

## Ee.max®

#### CAD

The original lithium disilicate CAD/CAM glass-ceramic

All ceramic, all you need.



#### **Excellent quality** and esthetics

IPS e.max® CAD is the world's top-selling CAD/CAM glass-ceramic1. The material provides a proven and efficient solution for fabricating lithium disilicate restorations in the dental laboratory.

Due to its superior esthetics, very good mechanical properties and high technique tolerance, the material produces excellent clinical results and enjoys very high customer satisfaction.

#### Exceptional esthetics

For anterior teeth in particular

#### Well-thought-out assortment

The right block for every situation

#### High strength

530 MPa<sup>2</sup>



IPS e.max CAD is based on the IPS e.max all-ceramic system, which dentists, dental technicians and patients have been relying on for many years. It is therefore the product of extensive knowledge and experience and exceptional passion.





#### Outstanding versatility

IPS e.max CAD has an unrivalled indication spectrum in CAD/CAM glass-ceramics. Due to the high strength (530 MPa<sup>1</sup>) of the lithium-disilicate glass-ceramic, full-contour crowns of minimum 1 mm thickness as well as thin veneers of minimum 0.4 mm can be produced.





≥ 1.0 mm





Partial crowns



≥1.0 mm in the anterior and posterior region



in the anterior and posterior region (2nd premolar as the terminal abutment)



Hybrid abutments

in the anterior and



posterior region as a single tooth restoration



in the anterior and posterior region



on zirconium oxide frameworks

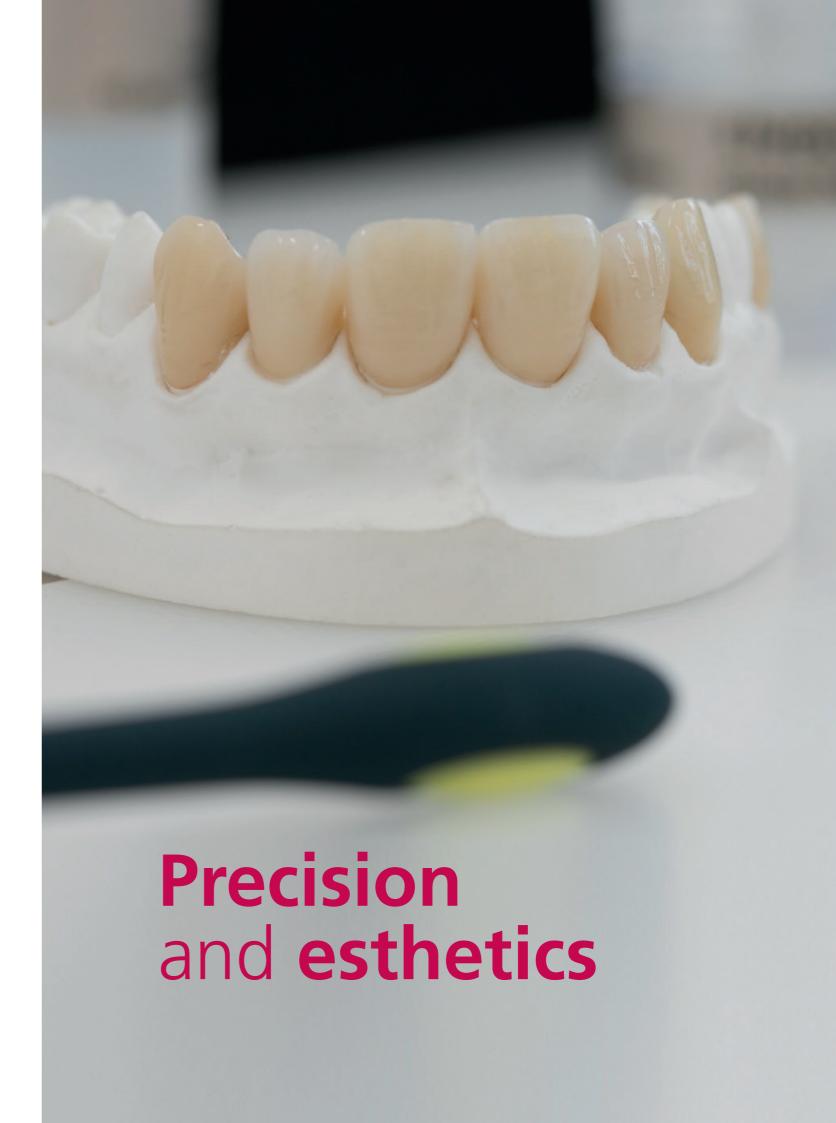
#### **Abutment Solutions** Individual restorations

The hybrid abutment restorations made of IPS e.max CAD show exceptionally high accuracy of fit, excellent adhesive bond strength and lasting esthetics due to the tooth-coloured abutments.

IPS e.max CAD A14 and A16 blocks are used to produce hybrid abutments (individual abutments) and hybrid abutment crowns (abutment and monolithic crown in one piece). The abutments feature a prefabricated interface for the extraoral bonding with a titanium base (e.g. Dentsply Sirona Ti-Base).

<sup>1</sup> typical mean value of the biaxial flexural strength over a period of 10 years, R&D Ivoclar Vivadent, Schaan, Liechtenstein

Abutment solutions are flexible and efficient: IPS e.max CAD is suitable for implant-supported single-tooth restorations.



## A wide selection for a perfect fit

The assortment of IPS e.max CAD blocks comprises a well-thought-out selection of shades and translucency levels that will enable restorations to blend in seamlessly with the natural tooth structure.

A suitably coloured block is available for virtually every clinical situation.

The restorations can be customized by means of the staining, cut-back or layering technique.

IPS e.max CAD blocks are equipped with the attachments for the authorized CAD/CAM systems PrograMill (Ivoclar Digital), CEREC®/inLab® (Dentsply Sirona) and PlanMill (Planmeca).

	IPS e.max CAD HT	IPS e.max CAD MT	IPS e.max CAD LT	IPS e.max CAD MO	IPS e.max CAD Impulse
Block	ce.max*CAD HT A3 / C 14	se.max* CAD MT A2 / C 14	ce.max*CAD LT A3 / C14	ce.max <sup>-</sup> CAD MO 2 / C14	re.max*cAD 102/C14
Translucency	-	-	-	-	-
	High translucency similar to that of natural enamel	Medium translucency	Low translucency similar to that of natural dentin	Medium opacity	Lifelike opalescent effect for the replacement of enamel
Shades <sup>1</sup>	20 (4 Bleach BL, 16 A–D)	7 (BL2, BL3, BL4, A1, A2, A3, B1)	20 (4 Bleach BL, 16 A–D)	5 (MO 0, MO 1, MO 2, MO 3, MO 4)	2 (Opal 1, Opal 2)
Sizes <sup>1</sup>	I12, C14, B40, B40L		I12, C14, C16, A14, A16, B32		C14
Indications	Thin and occlusal veneers Veneers Inlays Onlays Partial crowns	Thin and occlusal veneers Veneers Partial crowns Crowns	Veneers Partial crowns Crowns Bridges Hybrid abutment crowns	Frameworks on lightly stained cores	Thin occlusal veneers Veneers
Technique	Polishing Staining Cut-back CAD-On	Polishing Staining Cut-back	Polishing Staining Cut-back	Layering	Polishing Staining Cut-Back

# IPS e.max<sup>®</sup> Shade Navigation App



Five easy steps to finding the correct shade and translucency level

<sup>&</sup>lt;sup>1</sup> The range of products varies according to the different CAD/CAM system and block sizes (depending on the software solutions). The availability of block types, sizes and shades may vary from country to country.





Lifelike **esthetics** 

"I can rely on the legendary blue blocks: The esthetic results are outstanding and the clinical long-term studies on longevity and stability are impressive."

**Dominique Vinci** Switzerland



Clinical cases with exquisite, natural-looking outcomes



Anterior crowns (13 – 23): IPS e.max® CAD, staining technique Dr J. Ferencz / Marisa Notturno, USA



Crowns (12-22), veneers (13, 23): IPS e.max® CAD, cut-back technique (after 3 years)
Dr A. Aloum / A. Farah, United Arab Emirates

#### Superb quality

"All-ceramic, high-strength lithium disilicate restorations in the daily clinical application for single tooth restorations form an alternative to the metal ceramic gold standard.2"

Polyclinic for Dental Prosthetics at the University Hospital of Düsseldorf, Germany

#### 96.1% survival rate<sup>1</sup>

IPS e.max CAD offers outstanding esthetics and strength. It has obtained excellent reviews with regard to its resistance to delamination, fracturing, marginal leakage and staining. Its survival rate is exceptional: No wear was reported for any of the restorations placed.3

Starting situation







Dr Andreas Kurbad / Kurt Reichel, Germany

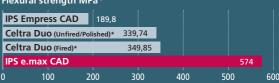
#### **High** flexural strength

The biaxial strength values as well as the fracture resistance values of IPS e.max CAD were significantly higher than those of the other materials tested. The difference between fired and unfired, but polished Celtra Duo restorations was minimal Zirconium oxide-reinforced lithium silicate did not show any advantages over lithium disilicate in clinical trials.4

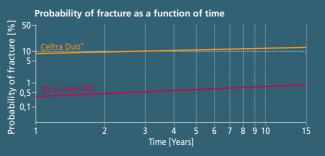
#### **Long-lasting** results

An in-vitro study has established that the probability of fracture of an IPS e.max CAD restoration is below 1% after 15 years in situ, while it is above 10 % for restorations made of competitive materials.

#### Flexural strength MPa<sup>4</sup>



High flexural strength is of major importance for load bearing restorations. It is measured as the load or force at the point of fracture.



Applied force  $\sigma=35$  MPa (representative of the premolar region) and assumed 1400 chewing cycles per day (SEM calculation (Pre-Clinic, R&D Ivoclar Vivadent, Schaan, Liechtenstein) based on the test results<sup>5</sup>)

<sup>&</sup>lt;sup>2</sup> Boldt J, Spitznagel F. A. (2017). Lithium disilicate: Indications and scientific evidence. DZZ 72 (4) <sup>3</sup> IPS e.max® Scientific Report Vol. 03 / 2001 – 2017 – Reference: Dental Advisor (2015)

<sup>\*</sup> Peneteric Pennax Scientific Report Vol. 03 / 2001 – 2017 – Reference: Randi et al. (2017)

\* "Ring on Ring Test" acc. to ASTM (American Society for Testing and Materials) C1499, Jülich Forschungszentrum (Institut für Energie- und Klimaforschung (IEK), Abteilung: Werkstoffstruktur und -eigenschaften (IEK-2)), 2018

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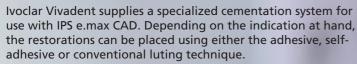
# A finely tuned system for impressive results

1 Simplified block selection



The IPS e.max Navigation App (SNA) assists you in finding the most suitable shade and translucency - for reliable and relaxed working.

## 6 Appropriate cementation



- Esthetic cementation with the Variolink® Esthetic luting composite
- Easy conditioning with the self-etching glass-ceramic primer Monobond Etch & Prime®

Finding your way out of the cements maze: www.cementation-navigation.com

# 5 Precision characterization/glazing



The stains and glazes of the IPS Ivocolor® assortment enable you to customize crystallized IPS e.max CAD restorations

- Simplified handling due to innovative paste formulation
- High gloss at a firing temperature of only 710° C
- Fluorescence with IPS Ivocolor Glaze Fluo

## 2 Fast, precision milling



IPS e.max CAD is efficiently and rapidly machined in the PrograMill milling machines to produce high-precision results. The state-of-the-art milling machines are specially designed to machine IPS e.max CAD.

## 3 Optimum enhancement



The sophisticated and innovative Programat® combines high-tech and futuristic design in a highly efficient and user-friendly ceramic furnace. The furnaces increase your profitability and efficiency and heighten the precision of your results.

## 4 Esthetic ceramic layers



IPS e.max Ceram is a versatile layering ceramic featuring intuitive modelling properties and excellent stability.

- Consistent layering scheme
- Harmonious shade adjustment
- Excellent firing behaviour

### ipsemax.com

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