

Preparation Requirements

The aim of the preparation process is maximum support of the restoration at the margin and the incisal and occlusal area. Smooth preparation surface and exact impression are crucial for the construction of the framework.

Successful results can only be achieved if the preparation guidelines below and the minimum layer thicknesses are strictly observed.

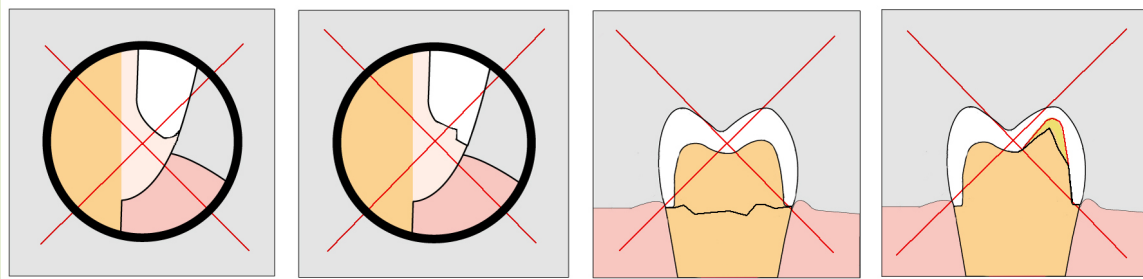
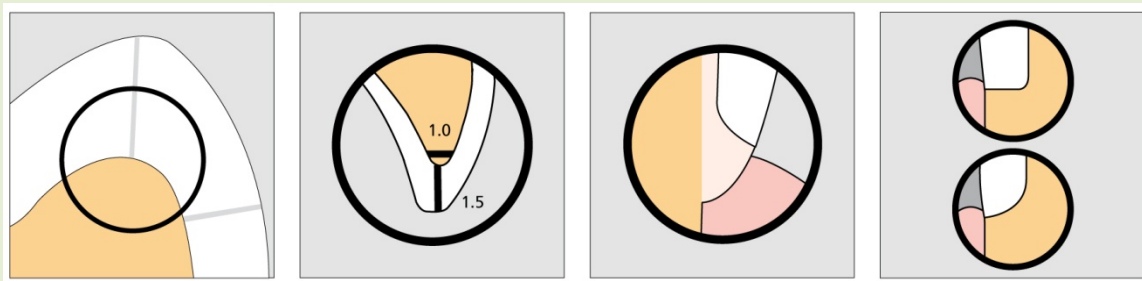
All our restorations are fabricated using CAD-CAM technology. In order to achieve a good fit, the following principles must be followed:

- **No angles or edges, no reverse margins (J margins) , no steps on the shoulder.**
- **Prepare an even and continuous shoulder and margin line**
- **Shoulder preparation with rounded inner edges and/or chamfer preparation**

--The incisal edge of the preparation should be at least 1.0 mm thick (milling tool geometry) in order to permit optimum milling of the incisal area during CAD/CAM processing, rounded and without edges

-**IMPORTANT:** note that the reduction requirements are different from the minimum thickness requirements!!! Minimum thickness refers to the thickness of the restoration, the crown should never be adjusted beyond the minimal thickness.

The dimensions indicated in the paragraphs below reflects the minimum thickness for the restorations.



Veneers

During the preparation of veneers the particular material-specific properties of dental ceramic materials must be observed.

The preparation measures are based on the following objectives:

- preservation of the vitality of the pulp
- sufficient removal of hard substance for aesthetic or material-specific reasons
- periodontal-prophylactic reasons

Thin veneer, veneer

- If possible, locate the preparation in the enamel.
- Do not locate the incisal preparation margins in the area of the abrasion surfaces or dynamic occlusal surfaces.
 - If sufficient space is available and depending on the fabrication method, you can even leave out the preparation entirely.

Thin veneer reduction requirements for: **IPS e.max**

- Ensure that the minimum layer thickness of the thin veneer in the cervical and labial area is 0.3 mm.
 - Make sure that the restoration thickness at the incisal edge is 0.4 mm

Veneer reduction requirements for: **IPS e.max**

- Reduce the cervical and/or labial area by 0.6 mm, and the incisal edge by at least 0.7 mm.

Starting situation Incisal orientation grooves Marginal orientation groove Central and incisal orientation grooves

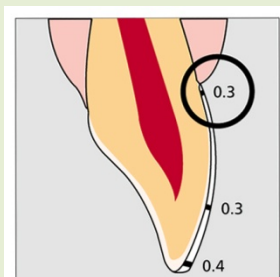
Facial preparation on 3 levels

Initial proximal separation

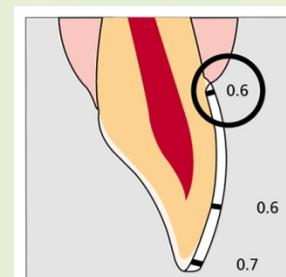
Definitive proximal preparation

Finishing and smoothing the preparation

Thin veneers

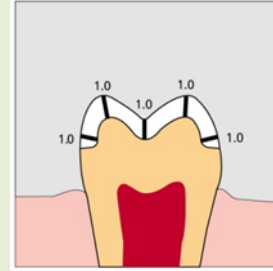


Veneers



Occlusal veneer reduction requirements for: **IPS e.max**

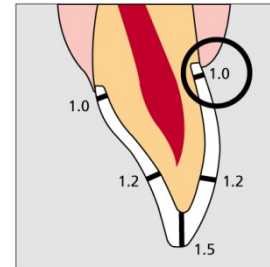
- Evenly reduce the anatomical shape while observing the stipulated minimum thicknesses.
- Prepare a circular shoulder with rounded inner edges or a chamfer at an angle of approximately 10 to 30 degrees.
- Ensure that the width of the **circular shoulder/deep chamfer is at least 1.0 mm.**
- **Reduce the occlusal part by at least 1.0 mm**



Bio Premium Zr, Bio Zir, IPS e.max, Bio FZ-Plus

Anterior crown reduction requirements for: **Bio Premium Zr, Bio Zir, IPS e.max, Bio FZ-Plus**

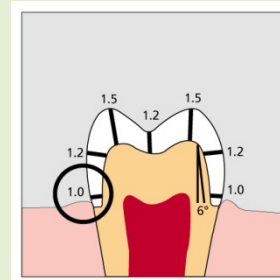
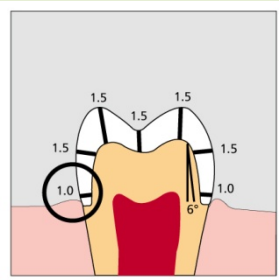
- Evenly reduce the anatomical shape while observing the stipulated minimum thicknesses.
- Prepare a circular shoulder with rounded inner edges or a chamfer at an angle of approximately 10 to 30 degrees.
- **Ensure that the width of the circular shoulder/deep chamfer is at least 1.0 mm.**
- **Reduce the incisal crown third by at least 1.5 mm.**
- **Reduce the facial and palatal area by at least 1.2 mm.**
- For conventional and/or self-adhesive cementation, make sure that the preparation demonstrates retentive surfaces and a sufficient preparation height of at least 4.0 mm.



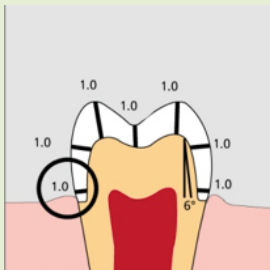
Posterior crown reduction requirements for:

IPS e.max, Bio Premium Zr, Bio Zir

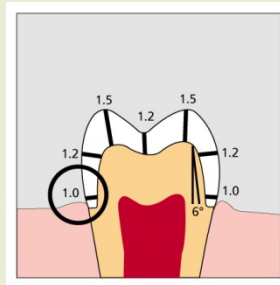
- Evenly reduce the anatomical shape while observing the stipulated minimum thicknesses.
- Prepare a circular shoulder with rounded inner edges or a chamfer at an angle of approximately 10 to 30 degrees. **Ensure that the width of the circular shoulder/deep chamfer is at least 1.0 mm.**
- Reduce the **occlusal crown third by at least 1.5 mm.**
- Reduce the **buccal or palatal/lingual area by at least 1.5 mm** for IPS e.max and by at least 1.2 mm for Zr crowns.
- For conventional and/or self-adhesive cementation, make sure that the preparation demonstrates retentive surfaces and a sufficient preparation height of at least 4.0 mm.



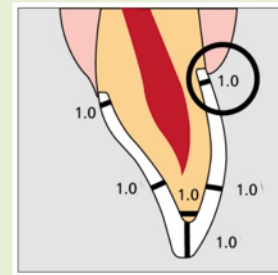
Single crown reduction requirements for: Zolid/Cubex, Bio Multi FZ



Bio Multi FZ



Zolid/Cubex Posterior



Zolid/Cubex Anterior

Bio Multi FZ – **Minimum reduction 1mm**, minimum crown thickness for single crowns 0,5mm, minimum crown thickness in a bridge increases with the spam of the bridge

Zolid/Cubex Anterior **minimum reduction 1 mm**, minimum crown thickness 0,6mm,

Zolid/Cubex Posterior **minimum reduction 1.2mm**, minimum crown thickness 0,8mm