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
  - to avoid screw collisions
  - to increase rotational stability
- Variable angled locking (±15°) in each plate hole

Maximum Soft Tissue Protection
- Highly polished surface and rounded edges to reduce soft tissue irritation and adhesion
- Low overall profile
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

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

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Technology, Screw Features

Multidirectional and angular stable TriLock locking technology

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 ± 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 submerged locking contour
- No cold welding between plate and screws
Screw Features

- HexaDrive screw head design
  - Secure connection between screw and screwdriver
  - Increased torque transmission
  - 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
1.5 TriLock Screws, HexaDrive 4

Material: Titanium (ASTM F136)

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<th>Length</th>
<th>Art. No.</th>
<th>Piece per Pack</th>
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1.5 TriLock Plates

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

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<th>Art. No.</th>
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<td>A-4350.14</td>
<td>T</td>
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<td>A-4350.23</td>
<td>rotation</td>
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<td>A-4350.41</td>
<td>double row, T</td>
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<td>A-4350.50</td>
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<td>A-4350.56</td>
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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 instable fracture site

Postoperative X-rays

Case 3 – 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

Cases by courtesy of Prof. Schaefer, Basel, Switzerland and Dr. Ranft, Kiel, Germany

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