



Celtra® Press System

# Developed to make a difference

Brochure for the dental laboratory

## Content

<hr/>	
Celtra® Press	
<hr/>	
Developed to make a difference	2
Fascinating esthetics unmatched	4
Strength to rely on	6
Efficiency that pays off	8
Simplicity that matters	10
<hr/>	
Celtra® Ceram	
<hr/>	
High esthetic veneering	12
Individual layering	14
<hr/>	
Celtra® Press Investment & further accessories	
<hr/>	
Perfect pressing even for highly complex, thin cases	18
Wax up	20
Fast and easy polishing	20
Cementation	21
<hr/>	
Customer voice	
<hr/>	
User evaluation	
International field test	22
<hr/>	
A smart portfolio	
<hr/>	
Celtra® Press System	24
<hr/>	
R&D's view	
<hr/>	
The structure makes the difference	26



Celtra Press DFU-Video

Celtra® Press

# Developed to make a difference

Celtra is the new generation of high strength glass ceramics, zirconia reinforced lithium silicate - ZLS.

---

Celtra® Press is an all-ceramic system for the creation of

- › Occlusal veneers
- › Thin veneers
- › Veneers
- › Inlays
- › Onlays
- › Crowns in the anterior and posterior region
- › 3-unit bridges in the anterior region up to the second premolar as the terminal abutment
- › Crown or 3 unit bridge up to the second premolar placed on top of an implant abutment



The material properties of Celtra allow the dental technician to concentrate more on the morphology.

The opalescent effect looks just great in the mouth, and the crown becomes simply - a tooth.



**Hans-Jürgen Joit**  
Linie Düsseldorf Dental  
Düsseldorf | Germany



## Celtra Press Benefits

---

- + Fascinating esthetics unmatched.
  - + Strength to rely on.
  - + Efficiency that pays off.
  - + Simplicity that matters.
- 



Life-like opalescence and translucency in sunlight - Celtra Press

Celtra® Press

# Fascinating esthetics unmatched

The only material option  
delivering the highest level  
of esthetics mimicking  
natural teeth.

- 
- + Amazing chameleon effect provides in-vivo blending
  - + Perfect balance of translucency and natural opalescence (natural vitality)
  - + Natural-like opalescence reduces graying effect in the patient's mouth
  - + Excellent VITA shade matching
- 



Opalescence !!! Opalescence !!! Opalescence !!!  
Achievable superior esthetics, with the  
strength and fit to match.



**Trevor Laingchild R.D.T. AAACD**  
Toronto | ON | Canada  
Burlington | ON | Canada



---

## CHAMELEON EFFECT

In-vivo blending



Celtra Press restoration: indistinguishable esthetics with adjacent teeth





Natural vitality of Celtra Press  
Perfect balance of translucency and  
opalescence of a monolithic Celtra pressing

---

## HIGHEST LEVEL OF ESTHETICS

mimicking natural dentition



Initial situation



Final restoration with Celtra Press - indistinguishable from the  
natural teeth

Celtra® Press

# Strength to rely on

Exceptional flow and strength increases confidence in complex case designs.

- + Exceptional flexural strength >500 MPa for up to 3-unit anterior bridge-work and reliable results up to 2<sup>nd</sup> premolar
- + Excellent margin quality increases confidence in complex case designs
- + Exceptional flow properties (smaller microcrystals of ZLS)



With its exclusive microstructure, Celtra Press delivers confidence with flexural strengths greater than 500 MPa. Combining this strength, with a unique chameleon effect, Celtra Press truly creates restorations that are in harmony with natural dentition.

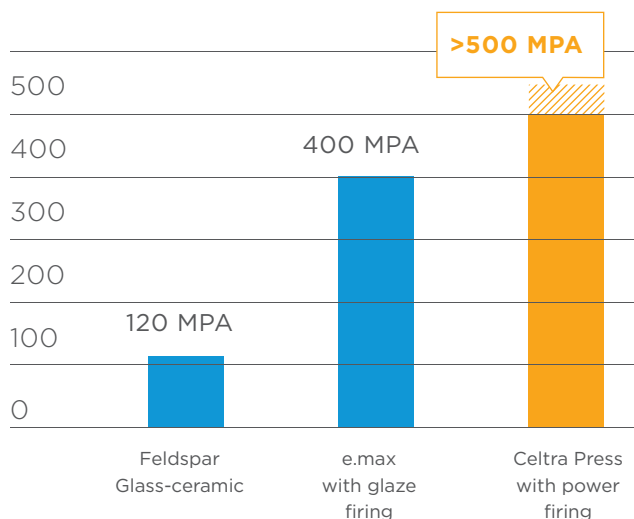


**Edwin Kee, MCDT, TE**

Associate Professor LSU School of Dentistry  
New Orleans | LA | USA



## FLEXURAL STRENGTH\*



\* 3 Point Flexural Strength



Robust 3-unit bridge

---

EXCEPTIONAL FLOW AND STRENGTH



3-unit Celtra Press bridge: excellent flow characteristics permit thin but very robust margins and reliable results

---

EXCELLENT MARGIN QUALITY



Razor thin margin of Celtra Press crown

Celtra® Press

# Efficiency that pays off

Time- and money-  
saving properties of  
Celtra® Press

- + Familiar, but faster workflow = increased productivity  
Low-viscosity material, excellent flow properties, only one sprue for 3-unit bridges
- + Fewer and easier working steps  
Minimal reaction layer with usage of Celtra Press investment  
Fast and easy polishing



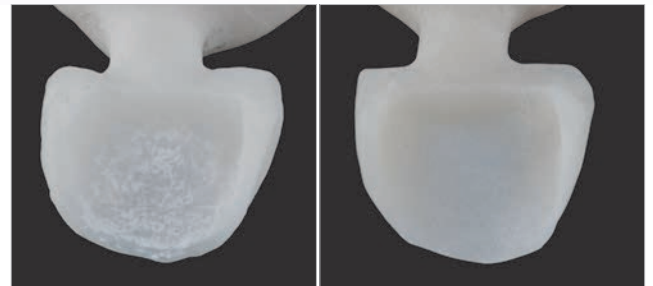
The new Celtra Press is truly the next generation in high-strength glass ceramics. Its enhanced vitality and shade accuracy contribute to exceptional visual opalescence and optimal translucency.

”

**Dr. Izchak Barzilay DDS, Cert. Prostho., MS, FRCD(C)**  
Head - Division of Prosthodontics and Restorative Dentistry,  
Mount Sinai Hospital,  
Toronto | ON | Canada



## COMPARISON REACTION LAYER



Lithium Disilicate  
Sandblasted after divesting -  
reaction layer

Celtra Press  
Sandblasted after divesting -  
no reaction layer

## TIME SAVING



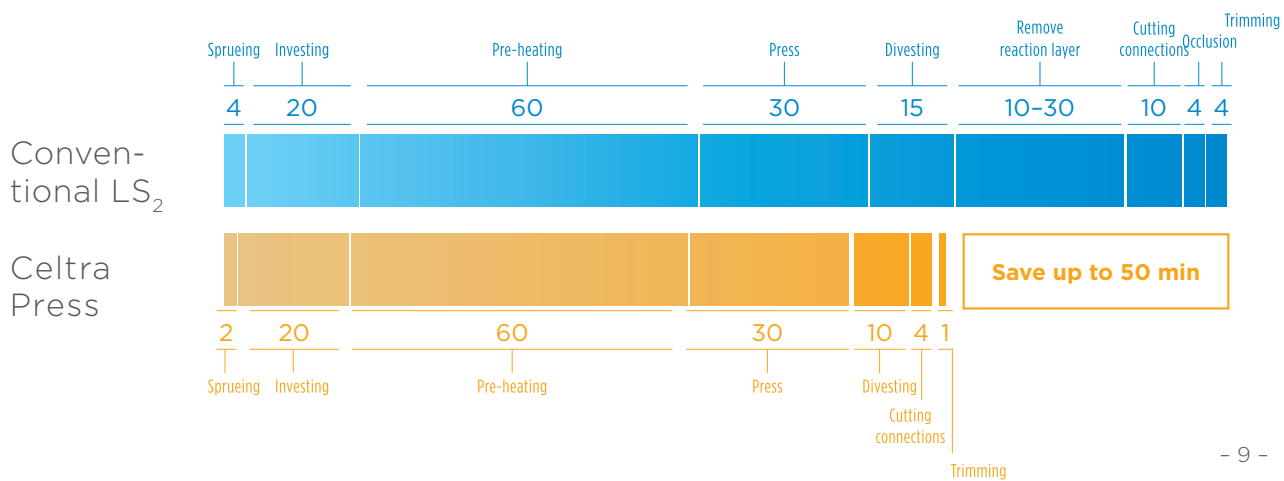
Cutting connections of a 3-unit Celtra Press bridge.  
Only one sprue necessary, smooth surface.





4 out of 32-units Celtra Press restoration

## TIME-SAVING ON A 3-UNIT BRIDGE



Celtra® Press

# Simplicity that matters

## Doing more with less

- + Easy and accurate ingot selection
  - Few shades sufficient for high coverage rate
- + “Right shade” out of the ingot - minimizing any hue, value, chroma adjustments
- + Easy and reliable staining concept
- + Smart shade selection + simple stain system = 100% shade coverage



With accurate shades and very little reaction layer, Celtra Press has been a smooth integration into our workflow and has greatly reduced our labor. The natural opalescence and chameleon effect produces an excellent end result.



**Chess Moore, CDT**  
Aesthetic Reconstruction  
Hattiesburg | MS | USA

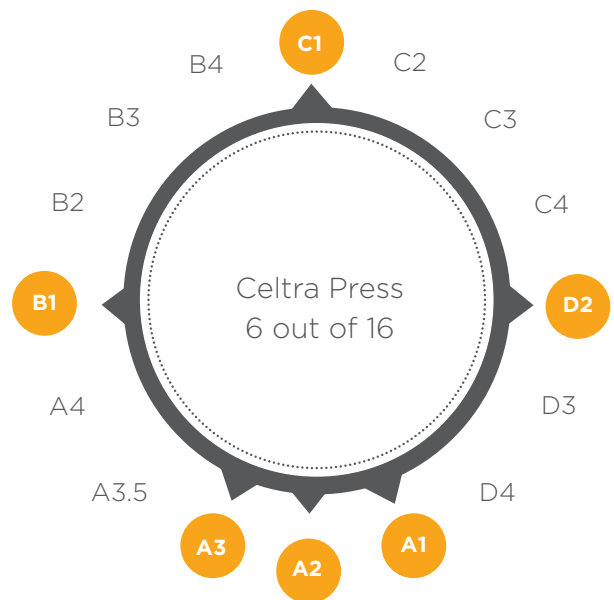
## EASY AND RELIABLE STAINING CONCEPT

New method to avoid stocking and achieve 100% coverage



## HIGH COVERAGE RATE

Few shades are sufficient



Shade-accurate, optimal translucency based on indication, cover all VITA shades with just 6 Celtra Press ingots

## INTERNAL STAIN



## CELTRA PRESS STAINING RECIPE

Staining recommendations for Celtra Press using DENTSPLY SIRONA Universal Stains

Final Shade	Starting Ingot Shade	Body Stain	Incisal Stain	Die
A1	A1	None, only glaze		F1
A2	A2	None, only glaze		F12
A3	A3	None, only glaze		F10
A3.5	A3	Stain 1 w/ i2 over all	i2	F9
A4	A3	Stain 3 & gray	i2	F7
B1	B1	None, only glaze		F1
B2	B1	Stain 2	i1	F11
B3	A2	Stain 2	i1	F8
B4	A3	Stain 2	i1	F8
C1	C1	None, only glaze		F3
C2	C1	Stain 2	i2	F4
C3	C1	Stain 3, olive & gray	i1	F5
C4	A3	Stain 3 & gray	i1	F6
D2	D2	None, only glaze		F2
D3	C1	Stain 4	i1	F2
D4	C1	Stain 4 & olive	i2	F3

**Note:**

The overall result will look more natural and the occlusal surface more realistic when starting with the brighter shade and then characterize the restoration with a darker stain.

Celtra® Ceram

# High esthetic veneering

Celtra Ceram is a low-fusing, leucite-reinforced feldspathic ceramic capable of veneering Celtra Press, conventional lithium silicate and zirconia frameworks.

CTE 25-500°C:  $9.0 \times 10^{-6} \text{K}^{-1}$

## Ultra-premium esthetics of Celtra® Ceram

- + Single veneering system for all-ceramic restorations – compatible with both zirconia and lithium silicate frameworks
- + Optimized for bonding to Celtra Press and lithium disilicate substructures eliminating need for wash firing
- + Exceptional performance that delivers an incredibly stable and robust result every time, even after multiple firings
- + Shade confidence with out-of-the-bottle shade accuracy



Celtra Press is a successful framework material that makes work easier for the dental technician. It has vivid and life-like optical appearance that is particularly appealing. The corresponding veneering materials exhibit a highly attractive chroma/transparency relationship. Taken together, these two factors ensure optimized and natural-looking shade results.



**Darryl Millwood**

Dental-Labor-Gemeinschaft Millwood OHG  
Murnau | Germany



## FEATURES

- + All 16 A-D shades
- + Full range of effect ceramics (Chromatic, Hue, Gingival)

## Indications

- + Celtra Press, Zirconia-reinforced Lithium Silicate (ZLS) frameworks:  $9.7 \times 10^{-6} \text{K}^{-1}$  (CTE 25-500°C)
- + Lithium disilicate frameworks:  $10.0 - 10.5 \times 10^{-6} \text{K}^{-1}$  (25-500°C)
- + Cercon ht frameworks:  $10.5 \times 10^{-6} \text{K}^{-1}$  (25-500°C)
- + Cercon xt frameworks:  $10.1 \times 10^{-6} \text{K}^{-1}$  (25-500°C)
- + Zirconia frameworks:  $10.1 - 11.0 \times 10^{-6} \text{K}^{-1}$  (25-500°C)

## Further Advantages

- + Optimized particle size for smooth application and seamless build-up
- + Correction/Add-on porcelain can be applied and fired with glaze/stain porcelain, or after glaze/stain firing



Tooth-like translucency of Celtra Press with value stability creates a natural appearance.

---

## EXCEPTIONAL PERFORMANCE

For incredibly stable results



A proprietary feldspathic base formulation delivers an incredibly stable and robust result - every time, even after multiple firings

---

## SHADE CONFIDENCE

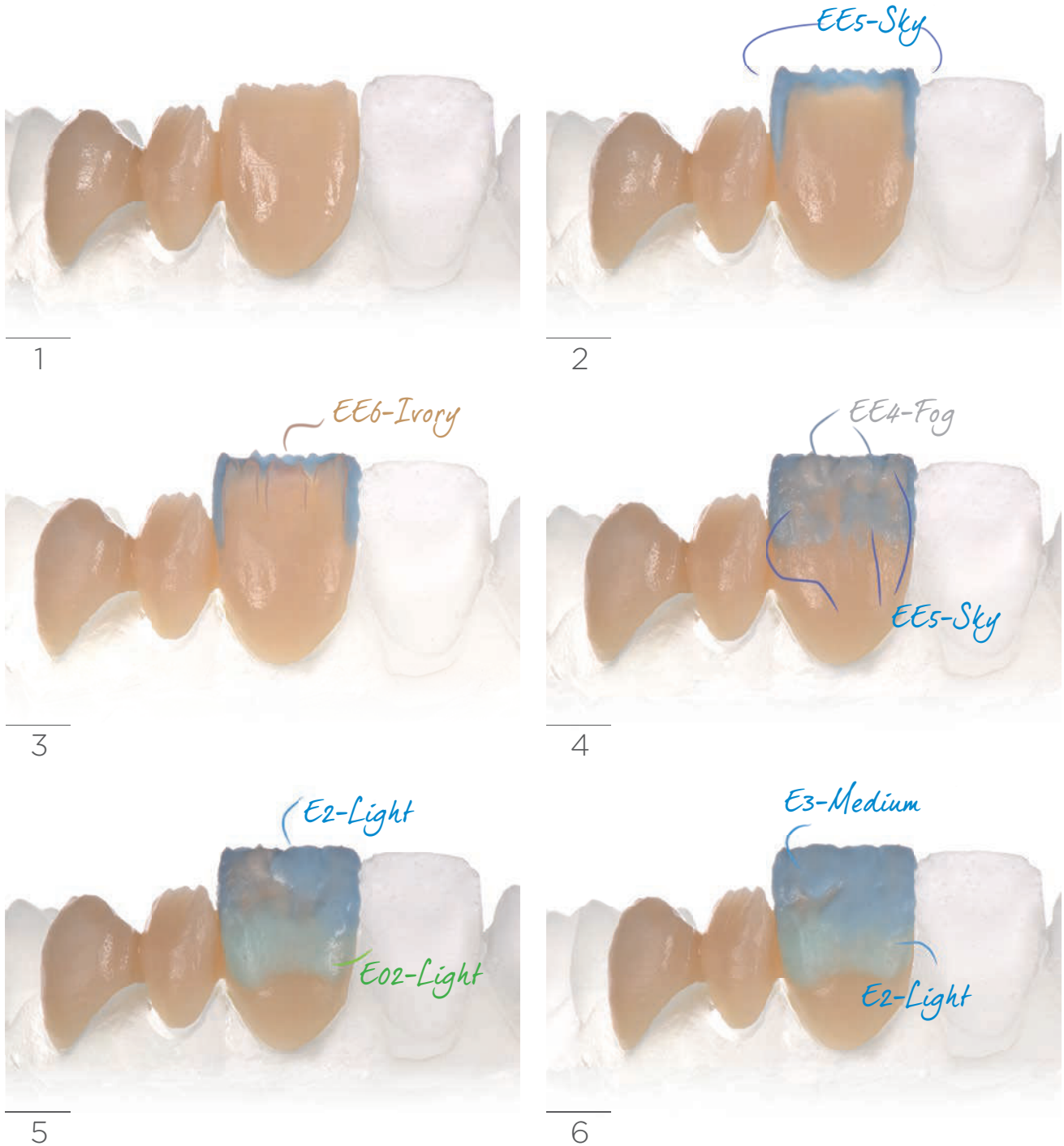
For life-like, reproducible veneerings



Out-of-the-bottle shade accuracy: Fewer remakes, improved consistency



# Individual layering





7



8



9



10



11

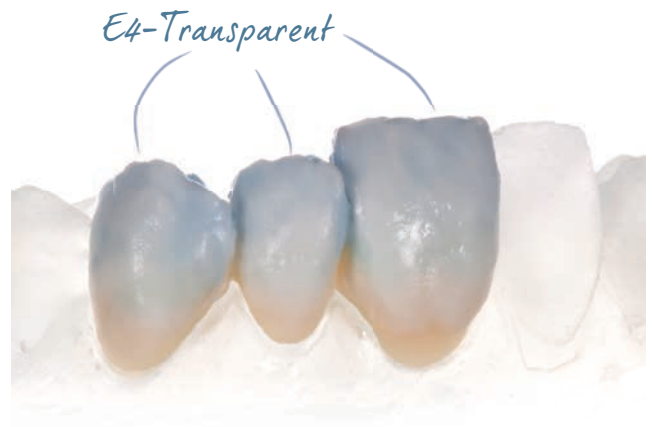


12

# Individual layering



13



14



15



16



17



18





## Celtra® Press Investment

# Perfect pressing even for highly complex, thin cases

Celtra Press Investment is especially developed for Celtra Press. The combination of exceptional flow from the unique microstructure coupled with a low reactivity investment eliminates conventional processing steps and yields more precise pressings resulting in better fitting restorations with minimal cleanup prior to completion.

## Celtra® Press Investment

- + Low-viscosity material saves time
- + Minimal reaction layer (no removing of reaction layer necessary)
- + Precise expansion control (precise fitting)
- + Smooth surfaces (fast finishing)
- + Rapid heating (time-saving)
- + Excellent processing properties (reproducible results)
- + For all pressable ceramics (universal use)



This product is the best pressed material I have used!



**Carlos Montaner**  
Montaner Dental Studio  
Apex | NC | USA

## PRECISE PRESSINGS

The combination of Celtra Press investment and Celtra Press allows ultra-fine pressing even in complex cases.







---

## EXCEPTIONAL FLOW CHARACTERISTICS



Only one sprue on a 3-unit bridge. Minimal reaction layer, easy sandblasting, no need to use toxic acids

## Celtra® Press Wax up



### + Celtra® Undercoating Wax

The light orange cervical and undercoating wax can be used, thanks to the very low contractility, for lining cavities and for defining crown and inlay margins.

### + Celtra® Modeling Wax

The light blue modeling wax exhibits optimum hardness and is characterized by a high positioning accuracy.

### + Dentsply Sirona Wax

Dentsply Sirona Wax is a special high quality wax for milling, that burns out completely. This material shortens milling times and facilitates easy extraction.

### Celtra Undercoating Wax

- Shade that contrasts optimally with the modeling wax
- Burns out without residue
- Solidification point 61°C
- Based solely on organic additives

### Celtra Modeling Wax

- Shade that contrasts optimally with the undercoating wax
- Burns out without residue
- Solidification point 64°C
- Based solely on organic additives

### Dentsply Sirona Wax

- 100% burnout
- Ideal for casting and injection processing
- Low tool consumption during milling process
- Excellent machinability

## Celtra® TwisTec

## Fast and easy polishing

- + For all ZLS materials such as Celtra® Duo and Celtra® Press
- + Covers critical processing steps from sandblasting to high-gloss polishing
- + Durable, high-quality instruments

## EASY MATERIAL PROCESSING

The new Celtra TwisTec has been specifically designed for processing zirconia-reinforced lithium silicate (ZLS).



# Celtra® Press Cementation

## CEMENTING

Depending on the indication, Celtra Press restorations can be self-adhesively or fully adhesively cemented. Compatible time-proven adhesive cementing materials are available as part of the Dentsply Sirona range of products. Cements are available separately.

	Self-adhesive	Fully adhesive	Glass-ionomer
Inlays	R	HR	-
Onlays	R	HR	-
Veneers	-	HR	-
Crowns	HR	HR	R
Bridges	R	HR	R

R = recommended  
HR = highly recommended

- + Fully adhesive (Calibra Ceram)
- + Self-adhesive (Calibra Universal)
- + Glass-ionomer



Either adhesively, self-adhesively cementing or glass-ionomer cements are possible at the time of delivery. This is a great advantage in our practice with multiple treatment providers. Structures processes can be maintained within the team even though different dentists prefer different cementation modes.



**Dr. Frank Zastrow M.Sc.**  
Wiesloch | Germany



Etching of 3-unit Celtra Press bridge

Customer voices

# User evaluation

International field test  
findings completed in 2016.



---

“The material is very nice to work with, the veneering is very homogeneous and exhibits little shrinkage. A very nice system yielding wonderful results.”

---

“Easy processing, excellent and reproducible results.”

---

“Stain and glaze full contour worked very well.”

---

“As far as product overall – very nice.”

---

“The translucent appearance increases with the lustre!”

---

“Looks were pleasing.”

---

“Stain and glaze full contour worked very well.”

---

“The restorations look great. The entire ceramic restoration appears sturdy!”

---

“A super investment. The best!”

---

“Our expectations were exceeded!”

---

---

## EXPERTS' CONCLUSIONS



I think that Celtra is awesome because it simply fits; sprueing and pressing are safe and simple because there is hardly any reaction layer that has to be removed, and because you actually get the shade that is written on the box.



**Thomas Bartsch**  
TRIODONT Zahntechnik GmbH  
Eschweiler | Germany



Both the pressing and the veneering ceramics of Celtra Press were very user-friendly in their handling. The easy handling of both materials, the resulting time savings and the excellent esthetic results are an important factor in my decisions to opt for using Celtra Press on a permanent basis.



**Andreas Kahl**  
Creativ Zahntechnik  
Darmstadt | Germany



Dental technicians no longer believe everything they are told. But Celtra Press, a truly impressive new material, easily convinces and helps regain their confidence with its incredible esthetics that reflects the shade environment, its unrivaled excellence of fit and highly economical production methods.



**Werner Gotsch**  
Dental Studio Gotsch  
Marktleuthen | Germany



The processing characteristics of the material are sensational: Its excellent flow properties simplify the process and help save time. Sprueing is greatly simplified, as only a single sprue is needed, and there is only a minimal reaction layer when using the new Celtra press investment, resulting in a very smooth surface. Rapid heating and extremely precise expansion control provide an excellent fit, which cuts down significantly on the time to completion at the lab. In short: Significantly higher productivity in the laboratory.



**Markus Stork**  
Stork Zahntechnik  
Braunschweig | Germany



I have full confidence in Celtra Press because it offers significantly more strength – more than 500 MPa – than any otherwise comparable material. Its extremely high fracture resistance has been documented in studies conducted by the universities of Heidelberg and Regensburg.



**Dr. Mischa Krebs**  
Alzey | Germany



Implementing Celtra Press in our laboratory was extremely easy – the user manual is lucid and easy to understand and all the steps are easy to follow. Anyone who has ever worked with pressable ceramic will be able to handle this new material straight away.



**Markus Girardi**  
Girardi Zahntechnik  
Ludwigsburg | Germany





A smart portfolio

# Celtra® Press System



The perfect esthetic characteristics, strong chameleon effects and high shade fidelity of Celtra Press facilitate the successful reproduction of all VITA shades with a reduced range of individual pressing materials.

If Dentsply Sirona Universal Stains are additionally used, even darker shades are easy to implement.

This means:

**Greater efficiency and cost savings  
in the laboratory!**



## SMART SHADE SYSTEM

Reduces inventory costs and simplifies shade selection

	Translucency		Shade						Individualization technique
<b>Incisal</b> (inlay, onlay, veneer)	<b>HT</b>		I1	I2	I3				Glaze
<b>Full Contour</b> (posterior)	<b>MT</b>	BL2	A1	A2	A3	B1	C1	D2	Stain & Glaze
<b>Cut-back</b> (anterior)	<b>LT</b>	BL2	A1	A2	A3	B1	C1	D2	Build-up Stain & Glaze

# The structure makes the difference

Celtra Duo is the first zirconia-reinforced glass ceramic CAD/CAM block we developed and brought to market. Here, the zirconium oxide is not present in crystalline form, so the glass ceramics does not appear opaque; rather, it brings out the optimum balance of translucency and opalescence of the prosthetic restoration.

This is a benefit that we wanted to replicate in a high-strength pressable ceramic material for the dental laboratory. In fact, we even made it stronger.

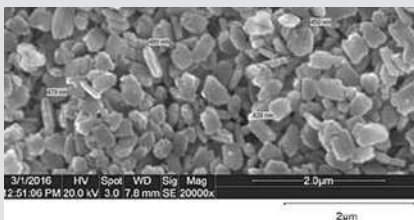
Having a number of patents worldwide for our unique composition of materials, we were able to build on this with an interdisciplinary team of scientists and engineers to develop our new concept of zirconia-reinforced lithium silicate ceramics (ZLS).



**Dr. Markus Vollmann**  
Director Research & Development,  
Dentsply Sirona Prosthetics

## COMPARISON OF MICROSTRUCTURES ZLS versus LS<sub>2</sub>

### UNPRESSED INGOT



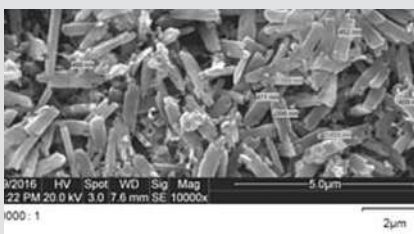
**Celtra Press ingot MT A2**  
Etched surface  
(Lithium Silicate crystal - 0.5 µm)



**Conventional LS<sub>2</sub> Press ingot HT A2**  
Etched surface  
(Lithium Disilicate crystal - 1.8 µm)

Smaller crystal length in pellet results in easier flow during pressing of the restoration.

### PRESSED MATERIAL



**Celtra Press ingot MT A2**  
Etched surface  
(Lithium Silicate crystal - 1.4 µm, Lithium Phosphate - 0.3 µm)



**Conventional LS<sub>2</sub> ingot HT A2**  
Etched surface  
(Lithium Disilicate crystal - 4.2 µm)

Smaller crystals leads to easier polishing.



## Celtra Press – The highest level of esthetics mimicking natural dentition

---

Strong chameleon effect  
(in-vivo blending)

---

Celtra Press retains all the esthetic advantages of Celtra Duo, such as strong opalescence regardless of shade paired with a level of translucency that is adequate to exploit the chameleon effect in the mouth. The reduced crystal size is designed within visible light wavelength to mimic light-scattering behavior of natural teeth.

---

High shade coverage rate  
and seamless insertion of  
the restoration

---

In other words: Just a few shades are sufficient to achieve a high coverage rate and seamless insertion of the restoration in the mouth. We even managed to increase its strength significantly and to raise it to new levels. This is owed to the particular characteristics of zirconia-reinforced glass matrix that you do not get with conventional lithium disilicate ceramics.

### Special features

---

Smart portfolio saves time  
and money

---

In developing Celtra Press, we are extremely proud to deliver a new material innovation that meets our stated goals. This is possible by a unique microstructure.

- + Amazing esthetic properties that closely mimic a patient's natural teeth
- + Simplified system with fewer necessary components
- + Optimized components eliminating conventional process steps
- + Increased strength to provide confidence
- + Exceptional flow characteristics improving pressing accuracy
- + Incredibly robust, easy to use veneering and individualization systems

---

Simplify the daily work in  
the lab

---

It is these things that simplify the daily work at the laboratory, something that should not be underestimated. With Celtra Press we have achieved all this, and we examined every factor in comprehensive testing including a large-scale international field test with valuable feedback from the workbenches of dental laboratories around the world.

### Special investment compound

We have developed a new investment capable of high-speed investing that reduces the difficult-to-remove reaction layer to almost zero thickness in combination with the lower pressing temperature of Celtra Press of 860°C. This has the advantage of better fit (no additional layer needs to be removed) and faster processing. The formation of a reaction layer is suppressed during the pressing process, which in turn simplifies the lab work.

### Celtra veneering ceramics

However esthetic Celtra Press may be – a custom build-up may still be preferred in the anterior region and accomplished with a veneer.

With Celtra Ceram and its individual masses we can offer the right customization tool, which is additionally compatible with all standard lithium disilicate ceramics. The low firing temperature of 760°C speeds up the process of making an individual crown. The developers primarily concentrated on:

- + Simple shade reproduction
- + Shade fidelity
- + Robust processing behavior

---

Dynamic aging tests

---

The range of different masses available ensures a high customization potential for both systems, glass ceramics and zirconia.

Dynamic aging tests (chewing simulations) with various restorative indications have demonstrated the excellent compatibility of Celtra Ceram and Celtra Press.



DeguDent GmbH  
Rodenbacher Chaussee 4  
63457 Hanau-Wolfgang  
Germany  
+49 6181 59-50  
[www.celtra-dentsplysirona.com](http://www.celtra-dentsplysirona.com)



Dentsply Sirona Prosthetics  
570 West College Avenue,  
York, PA 17401  
1-800-243-1942  
[www.dentsplysirona.com](http://www.dentsplysirona.com)

22288/REV 2017-06