remote access to your PC is established via a remote access software. Various different software applications can be used for remote access. Please contact your service engineer for more information.

Safety aspects

During a remote access session, you as the customer can cancel the service specialist's remote control rights at any time, thus blocking further remote access. You thus always remain in control during remote access.

Extensive security and access protection functions protect your PC against alterations, spying and manipulations. These options will vary depending on the remote access software involved. In general, remote controlled access can be monitored directly by the customer. By setting the access rights, you as the customer can determine which activities service specialists will be allowed to perform via remote access. All other functions which have not been approved by you remain disabled for the service specialist.

If you have any further questions, please contact your dental depot or our Customer Service Center; see "Contact data" [→ 11].

8 Spare parts and consumables

Use only original accessories and original spare parts from Dentsply Sirona.

Please order the materials listed below from a specialized dental dealer.

Care, cleaning, and disinfecting

Care, cleaning, and disinfecting agents

A continuously updated list of approved agents can be downloaded from the Internet on the online portal for technical documents. You can reach this portal at the address:

www.dentsplysirona.com/manuals

.Click on the menu item *"General documents"* and then open the *"Care, cleaning and disinfection agents"* document.

If you do not have access to the internet, please contact your dental depot to order the list (REF 59 70 905).

Total count tester

REF 58 53 775

Spray aspirator with additional air intake

A spray aspirator from the Dürr Dental company is attached to the treatment unit on delivery. It can be ordered from a specialized dealer.

Air and water filters

REF 14 43 436

Amalgam rotor

REF 14 34 138

Fresh water bottle

REF 54 34 498

Fuses

Fuse for the external device connection

100 V – 240 V~ (T 6.3 A, 250 V~)

REF 10 77 452

Other

Cover

For sealing the instrument holder of the TS dentist element

REF 64 55 823

Silicone isolation sleeve for endodontics with the ApexLocator

REF 63 24 631 (5 pcs)

9 Disposal



In accordance with Directive 2012/19/EU and national disposal regulations regarding old electrical and electronic devices, please be advised that such items must be disposed of in a special way within the European Union (EU). These regulations require the environmentally friendly recycling/disposal of old electrical and electronic devices. Such items must not be disposed of as domestic refuse. This has been expressed using the icon of the “crossed out trash can”.

Disposal procedure

We feel responsible for our products from the first idea to their disposal. For this reason, we give you an option to return our old electronic and electrical devices.

If you wish to dispose of your devices, please proceed as follows:

In Germany

To initiate return of the electrical device, please send a disposal request to enretec GmbH. You have the following options here:

- Use the ‘Returning an electrical device’ button under the ‘eom’ menu item on the enretec GmbH homepage (www.enretec.de).
- Alternatively, you can also contact enretec GmbH directly.

enretec GmbH
Kanalstraße 17
16727 Velten, Germany
Phone: +49 3304 3919-500
E-mail: eom@enretec.de

In accordance with the national disposal regulations regarding old electrical and electronic devices (ElektroG), as the manufacturer, we assume the costs for disposing of the electrical and electronic devices in question. Disassembly, transport and packaging costs shall be borne by the owner / operator.

Prior to disassembly/disposal of the unit, it must be prepared professionally (cleaned/disinfected/sterilized).

If your unit is not permanently installed, it will be collected from the practice. If it is permanently installed, it will be picked up curbside at your address by appointment.

Other countries

For country-specific information on disposal, contact your local dental dealers.

10 Overview of all function keys

The following contains a brief description of the fixed keys on the dentist and assistant elements and the function keys on the touchscreen and to provide the reader with a quick overview of the significance of the symbols on the keys. Detailed descriptions can be found in the corresponding sections of this document.

10.1 Fixed keys

10.1.1 Dentist element with EasyPad



Favorites key pad

Resets the speed of the electric motor or intensity of the scaler

For saving the instrument settings speed or intensity and maximum torque if the Endo function is activated and activation of the spray (only for C+ electronic foot switch) to the function keys 1, 2, and 3.

For custom configuration of the treatment center by the user.

Changing other settings, such as flushing and purging times.

Tumbler filling

Starts or stops the tumbler filling function.

Pressing the *Tumbler filling* key (> 2 s) displays the setting text for coupling the tumbler filling to mouth rinsing position S and filling time.

Flushing

Starts or stops cuspidor flushing.

Pressing the *Flushing* key (> 2 s) displays the setting text for coupling flushing to mouth rinsing position S and flushing time.

Operating light

Switches the operating light on, to the composite function, or off.

The composite function delays the curing of composite materials.

With the LEDlight and LEDlight Plus, light intensity is set using the non-touch sensor. With the LEDview Plus, when the *Operating light* key is pressed (> 2 s), the operating context for the light appears. With the LEDview Plus, the color temperature is adjustable.

Chair programs

Mouth rinsing position S with last-position memory function (programmable)

Entry/exit position 0 (programmable)

Chair programs 1 and 2 (programmable)

Backrest tilt

Moves the seat and backrest without any compression or stretching effects for the patient

Chair height



Counterclockwise rotation / user profile

Switches counterclockwise rotation ON/OFF

Changes the user profile

Switches AutoReverse function ON/OFF when the maximum torque is reached

Counterclockwise rotation ON/OFF

Cancels an ongoing process and changes to the standard operating context



Endo / Purge

Switching Endo function on/off

Switches the Endo mode on/off for the SiroSonic L scaler (limiting power)

Activates the calibration process (> 2 s)

Selects the purge, autopurge, sanitize, and stand-alone water supply functions



Display mode / clean

Switches between torque and speed display

Deactivates the complete user interface of the dentist element. This is used to clean the surface and protect from interference from an external HF surgical device.



Function key

Starts and stops the timer.

10.1.2 Dentist element with EasyTouch



Clean key

Deactivates the complete user interface of the dentist element. This is used to clean the surface and protect from interference from an external HF surgical device.



Tumbler filling

Starts or stops the tumbler filling function.

When the *Tumbler filling* key is pressed (> 2 s), the setting text for coupling tumbler filling to mouth rinsing position S and filling time appears.



Flushing

Starts or stops cuspidor flushing.

When the *Flushing* key is pressed (> 2 s), the setting text for coupling flushing to mouth rinsing position S and flushing time appears.



Operating light

Switches the operating light on, to the composite function, or off.

The composite function delays the curing of composite materials.

With the LEDlight and LEDlight Plus, light intensity is set using the non-touch sensor. With the LEDview Plus, when the *Operating light* key is pressed (> 2 s), the setting program for the light appears. With the LEDview Plus, the color temperature is adjustable.



Sub-screen

Some programs are divided into a main program and sub-screens.

Only function keys for the basic functions are displayed in the main programs. The *Sub-screen* key (two rectangles) leads to additional setting options.

10.1.3 Assistant element



Chair program S

Mouth rinsing position with last-position memory function (programmable)



Chair program 0

Entry/exit position (programmable)



Tumbler filling

On/Off



Flushing the cuspidor

On/Off



Operating light / Composite function

Switches the operating light on, to the composite function, or off. The composite function delays the curing of composite materials.



Fn key

Starts and stops the timer

10.2 Start dialog



Chair program S

Mouth rinsing position with last-position memory function (programmable)



Chair program 0

Entry/exit position (programmable)

Chair programs 1 and 2

(programmable)



Inclining the backrest

Compensated motion of the seat and backrest without any compression or stretching effects for the patient



Adjusting the chair height



Selecting a user profile

A stored user profile can be selected for up to six different users (A to D).



Timer function

Starts and stops the timer

If the *Time function* key is pressed (> 2 s), the setting dialog appears.



Purging water lines

Starts the purge function



Purging water paths automatically

Starts the autopurge function



Sanitization

Starts the treatment center sanitation program



Self-sufficient water supply

The disinfection system switches to stand-alone water supply



Apex measurement with file clamp

Activation of the ApexLocator for manual measurement with the file clamp, showing the distance display



Apex distance acoustic signals

Activates the acoustic signals for the distance to the apex. The intervals between the acoustic signals vary according to the measured distance to the apex.



White screen on the Sivation monitor

If the treatment center does not have an X-ray viewer, but is equipped with a Sivation monitor, it can be switched to a white screen in the *Start* sub-screen.



Setup key

Used for individual configuration of the treatment center by the user and for reading out messages by the service engineer.

10.3 Start dialog for removed instruments



Speed favorite keys

Adjusts and saves the speed of the electric motor, the maximum torque with the Endo function activated and the activation of the spray (only with C+ electronic foot control)



Intensity favorite keys

Changes and saves the intensity of the scaler and activating spray (only with C+ electronic foot control)



Direction of rotation

Switches counterclockwise rotation ON/OFF



Endo mode

Activates the Endo mode on/off for the SiroSonic L scaler (limiting power)



Preselecting spray coolant

Used to cool the treatment area with spray



Preselecting air coolant

For cooling the treatment area with air



Setting the automatic motor stop of the ApexLocator

When the *Apex Stop* key is pressed, the – and + keys are displayed. The automatic motor stop can be switched off or set to four different levels. If the distance is 0, the motor does not stop until it reaches the physiological apex. Please note that the distance values are not a metric length measurement!

The preset motor stop position is displayed as a black triangle to the right of the distance display under the text "Stop".



AutoReverse

Switching the ApexLocator Auto-Reverse function on or off. When the physiological apex is reached, the burr drive automatically switches to counterclockwise rotation when reactivated by the foot control. When the file is withdrawn, the bur drive automatically switches back to clockwise rotation.



Apex acoustic signals

Switching the apex acoustic signals on/off. If the signal tones are switched on, a beep is issued when the apex or a set motor stop position is reached. If the Auto-reverse function is activated, three acoustic signals are issued when the motor switches to counterclockwise rotation.



Apex distance acoustic signals

Switching the apex distance signal tones on or off. The intervals between the signal tones vary according to the measured distance to the apex.



Instrument light

Activating the instrument light



Direct starter/control foot control (only with the C+ electronic foot control)

Direct starter (highlighted gray): Switches the motor or scaler on with the set speed or intensity

Control foot control (highlighted orange): Regulates the motor or scaler to the set speed or intensity after setting the foot control pedal to maximum.

10.4 Endo function



Endo function

Activating the Endo function



Memory button

Saving all settings of the Endo function



Calibrating the bur drive

A calibration must be performed each time you change or lubricate the contra-angle handpiece.

The contra-angle handpiece is automatically checked during calibration. This includes a measurement of motor current at different speeds to assess the properties of the system.



Direction of rotation

Switches counterclockwise rotation ON/OFF



Switching reciprocal on/off

Activating the reciprocal function

The button will be inserted if a reciprocally rotating file has been selected in the second *Endodontics* sub-dialog.



Selecting a reciprocal rotating file

Select a reciprocally rotating file or hide the *Switching reciprocal on/off* button in the *Endodontics* sub-dialog.



Turning on/off the automatic motor stop of the ApexLocator

When the *Apex Stop* key is pressed, the – and + keys are displayed. The automatic motor stop can be switched off or set to four different levels. If the distance is 0, the motor does not stop until it reaches the physiological apex. Please note that the distance values are not a metric length measurement!

The preset motor stop position is displayed as a black triangle to the right of the distance display under the text "Stop".



AutoReverse function

When the set torque value is reached, the bur drive automatically switches to counterclockwise.

If your treatment center is equipped with the ApexLocator option, you can determine that the bur drive automatically stops at the physiological apex. If the auto-reverse function is switched on, the next time the foot pedal is activated following a motor stop, the motor is switched to counterclockwise rotation. When the root canal file is withdrawn, the burr drive automatically switches back to clockwise rotation.



Signal tones

Switching the acoustic signals on/off. If the AutoReverse function is activated, three acoustic signals are emitted when the motor switches to counterclockwise motion.



Apex acoustic signals

Switching the apex acoustic signals on/off. If the signal tones are switched on, a beep is issued when the apex or a set motor stop position is reached. If the AutoReverse function is activated, three acoustic signals are emitted when the motor switches to counterclockwise rotation.



Instrument light

Activating the instrument light

10.5 Other dialogs

10.5.1 Timer screen



Time loop

If the key is highlighted orange, the countdown will automatically be restarted when the set time has expired.



Acoustic signal

If the key is highlighted orange, an acoustic signal will sound when the set time has expired.

10.5.2 Tumbler filling setting dialog



Coupling tumbler filling to mouth rinsing position

If the key is highlighted orange, the tumbler filling function will automatically be switched on for the duration of the preset filling time when the mouth rinsing position chair program (S) is activated.



Setting filling time

10.5.3 Flushing settings screen



Linking flushing to mouth rinsing position S

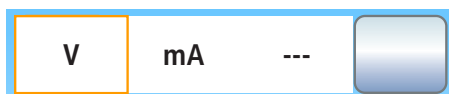
Following movement to mouth rinsing position S, the flushing function automatically switches on for the duration of the set flushing time.

10.5.4 Highspeed handpiece light setting dialog



Instrument setup

Calls up the *Highspeed handpiece* instrument setup



Limitation type

To select the limitation of voltage or current of the highspeed handpiece light or to switch off the power supply.



Setting the limitation

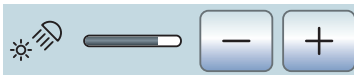
Setting of the voltage or current limitation

10.5.5 Operating light setting program



Sensor control for switching the operating light on/off

If the key is highlighted orange, the operating light can be switched on/off or changed to the Composite function by a hand movement.



Setting the brightness of the operating light



Setting the color temperature of the operating light

only for LEDview Plus



Setting the operating distance of the sensor control

Defines the distance at which the non-touch switch will react to movements.

10.6 Sivation program

10.6.1 Media Player



Start Media Player

Media Player is started on the external PC. The keys corresponding to the Media Player PC application are displayed on the right side of the touchscreen after a file is selected:

Previous/next title

Stop playback

Start/interrupt playback

Mute

Adjust volume

10.6.2 Microsoft® PowerPoint®



Start PowerPoint

PowerPoint is started on the PC. The keys corresponding to the PowerPoint PC application are displayed on the right side of the touchscreen after a file is selected:

Previous/next slide

10.6.3 Sidexis



Starting Sidexis

Sidexis is started on the PC. The keys for the Sidexis PC application are displayed on the right side of the touchscreen:

Next image

The next image window is activated.

Tiled layout

All open image windows are scaled to a uniform size in the display area and arranged without overlapping.

Cascaded layout

The opened windows are "cascaded", i.e. arranged slightly displaced behind one another. All image window titles are thus visible.



Overview layout

The opened image windows are scaled in the display area so that no scroll bars or as few scroll bars as possible must be displayed. The image windows are arranged without overlapping.

Full frame

The active image window is enlarged so that it covers the entire display area. The control elements of the Sidexis user interface are not concealed in the process.

Zoom in/out

This magnifies and decreases the active image window and the size of the image displayed in it on the Sivation monitor.

Rotate image

Rotates the image 90° counterclockwise or clockwise. With Sidexis 4, the image can be rotated 180° by pressing a key.

Contrast optimization filter

This image filter analyses and optimizes the current grayscale distribution of an image. In this way, for instance, details within a very low-contrast, "faint" image can be made visible.

Relief display filter

Image details with high contrast are displayed brighter or darker. Edges or contours within the image are thus clearly accentuated. The result is a relief-like image distortion.

Smooth image

To mitigate high-contrast or high-interference effects in images, the contrast between neighboring pixels is reduced or averaged. The overall definition of the image is reduced.

Sharpen image

Contrasts between neighboring pixels are increased. This function helps to accentuate edges or contours. The impression of a sharper image is created.

Invert image

This function inverts the brightness values of the image pixels, thus enabling a positive or negative display of the image. The inversion can be canceled by pressing the key once again.

Display image in pseudocolors

To enable better distinction of image details, an image can be displayed in what is called pseudo color mode. The grayscale values of the image are replaced by colors which the human eye can distinguish better from one another than the corresponding gray levels.



Filter black dots

Single pixel errors may occur when taking digital X-rays. These pixel errors appear as individual black dots when the optimum resolution (100%) is selected. They are removed by Sidexis.



Reducing noise

Individual scattered pixels and minor disturbing information which lead to a noisy image are eliminated without reducing the overall definition of the image.



Undo

The effect of the last filter operation is undone.



Restore original image

The changes previously made, e.g. via filters, are canceled. The most recently saved version of the image is restored.



Close current media window



Close all media windows



Cancel/confirm entry



Accept an order

Accepts an order that was placed and is waiting in Sidexis, e.g. for creating an intraoral image with the X-ray unit of the treatment center or a video recording with the intraoral camera.



Readiness for intraoral X-ray exposure

Establishes readiness for an X-ray exposure. A Sidexis window then opens where the image type can be selected and the image can be described in detail.

10.6.4 SI Video



Starting SI Video

SI Video is started on the PC, if Sidexis is not installed on it. The keys for the SI Video PC application are displayed on the right side of the touchscreen:



Selecting the next quadrant

In single image mode, the still image in the next quadrant is displayed. In quad image mode, the next quadrant is highlighted.



Quad image

Display quad image or single image. Up to four single images are simultaneously displayed on the Sivation monitor in quad image mode.



Deleting images

All generated still images are deleted.

10.6.5 Video plugin

Camera



Start the video plugin

Sidexis 4 and the video plugin are started on the PC. The fixed keys for the video plugin are displayed on the right side of the touchscreen.

Scroll up / select previous still image

Scroll down / select next still image

Mark selected still image for import to Sidexis 4

Mark all still images for export to Sidexis 4

Import marked still images to Sidexis 4

Discard all still images

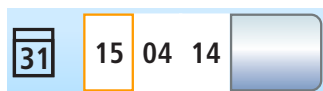
10.7 Setup program

10.7.1 Date and time

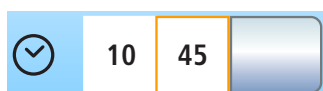


Date and time

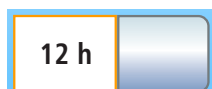
Opens the *Date and Time* setup program.



Date



Time



12/24 hour display

10.7.2 Control options



Configuring control options

Opens the *Control Options* setup dialog.



Number of user profiles

If fewer user profiles are required, their number can be limited so that only the specified users can be selected after the treatment center is switched on.



Touchscreen brightness



Key tone

A setting can be made to activate or deactivate an acoustic signal that sounds when the operator touches a key on the touchscreen.



Open next dialog page



Suction

If the treatment center is equipped with a position selector valve for the suction system, it can be set so suction flow can be interrupted or restarted by moving the 4-way foot control switch at the base of the chair in any direction.



Afterblow

After an instrument is put in its holder, the cooling spray remaining in the instrument head or in the tip of the instrument is automatically blown out by briefly activating the chip blower.



Focusing the intraoral camera using the foot control

If the treatment center is equipped with an autofocus camera and the C + electronic foot control, it can be configured in setup that the camera image can be focused with the foot switch.

If this function is switched off, the display switches between a still or live image when the foot pedal is pressed. The knob on the camera is used to focus the image.

If the function is switched on, the camera image is focused when the foot pedal is actuated. The display switches between a still or live image only when the foot pedal is pressed down fully. Focusing via the camera knob still works.



White screen

If the treatment center does not have an x-ray viewer but is equipped with a Sivation monitor, this can be switched to a white screen.



Cleaning agent mixture for chemical suction hose cleaning

The suction system can be automatically cleaned by pumping water into a tank behind the receptacle of the suction hoses and extracting it from there. A cleaning agent is automatically added to the water if the dental treatment center is equipped with the chemical suction hose cleaning option. It is possible to set how much cleaning agent should be mixed with water for chemical suction hose cleaning.



Water heater

The optional heater for the treatment water can be switched on/off.

10.7.3 Network connection



Configuring IP address setup dialog

Opens the *IP Address* setup dialog.



Entry of the IP Address, subnet mask and the Gateways

To configure a static network connection



DHCP

Activates the dynamic network configuration with DHCP (Dynamic Host Configuration Protocol)



Name in the network

To enter the device name of this treatment center in the network.

10.7.4 Service domain



Opening the service function

The Service domain is intended to be used only by service engineers. Please contact your service technician or your dental depot.

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We reserve the right to make any alterations which may be required due to technical improvements.

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