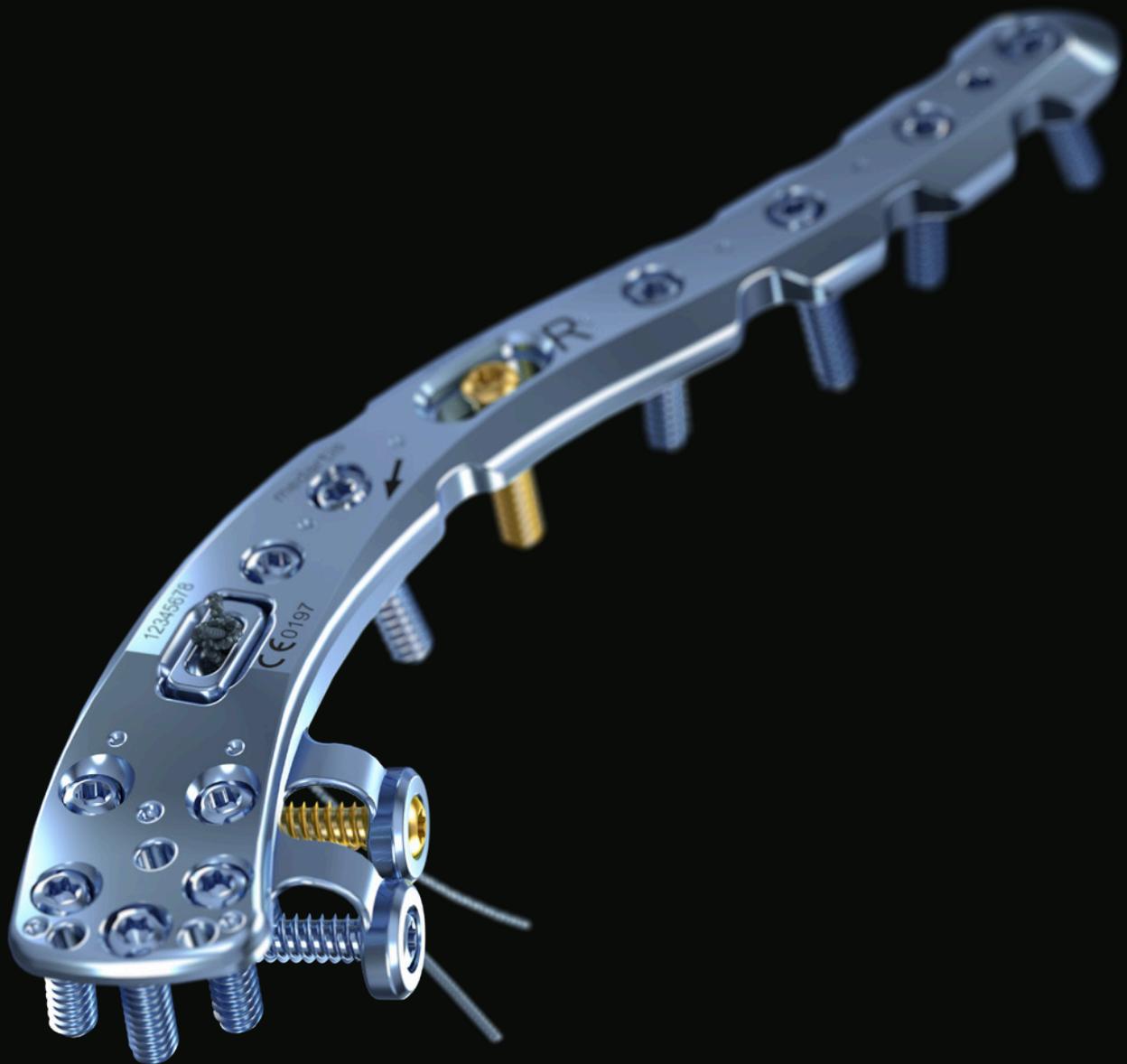


medartis

PRECISION IN FIXATION

PRODUCT INFORMATION

Clavicle System 2.8



APTUS® Shoulder

Contents

3	Stability redefined.
4	Portfolio
6	Treatment Concept
7	Plate Standards
8	2.8 TriLock Superior Midshaft Plates
9	2.8 TriLock Superior Lateral Shaft Plates
10	2.8 TriLock Superior Lateral Plates
11	2.8 TriLock Anterior Plates
12	Technology
14	Specific Instrumentation
15	Storage

For further information regarding the APTUS product line visit www.medartis.com.

Stability redefined.

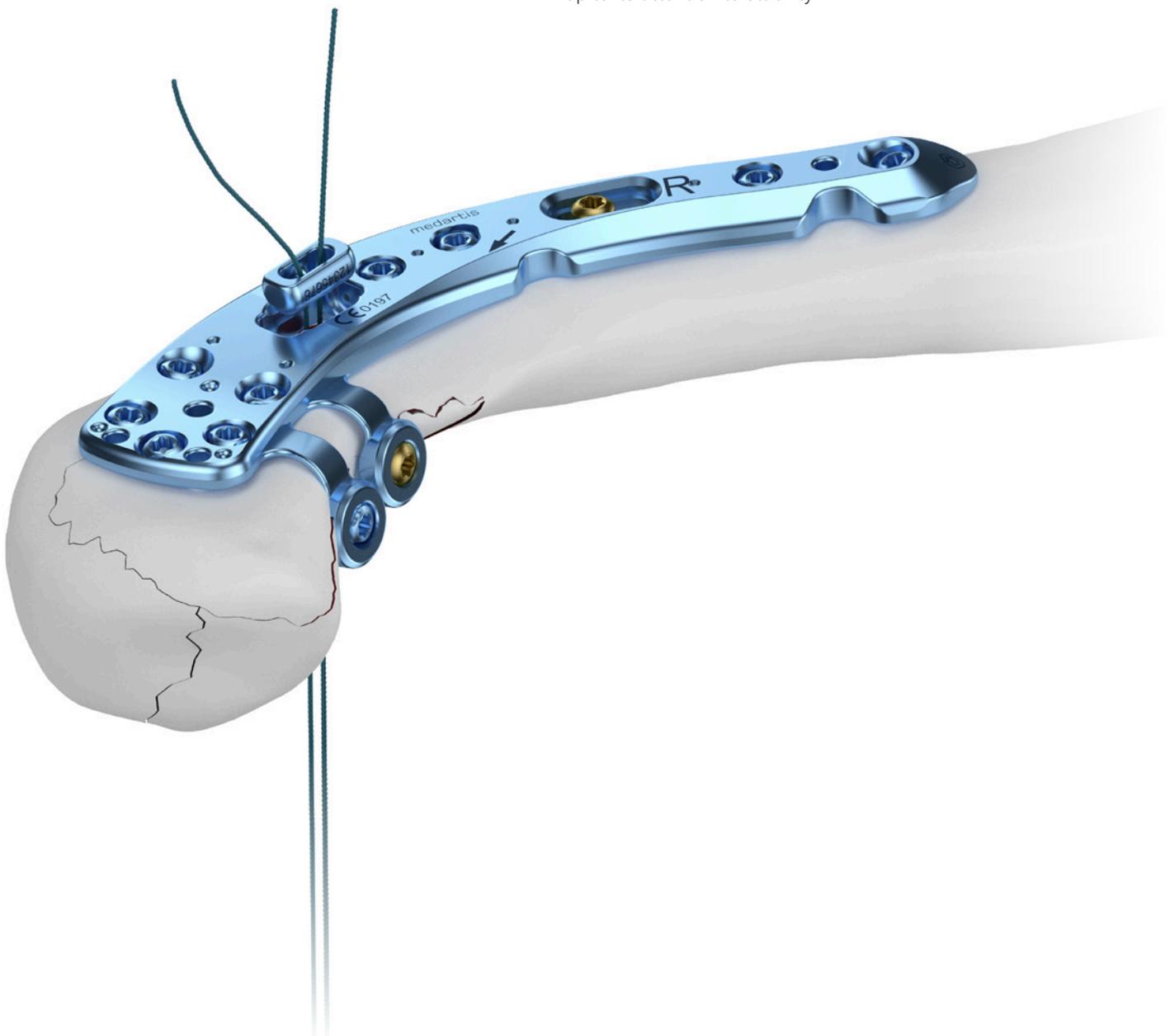
The APTUS Clavicle system provides surgeons with a versatile and anatomical solution to treat fractures, osteotomies, malunions and non-unions of the clavicle.

Its highlights include superior lateral plates that feature two flaps for additional screws from anterior to posterior to increase stability. Furthermore, a flexible suture retrieval and fixation system can be added to the plate to address affected ligaments.

A specifically designed superior lateral shaft plate can be positioned towards lateral without interfering with the acromioclavicular joint whilst offering multiple fixation options in this area.

The sophisticated choice of anatomical plates based on CT data reduces the need for plate bending.

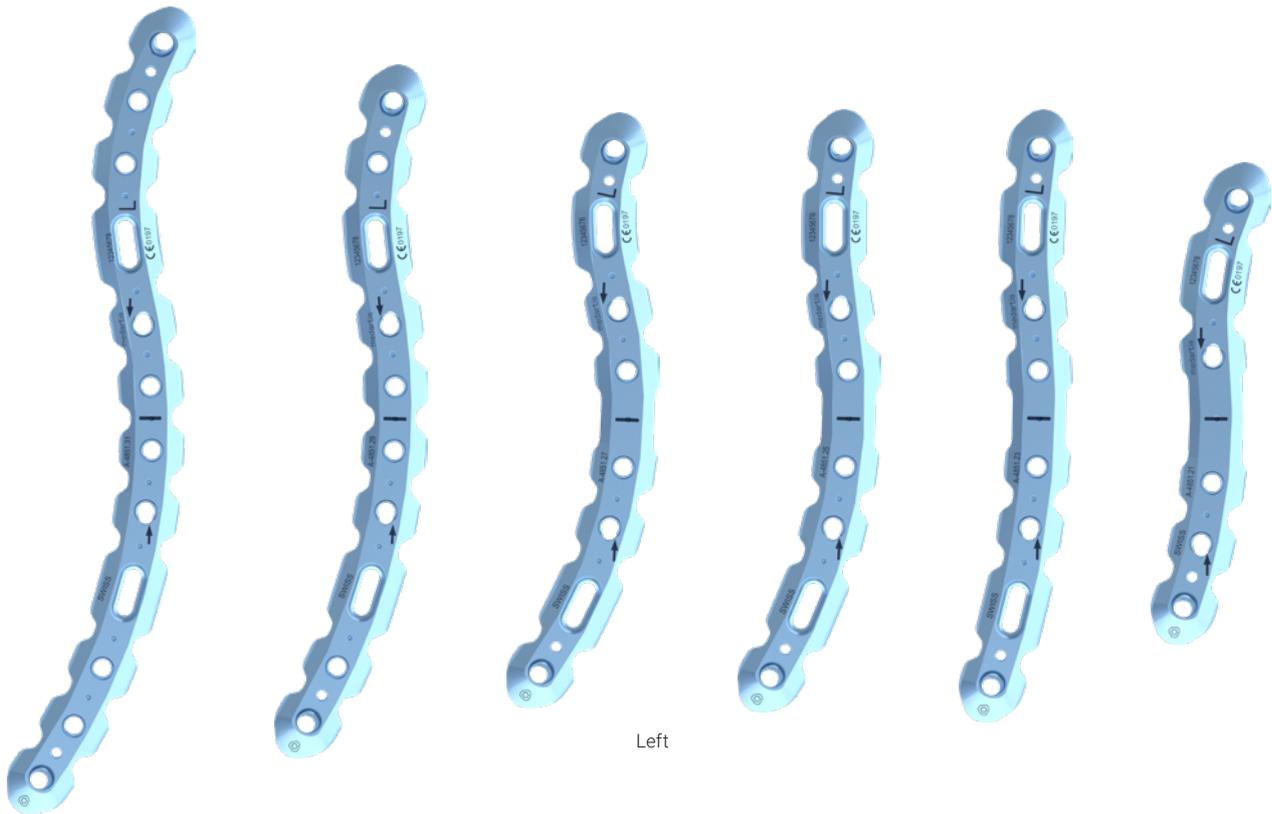
The efficient and user-oriented system is backed up with easy to use instrumentation and innovative features to live up to its attention to stability.



Portfolio

The implant plates of the APTUS Clavicle System 2.8 are available in the following designs:

Superior Midshaft Plates



Left

Anterior Lateral Plate

Superior Lateral Shaft Plates



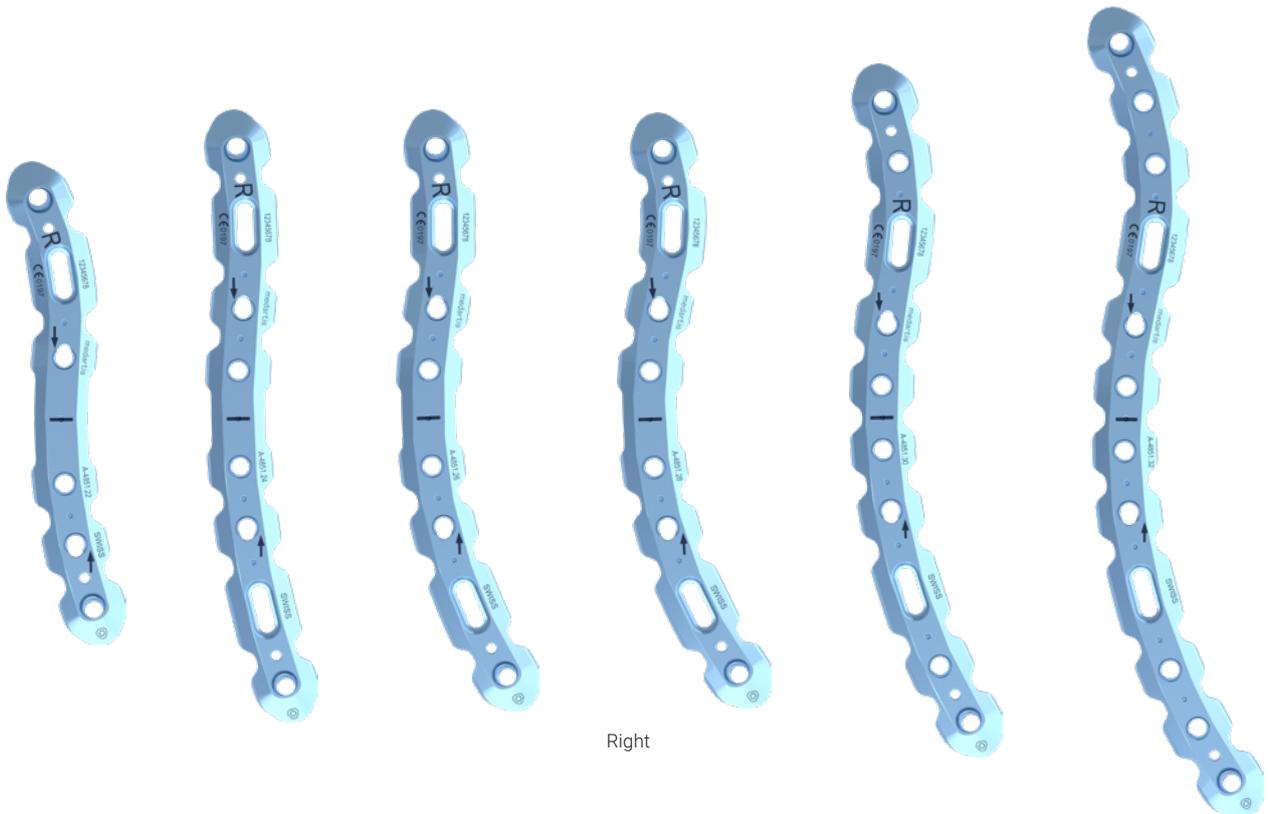
Anterior Midshaft Plates



Left

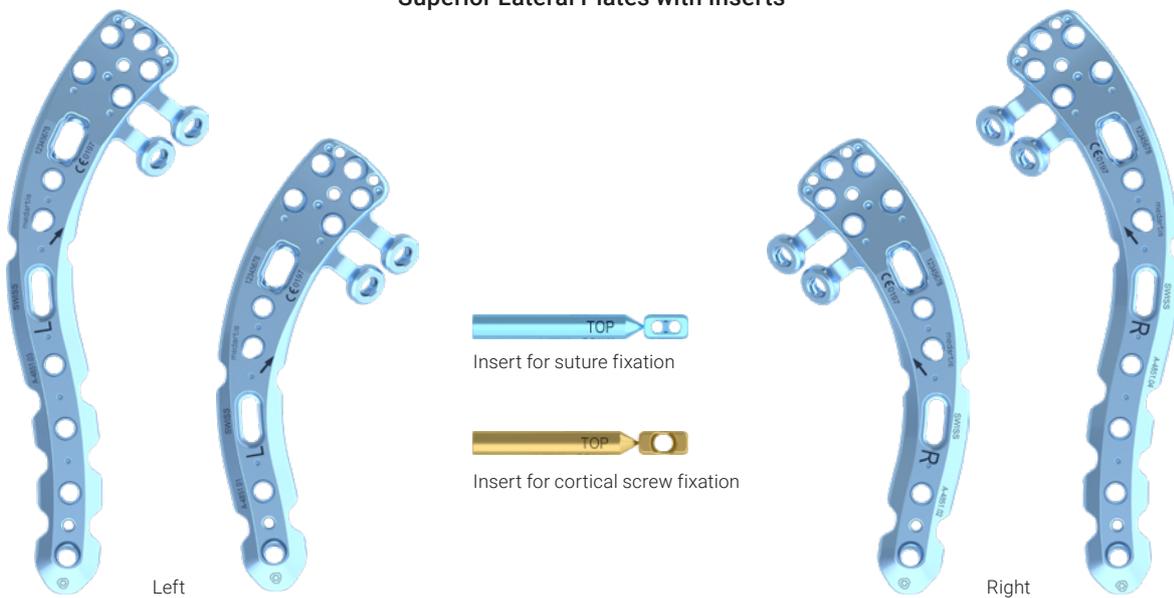


Right



Right

Superior Lateral Plates with Inserts

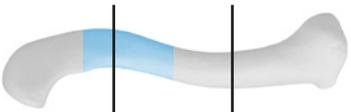


Left

Right

Treatment Concept

The table below lists typical clinical findings which can be treated with the implants of the APTUS Shoulder Clavicle System 2.8.

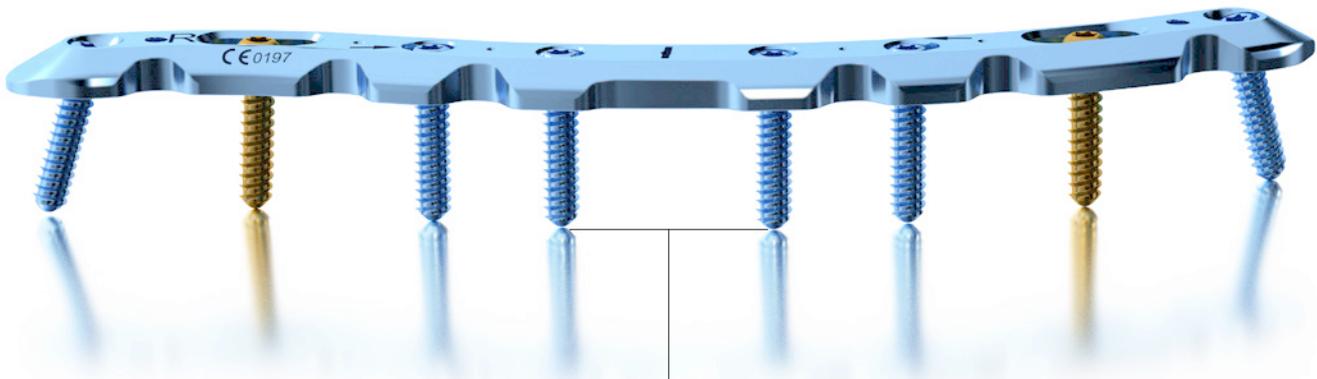
Fracture zone	<p>Midshaft</p> 	<p>Lateral third to midshaft</p> 	<p>Lateral third</p> 
Fracture type	<p>Fractures of the midshaft of the clavicle.</p>	<p>Fractures extending from the lateral third of the clavicle to the midshaft, without disruption of the coracoclavicular (CC) ligaments.</p>	<p>Fractures involving the distal end of the clavicle up to the acromioclavicular (AC) joint with coracoclavicular (CC) ligament intact or disrupted.*</p>
Plate types recommended			
	<p>Superior Midshaft Plates (A-4851.21-32)</p> <p>Anterior Midshaft Plates (A-4851.41-43)</p>	<p>Superior Lateral Shaft Plates (A-4851.11-12)</p>	<p>Superior Lateral Plates (A-4851.01-04)</p> <p>Anterior Lateral Plate (A-4851.51)</p> <p>*Fractures requiring suture fixation through plate: Superior Lateral Plates only (A-4851.01-04)</p>

The above-mentioned information is a recommendation only. The operating surgeon is solely responsible for the choice of the suitable implant for the specific case.

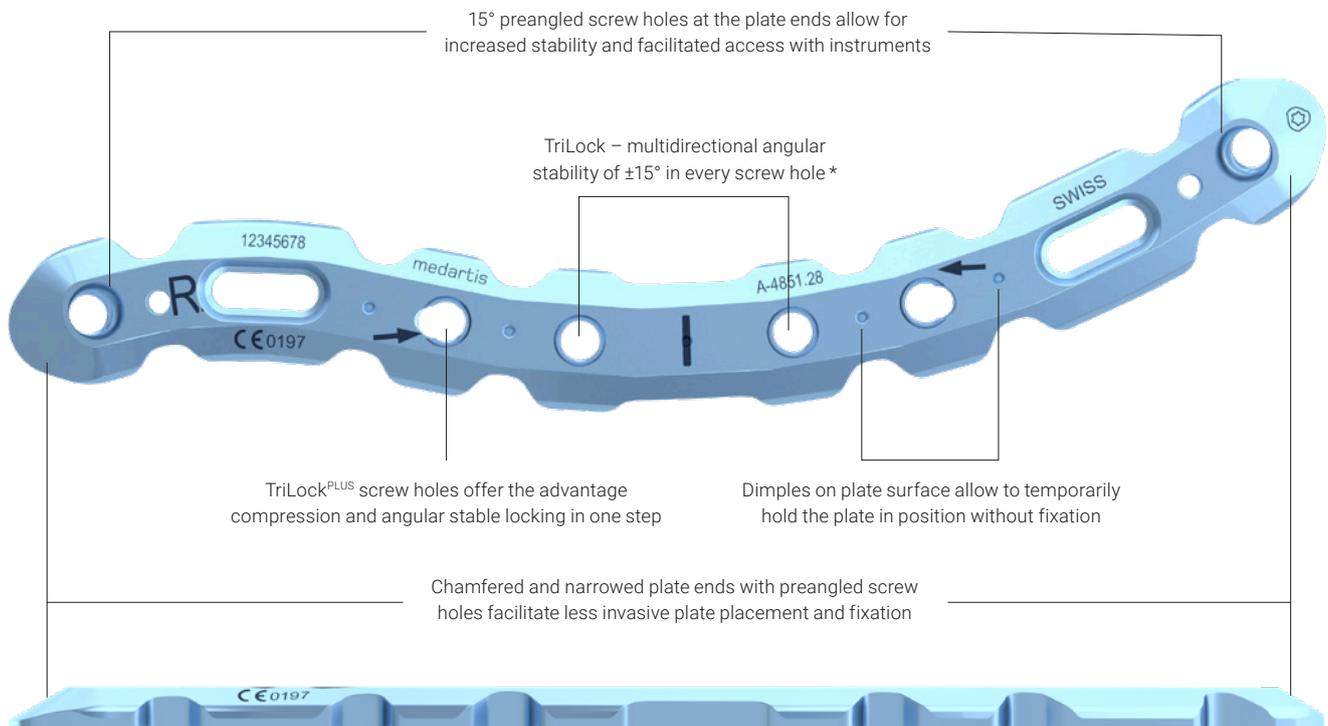
Plate Standards

Compact system with only one screw diameter.

Low plate profile with minimal screw head protrusion, rounded edges and a smooth surface for soft tissue protection

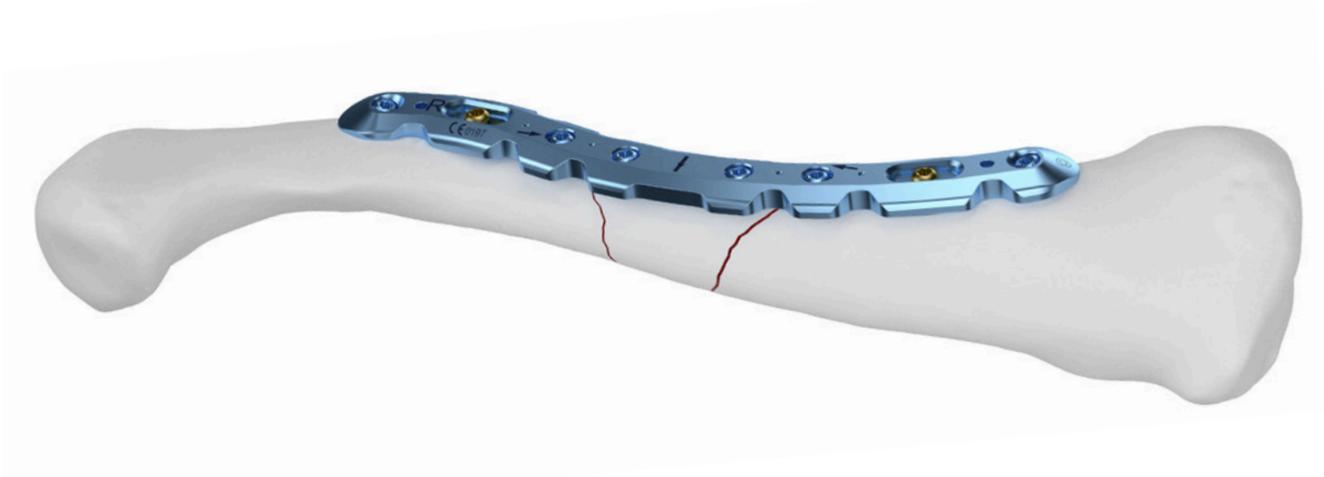


Atraumatic screw tips offer soft tissue protection when inserting screws bicortically



*except oblong holes

2.8 TriLock Superior Midshaft Plates Anatomical and efficient.



Clinical Benefits

Straightforward anatomical fit on variously shaped bones with reduced need for plate bending.

Relevant plate range offers flexible choice of the plates while keeping the system compact.

Plate Features

Curvature determined based on CT data.

Eight-hole plates in three different bend variations.

Short plates feature a bridge section in the fracture zone.



Preoperative X-ray of a midshaft fracture with a bending wedge AO/OTA type 15.2 B

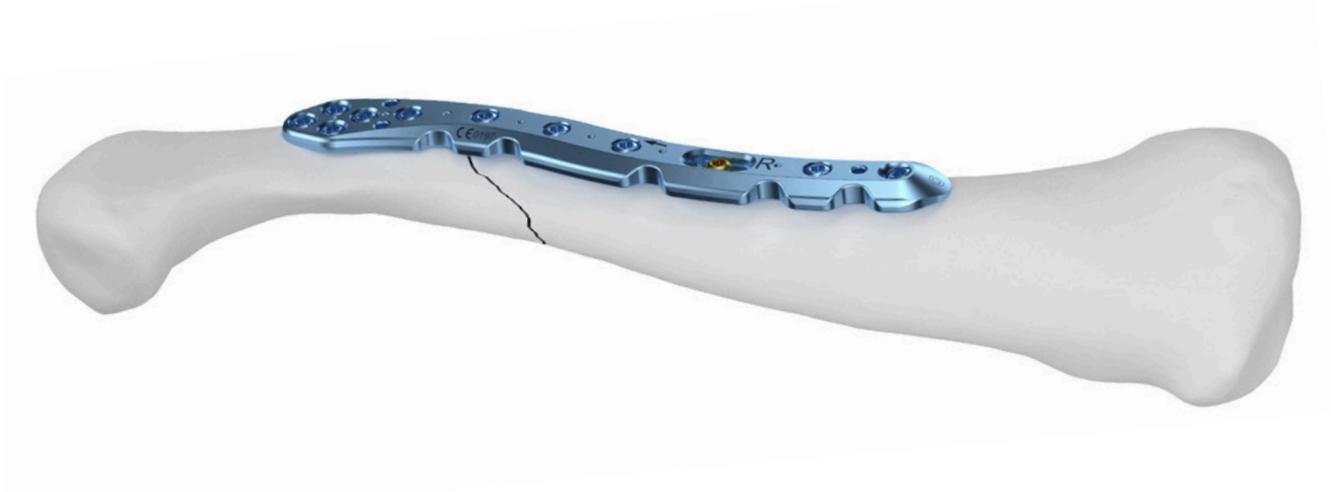


Postoperative X-ray control after fixation with a superior midshaft plate and an isolated lag screw

Clinical case published with the kind permission of: Haren Nandapalan, Sydney, Australia

2.8 TriLock Superior Lateral Shaft Plates

A specific solution.



Clinical Benefits

Possibility to position the plate laterally but away from the AC joint.

Multiple options for screw placement help to increase pull-out strength in the lateral area.

Plate Features

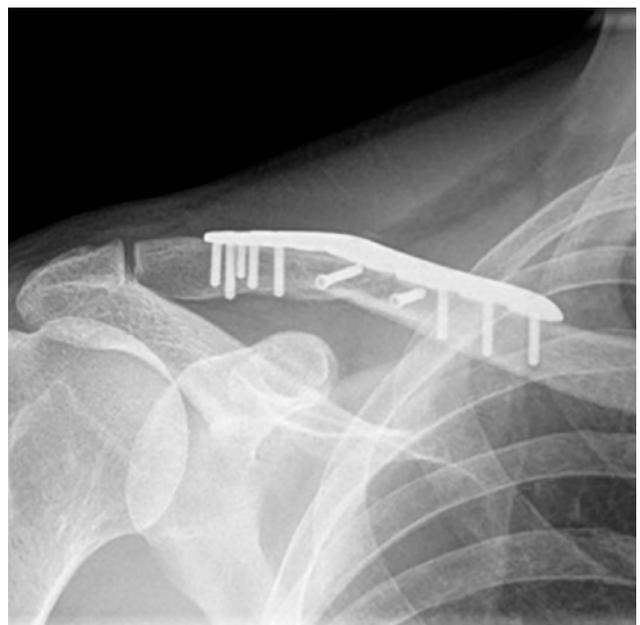
Specific anatomical fit at the lateral end of the middle third to the beginning of the lateral third of the clavicle.

Five screw holes in the lateral plate end.

Narrowed lateral plate end with reduced plate thickness.



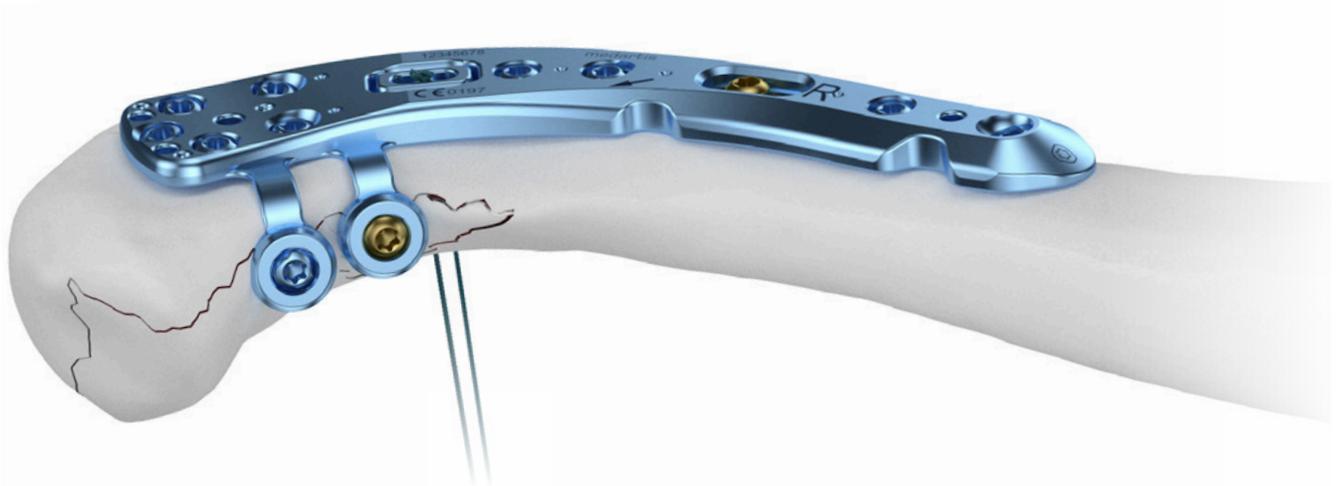
Preoperative X-rays of a displaced lateral fracture Neer type IIa



Postoperative X-ray control after fixation with a superior lateral shaft plate and two isolated lag screws

Clinical case published with the kind permission of: Andrew C. Wright, Wrightington, UK

2.8 TriLock Superior Lateral Plates Focused on stability.



Clinical Benefits

Allows for lateral screw placement in two planes.

Multiple screw holes and increased pull-out strength in the lateral area for various fracture patterns.

Option to fix a suture through the plate or alternatively place a cortical screw.

Plate Features

Two flaps for screws from anterior to posterior.

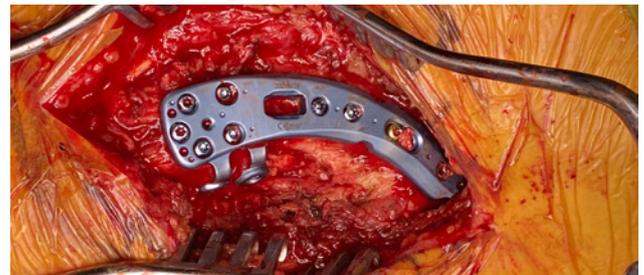
Five preangled screw holes in the lateral plate end.

Plate slot to hold an insert for either a cortical screw or suture fixation.

Reduced plate thickness on the lateral plate end.



Lateral clavicle fracture Neer type IIb



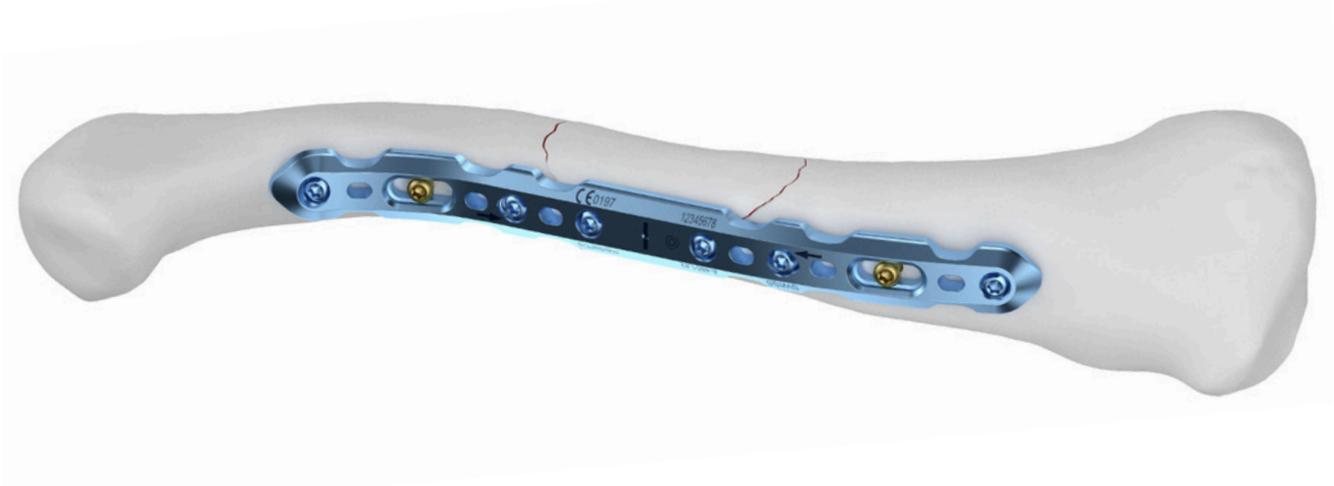
Intraoperative view of superior lateral clavicle plate with superior and anterior screw fixation laterally, without need for coracoclavicular fixation



Postoperative X-ray

Clinical case published with the kind permission of: Eugene Ek, Melbourne, Australia

2.8 TriLock Anterior Plates For intraoperative simplicity.



Clinical Benefits

Straightforward anatomical fit on variously shaped bones with reduced need for plate bending.

Designed for less invasive plate placement and fixation method.

Plate Features

Symmetrical plate design based on CT data.

Low plate profile with minimal screw head protrusion, rounded edges and a smooth surface.

Chamfered and narrowed plate ends with preangled screw holes.



Preoperative X-ray of a simple oblique midshaft fracture AO/OTA type 15.2 A



Postoperative X-rays control after fixation with an anterior midshaft plate and an isolated cortical lag screw

Clinical case published with the kind permission of: David Tuckman, Manhasset, USA

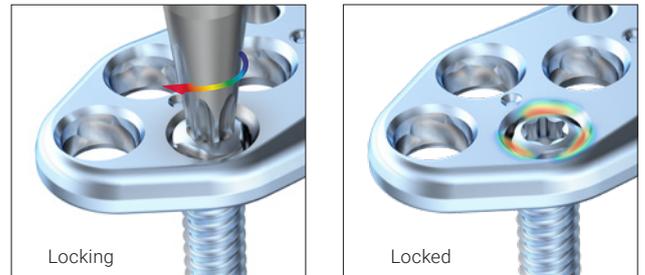
Technology

TriLock

Patented TriLock locking technology – multidirectional 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

Spherical three-point wedge-locking



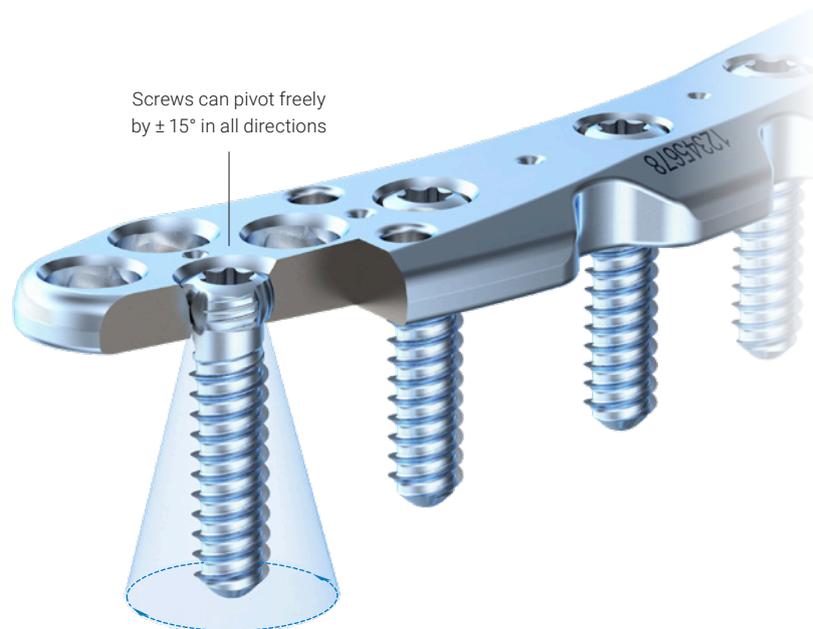
Screws can pivot freely by $\pm 15^\circ$ in all directions for optimal positioning

Fine-tuning capabilities of fracture fragments

TriLock screws can be relocked in the same screw hole at individual angles up to three times

Minimal screw head protrusion thanks to internal locking contour

No cold welding between plate and screws

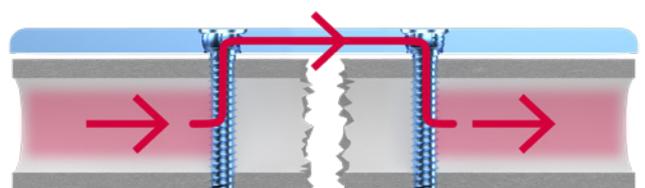


Completely countersunk screw heads



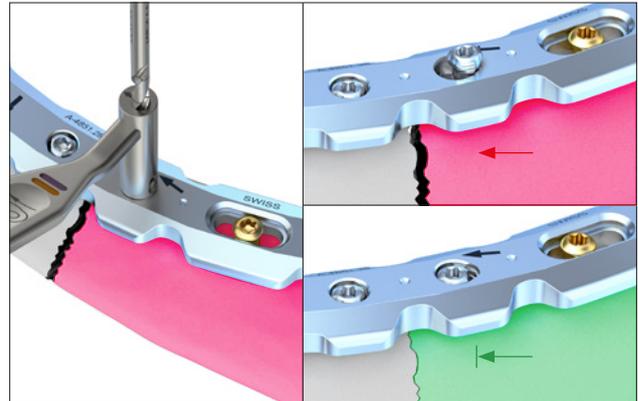
Internal fixator principle

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



TriLock^{PLUS}

TriLock^{PLUS} screw holes offer the advantage of locking and compression in one step



Screw Features

Patented HexaDrive screw head design

- HexaDrive interface with self-holding properties between screw and screwdriver
- Increased torque transmission
- Simplified screw pick-up due to patented self-holding technology

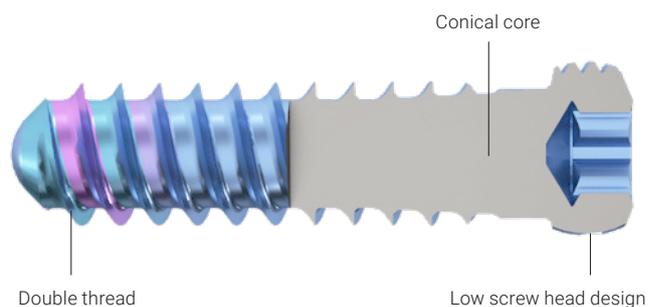
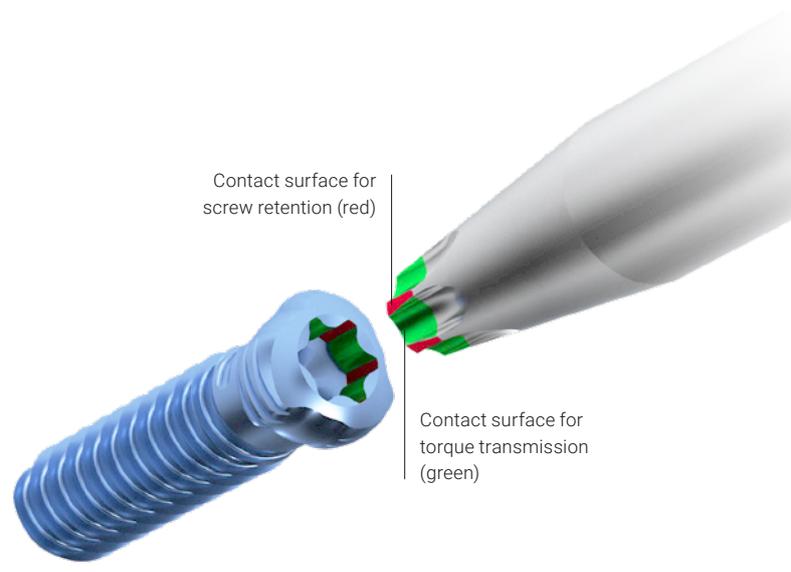
Atraumatic screw tip offers soft tissue protection when inserting screws bicortically

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

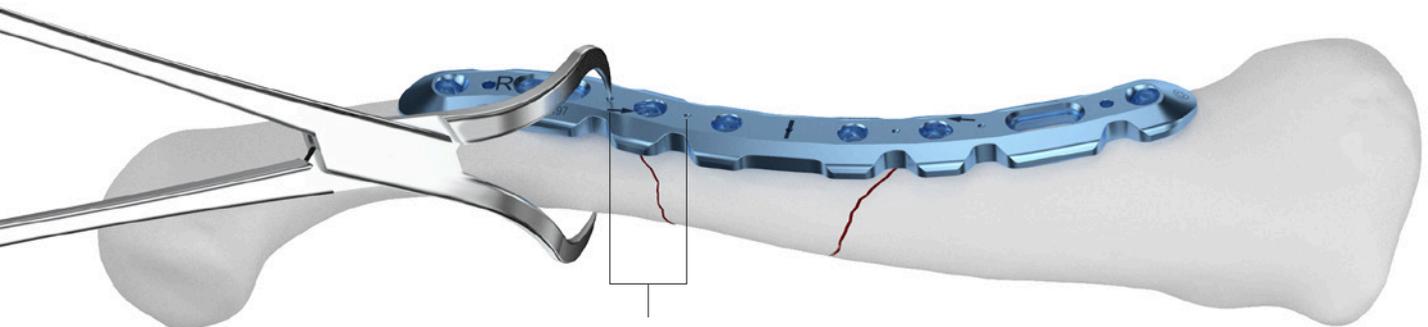


Specific Instrumentation

One system size – user-friendly and efficient.

Simple and easy to use instruments.

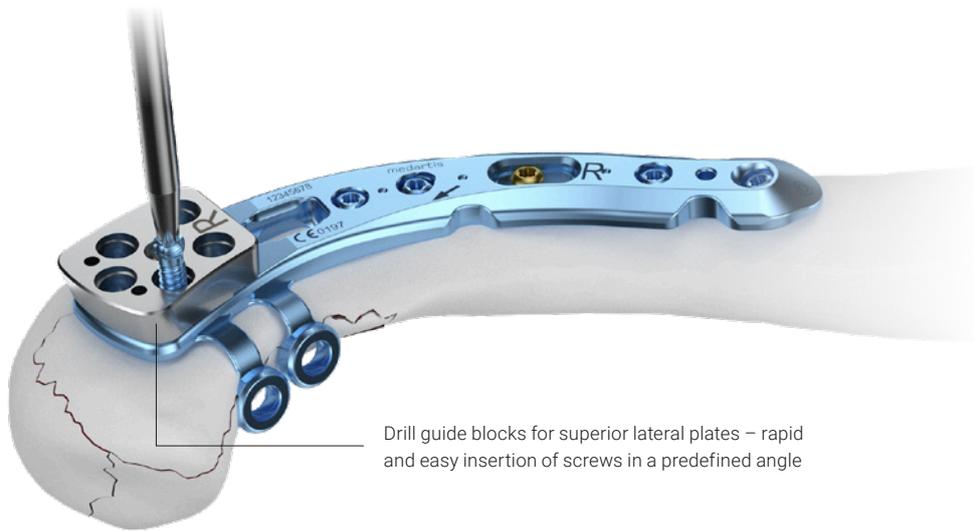
Finely adjusted ratcheting on reduction instruments.



Dimples on plate surface – plate can be easily held in position with pointed forceps



Nitinol suture retriever – flexible and reusable instrument for use with common CC-suture fixation techniques



Drill guide blocks for superior lateral plates – rapid and easy insertion of screws in a predefined angle



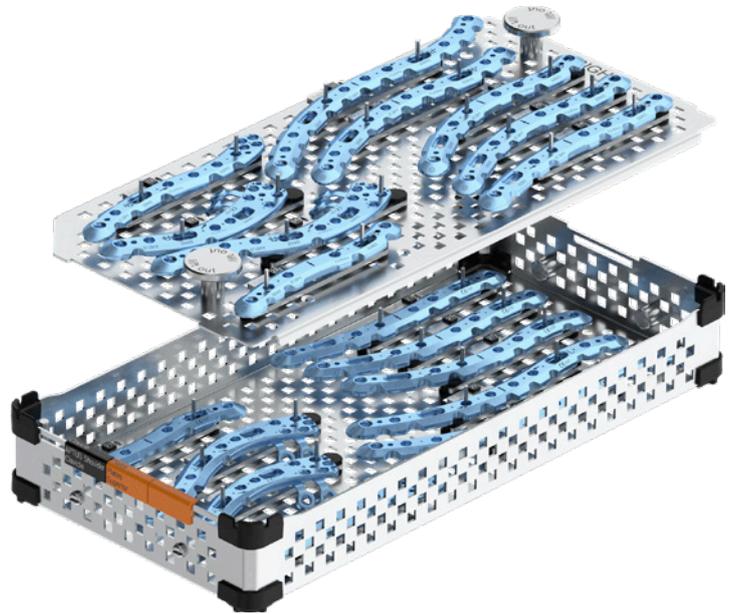
Storage

Compact system

Easy to use

Lightweight components

Validated cleaning and sterilization
of the implants and instruments



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MANUFACTURER & HEADQUARTERS

Medartis AG | Hochbergerstrasse 60E | 4057 Basel / Switzerland

P +41 61 633 34 34 | F +41 61 633 34 00 | www.medartis.com

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