

IPS Empress® CAD for the CAD/CAM Technology –  
Information for Dentists

Confidence

Reliability

Esthetics



IPS Empress® CAD

*\*The ultimate esthetic restorative system*



ivoclar  
vivadent®  
passion vision innovation

## A time-tested system .... with new possibilities



For more than 20 years, the name IPS Empress has been associated with the highest level of esthetics in the reproduction of natural tooth characteristics. With more than 40 million restorations fabricated with IPS Empress to date, the system has gained a reputation for producing long-lasting, natural-looking results and maintaining high quality standards.




Over the years, the IPS Empress System has been further developed keeping pace with the latest trends in cosmetic dentistry. As a result enhancements have been made to the material's esthetics, function and processing properties.

In 2004, the system was further expanded and optimized with the introduction of 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 chairside using CAD/CAM technology, and placed immediately.

IPS Empress Direct, which was introduced in 2009, is the latest addition to the IPS Empress System. This composite material for direct restorative procedures provides dentists with the esthetics of a ceramic with the convenience of a composite. IPS Empress Direct offers exceptional handling and a high gloss polish and is available in 32 true-to-nature shades.



### IPS Empress® System

Press	CAD/CAM	Composite
 <p><b>IPS Empress Esthetic</b></p>	 <p><b>IPS Empress CAD</b></p>	 <p><b>IPS Empress Direct</b></p>

#### HIGHLIGHTS OF IPS EMPRESS

- More than 20 years of clinical experience with leucite glass-ceramics
- Proven ceramic material with a flexural strength of 160 MPa
- Highly esthetic restorations and excellent shade adaptation

## More versatility with IPS Empress

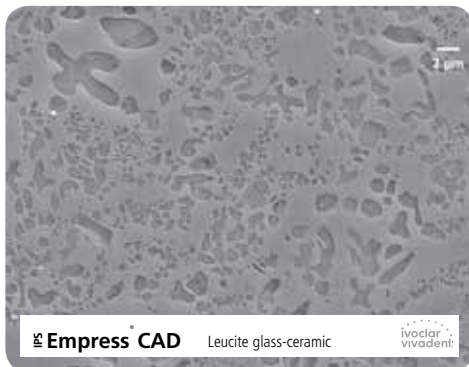


The IPS Empress materials are made of an extremely homogeneous leucite-based ceramic, which scatters light like natural enamel and blends in well with its surroundings.

IPS Empress CAD obtains its outstanding homogeneity and strength of 160 MPa in an optimized industrial manufacturing process. IPS Empress CAD is available

in A–D, Chromascop, and 4 Bleach shades, as well as in 6 sizes. It can be used for the fabrication of all-ceramic restorations for individual teeth, such as inlays, onlays, crowns, and veneers. However, the teeth have to be prepared carefully beforehand to establish the prerequisites needed for the correct fit of the restoration and long-lasting results.

Subsequently, your IPS Empress restorations can be quickly and efficiently polished to a high gloss or characterized with staining materials in a few easy steps and then glazed to further enhance their esthetic appearance.



SEM image of IPS Empress CAD  
Source: R&D Ivoclar Vivadent AG, Schaan, Liechtenstein



**Prof. Dr W. Mörmann**  
Switzerland



**Dr A. Peschke**  
Liechtenstein  
Ivoclar Vivadent



**Dr A. Kurbad**  
Germany

## Always the right block ...



The innovative **IPS Empress CAD Multi** Block successfully combines easy handling and sophisticated and exciting esthetics.

Because of the smooth colour 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

five most popular A–D and two Bleach BL shades, as well as in 3 sizes. They are ideal for fabricating full and partial crowns as well as veneers. The blocks feature a high level of chroma and lifelike opacity in the cervical area and the desired level of translucency in the incisal region.

The possibility of individual positioning featured by the software provides even more flexibility.

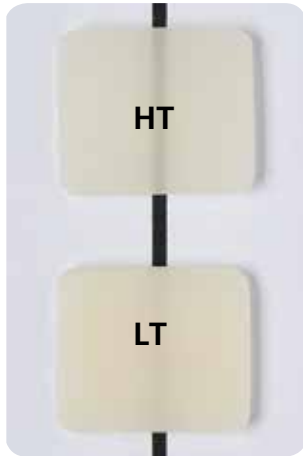


The restoration imitates the esthetic properties of the natural tooth. The level of chroma is at its highest in the cervical part of the tooth and it decreases towards the translucent incisal area.

### INDICATION OF IPS EMPRESS CAD BLOCKS

Multi Blocks	HT Blocks (High Translucency)	LT Blocks (Low Translucency)
Lifelike transition of shade, translucency and fluorescence	Higher translucency and chameleon effect Lower brightness values	Lower translucency and chameleon effect Higher brightness value
Anterior and posterior crowns	Inlays	Anterior and posterior crowns
Partial crowns	Onlays	Partial crowns
Veneers	Veneers	Veneers

... for each individual patient



The monochromatic **IPS Empress CAD HT** (High Translucency) Blocks exhibit a higher translucency and lower brightness values than the LT Blocks. They are particularly suitable for fabricating inlays and onlays because of their exceptional «chameleon effect». The high translucency of the material and its lifelike fluorescence allow the

restoration to blend in seamlessly with the surrounding dentition.

The **IPS Empress CAD LT** Blocks are characterized by their high level of brightness and true-to-nature chroma. Therefore, they are particularly suitable for fabricating larger restorations. The specially adjusted brightness of the material

prevents «greying» of full and partial restorations.

The coordinated fluorescence enables seamless integration of the restoration in the surrounding dentition, even under changing light conditions.



Dr G. Koike  
Japan



Dr C. Winterholler  
USA



Dr K. Wiedhahn  
Germany



Dr S. Cazier  
France



## A variety of characterization options

Your IPS Empress CAD restorations can be characterized according to

the individual requirement of your patients. As a result you can utilize simple steps

to achieve extraordinary esthetics with IPS Empress CAD.

### INTERNAL SHADING

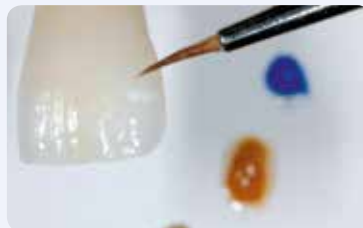
The IPS Empress Direct Color Material is applied in a thin layer to the inner surfaces of the restoration after etching and silanating and then light-cured. This basic technique imitates the features that make each tooth individual.



Dr K. Wiedhahn, Germany

### EXTERNAL SHADING

The outer surfaces of crowns and veneers are "conventionally" stained with IPS Empress Universal Shades/Stains. The application can be combined with glazing in a one-step technique and fired using the Programat® CS2 furnace.



J. Seger, Ivoclar Vivadent AG, Liechtenstein

### CUT-BACK & LAYER

The most esthetic technique involves layering porcelain. This allows you to obtain a range of translucencies and colors. This can be achieved using the IPS Empress Esthetic Veneering Materials (wash pastes, layering porcelain, glaze paste).



J. Seger, Ivoclar Vivadent AG, Liechtenstein

### POLISH & GLAZE

The polychromatic IPS Empress CAD Multi blocks offer a multiplicity of translucencies and a fusion of color embedded in a single block. The restoration is finished by only polishing or glazing.



Dr A. Touchstone, USA

## Coordinated products for heightened comfort in routine procedures

Optimally coordinated products for the entire treatment procedure make your job easier and enhance the overall quality of the restoration.

**OptraGate®** is a helpful accessory during shade determination and intraoral image taking by providing improved access to the oral cavity.

The **IPS® Contrast Spray Chairside** balances the optical properties of dentin and enamel and allows the teeth to be scanned successfully.

The **Virtual® CADbite** silicone with reflective surface provides excellent scanning results and is suitable for antagonist registration.

The restorations are characterized using **IPS Empress Direct Color**, **IPS Empress Universal** or **IPS Empress Esthetic**.

The ceramic stains are fired in the **Programat CS2**. The furnace convinces users with its outstanding firing results and the appealing operating concept.

Adhesive cementation of the IPS Empress CAD restorations is performed with an **OptraDam® Plus** in place. This rubber dam considerably enlarges the treatment field, while at the same time isolating all four quadrants.

For the adhesive cementation of your IPS Empress CAD restorations you can depend on clinically proven and innovative composites. **Multilink® Automix** offers a wide range of indications, very high bonding values, as well as good dentin sealing properties.

**Variolink® Esthetic** is a new light- and dual-curing luting composite for exceptional esthetics and user-friendly processing.

The **Bluephase®** curing light reduces the light polymerization times with its high light intensity.

You can achieve excellent high-gloss polishing results and a homogeneous surface with the **OptraFine** diamond polishing system.

OptraGate



IPS Contrast Spray Chairside



Virtual CADbite



IPS Empress Direct Color  
IPS Empress Universal  
Shades/Stains



Programat CS2



OptraDam Plus



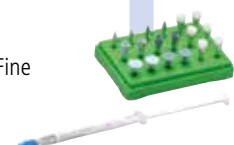
Multilink Automix  
Variolink Esthetic



Bluephase



OptraFine



	Variolink® Esthetic	Multilink® Automix
Veneers	✓	✗
Inlays	✓	✓
Onlays	✓	✓
Partial crowns	✓	✓
Anterior and posterior crowns	✓	✓

✓ Especially recommended    ✗ Contraindicated



## Fixed Prosthetics

IPS Empress® CAD forms a part of the “Fixed Prosthetics” product category. The products of this category cover the procedure involved in the fabrication of fixed prosthetic restorations – from temporization to restoration care. The products are optimally coordinated with each other and enable successful processing and application.



### THESE ARE FURTHER PRODUCTS OF THIS CATEGORY:

#### Programat®

Press and ceramic furnaces for demanding requirements



Packed with proven technology and advanced innovations

- Outstanding press and firing results
- Ideally coordinated with the ceramic materials of Ivoclar Vivadent
- Easy operation

#### Multilink® Automix

The adhesive cementation system



A strong bond, proven performance

- Strong hold – both dual and self-curing
- Universal – suitable for silicate and oxide ceramics as well as metal
- Clinically proven – numerous long-term studies

Would you like to know more about the products of the “Fixed Prosthetics” category? Simply get in touch with your contact person at Ivoclar Vivadent or visit [www.ivoclarvivadent.com](http://www.ivoclarvivadent.com) for more information.

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