10.2016



CEREC SpeedFire

Operating Instructions



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General data

1.1 Dear customer,

Thank you for purchasing your CEREC SpeedFire high-temperature furnace from Sirona.

It will support you with your work for many years, as it was developed and built with state-of-the-art technology.

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

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

1.2 Contact information

In the event of technical queries, please use our online contact form at www.sirona.com. In the navigation bar, go to the menu commands "CONTACT" / "Customer Service Center" and then click the "CONTACT FORM FOR TECHNICAL QUESTIONS" button.

Sirona Dental Systems GmbH Fabrikstrasse 31 64625 Bensheim Germany Phone: +49 (0) 6251/16-0 Fax: +49 (0) 6251/16-2591 e-mail: contact@sirona.com

www.sirona.com

1.3 General information about this operating manual

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. Always keep the Operating Instructions handy in case you or another user require(s) information at a later point in time. Save the Operating Instructions on the PC or print them out. If you sell the unit, make sure that the Operating Instructions are included with it either as a hard copy or on an electronic storage device so that the

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.

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

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

Customer service center

Manufacturer's address



Observe the Operating Instructions

Keep documents safe

Online portal for technical documents

Help

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 this document. This information is highlighted as follows:

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

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

AUTION

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 for facilitating work.

1.4.1.2 Formats and symbols used

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

Prerequisite	Requests you to do something.
1. First action step	
2. Second action step	
or	
 Alternative action 	
∜ Result	
 Individual action step 	
see "Formats and symbols used [\rightarrow 6]"	Identifies a reference to another text passage and specifies its page number.
• List	Identifies a list.
"Command / menu item"	Identifies commands, menu items, or quotations.

Equipment options

Maintenance

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 Scope of these Operating Instructions

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

1.6 Warranty and liability

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, Sirona Dental Systems or its authorized dealer does not assume any liability for damage caused.

1.7 Intended use

The unit may only be used in conjunction with the Sirona CAD/CAM system and is used for producing ceramic restorations.

The CEREC SpeedFire is suitable for sintering, painting and glazing ZrO_2 ceramics and for painting and glazing glass ceramics. Only heat treatment processes sent as a job to the unit from the Sirona CAD/CAM software may be performed. Heat treatments must be applied exclusively to the restorations and materials assigned by the software.

The heat treatment is specified automatically by the CAD/CAM software and is based on the material and dimensions of the restoration.

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

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

Follow the instructions

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

NOTICE

Use of acidic coloring liquids

Coloring liquids may contain acids which can escape during the sintering process and damage the heating element.

➤ Recommendation: Only use Sirona water-based coloring liquids.









Accompanying documents



1.8 Legend

Year of manufacture

"Hot surface" symbol

"Warning of hand injuries" symbol

Warning of hand injuries in the vicinity of devices with closing mechanical parts.

Product disposal symbol (see "Disposal [\rightarrow 52]").

This symbol can be found on the rating plate on the unit. Meaning: Observe the Operating Instructions when operating the unit.

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

Meaning: The accompanying documents are available on the Sirona homepage.



Take note of the following symbols on the packaging:

Тор













Protect from moisture

Fragile; handle with care

Do not stack

Temperature during storage and transport

Relative humidity during storage and transport

Air pressure during storage and transport

> Safety instructions

- 2.1 Basic safety information
- 2.1.1 Prerequisites

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!

2.1.2 Maintenance and repair

- 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.

2.1.3 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!

For reasons of product safety, this product may be operated only with original Sirona accessories or third-party accessories expressly approved by Sirona. The user assumes the risk of using nonapproved accessories.

2.1.4 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 is responsible for any damage resulting from the use of non-approved accessories.

2.1.5 In case of damage

In case of noticeable malfunctions or damage, stop using the instrument immediately and notify your authorized dealer or the manufacturer.

2.2 Connecting the unit

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

2.3 Connection of external equipment

If any equipment not approved by Sirona is connected, it must comply with the applicable standards:

- EN 60 950 for information technology equipment, and
- EN 61 010-1 for laboratory equipment.

2.4 Patient environment





CEREC SpeedFire is a laboratory device and may not therefore be used in the patient environment (A).

This applies to all possible patient positions (\mathbf{B}) during the examination or treatment.



2.5 Ventilation slots

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

Do not spray into the ventilation slots



Do not spray liquids such as disinfectants into the ventilation slots. This may lead to malfunctions. Use wipe disinfection only in the vicinity of the ventilation slots.

2.6

Product-specific safety instructions

Risk due to improper operation

The unit may only be operated by employees who are familiar with the content of these operating instructions. Signs and labels on the unit must be kept in legible condition at all times. They may not be removed.

A CAUTION

Danger due to incorrect installation

The unit may only be set up in dry rooms and must never be in contact with any liquids. Furniture items and other equipment in the vicinity of the furnace must not contain any explosive, flammable or easily ignitable materials. It is prohibited to keep or store ignitable or flammable gases or liquids in the room where the furnace is set up.

🕂 WARNING

Risk of burns or damage / risk of the temperature measuring element shifting

There is a risk of burns or of contact with insulating material if you reach into the furnace chamber.

There is also a risk of the temperature measuring element being damaged or shifting.

- Please wear safety gloves and use the tweezers when loading or unloading the furnace.
- Never touch the temperature measuring element.

🕂 WARNING

Risk of burns due to objects falling out

As there is a serious risk of burns in this case, it is essential to install a fire-proof table and floor covering.

I. For safety reasons, the furnace must be operated when standing. This is the only way that the user can quickly avoid any parts that fall out.

II. You are advised to wear heat-proof protective clothing when carrying out super speed sintering. In accordance with professional association regulations, the operator of the site is responsible for providing the user with appropriate protective clothing.

III. The operator of the site is responsible for providing the user with appropriate safety instructions.

IV. If a fracture occurs during the sintering process as a result of a failure to follow the recommended drying procedure, there is a risk that hot objects will fall out as soon as the furnace door is opened.

V. The furnace should only be loaded and unloaded using the tweezers. For safety reasons, a trained user must be present when the furnace is being loaded or unloaded.

Risk of burns due to hot surfaces

The unit may develop hot surfaces in some areas after extended use. Use the necessary caution around the unit, especially when the furnace is operated for extended periods.

Never touch the hot surfaces.

2.7 Insulation material of the furnace chamber

Handling and disposing of the insulating material

Abrasion of insulating material in the furnace door area may occur, which is visible as white dust. These deposits should:

- be wiped off with a moist cloth or
- be extracted with a vacuum cleaner with a fine particle filter (e.g. HEPA / Dust category H),
- not be blown away with compressed air,
- not be blown away by the wind.

Direct skin contact may lead to skin irritation. Please therefore avoid contact with the skin and eyes and wear gloves and safety goggles as necessary. In the event of contact with the skin wash the dust of the insulating material off with clear running water.

Always dispose of the insulating material in a closed container (see also "Disposal [\rightarrow 52]").

Please also observe the information provided under "Positioning the door insulation [\rightarrow 30]".

3 Product description

3.1 Main components of the product

Basic unit



A	Basic unit CEREC SpeedFire	D	Bottom door insulation
В	Control panel	Е	Top door insulation
С	Start button		

Rear of the basic unit



Rear side of the control panel



A	Connector plug for the communication control panel	С	2x USB
В	"Ethernet" connection for LAN		

3.2 Explanation of the symbols

3.2.1 Information

The following data is available in the Information menu:

- "serial number"
- "furnace firmware"
- "user app"
- "MAC-address:"









3.2.2 Job archive

The *"Job Archive"* contains new, processed, deleted and canceled jobs. You can permanently delete the jobs or send them to the job list again.

- 1. To process the jobs, go to the overview via information (symbol "i") / "Job Archive".
- 2. Select the job to be processed here and press "Next" ("Start" symbol).
 - $\,\,{\ensuremath{{\S}}}\,$ You will then see all possible processing steps displayed.
- 3. Confirm the processing step by tapping it.
- **4.** You can go back to the job list by tapping the symbols "Step back" and "Home".

The multi-select option is enabled here automatically.

3.2.3 Settings

The Settings menu includes the following sub-menus:

- "LAN-Settings"
- "WLAN-Settings"
- "Service"
- "basic settings"

LAN settings

You can switch from a static to an assigned IP address here.

WLAN settings

You can change the settings for your wireless connection here.

Service

Service functions such as the temperature test, log files and calibrate are only used with the support of customer services or a trained service technician.

- Temperature test
- Logfiles
- Door open and close
- Calibration
- Factory settings
 Use this option to reset the unit to factory settings. All saved data is
 lost in this process.

Basic settings

You can select the unit of temperature, the time, date and language here.

	3.2.4	Home
\bigtriangleup		Touching the "Home" icon always takes you back to the job list main view.
	3.2.5	Multi-select
E		Touching this icon allows you to select multiple jobs.
	3.2.6	Next step
>		Touching this icon takes you to the next step.
	3.2.7	Previous step
<		Touching this icon always takes you to the previous step.
	3.2.8	Start of
		Use this option to start your selected actions.
	3.2.9	Cancel
\bigcirc		Use this option to cancel the current action.
		After canceling a job, the job is sent automatically to the central archive. You can activate the job again by selecting it.
	3.3	Standards/ approvals/ certifications
		CE mark
CE		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.

3.4 Technical data

Model designation:	CEREC SpeedFire
Type of protection against electric shock:	Protection Class I device
Degree of protection against ingress of water:	Ordinary device (without protection against ingress of water)
Setup location:	Indoors in dry area
Operating altitude:	≤ 2000 m above sea level
Temperature range:	5°C to 35°C (41°F to 95°F)
Relative humidity	max. 80%
Pollution degree:	2
Mode of operation	Continuous operation
Dimensions of unit (W x H x D in mm):	250 x 425 x 425
Dimensions of packaged unit (W x H x D in mm):	400 x 600 x 500
Furnace chamber:	Diameter 38 mm x 20 mm height
Maximum sintering temperature:	1600°C (2912°F)
Approx. weight without packaging:	21 kg
Approx. weight including packaging:	30 kg
Rated line voltage:	AC 100V - 240V
Rated power frequency:	50/60Hz
Admissible line voltage fluctuations:	±10% of nominal voltage
Power consumption:	max. 1200 W
Interfaces:	2x USB 2.0
	1x LAN (RJ45)

WLAN (optional via WLAN USB dongle)

3.5 Electromagnetic compatibility

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

CEREC SpeedFire complies with the requirements for electromagnetic compatibility (EMC) according to DIN EN 61326-1:2006-10.

CEREC SpeedFire is hereinafter referred to as "UNIT".

3.5.1 Electromagnetic emission

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

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

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

3.5.2 Interference immunity

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

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

Interference immunity tests	IEC 60601-1-2 Test level	Compliance level	Electromagnetic environment - guidelines	
Electrostatic discharge (ESD) according to IEC 61000-4-2	± 4 kV contact ± 8 kV air	± 4 kV contact ± 8 kV air	Floors should be wood, concrete, or ceramic tile. If the floor is covered with synthetic material, the relative humidity must be at least 30%.	
Electrical fast transient/burst according to IEC 61000-4-4	± 0.5 kV for input and output lines ± 1 kV for power supply lines	± 0.5 kV for input and output lines ± 1 kV for power supply lines	The quality of the line power supply should be that of a typical commercial or hospital environment.	
Surge voltages according to IEC 61000-4-5	± 0.5kV differential mode voltage ± 1 kV common mode voltage	± 0.5kV differential mode voltage ± 1 kV common mode voltage	The quality of the line power supply should be that of a typical commercial or hospital environment.	
Voltage dips, short interruptions and variations of the power supply according to IEC 61000-4-11	0% U _T for $\frac{1}{2}$ period (100% dip of U _T)	0% U _T for ½ period (100% dip of U _T)	The quality of the line power supply should be that of a typical commercial or hospital environment.	
Conducted RF interference IEC 61000-4-6	1 V _{eff} 150 kHz to 80 MHz	1 V _{eff}	d= [1.2] √P	
Radiated RF interference IEC 61000-4-3	3V/m 80MHz to 1GHz 3V/m 1.4GHz to 2.0GHz	3 V/m 3 V/m	$d = [1.2] \sqrt{P}$ at 80MHz to 1GHz $d = [2.3] \sqrt{P}$ at 1.4GHz to 2.7GHz	
	1V/m 1.4GHz to 2.7GHz	1 V/m	with P as the power rating of the transmitter in watts (W) according to the transmitter manufacturer's specifications and d as recommended safety distance in meters (m).	
			Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey ¹ should be less than the compliance level ² in each frequency range.	
			Interference is possible in the vicinity of equipment bearing the following graphic symbol.	

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.

- 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.

3.5.3 Working clearances

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

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

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

Remark 1

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

Remark 2

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

Transport and commissioning

4.1 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.

If you no longer have the original packaging, this can also be reordered. The order number is 65 82 899.

Before shipping the unit, remove the door insulation (top/bottom) and the positioning pin and close the furnace door.

4.2 Repacking

- ✓ The main switch on the back side of the unit is set to the 0 (OFF) position.
- **1.** Pull out the power cable.
- **2.** Loosen both knurled screws on the communication cable connector and pull it out.
- 3. Stow the power cable and the communication cable.
- 4. Check the unit for completeness according to the scope of delivery.
- 5. Pack the unit securely.

4.3 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.

4.4 Scope of delivery and accessories

- Furnace
- Power cable
- Restoration holder ("Glazing Support Single Unit" and "Glazing Support Multi Unit")
- Top and bottom door insulation
- Positioning pin for door insulation
- CEREC SpeedPaste
- CEREC Zirconia Shade Guide
- Tweezers
- USB-WLAN adapter
- Ferrite core
- Network cable

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 is responsible for any damage resulting from the use of non-approved accessories.

4.5 Setup/connection

4.5.1 Transportation without packaging

Transportation without packaging



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.

- Do not grasp the unit by its plastic housing.
- Always grasp the unit by its chassis next to its feet.

4.5.2 Installation site

The unit is designed for desktop use and requires a level footprint of approx. $250 \times 425 \text{ mm}$ (W x D) with a loading capacity of 21 kg. The unit is 425 mm high. The ventilation slots on the rear of the unit must not be obstructed. Ensure there is a minimum distance of 100 mm between the rear of the unit and wall.

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

- 1. Always set up the unit in a dry location, as specified in the safety information.
- **2.** Position the unit so that the main switch on the back is easily accessible (at least 100 mm from wall).

4.5.3 Connecting the unit to the power supply and existing network

Connecting the unit to the power supply

Only use the power cord supplied in the package for connecting to the mains. The unit must be connected directly to a fixed socket and must not be bridged via an extension cable.

➤ Connect the unit to the power supply.

Connecting the control panel

Connect the control panel directly to the primary unit using the communication cable. Make sure that both knurled screws on the connector are fastened tightly.

Connecting the unit to the network

Integrate your unit into your existing network via the LAN "Ethernet" connection. Use the supplied network cable to do so.

Fasten the ferrite core

1. Place the network cable into the open ferrite core.





2. Close the ferrite core until it locks into place.



4.5.4 WLAN configuration

Use the USB WLAN adapter also supplied for wireless connection of the unit to an existing network.

- 1. Inset the adapter into one of the existing USB slots on the control panel.
- 2. Activate the WLAN configuration in the Settings menu / "WLAN-Settings" by pressing "ON".
- **3.** As soon as the WLAN function is activated, available networks are shown. Pressing on the desired network will open the network key entry dialog automatically. Input the network key and confirm the entry by pressing enter.
- **4.** Press on the selected network again to open the IP address input window.
- **5.** Tap on the number field to change the IP address. By pressing the relevant rows, you have the option to change the entry.
- **6.** Before leaving the menu, confirm the entry by pressing enter. Otherwise your changes will not be saved.
- 7. You can now leave the menu and configure the settings on the PC.
- **8.** Select the network selected on the SpeedFire on the PC and adjust the IP address accordingly where necessary.
- **9.** You can now automatically search for the device in the CEREC software device configuration or add it manually.

4.6 Commissioning

4.6.1 Insert the storage tray baseplate

 Place the baseplate also supplied into the storage area provided above the fan.



4.6.2 Switching the unit ON and OFF

Switch on the unit

NOTICE

Only switch on the unit once you have connected the network cable.

- **1.** Use the main switch on the rear of the unit to switch it on.
- 2. Press the start button on the control panel until the unit's strip of LEDs lights up.
 - The unit completes a system check and starts the application software.

Switching the unit off

- ➤ To switch off the unit again, press and hold the start button on the control panel for several seconds.
- or
- > You can also use the main switch on the rear of the unit to switch it off.

Open door

- 1. Open the door in order to insert the door insulation also supplied.
- 2. Go to the Settings menu / "Service" / "open/ close door", in order to activate the opening of the door.
- 3. Close the menu after opening in order to arrive at the main view.

IMPORTANT

An update process interrupted due to a power failure means that the control panel will be displayed when the unit is turned on and will disappear immediately.

- In this case, press the Start button (A) on the control panel and keep this pressed down until a beep sounds on the furnace and the furnace restarts.
- ✤ This process can take 2-3 minutes.



4.6.3 Positioning the door insulation

Handling and disposing of the insulating material

Abrasion of insulating material in the furnace door area may occur, which is visible as white dust. These deposits should:

- be wiped off with a moist cloth or
- be extracted with a vacuum cleaner with a fine particle filter (e.g. HEPA / Dust category H),
- not be blown away with compressed air,
- not be blown away by the wind.

Direct skin contact may lead to skin irritation. Please therefore avoid contact with the skin and eyes and wear gloves and safety goggles as necessary. In the event of contact with the skin wash the dust of the insulating material off with clear running water.

Always dispose of the insulating material in a closed container (see also "Disposal [\rightarrow 52]").

The unit must not be operated without door insulation.

1. Insert the positioning pin into the hole of the furnace door.





2. Start by placing the bottom door insulation on the positioning pin.



3. Insert the top door insulation onto the bottom door insulation. The door insulation is a consumable and suffers wear from each use. It is therefore excluded from the warranty. After use, wear is visible on the insulation as abrasion and cracks. The cracks have a negative impact on the quality of the process. As soon as it is no longer possible to load the furnace safely or the contact surface is damaged, replace the door insulation.

If the unit is to be transported, remove the door insulation from the unit and close the door prior to transportation.

4.6.4 Installing and configuring the unit

NOTICE

The CEREC SpeedFire can only be used in conjunction with the CEREC acquisition unit, CEREC software and a connected CEREC grinding unit. Prerequisites for transferring the jobs to the CEREC SpeedFire: -CEREC SpeedFire is turned on,

- CEREC SpeedFire is configured and connected as a device in the software,

- CEREC SpeedFire is activated as a production unit for the case.

4.6.4.1 Installing the unit

You must establish a connection to your CEREC recording unit before you can operate the unit.

The CEREC SpeedFire can be operated with both a static as well as an automatically assigned IP address. In the factory the unit is always configured with a static IP address. The default IP address is as follows: 192.168.230.xy. The digits x and y are made up from the last two digits of the unit serial number. These can be found on the label on the rear of the device If the serial number ends in "00" then the xy value is always "100".

The settings for the IP address, subnet mask and default gateway of the CEREC SpeedFire are shown in the furnace app in the Settings menu / *"LAN-Settings"*.





4.6.4.2 Automatic unit search

- ✓ The unit must be switched on.
- The unit must be directly connected to the existing network with the network cable.
- 1. Start the CEREC SW software.
- 2. Move the mouse cursor to the top of the window.
- or
- > Click the start window button.
- ✤ The system menu is displayed.
- 3. Click on the "Configuration" button in the system menu.
- 4. Click on the "Devices" button.
- 5. Click on the "Scan for New Devices" button.
 ♣ All connected units are recognized.
- 6. Enter a name for the new unit.

4.6.4.3 Manual unit search

- ✓ The unit must be switched on.
- ✓ The unit must be directly connected to the existing network with the network cable.
- 1. Start the CEREC SW software.
- 2. Move the mouse cursor to the top of the window.
- or
- > Click the start window button.
- ✤ The system menu is displayed.
- 3. Click on the "Configuration" button in the system menu.
- 4. Click on the "Devices" button.
- 5. Click on the "Add Device (Manual)" button.
- 6. Select "Network".
- 7. Enter the network address.
- 8. Click on the "Ok" button.
 - The software attempts to contact the device.
- 9. Enter a name for the new unit.

If connection fails, check the network status.



4.6.4.4 Remove the unit

- ✓ The unit is not in operation.
- 1. Click on 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.
 - Source of the second se
- 5. Click on the "YES" button.
- \clubsuit The device is removed.

4.6.5 Configuration following initial startup of the unit

Here you will be given the option to select the required language and temperature unit and to set the clock.

The configuration can be found in the "Settings" | "basic settings" menu.

4.6.6 Main screen following startup of the unit

Once connected successfully, the start screen for the unit's software is displayed. In this view you shall receive various information on the device status and operation.



А	Time
В	Temperature of the furnace chamber
С	Settings
D	Information
Е	Overview of received jobs (job list)
F	Multi-select option: selection of several jobs
G	Status information field and information on next step



4.6.7 Job list and multi-select

Once jobs have been successfully processed in your CEREC MC/MC X or MCXL, the heat treatment jobs are automatically sent to the furnace. A CEREC SpeedFire must be connected for the automatic transfer of jobs.

All jobs are displayed in the main view of the furnace app. You will have the option of selecting your job based on the material, patient ID, processing date, or tooth number, and then starting the process.

Multi-select icon

If you wish to work on several jobs during one process, enable the multiselect option via the multi-select button to select multiple jobs. It is only possible to work on several jobs during one process if the material and size of the restoration are the same as for the first selected job.

As soon as you have activated the first job, other jobs will only remain visible if they can also be worked on during the same process.

4.6.8 Selecting the job and starting the process

NOTICE

Only use approved materials

Only materials that can be selected from the material dialog in the CEREC SW software or for which a heat treatment program is saved after selection are allowed for heat treatment.

Select job

- Touch the job in the job list.
 - ✤ The next process available for the material are displayed.

Selecting the process - sintering as an example

- Sintering: Restoration is dry and can be sintered without pre-drying.
- Pre-drying: You only want to pre-dry.
- Pre-drying and sintering: Restoration is moist and is pre-dried and sintered in a single process.

Loading the furnace and starting the process

After selecting the process, you will be asked to load the restoration into the furnace.

- ➤ Start the process by touching the start icon.
 - Solution of the second state of the second

End of process

At the end of the process, you will receive a message about the status and other processing options:

- Prepare glazing
- Process later
- Complete job

Glaze

Only use approved auxiliary tools and materials for the glazing process.

- ➤ Start the process by touching the start icon.
 - Solution of the second state of the second





Operation

5.1 Loading the furnace for sintering

NOTICE

Maximum Observe restoration size

Observe the maximum Furnace chamber size when loading the furnace. - Diameter: 38mm

- Height: 20 mm

The restoration (including with the Glazing Support Single/Multi Unit) must not exceed this length (38mm) and height (20mm), otherwise the chamber may be damaged.

NOTICE

Only use approved materials

Only load the furnace with approved materials, which must be assigned uniquely to the heat treatment job in the furnace.



- 1. Place the restoration with the occlusal surface facing downward on the top door insulation. The restoration must not protrude from the insulation surface, as this might cause a collision with the furnace chamber insulation.
- 2. Start the process by touching the start icon.
 - The furnace shuts automatically once the process starts.





Damage to furnace and deposited items

As the furnace opens automatically after the process, the furnace and deposited items can be damaged if these instructions are not followed.

- > Do not use the space directly under the door as a storage surface.
 - The furnace opens automatically following successful heat treatment. The process is not yet completed here as the last cooling-off phase occurs in an open condition.
 - You will be notified by a message on the display and via a signal tone once the process has completed. The unit's LED status display is green and you can now unload the furnace.

Risk of burning

The restoration and parts of the door insulation may still be hot.

- Always pick up some tweezers to remove the restoration from the furnace.
- Allow the restoration to cool down for another five minutes before picking it up with your hands.



- As the restoration is still very hot in this phase, only unload the furnace using metallic or ceramic tweezers. Plastic tweezers are not suitable for removing restorations. Place the restoration on the fireproof tray (A) for further cooling (see "Fireproof tray with integrated fan [→ 46]").
 - If the furnace is still too hot after a process, it delays the start of the next process until the maximum start temperature is reached.
 - If the maximum start temperature is reached, the furnace automatically starts the pre-selected program. The start temperature is process-dependent and is pre-set.

The procedure for sintering zirconium oxide may be different, depending on the material manufacturer. Therefore, always follow the specifications of the manufacturer of the material to be used.





See "Using the glazing spray [\rightarrow 40]" for how to use the glazing spray.

- 1. Select the job.
- 2. Select the process.
- **3.** Load the furnace (see "Loading the furnace for glazing [\rightarrow 39]").
- 4. Start the process by touching the start icon.
 - The furnace closes automatically and performs the selected process.
 - The furnace opens automatically following successful heat treatment. The process is not yet completed here as the last cooling-off phase occurs in an open condition.

🕂 WARNING

Risk of burning

The restoration and parts of the door insulation may still be hot.

- Always pick up some tweezers to remove the restoration from the furnace.
- Allow the restoration to cool down for another five minutes before picking it up with your hands.
- As the restoration is still very hot in this phase, only unload the furnace using metallic or ceramic tweezers. Plastic tweezers are not suitable for removing restorations. Place the restoration on the fireproof tray (A) for further cooling (see "Fireproof tray with integrated fan [→ 46]").



5.2.1 Loading the furnace for glazing

NOTICE

Maximum Observe restoration size

Observe the maximum Furnace chamber size when loading the furnace. - Diameter: 38mm

- Height: 20 mm

The restoration (including with the Glazing Support Single/Multi Unit) must not exceed this length (38mm) and height (20mm), otherwise the chamber may be damaged.

NOTICE

Only use approved materials

Only load the furnace with approved materials, which must be assigned uniquely to the heat treatment job in the furnace.

Use the restoration holders, firing paste (CEREC SpeedPaste) and tweezers supplied in the package for loading the furnace for the glazing process. Also observe the operating instructions supplied with the CEREC SpeedPaste.



Fixing the restoration with the "Glazing Support Single Unit"



Fixing the restoration with the "Glazing Support Multi Unit"

- 1. Fill the restoration with the firing paste and apply the paste evenly up to the restoration margin.
- 2. Place the tray in the paste and pick up the tweezers, if required.
- **3.** After fixing the restoration to the restoration holder, position the holder centrally on the top door insulation and ensure that the holder or restoration do not protrude out from the door insulation; otherwise, these may collide with the furnace chamber.

5.2.2 Using the glazing spray

5.2.2.1 Preparing the restoration

The restoration must be dry and free of impurities. Use the glazing spray supplied in the package for the glazing, and take the CEREC SpeedPaste for fixing the restoration to the restoration holder.

5.2.2.2 Fixing the restoration to the restoration holder

For individual stabilization of the restoration on the restoration holder, use the firing paste supplied in the package (CEREC SpeedPaste). Also observe the operating instructions supplied with the CEREC SpeedPaste.

5.2.2.3 Spraying the glaze onto the restoration surface

- 1. Pick up the restoration holder and restoration using some tweezers.
- 2. Shake the spray can vigorously immediately before applying.
- **3.** There must be approx. 10 cm distance between the spray nozzle and the surface to be sprayed.
- **4.** Spray on an even coat of glazing spray from all sides directly on to the (characterized) restoration. Shake the spray can vigorously between individual sprays.
- 5. Make sure that the inner surfaces of the restoration are not moistened by the glazing spray.
- 6. Keep the can as upright as possible during the spraying process.
- **7.** Wait for a short while until the glazing coating has dried and displays an even, whitish coating. Apply more spray as required.
- **8.** If another application of spray is necessary after the firing, the spraying and firing can be performed once more in the same way.

Also observe the operating instructions supplied with the CEREC SpeedGlaze.



5.3 Crystallization / glazing process IPS e.max CAD

- 1. Select the job.
- 2. Select the process.
 - "Crystallize" with or without using IPS e.max CAD Crystall./Glaze Spray
 - "Crystallize/glaze" using IPS e.max CAD Crystall./Glaze Paste
- 3. Load the furnace (see "Loading the furnace for glazing [\rightarrow 39]").
- **4.** Start the process by touching the start icon.
 - Solution The furnace closes automatically and performs the selected process.
 - The furnace opens automatically following successful heat treatment. The process is not yet completed here as the last cooling-off phase occurs in an open condition.

Risk of burning

The restoration and parts of the door insulation may still be hot.

- Always pick up some tweezers to remove the restoration from the furnace.
- Allow the restoration to cool down for another five minutes before picking it up with your hands.
- As the restoration is still very hot in this phase, only unload the furnace using metallic or ceramic tweezers and do not touch the restoration directly. Plastic tweezers are not suitable for removing restorations. Place the restoration on the fire-proof tray (A) for further cooling – avoid the draft.



5.3.1 Restoration preparation for crystallization/glazing:

NOTICE

Maximum Observe restoration size

Observe the maximum Furnace chamber size when loading the furnace. - Diameter: 38mm

- Height: 20 mm

The restoration (including with the Glazing Support Single/Multi Unit) must not exceed this length (38mm) and height (20mm), otherwise the chamber may be damaged.

NOTICE

Only use approved materials

Only load the furnace with approved materials, which must be assigned uniquely to the heat treatment job in the furnace.

NOTICE

The IPS e.max CAD Crystallization Trays and IPS e.max CAD Crystallization Pins (Ivoclar Vivadent AG) must not be used in the furnace as they do not fit in the combustion chamber. Follow the additional instructions on the Ivoclar Vivadent flowchart "IPS e.max CAD Step-by-step for CEREC SpeedFire".

Fixing the restoration with the "Glazing Support Single Unit" / "Glazing Support Multi Unit" and IPS Object Fix Putty/Flow

Use the restoration holders, IPS Object Fix Putty or Flow (Ivoclar Vivadent AG) and tweezers supplied in the package for loading the furnace for the crystallization/glazing process with IPS e.max CAD.



- 1. Fill the inside of the restoration with the IPS Object Fix Putty or Flow support paste up the edge of the restoration.
- **2.** Press the selected glazing support into the support paste so that it is sufficiently fixed.

NOTICE

For IPS e.max CAD abutments / abutment crowns, do not press the rejuvenating pin for the glazing support single unit so that it does not affect the walls.

- **3.** If you wish, apply IPS e.max CAD Crystall/Shades, Stains and IPS e.max CAD Crystall./Glaze spray or paste to the blue restoration.
- **4.** After this, position the restoration centrally on the top door insulation and ensure that the holder or restoration do not protrude out from the door insulation; otherwise, these may collide with the furnace chamber.

For multi-jobs, a maximum of two individual tooth restorations can be positioned together in the furnace.



Three-unit bridges must be fired individually.



5.4 VITA SUPRINITY® PC crystallization/glazing process

NOTICE

Maximum Observe restoration size

Observe the maximum Furnace chamber size when loading the furnace. - Diameter: 38mm

- Height: 20 mm

The restoration (including with the Glazing Support Single/Multi Unit) must not exceed this length (38mm) and height (20mm), otherwise the chamber may be damaged.

NOTICE

Only use approved materials

Only load the furnace with approved materials, which must be assigned uniquely to the heat treatment job in the furnace.

For crystallization, combination firing (crystallization / glazing) and glaze firing, only the supplied CEREC SpeedFire restoration holders "Glazing support single unit" or "Glazing support multi unit".

IMPORTANT

The less CEREC SpeedPaste used, the better. However, to prevent direct contact of the restoration holder with the restoration, a little CEREC SpeedPaste must be used to fix it in place.

- **1.** To position/fix the restoration in place on the restoration holder, use a small amount of CEREC SpeedPaste.
- 2. After this, place the restoration in the middle of the restoration holder on the upper door insulation. Ensure that the holder or restoration do not protrude out from the door insulation; otherwise, these may collide with the furnace chamber.

The following programs are available:

- Crystallize
- Crystallize / glaze
- Glaze

Crystallize

The maximum number of three crowns must not be exceeded. The maximum furnace chamber size must be observed. The glazing support provided must be used for crystallization.

Glaze

For glazing VITA SUPRINITY PC in the CEREC SpeedFire, only the VITA AKZENT Plus GLAZE LT SPRAY is permitted.

A maximum of three glazing fires can be performed.

The glazing support provided must be used for glazing.

To guarantee optimal processing, read and follow the instructions of the material manufacturer VITA Zahnfabrik.

IMPORTANT

When processing VITA SUPRINITY PC, the built-in fan is turned off underneath the storage area.



5.5 Fireproof tray with integrated fan

- 1. As soon as the processes have completed, use the fireproof tray of the CEREC SpeedFire to support your restoration while it is still hot and cool it to room temperature. Use tweezers to help you unload the furnace.
- **2.** Position your restoration at the ventilation slots (**A**) of the tray to speed up the cooling process.
 - The fan beneath the storage area is turned on or off depending on the previously processed material. The respective material manufacturer determines which material can be cooled additionally.

6 Care and maintenance

6.1 Insulation material of the furnace chamber

Handling and disposing of the insulating material

Abrasion of insulating material in the furnace door area may occur, which is visible as white dust. These deposits should:

- be wiped off with a moist cloth or
- be extracted with a vacuum cleaner with a fine particle filter (e.g. HEPA / Dust category H),
- not be blown away with compressed air,
- not be blown away by the wind.

Direct skin contact may lead to skin irritation. Please therefore avoid contact with the skin and eyes and wear gloves and safety goggles as necessary. In the event of contact with the skin wash the dust of the insulating material off with clear running water.

Always dispose of the insulating material in a closed container (see also "Disposal [\rightarrow 52]").

Please also observe the information provided under "Positioning the door insulation [\rightarrow 30]".

6.2 Replacing the main fuses

MARNING

Electric shock

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

NOTICE

Fuse type

The main fuses F1 and F2 are of the T12.5A 250V type. They are available under the REF 65 81 891.

- Use only fuses of the same type!
- ✓ The power plug must be disconnected.
- 1. Use a screwdriver to screw off the 2 covers of the fuses on the rear side of the unit counter-clockwise until the fuse holder springs out in each case.
- 2. Pull out the fuse holders.
- 3. Replace the defective fuses (G-fuse inserts).
- 4. Reinsert the fuse holders.
- 5. Lock the covers clockwise with a screwdriver.





6.3 Replacing the filter

Depending on the degree of contamination, the filter fleece should be replaced regularly.

- 1. Unscrew the 2 screws (A) on the rear side.
- 2. Remove the metal cover.

- 3. Remove the contaminated filter fleece and insert the new filter fleece.
- 4. Reinsert the metal cover and screw it tight with the 2 screws (A).

6.4 Care, cleaning, and disinfecting agents

The cleaning agents and disinfectants approved by Sirona for the product surfaces are:

- Alpro
 - PlastiSept
 - PlastiSept wipes
- Schülke & Mayr
 - Mikrozid sensitive liquid
 - Mikrozid sensitive wipes
- Dürr
 - FD 366 sensitive

7 Service options

7.1 Temperature test

The temperature test is used to check the correct temperature for the furnace and is initiated by Customer Service in exceptional cases. The temperature test is only carried out on the instructions of the Customer Service Center.

7.2 Calibration

Each unit leaves production with its own individual calibration that is saved on the primary unit. Calibration is reserved for the service engineer and is only carried out in rare cases, such as when replacing particular spare parts.



Disposal

8.1 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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