



Block concept

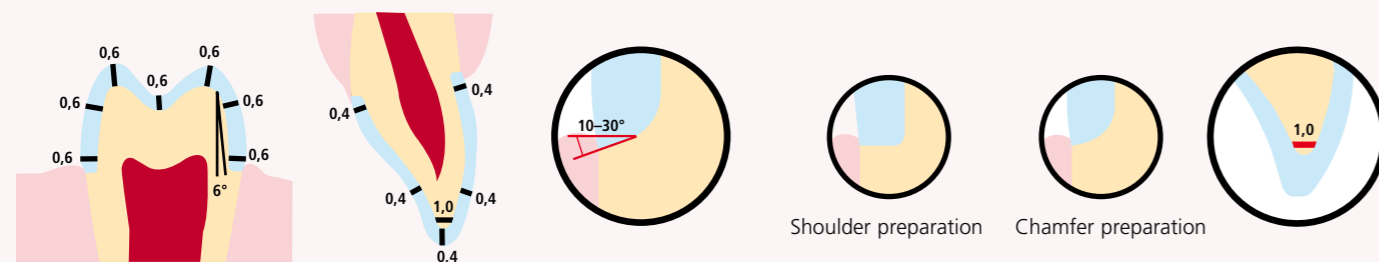
The LT blocks are monochromatic, pre-shaded and are available in **7 A-D shades** (A1, A2, A3, B1, B2, C2, D2) as well as **1 Bleach (BL) shade** and in **block sizes C17 and B45**.

Translucency level	Indications		Processing technique		
	Full-contour crowns	Full-contour 3-unit bridges	Glazing technique	Staining technique	Polishing technique
<b>LT</b> Low translucency	✓	✓	✓	✓	✓



Preparation guidelines

### Single crowns – 3-unit bridges



- Evenly reduce the anatomical shape and observe the stipulated minimum wall thickness.
- For conventional and/or self-adhesive cementation, the preparation must demonstrate retentive surfaces (preparation height at least 4 mm).
- Preparation angle: 4–8° for conventionally and self-adhesive cementation, >6° for adhesive cementation.

Connector dimensions

### Wall thickness / connector dimensions of the sintered restoration

Anterior region	IPS e.max ZirCAD LT (sintered)		
	Minimum wall thickness in mm	Connector dimensions in mm <sup>2</sup>	Design type
Crowns	0.4	–	supports the tooth shape and the gingiva shape (incisal, occlusal and/or basal)
3-unit bridges	0.6	7	
Posterior region	IPS e.max ZirCAD LT (sintered)		
	Minimum wall thickness in mm	Connector dimensions in mm <sup>2</sup>	Design type
Crowns	0.6	–	supports the tooth shape and the gingiva shape (incisal, occlusal and/or basal)
3-unit bridges	0.6	9	



- Aim for the largest possible dimensions when designing the connectors.
- The height of the connector is more important for the stability than the width. Doubling the width only results in double the stability, while doubling the height results in up to four times the stability.
- The greater the distance between the abutment teeth, the higher the mechanical stress on the construction and the exerted masticatory forces are going to be.

CAD/CAM processing

- Since the IPS e.max ZirCAD shrinks by approximately 20-25% during sintering, the shrinkage factor of the respective batch, which is included in the code on the material block, must be read into the software or manually entered. The shrinkage factor then ensures that the milled IPS e.max ZirCAD restorations demonstrate optimum accuracy of fit after sintering. Do not exceed the maximum amount of abrasive agent.
- For the wet processing of IPS e.max ZirCAD, a dedicated milling fluid container should be used to avoid cross-contamination (e.g. milling dust) (with the exception of PrograMill One). Do not exceed the maximum amount of milling fluid for wet processing. Contamination may result in discolouration of the restorations during sintering. For dry processing, make sure that the chamber of the CAM unit is clean and dry.

Finishing after the fabrication process

It is of critical importance to use the correct grinding instruments for adjusting and finishing IPS e.max ZirCAD restoration. This applies to non-sintered as well as sintered objects. If unsuitable grinding instruments are used, chipping of the edges and local overheating may occur.

### General information on IPS e.max® ZirCAD restorations

- Non-sintered zirconium oxide restorations are susceptible to damage and fractures. This fact has to be kept in mind during the entire working procedure.
- If possible, any necessary post-processing procedure should be carried out while the restoration is still in its non-sintered state (observe the recommendations regarding grinding instruments).
- In the non-sintered state, the contact with liquids (e.g. water and/or contact media, e.g. occlusal spray) must be prevented. Use only suitable grinding instruments at low speed and light pressure to prevent delamination and chipping, particularly in the marginal area (observe the recommendations regarding grinding instruments).
- The non-sintered restoration must not be cleaned in an ultrasonic bath or with the steam jet.

### Wet-milled IPS e.max® ZirCAD restorations

- Carefully separate the restoration from the holder using a separating disc or suitable grinding instruments. Smooth out the contact points of the holding pins with suitable grinding instruments.
- After finishing, clean the restoration thoroughly. To remove any adhering zirconium oxide dust, rinse the restoration with slowly running water.
- In order to prevent damage to the restorations during sintering, the IPS e.max ZirCAD restoration must be completely dry. Moist restorations must not be sintered.

### Drying times for IPS e.max® ZirCAD depending on the restoration size and temperature

	Temperature ~ 70 °C	Temperature ~ 140 °C	Programat CS4
Single tooth restorations	≥ 15 min	5 – 10 min	10 min (Integrated in the sintering program)
3-unit bridges	≥ 40 min	≥ 25 min	



### CAD/CAM partners

IPS e.max ZirCAD has to be processed with an authorized CAD/CAM system. For questions regarding the different CAD/CAM systems, please contact the respective cooperation partners. More information is available on the Internet from [www.ivoclarvivadent.com](http://www.ivoclarvivadent.com)!



## Efficiency

## Esthetics\*

Speed sintering in

37:00 min



max. 3 units or 1 bridge

Sintering in

57:00 min



Sintering in the Programat<sup>®</sup> CS4  
10 min. pre-drying time integrated  
in the sintering time



max. 6 units or 2 bridges



Sintered restoration

### Glazing technique

- Pre-finishing:** Use OptraFine<sup>®</sup> F dry at low speed to create a fine overall surface.
- Finishing:** Finish functional areas using OptraFine<sup>®</sup> P.



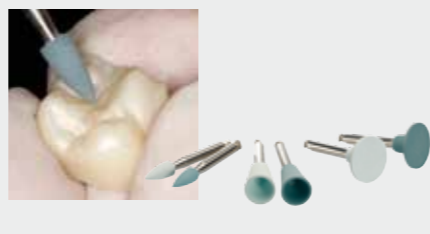
### Staining technique

- Pre-finishing:** Use OptraFine<sup>®</sup> F dry at low speed to create a fine overall surface.
- Finishing:** Finish functional areas using OptraFine<sup>®</sup> P.



### Polishing technique

- Pre-polishing** with OptraFine<sup>®</sup> F
- Occlusal high-gloss polishing** with OptraFine<sup>®</sup> P



Place the IPS e.max<sup>®</sup> CAD Crystallization Tray directly on the sinter table and fire in the Programat CS4 (max. 6 units)



\*Select the longer sintering program to achieve higher translucency.

Observe the following points when positioning the restorations on the sinter tray

	✓ correct	ok	✗ incorrect
<b>Single-tooth restorations Anterior region</b>	 Place the restorations on their labial surface.	 Place the restorations on their oral surface.	 <b>Do not</b> place the restorations on the crown margins.
<b>Single-tooth restorations Posterior region</b>	 Place the restorations on their occlusal surface.		 <b>Do not</b> place the restorations on the crown margins.
<b>Three-unit anterior bridges</b>	 Place the restorations on their labial surface and provide support to the pontic. If the restoration "tilts", select an alternative position.	 Position on the incisal margin. The pontic must also rest on the sinter tray.	 <b>Do not</b> support the restorations exclusively at the marginal edges.
<b>Three-unit posterior bridges</b>	 Place the restorations on the buccal or oral surfaces depending on the curvature. Abutment crowns do not have to come into contact with the sinter tray. The pontic must be supported.	 Do <b>not</b> support the restorations exclusively at crown margins. The pontic must be supported at the basal side.	 If the pontic does not support the restoration, the restoration must <b>not</b> be positioned on the occlusal surface.

↑ Points of contact of the restoration with the sinter tray.

Conditioning of the restoration

Indication	Crowns and bridges	
	Luting protocol	adhesive
Blasting	Cleaning with Al <sub>2</sub> O <sub>3</sub> at a maximum pressure of 1 bar (15psi)	
Cleaning after try-in	Ivoclean	
Conditioning	60 s with Monobond <sup>®</sup> Plus	–
Cementation system	Multilink <sup>®</sup> Automix	SpeedCEM <sup>®</sup> Plus, Vivaglass <sup>®</sup> CEM PL



Find your way out of the cements maze

Detailed information can be found under [www.cementation-navigation.com](http://www.cementation-navigation.com)