

## **MATRIX BANDS**

### ***INSTRUCTIONS FOR USE***

The devices are for single use.

#### **Target groups**

No limitations for target treatment group – the devices can be used for all groups of patients without restrictions.

#### **Warnings and precautions**

- 1) Do not re-use.
- 2) Prior to use matrix bands (device) make sure of integrity of the device and absence of rust on it.
- 3) Use rubber dam when operating with sectional, lug matrices and transparent crowns to avoid matrix swallowing by the patient.

### ***STERILIZATION***

Matrix bands are single use devices. They are supplied in non-sterile state and in case of risk of contamination are to be sterilized as follows.

#### **Procedure:**

- 1) Disinfect your hands;
- 2) Put on disposable gloves;
- 3) Put the cleaned the devices in the autoclave bag;
- 4) Carry out the sterilization:

metal matrix bands - in accordance with the instruction of the autoclave manufacturer at 134°C for 5 minutes;

plastic and plastic-metal matrix bands – by chemical method in 6% hydrogen peroxide solution at 18°C for 360±5 min, or in autoclave bag in autoclave at 121°C for 20 min in accordance with instructions of autoclave manufacturer.

#### **Warning:**

- 1) Do not use detergents or disinfectants containing strong alkalines (pH>9), strong acids (pH<4), phenols or iodophors, hydrogen peroxide, interhalogenic agents, halogenic hydrocarbons, strong oxidizing agents, organic solvents, aldehydes.
- 2) Dry the devices thoroughly before sterilization.
- 3) Follow instructions of autoclave (sterilizer) manufacturer.
- 4) To avoid corrosion of the metal due to electrolysis, do not place devices in autoclave together with products made of aluminum, brass and copper.
- 5) Do not use / sterilize the devices in case of presence of traces of rust on the surface or traces of surface damage.

#### ***Storage***

Sterilized devices can be stored:

- 1) In the UV-chamber – please refer for the instruction of the UV-chamber for the detailed storage conditions.
- 2) In the autoclave bags - please refer for the instruction of the autoclave bags for the detailed storage conditions. Products sterilized in autoclave bags should be stored in closed cabinets in clean, dry rooms, preferably at a temperature of 15-30°C and a relative humidity of 33-50%, avoiding exposure to direct sunlight. Unauthorized access to these rooms should be excluded.

## ***OPERATING INSTRUCTIONS***

### **Preparation**

1. Open the packaging.
2. Make sure that there are no:
  - signs of violation of the integrity of the device (including cracks and chips),
  - traces of rust or dirt on the surface.

### **Operating procedure**

#### **Metal matrix bands and striprolls, metal contoured matrices**

are installed with



Tofflemire retainer № 1.007



Supermat system



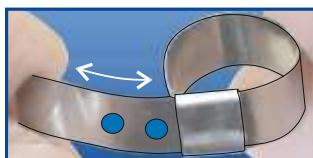
rings № 1.099, 1.199, 1.299, Slot ring № 1.044  
in case of installation with Slot ring № 1.044 be sure that the width of matrix wings is less than slot height, cut the wings to fit slot height if necessary



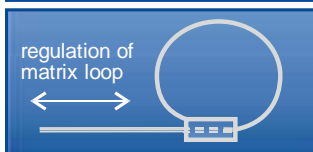
springclip № 1.009

#### **Loop matrices**

Construction of loop matrices provides simplicity of loop length regulation in accordance to tooth size. Loop matrices are installed without retainer. Mainly to be used for protection of adjacent tooth against bur upon cavity preparation.

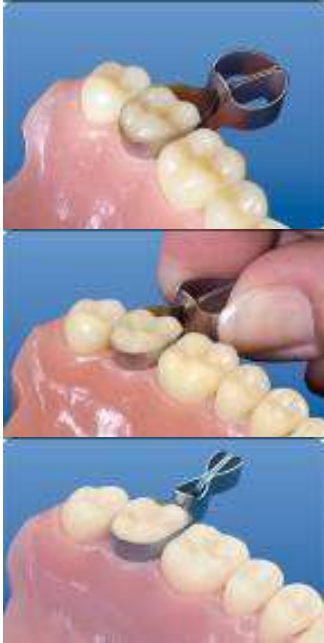


1. Regulate the loop size corresponding to the tooth size



2. Install loop matrix onto the tooth and tighten matrix end up to complete embracing of the tooth

### Metal contoured matrices combined with clamp

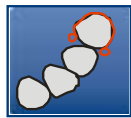


1. install matrix by hand on the tooth,
2. press metal clamp,
3. perform the restoration and remove the matrix.

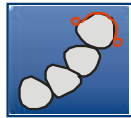
### Saddle matrices



incorrect



correct



incorrect

#### Important!

To provide perfect contact choose appropriate matrix length

### Installation with springclip № 1.003



1. Outside the patient mouth insert tines of springclip into the matrix side tubes
2. Press springclip holders with matrix and install matrix onto the tooth
3. The systems works on distal and on mesial tooth surface

### Installation with ring № 1.033



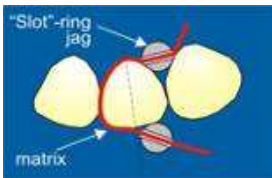
1. Outside the patient mouth insert tines of the ring into the matrix side tubes

2. Open the ring assembled with saddle matrix via forceps № 1.099-1 (or via standard rubber dam forceps) and install matrix onto the tooth

3. Ready for restoration. On the distal surface

4. The systems can be installed on mesial tooth surface too

### Pony matrices



Pony matrices are ideal for fixation with Slot springclip or Slot ring. Any other metal matrices can be installed with Slot springclip and Slot ring provided matrix edges are narrow enough to do not overhang from the slot into the direction of gingiva.

### Installation with Slot springclip №1.004



1. Insert matrix into the slots of springclip

2. Install the springclip with matrix onto the tooth

3. Ready for restoration on mesial surface of the tooth

4. Ready for restoration on distal surface of the tooth

### Installation with Slot ring №1.044



1. Open the ring via forceps № 1.099-1 or via standard rubber dam clamp forceps, insert matrix into the slots of the ring



2. Install the ring with matrix onto the tooth



3. Ready for restoration on distal surface of the tooth



4. Ready for restoration on mesial surface of the tooth

### Perforated matrices



Ivory retainer



ring № 1.022



springclip № 1.002

### Metal sectional matrices

All matrices are available of 4 types – hard, 0,050 mm thick / hard, 0,035 mm thick / soft, 0,050 mm thick / soft, 0,035 mm thick.

Hard matrices are easy to install. Soft matrices are easily adapted for contact point formation.

Matrices of 0,035 mm thickness are more effective for restoration of small decays.

Matrices of 0,050 mm thickness are intended for restoration of large decays in subgingival area. Such matrices retain the shape well.

Kits 1.1972, 1.1973 and 1.1976 are intended for advanced users of sectional systems or for dentists who desire to test the difference between hard and soft matrices.

Use rubber dam when operating with sectional matrices to avoid matrix swallowing by the patient.

### Installation with rings



1. Install matrix (preferably wide side down to gingiva) and wedge



2. Open the ring via forceps



3. Put the ring on the tooth and perform restoration



4. The system can be installed either on distal or on mesial surface of the tooth

### Possible ring positions



Variant 1. Ring tines located behind the wedge (restoration of large cavities)



Variant 2. Ring tines located in front of the wedge (restoration of small cavities)



Variant 3. Two rings with various tines height on one tooth (restoration of decay on distal and mesial surfaces of one tooth)

## Variants of installation of rings with flat tines

Rings with flat tines are recommended upon restoration of large decays near the contact point



Flat ring 1.199

D-ring 1.166. Tines of D-ring are curved inwards to fix matrix on distal side of the tooth

M-ring 1.177. Tines of M-ring are curved out to fix matrix on mesial side of the tooth

Delta ring 1.299 with add-on wedges 1.861. Double tines of Delta ring are suitable for installation of fixing wedges and add-on wedges (see how to operate with add-on wedges)

## Installation with springclip



Springclip can be installed without forceps. Springclip provides more gentle (weak) fixation of matrix than ring

## Lug matrices

Lug matrices are installed similar to sectional matrices.

Contact point is adjusted by pulling matrix lugs to adjacent tooth using dental plier. Use rubber dam when operating with lug matrices to avoid matrix swallowing by the patient.



## Proximal anterior strips



Install anterior strip vertically

Press the handhold of the strip forcing its working part to the adjacent tooth

### **Twin anterior matrices**

Installed by hand. Operating positions



### **Transparent strips and striprolls**

1. cut off the strip of the necessary length of the strip
2. install it by hand or with



Tofflemire retainer № 1.007

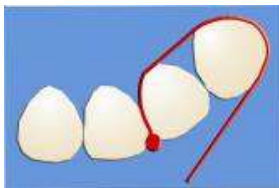


Supermat system



Slot ring № 1.044

### **Transparent stopstrips**



1. insert the free side (without stopper) of the stopstrip in the interdental space,
2. hold out the stopstrip till the stopper fixes the stopstrip in the interdental space (see the figure).

### **Transparent contoured matrices**

Transparent contoured matrices are installed with





Tofflemire retainer № 1.007



Supermat system



Slot ring № 1.044

### **Transparent contoured self-adhesive matrices**



1. install matrix by hand on the tooth,



2. remove the red protective layer from matrix sides,



3. stick glued matrix sides with each other.

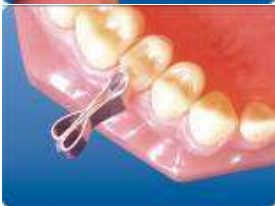
### Transparent contoured matrices combined with clamp



1. install matrix by hand on the tooth,



2. press metal clamp,



3. perform the restoration and remove the matrix.

### Transparent sectional matrices

Transparent sectional matrices are installed similar to metal sectional matrices - using fixing rings and transparent plastic wedges. Use rubber dam when operating with sectional matrices to avoid matrix swallowing by the patient.

### Transparent cervical matrix system



1. curve the matrix band *1* carefully (avoid the folding)  
(matrix curvature must correspond to the shape of the tooth part under restoration.)



2. insert the band into the cervical former 2, which comprises metal tube with inner diameter 6 mm,

3. approximately adjust the length of the matrix band *1* in accordance with tooth dimension,

4. cut out the matrix band *1* strictly according to the tooth shape,



5. fix the matrix band *1* in the cervical former 2 using the stopper 3,



6. perform the tooth restoration holding the cervical former and the stopper with one hand.

### Transparent crowns



1. Cut off the crown from the plate (if necessary) and puncture it
2. Fill the crown with filling material
3. Put the filled crown to the tooth under restoration
4. Remove the excess filling material squeezed from the hole and perform the restoration

### Plastic-metal combined matrix bands

1. Insert matrix in the interdental space metal side first
2. Hold the transparent side of the matrix towards the decay
3. Perform the restoration and remove the matrix