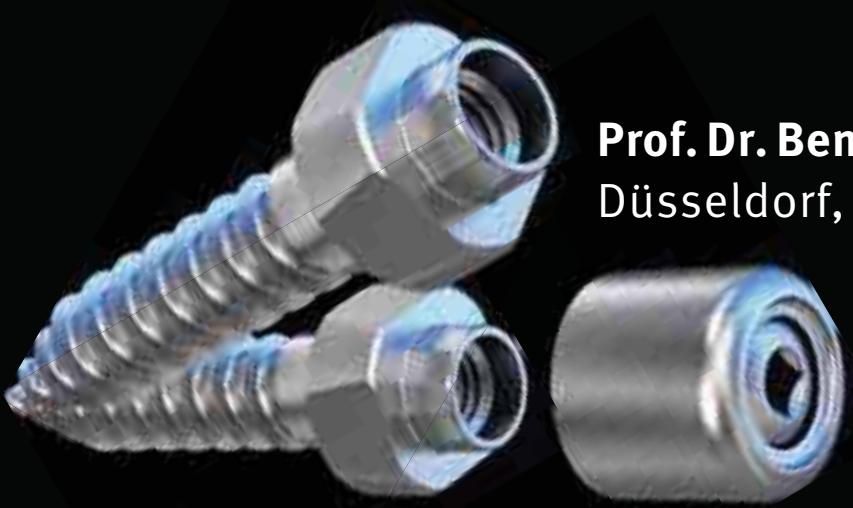




BENEFit®-System. Handout – *Manuel d'information*



Prof. Dr. Benedict Wilmes
Düsseldorf, Germany



www.psm.ms – premium implants

BENEFit® Mini-implant
BENEFit® Mini-implant



Abutments
Ecrou de fixation pour Mini-Implant



or
ou



or
ou



or
ou



or
ou



Coupling with the appliance
En combinaison avec le dispositif

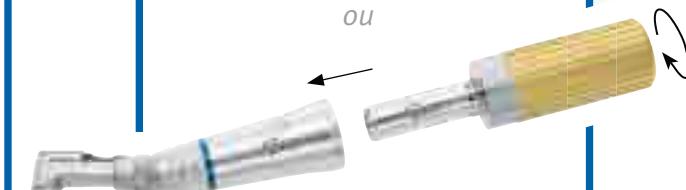
Screwdrivers
Tournevis

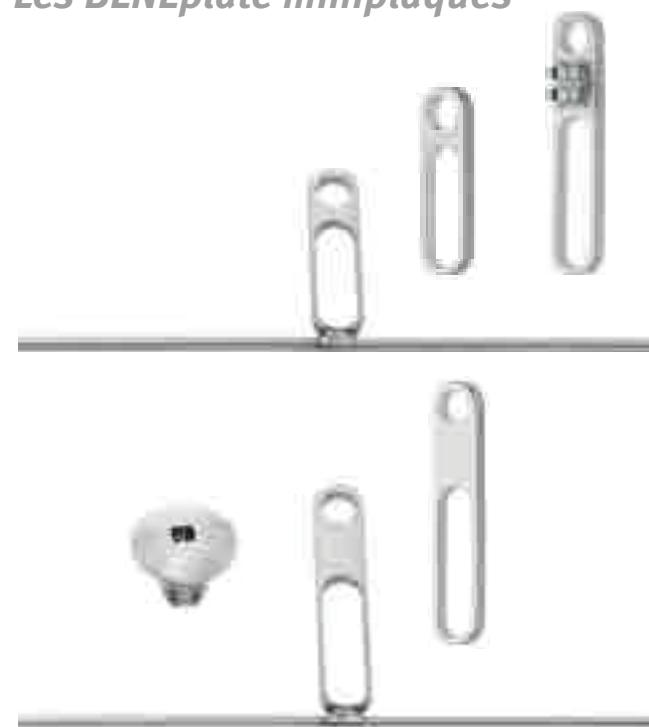


or
ou



or
ou



**The *BENEfit*®-Abutments**
The BENEfit®-Abutments**The *BENEplate* miniplates**
Les BENEplate miniplaques**LITERATURE – PUBLICATIONS:**

Wilmes B., Drescher D.
Benefit – A mini-implantat system with interchangeale abutments.
J Clin Orthod 2008; 42:574-580

Wilmes B., Drescher D., Nienkemper M.
Beneplate – A miniplate system for improved stability of
skeletal anchorage. J Clin Orthod 2009; 43:494-501

Adaptation

Adaptation



The BENEslider

The most classical indication for skeletal anchorage using Mini-Implants with abutments is molar-distalization and/mesialization in the maxilla. By means of the so called “**BENEslider**” the molars can be bodily distalized and/or mesialized using the Mesialslider. In many cases, tooth extraction or dental implants can be avoided.

To couple two **BENEFit®** Mini-Implants, a **BENEplate** with welded wire is connected to the Implants and the **BENEslider** parts (mobilizer, springs, **BENEtube**) are placed on the wire. Active force is applied by springs (240g or 500g) and activated with the Mobilizer.

Le système BENEslider

L’indication usuelle d’un ancrage squelettique à l’aide de mini-implants est la distalisation ou mésialisation au maxillaire. Grâce au système **BENEslider** les molaires peuvent être mésialées (Mesialslider) ou distalées (BENEslider). Dans la plupart des cas cela permettra d’éviter les extractions.

Pour coupler deux mini-implants **BENEFit®**, une plaque **BENEplate** sur arc est connectée aux mini-implants et agrémentée des accessoires **BENEslider** (Ecrous mobiles d’activation, ressorts, **BENEtube**) qui sont fixés sur l’arc. La force est activée par le biais des ressorts (240gr. ou 500gr.) et des écrous mobiles d’activation.



intraorally

En intra-oral



on the plaster model

Sur moulage de travail en laboratoire



Anaesthesia, two paramedian depots
Anesthésie, deux dépôts paramédianes



Pre-drilling, approx. 3 mm deep (only required for adults)
Pré-forage, approx. 3 mm profond seulement requis pour les adultes

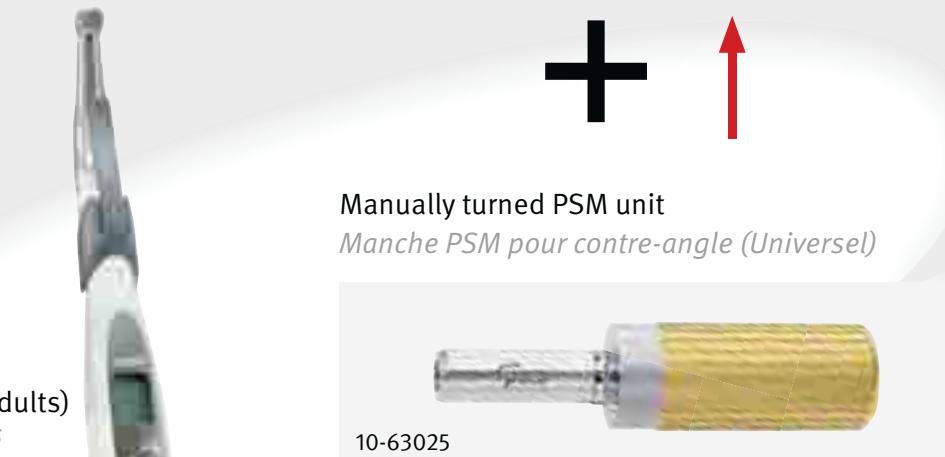


Implant Insertion
Insertion de l'implant



The manually turned unit is connected to your existing contra-angled handpiece (blue 1:1) that enables its use with an angled screwdriver.

Le manche de vissage manuel pour contre-angle est connecté directement à votre instrumentation existante (Bleu 1:1).



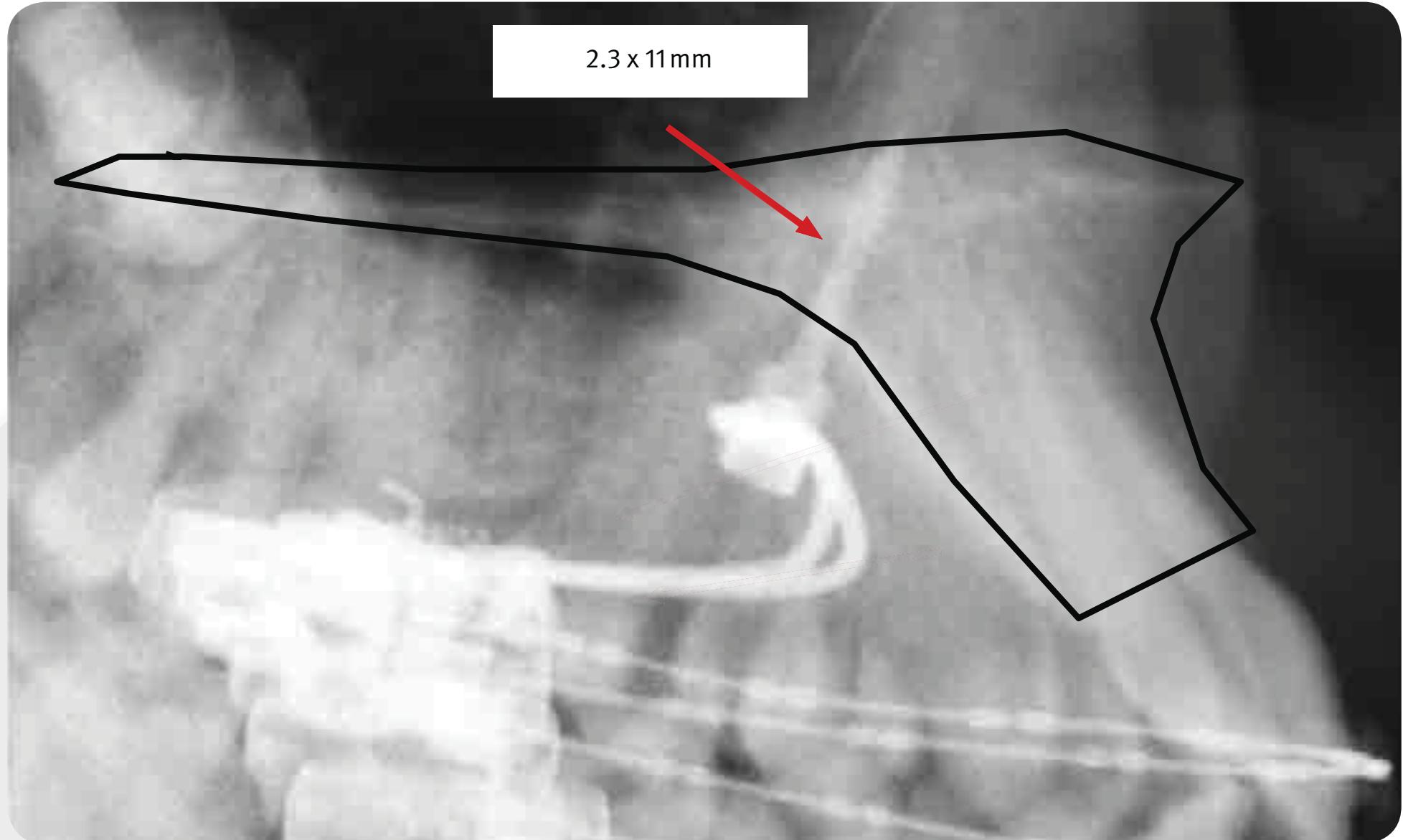
Manually turned unit for contra-angled handpieces
Manche de vissage manuel pour contre-angle



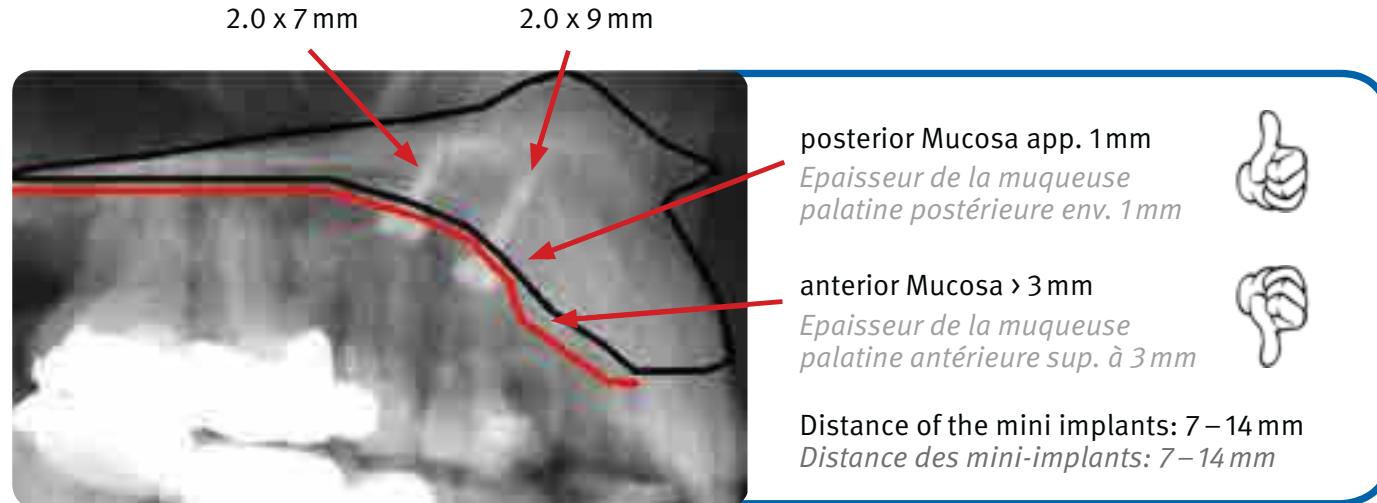
Manually turned unit mod. to Pauls, with adjustable torque from 0 - 40 Ncm
Manche de vissage manuel modèle Pauls, avec ajustage du couple de 0 à 40 Ncm

→ Orthodontist could / should insert
Suggestion d'insertion pour le praticien

Dimension when using only one mini implant
Dimension en utilisant seulement un mini implant



Dimension when using two mini implants Dimension en utilisant deux mini implants



Best insertion area / Site d'insertion idéal



Median insertion
Insertion médian



Para Median insertion
Para insertion médian

LITERATURE – PUBLICATIONS:

Ludwig B, Glasl T, Bowman J, Wilmes B, Kinzinger G, Lisson G. Anatomical Guidelines for Miniscrew Insertion: Palatal Sites. *J Clin Orthod.*
2011;45(8):433-441

Adaptation in the laboratory

Ajustage en laboratoire

Prof. Dr. Benedict Wilmes, Düsseldorf, Germany

9



(33-54410)

Impression cap

Tête pour prise d'impression



(33-54425)

Laboratory analog

Implant de transfert pour travaux sur moussages





Molar distalization *Distalisation Molaire*

BENEslider
BENEslider



Pendulum B
Pendulum B



Molars mesialization *Molaires mésialisation*

Mesialslider
Mesialslider



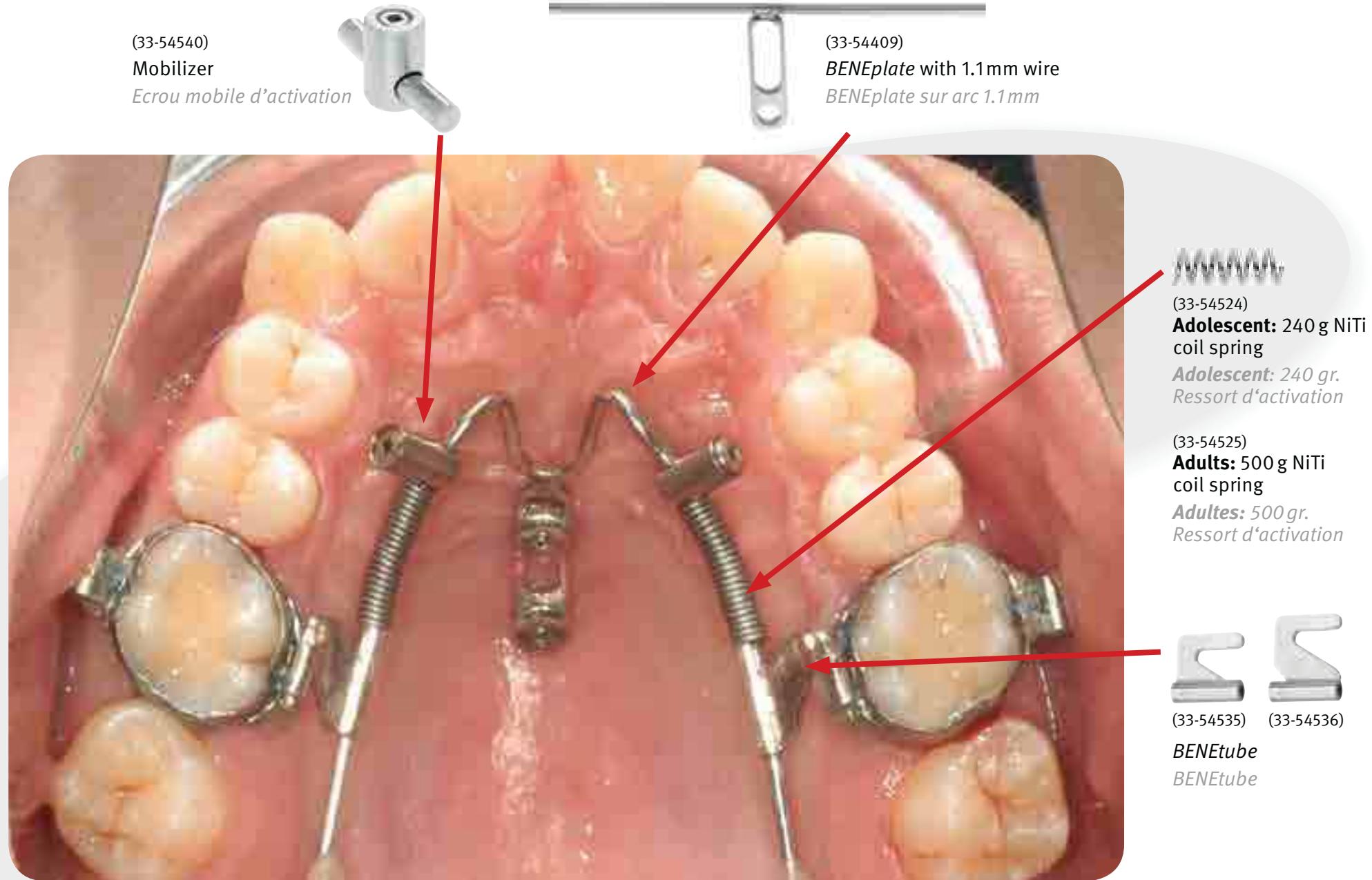
Alignment of retained teeth
Implants dentaires temporaires



Temporary pontics
Canines incluses- dents ankylosées

Molar uprightness
Redressement des axes Molaires





beneplates

**BENEplate with 1.1 mm
stainless steel wire**

*BENEplate sur arc acier
inox 1.1 mm*



5,5 months later
Après 5,5 mois

LITERATURE – PUBLICATIONS:

- Wilmes B, Nienkemper M, Ludwig B, Kau CH, Pauls A, Drescher D. Esthetic Class II Treatment with the Beneslider and Aligners. JCO 2012;46:390-8
Wilmes B, Drescher D., Application and effectiveness of the Beneslider. A device to move molars distally. World J Orthod 2010;11:331–340



LITERATURE – PUBLICATIONS:

Wilmes B, Neuschulz J, Safar M, Braumann B, Drescher D. Protocols for combining the Beneslider with lingual appliances in Class II treatment. J Clin Orthod. 2014;48:744-52

beneplates**BENEplate with 0.8 mm stainless steel wire** (33-54428)**or TMA** (33-54420)**BENEplate sur arc acier inox 0.8mm** (33-54428)**ou TMA** (33-54420)

LITERATURE – PUBLICATIONS:

Wilmes B, Katyal V, Drescher D. Mini-implant-borne Pendulum B appliance for maxillary molar distalisation: designand clinical procedure. Aust Orthod J. 2014;30:230-9

beneplates

BENEplate with 0.8 mm stainless steel wire (33-54428) – or TMA (33-54420)

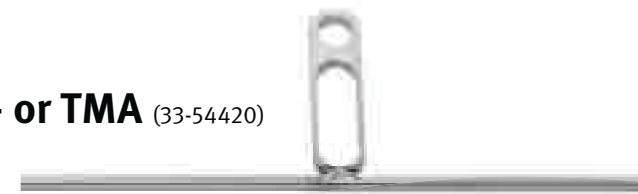
*BENEplate sur arc acier inox 0.8 mm (33-54428)
ou TMA (33-54420)*



Treatment Start
Début de traitement



4 months later
Après 4 mois



- › Total treatment time: 12 months
 - 6 months Pendulum
 - 6 months MB
- Patient traité en 12 mois:
 - 6 mois par le système Pendulum B
 - 6 mois par multi-attaches

Anterior anchorage, T-bow

Système T-Bow: Anchrage antérieur

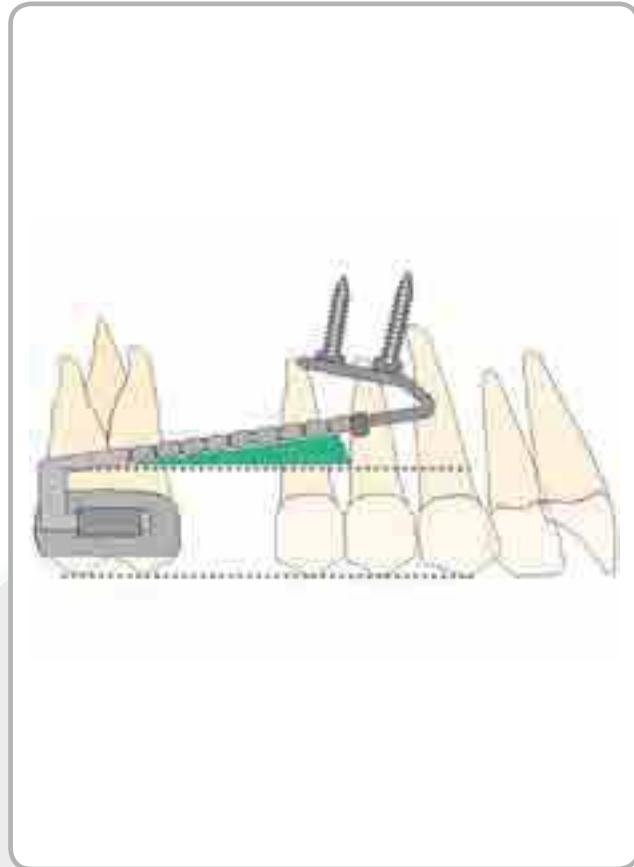
16

Prof. Dr. Benedict Wilmes, Düsseldorf, Germany



Mesialslider with an inclined plane for simultaneous molars intrusion

Mesialslider avec un plan incliné pour molaires intrusion simultanée



LITERATURE – PUBLICATIONS:

Wilmes B, Katyal K, Willmann J, Stocker B, Drescher D. Mini-implant-anchored Mesialslider for simultaneous mesialisation and intrusion of upper molars in an anterior open bite case: a three-year follow-up. Aust Orthod J 2015;31:87-97

beneplates

BENEplate for mesialization

BENEplate système de mésialisation



(33-54541)
Mobilizer with hook
Ecrou d'activation mobile



(33-54539)
Mesialtube
Tube mesial



(33-54495 soft / faible / 33-54496 medium / moyen
33-54497 strong / fort)
Niti spring
Ressort d'activation en nickel titane



LITERATURE – PUBLICATIONS:

- Wilmes B, Nienkemper M., Drescher D. A miniplate system for improved stability of skeletal anchorage. *J Clin Orthod* 2009; 43:494-501
- Wilmes B, Nienkemper M, Nanda R, Lübbertink G, Drescher D. Palatally anchored maxillary molar mesialization using the Mesialslider. *J Clin Orthod* 2013;47:172-79



LITERATURE – PUBLICATIONS:

Wilmes B, Nanda R, Nienkemper M, Ludwig B, Drescher D. Correction of upper-arch asymmetries using the Mesial-Distalslider. J Clin Orthod. 2013 ;47:648-55

Molar uprighting

20

Système de redressement d'axes des Molaires

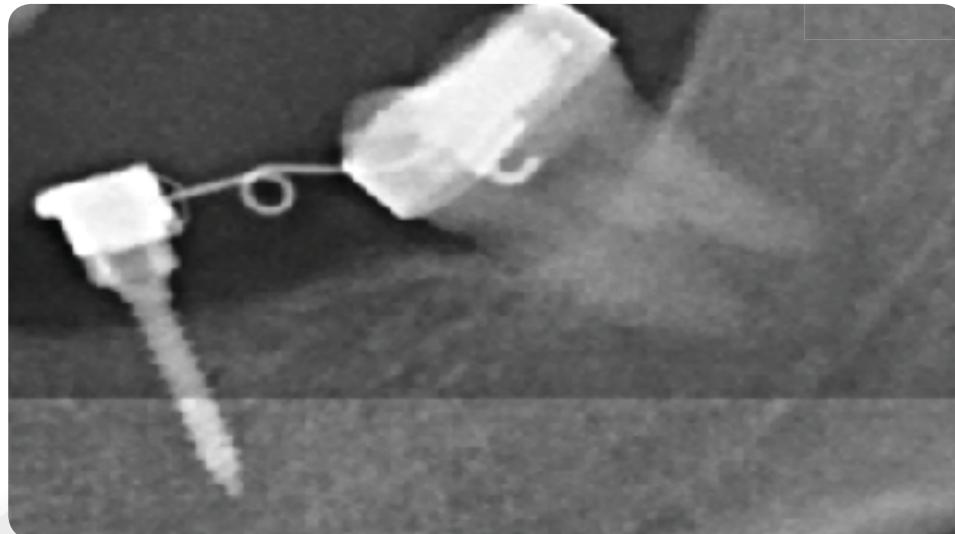
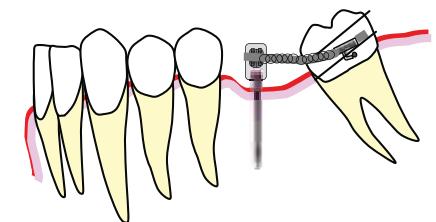
Prof. Dr. Benedict Wilmes, Düsseldorf, Germany



33-54450



33-54452



LITERATURE – PUBLICATIONS:

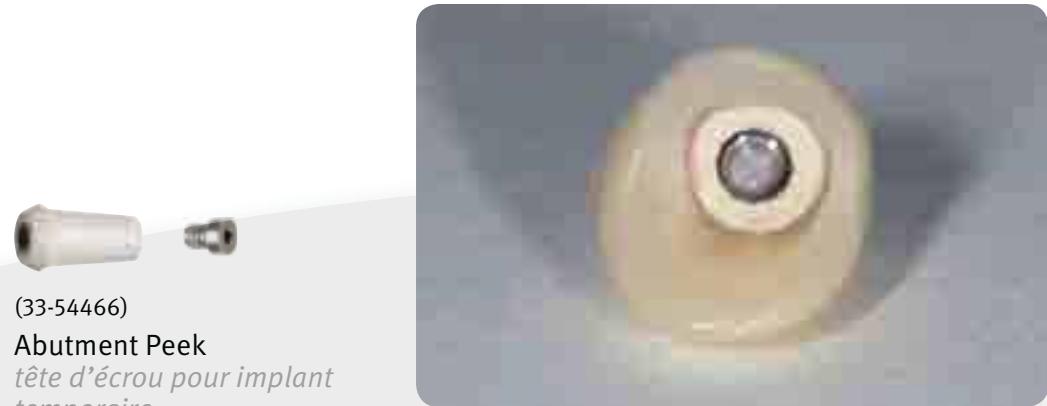
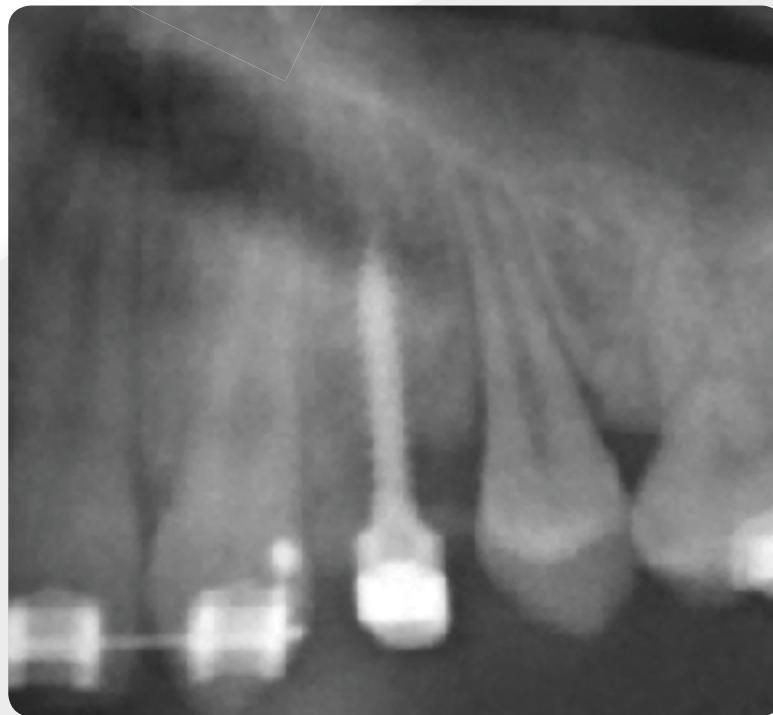
Nienkemper M, Wilmes B, Pauls A, Drescher D. Preprosthetic molar uprighting using skeletal anchorage. J Clin Orthod 2013, 47:433-7

Temporary pontic

Système d'implant dentaire temporaire

Prof. Dr. Benedict Wilmes, Düsseldorf, Germany

21

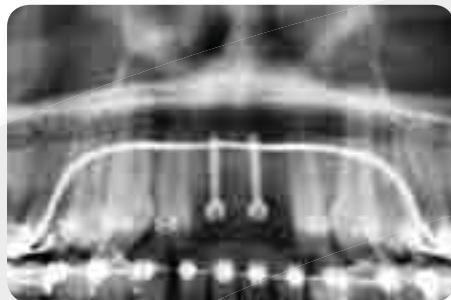


LITERATURE – PUBLICATIONS:

Wilmes B, Nienkemper M, Renger S, Drescher D. Mini-implant-supported temporary pontics. J Clin Orthod. 2014;48:422-9



(33-54466)

BENEFit® Peek Abutment, incl. 1 fixation screw**BENEFit®** Tête conique (1 pièce) avec vis de fixation (1 pièce)

Management of wide spaces

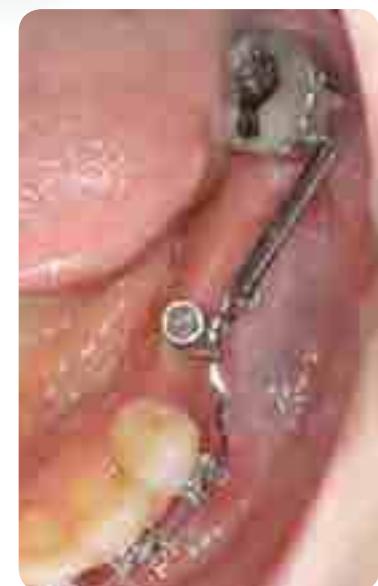
Comment contrôler et maintenir les espaces inter dentaires importants

Prof. Dr. Benedict Wilmes, Düsseldorf, Germany

23

“Bridge technique”

Méthode dite du “Bridge Technique”



Bracket-Abutment TMA-Wire 16/22"

Ecrou de fixation pour mini-implant à double bracket. (reçoit des arcs en TMA 16x22)



LITERATURE – PUBLICATIONS:

Nienkemper M, Wilmes B, Ludwig B, Lübbertink G, Drescher D. Extrusion of impacted teeth using mini-implant-borne mechanics. J Clin Orthod. 2012;46: 150-155

Molar intrusion

Système pour l'intrusion molaire

Prof. Dr. Benedict Wilmes, Düsseldorf, Germany

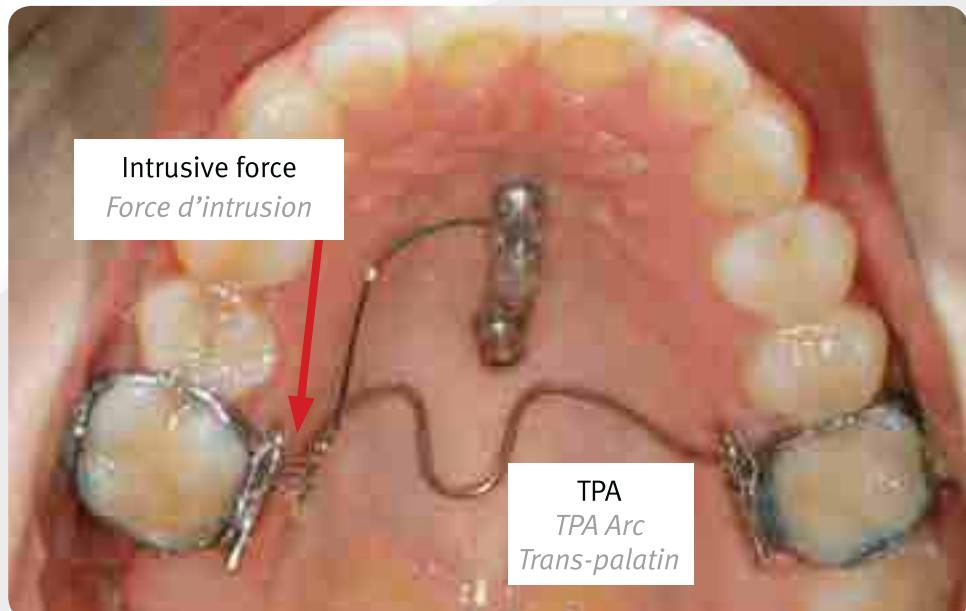
25



(95-13012)

Model Mouse Trap Intrusion

Modèle de présentation du système "Mouse trap"



LITERATURE – PUBLICATIONS:

Wilmes B, Nienkemper M, Ludwig B, Nanda R, Drescher D. Upper-Molar Intrusion Using Anterior Palatal Anchorage and the Mousetrap Appliance. J Clin Orthod 2013;47:314-20

Peridontal distraction of ankylosed teeth

26

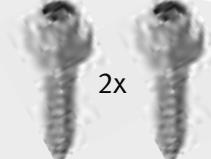
Distraction des dents ankylosées

Prof. Dr. Benedict Wilmes, Düsseldorf, Germany



LITERATURE – PUBLICATIONS:

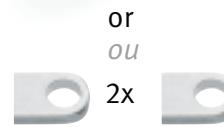
Wilmes B., Drescher D., Vertical Periodontal Ligament Distraction – a New Method for Aligning Ankylosed and displaced Canines.
J Orofac Orthop. 2009; 70:213-223



BENEfit 2.0 Screw, 9 mm
Mini Implant BENEfit 2.0, 9mm



(33-54463)
Tête d'implant pour Hyrax
Hyrax Pilastro



(33-54462)
Anneau pour Hyrax
Hyrax Ring

LITERATURE – PUBLICATIONS:

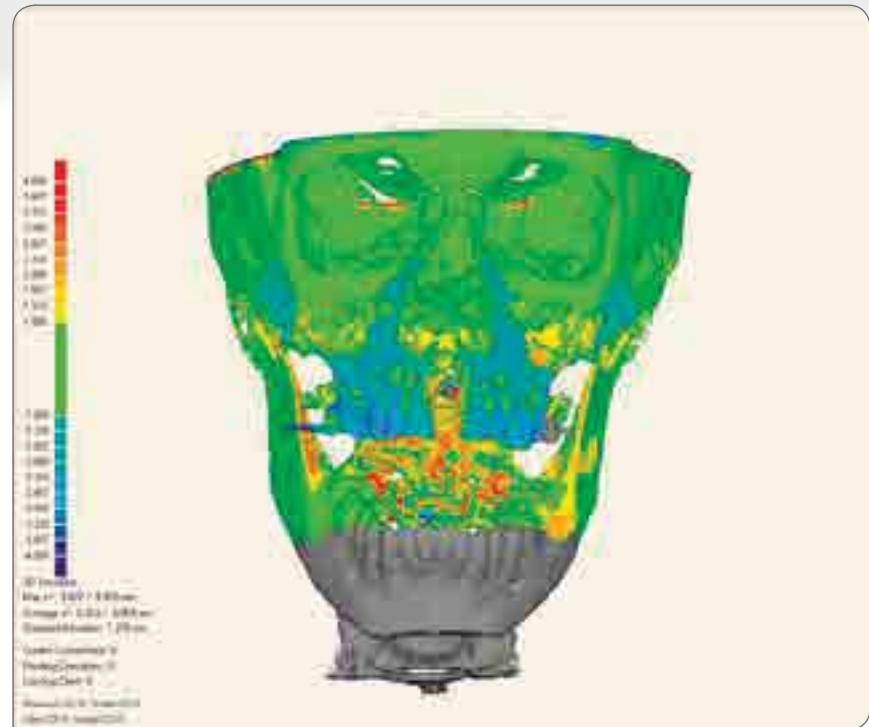
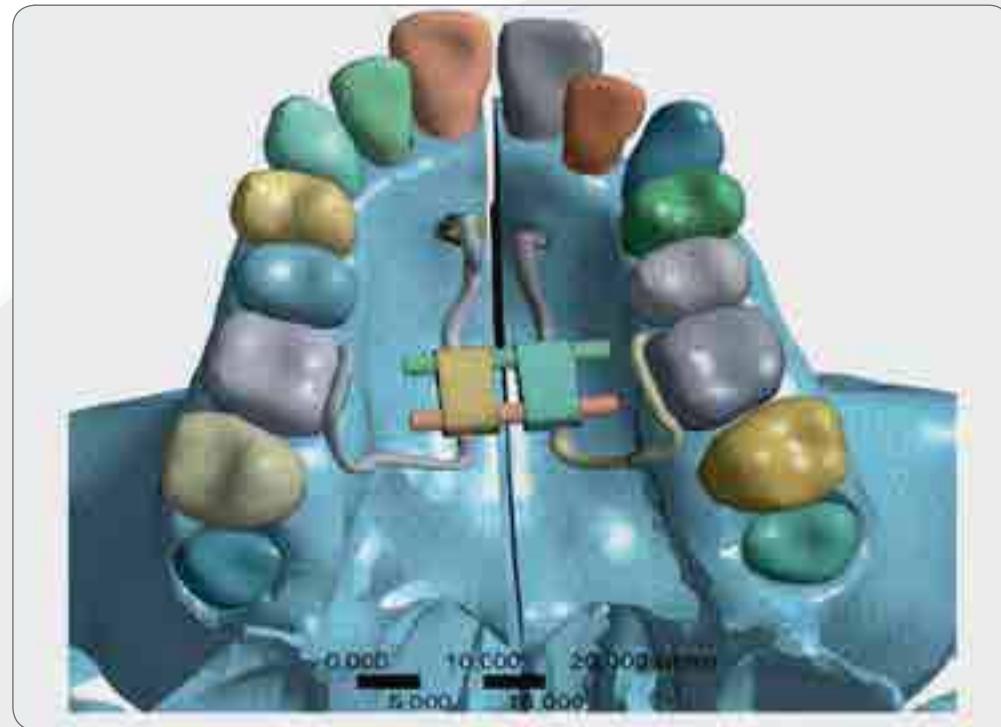
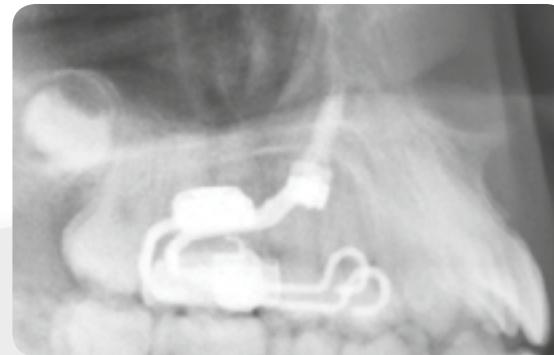
Wilmes B, Fields of Application of Mini-Implants. In: Ludwig, Baumgaertel, Bowman: Mini-Implants in orthodontics. Innovative anchorage concepts. London, Berlin etc. Quintessence. 2008: 91- 122

Wilmes B, Nienkemper M, Drescher D. Application and effectiveness of a new miniimplant and tooth-borne rapid palatal expansion device. World J Orthod. 2010

Nienkemper M, Wilmes B, Franchi L, Drescher D. Effectiveness of maxillary protraction using a hybrid hyrax-facemask combination: A controlled clinical study. Angle Orthod. 2014

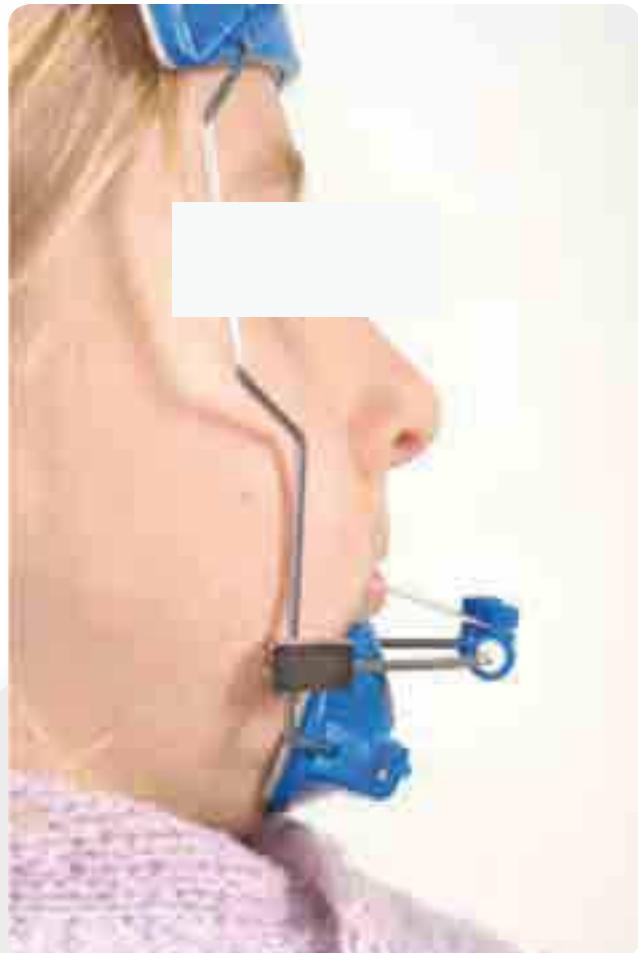
Goal 1: Less tipping of the teeth
→ Cranial force application

Goal 1: diminution d'inclinaison des dents
→ Application de la force cranial



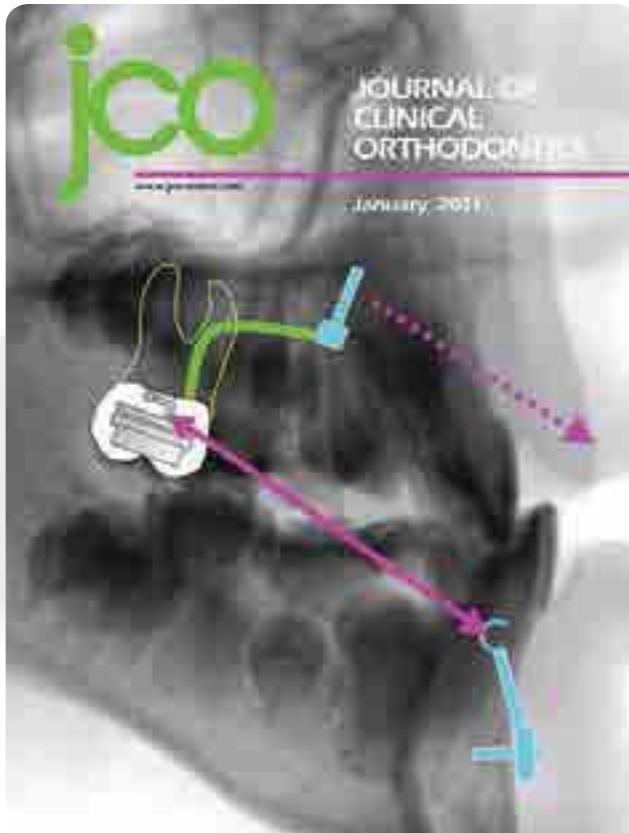
LITERATURE – PUBLICATIONS:

Ludwig B, Baumgaertel S, Kinzinger G, Zorkun B, Glasl B, Wilmes B. Application of a new visco-elastic FEM-Model and analysis of miniscrew supported Hybrid-Hyrax treatment. Am J Orthod Dentofacial Orthop 2013



Intraoral alternative?
Une alternative aux traitements intra-oraux?

Goal 2: Avoid mesial migration when using a facemask
Goal 2: Eviter la migration mésiale lorsque vous utilisez un masque facial



LITERATURE – PUBLICATIONS:

Wilmes B, Kau CH, Ludwig B, Drescher D. Early Class III Treatment with a Hybrid Hyrax-Mentoplaste Combination J Clin Orthod, 45:1-7



LITERATURE – PUBLICATIONS:

Ludwig B, Glasl B, Bowman J, Drescher D, Wilmes B. Miniscrew supported Class III Treatment with the Hybrid RPE Advancer. J Clin Orthod 2010; 44:533-539

Nienkemper M, Wilmes B, Pauls A, Drescher D. Maxillary protraction using a hybrid hyrax - face-mask combination. Prog Orthod 2013;14:5

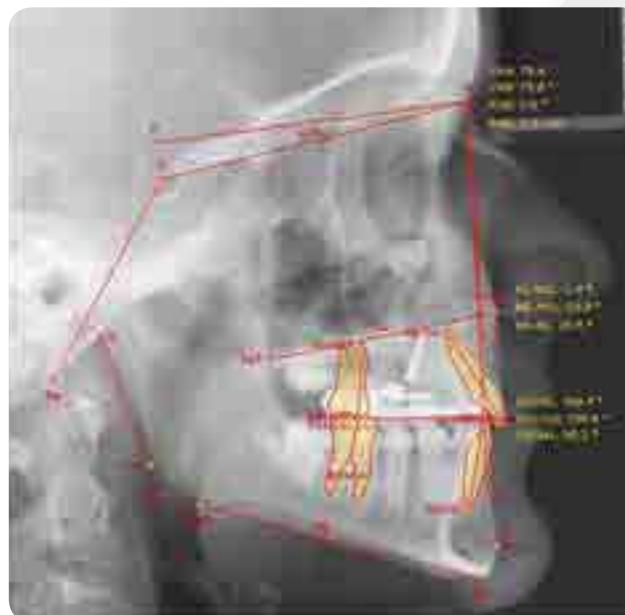


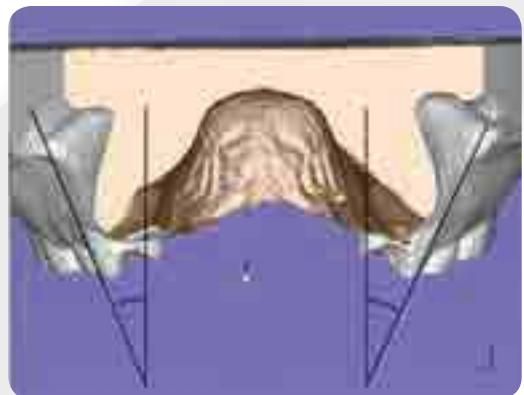
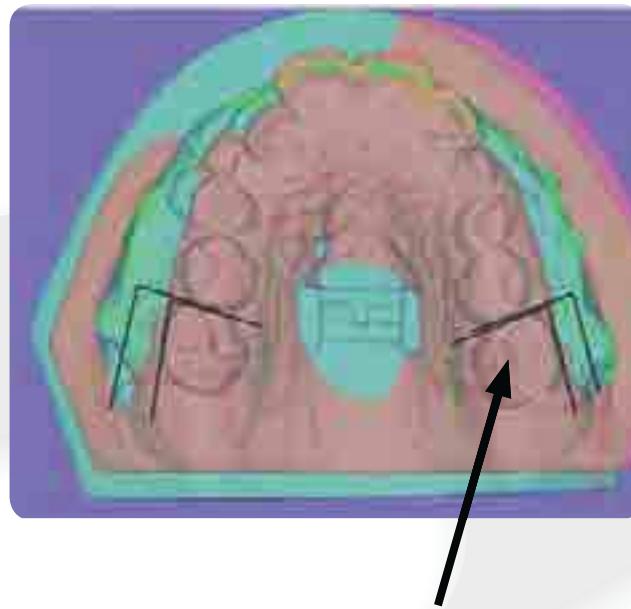
Hybrid-Hyrax / Facemask

Hyrax Hybride et Masque facial

Prof. Dr. Benedict Wilmes, Düsseldorf, Germany

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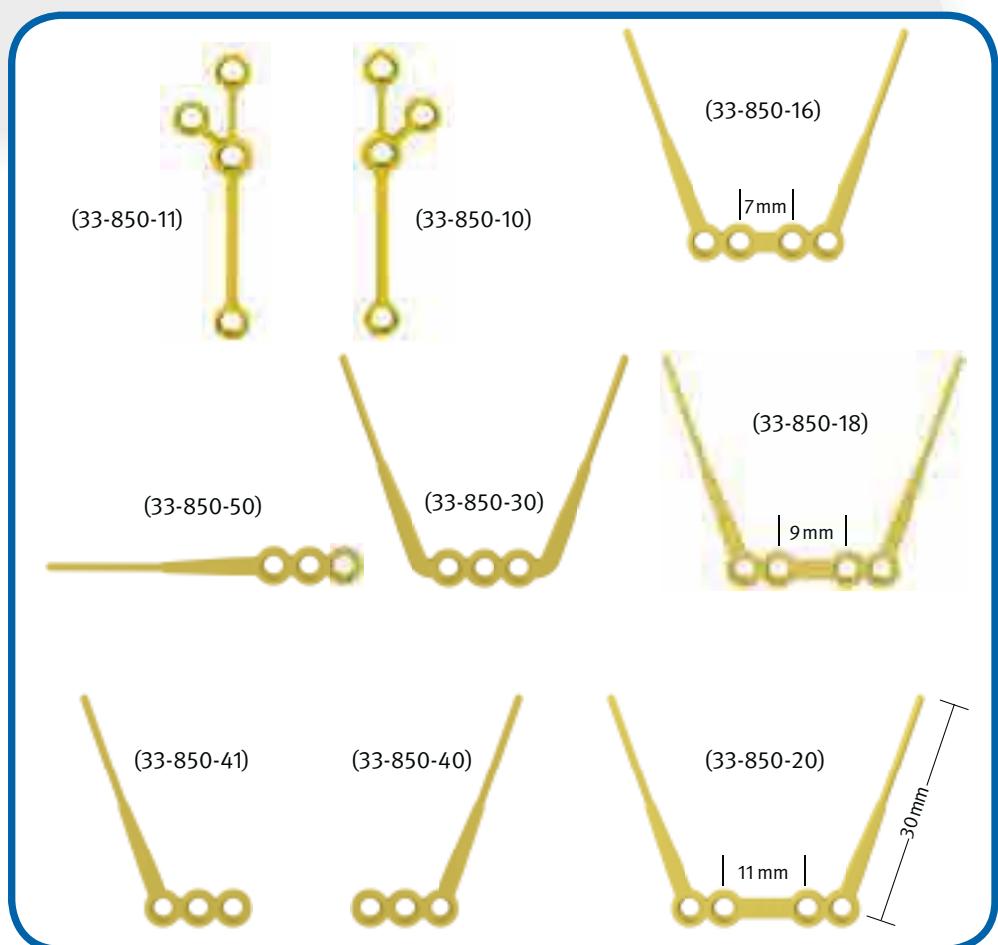
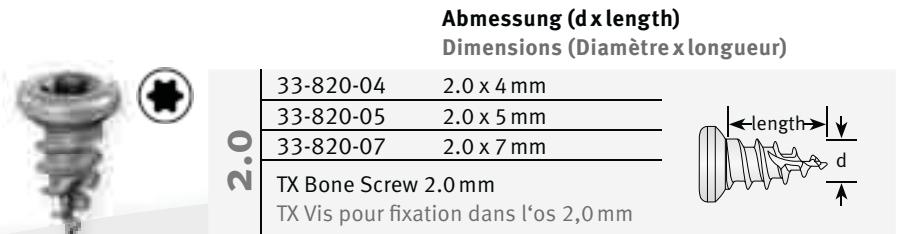


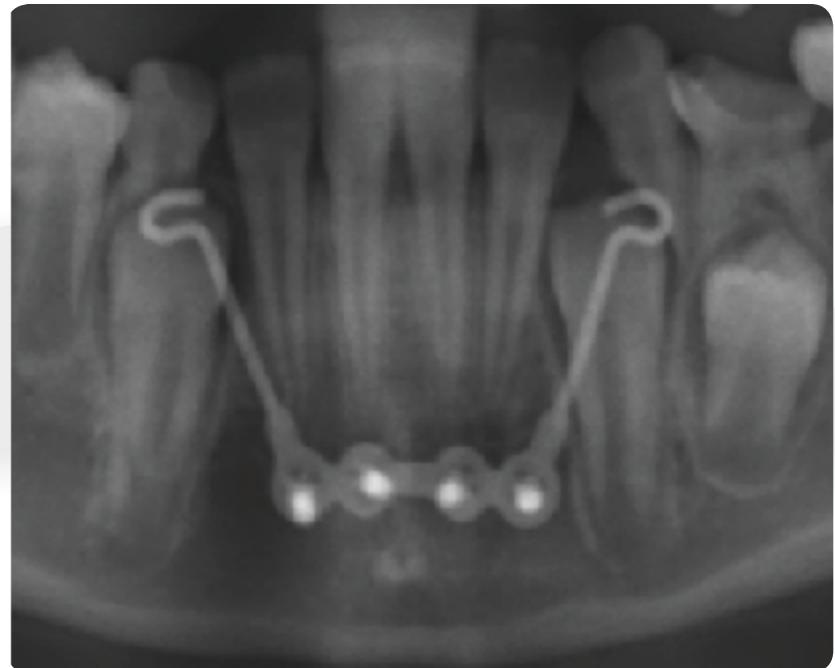
Less tipping
Réduit le risque de version

Less mesial migration using a facemask
Réduit la migration mésiale grâce au masque facial

LITERATURE – PUBLICATIONS:

Wilmes B, Nienkemper M, Drescher D. Application and effectiveness of a new mini-implant and tooth-borne rapid palatal expansion device. World J Orthod. 2010





Face mask no longer necessary

Advantages:

- The MentoPlate can be inserted before eruption of the canines we can start at the age of 8 years
- Loosening of the midface sutures (RPE effect)
- Low risk of root injury

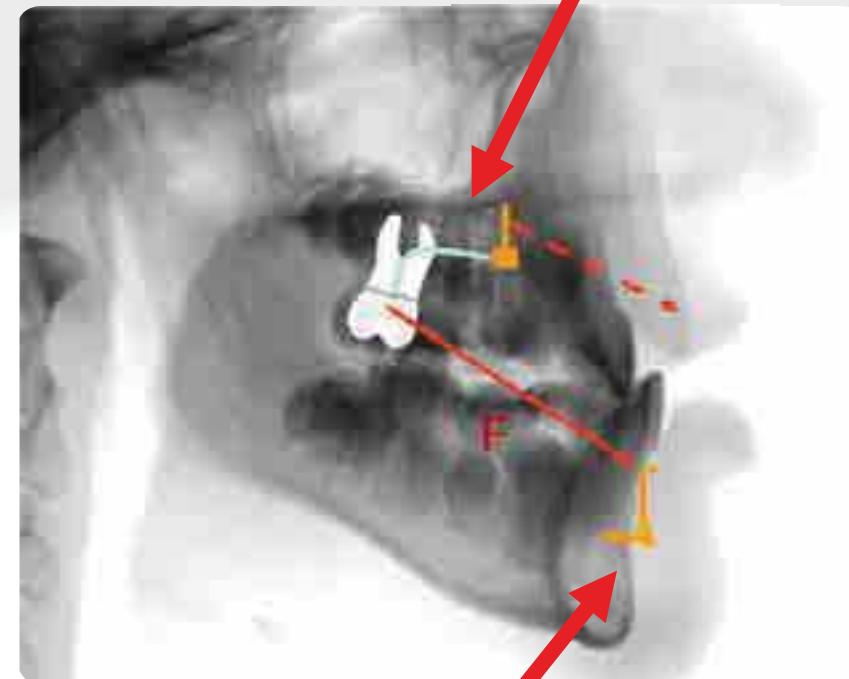
Masque facial n'est plus nécessaire

Avantages:

- La Mentoplate peut être mise en place en amont de l'éruption des canines, possibilité de démarrage du traitement dès 8 ans
- Action sur la suture palatine grâce à l'effet RPE
- Faible risque de blessure à la racine

LITERATURE – PUBLICATIONS:

Wilmes B, Nienkemper M, Ludwig B, Kau CH, Drescher D. Early Class III Treatment with a Hybrid Hyrax-Mentoplate Combination. J Clin Orthod 2011; 45:1-7



Hybrid-Hyrax
Hyrax Hybride

MentoPlate
MentoPlate

LITERATURE – PUBLICATIONS:

Wilmes B, Nienkemper M, Ludwig B, Kau CH, Drescher D. Early Class III Treatment with a Hybrid Hyrax-Mentoplate Combination. J Clin Orthod 2011; 45:1-7

Hybrid-Hyrax and MentoPlate

36

Hyrax Hybride et MentoPlate

Prof. Dr. Benedict Wilmes, Düsseldorf, Germany

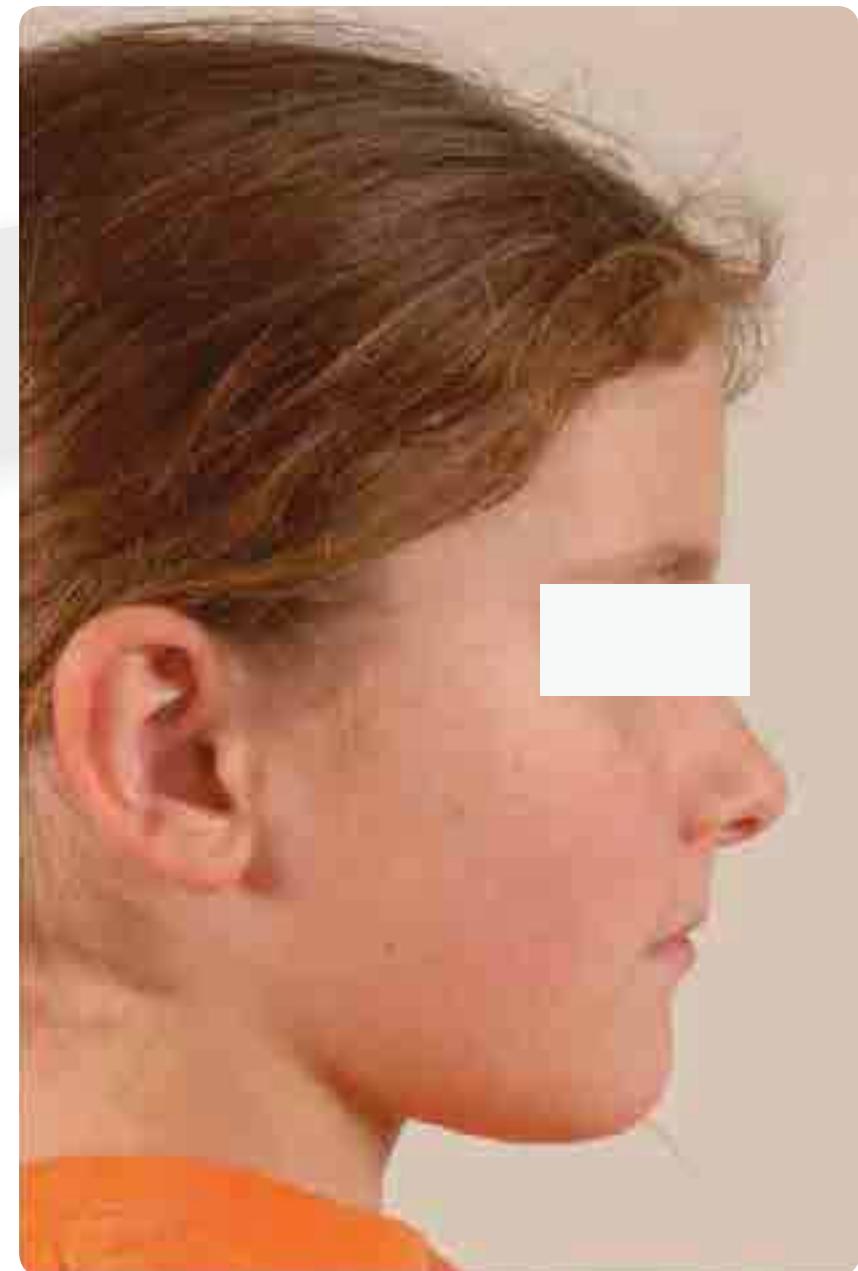
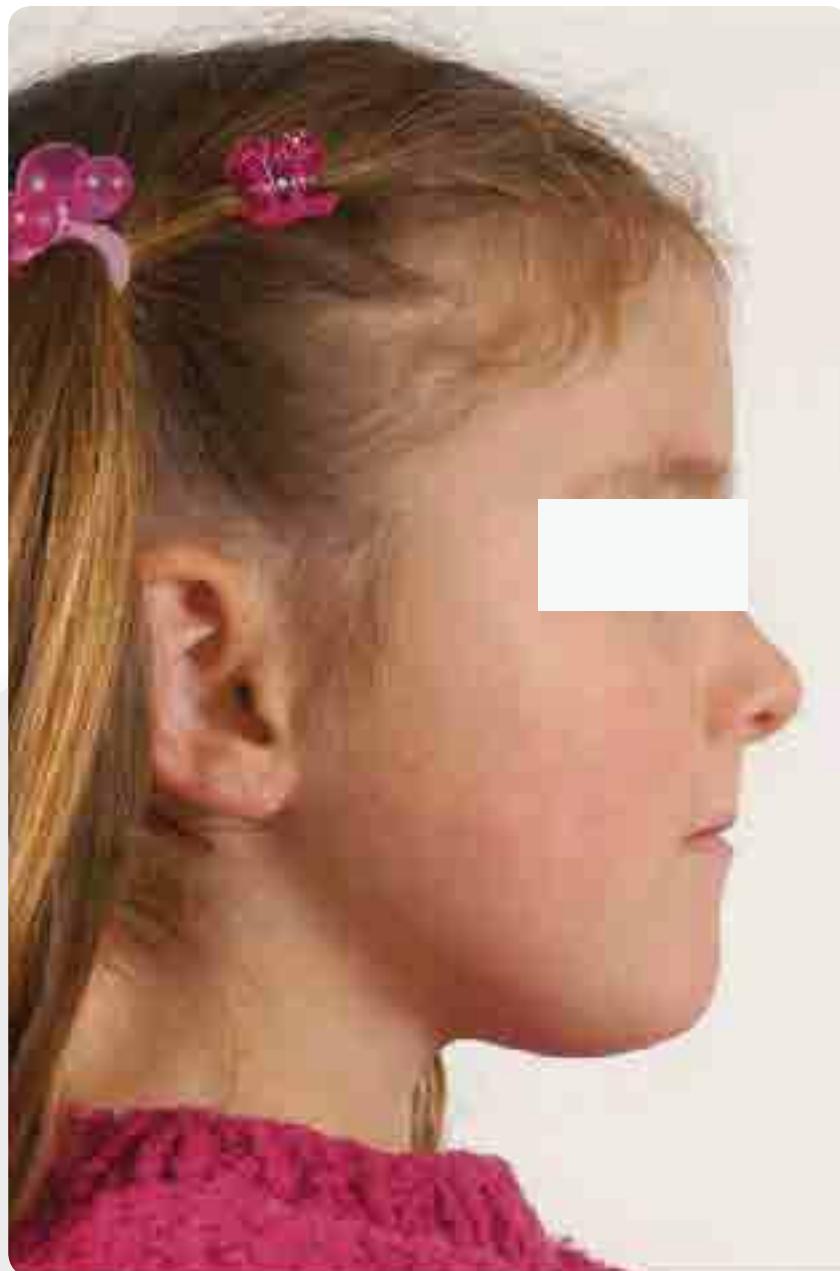


5 months later
Après 5 mois

Hybrid-Hyrax and MentoPlate

Hyrax Hybride et MentoPlate

Prof. Dr. Benedict Wilmes, Düsseldorf, Germany 37





Before
Avant



Afterwards
Après



LITERATURE – PUBLICATIONS:

Wilmes B, Ludwig B, Katyal V, Nienkemper M, Rein A, Drescher D. The Hybrid Hyrax Distalizer, a new all-in-one appliance for rapid palatal expansion, early class III treatment and upper molar distalization. J Orthod. 2014;41:47-53



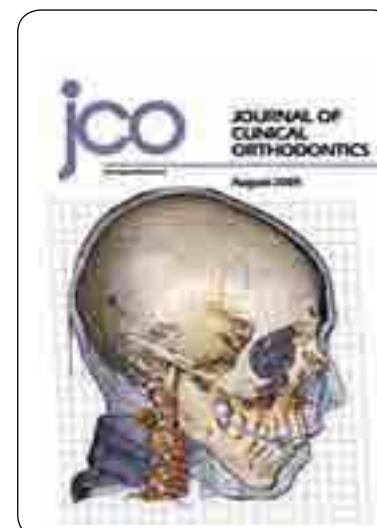
- Less failures
Réduit les risques d'échec
- Safer mechanics
Mécanique sûre et éprouvée.



benefit

Benefit-System
„A Breakthrough in Miniscrew Stability“
Robert G. Keim, Editor JCO
The Editor's Corner J Clin Orthod 2009;43:485-386

www.uniklinik-duesseldorf.de/kieferorthopaedie



Keim: The Editor's Corner

[A Breakthrough in Miniscrew Stability](#)

As with all other practical innovations in orthodontics, temporary anchorage devices (TADs) have involved a significant learning curve. Although Creekmore and Eklund's seminal paper on skeletal anchorage appeared in JCO more than 25 years ago,¹ it remained on the fringes of the profession until around the turn of the century, when the concept took off like a rocket. Since then, paper after paper has illustrated successful treatment of most categories of malocclusion... [\[more\]](#)
Access to the Editor's Corner ar free. For more free articles [click here](#)

August 2009 corner: This month's cover features a 30 volume rendering of a CT scan using software from Anatomage, Icc, as described in The Cutting Edge.



sterile

33-54207	2.0 x 7 mm
33-54209	2.0 x 9 mm
33-54211	2.0 x 11 mm
33-54213	2.0 x 13 mm
33-54215	2.0 x 15 mm
BENEFit® Orthodontic Screw 2.0 mm	
BENEFit® mini-implant 2.0 mm	

2.0

sterile

33-54307	2.3 x 7 mm
33-54309	2.3 x 9 mm
33-54311	2.3 x 11 mm
33-54313	2.3 x 13 mm
33-54315	2.3 x 15 mm
BENEFit® Orthodontic Screw 2.3 mm	
BENEFit® mini-implant 2.3 mm	

2.3

33-54599 **BENEslder Set 240 gr.**
complete consisting of:
BENEslder Kit 240 gr.
complet de démarrage:

33-54409 BENEplate short, with 1.1 mm wire,
incl. fixation screws

BENEplate court sur arc 1.1mm;
Kit d'une plaque et deux vis

33-54540 Mobilizer for wires from
0.5 to 1.2 mm, 2 ea.
Ecrou mobile d'activation (pour arcs
de 0,5mm à 1,2mm), Kit de 2

33-54524 BENEslder springs, 240gr., 2ea.
BENEslder ressorts, 240grs., Kit de 2

33-54535 BENEslder Hook lock, 2 ea.
BENEslder Tube standard à crochet
pour fourreaux, Kit de 2

33-54597 as 33-54599 but with **500gr.** springs
identique au kit 33-54599 mais avec
ressorts **500gr.**

**NEW!**

73-31960 **quattro®/BENEFit®** Sterilization tray
for instruments and implants, empty
quattro®/BENEFit® Support pour stérilisation des
instruments et implants, vendu vide

**NEW!**

33-54100 **quattro®/BENEFit®** Instrument Set
quattro®/BENEFit® Kit d'instrumentation

**33-54460** 1.1 stainless steel

Abutment Standard with 1.1 mm wire (12 cm)
Ecrou de fixation standard sur arc 1,1 mm
(longueur de l'arc 12cm)

**NEW!****33-54445** **BENEFit®** Abutment with slot

BENEFit® Ecrou de fixation avec gorge

**33-54463**

BENEFit® Hyrax Abutment
Tête d'implant **BENEFit®** pour Hyrax

**33-54535**

BENETube, Standard, 2 ea.
BENETube, Standard, Kit de 2

33-54536

BENETube, large, 2ea
BENETube, large, Kit de 2

**33-54539**

Mesialtube, with hook
Mesialtube, Tube mesial
avec crochet

**33-54541**

Mobilizer with hook
Vis d'activation avec
crochet

**33-54543**

Micro Mobilizer for
wires from 0.5 to
1.2 mm
MICRO-écrou mobile
d'activation pour arcs
de 0,5mm à 1,2mm



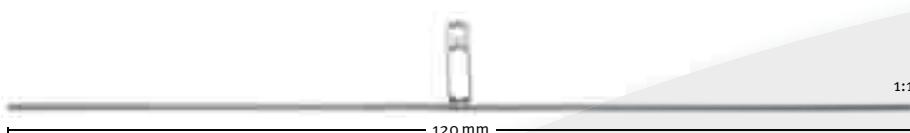
33-54400 stainless steel 1:1

BENEplate, long, incl. fixation screws
BENEplate, long avec écrous de fixation



33-54402 stainless steel 1:1

BENEplate, short, incl. fixation screws
BENEplate, court avec écrous de fixation



33-54429 1.1 stainless steel 1:1

BENEplate, long, with 1.1 mm wire (12 cm), incl. fixation screws
BENEplate, long sur arc 1.1 mm (12 cm) avec écrous de fixation

33-54409 1.1 stainless steel 1:1

BENEplate, short, with 1.1 mm wire (12 cm), incl. fixation screws
BENEplate, court sur arc 1.1 mm (12 cm) avec écrous de fixation



33-54428 0.8 stainless steel 1:1

BENEplate, long, with 0.8 mm wire (12 cm), incl. fixation screws
BENEplate, long sur arc 0.8 mm (12 cm) avec écrous de fixation



33-54408 0.8 stainless steel 1:1

BENEplate, short, with 0.8 mm steel wire (12 cm), incl. fixation screws
BENEplate, court sur arc 0.8 mm (12 cm) avec écrous de fixation



33-54407

BENEplate long, with bracket incl. fixation screws
BENEplate long avec bracket et écrous de fixation



33-55000

BENEFit® Starter Instrument Set
BENEFit® Kit d'instrumentation

73-31990

BENEFit® Starter tray, empty
BENEFit® Support de démarrage, en plastique, vendu vide

for 2.0 mm screws
Pour Mini Implants 2.0 mm

10-67513 **QB DENTAL**

Drill, 1.4x33 mm WL 15 mm, red
for 2.0 mm screws
Foret 1.4x33 mm, travaillant sur 15 mm, rouge, pour Mini Implants 2.0 mm



10-63025

Manually turned unit for contra-angled handpieces
Manchon manuel pour contre-angle



QB

33-54533

FlexiTube, 2 ea.
FlexiTube, 2 pièces



33-54462 **NEW!**



Hyrax Ring, incl. fixation screws, 2 ea.
Anneau de fixation pour Hyrax, Incluant les vis de fixation, 2 pièces



33-54466 **NEW!**

BENEFit Peek Abutment, 1 ea. incl. 1 fixation screw
Système **BENEFit**: Tête d'écrou pour implant temporaire avec 1 vis de fixation



33-54403

Spare fixation screws, 2 ea.
Ecrous de fixation seuls, vendus par deux



11-18452 **QB DENTAL**

Drill, 1.8x28 mm WL 15 mm, grey
for 2.3 mm screws
Foret 1.8x28mm, travaillant sur 15 mm, gris pour Mini Implants 2.3 mm



33-54704 **QB**

Manually turned unit mod. to Pauls, with adjustable torque from 0 – 40 Ncm
Manchon manuel selon Pauls avec vitesse de rotation adjustable de 0 à 40 Ncm



33-18266 **QB** **NEW!**

Thumb screw for Dental mandrel with limited torque (10 Ncm)
Mandrin de vissage manuel à couple bridé à 10 Ncm



33-54403



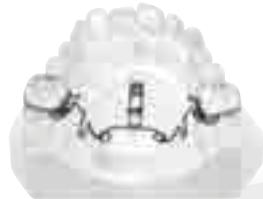
95-13001

Model **BENEslider**, mesial., distal.
Modèle de présentation du système **BENEslider** mesial-distal.



95-13002

Model Anchorage for upper Molars
Modèle de présentation du système d'ancrage maxillaire.



95-13003

Model Pendulum B
Modèle de présentation du système Pendulum B



95-13005

Model Molar uprigthing
Modèle de présentation du système de redressement d'axe pour molaires



95-13006

Model Hybridhyrax
Modèle de présentation du système Hyrax Hybride



V-90-994-00

BENEFit® Model Case for 9 models, empty
Mallette de présentation des modèles **BENEFit**®



95-13007

Model Anchorage Anterior Teeth
Modèle de présentation du système d'ancrage antérieur



95-13008

Model Tooth Eruption
Modèle de présentation du système d'éruption



95-13009

Model "Temporary Implant"
Modèle de présentation du système d'implant temporaire



95-13011

Plaster Model with laboratory implants
Modèle de présentation du système de transfert pour travaux en laboratoire



95-13012

Model Mouse Trap Intrusion
Modèle de présentation du système "Mouse trap"



95-13013

Model Hybridhyrax Distalizer
Modèle de présentation du système de distalisation Hyrax Hybride



95-13014

Model T-Mesial/Distalslider
Modèle T-Mesial/Distalslider



95-13015

Model Hybridhyrax Distalizer 2
Modèle Hyrax hybride et distaliseur 2



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BENEFit®-System. Handout – Manuel d'information



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