

Instructions for milling ZirCAD

Before starting to mill

ZirCAD processing in Planmeca PlanMill® 40 and Planmeca PlanMill® 40 S and 30 S

Before milling zirconia, the water chamber must be carefully cleaned to eliminate contaminants from any other type of material. Clean the filter with hot water and a toothbrush after milling zirconia. Please note that you need to start the tank maintenance process to be able to access the filter. It is recommended to use a separate filter for ZirCAD.

In order to achieve the best possible results with the above-mentioned milling machines, the default settings for *Margin Ramp* (1mm) and *Margin Boost* should remain unchanged. Depending on the preparation design, underscoring these margins may result in the increased occurrence of marginal chipping. With thin chamfer preparations, the system adds a margin boost of 350µm. This margin boost is intended to prevent chipping. However, in order to create an excess-free restoration, the finishing next to the margin needs to be done manually and carefully with rotary instruments before sintering. On the *Setup* tab, an enquiry regarding the preparation design appears after the selection of IPS e.max ZirCAD as the restorative material. With small shoulders or chamfer preparations, the option *Chamfer Edge* should be selected to ensure the above-mentioned margin boost addition.

Before starting to mill, the milling machine asks for the shrinkage factor of the material. The factor can be found written on the backside of each ZirCAD block.

Longer milling tools required for Planmeca PlanMill® 40 S and 30 S

When IPS e.max ZirCAD zirconia is used, new longer burs (tapered long and conical long milling burs) are required for a faster milling time and an expanded reach for larger restorations.

Special user tips for Planmeca PlanMill® 40 users

Use the existing conical and tapered burs. Due to a limited reach, larger restorations may require finishing by hand prior to sintering. You should always check this with a simulation (*SIM*) prior to milling.

Given the dimensions of the tools used in **Planmeca PlanMill® 40**, restorations with a slightly above-average crown or abutment length might not be completely ground. Particularly in anterior restorations, this may lead to incompletely ground crown lumens, which may affect the fit of the restorations. In addition, a true-to-form fabrication of the outer contours is not always possible with long crowns. This is indicated by the excess material in the equator area of the restorations.

When using Planmeca PlanMill 40, always run the simulation option *SIM* once the design is completed and before starting the actual milling process. In the generated milling preview, you can identify any possible deficits in the outer contours and any potentially incompletely ground inner aspects of the restorations. In this context, the sectional view of the restoration is particularly helpful in verifying the true-to-form milling of the inner contours. If any shape deviations between the design and the milling preview are identified, the restoration must be fabricated in **Planmeca PlanMill® 40 S** or **Planmeca PlanMill® 30 S** or with another system.

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