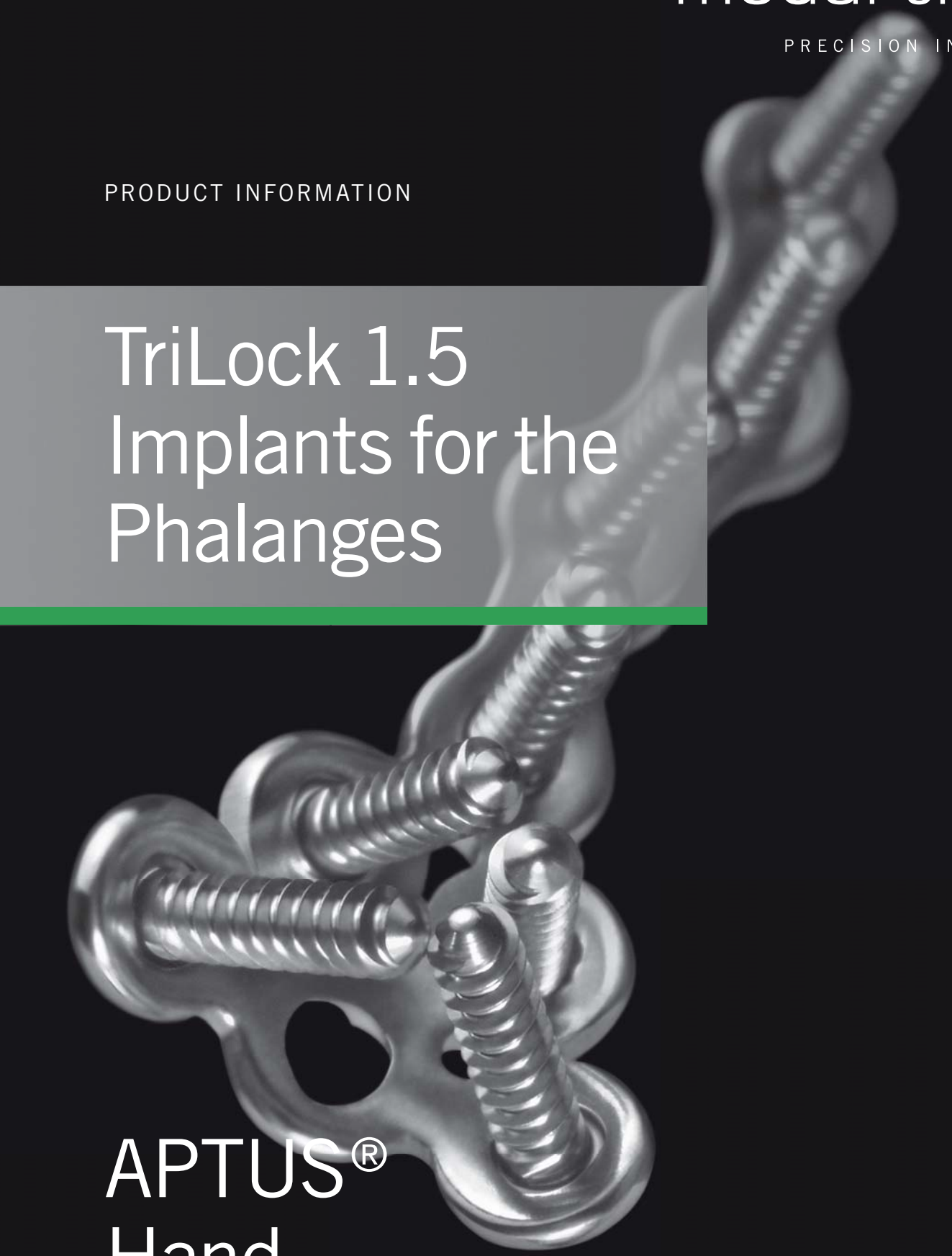
medartis®

PRECISION IN FIXATION

PRODUCT INFORMATION

TriLock 1.5 Implants for the Phalanges



APTUS® Hand

TriLock 1.5
The Smallest Locking System

Small, slender, strong

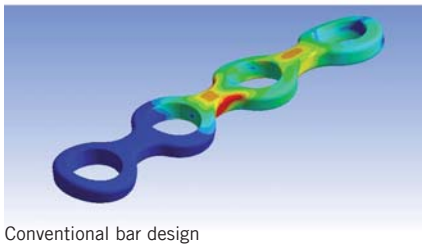
Low profile and angular stable 1.5 TriLock hand plates and screws are a new addition to the APTUS Hand fixation system. Expanding possible treatment options, 1.5 TriLock implants set a new standard in the angular stable fracture fixation of the hand. Design and configuration of plates and screws have been optimized for the complex anatomy of the phalanges. 1.5 TriLock implants provide an increased support in comminuted and intra-articular fractures and fractures close to the joint, as well as improved stability in osteoporotic bone and arthrodeses.

Clinical Benefits and Features

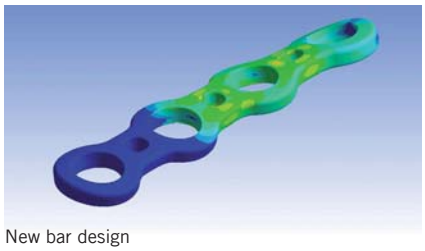
Optimized Plate Geometry

- 0.8 mm low profile plates
- Double bar on all straight plates for an increase of torsional stability by 20%
- Offset screw holes
  - o to avoid screw collisions
  - o to increase rotational stability
- Variable angled locking (±15°) in each plate hole

Stress distribution with torsional load; yellow-red coloring = increased stress



Conventional bar design



New bar design

Maximum Soft Tissue Protection

- The low profile construct with rounded edges may reduce soft tissue irritation
- Low overall profile

Highly polished surface left, conventional surface right

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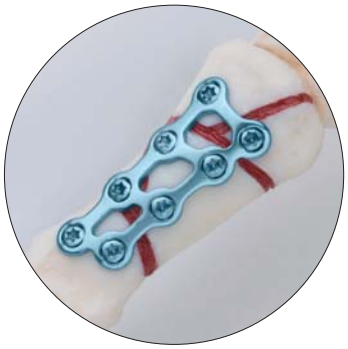
- Internal fixator for the phalanges
- Multidirectional (±15°) and angular stable
- Highly polished surface and rounded edges

Special Plate Designs

Grid Plates

- High rotational stability, especially for comminuted fractures
- Straight hole arrangement on one end of the plate to position the plate as close to the joint as possible
- Offset hole arrangement to reduce the risk of screw collisions

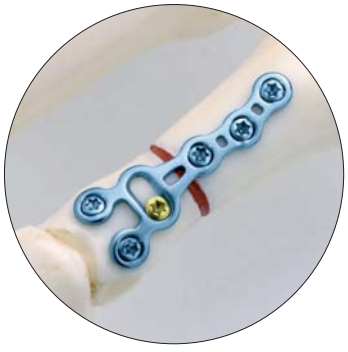


Double Row T-Plate

- For optimal reconstruction of articular fracture fragments and fractures close to the joint
- Ideal subchondral support of the articular surface
- Offset screw holes in the plate shaft

Rotation Correction Plate

- The oblong hole is close to the joint to perform the osteotomy close to the meta-physeal area
- Offset screw holes in the plate shaft



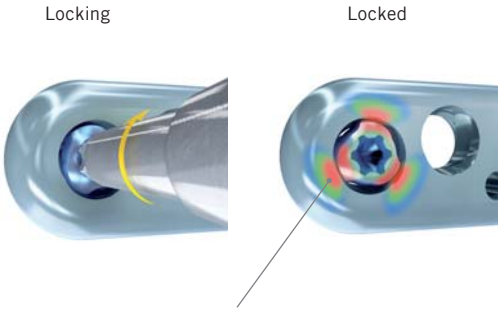
→ www.medartis.com/products/aptus/hand

Technology, Screw Features

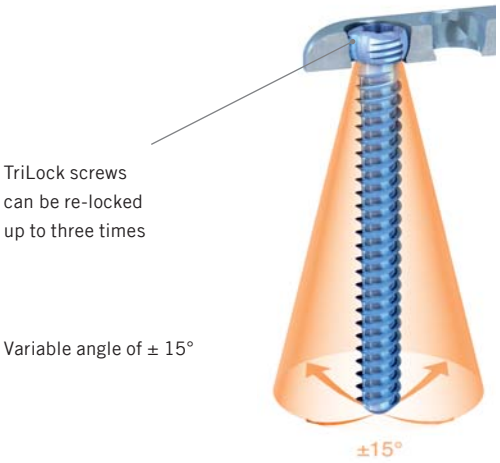
Multidirectional and angular stable TriLock locking technology

Technology

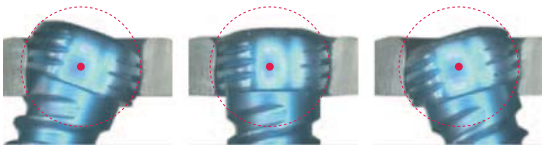
- Secure, angular stable locking of the screw in the plate
  - o Spherical three-point wedge-locking
  - o Friction locking through radial bracing of the screw head in the plate – without additional tensioning components
- Screws can pivot freely by ± 15° in all directions for optimal positioning
- Intra-operative 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

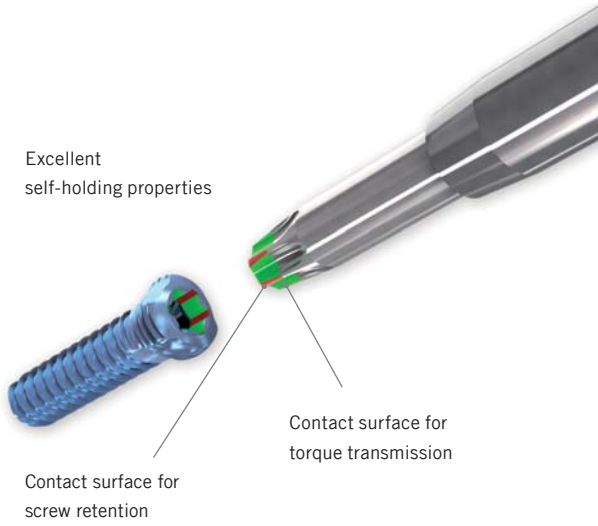


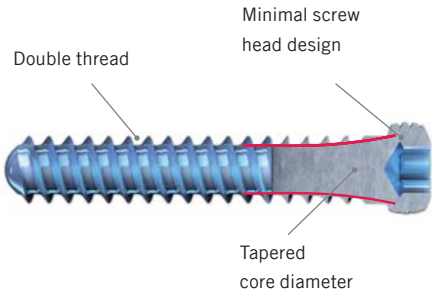
Minimal screw head protrusion



Screw Features

- HexaDrive screw head design
  - o Secure connection between screw and screwdriver
  - o Increased torque transmission
  - o Optimal self-retaining mechanism
- Maximum soft tissue protection due to chamfered shape of the screw head without sharp edges
- 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
- Each plate hole can be used with 1.2/1.5 cortical (fixation) or 1.5 TriLock screws





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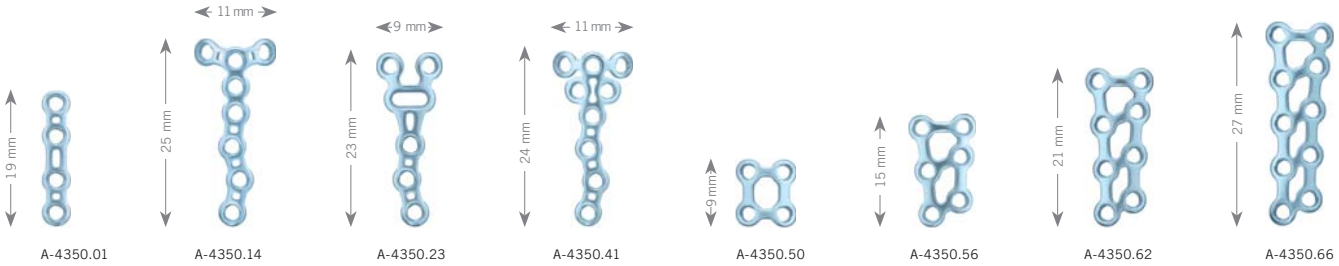
Ordering Information

1.5 TriLock Plates

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



A-4350.01 A-4350.14 A-4350.23 A-4350.41 A-4350.50 A-4350.56 A-4350.62 A-4350.66

Art. No.	Description	Holes	Piece per Pack
A-4350.01	straight	4	1
A-4350.14	T	8 (3/5)	1
A-4350.23	rotation	6 (3/3)	1
A-4350.41	double row, T	9 (5/4)	1
A-4350.50	Grid, rectangular	4 (2x2)	1
A-4350.56	Grid, trapezoid	6 (3x2)	1
A-4350.62	Grid, trapezoid	8 (4x2)	1
A-4350.66	Grid, trapezoid	10 (5x2)	1

1.5 TriLock Screws, HexaDrive 4

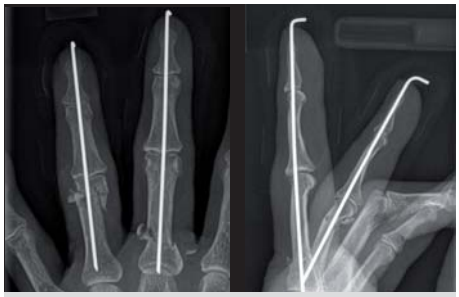
Material: Titanium (ASTM F136)

2:1

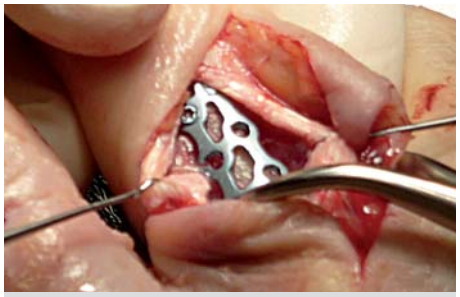
Length	Art. No	Piece per Pack	Art. No.	Piece per Pack
4 mm	A-5250.04/1	1	A-5250.04	5
5 mm	A-5250.05/1	1	A-5250.05	5
6 mm	A-5250.06/1	1	A-5250.06	5
7 mm	A-5250.07/1	1	A-5250.07	5
8 mm	A-5250.08/1	1	A-5250.08	5
9 mm	A-5250.09/1	1	A-5250.09	5
10 mm	A-5250.10/1	1	A-5250.10	5
11 mm	A-5250.11/1	1	A-5250.11	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 - Fracture of the Proximal Phalanges III and IV



Preoperative x-rays
72 year old woman, 4 weeks after fall from a ladder with temporary k-wire fixation.

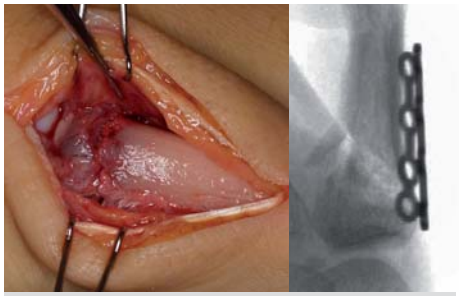


Osteosynthesis with two grid plates.

Postoperative x-rays

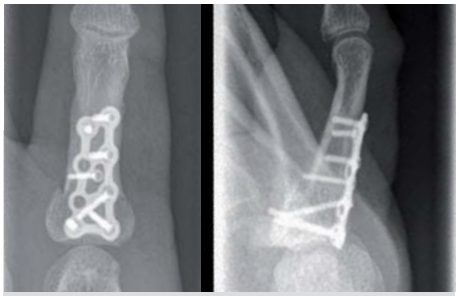
Case 2 - Fracture of the Proximal Phalanx V

Preoperative x-rays
48 year old man after bicycle accident.



Left: Intraoperative view of the comminuted fracture zone.

Right: Intraoperative x-ray of the unstable fracture site.



Postoperative x-rays

Case 1 - Prof. Schaefer, Basel, Switzerland, Case 2 - Dr. Ranft, Kiel, Germany

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