

# Recommendations



## Proper use

- The instrument shank must be inserted as deeply as possible into the chuck (1).
- Avoid jamming or levering actions when rotating, as this increases the risk of instrument breakage.
- Before applying the instrument to the workpiece, reach the required working speed.
- Use the instruments over the entire length of their working head and not just at the tip, so as to avoid an unconscious increase of the contact pressure causing local overheating (2).
- Never exceed the specified maximum speed, so as to avoid instrument breakage caused by the generation of powerful centrifugal forces. This occurs in particular when the diameter of the working head exceeds that of the shaft (3).
- Provide for adequate water irrigation (minimum 50 ml/min).
- In case of instruments exceeding ISO 027 provide additional waterspray cooling.
- Clean the instruments and remove debris after each use, so as to maintain their abrasive ability. We recommend to use the appropriate Intensiv Cleaning Rubber Diakleen.

## Maintenance of Diamond Instruments

- Instruments are delivered non-sterile. They must be disinfected, cleaned, and sterilized prior to first use on the patient and immediately after each use.

## Disinfection

- Disinfect the diamond instruments separately from non-stainless steel instruments, such as polishers and abrasives.
- Use only cleaning/disinfection solutions that provide corrosion protection, and strictly observe the concentrations and reaction times recommended by the manufacturer.
- In case of heavily contaminated instruments it is advisable to use an ultrasonic bath.

## Inspection/Cleaning

- After disinfection, inspect the instruments for residual contamination. If necessary, repeat the disinfection/cleaning procedure.
- Clean clogged diamond surfaces using the special Intensiv Cleaning Rubber Diakleen or a suitable brush. Thoroughly rinse the instruments with water and dry them immediately.

- Check for possible damages; dispose of oxydized, blunt and eccentric instruments.

## Sterilization

- Sterilization must be performed with validated procedures. If possible, use a single-pulsed or fractionated vacuum autoclave and subvacuum drying.
- Chemiclave sterilizers may also be used. Hot air sterilizers are not suitable for diamond instruments.
- Avoid temperatures above 180° C which may affect the durability of the instruments.
- Concerning the sterilization process we refer to the ISO standard 17664; so we suggest to follow these advices:  
Cycles at 134°C:  
Tmin = 134°C – Tmax = 138°C  
Pressure = 3.15 bar abs  
Time = 4 min (raisable)  
Cycles at 121°C:  
Tmin = 121°C – Tmax = 125°C  
Pressure = 2.10 bar abs  
Time = 16 min (raisable)

## General information

- Keep the original package for the whole life cycle of the instrument, in order to ensure batch traceability.

## Carbide instruments for cutting crown and bridges:

### Recommendations for Use and Safe Operation in Dental Practices

The service-life of carbide instruments depends on compliance with the following recommendations for use and safe operation. The instruments must be fully inserted and gripped in the contra angle with the utmost of care. It is recommended to use the red contra-angle (1:5) with connection to micro motor. Select the correct speed to ensure optimum performance and service-life. Operate within the recommended speed ranges. The hints covering maximum permissible speeds must be heeded. Before placing the tungsten carbide bur/finisher in contact with the site being prepared, check that the bur is rotating at the optimum speed and that the cooling system is functioning properly. Once the preparation has been completed, remove the rotary instrument from the site and allow it to come to a standstill. Prepare carefully and without exerting pressure. Select the pressure (maximum 0.3 – 0.5 N) to ensure that the speed is not reduced noticeably. The pressure exerted on the rotary instrument is a decisive factor for the working procedure and the successful outcome of the preparation. Under no circumstances should the burs be allowed to jam. The tilt of instrument should be avoided. To prevent harm to the tooth structure, pulp and adjacent fillings, cool by spraying with sufficient amounts of water. The removal (separation) process without using sufficient coolant – minimum: 50ml/min. and incorrect application of the coolant (diverted spray, inadequate ejection) may adversely affect the final result.