

## 5. Composition

The composition is included in the materials list; please refer to the catalog or [www.dentaurum.com](http://www.dentaurum.com).

## 6. Safety instructions

Always use only the blue safety key (Fig. 10) supplied to prevent swallowing.

The product should not be used if there is a known allergic reaction to one or more of the material components.

## 7. Information for single use products

The product is intended for single use only. Reconditioning of a product that has already been used (recycling) and its reuse on a patient is not permitted.

## 8. Delivery program

Please refer to our Orthodontics catalog for the complete product range of Variety/Variety SP screws without retention legs.

## 9. Quality information

Dentaurum ensures faultless quality of its products. These recommendations are based upon Dentaurum's own experiences. The user is solely responsible for the processing of the products. Responsibility for failures cannot be taken, as Dentaurum has no influence on the processing on site.

## 10. Explanation of symbols used on the label



Please refer to the label. Additional information can be found at [www.dentaurum.com](http://www.dentaurum.com) (Explanation of symbols REF 989-313-00).

## Information for the doctor/patient

Before the appliance with Variety/Variety SP is cemented into position, open the spindle (screw) by making 2–3 quarter turns in the direction of the arrow to test the mobility. Then turn back to the original position. Turn the Variety/Variety SP screw only in the direction of the arrow. Opening and closing the screw several times during treatment can cause it to loosen and no longer function properly. The finished Variety/Variety SP appliance is cemented into position in the usual manner. Follow the instructions from the cement manufacturer. Following this, the screw is turned four times 90° (quarter turn) using the safety key (REF 611-120-00, Fig. 10) supplied for this purpose. One full 360° turn of the spindle = 0.8 mm expansion.

The patient should turn the screw two times 90° both in the morning and evening (according to your instructions) until the desired expansion is achieved.

**Note:** Always use only the blue safety key (Fig. 10) supplied to avoid accidental swallowing.

Regular visits are recommended to monitor progress. The Variety/Variety SP appliance is secured against unwanted reversing, after the desired degree of expansion is achieved, by fitting a ligature or blocking with acrylic. The appliance should remain in the mouth for approximately 2–3 months for stabilization purposes. A retainer should be worn following removal of the appliance.



Should the user and/or the patient become aware of serious problems arising from the use of the product, it is important that the manufacturer and the competent authority in the country in which the user and/or the patient is resident is informed accordingly.

US

Instructions for use



CE 0483

➔ For more information on our products, please visit [www.dentaurum.com](http://www.dentaurum.com)

➔ Customer Service: Phone 800 523 3946  
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**D**  
DENTAURUM  
USA

## Dear customer,

Thank you for choosing a quality product from Dentaureum.

It is essential to read these instructions carefully and adhere to them to ensure safe, efficient use and ensure that you and your patients gain full benefit.

Instructions for use cannot describe every eventuality and possible application. In case of questions or ideas, please contact your local representative. As our products are regularly upgraded, we recommend that you always carefully read the current Instructions for use supplied with the product and stored in the internet at [www.dentaureum.com](http://www.dentaureum.com), even though you may frequently use the same product.

### 1. Manufacturer

Dentaureum GmbH & Co. KG  
Turnstr. 31 | 75228 Ispringen | Germany

### 2. General product description/area of application

The Variety/Variety SP expansion screw without retention legs are universal special expansion screws that can be used in the lower jaw to create space, to control tipping of the anterior and posterior teeth as well as to open and close spaces in both the upper and lower jaw. They can also be used as distraction screws, or for early palatal expansion of the upper jaw at the beginning of the mixed dentition phase.

The body of the Variety/Variety SP expansion screw is welded onto individual retention legs, connectors or so-called cap splints which have been either cast or produced by the SLM method in metal. The finished Variety/Variety SP appliance is cemented into position in the usual manner.

#### Variety (Fig. 1)

- small dimensions with maximum possible expansion
- integrated spindle friction prevents unwanted reversing
- clearly visible laser marked arrow on the body of the screw indicates the opening direction and the maximum expansion
- screw can be fixed with wire once desired expansion has been reached

#### Variety SP (small palate, Fig. 2)

- all the characteristics of the Variety expansion screw
- especially suitable for very narrow jaws



The smaller Variety Mini-8 and the Variety SP (small palate) Mini-8 expansion screws are provided with a longer guidance pin to prevent the screw from coming apart once it has reached maximum expansion.

Variety Maxi-12 and Variety SP (small palate) Maxi-12 expansion screws do not have this safety feature!

### 3. Fabrication of an appliance with Variety/Variety SP expansion screws with individualized retention legs and cap splints.

The following steps should be followed to manufacture individualized retention legs and cap splints by casting or by the SLM method (Fig. 3–4).

Preformed bands or individualized cap splints are fitted on the mandibular first premolars and the first molars, each left and right. The bands/cap splints are adjusted to fit on a hard plaster model or a 3D printed model.

The retention legs/cap splints are designed so that they can be welded to the expansion screw body of the Variety/Variety SP screw. The weld seam follows the groove in the screw bodies. The retention legs are connected to the Variety/Variety SP screw in such a way that the weld seams extend along the lateral groove (Fig. 5–6).

The Variety/Variety SP screw should “float” freely 1–2 mm above the gingiva (Fig. 7). To avoid any leverage effect, ensure that the direction of force runs parallel to the occlusal plane.

### 4. Tips for working with Variety/Variety SP expansion screws without retention legs

For the connection to be durable, the individualized retention legs must be welded along the groove of the body of the Variety/Variety SP screw body, for example using the welding unit desktop Compact (REF 090-578-50). As an average value for NiCr, the initial laser setting on the unit is as follows: 240 volt, 4 ms, 0.8 mm. The use of a shielding gas is indispensable during the welding process.

When using or adding new material to reinforce the welding area, we recommend the NiCr welding wire,  $\varnothing$  0.50 mm (REF 528-220-00) (Fig. 9.)

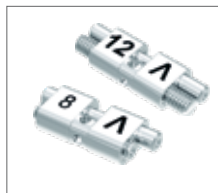


Fig. 1



Fig. 2



Fig. 7



Fig. 8



Fig. 3



Fig. 4



Fig. 9

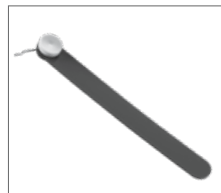


Fig. 10



Fig. 5



Fig. 6