



OrthoLox Coupling-System

For further information visit:
www.ortholox.de and www.orthodontie-shop.de



Description

The **OrthoLox** MAS and the **OrthoLox** Snap-In Abutments have been designed as a new **coupling mechanism** for orthodontic anchorage.

Many applications in combination with skeletal anchorage, known in the orthodontics can be implemented with this system.

The advantages of the OrthoLox system are particularly evident in palatal applications. Orthodontic MAS are accepted as minimally invasive and are well tolerated by patients. The application is largely independent of the patient's cooperation and allows well-planned treatments and ensure patient satisfaction. The long gingival collar, (3, 4 and 5 mm) of the OrthoLox screws, allows insertion in the orthodontically meaningful height, without causing irritation of the mucous membrane or tongue. Long smooth neck increases patient comfort and avoids inflammation. All threads are covered by bone.

The following screw sizes are available:

1.8 x 9,0 mm	2.0 x 10 mm	2.2 x 10 mm
	2.0 x 12 mm	2.2 x 12 mm
		(2.2 x 14 mm)



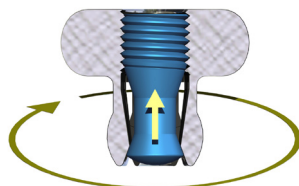
The OrthoLox Coupling Principle

OrthoLox Mini-Screws are designed to be used with the OrthoLox-Snap-In coupling mechanism as well as with SmartJet® and further orthodontic components for distalization, mesialisation, intrusion, retention, etc.

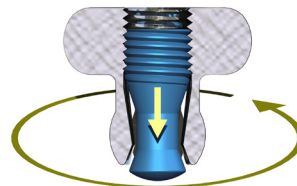
Whenever skeletal anchorage appears useful, the OrthoLox system can make a valuable contribution. OrthoLox screws are sterile packed for direct use from the blister.

Special protection caps increase patient comfort during the preparation of the appliance.

The selected abutment is first snapped into the OrthoLox screw according to the push-button principle. The abutment screw (blue) is equipped with a left-hand thread and moves upwards in the direction of the right rotation, locking the Abutment and OrthoLox screw securely.



*Fixing Mode
right-turn*



*Separation Mode
left-turn*



Snap-In Coupling

The result is a stable but detachable connection.

The abutment is pushed out of the screw head when the abutment screw is turned to the left. Blocking and separating the OrthoLox components are carried out without loading surrounding bone.



OrthoLox Snap-In-Abuments

Tilting Type for piercing wire 1.0 mm

40 OLP 000



Tilting Type for piercing wire 1.5 mm for RPE

40 OLP 515



Fixing Cone Type for piercing wire 1.0 mm

41 OLP 000



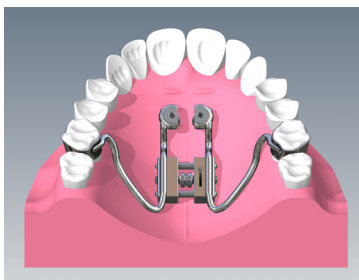
Fixing Cone Type with welded 12 cm wire 1.0

45 OPB 112

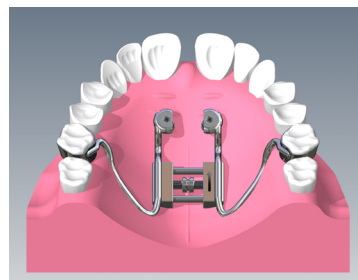


Indications and suitable insertion sites for the OrthoLox mini screws

Treatment of crowding in the maxilla.
Molar distalization, one sided or both sides.
Molar mesialisation, one sided or both sided.
Rapid palatal Expansion. Retention. Intrusion.



Finding



Expansion



Retention

Insertion sites:

Size and shape of the OrthoLox MAS already point to the ideal application region, the anterior palate. Other regions such as retro-molar or edentulous areas are also suitable after examination and treatment task. Space conditions in general and in addition location of roots must first be clarified using x-ray images. Insertion in areas with loose mucosa is not recommended. Ideal in the anterior palate are the regions / positions described by Dr. B. Ludwig and Dr. H. Winsauer (M4 Position).



Simultaneous distalization and mesialisation with OrthoLox and SmartJet®



Contraindications:

Periodontosis of molars.
Distal reduced space. Incompatibility of the metals and alloys used.

Prior insertion of OrthoLox Mini-Screws special instructions for use must also be observed.
www.ortholox.de

Instruments, accessories and orthodontic auxiliaries

OrthoLox is also characterized by the fact that it can be used without extensive tools.

Instruments:

Implant-Screw-Driver Shaft for Contra Angle

OL ISD 025



Multigrip Laboratory Screw Driver for Abutment-screw and SmartJet® activation

OL SFS 225



SmartDrive Torque-driver with dental connector

OL SDR 080



Multigrip Shaft for SmartDrive

OL SFS 125



Auxiliaries:

Protection cap for OrthoLox Screws

OL SKP 000



Impression cap

OL ADK 001



Laboratory analog

OL ANA 000



SmartJet® for Distalization/Mesialisation

OL SJT 200



SmartJet® Tube with fixed Z-Hook

OL SJTU 200



Z-Hook for SmartGuide

SD ZET 080



Useful:

Ratchet with dental connector for insertion of palatal screw

Ratchet

Adapter

OL RAT 000

OL DAD 000



Smart-MOP for transgingival **Micro Osteo Perforation**

To be used with the **Dual-Top®** or **OrthoEasy** Screwdriver handle

MOP 412





Step by Step

Insertion (see insertion sites)

The tapered thread allows vertical insertion of OrthoLox screws into the required position. The pivoting of the screw should be avoided.

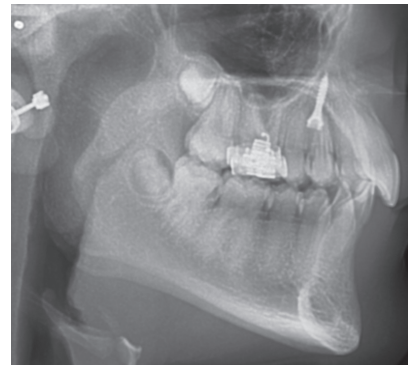
For the insertion of OrthoLox screws (with screwdriver shaft OL ISD 025) a reduced contra-angle with sufficient torque must be used at a low speed. Also suitable is the battery system „Orthonia“, which develops 30 Ncm torque at 45 RPM.

Corrections, in particular the height (vertical step), can be carried out with the ratchet.

In order to achieve a good efficiency of the system, OrthoLox screws should be inserted as coronally and largely parallel when paired.

A vertical step between the screws should be avoided.

Placement, if possible in the line of pull / push force is preferable.

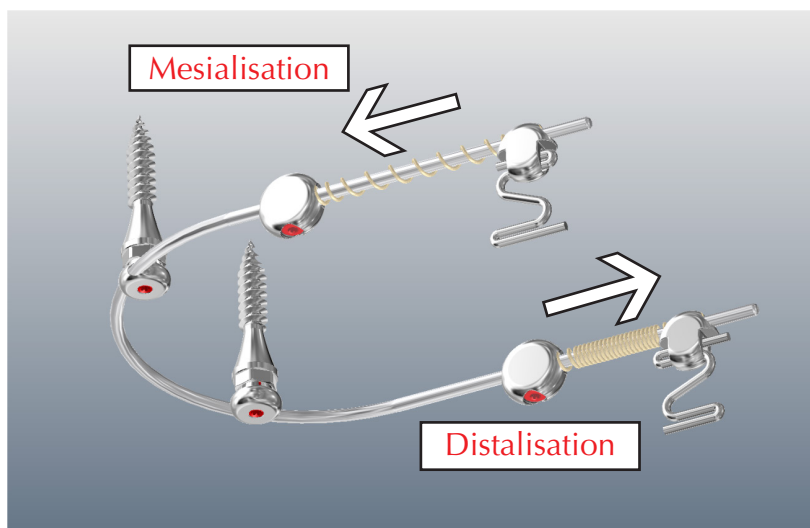


*Ideal screw position. Perfect parallelism.
Source Dr. Engel CH*

OrthoLox products allow the creation of completely compliance-independent appliances, which can be easily and reliably used for many indications.

When designing the individual OrthoLox components, patient comfort always has a special significance. All parts are rounded and easy to clean.

The **SmartJet®** consists of **SmartStop** and **SmartGuide**. A NiTi spring makes it a modular system for mesialisation and distalisation.



*OrthoLox coupling system and SmartJet®,
an ideal solution for palatal tasks.*



Stop and Guide of SmartJet®

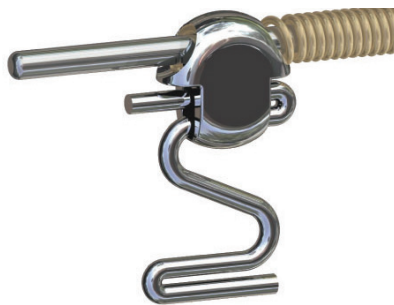
Suitable for palatal arches of wire thickness 1.0 mm and 1.1 mm.

SmartGuide and / or SmartStop have spring congruent internal threads and can therefore be screwed and unscrewed on the spring. The tendency to friction is considerably reduced by the guidance of the spring in the contact area on the arch-wire.

All parts run parallel on the wire and thus unfold optimal forces. Virtually only minimal friction occurs during expansion or tensioning of the spring.

An unintentional unscrewing of the spring is prevented by the fact that the two parts SmartStop and SmartGuide cannot rotate with the system installed.

There is a cohesive unit of 3 parts which can be used as a bow-guided thrust or tension element.



*SmartJet® with Guide
and Z-Hook*



*SmartJet® Tube with
laser-welded Z-Hook*

The SmartStop is equipped with a Multigrip locking screw (same screwdriver as for fixing the abutment screw). The reversible fixing option allows fast and safe assembly as well as the easy reactivation of the spring force.

Length adjustments can be easily carried out by shortening the springs.

The SmartGuide has a hole to accept a Z-Hook, similar to the Goshgarian lock.

The new SmartGuide Tube (after the suggestion of Dr. Kneer, Würzburg) facilitates insertion as the Z-hook is fixed to the Tube by laser-welding.

In conjunction with the OrthoLox coupling system, complete devices can be produced outside the patient's mouth and is then inserted from one part. Beneficial for user and patients.

All parts are rounded and easy to clean, providing the highest patient comfort.