panther

The Premium-Finish

High-End premium instruments

for every full ceramic

One system

for a perfect shine

Quick and efficient

2 step strategy

CLOSE TO YOU

20 YEARS

Dental Direkt

By using CAD/CAM blanks from Dental Direkt, the dentist and dental technicians have chosen the know-how of the largest, german manufacturer of dental zirconium oxide. Our production processes are the result of intensive research and development work. Thereby it is the subtleties in the process control that define the quality of a high-performance ceramic.

The nuances when finishing your zirconium oxide restorations are just as important. With the panther polishing system we offer an ideal tool for quick and aesthetic polishing while taking the latest research results into consideration. The tools were developed in close cooperation with dental technicians and optimised with respect to their handling.

We would like to thank all those who participated, for the efforts they put in and the passion for optimisation. The end result was the knowledge gained that polishing is not the same as polishing.

“We don’t want to change the dental industry. But continuously improve it.”

Your dental technology developers from Dental Direkt.

Antagonist abrasion

Despite the increasing use of zirconium oxide for monolithic crowns and bridges without a veneering, it is frequently assumed that zirconia, due to its hardness, causes a high abrasion of the natural enamel.

Scientific studies, however, have shown that it is not the hardness of a ceramic but its surface quality that significantly influences the abrasion. The rougher the occlusal contact surface of the ceramic restoration, the greater the resulting abrasion is on the antagonists.

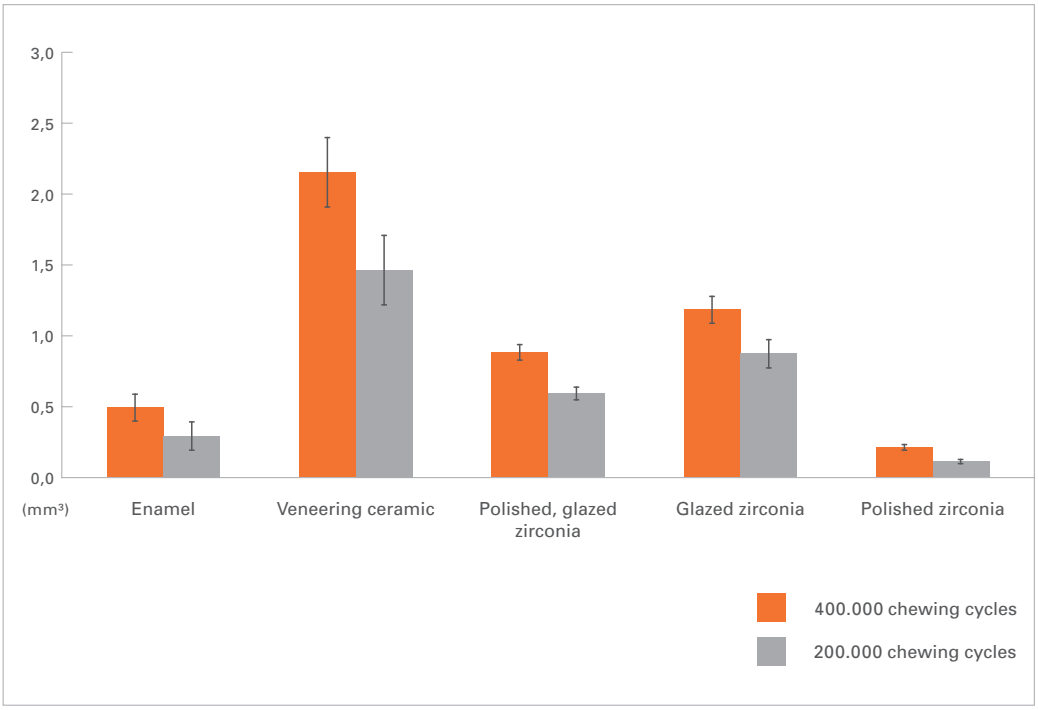


Fig. 1 (Graphic representation of the results from the source: Janyavula S, Lawson N, Cakir D, Beck P, Ramp LC, Burgess JO. The wear of polished and glazed zirconia against enamel. J Prosthet Dent 2013;109:22-9.)

Conventional veneering material thus shows a greater abrasive effect on natural teeth than monolithic zirconium oxide. This is, on the one hand, due to the higher initial roughness of the veneering ceramic, on the other hand, a grinding effect is caused over time as a result of the regular chewing stresses. This can also be observed on glazed crowns.

The surface changes on a glazed crown could be observed in detail, and documented, over a period of three years using a high resolution microscope (CR Foundation 2014). Regular chewing stress caused, over time, very fine cracks in the brittle glaze coating. Thereby an increasing number of fragments of the glaze are removed. Tiny, shard-like particles of the glazing material remain on the surface of the restoration and cause, in a similar way to emery paper, little by little to a significantly increasing abrasion – especially on natural antagonists.

Fig. 2 REM documentation on glaze wear over three years (source: Courtesy of TRAC Research Clinical Studies Section, CR Foundation, Provo, Utah USA)

Gentle polishing for the protection of the antagonists

The manufacturing of monolithic restorations made of ZrO_2 is not only an extremely efficient way of producing natural aesthetic. The results mentioned confirm that a subsequent polishing of the occlusal contacts and slide surfaces ensures a long-term conservation of the occlusal surface and the antagonists. It was thus demonstrated many times that polished ZrO_2, even in comparison to natural enamel, causes a significantly lower abrasion of the natural antagonists.

High-end premium instruments for perfect surfaces!

Time saving

The high-end premium instruments are designed for processing full ceramic surfaces and give a matt gloss, just like a natural tooth surface. With our panther premium polishing-kit you can achieve your result in only 2 steps (fig. 3). As a result of polishing the surfaces, the application of conventional glazing material, in areas not painted, can be renounced.

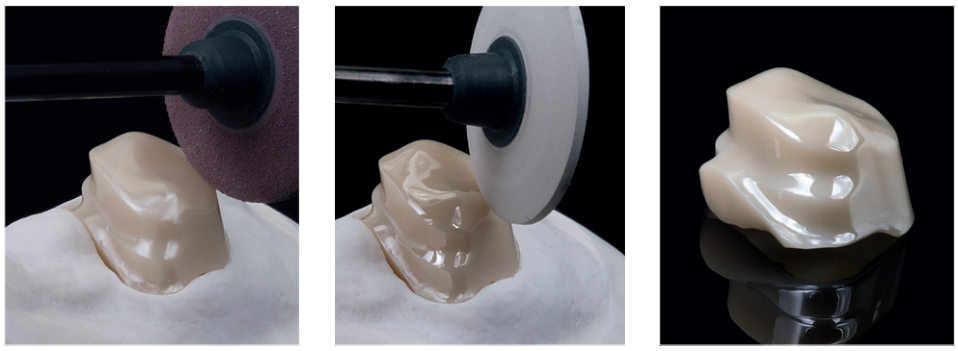
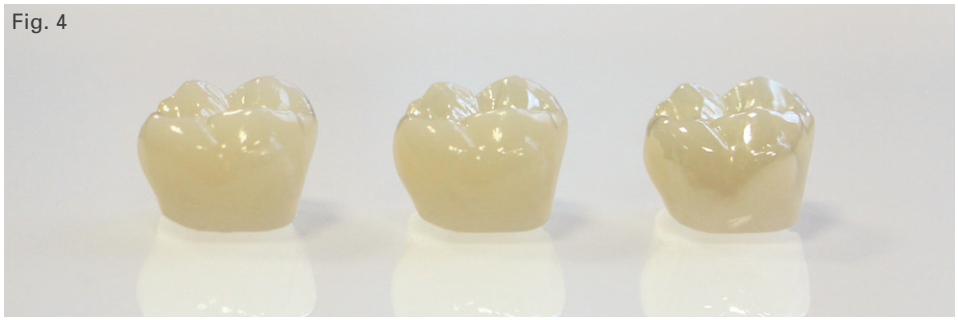


Fig. 3 Two-step finish for gloss without glazing.

Natural aesthetics

Your talent and know-how and the high quality tools go hand in hand to achieve a pleasing surface finish. Polishing too strongly with conventional tools can cause crowns to have a "nacre" effect (fig. 4). This effect falsifies the color and aesthetic result and is irreversible. By using our panther polishing-kit the color and natural appearance are maintained and emphasised.

Fig. 4



DD cube ONE® crown only glazed

DD cube ONE®crown only polished with the panther polishing-kit.

Equivalent, aesthetic color result in comparison to glazed crowns.

DD cube ONE®crown only polished with conventional polishers.

Falsified color result due to over-polishing. The crown seems significantly darker and has an unnatural gloss.

Premium-Finish Polishing Kit - for a flawless gloss

The panther premium-finish polishing-kit consists of polishers in four different shapes, with which you are equipped for every indication and situation. The Starter-Kit includes, in addition to the rubber polishers for the first smoothing (purple), a second rubber polisher (white) for the gloss as well as goat's hair brushes and a diamond polishing paste. The polishing-kit is supplied on high quality and heavy aluminium stand on which each instrument finds its place.

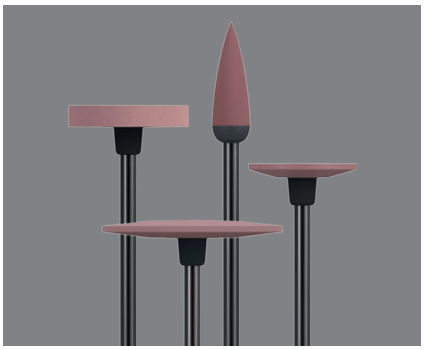
- High gloss in only two steps
- Time saving thanks to the 2-step strategy
- Perfect surfaces for the protection of the antagonists
- Long service life
- Rough surface enables immediate use
- Harmonised choice of shapes for all situations
- For zirconia, monolithic or partially veneered
- For lithium disilicate (LS_2) glass ceramics
- For conventional veneer ceramic

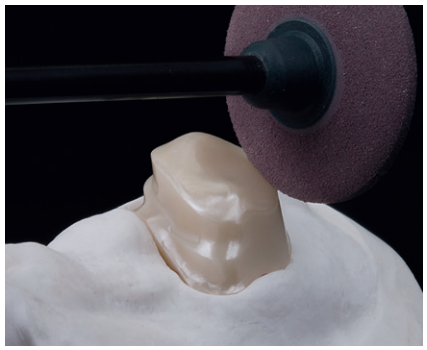
Carsten Fischer

sirius ceramics
Frankfurt/Main, Germany

Our objective:
High-end premium instruments
made by professionals for professionals
For perfect surfaces!

1. Preliminary step – SMOOTH

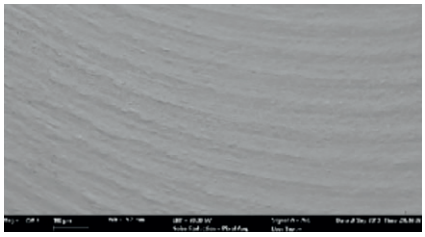




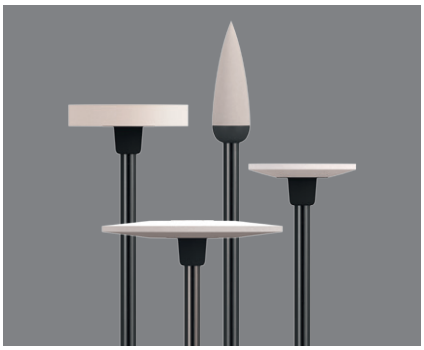
The preliminary stage “smooth” is used in the first step a can emphasise fine features and accentuate your desired form - medium grain

Specially suitable for zirconia abutments

Especially in the implant prosthetics the correct surface finishing is becoming increasingly important. With the purple preliminary stage “smooth”, especially in the submucosal areas, the desired remaining matt roughness can be achieved with Sa-values of 0.21 – 0.4 µm



2. Step gloss stage – GLOSS

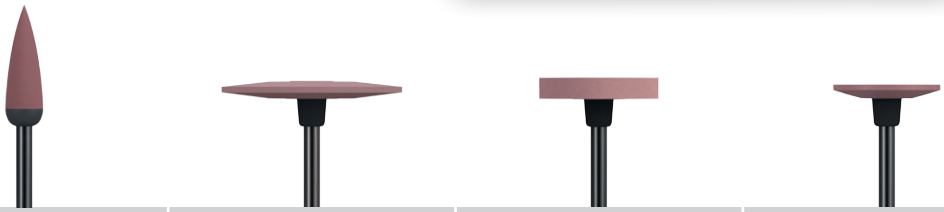


The “gloss” stage is used in the second step and effortlessly achieves the desired gloss level - extra-fine grain

3. Step diamond polish

With the final polish you achieve the high-gloss effect

Panther starter kit	
Order-no.	TCPSET104/01
Item	1



TCP	M	Panther Flame 055	Panther Lense 260	Panther Wheel 170	Panther Lense 150
Order-no.		TCP100104MSW4Z	TCP140104M	TCP158104MSW4Z	TCP541104MSW4Z
Measure (mm)		Ø 5,5 x 18	Ø 26 x 2	Ø 17 x 2,4	Ø 15 x 1
Shaft		104-HP	104-HP	104-HP	104-HP
↻ Optimal / maximum (min. -1)		12.000 / 20.000	8.000 / 20.000	8.000 / 20.000	8.000 / 20.000
Item		3 pieces	1 pieces	3 pieces	3 pieces

TCP	XF	Panther Flame 055	Panther Lense 260	Panther Wheel 170	Panther Lense 150
Order-no.		TCP100104XFSW4Z	TCP140104XF	TCP158104XFSW4Z	TCP541104XFSW4Z
Measure (mm)		Ø 5,5 x 18	Ø 26 x 2	Ø 17 x 2,4	Ø 15 x 1
Shaft		104-HP	104-HP	104-HP	104-HP
↻ Optimal / maximum (min. -1)		12.000 / 20.000	8.000 / 20.000	8.000 / 20.000	8.000 / 20.000
Item		3 pieces	1 pieces	3 pieces	3 pieces

Accessories	Diamond polishing paste	Goat's hair brush 17 mm	Goat's hair brush 19 mm
Order-no.	TCPPASTE01/20	TCP417104GR16	TCP419104GR16
Measure (mm)	–	Ø 17	Ø 19
Shaft	–	104-HP	104-HP
↻ Optimal / maximum (min. -1)	–	12.000 / 15.000	12.000 / 15.000
Item	20 g	10 pieces	10 pieces

If your requirements are more than the standard

Panther – the premium finish

- The two-step finish for a high luster
- Perfect surfaces for the protection of the antagonists
- Long service life
- Can be used immediately
- Coordinated shape selection

Dental Direkt GmbH
Industriezentrum 106–108 I 32139 Spenge I Tel: +49 5225 86319-0
E-Mail: info@dentaldirekt.de I www.dentaldirekt.de

Dental Direkt