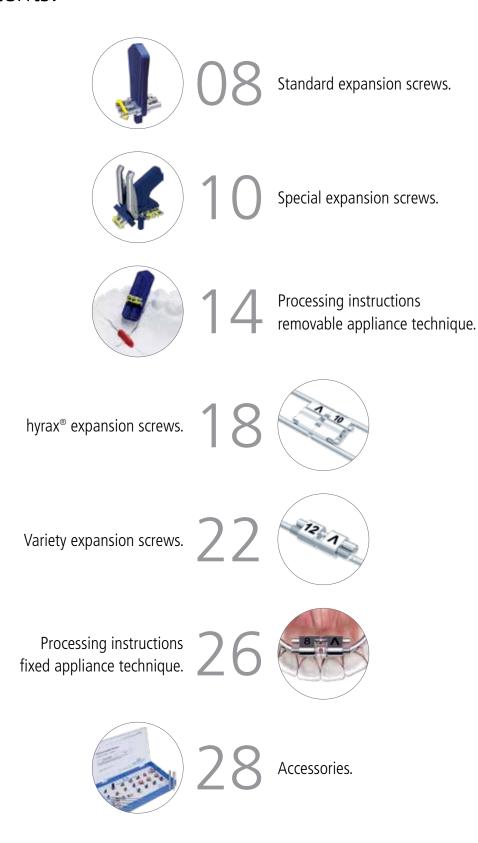


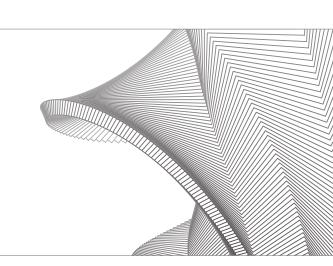
Expansion screws.

Perfect in form, function and design.



### Contents.



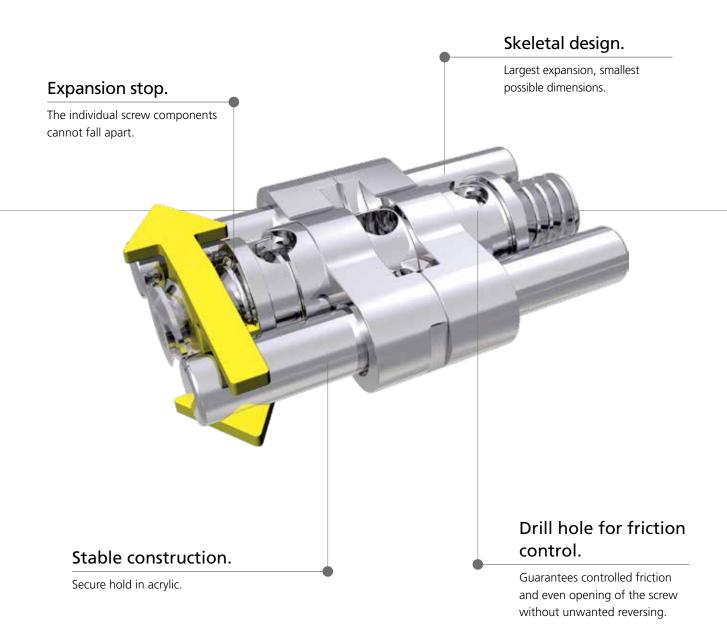


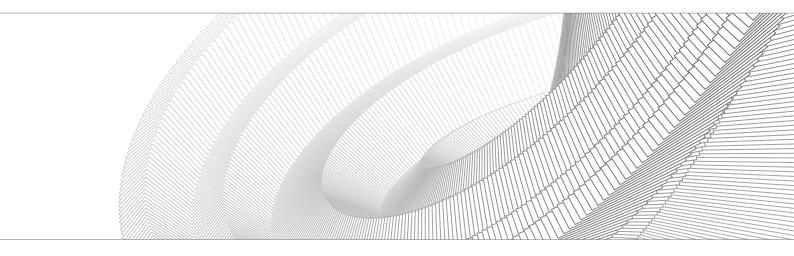
# Small products in best quality from Dentaurum.

Thanks to many years of experience in precision engineering, Dentaurum can produce products in high-quality detail. The screws are assembled by hand and on fully-automated machines and must pass high-level quality controls before leaving the factory. This ensures that the expansion screws all fulfill the high demands required for their use.

Be it in a fixed or in a removable appliance - Dentaurum expansion screws have been used millions of times, and have always proven their worth. You can be certain that you are putting your trust in a top product Made in Germany.

# Expansion screws.





There are no limits to the range of use for Dentaurum expansion screws. You will find our long-term experience and competence reflected in the form, function and design of each individual screw.

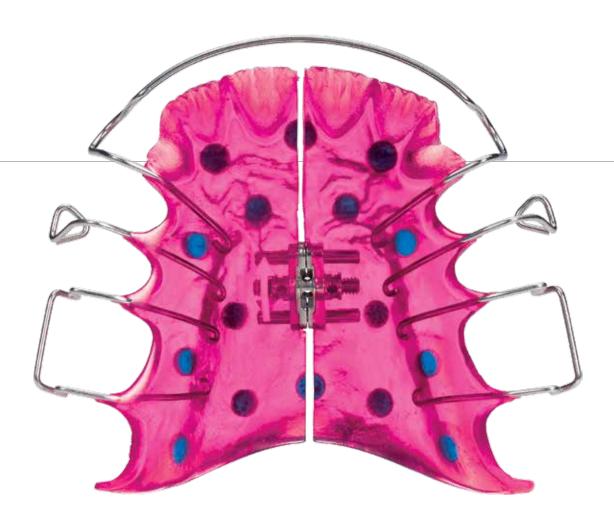
**Perfect in form** – the skeletal construction enables the screws to have the smallest possible dimensions, yet achieve the largest possible expansion. The integrated expansion stop prevents the screws from falling apart

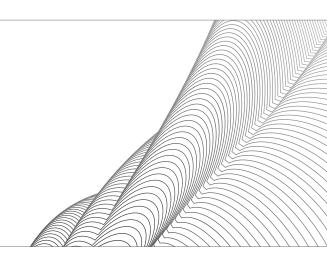
**Perfect in function** – the friction on the thread of the screws is so exact that they are guaranteed to open evenly. The unique click versions are secured against unwanted reversing, thereby preventing the screws used for the fixed appliance technique from turning back.

**Perfect in design** – the high-precision screws have a stable construction and are of high quality. They can be fixed securely in the acrylic.

Are you looking for an expansion screw to suit your indication? We're sure to have one!

# Removable appliance technique.

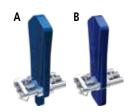




Orthocryl® and Orthocryl® LC – the perfect complement to Dentaurum expansion screws, e.g. in the colors:



# Standard expansion screws.



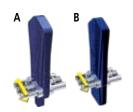
#### **Expansion screw Mini**

With cone-shaped holder (A) or wide holder (B).

**Indication:** for transverse expansion and distalization in the mandible or for especially narrow maxillae

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF (A)	REF (B)	Qty
6.5 mm	= 0.70 mm	Plastic, white	600-300-10	600-320-10	1 piece
6.5 mm	= 0.70 mm	Plastic, white	600-300-30	600-320-30	10 pieces
6.5 mm	= 0.70 mm	Plastic, white	600-300-60	600-320-60	100 pieces





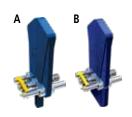
#### **Expansion screw Medium**

With cone-shaped holder (A) or wide holder (B).

Indication: for transverse expansion and distalization in maxilla and mandible

Maximum expansion	4 x <sup>1</sup> / <sub>4</sub> turn	Directional arrow	REF (A)	REF (B)	Qty
7.5 mm	= 0.80 mm	Plastic, neon yellow	600-301-10	600-321-10	1 piece
7.5 mm	= 0.80 mm	Plastic, neon yellow	600-301-30	600-321-30	10 pieces
7.5 mm	= 0.80 mm	Plastic, neon yellow	600-301-60	600-321-60	100 pieces



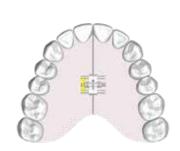


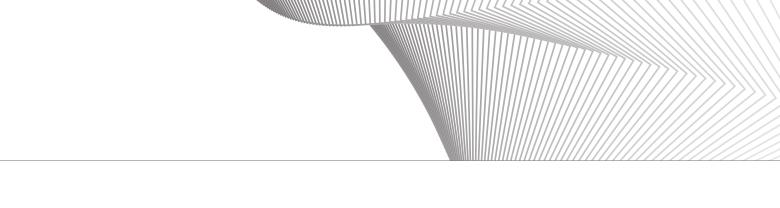
#### **Expansion screw Maxi**

With cone-shaped holder  $(\mathbf{A})$  or wide holder  $(\mathbf{B})$ .

**Indication**: for transverse expansion in the maxilla

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF (A)	REF (B)	Qty
7.5 mm	= 0.80 mm	Plastic, neon yellow	600-302-10	600-322-10	1 piece
7.5 mm	= 0.80  mm	Plastic, neon yellow	600-302-30	600-322-30	10 pieces
7.5 mm	= 0.80  mm	Plastic, neon yellow	600-302-60	600-322-60	100 pieces







#### **Expansion screw Magnum**

With cone-shaped holder.

**Indication**: for transverse expansion in the maxilla and bimaxillary functional gnatho-orthopedic appliances

Maximum expansion	4 x <sup>1</sup> / <sub>4</sub> turn	Directional arrow	REF	Qty
11.0 mm	= 0.80 mm	Plastic, neon yellow	600-303-10	1 piece
11.0 mm 11.0 mm	= 0.80 mm = 0.80 mm	Plastic, neon yellow Plastic, neon yellow	600-303-30 600-303-60	10 pieces 100 pieces





#### rematitan® expansion screw Medium

With cone-shaped holder.

**Indication:** for transverse expansion and distalization in the maxilla and mandible

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
7.5 mm	= 0.80 mm	Plastic, pearl-blue	600-400-10	1 piece
7.5 mm	= 0.80 mm	Plastic, pearl-blue	600-400-30	10 pieces



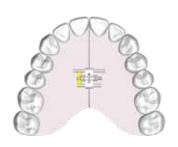


#### Trapezoidal expansion screw

With cone-shaped holder.

**Indication**: for transverse expansion of narrow maxillae and as activation screw for bimaxillary functional gnatho-orthopedic appliances

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
7.5 mm	= 0.80 mm	Plastic, neon yellow	600-310-30	10 pieces



# Special expansion screws.

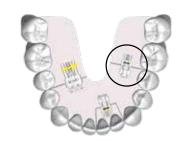


#### Sectional screw Mini, straight

With wide holder and straight, U-shaped guide pin.

**Indication**: for movement of individual teeth

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
4.0 mm	= 0.35 mm	printed, blue-yellow	600-502-10	1 piece
4.0 mm	= 0.35 mm	printed, blue-yellow	600-502-30	10 pieces
4.0 mm	= 0.35 mm	printed, blue-yellow	600-502-60	100 pieces





#### Sectional screw Mini, angulated

With wide holder and U-shaped guide pin, angulated, facing down.

**Indication**: for movement of individual teeth

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
4.0 mm	= 0.35 mm	printed, blue-yellow	600-503-10	1 piece
4.0 mm 4.0 mm	= 0.35 mm = 0.35 mm	printed, blue-yellow printed, blue-yellow	600-503-30 600-503-60	10 pieces 100 pieces



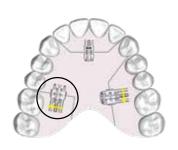


#### Sectional screw Medium, straight

With cone-shaped holder and straight guide pins with mushroom-head retention.

Indication: for distalization and segmentation of appliances, Y-plates

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
6.0 mm	= 0.40 mm	Plastic, neon yellow	600-500-10	1 piece
6.0 mm 6.0 mm	= 0.40 mm = 0.40 mm	Plastic, neon yellow Plastic, neon yellow	600-500-30 600-500-60	10 pieces 100 pieces



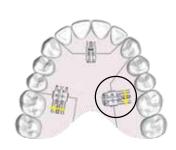


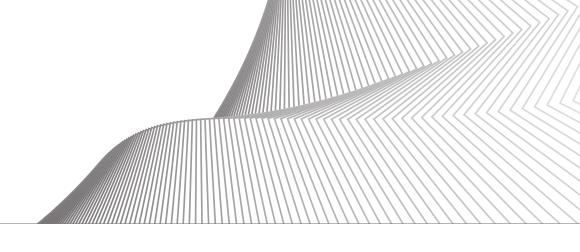
#### Sectional screw Medium, angulated

With cone-shaped holder and U-shaped guide pin, angulated, facing down.

**Indication:** for distalization and segmentation of appliances, protrusion of an anterior segment

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
6.0 mm	= 0.40 mm	Plastic, neon yellow	600-501-10	1 piece
6.0 mm	= 0.40 mm	Plastic, neon yellow	600-501-30	10 pieces
6.0 mm	= 0.40 mm	Plastic, neon yellow	600-501-60	100 pieces







#### Retraction screw Extra-Mini

With cone-shaped holder and straight, U-shaped guide pin.

Indication: for space closing and movement of individual teeth

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
3.0 mm	= 0.40 mm	printed, blue-yellow	600-602-30	10 pieces





#### **Retraction screw Mini**

With cone-shaped holder and straight, U-shaped guide pin.

Indication: for space closing and movement of individual teeth

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
2.5 mm	= 0.40 mm	printed, blue-yellow	600-601-30	10 pieces





#### **Retraction screw Medium**

With cone-shaped holder and straight, U-shaped guide pin.

Indication: for space closing and movement of individual teeth

Maximum expansion	4 x <sup>1</sup> / <sub>4</sub> turn	Directional arrow	REF	Qty
4.5 mm	= 0.40 mm	printed, blue-yellow	600-600-30	10 pieces



# Special expansion screws.



#### Neo-Bertoni three-dimensional screw – three movements (type A)

Anatomically angulated three-dimensional screw with three independently controlled movements

**Indication:** for combined transverse and protrusion movements with Y-plates

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
3.5 mm	= 0.40 mm	Plastic, neon yellow	600-131-10	1 piece





#### Neo-Bertoni three-dimensional screw – two movements (type B)

Anatomically angulated three-dimensional screw with two independently controlled movements.

**Indication:** for combined transverse and protrusion movements with Y-plates

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
3.5 mm	= 0.40 mm	Plastic, neon yellow	600-132-10	1 piece





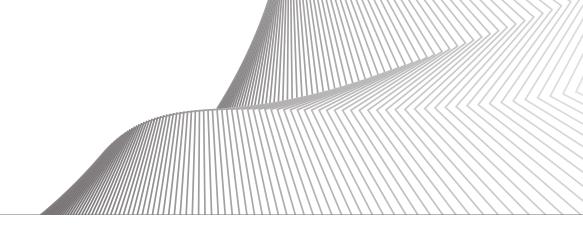
#### Neo-Bertoni 3D

Anatomical, individually adjustable three-dimensional screw with two independently controlled movements.

**Indication:** for combined transverse and protrusion movements with Y-plates

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
3.5 mm	= 0.40 mm	Plastic, neon yellow	600-133-10	1 piece





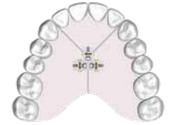


#### Three-dimensional screw acc. to Bertoni – three movements (type A)

With three independently controlled movements.

**Indication:** for combined transverse and protrusion movements with Y-plates

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
4.0 mm/ segment	= 0.35 mm/ segment	printed, blue-yellow	602-605-10	1 piece





#### Three-dimensional screw acc. to Bertoni – two movements (Type B)

With two independently controlled movements (symmetrical transverse expansion).

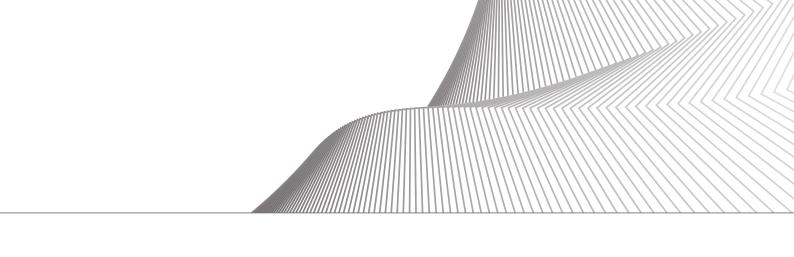
Indication: for combined transverse and protrusion movements with Y-plates

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
4.0 mm/ segment	= 0.35 mm/ segment	printed, blue-yellow	602-606-10	1 piece



# Neo-bite jumping appliance acc. to F.M. Sander\*





The patented Neo-bite jumping appliance has a sophisticated 3D design and enables the treatment of almost all class II anomalies. For the first time, class II/2 corrections are possible thanks to the sagittal expansion element. The upper and the lower appliance can be produced simply and more quickly with the practical accessories.



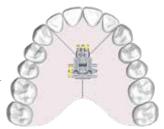
# Special expansion screws.



#### Neo-bite jumping appliance acc. to F.M. Sander\*, set

Patented, three-dimensional Bertoni expansion screw with guide ridges for forward thrust acc. to F.M. Sander'.

REF	Qty	Contents	REF
600-120-00	1 set	x Neo-bite jumping appliance acc. to F.M. Sander'     x Neo-bite jumping appliance mounting template     x Neo-bite jumping appliance guide template     (for inclined plane)	600-121-10 600-122-10 600-123-10





#### Neo-bite jumping appliance acc. to F.M. Sander\*

Patented, three-dimensional Bertoni expansion screw with guide ridges for forward thrust acc. to F.M. Sander'.

Indication: for treatment of Angle class II/1 and Angle class II/2

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
4.0 mm	= 0.35 mm	Plastic, neon yellow	600-121-10	1 piece





#### Three-dimensional screw acc. to Steiner

With two independently controlled movements (symmetrical transverse expansion).

**Indication:** for combined transverse and protrusion movements with Y-plates

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
4.0 mm/ segment	= 0.35 mm/ segment	printed, blue-yellow	602-604-10	1 piece





#### Fan-type expansion screw

With wide expansion screw holder.

Indication: for maxillary anterior or posterior expansion

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
7.0 mm	= 0.80 mm	printed, blue-yellow	606-600-00	1 piece
7.0 mm	= 0.80 mm	printed, blue-yellow	606-600-30	10 pieces





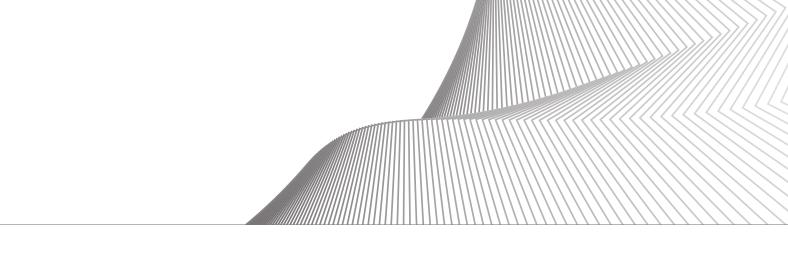
#### Mandibular bow screw acc. to Müller

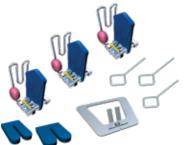
With cone-shaped holder.

**Indication:** for transverse expansion of the mandibular anterior arch.

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
5.0 mm	= 0.80 mm	Plastic, neon yellow	606-701-00	1 piece
5.0 mm	= 0.80 mm	Plastic, neon yellow	606-701-30	10 pieces







### Flexible forward thrust double plate system acc. to Schaneng, set

With cone-shaped holder and flexible, intermaxillary element.

**Indication:** for treatment of Angle class II/1 (distoclusion), for advancement of the mandible

REF	Qty	Contents	REF
600-000-00	1 set	3 x expansion screw for maxilla with elastic guide ridge for forward thrust double plate	600-001-00
		1 x adapter, narrow	600-003-00
		1 x adapter, wide	600-004-00
		1 x locating template	600-005-00





#### Expansion screw for split activator

With cone-shaped holder and reinforced guides.

**Indication:** for separate expansion of maxilla and mandible

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
7.0 mm	= 0.80 mm	printed, blue-yellow	600-610-00	1 piece
7.0 mm	= 0.80 mm	printed, blue-yellow	600-610-30	10 pieces





#### Expansion screw for progenia activator acc. to Weise

Without holder.

**Indication:** for the treatment of Angle class III (progenia), for distal shifting of the mandible

Maximum expansion	4 x ¹/₄ turn	Directional arrow	REF	Qty
5.0 mm	= 0.90 mm	printed, blue-yellow	603-000-00	1 piece





#### Piston spring screws, set

Constant, elastic and finely controllable pressure on the tooth to be moved.

**Indication**: for movement of individual teeth  $4 \times 1/4 \text{ turn} = 0.35 \text{ mm}$ 

REF	Qty	Contents	REF
609-500-00	1 set	10 x piston spring screw, 4 mm	609-004-00
		10 x piston spring screw, 6 mm	609-006-00
		10 x piston spring screw, 8 mm	609-008-00
		10 x positioning screw	609-100-00
		10 x serrated housing nut	609-200-30
		1 x reamer	609-300-01
		1 x screwdriver	609-400-00



Processing instructions removable appliance technique.





First, the position of the expansion screw is defined and a slot is then made in the model for the wide holder (**A**). For the cone-shaped holder (**B**), a hole is drilled at the marked position. The expansion screw is then fixed in place using thermo wax.





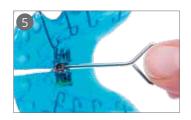
It is important that the acrylic completely surrounds the body of the screw and the thread for the screw to function correctly. The holes made to control movement friction should also be completely enveloped in the acrylic.



Care should be taken that no bubbles form when the acrylic is applied. Following polymerization, the holder is removed from the upper side using pliers. On the lower side, the wide holder can simply be pulled off. The cone-shaped version is removed after the saw cut has been made.

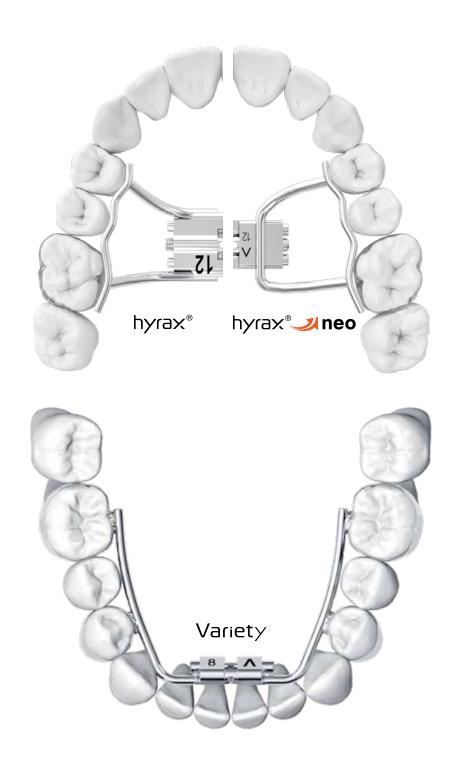


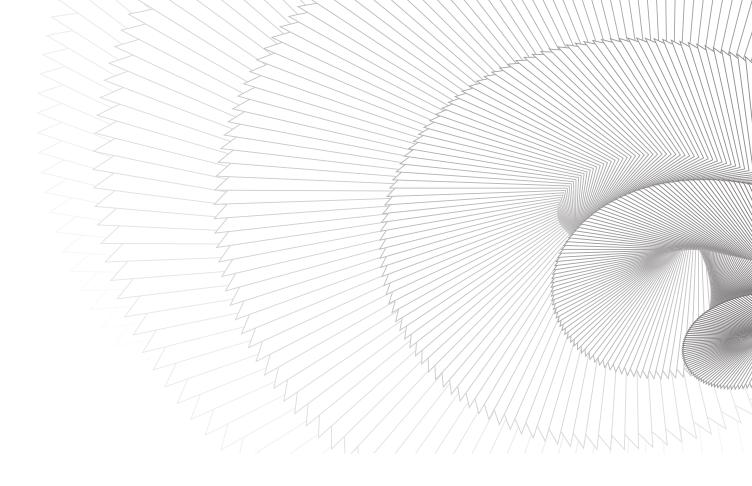
After finishing and sanding, mark the saw cut on the acrylic and make the cut with an appropriate hand saw. Alternatively, cut the acrylic with a thin separating disc. Make sure that the guide pins of the screw are not damaged.



Open the screw with the activating key about 3-4 quarter turns in the direction of the arrow. Then smooth out the sharp edges along the saw cut. The screw is then closed by turning it in the opposite direction of the arrow. **Make sure to make the same number of quarter turns to close the screw as you did before to open it.** 

# Fixed appliance technique.





### hyrax® and hyrax® neo -

the special expansion screws for palatal expansion.

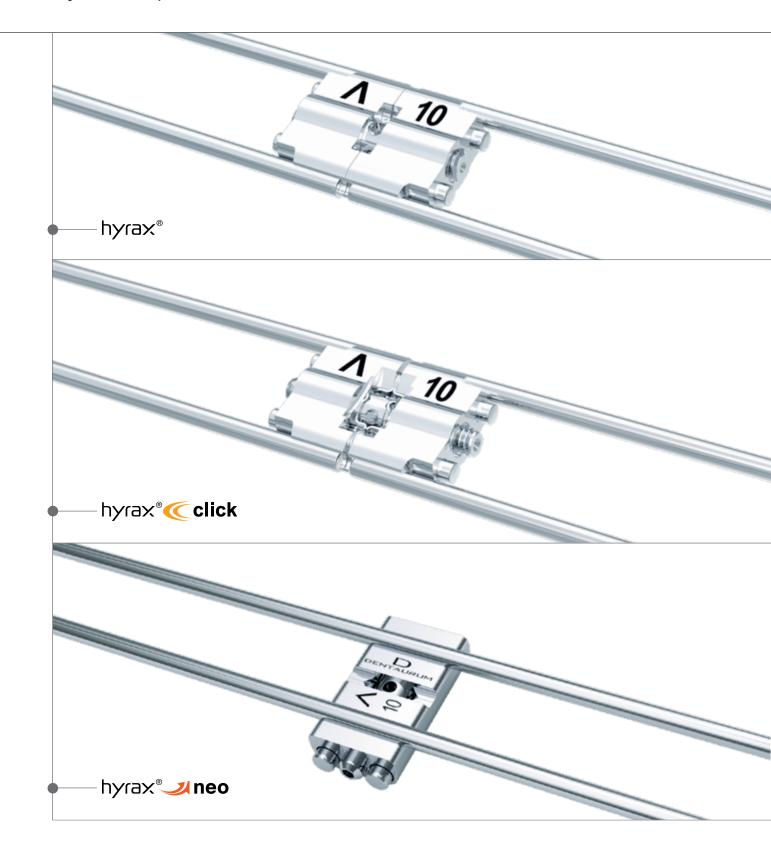
hyrax® and hyrax® neo screws (Hygienic Rapid Expansion) are special screws for hygienic rapid palatal expansion with a fixed appliance.

### Variety -

the multi-functional expansion screw.

Variety expansion screws were developed for fixed appliances in the mandible. They can be used to create space, control tipping of the anterior and posterior teeth as well as to open and close spaces. They are also suitable as distraction screws, or for early palatal expansion of the maxilla.

hyrax® expansion screws.



	hyrax®	hyrax® <b>click</b>	hyrax° <b>⁄neo</b>
Solid body High stability even when fully activated	•	•	•
Stable guidance Optimal design of guide pins	•	•	•
Easy to bend Break-resistant retention legs, little space needed to bend legs due to stepped screw body	•	•	•
Expansion stop	•	•	•
TAD-optimized design  The retention legs are parallel to the palatal suture			•
Click feature for unwanted reversing  The ideal screw locking feature during the active treatment phase		•	
High degree of safety  For both the orthodontist and the patient	•	•	•
Laser marking Directional arrows and maximum expansion	•	•	•

# hyrax® expansion screws.



#### hyrax<sup>®</sup> Mini – 7

RPE screw for palatal expansion by means of a fixed appliance.

Screw body: 9.4 mm/maximum expansion: 7.0 mm/4 x 1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-800-12	1 piece	602-800-32	10 pieces
straight angulated	602-800-10 602-801-10	1 piece 1 piece	602-800-30 602-801-30	10 pieces 10 pieces





#### hyrax<sup>®</sup> Medium – 10

RPE screw for palatal expansion by means of a fixed appliance.

Screw body: 12.4 mm/maximum expansion: 10.0 mm/4 x 1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-808-12	1 piece	602-808-32	10 pieces
straight angulated	602-808-10 602-840-10	1 piece 1 piece	602-808-30 602-840-30	10 pieces 10 pieces





#### hyrax® Maxi – 12

RPE screw for rapid palatal expansion by means of fixed appliances.

Screw body: 14.4 mm/maximum expansion: 12.0 mm/4 x 1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-811-12	1 piece	602-811-32	10 pieces
straight angulated	602-811-10 602-812-10	1 piece 1 piece	602-811-30 602-812-30	10 pieces 10 pieces
3				





#### Titan hyrax® Maxi – 12

RPE screw in titanium for palatal expansion by means of a fixed appliance.

Screw body: 14.4 mm/maximum expansion: 12.0 mm/4 x 1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-810-12	1 piece	602-810-32	10 pieces
straight	602-810-10	1 piece	602-810-30	10 pieces





#### hyrax<sup>®</sup> click Mini - 7

RPE screw with click feature to prevent unwanted reversing. For effective and reliable rapid palatal expansion by means of a fixed appliance.

Screw body: 9.8 mm/maximum expansion: 7.0 mm/4 x 1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-830-12	1 piece	602-830-32	10 pieces
straight angulated	602-830-10 602-831-10	1 piece 1 piece	602-830-30 602-831-30	10 pieces 10 pieces





#### hyrax<sup>®</sup> click Medium – 10

RPE screw with click feature to prevent unwanted reversing. For effective and reliable rapid palatal expansion by means of a fixed appliance.

Screw body: 12.8 mm/maximum expansion: 10.0 mm/4 x 1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-832-12	1 piece	602-832-32	10 pieces
straight angulated	602-832-10 602-833-10	1 piece 1 piece	602-832-30 602-833-30	10 pieces 10 pieces





#### hyrax<sup>®</sup> click Maxi – 12

RPE screw with click feature to prevent unwanted reversing. For effective and reliable rapid palatal expansion by means of a fixed appliance.

Screw body: 14.8 mm/maximum expansion: 12.0 mm/4 x 1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-834-12	1 piece	602-834-32	10 pieces
straight	602-834-10	1 piece	602-834-30	10 pieces
angulated	602-835-10	1 piece	602-835-30	10 pieces





#### hyrax® neo Mini – 7

RPE screw for palatal expansion by means of a fixed appliance.

Screw body: 11.2 mm/maximum expansion: 7.0 mm/4 x 1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-845-12	1 piece	602-845-32	10 pieces
straight	602-845-10	1 piece	602-845-30	10 pieces





#### hyrax® neo Medium – 10

RPE screw for palatal expansion by means of a fixed appliance.

Screw body: 12.4 mm/maximum expansion: 10.0 mm/4 x 1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without straight	602-846-12 602-846-10	1 piece	602-846-32 602-846-30	10 pieces
straigrit	002-040-10	i piece	002-040-30	10 pieces





#### hyrax® neo Maxi − 12

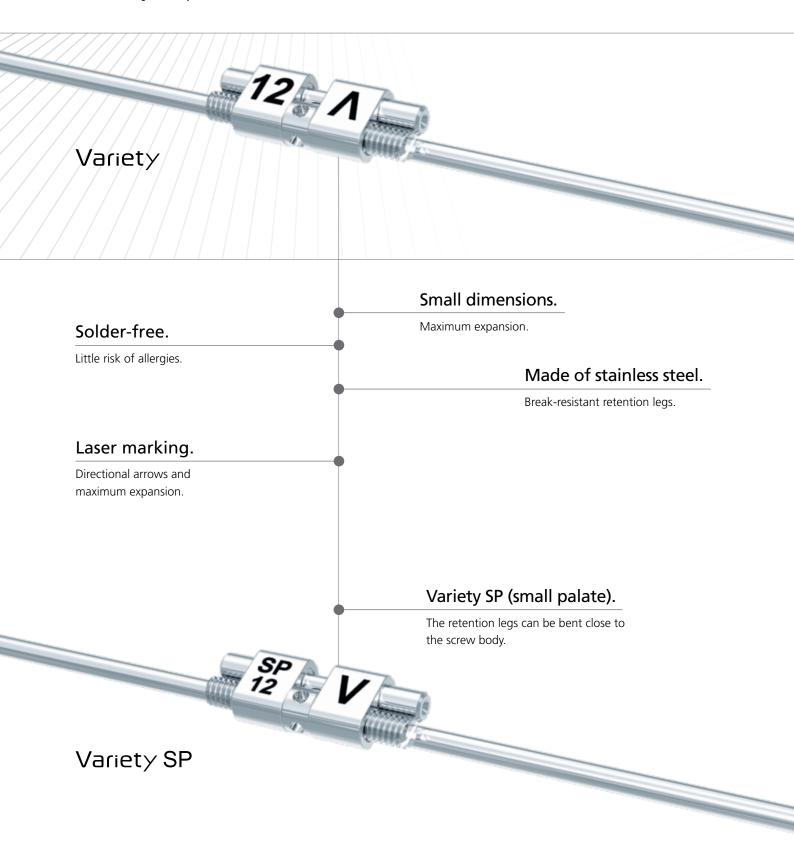
RPE screw for palatal expansion by means of a fixed appliance.

Screw body: 14.4 mm/maximum expansion: 12.0 mm/4 x 1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-847-12	1 piece	602-847-32	10 pieces
straight	602-847-10	1 piece	602-847-30	10 pieces



# Variety expansion screws.





#### Safe activation.

Clicking into place perceptible after each quarter turn.

### Click feature for unwanted reversing.

The ideal screw locking feature during the active treatment phase.

### Laser marking.

Directional arrows and maximum expansion.

### High degree of safety.

For both the orthodontist and the patient.



## Variety expansion screws.



#### Variety Mini - 8

Monoguided special expansion screw. Primarily for treatment of malocclusions in the mandible using fixed appliances, e.g. for distalization, mesialization or for space closure by moving individual teeth. Also suitable for early palatal expansion in the maxilla.

Installation dimension: 12.9 mm / screw body: 9.6 mm/maximum expansion: 8.0 mm/  $4\,x$  1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-815-12	1 piece	602-815-32	10 pieces
straight	602-815-10	1 piece	602-815-30	10 pieces





#### Variety SP (small palate) Mini - 8

Monoguided special expansion screw. For treatment of malocclusions in the mandible using fixed appliances, e.g. for distalization, mesialization or for space closure by moving individual teeth. Also suitable for early palatal expansion in the maxilla.

Installation dimension: 12.9 mm / screw body: 9.6 mm/maximum expansion: 8.0 mm/  $4\,x$  1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-819-12	1 piece	602-819-32	10 pieces
straight	602-819-10	1 piece	602-819-30	10 pieces





#### Variety Maxi - 12

Monoguided special expansion screw. Primarily for treatment of malocclusions in the mandible using fixed appliances, e.g. for distalization, mesialization or for space closure by moving individual teeth. Also suitable for early palatal expansion in the maxilla.

Installation dimension: 14.9 mm / screw body: 9.6 mm/maximum expansion: 12.0 mm/  $4\ x\ 1/4\ turn: = 0.80\ mm$ 

Retention legs	REF	Qty	REF	Qty
without	602-806-12	1 piece	602-806-32	10 pieces
straight	602-806-10	1 piece	602-806-30	10 pieces





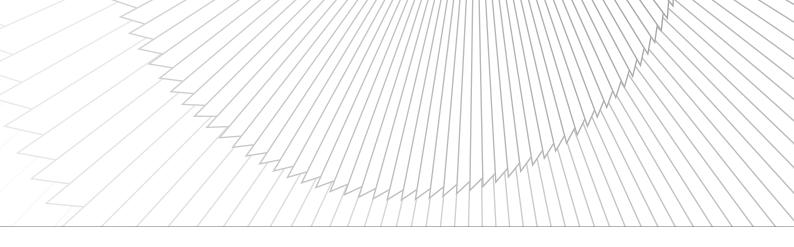
#### Variety SP (small palate) Maxi – 12

Monoguided special expansion screw. For treatment of malocclusions in the mandible using fixed appliances, e.g. for distalization, mesialization or for space closure by moving individual teeth. Also suitable for early palatal expansion in the maxilla.

Installation dimension: 14.9 mm / screw body: 9.6 mm/maximum expansion: 12.0 mm/  $4\,x$  1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-809-12	1 piece	602-809-32	10 pieces
straight	602-809-10	1 piece	602-809-30	10 pieces







#### Variety click Mini – 8

Monoguided special expansion screw with click feature to prevent unwanted reversing. Primarily for treatment of malocclusions in the mandible using fixed appliances, e.g. for distalization, mesialization or for space closure by moving individual teeth.

Also suitable for early palatal expansion in the maxilla.

Installation dimension: 12.9 mm / screw body: 9.6 mm/maximum expansion: 8.0 mm/  $4\ x\ 1/4\ turn: = 0.80\ mm$ 

Retention legs	REF	Qty	REF	Qty
without	602-836-12	1 piece	602-836-32	10 pieces
straight	602-836-10	1 piece	602-836-30	10 pieces





#### Variety click SP (small palate) Mini - 8

Monoguided special expansion screw with click feature to prevent unwanted reversing. For treatment of malocclusions in the mandible using fixed appliances, e.g. for distalization, mesialization or for space closure by moving individual teeth.

Also suitable for early palatal expansion in the maxilla.

Installation dimension: 12.9 mm / screw body: 9.6 mm/maximum expansion: 8.0 mm/  $4\,x$  1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-838-12	1 piece	602-838-32	10 pieces
straight	602-838-10	1 piece	602-838-30	10 pieces





#### Variety click Maxi - 12

Monoguided special expansion screw with click feature to prevent unwanted reversing. Primarily for treatment of malocclusions in the mandible using fixed appliances, e.g. for distalization, mesialization or for space closure by moving individual teeth.

Also suitable for early palatal expansion in the maxilla.

Installation dimension: 17.2 mm / screw body: 9.6 mm/maximum expansion: 12.0 mm/  $4\,x$  1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-837-12	1 piece	602-837-32	10 pieces
straight	602-837-10	1 piece	602-837-30	10 pieces





Monoguided special expansion screw with click feature to prevent unwanted reversing. For treatment of malocclusions in the mandible using fixed appliances, e.g. for distalization, mesialization or for space closure by moving individual teeth.

Also suitable for early palatal expansion in the maxilla.

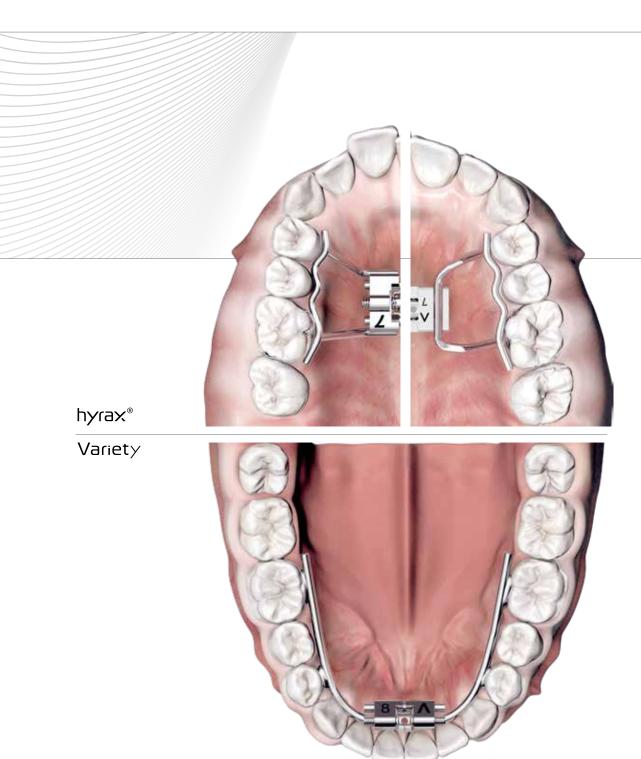
Installation dimension: 17.2 mm / screw body: 9.6 mm/maximum expansion: 12.0 mm/  $4\,x$  1/4 turn: = 0.80 mm

Retention legs	REF	Qty	REF	Qty
without	602-839-12	1 piece	602-839-32	10 pieces
straight	602-839-10	1 piece	602-839-30	10 pieces





# Processing instructions fixed appliance technique.











The hyrax®/hyrax® click/hyrax® neo screw (Hygienic Rapid Expansion Screw) is a special expansion screw for rapid palatal expansion. It should float freely 1-2 mm above the palatal vault. In order to avoid leverage, the screws must be situated parallel to the occlusal plane.



The hyrax®/hyrax® click/hyrax® neo screw is welded or soldered to preformed bands using its retention legs. When using the soldering technique, please protect the body of the screw against excessive heat. The bands can be connected by means of a remaloy® wire ø 1.0 mm (REF 528-100-00) on the palatal and the buccal side as a means of reinforcement. This helps distribute the forces more evenly.



The retention legs can be welded or soldered to cap splints made of metal. The bands or the splints are then cemented into place as usual. In order to bend the retention legs, we recommend using the universal bending key (REF 611-122-00) without the aid of additional pliers.

### Variety



Variety/Variety SP expansion screws can be used in the mandible to create space, control tipping of the anterior and posterior teeth as well as to open and close gaps. They can also be used as distraction screws, or for early palatal expansion in the maxilla. The dental age should however not exceed 8 years.



We recommend using the universal bending key (REF 611-122-00) for bending the retention legs. If this is not available, the retention legs must be stabilized by holding the expansion screw body with a pair of sturdy pliers, e.g. wire bending pliers Maxi (REF 013-522-00). When using the soldering technique, please protect the body of the screw against excessive heat.

### Accessories.



#### Neo-bite jumping appliance mounting template

acc. to Sander & Höbel

The angle to the occlusal plane can be adapted to each individual patient in combination with the slots at 55°, 60° and 65° in the expansion screw holder of the neo-bite jumping appliance.

REF	Qty
600-122-00	1 piece
000-122-00	1 piece



#### Neo-bite jumping appliance guide template

acc. to Sander & Höbel

To produce an inclined plane in the mandible.

REF	Qty
600-123-00	10 pieces



#### Guide ridge for flexible forward thrust double plate system acc. to Schaneng

With double loop, wax coated.

Length of guide ridge: 14.0 mm

Design	REF	Qty	REF	Qty
with palatal expansion screw	600-001-00	1 piece	600-001-30	10 pieces
without palatal expansion screw	600-002-00	1 piece	600-002-30	10 pieces



### Guide ridge adapter for flexible forward thrust double plate system acc. to Schaneng

To produce the inclined plane in the mandible.

Adapter	Width	REF	Qty
narrow	14.0 mm	600-003-00	10 pieces
wide	18.0 mm	600-004-00	10 pieces



#### Locating template acc. to Schaneng

Locating template to produce the  $60^{\circ}$  angle of inclination.

REF	Qty
600-005-00	1 piece



#### **Directional arrow**

For expansion screws.

Color	REF	Qty
yellow	611-130-00	50 pieces
white	611-131-00	50 pieces
pearl-blue	611-132-00	50 pieces



#### Expansion screw key, standard

Straight, small.

Can be used with all Dentaurum expansion screws. To activate all expansion screws in removable appliances (outside of the mouth).

REF	Qty
611-115-00	1 piece
611-115-30	10 pieces
611-115-60	100 pieces



#### Expansion screw key, large

With elongated handle.

Can be used with all Dentaurum expansion screws. To activate all expansion screws in removable appliances (outside of the mouth).

KEF	Qty
611 116 00	 ——



#### **Expansion screw sample kit**

1 set = 30 pieces.

Contains a selection from Dentaurum's large range of expansion screws.

Includes 27 expansion screws that are also available separately, 2 expansion screw keys and 1 universal bending key.

REF	Qty
612-000-00	1 set



#### Expansion screws poster

REF		Qty
989-700-33		1 piece

### Accessories.



#### Universal bending key

Easy bending of the retention legs of all hyrax\* and Variety screws without using any additional pliers (leverage principle).

REF	Qty
611-122-00	1 piece



#### Safety key

Can be used with all Dentaurum hyrax\* and Variety screws. For safe intra-oral activation of the expansion screws in fixed appliances.

REF	Qty
611-120-01	10 pieces



#### tomas®-RPE eyelet

(coupling element for RPE screws)

Eyelet for direct coupling between tomas®-pin with all hyrax® RPE screws with two supports for easier placement on working model.

Can be used for hybrid RPE appliance or skeletal RPE appliance using Pin-Last® approach.

Outer ø eyelet	Inner ø eyelet	Thickness eyelet	REF	Qty
5.0 mm	top 3.0 mm bottom 2.3 mm	1.5 mm	302-602-00	12 pieces + 2 holders



#### rematitan® straight wire

Titanium grade 1, norm: DIN EN ISO 28319, DIN EN ISO 5832-2

For laser welding.

Recommended as reinforcing wire for fixed titanium RPE appliances (Titan hyrax® Maxi – 12).

Ø	Length	REF	Qty
1.00 mm / 39	each 100 mm	528-041-00	10 pieces
1.20 mm / 47	each 100 mm	528-042-00	10 pieces



#### Piston spring screw

Constant, elastic and finely controllable pressure on the tooth to be moved.

**Indication**: for movement of individual teeth

Length	4 x 1/4 turn	REF	Qty
4.0 mm	= 0.35 mm	609-004-00	10 pieces
6.0 mm	= 0.35 mm	609-006-00	10 pieces
8.0 mm	= 0.35 mm	609-008-00	10 pieces



#### Positioning screw

For piston spring screw.

To position the piston spring screw into the acrylic.

Length	REF	Qty
12.0 mm	609-100-00	10 pieces



#### Serrated housing nut

For piston spring screw.

To position into acrylic or to weld onto wire elements.

Length	REF	Qty
3.0 mm	609-200-30	10 pieces



#### Reamer

For piston spring screw.

REF	Qty
609-300-01	1 piece



#### Screwdriver

For piston spring screw.

To activate the piston spring screw.

REF	Qty
609-400-00	1 piece



#### Wedge gauge

For checking the gap width on expansion plates.

REF	Qty
043-720-00	1 piece



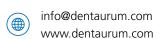






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