

IPS Empress® System  
Information for the  
**LABORATORY**

Confidence

Reliability

Esthetics



# IPS Empress® SYSTEM

The ultimate esthetic restorative system

# A TIME-TESTED SYSTEM OFFERS NEW POSSIBILITIES







For nearly 20 years, the name Empress has been associated with the highest level of esthetics in the reconstruction of dental defects. More than 40 million restorations speak for the durable lifelike appearance, the continuing success and the high quality standard of the material.

The IPS Empress System has been further developed and continues to enthuse users with decisive improvements in terms of esthetics, function and processing.

In 2004, the system was further expanded and optimized with the introduction of the new **IPS Empress Esthetic** pressable ceramic.

This was followed by the release of **IPS Empress CAD** in 2006, creating an opportunity for esthetic restorations to be milled using CAD/CAM technology, now also at the chairside.



 <b>IPS Empress® System</b>		
DENTAL TECHNICIANS	CAD/CAM USERS	DENTISTS
<p>IPS Empress Esthetic</p>  <p>Lab-fabricated ceramic restorations</p>	<p>IPS Empress CAD</p>  <p>Lab- or chairside-fabricated ceramic restorations</p>	<p>IPS Empress Direct</p>  <p>Direct composite resin restorative therapy</p>

# MORE VERSATILITY IN THE LABORATORY

WITH IPS EMPRESS®

The IPS Empress all-ceramic material for use in the dental laboratory is made of an extremely homogeneous leucite-based ceramic, which scatters light like natural enamel and blends in well with its surroundings. This material exhibits lifelike translucency and convincing esthetic properties.

As the press ceramic IPS Empress Esthetic and the ceramic blocks IPS Empress CAD are based on the same materials

composition, the two products demonstrate exceptional optical properties and strength values. Therefore, highly esthetic all-ceramic single-tooth restorations can be efficiently pressed or milled.

Irrespective of the processing technique used, IPS Empress enhances your laboratory's flexibility, esthetic results, performance and economic efficiency.

## HIGHLIGHTS

- Highly esthetic all-ceramic restorations
- Proven ceramic material with a flexural strength of 160 MPa
- 20 years of experience with leucite glass-ceramics
- Same material composition of IPS Empress Esthetic and IPS Empress CAD

### Physical properties at a glance

IPS Empress Esthetic and IPS Empress CAD

Flexural strength	160 MPa
Hardness	6200 MPa
Modulus of elasticity	62 GPa
Solubility	25 µg/cm <sup>2</sup>

Source: R&D Ivoclar Vivadent AG, Schaan

## Clinical studies on IPS Empress

### Leucite-reinforced glass-ceramic inlays and onlays after eight years in vivo

Survival rate after

8 years: 92%

N. Krämer, A. Petschelt,  
R. Frankenberger,  
J Dent Res Spec Iss (2002);  
81:Abstr. #1696:A-224

### Six-year clinical evaluation of ceramic inlays and onlays

At 6 years, 93.7% of the restorations were judged clinically acceptable.

Survival rate after 6 years: 96.9%

A. Galiatsatos, D.Bergou,  
Quintessence Int (2008);  
39:407-412

### Clinical evaluation of leucite-reinforced glass-ceramic crowns over 11 years

Survival rate after 11 years: 95.2%

M. Fradeani, M. Redemagni,  
Quintessenz (2003); 54:379-386

### 10-year clinical performance

IPS Empress restorations received high patient and dentist acceptance for resistance to fracture and wear and for excellent esthetics. The Dental Advisor continues to highly recommend IPS Empress after 10 years.

The Dental Advisor (2004);21(3):6

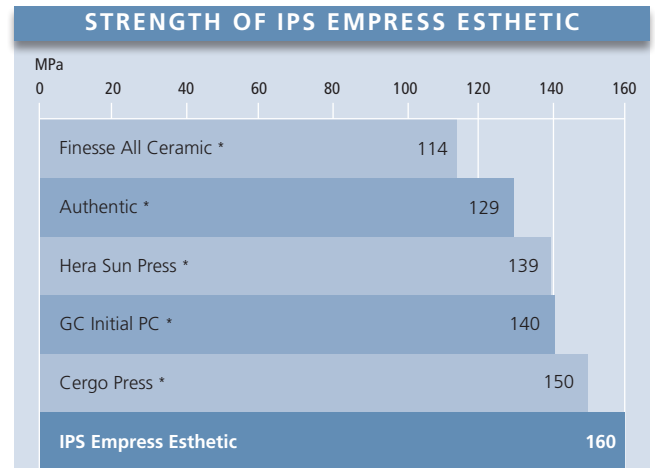


# THE PRESS PROCESS

## EFFICIENT AND PROVEN

Since the beginning of the 1990s, the press technique has been producing precision all-ceramic restorations and thus satisfying dental professionals and patients alike.

Because of its strength and exceptional esthetics, **IPS Empress Esthetic** is the material of choice for fabricating esthetic inlays, onlays, crowns and veneers with the press technique.



Source: R&D Ivoclar Vivadent AG, Schaan, May-July 2005

\* not registered trademarks of Ivoclar Vivadent AG

# IPS Empress<sup>®</sup> ESTHETIC



**Before:** Diastema in the anterior region



**After:** Restored with  
IPS Empress Esthetic Veneer

Matt Roberts / Dr David Hornbrook, USA



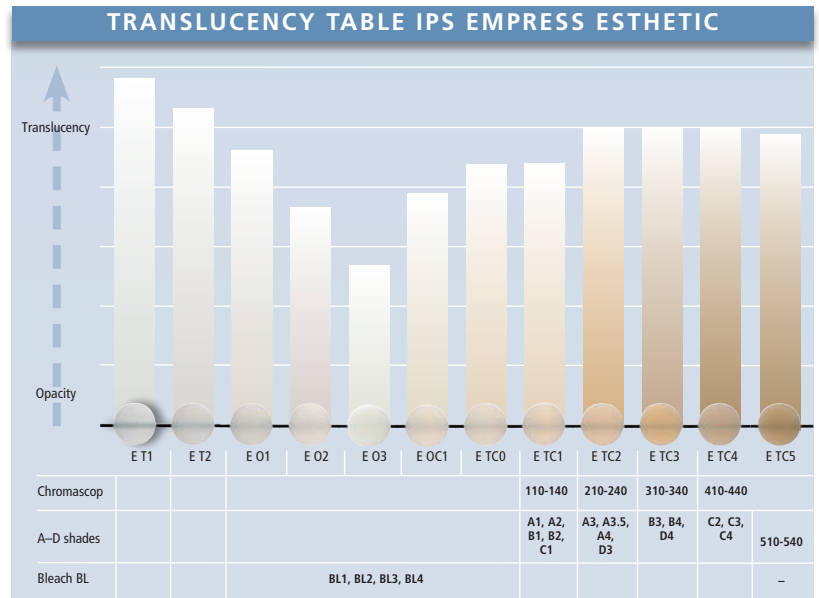
# THE MATERIAL

## IPS EMPRESS® ESTHETIC INGOTS

IPS Empress Esthetic comes in a comprehensive range of ingots. A total of 12 ingots in 7 levels of translucency are available, which will fulfil even the most discerning esthetic requirements.

The ingots are supplied in the 6 familiar TC shades. Hardly any characterization is required for the slightly shaded TC ingots. Consequently, they can be used as universal ingots for all the indications. In addition, 6 further shades are available, which are ideal for the inlay and veneering technique.

The final tooth shade is produced through a combination of the shade of the prepared tooth, the ingot, the stains or layering material and the cementation material.



Source: R&D Ivoclar Vivadent AG, Schaan, February 2011

### HIGHLIGHTS

- 12 ingots in 7 levels of translucency
- True-to-nature light scattering and balanced chameleon effect
- Excellent press results and accuracy of fit



### PRESS FURNACES

The Ivoclar Vivadent press furnaces **Programat® EP 3000** and **EP 5000** are coordinated with the processing of the IPS Empress Esthetic material. High-precision press results and smooth surfaces can be achieved in conjunction with the investment materials IPS Empress Esthetic Speed or IPS® PressVEST.



Programat EP 3000/G2



Programat EP 5000/G2

# CAD/CAM PROCESSING

## DIGITAL AND MODERN

CAD/CAM techniques are opening up new possibilities in many different fields. You too can take advantage of this modern technology in combination with the high-performance **IPS Empress material**.

The extensive range of IPS Empress CAD blocks for your inLab® (\*) CAD/CAM system allows you to select the block that best suits your case requirements.

The exceptional ceramic is available in two levels of translucency: HT (High Translucency) and LT (Low Translucency). Within these translucency levels, there is a choice between Chromascop and A–D shades. To complete the range, the IPS Empress CAD LT blocks are also supplied in 4 modern Bleach shades (BL1–BL4). The polychromatic IPS Empress CAD Multi blocks are the highlight of the IPS Empress CAD range of products.

\* The inLab software version V2.90 is required for the milling of IPS Empress CAD Multi blocks.



Because of their high translucency, the **IPS Empress CAD HT blocks** are ideal for fabricating smaller restorations (e.g. inlays), for which a balanced, true-to-nature chameleon effect is desired. The influence of the surrounding dentition refines the shade of the restoration.

Together with the lifelike fluorescence, this results in an optimum integration in terms of shade.



The new **IPS Empress CAD LT blocks** are characterized by their high level of brightness and true-to-nature chroma. Therefore, they are particularly suitable for the fabrication of larger restorations.

These blocks exhibit an adjusted fluorescence and are therefore ideal for the cut-back technique in conjunction with IPS Empress Esthetic Veneer.

# IPS Empress® CAD

## INDICATIONS OF IPS EMPRESS CAD



**HT blocks**  
(High Translucency)

Higher translucency and  
chameleon effect  
Low brightness value

Inlays

Onlays

Veneers



**LT blocks**  
(Low Translucency)

Lower translucency and  
chameleon effect  
Higher brightness value

Anterior and  
posterior crowns

Partial crowns

Veneers



**Multi blocks**

Natural shade,  
translucency and  
fluorescence transition

Anterior and  
posterior crowns

Partial crowns

Veneers



# THE HIGHLIGHT

## IPS EMPRESS® CAD MULTI BLOCKS

The innovative **IPS Empress CAD Multi blocks** are an ideal supplement to the system and offer a unique combination of efficiency and sophisticated and exciting esthetics.

Because of the smooth shade transition between the dentin and incisal areas, these polychromatic blocks produce highly esthetic and natural-looking results, even without characterization.

IPS Empress CAD Multi blocks are available in the 5 most popular A–D as well as 2 Bleach BL shades.

They are ideal for fabricating full and partial crowns as well as veneers. The blocks feature a high level of chroma and a lifelike opacity in the cervical/dentin areas and the desired level of translucency in the incisal region.

The precisely adjusted transition of shade and fluorescence enables you to fabricate beautiful and reproducible restorations with remarkable efficiency.



### HIGHLIGHTS

- 20 years of experience with leucite glass-ceramics
- 3 different blocks for every patient case at hand
- You can choose between a lifelike chameleon effect, natural-looking brightness value or a true-to-nature shade transition



The esthetic properties of the IPS Empress CAD Multi blocks imitate those of natural teeth. The level of chroma and fluorescence is highest in the cervical portion and decreases towards the translucent incisal area.

# IPS EMPRESS® SYSTEM

## ALL YOU NEED FOR BEST RESULTS

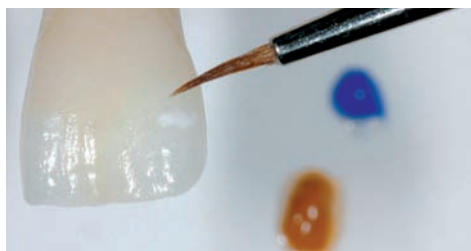
### STAINS AND LAYERING MATERIALS

Your know-how and the characterization possibilities offered by the system will allow you to fabricate exceptionally esthetic restorations with IPS Empress.

#### External shading

The **IPS Empress Universal Shades** and **Stains** in paste form are applied to the outer surfaces of the restoration for highlighting individual characteristics and subsequently fired in the new Programat furnaces.

Hence, it is possible to reproduce all the Chromascop and A–D shades. The lifelike appearance of the incisal area is further enhanced using the two incisal shades.



J. Seger, Ivoclar Vivadent AG, Liechtenstein

With your expertise you can help your dentist to restore the smile of even the most discerning patients.

#### Cut-back technique

With the opalescent **IPS Empress Esthetic Veneer** layering material, the veneering technique has come yet another step closer to imitating nature. In the **cut-back technique**, the incisal third of fully anatomical IPS Empress Esthetic or IPS Empress CAD restorations is reduced to a dentin-mamelon structure. Subsequently, internal characteristics, such as mamelons, are applied using the Wash pastes.



These specially shaded and ready-mixed "two-in-one" pastes enable a homogeneous bond and improve the natural esthetics. Fourteen layering materials, of which three are opalescent, are available for building up the incisal third.



J. Seger, Ivoclar Vivadent AG, Liechtenstein



# BECAUSE QUALITY AND ESTHETICS CAN BE REPRODUCED

## CERAMIC FURNACES

The latest generation of ceramic furnaces is specially coordinated with the IPS Empress materials. The furnaces produce excellent firing results in the fabrication of ceramic restorations.

The furnaces in the Programat series – **Programat P300/G2**, **P500/G2** and **P700/G2** – are characterized by innovation, quality and many years of success.

The new QTK muffle technology represents the core of this furnace generation. It enables the firing procedure to be precisely controlled and ensures even heat distribution in the firing chamber.

You can therefore choose the Programat furnace that best meets your and your dental lab's requirements.



## CEMENTATION

Why not recommend that your dentist use the clinically proven Ivoclar Vivadent luting materials for the adhesive cementation of your restorations?

The placement of IPS Empress restorations is easy and convenient with **Variolink® II**, **Variolink® Veneer** or **Multilink® Automix** and the results are exceptionally esthetic.



Dr David Hornbrook, USA

	Variolink® Variolink II Variolink Veneer	Multilink® Multilink Automix
Veneers	✓	—
Inlays	✓	✓
Onlays	✓	✓
Partial crowns	✓	✓
Anterior and posterior crowns	✓	✓

✓ Especially recommended    — Not recommended

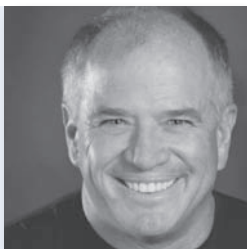
THE RESULTS SPEAK FOR THEMSELVES

# IPS Empress® SYSTEM



**Shigeo Kataoka**  
Japan

// IPS Empress allows the fabrication of all-ceramic restorations that harmoniously blend into the oral environment. //



**Matt Roberts**  
USA

// IPS Empress delivers excellence once again. The new IPS Empress Esthetic materials give me the tools I need to achieve the esthetic goals our patients demand. //



# LOOKING BACK ON ALMOST 20 YEARS OF SUCCESS



**Jürgen Seger**  
Liechtenstein, Ivoclar Vivadent AG



IPS Empress Esthetic allows high-quality ceramic veneers to be fabricated using an effective and efficient technique.

Their optical appearance completely convinces patients and experts alike.



**Stéphane Cazier**  
France



The increased tolerance during shade determination and the resulting improved integration into the natural environment is what I like particularly about the IPS Empress CAD Multi blocks. The colour transition of the blocks increases the natural-looking appearance after glazing.

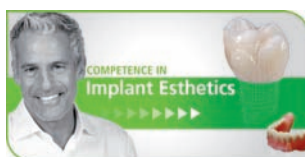


# IPS Empress® System

Please contact your Ivoclar Vivadent consultant for detailed information about the individual products and the system.

For additional information, please go to:

**[www.ivoclarvivadent.com](http://www.ivoclarvivadent.com)**



This product forms part of our All-Ceramics and Implant Esthetics competence areas. All the products of these areas are optimally coordinated with each other.

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