The CEREC SW 4.3 update includes the following changes that are described in more detail:

New features:
- Acquisition hints 2.0
- Optional blocking out of inlays at the preparation margin
- New model calculation Omnicam with sharper edges and improved color visualization
- Carbide Milling
- Expanded virtual articulator
- CEREC Connect button
- Incisal variation 2.0
- More natural visualization of the restoration
- 3D PDF export
- Manual correlation of image fields
- 2 additional sounds for the Omnicam image
- Adjusting the thickness of the form tool
- Support for new titanium bases and scan posts

Changes:
- Factory spacer setting is changed to 120 µm and is automatically set at installation
- Progress bar for model calculation with the option of stopping the calculation
- No more "air milling" after stopping by user or water pressure message
- Smoother restoration surfaces
- E.max Meso block in size 14 is now available only for abutments in the multilayer mode, no longer for crowns directly screwed on. E.max Meso block in size 16 is now available only for crowns directly screwed on.
- Retry button, to reconnect to the MCXL after communication interruptions
- Search of the patient list is no longer controlled by time, but by clicking on the magnifying glass next to the search field
- Export of SSI files is possible only in the grinding phase
- Text of messages in case of calibration error/stop changed from green and "OK" to bluish and "Confirm"
Bug fixes
- Contact indicator for mushbite
- Indicator of interproximal contacts
- More robust model calculation, no more infinite calculation
- No switching of the move tool (from Scale to Move) when changing the restoration
- No view change for restoration calculation / transition from mill to design and back
- No closing of the active tool when the tool wheel is accessed (only for "select new tool" or "close")
- Patient list display & search by start of the word, save as selected in 2 steps for the same last name
- No crash when the cut tool is used after copying catalogues
- Scanning slows down after re-entering Omnicam

Acquisition Hints 2.0
The acquisition hints give the user feedback on the quality of the scan. Red arrows show the areas the user should scan again.

Optional blocking out of undercuts at the preparation margin for inlays
If undercuts are detected in the region of the preparation margin when defining the insertion axis, the software asks whether they should be blocked out to allow the restoration to be inserted. This makes it possible to make substance preserving preparations and the user also receives feedback on the preparation which he can react to depending on the situation.

New model calculation with sharper edges
A new algorithm for calculating the models based on Omnicam image data yields even sharper models, which has advantages especially for drawing the preparation margins. In addition, the color visualization is more realistic.
New: Milling of Translucent Zirconium Oxide (TZI) and Polymers

With the new CEREC SW 4.3, translucent zirconium oxide (TZI) and polymer blocks can be milled using carbide instruments instead of grinding with diamond coated burs.

Advantages of milling zirconium oxide with carbide instruments:
- Sharper edges, no chipping
- Smaller sprue sizes

Advantages of milling polymers with carbide instruments:
- More stable machining
- Quicker processing times
- Shiny surfaces

inCoris ZI Meso blocks are still ground in this software version. The milling option for this material will be introduced in a later software version.

New accessories for milling zirconium oxide and polymers

A new roughing cutter was developed for milling, the Shaper 25 RZ (RZ = Resin and Zirconium Oxide). The finishing instrument is the Finisher 10 that is also used for model milling. For the manufacturing process, the Shaper 25 RZ is inserted in the left spindle motor and Finisher 10 in the right motor. For machines with 4 motors, these milling tools may only be inserted in motor set 1.

The Shaper 25 RZ requires a higher torque than all other grinding and milling instruments. A new torque wrench is therefore needed to insert the Shaper 25 RZ, the HT torque wrench (HT = high torque). For CEREC MC, MC X and MC XL units, the Torque Wrench HT is offered as an option which can be ordered separately.

Hardware requirements

A new spindle motor has been developed which is necessary to allow the user to mill. In order to avoid potential misunderstandings, the milling function is deactivated when using the standard installation of the software. When the milling function is activated (Header Bar Menu>Configuration>Settings>Milling), users will be immediately notified that milling is only possible under certain conditions:

![Information](image-url)
**Motor replacement for existing customers**
Existing customers must replace a spindle motor before they can mill. For machines with 4 motors it is the left spindle motor in motor set 1. For machines with two motors it is the left spindle motor. Please contact your Patterson representative for more information.

**Manual correlation of image fields**
This version also allows manual correlation of image fields to be used for BioCopy and gingival mask images if automatic superimposition fails. This function allows both image fields to be superimposed using 3 points.

![Image of manual registration]

**Adjusting the thickness of the form tool**
In this version, the thickness as well as the size of the form tool can also be changed using a slider. Thus the tool can be used very easily to construct small secondary fissures, for example.

![Image of tool thickness adjustment]

**“Form” and “recalculate” can be used on the whole bridge**
The “form” and “recalculate” tools can be used for the whole bridge. This means that switching to and from individual elements when shaping is no longer necessary. The bridge symbol on the dock bar must be clicked in order for the tool to be used on the whole bridge.
Improvements to the virtual articulator:
- Automatic calculation of the movement tracks in the workflow
- Adjustment of the incisal pin possible
- Manual movement of the lower jaw
- Right-left setting values for sagittal condylar path inclination and Bennett angle
- New parameter "Immediate sideshift" integrated on the left and right
- The movements of the occlusal compass can be shown individually
- Parameters for dynamic contacts

Connect Button
The current case can be automatically exported to CEREC Connect for further processing there using the connect button. The connect button is active as soon as a simultaneously installed Connect version 4.2.0 or higher is found.

Incisal variation 2.0
The tool was expanded and now has more textures available for designing front teeth.
More natural visualization of restoration
The visualization of the restoration in the software now has a more natural color gradient that can be adjusted using a controller.

3D PDF export
A 3D PDF of the current case can be created to facilitate communication with the patient, laboratory, and other dentists. The PDF can be created using the existing export pathway and includes a 3D view of the current case with a smaller file size.

2 additional sounds for Omnicam imaging
In addition to the familiar acoustic feedback, two additional variations are now available.

A complete Operators Manual for CEREC Software 4.3 can be found at the following address: http://manuals.sirona.com/en/digital-dentistry/cerec-chairside-solutions/cerec-sw.html