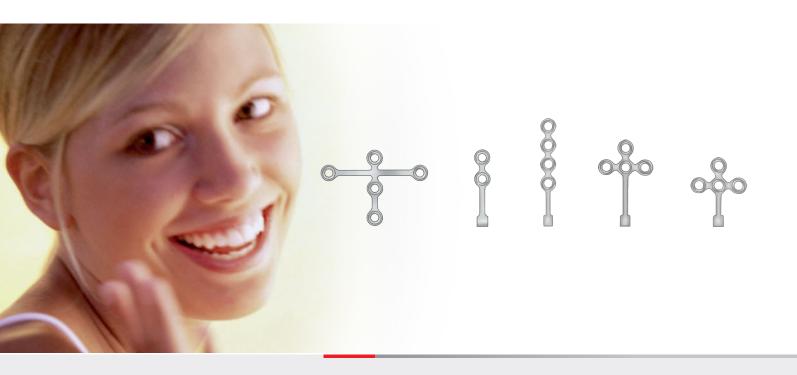
KLS Martin



OrthoAnchor[™]

A new reason to smile

www.klsmartinnorthamerica.com

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When we improve function and symmetry of the face via the occlusion, the results are easy to see in the smile of a patient!

The passion to find a better way

Traditional orthodontics relied on the vectors within the arch, or headgear in order to move the occlusion into symmetry. KLS Martin pioneered the field of bone anchorage many years ago, and has maintained a comprehensive portfolio of options from proven screw designs to adaptable and very stable plate designs. Our experience in the OR and many years of collaboration with orthognathic teams keeps our product line at the cutting edge.



OrthoAnchor™ Screws

Developed in cooperation with Dr. Paul Thomas, Senior Research Fellow, Eastman Dental Institute, London, England



Orthodontic appliances can be attached using the 0.9 mm (0.035") gap on the head of the screw, or through the 0.9 mm (0.035") diameter hole in the head of the screw.

The Ortho Anchorage System can be used in cases which maximum anchorages are required. The treatment results using the Ortho Anchorage System have a better prognosis in patients over the age of 13 years. The Ortho Anchorage System can only be used in condition that retention can be attained in the cortical bone.

Indications

- $\cdot\,$ Present posterior occlusal relationship should be maintained stably
- $\cdot\,$ The occurrence of periodontitis and dental caries should be prevented.
- $\cdot\,$ There is no dental anchorage.
- Posterior teeth cannot be used as a dental anchorage due to excessive alveolar bone loss.
- $\cdot\,$ The use of skeletal anchorage can shorten treatment period.
- $\cdot\,$ When maximum anchorage preparation is required.
- When skeletal anchorage is required but the width of attached gingiva is not enough.







Placement X-ray



Placement



Loading

Contraindications

- · When cortical bone is not thick enough.
- · When the patient does not accept its necessity.
- When the patient has an abnormal habit of mastication for retention and stability after implantation.
- · It cannot be used in deciduous or mixed dentition.
- \cdot 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.
- Foreign body sensitivity. Where material sensitivity is suspected, tests are to be made prior to implantation.

C-tube Plates

Developed in cooperation with Prof. Dr. Kyu Rhim Chung, Kyung-Hee University Hospital



The tube has an inner diameter of 0.9 mm (.035"), accepting an archwire, ligature wire, or other orthodontic hardware.

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

Advantages of the C-tube Plates

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 (4-5 mm screws can be used).
- Where OrthoAnchor[™] screws do not provide an adequate force vector or fixation, plates provide multiple points of anchorage (micro screws) in the bone that results in an independent stable structure.
- · The use of skeletal anchorage will shorten the treatment period.

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



Indications for Use

The Ortho Anchorage System can be used in cases which maximum anchorages are required. The treatment results using the Ortho Anchorage System have a better prognosis in patients over the age of 13 years. The Ortho Anchorage System can only be used in condition that retention can be attained in the cortical bone.

- The C-Tube is intended to be placed bi-laterally for en masse retraction of the anterior teeth of the maxilla or the mandible.
- 1. Present posterior occlusal relationship should be maintained stably.
- 2. The occurrence of periodontitis and dental caries should be prevented.
- 3. There is no dental anchorage.
- 4. Posterior teeth cannot be used as a dental anchorage due to excessive alveolar bone loss.
- 5. The use of skeletal anchorage can shorten treatment period.
- 6. When maximum anchorage preparation is required.
- 7. When skeletal anchorage is required but the width of attached gingiva is not enough.

Contraindications

- 1. When cortical bone is less than 5 mm in depth.
- 2. When the patient does not accept its necessity.
- 3. It cannot be used in deciduous or mixed dentition.
- 4. Active infection.
- 5. Patient conditions including: blood supply limitations, insufficient quantity or quality of bone or latent infections.
- 6. Patients with mental or neurological conditions who are unwilling or incapable of following post-operative care instructions.
- 7. General contra-indication is the severe diseased system: Immunodeficiency irradiated patients severe diabetes severe osteoporosis.

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.



Patient's lateral cephalogram.

Intra-operative approach



The C-tube plate has been adapted and is fixed with two Drill-Free[®] screws 1.5×7 mm between the second premolar and the first molar.



After suturing, the eyelet remains in the vestibulum.

Initial stage of treatment



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



Occlusal view of the maxilla.



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

12 months post operation







Final results after 1 year.

The dental arch is completely formed.

Frontal view

Post-treatment intraoral view and lateral cephalogram



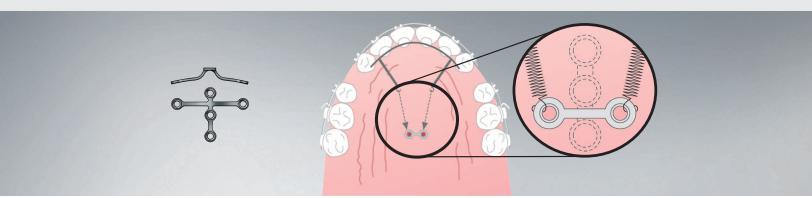








C-palate Plate



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

The basic principle of C-palate plate fixation: The plate is fixed to the palatum with three Drill-Free® screws. WARNING: The use of a fixation screw in excess of 5 mm in length is not recommended for implants in the palatal region.

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.



Post-operative situation

Post-anterior retraction situation

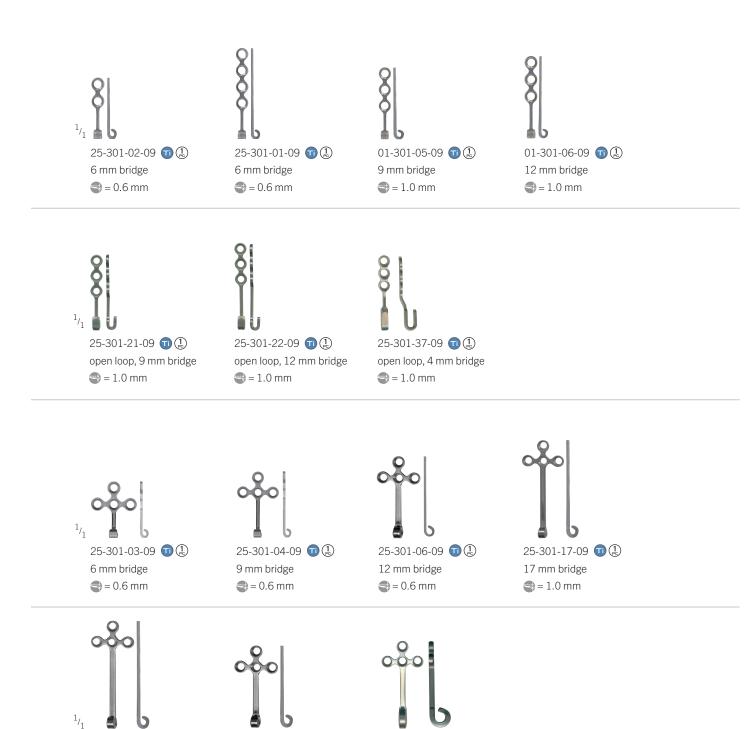
Indications for Use

The Ortho Anchorage System can be used in cases which maximum anchorages are required. The treatment results using the Ortho Anchorage System have a better prognosis in patients over the age of 13 years. The Ortho Anchorage System can only be used in condition that retention can be attained in the cortical bone.

- The C-Palate is intended for en masse retraction of the anterior teeth without loss of anchorage.
- 1. Present posterior occlusal relationship should be maintained stably.
- 2. The occurrence of periodontitis and dental caries should be prevented.
- 3. There is no dental anchorage.
- 4. Posterior teeth cannot be used as a dental anchorage due to excessive alveolar bone loss.
- 5. The use of skeletal anchorage can shorten treatment period.
- 6. When maximum anchorage preparation is required.
- 7. When skeletal anchorage is required but the width of attached gingiva is not enough.

Contraindications

- 1. When cortical bone is less than 5 mm in depth.
- 2. When the patient does not accept its necessity.
- 3. It cannot be used in deciduous or mixed dentition.
- 4. Active infection.
- 5. Patient conditions including: blood supply limitations, insufficient quantity or quality of bone or latent infections.
- 6. Patients with mental or neurological conditions who are unwilling or incapable of following post-operative care instructions.
- 7. General contra-indication is the severe diseased system: Immunodeficiency irradiated patients severe diabetes severe osteoporosis.



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12 mm bridge

🚭 = 1.5 mm

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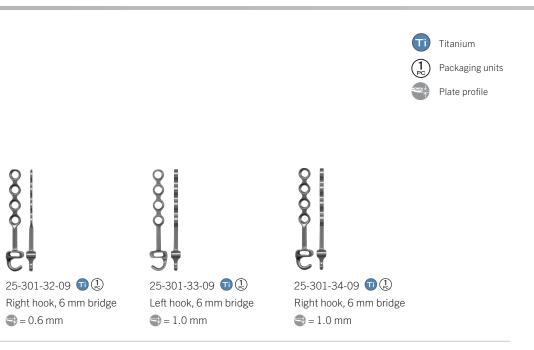
19 mm bridge

🕞 = 1.0 mm

25-301-20-09 🔟 🔔

12 mm bridge

➡ = 1.0 mm





e = 0.6 mm

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Left hook, 6 mm bridge

1/1

25-301-35-09 **①** (2) Left hook, T-shape, 6 mm bridge **④** = 1.0 mm



25-301-36-09 可 🕒 Right hook, T-Shape, 6 mm bridge 🚭 = 1.0 mm



00-301-12-09 ① (1) 5 mm flat, 12 mm bridge = 1.0 mm







OrthoAnchor™



1.5 mm "soft tissue collar"

		Cross	maxDrive®	
	1.5 mm Dia		Cartridges	
	1.5 x 6.0 mm	50-340-08-09	99-340-08-04	50-334-08-09
- 1	1.5 x 8.0 mm	50-340-10-09	99-340-10-04	50-334-10-09
<u> </u>	1.5 x 10.0 mm	50-340-11-09	99-340-11-04	50-334-11-09
	2.0 mm Dia			
	2.0 x 6.0 mm	50-345-11-09	99-345-11-04	50-335-11-09
	2.0 x 8.0 mm	50-345-13-09	99-345-13-04	50-335-13-09
77	2.0 x 10.0 mm	50-345-15-09	99-345-15-04	50-335-15-09



2.0 mm "soft tissue collar"

		Cross-Drive		maxDrive®
	1.5 mm Dia		Cartridges	
4	1.5 x 8.0 mm	50-340-12-09	99-340-12-04	50-334-12-09
	2.0 mm Dia			
	2.0 x 8.0 mm	50-345-14-09	99-345-14-04	50-335-14-09
1				
1				

Titanium alloy

Packaging units

Cross-I	Drive					
Drill-Free® Screws self-retaining						
		Cross-Drive		maxDrive®		
	1.5 mm Dia	(5 PC		5		
	1.5 x 4 mm	25-678-04-09	25-678-04-91	25-878-04-09	25-878-04-91	
	1.5 x 5 mm	25-678-05-09	25-678-05-91	25-878-05-09	25-878-05-91	
	1.5 x 7 mm	25-678-07-09	25-678-07-91	25-878-07-09	25-878-07-91	
1						
4						







*For storage in Level One modules

St Stainless steel

 $\left(\begin{array}{c} 1\\ Pc \end{array} \right)$ Packaging units

Twist drills					
St (L)					
	ØxL(mm)	Stop (mm)			
+ n +	1.1 x 50	5	25-452-05-91		
Stop	1.1 x 50	7	25-452-07-91		



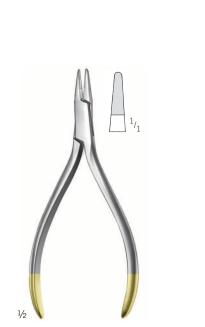
St 🕽

 ØxL(mm)
 Stop (mm)

 1.1 x 30
 17
 50-920-00-07

 1.1 x 20
 7
 50-920-07-07

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25-486-13-07 (a) **TC GOLD** 13 cm / 5 ¹/₄" Modeling pliers





50-900-00-04 St (1) Right Angle Screwdriver



St Stainless steel

Packaging units

TC GOLD Instruments with tungsten carbide inserts



55-961-28-04 Office Fixation Kit Module Level One Style Slots for screw cartridge An all-in-one kit for OrthoAnchor[™] and other in-office procedures

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REV 11 · 2018.01 · OrthoAnchor[™] · The information presented is intended to demonstrate a KLS Martin LP product. Please refer to the IFU for the full list of indications, contraindications, precautions, and sterilization information. Always refer to the IFU before using any KLS Martin LP product. Surgeons must always rely on their own clinical judgment when deciding which products and techniques to use with their patients.