



POLISHING GUIDE

The choice of dental professionals worldwide.

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Reasons for Polishing

Health

Polishing eliminates rough surfaces which would otherwise produce plaque accumulation and run the risk of secondary-recurrent caries. Unpolished surfaces near the gingiva can also increase the risk of periodontitis.

Comfort

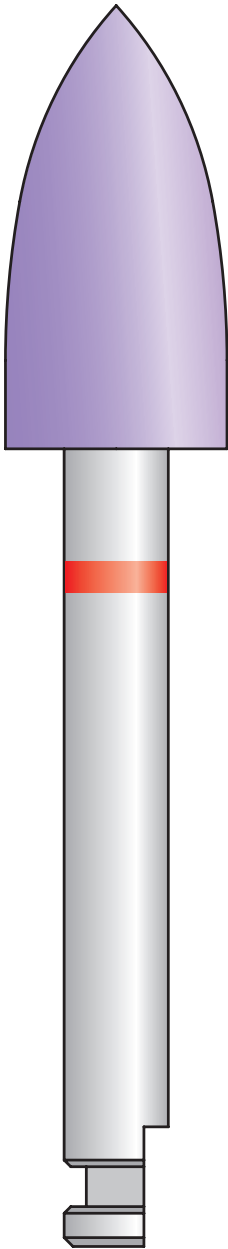
The human tongue is able to detect differences in roughness in a range as low as a micrometer. Therefore, a polished filling will create a pleasant feeling for the patient.

Esthetics

Polishing helps to achieve an esthetic finish by reducing surface staining and producing a natural shine finish.



The Construction of a Dental Polisher

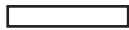
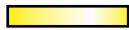




Polishing Head

The polishing head is made up of either silicone or synthetic rubber, mixed in with abrasive particles made of diamond, silicon carbide or aluminum oxide. The various mixtures provide the required polishing effects. Some polishers are not active themselves and require the additional use of a polishing paste (in particular for prophylaxis).

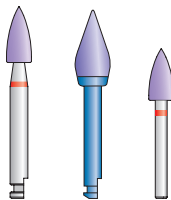
Colored Ring

The colored rings on the shank indicate the different diamond grit sizes according to ISO 21671.

color	grit	grit size in micron
	ultra-fine	4-1
	extra-fine	8-4
	fine	32-8
	medium	69-32
	coarse	164-69
	very coarse	>164

Shank

Shanks for polishers come in either stainless steel or plastic for multi-use or single-use respectively. Shanks also come in two different types: RA (contra angle \varnothing 2,35 mm) and FG (friction grip \varnothing 1,6 mm).



Restorative Materials and Types of Polishers

Restorative Materials to be Polished

There are many different polishing systems for all kinds of restorative materials:

Direct Filling Materials	Indirect Restorations
Composites	Hybrid Ceramics
Compomers	Oxide Ceramics
Glass Ionomers	Silicate Ceramics
Amalgam	Precious and Non-Precious Metals
Dentures	Natural Tooth
Conventional Acrylic Dentures	Enamel
Flexible Nylon-Based Dentures	

Single- and Multi-Use Polishers

Regarding their use, there are two different types of polishers available: disposable for single-use polishing and autoclavable polishers for multi-use polishing.

The advantages of the single-use polishers are that there is little risk of cross-contamination, more precise work as the shape is always in its original state at the beginning of the polishing procedure and the convenience of single-use.

The advantage of multi-use polishers is that they can be used on an average of seven patients, depending on the amount of work for each patient. Multi-use polishers are available in many different shapes and sizes and also come in FG (friction grip) version.

Diamond Polishers

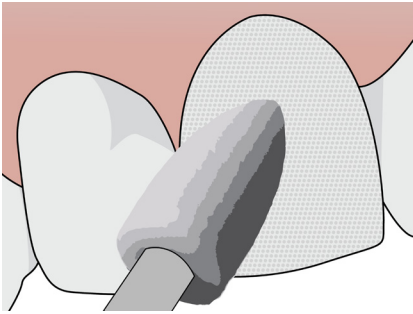
The diamond polisher was developed to simplify the high shine process on composite and ceramic restorations. Diamond polishers enable high shine polishing on ceramic inlays, crowns and bridges, and composite restorations in shorter polishing time. Also, diamond polishers lead to a better esthetic finish.

Polishing Systems

For an excellent polishing result, different polishing systems have been developed. There are single- and multi-step polishing systems.

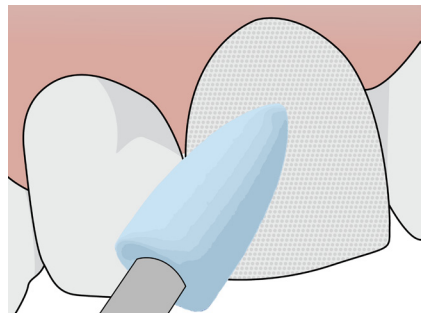
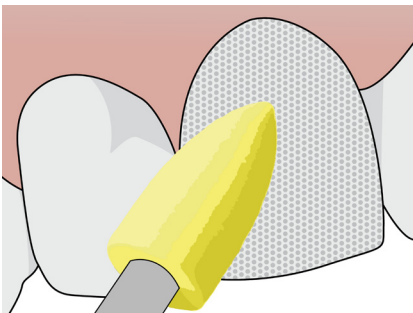
1-step polishing system

This system contains only one single polisher which usually has diamond particles as an abrasive. It achieves good polishing results solely by the dentist's pressure variation. The user prepolishes with more pressure and achieves a high shine by reducing the pressure. This is the most time-effective method.



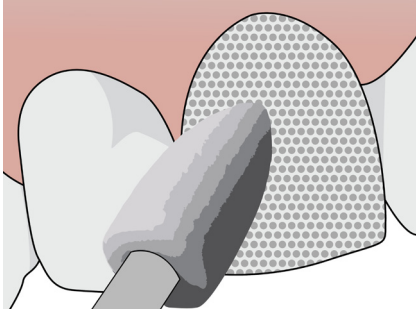
2-step polishing system

This is the most commonly used polishing system. It contains only two polishers: a medium gritted pre-polisher and a fine-gritted high shine polisher.

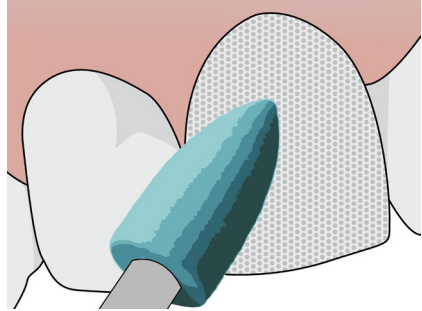


3-step polishing system

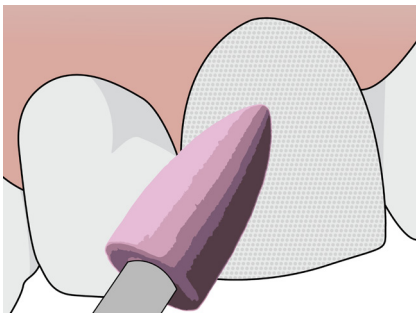
The three step polishing system comes with three polishers in different grit sizes.



The first step is to remove excess material and to contour the restoration in preparation for polishing.



The second step is to smooth the surface.

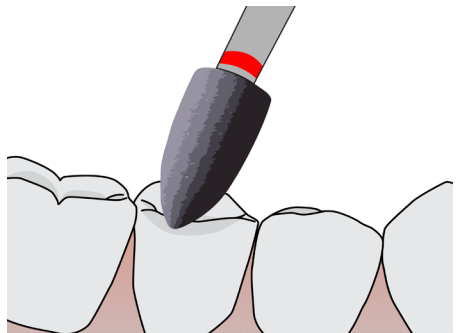
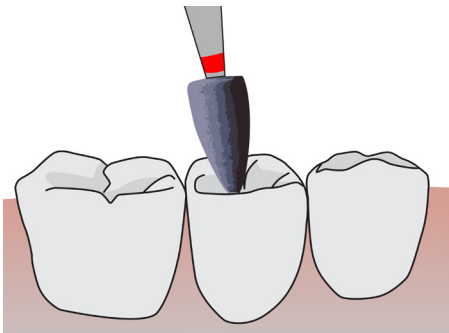
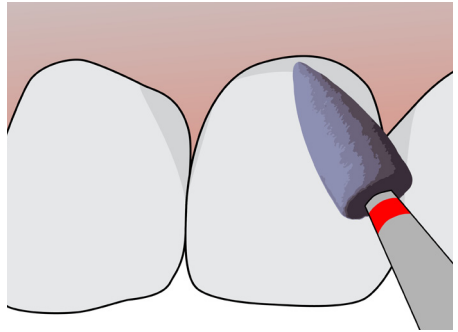
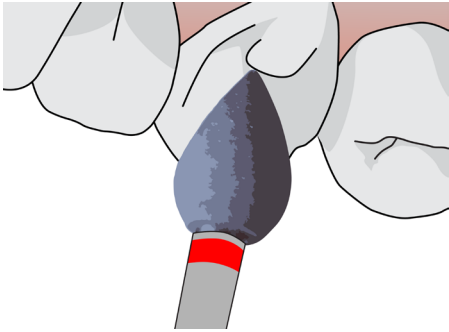
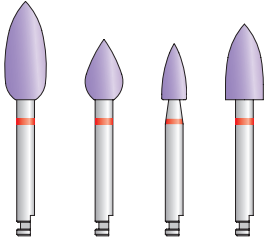


The third and final step gives the restoration a high lustre finish.

Polisher Shapes and Usage

There are four main groups of polishers: point, cup, disc, pear.

Point



Points are ideal for polishing both the cervical area and the occlusal reliefs. For some systems, up to four different points and sizes are available to satisfy dentists' individual preferences.

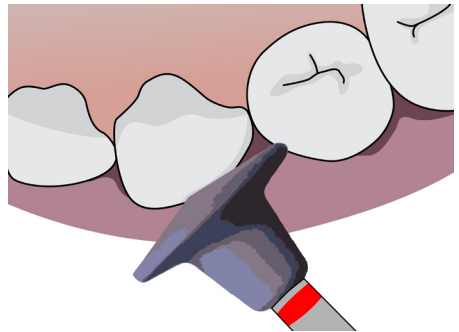
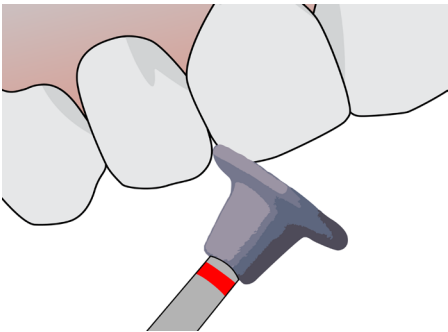
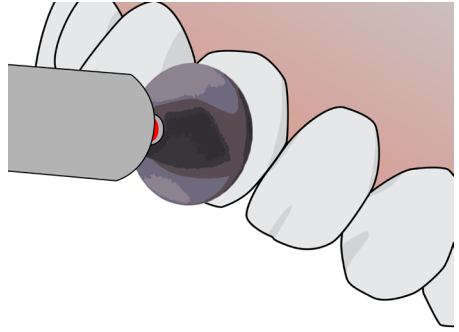
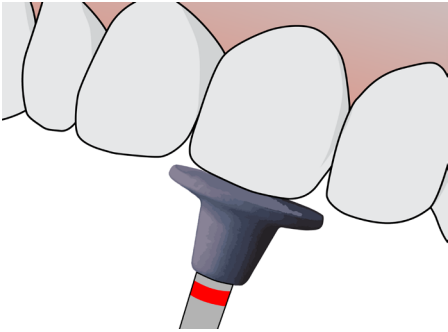
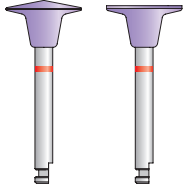
Cup



There are three different cup sizes. They can be used in different application areas, such as cusp slopes and incisal restorations (buccal and oral).

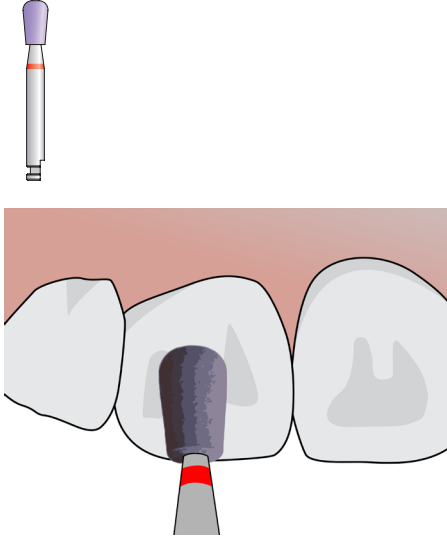
Polisher Shapes and Usage

Knife & Disc



There are two different types of discs. Both are ideal on incisors, large filling surfaces, incisal edges and boundaries between approximal areas.

Pear



This pear-shaped polisher is extremely useful on oral areas of incisor constructions.

Usage Instructions

Pressure and Cooling

To achieve an excellent polishing result, a pressure of 0,3-2 N is recommended for steel shanked polishers, whereas the maximum pressure for disposable plastic shanked polishers should not be higher than 1 N.

Always use waterspray for cooling to prevent excess heating and irreversible damage to the tooth and the surrounding tissue.

Disinfection and Sterilisation

Generally, polishers are supplied unsterile and therefore must be treated before use. Single patient polishers are not eligible for reuse but need to be disinfected and sterilised before and only use.

Due to the classification of dental polishers in the semi-critical B category of medical products, the following rules for reprocessing multi-use polishers apply: After each use they must be cleaned, disinfected and sterilised in an autoclave at 134 °C (275 °F) for at least 5 minutes with 10 minutes drying time.























Storage

All polishers need to be stored at room temperature and need to be protected from dust, humidity and direct sunlight.

Health and Safety

Goggles and masks should be worn to protect dentist and assistant from flying debris while polishing.

Symbols

	Polisher for smoothing and finishing		Diamond particles as material of working part for efficient polishing
	Polisher for finishing and silky shine polishing		maximum speed in RPM. Do not exceed.
	High shine polisher for ultimate gloss		recommended speed in RPM for best polishing results.
	autoclavable with moist heat sterilisation		Disposable. Use one time only.
	use waterspray for cooling		packaging units in boxes
	Order number		blister
	LOT number – for traceability of the respective production batch		CE-sign confirms conformity with Directive 93/42/EEC
	Expiry date		color
	Manufacturer		storage temperature
	user instructions / refer to catalogue		keep away from sunlight
	wear eye protection		wear breathing protection



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