

medartis®

PRECISION IN FIXATION

PRODUCT INFORMATION

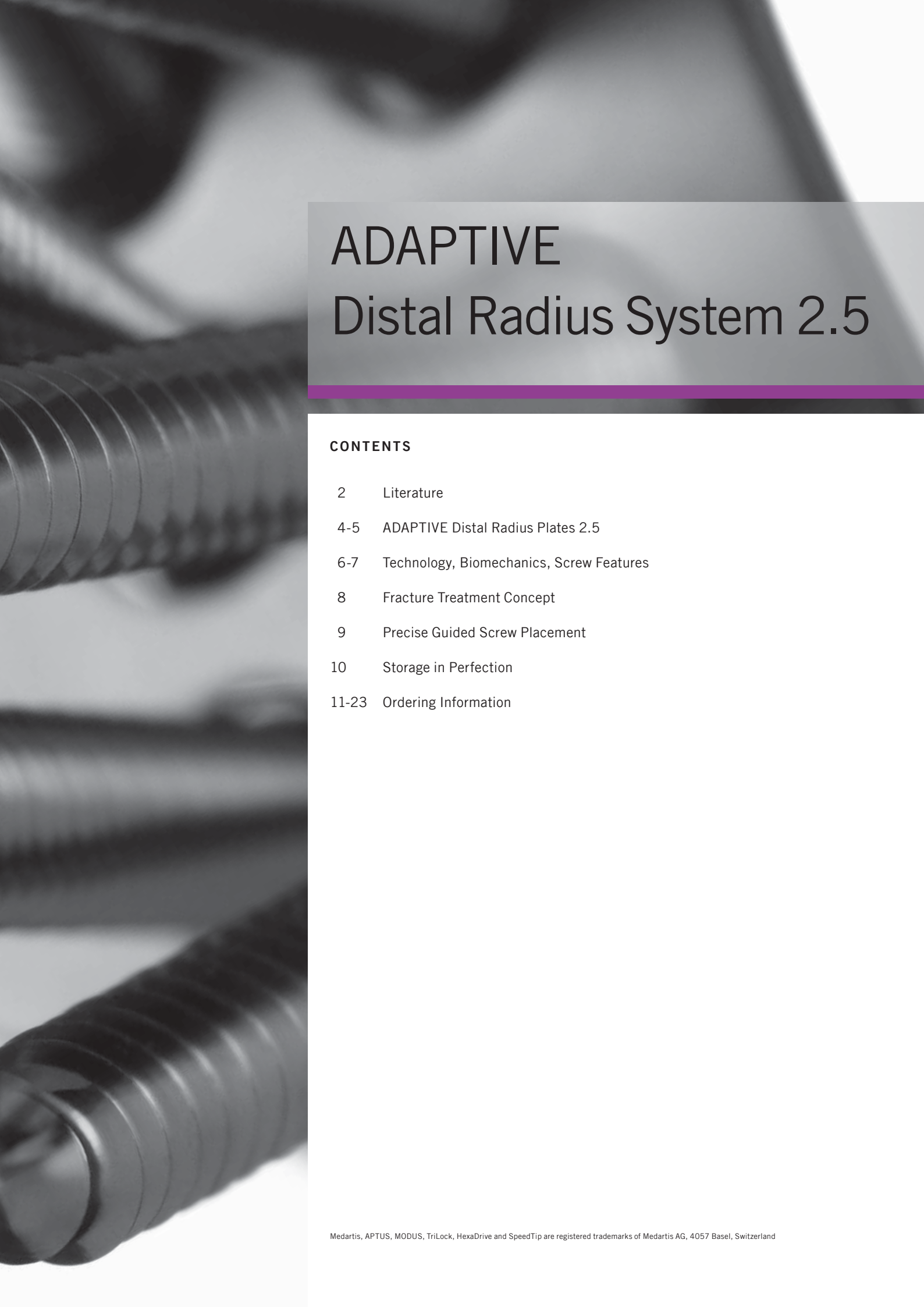
ADAPTIVE  
Distal Radius  
System 2.5

APTUS®  
Wrist

A close-up, black and white photograph of a distal radius plate with several locking screws. The plate is metallic and has a complex shape with multiple holes for screws. The screws are arranged in a fan-like pattern, with some pointing towards the viewer and others pointing away. The background is dark, making the metallic components stand out. The text is overlaid on the image in white and purple.

## LITERATURE

1. Krimmer, H., Pessenlehner, C., Haßelbacher, K., Meier, M., Roth, F., and Meier, R. Palmar fixed angle plating systems for instable distal radius fractures [Palmare winkelstabile Plattenosteosynthese der instabilen distalen Radiusfraktur] *Unfallchirurg*, 107[6], 460-467. 2004.
2. Mehling, I., Meier, M., Schloer, U., and Krimmer, H. Multidirectional Palmar Fixed-Angle Plate Fixation for Unstable Distal Radius Fracture [Multidirektionale winkelstabile Versorgung der instabilen distalen Radiusfraktur] *Handchir.Mikrochir.Plast.Chir*, 39[1], 29-33. 2007.
3. Moser, V. L., Pessenlehner, C., Meier, M., and Krimmer, H. Anterior Fixed Angle Plate Fixation of Unstable Distal Radius Fractures [Palmare winkelstabile Plattenosteosynthese der instabilen distalen Radiusfraktur] *Operat.Orthop.Traumatol.*, 16[4], 380-396. 2004.
4. Jakubietz, R. G., Gruenert, J. G., Kloss, D. F., Schindele, S., and Jakubietz, M. G. A Randomised Clinical Study Comparing Palmar and Dorsal Fixed-Angle Plates for the Internal Fixation of AO C-Type Fractures of the Distal Radius in the Elderly *Journal of Hand Surgery, European Volume* 33[5], 600-604. 2008.
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6. Weninger, P., Schueller, M., Drobetz, H., Jamek, M., Redl, H., and Tschegg, E. Influence of an Additional Locking Screw on Fracture Reduction After Volar Fixed-Angle Plating – Introduction of the “Protection Screw” in an Extra-Articular Distal Radius Fracture Model *Journal of Trauma - Injury, Infection, and Critical Care*, 67[4], 746-751. 2009.
7. Figl, M., Weninger, P., Jurkowsch, J., Hofbauer, M., Schauer, J., and Leixnering, M. Unstable Distal Radius Fractures in the Elderly Patient – Volar Fixed-Angle Plate Osteosynthesis Prevents Secondary Loss of Reduction *Journal of Trauma - Injury, Infection, and Critical Care*, 68[4], 992-998. 2010.
8. Sonderegger, J., Schindele, S., Rau, M., and Gruenert, J. G. Palmar multidirectional fixed-angle plate fixation in distal radius fractures: do intraarticular fractures have a worse outcome than extraarticular fractures? *Arch.Orthop.Trauma Surg.*, 2010.
9. Richter, R., Konnl, E., and Krimmer, H. Strategy of early corrective osteotomy [Strategie der Radiusfrühkorrektur] *Obere Extremität*, 5[2], 92-97. 2010.
10. Haefeli, M., Stober, R., Plaass, C., Jenzer, A., and Steiger, R. First experience with a dorsal plate in modern design for the treatment of distal radius fractures *Journal of Hand Surgery, European Volume* 35E[S1], A-0461. 2010.



# ADAPTIVE Distal Radius System 2.5

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# ADAPTIVE Distal Radius Plates 2.5

Optimal support of the lunate facet and the DRUJ

## Indications

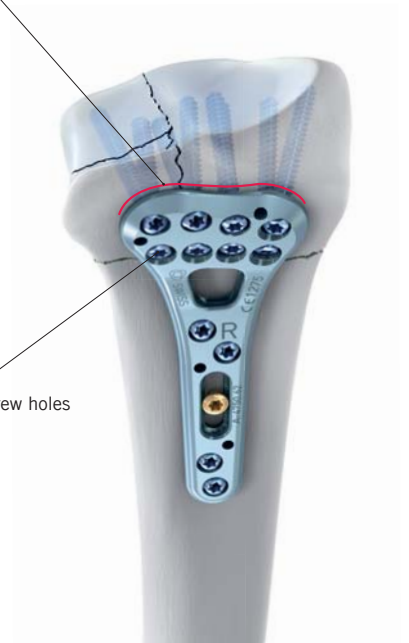
- Intra- and extra-articular fractures
- Correction osteotomies

## ADAPTIVE Watershed Line Design

- Improved stabilization of the sigmoid notch and lunate facet
- Optimal support of the radial styloid
- Treatment of fractures with ulnar fragment
- Perfect distal anatomical fit

ADAPTIVE  
Watershed line design

Pre-angled screw holes



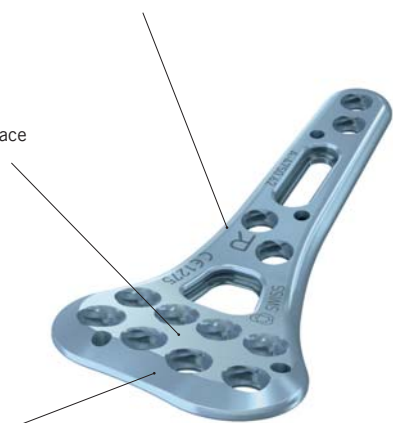
Easy plate identification

Highly polished surface

Chamfered plate contour

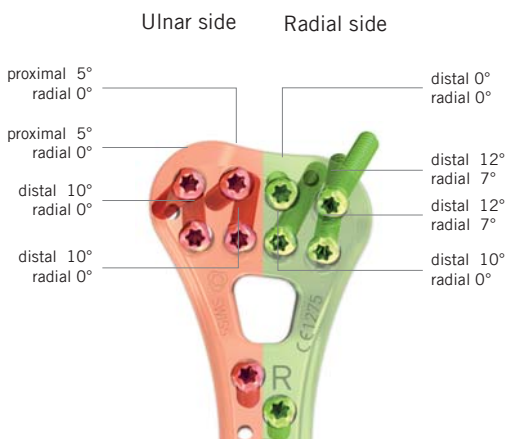
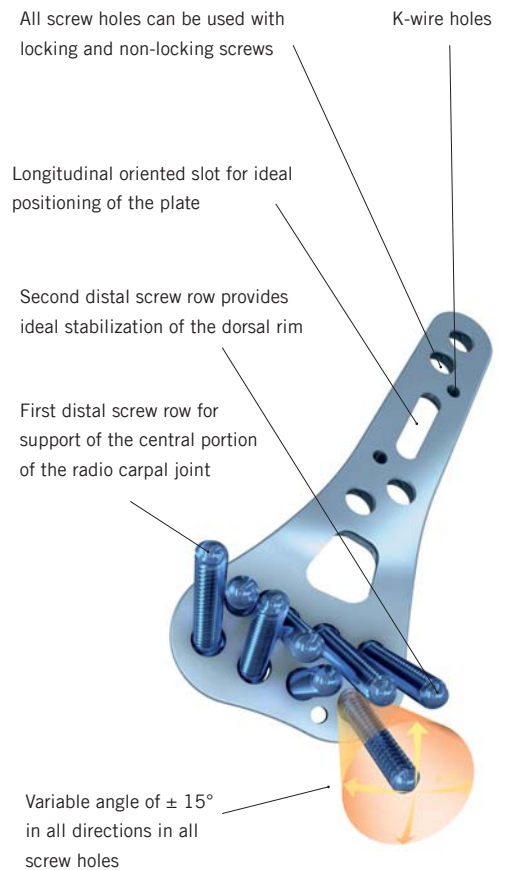


Subchondral buttressing of the RCJ and DRUJ due to converging screw placement

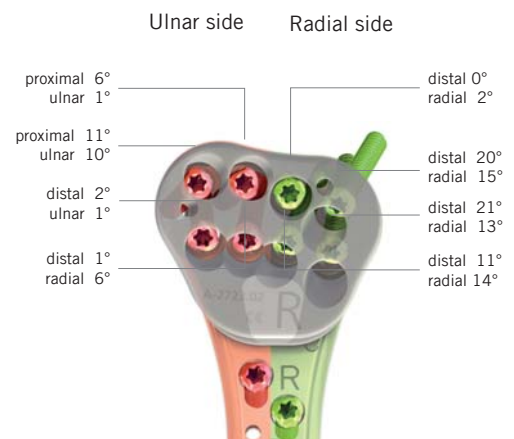


## Plate Features

- Pre-angled holes for ideal screw placement
- TriLock – variable angled locking of  $\pm 15^\circ$  in each plate hole
- Low overall profile height
- Chamfered plate contour for reduction of tendon irritation and abrasion
- Anatomically shaped to match the volar aspect of the distal radius
- Grade 4 Titanium for improved strength to bridge the fracture gap
- Highly polished surface to prevent soft tissue adhesions
- Clear marking for easy plate identification
- Radiolucent drill guide block for rapid and accurate insertion of screws
- K-wire holes to assist with temporary plate fixation and verification of implant position
- Consistent 2.5 mm screw diameter throughout for intra-operative simplicity



Pre-angled screw holes allow for additional angulation of  $\pm 15^\circ$



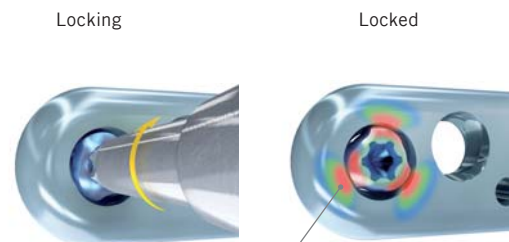
Unidirectional insertion of screws due to fixed angles of the drill guide block

# Technology, Biomechanics, Screw Features

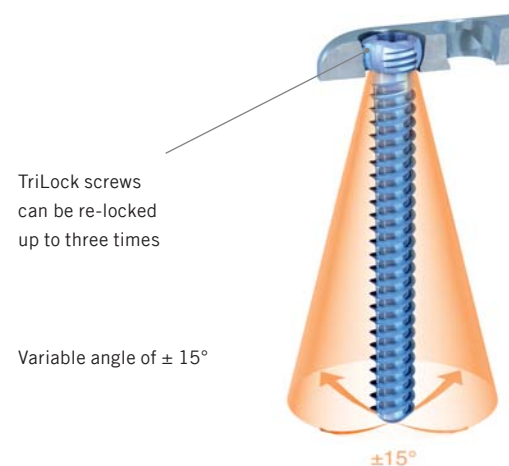
## Multidirectional and angular stable TriLock locking technology

### Technology

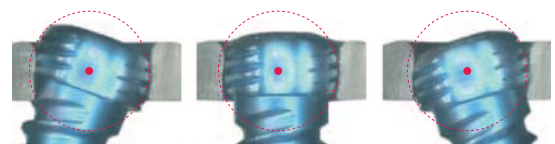
- Secure, angular stable locking of the screw in the plate
  - Spherical three-point wedge-locking
  - Friction locking through radial bracing of the screw head in the plate – without additional tensioning components
- Screws can pivot freely by  $\pm 15^\circ$  in all directions for optimal positioning
- Intra-operative fine tuning capabilities
- TriLock locking 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

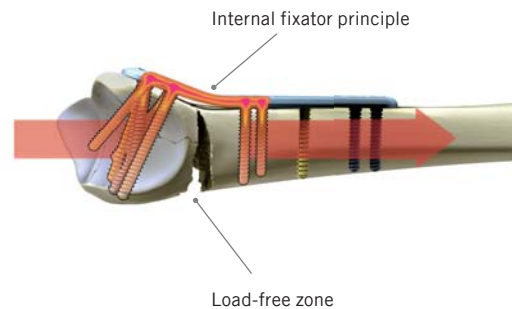


Minimal screw head protrusion



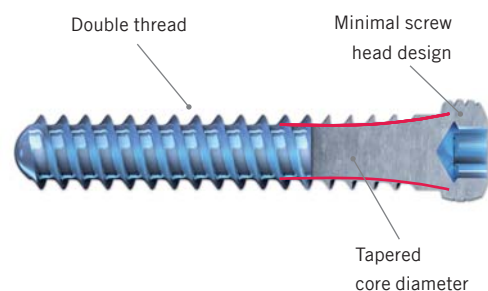
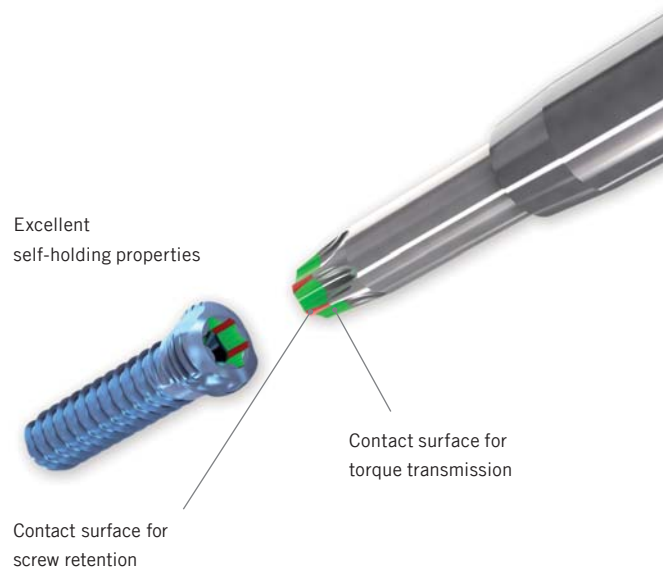
## Biomechanics

- Internal fixator principle
  - Forces around the distal radius bypass the generally unstable fracture site
  - Low contact for ideal blood supply
  - Functionally dynamic construct to avoid cut-out of 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



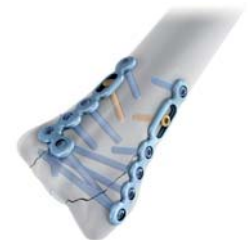
# Fracture Treatment Concept

## Surgical Benefits

- One system for primary and secondary reconstruction of the distal radius
- Complete system for fracture specific treatment
  - ADAPTIVE volar radius plates for far distal placement and for maximum support of the lunate facet and the DRUJ
  - Styloid volar radius plates for the treatment of isolated and complex fractures of the styloid process
  - Small fragment plates for dorsal and radial fixation
  - Specific volar correction plates indicated for correction osteotomies
- Anatomically pre-shaped and fracture specific implant designs reduce OR time
- Intra-operative adjustability
- Reduced soft tissue irritation due to optimized implant design
- Internal fixator principle for early mobilization
- Ideally suited for osteoporotic bone



**ADAPTIVE Volar Radius Plate**  
Volar fixation of a comminuted distal radius fracture with involvement of the lunate facet and the DRUJ.



**Small Fragment Plates**  
Dorsal and radial fixation of a multifragmented distal radius fracture with involvement of the lunate facet and the DRUJ.



**Styloid Radius Plate**  
Volar fixation of an intra-articular radio-styloid fracture.



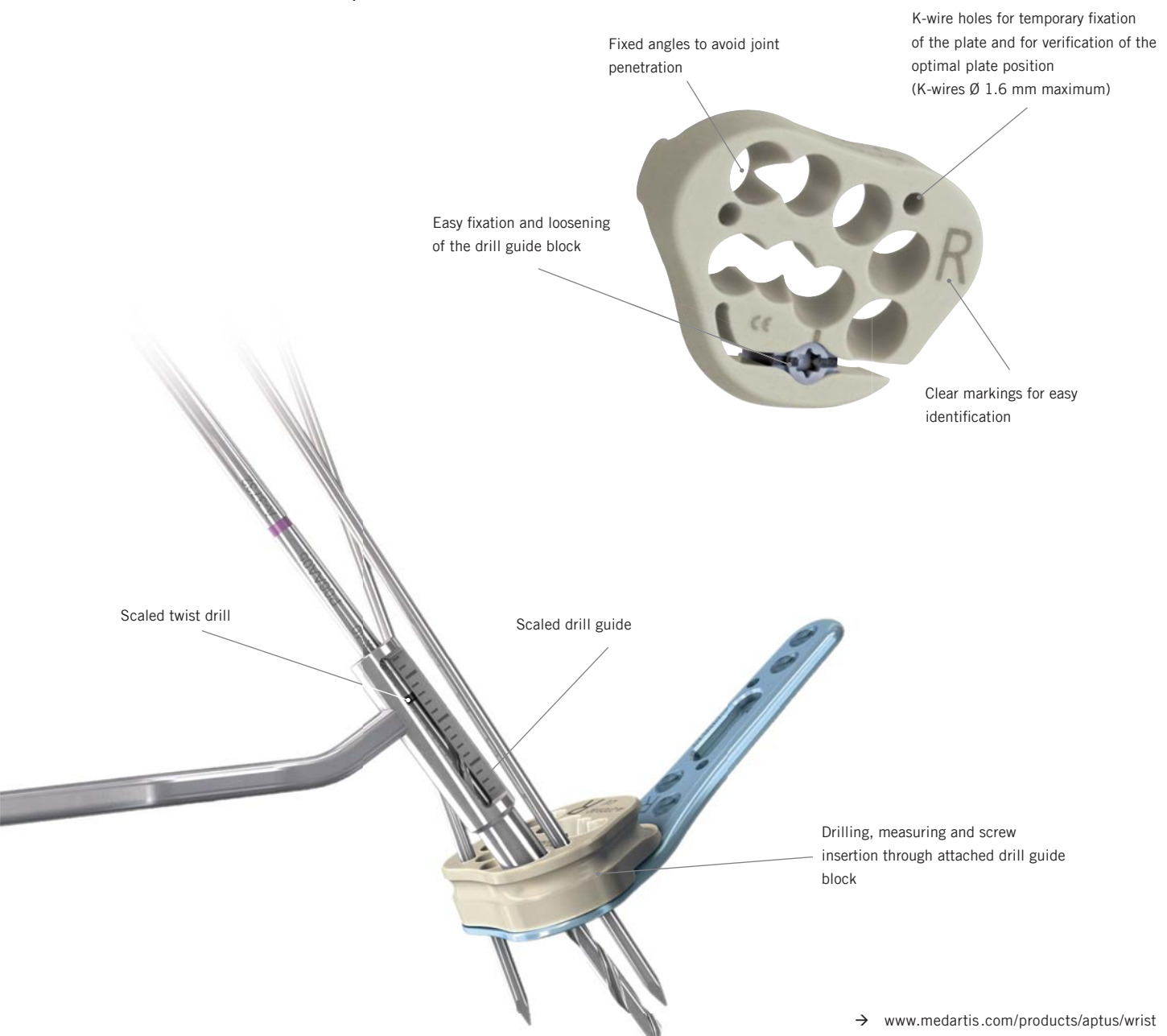
**Correction Osteotomy Plate**  
Volar correction osteotomy of a mal-united fracture.



# Precise Guided Screw Placement

## Drill Guide Block Features

- Rapid screw insertion and simple to use
- Radiolucent
- Specific left and right drill guide blocks to fit all ADAPTIVE volar plates



# Storage in Perfection

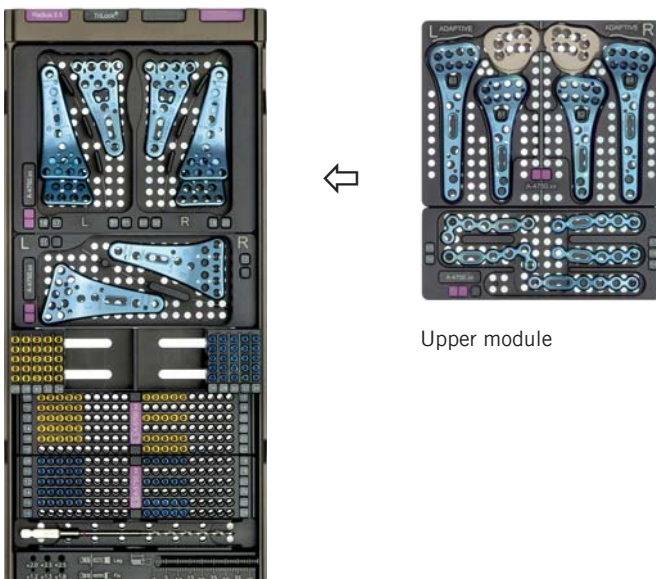
## Storing Features

- Modular concept
- Economic and compact system
- Easy to handle
- Customized kit arrangement
- Streamlined organization of implants and instruments
- Lightweight components



## APTUS ADAPTIVE Distal Radius 2.5 Implant Container (incl. Stickers, empty)

Art. No. A-0760



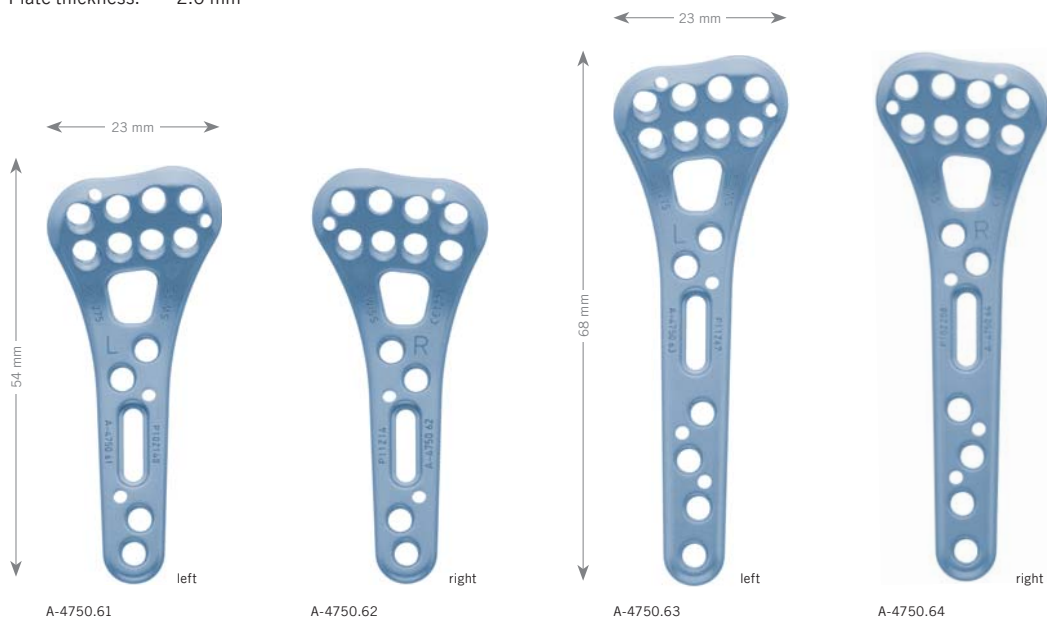
Upper module

Example of a fully equipped implant container A-0760.

# Ordering Information

## 2.5 ADAPTIVE TriLock Distal Radius Plates, volar

Material: Titanium (ASTM F67)  
 Plate thickness: 2.0 mm



Art. No.	Description	Holes	Pieces per Pack
A-4750.61	left	13	1
A-4750.62	right	13	1
A-4750.63	left, long	15	1
A-4750.64	right, long	15	1

## 2.5 Drill Guide Blocks

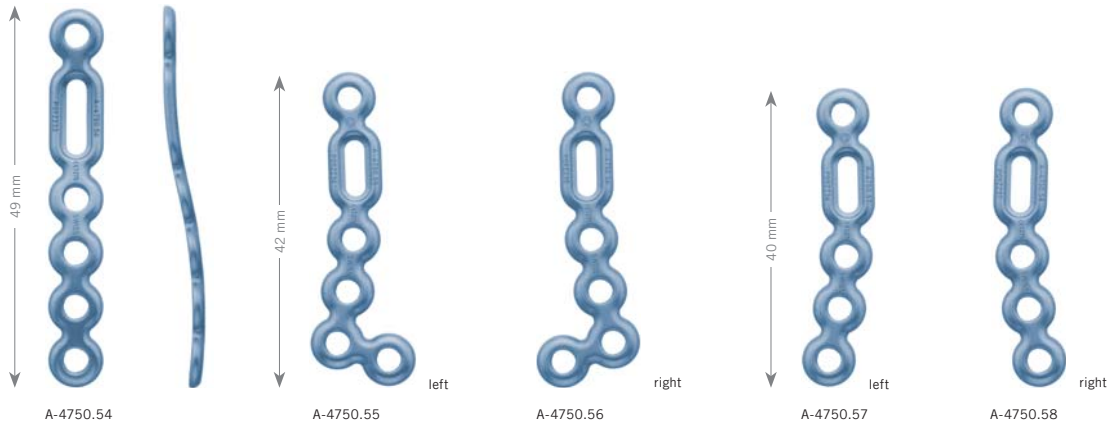
Material: PEEK



Art. No.	Description	Holes	Pieces per Pack
A-2723.01	left	8	1
A-2723.02	right	8	1

### 2.5 TriLock Distal Radius Small Fragment Plates

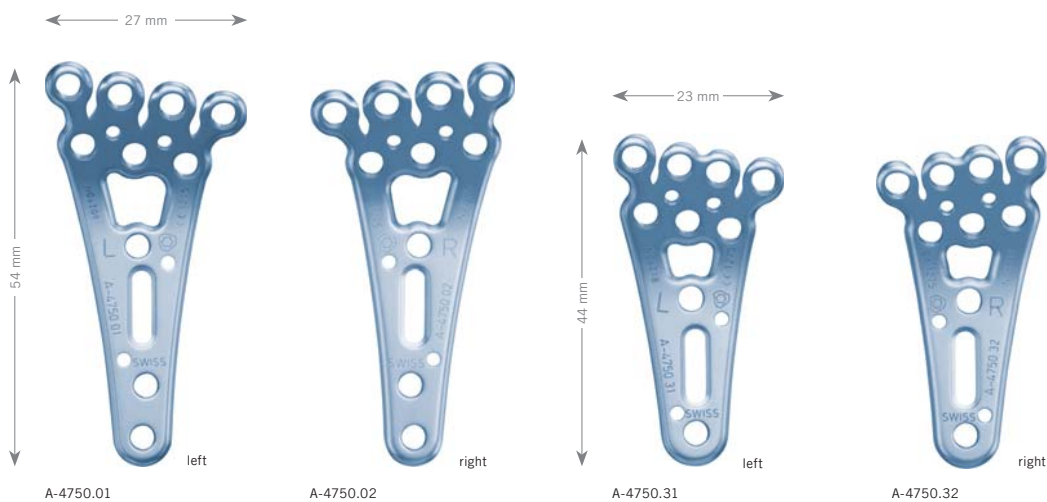
Material: Titanium (ASTM F67)  
 Plate thickness: 1.6 mm



Art. No.	Description	Holes	Pieces per Pack
A-4750.54	lateral	6	1
A-4750.55	L left	6 (2/4)	1
A-4750.56	L right	6 (2/4)	1
A-4750.57	left	5	1
A-4750.58	right	5	1

### 2.5 TriLock Distal Radius Fracture Plates, volar

Material: Titanium (ASTM F67)  
 Plate thickness: 1.6 mm

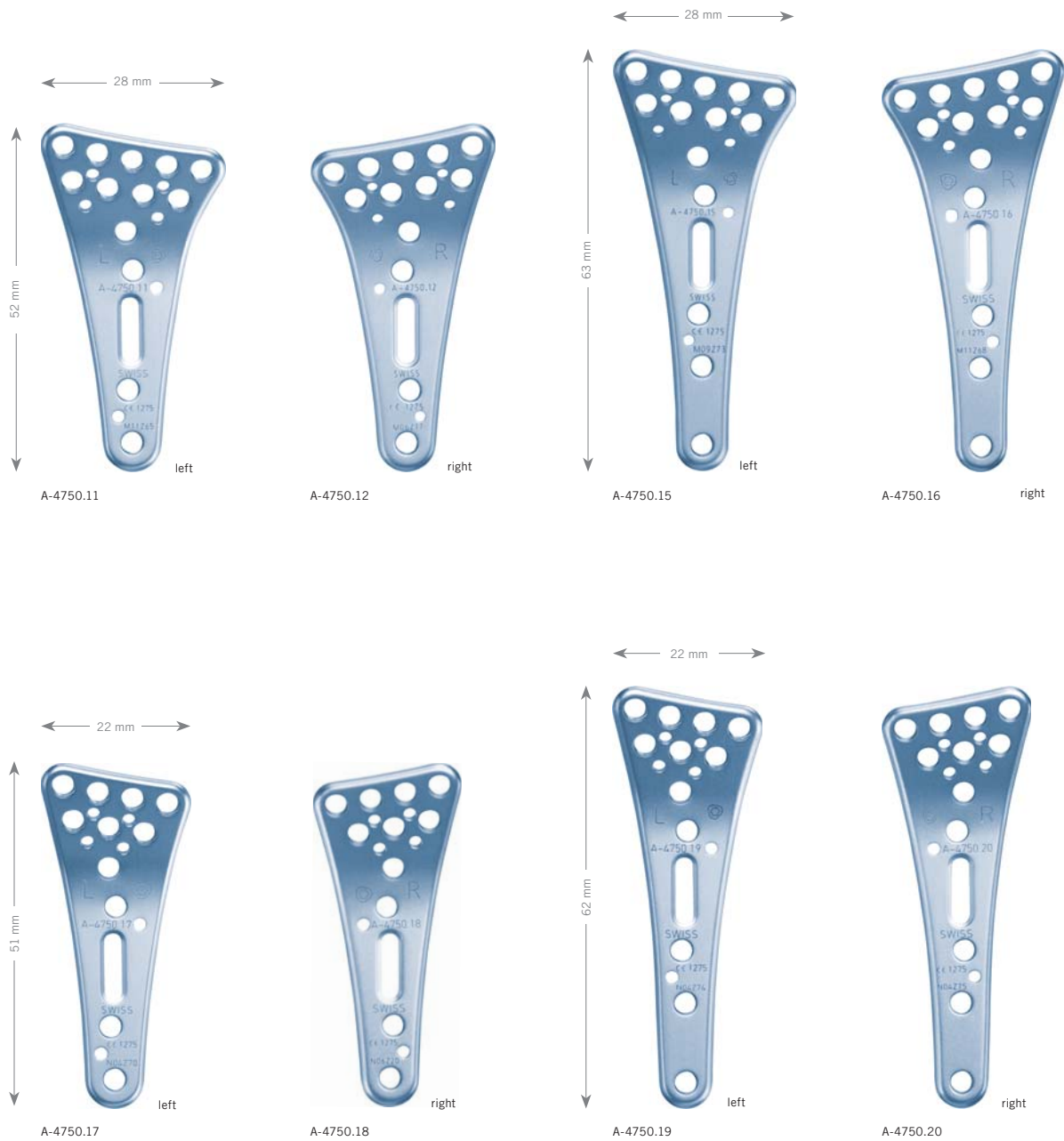


Art. No.	Description	Holes	Pieces per Pack
A-4750.01	left	11	1
A-4750.02	right	11	1
A-4750.31	left, narrow, short	10	1
A-4750.32	right, narrow, short	10	1

## 2.5 TriLock Distal Radius Correction Plates, volar\*

Material: Titanium (ASTM F67)

Plate thickness: 1.6 mm

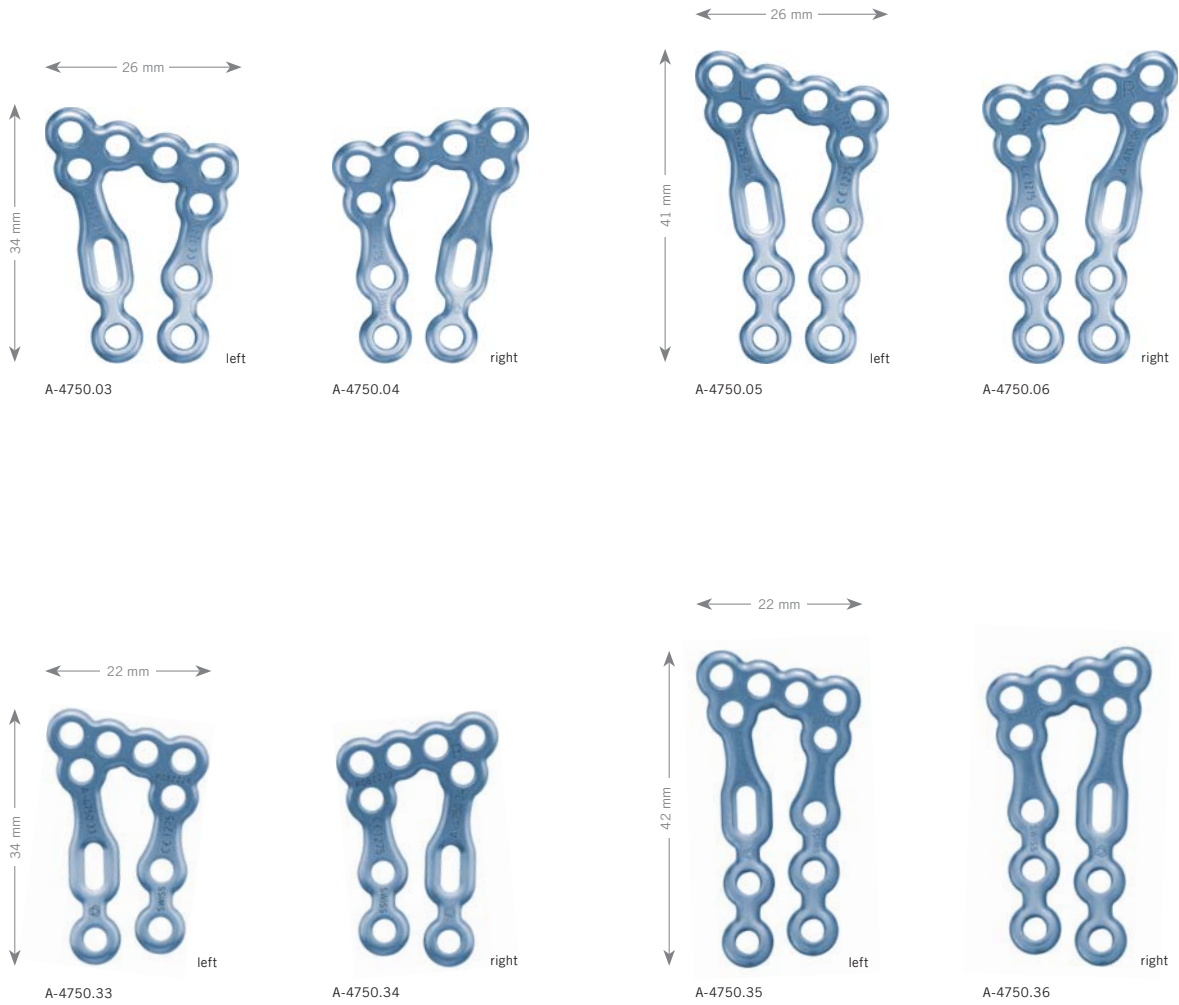


Art. No.	Description	Holes	Pieces per Pack
A-4750.11	left	14	1
A-4750.12	right	14	1
A-4750.15	left, long	15	1
A-4750.16	right, long	15	1
A-4750.17	left, narrow	12	1
A-4750.18	right, narrow	12	1
A-4750.19	left, narrow, long	13	1
A-4750.20	right, narrow, long	13	1

### 2.5 TriLock Distal Radius Frame Plates, volar

Material: Titanium (ASTM F67)

Plate thickness: 1.6 mm



Art. No.	Description	Holes	Pieces per Pack
A-4750.03	left	10	1
A-4750.04	right	10	1
A-4750.05	left, long	12	1
A-4750.06	right, long	12	1
A-4750.33	left, narrow	10	1
A-4750.34	right, narrow	10	1
A-4750.35	left, narrow, long	12	1
A-4750.36	right, narrow, long	12	1

## 2.5 TriLock Distal Radius Correction Plates, XL, volar\*

Material: Titanium (ASTM F67)

Plate thickness: 2.2 mm

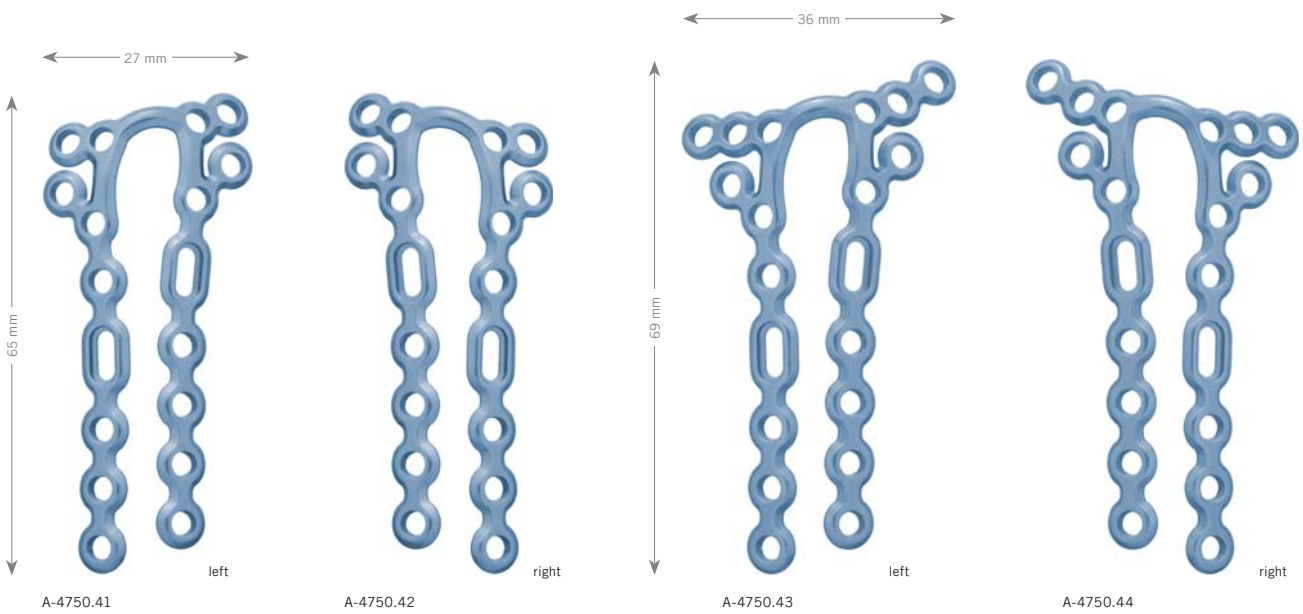
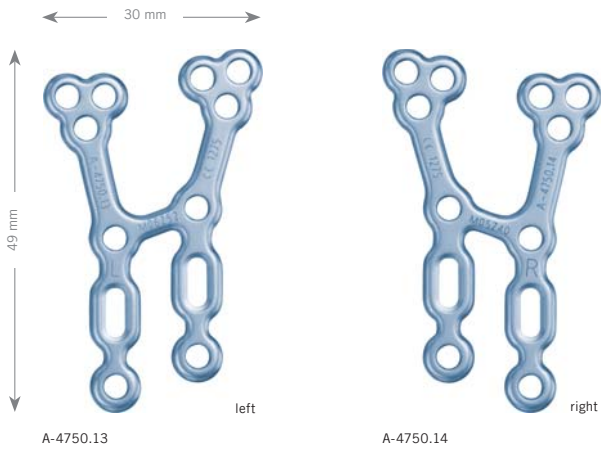


Art. No.	Description	Holes	Pieces per Pack
A-4750.25	left, narrow	20	1
A-4750.26	right, narrow	20	1

## 2.5 TriLock Distal Radius Plates, dorsal

Material: Titanium (ASTM F67)

Plate thickness: 1.6 mm



Art. No.	Description	Holes	Pieces per Pack
A-4750.13	H, left	12	1
A-4750.14	H, right	12	1
A-4750.41	frame, left, narrow	18	1
A-4750.42	frame, right, narrow	18	1
A-4750.43	frame, left	20	1
A-4750.44	frame, right	20	1



## 2.5 Cortical Screws, HexaDrive 7

Material: Titanium (ASTM F136)



Length	Art. No.	Pieces per Pack	Art. No.	Pieces per Pack
8 mm	A-5700.08/1	1	A-5700.08	5
10 mm	A-5700.10/1	1	A-5700.10	5
12 mm	A-5700.12/1	1	A-5700.12	5
14 mm	A-5700.14/1	1	A-5700.14	5
16 mm	A-5700.16/1	1	A-5700.16	5
18 mm	A-5700.18/1	1	A-5700.18	5
20 mm	A-5700.20/1	1	A-5700.20	5
22 mm	A-5700.22/1	1	A-5700.22	5
24 mm	A-5700.24/1	1	A-5700.24	5
26 mm	A-5700.26/1	1	A-5700.26	5
28 mm	A-5700.28/1	1	A-5700.28	5
30 mm	A-5700.30/1	1	A-5700.30	5
32 mm	A-5700.32/1	1	A-5700.32	5
34 mm	A-5700.34/1	1	A-5700.34	5

## 2.5 TriLock Screws, HexaDrive 7

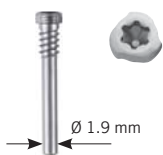
Material: Titanium (ASTM F136)



Length	Art. No.	Pieces per Pack	Art. No.	Pieces per Pack
8 mm	A-5750.08/1	1	A-5750.08	5
10 mm	A-5750.10/1	1	A-5750.10	5
12 mm	A-5750.12/1	1	A-5750.12	5
14 mm	A-5750.14/1	1	A-5750.14	5
16 mm	A-5750.16/1	1	A-5750.16	5
18 mm	A-5750.18/1	1	A-5750.18	5
20 mm	A-5750.20/1	1	A-5750.20	5
22 mm	A-5750.22/1	1	A-5750.22	5
24 mm	A-5750.24/1	1	A-5750.24	5
26 mm	A-5750.26/1	1	A-5750.26	5
28 mm	A-5750.28/1	1	A-5750.28	5
30 mm	A-5750.30/1	1	A-5750.30	5
32 mm	A-5750.32/1	1	A-5750.32	5
34 mm	A-5750.34/1	1	A-5750.34	5

## 2.5 TriLock Express Screws, HexaDrive 7

Material: Titanium (ASTM F136)



Length	Art. No.	Pieces per Pack	Art. No.	Pieces per Pack
14 mm	A-5755.14/1	1	A-5755.14	5
16 mm	A-5755.16/1	1	A-5755.16	5
18 mm	A-5755.18/1	1	A-5755.18	5
20 mm	A-5755.20/1	1	A-5755.20	5
22 mm	A-5755.22/1	1	A-5755.22	5
24 mm	A-5755.24/1	1	A-5755.24	5

## Twist Drills Ø 2.0 mm



A-3713



A-3723



A-3733

Art. No.	System Size	Stop	Length	Drill Shaft End	Pieces per Pack
A-3713	2.5	40 mm	97 mm	Dental	1
A-3723	2.5	40 mm	97 mm	Stryker J-Latch	1
A-3733	2.5	40 mm	91 mm	AO Quick Coupling	1

## Twist Drills Ø 2.6 mm (for gliding hole)



A-3711



A-3721



A-3731

Art. No.	System Size	Stop	Length	Drill Shaft End	Pieces per Pack
A-3711	2.5	10 mm	67 mm	Dental	1
A-3721	2.5	10 mm	67 mm	Stryker J-Latch	1
A-3731	2.5	10 mm	61 mm	AO Quick Coupling	1

## Countersink for Cortical Screws



Art. No.	System Size	Ø	Length	Shaft End	Pieces per Pack
A-3830	2.5	3.7	45 mm	AO Quick Coupling	1

## K-Wires, Stainless Steel



Art. No.	System Size	Description	Length	Pieces per Pack
A-5040.21	1.2	trocar	150 mm	10
A-5040.41	1.6	trocar	150 mm	10

## K-Wires, Stainless Steel



Art. No.	System Size	Description	Length	Pieces per Pack
A-5042.21	1.2	lancet	150 mm	10
A-5042.41	1.6	lancet	150 mm	10
A-5042.51	1.8	lancet	150 mm	10

## K-Wire Dispensers



Art. No.	System Size	Length	Pieces per Pack
A-6010.12	1.2	185 mm	1
A-6010.16	1.6	185 mm	1
A-6010.18	1.8	185 mm	1

### Plate and Screw Holding Forceps



Art. No.	Description	Length	Pieces per Pack
A-2060	angled	148 mm	1

### Screwdriver, self-holding



Art. No.	System Size	Interface	Length	Pieces per Pack
A-2710	2.5	HD7	166 mm	1

### Drill Guides



A-2721



A-2722

Art. No.	System Size	Description	Length	Pieces per Pack
A-2721	2.5	for lag screws	144 mm	1
A-2722	2.5	scaled	114 mm	1

### Depth Gauge



A-2730



A-2730.1

Art. No.	System Size	Description	Length	Pieces per Pack
A-2730	2.5		151 mm	1
A-2730.1	2.5	caliper	149 mm	1

## Plate Cutting Pliers



Art. No.	System Size	Description	Length	Pieces per Pack
A-2046	1.2 - 2.8		207 mm	1

## Plate Bending Pliers



Art. No.	System Size	Description	Length	Pieces per Pack
A-2047	2.0 - 2.8	with pins / mit Pins / avec pins	158 mm	1

## Bone Elevator Mini-Hohmann



Art. No.	Description	Length	Pieces per Pack
A-7006	8 mm	160 mm	1

## Periosteal Elevator



Art. No.	Description	Length	Pieces per Pack
A-7007	6 mm	185 mm	1

### Hook



Art. No.	Description	Length	Pieces per Pack
A-7009	“Tönnis“	150 mm	1

### Wound Retractor Mini-Langenbeck



Art. No.	Description	Length	Pieces per Pack
A-7013	20 x 6 mm	156 mm	1

### Handle with Quick Connector



Art. No.	Length	for Shaft End	Pieces per Pack
A-2070	119 mm	AO Quick Coupling	1

### Reduction Forceps



Art. No.	Description	Length	Pieces per Pack
A-7001	“Apart“	130 mm	1

### Bone Holding Forceps

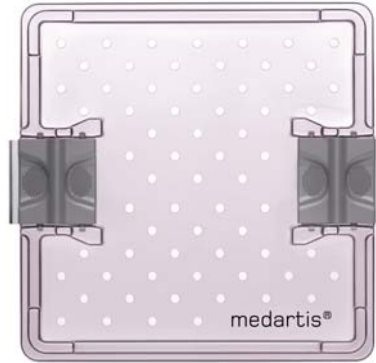


Art. No.	Length	Pieces per Pack
A-7012	140 mm	1

### Sterilizing Case



A-6040



A-6024

Art. No.	Description	Pieces per Pack
A-6040	260 x 270 x 120 mm	1
A-6024	lid for A-6040	1

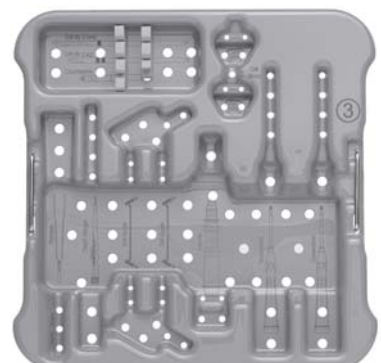
### Instrument Trays



A-6026



A-6027



A-6028

Art. No.	Description	Pieces per Pack
A-6026	lower "1"	1
A-6027	middle "2" for A-6026	1
A-6028	upper "3" for A-6026	1

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#### **HEADQUARTERS**

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