

# Hand Product Overview



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For further information regarding the APTUS product line visit  
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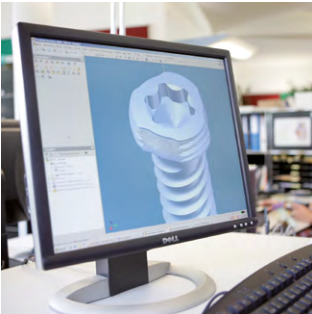
# About Medartis

Founded in 1997 and headquartered in Basel, Switzerland, Medartis is one of the world's leading manufacturers and providers of medical devices and solutions for the treatment of bone fractures of the upper and lower extremities as well as the head.

Medartis employs approximately 1,200 people at its 13 locations, including an additional development and manufacturing site in Warsaw, USA, and offers products in over 50 countries worldwide.

Leading innovations have characterized Medartis since its founding. A team of industry-experienced osteosynthesis innovators has developed a new generation of bone fixation technologies and continues to drive innovation in the field.

Medartis is committed to ensuring the well-being of patients by providing surgeons with anatomy-specific, high-quality, and user-friendly solutions to improve surgical outcomes.



# Hand System 1.2–2.3

The hand is one of the most complex and most frequently utilized parts of the human musculoskeletal system.<sup>1</sup> In collaboration with leading specialists, Medartis has developed the unique APTUS Hand System for treatment of fractures, osteotomies and arthrodesis of the hand.<sup>2</sup> The implants portfolio offers different technologies, designs, and sizes to support early mobilization and active therapy.



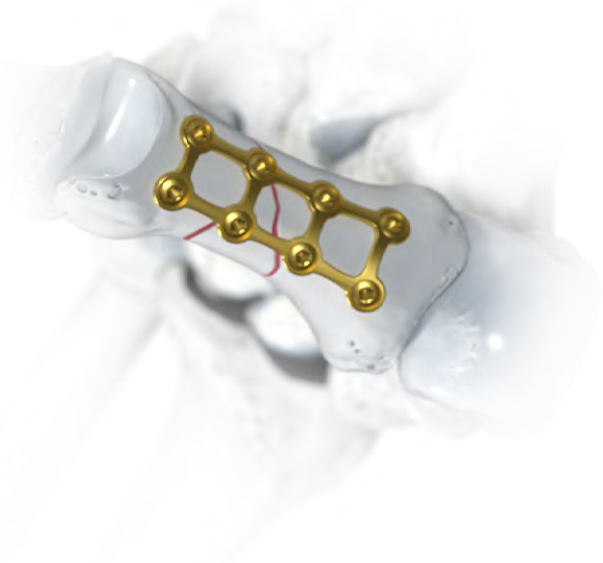
## CCS, headedCCS



With CCS and headedCCS, Medartis offers a comprehensive screw portfolio to meet anatomical needs and surgeon's preference.

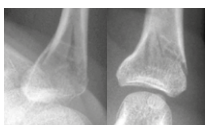
A large range of self-drilling and self-tapping cannulated screws is available for fracture reduction, and for joint arthrodesis, either with or without compression.

## 1.2/1.5 and 2.0/2.3 Fixation Plates



- General plate shapes – straight, L-/T-/Y-shape, and grid structure – are designed to match most bony anatomies and to support fracture reduction.<sup>3</sup>
- Low plate profile – with plate thicknesses of 0.6, 1.0, and 1.3 mm.
- Two screw sizes are available within each plate system for adequate fragment fixation:
  - 1.2 or 1.5 screws in 1.2/1.5 plates
  - 2.0 or 2.3 screws in 2.0/2.3 plates

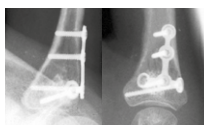
### Extraarticular base fracture of a proximal phalanx



Preoperative X-rays.



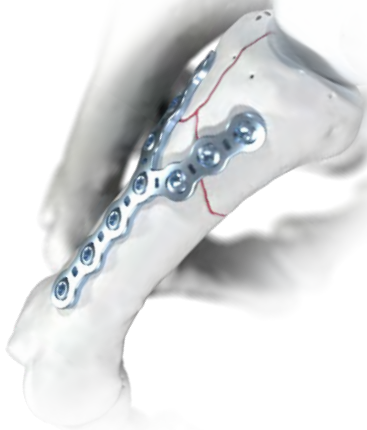
Intraoperative image.



Postoperative X-rays.

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## 1.2/1.5 and 2.0/2.3 TriLock Plates



- Internal fixator principle (locking system) allows initiation of mobilization in the early postoperative period.<sup>4</sup>
- General plate shapes – straight, L-/T-/Y-shape, and grid structure – are designed to match most bony anatomies and to support fracture reduction.
- Fracture specific plate geometries – e.g. double-row T-plates – offer more screw options in the subchondral area, allowing for more reduction options of articular fracture fragments and fractures close to the joint.
- Double bars between screw holes increase torsional stability.
- Offset screw holes prevent crack formation during drilling and screw insertion.
- Low plate profile – with plate thicknesses of 0.8, 1.0, and 1.3 mm.

### Fracture of the proximal phalanges III and IV



Preoperative X-rays.



Intraoperative image.



Postoperative X-rays.

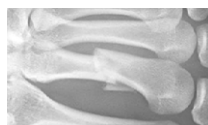
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## 2.0/2.3 MC Compression and TriLock<sup>PLUS</sup> Plates



- TriLock<sup>PLUS</sup> combines compression and locking in one step.
- TriLock<sup>PLUS</sup> holes allow up to 1 mm compression.  
With two opposing TriLock<sup>PLUS</sup> holes on the plate up to 2 mm compression can be achieved.
- For adequate fixation the general plate geometries – straight, L-/Y-shape – may be additionally adapted (i.e. cut, bent) to different bone shapes and fracture location.

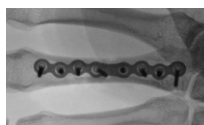
### Metacarpal shaft fracture



Preoperative X-ray.



Postoperative lateral X-ray.



Postoperative AP X-ray.

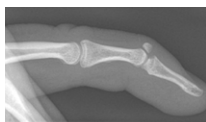
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## 1.2/1.5 Fixation and TriLock Hook Plates



- Hooks are pressed into the avulsed fragment to capture and reduce it to its original anatomical shape.<sup>5</sup>
- Dedicated holding instruments and K-wire holes support reduction of bony avulsion and plate positioning.
- Long hook plates with several holes offer more fixation options.
- The combination of hooks and TriLock holes increases stability in case of bony avulsion and intraarticular fragments.
- For adequate fixation, the long hook plates may be additionally adapted (i.e. cut, bent) to different bone shapes and fracture location.

### Fixation of Mallet fracture



Preoperative X-rays.



Intraoperative image.



Postoperative X-rays.

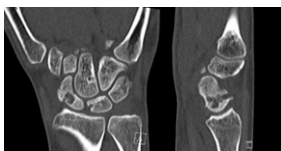
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## 1.2/1.5 TriLock Scaphoid Plates

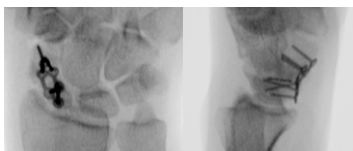


- Scaphoid plates are designed to treat primarily non-unions.<sup>6,7,8</sup> In addition, they allow the treatment of multifragmentary, complex or very distal fractures of the scaphoid.
- Three plate options provide an improved anatomical fit to accommodate the large variability in size and shape of the scaphoid bone.

### Non-union treated with the scaphoid plate



Preoperative X-rays.



Postoperative X-rays.

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## 1.2–2.3 TriLock MC Head/Neck Plate

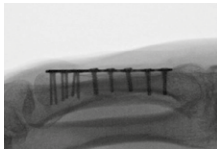


- A combination of 1.5 and 2.0 TriLock screws enables fixation of comminuted fragments in the head/neck (1.2/1.5 screws) while maintaining necessary strength in the shaft (2.0/2.3 screws).
- For an optimal fit in the head/neck region and shaft region, the plate can be additionally adapted (i.e. cut, bent).

### Metacarpal V head fracture



Preoperative X-rays.



Postoperative lateral X-ray.



Postoperative AP X-ray.

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## 1.2/1.5 and 2.0/2.3 TriLock Rotation Plates



- Laser mark supports positioning of the plate over the planned osteotomy site.
- Two compression holes allow for closing the osteotomy gap after rotational correction.
- Transversal oblong hole allows up to  $\pm 25^\circ$  of rotational correction and is close to the joint to perform the osteotomy near the metaphyseal area.
- Separate screw holes ("frog design") simplify contouring in the periarticular area.

### Rotational correction after malunion



Torsional deviation after carpometacarpal V arthrodesis following comminuted base fracture.



Intraoperative image.



Postoperative X-ray.

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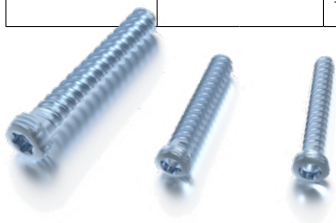
# Screws

Different screw diameters are available for each plate type:

|               | Cortical Screws                                             |     |                                                                                                     |     |
|---------------|-------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------|-----|
| Diameter (mm) | 1.2                                                         | 1.5 | 2.0                                                                                                 | 2.3 |
| Plate types   | 1.2/1.5<br>Fixation Plates<br><br>1.2/1.5<br>TriLock Plates |     | 2.0/2.3<br>Fixation Plates<br><br>2.0/2.3<br>TriLock Plates<br><br>2.0/2.3<br>MC Compression Plates |     |



|               | TriLock Screws            |     |                                                                            |
|---------------|---------------------------|-----|----------------------------------------------------------------------------|
| Diameter (mm) | 1.2                       | 1.5 | 2.0                                                                        |
| Plate types   | 1.2/1.5<br>TriLock Plates |     | 2.0/2.3<br>TriLock Plates<br><br>2.0/2.3<br>TriLock <sup>PLUS</sup> Plates |



|               | SpeedTip Screws                                             |
|---------------|-------------------------------------------------------------|
| Diameter (mm) | 1.5                                                         |
| Plate types   | 1.2/1.5<br>Fixation Plates<br><br>1.2/1.5<br>TriLock Plates |



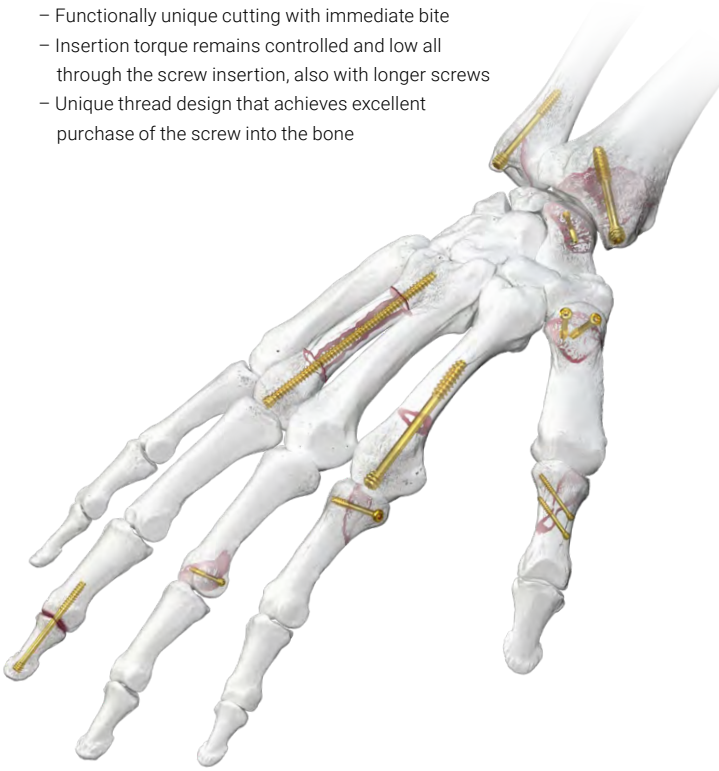
# Washers



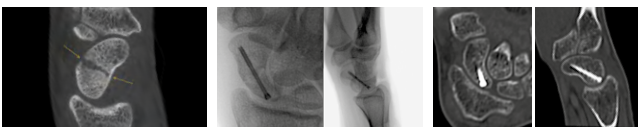
Biconcave design distributes the forces over a larger bone surface around the screw head.

# Cannulated Compression Screws: CCS and headed CCS 1.7, 2.2, 3.0

- Three different thread designs (short, long and fully threaded) for fracture reduction with or without compression
- Headed and headless screws. The CCS portfolio offers implants for intra- and extraarticular screw positioning
- Self-holding HexaDrive screw head design
- Sharp; self-drilling and self-tapping
- SpeedTip thread design
  - Functionally unique cutting with immediate bite
  - Insertion torque remains controlled and low all through the screw insertion, also with longer screws
  - Unique thread design that achieves excellent purchase of the screw into the bone



## Scaphoid fracture



Preoperative X-ray

Intraoperative images

Postoperative X-rays

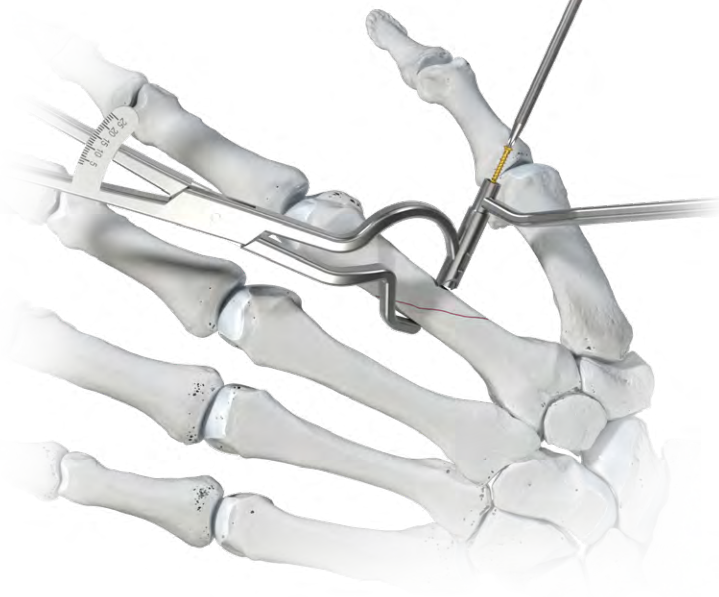
Clinical example published with the kind permission of: N. Schelhorn, R. Fricker, Switzerland

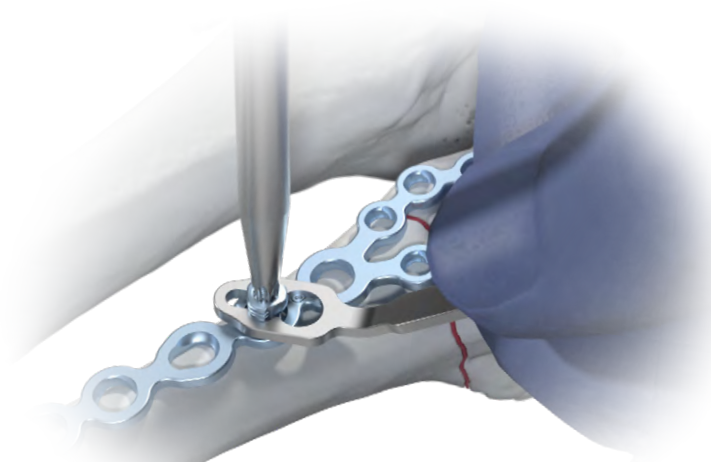
# Instruments

## General System Features

- Simple and easy-to-use instruments
- Color-coded instruments for easy identification in the operating room
- Finely adjusted ratcheting on reduction instruments

## Clamps for Lag Screw Technique





**Temporary Locking Stopper**

**Olive K-wires**



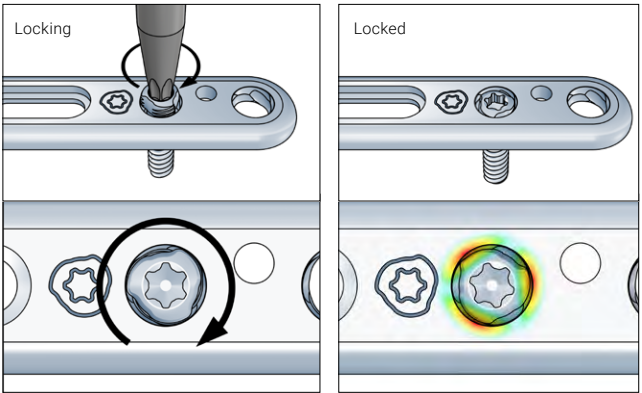
# Technology

## TriLock Locking Technology

TriLock is a multidirectional and angular stable locking technology.

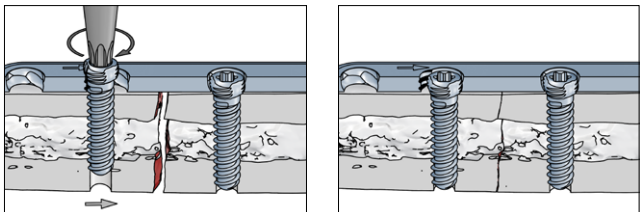
Locking is achieved through:

- Spherical three-point wedge locking, through radial bracing of the screw head in the plate without additional components

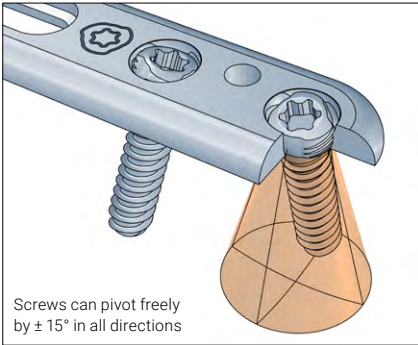


Spherical three-point wedge locking

## TriLock<sup>PLUS</sup>



TriLock<sup>PLUS</sup> screw holes offer the advantage of locking and compression in one step

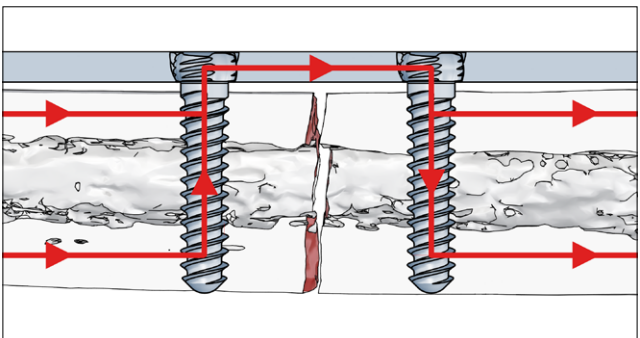


This locking technology enables:

- $\pm 15^\circ$  multidirectional screw angulation to position screws based on the fracture pattern
- Re-locking a screw in the same plate hole at individual angles up to three times
- Fine tuning of fragments positioning due to the threadless locking technology
- No cold welding between plate and screws
- Flexibility in screw type selection based on indication and fracture – the same hole can be used for either locking or non-locking screws

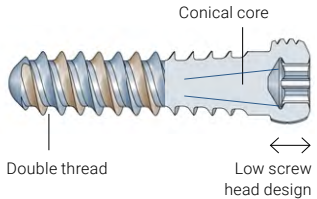
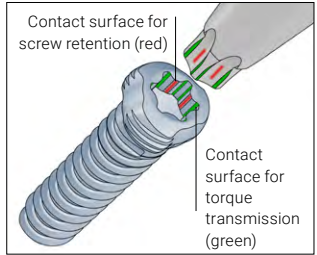
Internal fixator principle

Stable plate-screw construct allows for the bridging of unstable zones.



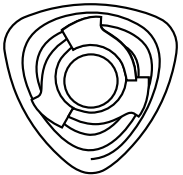
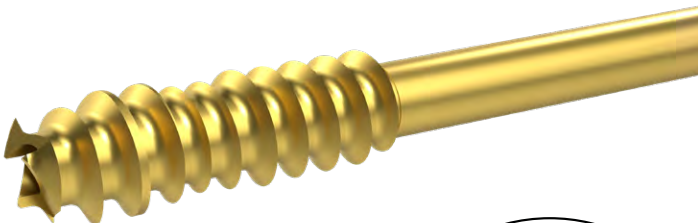
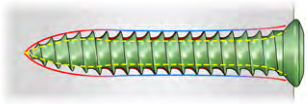
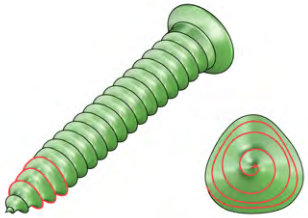
## Screw Features

- HexaDrive screw head design:
  - HexaDrive interface with self-holding properties between screw and screwdriver
  - Increased torque transmission
  - Simplified screw pick-up due to the self-holding technology
- Atraumatic screw tip provides soft tissue protection when inserting screws bicortically
- Soft tissue protection due to smooth screw head design
- Double-threaded screws reduce screw insertion time
- Increased torsional, bending and shear stability due to conical core
- Precision cut thread profile for sharpness and self-tapping properties



### SpeedTip Thread Design

- Functionally unique cutting with immediate bite
- Immediate cutting of the bone with only slight axial pressure
- The triangular tip design permits simultaneous drilling, tapping, and compression of the bone tissue<sup>9</sup>
- The triangular tip design results in increased pull-stability<sup>9</sup>
- Reduced insertion torque thanks to the polygonal tip and tapered shaft



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# Medartis Loan Service and Contact Addresses

All APTUS systems are also available as a loan set:

24 hrs service (Monday–Friday): order today for delivery on the next working day\*

## Contact addresses

Contact us for further information regarding the APTUS product line:

|                                              |                                                                                                                                     |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Medartis Headquarters<br/>Switzerland</b> | Phone: +41 (0)61 633 34 34<br>Fax: +41 (0)61 633 34 00<br>order@medartis.com                                                        |
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| <b>New Zealand</b>                           | Phone: 0800 548 001/+64 (9) 909 0416<br>Fax: +0800 548 002/+64 9 909 0419<br>bookings@medartis.com                                  |
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\* May vary by country



R\_HAND-00001101\_v2 / 2026-05, Medartis AG, Switzerland.

All technical data subject to alteration.

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