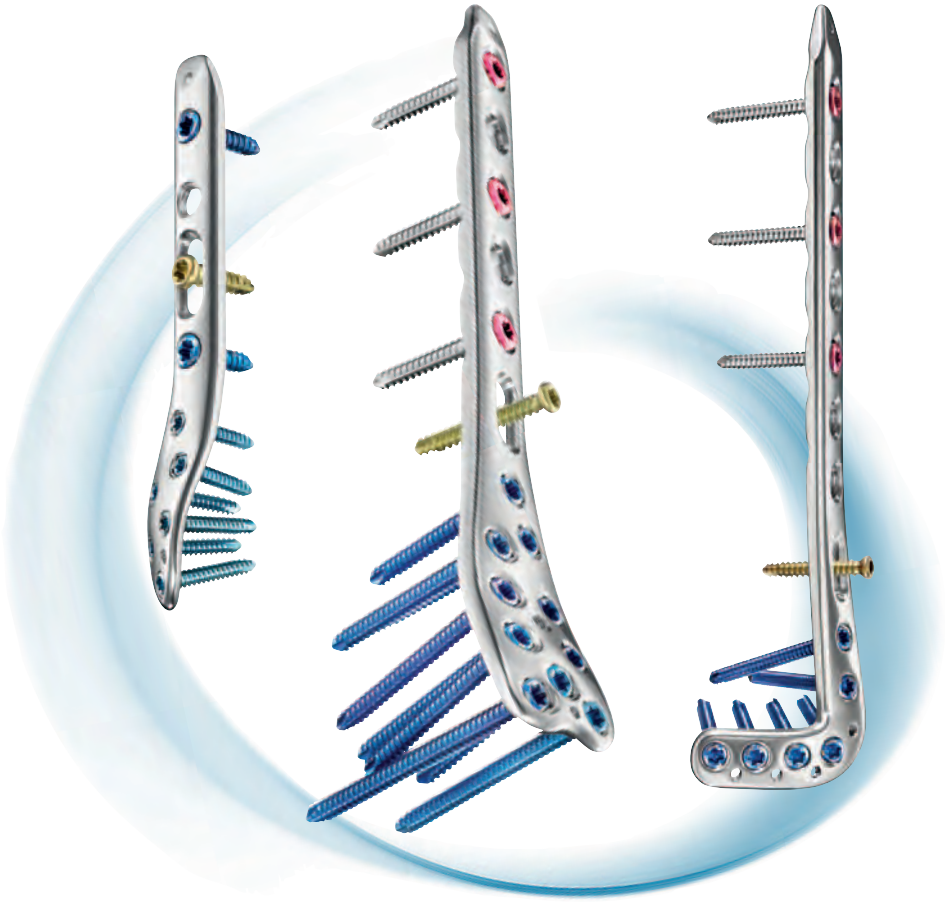
LOQTEQ®

Ankle Fracture System 2.7/3.5

Surgical Technique



Locking Compression Technology by aap

Disclaimer

This surgical technique is exclusively intended for medical professionals, especially physicians, and therefore may not be regarded as a source of information for non-medical persons. The description of this surgical technique does not constitute medical advice or medical recommendations nor does it convey any diagnostic or therapeutic information on individual cases. Therefore, the attending physician is fully responsible for providing medical advice to the patient and obtaining the informed consent of thepatient which this surgical technique does not supersede.

The description of this surgical technique has been compiled by medical experts and trained staff of aap Implantate AG with utmost diligence and to the best of their knowledge. However, aap Implantate AG excludes any liability for the completeness, accuracy, currentness, and quality of the information as well as for material or immaterial damages arising from the use of this information.

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State-of-the-art locked plating systems allow anatomical reduction with permanent retention in accordance with the fixateur interne principle. They represent the gold standard in fracture treatment, particularly in cases with reduced bone quality and in the stabilization of comminuted fractures.

Users throughout the world have achieved excellent results with the LOQTEQ® Anatomical Plating System, that combines advanced locking-compression technology and excellent anatomical fit in a comprehensive range of products. The combination of fracture compression and angular-stable locking in one surgical step is unique in this form and is the foundation of LOQTEQ®'s success. Thanks to the integration of a variable-locking technology and the continuous expansion of its areas of application, LOQTEQ®'s success story is sure to continue. The current highlight is the development of an antibacterial silver coating, which, in combination with LOQTEQ® plates, is a major boost to efficiency in fracture treatment that helps to significantly improve everyday life for doctors and patients.

	LOQTEQ® VA	LOQTEQ®
Angle-stable plate-screw connection with fixed (predetermined) angle	✓	✓
Variable-angled plate-screw connection with an angulation of ±15°, starting from the fixed angle (0°)	✓	
Fracture compression with final locking in the shaft area	✓	✓

◆ NOTE:
Pages 30 and 31 contain general information on variable-angled locked plating and should be read before using them for the first time. Monoaxial and polyaxial plates can be differentiated from one another by the article numbers and descriptions. We recommend comparing the catalogue or stock list before using or ordering them. The complete range of screws can be used in both systems.

The LOQTEQ® anatomical plates for the distal tiba and fibula are available with both monoaxial and variable-angle round locking holes in the metaphyseal part of the plates. The gliding holes in the shaft of the medial and anterolateral distal tibia plates allow locking-compression with the help of the LOQTEQ® technology.

The fibula plate features a profile height of just 1.8mm in the distal part to protect skin and soft tissues. Nevertheless, it gains a three times higher stability in mechanical comparison to a conventional 1/3 tubular plate. Unlike the LOQTEQ® Fibula Plate 3.5, which accepts 3.5mm screws only, the LOQTEQ® Fibula Plate 2.7/3.5 accepts 2.7mm screws in the metaphyseal part and 3.5mm in the shaft.

Material

The LOQTEQ® implants and instruments are manufactured using high-quality materials, which have been proven to be successful in medical technology for decades. The anatomical plates and bone screws are made of titanium alloy.

All materials employed comply with national and international standards. They are characterized by good biocompatibility, a high degree of safety against allergic reactions and good mechanical properties. LOQTEQ® implants feature an excellent, highly polished surface.

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Intended Use

The plate and screw implants of the system LOQTEQ® (VA) Distal Tibia Fibula Plates are intended for temporary fixation, correction or stabilization of the distal tibia and/or fibula. Implants are intended for single use on human bone.

Indications/Contraindications

Indications

Distal Medial Tibia Plate 3.5

- Fixation of complex intra- and extra-articular fractures of the distal tibia and osteotomies of the distal tibia

Distal Anterolateral Tibia Plate 3.5

- Fractures, osteotomies, and non-unions of the distal tibia, especially in osteopenic bone

Distal Fibula Plate 3.5

- Fractures, osteotomies and non-unions of the distal fibula, particularly in osteopenic bone

Absolute Contraindications

- Infection or inflammation (localized or systemic)
- Allergies against the implant material
- Acute and chronic osteomyelitis at or close to the surgical field
- High anesthesia risk patients
- Severe soft tissue swelling impacting normal wound healing
- Insufficient soft tissue coverage
- Fractures in children and adolescents with epiphyseal plates not yet ossified

Relative Contraindications

The circumstances listed below may negatively affect the success of surgery. In these cases, the treating physician must carry out a thorough assessment and on this basis, decide whether the benefits expected from surgery outweigh the potential damage:

- Patient's inability to cooperate in follow-up care (e.g., due to age, dementia, alcoholism)
- Prior illnesses or comorbidities that could negatively affect the results of surgery (e.g., arthrosis, osteoporosis, neurogenic or vascular diseases, diabetes mellitus, allergies, obesity)
- Simple fractures of nonosteoporotic bone

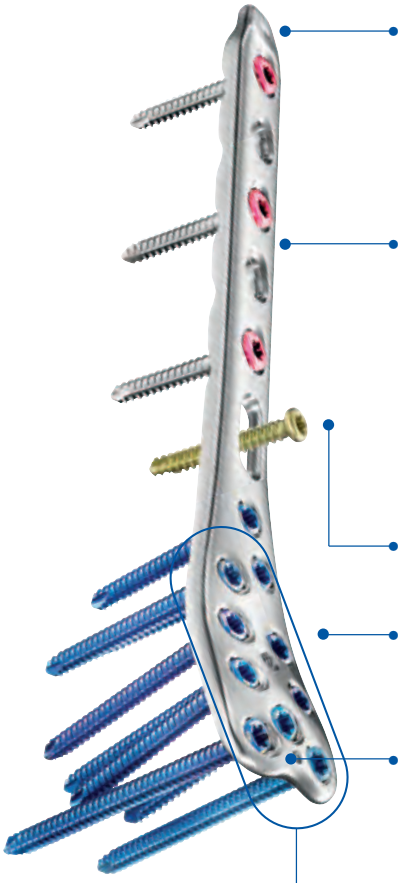
Processing (Sterilization & Cleaning)

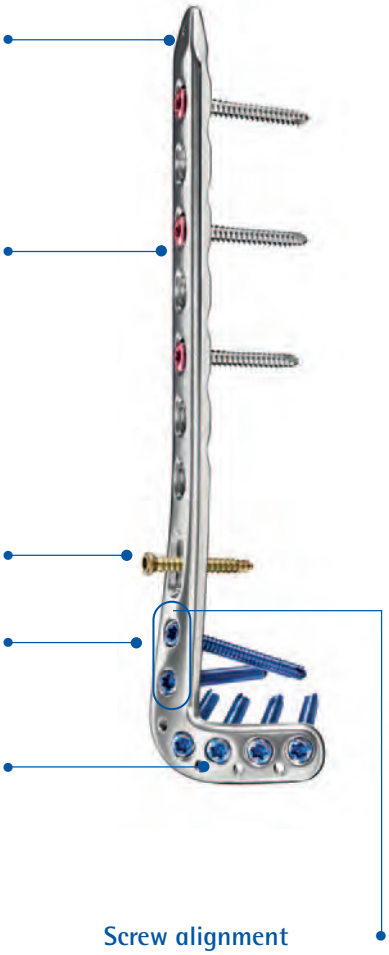
The implants described in this surgical technique are supplied non-sterile.

Implants and instruments that are supplied in non-sterile condition must be sterilized before use.
For this purpose, please refer to the Instructions for Use that are enclosed with the products.

Never use damaged implants or implants from damaged packaging.

Features & Benefits





Anatomical plate design
supports the reduction of complex fractures
available as right and left version

Tapered plate end
for tissue-conserving, submuscular insertion

Radiolucent aiming devices
facilitate correct placement of the drill guides
in the predetermined angle

Gliding locking holes in the shaft area
allow compression and angular stability with
LOQTEQ® technology

Rounded edges
reduce the risk of possible soft-tissue irritations

Minor contact undercuts
help to preserve the blood supply to the periosteum

The oblong hole
aids in the alignment of the plate

Variable locking plate holes (LOQTEQ® VA)
offer increased flexibility in the treatment
of fracturesnear joints

K-wire holes
for temporary fixation of bone fragments
or of theplate to the bone

Low profile and numerous screw options
for soft tissue protection and
screw placement according
to the fracture pattern

Screw alignment
for securing Volkmann's
triangle and Chaput
frament

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Distal Fibula Plate 2.7/3.5 and 3.5

Features & Benefits

2.7/3.5 (VA)

Tapered plate end
for tissue-conserving, submuscular insertion

Anatomical plate design
supports the reduction of complex fractures
available as right and left version

Radiolucent aiming devices
facilitate correct placement of the drill guides in the predetermined angle

The oblong hole
aids in the alignment of the plate

K-wire holes
for temporary fixation of bone fragments or of the plate to the bone

Variable locking plate holes (LOQTEQ® VA)
offer increased flexibility in the treatment of fractures near joints

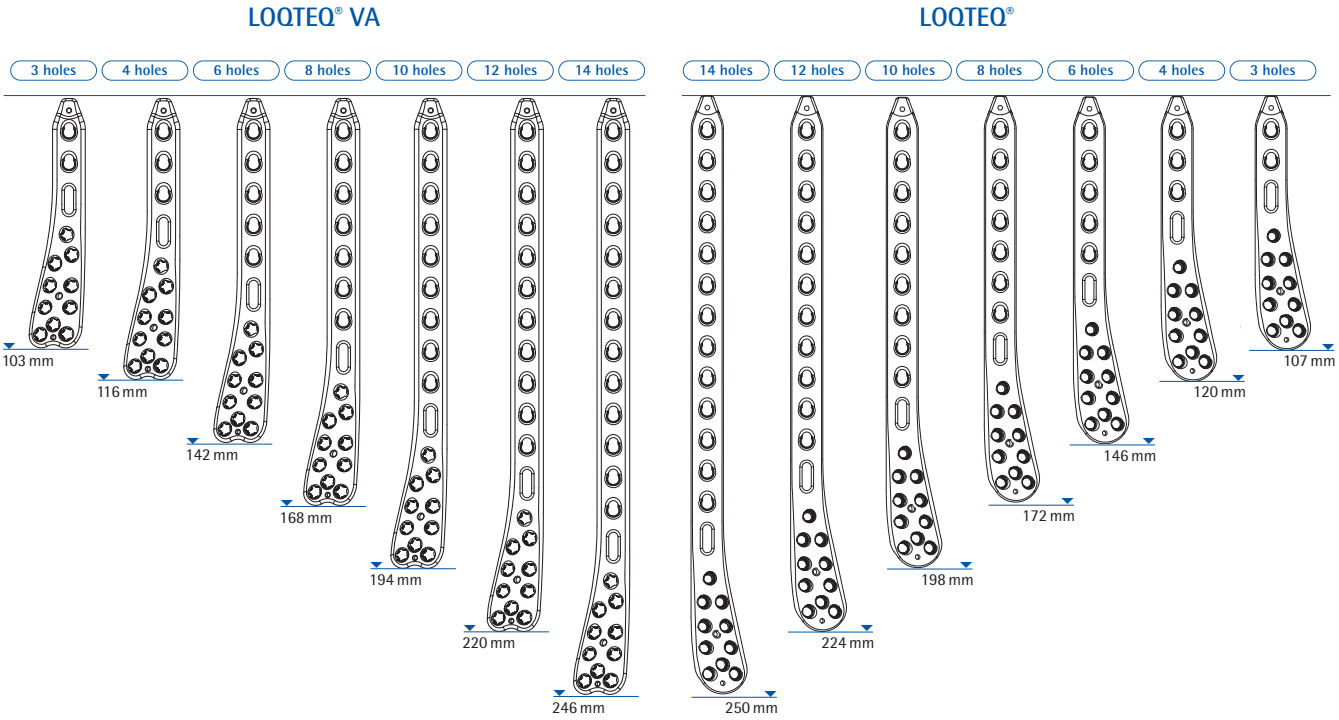
Skin- and tissue-conserving design
with levelled edges, a maximum width in the head area of only 13.5 mm and a profile height of just 1.8 mm

ø2.7 mm screws (LOQTEQ® VA)
for variable angle locking fixation of small fragments and optimal purchase in the bone

3.5

Preoperative planning

- The fracture situation and optimal plate position are evaluated and the suitable plate is selected based on a recent X-ray. If necessary, the use of lag screws should be planned. In some cases, a CT scan is recommended to complement preoperative planning.



Patient positioning

- The patient is positioned supine on a radiolucent operating table. For a neutral position, place the leg elevated on a bolster with the knee slightly bent. It is suggested to have fluoroscopic imaging in AP and lateral views available for the duration of the surgical procedure. If necessary, apply a tourniquet to the thigh.

Approach

- Open or percutaneous, depending on the fracture situation.
- In the case of percutaneous approach: incision for approach to the medial malleolus.

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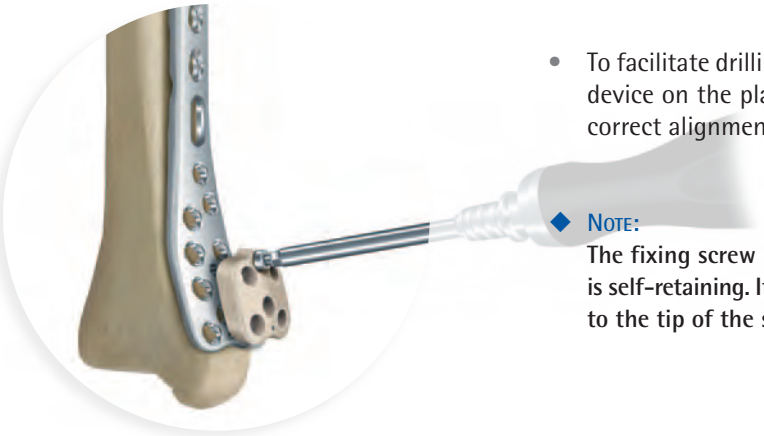
Distal Medial Tibia Plate 3.5

Preparing the plate

INSTRUMENTS	ART.-NO.
Large handle, cannulated, quick coupling	IU 7706-00
Screwdriver Duo, T15, quick coupling	IU 7825-56
Aiming device LOQTEQ® Distal Medial Tibia Plate 3.5, R/L	IU 8174-0x
Fixing screw aiming device LOQTEQ® SFI T15	IU 8176-03



- To facilitate drilling in the predetermined angle (0°), position the aiming device on the plate and secure it with the fixing screw. This enables a correct alignment of the drill guides.

◆ NOTE:
The fixing screw is connected to the aiming device in such a way that it is self-retaining. It can be removed for cleaning by applying gentle pressure to the tip of the screw from below.

Reduction and primary fixation

INSTRUMENTS	ART.-NO.
K-wire with trocar point, ø1.6, L 150	NK 0016-15

- Following anatomic reduction of the fracture fragments, temporarily fixate the result, e.g. with K wires. Then check the result of reduction using fluoroscopy in AP and lateral views.

◆ NOTE:
Fractures with involvement of the joint may require compression of the fracture with lag screws. Make sure that the later positioning of the plate is not obstructed by such screw.

- Depending on the approach, carefully insert and position the plate, or directly apply it to the bone. The plate position can be temporarily fixed with K wires, either using the provided holes in the plate or with the help of an appropriately positioned drill guide with inserted reduction sleeve.

◆ CAUTION:
Usually, bending of anatomically pre-contoured plates is neither necessary nor desirable as significant deformation of the plate holes may prevent an effective angular stable plate-screw connection. Contouring the plate in the metaphyseal region is not permitted when using a targeting device.

Primary fixation with cortical screw (gold)

INSTRUMENTS	ART.-NO.
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Double drill guide ø2.7 / 3.5, with spring aided centering	IU 8116-60
Depth gauge for screws ø3.5 - 4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Large handle quick coupling, cannulated	IU 7706-00

- Securing the oblong hole before inserting screws in other plate holes can aid in positioning the plate on the bone.
- To insert a cortical screw 3.5mm (gold) in the oblong hole, place the double drill guide in the center of the oblong hole and drill to the desired depth, preferably to the far cortex. Then determine the length of the screw using the depth gauge and insert a screw of appropriate length using the screwdriver. This screw can pull the plate to the bone, if necessary.
- Check the plate position using fluoroscopy and adjust if required.

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Distal Medial Tibia Plate 3.5

Insertion of screws, metaphyseal

- Depending on design, the distal area of LOQTEQ® Distal Tibia Plates feature:

  LOQTEQ® angle-stable round holes, for monoaxial locking

  LOQTEQ® VA variable-angle (VA) locking holes with up to 15° off-axis angulation in all directions

  They can accommodate 3.5mm locking (blue) as well as non-locking screws (gold).

◆ **Caution:**
When using locking screws at variable angles, a deviation of more than 15° from the respective axis of the plate hole should be avoided as it may prevent the screws from locking correctly into the plate and may result in screw loosening.

◆ **Note:**
If a combination of non-locking and locking screws is used, the non-locking screws must be inserted first.

Drill in predetermined angle (0°)

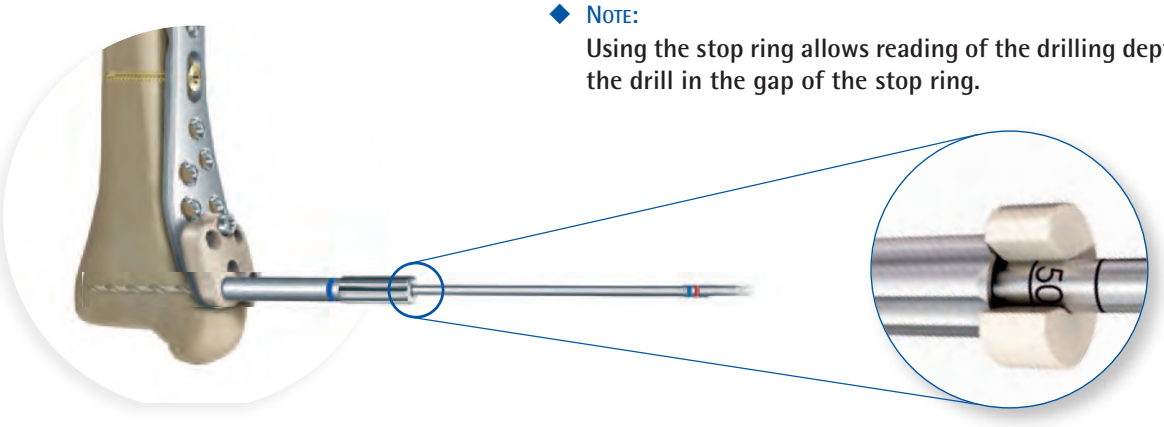
INSTRUMENTS	ART.-NO.
Drill guide for round hole LOQTEQ® 3.5, I-ø 2.8, blue	IU 8166-20
Reduction sleeve for K-wire ø1.6	IU 8166-16
K-wire with trocar point, ø1.6, L 150	NK 0016-15
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Stop ring for depth measurement, SF	IU 8166-06

- The positioning of screws inserted in the predetermined angle (0°) can be checked in advance by inserting a K-wire with the aid of the drill guide (blue) and a reduction sleeve. The K-wire indicates the position of the screw under fluoroscopy.

- Screw in a drill guide (blue) for round holes in one of the distal plate holes according to the intended sequence and drill to the desired depth.

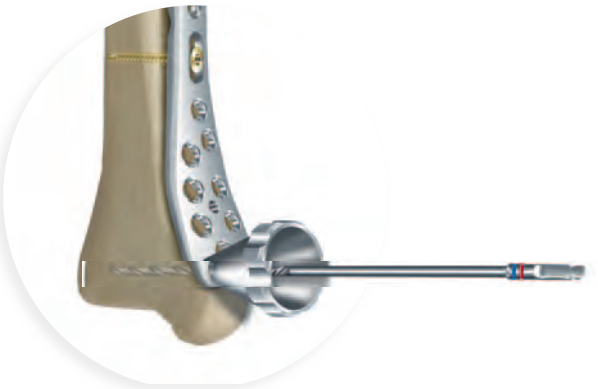
◆ **Caution:**
The screwdriver duo is not intended for screwing the drill guide into the plate.

◆ **Note:**
Using the stop ring allows reading of the drilling depth directly from the drill in the gap of the stop ring.



Only applicable for LOQTEQ® VA
Drill in variable angle (±15°)

INSTRUMENTS	ART.-NO.
Drill guide LOQTEQ® VA with thread, drill ø2.7, 0° to 15°	IU 8166-70
Drill guide LOQTEQ® VA with handle, drill ø2.7, 0° to 15°	IU 8166-60
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U

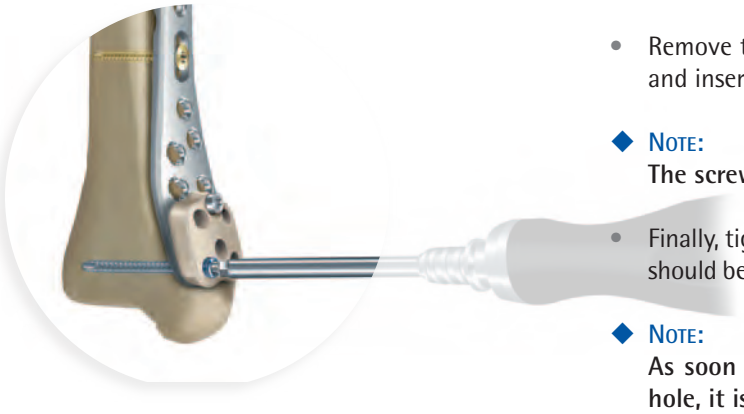


- Two drill guides are offered for drilling at a variable angle (±15°): a funnel-shaped threaded guide and a guide with handle for free choice of angle.
- Screw the variable drill guide into a VA plate hole and drill at the desired angle using the drill.

◆ **Caution:**
Avoid exerting pressure on the drill guide during insertion to ensure screwing it in along the central axis of the locking plate hole (predetermined angle 0°). Mind the maximum angulation of 15° when using the variable angle drill guide with handle.

Screw insertion

INSTRUMENTS	ART.-NO.
Depth gauge for screws ø3.5-4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Large handle, cannulated, quick coupling	IU 7706-00
Handle round with quick coupling, with torque limiter 2.0Nm	IU 7707-20



- Remove the drill guide, determine screw length with the depth gauge and insert an appropriate length locking screw (blue).

◆ **Note:**
The screwdriver duo facilitates manual removal of the drill guide.

- Finally, tighten the screw with the torque limiter 2.0Nm. Optimal locking should be achieved with an audible and tactile click of the torque limiter.

◆ **Note:**
As soon as the head of the screw reaches the thread of the plate hole, it is compulsory to switch to the torque limiter.

- Follow these instructions to insert further screws in the distal plate holes depending on the fracture pattern. Finally, confirm that all screw heads are flush with the plate surface and check the result using fluoroscopy. Adjust the positioning of screws or replace with screws of the correct length as necessary.

◆ **Caution:**
Replace any locking screw that fails to lock into the variable-angle locking plate hole!

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Distal Medial Tibia Plate 3.5

Insertion of screws, plate shaft

- The plate shaft features LOQTEQ® gliding locking holes which can accommodate locking screws (red) or non-locking screws (gold) either with or without compression (neutral).

◆ **Caution:**
The corresponding drill guide should always be used to correctly insert locking screws in the monoaxial plate hole. An incorrect angle may prevent the screw from locking securely into the plate.

without compression

INSTRUMENTS	ART.-NO.
Drill guide for gliding hole LOQTEQ® 3.5, I-ø 2.8, red	IU 8166-10
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Stop ring for depth measurement, SF	IU 8166-06
Depth gauge for screws ø3.5-4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Large handle, cannulated, quick coupling	IU 7706-00
Handle round with quick coupling, with torque limiter 2.0Nm	IU 7707-20

- To place screws in a neutral position, use the threaded drill guide (red). After drilling, remove the drill guide and determine the screw length with the depth gauge. Select and loosely insert a locking screw (red) of the appropriate length using the screwdriver.

◆ **Caution:**
The screwdriver duo is not intended for screwing the drill guide into the plate.

◆ **Note:**
Using the stop ring allows reading of the drilling depth directly from the drill in the gap of the stop ring.

◆ **Note:**
The screwdriver duo facilitates manual removal of the drill guide.

- Then manually tighten the screw using the torque limiter 2.0Nm. Optimal locking should be achieved with an audible and tactile click of the torque limiter. Finally, confirm that all screw heads are flush with the plate surface.

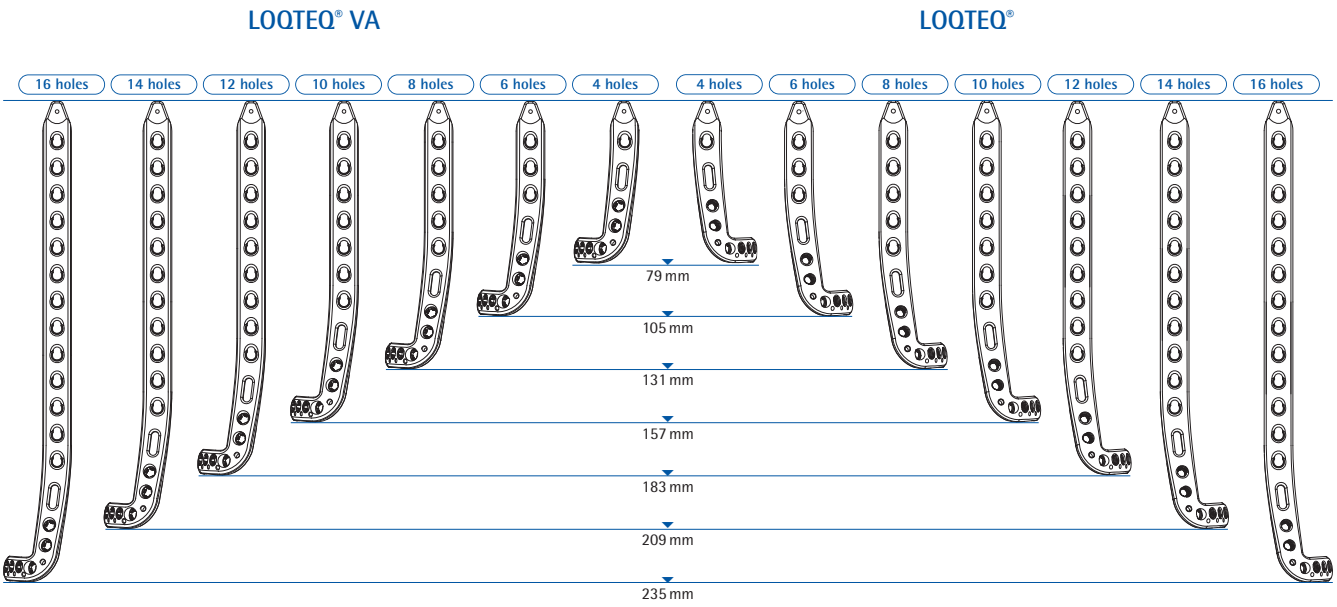
◆ **Caution:**
As soon as the head of the screw reaches the thread of the plate hole, it is compulsory to switch to the torque limiter. In cases of very hard diaphyseal bone, it is necessary to make sure that the screw heads are flush with the plate. In such cases, it is permissible to finish the screw without the torque limiter.

with compression

- Please follow the instructions on pages 18 and 19 for locking compression!

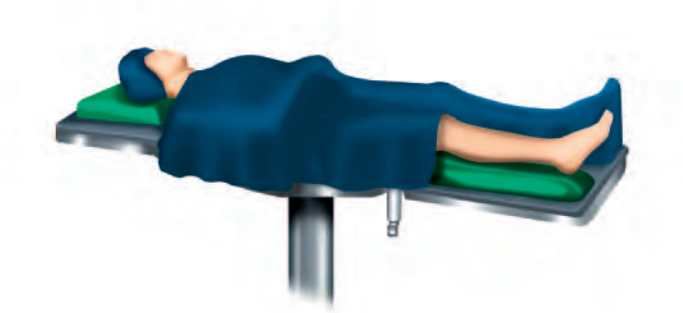
Preoperative planning

- The fracture situation and optimal plate position are evaluated and the suitable plate is selected based on a recent X-ray. If necessary, the use of lag screws should be planned. In some cases, a CT scan is recommended to complement preoperative planning.



Patient positioning

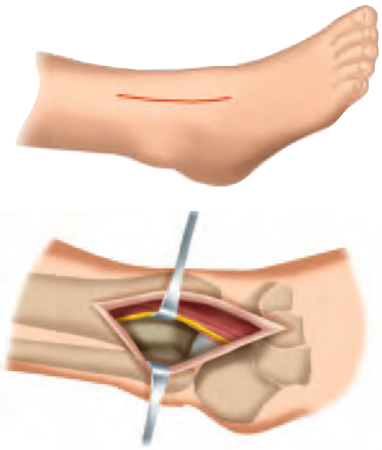
- The patient is positioned supine on a radiolucent operating table. For a neutral position, place the leg elevated on a bolster with the knee slightly bent. It is suggested to have fluoroscopic imaging in AP and lateral views available for the duration of the surgical procedure. If necessary, apply a tourniquet to the thigh.



Approach

- Make the anterior incision in the planned length centrally above the ankle. It should end proximally between the fibula and tibia.

◆ NOTE:
The superficial peroneal nerve traverses the incision and should be protected for the duration of the operation.



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Distal Anterolateral Tibia Plate 3.5

Preparing the plate

INSTRUMENTS	ART.-NO.
Screwdriver Duo, T15, quick coupling	IU 7825-56
Aiming device LOQTEQ® Distal Anterolateral Tibia Plate 3.5, R/L	IU 8186-0x
Fixing screw aiming device LOQTEQ® SFI T15	IU 8176-03
Large handle, cannulated, quick coupling	IU 7706-00

- To facilitate drilling in the predetermined angle (0°), position the aiming device on the plate and secure it with the fixing screw. This enables a correct alignment of the drill guides.

◆ **NOTE:**
The fixing screw is connected to the aiming device in such a way that it is self-retaining. It can be removed for cleaning by applying gentle pressure to the tip of the screw from below.

Reduction and primary fixation

INSTRUMENTS	ART.-NO.
K-wire with trocar point, ø1.6, L 150	NK 0016-15

- Following anatomic reduction of the fracture fragments, temporarily fixate the result, e.g. with K wires. Then check the result of reduction using fluoroscopy in AP and lateral views.

◆ **NOTE:**
Fractures with involvement of the joint may require compression of the fracture with lag screws. Make sure that the later positioning of the plate is not obstructed by such screw.

- Depending on the approach, carefully insert and position the plate, or directly apply it to the bone. The plate position can be temporarily fixed with K-wires, either using the provided holes in the plate or with the help of an appropriately positioned drill guide with inserted reduction sleeve.

◆ **CAUTION:**
Usually, bending of anatomically pre-contoured plates is neither necessary nor desirable as significant deformation of the plate holes may prevent an effective angular stable plate-screw connection. Contouring the plate in the metaphyseal region is not permitted when using a targeting device.

Primary Fixation with cortical screw (gold)

INSTRUMENTS	ART.-NO.
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Double drill guide ø2.7 / 3.5, with spring aided centering	IU 8116-60
Depth gauge for screws ø3.5 - 4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Large handle quick coupling, cannulated	IU 7706-00

- Securing the oblong hole before inserting screws in other plate holes can aid positioning the plate on the bone.
- To insert a cortical screw 3.5mm (gold) in the oblong hole, place the double drill guide in the center of the oblong hole and drill to the desired depth, preferably to the far cortex. Then determine the length of the screw using the depth gauge and insert a screw of appropriate length using the screwdriver. This screw can pull the plate to the bone, if necessary.
- Check the plate position using fluoroscopy and adjust if required.

Insertion of screws, metaphyseal

- Depending on design, the distal area of LOQTEQ® Distal Tibia Plates feature:

  LOQTEQ® angle-stable round holes, for monoaxial locking

  LOQTEQ® VA variable-angle (VA) locking holes with up to 15° off-axis angulation in all directions

  They can accommodate 3.5mm locking (blue) as well as non-locking screws (gold).

◆ **CAUTION:**
When using locking screws at variable angles, a deviation of more than 15° from the respective axis of the plate hole should be avoided as it may prevent the screws from locking correctly into the plate and may result in screw loosening.

◆ **NOTE:**
If a combination of non-locking and locking screws is used, the non-locking screws must be inserted first.

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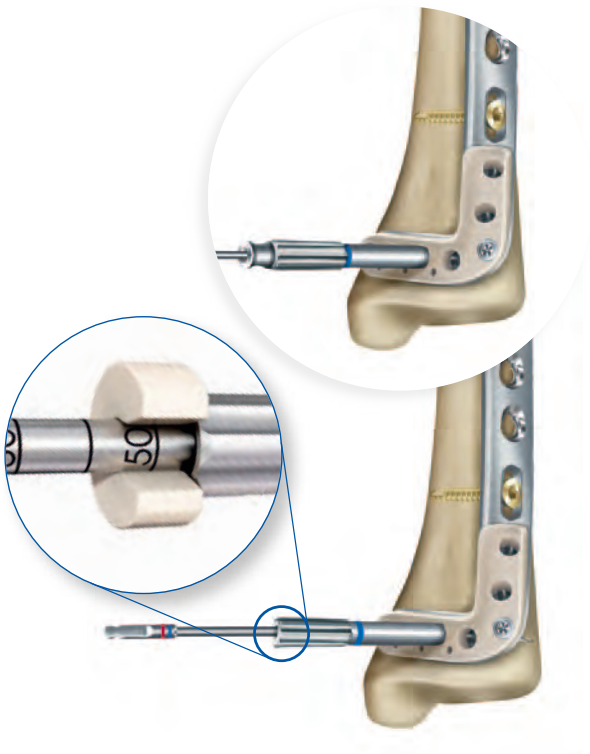
Distal Anterolateral Tibia Plate 3.5

Drill in Predetermined angle (0°)



INSTRUMENTS	ART.-NO.
Drill guide for round hole LOQTEQ® 3.5, I-ø 2.8, blue	IU 8166-20
Reduction sleeve for K-wire ø1.6	IU 8166-16
K-wire with trocar point, ø1.6, L 150	NK 0016-15
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Stop ring for depth measurement, SF	IU 8166-06

- The positioning of screws inserted in the predetermined angle (0°) can be checked in advance by inserting a K-wire with the aid of the drill guide (blue) and a reduction sleeve. The K-wire indicates the position of the screw under fluoroscopy.
- Screw in a drill guide (blue) for round holes in one of the distal plate holes according to the intended sequence and drill to the desired depth.

◆ **Caution:**
The screwdriver duo is not intended for screwing the drill guide into the plate.

◆ **Note:**
Using the stop ring allows reading of the drilling depth directly from the drill in the gap of the stop ring.

Only applicable for LOQTEQ® VA

Drill in variable angle (±15°)

INSTRUMENTS	ART.-NO.
Drill guide LOQTEQ® VA with thread, drill ø2.7, 0° to 15°	IU 8166-70
Drill guide LOQTEQ® VA with handle, drill ø2.7, 0° to 15°	IU 8166-60
K-wire with trocar point, ø1.6, L 150	NK 0016-15
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U

- Two drill guides are offered for drilling at a variable angle (±15°): a funnel-shaped threaded guide and a guide with handle for free choice of angle.
- Screw the variable drill guide into a VA plate hole and drill at the desired angle using the drill.

◆ **Caution:**
Avoid exerting pressure on the drill guide during insertion to ensure screwing it in along the central axis of the locking plate hole (predetermined angle 0°). Mind the maximum angulation of 15° when using the variable angle drill guide with handle.

Screw insertion

INSTRUMENTS	ART.-NO.
Depth gauge for screws ø3.5-4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Large handle, cannulated, quick coupling	IU 7706-00
Handle round with quick coupling, with torque limiter 2.0Nm	IU 7707-20

- Remove the drill guide, determine screw length with the depth gauge and insert an appropriate length locking screw (blue).

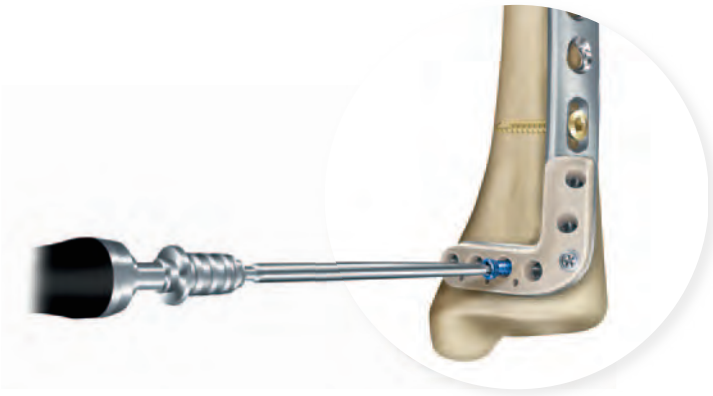
◆ **Caution:**
The screwdriver duo facilitates manual removal of the drill guide.

- Finally, tighten the screw with the torque limiter 2.0Nm. Optimal locking should be achieved with an audible and tactile click of the torque limiter.

◆ **Caution:**
As soon as the head of the screw reaches the thread of the plate hole, it is compulsory to switch to the torque limiter.

- Follow these instructions to insert further screws in the distal plate holes depending on the fracture pattern. Finally, confirm that all screw heads are flush with the plate surface and check the result using fluoroscopy. Adjust the positioning of screws or replace with screws of the correct length as necessary.

◆ **Caution:**
Replace any locking screw that fails to lock into the variable-angle locking plate hole!



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Distal Anterolateral Tibia Plate 3.5

Insertion of screws, plate shaft

- The plate shaft features LOQTEQ® gliding locking holes which can accommodate locking screws (red) or non-locking screws (gold) either with or without compression (neutral).

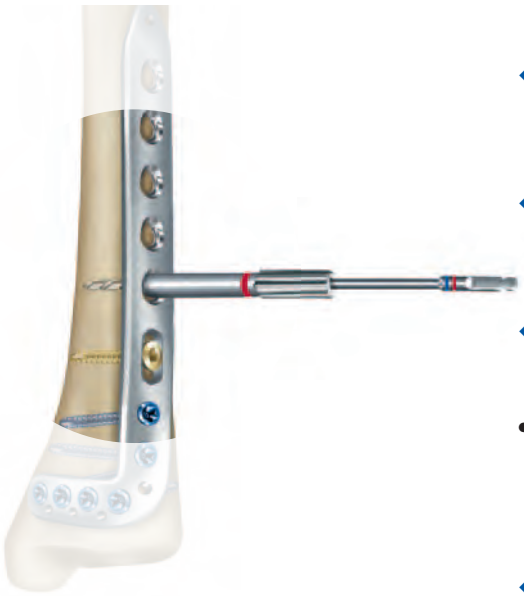
◆ **Caution:**
The corresponding drill guide should always be used to correctly insert locking screws in the monoaxial plate hole. An incorrect angle may prevent the screw from locking securely into the plate.

without compression

INSTRUMENTS	ART.-NO.
Drill guide for gliding hole LOQTEQ® 3.5, I-ø 2.8, red	IU 8166-10
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Stop ring for depth measurement, SF	IU 8166-06
Depth gauge for screws ø3.5-4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Large handle, cannulated, quick coupling	IU 7706-00
Handle round with quick coupling, with torque limiter 2.0Nm	IU 7707-20

- To place screws in a neutral position, use the threaded drill guide (red). After drilling, remove the drill guide and determine the screw length with the depth gauge. Select and loosely insert a locking screw (red) of the appropriate length using the screwdriver.

◆ **Caution:**
The screwdriver duo is not intended for screwing the drill guide into the plate.

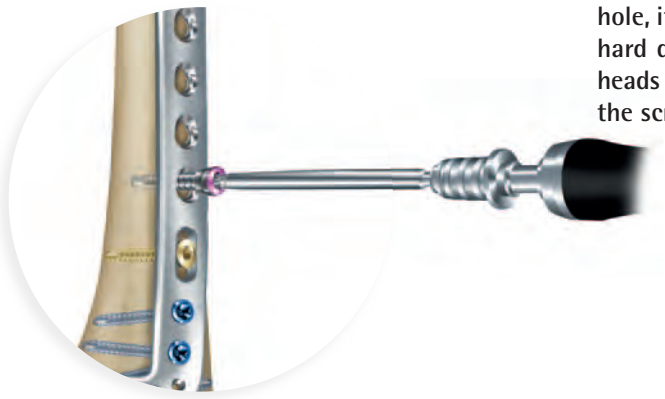


◆ **Caution:**
Using the stop ring allows reading of the drilling depth directly from the drill in the gap of the stop ring.

◆ **Caution:**
The screwdriver duo facilitates manual removal of the drill guide.

- Then manually tighten the screw using the torque limiter 2.0Nm. Optimal locking should be achieved with an audible and tactile click of the torque limiter. Finally, confirm that all screw heads are flush with the plate surface.

◆ **Caution:**
As soon as the head of the screw reaches the thread of the plate hole, it is compulsory to switch to the torque limiter. In cases of very hard diaphyseal bone, it is necessary to make sure that the screw heads are flush with the plate. In such cases, it is permissible to finish the screw without the torque limiter.



with compression

INSTRUMENTS	ART.-NO.
Basic Insert for Load Drill Guide LOQTEQ® 3.5	IU 8166-05
Load Drill guide LOQTEQ® 3.5, compression 1mm	IU 8166-01
Load Drill guide LOQTEQ® 3.5, compression 2mm	IU 8166-02
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Depth gauge for screws ø3.5-4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Large handle, cannulated, quick coupling	IU 7706-00
Handle round with quick coupling, with torque limiter 2.0Nm	IU 7707-20
OPTIONAL	
Load Drill guide LOQTEQ® 3.5, adjustable up to 2mm	IU 8166-03

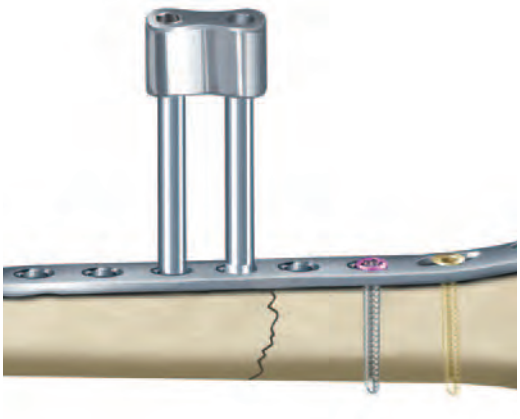
- If required, fracture compression can be achieved by inserting a non-locking cortical screw 3.5mm (gold) or LOQTEQ® locking compression screw 3.5mm (red) into the compression position.

- Screw the basic insert for load drill guide (IU 8166-05) into a shaft hole near the fracture line or, if necessary, above the fracture line. Choose a load drill guide in accordance with the compression distance (1mm or 2mm) and position on the basic insert away from the fracture gap.

◆ **CAUTION:**
The screwdriver duo is not intended for screwing the basic insert into the plate.

- Alternatively, the adjustable load drill guide (IU 8166-03) can be used. The fracture gap serves as orientation in setting the compression distance (max. 2mm). For this purpose, turn the wheel of the load drill guide until an appropriate gap forms in the upper part of the instrument and position the drill guide on the basic insert for load drill guide away from the fracture gap.

◆ **CAUTION:**
Care should be taken to select the proper compression distance (1 or 2mm). If the fracture gap is too small and the bone very hard, excessive compression may prevent full locking of the angle stable screw.



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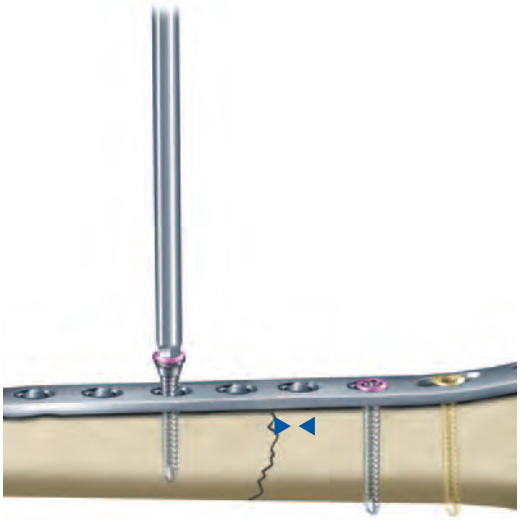
- Drill to the desired depth using a twist drill ø2.7 (blue/red) and remove the load drill guide as well as the basic insert.

◆ **Note:**
The screwdriver duo facilitates manual removal of the basic insert.

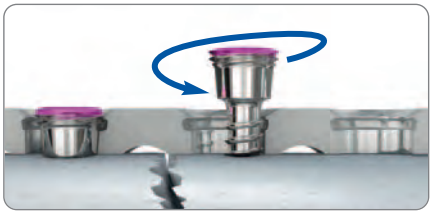
- Determine the depth with the depth gauge, loosely insert a LOQTEQ® locking compression screw 3.5mm (red) of the appropriate length with screwdriver T15 and finally tighten the screw with the torque limiter 2.0Nm. Optimal fixation is achieved when an audible click is heard.

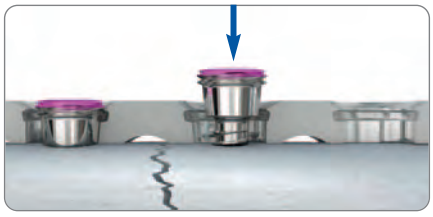
◆ **Caution:**
As soon as the head of the screw reaches the thread of the plate hole, it is compulsory to switch to the torque limiter. In cases of very hard diaphyseal bone, it is necessary to make sure that the screw heads are flush with the plate. In such cases, it is permissible to finish the screw without the torque limiter.



- Alternatively, a non-locking cortical screw (gold) can be placed as a compression screw. For this purpose, use the double drill guide in offset position (do not apply pressure on the drill guide) and drill using a twist drill ø2.7 (see page 8).

- Follow these instructions to insert screws in the plate holes in the shaft according to the fracture pattern. Confirm the final reduction, position and alignment of the plate and screws using fluoroscopy. Wound closure is performed.

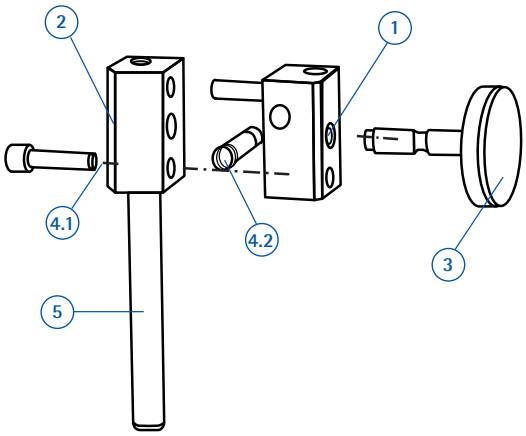




Assembly instructions load drill guide

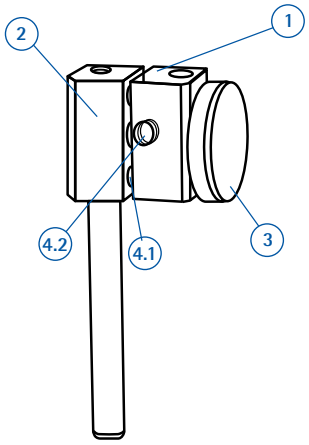
The load drill guide facilitates setting a variable compression path. It can be disassembled and reassembled in only a few steps.

Disassembly



- Remove screws (item 4.1 and 4.2) using a hexagonal screwdriver 2.5
- Unscrew the set screw (item 3)
- Pull the compression block apart (items 1 and 2)

Assembly



- Fit together the compression block (items 1 and 2)
- Insert the set screw (item 3) into the compression block, middle hole
- Insert the retaining screws (items 4.1 and 4.2) using a hexagonal screwdriver 2.5

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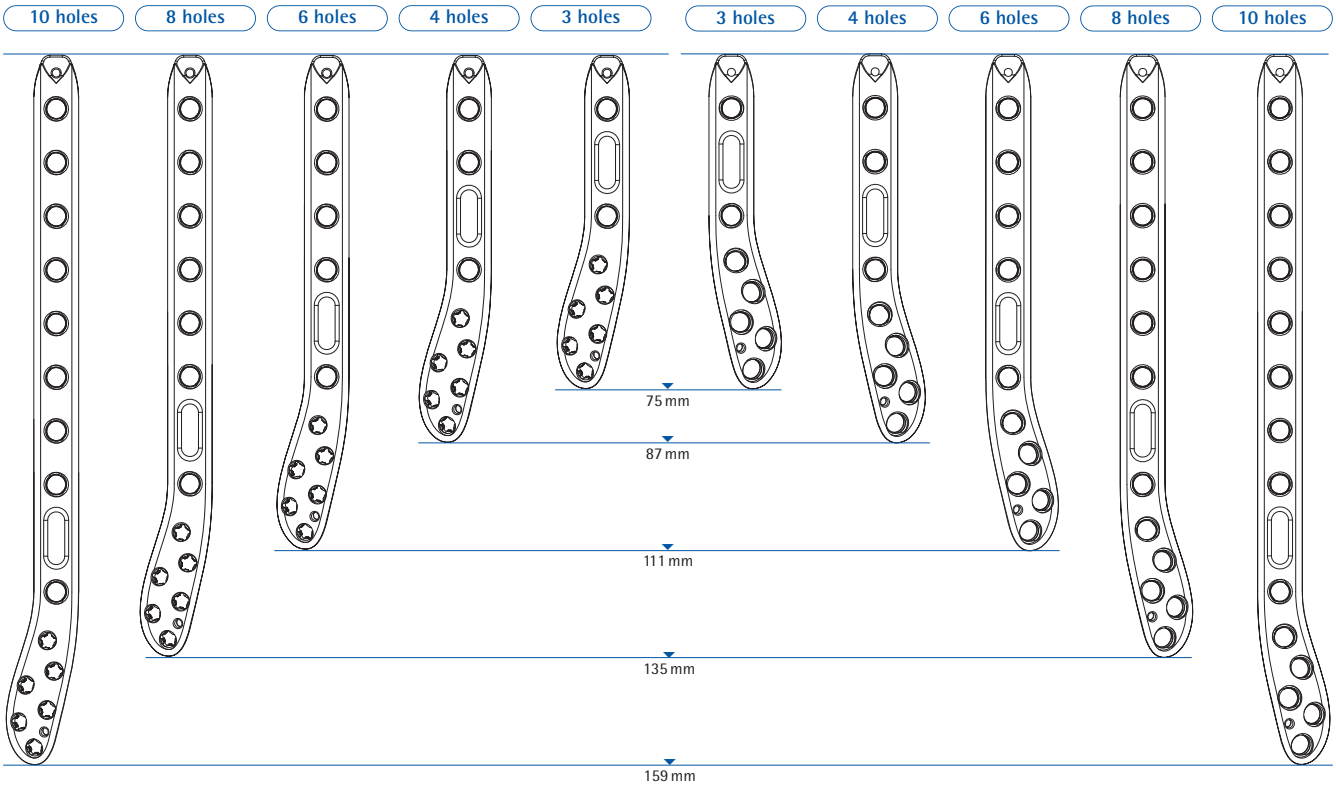
Distal Fibula Plate 2.7/3.5 and 3.5

Preoperative planning

- The fracture situation and optimal plate position are evaluated and the suitable plate is selected based on a recent X-ray. If necessary, the use of lag screws should be planned. In some cases, a CT scan is recommended to complement preoperative planning.

LOQTEQ® VA Fibula Plate 2.7/3.5

LOQTEQ® Fibula Plate 3.5



Patient positioning

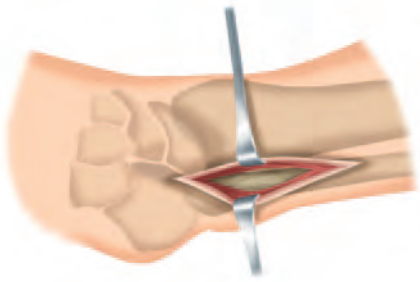
- The patient is positioned supine on a radiolucent operating table. For a neutral position, place the leg elevated on a bolster with the knee slightly bent. It is suggested to have fluoroscopic imaging in AP and lateral views available for the duration of the surgical procedure. If necessary, apply a tourniquet to the thigh.

Approach

Depending on the fracture situation:

- In case of simple fibular fractures (Danis-Weber Type A or B), a straight lateral or postero-lateral incision is recommended. For supra- syndesmosis fractures, the incision can be proximally extended.

- In case of complex fractures (e.g., AO 43 C3), an anterolateral incision, for example, allows the treatment of both the fibula and the tibia (DAT plate) through the same approach.



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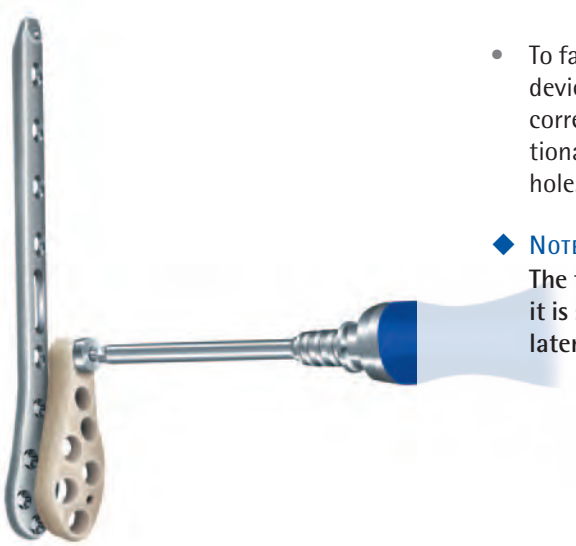
Distal Fibula Plate 2.7/3.5 and 3.5

The following surgical technique is illustrated with pictures showing the LOQTEQ® VA Distal Fibula Plate 2.7/3.5.

Preparing the plate

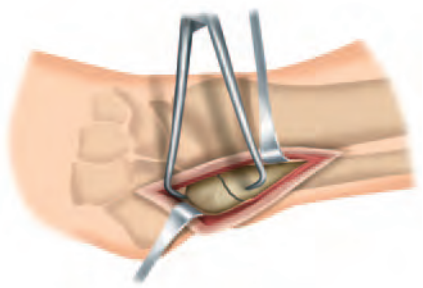
INSTRUMENTS	ART.-NO.
Screwdriver Duo, T15, quick coupling	IU 7825-56
Large handle, cannulated, quick coupling	IU 7706-00
Aiming device LOQTEQ® Distal Fibula Plate 3.5, R/L	IU 8191-0x
Fixing screw aiming device LOQTEQ® Fibula 3.5	IU 8191-03



- To facilitate drilling in the predetermined angle (0°), position the aiming device on the plate and secure it with the fixing screw. This enables a correct alignment of the drill guides. The aiming device can be additionally stabilized with a drill guide (light blue) in the most distal plate hole.

◆ **NOTE:**
The fixing screw is connected to the aiming device in such a way that it is self-retaining. For cleaning purposes, the screw must be removed laterally from the aiming device and afterwards pushed in again.

Reduction and primary fixation



INSTRUMENTS	ART.-NO.
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Double drill guide ø2.5/3.5, with spring aided centering	IU 8116-50
K-wire with trocar point, ø1.6, L 150	NK 0016-15
Screwdeiver heagonal 2.5, quick coupling	IU 7825-00
Large handle, cannulated, quick coupling	IU 7706-00
Drill guide for round hole LOQTEQ® 3.5, I-ø 2.8, blue	IU 8166-20
OPTIONAL	
Twist drill ø3.5, L 110, coil 50, quick coupling	IU 7435-00

- Following anatomic reduction of the fracture fragments, temporarily fixate the result, e.g. with K wires. The restoration of the correct length, alignment, and rotation of the fibula is of vital importance. Then check the result of reduction using fluoroscopy in AP and lateral views.

◆ **NOTE:**
Fractures with involvement of the joint may require compression of the fracture with lag screws. Make sure that the later positioning of the plate is not obstructed by such screw.

- For conventional lag screw technique with 4.0mm cancellous screws the appropriate instruments are used as described on page 8.

- Depending on the approach, carefully insert and position the plate, or directly apply it to the bone. The plate position can be temporarily fixed with K-wires, either using the provided holes in the plate or with the help of an appropriately positioned drill guide with inserted reduction sleeve.

◆ **CAUTION:**
Usually, bending of anatomically pre-contoured plates is neither necessary nor desirable as significant deformation of the plate holes may prevent an effective angular stable plate-screw connection. Contouring the plate in the metaphyseal region is not permitted when using a targeting device.

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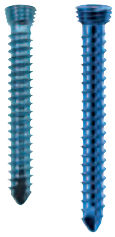
Distal Fibula Plate 2.7/3.5 and 3.5

Primary Fixation with cortical screw (gold)

INSTRUMENTS	ART.-NO.
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Double drill guide ø2.7 / 3.5, with spring aided centering	IU 8116-60
Depth gauge for screws ø3.5 - 4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Large handle quick coupling, cannulated	IU 7706-00

- Please follow the isntructions on page 8 for primary fixation with a 3.5mm cortical screw (gold).

Insertion of screws, metaphyseal



- Depending on design, the distal area of LOQTEQ® Distal Tibia Plates feature:

LOQTEQ®	angle-stable round holes for 3.5mm screws, monoaxial locking
LOQTEQ® VA	variable-angle (VA) locking holes for 2.7mm screws (light blue), with up to 15° off-axis angulation in all directions

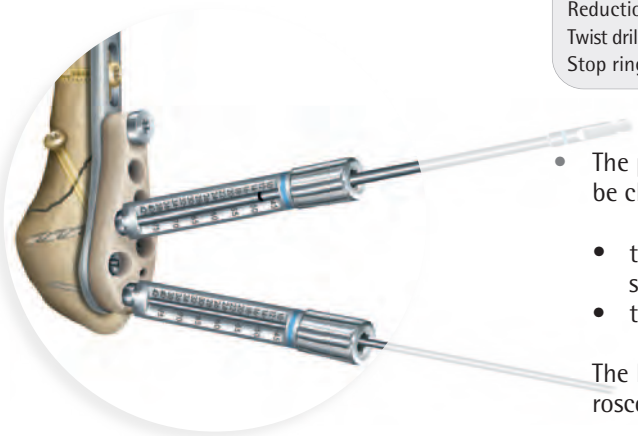
They can accommodate locking (light blue/blue) as well as non-locking screws (gold).

◆ **CAUTION:**
When using locking screws at variable angles, a deviation of more than 15° from the respective axis of the plate hole should be avoided as it may prevent the screws from locking correctly into the plate, and may result in screw loosening.

◆ **NOTE:**
If a combination of non-locking and locking screws is used, the non-locking screws must be inserted first.

Drilling in predetermined angle (0°)

INSTRUMENTS	SCREW-Ø	ART.-NO.
Drill guide LOQTEQ® Elbow plates 2.7, light blue	2.7	IU 8169-20
Twist drill ø2.0, L 150, coil 50, quick coupling, single use	2.7	IU 7420-16-1U
K-wire with trocar point, ø1.6, L 150	2.7/3.5	NK 0016-15
Drill guide for round hole LOQTEQ® 3.5, I-ø 2.8, blue	3.5	IU 8166-20
Reduction sleeve for K-wire ø1.6	3.5	IU 8166-16
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	3.5	IU 7427-16-1U
Stop ring for depth measurement, SF	3.5	IU 8166-06



- The positioning of screws inserted in the predetermined angle (0°) can be checked in advance by inserting a K-wire with the aid of:
  - the drill guide (blue) and reduction sleeve in round holes for 3.5mm screws
  - the drill guide (light blue) in VA round holes for 2.7mm screws

  The K-wire indicates the subsequent position of the screw under fluoroscopy.

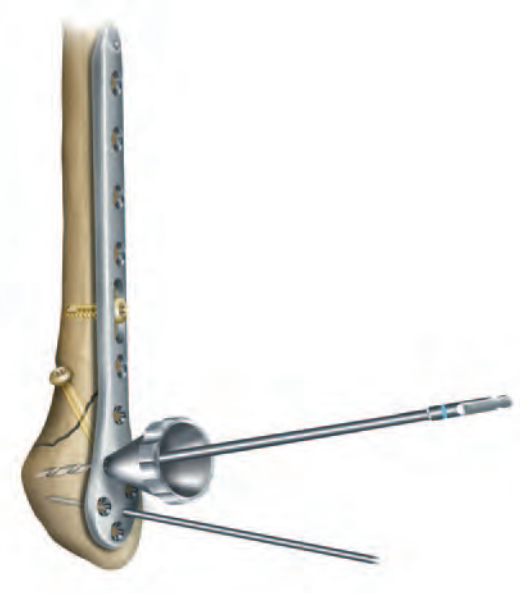
- Screw in a drill guide (light blue/blue) for round holes in one of the distal plate holes according to the intended sequence and drill to the desired depth.

◆ **CAUTION:**
The screwdriver duo is not intended for screwing the drill guide into the plate.

- The scale of the drill guide (light blue) with window allows direct reading of the screw length thanks to a laser marking on the drill. Alternatively, remove the drill guide and determine the screw length with the depth gauge.

ONLY APPLICABLE FOR LOQTEQ® VA
Drilling in variable angles (±15°)

INSTRUMENTS	ART.-NO.
Drill guide LOQTEQ® VA with thread, drill ø2.0, 0° to 15°	IU 8165-21
Drill guide LOQTEQ® VA with thread, drill ø2.7, 0° to 15°	IU 8166-70
Drill guide LOQTEQ® VA with handle, drill ø2.0, 0° to 15°	IU 8165-20
K-wire with trocar point, ø1.6, L 150	NK 0016-15
Twist drill ø2.0, L 150, coil 50, quick coupling, single use	IU 7420-16-1U



- Two drill guides are offered for drilling at a variable angle (±15°): a funnel-shaped threaded guide and a guide with handle for free choice of angle.

- Screw the variable drill guide into a VA plate hole and drill at the desired angle using the drill.

◆ **CAUTION:**
Avoid exerting pressure on the drill guide during insertion to ensure screwing it in along the central axis of the locking plate hole (predetermined angle 0°). Mind the maximum angulation of 15° when using the variable angle drill guide with handle.

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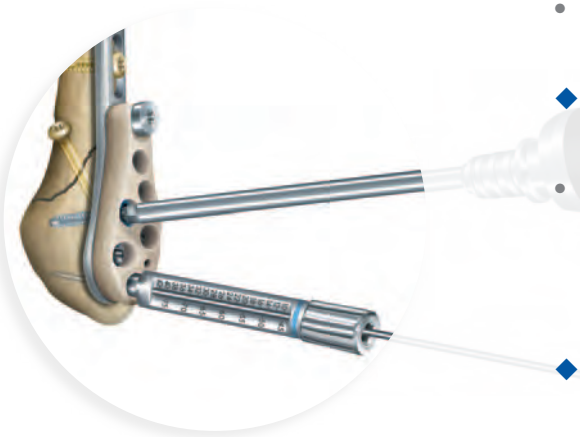
Distal Fibula Plate 2.7/3.5 and 3.5

Screw insertion

INSTRUMENTS	SCREW-Ø	ART.-NO.
Depth gauge for locking screws, ø2.7, to L 70	2.7	IS 7903-20
Screwdriver Duo, T8, quick coupling	2.7	IU 7815-56
Handle with quick coupling, with torque limiter, 1.5Nm	2.7	IU 7707-15
Large handle, cannulated, quick coupling	2.7/3.5	IU 7706-00
Depth gauge for locking screws, ø3.5-4.0, to L 90	3.5	IS 7904-20
Screwdriver Duo, T15, quick coupling	3.5	IU 7825-56
Handle with quick coupling, with torque limiter, 2.0Nm	3.5	IU 7707-20



- Remove the drill guide, determine screw length with the depth gauge and insert an appropriate length locking screw (light blue/blue).

◆ **Note:**
The screwdriver duo facilitates manual removal of the drill guide.

- Finally, tighten the screw with the torque limiter:
  - 1.5Nm for locking screws 2.7mm
  - 2.0Nm for locking screws 3.5mm

  Optimal locking should be achieved with an audible and tactile click of the torque limiter.

◆ **Caution:**
As soon as the head of the screw reaches the thread of the plate hole, it is compulsory to switch to the torque limiter.

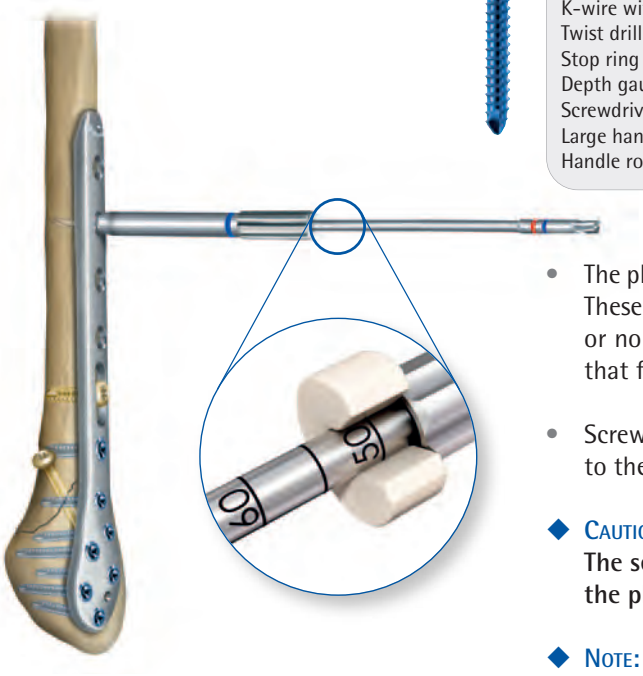
- To insert a cortical screw 2.5mm (gold) in a VA round hole for locking screws 2.7mm, use the drill guide (light blue) or drill guide with handle and drill to the desired depth with a drill. Remove the drill guide, determine screw length with the depth gauge and insert an appropriate length screw.

- Follow these instructions to insert further screws in the distal plate holes depending on the fracture pattern. Finally, confirm that all screw heads are flush with the plate surface and check the result using fluoroscopy. Adjust the positioning of screws or replace with screws of the correct length as necessary.

◆ **Caution:**
Replace any locking screw that fails to lock into the variable-angle locking plate hole!

Insertion of screws, plate shaft

INSTRUMENTS	ART.-NO.
Drill guide for round hole LOQTEQ® 3.5, I-ø 2.8, blue	IU 8166-20
Reduction sleeve for K-wire ø1.6	IU 8166-16
K-wire with trocar point, ø1.6, L 150	NK 0016-15
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Stop ring for depth measurement, SF	IU 8166-06
Depth gauge for screws ø3.5-4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Large handle, cannulated, quick coupling	IU 7706-00
Handle round with quick coupling, with torque limiter 2.0Nm	IU 7707-20



- The plate shaft features only round locking holes for monoaxial locking. These plate holes can accommodate either locking screws 3.5mm (blue) or non-locking screws 3.5mm (gold). The procedure is the same as for that filling a round locking hole in the predetermined angle (0°).

- Screw in a drill guide (blue) in one of the distal plate holes according to the intended sequence and drill to the desired depth with a drill.

◆ **Caution:**
The screwdriver duo is not intended for screwing the drill guide into the plate.

◆ **Note:**
Using the stop ring allows reading of the drilling depth directly from the drill in the gap of the stop ring.

- Remove the drill guide, determine the screw length with the depth gauge and insert an appropriate length locking screw (blue).

◆ **Note:**
The screwdriver duo facilitates manual removal of the drill guide.

- Then manually tighten the screw using the torque limiter. Optimal locking should be achieved with an audible and tactile click of the torque limiter 2.0Nm. Finally, confirm that all screw heads are flush with the plate surface.

◆ **Caution:**
As soon as the head of the screw reaches the thread of the plate hole, it is compulsory to switch to the torque limiter. In cases of very hard diaphyseal bone, it is necessary to make sure that the screw heads are flush with the plate. In such cases, it is permissible to finish the screw without the torque limiter.

- A necessary angulation can only be achieved in the shaft area by using non-locking screws. Use the double drill guide or drill guide with handle and drill in the required angle.

- Follow these instructions to insert screws in the plate holes in the shaft according to the fracture pattern. Confirm the final reduction, position and alignment of the plate and screws using fluoroscopy. Wound closure is performed.

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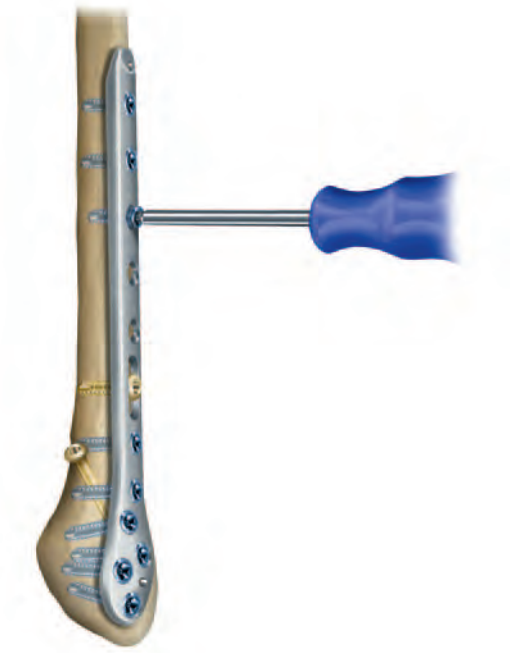
INSTRUMENTS	ART.-NO.
Explantation screwdriver T8, round handle	IU 7811-08
Explantation screwdriver T15, round handle	IU 7811-15
Screwdriver hexagonal 2.5, round handle	IU 7841-00

◆ NOTE:
The T8 (IU 7815-56) and T15 (IU 7825-56) screwdriver in the set are self-retaining and should not be used for screw removal.

- Use the appropriate explantation screwdriver for safe removal of a screw. Explantation screwdrivers are not self-retaining, penetrate further into the screw head and thus permit a higher torque when removing screws. They are not included in the set as standard and must be ordered separately.

- Place an incision on the old scar. Manually undo all screws and sequentially remove them.



◆ NOTE:
After manually unlocking all screws, removal may be performed using a power tool.

General Information
on variable locking screw fixations

- A locked plate-screw connection in the preferred or fixed angle offers the highest stability. Any constraints in terms of the flexibility of the treatment, e.g. the fixation of fragments that are difficult to reach, are reduced thanks to the variable locking (multidirectional) screw fixation.
- Multidirectional or variable locking systems allow the screws to be inserted at an angle of up to 15° in all directions around the respective central axis (0°) of the plate hole. Angles larger than this can prevent the screws from locking/screwing into the plate hole, which can lead to the screws working loose. Therefore, variable locking should be used in exceptional cases only.
- Always bear in mind that any deviation from the preferred angle (0°) will lead to screw heads that protrude to a greater or lesser extent; this can result in damage to nerves and soft tissue.
- Drill guides for round locking holes in the head section of the plates should be used in connection with the respective aiming device. This ensures the correct engagement of the instruments at the fixed angle and prevents a loss of stability.
- Drilling without the corresponding drill guide (hand drilling) can result in damage to the plate hole and should therefore generally be avoided.
- When using the funnel-shaped drill guide to drill at a variable angle (±15°), it must be taken into account that applying excessive pressure when inserting drill guides in a plate hole can lead to the drill guide deviating from the fixed angle. A drilled hole within the 30° cone is then no longer guaranteed. The plate and/or instrument thread can also be damaged. The drill guide can be effortlessly inserted in an axially correct position with minimum pressure and a quarter turn in the counterclockwise direction.

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- To avoid damaging the thread, the LOQTEQ® VA drill guide with handle must be directly positioned in the plate hole. An angle of 15° may not be exceeded here either.
- Excessive drilling, e.g. to correct a screw alignment, should be avoided in bones of poor quality in particular.
- The locking screw must be replaced if it fails to lock into the variable locking plate hole.
- A screw may be repositioned up to 3 times at a variable angle, depending on the bone quality and the degree of angulation. The greater the deviation from the preferred angle, the greater the deformation of the thread on the screw head, in particular once fully screwed into the plate. For this reason, it is recommended that a new screw should be used each time. A non-locking screw should be used in cases where the thread in the plate hole is damaged.

- The optimum screw alignment provided by the preferred angles changes if there is a deviation from the preferred angle or the plate is bent. To prevent screws from colliding, the positions of the screws in such cases should be regularly checked under fluoroscopy and corrected as required.
- Finally, all locking screws must be manually tightened using the torque limiter. Information on the required torque can be found in the respective surgical techniques and the instructions for use (IFU). Exception: LOQTEQ® VA Distal Radius 2.5. A torque limiter is not used in this set.

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Distal Medial Tibia Plate 3.5

HOLES	LENGTH	LOQTEQ®		LENGTH	LOQTEQ® VA	
	(mm)	LEFT	RIGHT	(mm)	LEFT	RIGHT
3	107	PA 3532-03-2	PA 3531-03-2	103	PA 3534-03-2	PA 3533-03-2
4	120	PA 3532-04-2	PA 3531-04-2	116	PA 3534-04-2	PA 3533-04-2
6	146	PA 3532-06-2	PA 3531-06-2	142	PA 3534-06-2	PA 3533-06-2
8	172	PA 3532-08-2	PA 3531-08-2	168	PA 3534-08-2	PA 3533-08-2
10	198	PA 3532-10-2	PA 3531-10-2	194	PA 3534-10-2	PA 3533-10-2
12	224	PA 3532-12-2	PA 3531-12-2	220	PA 3534-12-2	PA 3533-12-2
14	250	PA 3532-14-2	PA 3531-14-2	246	PA 3534-14-2	PA 3533-14-2

	LOQTEQ®	LOQTEQ® VA
Aiming device LOQTEQ® Distal Medial Tibia Plate 3.5, R	IU 8174-01	IU 8174-03
Aiming device LOQTEQ® Distal Medial Tibia Plate 3.5, L	IU 8174-02	IU 8174-04
Fixing screw aiming device LOQTEQ® SFI T15	IU 8176-03	IU 8176-03

Distal Anterolateral Tibia Plate 3.5

HOLES	LENGTH	LOQTEQ®		LOQTEQ® VA	
	(mm)	LEFT	RIGHT	LEFT	RIGHT
4	79	PA 3522-04-2	PA 3521-04-2	PA 3524-04-2	PA 3523-04-2
6	105	PA 3522-06-2	PA 3521-06-2	PA 3524-06-2	PA 3523-06-2
8	131	PA 3522-08-2	PA 3521-08-2	PA 3524-08-2	PA 3523-08-2
10	157	PA 3522-10-2	PA 3521-10-2	PA 3524-10-2	PA 3523-10-2
12	183	PA 3522-12-2	PA 3521-12-2	PA 3524-12-2	PA 3523-12-2
14	209	PA 3522-14-2	PA 3521-14-2	PA 3524-14-2	PA 3523-14-2
16	235	PA 3522-16-2	PA 3521-16-2	PA 3524-16-2	PA 3523-16-2

Aiming device LOQTEQ® (VA) Distal Anterolateral Tibia Plate 3.5, R	IU 8188-01
Aiming device LOQTEQ® (VA) Distal Anterolateral Tibia Plate 3.5, L	IU 8188-02
Fixing screw aiming device LOQTEQ® SFI T15	IU 8176-03

Distal Fibula Plate 2.7/3.5 and 3.5

HOLES	LENGTH	LOQTEQ®		LOQTEQ® VA	
	(mm)	LEFT	RIGHT	LEFT	RIGHT
3	75	PA 3562-03-2	PA 3561-03-2	PA 3564-03-2	PA 3563-03-2
4	87	PA 3562-04-2	PA 3561-04-2	PA 3564-04-2	PA 3563-04-2
6	111	PA 3562-06-2	PA 3561-06-2	PA 3564-06-2	PA 3563-06-2
8	135	PA 3562-08-2	PA 3561-08-2	PA 3564-08-2	PA 3563-08-2
10	159	PA 3562-10-2	PA 3561-10-2	PA 3564-10-2	PA 3563-10-2

	LOQTEQ®	LOQTEQ® VA
Aiming device LOQTEQ® Distal Fibula Plate 2.7/3.5, R	IU 8191-01	IU 8192-01
Aiming device LOQTEQ® Distal Fibula Plate 2.7/3.5, L	IU 8191-02	IU 8192-02
Fixing screw aiming device LOQTEQ® Fibula 3.5	IU 8191-03	IU 8191-03

LOQTEQ® Cortical Screw 2.7, small head, T8, self-tapping

L 10	SK 2726-10-2
L 12	SK 2726-12-2
L 14	SK 2726-14-2
L 16	SK 2726-16-2
L 18	SK 2726-18-2
L 20	SK 2726-20-2
L 22	SK 2726-22-2
L 24	SK 2726-24-2

LOQTEQ® Cortical Screw 3.5, small head, T15, self-tapping

L 10	SK 3526-10-2
L 12	SK 3526-12-2
L 14	SK 3526-14-2
L 16	SK 3526-16-2
L 18	SK 3526-18-2
L 20	SK 3526-20-2
L 22	SK 3526-22-2
L 24	SK 3526-24-2
L 26	SK 3526-26-2
L 28	SK 3526-28-2
L 30	SK 3526-30-2
L 32	SK 3526-32-2
L 34	SK 3526-34-2
L 36	SK 3526-36-2
L 38	SK 3526-38-2
L 40	SK 3526-40-2
L 42	SK 3526-42-2
L 45	SK 3526-45-2
L 50	SK 3526-50-2
L 55	SK 3526-55-2
L 60	SK 3526-60-2
L 65	SK 3526-65-2
L 70	SK 3526-70-2

LOQTEQ® Cortical Screw 3.5, T15, self-tapping

L 12	SK 3525-12-2
L 14	SK 3525-14-2
L 16	SK 3525-16-2
L 18	SK 3525-18-2
L 20	SK 3525-20-2
L 22	SK 3525-22-2
L 24	SK 3525-24-2
L 26	SK 3525-26-2
L 28	SK 3525-28-2
L 30	SK 3525-30-2
L 32	SK 3525-32-2
L 34	SK 3525-34-2
L 36	SK 3525-36-2
L 38	SK 3525-38-2
L 40	SK 3525-40-2
L 45	SK 3525-45-2

NOTE: Not for Fibula Plate !

Cortical Screw 2.5, small head, T8, self-tapping

L 10	SK 2512-10-2
L 12	SK 2512-12-2
L 14	SK 2512-14-2
L 16	SK 2512-16-2
L 18	SK 2512-18-2
L 20	SK 2512-20-2
L 22	SK 2512-22-2
L 24	SK 2512-24-2

Cortical Screw 3.5, T15, self-tapping

L 10	SK 3514-10-2
L 12	SK 3514-12-2
L 14	SK 3514-14-2
L 16	SK 3514-16-2
L 18	SK 3514-18-2
L 20	SK 3514-20-2
L 22	SK 3514-22-2
L 24	SK 3514-24-2
L 26	SK 3514-26-2
L 28	SK 3514-28-2
L 30	SK 3514-30-2
L 32	SK 3514-32-2
L 34	SK 3514-34-2
L 36	SK 3514-36-2
L 38	SK 3514-38-2
L 40	SK 3514-40-2
L 42	SK 3514-42-2
L 45	SK 3514-45-2
L 50	SK 3514-50-2
L 55	SK 3514-55-2
L 60	SK 3514-60-2
L 65	SK 3514-65-2
L 70	SK 3514-70-2

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Cancellous Screw 4.0, small head, T15

L 10	TL 5	SP 4030-10-2
L 12	TL 5	SP 4030-12-2
L 14	TL 5	SP 4030-14-2
L 16	TL 6	SP 4030-16-2
L 18	TL 7	SP 4030-18-2
L 20	TL 8	SP 4030-20-2
L 22	TL 9	SP 4030-22-2
L 24	TL 10	SP 4030-24-2
L 26	TL 12	SP 4030-26-2
L 28	TL 14	SP 4030-28-2
L 30	TL 14	SP 4030-30-2
L 32	TL 14	SP 4030-32-2
L 34	TL 14	SP 4030-34-2
L 36	TL 14	SP 4030-36-2
L 38	TL 14	SP 4030-38-2
L 40	TL 14	SP 4030-40-2
L 42	TL 15	SP 4030-42-2
L 45	TL 15	SP 4030-45-2
L 50	TL 15	SP 4030-50-2
L 55	TL 16	SP 4030-55-2
L 60	TL 16	SP 4030-60-2
L 65	TL 16	SP 4030-65-2
L 70	TL 16	SP 4030-70-2

Cancellous Screw 4.0, small head, T15, full thread

L 10	SP 4035-12-2
L 12	SP 4035-12-2
L 14	SP 4035-14-2
L 16	SP 4035-16-2
L 18	SP 4035-18-2
L 20	SP 4035-20-2
L 22	SP 4035-22-2
L 24	SP 4035-24-2
L 26	SP 4035-26-2
L 28	SP 4035-28-2
L 30	SP 4035-30-2
L 32	SP 4035-32-2
L 34	SP 4035-34-2
L 36	SP 4035-36-2
L 38	SP 4035-38-2
L 40	SP 4035-40-2
L 42	SP 4035-42-2
L 45	SP 4035-45-2
L 50	SP 4035-50-2
L 55	SP 4035-55-2
L 60	SP 4035-60-2
L 65	SP 4035-65-2
L 70	SP 4035-70-2

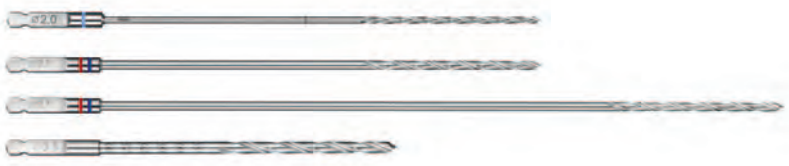
Washer, I-ø4.4, O-ø8.0, Titanium

SU 0448-00-2

Bending iron 1 for small fragment plates, closed	IP 8405-00
Bending iron 2 for small fragment plates, closed	IP 8405-50

Depth gauge for screws, ø2.7, up to L 70	IS 7903-20

Depth gauge for screws ø3.5 - 4.0, up to L 90	IS 7904-20



Twist drill quick coupling ø2.0, L 150, coil 50, single use	IU 7420-16-1U
Twist drill quick coupling ø2.7, L 150, coil 50, scaled, single use	IU 7427-16-1U
Twist drill quick coupling ø2.7, L 220, coil 50, scaled, single use	IU 7427-23-1U
Twist drill quick coupling ø3.5, L 110, coil 50, single use	IU 7435-00-1U

Large handle quick coupling, cannulated	IU 7706-00

Handle quick coupling, with torque limiter 1.5 Nm	IU 7707-15

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Handle quick coupling, with torque limiter 2.0 Nm — IU 7707-20

Screwdriver Duo, T8, quick coupling — IU 7815-56

Screwdriver Duo, T15, quick coupling — IU 7825-56

Double drill guide ø2.7 / 3.5, with spring aided centering — IU 8116-60

Drill guide LOQTEQ® VA with handle, drill ø2.0, 0° to 15° — IU 8165-20
Drill guide LOQTEQ® VA with handle, drill ø2.7, 0° to 15°, short — IU 8166-60

Drill guide LOQTEQ® VA with thread, drill ø2.0, 0° to 15° — IU 8165-21
Drill guide LOQTEQ® VA with thread, drill ø2.7, 0° to 15° — IU 8166-70

Load drill guide LOQTEQ® 3.5, compression 1 mm — IU 8166-01
Load drill guide LOQTEQ® 3.5, compression 2 mm — IU 8166-02
Basic insert for load drill guide LOQTEQ® 3.5 — IU 8166-05

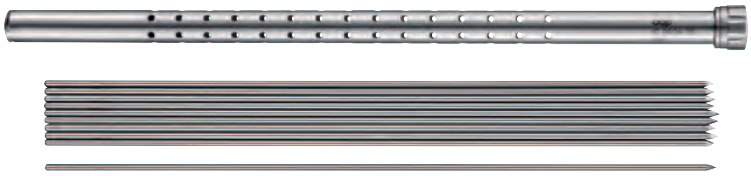
Stop ring for depth measurement, SF — IU 8166-06

Drill guide for gliding hole LOQTEQ® 3.5, I-ø 2.8, red — IU 8166-10

Reduction sleeve for K-wire ø1.6 — IU 8166-16

Drill guide for round hole LOQTEQ® 3.5, I-ø 2.8, blue — IU 8166-20

Drill guide LOQTEQ® Elbow plates 2.7, light blue — IU 8169-20



Caddy for K-wire L 200 — IC 0006-20

K-wire with trocar point, ø1.6, L 150 — NK 0016-15

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Notes

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