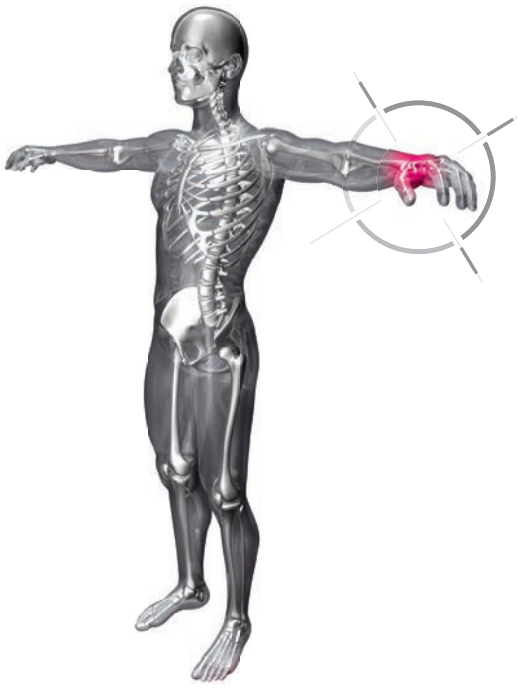
MEDIN
ORTHOPAEDIC
IMPLANTS

PLATE
RADIAL DISTAL VOLAR

TITAN

→ IMPLANT SYSTEM



MEDIN®

The objective of surgical treatment of distal radius fractures is to preserve the full momentum of the joint. To prevent arthrosic changes in intra-articular fractures. An open reduction and internal fixation by angular stable plate is considered as the most efficient method for a perfect restoration of the shape the damaged bone and joint congruence.

The plate combines the assets of locking polyaxial and locking cortical screws in order to achieve an optimal stabilisation and support of the articular surface.

The trajectory of polyaxial locking screws can deviate within 10° angle range off axis. The above capability makes it possible to fix fragments outside the scope of the predefined trajectory of cortical locking screws.

Locking screws allow a firm fixation of screws in the plate. Stable fixation of the plate system to a bone and a total stability of fragments necessary for successful healing are achieved. The whole system is based on the principle of internal fixator which is very convenient for osteoporotic bones.

The shape of the plate is designed to match the natural anatomy of the bone in the best possible way.

The low profile and rounded edges of the plate minimize irritation of soft tissue. The above qualities, together with the correct placement of the plate on the surface of distal radius, decrease the risk of irritation and subsequent rupture of flexor tendons to minimum.

Fixation with the help of locking screws allows reduced contact between the plate and the bone, and lesser disruption of vascular supply.

PERSISTENT QUALITY OF OUR IMPLANTS GRANTS OSTEOSYNTHESES WITH PERSISTENT OUTCOMES

MEDIN IMPLANTS
FOR PRECISE CARE

CONTENTS

Caution Note Instruments X-ray Check Necessary

IMPLANT SYSTEM CHARACTERISTICS

- Radial distal volar plate is preshaped to better accommodate to the anatomy of the radius.
- Two forms of the plate with regard to either left or right radius.
- The low profile and rounded edges of the plate minimize irritation of soft tissue.
- The system is made of Ti6Al4V Titanium alloy (ISO 5832-3).
- The lengths of the plate / 47, 55 a 63 mm.
- The widths of the plate / 23, 28 a 33 mm.
- Number of holes in the plate:
  – at distal end – 6, 7 a 8 holes,
  – at proximal end – 2, 3 a 4 holes.

INDICATION

1. Intra-articular distal radial fractures.
2. Extra-articular distal radial fractures.

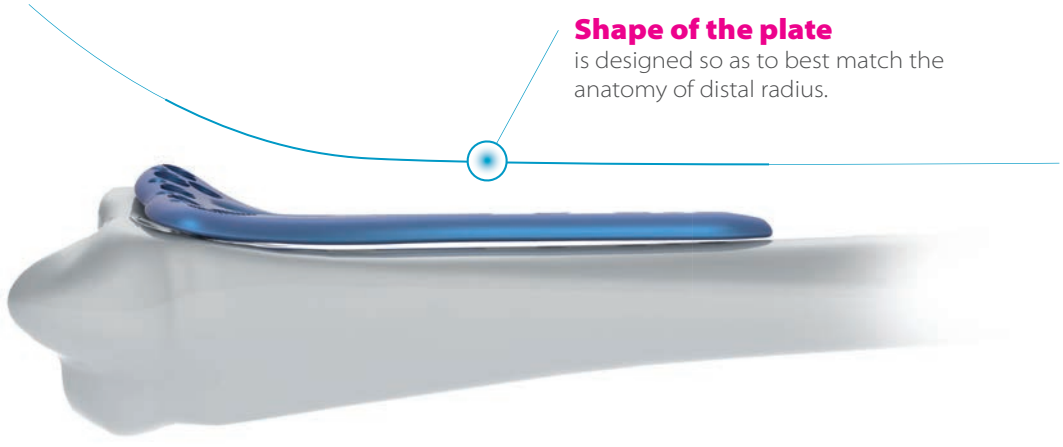
CAUTION!

1. This Surgical Technique Manual does not contain enough information necessary for immediate use of the implant! Always get acquainted with all information on product label and in the Instructions for Use manual supplied by the manufacturer before using any MEDIN, a. s. products.
2. The use of this device is intended exclusively for physicians specialized in traumatology, orthopedy, and surgery, who went through the professional training for the device provided by MEDIN, a. s.
3. Implants of the "Radial Distal Volar Plate" system are made of Titanium alloy. All devices and instruments intended for use with this device are listed in the corresponding part of this ST Manual. Compatibility of respective implants and instruments was tested a and certified. Combined use with other implants or instruments is not permitted since it could lead to a damage of the implant and/or the patient.

   MEDIN, a. s. Bears no responsibility for any possible complications due to a breach of this directive.
4. Only appropriate manual force can be used for tightening the screws. Over-tightening or tightening with a drill may cause the screw to get stuck in the locking hole and make its subsequent removal impossible.
5. Perioperative X-ray testing is necessary. X-ray multi-projection imaging approach is required especially for detecting a potential screw prominence in dorsal cortex of distal surface of the radius.

   Screws penetrating dorsal cortex of distal radius may cause an extensor tendon injury. The above complications may be prevented by thorough surgical technique and peroparative x-ray testing.

   Note
   The symbol of x-ray radiation always represents ☢, necessity of x-ray multi-projection imaging tests to be carried out.
6. The delivered implants are not sterile and are intended for sterilisation before use. Instructions necessary for the preparation of the implants can be found in the Instructions for Use.
7. Always check the number of previous uses of the drill bit. The limit has been assessed to maximum of 30 uses per a drill bit. After reaching the limit, do not extend the use of the drill bit. Either dispose of it or send it back to the manufacturer for resharpening. Failing that creates a risk of prolonged surgery or of making it impossible to drive a screw in.
8. Make sure the surface of the instruments is unimpaired, and that they are correctly set and functional. Do not use impaired instruments; neither those with unreadable label marks; those that bear signs of corrosion; or those with a blunt blade. Dispose of such instruments. Your MEDIN, a. s. sales representative will provide you with further detailed instructions regarding functionality testing. Only the manufacturer is authorized to carry out service maintenance.



FUNCTIONAL ELEMENTS

→ LOCKING HOLES

Locking, self-tapping screws can be driven into a bone and "locked" by tightening the threaded head of the screw into a corresponding threaded hole in the plate. The resulting connection is angularly stable towards the plate, and the whole system works on the principle of internal fixator. This solution helps to prevent the following difficulties::

- primary reduction loss of fracture fragments,
- secondary reduction loss, especially in comminuted fractures without sufficient bone support, poor-quality or osteporotic bones
- periosteal compression and subsequent deterioration of blood supply to the bone.

Caution
Locking holes are intended for use with only cortical locking or polyaxial locking screws! Do not use cortical (non locking) screws with these holes!

Caution
Do not use polyaxial locking screws at the proximal end of the plate!

Caution
Use either only cortical locking screws or combination of cortical locking screws and polyaxial locking screws at the distal end of the plate. Do not use only polyaxial locking screws at the proximal end of the plate! The connection between polyaxial screws and the plate is less stable. The use of the polyaxial locking screws must be taken into consideration during subsequent postoperative care!

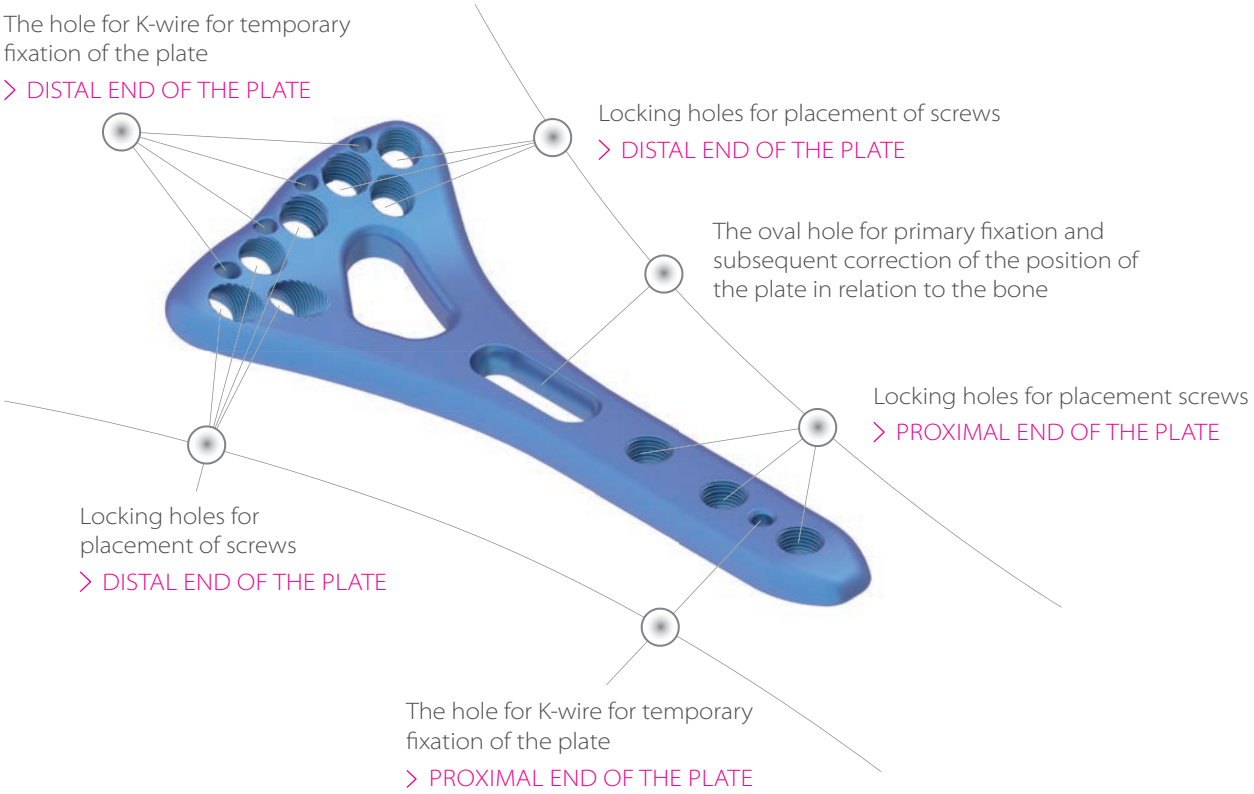
→ THE OVAL HOLE

The oval hole facilitates the primary fixation of the plate to the bone. This hole is intended to be used with cortical screws. An adjustment of the plate's position to a correct position is possible before tightening up the screw.

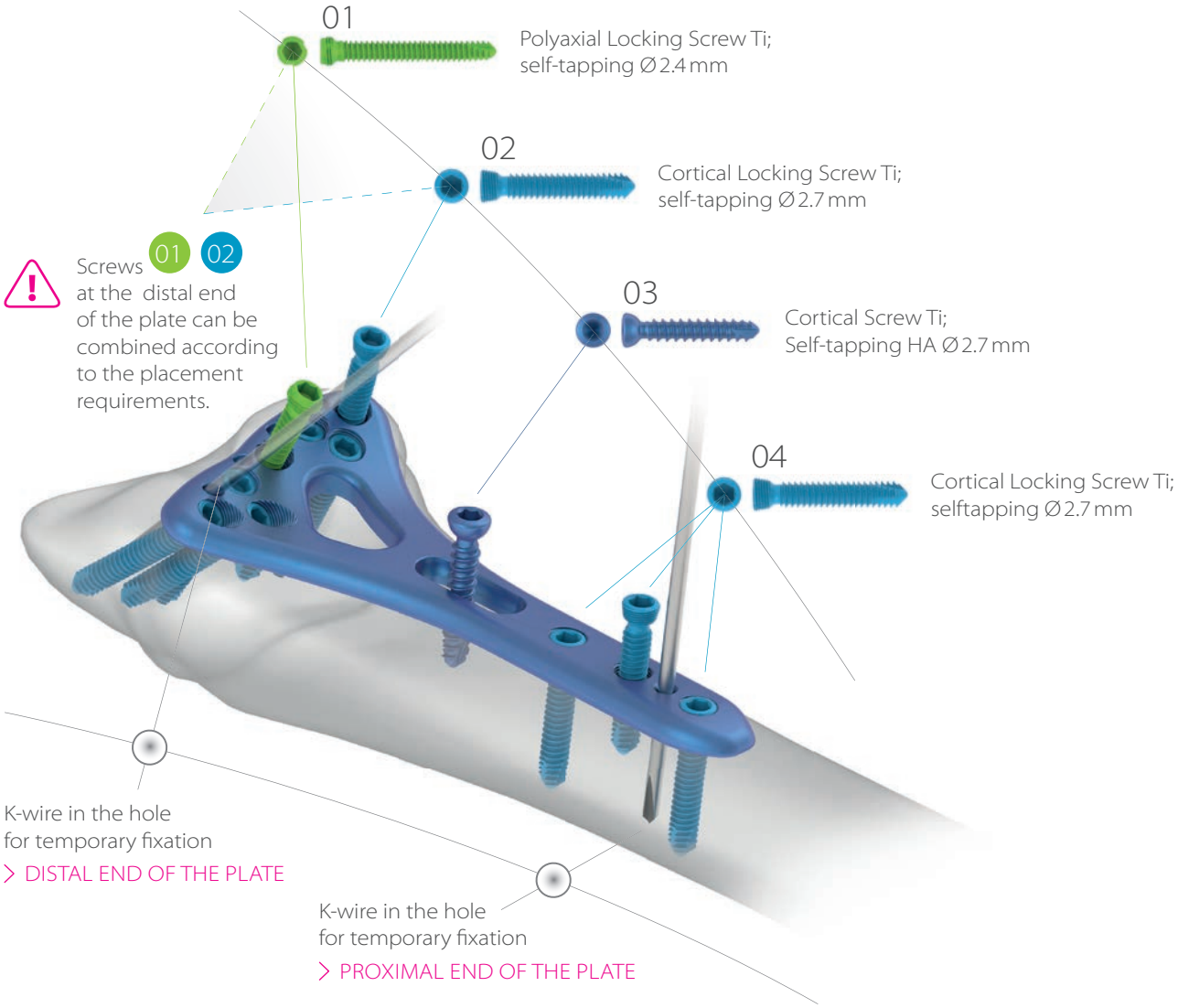
Caution
Do not drive locking screws into the oval hole!

→ HOLES FOR TEMPORARY FIXATION OF THE PLATE

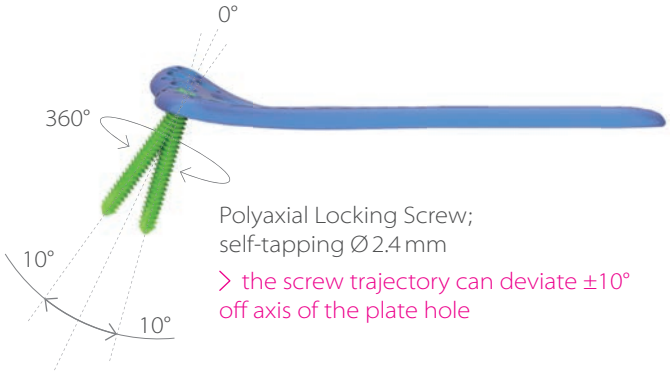
K-wire holes located at distal and proximal ends of the plate are intended for temporary fixation of the plate.



→ RECOMMENDED TYPES OF SCREWS FOR INDIVIDUAL PARTS OF THE PLATE



→ TRAJECTORIES OF SCREWS RELATIVE TO THE PLATE HOLE'S AXIS



01
PATIENT POSITIONING

› Patient is in supine position. The injured limb is laid on an transparent X-ray pad [fig. 1.1].

02
SURGICAL APPROACH

→ **Incision**

Make a 7–8 cm incision roughly in line with II. metacarpus above m. flexor carpi radialis tendon, which is palpable on volar and radial side of distal forearm [fig. 2.1].

→ **Preparace m. flexor carpi radialis**

Continue further through the flexor carpi radialis tendon sheath or closely along it down the radius towards m. pronator quadratus and further to distal radius.

→ **Preparace m. pronator quadratus**

Retract m. flexor pollicis longus tendon ulnarly and release pronator quadratus. Make the incision of pronator quandratus perpendicularly to the direction of muscle fibres about 1–1.5 cm from the insertion of the radial muscle. At the distal insertion of pronator quadratus cut off the muscle's edge in the area of the **Watershed line** (determined by the most prominent volar part of the distal radius) [fig.4.9], The distal edge of the implant implant stretches up to this line and, thanks to anatomically preshaped edge of the plate, does not extend beyond it towards flexor tendons of fingers.

→ **Separation of m. pronator quadratus from the bone**

With an adequate release of pronator quadratus, you may install retractors (not part of the delivery) behind the radial and ulnar edges of the metaphysis of the radius in order to get a satisfactory view of the region of the distal radius and the volar region of the fracture [fig. 2.2].

→ INSTRUMENTS

REF	Instruments
397 129 69 7680	Bone elevator; 165 mm
397 129 69 7690	Hook retractor; 145 mm, blunt
397 129 69 8460	Bone raspatory; 165 mm

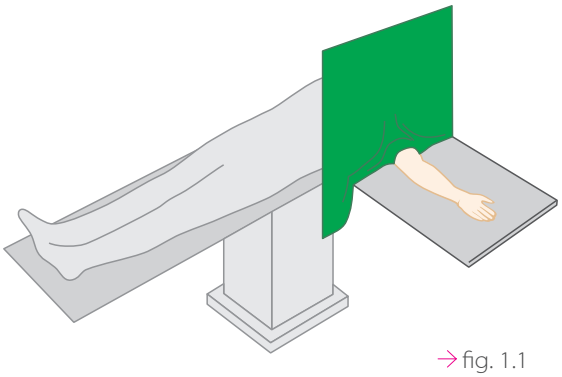
03
REDUCTION

→ **Intermediate column**

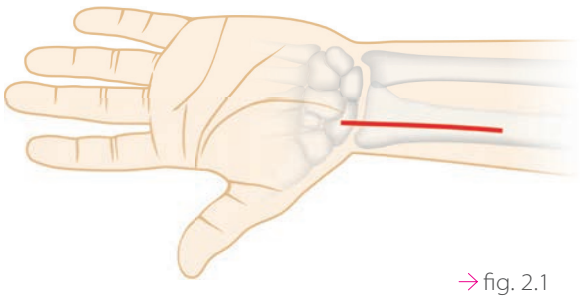
Dorsal dislocated fragments can be reduced by ligamentotaxis, or with a suitable instrument (elevator) inserted into the fracture line to help reduce fragments of the intermediate column. (surgical elevator is part of the instrumentarium, with the handle marked in red).

→ **Radial column**

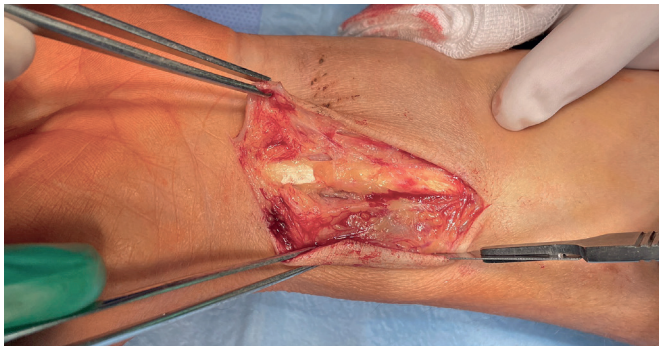
One of the most powerful luxative forces acting on the radial column is the pull of m. brachioradialis, with insertion base at processus styloideus radii. The muscle insertion can be used for reduction of the radial column by carefully inserting a hook between the bone and the above mentioned tendon and by pulling of the instrument along the axis of the limb reduce the processus styloideus radii and restore the ulnar inclination of the distal radius joint surface. The fragments are then held reduced to the plate and a K-wire may be used to give temporary fixation. The interruption of insertion of m. brachioradialis on processus styloideus radii greatly facilitates the subsequent reduction.



→ fig. 1.1



→ fig. 2.1



→ fig. 2.2 a

→ fig. 2.2 b

04
PRIMARY PLATE FIXATION

› Choose the correct form and size of the plate according to the kind of the fracture and injured limb. All types of the plate are listed in the section C.

Note
You may double-check the form of the plate on the shank – LEFT (L), RIGHT (R) [fig. 4.1].

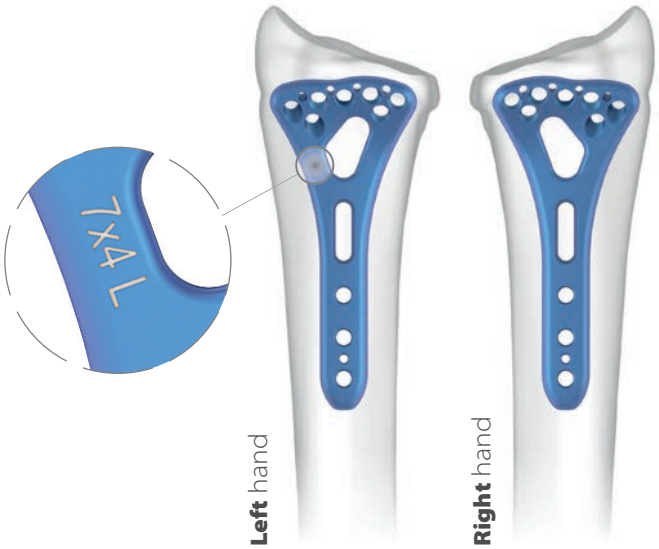
› Place the plate so that it fits perfectly on the surface of the volar side of the distal radius [fig. 4.2].

Caution
The plate is anatomically preshaped and it is prohibited to make any supplementary changes which could decrease the strength of the plate or deform the threaded holes, making them incompatible with the screws!

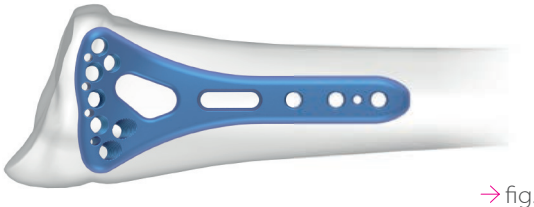
› Use the drill guide sleeve and Ø2 mm drill bit to make a screw hole in the oval hole of the plate. The sleeve and the drill bit are marked blue [fig. 4.3].

› Place the guide sleeve roughly in the middle of the oval hole in the plate [fig. 4.4], and drill a hole using the Ø2 mm drill bit. Drill bicortically in direction perpendicular to the plate [fig. 4.5].

Caution
Be careful to avoid any injury of soft tissues on the opposite side of the limb while drilling!

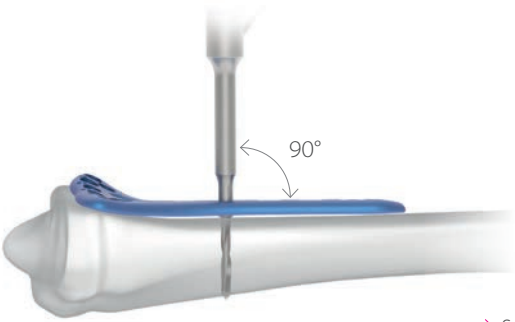


→ fig. 4.1



→ fig. 4.2

→ fig. 4.4



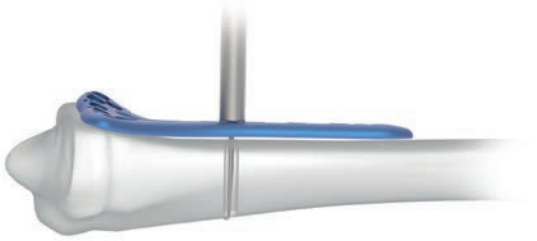
→ fig. 4.5

→ fig. 4.3

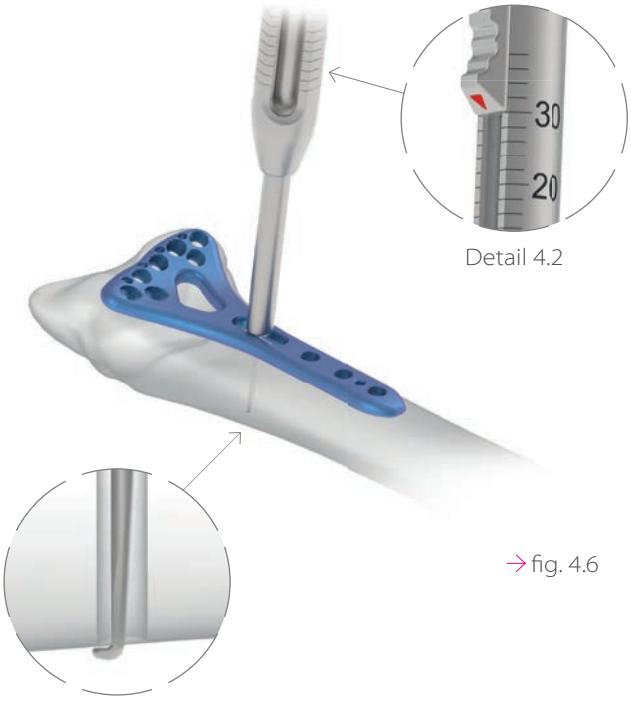
→ INSTRUMENTS

REF	Instruments
397 129 69 6730	Sleeve; drilling, 4/2×40 mm
397 129 69 7410	Drill; 2×110 mm, AO coupling

› Measure the depth of the hole using a depth gauge [fig. 4.6] Insert the measuring wire into the drilled hole, fix the hook to the distant cortex [Detail 4.1] and push the depth gauge tube firmly to the plate [fig. 4.7]. Choose the correct screw length based on the reading displayed on the scale of the depth gauge [Detail 4.2].



→ fig. 4.7



Detail 4.2

Detail 4.1

→ fig. 4.6

→ INSTRUMENTS

REF	Instruments
397 129 69 7674	Depth gauge; 1,8×32 mm

› Fix the plate with one Ø 2.7 mm cortical screw through the oval hole.

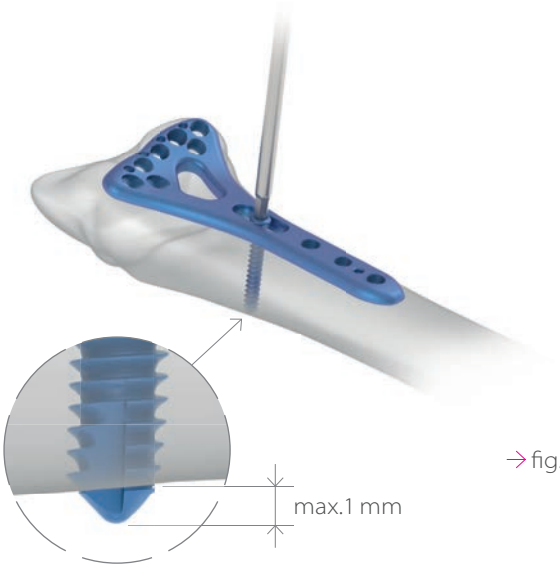
› Use only manual screwdriver for tightening of the cortical screw. Drive the screw along the axis of the hole, perpendicularly to the plate [fig. 4.8].

Caution
The tip of the screw must not protrude more than 1 mm from the far cortex! Danger of soft tissues injury! [Detail 4.3]

Note
You can use the measure on the screw stand in case you need to check the length of the screw. Place the head of the screw to mark "0" and read the length of the screw on the scale.

Note
You can make final correction of the alignment of the distal end of the plate with the Watershed Line [fig. 4.9].

Watershed line
Watershed Line is a useful orientation mark for the plate placement. Implants extending beyond the line in distal direction may irritate the finger flexor tendons of the volar region.

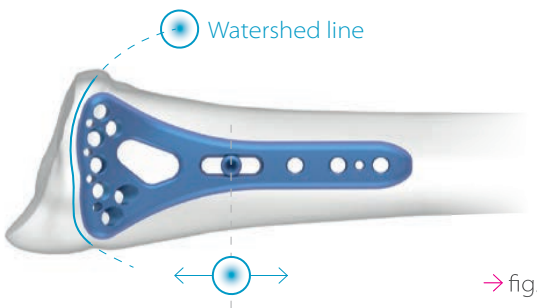


Detail 4.3

→ fig. 4.8

→ INSTRUMENTS

REF	Instruments
397 129 69 7910	Screwdriver; AO, 6HR, 2×90 mm, conical



→ fig. 4.9

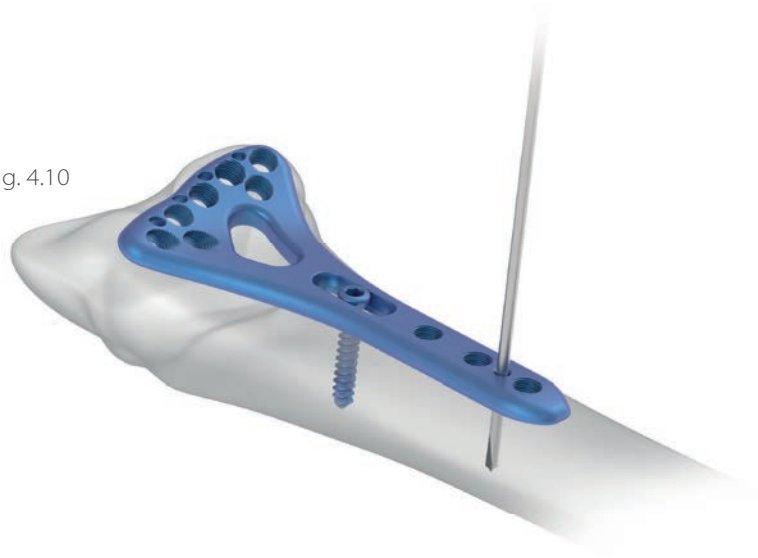
The oval hole facilitates a lengthwise correction of the position of the plate.

› When necessary, hold the reduced bone fragments to the plate by a Ø1,5 mm K-wire installed through the designated holes at the proximal [fig. 4.10] and distal [fig. 4.11] end of the plate.

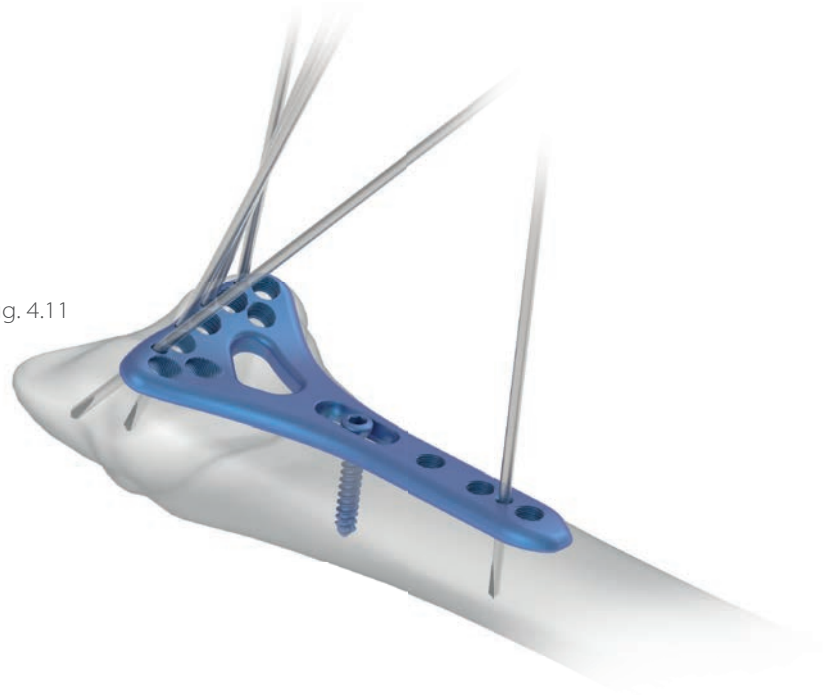
› The K-wire gives a temporary fixation to the position of the plate and prevents its rotation around the axis of the cortical screw.

Note
The trajectories of designated holes for K-wires at the distal end at the distal end correspond with the trajectories of the screws and create a line beyond which none of the screws should go so as not to protrude into the joint.

→ fig. 4.10



→ fig. 4.11



→ INSTRUMENTS

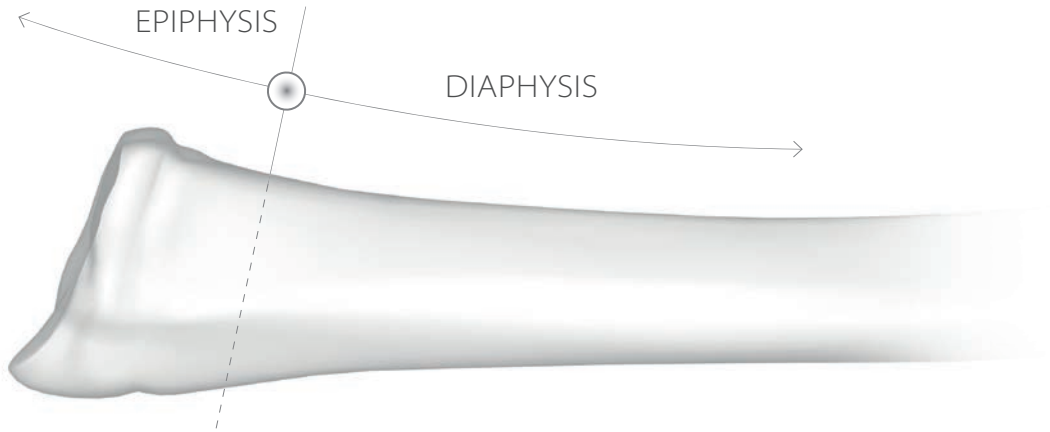
REF	Instruments
397 129 09 2480	K-wire MEDIN; 1.5 × 160 mm

05

FIXATION OF INDIVIDUAL FRAGMENTS WITH SCREWS AT THE DISTAL END OF THE PLATE

→ **Surgical technique**

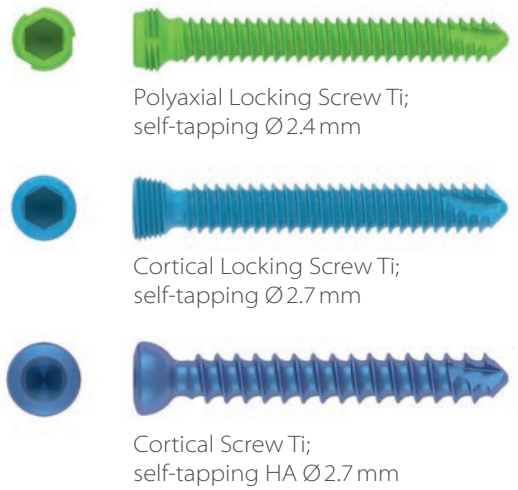
› Insert the screws solely unicortically in the epiphysis, and bicortically in the diaphysis region [fig. 5.1]. Bear in mind that locking screws do not perform in the same way as standard compression screws. It is necessary to realise that by tightening and locking of the threaded head into the plate hole the screw is firmly fixed and generates no additional compression between the plate and bone fragments. Therefore, careful anatomical reduction of the fracture fragments is essential (especially in intra-articular fractures).



→ fig. 5.1

Caution
The surgeon determines the order of insertion of the screws at the proximal end of the plate and it may vary with respect to specific kinds of fractures!

Note
The screws are made in different colours for easy identification during surgery [fig. 5.2].



Polyaxial Locking Screw Ti;
self-tapping Ø 2.4 mm

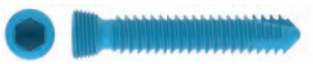
Cortical Locking Screw Ti;
self-tapping Ø 2.7 mm

Cortical Screw Ti;
self-tapping HA Ø 2.7 mm

→ fig. 5.2

SCREWS DESIGNATED FOR FIXATION IN THE TRAJECTORY OF THE HOLE'S AXIS AT THE DISTAL END OF THE PLATE

› Cortical ST locking screw **Ø 2,7 mm** (light blue).



› Use a Ø 2 mm drill (blue) guided with Ø 2 mm locking sleeve (also marked blue) for drilling holes for the cortical locking screws.

› Using the locking guide sleeves is necessary for ensuring of the alignment of the screw and the hole in the plate for a proper function of the angularly stable connection. Manually screw the sleeve into the hole in the plate in the direction of the trajectory of the hole's axis. Carry on to drill a hole. In order to check the depth of the hole, read the scale on the body of the drill as you go along. Remove the drill from the sleeve and screw out the sleeve from the plate after finishing the drilling [fig. 5.3].

→ fig. 5.3

Caution
Holes at the distal end of the plate must be drilled unicortically and the screws must not extend into the joint! Assess the depth of the hole with the help of the scale on the drill!

Note
There is a scale on the body of the drill for checking the depth of the hole during drilling, which facilitates quicker assessment of the appropriate screw length. Saving time and decreasing the number of steps necessary for the surgery.

Note
You can use a screwdriver through the hole in the guide sleeve for easier unfastening of the sleeve.

→ INSTRUMENTS

REF	Instruments
397 129 69 6710	Sleeve; drilling, locking, 4/2×49 mm
397 129 69 7410	Drill; 2×110 mm, AO coupling

› Measure the depth of the hole using a depth gauge. Insert the measuring wire into the drilled hole, slide the hook into the deepest point of the hole and push the depth gauge tube firmly to the plate [fig. 5.4]. Choose the correct screw length based on the reading displayed on the scale of the depth gauge. [Detail 5.1] The anatomical curvature of the plate may create measurement deviations. Thus it is recommended to use a screw 2 mm shorter than the measurement would suggest.

Detail 5.1

→ fig. 5.4

→ INSTRUMENTS

REF	Instruments
397 129 69 7674	Depth gauge; 1,8×32 mm

SCREWS DESIGNATED FOR FIXATION OUTSIDE THE TRAJECTORY OF THE HOLE'S AXIS AT THE DISTAL END OF THE PLATE

› Polyaxial ST locking screw **Ø 2,4 mm** (green).

Caution
Do not use cortical locking screws for this technique!

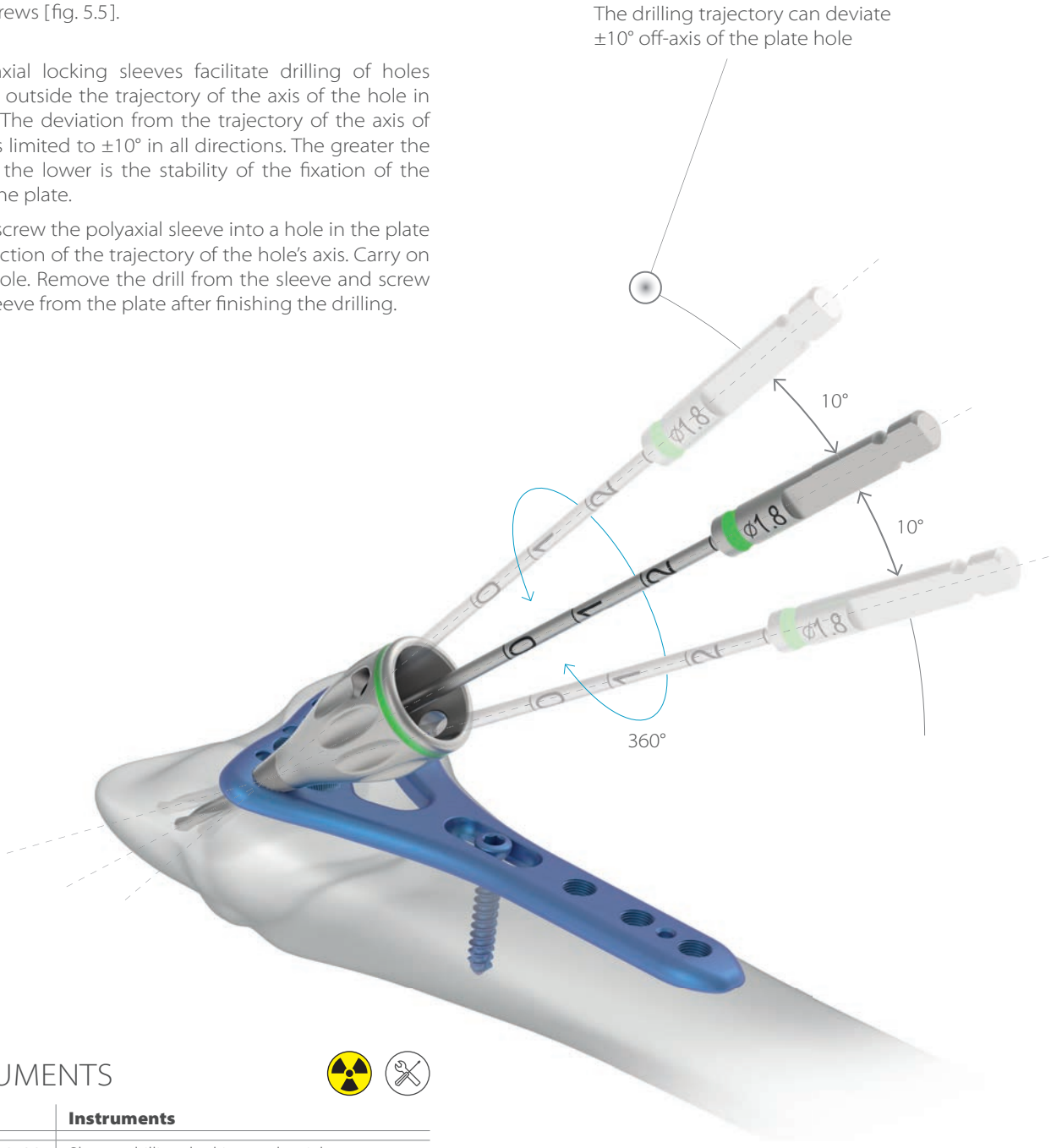
› Use a Ø 1.8 mm drill (green) guided with a polyaxial locking sleeve (also marked green) for drilling holes for polyaxial locking screws [fig. 5.5].

Note
The polyaxial locking sleeves facilitate drilling of holes for screws outside the trajectory of the axis of the hole in the plate. The deviation from the trajectory of the axis of the hole is limited to ±10° in all directions. The greater the deviation, the lower is the stability of the fixation of the screw to the plate.

› Manually screw the polyaxial sleeve into a hole in the plate in the direction of the trajectory of the hole's axis. Carry on to drill a hole. Remove the drill from the sleeve and screw out the sleeve from the plate after finishing the drilling.

Caution
Holes at the distal end of the plate must be drilled unicortically and the screws must not extend into the joint! The depth of the hole is assessed by the surgeon. Check the trajectory of the drill with an X-ray image intensifier and alter the angle if necessary. Use the same method for checking the altered trajectory!

Note
You can use a screwdriver through the hole in the guide sleeve for easier unfastening of the sleeve.



→ INSTRUMENTS

REF	Instruments
397 129 69 6720	Sleeve; drilling, locking, polyaxial, D13 × 25 mm
397 129 69 7400	Drill; 1.8 × 110 mm, AO coupling

→ fig. 5.5

› Measure the depth of the hole using a depth gauge [fig. 5.6]. See page 12 for the measurement technique.

› The anatomical curvature of the plate may create measurement deviations. Thus it is recommended to use a screw 2 mm shorter than the measurement would suggest.

Detail 5.2

→ fig. 5.6

→ INSTRUMENTS

REF	Instruments
397 129 69 7674	Depth gauge; 1,8×32 mm

› Insert the screw into the drilled hole and tighten it by using strictly only a manual screwdriver [fig. 5.7]. Do the same with the rest of the screws at the distal end. The arrangement of the distal holes makes the proper fixation and support of the columns possible by using a sufficient number of screws.

Caution
Never fasten the screw too tightly!

Caution
Only a single locking of the head of the polyaxial locking screw in the plate hole is allowed! If alternation of a trajectory of a locked screw is necessary, remove it and use a new polyaxial locking screw. Without locking the screw head into the plate hole, the polyaxial locking screw can be used repeatedly!

Caution
Using X-rays, keep checking the position of the screws for any interference into the articular surface or a significant protrusion through the second cortex!

Note
Make sure the plate is firmly fixed in the correct position before tightening the first locking screw, which could cause a shift of the plate around the axis of the screw.

→ fig. 5.7

→ INSTRUMENTS

REF	Instruments
397 129 69 7910	Screwdriver; AO, 6HR, 2×90 mm, conical
BD17-080-AO	Handle AO; 21×120 mm

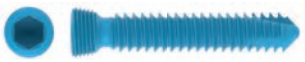
06

FIXATION OF THE PLATE WITH SCREWS AT THE PROXIMAL END

SCREWS DESIGNATED FOR FIXATION AT THE PROXIMAL END OF THE PLATE

→ **Insertion in the trajectory of the hole's axis**

› Cortical ST locking screw **Ø 2,7 mm** (light blue).



→ fig. 6.1

Caution
Do not use polyaxial locking screws at the proximal end of the plate!!

Note
It is still possible to adjust the correct position of the plate before inserting the screws at the proximal end [fig. 6.1], by restoring the length and inclination of the radius.

› Use a Ø 2 mm drill (blue) guided with Ø 2 mm locking sleeve (also marked blue) for drilling holes for the cortical locking screws.

› Using the locking guide sleeves is necessary for ensuring of the axis alignment of the screw and the plate hole for a proper function of the angularly stable connection. Begin with the most proximal hole. Manually screw the sleeve into the hole in the plate in the direction of the trajectory of the hole's axis. Carry on to drill a hole [fig. 6.2].

Caution
Be careful to avoid any injury of soft tissues on the opposite side of the limb while drilling!

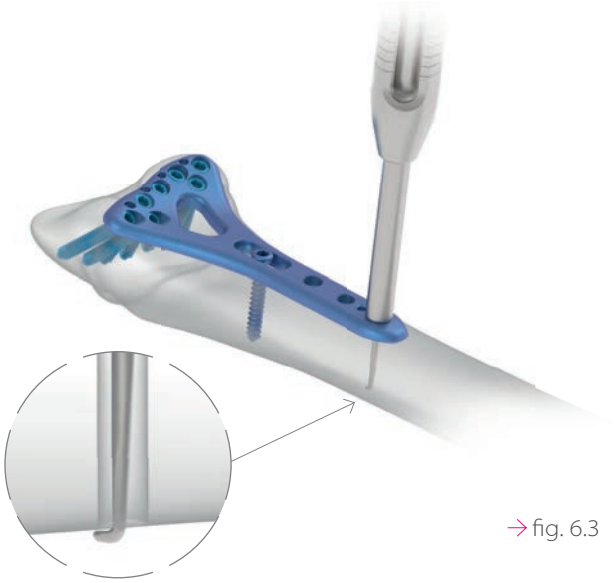
→ fig. 6.2

→ INSTRUMENTS

REF	Instruments
397 129 69 6710	Sleeve; drilling, locking, 4/2×49 mm
397 129 69 7410	Drill; 2×110 mm, AO coupling

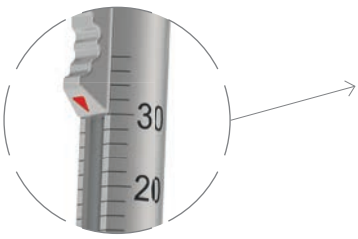
› Use at least 1–2 angularly stable screws in the diaphyseal region, to prevent dislodging of the plate from the diaphysis of the radius, particularly in patients with osteoporotic bones.

› Measure the depth of the hole using a depth gauge [fig. 6.3 and 6.4] See page 12 for the measurement technique.



Detail 6.1

→ fig. 6.3



Detail 6.2

→ fig. 6.4

→ INSTRUMENTS

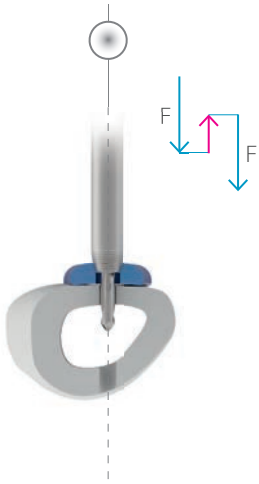
REF	Instruments
397 129 69 7674	Depth gauge; 1,8×32 mm

Note

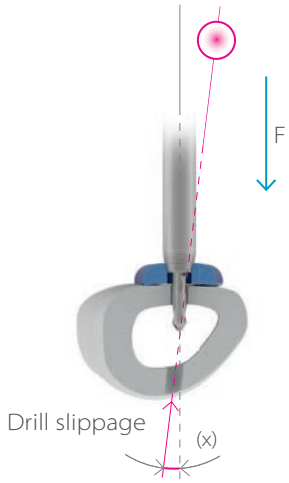
When drilling at the proximal end of the plate it is essential to keep the drilled Ø2 mm holes in axis alignment of both cortices. In order to achieve the axis alignment you need to ease the pressure on the drill after drilling through the first cortex and with mild pressure continue on the second cortex [fig. 6.5].

› Fix the plate with cortical locking screws. Use only manual screwdriver for tightening the screws. Drive the screw along the axis of the hole, perpendicularly to the plate [fig. 6.7]. Never fasten the screw too tightly.

Correct
drilling technique
→ obr. 6.5



Incorrect
drilling technique
→ obr. 6.6

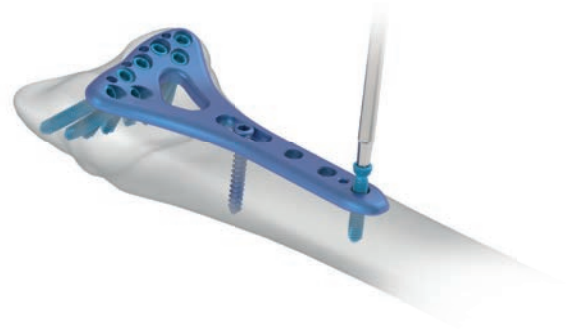


Caution

Avoid excessive pressure on the drill to prevent the risk of a drill slippage resulting in a misalignment of the second hole! [fig. 6.6]

→ INSTRUMENTS

REF	Instruments
397 129 69 7910	Screwdriver; AO, 6HR, 2×90 mm, conical
BD17-080-AO	Handle AO; 21×120 mm



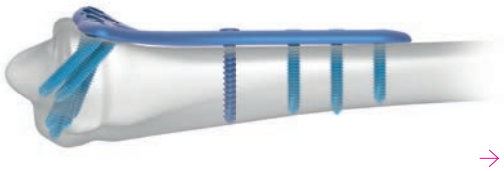
→ fig. 6.7

- Check the correct reduction of the articular surface and tightness of the screws [fig. 7.1–7.3].
- Check the correct position and lengths of the screws. Remove the K-wires used for temporary fixation of the plate.

☢ Run an X-ray check.

→ fig. 7.1

→ fig. 7.2



→ fig. 7.3

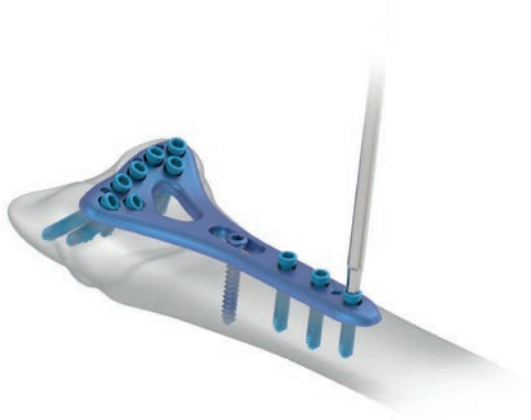
07

PLATE REMOVAL

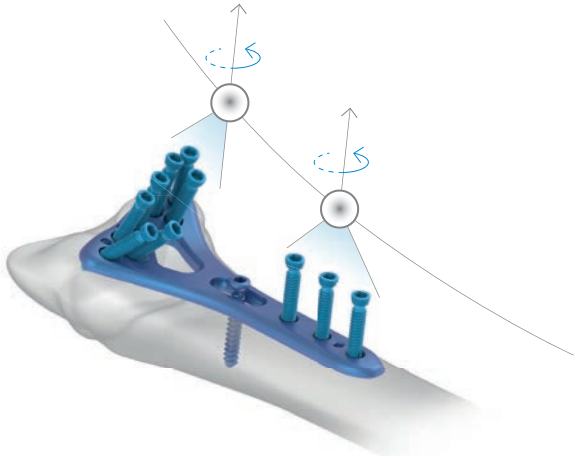
- Use the screwdriver with the holder to remove the plate. First unfasten all locking screws at the distal end of the plate [fig. 10.1], and then all the locking screws at the proximal end [fig. 10.2]. At last unfasten the cortical screw in the oval hole[fig. 10.3]. When all the screws in the plate have been unfastened you may start removing the locking screws [fig.10.4]. At last remove the cortical screw from the oval hole[fig. 10.5]. Use the raspatory for separating the plate from the bone if necessary.
- In case of a stripped hexagon screw head or any other troubles with the screws' removal use MEDIN instruments for removing screws.

Caution
Use only manual screwdriver for unfastening of the screws!

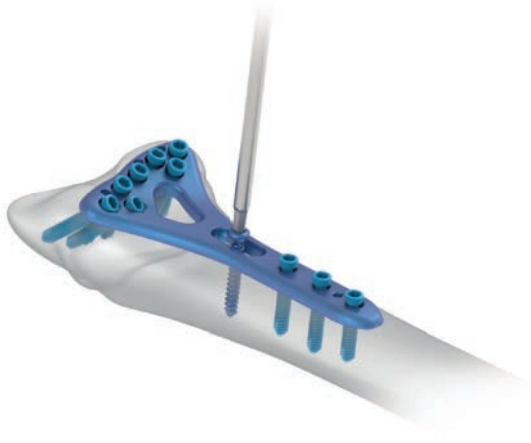
→ fig. 10.1



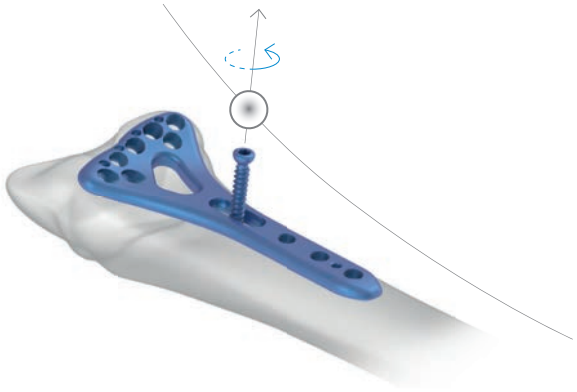
→ fig. 10.2



→ fig. 10.4



→ fig. 10.3

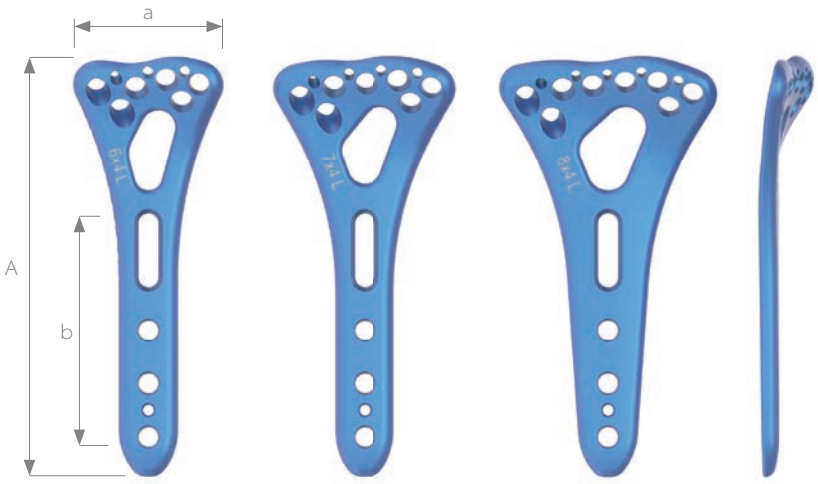


→ fig. 10.5

→ INSTRUMENTS

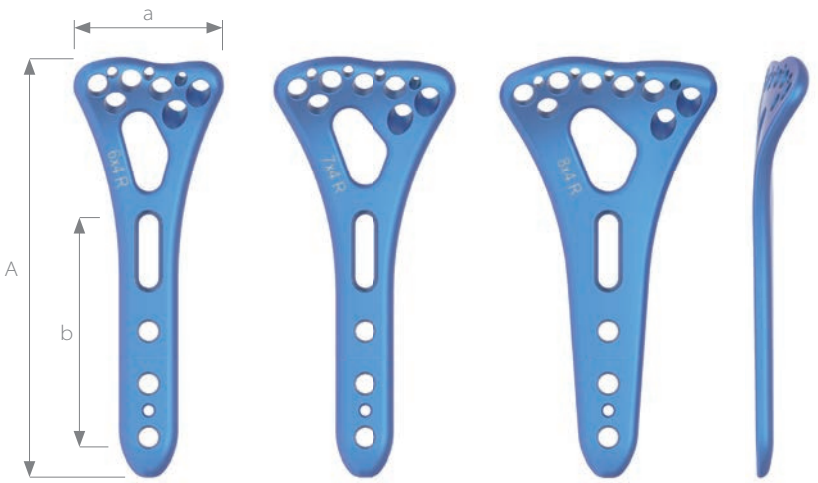
REF	Instruments
397 129 69 7910	Screwdriver; AO, 6HR, 2×90 mm, conical
BD17-080-AO	Handle AO; 21×120 mm
397 129 69 8460	Bone raspatory; 165 mm

→ RADIAL DISTAL VOLAR PLATES



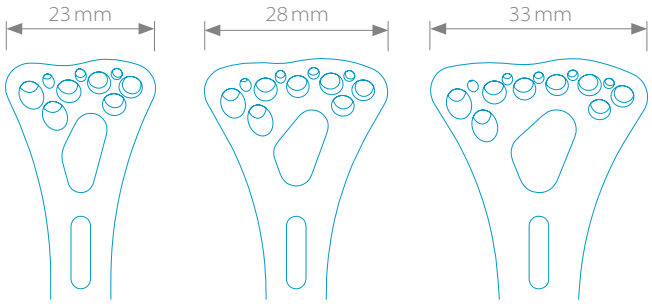
Radial Distal Volar plate, left

Titanium / Ti	A	Holes (a × b)
397 129 70 4303	47 mm	6×2
397 129 70 4313	55 mm	6×3
397 129 70 4323	63 mm	6×4
397 129 70 4333	47 mm	7×2
397 129 70 4343	55 mm	7×3
397 129 70 4353	63 mm	7×4
397 129 70 4363	47 mm	8×2
397 129 70 4373	55 mm	8×3
397 129 70 4383	63 mm	8×4



Radial Distal Volar plate, right

Titanium / Ti	A	Holes (a × b)
397 129 70 4403	47 mm	6×2
397 129 70 4413	55 mm	6×3
397 129 70 4423	63 mm	6×4
397 129 70 4433	47 mm	7×2
397 129 70 4443	55 mm	7×3
397 129 70 4453	63 mm	7×4
397 129 70 4463	47 mm	8×2
397 129 70 4473	55 mm	8×3
397 129 70 4483	63 mm	8×4

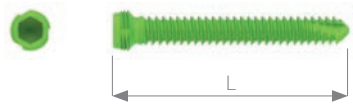


Technical data	Size
plate thickness	2.5 mm

	REF	Sieve / size 240 × 240 × 50 mm	pcs
	397 129 68 0240	Sieve for radial distal volar plates	1
		– without implants	

→ LOCKING SCREWS

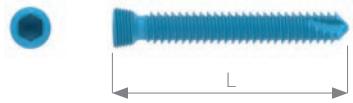
Polyaxial Locking Screw Ti; self-tapping 2.4 × L mm



Technical data	Size
screw thread	Ø 2.4 mm
screw core	Ø 1.7 mm
screw head	Ø 3.5 mm
drill	Ø 1.8 mm
screwdriver	⬡ 2.0 mm

Titanium / Ti	L
397 129 70 1634	12 mm
397 129 70 1644	14 mm
397 129 70 1654	16 mm
397 129 70 1664	18 mm
397 129 70 1674	20 mm
397 129 70 1684	22 mm
397 129 70 1694	24 mm
397 129 70 1704	26 mm
397 129 70 1714	28 mm
397 129 70 1724	30 mm

Cortical Locking Screw Ti; self-tapping 2.7 × L mm



Technical data	Size
screw thread	Ø 2,7 mm
screw core	Ø 2,0 mm
screw head	Ø 3,5 mm
drill	Ø 2,0 mm
screwdriver	⬡ 2,0 mm

Titanium / Ti	L
397 129 70 1934	12 mm
397 129 70 1944	14 mm
397 129 70 1954	16 mm
397 129 70 1964	18 mm
397 129 70 1974	20 mm
397 129 70 1984	22 mm
397 129 70 1994	24 mm
397 129 70 2004	26 mm
397 129 70 2014	28 mm
397 129 70 2024	30 mm

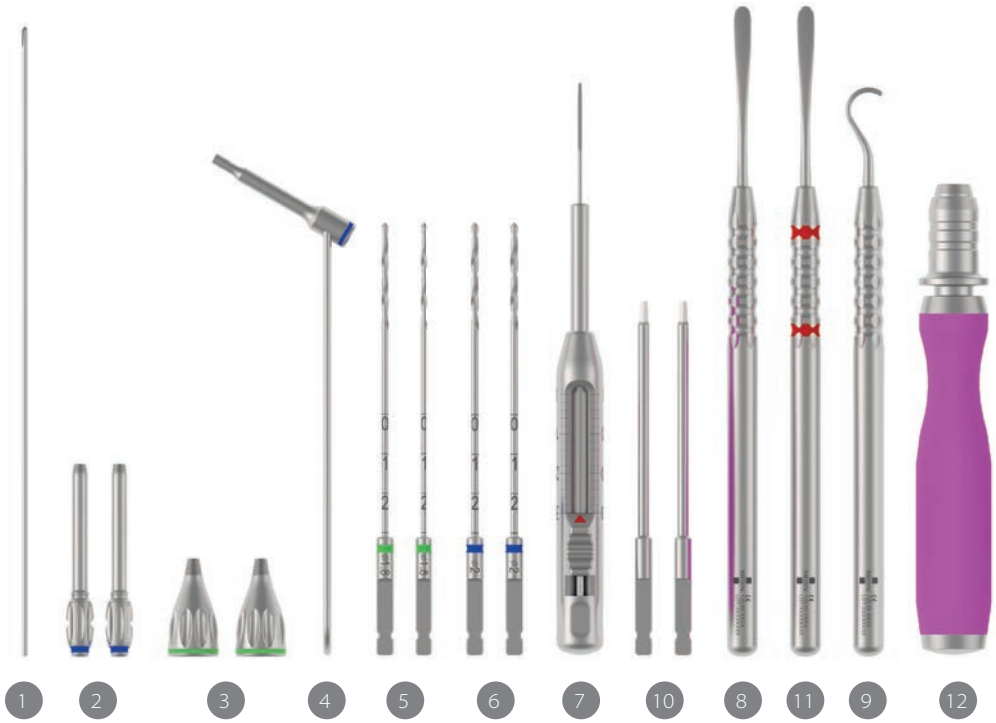
→ CORTICAL SCREW

Cortical Screw Ti; self-tapping HA 2.7 × L mm, 6HR2

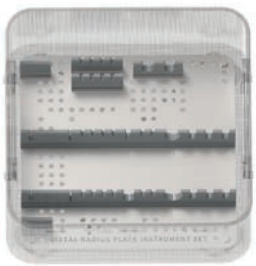
Technical data	Size
screw thread	Ø 2,7 mm
screw core	Ø 2,0 mm
screw head	Ø 4,0 mm
drill	Ø 2,0 mm
screwdriver	⬡ 2,0 mm

Titanium / Ti	L
397 129 70 2534	12 mm
397 129 70 2544	14 mm
397 129 70 2554	16 mm
397 129 70 2564	18 mm
397 129 70 2574	20 mm
397 129 70 2584	22 mm
397 129 70 2594	24 mm
397 129 70 2604	26 mm
397 129 70 2614	28 mm
397 129 70 2624	30 mm

→ INSTRUMENTS FOR RADIAL DISTAL VOLAR PLATES



	397 139 09 0915	Set of instruments for the radial distal volar plates with a sieve	
No.	**REF**	**Instruments**	**pcs**
1	397 129 09 2480	K-wire MEDIN; 1.5×160 mm	10
2	397 129 69 6710	Sleeve; drilling, locking, 4/2×49 mm	2
3	397 129 69 6720	Sleeve; drilling, locking, polyaxial, D13×25 mm	2
4	397 129 69 6730	Sleeve; drilling, 4/2×40 mm	1
5	397 129 69 7400	Drill; 1.8×110 mm, AO coupling	2
6	397 129 69 7410	Drill; 2×110 mm, AO coupling	2
7	397 129 69 7674	Depth gauge; 1,8×32 mm	1
8	397 129 69 7680	Bone elevator; 165 mm	1
9	397 129 69 7690	Hook retractor; 145 mm, blunt	1
10	397 129 69 7910	Screwdriver; AO, 6HR, 2×90 mm, conical	2
11	397 129 69 8460	Bone raspatory; 165 mm	1
12	BD17-080-AO	Handle AO; 21×120 mm	1

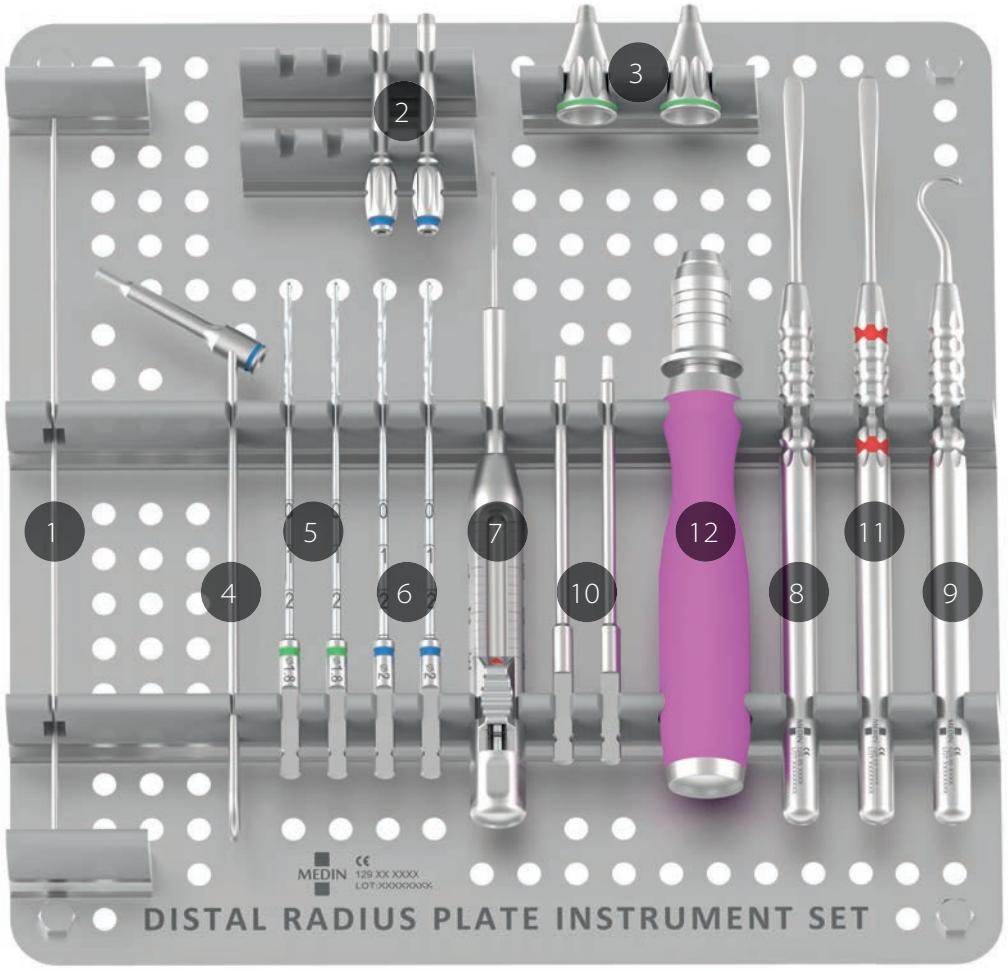


	REF	Sieve type	pcs
	397 129 68 0230	Sieve for instruments for radial distal volar plates – without instruments – 240×240×90 mm	1

	REF	Sieve type	pcs
	397 129 68 0260	Stand for radial distal screws – without implants – 135×90×36 mm	1

→ PLACEMENT OF INSTRUMENTS

PLATE 1

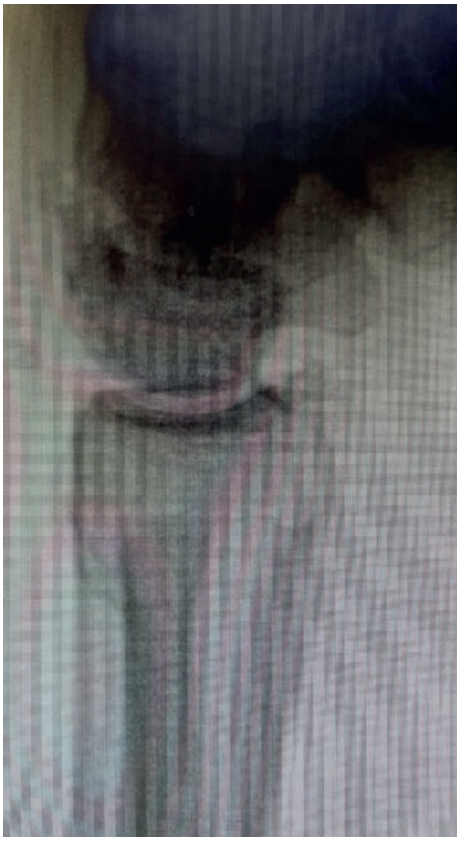


Note
The instruments are colour-coded.

→ INSTRUMENTS

No.	Instruments
1	K-wire MEDIN; 1.5 × 160 mm
2	Sleeve; drilling, locking, 4/2 × 49 mm
3	Sleeve; drilling, locking, polyaxial, D13 × 25 mm
4	Sleeve; drilling, 4/2 × 40 mm
5	Drill; 1.8 × 110 mm, AO coupling
6	Drill; 2 × 110 mm, AO coupling
7	Depth gauge; 1,8 × 32 mm
8	Bone elevator; 165 mm
9	Hook retractor; 145 mm, blunt
10	Screwdriver; AO, 6HR, 2 × 90 mm, conical
11	Bone raspatory; 165 mm
12	Handle AO; 21 × 120 mm

→ PREOPERATIVE X-RAY IMAGES OF THE FRACTURE



→ POSTPERATIVE X-RAY IMAGES OF THE FRACTURE

REF	GTIN	Description
› Radial distal volar plate Ti		
397 129 70 4403	8591712280504	6×2 holes, 47 mm, right
397 129 70 4413	8591712280252	6×3 holes, 55 mm, right
397 129 70 4423	8591712280511	6×4 holes, 63 mm, right
397 129 70 4433	8591712280528	7×2 holes, 47 mm, right
397 129 70 4443	8591712280269	7×3 holes, 55 mm, right
397 129 70 4453	8591712280535	7×4 holes, 63 mm, right
397 129 70 4463	8591712280542	8×2 holes, 47 mm, right
397 129 70 4473	8591712280276	8×3 holes, 55 mm, right
397 129 70 4483	8591712280559	8×4 holes, 63 mm, right
› Radial distal volar plate Ti		
397 129 70 4303	8591712280450	6×2 holes, 47 mm, left
397 129 70 4313	8591712280238	6×3 holes, 55 mm, left
397 129 70 4323	8591712279584	6×4 holes, 63 mm, left
397 129 70 4333	8591712280467	7×2 holes, 47 mm, left
397 129 70 4343	8591712280283	7×3 holes, 55 mm, left
397 129 70 4353	8591712280474	7×4 holes, 63 mm, left
397 129 70 4363	8591712280481	8×2 holes, 47 mm, left
397 129 70 4373	8591712280245	8×3 holes, 55 mm, left
397 129 70 4383	8591712280498	8×4 holes, 63 mm, left
› Polyaxial locking screw Ti		
397 129 70 1634	8591712328794	self-tapping 2.4×12 mm
397 129 70 1644	8591712328800	self-tapping 2.4×14 mm
397 129 70 1654	8591712328817	self-tapping 2.4×16 mm
397 129 70 1664	8591712328824	self-tapping 2.4×18 mm
397 129 70 1674	8591712328831	self-tapping 2.4×20 mm
397 129 70 1684	8591712328848	self-tapping 2.4×22 mm
397 129 70 1694	8591712328855	self-tapping 2.4×24 mm
397 129 70 1704	8591712328862	self-tapping 2.4×26 mm
397 129 70 1714	8591712328879	self-tapping 2.4×28 mm
397 129 70 1724	8591712328886	self-tapping 2.4×30 mm
› Cortical locking screw Ti		
397 129 70 1934	8591712265228	self-tapping 2.7×12 mm
397 129 70 1944	8591712265235	self-tapping 2.7×14 mm
397 129 70 1954	8591712241956	self-tapping 2.7×16 mm
397 129 70 1964	8591712265242	self-tapping 2.7×18 mm
397 129 70 1974	8591712241949	self-tapping 2.7×20 mm
397 129 70 1984	8591712265259	self-tapping 2.7×22 mm
397 129 70 1994	8591712241932	self-tapping 2.7×24 mm
397 129 70 2004	8591712265266	self-tapping 2.7×26 mm
397 129 70 2014	8591712265273	self-tapping 2.7×28 mm
397 129 70 2024	8591712241925	self-tapping 2.7×30 mm
› Cortical screw Ti		
397 129 70 2534	8591712265327	self-tapping HA 2.7×12 mm. 6HR2
397 129 70 2544	8591712265334	self-tapping HA 2.7×14 mm. 6HR2
397 129 70 2554	8591712242045	self-tapping HA 2.7×16 mm. 6HR2
397 129 70 2564	8591712265341	self-tapping HA 2.7×18 mm. 6HR2
397 12970 2574	8591712242021	self-tapping HA 2.7×20 mm. 6HR2
397 129 70 2584	8591712267314	self-tapping HA 2.7×22 mm. 6HR2
397 129 70 2594	8591712242014	self-tapping HA 2.7×24 mm. 6HR2
397 129 70 2604	8591712267284	self-tapping HA 2.7×26 mm. 6HR2
397 129 70 2614	8591712267291	self-tapping HA 2.7×28 mm. 6HR2
397 129 70 2624	8591712242038	self-tapping HA 2.7×30 mm, 6HR2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