

BAXMANN MINI TELESCOPE™

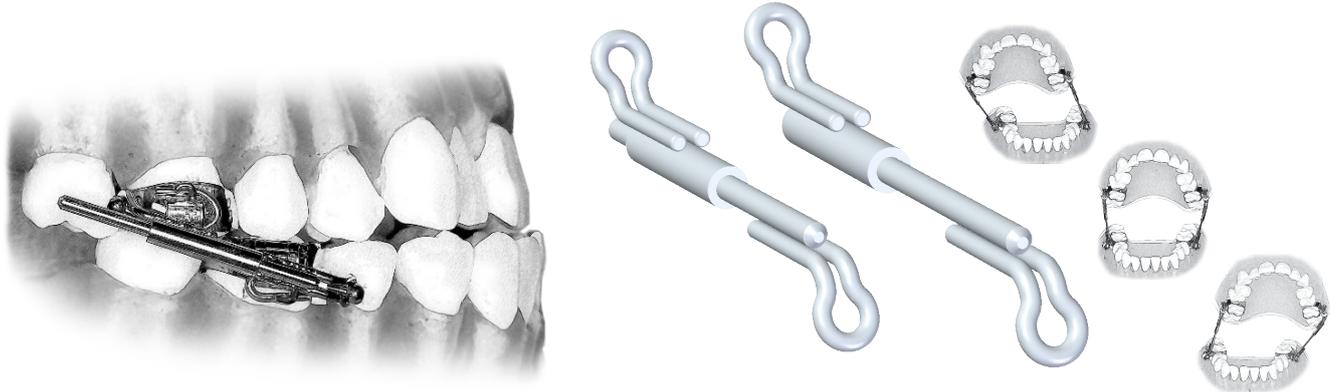


# BAXMANN MINI TELESCOPE™

The new generation of Class II correction - comfort, strength and control with simple installation and activation

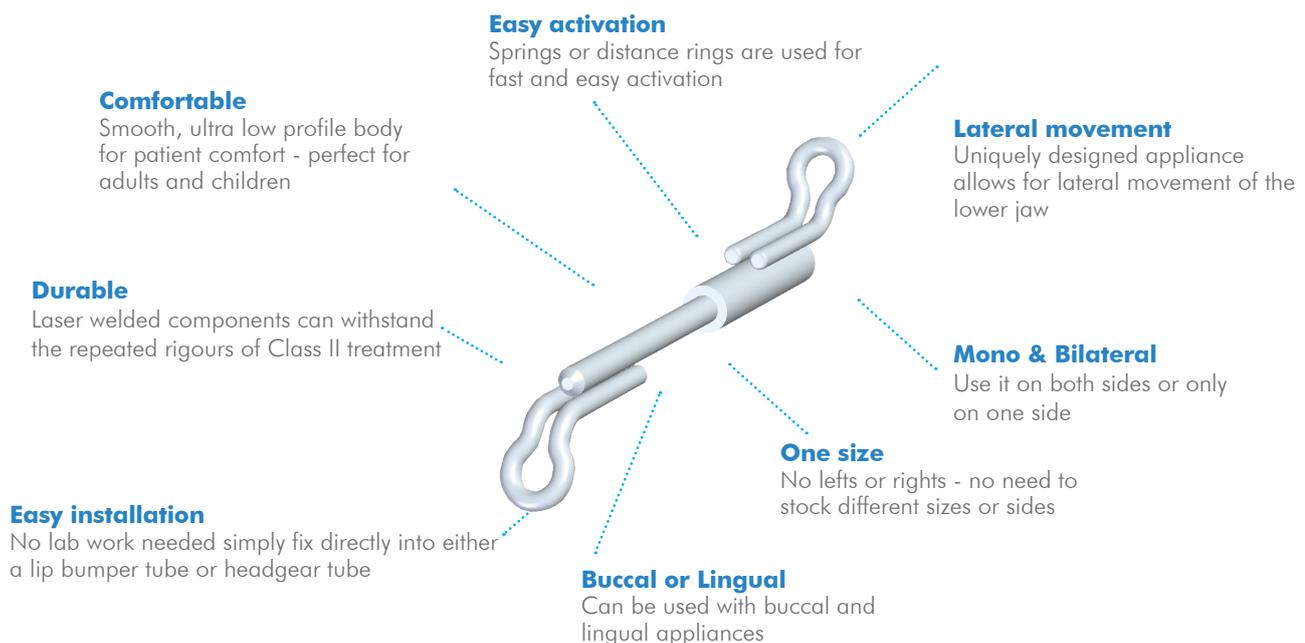


Professor Baxmanns' Mini Telescope is designed specifically to reduce and eliminate common problems experienced during Class II correction -undesirable intrusive molar forces, undesired protrusion, lack of control, breakage issues, complicated installations and activation:



With all flexible common Class II appliances the patient can easily hold the lower jaw backwards, this problem not only deforms or breaks the appliance, but also introduces undesirable intrusive forces on the molars. The BMT™ has been designed to control the patients lower jaw movement, as this jaw can no longer be held backwards, this eliminates the undesirable intrusive forces on the molars. The orthodontist can choose two options to best suit the patients needs. A rigid appliance, or as a soft bouncing appliance - adding the spring offers a softer more comfortable treatment, and the ability to overcome the differences in asymmetric cases easily. The force applied with either option still applies a rigid force and easily controls the patients jaw movement.

The BMT™ is designed specifically to attach easily and quickly to a headgear tube or lip bumper tube. Directly attaching to the buccal tube, eliminates uncontrolled forces being transmitted to the main arch, creating undesirable protrusion. Attachment is fast and easy as this system requires no prior lab work.



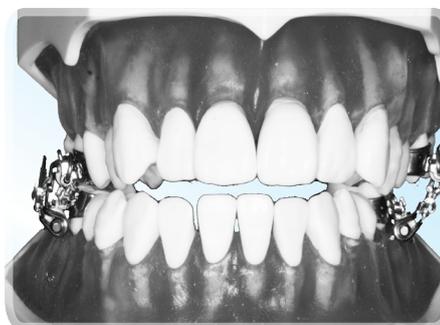
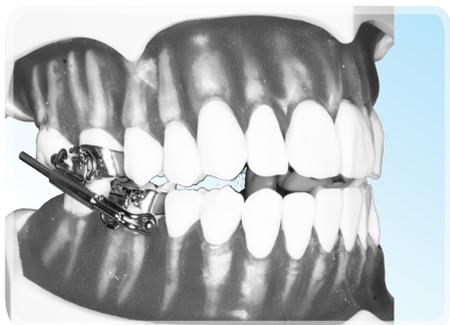
The BMT™ consists of a telescopic tube with eye, a telescopic rod with eye and pin abutments for attachment. It can be used on one or both sides.



This is a rigid class II corrector, but is easy to convert into a corrector with a spring using an additional BMT™ spring. The simplicity of this corrector is illustrated by the fact that the basic version requires only three components: a telescopic tube, telescopic rod and pins. These components are identical for the left and right side, and are supplied in one standard size.

With a little practice, the BMT™ takes less than two minutes per side to insert — with no preliminary work required in the laboratory!

Unlike most conventional rigid class II correctors, the BMT™ not only holds the lower jaw in the correct position, it also permits other movements, e.g. extrusive movements.



## Action and Treatment Effect

The lateral movement of the lower jaw corresponds to the natural range of movement of the temporomandibular joints of the patient. This results in a significant increase in the subjective comfort of the corrector.

Depending on the position of the jaw and the chewing pattern, intrusive and expansive force vectors or adverse turning moments may occur, in addition to the sagittal component. However, this can be controlled by using sufficient rigid full arches, or transpalatal or lingual arches. The rigid construction also prevents the patient from holding the lower jaw back. This reduces the intrusive forces that act directly on the treatment arch when using correctors that are flexible or have springs.

A considerable improvement in the initial situation can be achieved, particularly during early treatment, e.g. of incomplete class II molars, through a rapid change in the angulation of the first molars and, if necessary, distalization of the upper first molars.

A vertical development may occur with class II elastics and is frequently unwanted, but is rather unlikely in this scenario and has not been observed thus far. The average treatment time is between six and twelve months depending on the time at which treatment is administered.

## Indication and Area of Application

**Indication:** The BMT™ can be used in mixed dentition when using a partial bracket system, as well as in permanent dentition. The range of indications starts when the first molars come through and extends into adult treatment.

**Asymmetry:** If there is an asymmetric situation, it can be improved by using a clamping BMT™ spacer ring or passive BMT™ springs.

**Bruxism:** If patients have particularly large chewing forces or bruxism, it is advisable to use double welded molar bands. In addition, an occlusal splint worn at night in a therapeutic position can also be helpful.

**Subsequent insertion:** The BMT™ can be subsequently inserted at any time in addition to the complete MB corrector.

**BMT™ and lingual technology:** When used in parallel with lingual technology, it has now become possible in various systems to obtain personalized bands and to also have them fitted with buccal tubes. In this area too, there are no limits.



### Orthodontic Preparation before Insertion

- Before the BMT™ is inserted, the dental arches should be pre-formed in a way that allows a sufficiently thick full arch to be inserted.
- If inserting the BMT™ at an early stage, shortly after the molars have come through, transpalatal and lingual arches should be used.
- In (early) mixed dentition, a utility arch can also be used.
- The recommended arch is a rectangular steel arch (e.g. DURADENT Stainless Steel) in a minimum size of .016" x .022".
- Molar bands with headgear or lip bumper tubes are required in both upper and lower jaws

## Preparation/assembly

**01** First, the BMT™ pin is guided through the eye of the telescopic tubes from distal to mesial. The telescopic tubes are intended for use in the upper jaw.

The pin is then guided through the eye of the telescopic tubes that are intended for the lower jaw, from mesial to distal.

**02** Now that the pin has been inserted, the telescopic tube can be inserted into the headgear tube of the first molar from distal to mesial.

Approx. 4 mm distal overhang should remain.

*4mm = distance elastics are placed on the pins directly from production.*

In order to maintain the distal overhang of 4 mm, this distance can be marked out beforehand using the spacer plates provided. This also prevents the pin from sliding out of the eye and makes insertion easier, particularly for new users.

### Inserting the BMT in the upper jaw

**03** Now the anterior end of the ball abutment is bent sharply upward/to the rear using a pair of Weingart pliers. In order to achieve a sufficient distance between the eye and the gingiva, bayonet bending can be performed, if necessary, distally of the tube by approx. 20° towards the buccal.

### Inserting the BMT in the lower jaw

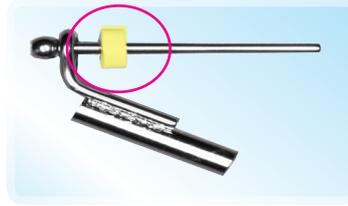
**04** Insert the telescopic rod (to which the pin is already attached) into the telescopic tube.

**05** Move the patient's lower jaw into the therapeutic position and push the pin through the tube of the lower jaw molar band from mesial to distal.

Now bend the distal end downward/forward while continuing to ensure that the jaw is in the correct position.

If the patient finds it difficult to maintain the correct jaw position for a sufficient amount of time, a construction bite is used to stabilize the jaw position.

**When two-sided use of the BMT™ is required, the same insertion steps should be used on both sides. Always start with the upper jaw!**

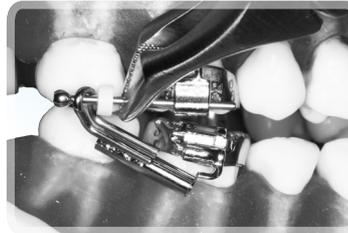


Telescopic tube

*Please note the elastic space maintainer will remain in place throughout treatment.*



Telescopic tube and telescopic rod



## Subsequent Activation of the BMT™

If the position needs to be optimized or if the therapeutic position needs to be corrected, the corrector can simply be subsequently activated. This can be achieved in various ways, which can be used alone or combined as required. It is also possible to do this on one side (e.g. for asymmetry) or on both sides if necessary.

If additional activation is required, options 1 to 4 can be combined as necessary.

If the therapeutic position has been reached and the patient can complete opening and closing movements without complaint, the ends of the pin are fixed to the bands using a composite material.

### 1. Simple Subsequent Activation at the Ends of the Pins

- a) The distal overhang of the pin in the upper jaw is reduced by pulling them further in the mesial direction. The pin is then bent again and fixed in place mesially of the headgear tube or lip bumper tube. This enables subsequent activation of 2 to 3 mm. 1 to 2 mm should remain as an overhang in order to ensure optimum jaw movements.
- b) The mesial overhang of the pin in the lower jaw is reduced by pulling them further in the distal direction. The pin is then bent again distally of the tube and fixed in place using composite if necessary. This enables subsequent activation of 2 to 3 mm. 1 to 2 mm should remain as an overhang in order to ensure optimum jaw movements

2. **Activation via spacer rings:** Clamping BMT™ spacer rings are inserted onto the telescopic tube. Depending on the subsequent correction that is required, several rings may be used.

3. **Activation via springs:** As an alternative to the distance rings, a spring can be inserted onto the telescopic tube. The recommended spring is the BMT Open Spring, which is cut to approx. 10 mm passively and, when compressed to approx. 4 mm, enables an additional activation force of 330 g. In this scenario, the spring merely forms a buffer. The overall forces correspond roughly to the individual chewing forces due to the rigid construction.

To activate via springs, the patient opens their mouth as wide as possible, the pins are loosened and the telescopic rod is pulled out of the tube. The BMT™ ring is pushed onto the rod and the corrector is fitted back together while the patient holds their mouth open as wide as possible.





Please note: In the rare case the patient unintentionally opens their mouth wide enough to separate the two sections of the BMT™ simply instruct the patient to insert the rod back into the tube. This has proven to be un-problematic in practice, as the corrector is easy to fit back together even for young patients.

Orthodontists can use this opportunity to their advantage: They can check on the therapeutic effect of the corrector at every appointment without the need for any complex construction, meaning they don't suffer any "nasty surprises", e.g. a dual bite after the conventional wearing time of approx. six months.

The short length of the corrector and its resulting rigidity makes it extremely rare for the corrector to become bent out of shape, and highly unlikely for fractures to occur.



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