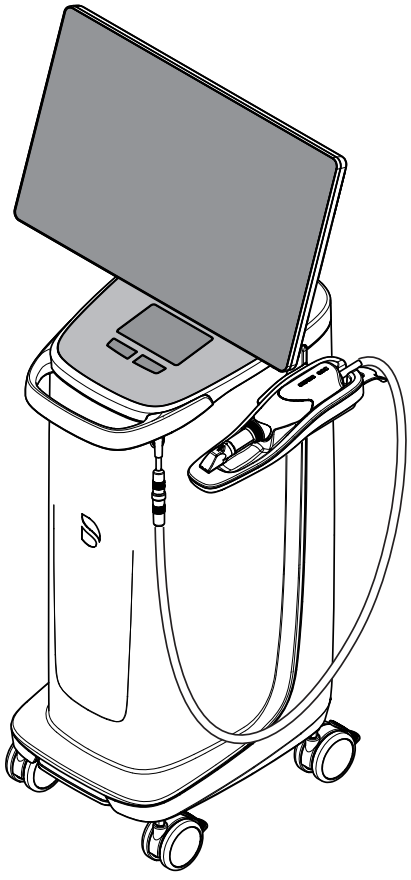
New as of: 05.2019

Dentsply Sirona

CEREC Primescan AC, Primescan AC

Operating Instructions (not valid for USA)

English



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1 General data

1.1 Dear Customer,

Thank you for your purchase of this CEREC Primescan AC / Primescan AC® unit from Dentsply Sirona.

The CEREC Primescan AC enables you to produce dental restorations, e.g. from ceramic material with a natural appearance (**CE**ramic **REC**onstruction).

The CEREC Primescan AC / Primescan AC allows you to send digital acquisitions to a laboratory of your choice for manufacture at your laboratory partner.

Improper use and handling can create hazards and cause damage. Please therefore read and follow these operating instructions carefully. Always keep them within easy reach.

Also pay attention to the safety instructions to prevent personal injury and material damage.

Your
Dentsply Sirona team,

1.2 Contact data

Customer Service Center

In the event of technical queries, please use our online contact form at the following address:
http://srvcontact.sirona.com

Manufacturer's address

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 General information about these 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.

The Operating Instructions are stored on the unit and online at www.dentsplysirona.com/manuals.

Always keep the Operating Instructions handy in case you or another user require(s) information at a later point in time. Print out the Operating Instructions and note where they are stored on the unit or online.

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 dealer.

1.4 General conventions and structure of the document

1.4.1 Structure of the document

1.4.1.1 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.

1.4.1.2 Formats and symbols used

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

✓ Prerequisite **1.** First action step **2.** Second action step or ➢ Alternative action ↳ Result ➢ Individual action step	Requests you to do something.
See "Formats and symbols used [→ 7]"	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.

1.4.2 Operating conventions

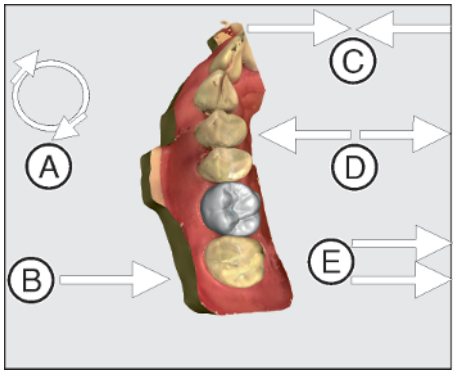
Example	Meaning
Tapping	Pressing once and releasing the finger or the left trackball/touchpad key on the acquisition unit.
Double-tapping	Pressing twice quickly in succession and releasing the finger or the left trackball/touchpad key on the acquisition unit.
Moving the mouse in one direction	On the acquisition unit: Moving the trackball/finger in the corresponding direction.
Seizing a point	Pressing and holding the left mouse button (left trackball/touchpad button on the acquisition unit).
"Ctrl+N"	On the keyboard: Press the **Ctrl** and **N** keys simultaneously.
Drag & drop	. Select an element (e.g. a pictograph) and drop / release it onto a potential destination.

Multi-Touch Technology

The screen is equipped with multi-touch technology. You can navigate and enter content using your finger. Icons open if you tap them with your finger.

Navigating in the software

Example	Meaning
Tap	Single tap on the screen using your finger. To execute functions in the software you must tap once on the corresponding button.
Double-click	Two taps on the screen in rapid succession using your finger. **Tip:** To open programs in Windows you must tap the corresponding button twice (double-click).
Call up shortcut menus	Tap the corresponding point and hold the finger on the screen for a longer period. A shortcut menu opens at this point.
Drag & drop	Tap an element (e.g. pictograph), drag and drop onto new potential destination.



Edit a 3D model with multi-touch

You can edit the 3D model using multi-touch.

Item	Function
A	➢ Complete a rotary movement using 2 fingers. ↳ The object is rotated in the plane.
B	➢ Drag with 1 finger. ↳ The model is rotated out of its current plane.
C	➢ Pull 2 fingers in together. ↳ The object is minimized.
D	➢ Pull the fingers apart. ↳ The object is maximized.
E	➢ Drag with 2 fingers. ↳ The model is dragged.

1.4.3 Notes to the repository

It is mandatory to keep this operating manual in an easily accessible place for the purpose of later reference. In the event of a sale or transfer of the device to another user, make sure that the device is supplied along with the operating manual, so that the new owner can get acquainted with the operation and the appropriate precautions and warnings

1.5 Warranty and liability

Maintenance

In the interest of the safety and health of patients, users or third parties, it is necessary that maintenance work is carried out at fixed time intervals to ensure the operational safety and reliability of your product.

The operator must ensure the implementation of the maintenance work.

As a manufacturer of electro-medical equipment, we can consider ourselves responsible for the safety characteristics of the device only if maintenance and repairs are carried out only by us or by companies authorized explicitly by us for this purpose and if components are replaced with original spare parts in case of failure.

Exclusion of liability

If the operator does not meet the obligation to carry out such maintenance or fault messages are ignored, Dentsply Sirona or its authorized dealer does not assume any liability for damage caused.

1.6 Intended use

The CEREC Primescan AC / Primescan AC acquisition unit creates digital impressions, which are sent to a laboratory and/or in connection with the milling unit is used to manufacture computer-supported dental restorations, e.g. from a natural-appearing ceramic material. The unit may be operated only by medically trained and qualified personnel.

This unit must not be used for any other purpose. If the unit is used for any purpose other than the one mentioned above, it may be damaged.

Intended use also includes compliance with these Operating Instructions and the relevant maintenance instructions.

⚠ CAUTION

Follow the instructions

If the instructions for operating the unit described in this document are not observed, the intended protection of the user may be impaired.

For the USA only

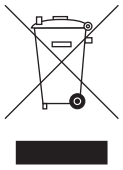
CAUTION: Federal law (USA) restricts sale of this device to or on the order of a physician, dentist, or licensed practitioner.

1.7 Legend

Year of manufacture

Safety labels

Identifies labels/imprints on the unit (see Safety labels [→ 17]).



Product disposal symbol (see "Disposal [→ 87]").

Storage battery pack recycling symbol (see "Disposal of the storage battery pack [→ 88]")

The CEREC Primescan AC / Primescan AC acquisition unit may contain an RF transmitter in the form of a WLAN card or a separate wireless module.

Radio approval for Australia/New Zealand

Follow the operating instructions.

To ensure safe operation of the unit, the user must follow the operating instructions.

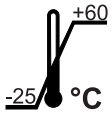
Symbols on the packaging

Take note of the following symbols on the packaging:

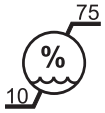
Top

Protect from moisture

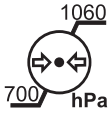
Fragile; handle with care



Temperature during storage and transport



Relative humidity during storage and transport



Air pressure during storage and transport

2 Safety instructions

2.1 Disturbance of data transmission

Note on wireless communication

Data communication between the acquisition unit and the CEREC MC XL production unit should preferably be established via the wireless interface CEREC Radio Device or WLAN.

As for all wireless connections (e.g. cell phones), heavy utilization of the available radio channels or shielding caused by building installations (e.g. metal-shielded X-ray enclosures) may impair the quality of the connection. This may become noticeable through a reduction in range and/or a slower data transmission rate. In extreme cases, it will be impossible to establish a wireless connection at all.

Dentsply Sirona has selected the best possible configuration for data communication via the wireless interface (CEREC Radio Device) or WLAN, which generally ensures perfect functioning of this connection. However, in individual cases unrestricted wireless data communication may be impossible for the reasons mentioned above and/or due to local circumstances. In such cases, a cable LAN connection should be selected to ensure uninterrupted operation. If the only LAN interface on the rear of the acquisition unit is occupied by another plug, remove this wireless interface connection and instead connect the LAN cable with the CEREC MC XL production unit.

2.2 Basic safety information

2.2.1 Prerequisites

NOTE

Important information on building installation

In order to prevent the risk of an electric shock, this unit must only be connected to a supply mains with a ground wire.

The building installation must be performed by a qualified expert in compliance with the national regulations.

NOTE

Restrictions regarding installation site

The system is not intended for operation in areas subject to explosion hazards.

NOTE

Do not damage the unit!

The unit can be damaged if opened improperly.

It is expressly prohibited to open the unit with tools!

2.2.2 Connecting the unit

Perform connection by following the directions given in the present operating instructions.

2.2.3 General safety information

⚠ CAUTION

Risk group 2: Potentially hazardous optical radiation!

Direct radiation to the eye can be harmful to the eye.

➢ During operation, do not look directly at the lamp for long periods.

⚠ CAUTION

Risk of toxic liquid escaping from a damaged display

There is a risk of injury if toxic liquid escapes from a damaged display.

➢ Do **not** touch the LED screen with sharp or pointed objects.

➢ If the LED monitor is damaged (e.g. the glass screen is broken), prevent any leaking liquid from coming into contact with your skin, mucous membranes (eyes, mouth), or foodstuffs and be careful not to inhale any escaping vapors.

➢ Rinse any parts of your body or items of clothing already contaminated by the liquid with ample amounts of water and soap.

⚠ CAUTION

Note on the prevention, recognition, and elimination of unintended electromagnetic effects:

The CEREC Primescan AC / Primescan AC acquisition unit is Class B equipment (classified according to CISPR 11, EN 60601-1-2: 2015 based on IEC 60601-1-2: 2014).

This unit may be used in professional equipment of health services.

NOTE

Install only approved software

To prevent interference with the runtime reliability of the program, only software approved by Dentsply Sirona may be installed.

NOTE

Risk of damaging components

Components may be damaged by covering ventilation openings.

➢ Ensure that the ventilation openings are not covered.

⚠ WARNING

Danger of touching live parts

If the housing is damaged, there is a possibility of touching live parts inside the unit.

➢ Check that the unit is intact. The unit can only be used for work purposes if it is intact.

➢ If the housing is damaged, the unit must be put and left out of operation until it has been professionally repaired.

NOTE

Danger posed by broken glass

Stress to the glass surfaces of the control console and monitor from strong forces and impacts must be prevented, otherwise there is a risk of the glass breaking. Prevent impacts to the monitor, especially around the edges of the cover glass.

⚠ CAUTION

Restoration to be checked by trained personnel

Each restoration created must be checked for suitability by a trained person (e.g. dentist).

2.2.4 Movement and stability of the unit

NOTE

The unit can overturn or slip away

For reasons of tilt stability, the unit must be pulled by its front or rear handle when being moved. If you push the unit, obstacles on the floor could block its wheels, thus causing it to overturn.

For transporting the unit (for example to another room), the monitor must be in a rotated position in order to prevent damage through impacts. The monitor may be in the upper or swiveled out position.

Make sure that the unit is transported in a stable manner.

All wheels of the unit have brakes which can be locked to ensure secure positioning. If the unit is steeply inclined or standing on a slippery surface and lateral forces are acting on it, it may slide even though the wheel brakes are locked. Horizontal forces in the upper part of the unit (e.g. on the monitor) can cause the unit to tip over when the wheels are stationary.

➢ Always make sure that the unit's footprint is a flat, nonskid surface.

NOTE

Tripping hazard posed by cable connection to USB ports on the monitor

Tripping hazards that compromise tipping stability may arise due to the connection of USB cables to the USB ports on the monitor.

➢ Do not connect USB cables to the USB ports on the monitor.

➢ Always connect USB cables to the sockets on the rear of the PC.

2.2.5 Maintenance and repair

As manufacturers of dental instruments and laboratory equipment, we can assume responsibility for the safety properties of the unit only if the following points are observed:

- The maintenance and repair of this unit may be performed only by Dentsply Sirona or by agencies authorized by Dentsply Sirona.
- Components which have failed and influence the safety of the unit must be replaced with original (OEM) spare parts.
- Only original cables may be used, so that EMC requirements are met.

Please request a certificate whenever you have such work performed. It should include:

- The type and scope of work.
- Any changes made in the rated parameters or working range.
- Date, name of company and signature.

2.2.6 Modifications to the product

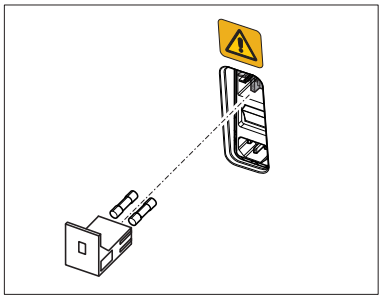
Modifications to this product which might affect the safety of the system owner, patients or other persons are prohibited by law!

2.2.7 Accessories

In order to ensure product safety, this device may be operated only with original Dentsply Sirona accessories or third-party accessories expressly approved by Dentsply Sirona. In particular, only the power cable also supplied or the corresponding original spare part may be used with the unit. The user is responsible for any damage resulting from the use of non-approved accessories.

2.3 Safety labels

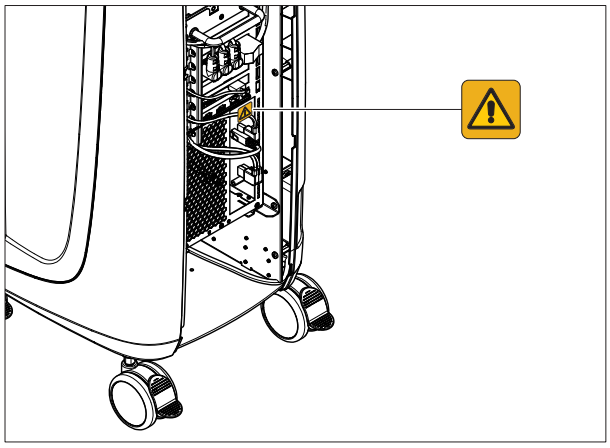
Fuses



NOTE

Use ONLY fuses of the same type!

Plug connections of external interfaces



⚠ CAUTION

Adaptation of acquisition unit to external components

Additional devices connected to external interfaces must be tested according to the relevant standards, e.g.:

EN 60601-1:2006 + Cor.:2010 + A1:2013,
IEC 60601-1 Edition 3.1:2012,
EN 61010-1:2010 based on IEC 61010-1:2010 + Cor.:2011.

They must be installed outside of the patient area (a radius of 1.5m surrounding the patient).

⚠ WARNING

Risk of electric shock

Low voltages are applied to the sockets for connecting external interfaces. In order to maintain electrical safety, the rear covers of the acquisition unit must be kept closed while it is in operation (service cover and cover on the monitor).

- ➢ Do not touch the pins of the connectors.
- ➢ When using the unit on the patient, please note that the covers on the rear side of the unit (service cover and cover on the monitor) must remain closed and voltage sources must not be accessible. The cover on the monitor must not be opened, if both USB sockets are in use or locked.
- ➢ The acquisition unit must not be operated inside of the patient area (within a radius of 1.5 m surrounding the patient) with the covers open.

NOTE

Risk of damage to the plugs/cables!

The externally connected plugs/cables may be damaged, if they are overtensioned or if the plug connections do not snap in.

- ➢ Do not pull on the cables.
- ➢ Make sure that the plug connections snap in.

2.4 Electrostatic charge

2.4.1 ESD warning labels

ESD warning label

⚠ CAUTION

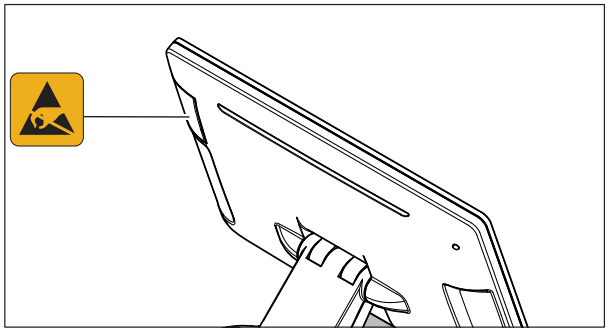
Risk of injury or damage to components from electrostatic discharge

For electrical components labeled with an ESD warning label, observe the following instructions.

➢ Apply the ESD protective measures.

➢ Do not touch connector pins or sockets without applying ESD protective measures first.

➢ Do not establish any connections between these connectors without applying ESD protective measures first.

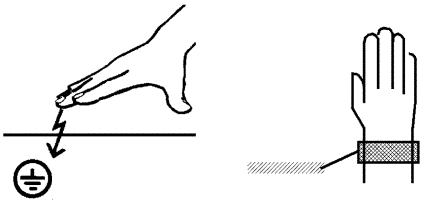


2.4.2 ESD protective measures

ESD

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

ESD protective measures



ESD protective measures include:

- Procedures for preventing electrostatic charge build-up (e.g. air conditioning, air moistening, conductive floor coverings and non-synthetic clothing)
- Discharging the electrostatic charges of your own body on the frame of the UNIT, the protective ground wire or large metallic objects
- Connecting yourself to ground using a wrist band.

Training

We therefore recommend that all persons working with this system be instructed on the significance of this warning label. Furthermore, they also should receive training in the physics of electrostatic discharges which can occur in the practice and the destruction of electronic components which may result if such components are touched by electrostatically charged USERS.

The content of this training is explained in the Chapter "About the physics of electrostatic charges" [→ 19].

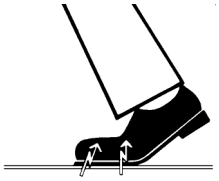
2.4.3 About the physics of electrostatic charges

What is an electrostatic charge?

An electrostatic charge is a voltage field on and in an object (e.g. a human body) which is protected against conductance to ground potential by a nonconductive layer (e.g. a shoe sole).

Formation of an electrostatic charge

Electrostatic charges generally build up whenever two bodies are rubbed against each other, e.g. when walking (shoe soles against the floor) or driving a vehicle (tires against the street pavement).



Amount of charge

The amount of charge depends on several factors:

Thus the charge is higher in an environment with low air humidity than in one with high air humidity; it is also higher with synthetic materials than with natural materials (clothing, floor coverings).

Electrostatic discharge must be preceded by electrostatic charging.

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

An electrostatic discharge is:

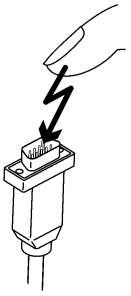
- perceptible at 3,000 V or higher
- audible at 5,000 V or higher (cracking, crackling)
- visible at 10,000 V or higher (arc-over)

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

Background

Integrated circuits (logical circuits and microprocessors) are used to implement a wide variety of functions in dental/X-ray/CAD/CAM systems.

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.



It is obvious that integrated circuits which are connected to plugs leading outside of the unit via cables are sensitive to electrostatic discharge.

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

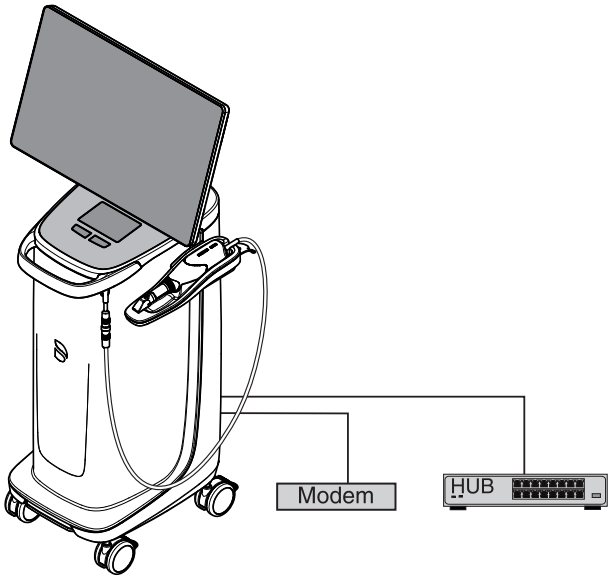
To prevent this from happening, the ESD warning label next to the plug warns of this hazard. ESD stands for **E**lectro**S**tatic **D**ischarge.

Connector pins or sockets bearing ESD warning labels must not be touched or interconnected without ESD protective measures.

2.5 Wireless phone interference with equipment

The use of mobile wireless phones in practice or hospital environments must be prohibited to ensure safe operation of the unit.

2.6 Integration in a network or connection to a modem



NOTE

Observe the following installation regulations

The following installation regulations apply to integration of the acquisition unit in a network or connection of the acquisition unit to a modem:

Network

The acquisition unit may be operated in a network only if it is connected to a HUB/switch. The hub/switch must:

- be located in the room where the acquisition unit is operated, **permanently installed**.
- be grounded via an **additional ground wire**.

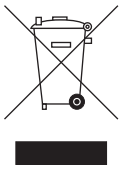
Cross-section of the protective ground wire	laid protected	2.5 mm^2
	laid unprotected	4 mm^2

Modem

At least one of the following specifications must be fulfilled in order to operate the acquisition unit on a modem:

- If a modem is connected, the acquisition unit may be operated only outside of the patient area (radius of 1.5 m surrounding the patient).
- An RS232 isolator compliant with EN 60 601-1-1 with a dielectric strength of at least 1.5 kV must be installed at the modem end in the RS232 connecting cable between the acquisition unit and the modem.

2.7 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 environmental friendly usage/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" since March 24, 2006, amongst other methods.

Please observe the disposal regulations applicable in your country.

3 Product description

3.1 Technical description

CAD system for high-precision intraoral optical impressions

- High-resolution, heated oral scanner (3D scanner) with removable reflective sleeve
- Integrated image processing
- High processing power due to state-of-the-art processor
- Trackball or touchpad
- Hand and foot controlled enter keys
- Ethernet port and WLAN
- USB interfaces

High-resolution 3D intraoral scanner with control and image processing electronics

- Image acquisition: Image control inside the scanner
- Image data transfer: USB 2.0 standard

Monitor

- 21.5" inch TFT LED flat-screen display
  HD resolution: 1920 x 1080 pixels

PC hardware

Special PC with the following equipment:

- Processor: Intel®
- RAM: 32GB RAM
- Hard disks: 1x PCIe SSD, 1x SATA HDD
- Network card: Ethernet 10/100/1000MBit/s
- WLAN card
- Sound card
- Graphics card
- Supply board: 66 34 245 D 3696

PC software

- Operating system: Windows 10, 64 bit
- Installation: The operating system is installed at the factory.

Housing

All units are integrated in a mobile housing with easily movable/lockable castors.

No water or air connection required.

3.2 Technical data

Type designation	CEREC Primescan AC / Primescan AC
Rated line voltage	100 - 240 VAC /50 - 60 Hz
Nominal current	5.0 – 2.1 A
Type of protection against electric shock	Class I device
Type of protection against electric shock (scanner)	Type BF applied part 
Degree of protection against ingress of water	Ordinary device (without protection against ingress of water)
Degree of contamination	2
Installation category	II
Operating mode	Continuous operation

Transportation and storage conditions

In the original transport packaging, the acquisition unit withstands the following environmental conditions during transport and storage:

Temperature	-25°C to 60°C (-13°F to 140°F)
Relative humidity	10% to 75%
Air pressure	700 hPa to 1060 hPa

Operating conditions

The acquisition unit may be operated in the following environmental conditions:

Ambient temperature	10°C to 35°C (50°F to 95°F)
Relative humidity	30% to 85% No condensation
Air pressure	700 hPa to 1060 hPa
Operating altitude	≤ 3000 m

Dimensions and weight

Dimensions W x H x D	
in mm	408 (537) x 1190 x 443
in inches	16.06 (21.14) x 46.85 x 17.44
Weight	
• Total weight, approx.	38 kg (83.8 lbs)
• without monitor and battery, approx.:	31 kg (68.3 lbs)
• without battery, approx.:	36 kg (79.3 lbs)

3.3 Controls and functional elements

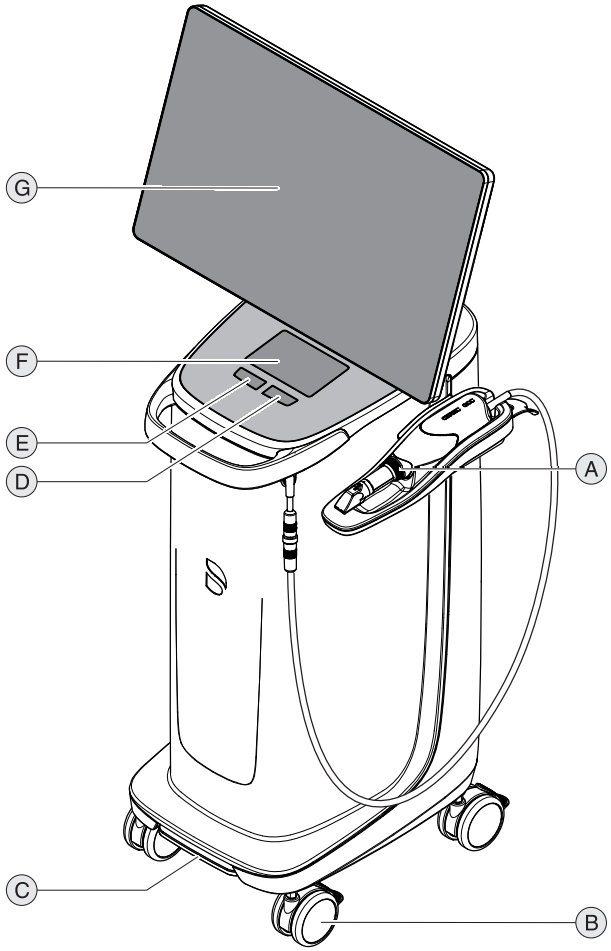
3.3.1 Overview of the front panel

NOTE

CEREC Primescan / Primescan is calibrated

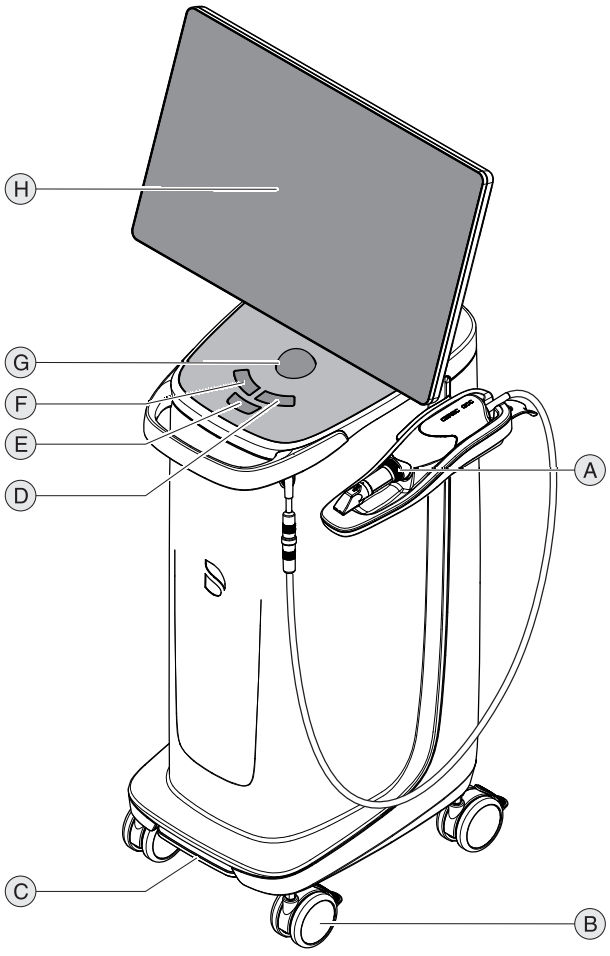
The CEREC Primescan / Primescan scanner is calibrated ex works.

Acquisition unit with touchpad



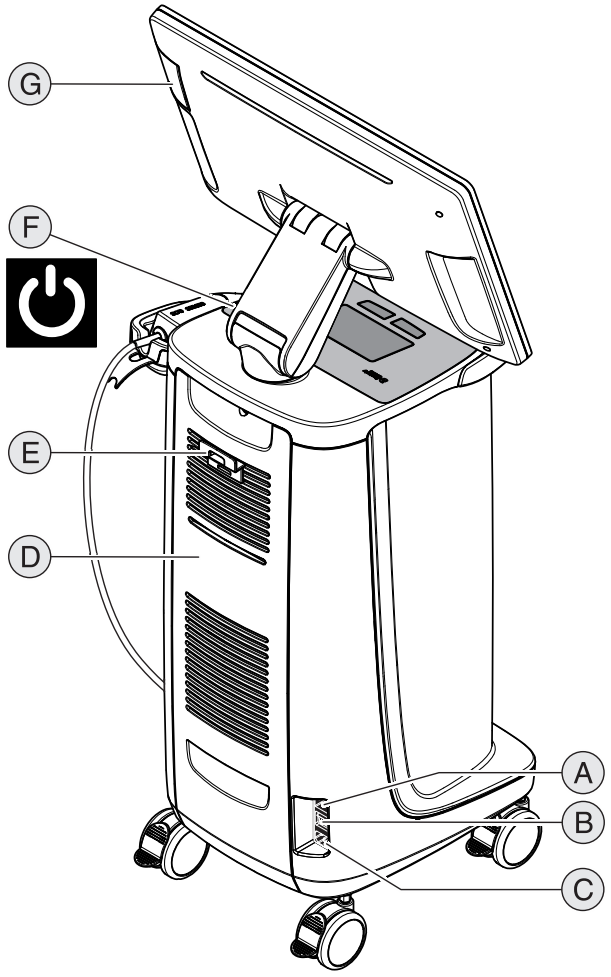
A	CEREC Primescan / Primescan	E	Left touchpad button
B	4 castors with parking brake	F	Touchpad
C	Foot switch/foot pedal	G	Screen
D	Right touchpad button		

Acquisition unit with trackball



A	CEREC Primescan / Primescan	E	Center trackball button
B	4 castors with parking brake	F	Left trackball button
C	Foot switch/foot pedal	G	Trackball
D	Right trackball button	H	Screen

3.3.2 Overview of the rear panel



A	Fuses	E	Power cable holder
B	Main switch **I** = ON, **0** = OFF	F	On button (operating state LED integrated)
C	Power connection	G	USB interface
D	Service cover		

3.4 Operating state LED

To position the operating state LED, see chapter “Overview of the rear panel [→ 29]”.

	LED lights up blue:	Acquisition unit is connected with the socket.
	LED flashes blue:	The storage battery is charged when the socket is connected.
	LED lights up green:	The system is being started up or has started up.
	LED flashes green:	The storage battery is charged while the system is being started up/has started up.
	LED lights up red:	Error
	LED flashes red:	Error in communication (between power supply unit/battery and interface PCB).
	LED lights up orange:	The system is not connected with the socket. Storage battery is charged. The system is being started up or has started up.
	LED flashes orange:	The system is not connected with the socket. The storage battery is not fully charged.

IMPORTANT

The storage battery is only 30% pre-charged

The storage battery is only 30% pre-charged upon delivery. Connect the unit to the line voltage with the power cord in order to achieve the full capacity of the storage battery.

3.5 Certification

CE mark

This product bears the CE mark in accordance with the provisions of the Council Directive 93/42/EEC of June 14, 1993 concerning medical devices and their changes.

NOTE

CE mark for connected products

Further products which are connected to this unit must also bear the CE mark.

Compliance

Anyone creating or changing a medical electrical system through a combination with other devices in accordance with standard EN 60601-1-1:2001 based on 60601-1-1:2000 (specification for the safety of medical electrical systems)/UL 60601-1 Part 1: first edition 2003 is responsible for ensuring that the requirements of these standards are met to the full extent in order to ensure the safety of patients, operators and the environment.

EAC certification

Mark of conformity of the Eurasian Economic Community

3.6 Electromagnetic compatibility

Observance of the following information is necessary to ensure safe operation regarding EMC aspects.

CEREC Primescan AC / Primescan AC complies with the requirements for electromagnetic compatibility (EMC) according to EN 60601-1-2: 2015 based on IEC 60601-1-2: 2014.

CEREC Primescan AC / Primescan AC is hereinafter referred to as "UNIT".

3.6.1 Electromagnetic emission

The **UNIT** is intended for operation in the electromagnetic environment specified below.

The customer or user of the **UNIT** should make sure that it is used in such an environment.

Emission measurement	Conformity	Electromagnetic environment - guidelines
RF emissions according to **CISPR 11**	Group 1	The **UNIT** uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions according to **CISPR 11**	Class B	The **UNIT** is intended for use in all facilities, including residential areas and in any facilities connected directly to a public power supply providing electricity to buildings used for residential purposes.
Harmonics according to **IEC 61000-3-2**	Class A	
Voltage fluctuations / flicker according to **IEC 61000-3-3**	coincides	

3.6.2 Interference immunity

The **UNIT** is intended for operation in the electromagnetic environment specified below.

The customer or user of the **UNIT** should make sure that it is used in such an environment.

Interference immunity tests	IEC 60601-1-2 Test level	Compliance level	Electromagnetic environment - guidelines
Electrostatic discharge (ESD) according to **IEC 61000-4-2**	± 8 kV contact ± 15 kV air	± 8 kV contact ± 15 kV air	Floors should be wood, concrete, or ceramic tile. If the floor is covered with synthetic material, the relative humidity must be at least 30%.
Electrical fast transient/burst according to **IEC 61000-4-4**	± 1 kV for input and output lines ± 2 kV for power supply lines	± 1 kV for input and output lines ± 2 kV for power supply lines	The quality of the line power supply should be that of a typical commercial or hospital environment.
Surge voltages **according to IEC 61000-4-5**	± 1 kV differential mode voltage ± 2 kV common mode voltage	± 1 kV differential mode voltage ± 2 kV common mode voltage	The quality of the line power supply should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and variations of the power supply **according to IEC 61000-4-11**	0% U_T for ½ period (100% dip of U_T) 0% U_T for 1 period (100% dip of U_T) 70% U_T for 25 periods (30% dip of U_T) 0% U_T for 5sec. (100% dip of U_T	0% U_T for ½ period (100% dip of U_T) 0% U_T for 1 period (100% dip of U_T) 70% U_T for 25 periods (30% dip of U_T) 0% U_T for 5sec. (100% dip of U_T	The quality of the line power supply should be that of a typical commercial or hospital environment. Continued operation of the **UNIT** is possible following interruptions of the power supply, since the **UNIT** is powered by an uninterruptible power supply backed up by a storage battery.
Magnetic field of power frequencies (50/60 Hz) according to **IEC 61000-4-8**	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
Note: U_T is the AC supply voltage prior to application of the test level.			
			Portable and mobile radio equipment must not be used within the recommended working clearance from the **UNIT** and its cables, which is calculated based on the equation suitable for the relevant transmission frequency. Recommended working clearance:

Interference immunity tests	IEC 60601-1-2 Test level	Compliance level	Electromagnetic environment - guidelines
Conducted RF interference **IEC 61000-4-6**	3 V_{eff} 150 kHz to 80 MHz 6 V_{eff} in ISM frequency bands between 150 kHz and 80 MHz 80% AM at 1 kHz	3 V_{eff} 6 V_{eff}	d= [1.2] √P
Radiated RF interference **IEC 61000-4-3**	3 V/m 80 MHz to 800 MHz 3 V/m 800 MHz to 2.7 GHz 80% AM at 1 kHz	3 V/m 3 V/m	d= [1.2] √P at 80 MHz to 800 MHz d= [2.3] √P at 800 MHz to 2.7 GHz with P as the power rating of the transmitter in watts (W) according to the transmitter manufacturer's specifications and d as recommended safety distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey[1] should be less than the compliance level[2] in each frequency range. Interference is possible in the vicinity of equipment bearing the following graphic symbol. 

Immunity to interference against high-frequency electromagnetic fields in the direct vicinity of wireless communication devices IEC 61000-4-3			
Test frequency (MHz)	**Modulation**	**Required immunity test level (V/m)**	**Maintained immunity test level (V/m)**
385	Pulse modulation: 18 Hz	27	27
450	FM + 5 Hz difference: 1 kHz Sinus	28	28
710 745 780	Pulse modulation: 217 Hz	9	9
810 870 930	Pulse modulation: 18 Hz	28	28
1720 1845 1970	Pulse modulation: 217 Hz	28	28

Immunity to interference against high-frequency electromagnetic fields in the direct vicinity of wireless communication devices IEC 61000-4-3			
Test frequency (MHz)	**Modulation**	**Required immunity test level (V/m)**	**Maintained immunity test level (V/m)**
2450	Pulse modulation: 217 Hz	28	28
5240 5500 5785	Pulse modulation: 217 Hz	9	9

Remark 1
The higher frequency range applies at 80 MHz and 800 MHz.

Remark 2
These guidelines may not be applicable in all cases. The propagation of electromagnetic waves is influenced by their absorption and reflection by buildings, objects and persons.

1. The field strengths of fixed transmitters, such as base stations of radiotelephones and mobile agricultural radio broadcast services, amateur radio stations, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. A site survey is recommended to assess the electromagnetic environment due to fixed RF transmitters. If the measured field strength in the location in which the **UNIT** is used exceeds the applicable RF compliance level specified above, the **UNIT** should be observed to verify normal operation. If unusual performance characteristics are observed, it may be necessary to take additional measures such as reorientation or repositioning of the **UNIT**.
2. Over the frequency range 150kHz to 80 MHz, field strengths should be less than 3 V/m.

3.6.3 Working clearances

Recommended working clearances between portable and mobile RF communication devices and the UNIT

The **UNIT** is intended for operation in an electromagnetic environment, where radiated RF interference is checked. The customer or the user of the **UNIT** can help prevent electromagnetic interference by duly observing the minimum distances between portable and/or mobile RF communication devices (transmitters) and the **UNIT**. These values may vary according to the output power of the relevant communication device as specified below.

Rated maximum output power of transmitter [W]	Working clearance according to transmission frequency [m]		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.5 GHz
	d= [1.2] √P	d= [1.2] √P	d= [2,3] √P
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters whose maximum nominal output is not specified in the above table, the recommended working clearance d in meters (m) can be determined using the equation in the corresponding column, where P is the maximum nominal output of the transmitter in watts (W) specified by the transmitter manufacturer.

Remark 1

An additional factor of 10/3 is applied when calculating the recommended working clearance between transmitters in the 80 MHz to 2.3 GHz frequency range in order to reduce the probability that a mobile/portable communication device unintentionally brought into the patient area could lead to interference.

Remark 2

These guidelines may not be applicable in all cases. The propagation of electromagnetic waves is influenced by their absorption and reflection by buildings, objects and persons.

4 Installation and startup

4.1 Transport and unpacking

All products from Dentsply Sirona are carefully checked prior to shipment. Please perform an incoming inspection immediately after delivery.

1. Check the delivery note to ensure that the consignment is complete.
2. Check whether the product shows any visible signs of damage.

NOTE

Damage during transport

If the product was damaged during transport, please contact your carrying agent.

If return shipment is required, please use the original packaging for shipment.

To prevent damage to the LED monitor, it must be removed during transport of the unit.

4.2 Disposal of packaging materials

The packaging must be disposed of in compliance with the relevant national regulations. Please observe the regulations applicable in your country.

4.3 Scope of supply

The detailed scope of supply is specified in the document "Checklist".

The "Unpacking and Installation Instructions" document is also part of the scope of supply.

To install the system, for example installation of the monitor, follow the notes in the “Unpacking and Installation Instructions” document.

4.4 Initial startup

For details on commissioning, see also the “Unpacking and Installation Instructions” document provided with the unit.

4.4.1 Plug connections

NOTE

The CEREC Primescan / Primescan scanner is a high-precision optoelectronic scanning instrument for non-contact impression taking which requires careful handling. Incorrect handling (impacts, dropping) leads to failure of the scanner.

➢ Always place the sensitive scanner in its holder!

NOTE

Risk of damage posed by pulling on the scanner cable

If the CEREC Primescan AC / Primescan AC is moved by pulling on the scanner cable, there is a risk of damage to the cable, scanner and device.

➢ Never pull on the scanner cable to move the CEREC Primescan AC / Primescan AC.

➢ Always grab the CEREC Primescan AC / Primescan AC by the handle to move it.

1. Make sure that the acquisition unit is switched off (main switch is at 0).
2. Insert the window sleeve onto the CEREC Primescan / Primescan scanner. Exercise a great deal of care. Push the window sleeve carefully onto the cone until it latches in.
3. Connect the unit to the line voltage with the power cord.
4. Carefully insert the connector of the scanner cable into the coupling on the CEREC Primescan AC / Primescan AC, watching out for the guide nose.

NOTE

Do not damage cable

If you pull on the cable itself in order to unplug it or to check the plug connection, you will damage the cable.

➢ Never pull on the cable.

➢ Slide the moving part of the plug-in coupling upward on the CEREC Primescan AC / Primescan AC. At the same time, hold the scanner connector in place.

5. Check the plug connections of the power supply and the scanner. The scanner always remains connected.

Notes on network installation

The network card is installed.
The cable with the RJ-45 connectors establishes the network connection or is connected to the CEREC radio module.

The acquisition unit is equipped with a WLAN card which establishes the connection to the network.

The network software and the driver for the network card must be installed by your network administrator.

4.4.2 Using a trackball (if provided, depending on the configuration)

➢ Use the trackball in the recess (spherical calotte/spherical cap) on the operator console.

4.4.3 Insert battery (optional)

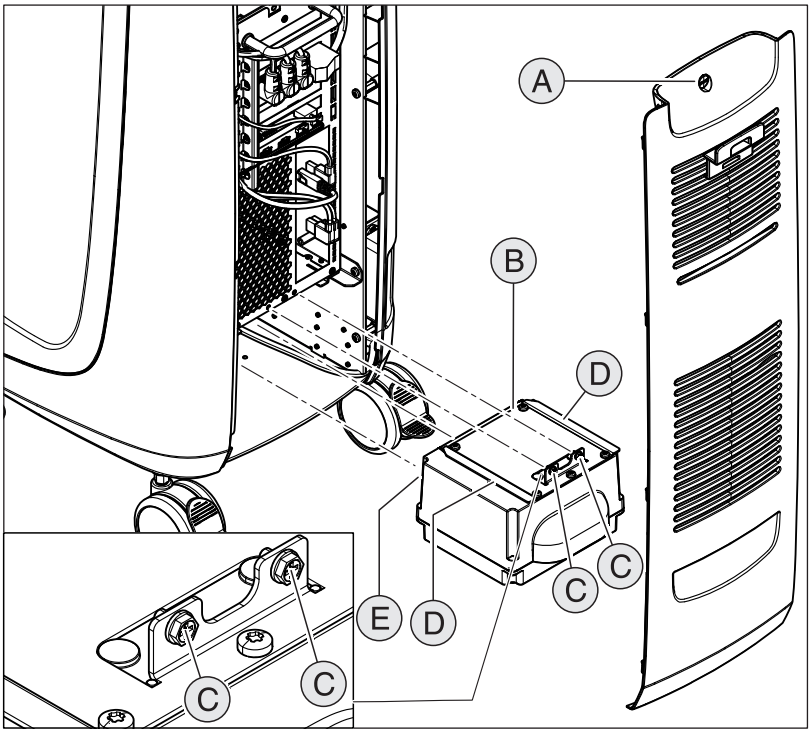
⚠ CAUTION

Risk of fire or chemical injury

Improper handling of the storage battery used in this unit can lead to a risk of fire or chemical injury.

➢ Do not dismantle the storage battery, allow it to heat up above 45°C or burn it.

➢ The battery must only be replaced by a spare part provided by the manufacturer. Use of other storage batteries can lead to a risk of fire or explosion.



A	Service cover	D	2 guide rails
B	Storage battery	E	2 guide pins
C	2 fastening screws		

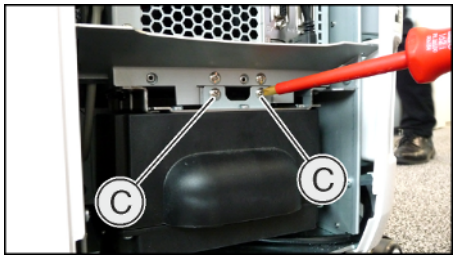
1. Open the service cover on the back panel.

NOTE

Risk of fault during operation and defects to the system

If the storage battery is not screwed down, faults during operation and defects to the system may occur.

➢ Always screw the storage battery down tightly.



2. Slide in the storage battery using the guide rails and guide pins up to the stop and screw it in place with 2 fastening screws (**C**).
3. Put the service cover back in position and lock it.

4.4.4 Switching the units on

NOTE

Do not put the unit into operation at low temperatures!

If you move the unit to the operating site from a cold environment, condensation may form and result in a short circuit.

✓ Install the unit at room temperature.

➢ Wait until the unit has reached room temperature and is absolutely dry (for at least one hour)

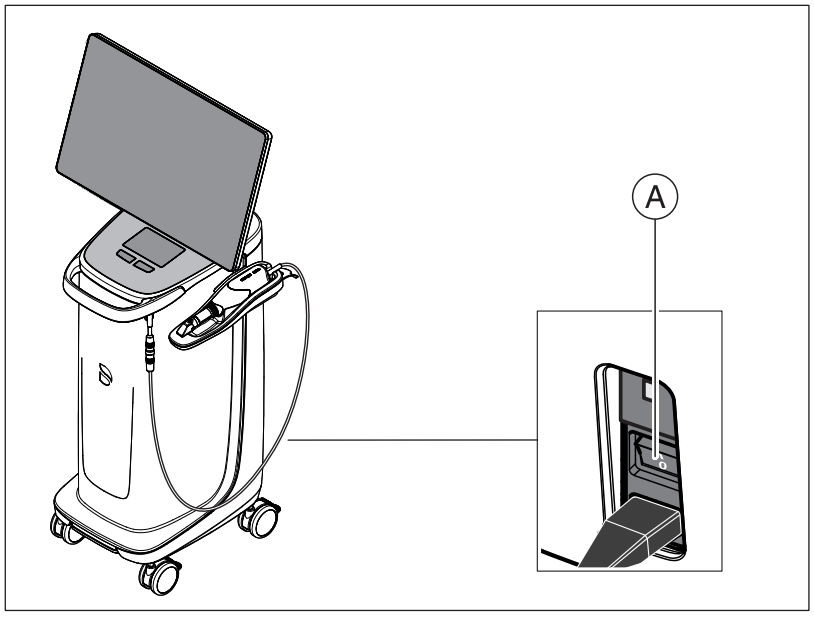
↳ The unit is dry and can be put into operation.

⚠ CAUTION

Use only the supplied power cord

Use only the power cord supplied by Dentsply Sirona to connect the acquisition unit to the power supply.

If the acquisition unit is switched on at the main switch, then it can be switched on at the **ON button**. The monitor is switched on and off automatically.



A	Main switch

1. Switch the acquisition unit on at the **main switch**.
2. Start the unit by holding down the On button (blue LED) on the right at the back of the control console until a second vibration can be felt. The color of the LED changes from blue to green.

NOTE

Possible data loss and PC malfunction:

Switching the acquisition unit off at the ON button during operation may cause data loss and PC malfunctions.

➢ Always switch the unit off as described in the chapter "Switching the units off [→ 43]".

3. Switch the milling unit on (see the **Operating Instructions for the milling unit**).
4. After loading the operating system, start the CEREC SW / Connect SW application by double-clicking on the CEREC SW / Connect SW icon.

NOTE

In order to prevent data security breaches, it is recommended that users enable the password-protected login function for the Windows operating system.

4.4.5 Switching the units off

NOTE

Proper shutdown procedure

The operating system must always be shut down properly to prevent data loss.

To prevent the PC from progressively getting slower over time, shut the operating system down properly at regular intervals.

1. Exit all programs.
2. Power down the operating system.
   ↳ The PC automatically switches off.
3. Switch the acquisition unit off at the main switch.

or

➢ Remove the connector of the power cord from the power supply. For this purpose, it is necessary to position the unit in such a way that the power connection is accessible at all times.

↳ The operating state LED goes out.

NOTE: Now you can also switch the milling unit off if necessary.

4.4.6 Battery-backed operation (optional)

Introduction

The acquisition unit PC has a battery-backed power supply. It is thus possible to operate the acquisition unit for a short time with no line voltage connected.

Treating a patient in battery mode is permissible.

⚠ WARNING

Danger of touching live parts

If the covers are open on the unit, there is a possibility of touching live parts inside the unit.

➢ When using the unit on the patient, please ensure that the covers on the rear side of the unit (service cover, USB cover) are closed.

NOTE

Observe operating state LED

Observe the operating state LED (see “Operating state LED [→ 30]”).

The following parameters are constantly checked by the installed monitoring software in order to monitor the battery back-up function:

- Line voltage present:
- Charge set of storage battery pack
- Fan function
- Temperature of power supply

When the unit is running in the battery-powered mode, this is indicated by a message in the Windows task bar displayed at the bottom of the screen.

This beeps 20 seconds before the system shuts down due to insufficient battery power. A corresponding display then appears in the center of the screen. The user thus has time to finish his last actions on the PC.

As soon as 20 seconds have elapsed, the operating system is shut down.

NOTE

Information on back-up cycles

The storage battery is designed for fully cable-free use of Scan, Design and Grinding at a power requirement of 250 W for 60 minutes. Approx. 2.5 hours are needed for full charging.
For back-up mode, which the user, for example, uses for an operation lasting 10 minutes, in order to move the unit from door to door (standby consumption of 100 W), a charging time of 10 minutes is needed. After around 1000 buffer cycles the capacity of the battery fades due to the nature of the battery technology used.

NOTE

The operating time of the storage batteries is not constant. It depends on the charge state, the load and the age of the storage batteries.

NOTE

Reduced battery service life

If the battery is not charged over a long period of time, this significantly reduces its service life.

➢ Always recharge the battery fully after buffer operation.

NOTE

In battery mode, the CEREC Primescan AC / Primescan AC acquisition unit must remain connected to the mains supply for at least two hours after using the battery buffering to charge the storage battery.
At least every six weeks the CEREC Primescan AC / Primescan AC acquisition unit should be connected to the mains supply to charge the storage batteries.

IMPORTANT

The storage battery is only charged if the capacity falls below the threshold of 90%.

In the case of ambient temperatures above 28°C and unfavorable operating conditions, this can result in delays when charging the battery.

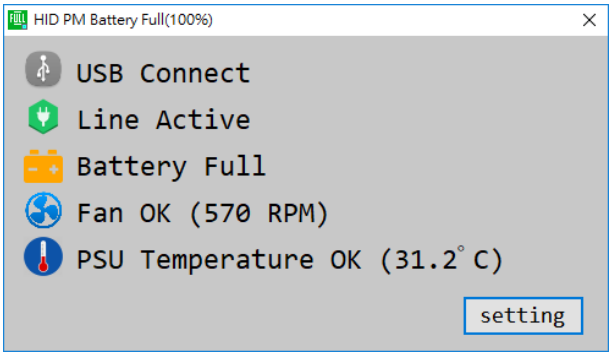
Monitoring program

The monitoring program is represented in the task bar by a symbol:

The color of the symbol has the following meaning:

- Blue:
  - Connected to mains
  - PC off
  - Flashes slowly if the storage battery is being charged
  - Otherwise continuous light
- Green:
  - Connected to mains
  - PC running
  - Flashes slowly if the storage battery is being charged
  - Otherwise continuous light
- Yellow:
  - Battery operation
  - PC running
  - Flashes (fast) if the battery capacity drops below 25%
  - Otherwise continuous light
- Red: Error during communication between components.

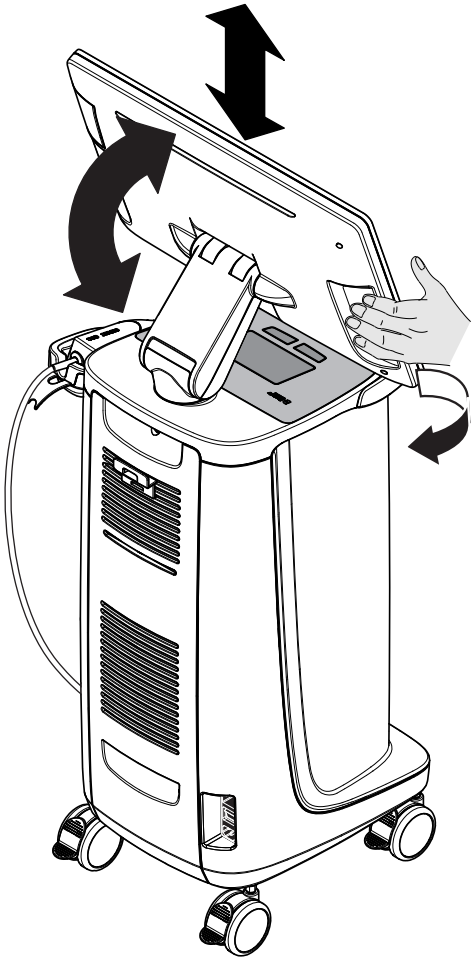
Following a double-click on the symbol, the following monitoring window opens in the foreground (example: Green):



5 Operation

5.1 Working with the touch monitor

5.1.1 Adjusting the position of the monitor



You can guide the touch monitor to a position convenient for you. In doing so, there is the option to adjust the height/tilt position and a lateral pivot.

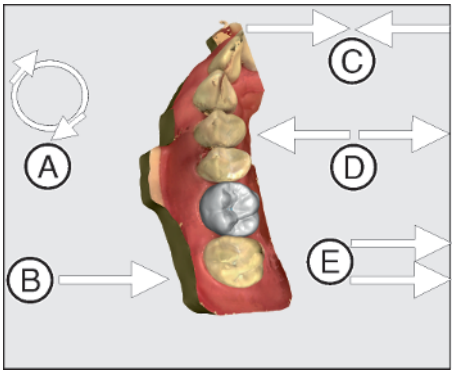
To move the monitor, on the rear side you will find molds shaped to one’s fingers. To adjust the monitor, always grab into these molds with both hands at the sides. Single-handed grabbing or grabbing the top/ bottom of the monitor is not intended and may lead to functional impairment.

5.1.2 Touch functionality

You can activate the touch function with and without gloves.

The following gestures are supported:

Edit a 3D model with multi-touch



You can edit the 3D model using multi-touch.

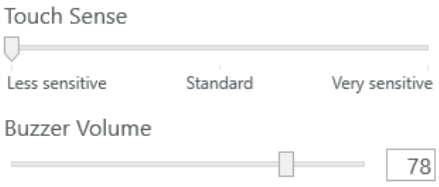
Item	Function
A	➢ Complete a rotary movement using 2 fingers. ↳ The object is rotated in the plane.
B	➢ Drag with 1 finger. ↳ The model is rotated out of its current plane.
C	➢ Pull 2 fingers in together. ↳ The object is minimized.
D	➢ Pull the fingers apart. ↳ The object is maximized.
E	➢ Drag with 2 fingers. ↳ The model is dragged.

5.1.3 Adjusting touch-sensitivity and buzzer volume

The CEREC Primescan AC / Primescan AC provides you with the following options:

- Adjusting the touch-sensitivity of the touchpad/trackball buttons
- Adjusting the volume for their acoustic feedback

1. To do this, go to the taskbar and click on the arrow pointing upwards.
2. Click the icon for freezing the monitor.



3. Slide the controller for touch-sensitivity to the right or left to set the touch-sensitivity to your preference.
4. Slide the volume controller to the right or left. The volume can be adjusted between 0 (low) and 100 (high).

Tip: If you want to stick the icon for freezing the monitor, and the associated functionality for the settings, onto the taskbar, then press on the icon, pull it over the taskbar and then release.

5.2 Optical impressions with the scanner

⚠ CAUTION

Hot tip of the scanner sleeve!

The tip of the scanner sleeve is continuously heated up! The surface temperature of the sleeve may be as high as 51°C. This may cause an unpleasant heat sensation on contact with a person's skin or mucous membrane. These temperatures will not damage the skin or mucosal membrane. The temperature sensitivity in the mouth is considerably lower than it is on other surfaces of the skin. The scanner does not produce any pressure on the mucosa of the mouth. Temperatures up to 51°C must therefore be classified as being non-critical for the patient.

The scanner is therefore suitable for use in the patient's mouth for an unlimited period of time.

NOTE

Image brightness

The image brightness during the acquisition is controlled automatically, so that there is always optimum image brightness, largely independent of the distance between the scanner and the tooth.

The surroundings of the tooth to be scanned should be as weakly illuminated as possible. Avoid any type of external light. Switch off the operating light.

IMPORTANT

Do not use cotton rolls in the scan area

Do not use any cotton rolls in the vicinity of the scan area, as they can reduce the precision of the scan and create image interference.

⚠ CAUTION

Prevent cross-contamination

Germs can be transmitted to uncontaminated persons via the hands, materials or objects.

➢ For hygiene reasons, wear a new set of disposable gloves for each patient while using the scanner.

⚠ WARNING

Risk of injury for those diagnosed with epilepsy

For persons who have been diagnosed with epilepsy, there is a risk of epileptic shock through the flashing light of the scanner.

➢ Patients who have been diagnosed with epilepsy cannot be treated with the scanner.

➢ Dentists and dental assistants who have been diagnosed with epilepsy cannot work with the scanner.

⚠ CAUTION

Potentially hazardous optical radiation

The scanner transmits potentially hazardous optical radiation which may cause harm to the eyes.

➢ During operation, do not look directly at the scanner for long periods.

IMPORTANT

Potential switch-off procedure

In the case of several repeated scans of the image fields without model calculation, the CEREC Primescan / Primescan scanner can deviate from the calibrated temperature range. In this case, a warning message appears and you need to take a scanning break prior to completing the exposures. Please wait roughly long enough for the remaining exposures to be performed. The potential switch-off procedure is innocuous for your CEREC Primescan / Primescan scanner and is not a malfunction.

IMPORTANT

Heating up the scanner

The internal scanner heating ensures that condensation does not form during scanning. The heating starts immediately after starting up the exposure unit and after around five minutes the CEREC Primescan / Primescan scanner is free of condensation. This is usually the case through to navigation into the exposure phase.

✓ The teeth are blow-dried.

1. Change to the *"ACQUISITION"* phase.
   - The scanner is ready for exposure.
   - As soon as you move the scanner, a live image appears which can be used to look around the patient's mouth.
2. Remove the scanner from the holder.
   - As soon as the scanner is pointed over a tooth or the gums, data acquisition begins. During the continuous data acquisition, a color 3D model is generated automatically on the screen. A white field indicates in which area data will be acquired. If the automatic data flow breaks off, the white field is lost and the audio signal changes. In this case, move the scanner to any area which has already been scanned. The scanning procedure continues.
3. Place the scanner in the holder, it then switches off after a few seconds.
   - Prior to taking the exposure, you can activate the foot control in order to switch off the automatic exposure function. Then hold the scanner above the surface, which you wish to acquire and then press the foot control a second time. The camera function switches on and the scanner starts. By activating the foot control again, the camera and scan function can be switched off.
4. Activate the foot control or point the scanner cursor to the camera icon in the top right corner to end the acquisition procedure.

Proceeding with scanning procedure

1. Activate the foot control or click on the switch with the cursor.
   ↳ The scanning procedure begins.
2. Proceed with the scanning procedure as described above.

5.3 Scanner guide

⚠ CAUTION

After each use

Prepare the scanner once again after each patient.

➢ Follow the instructions in the "Scanner [→ 63]" section on cleaning, disinfection and sterilization in order to avoid cross-contamination between patients.

The scanner acquires images which are used during the ongoing measurement in spatial relation to each other (image registration).

During the acquisition and then during the ongoing registration process, a distinctive sound can be heard.
If the registration cannot be implemented, the acquisition flow is suspended. You are informed of this by means of a sound. This is different to the sound emitted during successful acquisition. You can adjust the volume under configuration and select another type of sound (melody).

IMPORTANT

Registration error

Should a registration error occur, you must return to another acquired point.
To start with, practice this procedure on the model and then on intraoral areas.

➢ Move the scanner to a position where a successful acquisition was taken. A point that has already been acquired in the occlusal area is best.

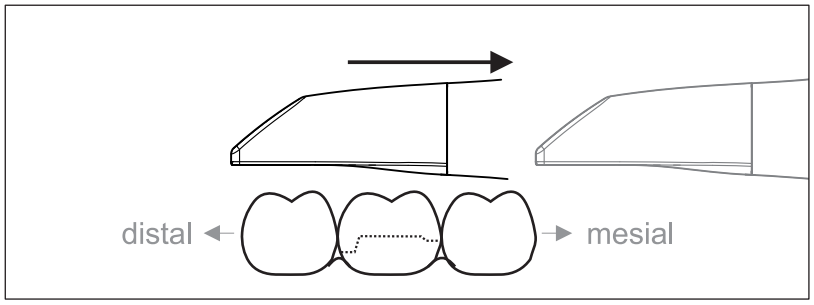
⇨ You will be able to hear the sound for registered acquisitions.

➢ Continue the acquisition.

Divide the acquisition into four consecutive sequences:

1. Occlusal
2. Buccal
3. Lingual
4. Proximal

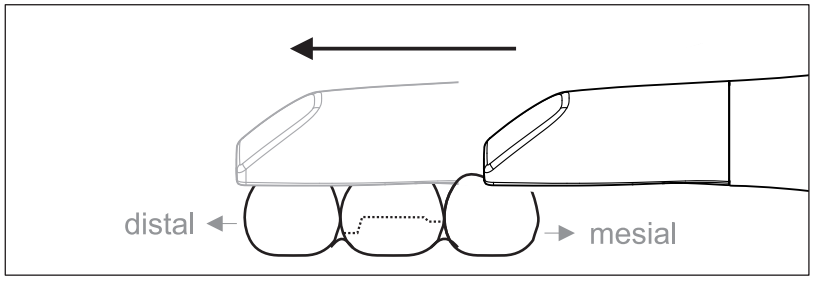
5.3.1 Occlusal scan



Important: Ensure that the distance between the coated sapphire glass of the scanner and the scanned surface is observed.
The distance must be between 0 - 20 mm (ideally: 2 mm). The scanner does not rest on the teeth or the gums.

1. Move the scanner to the starting position. For this purpose, the scanner is in the occlusal view of the tooth, which is next to the prepared tooth in the distal direction.
2. Scan in the mesial direction. To do so, move the scanner in the occlusal direction from the distal-positioned tooth over the prepared tooth to the mesial-positioned tooth.

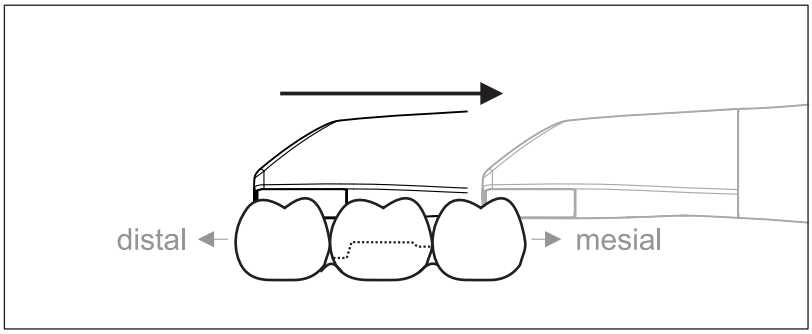
5.3.2 Buccal scan



✓ The scanner is on the adjacent tooth, in the mesial direction to the preparation.

1. Rotate the scanner 20° toward the buccal.
2. Guide the scanner over the entire buccal distance in the distal direction over the prepared tooth.

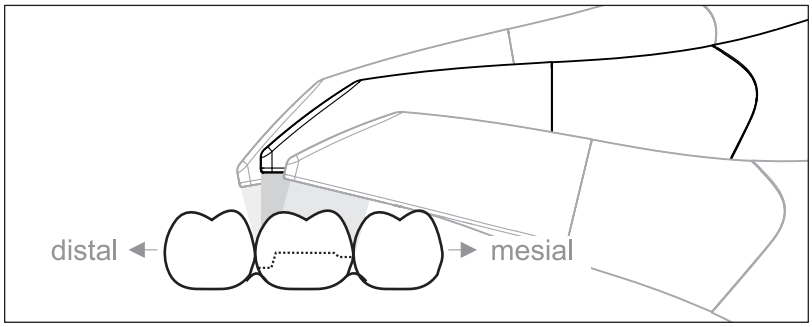
5.3.3 Lingual scan



✓ The scanner is on the tooth that is positioned next to the preparation in the distal direction.

1. Rotate the scanner to maximum 20° toward the lingual direction.
2. Guide the scanner over the entire lingual distance in the mesial direction over the prepared tooth.

5.3.4 Approximal surface scan



Scan the approximal surfaces of the prepared tooth.

➢ Move the scanner in the occlusal direction to the prepared tooth. Acquire the approximal surfaces in the distal and mesial direction.

5.3.5 Single and multiple buccal registration

The buccal registration establishes the allocation of jaw exposures.

✓ The jaw with the preparation is scanned.

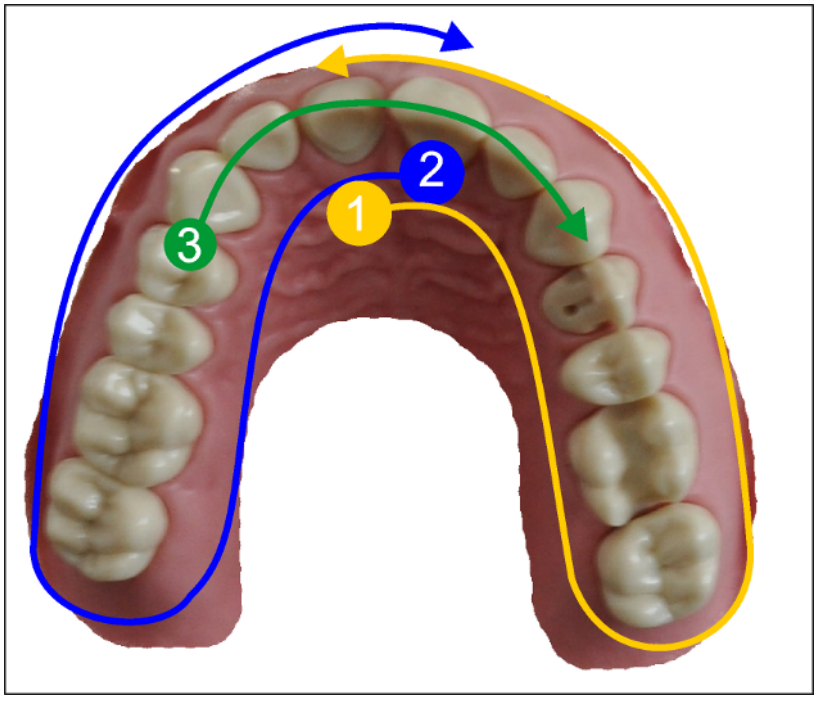
1. Scan the occlusal, buccal and lingual view of the antagonist (see the section “Occlusal scan [→ 54]”, “Buccal scan [→ 54]” and “Lingual scan [→ 55]”).
2. Perform a buccal scan of the bite block prior to completing the registration. This buccal scan should be carried out close-up to the preparation. To acquire sufficient geometry, capture the teeth of the upper and lower jaw as well as 5 mm of the respective gingival areas.
3. Please complete a buccal scan on both sides for a full jaw scan. For this, use the scanner to complete a buccal scan in each case over the premolars of both quadrants.

Tip: In the case of multiple or long-span restorations over several quadrants, we recommend generating several buccal exposures close to the restoration.

5.3.6 Square and full jaw scan

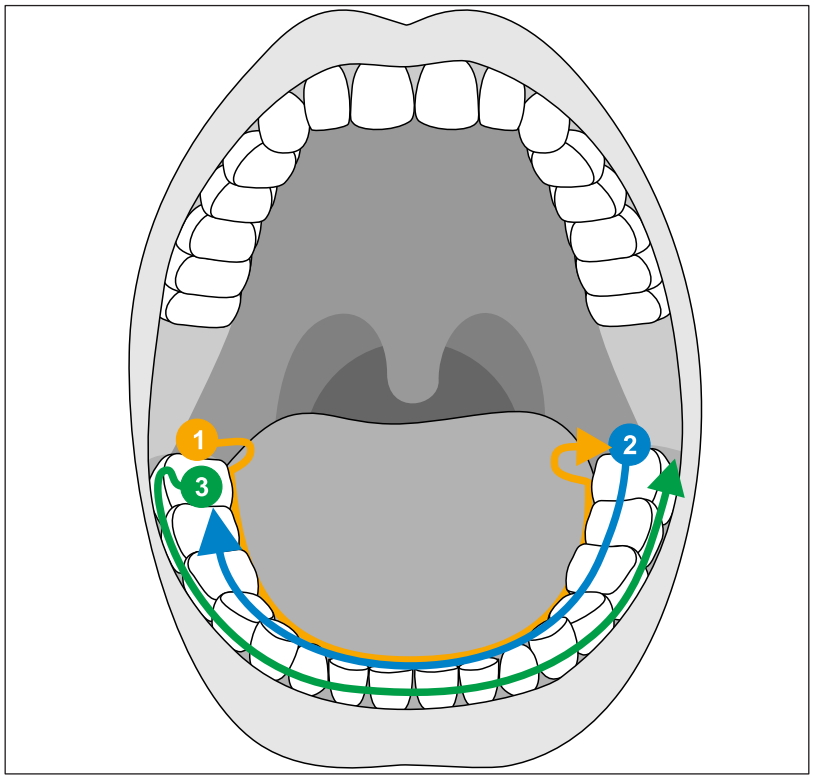
You can use different scanning procedures for scanning a quadrant or a full jaw. Find two procedures as follows to help you gain access should such help be necessary.

Procedure 1



1. Start with the oral surface of the anterior teeth and move the scanner in the oral direction along the quadrant. Move the scanner over the distal tooth to the vestibular side and track the first quadrant to the anterior teeth. Gently tilt the scanner approx. 30° in the coronal-apical direction.
2. Move the scanner as shown below (1) for the second quadrant.
3. Then scan the anterior teeth from cuspid to cuspid in the coronal-apical direction. Ensure that both the labial surface and the oral surfaces are visible.
   Extend this third scan to locations where you can view scan holes.

Procedure 2



1. Start occlusally on the distal tooth, tilt the scanner approx. 60° in an oral direction and move it orally along the dental arch up to the opposite distal tooth.
2. Guide the scanner occlusally from the distal tooth across the entire dental arch back to the other side.
3. To complete the scan, tilt the scanner approx. 60° in a buccal direction and move it buccally along the entire dental arch.

5.3.7 Concluding the optical impressions

✓ The exposures are complete.

1. Click on the *"Next"* button.
   - The virtual model is calculated and displayed in color.
   - Beige brown sections highlight data material that is missing from the calculated model.
2. If missing data emerges in the preparation area, carry out further scans.

Change back to the *"ACQUISITION"* phase. Perform additional scans to complete the model structure.

5.4 Software for the scanner

Only use software which is pre-installed on the system.

5.4.1 Cut out model areas

With the *"Cut"* function, you can should be able to cut out model areas. These can be areas in which parts of cotton rolls or cheeks were unintentionally acquired.

When performing this activity, be careful not to accidentally cut out any areas that e.g. are located behind the model or are otherwise cut away from the line.

✓ You are now in the ACQUISITION phase.

1. Click on the Tool icon in the side palette on the right edge of the screen.
2. Click the *"Cut"* button.
   ↳ The cursor changes to a cross.
3. Begin the cut line with a double-click.
4. Click to set additional points.
5. Finish the cut by double clicking.
   ↳ The model area is cut out.
6. Click the *"Apply"* button to implement the change.

You can execute another scan of the area which you have cut out using the crop function. To do so, close the tool window, by clicking on the top right corner. You can refill the area with another acquisition.

"Undo" and *"Reset"*

With the *"Undo"* button in the tools you can undo all changes made on the selected restorations since the tool was started.

With the *"Reset"* button in the tools you can undo all changes made on all restorations since the tool was started.

6 Maintenance

⚠ WARNING

Danger of touching live parts

If the housing is damaged, there is a possibility of touching live parts inside the unit.

➢ Check that the unit is intact. The unit can only be used for work purposes if it is intact.

➢ If the housing is damaged, the unit must be put and left out of operation until it has been professionally repaired.

NOTE

Regular inspection

Some countries have legal regulations which require regular safety inspections of electrical devices or systems by the operator.

Dentsply Sirona would like to draw your attention to the fact that a so-called "retest" (repeat test) must be carried out for the CEREC Primescan AC / Primescan AC acquisition unit at least every three years. In addition, this retest also must be performed following every repair or retrofit of components such as the PC, the PC power supply, the CEREC Primescan / Primescan scanner, and the scanner cable.

NOTE

Maintenance performed by trained technical personnel is recommended on at least an annual basis. Maintenance should include the filter mat, the filter made from metal grating mesh and the storage battery.

6.1 Cleaning, disinfection, and sterilization

NOTE

Approved cleaning agents and disinfectants

Use only cleaning and disinfecting agents which have been approved by Dentsply Sirona!

6.1.1 Cleaning agents and disinfectants

6.1.1.1 Cleaning agents

Alpro	• Minuten Wipes
Merz	• Pursept-A
Dürr	• FD 366 sensitive • FD 366 sensitive wipes
	• > 60% isopropyl alcohol
	• Neutral soap

6.1.1.2 Wipe disinfectants (virucidal limited)

Alpro	• Minuten Wipes
Merz	• Pursept-A
Dürr	• FD 366 sensitive • FD 366 sensitive wipes
	• > 60% isopropyl alcohol

6.1.1.3 High-level disinfectant

Johnson & Johnson	• CIDEX OPA

6.1.2 Uncritical surfaces including monitor

NOTE

Do not allow liquids to penetrate into the ventilation slots!

NOTE

Never use corrosive cleaning agents, wax or solvents.

⚠ CAUTION

Risk of infection

There is a risk of infection if surfaces are not regularly disinfected.

➢ Following each treatment, wipe disinfect the following non-critical contact surfaces:
- the scanner holder,
- the operator console (trackball or touchpad, depending on the configuration),
- the monitor (including handles on the rear of the monitor)
- the handle (front and rear).

1. Use a new absorbent cotton gauze which is moistened with one of the cleaning agents listed in the "Wipe disinfectants (virucidal limited) [→ 61]" section or a moistened cloth to disinfect the non-critical contact surfaces.
2. To clean and disinfect the monitor, follow the following steps, so that the monitor is frozen and you are not able to accidently activate a function on the screen during wiping:
   a) Press simultaneously on the left and right button on the touchpad / trackball for approx. 1 second. The screen turns dark and “`device locked`” appears.
   b) Wipe the monitor.
   c) Unlock the monitor with the foot control.
3. Then remove the absorbent cotton gauze or wiping cloth.

Please ensure that **no colored cloths** are used for this as these can result in discoloration of the surfaces, e.g. when used in combination with disinfectants.

Protection against medicaments

Due to their high concentrations and the substances they contain, many medicaments can dissolve, etch, bleach or discolor surfaces.

NOTE

The only way to prevent damage is to **wipe off medicaments immediately** with a damp cloth and a cleaning agent!

6.1.3 Trackball holder (if available)

NOTE

No residues in the spherical calotte

The spherical calotte is designed without openings and may therefore come into contact with fluids.

➢ Ensure that no cleaning agent residues or other residues remain in the spherical calotte.

1. Remove the ball.
2. Wipe out the spherical calotte (spherical cap).
3. Wipe down the ball
4. Insert the ball.

6.1.4 Scanner

⚠ CAUTION

Risk of injury

An evidently damaged scanner must no longer be used on patients.

If the CEREC Primescan / Primescan scanner accidentally falls off, check to make sure that the sapphire glass is not damaged. If the CEREC Primescan / Primescan scanner has been damaged, it must no longer be used on patients.

The CEREC Primescan / Primescan scanner must be recalibrated.

NOTE

Do not sterilize the CEREC Primescan / Primescan scanner and the scanner cable!

NOTE

The window sleeves cannot be sterilized in the autoclave.

NOTE

For markets where the RKI* guidelines are to be observed

The window sleeve is classified as a "semicritical medical device A" according to RKI guidelines and therefore does not have to be autoclaveable.

*RKI=Robert Koch Institute, Berlin (Germany).

6.1.4.1 General information

The CEREC Primescan / Primescan scanner is a very sensitive optical device and must therefore be handled with the utmost care. Protect the coated sapphire glass and the scanner window against scratches and clean them with a lint-free cloth and ethanol (commercially available cleaning alcohol) if any haze is noted during the acquisition. Wipe down the sleeve afterwards again with the absorbent cotton gauze dipped in drinking water.

NOTE

Hygiene processes

Observe the following hygiene processes.

The following methods are available for cleaning the sleeves:

- Wipe disinfection of the scanner and window sleeve [→ 67]
- High-level disinfection of the window sleeve [→ 68]
- Hot air sterilization of the window sleeve [→ 73]
- Using disposable sleeves [→ 74]

6.1.4.2 Components of the scanner

⚠ CAUTION

Risk of cross-contamination

Without the window sleeve / disposable sleeve the scanner must not be used in the patient's mouth. Without the window sleeve / disposable sleeve, the scanner cannot be disinfected or sterilized and can lead to cross-contamination.

➢ Always set up the window sleeve or disposable sleeve.

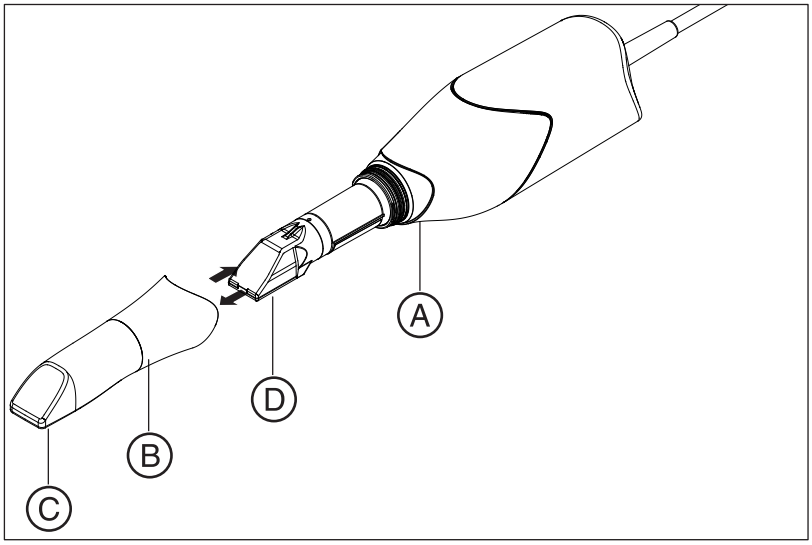
⚠ CAUTION

Risk of injury

The window of the window sleeve is made of glass and is fragile.

➢ Use the sleeve with care so that the glass does not crack.

➢ If the glass has been cracked, the sleeve must no longer be used on patients.



A	Area for gripping in order to remove the sleeve from the body.	C	Sleeve window (made from coated sapphire for window sleeve / made from plastic for disposable sleeve)
B	• Window sleeve (standard sleeve) • Disposable sleeve	D	Scanner window

6.1.4.3 Removing the sleeve

If it is necessary to remove the sleeve, proceed as follows:

1. Grip the sleeve in the marked area.

NOTE

There is a risk of damaging the scanner window or the sleeve window if the sleeve is not pushed straight toward the front.

➢ Push the sleeve straight toward the front; **do not tilt it**.

2. Remove the sleeve from the scanner body.

6.1.4.4 Attaching the sleeve

NOTE

Risk of damage to the windows

There is a risk of damaging the scanner window or the sleeve window if the sleeve is not pushed in a straight way.

➢ The sleeve must not come into contact with the scanner window.

➢ Push the sleeve straight toward the scanner body; **do not tilt it**.

➢ Carefully refit the sleeve up to the stop.

6.1.4.5 Preliminary cleaning of the sleeve

Clean the scanner immediately after use as follows:

1. Carefully wipe the sleeve while it is on the scanner body so that no dirt whatsoever can remain stuck and can harden on the surface of the sleeve. For this purpose, use the following:
   - a dampened wiping cloth (see "Cleaning agents [→ 61]"),
   - an absorbent cotton gauze or a lint-free cloth, dipped in cleaning agent (see "Cleaning agents [→ 61]").
2. Wipe down the sleeve afterwards again with the absorbent cotton gauze dipped in drinking water.
3. Next dry the sleeve using a lint-free cloth.

6.1.4.6 Wipe disinfection of the scanner and window sleeve

NOTE

Do not spray the CEREC Primescan / Primescan scanner or immerse it in cleaning agents or disinfectants!

1. Carry out a preliminary cleaning process (see "Preliminary cleaning of the sleeve [→ 66]").
2. Use a dampened wiping cloth (see “Wipe disinfectants (virucidal limited) [→ 61]”) or an absorbent cotton gauze, dipped in an agent named in section “Wipe disinfectants (virucidal limited) [→ 61]”. Observe the reaction time according to manufacturer specifications. First wipe the scanner enclosure and then the sleeve. The scanner enclosure and sleeve are disinfected through this step.
3. Wipe down the sleeve afterwards again with the absorbent cotton gauze dipped in drinking water.
4. Next dry the sleeve using a lint-free cloth.

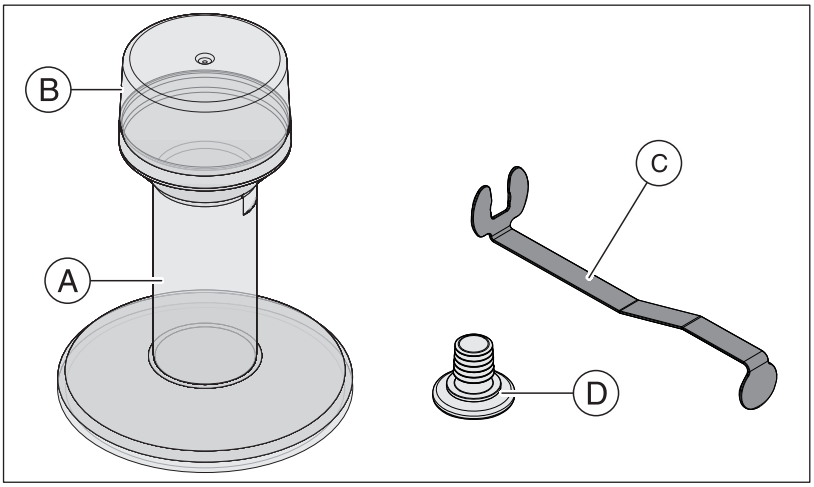
6.1.4.7 High-level disinfection of the window sleeve

NOTE

The hot air sterilization and high-level disinfection must not be combined.

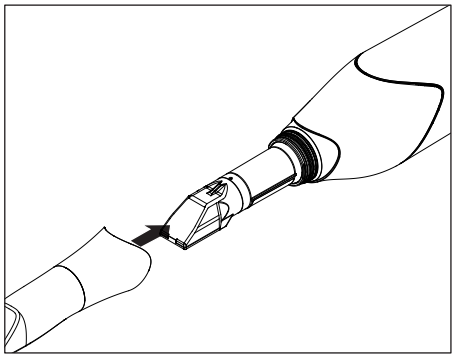
The complete process for high-level disinfection (HLD) is as follows – assuming the CIDEX ® OPA disinfectant is available in your country via your dealer:

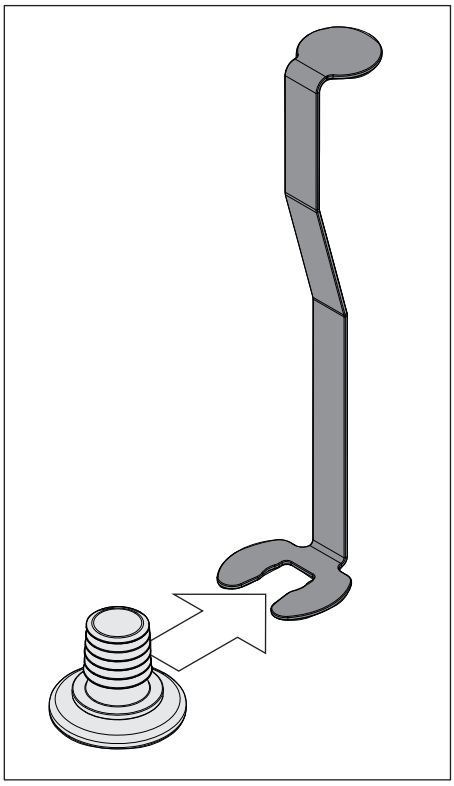
A HLD set to support the HLD processes can be ordered from Dentsply Sirona with REF 66 83 184.



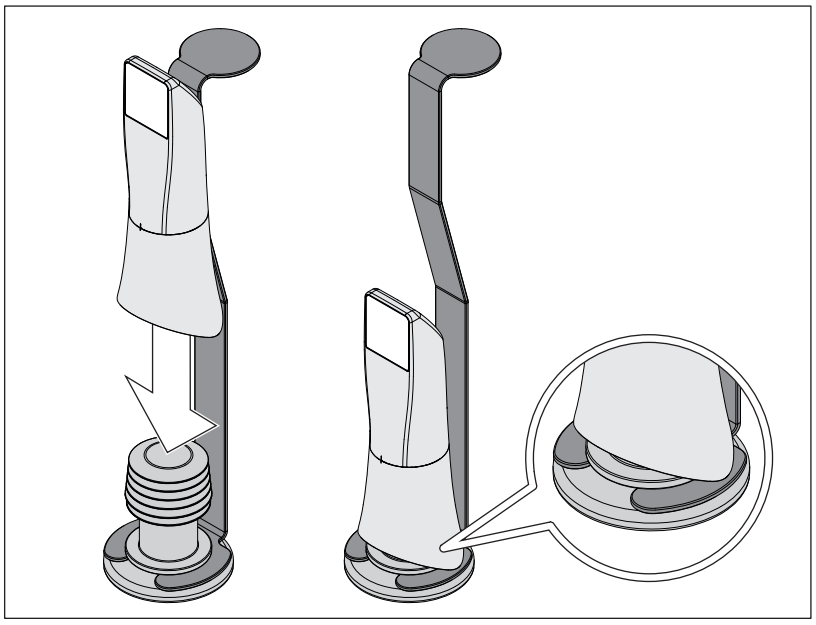
A	HLD tank	C	Metal bracket
B	Cover	D	Plugs

1. Carry out a preliminary cleaning process (see "Preliminary cleaning of the sleeve [→ 66]").
2. Always use personal protective equipment when implementing the high-level disinfection if not before.
3. Remove the sleeve from the scanner body (see "Removing the sleeve [→ 66]") section.
4. Place the white protective sleeve on the scanner head and place the scanner body in the scanner holder.
5. Use the following disinfectant for the high-level disinfection: CIDEX ® OPA.





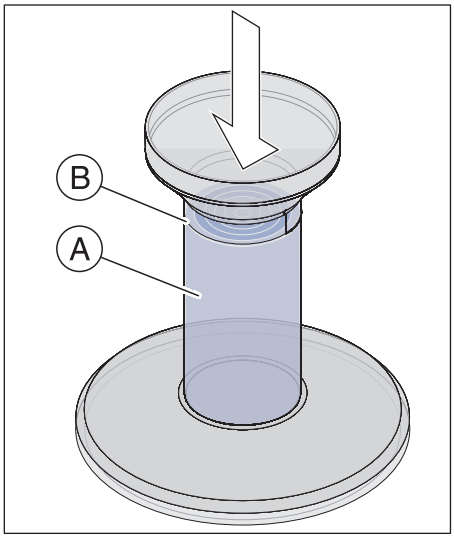
6. Push the plug completely into the metal bracket.



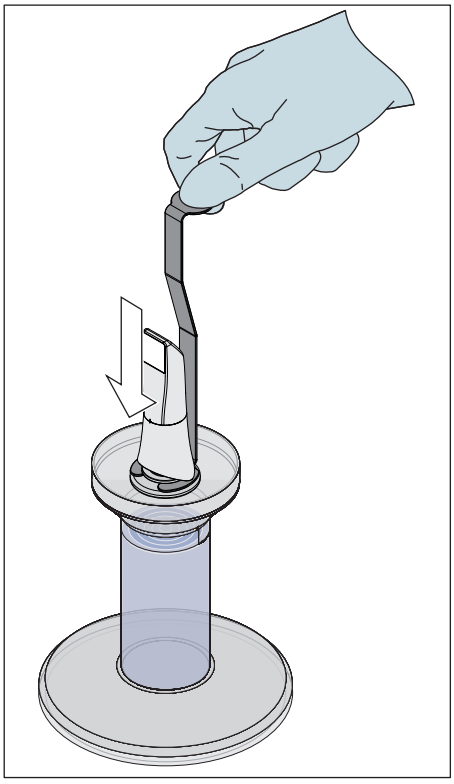
7. Press the sleeve onto the plug while holding the metal bracket firmly in place in order to ensure that no particle contamination or fluids penetrate the inside of the sleeve.
   ↳ The plug provides a waterproof seal for the sleeve when attached correctly.

⚠ CAUTION

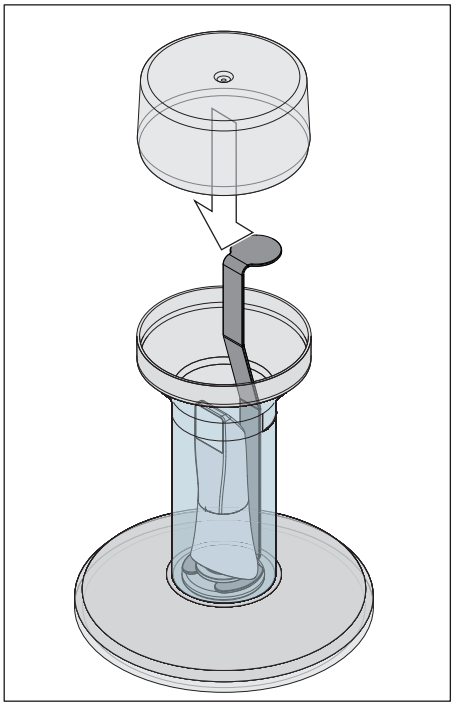
Observe the safety instructions from the disinfectant manufacturer.



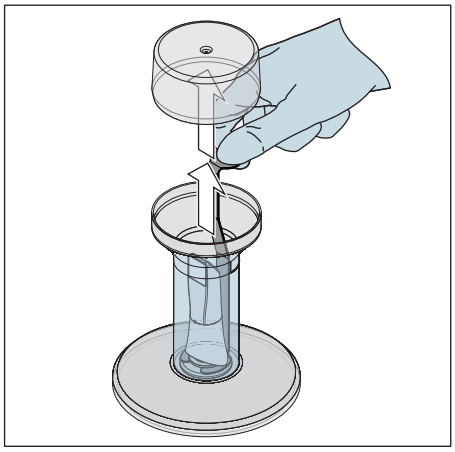
8. Carefully fill the HLD container up to the marking (**B**). You can use a funnel to pour in the fluid (**A**). Do not spill any disinfectant. Observe the safety instructions from the disinfectant manufacturer when cleaning if you do spill any disinfectant.



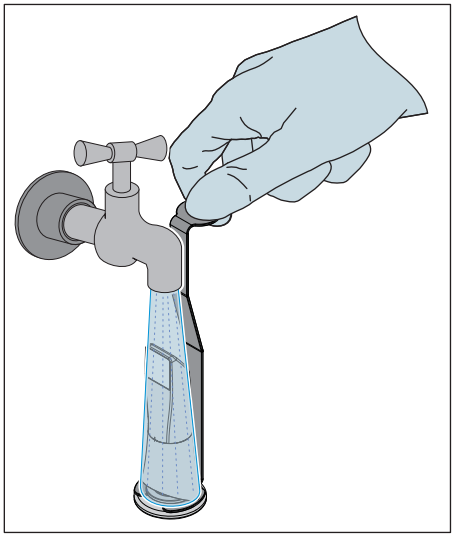
9. Insert the metal bracket with the sleeve.



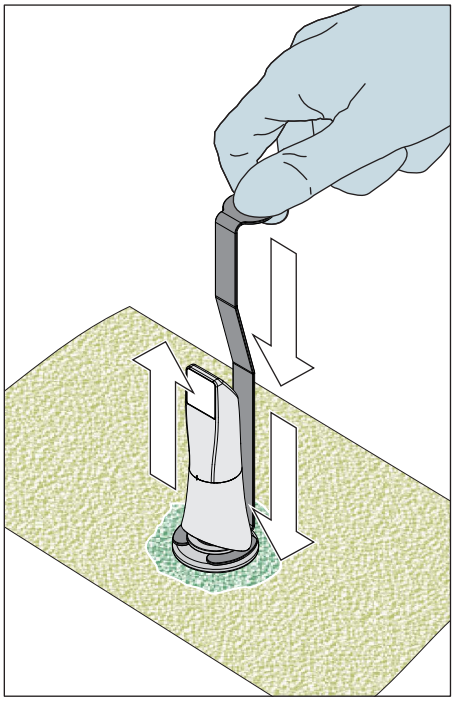
10. Place the cover on the container and leave the sleeve in the disinfectant for at least 12 minutes (CIDEX®OPA). The sleeve will not be damaged if it remains in the disinfectant for longer than the required time, but removing it shortly after the required time is recommended.



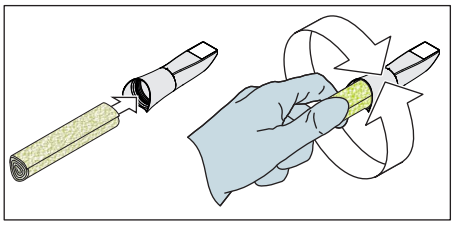
11. Remove the cover and take the bracket with the sleeve out of the container.



12. Carefully rinse the sleeve with tap water for at least 30 seconds while holding it with the bracket.



13. Remove the bracket from the sleeve carefully and slowly by pushing the bracket downwards. Ensure that the sleeve is pointing upwards so that no fluids are able to penetrate into the interior of the sleeve.
14. Remove the plug from the bracket.
15. Dry the plug.
16. Dispose of the fluid and store the bracket in the empty container if the HLD set is not used for more than one week.



17. Dry the entire outer surface of the sleeve as well as the inner section around the plug using a soft lint-free cloth. Ensure that no fluid is able to penetrate the inside of the sleeve.
18. Store the sleeve in such a way that it is protected from contamination until the next use.
19. Remove the white protective sleeve from the scanner head before use.
20. Carefully re-attach the sleeve and allow it to lock in place (see "Attaching the sleeve [→ 66]"). Hold the scanner in other places, not just on the sleeve in order to prevent it from falling.

6.1.4.8 Hot air sterilization of the window sleeve

NOTE

Hot air sterilization and high-level disinfection must not be combined.

The process for hot air sterilization is as follows:

1. Carry out a preliminary cleaning process (see "Preliminary cleaning of the sleeve [→ 66]").
2. Remove the sleeve from the scanner body (see "Removing the sleeve [→ 66]") section.
3. Place the white protective sleeve on the scanner head and place the scanner body in the scanner holder.
4. The sleeve can be sterilized using hot air (180°C, 30 min). Please ask your dealer for deals on hot air sterilizers. Place the sleeves in the hot air sterilizer and follow the manufacturer's instructions.
5. Store the sleeve in such a way that it is protected from contamination until the next use.
6. Carefully re-attach the sleeve and allow it to lock in place (see section "Attaching the sleeve [→ 66]"). Hold the scanner in other places, not just on the sleeve in order to prevent it from falling.

6.1.4.9 Using disposable sleeves

The CEREC Primescan / Primescan scanner can be operated with disposable plastic sleeves in order to ensure maximum infection control. The sleeves are available using order number 66 86 880.

NOTE

The disposable sleeves cannot be used in the following circumstances:
- when using color analysis.

1. Following each patient, remove the disposable sleeve from the scanner body and dispose of it according to the standard procedure.
2. Clean the scanner head with a dry cloth.
3. Remove one disposable sleeve from its packaging. Slide the sleeve up to the stop on the scanner body, so that it is securely positioned on the CEREC Primescan / Primescan scanner. Hold the CEREC Primescan / Primescan scanner in other places, not just on the sleeve in order to prevent the CEREC Primescan / Primescan scanner from falling.
4. Position the CEREC Primescan / Primescan scanner in the holder, so that it can warm up briefly prior to the intraoral exposure. Make sure that the holder has been disinfected (see "Uncritical surfaces including monitor [→ 62]").

6.1.5 Cleaning the inside of the sleeve window

If you should realize during the scanning process that the inside of the sleeve is dirty, then follow the following process:

1. Remove the sleeve from the scanner body (see "Removing the sleeve [→ 66]") section.
2. Place the white protective sleeve on the scanner head and place the scanner body in the scanner holder.
3. Gently tap the sleeve on a soft surface / on your hand.
4. Blow out the sleeve with compressed air.
5. **NOTE! Do not moisten the inside of the sleeve window with liquid (this can lead to marks).** Clean the inside of the steel part with ethanol or isopropanol.
   Ensure that the removed impurities do not drop inside onto the sleeve window.
   Wipe the inside of the steel sleeve with a clean, dust-free and grease-free cloth and ensure that no droplets remain.
6. Remove the scanner body from the holder and remove the white protective sleeve.
7. Prior to inserting the sleeve, clean the scanner cone with a clean, dust-free and grease-free cloth to remove any potential impurities/ adhesions.
8. Carefully re-attach the sleeve and allow it to lock in place (see "Attaching the sleeve [→ 66]"). Hold the scanner in other places, not just on the sleeve in order to prevent it from falling.
   Check whether the process has had the desired effect until now.
9. **NOTE! Do not allow any finger sweat or external pollutants to access the sleeve.** If contamination should still be visible, then clean the inside of the sleeve window with a cleaning cloth which is suitable for the cleanroom. Ensure that finger sweat or external pollutants are not able to access the sleeve.
10. Carefully re-attach the sleeve and allow it to lock in place (see "Attaching the sleeve [→ 66]"). Hold the scanner in other places, not just on the sleeve in order to prevent it from falling.

6.2 Calibrating the scanner

The measurement procedure used by the system requires the use of a calibrated scanner. The CEREC Primescan / Primescan scanner is calibrated ex works. Calibrate the scanner after every reinstallation and after each time that it is transported. The calibration set supplied is available for the calibration process.

In order to achieve optimum results, the CEREC Primescan / Primescan scanner must be allowed to warm up for 2 **minutes before calibration**.

Recalibrate the scanner in the following cases:

- following transport (shaking stress) or during first commissioning,
- after storage in unheated or un-air-conditioned rooms (temperature differences exceeding 30°C / 85°F),
- with temperature differences of over 15°C / 60°F between the last calibration and operation.
- In general, carrying out a calibration is the correct process in the event of errors in the acquisition process (such as poor image quality or the lack of a 3D preview). In many cases, the errors can be corrected in doing so.
- As the system may be exposed to vibration loads without knowledge of this, it should be calibrated once a month.

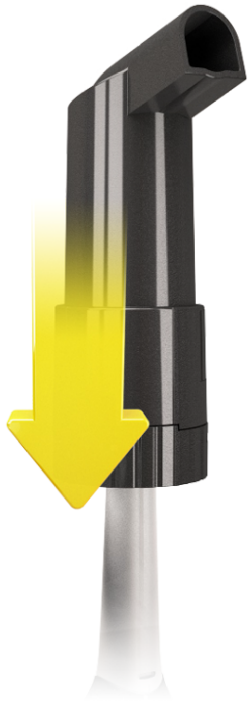
Starting calibration

1. In the software, navigate to the system menu and click on the *"Configuration"* button.
2. Click on the *"Devices"* button.
3. Click on the *"Primescan"* button.
4. Click on the *"Calibrate"* button.
   ↳ The scanner view is displayed in one window.

Calibrating the scanner

1. Remove the protective cap from the calibration set.
2. Mount the calibration set on the tip of the scanner until it locks into place.
3. Secure the CEREC Primescan / Primescan scanner in the calibration set using one hand. Ensure that the external calibration set screw is fully screwed in a clockwise motion until it gently locks into place.
4. Click on the *"OK"* button.
   - The measuring process starts.
   - The software prompts you to proceed to the next latching.

5. Turn the screw counter-clockwise until you reach the next latching point.
6. Click on the *"OK"* button. Hold the CEREC Primescan / Primescan scanner still.
   - The software confirms the calibration process.
   - The software prompts you to proceed to the next latching.
7. Complete steps 5 and 6 a total of 17 times.
   - The software provides status updates on the calibration and informs you once the procedure is complete.
   - You will be prompted to measure the position of the exit window.



Measuring the position of the exit window

1. Mount the bottom side of the calibration set to the tip of the scanner.
2. Click on the *"OK"* button.
   - The calibration process is continued.
   - Once the calibration is complete, a message is displayed indicating this.
3. Confirm the message by clicking the *"OK"* button.

The CEREC Primescan / Primescan scanner is calibrated.

Error message during calibration

The software indicates if an error occurs during calibration. If the calibration process resulted in errors, restart the process.

End calibration

✓ The software indicates that the calibration was completed successfully.

➢ Click the *"OK"* button.
   - The CEREC Primescan / Primescan scanner is calibrated.

6.3 Color calibration

General information

NOTE

Faulty color analysis

The color analysis can be negatively impacted due to strong light incidence and it can lead to varying results.

➢ Set the scanner up so that it is not located directly in the beam path of an extreme light source (e.g., the treatment light) and not exposed to direct sunlight.

A color-calibrated scanner must be used for the color analysis.

NOTE

Observe color calibration

A color calibration may only be performed at least 20 minutes after the system start/cleaning.

The color calibration must be performed regularly.

The scanner must be color calibrated every two weeks in order to carry out a reliable color analysis. You will achieve the best results if the scanner is color calibrated immediately before scanning a new case.

Carry out a color calibration also after changing a sleeve.

Heavily scratched sleeve window may not be used for a color analysis.

Storing a color-calibration set

The color-calibration set must be stored in its packaging in a dry place which is protected from light. It must be used with a disinfected scanner as the color-calibration set must itself not be disinfected. If dust accumulates on the inside of the color-calibration set, it must be carefully removed using compressed air.

Switch on the color analysis

1. In the software, navigate to the system menu and click on the *"Configuration"* button.
2. Click on the *"Devices"* button.
3. Click on the *"Primescan"* button.
4. Select the *"Shade Detection"* option.
   - You can choose between various color systems (*"Shade Guide Selection"*).
   - You can decide whether you would like to be notified in 14 days when the color calibration is needed again.
5. Confirm the changes below with *"Ok"*.
6. Click the *"Color Calibration"* button and carry out the color calibration.

Color-calibrating the scanner

NOTE

Only use color calibration set with clean, dry CEREC Primescan / Primescan scanner

In order to achieve optimum results, the CEREC Primescan / Primescan scanner must be clean, disinfected and dry before color calibration.

➢ Make sure that the CEREC Primescan / Primescan scanner is clean, disinfected and dry.

1. Remove the color-calibration set from the packaging.
2. Use the CEREC Primescan / Primescan scanner to scan the QR code on the underside of your color-calibration set. In order to do this, you must hold the CEREC Primescan / Primescan scanner still in front of the QR code so that it is completely visible in the picture. If the QR code appears to be shiny, hold the scanner at more of an oblique angle in order to avoid any glaring light and to make it easier to scan the codes. If the QR code is recognized, the next *"Please mount color calibration set"* step appears.
   This step of the QR code scan is skipped during the subsequent color calibration and the serial number of the color-calibration set is thus displayed. If this does not match the serial number printed on your color-calibration set, click on the *"Rescan QR Code"* button and scan the new QR code.
3. Mount the color-calibration set on the tip of the scanner until it locks into place.
4. Click on the *"Ok"* button.
   - The measuring process starts. Do not move the CEREC Primescan / Primescan scanner or the color-calibration set during this time.
   - The software provides status updates on the calibration and informs you once the procedure is complete.

Ending the color calibration

✓ The software indicates that the color calibration was completed successfully.

1. Click on the *"Ok"* button.
   - The CEREC Primescan / Primescan scanner is now color-calibrated.
2. Remove the color-calibration set from the scanner and place it back in the packaging.

Error message during color calibration

The software indicates if an error occurs during color calibration. If the color calibration contained an error, ensure the following:

- The color-calibration set is free of dust
- The color-calibration set was mounted correctly
- The CEREC Primescan / Primescan scanner exit window is clean

➢ Then restart the color calibration.

Do not continue using a damaged color-calibration set; instead, contact your distributor to purchase a new one.

Replacing the color calibration set

NOTE

Regularly replacing the color calibration set

In order to achieve optimum results, the color calibration set must be replaced regularly.

➢ Observe the following:

Please note that the color calibration set

- can only be used with CEREC 5 software ≥ 5.x or Connect SW ≥ 5.
- can only be kept for use for a maximum of 2 years. You can find the expiry date at the bottom of the color calibration set container. Previous storage may mean that the period for use has been reduced to less than 2 years.
- can only be used for one year after the container has been opened. Write the date that the container was opened on the container after "Opened on _____" using a waterproof pen and do not use after one year.

The color calibration set may no longer be used once either of the two periods has expired.

The software notifies you that the color calibration set needs to be replaced with a new set before the color calibration expires.

Once the color calibration set has expired the software notifies you that a color analysis can only be carried out based on old calibration data.

Please contact your dealer for replacements for the color calibration set.

6.4 Replacing the main fuse

DANGER

Potentially lethal shock hazard

People can be injured or electrical components of the unit destroyed.

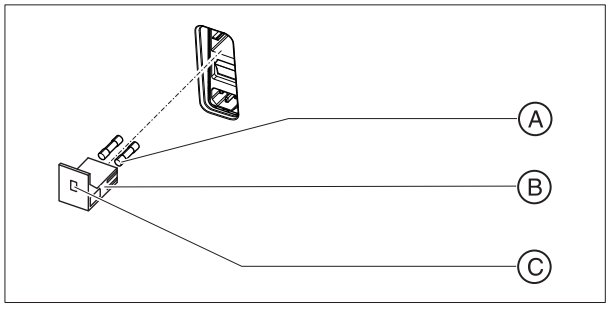
➢ Switch off the unit **prior** to beginning work.

➢ Pull out the power cable.

NOTE

Fuse type

Use only fuses of the same type in the fuse module!



A	Main fuses	C	Window
B	Fuse module		

Fuses: T8A H 250V Order No. 62 33 188

✓ The power plug must be disconnected.

1. Unlatch the fuse module with a screwdriver and pull the module out.
2. Replace the defective fuses.
3. Reinsert the fuse module until it locks in place.

6.5 Charge battery (optional)

NOTE

Information on back-up cycles

The storage battery is designed for fully cable-free use of Scan, Design and Grinding at a power requirement of 250 W for 60 minutes. Approx. 2.5 hours are needed for full charging.
For back-up mode, which the user, for example, uses for an operation lasting 10 minutes, in order to move the unit from door to door (standby consumption of 100 W), a charging time of 10 minutes is needed. After around 1000 buffer cycles the capacity of the battery fades due to the nature of the battery technology used.

The battery is permanently charged during operation on mains voltage.

For full charging, keeping the acquisition unit connected to the mains voltage and the power switch on is sufficient. The PC does not have to be switched on for the charging process.

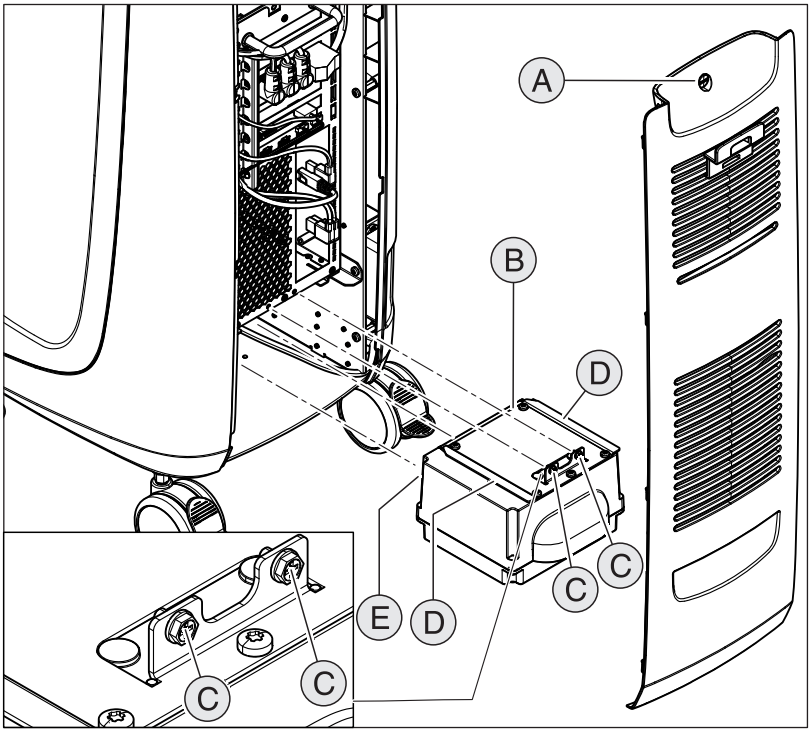
NOTE

Reduced battery service life

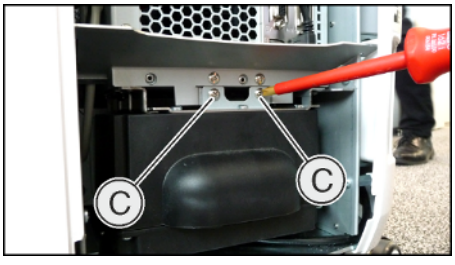
If the battery is not charged over a long period of time, this significantly reduces its service life.

➢ Always recharge the battery fully after buffer operation.

6.6 Replace battery (optional)



A	Service cover	D	2 guide rails
B	Storage battery	E	2 guide pins
C	2 fastening screws		



1. Open the service cover on the back panel.
2. Remove the 2 fastening screws (**C**, cross-head screws).
3. Remove the storage battery.
4. Slide in the new storage battery using the guide rails and guide pins up to the stop.

NOTE

Risk of fault during operation and defects to the system

If the storage battery is not screwed down, faults during operation and defects to the system may occur.

➢ Always screw the storage battery down tightly.

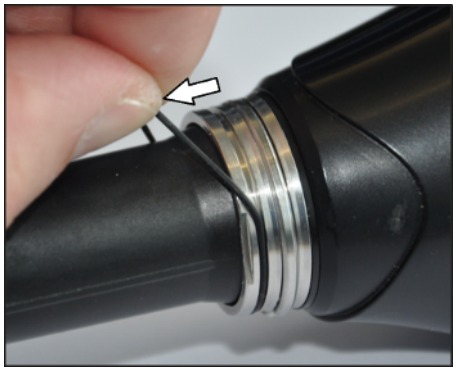
5. Screw the storage battery in place with 2 fastening screws (**C**).
6. Put the service cover back in position and lock it.

6.7 Replacing the O-ring

Removing the worn O-ring

✓ The sleeve has been removed from the scanner body.

1. Hold the holding ring between your thumb and index finger.
   ↳ In doing so, the O-ring is clamped in.
2. Use your thumb and index finger to guide towards the holding nut as shown above.
   ↳ During this process, the O-ring is partially pushed out of the groove and an arc forms.



3. Use your other hand to touch the O-ring on this arc and remove it.

Fitting the new O-ring

NOTE

Do not damage the O-ring

The O-ring can be damaged if overstretched.

➢ Never overstretch the O-ring.

➢ Never shape the O-ring during fitting as shown.

1. Slide the O-ring at one point into the O-ring groove.

2. Starting from this point, carefully use your thumb and index finger to push the O-ring into the groove (in a similar way to pushing it out but without any force).

3. Guide your thumb and index finger in such a way along the groove until the O-ring is fully positioned in the groove.

NOTE

The O-ring can be damaged

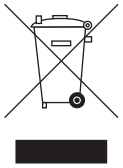
Ensure that the O-ring fits in the groove without twisting in order to prevent damage to the O-ring when fitting the sleeve.

IMPORTANT

Replacement O-rings

Replacement O-rings are available with the scanner or can be ordered under REF 66 80 974.

7 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.

7.1 Disposal of the storage battery pack

The storage battery pack must be subjected to recycling if it becomes defective or reaches the end of its service life. Recycling is performed via Dentsply Sirona.

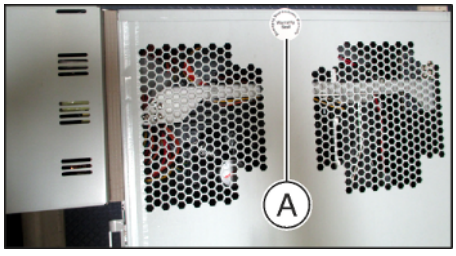
The storage battery pack is marked with the adjacent symbol. Dispose of discharged storage batteries immediately. Keep out of the reach of children. Do not dismantle or set on fire. Disposal of the storage battery pack with domestic refuse is not compatible with the objectives of environmentally sound recycling/disposal. Send in the replaced storage battery pack to Dentsply Sirona (see the reverse side of these operating instructions for the mailing address).

8 Appendix

8.1 Making backup copies

To increase the system's data security and protect themselves against data losses, users should make backup copies of the data regularly.

8.2 Seal on PC slide-in module



NOTE

If the seal is broken, all warranty claims regarding the PC slide-module automatically expire.

The PC slide-in module may be opened only by an authorized dental technician. Only spare parts approved by us may be used in this module.

Following a repair, the seal supplied along with the spare parts must be affixed at the specified location (**A**).

8.3 Windows Update

"Windows Update" is a service, which provides software updates and security updates for the operating system.

"Windows Update" is set by default at the factory, meaning that only *"Critical Updates"* and *"Recommended updates"* are installed automatically.

"Optional Updates" should not be installed, if available. These may include device drivers and additional software, which are possibly incompatible with the PC components.

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We reserve the right to make any alterations which may be required due to technical improvements.

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