

## Micropreparation | Set **4383**

**Tungsten carbide and diamond instruments for minimally invasive restorations as suggested by Dr. Stefan Neumeier**



These days, first priority is given to the preservation of natural hard tooth substance. The idea of the minimally invasive preparation technique has, therefore, inevitably resulted in new demands on the design of rotary instruments. In order to meet these requirements we have developed instruments with specially long and slender necks in order to carry out precise and safe preparations in microdentistry.

### **Extraordinary combination of instruments with a modified neck**

With the instrument set 4383 KOMET offers you the possibility to choose not only diamond points but also tungsten carbide instruments in micropreparation. This set is specially suited for the elimination of dentinal caries\*. With the filigree tungsten carbide patterns you can efficiently and safely remove infected dentin in deeper areas. The optimal combination of small working part dimensions and long slender necks assures good vision on the preparation site.

### **Perfectly smooth surfaces and improved cutting efficiency**

The proven advantages of preparing with tungsten carbide instruments as compared to diamond instruments include optimal cutting efficiency, low heat generation and smoother surfaces. Using the instrument set 4383 you can clearly benefit from these advantages: The excellent cutting performance of the round and pear-shaped tungsten carbide instruments permits safe working near the pulp. Carious dentin can be removed quickly and without excessive heat generation and clogging.

The diamond instruments with small working parts included in set 4383 are designed for working on fillings. The special shapes grenade, pointed and lancet are perfectly adapted to the transition areas of natural and restored surfaces.

\*Set 4337 is recommended for fissure caries and opening of deeper cavities

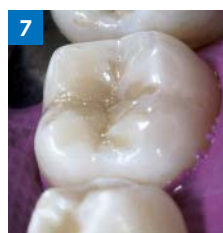
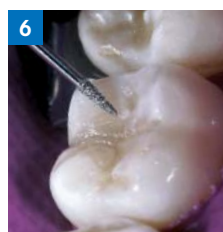
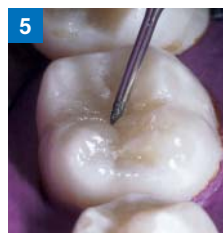
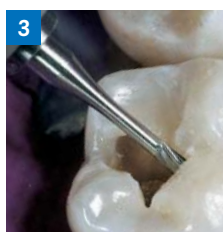
## Examples for use

1. For exact identification of carious material we recommend to use appropriate solutions for caries detection. The example shows the CARIES DETECTOR\* applied. After a reaction time of 10 seconds the cavity is rinsed with water. The demineralized carious tooth substance has turned red and can be easily removed.

2. Considering the topography of the carious lesion, the preparation is carried out with a corresponding instrument: In this case a round tungsten carbide instrument with high cutting efficiency (H1SM.314.014) is used.

3. The lancet-shaped instrument (H249M.314.007) cuts slightly less material and is intended for selective removal of carious material or for fine working on filling margins.

\*by Kuraray Dental



4. After filling the cavity with composite (according to the instructions of the manufacturer) the filigree diamond instruments are used: The grenade shape (883A.314.007) for creating central fissures and for working on the concave cusp inclinations.

5. The pointed version (955AM.314.007) is used for precise shaping of fine fissures.

6. For trimming convex tooth surfaces and cusps we recommend to use the lancet shape (957AM.314.007) or alternatively the respective tungsten carbide instrument (H249M.314.007)

7. Composite restoration of natural anatomical and aesthetic appearance.

## Recommendations for use

- To carry out a precise minimally invasive preparation we recommend to use – besides a suitable solution for caries detection – optical aids as for example magnifying glasses or microscopes
- Instruments should be used in the red contra-angle at a maximum speed of  $\varnothing_{\text{max.}} 160\,000$  rpm
- Apply minimal contact pressure in order to avoid instrument breakage (<2N)
- Best results are achieved when the optimal speeds are observed:

