

Tiger Dental

Gebrauchsanleitung
Instructions for use

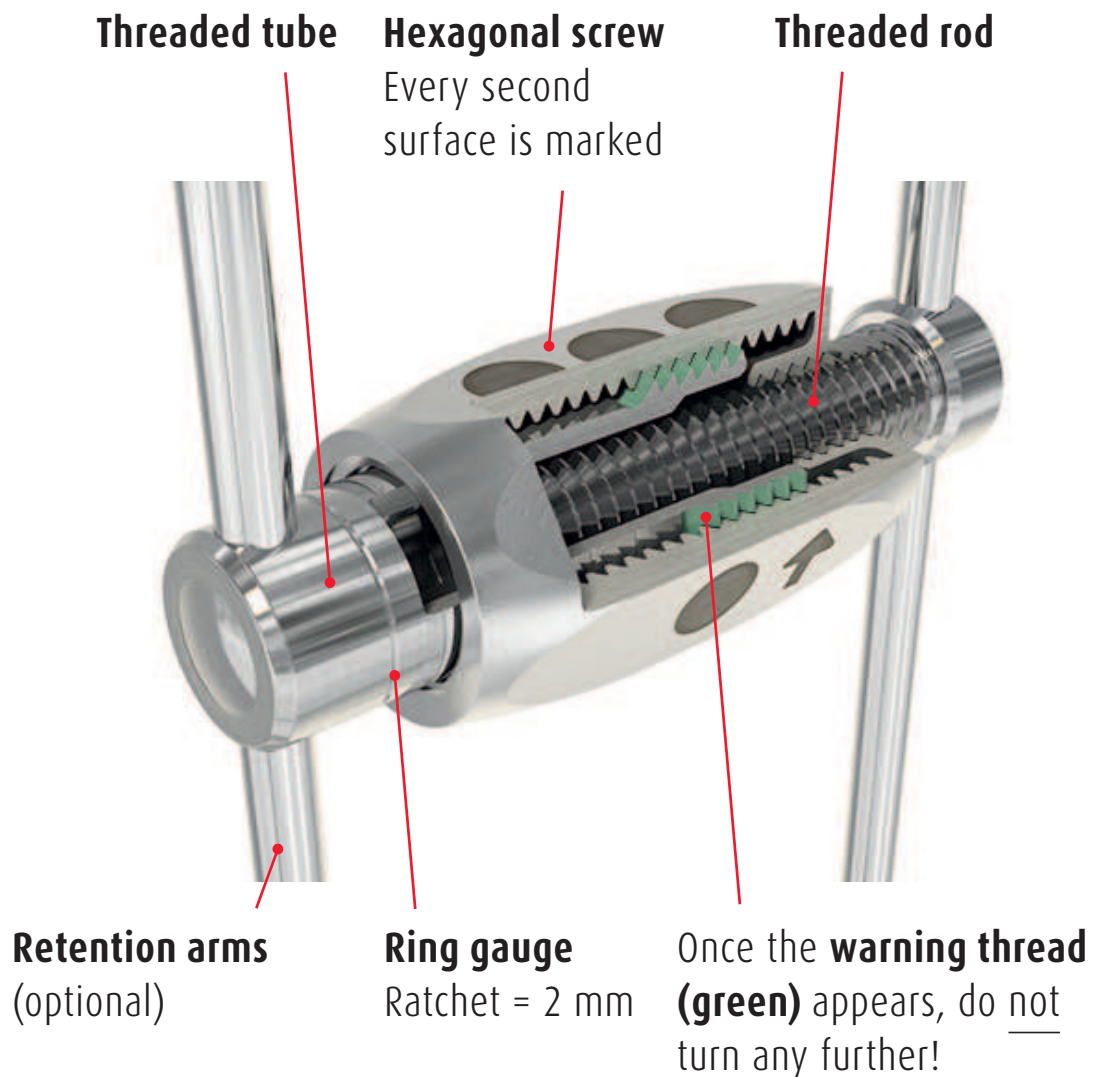
◀ **PowerScrew** ▶

PowerScrew 8, 10, 12, 14, 16

Dehnschraube zur Gaumennahterweiterung
Expansion screw for maxillary expansion



The components of the PowerScrew



Technical information

Screw bodies (size)	Max. expansion path	Ring gauge
8 mm	+6 mm	1 ring
10 mm	+9 mm	2 rings
12 mm	+12 mm	4 rings
14 mm	+15 mm	5 rings
16 mm	+18 mm	6 rings

Expansion per turned surface

Surfaces	expansion path
6	1,0 mm (= 1 turn)
1	0,17 mm

Dear doctor, we are honored that you have chosen this innovative new product from Tiger Dental GmbH.

To ensure the safe and effective use of this product, you must carefully read and adhere to this user manual.

The user manual covers all necessary safety instructions but cannot describe all possible circumstances. For this reason, you may find further user notices online at tigerdental.com under the “Know-how” link. Our customer service is available for any additional questions.

The continual development of our products indicates our company’s commitment to innovation. Accordingly, after several clinical uses, we recommend you carefully review the accompanying user manual (this can be found online under the “Downloads” link at tigerdental.com).

1. Manufacturer

Tiger Dental GmbH, Belruptstraße 59, 6900 Bregenz, Austria

2. Product description

The PowerScrew is a double telescope screw for use in palatal expansion devices. It is available in five sizes (8, 10, 12, 14 and 16 mm installation size).

Activation is simple, as the 8 cm long flat spanner can be quickly and safely used by the patient on the hexagonal screw.

Narrow palates need a small expansion screw. The PowerScrew therefore grows with it. By simply changing the hexagonal screw for the next biggest, the expander can continue to be used without making a new one (see images page).

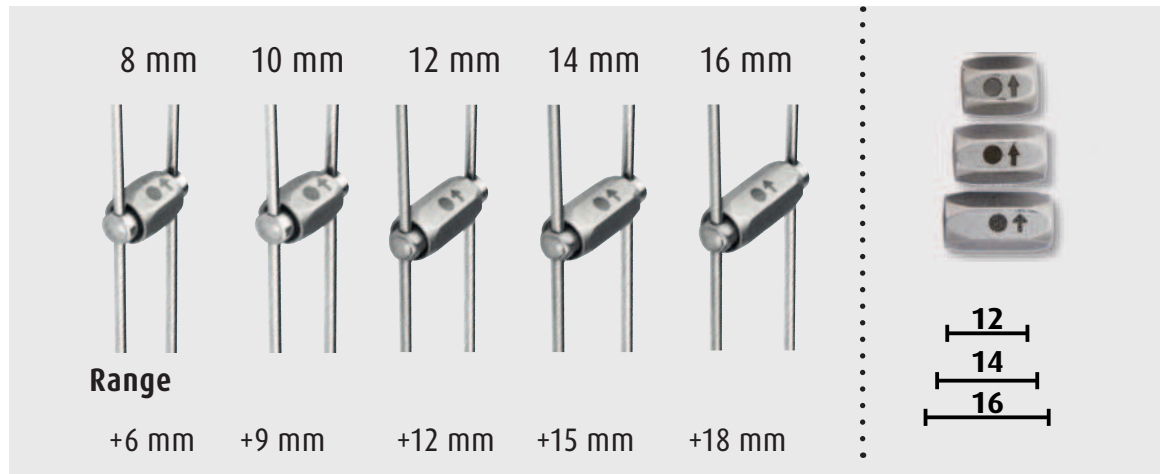
The PowerScrew and its retention arms are extremely stable and can withstand the greatest forces and torques.

One turn (6 surfaces) equals 1 mm expansion (0.17 mm per surface); every second surface is marked with increasing points.

3. Areas of application

Indications: The PowerScrew is used for skeletal expansion of a narrow upper jaw in children, adolescents and adults. It is an expansion screw for dental bands devices (HAAS-type) and dental cap splint devices. It is also

Five sizes



 Depends on the size of the palate.

Interchangeable
hexagonal nut

used in the Hybrid Expander (partially miniscrew-worn and tooth-worn RME devices). In addition, it is used in purely miniscrew-worn expanders, like the Micro2 Expander or Micro4 Expander.

4. Use of the Expander and activation of the PowerScrew

As soon as the device is used, medical activation of at least 0.5 mm (3 surfaces) can be carried out. That guarantees initial activation and shows the patient the correct use.

Please give your patient the patient information leaflet with the turning protocol for daily recording. Enter in this turning protocol the turns made by you for activation. We also recommend allowing the patient to make a few turns forwards and back for him/her self. This ensures that the patient has understood the turning process.

Please carry out a withdrawal test at every check up. Use the Weingart forceps to pull briefly on the retention arms to check the seat and firmness of the apparatus.

5. Expansion, warning thread and turning stop

Each ring gauge corresponds to 2 mm expansion. When maximum expansion of the PowerScrew is reached, the warning thread (green) appears on the threaded tube. The screw should not be turned any further.

6. Securing the PowerScrew after turning stop

After expansion is concluded, light-cured resin (Heliosit® or Triad® Gel) can be applied between the hexagonal screw and the retention arms to fix the hexagonal screw to the thread rod. Further expansion can be carried out after that if required.

7. Notices for Single-use Products

This product is nearly ready to use out of the box, but is not sterile and should not be used more than once. The reprocessing of this once used product (recycling) and its reapplication to the patient is strictly prohibited.

8. Safety instructions

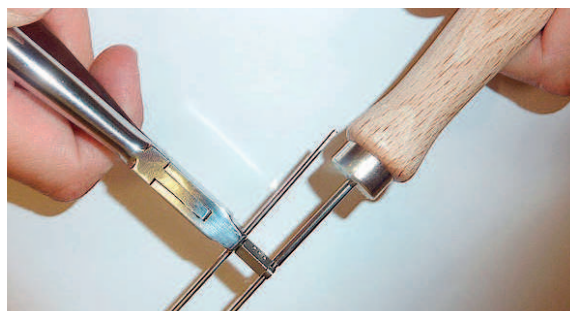
This operating and installation manual contains tips and recommendations, but does not release you from personal responsibility! The use of this product is allowed only by orthodontists and dentists according to MDD 93/42/EEC. The user must comply with the provisions of the Medical Devices Directive and any other applicable laws and regulations.

⚠ This product must be removed before magnetic resonance imaging (MRI). This product contains nickel.

9. Optional Accessories

PowerScrew laboratory forceps with bending tube

For securely holding and bending the holding arm of the PowerScrew.



Article no.	Designation & Contents
10597	PowerScrew laboratory forceps with bending tube

Unicorn forceps

For painless removal of cap splint devices



Article no.	Designation & Contents
10624	Unicorn forceps with bud burr



1. Drill opening in acrylic



2. Push teeth in individually



3. Device is painlessly removed.

10. References of Quality

Tiger Dental GmbH assures the user a flawless quality of its products. The content of this manual is based on experience. The user is responsible for the processing of the products themselves. Tiger Dental GmbH is not liable for erroneous results or processing by the user that occur in the absence of influence of Tiger Dental GmbH. Although this product is a mature product, improvements and changes can be made, which may not be documented in the present manual. Similarly, we are not liable for printing errors.

10. Contents

11011	PowerScrew 8, with welded holding arms, flat spanner
18222	PowerScrew 10, with welded holding arms, flat spanner
10965	PowerScrew 12, with welded holding arms, flat spanner
18215	PowerScrew 14, with welded holding arms, flat spanner
10967	PowerScrew 16, with welded holding arms, flat spanner

- 10873 PowerScrew open-ended spanner
- 10968 PowerScrew 12 mm expansion screw (nut) 3 pcs/pkg
- 19069 PowerScrew 14 mm expansion screw (nut) 3 pcs/pkg
- 10969 PowerScrew 16 mm expansion screw (nut) 3 pcs/pkg

Examples of palate expansion apparatus



Cap splint device



Haas device



Hybrid device with miniscrew screws



MICRO2 (purely skeletal, 12-16 years)



MICRO4 (purely skeletal, from 17 years of age)

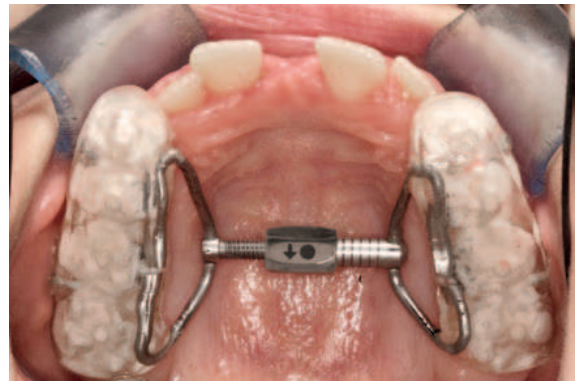


Simple activation with flat spanner by the patient himself/herself

Example of treatment



Eight-year-old patient before palate expansion



Cap splint device with PowerScrew 12. Expansion of 11mm, typical diastema

Patient cases

Claudia, 11 years old, had an upper jaw that was too narrow and had to be expanded.

Since the patient was under thirteen years of age, the upper jaw was expanded with a MICRO2 appliance (PowerScrew and two mini screws).



Andrea, 10 years old, also has a lack of space in her upper jaw. In the first treatment step, the molars were distalized, and in the second treatment step a hybrid appliance was used to expand the maxilla while simultaneously retiring the distalized molars.

