

New as of:

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Sirona Dental CAD/CAM System CEREC MC / MC X

Operating Instructions

English (US)

This product is covered by one or more of the following US patents:

- US6454629
- US6702649
- US6394880
- US7522764
- US7163443

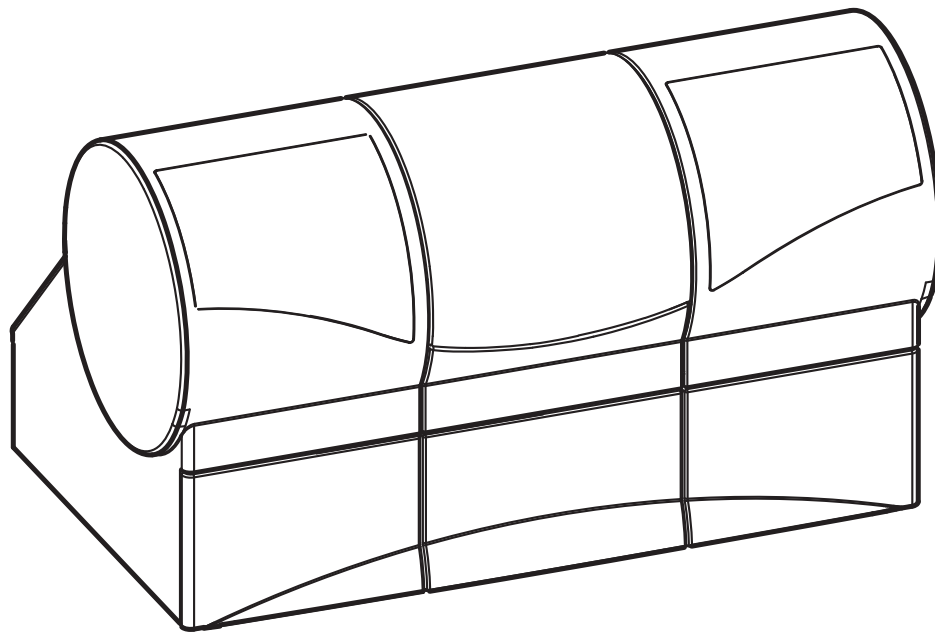


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1 Dear Customer,

Thank you for your purchase of this CEREC MC/MC X[®] unit from Sirona.

This device enables you to produce dental restorations, e.g. from ceramic material with a natural appearance (**CE**ramic **RE**Construction).

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

To prevent personal injury or material damage, it is important to observe all safety information.

Your
CEREC MC/MC X team

2 General data

Please read this document completely and follow the instructions exactly. You should always keep it within reach.

Original language of the present document: German.

2.1 Identification of the danger levels

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

DANGER

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

WARNING

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

CAUTION

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

NOTICE

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

IMPORTANT

Application instructions and other important information.

Tip: Information on making work easier.

2.2 Formats and symbols used

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

| | |
|---|---|
| ✓ Prerequisite 1. First action step 2. Second action step or > Alternative action ↕ Result ➤ Individual action step | Requests you to do something. |
| See "Formats and symbols used [→ 7]" | Identifies a reference to another text passage and specifies its page number. |
| • List | Designates a list. |
| "Command / menu item" | Indicates commands, menu items or quotations. |

2.3 Note PC / Acquisition Unit

When a PC is described in this document, this refers to a PC for the acquisition unit (if present). The PC is represented symbolically.

Please observe our recommendations for PC configuration (see System requirements [→ 58]).

3 General description

3.1 Certification



CE mark

This product bears the CE mark in accordance with the provisions of Council Directive 2006/42/EC (machinery directive). As such, the following standards apply: DIN EN ISO 12100:2011-03, DIN EN 61010-1:2011-07 and DIN EN 61326-1:2013-07.

CAUTION

CE mark for connected products

Further products which are connected to this unit must also bear the CE mark. These products must be tested according to the applicable standards.

Examples of CE mark for connected products:

- EN 60601-1:2006 based on IEC 60601-1:2005
- EN 60950-1:2006 based on IEC 60950-1:2005
- UL 60950 second edition 2010

GOST mark



3.2 Intended 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 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.xxxx) (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:

- Nobel Biocare Replace (K020646)
- Nobel Biocare Branemark (K022562)
- Friadent Xive (K013867)
- Biomet 3i Osseotite (K980549)
- Astra Tech Osseospeed (K091239)
- Zimmer Tapered Screw-Vent (K061410)
- Straumann SynOcta (K061176)
- Straumann Bone Level (K053088, K062129, K060958)
- Biomet 3i Certain (K014235, K061629)
- Nobel Biocare Active (K071370)

CAUTION

Small diameter implants and large angled abutments in the anterior region of the mouth due to possible failure of the implant system.

CAUTION

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

3.3 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.
- an endosseous dental implant accessory according to 21 CFR 872.3980. The system is used to produce a part that the user can manually incorporate together with other 3rd party components into a dental surgery guide, a temporary accessory used with endosseous dental implants with tissue contact for less than 1 hour (exempt).

Such devices are exempt from the premarket notification procedures.

4 Safety

4.1 Basic safety information

4.1.1 Prerequisites

NOTICE

Important information on building installation

The building installation must be performed by a qualified expert in compliance with the national regulations. DIN VDE 0100-710 applies in Germany.

NOTICE

Restrictions regarding installation site

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

NOTICE

Do not damage the unit!

The unit can be damaged if opened improperly.
It is expressly prohibited to open the unit with tools!

4.1.2 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 Sirona or by agencies authorized by Sirona.
- Components which have failed and influence the safety of the unit must be replaced with original (OEM) spare parts.

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.

4.1.3 Modifications to the product

Modifications to this product which may affect the safety of the operator, patients or third parties are prohibited by law!

4.1.4 Accessories

In order to ensure product safety, this device may be operated only with original Sirona accessories or third-party accessories expressly approved by Sirona. In particular, only the power cable supplied with the unit or the corresponding original spare part may be used with the unit. The user assumes the risk of using non-approved accessories.

4.2 Opening the grinding chamber door during the production process

CAUTION

Instruments that continue to run

When the grinding chamber door is opened during the production process, the instruments could continue to run for a short time.

- Be careful not to touch the instruments with your hand or any other object during this time.
- Avoid opening the grinding chamber door while the grinding unit is in operation.
- Before you open the grinding chamber door, end any actions that are running by selecting the "Stop" key on the grinding unit or in the application software.

4.3 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.

4.4 Disturbance of data transmission

Note on wireless communication

Data communication between the acquisition unit and the CEREC MC/ MC X grinding unit should preferably be established via the wireless interface (H&W or 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.

Sirona has selected the best possible configuration for data communication via the wireless interface (H&W and 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 CEREC AC is occupied by another plug, remove this wireless interface connection and instead connect the LAN cable with the CEREC MC/MC X grinding unit.

5 Installation and startup

5.1 Transport and unpacking

All products from 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.

NOTICE

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.

The unit must be drained prior to shipment (if it has been operated).
Removing water from the unit [→ 56]

Transport without packaging

CAUTION

Damage to the unit or risk of injury during transport without packaging

There is a danger of the unit falling down if it is grasped by its plastic housing.

- The unit should always be carried by two persons.
- Do not grasp the unit by its plastic housing.
- Always grasp the unit by its chassis next to its feet.

5.2 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.

5.3 Installation site

CAUTION

Install out of the reach of patients!

Do not install or operate the grinding unit in the vicinity of the patient (place it at least 1.5 m away from the patient).

The grinding unit requires a level floor space of approx. 700 x 420 mm
The height of the grinding unit is:

- with the grinding chamber door closed: 425mm
- with the grinding chamber door open: 570mm

Install the grinding unit in such a way that it is not difficult to operate the main switch.

Make sure that the ventilation slots underneath and at the back of the unit remain unobstructed. The distance between the back of the unit and the wall must at least be 10 cm.

Note that the unit weighs 43 kg!

The unit must not be installed at sites with a high level of humidity or dust!

NOTICE

Installation in a cabinet

If the unit is installed in a cabinet, you must provide for adequate heat exchange.

The ambient temperature surrounding the unit must be between 5°C and 40°C.

5.4 Commissioning

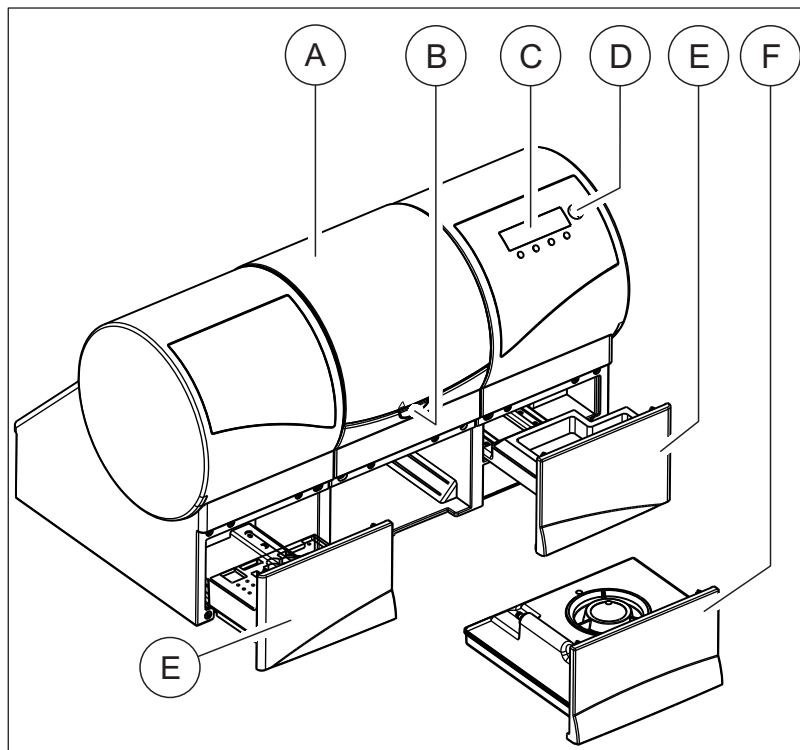
NOTICE

Important information on initial startup

Observe the software installation instructions!

5.4.1 Functional elements

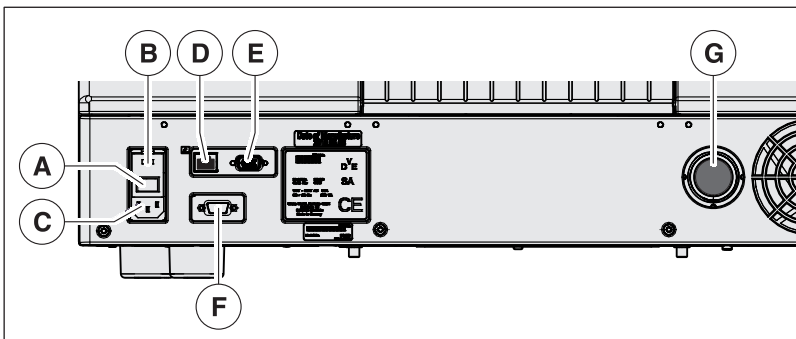
Unit overview



Overview of the grinding unit

| | | | |
|---|-----------------------------|---|---------------|
| A | Grinding chamber | D | ON/OFF switch |
| B | Grinding chamber door catch | E | Drawer |
| C | Display | F | Water tank |

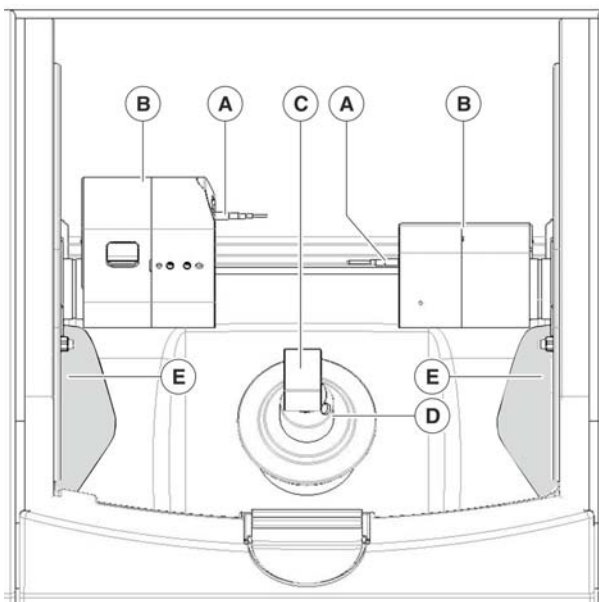
Ports on the back side



Connections

| | | | |
|---|--------------------------------|---|--------------------------------------|
| A | Main switch I = ON, 0 = OFF | E | Communications interface for suction |
| B | Fuse cover | F | Bar code reader connection |
| C | Power connection | G | Connection for suction |
| D | LAN port Ethernet | | |

Grinding chamber



Grinding chamber

| | | | |
|---|----------------|---|--------------------|
| A | Instrument set | D | Workpiece spindle |
| B | Motor mount | E | Suction connection |
| C | Ceramic block | | |

5.4.2 Standard accessories

5.4.2.1 Instruments

The following instruments are available for production purposes. When replacing instruments, ensure the permitted instrument combinations are used (see "Permitted instrument combinations [→ 41]").


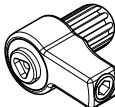











5.4.2.2 Calibration pins



The calibration pins are used when calibrating the instrument sets (see "Calibrating the unit [→ 36]").

5.4.2.3 Torque wrench

To insert or replace the instruments or calibration pins, use the following torque wrench.

| Instrument | REF | Usage | Torque wrench | Clamping format of the force transmission |
|---|---------|---------------|---|---|
| Step Bur 12 S  | 6240167 | Grinding |  | Triangular  |
| Cyl. Pointed Bur 12 S  | 6240159 | Grinding | | |
| Step Bur 20  | 6259597 | Grinding | | |
| Cyl. Pointed Bur 20  | 6259589 | Grinding | | |
| Step Bur 12  | 6260025 | Grinding | | |
| Shaper 25  | 6299395 | Milling (dry) | | |
| Finisher 10  | 6299387 | Milling | | |
| Calibration pin (AiO*)  | 6241132 | Calibration | | |
| Shaper 25 RZ  | 6433440 | Milling (wet) |  | Square  |

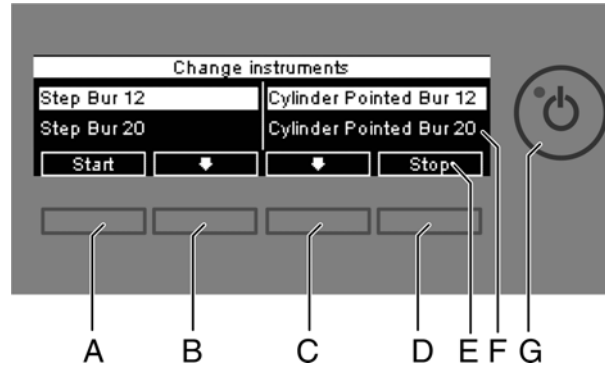
* All-in-One

5.4.3 Display description

These operating instructions describe how to operate the unit by executing and confirming commands via your PC.

You can also confirm commands such as "Start", "Stop", "Cancel" or "OK" directly on the display of your grinding unit.

Possible commands are then shown above the corresponding button on the display. In the example shown, **button 1, (A)** would confirm the command "Start" and **button 4, (D)** would confirm the command "Stop".



Display

| | | | |
|---|----------|---|---------------|
| A | Button 1 | E | Command |
| B | Button 2 | F | Display |
| C | Button 3 | G | ON/OFF switch |
| D | Button 4 | | |

5.4.4 Lighting of the grinding chamber

The lighting of the grinding chamber depends on the machining operation involved:

| Machining operation | Lighting color |
|--------------------------------|----------------|
| Grinding | White |
| Operation completed | Green |
| Error or "Stop" button pressed | Red |

5.4.5 Inserting the grinding chamber sieve

CAUTION

Risk of injury on instruments

Be careful not to brush against the instruments with your hand.

NOTICE

Risk of blockage in the cooling circuit

If chips enter into the cooling circuit of the machine, there is a risk that the cooling circuit will become blocked.

➤ The sieve is suitable for all restoration and material types. It is absolutely essential that no chips enter into the cooling circuit.

1. Remove the grinding chamber sieve from the packaging.
2. Wet the underside of the sieve with water before insertion and press it firmly against the floor of the grinding chamber.



5.4.6 Connecting the bar code reader

The bar code reader is optional for the CEREC MC/MC X unit.

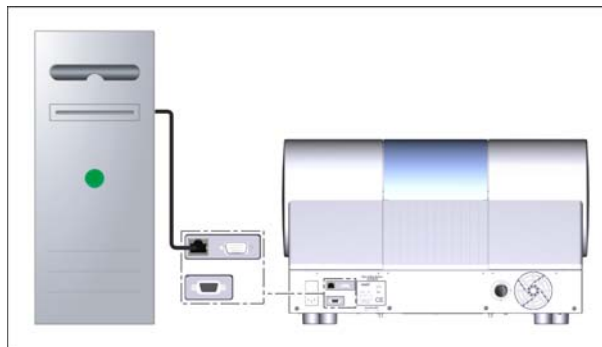
Connecting the bar code reader

- Plug the bar code reader into the serial interface to the rear of the grinding unit and secure with screws.

5.4.7 Installation

5.4.7.1 Connecting to the PC via LAN

An Ethernet connection is located to the rear of the unit, which can be used to connect the PC to the grinding unit. Use a network cable to do this (LAN connection).



Using a network cable

Connect the PC to the LAN connection of the unit.

If problems arise when connecting via a network cable, please read the separate instructions "Operating the MC XL via LAN".

5.4.7.2 Connecting the unit to the power supply

NOTICE

Grounded power outlet

The unit must be connected to a grounded power outlet.

➤ Connect the unit to the power supply using the supplied power cable.

5.4.7.3 Installing the unit

You must connect the unit to the PC before putting it into operation. This is described in the section entitled "Connecting to the PC via LAN" [→ 21] or "Connecting to the PC via WLAN (option)" [→ 25].

Searching for unit automatically

The unit is connected to the PC via a LAN cable or via WLAN.

1. Click the "*Configuration*" button in the system menu.
2. Click on the "*Devices*" button.
3. Click on the "*Scan for New Devices*" button.
 - ↳ All units connected to the PC are recognized. In the case of new units, you will be prompted to enter a name.
4. Enter a name for the new unit.

Search for unit manually

The unit is connected to the PC via a LAN cable or via WLAN.

1. Click the "*Configuration*" button in the system menu.
2. Click on the "*Devices*" button.
3. Click on the "*Add Device (Manual)*" button.
4. Set the network.
5. Enter the network address which appears on the "*IP address:*" display once the grinding unit has been switched on.
6. Click on the "*Ok*" button.
 - ↳ The software attempts to contact the device.

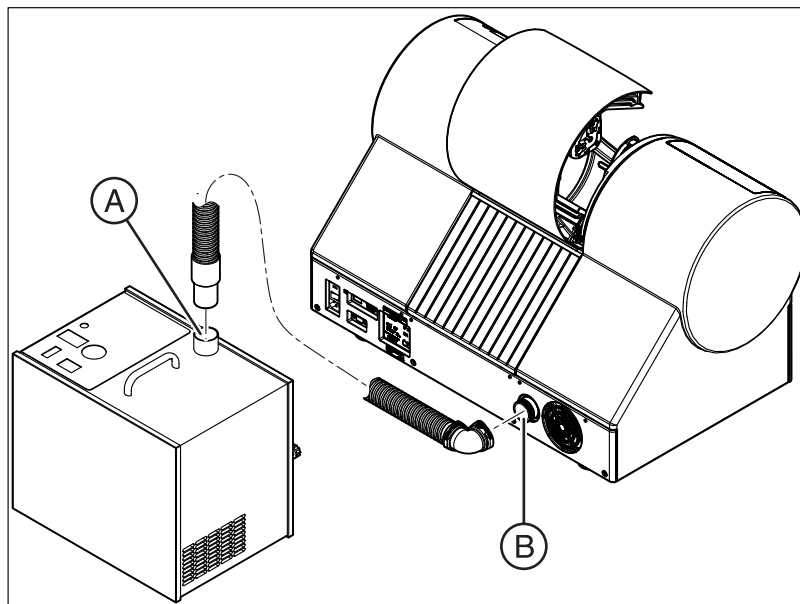
If the connection fails, check the connection. If necessary, ask a qualified technician.

Unit removal

- ✓ If you no longer require a unit (e.g. a unit is replaced), you can remove it.
- ✓ The unit is operation.
 1. Click the "*Configuration*" button in the system menu.
 2. Click on the "*Devices*" button.
 3. Click on the unit that you wish to uninstall.
 4. Click on the "*Delete Device*" button.
 - ↳ You will be asked if you would like to remove the unit.
 5. Click on the "*YES*" button.
 - ↳ The device is removed.

5.4.7.4 Connecting the suction device (optional)

5.4.7.4.1 Connecting the suction tube



1. Connect one end of the suction tube to the available connection point on the suction device (A).
2. Connect the other end of the tube to the rear side of the milling unit (B).

Notes on the suction tube:

The suction tube is supplied at a length of approx. 2.0 m (CEREC MC/MC X/MC XL Premium Package). When connecting the suction device to the unit, please ensure that no sharp bends occur over the full length of the suction tube.

Reduce the length of the tube according to your requirements and your installation location. Note that suction power drops along the length of the tube. You obtain decent suction power if the suction device is placed immediately below the machine and you have a tube length of 1.2 m or less.

5.4.7.4.2 Connecting the power cord

NOTICE

Grounded power outlet

The unit must be connected to a grounded power outlet.



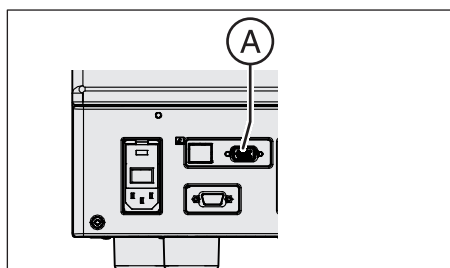
1. Insert the power cable into the relevant socket on the suction system.
2. Plug the other end into an appropriate power socket with a protective ground terminal.

Note on the power cable:

The suction system must only be operated with a power cable with a plug system designed for the relevant country.

Check the voltage specification on the rating plate. The system must conform to the country-specific supply voltage.

5.4.7.4.3 Connecting the interface cable (for automatic mode)



1. Plug the 15-pole connector into the socket (A) of the processing machine.



2. Plug the 9-pole connector into the socket (B) of the suction device.

5.4.7.4.4 Automatic mode



- ✓ The interface cable is connected.
- Set the on/off switch to the position *Auto*.

Note on the automatic mode:

The processing machine monitors the correct socket (interface cable and suction tube) and the operation of the suction system during the running processes.

5.4.7.4.5 Setting the suction power

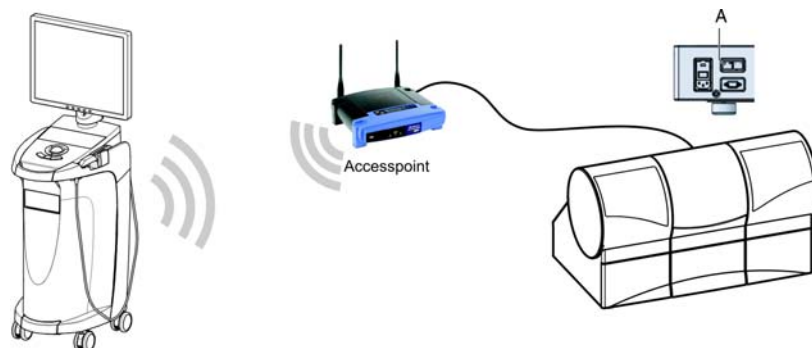


Use the control dial (A) to set the suction power.

- **Recommendation:** Set the suction power to the minimum (*min*). To increase the service life of the filter bags, you can increase the suction power to the maximum suction power (*max*).

5.4.7.5 Connecting to the PC via WLAN (option)

Making the connection



Connect access point

- Connect the LAN port **A** of the grinding unit and the access point, using the network cable (10m, Order No.: 61 51 521).
 - ↳ The access point is pre-configured at the factory for this application.

Positioning the access point

1. As a test, place the access point near the grinding unit at head level or higher.
2. Perform a communication test as described in the separate instructions (see "Operating MC XL via WLAN in infrastructure mode", chapter "Final work, analyzing connection quality"). If applicable, follow the instructions on changing channels.
3. After you have found the optimum setting, take the acquisition unit and place it in the position in which it will be operated that is farthest away from the access point.
4. From this position, repeat the communication test you conducted earlier. If the results are satisfactory, leave the access point permanently in this position.
5. If the results are not satisfactory, position the access point outside of the room in which the grinding unit is located and repeat the communication test.
 - ↳ If the connection quality is still not adequate, WLAN communication cannot be easily achieved under the local conditions. In this case, ask your network administrator for assistance.

NOTICE

LAN connection

Operation via a cable LAN connection is possible at any time.

5.4.7.6 Operating several grinding units over one access point

To operate several MC/MC X or MC XL grinding units over one access point, you need the following additional components:

- 1x LAN switch (e.g. Netgear ProSave 5 Port Gigabit Switch, Model GS105)
 - 1x LAN network cable (10m, Sirona Order No.: 61 51 521).
1. Connect the LAN port (**A**) of the grinding units with the LAN switch using the included 10m LAN network cable.
 2. Connect the access point with the LAN switch using the additional 10 m LAN network cable.
- ↳ Now, all grinding units connected to the LAN switch can be operated via WLAN.

5.4.7.7 Connecting to the PC via the wireless interface (optional)

The CEREC acquisition unit has one of the following wireless modules installed:

- Höft & Wessel HW 8614/F2
 - Installation kit: 62 79 694
 - Retrofit kit: 62 79 702

or

- CEREC Radio Device
 - Installation kit: 65 42 521
 - Retrofit kit: 65 43 073

IMPORTANT

Acquisition units and grinding units can only work with one wireless module system or the other. This means that any additional acquisition or grinding units that are acquired by existing customers, which need to be connected wirelessly to existing systems, will require the existing systems to be retrofitted in order to work with the new CEREC Radio Device.

5.4.7.7.1 Höft & Wessel HW 8614/F2

1. Connect the HW 8614/F2 wireless module to the LAN port of the grinding unit using the LAN crossover cable (1 m).
2. Connect the plug-in power supply included in the scope of delivery with the wireless module HW 8614/F2 and plug it into the power supply.
3. If necessary, secure the wireless module in the selected operating position using the preassembled Velcro® tape. In doing so, ensure that the rod antenna is vertically positioned.
4. Pair the wireless module of the grinding unit as described in the installation instructions included with the wireless module (REF 62 80 064).

You can pair multiple grinding units with a CEREC acquisition unit. If more than 2 grinding units are operated at once, the limited data bandwidth may cause grinding time delays.

5.4.7.7.2 CEREC Radio Device

Creating a network

The supplied network devices have not as yet been part of a network. To enable several networks from various operators to be created next to one another or in the same area, new network devices must first form a network. This is described in the following section.

To create a new network with several new network devices, perform the following steps:

1. Place all network devices in the same area.
2. Switch all network devices on within one minute.
3. After switching on the last network device, wait approx. one minute.
4. Make sure that all network devices are connected, as indicated by the green LED; see section “LED displays” in the “CEREC Radio Device” operating instructions (REF 65 45 177).

All network devices now belong to a single network, which can be operated as an independent network, and can communicate with one another. In the event of problems, see section “Network creation failures” in the “CEREC Radio Device” operating instructions (REF 65 45 177).

Extending the network - adding a new network device

New network devices can be added to an existing network. To prevent random network devices from becoming part of the network, the user must perform the following steps:

1. Place the new network devices next to a network device that is part of the network.
2. Switch on the new network devices.
3. Switch the existing network device off and on again within one minute.
 - ↳ After one minute the new network devices will become part of the network.

IMPORTANT

A network with CEREC Radio Devices can include up to three network devices. Larger networks are not possible.

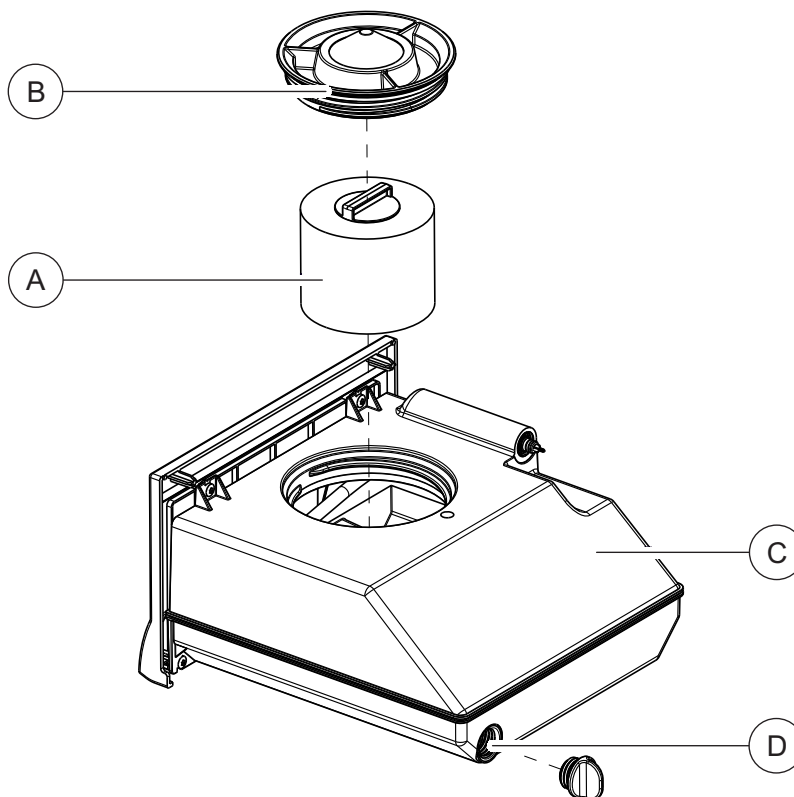
5.4.8 Filling the water tank

NOTICE

Using the tank cap opener

If you find the tank cap, tank drain or filter insert hard to open by hand, use the tank cap opener (see "Using the tank cap opener").

5.4.8.1 Water tank MC / MC X



Water tank

| | | | |
|---|---------------|---|------------|
| A | Filter insert | C | Tank |
| B | Tank cap | D | Tank drain |

✓ The water tank has been drained, see "Removing water from the unit".

1. Pull out the water tank at the front of the unit.
2. Turn the tank cap counter-clockwise and take it off.

NOTICE

Damage to surfaces!

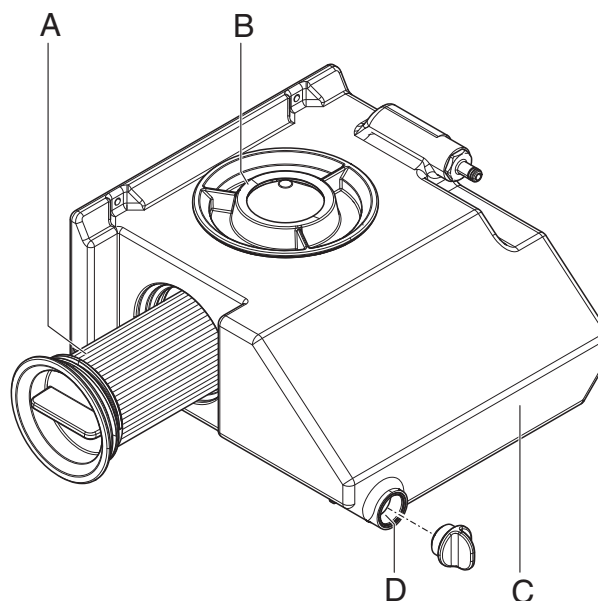
When undiluted, DENTATEC grinding additive etches plastic surfaces and can cause discoloration.

- Do not place DENTATEC on the unit.
- Do not spill DENTATEC.

3. Add approx. 75 ml of DENTATEC to the tank.
4. Fill the tank with water until the filter insert is completely immersed (up to the bottom edge of the cover thread, approx. 3 liters).
5. Wait for a short time until the filter insert is completely soaked; then add an appropriate amount of water.
6. Close the water tank by tightening the tank cap clockwise by hand.
Do not use the tank cap opener for this.
7. Push the water tank back into the housing.

8. Switch the unit on (see Switching the unit ON and OFF [→ 32]).
9. Switch the pump on (press the "Pump" button) to fill the water circuit.
10. Fill the water tank up again until the filter insert is completely immersed (up to the bottom edge of the cap thread).

5.4.8.2 Water tank CEREC MC XL Basic



Water tank

| | | | |
|---|---------------|---|------------|
| A | Filter insert | C | Tank |
| B | Tank cap | D | Tank drain |

- ✓ The water tank has been drained, see "Removing water from the unit".
1. Pull out the water tank at the front of the unit.
 2. Turn the tank cap counter-clockwise and take it off.

NOTICE

Damage to surfaces!

When undiluted, DENTATEC grinding additive etches plastic surfaces and can cause discoloration.

- Do not place DENTATEC on the unit.
- Do not spill DENTATEC.

3. Add approx. 75 ml of DENTATEC to the tank.
4. Fill the tank with water until the filter insert is completely immersed (up to the bottom edge of the cover thread, approx. 3 liters).
5. Wait for a short time until the filter insert is completely soaked; then add an appropriate amount of water.
6. Close the water tank by tightening the tank cap clockwise by hand. **Do not use the tank cap opener for this.**
7. Push the water tank back into the housing.

8. Switch the unit on (see Switching the unit ON and OFF [→ 32]).
9. Switch the pump on (press the "Pump" button) to fill the water circuit.
10. Fill the water tank up again until the filter insert is completely immersed (up to the bottom edge of the cap thread).

5.4.9 Switching the unit ON and OFF

NOTICE

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.

Within the machine, grease depots are included for lubricating components that can cause error messages at low temperatures.

- ✓ 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.

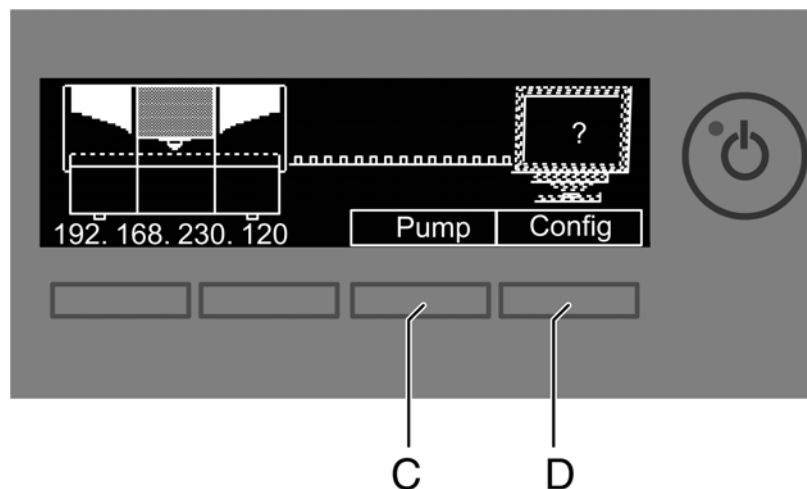
NOTICE

Do not adjust the line voltage

The unit automatically adjusts to the line voltage.

Switching the unit on

- ✓ The grinding unit is connected to the power supply.
- 1. The main switch on the rear side of the unit is set to position I (ON).
- 2. Press the ON/OFF button on the front panel.
- ↪ The unit switches on and the display lights up.



Power-up display

When the grinding unit is switched on, the display shows a picture of the grinding unit trying to contact the PC.

You can start or stop the water pump by pressing the "Pump" button (C). This enables you to drain the water circuit without connecting to the PC (e.g. prior to transport) or fill the water circuit during startup.

You can call up the IP address by pressing the "Config" button (D). You can configure the grinding unit in the network with this address.

Switching the unit off

- ✓ The unit has finished the machining operation.
- Briefly press the ON/OFF button on the front panel.
- ↪ When you let go of the button, the unit switches off.

5.5 Repacking

NOTICE

Repack only drained units!

Drain the unit! See "Removing water from the unit".

- ✓ The water tank is empty.
- ✓ The main switch on the back side of the unit is set to the 0 (OFF) position.
- 1. Disconnect the power cable and the connecting cable from the back side of the unit and stow them away.
- 2. Stow away the calibration tools in the drawer.
- 3. Check the unit for completeness according to the scope of supply!
- 4. Pack the unit securely.

5.6 Scope of supply

The detailed scope of supply is specified in the document "Checklist CEREC MC/MC X".

5.7 Storage

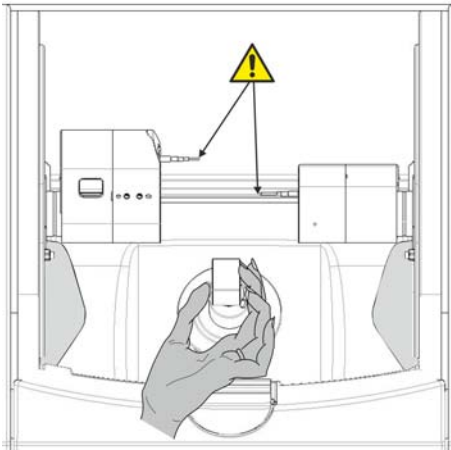
NOTICE

Repack only drained units!

Drain the unit! See "Removing water from the unit".

Store the unit in a closed and dry room at a temperature of -10°C to 50°C for a maximum period of 12 months.

6 Operation



⚠ CAUTION

Risk of injury on calibration pins/instruments

If you reach into the grinding chamber (e.g.: when inserting/removing a ceramic block, changing instruments or inserting/removing a calibration phantom), you may injure your hand on the calibration pins/instruments.

Be careful not to brush against the calibration pins/instruments with your hand.

Always insert your hand in the grinding chamber underneath the calibration pins/instruments.

6.1 Configuration (CEREC MC/MC X)

In the *"Devices"* area of the CEREC SW software, various settings can be subsequently modified.

1. Click the *"Configuration"* button in the system menu.
2. Click on the *"Devices"* button.
3. Click on the unit that you wish to configure.

Bar code reader

If a bar code reader is used, e. g. for inCoris ZI, the corresponding box must be activated. The bar code reader will then always be used to read a bar code.

Extraction Unit

If a suction device is connected, and the check mark is set, the dry milling process is automatically started when processing zirconium oxide. To deactivate dry milling, you can remove the check mark once again.

6.2 Calibrating the unit

NOTICE

Use only the supplied calibration tools

Use only the supplied calibration pins and the corresponding calibration phantom when calibrating the grinding unit.

Unit calibrated ex works

The unit is calibrated at the factory. No additional calibration is required during initial startup. Proceed as described below when performing a subsequent calibration.

NOTICE

Faulty grinding result

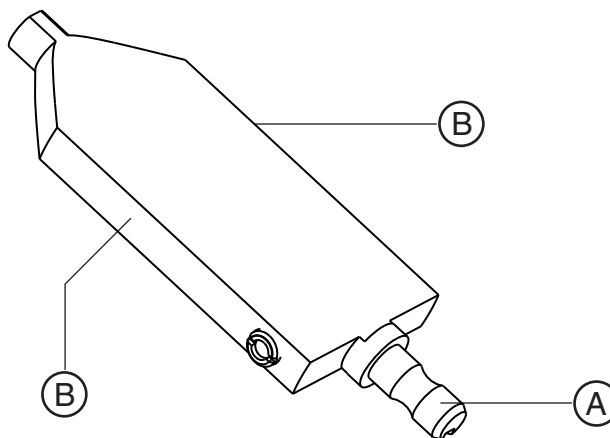
If the unit is not calibrated, the grinding result may be faulty.

Preparing a calibration

1. Take the calibration pins and calibration phantom out of the drawer of the unit.
2. In the software, navigate to the system menu, and click on the "Configuration" button.
3. Click on the "Devices" button.
4. Click on the unit that you wish to calibrate.
5. Click on the step "Calibrate".
 - ↳ The grinding unit then moves into position to insert the calibration tools.
A dialog box prompts you to insert the calibration pins and the calibration phantom and to close the grinding chamber door again.
6. Click on the "Start" button.

Inserting the calibration pins and phantom

1. Press the catch of the grinding chamber door and open the door.
2. Loosen the instruments with the torque wrench and remove them.



Calibration phantom

NOTICE

Grasp the calibration phantom correctly

Grasping the calibration phantom by its wide surfaces may cause calibration errors.

- Always grasp the calibration phantom by its clamping shank (A) when removing it from the storage box.
- Always grasp the calibration phantom by its narrow surfaces B when inserting it into the block fixing.

3. To insert the calibration phantom into the block fixing, grasp it by its narrow surfaces B.
4. Clamp the calibration phantom with the ball pressure screw. Use the block clamp tool for this purpose.
5. Insert the calibration pins in the motor mount by hand. Tighten the corresponding chuck with the torque wrench until a clicking sound can be heard.
6. Close the grinding chamber door.

Performing a calibration

- Confirm your selection in the "Calibrate milling unit" window with the "Start" button.
 - ↪ The automatic calibration begins and takes approx. 14 minutes. Wait until the calibration has been completed.

Inserting instruments

1. Open the grinding chamber door following calibration.
2. Loosen the calibration pins with the torque wrench and remove them.
3. Loosen the ball pressure screw.
4. Remove the calibration phantom by grasping it by its narrow surfaces (B).

NOTICE

Store the calibration tools in a safe place

Store the calibration pins and the calibration body in a safe place (e.g. in a storage box in the unit drawer).

5. Insert the instruments in the motor mount by hand. Tighten the corresponding chuck with the torque wrench until a clicking sound can be heard.
6. Close the grinding chamber door.
 - ↳ The dialog box for selecting the instruments then appears.
7. Select the inserted instruments and confirm by clicking the "Start" button in the window.
 - ↳ The motor mounts move to their starting positions.
The "Calibration succeeded" dialog box appears.

Exiting the calibration

1. Click on the "OK" button.
2. Click on the step "Exit Configuration".

6.3 Replacing the set screw



NOTICE

Not to be confused

Do not confuse the set screw with the ball pressure screw!

NOTICE

Wear to the set screw

Replace the set screw every 1000 clamping procedures or if the pin has broken off.

1. If a block is inserted in the block fixing, remove it.
2. In the software, navigate to the system menu, and click on the "Configuration" button.
3. Click on the "Devices" button.
4. Click on the unit whose set screw you wish to replace.
5. Click on the step "Change set screw".
 - ↳ The grinding unit moves into position (12 o'clock position) to insert the set screw.
 - ↳ A dialog box prompts you to replace the set screw and close the grinding chamber door again.
6. Remove the worn set screw using the block clamp tool.
7. Take a new set screw out of the drawer of the unit, insert it, and secure it in place using the block clamp tool.
8. Click on the "Ok" button.


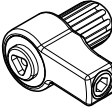





6.4 Production process

6.4.1 Process types

Various process types are available for production purposes. These vary in terms of the type of materials to be processed and the instruments to be used.

6.4.1.1 Grinding

For grinding purposes, use the following instruments as well as the appropriate torque wrench:

| Instrument | REF | Torque wrench | Clamping format of the force transmission |
|--|---------|---|---|
|  Step Bur 12 S | 6240167 |  | Triangular  |
|  Step Bur 12 | 6260025 | | |
|  Cyl. Pointed Bur 12 S | 6240159 | | |
|  Step Bur 20 | 6259597 | | |
|  Cyl. Pointed Bur 20 | 6259589 | | |

6.4.1.2 Milling

The milling option is available from the following serial numbers onwards:

| Machine type | Serial number (wet milling) | Serial number (dry milling also with retrofit) |
|--------------|-----------------------------|--|
| MC X | 231001 | 236001 |
| MC | 202001 | 202501 |

Other machines must be equipped with the milling starter kit for closed motors (REF: 64 51 079) (only for wet milling).

IMPORTANT


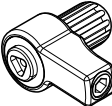


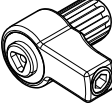




The milling process is supported in the CEREC software from version 4.3 onwards.

Activating the milling option

1. Select "Configuration" / "Settings" / "Milling".
2. Check "Activate".

Instruments and torque wrenches

For milling purposes, use the following instruments as well as the appropriate torque wrenches:

| Instrument | REF | Torque wrench | Clamping format of the force transmission |
|--|---------|---|---|
|  Finisher 10 | 6299387 |  | Triangular  |
|  Shaper 25: Milling (dry) | 6299395 |  | Triangular  |
|  Shaper 25 RZ: Milling (wet) | 6433440 |  | Square  |

6.4.1.3 Permitted instrument combinations

Depending on the materials to be processed and the process type used, various instrument combinations are permitted.

For a continuously updated table of approved instrument combinations, please visit the "www.sirona.com". To access the online portal for technical documentation, follow the "*SERVICE*" / "*Technical Documentation*" menu items in the navigation bar. The portal can also be accessed directly via the following address

<http://www.sirona.com/manuals>

Select your product there and then open the "*Bur table*" document.

6.4.2 Preparations

- ✓ Download or design a restoration (see operator's manual).
- ✓ When the "*Milling*" option is activated, in the "*Select Material*" material selection step, you can choose between the "*Grinding*" and "*Milling*" manufacturing processes for plastic and zirconium oxide materials.
- ✓ You are in the "*MILL*" phase and have selected the grinding unit, tested the settings, and positioned the restoration in the block.
- Click on the "*Start Milling*" step.
 - ↳ The grinding unit then moves to the insertion position.

6.4.3 Starting the production process

- ✓ The instrument sets are equipped with the required instrument combinations for the production process.
- 1. Depending on the configuration, you will be prompted to enter the bar code (see also "Entering the bar code").
- 2. Press the catch of the grinding chamber door and open the door.

NOTICE

Error message during touch process!

Always be sure to insert the ceramic block that you selected for the restoration. Otherwise an error message will be displayed during the touch process.



- 3. Place the selected ceramic block in the block fixing.
- 4. Clamp the ceramic block with the ball pressure screw. Use the block clamp tool for this purpose.
- 5. Close the grinding chamber door and confirm the procedure by clicking "Start".
 - ↳ The estimated time required for the production process will then appear in a message window.

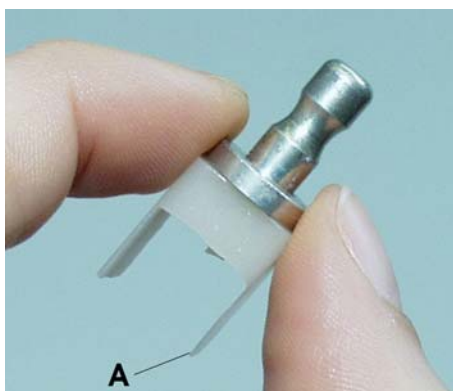
NOTICE

Aborting the production process

You can abort the production process at any time by pressing the "Stop" button.

6.4.4 Terminating the production process

- 1. When the production process has been completed, open the grinding chamber door.
- 2. Remove the restoration.



⚠ WARNING

Risk of injury on the remainder of the ceramic block

The remaining portion of the ceramic block may have sharp edges (e.g. A) that could injure you if it is not removed carefully.

Always grasp the remainder of the ceramic block by its metal holder.

- 3. Loosen the ball pressure screw.
- 4. Remove the remainder of the ceramic block.
- 5. Close the grinding chamber door.

⚠ CAUTION

Do not use inaccurate production results!

Production results must be judged by the user (dentist or dental technician) and must not be used if defects are detected!

NOTICE

If you have not used the grinding unit for a rather long time, we recommend you should switch it off and then open the grinding chamber door so that the grinding chamber can dry out.

6.4.5 Information on the seal of approval

Proper selection and processing of the material are decisive for the long-term clinical success of the restoration, especially in the case of zirconia. However, different types of zirconia require individually matched machine parameters. This is the reason why you can and must select different types of zirconia in the inLab software. These machine parameters are coordinated between Sirona and its material partners in complex development processes. In addition to the desired fit and surface quality, they also guarantee a maximum degree of material and equipment safety. The consistently high quality of the production results and the fit can only be guaranteed and damage to the production machines can only be excluded if certified materials are used.

NOTICE

Block without seal of approval

If a block is found without a seal of approval during the production process (milling or grinding), the following message appears:
„No quality label was recognized on the block. The grinding and milling processes as well as the instruments are specially verified for certified materials. Certified materials can be identified by the engraved "inLab" lettering on the block. The use of zirconium oxide materials without quality label can lead to inferior results as well as increased wear on the device and instruments.
Do you still wish to start the manufacturing process?“

6.5 Entering the bar code

Barcode Reader active

If you have activated the option *"Barcode Reader"* in the system configuration dialog (e.g. for inCoris ZI), you must read-in both bar codes with the bar code reader. To do this, hold the bar code reader tilted to a slight angle and move it over both of the bar codes on the block continuously and evenly.

If the reading process fails, you can read-in the bar code once again by pressing *"Retry"* (button 1 on the unit display). Alternatively, you also can enter the substitute code (8-digit character string, e.g. *1234XYZ) on the PC manually.

No bar code reader available

- Enter the substitute code (8-digit character string, e.g. *1234XYZ) on the PC manually.

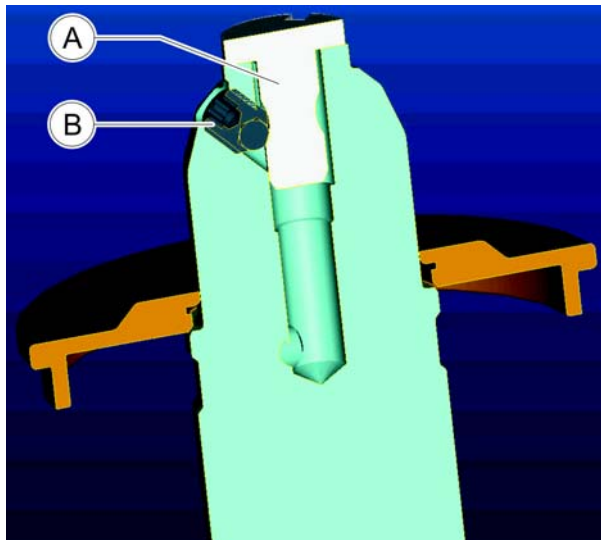
6.6 Manual block clamp

NOTICE

Wear of the ball pressure screw

The high clamping forces cause wear of the ball pressure screw.

- Replace the ball pressure screw every 500 clamping operations.



NOTICE

Fasten the block tightly

If the block is not tightened sufficiently, this may result in falsification of the grinding result and fracturing of its ceramic material.

- **Fasten the block very tightly with the block clamp tool.**
- Check to make sure that the block is seated very firmly.

1. Insert the block (A).
2. **Clamp** the ceramic block **securely** with the ball pressure screw (B). Use the block clamp tool for this purpose.
 - ↪ The block is pressed laterally against the contact surface of the block fixing and simultaneously pulled in axially. The plate of the block holder thus rests on the block fixing.

7 Service

NOTICE

Observe country-specific Regulations!

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

NOTICE

Perform maintenance regularly!

Have maintenance performed on your unit annually by trained technical personnel / a service engineer.

NOTICE

Observe error messages

You must observe error messages shown on the display on in the software. If the error message does not disappear even after you have performed the prompted action, contact your service engineer.

NOTICE

Machine care

Interval: Once a month

- Change the filter (see Changing the filter)
- **Clean** the clamping cones of the instruments according to the cleaning set instructions (REF 61 77 161).
- If the jets of water do not strike the instruments, carefully remove any foreign particles from the water nozzles with a probe.

NOTICE

Grinding chamber cleaning option

Interval (if dry milling is predominantly used): Once a week or in the case of heavy soiling.

- Clean grinding chamber.

NOTICE

Do not confuse the block screw with the ball pressure screw

When operating a CEREC 3 grinding unit and a CEREC MC/MC X grinding unit in the same room, be careful not to confuse the block screw of the CEREC 3 with the ball pressure screw of the CEREC MC/MC X.

NOTICE

Using the tank cap opener

If you find the tank cap, tank drain or filter insert hard to open by hand, use the tank cap opener (see "Using the tank cap opener").

NOTICE

Wear of the ball pressure screw

The high clamping forces cause wear of the ball pressure screw.

- Replace the ball pressure screw every 500 clamping operations.

7.1 Changing the water

7.1.1 General information

NOTICE

Damage to the pump and grinding drives!

An excessively high ceramic content in the cooling water will damage the pump and grinding drives.

Change the water regularly!

When the water is due to be changed, a message window appears on your monitor to remind you that it is time to change the water.

Preventing odors

All grinding additives contain a biologically degradable preservative. Despite this, however, odors may still develop under unfavorable conditions.

Observe the following:

- Change the water at least once a week.
- With ambient temperatures above 25°C, change the water every 2 to 3 days to prevent foul odors.
- Drain the tank if you do not intend to operate the unit for more than one week.
- Clean the tank if the odors recur.
- Add DENTATEC grinding additive and fill the tank up to the brim with water. Let it stand for at least 24 hours and then rinse it out thoroughly with water once again.

NOTICE

Damage to surfaces!

When undiluted, DENTATEC grinding additive etches plastic surfaces and can cause discoloration.

- Do not place DENTATEC on the unit.
- Do not spill DENTATEC.

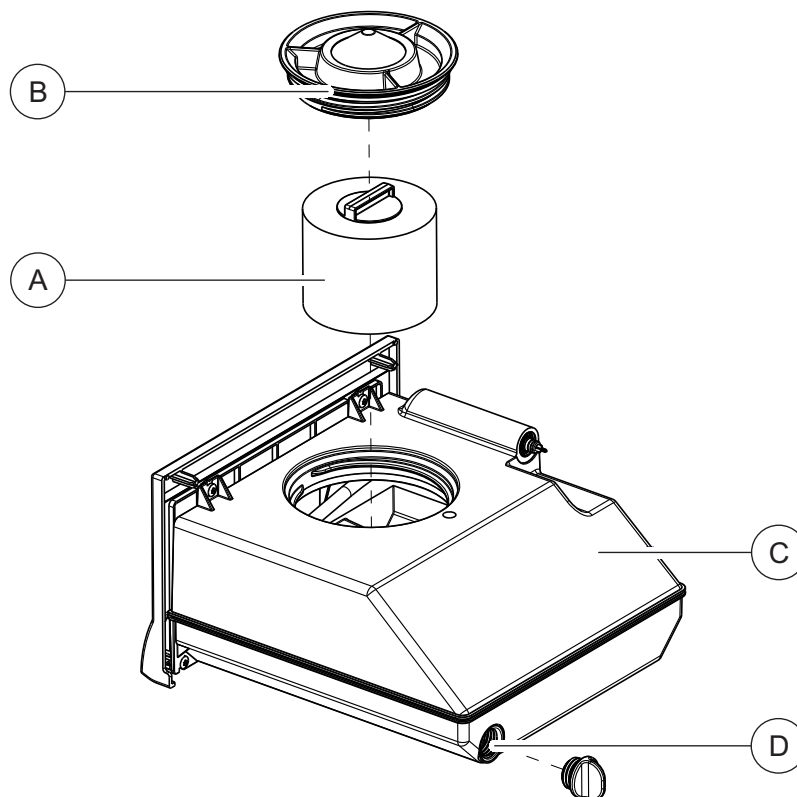
NOTICE

Permissible grinding additive

Use only DENTATEC as a grinding additive.

7.1.2 Changing the water

7.1.2.1 Water tank MC / MC X



Water tank

| | | | |
|---|---------------|---|------------|
| A | Filter insert | C | Tank |
| B | Tank cap | D | Tank drain |

To change the water, proceed as follows:

- ✓ The unit is switched on.
 - ✓ No machining process is running.
1. Pull out the water tank at the front of the unit.
 2. Open the drain opening.
 3. Drain the water tank.
 4. Turn the tank cap counter-clockwise and take it off. If you find the tank cap hard to open by hand, use the tank cap opener (see "Opening the tank cap").
 5. Remove the filter insert from the tank and clean the filter thoroughly under running water.
 6. Rinse the water tank.
 7. Insert the cleaned filter with handle into the tank and press it firmly onto the base in the floor of the tank.
 8. Close the drain opening.

NOTICE

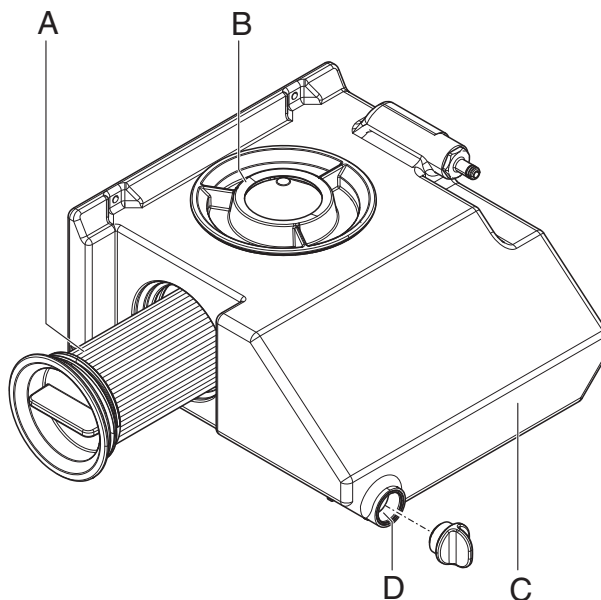
Foaming not permissible!

If any cleaning agents are used, this will create foam, which is not permitted.

Do not use any cleaning agents.

9. Add approx. 75 ml of DENTATEC to the tank.
10. Fill the tank with water until the filter insert is completely immersed (up to the bottom edge of the cover thread, approx. 3 liters).
11. Wait for a short time until the filter insert is completely soaked; then add an appropriate amount of water.
12. Close the water tank by tightening the tank cap clockwise by hand. **Do not use the tank cap opener for this.**
13. Push the water tank back into the housing.

7.1.2.2 Water tank CEREC MC XL Basic



Water tank

| | | | |
|---|---------------|---|------------|
| A | Filter insert | C | Tank |
| B | Tank cap | D | Tank drain |

To change the water, proceed as follows:

- ✓ The unit is switched on.
 - ✓ No machining process is running.
1. Pull out the water tank at the front of the unit.
 2. Open the drain opening.
 3. Drain the water tank.
 4. Turn the tank cap counter-clockwise and take it off. If you find the tank cap hard to open by hand, use the tank cap opener (see "Opening the tank cap").

5. Unscrew the side cap.
6. Remove the filter insert from the tank and clean the filter thoroughly under running water.
7. Rinse the water tank.
8. Insert the cleaned filter with its cap into the unit and screw it tight.
9. Close the drain opening.

NOTICE

Foaming not permissible!

If any cleaning agents are used, this will create foam, which is not permitted.

Do not use any cleaning agents.

10. Add approx. 75 ml of DENTATEC to the tank.
11. Fill the tank with water until the filter insert is completely immersed (up to the bottom edge of the cover thread, approx. 3 liters).
12. Wait for a short time until the filter insert is completely soaked; then add an appropriate amount of water.
13. Close the water tank by tightening the tank cap clockwise by hand.
Do not use the tank cap opener for this.
14. Push the water tank back into the housing.

7.2 Instruments

7.2.1 Overview of materials/instruments

7.2.1.1 CEREC MC

For a continuously updated table of approved instrument combinations, please visit the "www.sirona.com". To access the online portal for technical documentation, follow the "*SERVICE*" / "*Technical Documentation*" menu items in the navigation bar. The portal can also be accessed directly via the following address
<http://www.sirona.com/manuals>
Select your product there and then open the "*Bur table*" document.

7.2.1.2 CEREC MC X

For a continuously updated table of approved instrument combinations, please visit the "www.sirona.com". To access the online portal for technical documentation, follow the "*SERVICE*" / "*Technical Documentation*" menu items in the navigation bar. The portal can also be accessed directly via the following address
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Select your product there and then open the "*Bur table*" document.

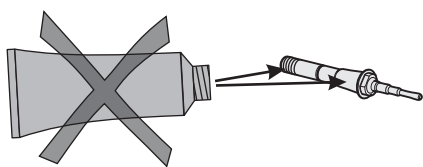
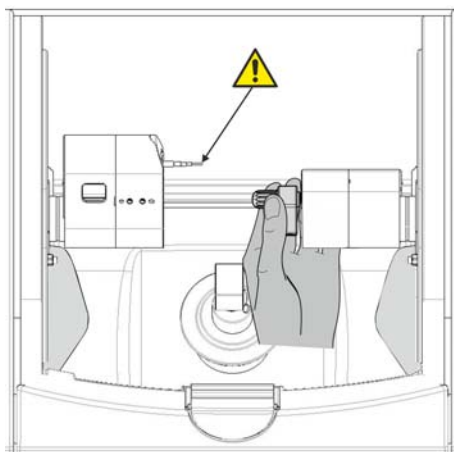
7.2.2 Changing instruments

NOTICE

Regular replacement of the instruments

Change the instruments as soon as the system prompts you to do so.

- ✓ The torque wrench from the draw of the grinding unit is ready-to-hand.
- 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 unit whose instruments you wish to replace.
- 4. Click on the "Start" button.
 - ↳ The motors travel to the change position for the instruments. The dialog box for changing the instruments opens.
- 5. Press the catch of the grinding chamber door and open the door.



CAUTION

Risk of injury on instruments

If you put your hand in the grinding chamber, you could injure it on the instruments.

Be careful not to brush against the instruments with your hand.

Apply the torque wrench as shown.

- 6. Loosen the worn-out or defective instrument with the torque wrench and pull it out manually.
- 7. **NOTICE! Do not grease the instrument!** Insert the new instrument into the motor mount by hand. Tighten the corresponding chuck with the torque wrench until a clicking sound can be heard.

NOTICE

Faulty grinding results

Interchanging instruments leads to faulty grinding results.

- 8. Close the grinding chamber door.
- 9. Select the instrument(s) you have inserted on the PC monitor and click "Start".
You can also select the instruments on the grinding unit (up/down arrow) and confirm with "Start".

NOTICE

Cleaning cooling water nozzles

The cooling water nozzles in the grinding chamber always must be kept free of lime and grinding dust deposits. The corresponding cooling water jet must always strike the instrument accurately!

- ✓ The cooling water nozzles are dirty.
- Clean the nozzles with a cleaning wire and a syringe.

NOTICE

Use only suitable instruments!

Do not use any instruments from CEREC 2 or CEREC 3 units.

Changing a defective instrument

If an instrument breaks during the production phase, the corresponding motor travels to the change position. A dialog box which marks the side with the broken instrument with a red cross then opens.

- ✓ The instrument is broken.
1. Change the defective instrument as described above.
 2. Select the instrument which you have inserted.
 3. Press the "Start" button.

7.3 Care, cleaning agents, and disinfectants

NOTICE

Approved care, cleaning, and disinfecting agents

Use only care, cleaning and disinfecting agents approved by Sirona!

For a continuously updated list of approved agents, please visit "www.sirona.com". To access the online portal for technical documentation, follow the "SERVICE" / "Technical Documentation" menu items in the navigation bar. The portal can also be accessed directly via the following address <http://www.sirona.com/manuals>. Click on the menu item "General documents" and then open the "Care, cleaning and disinfection agents" document.

If you do not have any access to the Internet, please contact your dental depot to order the list (REF 59 70 905).

7.4 Cleaning surfaces

NOTICE

Do not allow liquids to run into the ventilation slots!

7.4.1 Disinfecting

Wipe surfaces down with a surface disinfectant (wiping disinfectant).

Observe the manufacturer's instructions regarding restrictions for use.

7.4.2 Protection against medicaments

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

NOTICE

Damage to the surface

Clean the surface immediately with a moist cloth and a cleaning agent.

7.4.3 Cleaning

Remove dirt, grime and disinfectant residue regularly using mild, commercially available cleaning agents.

7.5 Replacing the main fuses

WARNING

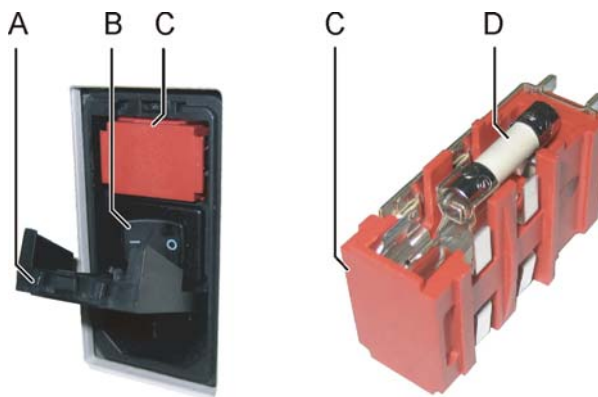
Electric shock

Disconnect the power plug at the unit end before replacing the fuses.

NOTICE

Fuse type

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



Fuse holder

| | | | |
|---|-------|---|-------------|
| A | Cover | C | Fuse holder |
| B | CC | D | Fuse |

Fuses:

T5H250V

Order No. 20 33,111

- ✓ The power plug must be disconnected.
- 1. Use a screwdriver to carefully pry off the cover of the fuses on the back side of the unit.
- 2. Pull out the fuse holder.
- 3. Replace the defective fuses.
- 4. Reinsert the fuse holder.
- 5. Close the cover.

7.6 Changing the filter

NOTICE

Change the filter regularly

Clean the filter regularly and change it immediately when damaged. Otherwise, change it every 3 months.

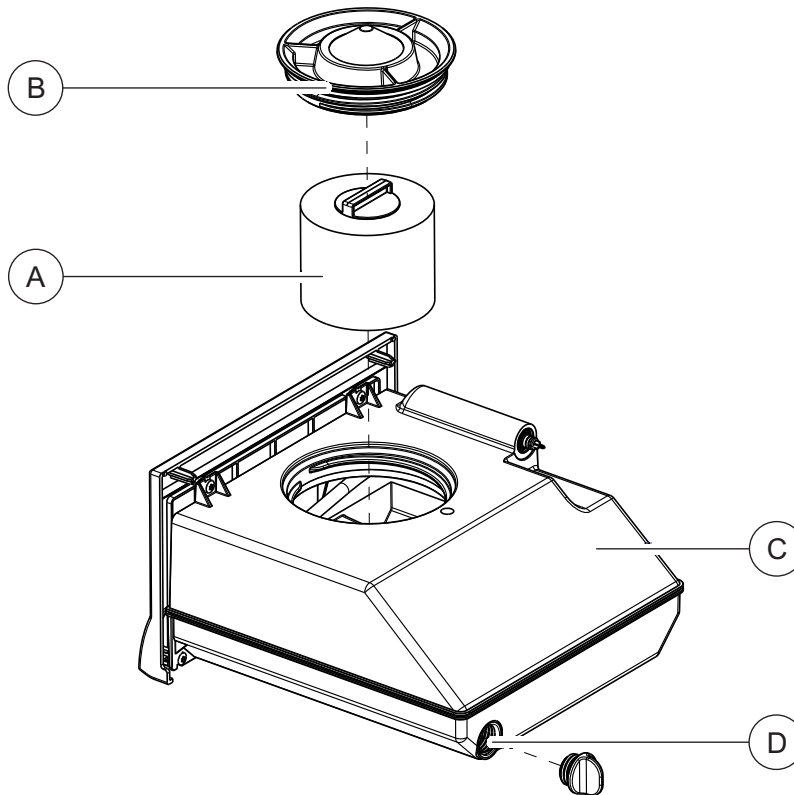
If a message appears stating that the water pressure is too low, you must clean the filter or, if it is damaged, replace it immediately.

CAUTION

Filter

Use only filters approved by Sirona!

7.6.1 Water tank MC / MC X



Water tank

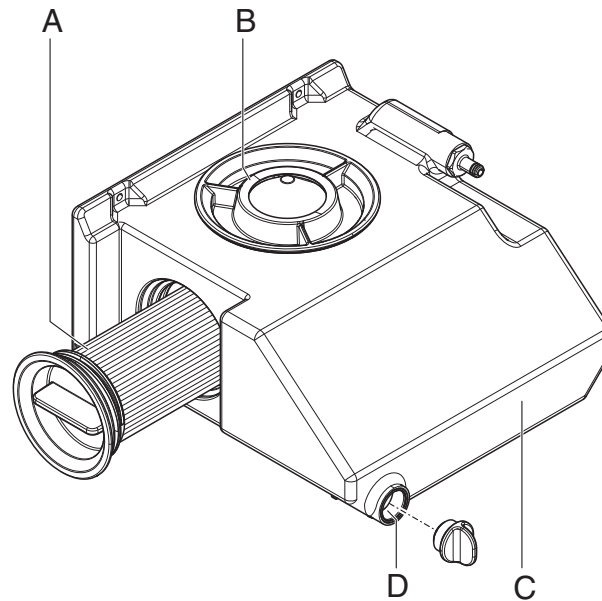
| | | | |
|---|---------------|---|------------|
| A | Filter insert | C | Tank |
| B | Tank cap | D | Tank drain |

- ✓ The tank is drained, see "Removing water from the unit".
- 1. Pull out the water tank at the front of the unit.
- 2. Turn the tank cap counter-clockwise and take it off. If you find the tank cap hard to open by hand, use the tank cap opener.

3. Take the filter insert out of the tank.
4. Rinse the water tank.
5. Insert a new filter with handle into the tank and press it firmly onto the base in the floor of the tank.
6. Fill the tank, see "Changing the water" [→ 46].
7. Close the water tank by tightening the tank cap clockwise by hand.
Do not use the tank cap opener for this.
8. Push the water tank back into the housing.

| |
|---|
| NOTICE |
| <p>Cleaning the filter</p> <p>Clean the filter approx. every 12 to 15 units under running water, but at least with every water change.</p> |

7.6.2 Water tank CEREC MC XL Basic



Water tank

| | | | |
|---|---------------|---|------------|
| A | Filter insert | C | Tank |
| B | Tank cap | D | Tank drain |

- ✓ The tank is drained, see "Removing water from the unit".
1. Pull out the water tank at the front of the unit.
 2. Unscrew the cover on the side and take it out of the tank along with the filter insert.
 3. Rinse the water tank.
 4. Insert a new filter with cover into the tank and screw it tight.
 5. Fill the tank, see "Changing the water" [→ 46].

Filter insert:

Order No. 61 29 519

NOTICE**Cleaning the filter**

Clean the filter approx. every 12 to 15 units under running water, but at least with every water change.

7.7 Removing water from the unit

You must remove the water from the unit if you will not be using it for a longer period of time or wish to transport it.

- ✓ No grinding process is running.
- 1. Turn the device off.
- 2. Pull out the water tank at the front of the unit.
- 3. Drain the water out of the water tank through the drain opening and reinsert the water tank in the unit.
- 4. Switch the unit on.

NOTICE**Pump button active at power-up**

The "*Pump*" button appears on the display when the grinding unit is switched on. You can start or stop the water pump by pressing this button.

- 5. Press the "*Pump*" key to switch the pump on.
 - ↳ The water pump then starts pumping the water out of the unit.
Let the pump run until no more water escapes from the nozzles.
- 6. Press the "*Pump*" key to switch the pump off.
- 7. Pull out the water tank and empty it.
- 8. Push it back into the housing.

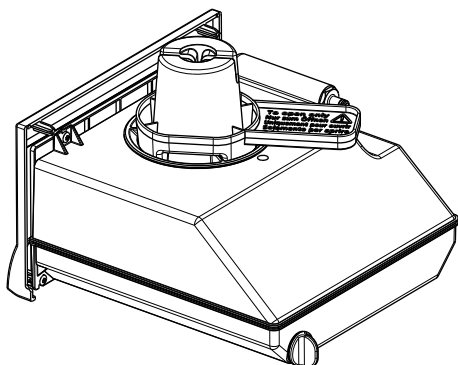
7.8 Using the tank cap opener

NOTICE**Risk of damage to the tank**

Use the tank cap opener **only for opening** the tank cap and tank drain.

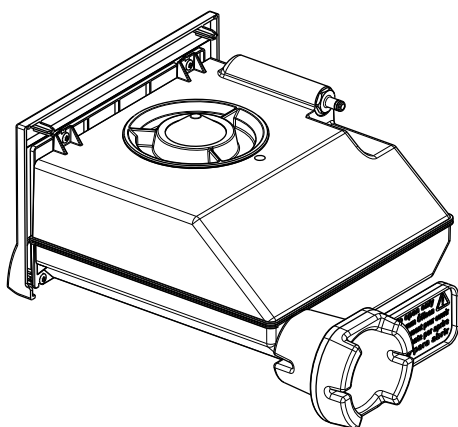
Do not use the tank cap opener for closing the tank cap. To close the tank cap and tank drain, it is sufficient to tighten them clockwise by hand.

Opening the tank cap



- ✓ The water tank has been pulled out and drained.
- Place the tank cap opener on the tank cap as shown, and take off the tank cap by unscrewing it counter-clockwise.

Opening the tank drain



- ✓ The water tank has been pulled out.
- Place the tank cap opener on the filter drain as shown, and take off the filter drain by unscrewing it counter-clockwise.

8 Technical description

8.1 System requirements

8.1.1 CEREC MC

The CEREC SW software must only be installed on CEREC acquisition units.

For all software generations 4.x and higher, CEREC AC Bluecam PC hardware version must be LN or higher (Windows 7, 64 bit). No hardware limitations for CEREC AC / AF / AI with Omnicam.

If necessary, upgrade your operating system.

The software version must be CEREC SW 4.2.0 or higher.

8.1.2 CEREC MC X

The CEREC SW / CEREC Premium SW / CEREC Premium CAM SW software must only be installed on CEREC acquisition units or on the 64-bit inLab PC (optional).

The software version must be either CEREC SW 4.2.0 or inLab SW 4.2.0 or higher.

For all software generations 4.x and higher, CEREC AC Bluecam PC hardware version must be LN or higher (Windows 7, 64 bit). No hardware limitations for CEREC AC / AF / AI with Omnicam.

8.2 Grinding and milling unit

8.2.1 General technical description

- Digital feed control with force monitoring for extremely sensitive processing
- Process-controlled tool drives
- Production repeatability: $\pm 25 \mu\text{m}$

Milling instruments

- Step Bur 12 S
- Cyl. Pointed Bur 12 S
- Step Bur 12
- Step Bur 20
- Cyl. Pointed Bur 20

Milling instruments

- Shaper 25 RZ (wet milling)
- Shaper 25 (dry milling)
- Finisher 10

8.2.2 Technical data

| | |
|---|---|
| Type designation | Grinding unit CEREC MC/MC X |
| Rated line voltage | 100 V - 230 V AC |
| Rated power frequency | 50/60 Hz |
| Rated current | 1.5 - 3.5 A |
| Nominal power output | 320 VA |
| Permissible line voltage fluctuations | ±10% of nominal voltage |
| Type of protection against electric shock | Class 1 device |
| Degree of protection against ingress of water | Ordinary device (without protection against ingress of water) |
| Overvoltage category | II |
| Ambient conditions | For indoor use Pollution degree 2 Air pressure: 700 hPa – 1,060 hPa |
| Temperature range | 5 °C - 40 °C |
| Humidity range | 80% rel. up to 31 °C decreasing to 50% rel. up to 40 °C |
| Operating mode | Continuous operation |
| Dimensions (WxHxD) in mm | 700 x 425 x 420 |
| Approx. weight | 43 kg |

8.2.3 Controller board

- 3x 2-axis stepping motor controller with microstepping
- 2 DC motor controllers with integrated speed and current control and force monitoring
- Ethernet, RJ45 interface 10 Mbit/sec

9 Disposal



In accordance with Directive 2012/19/EU and national disposal regulations regarding old electrical and electronic devices, please be advised that such items must be disposed of in a special way within the European Union (EU). These regulations require 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.

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

Tel.: +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 product, it must be fully prepared (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.

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

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