The OrthoAnchor™ System

The passion to find a better way. At KLS Martin®, we are driven to make the best possible devices so that patients and practitioners have a reason to smile. The OrthoAnchor™ System does just that.

• Absolute anchorage with immediate loading
• Better, faster results without headgear

Visit www.orthoanchor.com to learn more.
Skeletal Anchorage in Orthodontics

Anchorage control has always been a difficult and unpredictable challenge for orthodontists. Unlike tooth-borne appliances, which rely on patient compliance to achieve tooth movement, (bone-borne) implants provide true stationary anchorage, allowing treatment to proceed more rapidly with highly predictable results.

- Immediate loading
- Reduced risk of tooth damage (root resorption, tooth loosening, tooth tilting)
- Easy fixation with Drill-Free® or self-tapping screws
- Precise control of desired tooth movement
- Maximum retention force
- Normal dental hygiene can be maintained
- Microplates are easy to adapt
- Minimized side affects
- Normal dental hygiene can be maintained
- Minimum irritation to the oral tissues
OrthoAnchor™ Screws

The OrthoAnchor™ screws can be used in cases where maximum anchorage force is required. The screws are simple to place and designed for immediate loading. The OrthAnchor™ screws work best in patients over the age of 13 years and where retention can be attained in good cortical bone.

Contraindications

- When cortical bone is not thick enough
- Patients with deciduous or mixed dentition
- Patients with active infection
- Patient conditions including: blood supply limitations, insufficient quantity or quality of bone, or latent infections
- Patients with mental or neurological conditions who are unwilling or incapable of following post-operative care instructions

Indications

- When the present posterior occlusal relationship should be maintained stable
- When there is no dental anchorage
- When posterior teeth cannot be used as a dental anchorage due to excessive alveolar bone loss
- The use of skeletal anchorage will shorten treatment time
- When maximum anchorage preparation is required
- When skeletal anchorage is required but the width of attached gingiva is not adequate

Developed in cooperation with

Dr. Paul Thomas
Senior Research Fellow
Eastman Dental Institute, London, England
Orthodontic appliances can be attached using the 0.9mm (0.035") gap on the head of the screw, or through the 0.9mm(0.035") diameter hole in the head of the screw.
C-tube Plates

*In comparison to a single-point anchorage with cylindrical implants, the micro-plate fixation with our OrthoAnchor™ system offers additional benefits:*

- Lack of space between tooth roots (plates can be placed away from tooth roots and ‘reach’ down with the orthodontic attachment)
- Monocortical depth fixation (4-5mm screws can be used)
- Where OrthoAnchor™ screws do not provide adequate fixation or force vector, plates provide multiple points of anchorage (micro screws) in the bone that results in an independent stable structure.

*The use of implant-quality titanium micro plates and screws provides perfect bio-compatibility and ideal adaptation properties.*

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Contraindications

- When cortical bone is less than 5mm in depth
- Patients with deciduous or mixed dentition
- Patients with active infection
- Patient conditions including: blood supply limitations, insufficient quantity less than 5mm in depth, or latent infections
- Patients with mental or neurological conditions who are unwilling or incapable of following post-operative care instructions
- General contra-indication is the severely diseased system: Immunodeficiency - irradiated patients - severe diabetes - severe osteoporosis

Developed in cooperation with

Prof. Dr. Kyu Rhim Chung
Kyung-Hee University Hospital
Advantages of the C-tube Plates

The principle of C-tube fixation in the lateral maxilla: The eyelet remains in the vestibulum and serves to hold the dental arch wire.

Case 1

15-year old boy is presenting Class II Division 1 malocclusion with permanent dentition. Severe teeth crowding in both upper and lower jaw and protrusion of the upper lip is chief complaint. Maxillary first bicuspids extracted.

Pre-treatment intraoral view and lateral cephalogram

Dental situation of the maxilla.

The side view shows clear protrusion of the maxilla.

Patient’s lateral cephalogram.
Intra-operative approach

Small lateral incision with buccal mucosal flap and periosteal elevation in order to place the C-tube plate.

The C-tube plate has been adapted and is fixed with two Drill-Free® screws 1.5 x 7mm between the 2nd premolar and the 1st molar.

After suturing, the eyelet remains in the vestibulum.

Initial stage of treatment

The eyelet serves as the anchorage points for dental arch wire.

Occlusal view of the maxilla.

The C-tube plate fixed between the roots with two microscrews.

12 months post operation

Final results after 1 year.

The dental arch is completely formed.

Frontal view

Post-treatment intraoral view and lateral cephalogram
C-palate Plate

The C-palate plate is recommended in more severe cases, where the orthognathic situation has to be corrected and palatal traction is needed. The implant is designed to compensate for more complex and multidirectional traction forces.

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Advantages of the C-palate Plate

- The surgery is quick and simple
- Immediate loading after surgery is possible
- Application of various force vectors simultaneously
- Good resistance against shear forces

The basic principle of C-palate plate fixation:
The plate is fixed to the palatum with three Drill-Free® screws.

The dotted lines indicate the submucosal position of the C-palate plate. Springs are attached to the exposed (red) part of the plate.

*Post-operative situation*

*Post-anterior retraction situation*
C-tube Plates

25-301-02  Micro plate straight 2 hole, 6mm bridge
25-301-03  Micro plate straight 4 hole, 6mm bridge
25-301-04  Cross-shaped, 6mm bridge
25-301-05  Cross-shaped, 9mm bridge
25-301-06  Cross-shaped, 12mm bridge

OrthoAnchor™ Screws

Screw Cartridges

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<th>Size</th>
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Bracket Plates

00-301-12   5mm flat, 12mm
00-301-14   5mm flat, 14mm
00-301-17   5mm flat, 17mm

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C-tube Plates

01-301-31   Left hook, 4 hole 6mm bridge
01-301-32   Right hook, 4 hole 6mm bridge

Bracket Plates
**Options**

- OrthoAnchor™ Teflon Container: 55-969-70
- Office Fixation Kit: 55-961-28
- Trephine, 5mm diameter: 38-032-05
- Bending Pliers: 25-412-12
- Lindorf Plate Holding Instrument: 25-435-15
- Rosebud Burr: 51-535-66
- Right Angle Screwdriver: 50-900-00
- Soft Tissue Punch, 2mm: 28-240-02

**Drills**

**Cylindrical Attachment**
- 1.1mm DIA x 50mm: 25-451-05 (Stop 5mm)
- 1.1mm DIA x 50mm: 25-451-07 (Stop 7mm)

**Stryker Attachment**
- 1.1mm DIA x 50mm: 25-452-05 (Stop 5mm)
- 1.1mm DIA x 50mm: 25-452-07 (Stop 7mm)

**Dental Latch**
- 1.1mm DIA x 50mm: 50-920-07 (Stop 7mm)
- 1.1mm DIA x 50mm: 50-920-00 (No Stop)

**Blades**

**Centre-Drive**
- 1.5mm, 80mm: 25-430-98
- 2.0/2.3mm, 80mm: 25-434-98

**Cross-Drive**
- 1.5mm, 80mm: 25-483-97
- 2.0/2.3mm, 94mm: 25-484-97

**Right Angle Blade**
- 1.5mm Cross-Drive: 50-915-15
- 2.0/2.3mm Cross-Drive: 50-915-20
- 1.5mm Centre-Drive™: 50-910-15
A tradition of innovation and service

KLS Martin® has been manufacturing high quality surgical instruments and medical devices since 1896 in Mühlheim, Germany. Our commitment to the creation of innovative products has brought about many advancements in the discipline of plastic reconstructive surgery.

Surgical innovation and service to our customers are the core principles that drive our manufacturing process. Our North American headquarters and extensive network of local representatives brings this relationship directly to you.

Please contact us for further information on any of the products you see in this literature.

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www.klsmartin.com

a member of

The OrthoAnchor™ System

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