

## LM Instrument Kit for Esthetic and Functional Composite Restorations

### ***Esthetic Set LM 6810 XSi***

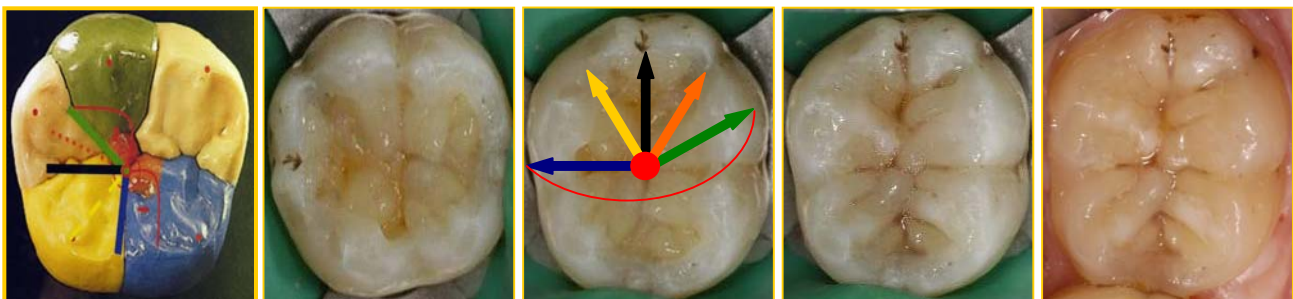
Mirror Handle and mirror  
Trimmex Mesial 1  
Trimmex Distal 1  
CMF Shaper  
Modeller – Brush Holder

Esthetic dentistry has become tremendously popular in the last decade, as youth and beauty are expression of a better life style. Everybody wants to be part of it and teeth are ranked in a high position when patients ask for a perfect and persuasive smile.

In the past few years composite materials have reached a high standard regarding wear resistance, handling characteristics and colour stability. This made composites attractive not only for dentists, but especially for patients, as restorations can be realized chair-side with excellent esthetic results.

Although several instruments for cavity hand-preparation, composite placement and composite contouring are already on the market, many colleagues felt that there is a need for more specific tools in restorative dentistry.

Reducing the number of instruments, ergonomic handles and tips and easy maintenance and reconditioning were the goals to reach during development. Furthermore the additive composite layering technique based on functional parameters, comparable to wax-up techniques in dental laboratories (the opposite of subtractive techniques as carving of amalgam) influenced mainly choice and design of the instrument tips.



Dental laboratory technicians follow the principle of the occlusal compass, as described by Payne, Polz and Schulz, in order to obtain functional restorations which fit into the patients occlusal patterns. As it can be seen in the photograph above there is a colour attributed to every antagonist movement: **black** for protrusion, **blu** for laterotrusion, **green** for mediotrusion and **yellow** and **orange** for latero-protrusion and medio-protrusion. The central **red** spot representatives a contact in central occlusion while the **red** hemi-circle stands for the modified retrusion and immediate side-shift concept from Kordaß et al.: “Retrusion is possible during latero- or mediotrusion at any time.”

## ***Cavity preparation***

Trimmex Mesial 1.0 mm (LM 6122-6222 XSi) or 1.5 mm (LM 6322-6422 XSi)

Trimmex Distal 1.0 mm (LM 6121-6221 XSi) or 1.5 mm (LM 6321-6421 XSi)

Hand instruments as excavators, margin trimmers and enamel chisels are becoming popular again for cavity preparation. Tactile sensitivity is increased while working with these tools when compared to preparation with rotating instruments.

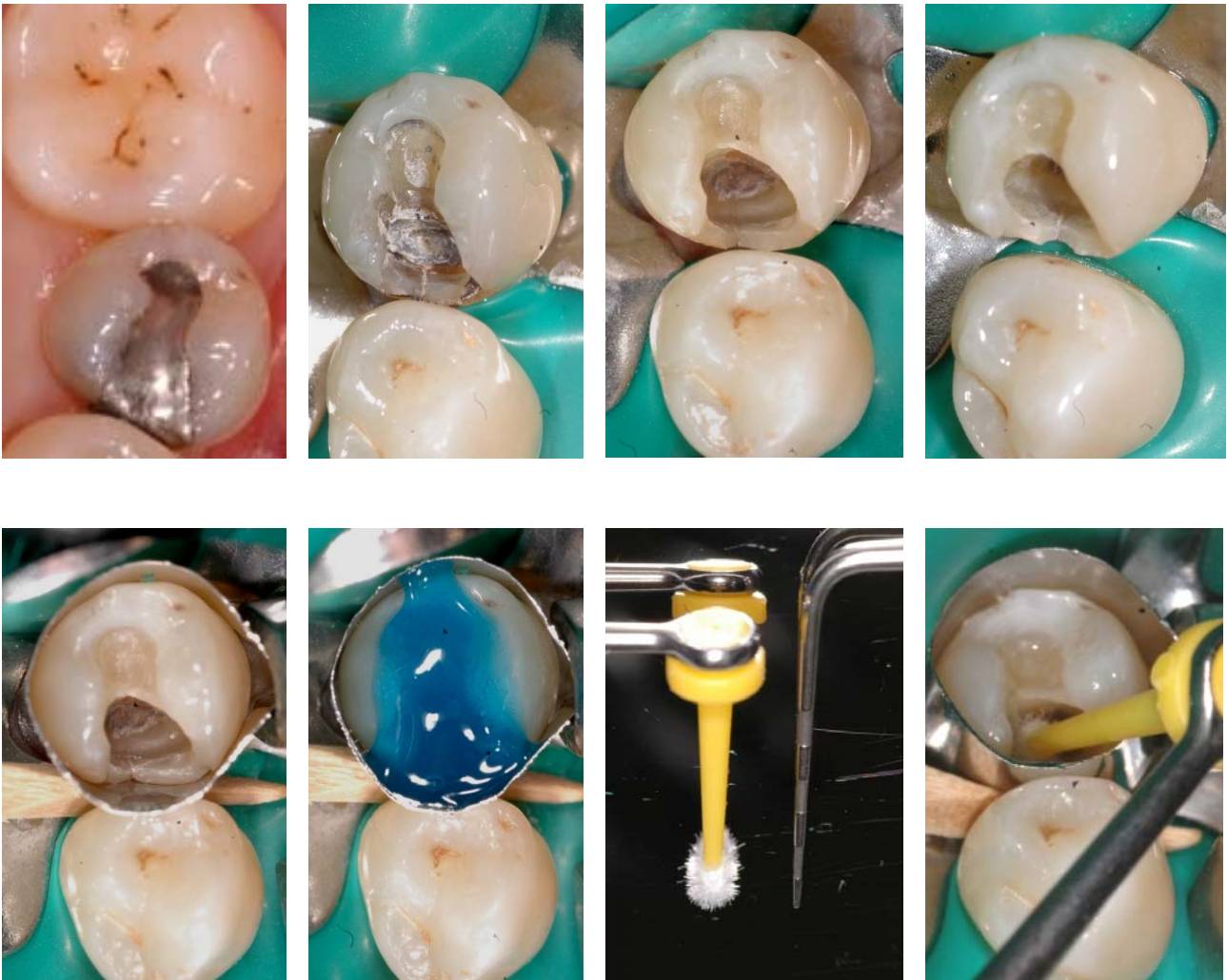
The Trimmex instrument has been developed to combine a margin trimmer and an excavator in order to reduce the number of tools involved in cavity preparation. Two different instrument sizes for both, mesial and distal cavities, are available. The LM 6122-6222 and LM 6121-6221 are first choices for those who work with magnifying loops. The slim and long shank guarantees good visibility of the working tip maintaining proper instrument strength. This size can also be used for tunnel preparations by hand in order to preserve (please cancel "the") marginal crests. The LM 6322-6422 and LM 6321-6421 instruments have the same shape, but are larger in size.



## ***Composite placement and contouring***

CMF Shaper (LM 44-45)

This tomahawk shaped instrument is combining the features of a carrier, a modeller and a finishing device. Composites can be easily positioned also in the posterior area, as the blades are angled 45° to the handle. The CMF Shaper can also be used as an excess remover by pulling. The cutting edge close to the lower shank is indicated to remove excessive material distant from the cavity margins. The 270° and highly polished cutting edge avoids composite sticking onto the instrument and enables an even and straight cutting of composite excesses without strapping the restorative material. When working with this instrument good visibility is maintained at all times even with magnifying lenses due to its slim lower shank.



#### Modeller-Brush Holder (LM 481-758)

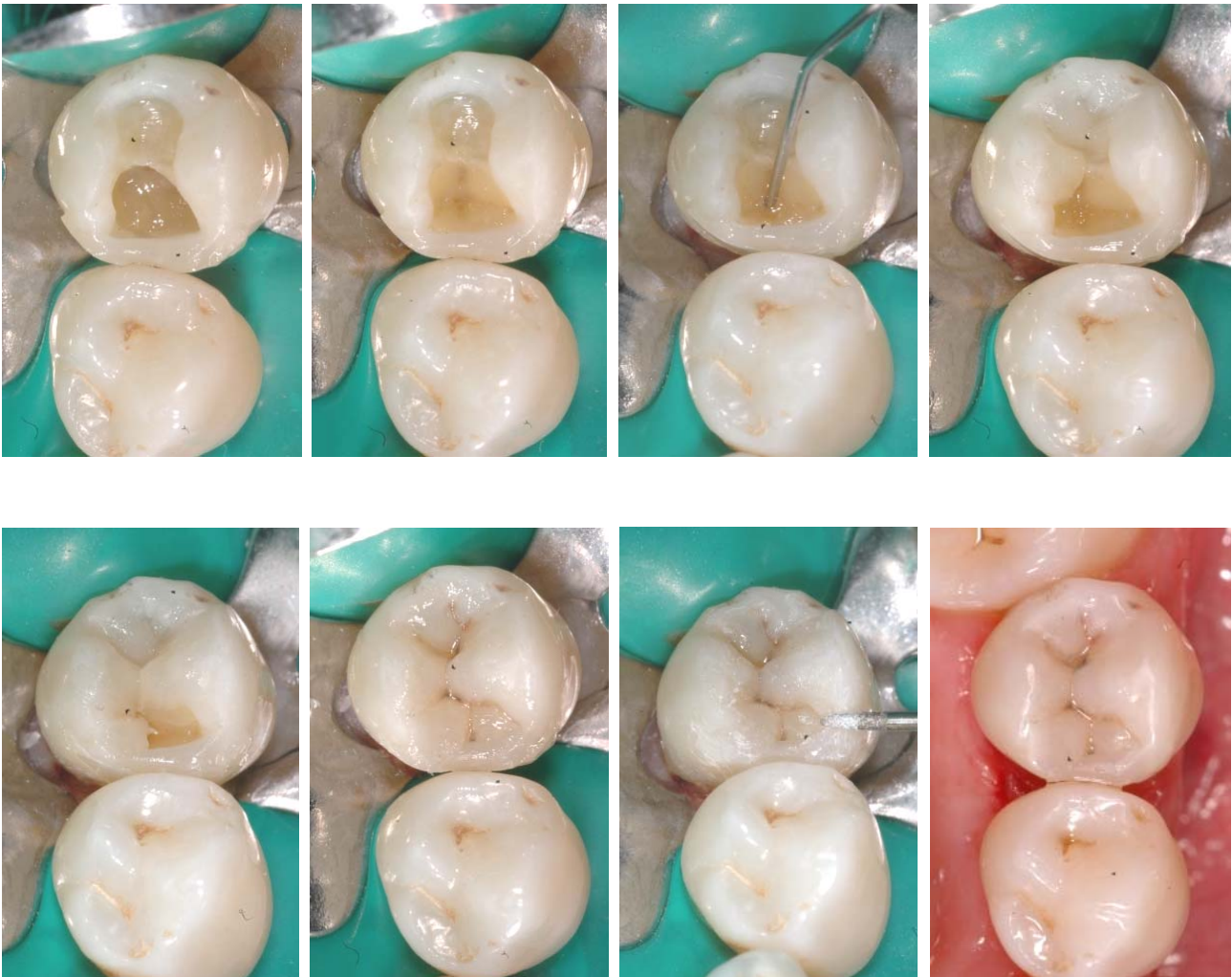
A classical modelling instrument, PK Thomas #3, is combined with a brush holder for disposable micro brush application tips. This simple brush holder is a reliable and secure alternative to those realized in plastics. Cutting off the part exceeding the retention ring reduces this applicator to only 15 mm of length. This makes it one of the smallest instruments on the market and guarantees an easier access to posterior cavities.

The colour-coded micro-brushes\* can be used either for enamel distribution (**yellow** brush) in the cavity, for priming (**red** brush) and bonding (**blue** brush). The latter can be used as a «non-sticking» ball instrument. Drying the micro-brushes prior to modelling with sterile absorbent paper avoids alteration of composite characteristics. Compared to disposable micro-brushes the LM solution does not bend while applying force.

Due to its long cone the PK Thomas #3 is used for both, adapting composite to any cavity margin, independent from its curvature, and modelling cusps and fissures in order to obtain a natural and functional occlusal surface.

Stains make fillings more natural. The Modeller – Brush Holder satisfies both, stain distribution within the fissures (PK #3) and stain-excess removal (dry micro-brush).

*\* LM's removable micro-brush application tips are available in three colours (red, blue, yellow) to simplify identification and to coordinate multi-step procedures. Also Helmut Zepf and Onmident micro-brush application tips fit the LM-Brush Holder.*



### **Conclusion**

LM Esthetic Set satisfies all requests for cavity preparation and composite placement, as well as composite contouring with only four instruments. This reduced number of tools means economic advantage for the practitioner, but also reduced maintenance and cleaning time for the dental assistant.

Shape and size of these instruments have been chosen considering the increase of micro invasive esthetic dentistry.

Laboratory technicians can use these tools for both, placement and contouring of composites and ceramics.