



Celtra® Press System

Developed to make a difference

Brochure for the dental laboratory



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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
-

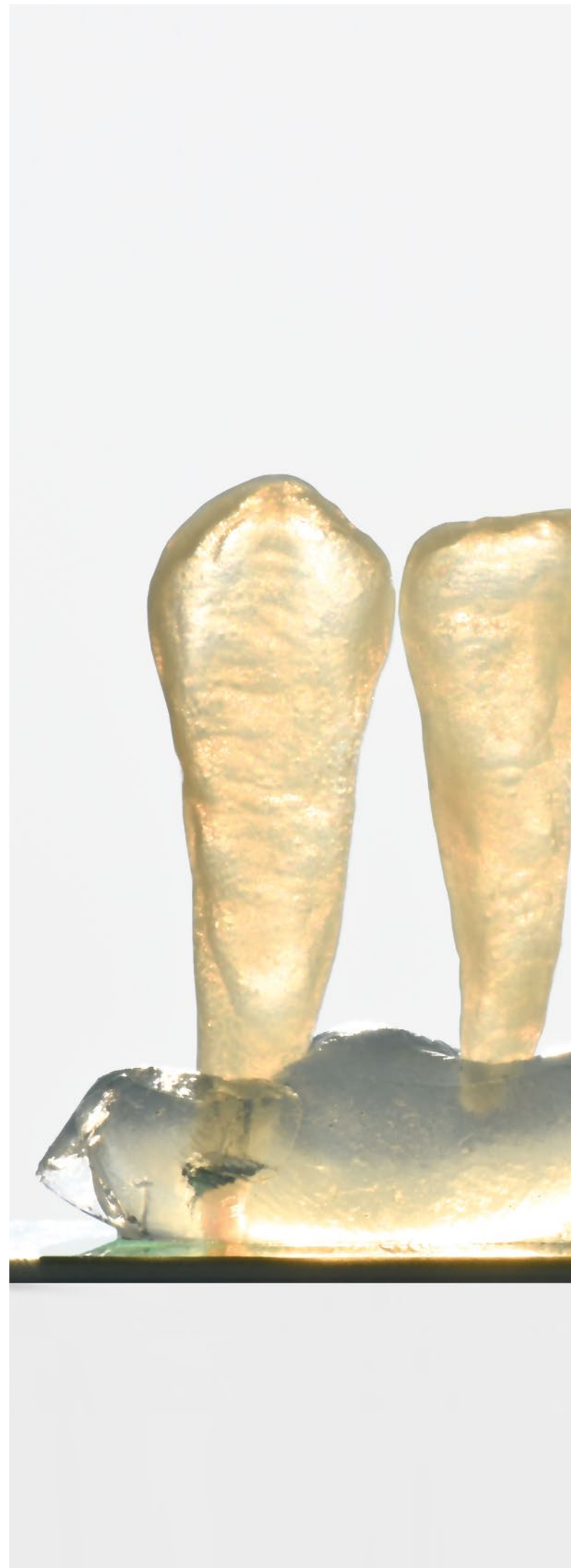


The material properties of Celtra allow the dental technician to concentrate more on the morphology.

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 2nd premolar
- + Excellent margin quality increases confidence in complex case designs
- + Exceptional flow properties (smaller microcrystals of ZLS)



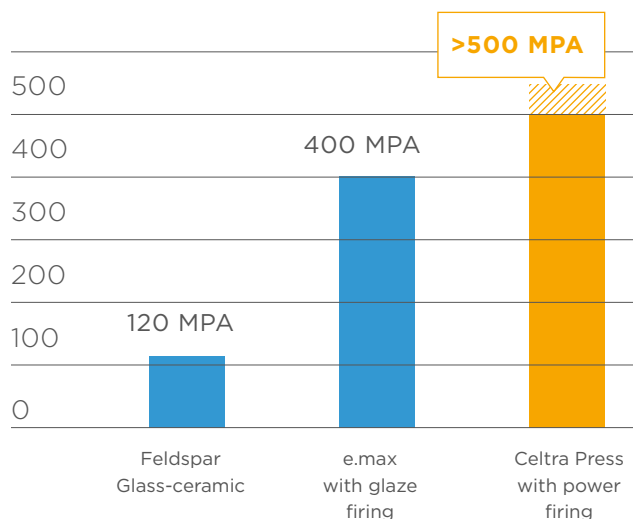
With its exclusive microstructure, Celtra Press delivers confidence with flexural strengths greater than 500 MPa. Combining this strength, with a unique chameleon effect, Celtra Press truly creates restorations that are in harmony with natural dentition.

”

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



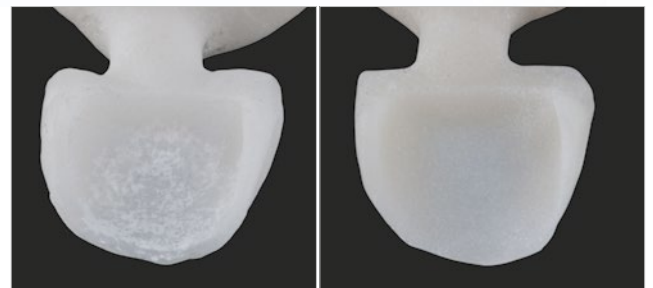
The new Celtra Press is truly the next generation in high-strength glass ceramics. Its enhanced vitality and shade accuracy contribute to exceptional visual opalescence and optimal translucency.

”

Dr. Izchak Barzilay DDS, Cert. Prosthodont., 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

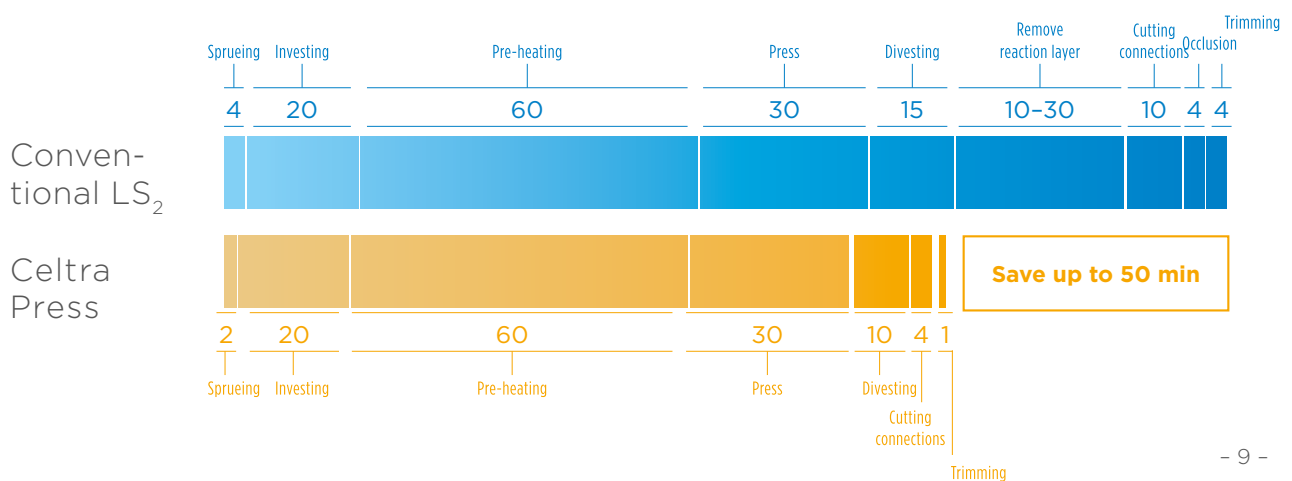


Cutting connections of a 3-unit Celtra Press bridge.
Only one sprue necessary, smooth surface.



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

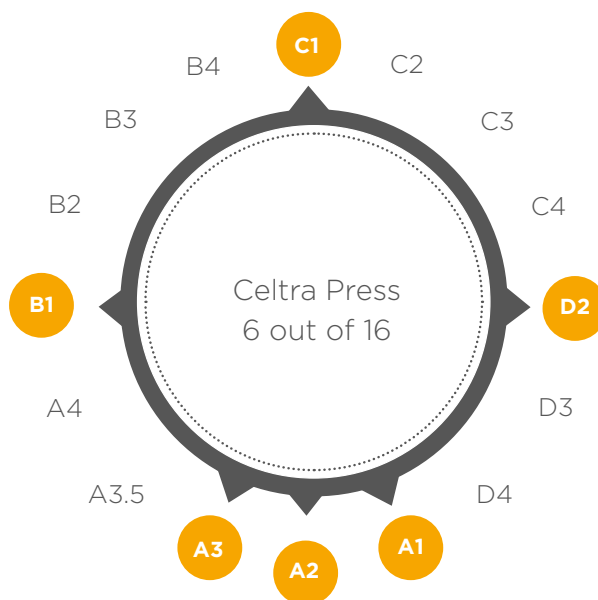
EASY AND RELIABLE STAINING CONCEPT

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

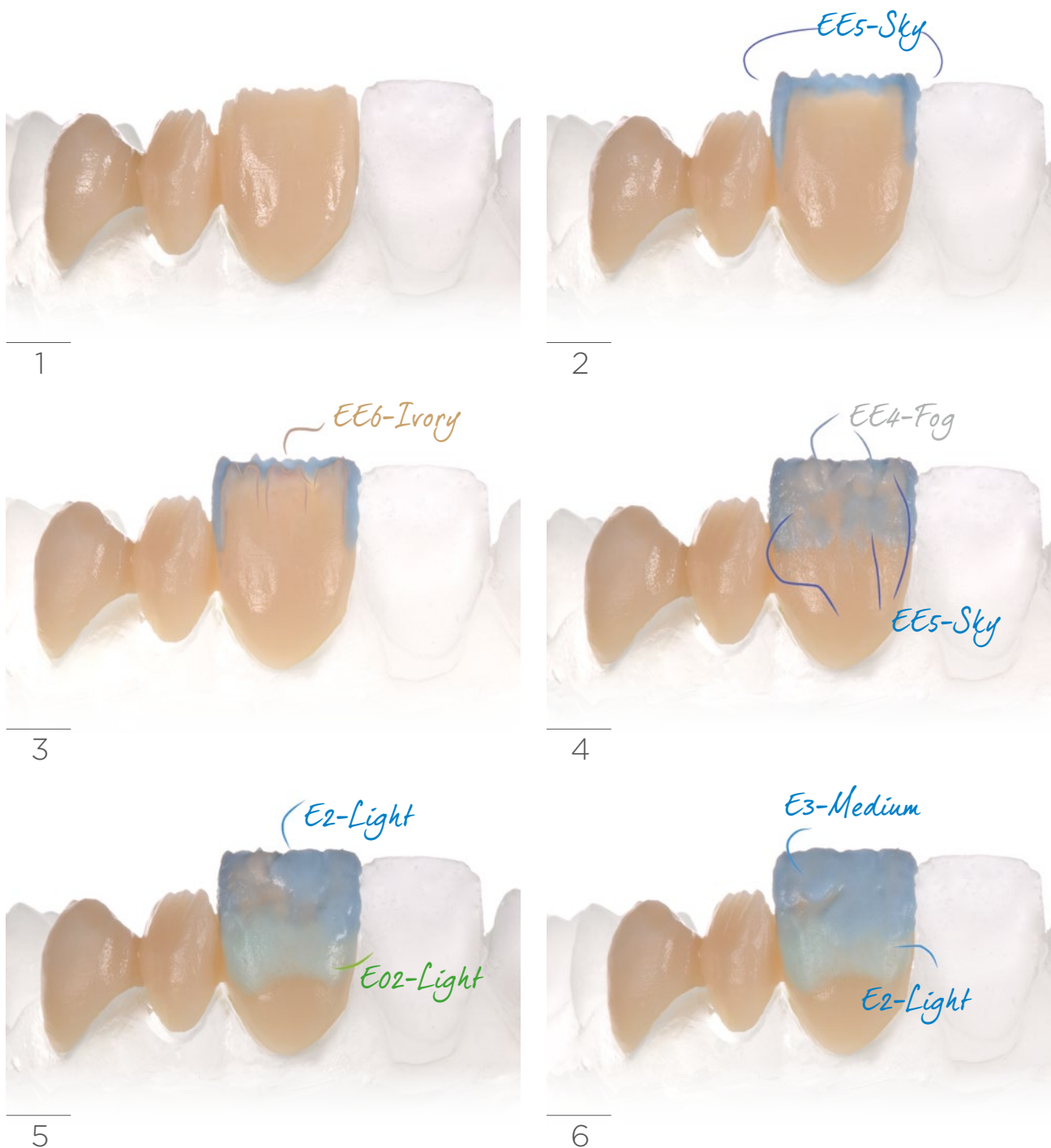
SHADE CONFIDENCE

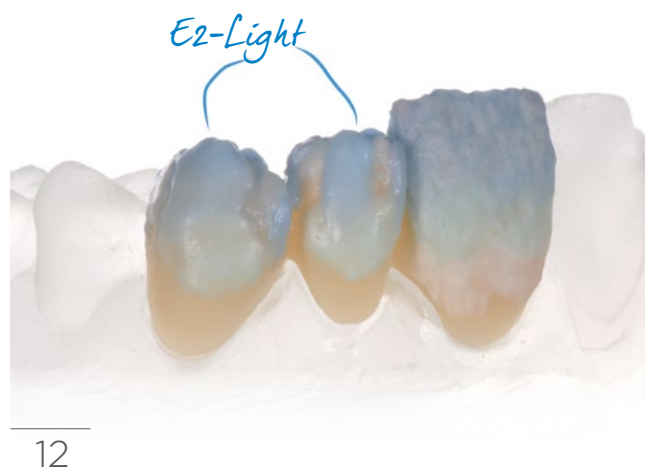
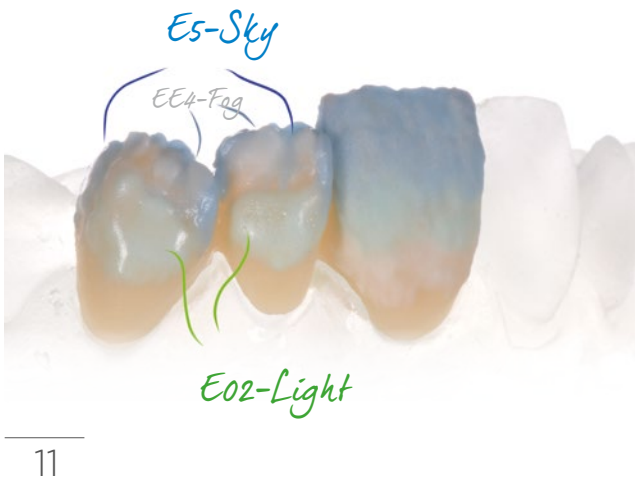
For life-like, reproducible veneerings



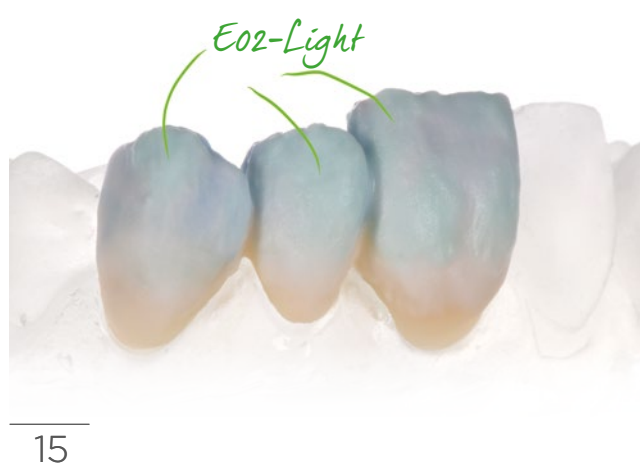
Out-of-the-bottle shade accuracy:
Fewer remakes, improved consistency

Individual layering





Individual layering





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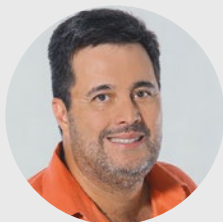
Celtra® Press Investment

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

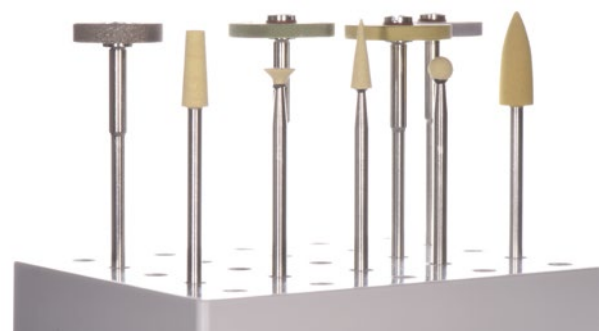
Celtra® TwisTec

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; sprawling 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 oft 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
Incisal (inlay, onlay, veneer)	HT		I1	I2	I3					Glaze
Full Contour (posterior)	MT	BL2	A1	A2	A3	B1	C1	D2		Stain & Glaze
Cut-back (anterior)	LT	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.

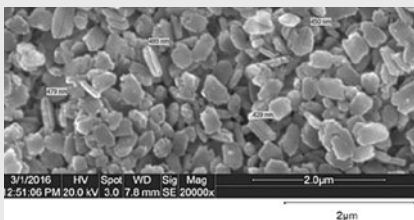
Having a number of patents worldwide for our unique composition of materials, we were able to build on this with an interdisciplinary team of scientists and engineers to develop our new concept of zirconia-reinforced lithium silicate ceramics (ZLS).



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

COMPARISON OF MICROSTRUCTURES ZLS versus LS_2

UNPRESSED INGOT



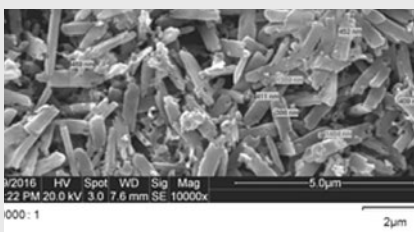
Celtra Press ingot MT A2
Etched surface
(Lithium Silicate crystal ~ 0.5 μm)



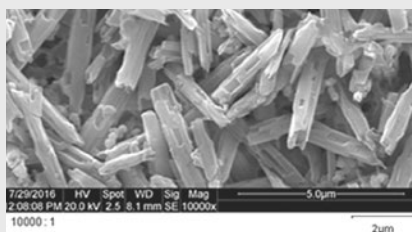
Conventional LS_2 Press ingot HT A2
Etched surface
(Lithium Disilicate crystal ~ 1.8 μm)

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_2 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

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.

Smart portfolio saves time and money

- + 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.



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22288/REV 2017-06