# e.max cad

# Milled lithium disilicate all-ceramic restorations from your laboratory









## IPS e.max CAD (LS<sub>2</sub>) for high esthetics and manifold possibilities

#### Strength and lifelike esthetics

All-ceramics stands for esthetic and biocompatible restorations. These restorations can be fabricated with the help of the modern CAD/CAM technology nowadays.

IPS e.max CAD has proved its clinical suitability in long-term studies. The innovative lithium disilicate  $(LS_2)$  glass-ceramic features a strength (360 MPa) that is 2.5–3 times higher than that of other glass-ceramics. Therefore, it is not only an esthetic, but also an economically interesting alternative to  $ZrO_2$ -supported single-tooth restorations.

The LS<sub>2</sub> material is available in three levels of translucency as well as Impulse shades and thus provides expressive esthetics – irrespective of the preparation. You may even resort to IPS e.max CAD restorations for patients with devitalized tooth structure. Inform your laboratory about the stump shade in addition to the tooth shade and your dental technician then selects the LS<sub>2</sub> material in the required opacity to redesign the true-to-nature esthetic appearance.

Especially for larger restorations (e.g. 3- to 4-unit bridges) you may profit from the CAD-on technique. It combines the high-strength IPS e.max ZirCAD  $ZrO_2$  framework with an IPS e.max CAD LS<sub>2</sub> veneering structure, which is mainly responsible for the expressive esthetics as well as the outstanding overall strength of the restoration.

#### Wide range of indications

Have your laboratory fabricate the following IPS e.max CAD restorations:

- Veneers, inlays/onlays
- Crowns (monolithic or CAD-on technique, i.e. with ZrO<sub>2</sub> framework)
- 3-unit anterior and premolar bridges
- 3- to 4-unit bridges (CAD-on technique)
- Implant superstructures crowns (monolithic or CAD-on technique)
- Implant superstructures bridges (CAD-on technique)
- Hybrid abutments and hybrid abutment crowns

Select, in cooperation with your laboratory, the suitable solution for the respective patient case: a cost-effective, fully contoured restoration as an economical and appealing alternative to a full cast crown. Or you can choose the more exclusive version fabricated by means of the cut-back and layering technique, which will meet even the most exacting esthetic requirements of your patients.







IPS e.max CAD-on bridge Dr R. Watzke/F. Perkon, Ivoclar Vivadent AG, Liechtenstein

Efficiency



Fully anatomical, glazed



Fully anatomical, stained and glazed



Esthetics

### Lithium disilicate (LS<sub>2</sub>) provides new alternatives

#### Preparation

Using IPS e.max CAD allows you to prepare the tooth structure in a conservative way, since for inlays, for example, a minimum layer thickness of only 1 mm has to be observed and only 0.4 mm for veneers.

Crowns and partial crowns require a minimal wall thickness of 1.5 mm. The incisal edge of the preparation should be at least 1.0 mm (milling tool geometry) in order to permit optimum milling of the incisal area during CAD/CAM processing in the laboratory.

When designing the preparation, make sure to prepare a circular shoulder with rounded inner edges or a chamfer.



#### Cementation

Depending on the indication, IPS e.max CAD restorations can be seated using either adhesive, self-adhesive or conventional cementation.

**Multilink® Automix** is a universal, self-etching composite system that is directly applied without mixing. Multilink Primer seals the dentin and ensures a good marginal seal as well as high bonding strength.

Variolink<sup>®</sup> II and Variolink Veneer are ideally suitable for the incorporation of veneers.

The self-adhesive composite cement **SpeedCEM**<sup>®</sup> is even easier to process than a conventional cement and does not require the application of separate bonding agents.

As a rule, IPS e.max CAD must be etched prior to incorporation. However, silanating is not necessary with conventional cementation . Occlusal adjustments after cementation are conducted with a (fine) diamond. A diamond polishing system (e.g. OptraFine) is used to polish the restorations to a high gloss.

#### Successful clinical use

There are results of clinical studies lasting up to 4 years for IPS e.max CAD. Six clinical studies involving a total of 237 restorations (crowns) have shown that 97.3% of the restorations survived after a mean observation period of 3 years. With a survival rate of roughly 98% and a fracture rate of only 1.7%, the clinical efficiency of IPS e.max CAD is clearly superior than that of metal-ceramics and other ceramics.



Cementation of an IPS e.max CAD crown Dr A. Kurbad/K. Reichel, Germany



Summary of the results of 6 clinical studies with IPS e.max CAD restorations. (Source: Scientific Report volume 02, Ivoclar Vivadent, Liechtenstein)

Maximum economic efficiency



SpeedCEM



Maximum esthetics

Variolink® II

### **CAD** New possibilities with innovative CAD/CAM ceramic

#### Advantages of IPS e.max CAD

- Highly esthetic alternative to zirconium crowns
- Cost-effective, esthetic alternative to full cast crowns
- Quick clinical procedure
- Self-adhesive or conventional cementation



Dr K. Hoederath / V. Brosch, Germany





Dr A. Kurbad / K. Reichel, Germany





Dr A. Kurbad / K. Reichel, Germany



Laboratory logo | stamp



Dr R. Watzke / F. Perkon, Ivoclar Vivadent AG, Liechtenstein





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