



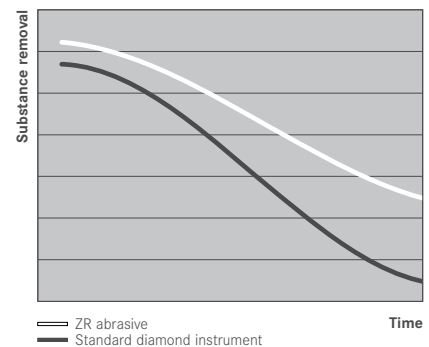
# All-ceramic restorations | ZR-Diamonds



## Special instruments for the dental practice.

People attach great importance to a well-groomed appearance and personal well-being. Flawless, healthy looking teeth are a part of this awareness. Therefore, it is not surprising that aesthetically pleasing, tooth-coloured restorations gain more and more importance in the dental practice.

All-ceramic restorations (for example completely made of  $ZrO_2$ ) – in expert circles also known as zirconium oxide – are reliable and durable, but difficult to work on, so that grinding of ceramic abutments, trepanation or fitting of ceramic restorations constitute a real everyday challenge for the dentist. Comprehensive test series were carried out and as a result, we can now offer a special ZR abrasive with diamond grain, which is perfectly adapted to these special requirements. A special bond embeds the diamond grains durably so that these abrasive instruments feature a considerably longer operating life and material reduction compared to conventional diamond instruments (see diagram).



Different grains are available to suit the respective indications. Trepanation or separation of ceramic restorations is preferably carried out with the more aggressive instruments with coarse grain (green/white ring). When fitting the dental prosthesis, it is recommended to use the less aggressive instruments with medium (blue/white ring or golden shank and a white ring in case of crown cutters) or fine grain (red/white ring). The special ZR abrasives made by Komet® are perfectly suitable for precise work on all-ceramic restorations and will soon become an invaluable aid in every dental practice.

## Application:

1. Slight adaptation of the ceramic crown with the ZR862.314.016.
2. Quick trepanation with the round special abrasive ZR6801.314.010/014.

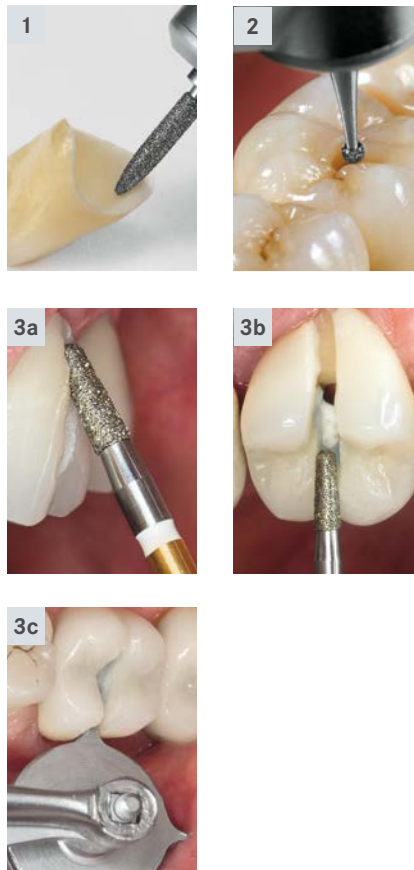
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For separating all-ceramic crowns, we recommend Jack (also known as 4ZRS). In line with crown cutters made of tungsten carbide, the instrument has to be applied at an angle of  $45^\circ$  to the crown surface for best results (fig. 3a).

Apart from the axial wall, the incisal edge and, in case of molar and premolars, the occlusal surface should also be cut (fig. 3b). This applies in particular to adhesive all-ceramic restorations.

To remove the restoration, this has to be widened until it fractures. This can be done with a lever or Planert crown widening pliers (DP 788R Aesculap Dental, Tuttlingen) (fig. 3c).

To grind down residual fragments, we recommend our 4ZR.314.012/014.



## Recommendations for use:

- Optimal speed:  $\varnothing_{opt}$  160.000 rpm
- It is recommended to use the instruments in the red contra-angle, as the higher torque is advantageous for efficient work on all-ceramic restorations (compared to the torque of the conventional turbine).
- Use maximum spray coolant, especially during the trepanation procedure (min. 50 ml/min.).
- Apply low contact pressure ( $<2N$ ).

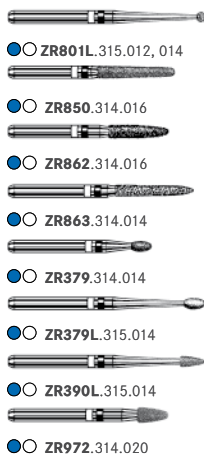
## Crown Cutter



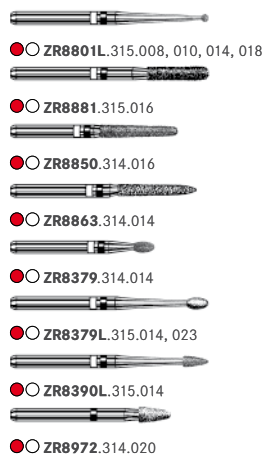
### Coarse Grit



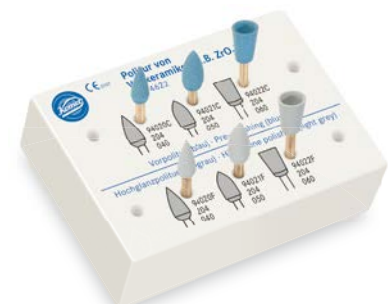
### Medium Grit



### Fine Grit



For subsequent polishing, we recommend Set 4622:



Diamond interspersed polishers for all-ceramic restorations (e.g.  $ZrO_2$ )