Sirona Dental CAD/CAM System
CEREC Omnicam AC, Omnicam AC

Operating Instructions (valid for USA)
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1 General data

1.1 Dear Customer,

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

The CEREC Omnicam AC enables you to produce computer-assisted dental restorations, e.g. from ceramic material with a natural appearance (CERamic REConstruction).

The CEREC Omnicam AC / Omnicam 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 information

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

<table>
<thead>
<tr>
<th>Observe the Operating Instructions</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Operating Instructions are stored on the unit and online at <a href="http://www.dentsplysirona.com/manuals">www.dentsplysirona.com/manuals</a>.</td>
</tr>
<tr>
<td></td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>Online portal for technical documents</td>
<td>We have set up an online portal for the Technical Documents at <a href="http://www.dentsplysirona.com/manuals">www.dentsplysirona.com/manuals</a>. 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.</td>
</tr>
<tr>
<td>Help</td>
<td>If you continue to have difficulties despite having thoroughly studied the Operating Instructions, please contact your dealer.</td>
</tr>
</tbody>
</table>
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 instructions for use. Such information is highlighted as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DANGER</strong></td>
<td>An imminent danger that could result in serious bodily injury or death.</td>
</tr>
<tr>
<td><strong>WARNING</strong></td>
<td>A possibly dangerous situation that could result in serious bodily injury or death.</td>
</tr>
<tr>
<td><strong>CAUTION</strong></td>
<td>A possibly dangerous situation that could result in slight bodily injury.</td>
</tr>
<tr>
<td><strong>NOTE</strong></td>
<td>A possibly harmful situation which could lead to damage of the product or an object in its environment.</td>
</tr>
</tbody>
</table>

**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:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>Prerequisite</td>
</tr>
<tr>
<td>1.</td>
<td>First action step</td>
</tr>
<tr>
<td>2.</td>
<td>Second action step</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>➢</td>
<td>Alternative action</td>
</tr>
<tr>
<td>➤</td>
<td>Result</td>
</tr>
<tr>
<td>➥</td>
<td>Individual action step</td>
</tr>
</tbody>
</table>

See "Formats and symbols used [→ 7]"

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>●</td>
<td>List</td>
</tr>
</tbody>
</table>

"Command / menu item"

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Identifies a reference to another text passage and specifies its page number.</td>
</tr>
<tr>
<td></td>
<td>Designates a list.</td>
</tr>
<tr>
<td></td>
<td>Indicates commands / menu items or quotations.</td>
</tr>
</tbody>
</table>
### 1.4.2 Operating conventions

<table>
<thead>
<tr>
<th>Example</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tapping</td>
<td>Pressing once and releasing the finger or the left touchpad key on the acquisition unit.</td>
</tr>
<tr>
<td>Double-tapping</td>
<td>Pressing twice quickly in succession and releasing the finger or the left touchpad key on the acquisition unit.</td>
</tr>
<tr>
<td>Moving the mouse in one direction</td>
<td>On the acquisition unit: Moving finger in the corresponding direction.</td>
</tr>
<tr>
<td>Seizing a point</td>
<td>Pressing and holding the left mouse button (left touchpad button on the acquisition unit).</td>
</tr>
<tr>
<td>Drag &amp; drop</td>
<td>Select an element (e.g. a pictograph) and drop / release it onto a potential destination.</td>
</tr>
</tbody>
</table>

### Multi-touch technology (only for systems with touch monitor)

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

<table>
<thead>
<tr>
<th>Example</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tap</td>
<td>Single tap on the screen using your finger. To execute functions in the software you must tap once on the corresponding button.</td>
</tr>
<tr>
<td>Double-tapping</td>
<td>Two taps on the screen in rapid succession using your finger. <strong>Tip:</strong> To open programs in Windows you must tap the corresponding button twice (double-click).</td>
</tr>
<tr>
<td>Call up shortcut menus</td>
<td>Tap the corresponding point and hold the finger on the screen for a longer period. A shortcut menu opens at this point.</td>
</tr>
<tr>
<td>Drag &amp; drop</td>
<td>Tap an element (e.g. pictograph), drag and drop onto new potential destination.</td>
</tr>
</tbody>
</table>
**Edit a 3D model with multi-touch**

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Function</th>
</tr>
</thead>
</table>
| 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 Indications for use

The Sirona Dental CAD/CAM System is intended for use in partially or fully edentulous mandibles and maxillae in support of single or multiple-unit cement retained restorations. For the BH 3.0 S, SSO 3.5 L and SBL 3.3 L titanium bases, the indication is restricted to the replacement of single lateral incisors in the maxilla and lateral and central incisors in the mandible. The system consists of three major parts: TiBase, inCoris mesostructure, and CAD/CAM software. Specifically, the inCoris mesostructure and TiBase components make up a two-piece abutment which is used in conjunction with endosseous dental implants to restore the function and aesthetics in the oral cavity. The inCoris mesostructure may also be used in conjunction with the Camlog Titanium base CAD/CAM (types K2244.X)(XX) (K083496) in the Camlog Implant System. The CAD/CAM software is intended to design and fabricate the inCoris mesostructure. The inCoris mesostructure and TiBase two-piece abutment is compatible with the following implant systems:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Name of Implant System</th>
<th>Implant Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Platform</td>
</tr>
<tr>
<td>Nobel Biocare</td>
<td>Replace</td>
<td>NP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RP</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>RP</td>
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<td>Branemark</td>
<td>NP</td>
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<tr>
<td></td>
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</tr>
<tr>
<td>Straumann</td>
<td>Synocta</td>
<td>NN (3.5mm)</td>
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<tr>
<td></td>
<td></td>
<td>RN (4.8mm)</td>
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<tr>
<td></td>
<td></td>
<td>WN (6.5mm)</td>
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<tr>
<td></td>
<td>Bone Level</td>
<td>NC (3.3mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RC (4.1mm/4.8mm)</td>
</tr>
<tr>
<td>Dentsply Sirona Implants</td>
<td>Osseospeed</td>
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<tr>
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<td>Zimmer</td>
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</tr>
<tr>
<td>Osstem/Hiossen</td>
<td>Osstem TS Implant System</td>
<td>Platform</td>
</tr>
<tr>
<td></td>
<td>Hiossen Implant System</td>
<td>Diameter</td>
</tr>
<tr>
<td></td>
<td>Mini</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Regular</td>
<td>4.0/4.5/5.0/6.0/7.0</td>
</tr>
</tbody>
</table>
### General data

#### Indications for use

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Name of Implant System</th>
<th>Implant Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>BioHorizons (Internal Connection)</td>
<td>Tapered 3.0, Tapered plus</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Tapered internal</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Tapered plus</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Tapered internal, Tapered internal tissue level</td>
<td>3.0/3.8</td>
</tr>
<tr>
<td></td>
<td>Internal dental implant</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Single stage dental implants</td>
<td>3.5/4.0</td>
</tr>
<tr>
<td></td>
<td>Tapered plus</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>Tapered internal, Tapered internal tissue level</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td>Internal dental implant</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Single stage dental implants</td>
<td>4.0/5.0</td>
</tr>
<tr>
<td></td>
<td>Tapered internal, Tapered internal tissue level</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>Internal dental implant, Single stage dental implants</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>Internal dental implant, Single stage dental implants</td>
<td>5.0/6.0</td>
</tr>
</tbody>
</table>

**WARNING**

Small diameter implants and angled abutments are not recommended for the posterior region.

**WARNING**

The TiBase has not been evaluated for safety and compatibility in the MR environment. It has not been tested for heating, migration, or image artifact in the MR environment. The safety of TiBase in the MR environment is unknown. Scanning a patient who has this device may result in patient injury.

**CAUTION**

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

CEREC Guides are intended to support the dentist or oral surgeon when drilling for placement of dental implants. CEREC Guides are intended to be designed and fabricated using the Sirona Dental CAD/CAM System’s CEREC Chairside software and CAM equipment, Galileos Implant dental implant planning software, and Calibra Universal Self-Adhesive Resin Cement.
1.7 Further use of Sirona Dental CAD/CAM System

The Sirona Dental CAD/CAM System is also an optical impression system for computer assisted design and manufacturing (CAD/CAM) according to 21 CFR 872.3661. The system records the topographical characteristics of teeth, dental impressions, or stone models for use in the computer-assisted design and manufacturing of dental restorative prosthetic devices. Such devices are exempt from the premarket notification procedures.

1.8 Legend

- **20XX**
  - Year of manufacture

- **Hot surface**
  - "Hot surface" symbol

- **Safety labels**
  - Identifies labels/imprints on the unit (see Safety labels [→ 20]).

- **Product disposal symbol**
  - (see "Disposal [→ 85]")

- **Storage battery pack recycling symbol**
  - (see "Disposal of the storage battery pack [→ 86]"

- **RF transmitter in the form of a WLAN card or a separate wireless module**
  - The CEREC Omnicam AC / Omnicam 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 Omnicam AC / Omnicam 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,
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

**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 stands for ElectroStatic Discharge.
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" [→ 23].

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 ElectroStatic Discharge.

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 mm²
- laid unprotected: 4 mm²

**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
- Touchpad
- Hand and foot controlled enter keys
- Ethernet port and WLAN
- USB interfaces

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

- Measuring technique: Triangulation
- Light source: White LED, unpolarized, visible spectral range
- Image acquisition: Image control inside the camera
- Image data transfer: Gigabit Ethernet 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 34 229 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 Omnicam AC / Omnicam 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%
- **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 Omnicam / Omnicam is calibrated
The CEREC Omnicam / Omnicam scanner is calibrated ex works.

Acquisition unit with touchpad

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>CEREC Omnicam / Omnicam</td>
<td>E</td>
</tr>
<tr>
<td>B</td>
<td>Heater plate</td>
<td>F</td>
</tr>
<tr>
<td>C</td>
<td>4 castors with parking brake</td>
<td>G</td>
</tr>
<tr>
<td>D</td>
<td>Foot switch/foot pedal</td>
<td>H</td>
</tr>
</tbody>
</table>
3.3.2 Overview of the rear panel

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Fuses</td>
<td>E</td>
</tr>
</tbody>
</table>
| 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 [→ 32].”

<table>
<thead>
<tr>
<th>LED state</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED lights up blue</td>
<td>Acquisition unit is connected with the socket.</td>
</tr>
<tr>
<td>LED flashes blue</td>
<td>The storage battery is charged when the socket is connected.</td>
</tr>
<tr>
<td>LED lights up green</td>
<td>The system is being started up or has started up.</td>
</tr>
<tr>
<td>LED flashes green</td>
<td>The storage battery is charged while the system is being started up/has started up.</td>
</tr>
<tr>
<td>LED lights up red</td>
<td>Error</td>
</tr>
<tr>
<td>LED flashes red</td>
<td>Error in communication (between power supply unit/battery and interface PCB).</td>
</tr>
<tr>
<td>LED lights up orange</td>
<td>The system is not connected with the socket. Storage battery is charged. The system is being started up or has started up.</td>
</tr>
<tr>
<td>LED flashes orange</td>
<td>The system is not connected with the socket. The storage battery is not fully charged.</td>
</tr>
</tbody>
</table>

**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.
3.6 Electromagnetic compatibility

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

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

CEREC Omnicam AC / Omnicam 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.

<table>
<thead>
<tr>
<th>Emission measurement</th>
<th>Conformity</th>
<th>Electromagnetic environment - guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF emissions according to CISPR 11</td>
<td>Group 1</td>
<td>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.</td>
</tr>
<tr>
<td>RF emissions according to CISPR 11</td>
<td>Class B</td>
<td>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.</td>
</tr>
<tr>
<td>Harmonics according to IEC 61000-3-2</td>
<td>Class A</td>
<td></td>
</tr>
<tr>
<td>Voltage fluctuations / flicker according to IEC 61000-3-3</td>
<td>coincides</td>
<td></td>
</tr>
</tbody>
</table>
### 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.

<table>
<thead>
<tr>
<th>Interference immunity tests</th>
<th>IEC 60601-1-2 Test level</th>
<th>Compliance level</th>
<th>Electromagnetic environment - guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrostatic discharge (ESD) according to IEC 61000-4-2</td>
<td>± 8 kV contact ± 15 kV air</td>
<td>± 8 kV contact ± 15 kV air</td>
<td>Floors should be wood, concrete, or ceramic tile. If the floor is covered with synthetic material, the relative humidity must be at least 30%.</td>
</tr>
<tr>
<td>Electrical fast transient/burst according to IEC 61000-4-4</td>
<td>± 1 kV for input and output lines ± 2 kV for power supply lines</td>
<td>± 1 kV for input and output lines ± 2 kV for power supply lines</td>
<td>The quality of the line power supply should be that of a typical commercial or hospital environment.</td>
</tr>
<tr>
<td>Surge voltages according to IEC 61000-4-5</td>
<td>± 1 kV differential mode voltage ± 2 kV common mode voltage</td>
<td>± 1 kV differential mode voltage ± 2 kV common mode voltage</td>
<td>The quality of the line power supply should be that of a typical commercial or hospital environment.</td>
</tr>
<tr>
<td>Voltage dips, short interruptions and variations of the power supply according to IEC 61000-4-11</td>
<td>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)</td>
<td>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)</td>
<td>The quality of the line power supply should be that of a typical commercial or hospital environment. Continued operation of the <strong>UNIT</strong> is possible following interruptions of the power supply, since the <strong>UNIT</strong> is powered by an uninterruptible power supply backed up by a storage battery.</td>
</tr>
<tr>
<td>Magnetic field of power frequencies (50/60 Hz) according to IEC 61000-4-8</td>
<td>30A/m</td>
<td>30A/m</td>
<td>Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Conducted RF interference IEC 61000-4-6</th>
<th>IEC 60601-1-2 Test level</th>
<th>Compliance level</th>
<th>Electromagnetic environment - guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 V&lt;sub&gt;eff&lt;/sub&gt; to 80 MHz</td>
<td>3 V&lt;sub&gt;eff&lt;/sub&gt;</td>
<td>d= [1.2] √P</td>
<td></td>
</tr>
<tr>
<td>6 V&lt;sub&gt;eff&lt;/sub&gt; in ISM frequency bands between 150kHz and 80 MHz 80% AM at 1 kHz</td>
<td>6 V&lt;sub&gt;eff&lt;/sub&gt;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Radiated RF interference IEC 61000-4-3</th>
<th>IEC 60601-1-2 Test level</th>
<th>Compliance level</th>
<th>Electromagnetic environment - guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 V/m to 800 MHz</td>
<td>3 V/m</td>
<td>d= [1.2] √P</td>
<td></td>
</tr>
<tr>
<td>3 V/m to 2.7 GHz</td>
<td>3 V/m</td>
<td>at 80 MHz to 800 MHz</td>
<td></td>
</tr>
<tr>
<td>800 MHz to 2.7 GHz</td>
<td>3 V/m</td>
<td>d= [2.3] √P</td>
<td></td>
</tr>
<tr>
<td>80% AM at 1 kHz</td>
<td></td>
<td>at 800 MHz to 2.7 GHz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>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).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey&lt;sup&gt;1&lt;/sup&gt; should be less than the compliance level&lt;sup&gt;2&lt;/sup&gt; in each frequency range.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interference is possible in the vicinity of equipment bearing the following graphic symbol.</td>
<td></td>
</tr>
</tbody>
</table>

### Immunity to interference against high-frequency electromagnetic fields in the direct vicinity of wireless communication devices IEC 61000-4-3

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

<table>
<thead>
<tr>
<th>Test frequency (MHz)</th>
<th>Modulation</th>
<th>Required immunity test level (V/m)</th>
<th>Maintained immunity test level (V/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2450</td>
<td>Pulse modulation: 217 Hz</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>5240 5500 5785</td>
<td>Pulse modulation: 217 Hz</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Rated maximum output power of transmitter [W]</th>
<th>Working clearance according to transmission frequency [m]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>150 kHz to 80 MHz</td>
</tr>
<tr>
<td>0.01</td>
<td>d = [1.2] √P</td>
</tr>
<tr>
<td>0.1</td>
<td>0.38</td>
</tr>
<tr>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>10</td>
<td>3.8</td>
</tr>
<tr>
<td>100</td>
<td>12</td>
</tr>
</tbody>
</table>

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 LCD 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 Omnicam / Omnicam 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 Omnicam AC / Omnicam 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 Omnicam AC / Omnicam AC.

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

1. Make sure that the acquisition unit is switched off (main switch is at 0).
2. Make sure that the mirror sleeve (CEREC Omnicam / Omnicam) is placed on the scanner.
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 Omnicam AC / Omnicam 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 Omnicam AC / Omnicam 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 Inserting the battery

**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.

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.
4.4.3 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.

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 [→ 46]".

![Main switch](image_url)
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.

### 4.4.4 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.
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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Function</th>
</tr>
</thead>
</table>
| 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 Omnicam AC / Omnicam 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 **Scanner warm-up time**

When switching on the system, the scanner needs to warm up for 15 - 20 minutes. If the coated sapphire glass of the scanner is not sufficiently warm, it may steam up during the acquisition. This complicates the scan acquisition.

Following use, always position the scanner on the heater plate or in the scanner cradle.

You can set the end temperature to which the scanner heater warms the mirror sleeve of the scanner.

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 "Omnican" button.
4. Click on the "Camera Heater Settings" button.
5. Use the slider to adjust the temperature.
5.3 Scanner setup

You can adjust the CEREC Omnicam / Omnicam scanner in the device configuration.

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 "Omnicam" button.

Accepting settings
➢ Click on the "Ok" button.

Discarding settings
➢ Click on the "Cancel" button.
5.4 Taking optical impressions with the scanner

⚠️ CAUTION

Hot surface
The coated sapphire glass of the scanner, is preheated in the scanner cradle. When removing the scanner from its holder, the surface temperature of the mirror sleeve can be up to 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.

After removing the scanner from the scanner cradle, the temperature of the mirror sleeve drops within a few minutes (< 5 minutes) to less than 43°C. The scanner is therefore suitable for use in the patient's mouth for an unlimited period of time.

At an ambient temperature from 30°C, only select the three lower heater settings.

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.

⚠️ CAUTION

In the case of patients with allergies to nickel
Should the scanner mirror sleeve make contact with the skin of patients allergic to nickel, allergic reactions may occur.

➢ Ensure that in the case of patients with nickel allergies, the parts of the mirror sleeve which may make contact are protected from areas of skin.
5 Operation

5.4 Taking optical impressions with 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.

✔ 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.
5.5 Scanner guide

![CAUTION]
After each use
Prepare the scanner once again after each patient.
➢ Follow the instructions in the “Scanner [→ 64]” 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
5.5.1 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 0-15 mm (ideally: 5 mm). The scanner does not rest on the teeth or the gums. If the distance is too great, no data will be obtained.

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 slowly in the occlusal direction from the distal-positioned tooth over the prepared tooth to the mesial-positioned tooth.

With full jaw acquisitions, the scan sequence is different for the transition to anteriors. Scanning begins with the lingual and labial areas, before moving on to the incisors.

5.5.2 Buccal scan

✓ The scanner is on the adjacent tooth, in the mesial direction to the preparation.
1. Rotate the scanner between 45° to maximum 90° toward the buccal.
2. Guide the scanner over the entire buccal distance in the distal direction over the prepared tooth.
   With full jaw acquisitions, limit the buccal scan to no more than a quadrant.

Ensure that the scanner is held like a flute during buccal scans. Do not tilt it vertically to the direction of motion.

Tip: Practice guiding the scanner between 45° and 90°.
5.5.3 **Lingual scan**

- The scanner is on the tooth that is positioned next to the preparation in the distal direction.
- Rotate the scanner from 90° in the buccal direction to around 45° to maximum 90° in the lingual direction on the other side.
- Guide the scanner over the entire lingual distance in the mesial direction over the prepared tooth.

5.5.4 **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 by using a wave motion in the occlusal, buccal, and lingual direction over the prepared tooth.
  - To do so, tilt the surface by 15° in the distal and mesial direction to gain a better view of the approximal contacts.

**Notes:**
- Remove the soft tissue.
- Cut away the moveable gingivae, so that only 2-5 mm gingivae remains around the tooth.
- 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.
- This cut must be completed during the ACQUISITION phase using the cutter.
5.5.5 **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”, “Buccal scan” and “Lingual scan”).
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.

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

5.5.6 **Scanning the quadrant and jaw**

The following scan regulation applies for the acquisition of a complete quadrant or jaw arch.

The first (fourth) quadrant is scanned up to the opposite second front tooth by moving the scanner in parallel along the jaw arch.

**Start the scanning process**

➢ Position the scanner occlusally above the last tooth on the right, to start the scanning process.
Completing the scanning process

1. **Start as indicated above, on the occlusal surface of the right terminal tooth,** and scan it occlusally. Tilt the scanner by 45° in a palatinal direction (oral) and guide it from the distal to the mesial.

2. Tilt the scanner another 45° in a palatinal direction (oral) and move it in a distal direction.

3. Tilt the scanner by 90° on to the occlusal surface and move it in a mesial direction.

4. Tilt the scanner in a 45° buccal direction and move it back towards the distal.

5. Then tilt the scanner a further 45° in a buccal direction to a total of 90° and move it in a mesial direction again.
The following scan sequence is implemented for the opposite second (third) quadrant:

1. **Start by placing the device on the occlusal surface of a premolar, that has already been scanned,** and guide the scanner palatally (orally) at a mesial tilt of up to 90° across the lingual surface of the front teeth in a distal direction towards the terminal tooth.

2. Slight tilt the scanner by 45°, so that the scanner is only tilted by 45° in a palatal direction (oral) moving from the distal and back to the mesial to the front teeth.

3. Once you have reached the area of the front tooth, guide the scanner 45° to the buccal side and tilt the scanner by 45° from the mesial to the distal direction.

4. Once you have reached the distal, tilt the scanner by another 45° (total of 90°) further towards the buccal and guide the scanner from the distal back to the mesial direction.

5. Once you have reached the area of the front tooth, tilt the scanner in an occlusal direction and guide the scanner mesially to the occlusal surfaces right to the back distal molars.

**Notes:**

- Remove the soft tissue.
- Cut away the moveable gingivae, so that only 2-5 mm gingivae remains around the tooth.
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.

• This cut must be completed during the ACQUISITION phase using the cutter.

5.5.7 **Completing measurements**

✔ The exposures are complete.

1. Press 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 exposures.
5.6 Software for the scanner

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

5.6.1 Cut out model areas

With the "Cut" function, you can 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.

"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 Omnicam AC / Omnicam 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 Omnicam / Omnicam scanner, and the scanner cable.
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

<table>
<thead>
<tr>
<th>Kerr</th>
<th>CaviCide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CaviWipes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patterson</th>
<th>pdCARE Surface Disinfectant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pdCARE Wipes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Various manufacturers</th>
<th>60%-90% isopropyl alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neutral soap</td>
</tr>
</tbody>
</table>

6.1.1.2 Wiping Disinfectants

<table>
<thead>
<tr>
<th>Kerr</th>
<th>CaviCide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CaviWipes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patterson</th>
<th>pdCARE Surface Disinfectant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pdCARE Wipes</td>
</tr>
</tbody>
</table>

| Various manufacturers | 60%-90% isopropyl alcohol |

6.1.1.3 High-level disinfectants

<table>
<thead>
<tr>
<th>Johnson &amp; Johnson</th>
<th>CIDEX OPA</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sultan Healthcare</th>
<th>Sporox II</th>
</tr>
</thead>
</table>
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,
   - 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 "Wiping Disinfectants [→ 62]" 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 accidentally activate a function on the screen during wiping:
   a) Press simultaneously on the left and right button on the touchpad 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 Scanner

**CAUTION**

Risk of injury
An evidently damaged scanner must no longer be used on patients. If the CEREC Omnicam / Omnicam scanner accidentally falls off, check to make sure that the sapphire glass is not damaged. If the CEREC Omnicam / Omnicam scanner has been damaged, it must no longer be used on patients. The CEREC Omnicam / Omnicam scanner must be recalibrated.

**NOTE**

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

**NOTE**

The mirror sleeves cannot be sterilized in the autoclave.
6.1.3.1 General information

The CEREC Omnicam / Omnicam 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 window afterwards again with the absorbent cotton gauze dipped in drinking water.

NOTE

Hygiene processes
Observe the following hygiene processes.

Dental health care providers are advised to select the reprocessing method that aligns with their infection control process. An effective infection control program is practical, reasonable, and reproducible.

3 methods have been validated to reprocess the CEREC Omnicam / Omnicam between patient care:

- High-level disinfection of the mirror sleeve (with HLD Set) [→ 69]
- Dry heat sterilization of the mirror sleeve [→ 74]
- Using disposable sleeves [→ 75]

One of these methods is strongly recommended to be used for the reprocessing of the CEREC Omnicam / Omnicam.

6.1.3.2 Components of the scanner

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Press detent to release</td>
</tr>
<tr>
<td>B</td>
<td>Mirror sleeve</td>
</tr>
<tr>
<td>C</td>
<td>Sapphire glass (coated)</td>
</tr>
<tr>
<td>D</td>
<td>Scanner window</td>
</tr>
</tbody>
</table>
6.1.3.3 Removing the mirror sleeve

If required to remove the mirror sleeve do the following:
1. Press the mirror sleeve against the scanner body.
2. Press detent A.

**NOTE**

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

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

3. Pull off the mirror sleeve.
### 6.1.3.4 Refitting the mirror sleeve

➢ Carefully refit the mirror sleeve until it locks in place.

**NOTE**

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

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

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

➢ Carefully refit the mirror sleeve until it locks in place.

### 6.1.3.5 Mirror sleeve reprocessing overview

See detailed instructions after summary.

<table>
<thead>
<tr>
<th>Mirror sleeve for CEREC Omnicam / Omnicam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Cleaning process</strong></td>
</tr>
<tr>
<td>(while mirror sleeve is attached to the scanner)</td>
</tr>
<tr>
<td>1. Clean with a cotton gauze moistened with tap water of potable water quality that meets Federal Clean Water Standards and pH neutral soap</td>
</tr>
<tr>
<td>2. Wipe with the absorbent cotton gauze dipped in drinking water.</td>
</tr>
<tr>
<td>3. Dry the mirror sleeve using a lint-free cloth.</td>
</tr>
<tr>
<td><strong>HLD process</strong></td>
</tr>
<tr>
<td>1. Use CIDEX® OPA or Sporox II Sterilizing and Disinfecting Solution (use steel mirror sleeves) as disinfectant for high-level disinfection per manufacturer’s instructions.</td>
</tr>
<tr>
<td>2. Leave the mirror sleeve in CIDEX® OPA for 12 minutes or in Sporox II for 30 minutes at 20°C.</td>
</tr>
<tr>
<td>3. Rinse the sleeve under tap water of potable water quality that meets Federal Clean Water Standards.</td>
</tr>
<tr>
<td>4. Dry the mirror sleeve with a clean lint-free cloth.</td>
</tr>
<tr>
<td><strong>Dry heat sterilization process</strong></td>
</tr>
<tr>
<td>1. Dry heat 160°C (SteriSURE) for 60 minutes (wrapped or unwrapped)</td>
</tr>
<tr>
<td>2. Dry heat 190°C (Cox RAPIDHEAT Sterilizer) for 6 minutes (unwrapped),</td>
</tr>
<tr>
<td>3. Dry heat 190°C (Cox RAPIDHEAT Sterilizer) for 12 minutes (wrapped).</td>
</tr>
</tbody>
</table>
6.1.3.6 Preliminary cleaning of the mirror sleeve

Clean the scanner immediately after use as follows:

1. Carefully wipe the mirror sleeve while it is on the scanner so that no dirt whatsoever can remain stuck and can harden on the surface of the mirror sleeve. For this purpose, use the following:
   - a dampened wiping cloth (see "Cleaning agents → 62),
   - an absorbent cotton gauze or a lint-free cloth, dipped in cleaning agent (see "Cleaning agents → 62)

2. Wipe down the mirror sleeve afterwards again with the absorbent cotton gauze dipped in drinking water.

3. Next dry the mirror sleeve using a lint-free cloth.

6.1.3.7 Disinfecting the scanner body and the mirror sleeve

➢ Use a new cotton gauze moistened with one of the wiping disinfectants listed in the „Wiping Disinfectants [→ 62]“ section. Wipe the scanner body first and then the sleeve. This step disinfects the scanner body and the sleeve. Wipe down the sleeve afterwards again with the absorbent cotton gauze dipped in drinking water. Then dry the sleeve with a clean lint-free cloth.
6.1.3.8 High-level disinfection of the mirror sleeve (with HLD Set)

**NOTE**
Dry heat sterilization and high-level disinfection must not be combined.

The complete process for high-level disinfection is as follows:

**With HLD Set**

**NOTE**
Sporox II should only be used with steel mirror sleeves. Steel mirror sleeves are marked with the letters ST (see the image).

A HLD set to support the HLD process should be ordered from Dentsply Sirona with REF 66 05 120.

---

A detailed diagram is shown with the following labels:

- A: HLD container
- B: Lid
- C: Metal holder
- D: Plug

1. Pre-cleaning (see „Preliminary cleaning of the mirror sleeve [→ 68]“).
2. Put on Personal Protective Equipment at the latest when handling the high-level disinfectant.
3. Remove the sleeve from the CEREC Omnicam / Omnicam (see „Removing the mirror sleeve [→ 66]“).

**NOTE**
It is recommended that you never switch between disinfecting and sterilizing solutions. However, if you do, make sure you thoroughly rinse the HLD set before switching.

4. Place the white protective sleeve on the scanner tip and place the scanner in the scanner cradle.
5. Use one of the following disinfectants for the high-level disinfection: CIDEX ® OPA, Sporox II.
6. Slid the plug into the metal holder.

7. Press the sleeve onto the plug while holding the metal holder in order to ensure that no particle contamination or fluids penetrate the inside of the sleeve.

If attached correctly, the plug seals the sleeve watertight.

**CAUTION**

Observe the disinfectant's manufacturer's safety indications!

8. Cautiously fill the HLD container up to the marked level (B) per manufacturer's instructions. A funnel can be used to assist with filling the liquid (A). Do not spill any disinfectant. If spillage occurs please follow disinfectant's manufacturer's safety indications for cleaning.
9. Insert the metal holder with the sleeve.

10. Place the lid on the container and leave the sleeve at least 12 minutes for CIDEX®OPA or 30 minutes for Sporox II in the disinfectant. While exceeding the recommended immersion time may not cause damage to the sleeve, the sleeve should be removed as soon as possible after the recommended time.
11. Remove the lid and the holder with the sleeve from the container.

12. Thoroughly rinse the sleeve with tap water of potable water quality that meets Federal Clean Water Standards holding it with its holder (for at least 30 seconds).

13. Carefully and slowly remove the plug with the holder from the sleeve by downward movement of the holder. Make sure that the sleeve points upwards not to risk any damage by liquids entering the inside of the sleeve.

14. Remove the plug from the holder.

15. Dry the plug with a clean lint-free cloth.

16. Prior to each use of the HLD set test the solution for its effectiveness per manufacturer’s instructions. If not in use rinse container and holder and store the holder inside the empty container.
17. Dry the whole surface of the sleeve and also the lower part of the inner surface using a clean soft, lint-free cloth.
18. Store the sleeve in a manner to protect it from contamination until the time of use.
19. At time of use remove the white protective sleeve from the scanner tip.
20. Carefully re-attach the sleeve and allow it to lock in place (see „Removing the mirror sleeve [→ 66]”).
6.1.3.9 Dry heat sterilization of the mirror sleeve

**NOTE**

Dry heat sterilization and high-level disinfection must not be combined.

The process for dry heat sterilization is as follows:

1. Pre-cleaning (see „Preliminary cleaning of the mirror sleeve [→ 68]“).
2. Remove the mirror sleeve from the CEREC Omnicam / Omnicam (see „Removing the mirror sleeve [→ 66]“).
3. Sterilize the mirror sleeve using dry heat at 190°C for 6 minutes (unwrapped) or 12 minutes (wrapped). Use only pouches which are suitable for dry heat sterilization cycle of at least 190°C, 12 minutes. Alternatively, sterilize mirror sleeve using dry heat at 160°C for 60 minutes (unwrapped or wrapped). Use only pouches which are suitable for dry heat sterilization cycle of at least 160°C, 120 minutes.
   The CPAC Cox RAPIDHEAT Sterilizer and the CPAC SteriSURE have been validated by Sirona Dental Systems.
   For 6 minutes 190°C program # 1 has to be set on the CPAC Cox RAPIDHEAT Sterilizer.
   For 12 minutes 190°C program # 3 has to be set on the CPAC Cox RAPIDHEAT Sterilizer.
   For 60 minutes 160°C the CPAC SteriSURE is to be used.
4. Store the mirror sleeve in such a way that it is protected from contamination until the next use.
5. Carefully re-attach the mirror sleeve and allow it to lock in place (see „Refitting the mirror sleeve [→ 67]“).

**NOTE**

The mirror sleeve changes its color which will not have any negative impact upon the mirror sleeve’s durability.
6.1.3.10 Using disposable sleeves

The CEREC Omnicam / Omnicam scanner can be operated with disposable plastic sleeves in order to ensure maximum infection control. The sleeves are available using order number 66 32 264.

**NOTE**

The disposable sleeves cannot be used in the following circumstances:
- with the CEREC AF and CEREC AI system,
- when using color analysis,
- when using CEREC Ortho SW software.

1. Following each patient, remove the disposable sleeve from the CEREC Omnicam / Omnicam scanner and dispose of it according to the standard procedure.
2. Wipe disinfection of the scanner (see "Wipe disinfection of the scanner and mirror sleeve").
3. Remove one disposable sleeve from its packaging. Slide the sleeve up to the stop on the CEREC Omnicam / Omnicam scanner, so that it is securely positioned on the CEREC Omnicam / Omnicam scanner. Hold the CEREC Omnicam / Omnicam scanner in other places, not just on the sleeve in order to prevent the CEREC Omnicam / Omnicam scanner from falling.
4. Position the CEREC Omnicam / Omnicam scanner in the holder, so that it can warm up for at least 15 minutes prior to the intraoral exposure. Make sure that the holder has been disinfected (see "Uncritical surfaces including monitor [→ 63]").
5. In the case of intraoral exposures with disposable sleeves, the CEREC Omnicam / Omnicam scanner should be positioned closer to the teeth than without sleeves. If the 3D preview indicates artifacts, check whether the window of the disposable sleeve is clean and wipe it down with alcohol.
6.2 Calibrating the scanner

The measurement procedure used by the system requires the use of a calibrated scanner. The 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 Omnicam / Omnicam scanner must be allowed to warm up for 15-20 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 "Omnicam" 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 Omnicam / Omnicam 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 Omnicam / Omnicam 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 Omnicam / Omnicam 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 Omnicam / Omnicam 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 mirror 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 "Omnicam" 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 Omnicam / Omnicam scanner

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

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

1. Remove the color-calibration set from the packaging.
2. Use the CEREC Omnicam / Omnicam scanner to scan the QR code on the underside of your color-calibration set. In order to do this, you must hold the CEREC Omnicam / Omnicam 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 Omnicam / Omnicam 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 Omnicam / Omnicam 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 Omnicam / Omnicam 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!

![Fuse module diagram](image)

<table>
<thead>
<tr>
<th></th>
<th>Main fuses</th>
<th>C</th>
<th>Window</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Fuse module</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 Charging the battery

**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 Replacing the battery

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.
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. For country-specific information on disposal, contact your local dental dealers.

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.
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.