



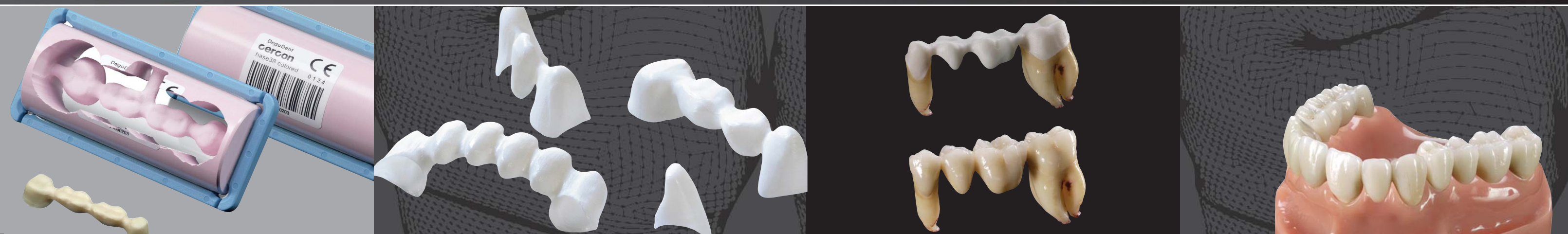
OUR TECHNOLOGY – YOUR POTENTIAL  
YOUR POTENTIAL – OUR REPUTATION  
OUR REPUTATION – YOUR SUCCESS

**cercon**<sup>®</sup> zirconia

## Cercon® - the proven all-ceramic solution.

### ULTIMATE ESTHETICS, HIGH BIOCOMPATIBILITY

- A proven bio-material with two decades of use in medicine, zirconia offers a high level of biocompatibility.
- Cercon Zirconia is available in neutral (white) and shaded (tooth colored) options.
- When veneered with Ceramco PFZ or Cercon Ceram Kiss, it has outstanding esthetic characteristics and a totally natural look.
- Cercon base material is available for crowns and bridge structures with an anatomical length of 12, 30, 38 and 47mm.
- Cercon base 47 is particularly suited for long-span bridges with multiple abutments, up to 47mm, and can accommodate wide curvatures.
- Customize your coping or framework shade with our core staining process.



### CERCON ZIRCONIA – THE NEW BENCHMARK

Today more than ever patients demand esthetic renewal as part of their dental treatment and are choosing metal-free, biocompatible and highly esthetic dental restorations. To meet this need, Dentsply offers a unique material - Cercon Zirconia. With prescriptions for crowns and bridges using zirconia frameworks rapidly growing, we have also developed a comprehensive laboratory system which has produced more than 1 million dental units.

### CERCON OFFERS A WIDE RANGE OF OPTIONS

Whether you want to prepare simple crown frameworks, complicated bridge geometries or supra-structures, Cercon Zirconia is capable of filling a wide range of options, making it the ultimate metal free solution. Cercon restorations can be conventionally cemented or adhesively bonded and have been proven in clinical use since 1998. Cercon is just as varied and diverse as dentistry itself.

### DEPENDABLE ACCURACY OF FIT

- Whether it be crowns or bridges, for the anterior or posterior regions, Cercon Zirconia allows you to achieve an extraordinarily high degree of precision and accuracy in fitting.
- Computer aided design (CAD) options in Cercon guarantee a high level of repeatability in your accuracy.
- Crown and bridge frameworks with a minimal wall thickness (0.3mm - 0.4mm) and connector sizes (9mm<sup>2</sup>) similar to dental alloys – are routinely produced with Cercon Zirconia.

### SUPREME STRENGTH PROPERTIES

- Zirconium oxide is the only ceramic which is able to withstand the high masticatory forces in the posterior tooth region. This has been well documented in both industry and medicine.
- With a high flexural strength (> 900 MPa) and a transformation toughening property that resists crack propagation, Cercon offers unparalleled reliability.
- The high strength and toughness also offers the advantage of conservative, PFM-like tooth reductions.



Cercon base material.

**cercon**<sup>®</sup>  
zirconia

## Cercon® - a working system for the future.

### CERCON ART

- Software module which simplifies computer aided design (CAD) of restorations.
- Ability to "nest" multiple units in one large base block increases your profitability.
- Customize your frameworks using options in the export system software.
- Can be used with scans from the Cercon Brain's laser for single coping units.
- Cercon Move, the 3D navigation system offers a unique way to visualize onscreen models.



### PERFECTLY MATCHED PRODUCTION STEPS

The Cercon system is your professional high-tech partner providing reliable results during all production steps. The materials, equipment, times and temperatures are perfectly matched to one another. All computing and manufacturing processes run automatically adding efficiency to the production process. Better results are what count – whether they are arrived at by traditional means or in virtual reality, so Cercon offers you a choice between a CAM-aided or a CAD/CAM-aided processing method. Build the system that's right for you.

### CERCON EYE

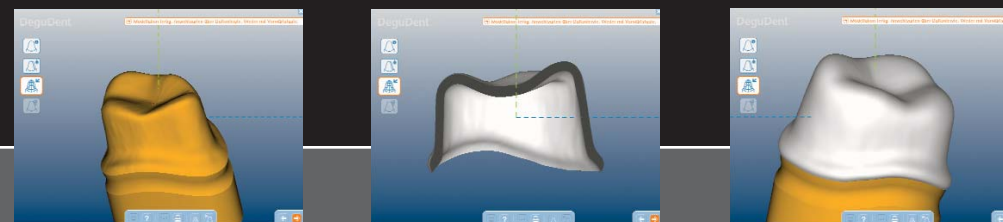
- A stand-alone laser scanner which can digitally map out up to 16 units per model.
- Touch free optical mapping using a laser beam and two matrix cameras for exact scanning results.
- Seamlessly integrated with the Cercon Art CAD module.
- Connect with the Cercon Brain unit, or run in a laboratory to laboratory network environment.

### CERCON BRAIN

- The heart of the system, containing a laser scanner and a 3-1/2 axis milling platform.
- Highly accurate and consistent precision milling.
- Digital data from an onboard laser scanner or from the Cercon Eye / Art CAD system is converted to an efficient milling process in minutes.
- Milling dust is picked up by Cercon Clean.

### CERCON HEAT

- Sintering furnace designed specially for the Cercon system.
- About 30 units (one day's milling output) can be sintered at once.
- At 1,350°C the milled objects shrink to their ideal size and strength in the 6 hour sintering cycle.



Cercon Art - Simplifies CAD design instead of complicating it.



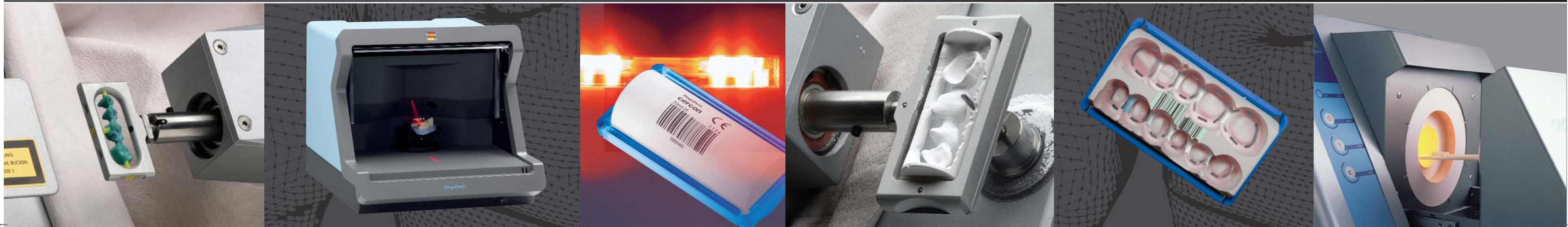
## Cercon® - high precision tools, from start to finish.

### MILLING

The milling process is started automatically with the Cercon Zirconia base material already fixed in place.

- Rough and fine milling tools create the detail of the gingival and occlusal sides of the framework.

- While the zirconia is in its pre-sintered chalk-hard stage, adjustments to the coping or framework design can easily be made.
- An oversized replica of the restoration is milled.



### CHOOSE THE METHOD WHICH BEST SUITS YOUR STYLE.

If you prefer a more traditional approach, you can continue configuring your crown or bridge framework manually as a wax model. This method is ideally suited to long span bridges and complex cases that require your individual attention. You can also choose the virtual alternative by scanning the model and designing your frameworks on screen using the Cercon Eye and Art CAD module.

#### SCANNING USING CERCON BRAIN

- The waxup is mounted with sprues in a scanning frame.
- The onboard laser automatically scans the waxup confocally.
- The system automatically calculates and compensates for Zirconia sintering shrinkage using the information from the barcode on each Cercon blank.

#### SCANNING USING CERCON EYE

- Stand-alone scanner handles single dies, full arch models, or wax copings
- Capable of digitally mapping up to 16 units at one time
- Scan time of less than 20 seconds per unit with a precision of 10 microns or less.

### SINTERING

- Following shaping, the framework is hardened by sintering in the Cercon Heat furnace.
- This process also involves shrinkage to the final size prescribed by the wax model or the virtual configuration.
- The result is a high-strength ceramic framework with a perfect fit and a neutral or tooth colored shade.

### CERCON SYSTEM CONFIGURATIONS

- Cercon Brain and Heat
- Cercon Art, Brain and Heat
- Cercon Eye, Art, Brain and Heat
- Cercon Eye and Art – Stand-alone

Build the system that's right for you



The base



The wax model

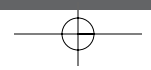


The sintered object



The final result

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zirconia



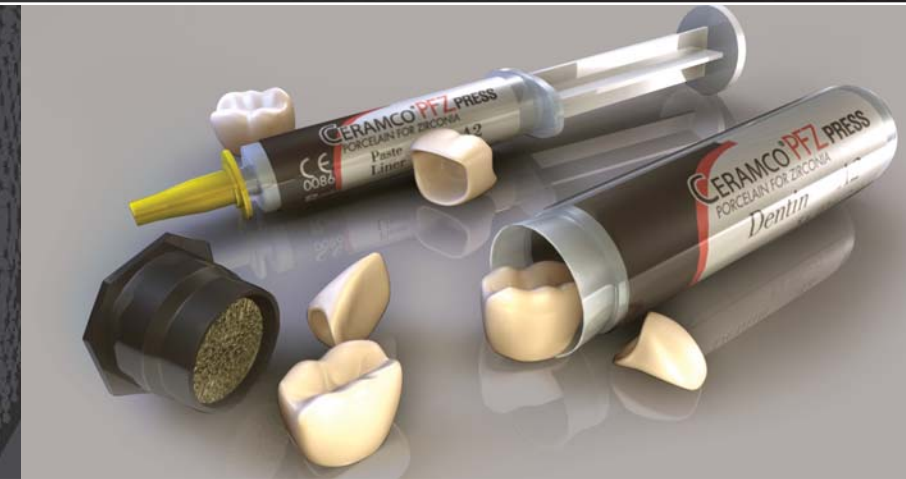
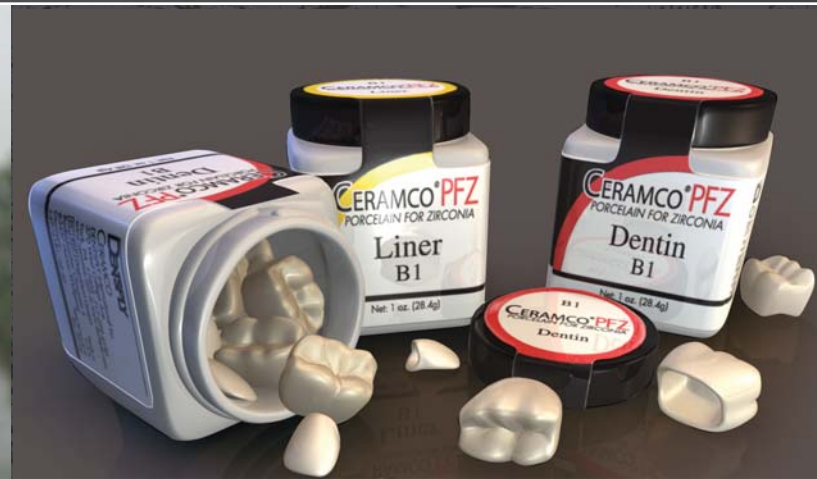
## Cercon® - esthetic excellence.

### CERCON® CERAM KISS

- A European style porcelain developed specially for veneering Cercon Zirconia frameworks.
- Based on the KISS shading system allowing for both simplicity and artistry in creating restorations.
- Sets new standards in the all-ceramic field in chewing simulation tests.

### PFZ – PERFECTION IN PORCELAIN

Ceramco PFZ, porcelain fused to Zirconia, has been engineered to provide exceptional handling, thermal stability and esthetic properties. The entire system, from the liners through the dentins, natural enamels, opal enamels, and surface stains, impart the fluorescence of natural dentition. This system is rated by our evaluators as one of the best porcelain systems ever made.



### VENEERING SYSTEMS: CERCON® CERAM KISS AND CERAMCO® PFZ

Esthetics are the first priority for our most demanding customers – our patients. With the Cercon system, we offer a variety of approaches to optimize a natural look for your patient's best smiles. Our core competencies for over forty years have been in the area of porcelain development. Two very unique materials, Ceramco PFZ and Cercon Ceram Kiss are available as options to the dental laboratory. Both systems meet the highest international standards for dental ceramics.

#### KISS - A TOTALLY NATURAL LOOK

Cercon Ceram Kiss allows the artist in you to attain full expression and create a totally natural looking restoration. The standard layering technique itself allows you to achieve highly esthetic results. The effect can be improved still further using the light-dynamic powders. The Cercon Ceram Kiss shading system offers an endless variety by combining a few basic modifier shades on your palette.

### CERAMCO® PFZ

- Ease of use and handling of traditional Ceramco porcelains.
- Leucite-free material provides exceptional thermal stability for increased productivity.
- Features an efficient 3-powder build-up system.

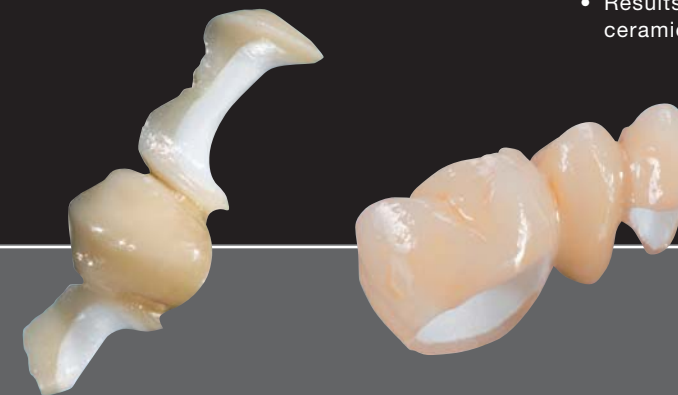
### PERFECT MARGINS, EFFICIENT TECHNIQUE

Pressing over Cercon frameworks, with or without our specially formulated liner, is an excellent alternative to veneering. Ceramco PFZ Press restorations can be characterized using both the enamel cutback and staining techniques. Exact all-ceramic margins that can be etched and bonded, enhance accuracy and reduce chairside adjustment times.

### CERAMCO® PFZ PRESS

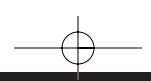
- Easy margins with zero shrinkage.
- Enhance esthetics, characterize with Ceramco PFZ.
- Results in a homogeneous pressed ceramic structure.

Cercon Ceram Kiss - easy to handle... with a perfect result



Ceramco PFZ – excellent esthetics... with natural fluorescence

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zirconia

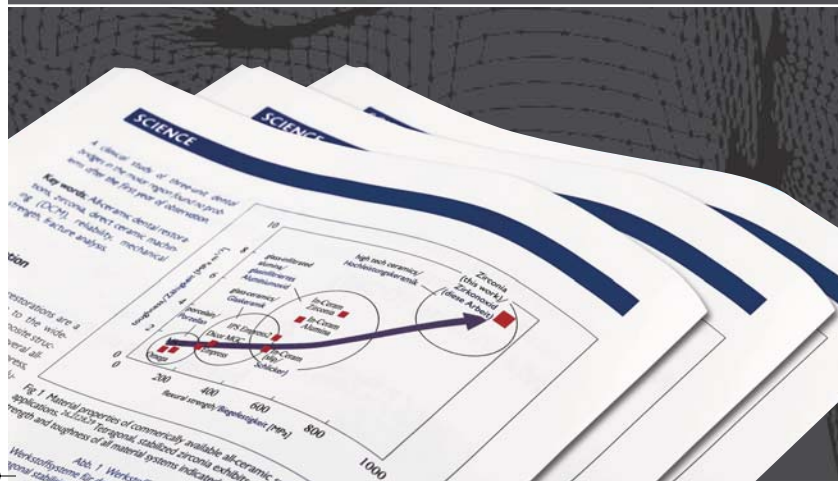


## Cercon® - the support behind the product.

### SUCCESS THROUGH EDUCATION AND TRAINING

We are committed to helping meet the needs and learning requirements of all of our customers, large and small. DENTSPLY Ceramco offers several excellent educational opportunities at our new Technical Education Center in Burlington, New Jersey and our training facility in Yucaipa, California. We provide excellent programs for all levels of dental technicians, from beginner to advanced. Beyond the classroom, we are expanding our training methods with the use of on-line webinars, which provide a cost effective alternative to in-house technical training as well as on-line Clinical Education programs.

Discuss the options that are best for you with your local Ceramco representative.



*I have been using Cercon Zirconia for over 5 years now and there is simply no better product when it comes to esthetics and strength.*  
Dr. David Little



*There are many different products in the world of all-ceramics, but when it comes to Cercon, I get the precise fit and reliable results that I demand case after case.*  
Dr. Lou Graham



### TAKE ADVANTAGE OF CERAMCO'S EXPERTISE

We have documented the entire Cercon system for you in thorough detail and summarized it in informational brochures. However, when you are deliberating about where to make investments and what to use in your daily laboratory work, there are sure to be further questions which we can answer for you. Just ask - we will be delighted to help.

### ADVICE COVERING EVERY ASPECT OF YOUR INVESTMENT

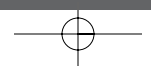
You know your laboratory and your working procedures better than anybody. How would you integrate the Cercon system? Which components can help to improve your working procedures and results? How will you finance the equipment? Working with your unique input, we can give you the answers you need to these questions and we would be delighted to offer you very individual advice.

### MARKETING MATERIALS TO SUPPORT YOUR BUSINESS

To help promote your Cercon Zirconia franchise to your client dentists, Ceramco continues to produce a variety of support materials. From Cercon dentist brochures, patient brochures and rebate coupons to national advertising programs. With over 5 years of successful clinical data, many studies are available that will help convert your dentists to zirconia as the preferred all-ceramic material. We hope you will take advantage of these productive tools to help maximize your success.



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*The chemistry of a great smile.™*

**R<sub>x</sub>only**