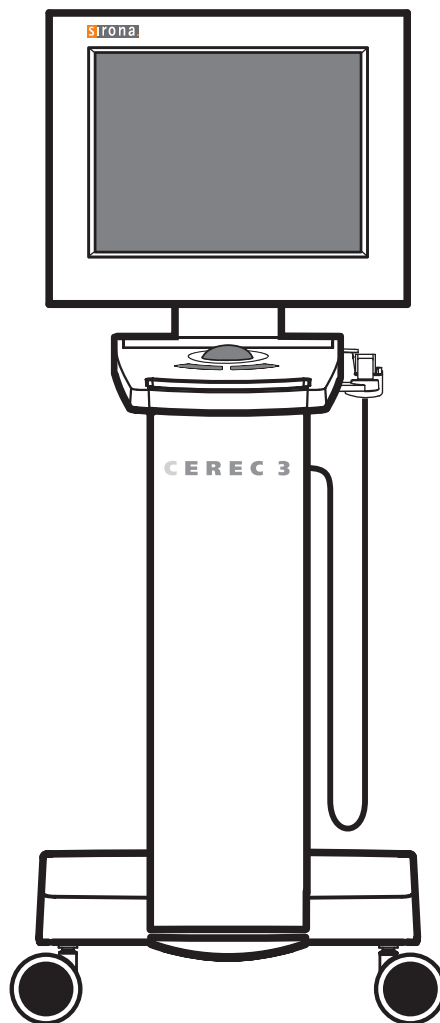


CEREC 3 Acquisition Unit EPD

Technical Data

English



The new CEREC 3 generation for the computer-aided manufacture of ceramic restorations.

CAD system for making high-precision optical impressions in the mouth.

- High-resolution, heated mouth scanning 3D camera with removable prism tube (prism tube sterilizable with hot air)
- Integrated image processing
- High processing performance
- Trackball,
- Input key and pedal,
- Easy-to-disinfect membrane keyboard (only requires wiping),
- Hard disk drive,
- DVD-R(W)/CD-R(W) drive,
- WLAN, configured for the CEREC MC XL milling unit
- Radio module for serial communication with the CEREC 3 milling unit
- 2 integrated loudspeakers.

High-resolution 3D mouth scanning camera with control and image processing electronics:

- | | |
|-----------------------------|---|
| • Measuring technique: | Active triangulation |
| • Pixel size: | 25 x 29 µm |
| • Low noise CCD sensor: | 680 x 480 pixels (=326,400 pixels) |
| • Light source: | Infrared, polarized, 840 nm |
| • Image acquisition: | Philips PNX 1300, 133MHz TriMedia™ ^a processor |
| • Image acquisition memory: | 8MB ultrafast SDRAM |
| • Image processing: | Intensity measurement of 1.4 mil. pixels in 0.133 sec. |
| • Image data transfer rate: | Max. 38 MB/sec. |

Monitor:

- 17" TFT flat LCD display, true color, SXGA resolution (1280 x 1024 pixels)

PC Hardware

- | | |
|----------------------|--|
| • Processor | Intel Core2Duo, E6600 |
| • Memory | 2x 1024MB, 800MHz DDR2-RAM |
| • DVD-ROM/CD-R(W) | SH-S182-D combination drive
DVD RAM (12X), DVD+R (18X) / RW (8X), DVD-R(18X)/RW (6X), DVD+/-R DL (8X),CD-R (48X) / RW (32X) |
| • Hard disk | Western Digital WD2500YS (250GB Serial-ATA) |
| • Frame Grabber card | SIRONA |
| • Network card | Ethernet 10/100/1000MBit/s onboard |
| • WLAN card: | Linksys WMP54GS
Standards: IEEE 802.11g, IEEE 802.11b, PCI 2.2, PCI 2.3
Transmitter power: 15dBm
Approvals: FCC, Wi-Fi, CE, ICES-03 |
| • Sound card | Realtek HD Audio onboard |
| • Graphics card | NX8800GTS T2D640E (PCIe 16x, 640MB) |
| • DECT supply | 60 81 942 D3344 Sirona |
| • PC power supply | 450W with battery back-up function |



PC software

- | | |
|---------------------|---|
| • Operating system: | WINDOWS™ ^b XP Professional (English) |
| • Installation: | The operating system and the applications are installed in the factory. |

a. *TriMedia is a trademark of Philips.*

b. *WINDOWS is a trademark of Microsoft Corporation.*

All units are integrated in a mobile housing with freely moving, lock-type castors (no water or air connection is required).

Type designation	CEREC 3 Acquisition Unit EPD
Rated line voltage, USA	115V AC / 60Hz
Rated current, USA	3.0A
Type of protection against electric shock	Class I device
Type of protection against electric shock (3D camera)	Application component of type BF 
Degree of protection against penetration of water	normal device (without protection against ingress of water)
Ambient temperature	10°C to 35°C
Operating mode	continuous operation
Storage battery pack for battery-backed operation	24VDC / 2.5Ah Sirona Part No. 61 77 393 D3344
Dimensions W x H x D (in mm)	418 x 1110 x 570
 Label: CAUTION	Please read accompanying papers.
Weight – CEREC 3 without monitor and battery pack: – Monitor: – Battery pack:	 36kg 4kg 3,5kg

Electromagnetic compatibility

i NOTE

The CEREC 3 Acquisition Unit fulfills all requirements for electromagnetic compatibility (EMC) compliant with IEC 60601-1-2:2001.

The CEREC 3 Acquisition Unit is referred to as "**UNIT**" in the following.

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

Accessories

- The **UNIT** may be operated only with accessories and spare parts approved by Sirona. Unapproved accessories and spare parts may lead to an increased emission of or a reduced immunity to interference.
- The **UNIT** should not be operated immediately adjacent to other devices. If this proves to be unavoidable, the **UNIT** should be monitored to check and make sure that it is used properly.

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
HF emission according to CISPR 11	Group 1	The UNIT uses HF energy only for its internal function. The HF emission is therefore very low, and it is improbable that nearby electronic devices might be disturbed.
HF emission according to CISPR 11	Class B	The UNIT is intended for use in all facilities, including residential areas and in any facilities connected directly to a public power supply providing electricity to buildings used for residential purposes.
Harmonics according to IEC 61000-3-2	Class A	
Voltage fluctuations / Flicker according to IEC 61000-3-3	compliant	

Immunity to interference

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.

Immunity interference tests	IEC 60601-1-2 test level	Conformance level	Electromagnetic environment guidelines
Electrostatic discharge (ESD) according to IEC 61000-4-2	± 6kV contact discharge ± 8 kV air discharge	± 6kV contact discharge ± 8kV air discharge	Floors should be made of wood or concrete or covered with ceramic tiling. If the floor surface consists of synthetic material, the relative humidity must be at least 30%.
Electrical fast transient/burst according to IEC 61000-4-4	± 1kV for input and output lines ± 2kV power cables	± 1kV for input and output lines ± 2kV power cables	The quality of the supply voltage should conform to the typical business or hospital environment.
Surge voltages according to IEC 61000-4-5	± 1kV push-pull voltage ± 2kV push-pull voltage	± 1kV push-pull voltage ± 2kV push-pull voltage	The quality of the supply voltage should conform to the typical business or hospital environment.
Voltage dips, short interruptions and variations of the power supply according to IEC 61000-4-11	<5% U_T for ½ period (>95% dip of U_T) 40% U_T for 5 periods (60% dip of U_T) 70% U_T for 25 periods (30% dip of U_T) <5% U_T for 5sec. (>95% dip of U_T)	The UNIT features a battery back-up function which enables continued operation for a short period of time following an interruption of the power supply.	The quality of the supply voltage should correspond to the typical business or hospital environment.
Magnetic field of power frequencies (50/60 Hz) according to IEC 61000-4-8	3 A/m	3 A/m	The power frequency magnetic fields should correspond to the typical values found in the relevant business and hospital environment.
Remarks: U_T is the AC supply voltage prior to application of the test level.			

Immunity interference tests	IEC 60601-1-2 test level	Conformance level	Electromagnetic environment guidelines
<p>Conducted HF interference IEC 61000-4-6</p> <p>Radiated HF interference IEC 61000-4-3</p>	<p>3V_{eff} 150 kHz to 80 MHz^a</p> <p>3V/m 80MHz to 800MHz^a</p> <p>3V/m 800MHz to 2.5GHz^a</p>	<p>3V_{eff}</p> <p>3V_{eff}</p> <p>3V_{eff}</p>	<p>Portable and mobile radio equipment must not be used within the recommended working clearance from the UNIT and its cables, which is calculated based on the equation suitable for the relevant transmission frequency.</p> <p>Recommended working clearance:</p> $d = [1, 2] \sqrt{P}$ $d = [1, 2] \sqrt{P}$ <p>at 80MHz to 800MHz</p> $d = [2, 3] \sqrt{P}$ <p>at 800MHz to 2.5GHz</p> <p>where P is the nominal transmitter output in watts (W) specified by the transmitter manufacturer and d is the recommended working clearance in meters (m).</p> <p>The field strength of stationary radio transmitters is based on a local investigation for all frequencies^b less than the conformance level for all frequencies^c.</p> <p>Interference is possible in the vicinity of equipment bearing the following graphic symbol.</p> 

- a. The higher frequency range applies at 80MHz and 800MHz.
- b. The field strength of stationary transmitters such as the base stations of radio telephones and land mobile services, amateur radio stations as well as AM and FM radio and television broadcasting stations cannot be accurately predetermined. An investigation of the location is recommended to determine the electromagnetic environment resulting from stationary HF transmitters. If the field strength measured at the **UNIT** location exceeds the conformance level specified above, the **UNIT** must be observed with respect to its normal operation at each application site. If unusual performance characteristics are observed, it may be necessary to take additional measures such as reorientation or repositioning of the **UNIT**.
- c. A frequency range of 150kHz to 80MHz results in a field strength of less than 3V/m.

Working clearances

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

The **UNIT** is intended for operation in an electromagnetic environment, where radiated HF 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 HF communication devices (transmitters) and the **UNIT**. These values may vary according to the output power of the relevant communication device as specified above.

Nominal transmitter output [W]	Working clearance according to transmission frequency [m]		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.5 GHz
	$d = [1, 2] \sqrt{P}$	$d = [1, 2] \sqrt{P}$	$d = [2, 3] \sqrt{P}$
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.

Annotation 1

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

Annotation 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.

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

© Sirona Dental Systems GmbH 2007
D 3344.021.02.01.02 02.2007

Sprache: englisch
Ä.-Nr.: 000 000

Printed in Germany
Imprimé en Allemagne

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