

medartis®

PRECISION IN FIXATION

PRODUCT INFORMATION

TriLock 1.5 Scaphoid Plate

APTUS®
Hand



TriLock 1.5 Scaphoid Plate

Angular stable treatment
for scaphoid nonunion



Clinical Benefits and Plate Features

Optimized Plate Geometry

- Excellent stability of the reduction due to grid structure
- Two bars in the middle keep bone graft in place
- For optimal stability, up to 3 TriLock screws can be placed on each side of the nonunion
- Anatomically preshaped plate for simple and fast intraoperative use
- Marginal holes only have one bar to easily fit the plate to the shape of the scaphoid
- Variable angled locking ($\pm 15^\circ$) in each plate hole
- Early mobilization possible due to angular stability
- Volar plate placement
- Easy explantation

Maximum Soft Tissue Protection

- 0.8 mm low profile plate
- Highly polished surface and well rounded edges to reduce soft tissue irritation
- Minimal overall profile height

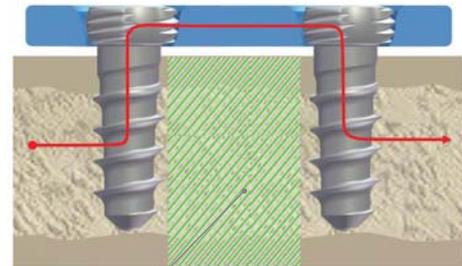


LITERATURE

1. Leixnering M., Pezzeri C., et al., First Experiences With a New Adjustable Plate for Osteosynthesis of Scaphoid Nonunions. *Journal of Trauma - Injury, Infection and Critical Care*, March 2011
2. Ghoneim A., The Unstable Nonunited Scaphoid Waist Fracture: Results of Treatment by Open Reduction, Anterior Wedge Grafting, and Internal Fixation by Volar Buttress Plate *Journal of Hand Surgery*, 36A, 17-24, Jan. 2011
3. Hoffmann R., *Checkliste Handchirurgie*, Thieme Verlag, pp 303-304, 3. Auflage 2009.

Biomechanics

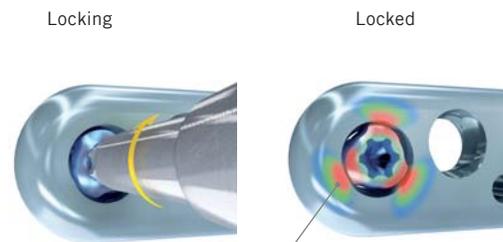
- Internal fixator principle
 - Stable plate – screw construct allows the bridging of unstable zones
 - Improved vascularization of the periosteum due to low contact of the plate



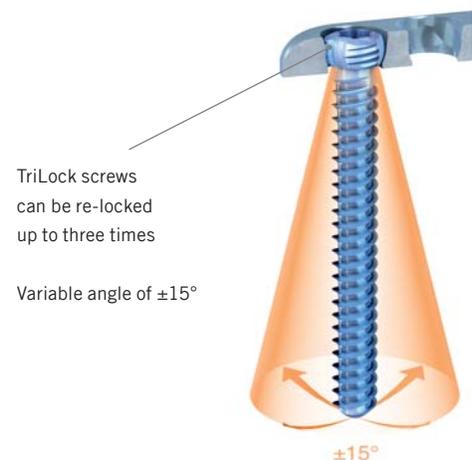
Load-free zone

TriLock Technology

- Secure, angular stable locking of the screw in the plate
 - Spherical three-point wedge-locking
 - Friction locking through radial bracing of the screw head in the plate – without additional tensioning components
- Screws can pivot freely by $\pm 15^\circ$ in all directions for optimal positioning
- Intra-operative fine tuning capabilities
- TriLock screws can be re-locked in the same plate hole under individual angles up to three times
- Minimal screw head protrusion thanks to internal locking contour
- No cold welding between plate and screws



Secure locking of the TriLock screw



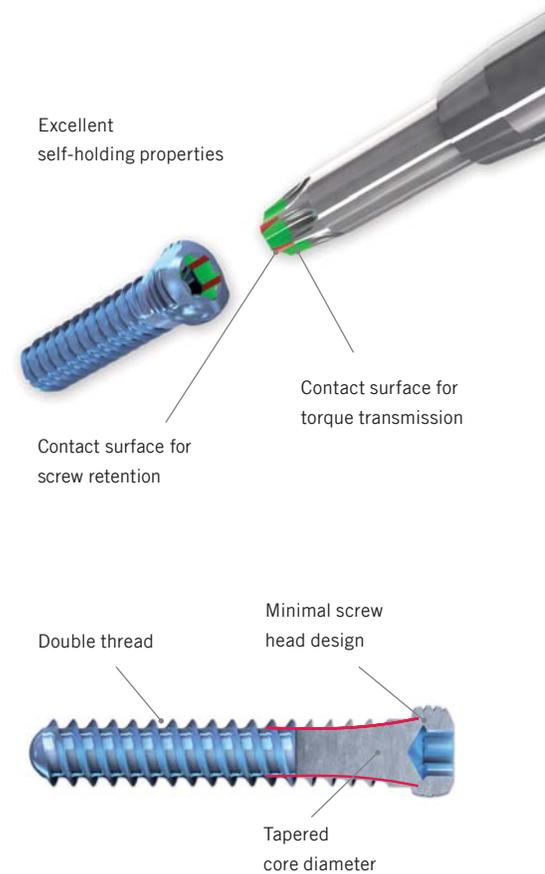
TriLock screws can be re-locked up to three times

Variable angle of $\pm 15^\circ$

$\pm 15^\circ$

Screw Features

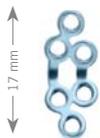
- HexaDrive screw head design
 - Secure connection between screw and screwdriver
 - Increased torque transmission
 - Optimal self-retaining mechanism
- Atraumatic tip prevents soft tissue irritation when inserting screws bicortically
- Tapered core diameter for increased torsional and tensile strength
- Precision cut thread profile for improved sharpness and self-tapping properties
- Double threaded for faster insertion of TriLock screws
- TiAl6V4 for improved strength



Ordering Information

1.5 TriLock Scaphoid Plate

Material: Titanium (ASTM F67)
Plate thickness: 0.8 mm



Art. No.	Holes	Pieces/Pkg
A-4350.80	6 (3x2)	1

1.5 TriLock Screws, HexaDrive 4

Material: Titanium (ASTM F136)



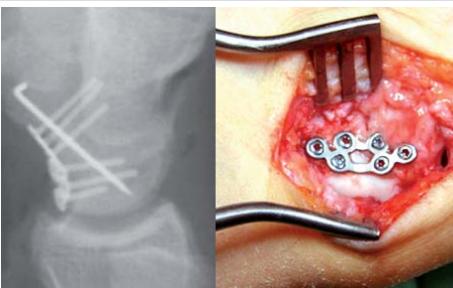
Length	Art. No.	Pieces/Pkg	Art. No.	Pieces/Pkg
4 mm	A-5250.04/1	1	A-5250.04	5
5 mm	A-5250.05/1	1	A-5250.05	5
6 mm	A-5250.06/1	1	A-5250.06	5
7 mm	A-5250.07/1	1	A-5250.07	5
8 mm	A-5250.08/1	1	A-5250.08	5
9 mm	A-5250.09/1	1	A-5250.09	5
10 mm	A-5250.10/1	1	A-5250.10	5
11 mm	A-5250.11/1	1	A-5250.11	5
12 mm	A-5250.12/1	1	A-5250.12	5
13 mm	A-5250.13/1	1	A-5250.13	5

Clinical Cases

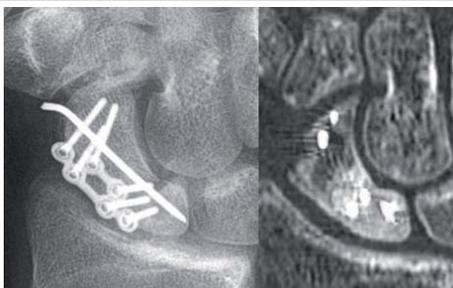
Case 1 - Scaphoid Nonunion



Preoperative CT and X-ray
Patient: male, 18 years old
Nonunion of the scaphoid



Intraoperative images
Left: Intraoperative X-ray. A K-wire was placed for additional stability
Right: Plate fixed to the scaphoid

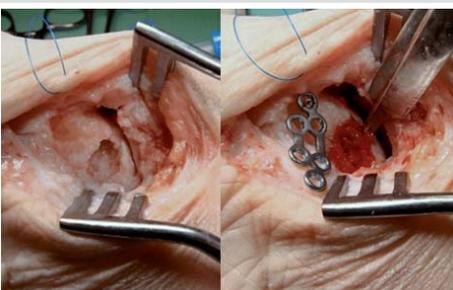


Left: X-ray, 6 weeks postoperative
Right: CT, 15 weeks postoperative
The union of the pseudarthrosis is well visible

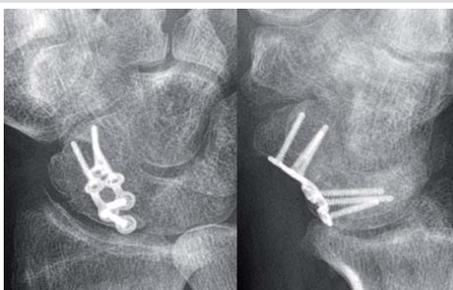
Case 2 - Scaphoid Nonunion



Preoperative CT and X-ray
Patient: male, 38 years old
Nonunion of the scaphoid



Intraoperative image, volar
Left: Resection of the pseudarthrosis tissue
Right: Pre-fixation of the plate with a suture



X-rays, 10 weeks postoperative
The union of the pseudarthrosis is well visible

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