SHAPE YOUR DENTAL FUTURE
True innovation proves itself in use. A prime example of this is IPS e.max® CAD, the most widely used* material for single-visit all-ceramic restorations.

Bringing technologies together
Imagine that leading technologies would be brought together in an open and yet integrated digital workflow and they would be accessible to everybody. This is exactly what the process chain of Ivoclar Digital offers. It allows patients to benefit from accurate, highly esthetic IPS e.max restorations that are created efficiently in a single visit.

Ideally integrated components
The workflow comprises a 3Shape TRIOS® intraoral scanner, the intuitive TRIOS Design Studio software and the unique PrograMill One - a milling machine that has been especially designed for IPS e.max.

*Based on sales figures
Making what is good even better. This has been the motivation behind the development of PrograMill One — the world’s smallest 5-axis milling machine featuring unique 5-axis turn-milling technology (SXT).

**YOUR BENEFITS**
- Outstanding surface quality
- Excellent fit
- Short processing times

**CUTTING-EDGE TECHNOLOGY FOR IPS e.max® RESTORATIONS**
SCANNING AND DESIGNING WITH AWARD-Winning 3SHAPE SOLUTION

3SHAPE TRIOS®-INTRAORAL SCANNER*

TRIOS is a fast and user-friendly intraoral scanner for digital impression scanning with documented accuracy:
- Fast and easy, ensuring enhanced comfort for patients
- Documented high accuracy, providing optimum treatment results and an excellent fit
- Digital impressions in lifelike colours
TRIOS Design Studio is a plug-and-play software solution for the manufacture of restorations in a single session:
- Designing and milling IPS e.max crowns, inlays, bridges and veneers
- Completely integrated workflows with PrograMill One
- Open system design philosophy

Practices can choose to send their cases to the lab to take advantage of the complete range of indications, materials and expertise:
- Easy connectivity with thousands of labs
- Easy communication and interaction between TRIOS, mobile terminals and web browsers

*TRIOS® and TRIOS® Design Studio are not registered trademarks of Ivoclar Vivadent AG.
IPS e.max® – THE LEADING CAD/CAM ALL-CERAMIC

IPS e.max® – all ceramic – all you need

IPS e.max is a unique material known for its unparalleled esthetics, strength and flexibility. Depending on the indication and preference of the patient, the operator selects a suitable lithium disilicate (IPS e.max CAD) or zirconium oxide (IPS e.max ZirCAD) material.

IPS Empress® CAD Multi complements the range of highly esthetic materials. These innovative polychromatic blocks feature a lifelike transition of shade and fluorescence from dentin to incisal.

With Telio® CAD, a material for long-term temporaries is available.

1 Based on sales figures.
PrograMill One

PrograMill One is the smallest smart 5-axis milling machine worldwide. It combines industrial production quality with high precision and modern design. The machine is wireless and can be placed anywhere within the dental practice and operated via an app from a tablet or smartphone. This new interplay between man and machine means it can be perfectly integrated within the practice. This is Digital Dentistry 4.0.

**MATERIALS**
- IPS e.max® CAD
- IPS e.max® ZirCAD
- IPS Empress® CAD
- Telio® CAD

**INDICATIONS**
- Inlays, onlays, veneers
- Partial crowns, crowns
- Bridges (up to 45 mm block length)
The innovative 5-axis turn-milling technology (5XT) means the block which is being processed moves around the tool. The infeed remains consistent and the tool never leaves the workpiece. This enables short machining times while keeping tool wear low. The result is an outstanding surface quality and excellent fit of the restorations. Depending on the materials and indications, individual validated machining strategies are used which means rework is reduced to a minimum.

**5XT – the next generation of processing**

High automation and comfort

A camera integrated within the PrograMill One automatically records all information on materials and tools. This makes the use of different materials extremely easy and material loading very convenient.

The OSD (Optical Status Display) visually informs the user about the current operating status.

Material, size, shade and translucency are automatically read in by means of the Data Matrix Code.
PrograMill One is wireless and can be operated from anywhere within the laboratory via an app from a tablet or smartphone. This way you are always informed of the machine’s current status.

**Order management**
- Order list in the overview
- Current processing status
- Control of the 5-axis block changer

**Tool management**
- Display of tool status
- Control of the 8-position tool changer

**Machine management**
- Overview of machine data
- Machine status
- Filter unit status
IPS e.max® CAD
LITHIUM DISILICATE
GLASS-CERAMICS (LS$_2$)

IPS e.max CAD is the world’s best-selling glass-ceramic. It is suitable for the efficient fabrication of full-contour restorations and is known for its versatile application options, comprehensive range of indications and for its high strength of 530 MPa.

Both its esthetic properties and durability have been confirmed by everyday clinical practice.

**PROCESSING OPTIONS**

“Blue” restorations can either be:
- polished and then crystallized
- glazed and crystallized in a single step
- stained, glazed and crystallized in a single step

**INDICATIONS**

- Minimally invasive crowns (1 mm)$^3$
- Crowns
- Three-unit bridges (up to the second premolar as the terminal abutment)
- Veneers, thin veneers (0.4 mm) and occlusal veneers
- Inlays, onlays, partial crowns

Polishing of the “blue” restoration, followed by speed crystallization for 15 minutes.

Glazing of the “blue” restoration followed by speed crystallization for 15 minutes.
YOUR BENEFITS

- Excellent esthetics and high strength of 530 MPa\(^2\), efficiently created in the dental practice
- Full range of indications for your chairside CAD/CAM system
- Minimally invasive crown preparation, adhesively cemented
- Clinical long-term success and scientifically documented results

IPS e.max\(^\circledR\) – THE WORLD’S MOST USED\(^1\) ALL-CERAMIC SYSTEM

96.6\%\(^4\) SURVIVAL RATE

MORE THAN 10 YEARS CLINICAL EVIDENCE

OVER 100 MILLION RESTORATIONS\(^1\)

98\%\(^5\) CUSTOMER SATISFACTION

\(^1\) Based on sales figures
\(^2\) Average biaxial flexural strength, measured over 10 years, R&D Ivoclar Vivadent, Schaan, Liechtenstein
\(^3\) On the basis of long-term clinical evidence and the material’s high strength, the fabrication of crowns with a minimum thickness of 1 mm is allowed if an adhesive cementation technique is used.
\(^4\) IPS e.max, Scientific Report, Vol. 02/2001-2013
\(^5\) IPS e.max CAD customer satisfaction survey in Germany and the USA, 2014
IPS e.max® ZirCAD
ZIRCONIUM OXIDE CERAMICS (ZrO₂)

IPS e.max ZirCAD involves a quick sintering process, which allows monolithic and esthetically pleasing zirconia restorations to be created directly in the dental practice using an efficient procedure. This makes this popular restorative material also suitable for chairside applications.

IPS e.max ZirCAD is known for its high flexural strength (1,200 MPa*) and fracture toughness. It allows the fabrication of restorations with considerably lower wall thicknesses (posterior crowns: minimum 0.6 mm; anterior crowns: minimum 0.4 mm). Preparations preserve tooth structure and restorations can be cemented conventionally.

Glazing is achieved with IPS e.max CAD Crystall./Glaze, which is available in two versions, one with fluorescent effect and one without.

INDICATIONS
- Crowns
- Three-unit bridges

PROCESSING OPTIONS
Once sintered, the restorations can either be:
- glazed and fired
- stained (optional), glazed and fired
- polished

Polishing technique
High-gloss polishing with OptraFine®

Staining technique
Glazing with fluorescent IPS e.max® CAD Crystall./Glaze Paste Fluo
For me, IPS e.max ZirCAD zirconium oxide for chairside restorations ideally complements IPS e.max CAD for posterior bridges.

Dr Ronny Watzke, Ivoclar Vivadent, Schaan, Liechtenstein

**YOUR BENEFITS**

- Chairside zirconia restorations allow practices to expand their portfolio of offerings
- Pleasing esthetics combined with high strength
- Tooth-preserving preparation and conventional cementation
- No risk of chipping
- Biocompatibility

*C Average biaxial flexural strength. Ivoclar Vivadent AG, Schaan, Liechtenstein*
IPS Empress® CAD

IPS Empress® CAD is associated with more than 20 years of successful clinical performance. It closely reproduces the natural tooth structure due to its distinct chameleon effect and natural fluorescence. IPS Empress CAD is known for the highest levels of esthetics and can be easily polished to a high gloss. Grind–polish–done.

A special highlight is the innovative polychromatic IPS Empress CAD Multi block. This block is distinguished by a lifelike transition of shade and fluorescence from dentin to incisal.

**YOUR BENEFITS**

- Highly esthetic restorations, efficiently created
- Clinically proven ceramic material with a flexural strength of 185 MPa*
- Optimum shade adjustment to the natural tooth structure due to the chameleon effect

**INDICATIONS**

- Crowns
- Inlays, onlays
- Veneers

**PROCESSING OPTIONS**

Once produced, restorations can be:
- polished
- stained (optional) – glazed

*Average biaxial flexural strength, measured over 10 years. Ivoclar Vivadent AG, Schaan, Liechtenstein
Telio® CAD
CROSS-LINKED PMMA MATERIAL

Telio CAD are cross-linked PMMA blocks for the efficient fabrication of long-term temporaries.

As a result of an optimized manufacturing process, the restorations feature a smooth surface that can be quickly and efficiently polished.

PROCESSING OPTIONS
Once milled, restorations are:
- polished

INDICATIONS
- Temporary crowns
- Temporary bridges with up to two connected pontics

YOUR BENEFITS
- High material homogeneity and process reliability reduce mixing errors and air entrapments compared with conventional methods
- Shade stability and lifelike fluorescence
- Excellent polishability
- Economical fabrication of temporaries
IPS e.max® CAD Crystall./Shades/Stains and Glaze

FINALIZING AND FIRING

IPS e.max CAD Crystall./Shades/Stains and Glaze is a universal range of stains and glazes designed for IPS e.max CAD, IPS e.max ZirCAD and IPS Empress CAD.

The glaze is now available in two versions - with or without fluorescent effect.

Minor corrections (e.g. proximal contact areas) can be applied to IPS e.max CAD and IPS e.max ZirCAD restorations using IPS e.max CAD Crystall./Add-On.

Indications:
- IPS e.max CAD
- IPS e.max ZirCAD
- IPS Empress CAD

YOUR BENEFITS
- Reduced inventory, reduced costs – a single range suitable for all the CAD/CAM ceramic materials from Ivoclar Vivadent
- Familiar application and consistent high quality
- Glaze with and without fluorescent effect
- Possibility to apply corrections (e.g. proximal contacts) with Add-On

Applying Shades and Stains to IPS e.max® ZirCAD
Clinicians and dental technicians all over the world simply love the high quality standard, long service life, homogeneous firing results and straightforward operation, together with the many other innovative features. It is not without reason that the Programat range is among the best selling ceramic furnaces*. The brand has gained a track record of success spanning more than 40 years.

*Based on sales figures

**YOUR BENEFITS**

- 40-year success story underpins the high quality standard
- Precise firing ensures homogeneous results
- Pre-set Ivoclar Vivadent programs enhance process reliability
- “Power Saving Technology” reduces energy consumption in the stand-by mode

**Speed Program**

<table>
<thead>
<tr>
<th>Program</th>
<th>IPS e.max® CAD</th>
<th>IPS e.max® CAD</th>
<th>IPS e.max® CAD</th>
<th>IPS e.max® ZirCAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programat® CS2</td>
<td>Glazing and crystallization furnace with colour touch screen</td>
<td>15 min</td>
<td>15 min</td>
<td>17 min</td>
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<tr>
<td>Programat® CS3</td>
<td>Glazing and crystallization furnace with colour touch screen and Digital Shade Assistant</td>
<td>15 min</td>
<td>17 min</td>
<td>37 min</td>
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<tr>
<td>Programat® CS4</td>
<td>Glazing, crystallization and sintering furnace</td>
<td>17 min</td>
<td>37 min</td>
<td>37 min</td>
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</tbody>
</table>

**POWER SAVING Technology**

All furnaces are equipped with a power-saving key. In the stand-by mode, the furnaces use 40% less energy.
Variolink® Esthetic

THE LUTING COMPOSITE FOR LITHIUM DISILICATE GLASS-CERAMICS

Variolink® Esthetic is an esthetic light- and dual-curing luting composite for the permanent cementation of demanding ceramic and composite restorations. The cement is based on the esthetic luting composites Variolink II and Variolink Veneer, which have proven their worth in clinical use for many years.

YOUR BENEFITS

- Balanced and straightforward Effect shade system
- Excellent shade stability due to amine-free formulation
- Easy, controlled clean-up

INDICATIONS

- IPS e.max CAD
- IPS Empress CAD
- Composite restorations

Ideal for IPS e.max® CAD, IPS Empress® CAD in combination with Monobond Etch & Prime®, the self-etching glass-ceramic primer.
SpeedCEM® Plus
THE SELF-ADHESIVE RESIN CEMENT FOR ZIRCONIUM OXIDE

SpeedCEM® Plus is a self-adhesive, self-curing resin cement with optional light-curing. It offers an ideal combination of performance and user friendliness. Its formulation has been optimized to make it particularly suitable for use in conjunction with restorations made of IPS e.max ZirCAD, metal-ceramics and for the cementation of restorations on implant abutments.

**INDICATIONS**
- IPS e.max ZirCAD
- IPS e.max CAD
- Metal and metal-ceramics

**YOUR BENEFITS**
- Excellent self-curing performance, ideal for IPS e.max ZirCAD and metal-ceramics
- User-friendly handling and easy clean-up
- Efficient process with just one component
IPS e.max® Shade Navigation App
is the intelligent app which assist you in finding the most suitable Ivoclar Vivadent blocks. Just 5 clicks to find the right solution - for an optimum shade match.

CNS: The Cementation Navigation System offers practical orientation and guidance in questions concerning cementation.

What is in it for me?
- Enhanced quality of your single-visit restorations due to coordinated products with high clinical evidence
- Suitable material and range of shades for each clinical situation
- Improved workflow efficiency due to innovative auxiliaries

What is in it for my patients?
- Time savings: no temporaries and no unpleasant impression-taking
- Reduced need for anaesthetics

IPS e.max® CAD
Lithium disilicate glass-ceramics (LS2)
For: Crowns, bridges, inlays, onlays, veneers and partial crowns
Strength: 530 MPa

Telio® CAD
Cross-linked PMMA material
For: Temporary crowns and bridges
Strength: 130 MPa

1 Average biaxial flexural strength, measured over 10 years
2 Average biaxial flexural strength of IPS e.max ZirCAD LT
3 Average biaxial flexural strength

Ivoclar Vivadent AG, Schaan, Liechtenstein
Zirconium oxide ceramics (ZrO₂) for Crowns and bridges
Strength: 1,200 MPa²

IPS e.max® ZirCAD

Leucite glass-ceramics for Inlays, onlays, veneers and crowns
Strength: 185 MPa¹

IPS Empress® CAD

185 MPa³

Lithium disilicate glass-ceramics (LS2) for Crowns, bridges, inlays, onlays, veneers and partial crowns
Strength: 530 MPa¹

IPS Empress® CAD chairside

IPS e.max® ZirCAD chairside

Find more information at ivoclardigital.com
Ivoclar Digital is a competent digital partner, which supports dentists and dental technicians along the entire digital process chain. A great deal of importance is placed on simple and understandable procedures. The portfolio for the digital work process is divided into three areas:

**Scanner | CAD**
Versatile scanners, intuitive design software and exclusive add-ons

**Material**
High-performance materials such as IPS e.max® – the world’s most used all-ceramic system*

**Equipment | CAM**
Technologically high-quality PrograMill® milling machines for the production of esthetic restorations

*Based on sales figures