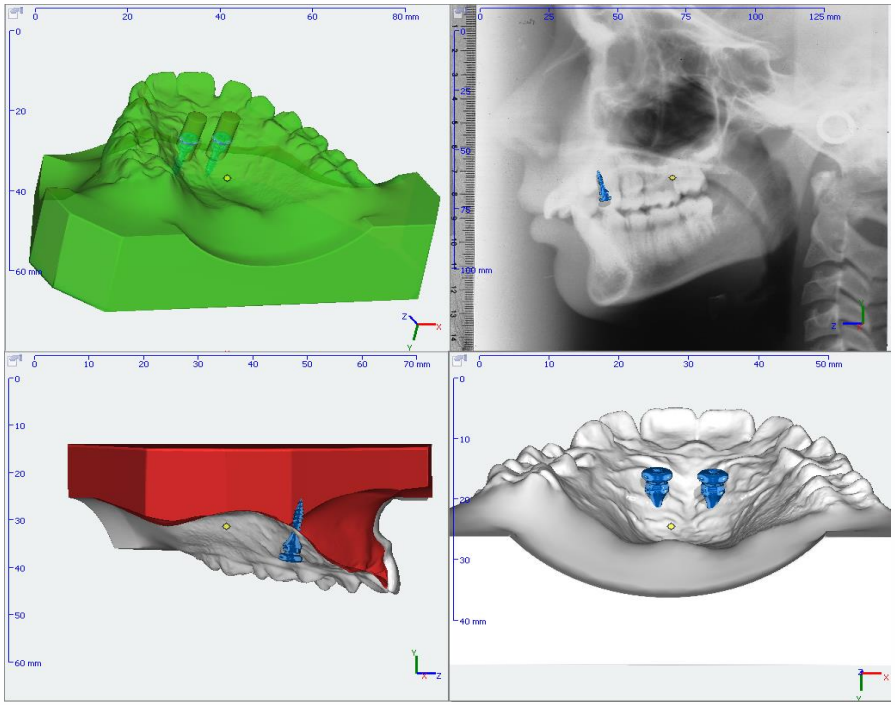
Step by step guide to using 3D printed virtual reality models for skeletal anchored palatal devices

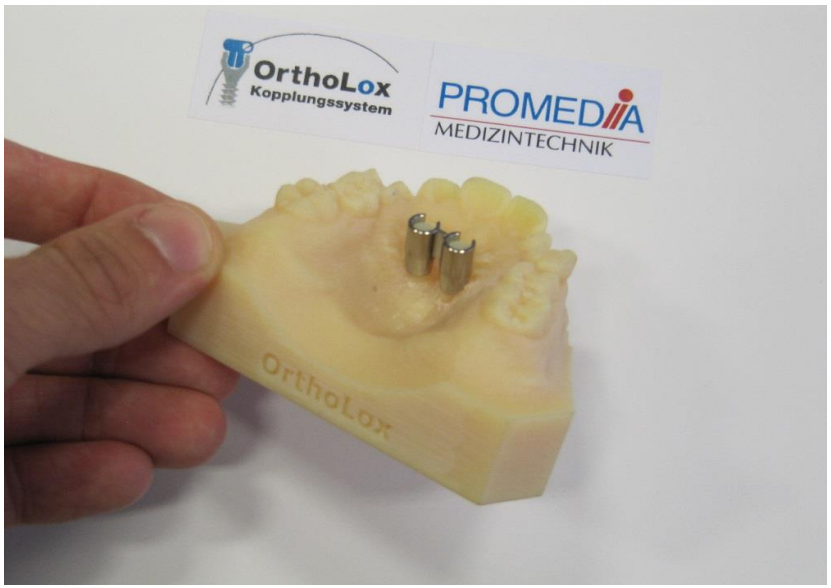


Parallel virtual set OrthoLox screws, at an angle of about 70-80 ° to the occlusal plane. The height of the screw heads is slightly above the resistance center of the molars. The screws are ideal for the fabrication and function of a distalization mesialization or hybrid GNE device. The printed position and mounting models are a prerequisite for the production of the apliance.

Production of the insertion and transfer key

The prerequisite for virtual planning is the position and assembly models that are produced with an existing 3D printer or by an external service provider.

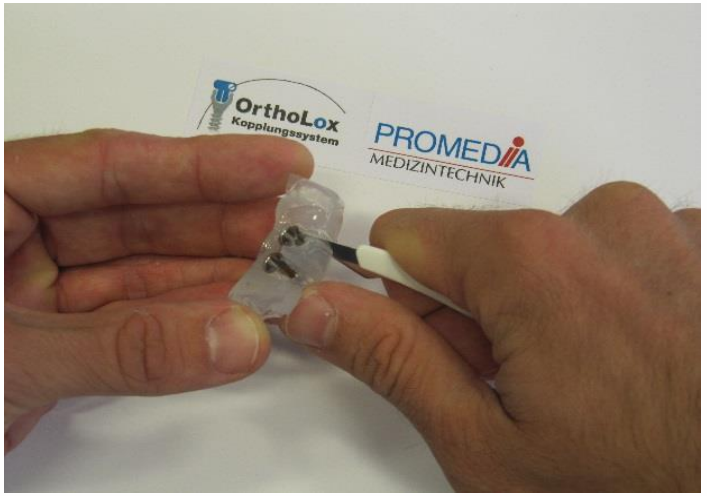
The parallel sleeves with 6mm, 8mm and 10mm spacing are placed on the printed mounting posts of the position model. It is important that the bevel of the insertion aids points anteriorly.



After placing the parallel sleeve on the position model, the parallel sleeve is gripped from all sides with a two-component silicone ("Kaniedenta", Schore hardness 70).

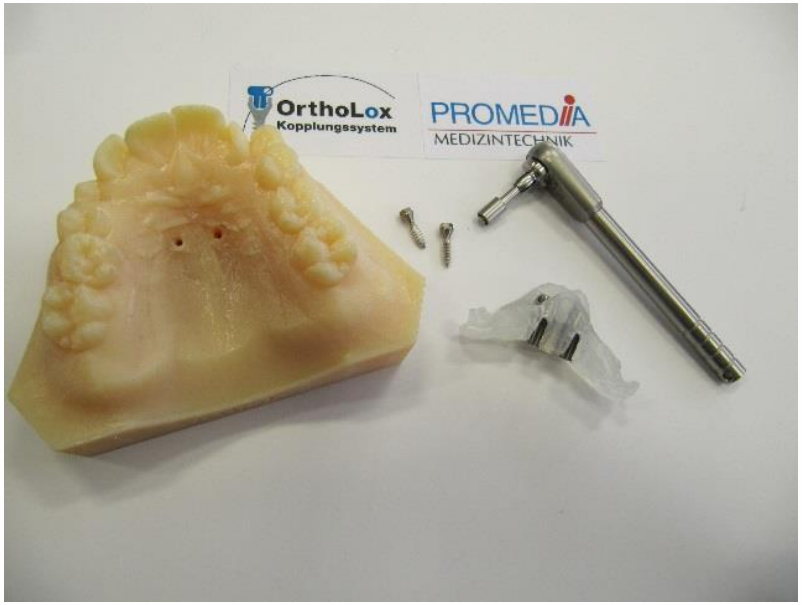
Apply the two-component silicone

Important:
Curing time: 90sec.
Cut the silicone on the position model with a sharp scalpel.
Carefully lift off. Aid: compressed air.
Oklussal must not stay any silicone residue on the parallel sleeve.
Do not apply too thin, make it stable.
The U-shaped section of the parallel sleeve must be free to insert the mini-screw.
Especialy for patients with small mouth opening ability.



The clean exposing of U-neck

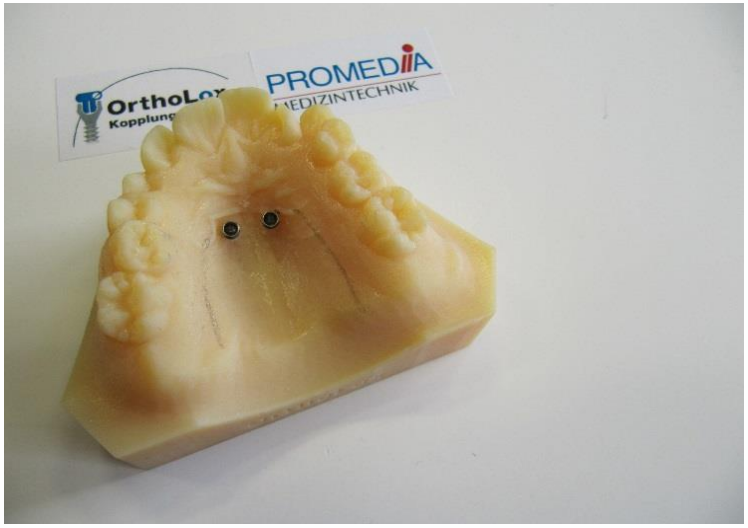
INSERTION OF LABORATORY ANALOGS ON THE ASSEMBLY MODEL



The laboratory analogues are screwed in with Shaft (OL ISD 026) and the ratchet (OL RAT 000 with adapter OL DAD 000)
Using the transfer key.
The Analogs (OL ANA 002) are set in parallel and there is no vertical step.
The manufacture of the apparatus thus simplifies Technicians work and the incorporation of the apparatus in the patient's mouth.

Screwing the laboratory analogues with the ratchet through the previously prepared transfer key.

Bending of the ortholox device on the mountening model



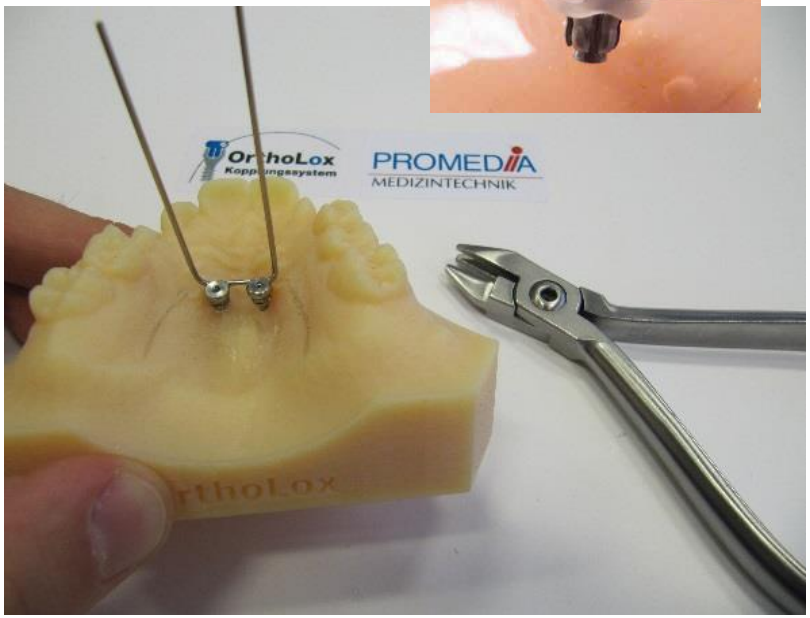
Before the beginning of the bending,
the distance of the analogues should be measured
and transferred to the arch.

The course of the arch should be based on
the resistance center of the posterior teeth.
Control or specification by the practitioner.
The curve should be applied to the palate, distally,
slightly ascending, to counteract the tendency
of the bite opening.

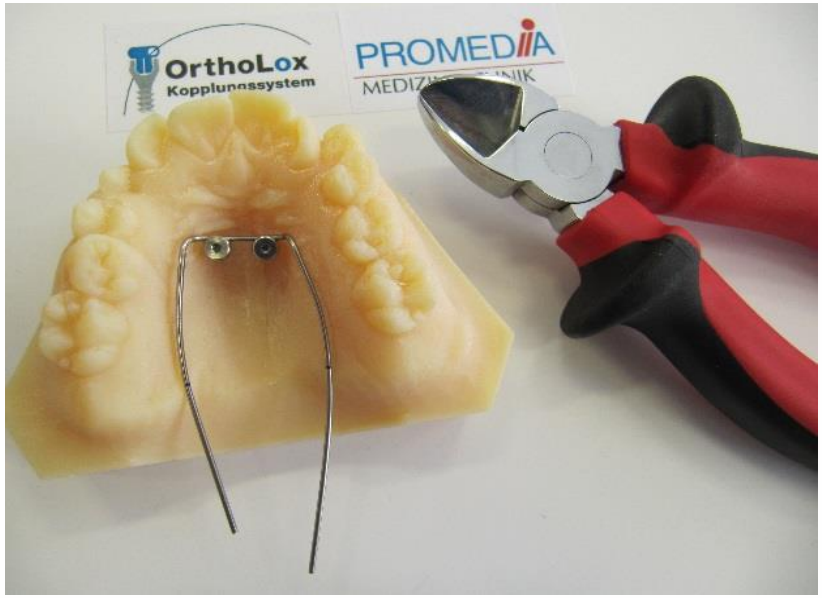
Bending starts first at the side where the welded abutment is located.

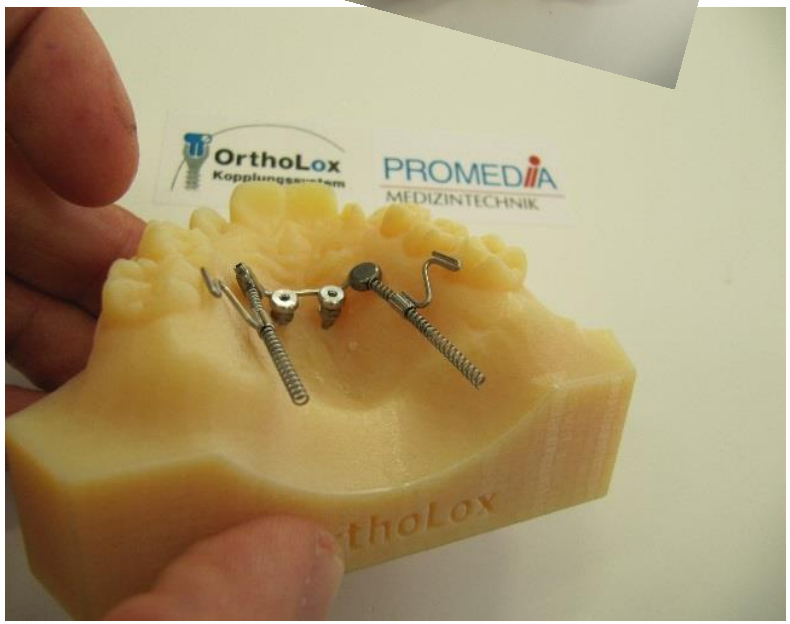
Firmly fix the Abutment with the 3-finger pliers.
Bending should be performed by hand.

The second, tilting snap-in abutment is pushed before the bend and held with an elastic chain. The elastic chain should loosely fix the abutment until the final insertion of the device.



After checking that the screws have been set parallel and without a vertical step, following the line drawing, the further bends are carried out.





The Z-hook of the SmartJet ™ tube is bent at the level of the molar's equator so that the practitioner only has to insert the Z-hook into the Goshgarian lock of the ligament.
The direct fitting and bonding of the Z-hook to the tooth is also a proven variant.

In this case example, distalization is performed on both sides with the OrthoLox device.
The final fitting of the device is done intraorally or on the mounting model, with an extra attached molar band.
Within a few minutes, virtual and analogue planning
are „matched" to a product thanks to TADmatch™!

Please visit our web-site www.ortholox.de for further information
and our shop www.orthodontie-shop.de