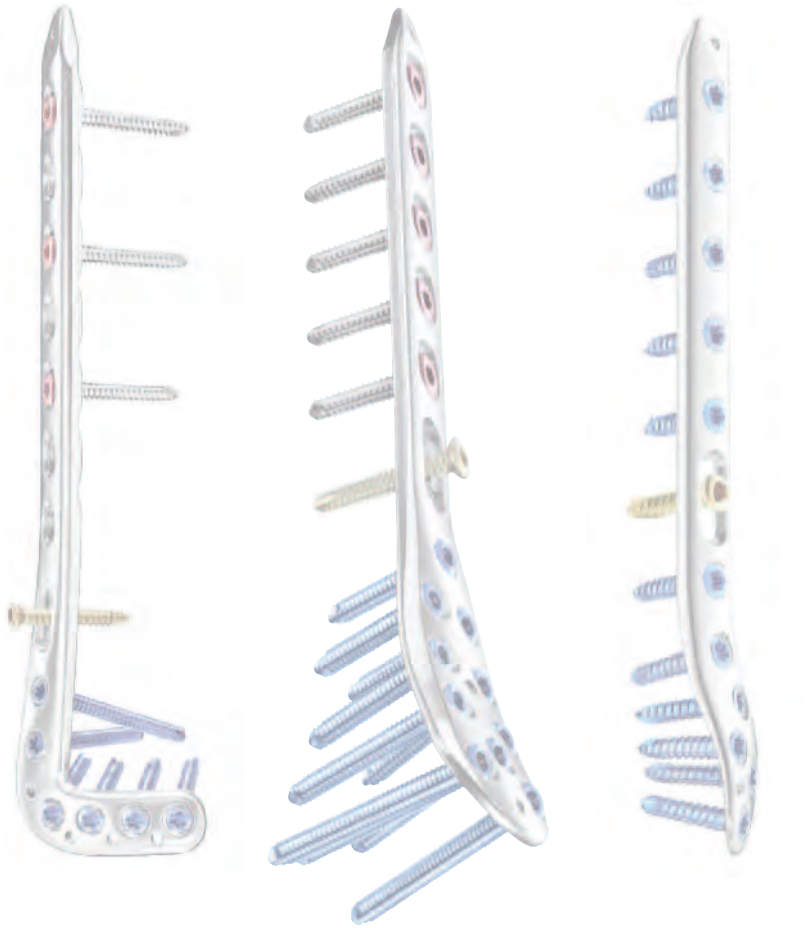
Distal Tibia Plating System 3.5
Surgical Technique (standard hex)

LOQTEQ®

Locking Compression Technology by aap

Distal Tibia Plating System 3.5
Surgical Technique (standard hex)

LOQTEQ®



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 the patient which this surgical technique does not supersede.

The description of this surgical technique has been compiled by medical experts and trained staff of aap mplantate 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.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

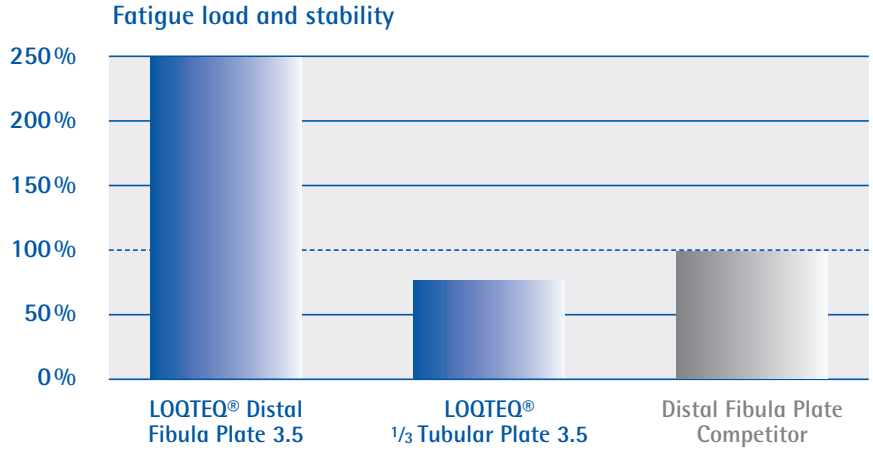
Content

The LOQTEQ® anatomical plating system by **aap** combines angular stability with advanced plate design.

The LOQTEQ® Distal Tibia and Fibula Plates 3.5 are anatomically preformed and available as right and left versions in different lengths. The plate tray is used as a module in combination with the basic instrument set for small fragments. Both the LOQTEQ® Distal Medial Tibia Plate 3.5 and the LOQTEQ® Distal Anterolateral Tibia Plate 3.5 allow angle stable compression in the shaft area.

The 1.8 mm low profile of the LOQTEQ® Distal Fibula Plate 3.5 prevents skin and soft tissue irritation, while being triple as stable as a conventional 1/3 tubular plate in mechanical comparison.

Modern angular stable plating systems allow for anatomic reduction with permanent retention according to the Fixateur interne principle. As state-of-the-art in fracture management, locked plating is particularly important with reduced bone quality or for stabilizing comminuted fractures.



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 show an excellent highly polished surface.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

Indications/Contraindications

Indications LOQTEQ® Distal Medial Tibia Plate 3.5

- Complex intra-articular and extra-articular fractures of the distal tibia
- Osteotomies of the distal tibia

Indications LOQTEQ® Distal Anterolateral Tibia Plate 3.5

- Fractures
- Osteotomies
- and non-unions

of the distal tibia, especially in osteopenic bone

Indications LOQTEQ® Distal Fibula Plate 3.5

- Fractures
- Osteotomies
- and non-unions

of the fibula, especially in osteopenic bone

Contraindications

- Infection or inflammation (localized or systemic)
- Allergies against the implant material
- High anesthesia risk patients
- Severe soft tissue swelling impacting normal wound healin
- Insufficient soft tissue coverage
- Fractures in children and adolescents with epiphyseal plates not yet ossified

Processing (Sterilization & Cleaning)

The implants are supplied sterile and non-sterile.

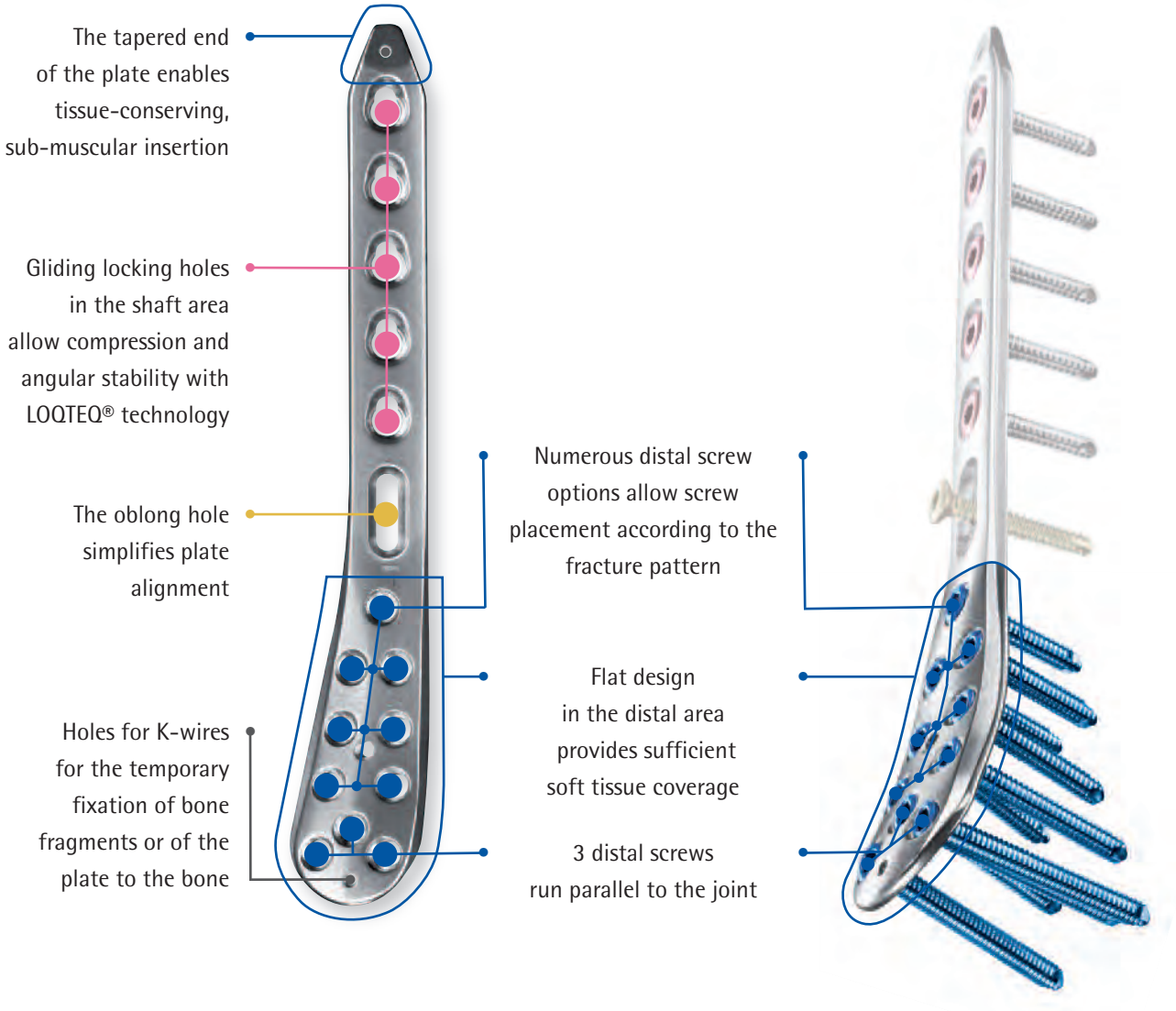
Implants and instruments that are supplied in non-sterile condition must be sterilized before use.
For this purpose, please refer to the Instructions for Use that are enclosed with the plates, instruments, and trays.

Do not use (sterile) implants from damaged or open inner packaging.

Features & Benefits

- The anatomical plate design minimizes the need for intraoperative plate contouring
- All plate holes, with the exception of the oblong hole, are compatible with locking as well as non-locking cortical screws
- Fitted, radiolucent aiming devices are designed for the safe placement of drill guides at a preset angle
- Minor Contact undercuts may help to preserve the blood supply to the periosteum
- Available as right and left version

LOQTEQ® Distal Medial Tibia Plate 3.5



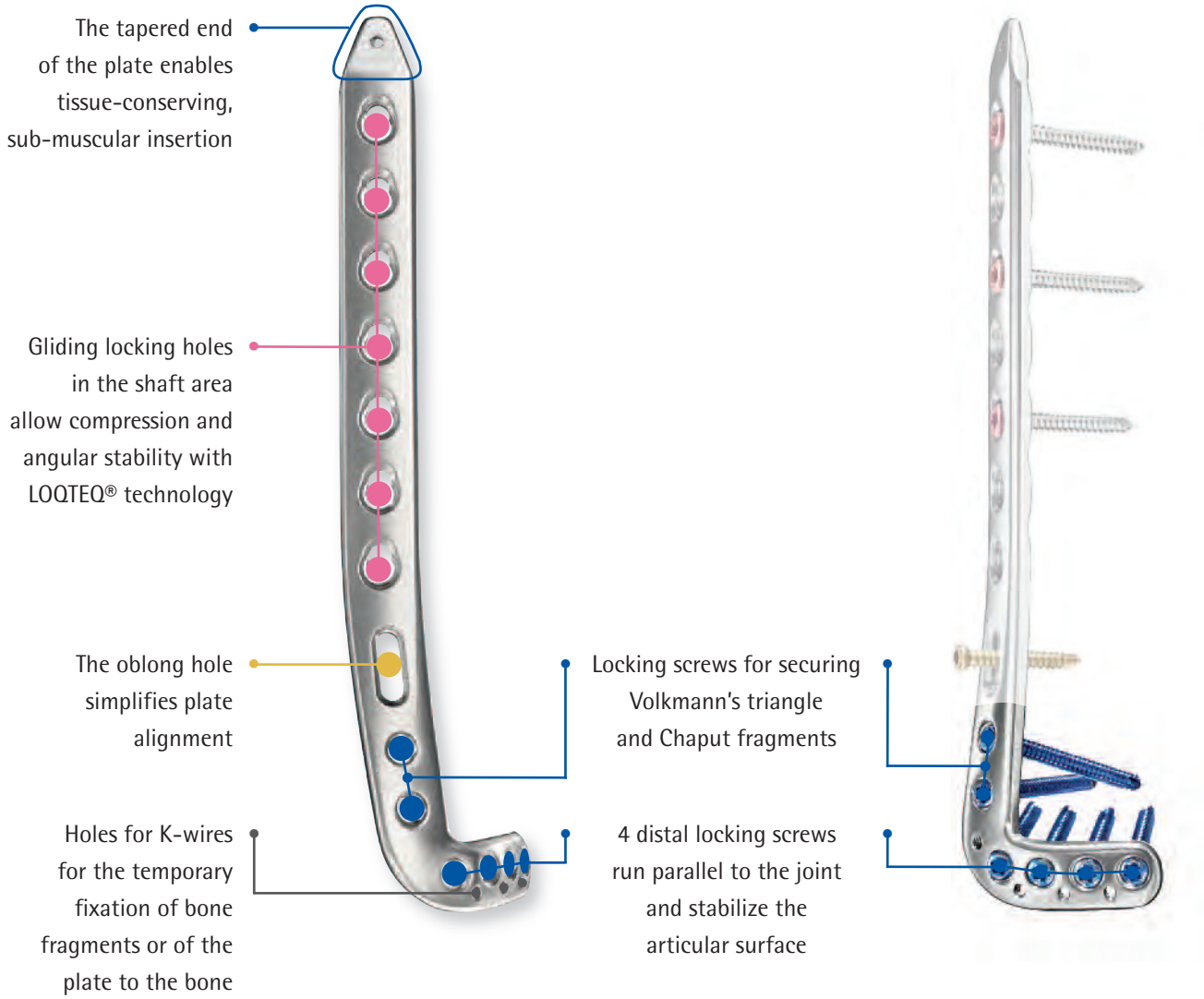
aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

Distal Anterolateral Tibia Plate 3.5

Features & Benefits

- The anatomical plate design minimizes the need for intraoperative plate contouring
- All plate holes, with the exception of the oblong hole, are compatible with locking as well as non-locking cortical screws
- Fitted, radiolucent aiming devices are designed for the safe placement of drill guides at a preset angle
- Minor Contact undercuts may help to preserve the blood supply to the periosteum
- Available as right and left version

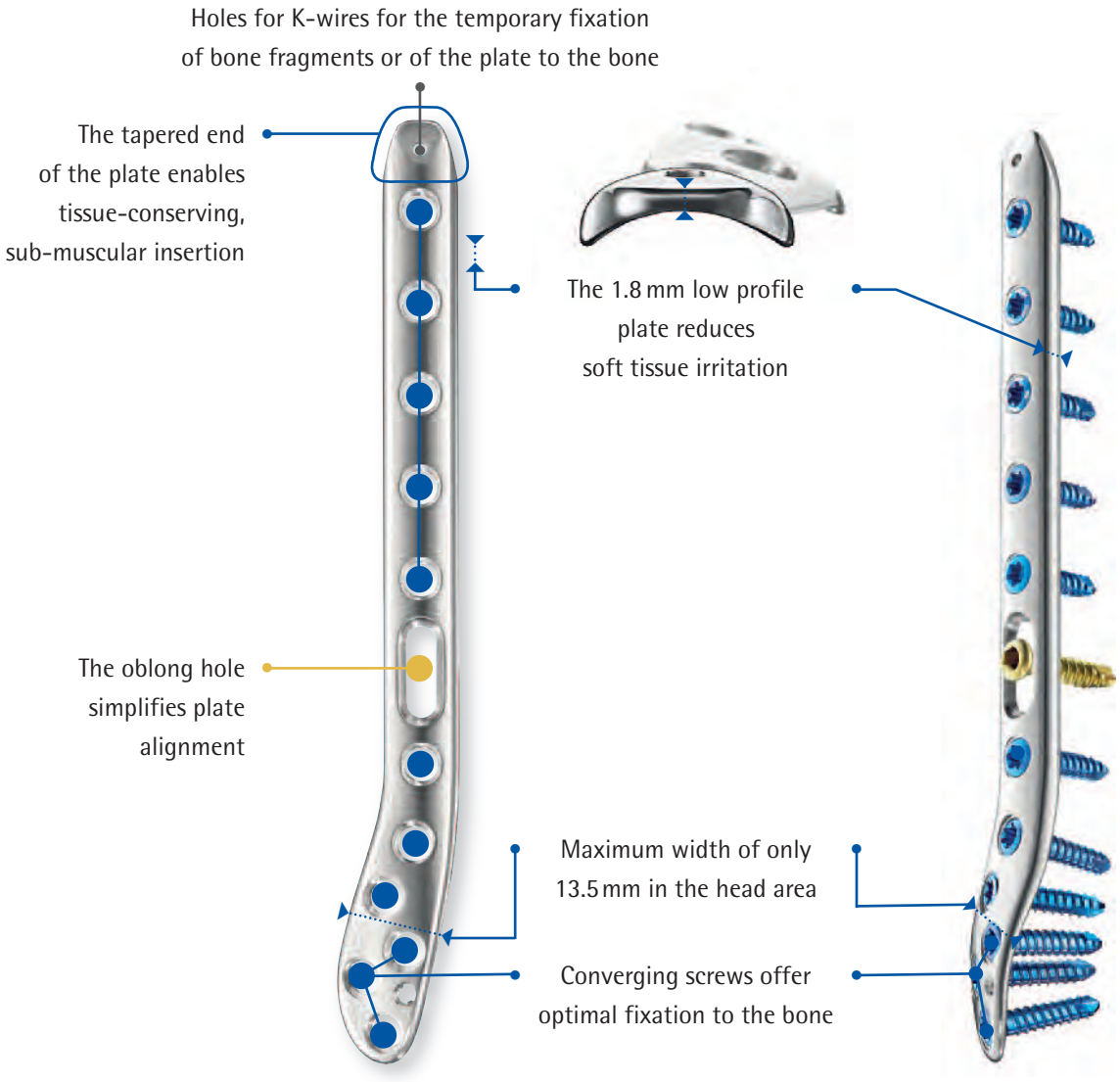
LOQTEQ® Distal Anterolateral Tibia Plate 3.5



Features & Benefits

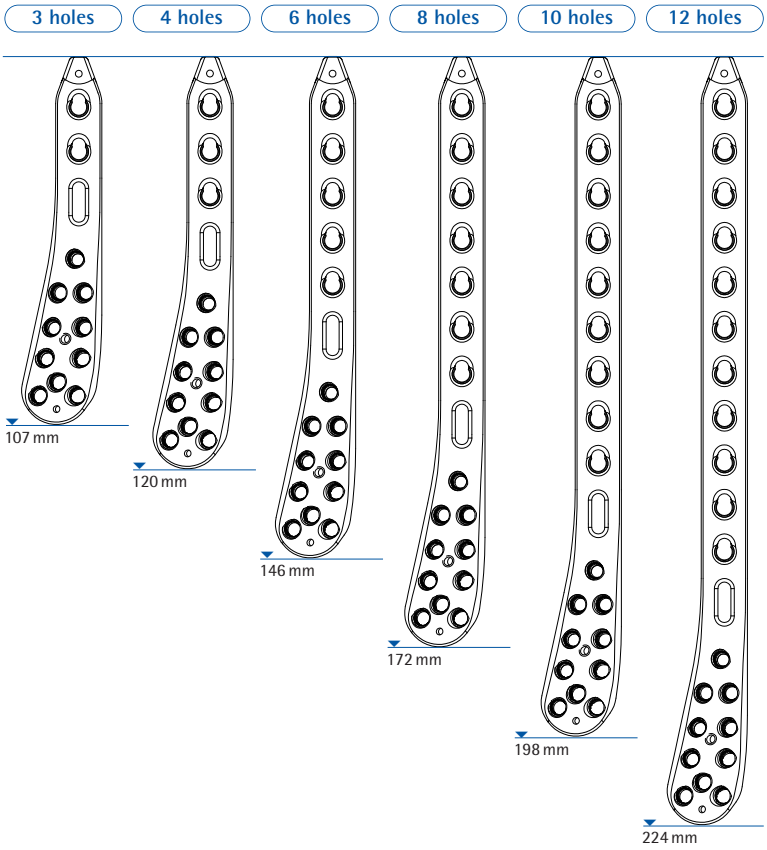
- The anatomical plate design minimizes the need for intraoperative plate contouring
- All plate holes, with the exception of the oblong hole, are compatible with locking as well as non-locking cortical screws with small heads
- Fitted, radiolucent aiming devices are designed for the safe placement of drill guides at a preset angle
- Available as right and left version

LOQTEQ® Distal Fibula Plate 3.5



Preoperative planning

- Evaluate the fracture situation and select the appropriate plate position on the basis of the X-ray. Also, plan the insertion of lag screws, if necessary.



Patient positioning

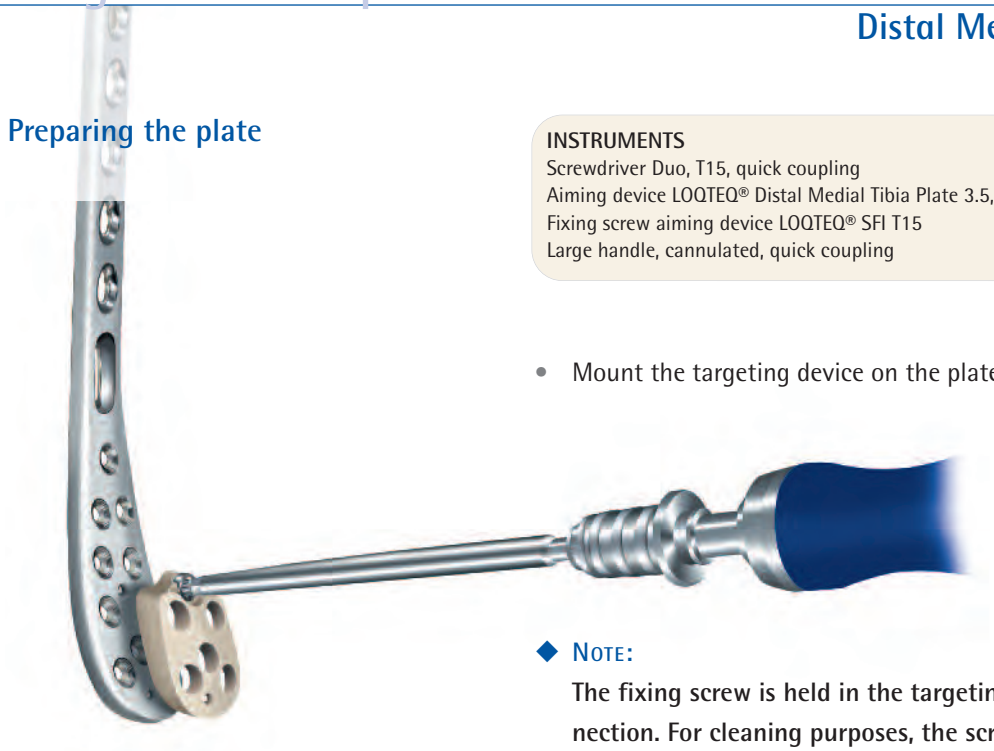
- The patient is positioned supine on a radiolucent operating table. A bolster can be placed below the leg for stabilization purposes, to gain height, avoid rotation, and ensure neutral positioning.
- Visualization by the C-arm in M/L and A/P should be ensured throughout the surgery.
- If necessary, apply a tourniquet to the thigh.

Approach

- Open or percutaneous, depending on the fracture situation
- In case of percutaneous access: incision for access to the medial malleolus; if necessary, reposition using external fixator.

Preparing the plate

INSTRUMENTS	ART.-NO.
Screwdriver Duo, T15, quick coupling	IU 7825-56
Aiming device LOQTEQ® Distal Medial Tibia Plate 3.5, R/L	IU 8174-01/-02
Fixing screw aiming device LOQTEQ® SFI T15	IU 8176-03
Large handle, cannulated, quick coupling	IU 7706-00



- Mount the targeting device on the plate using the fixing screw.

◆ NOTE:

The fixing screw is held in the targeting device by a thread connection. For cleaning purposes, the screw must be screwed out of the targeting device. For this purpose, apply slight pressure onto the screw from the underside of the targeting device, unscrew and remove the screw.

Reduction and primary fixation

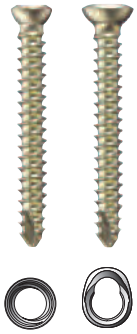
INSTRUMENTS	ART.-NO.
K-wire with trocar point, ø1.6, L 150	NK 0016-15

- Following anatomic repositioning of the articular surface, temporarily fix the result in place, e.g. with K-wires. If closed repositioning is possible, align the shaft to length, axis and rotation. Then check the result of repositioning using fluoroscopy.

- Depending on the access, carefully insert the plate and position it, or directly apply to the bone and temporarily fix in place with K-wires. For this purpose, you can use the provided holes in the plate or an appropriately positioned threaded drill guide with inserted reduction sleeve.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

Insertion of cortical screws (gold)



INSTRUMENTS	ART.-NO.
Twist drill ø2.5, L 180, coil 50, quick coupling	IU 7425-18
Double drill guide, ø2.5/3.5, with spring aided centering	IU 8116-50
Depth gauge for screws ø3.5 - 4.0, up to L 90	IS 7904-20
Screwdriver hexagonal, ø2.5, quick coupling	IU 7825-00
Large handle, cannulated, quick coupling	IU 7706-00

- **In round holes, use only cortical screws with small heads!**
- **In gliding holes, use only cortical screws with big heads!**

- For the primary fixation of the plate shaft, a non-locking cortical screw 3.5mm (gold) can be inserted into the oblong hole. For this purpose use a double drill guide and a twist drill ø2.5 and drill to the desired depth.

- Then determine the length of the screw using the depth gauge and insert a screw of appropriate length by using the screwdriver hex 2.5. The plate can be pulled against the bone using this screw.

- NOTE:

Securing the oblong hole before inserting screws in other plate holes can facilitate the positioning of the plate on the bone.

- NOTE:

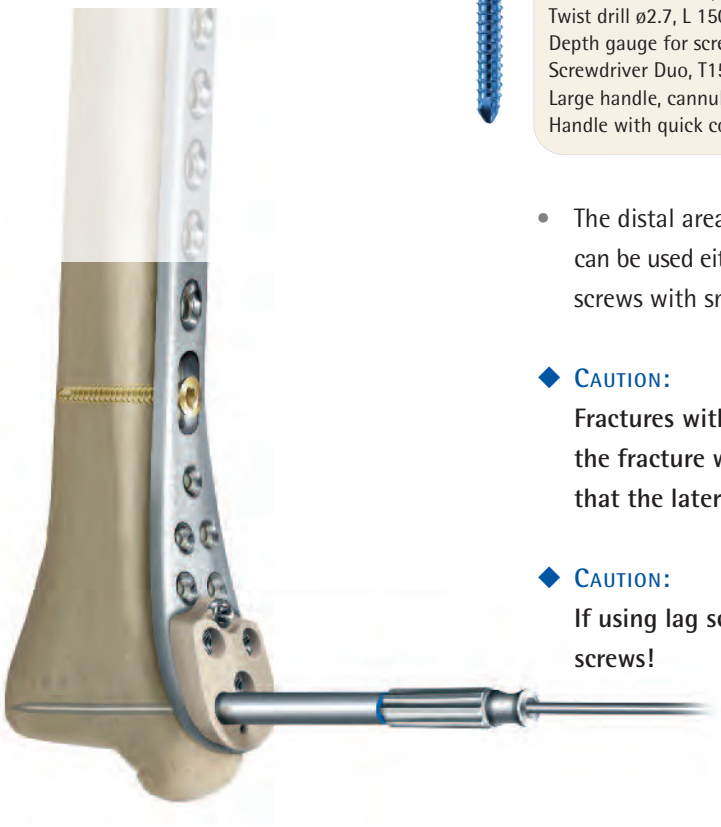
If a combination of non-locking cortical screws (gold) and locking screws is used, non-locking cortical screws (gold) must be inserted first.

- For inserting a non-locking cortical screw 3.5mm (gold) in a locking hole, use the double drill guide ø2.5/3.5 in a neutral position, i.e. center in the plate hole by applying slight pressure on the adjustable part. Drill using a twist drill ø2.5, determine the length of the screw using the depth gauge, and insert a non-locking cortical screw 3.5mm (gold) of the appropriate length.

- Check plate position using fluoroscopy and adjust if required.

Insertion of locking screws (blue)

INSTRUMENTS	ART.-NO.
Drill guide for round hole LOQTEQ® 3.5, l-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 ø2.7, L 150, coil 50, quick coupling	IU 7427-15
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 with quick coupling, with torque limiter, 2.0Nm	IU 7707-20



- The distal area of the plate only features round locking holes. These can be used either with locking screws (blue) or with standard cortical screws with small head (gold).

◆ **Caution:**

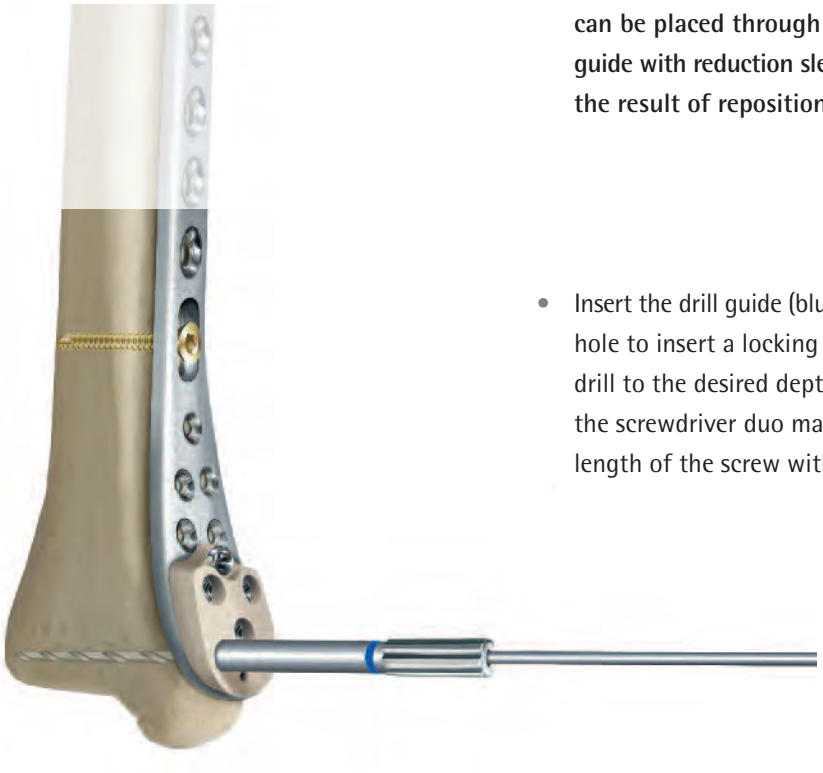
Fractures with involvement of the joint require compression of the fracture with lag screws before using locking screws. Ensure that the later position of the plate is not obstructed.

◆ **Caution:**

If using lag screws, they must be inserted before using locking screws!

◆ **Note:**

To check the final screw position in the metaphyseal area, a K-wire can be placed through an appropriately positioned threaded drill guide with reduction sleeve before inserting the screws. Then check the result of repositioning using fluoroscopy.



- Insert the drill guide (blue) for round holes into the appropriate plate hole to insert a locking screw. Use a twist drill ø2.7 (blue/red) to drill to the desired depth. Then remove the drill guide, the use of the screwdriver duo may facilitate the unscrewing. Determine the length of the screw with the depth gauge.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

- Loosely insert a locking screw (blue) of the appropriate length using a self-retaining screwdriver T15. Finally tighten the screw with the torque limiter 2.0 Nm. With an audible and sensible click of the torque limiter the optimal locking is achieved. In addition, it is recommended to ensure correct fit of the screws, i.e. visually or using fluoroscopy.

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

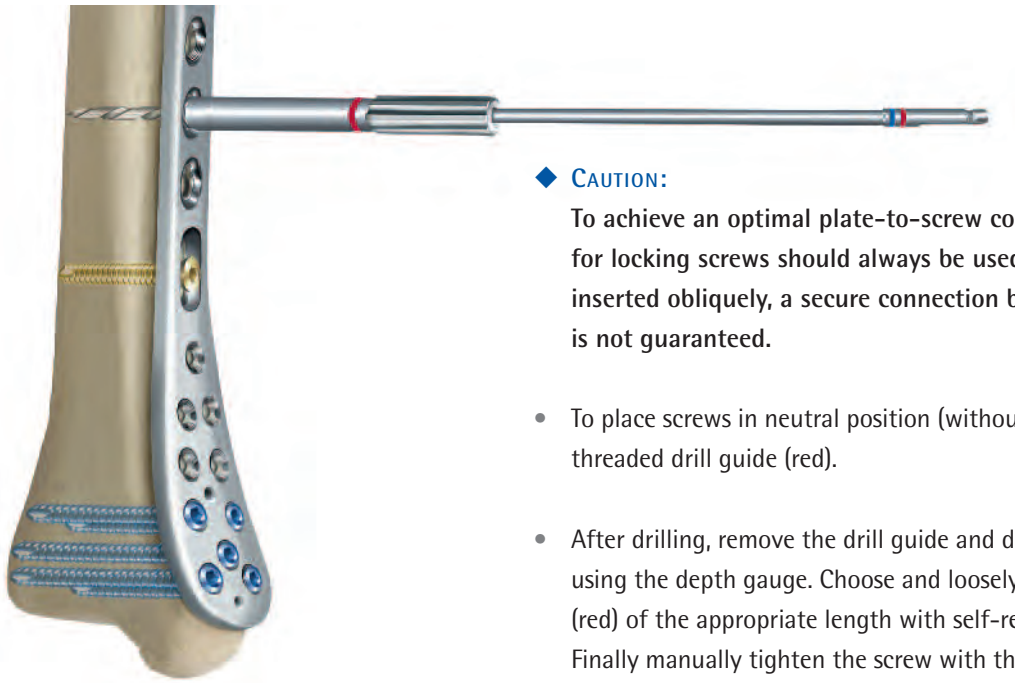
- Do the same for all distal screw holes. Then remove the targeting device.

Insertion of locking screws for gliding locking holes (red)
without compression

INSTRUMENTS	ART.-NO.
Drill guide for gliding hole LOQTEQ® 3.5, l-ø 2.8, red	IU 8166-10
Twist drill ø2.7, L 150, coil 50, quick coupling	IU 7427-15
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 with quick coupling, with torque limiter, 2.0Nm	IU 7707-20

◆ **Caution:**

The use of locking srews (blue) and standard cortical screws with small head (gold) is not permitted in gliding locking holes !

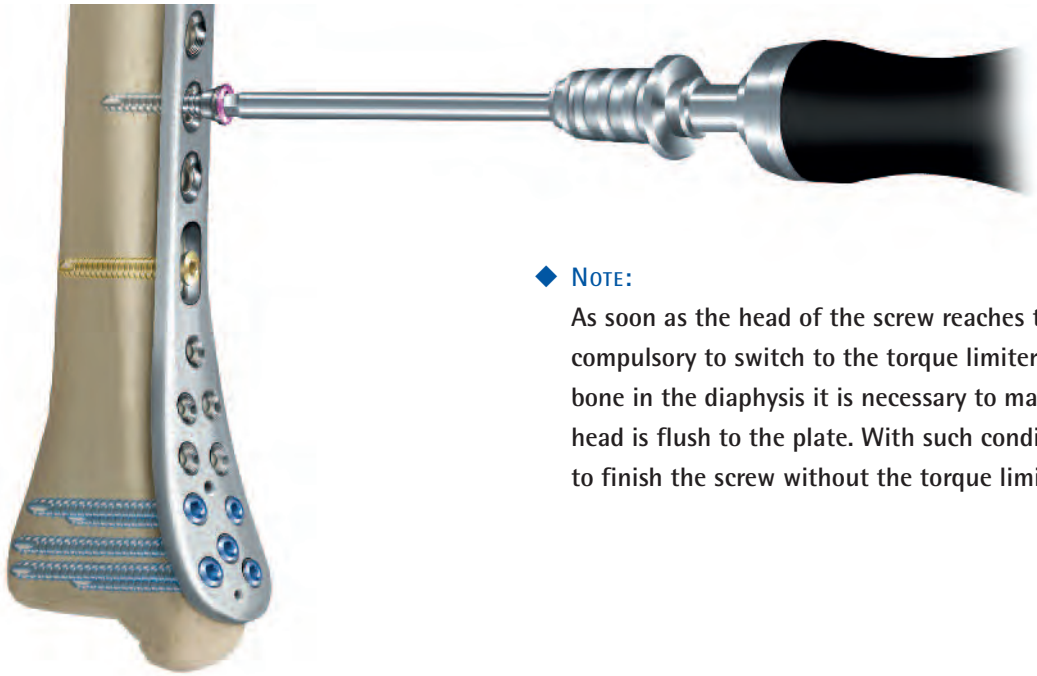


◆ **Caution:**

To achieve an optimal plate-to-screw connection, the drill guide for locking screws should always be used. If the locking screw is inserted obliquely, a secure connection between screw and plate is not guaranteed.

- To place screws in neutral position (without compression), use the threaded drill guide (red).

- After drilling, remove the drill guide and determine screw length using the depth gauge. Choose and loosely insert a locking screw (red) of the appropriate length with self-retaining screwdriver T15. Finally manually tighten the screw with the torque limiter 2.0 Nm. With an audible and sensible click of the torque limiter the optimal locking is achieved. In addition, it is recommended to ensure correct fit of the screws, i.e. visually or using fluoroscopy.



◆ **Note:**

As soon as the head of the screw reaches the plate hole, it is compulsory to switch to the torque limiter. In cases of very hard bone in the diaphysis it is necessary to make sure that the screw head is flush to the plate. With such conditions, it is permissible to finish the screw without the torque limiter.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

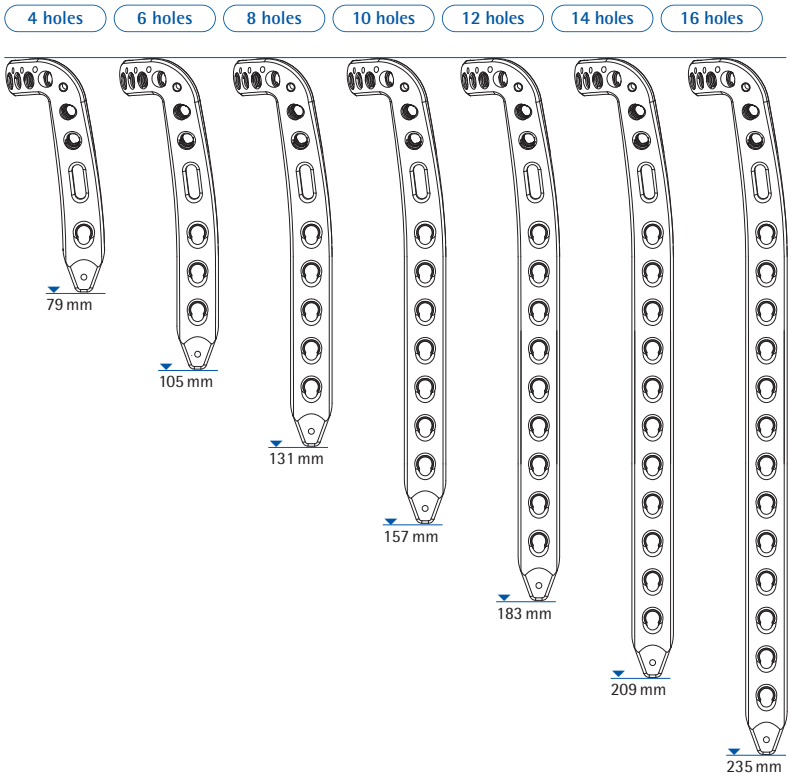
- Once all screws have been placed, finally check the positioning under fluoroscopy. Then close the wound.

Insertion of locking screws for gliding locking holes (red)
with compression

- **For angle-stable compression, please follow instructions on pages 22 and 23.**

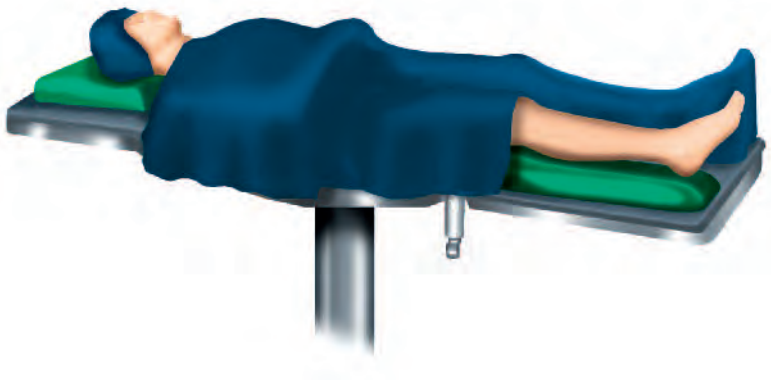
Preoperative planning

- Evaluate the fracture situation and select the appropriate plate position on the basis of the X-ray. Also plan the insertion of lag screws, if necessary.



Patient positioning

- The patient is positioned supine on a radiolucent operating table. A bolster can be placed below the leg for stabilization purposes, to gain height, avoid rotation, and ensure neutral positioning.
- Visualization by the C-arm in M/L and A/P should be ensured throughout the surgery.
- If necessary, apply a tourniquet to the thigh.



Approach

- Place the anterior incision centrally, starting at the ankle joint. Proximally, the incision ends at the planned length between the fibula and tibia.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

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 8186-01/-02
Fixing screw aiming device LOQTEQ® SFI T15	IU 8176-03
Handle with quick coupling, with torque limiter, 2.0Nm	IU 7707-20

- Mount the targeting device on the plate using the fixing screw.

◆ NOTE:

The fixing screw is held in the targeting device by a thread connection. For cleaning purposes, the screw must be screwed out of the targeting device. For this purpose, apply slight pressure onto the screw from the underside of the targeting device, unscrew and remove the screw.

Reduction and primary fixation

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

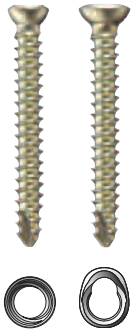
- Reposition fracture fragments and the articular surface under fluoroscopic view and temporarily fix in place. Before applying the locking screws, the fracture may be compressed and secured using lag screws, either through the plate or outside of the later plate position. In case of temporary fixation with K-wires, consider the later plate position.

◆ NOTE:

The locking screws are not intended for interfragmentary compression. Compression of the joint or fracture elements must be achieved using standard/lag screws before placing the locking screws.

- Check plate position using fluoroscopy and adjust if required.

Insertion of cortical screws (gold)



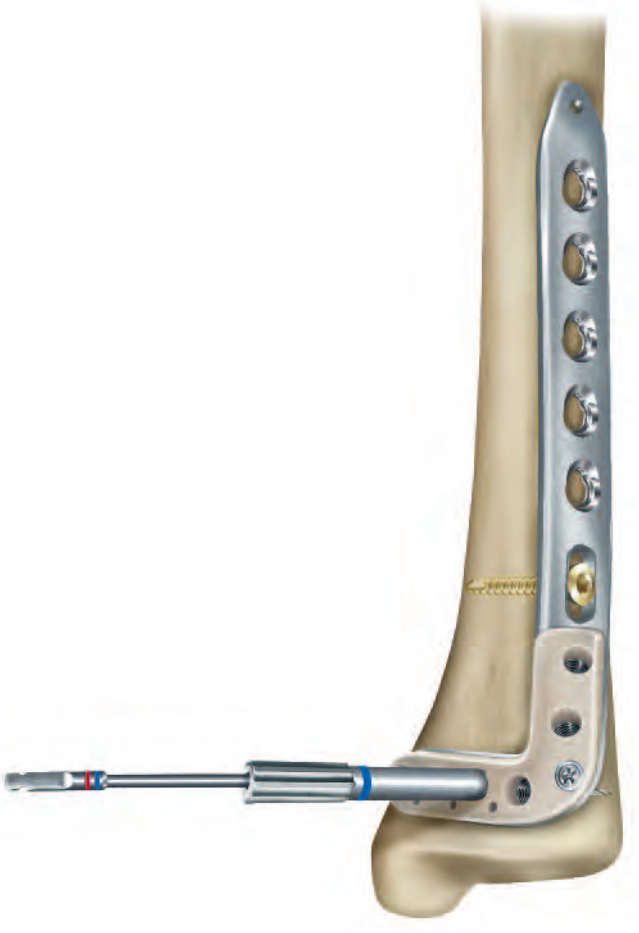
- Please follow instructions on page 11.

- Only use cortical screws with small heads in round holes!
- Only use cortical screws with big heads in gliding holes!

Insertion of locking screws (blue)

INSTRUMENTS	ART.-NO.
Drill guide for round hole LOQTEQ® 3.5, l-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 ø2.7, L 150, coil 50, quick coupling	IU 7427-15
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 with quick coupling, with torque limiter, 2.0Nm	IU 7707-20

- With the LOQTEQ® Distal Tibia Plates, locking screws (blue) 3.5mm as well as standard cortical screws with small head (gold) can be used in the periarticular area.



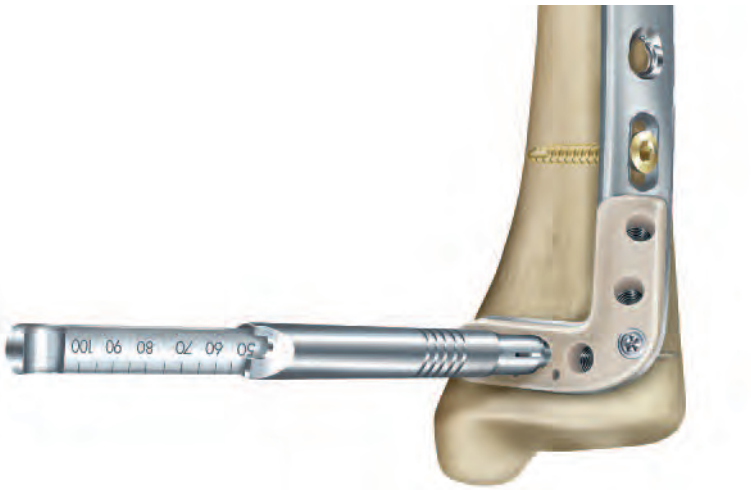
- NOTE:

To check the screw position beforehand, K-wires can be inserted with the aid of the drill guide (blue) and the reduction sleeve. The screw position is indicated by the wire. Check correct positioning under fluoroscopic view.

- After removing the K-wire, drill for a cortical screw or a locking screw (blue), depending on the fracture situation.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

- Use a twist drill ø2.7 (blue/red) to drill through the blue drill guide to the desired depth (under fluoroscopic monitoring, if necessary). Then remove the drill guide and determine the length of the screw with the depth gauge.



- Choose and loosely insert a locking screw (blue) of the appropriate length with self-retaining screwdriver T15. Then manually tighten the screw using the torque limiter 2.0 Nm.
  With an audible and sensible click of the torque limiter the optimal locking is achieved. In addition, it is recommended to ensure correct fit of the screws, i.e. visually or using fluoroscopy.

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

Insertion of locking screws for gliding locking holes (red)
without compression

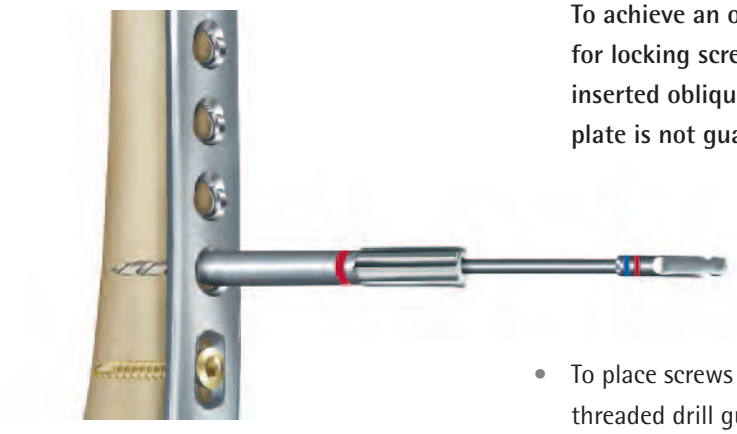
INSTRUMENTS	ART.-NO.
Drill guide for gliding hole LOQTEQ® 3.5, l-ø 2.8, red	IU 8166-10
Twist drill ø2.7, L 150, coil 50, quick coupling	IU 7427-15
Depth gauge for screws ø3.5 - 4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Handle with quick coupling, with torque limiter, 2.0Nm	IU 7707-20

◆ **CAUTION:**

The use of locking screws (blue) as well as standard cortical screws with small head (gold) is not permitted in gliding locking holes!

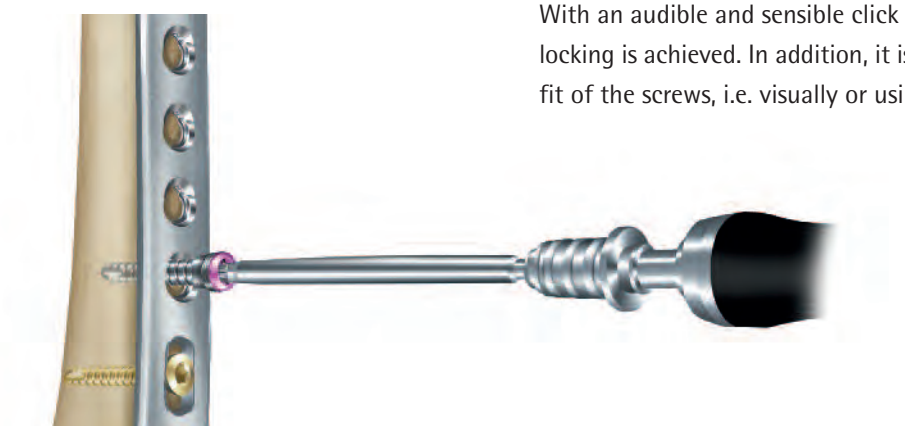
◆ **CAUTION:**

To achieve an optimal plate-to-screw connection, the drill guide for locking screws should always be used. If the locking screw is inserted obliquely, a secure connection between the screw and plate is not guaranteed.



- To place screws in neutral position (without compression), use the threaded drill guide (red).

- After drilling, remove the drill guide and determine screw length using the depth gauge. Choose and loosely insert a locking screw (red) of the appropriate length with self-retaining screwdriver T15. Finally manually tighten the screw with the torque limiter 2.0 Nm. With an audible and sensible click of the torque limiter the optimal locking is achieved. In addition, it is recommended to ensure correct fit of the screws, i.e. visually or using fluoroscopy.



◆ **NOTE:**

As soon as the head of the screw reaches the plate hole, it is compulsory to switch to the torque limiter. In cases of very hard bone in the diaphysis it is necessary to make sure that the screw head is flush to the plate. With such conditions, it is permissible to finish the screw without the torque limiter.

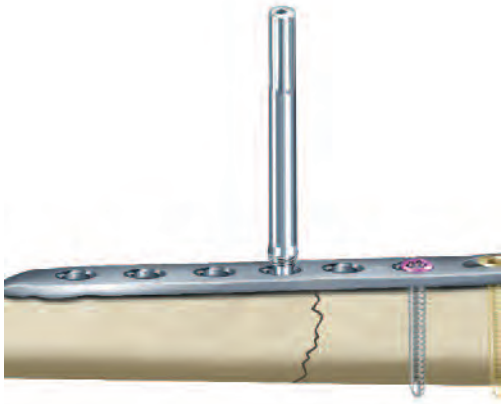
aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

- Once all screws have been placed, finally check the positioning under fluoroscopy. Then close the wound.

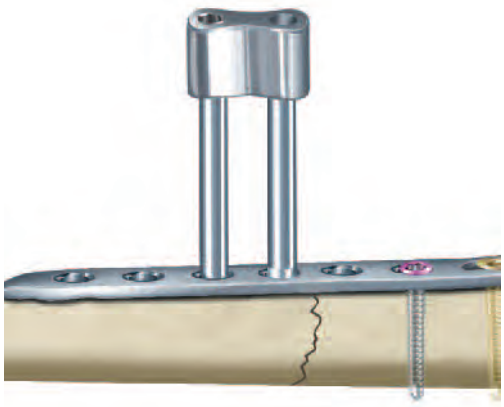
Insertion of locking compression screws (red)
with compression

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 ø2.7, L 150, coil 50, quick coupling	IU 7427-15
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 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 3.5 mm (gold) or LOQTEQ® locking compression screw 3.5 mm (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.



- 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.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

- Drill to the desired depth using a twist drill ø2.7 (blue/red) and determine the depth with the depth gauge.

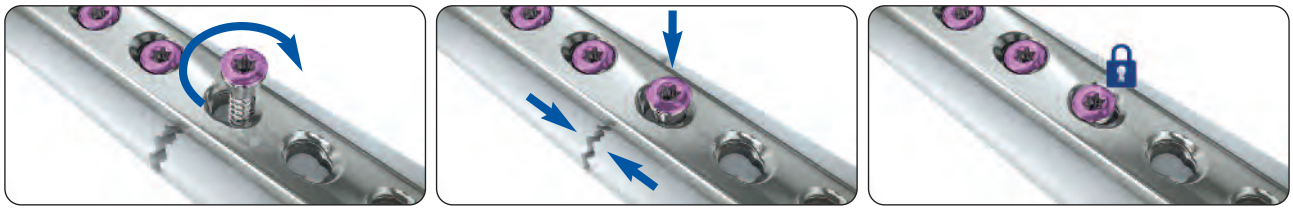
- Loosely insert a LOQTEQ® locking compression screw 3.5mm (red) of the appropriate length with screwdriver T15 and finally tighten the screw with the torque limiter 2.0 Nm. With an audible and sensible click of the torque limiter the optimal locking is achieved. In addition, it is recommended to ensure correct fit of the screws, i.e. visually or using fluoroscopy.

◆ **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.

◆ **Note:**
As soon as the head of the screw reaches the plate hole it is compulsory to switch to the torque limiter. In cases of very hard bone in the diaphysis, it is necessary to make sure that the screw head is flush to the plate. With such conditions, 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 11).

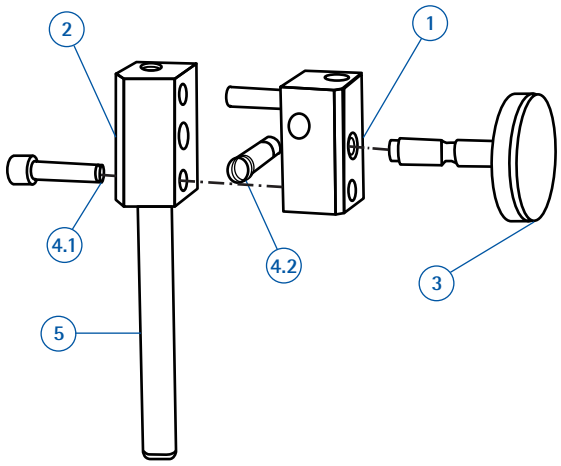
- When all required screws have been inserted, perform final check using fluoroscopy, AP and lateral, and close the wound.



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

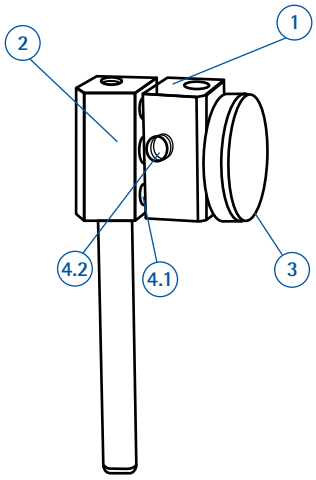
◆ NOTE:
When ordering the adjustable load drill guide LOQTEQ® 3.5 (IU 8166-03), please add a screwdriver hexagonal 2.5 (IU 7825-00) to your order.

Disassembly



- Remove screws (items 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

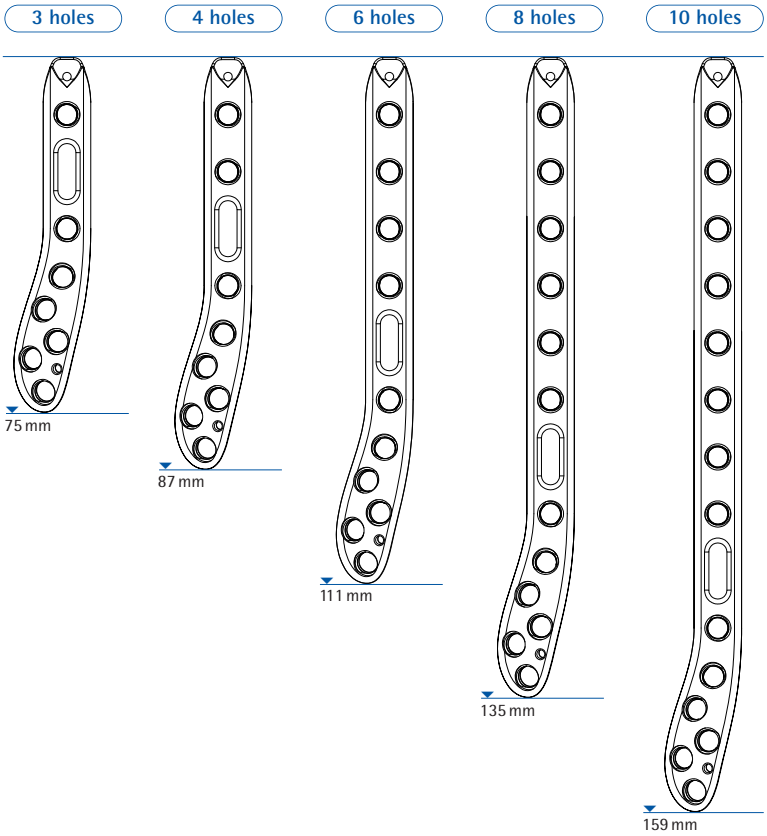


- Fit together the compression block (items 1 and 2)
- Insert the set screw (item 3) into the compression block, middle hole
- Insert the retaining screws (items 4.1 and 4.2) using a hexagonal screwdriver 2.5

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

Preoperative planning

- Evaluate the fracture situation and select the appropriate plate position on the basis of the X-ray. Also plan the insertion of lag screws, if necessary.



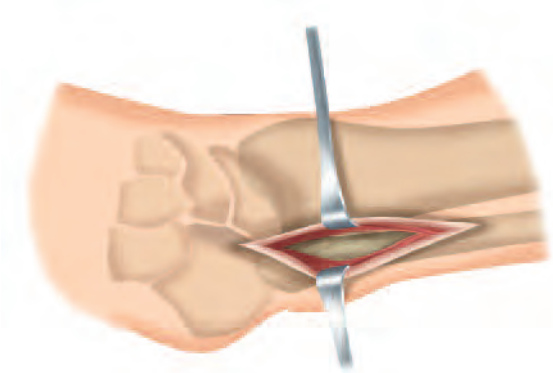
Patient positioning

- The patient is positioned supine on a radiolucent operating table. A bolster can be placed below the leg for stabilization purposes, to gain height, avoid rotation, and ensure neutral positioning.
- Visualization by the C-arm in M/L and A/P should be ensured throughout the surgery.
- If necessary, apply a tourniquet to the thigh.

Approach

The access is influenced by the type of fracture and its treatment

- In case of simple Danis-Weber Type A or B fibular fractures, a straight lateral or posterolateral incision is recommended. For supra syndesmosis fibula fractures, the incision can be proximally extended. The incision is placed anteriorly between the peroneus tertius and posteriorly the peroneus longus. Take care not to damage these structures.

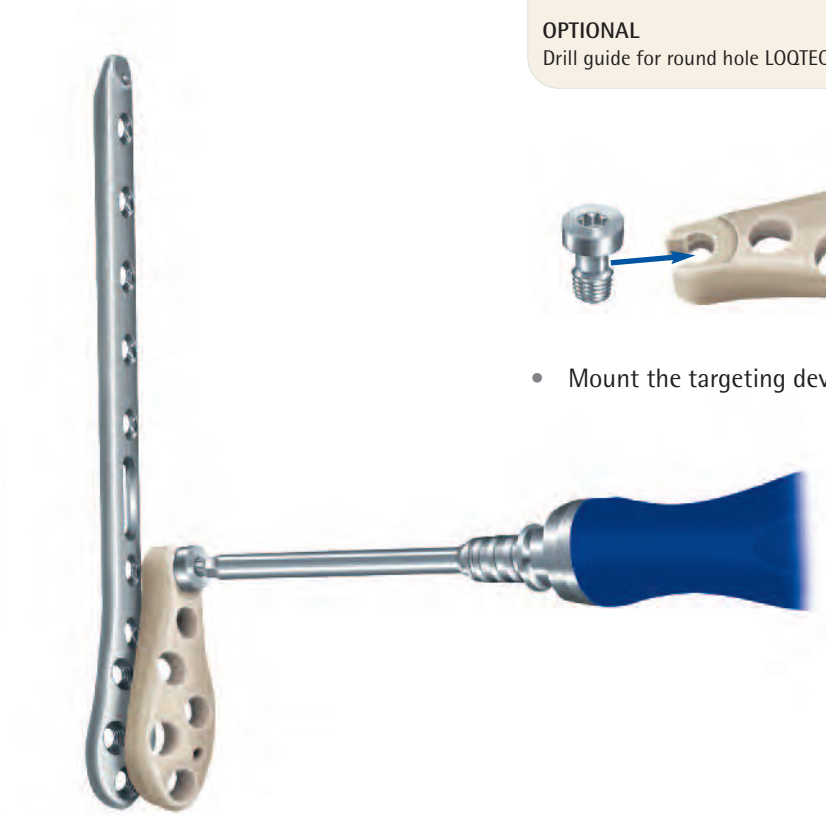


- When treating an AO 43-C3 fracture and needing additional plates, such as a DAT (distal anterolateral plate) in combination with the fibula plate, the anterolateral access can be used in certain cases to treat both the fibula and the tibia through one single access.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

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 8191-01/-02
Fixing screw aiming device LOQTEQ® Fibula 3.5	IU 8191-03
OPTIONAL	
Drill guide for round hole LOQTEQ® 3.5, blue	IU 8166-20



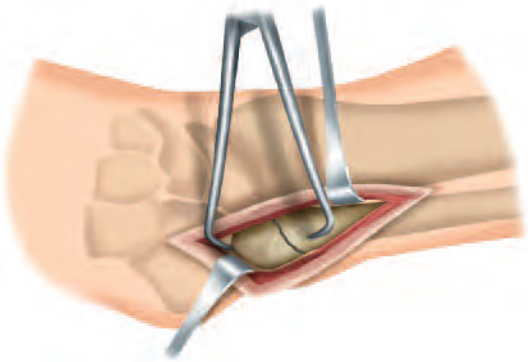
- Mount the targeting device on the plate using the fixing screw.

◆ **NOTE:**

The fixing screw is held in the targeting device. For cleaning, the screw must be pulled out of the targeting device and can then be manually clicked in again. The targeting device facilitates inserting and removing the drill guides in the distal part of the plate.

- The aiming device can be additionally secured on the plate with a drill guide for round hole (blue) in the most distal plate hole.

Reduction and primary fixation



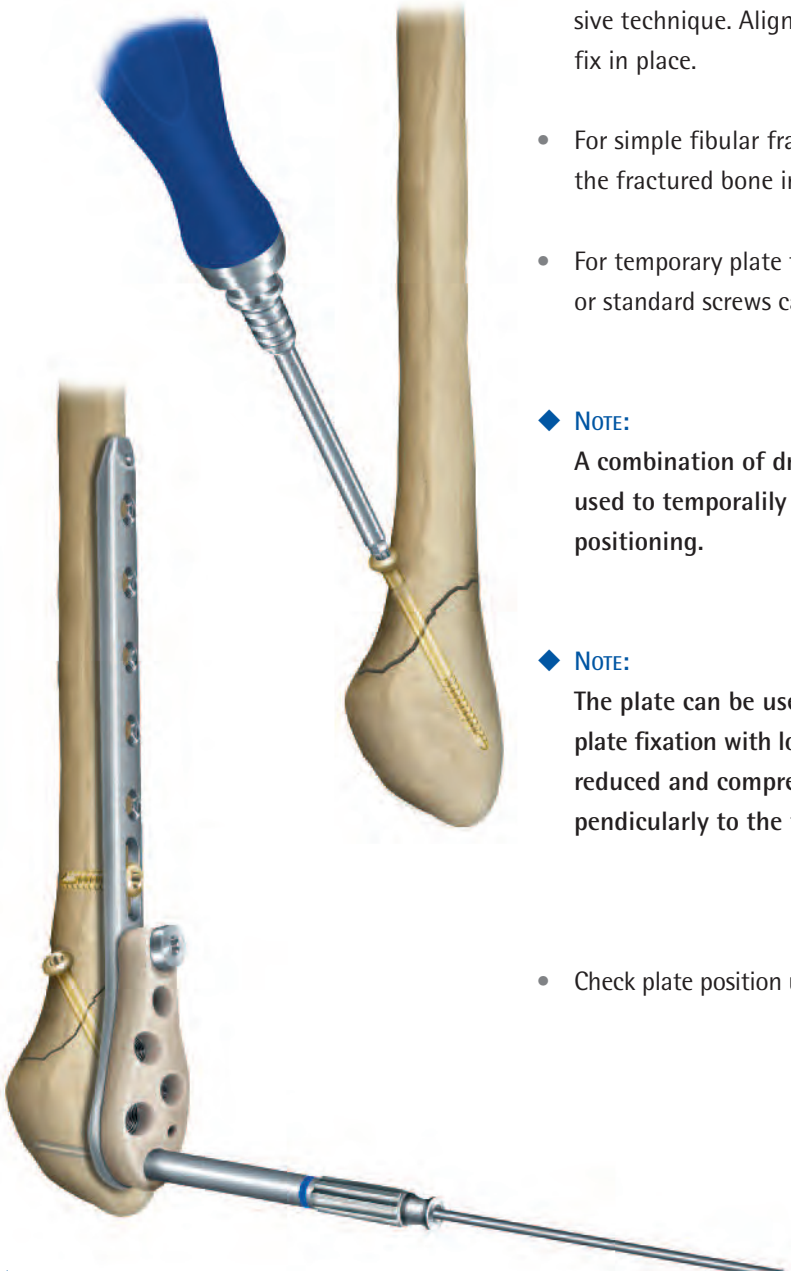
INSTRUMENTS	ART.-NO.
Twist drill ø2.5, L 180, coil 50, quick coupling	IU 7425-18
Double drill guide, ø2.5/3.5, with spring aided centering	IU 8116-50
K-wire with trocar point, ø1.6, L 150	NK 0016-15
Screwdriver hexagonal, ø2.5, quick coupling	IU 7825-00
Large handle, cannulated, quick coupling	IU 7706-00
Drill guide for round hole LOQTEQ® 3.5, blue	IU 8166-20
OPTIONAL	
Twist drill ø3.5, L 110, coil 50, quick coupling	IU 7435-00

- The fracture should be exposed, cleaned and repositioned in an anatomically correct manner. It is important to restore the correct length and rotation.

- Expose the fibula as desired. The plate can be inserted along the diaphysis either openly or sub-cutaneously using a minimally invasive technique. Align the plate at the distal fibula and temporarily fix in place.

- For simple fibular fractures, a reposition forceps can help to keep the fractured bone in the correct position until final plate fixation.

- For temporary plate fixation to the bone, holding forceps, K-wires or standard screws can be used.



◆ NOTE:

A combination of drill guide, reduction sleeve and K-wire can be used to temporalily fix the plate to the bone and check screw positioning.

◆ NOTE:

The plate can be used to correctly reposition fragments. Before plate fixation with locking screws, the fracture must be completely reduced and compressed. The lag screw has to be placed perpendicularly to the fracture gap.

- Check plate position using fluoroscopy and adjust if required.

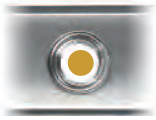
aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

Insertion of cortical screws (gold)

- Please follow instructions on page 11.

◆ **CAUTION:**

Only use cortical screws with small heads in the LOQTEQ® Distal Fibula Plate 3.5!

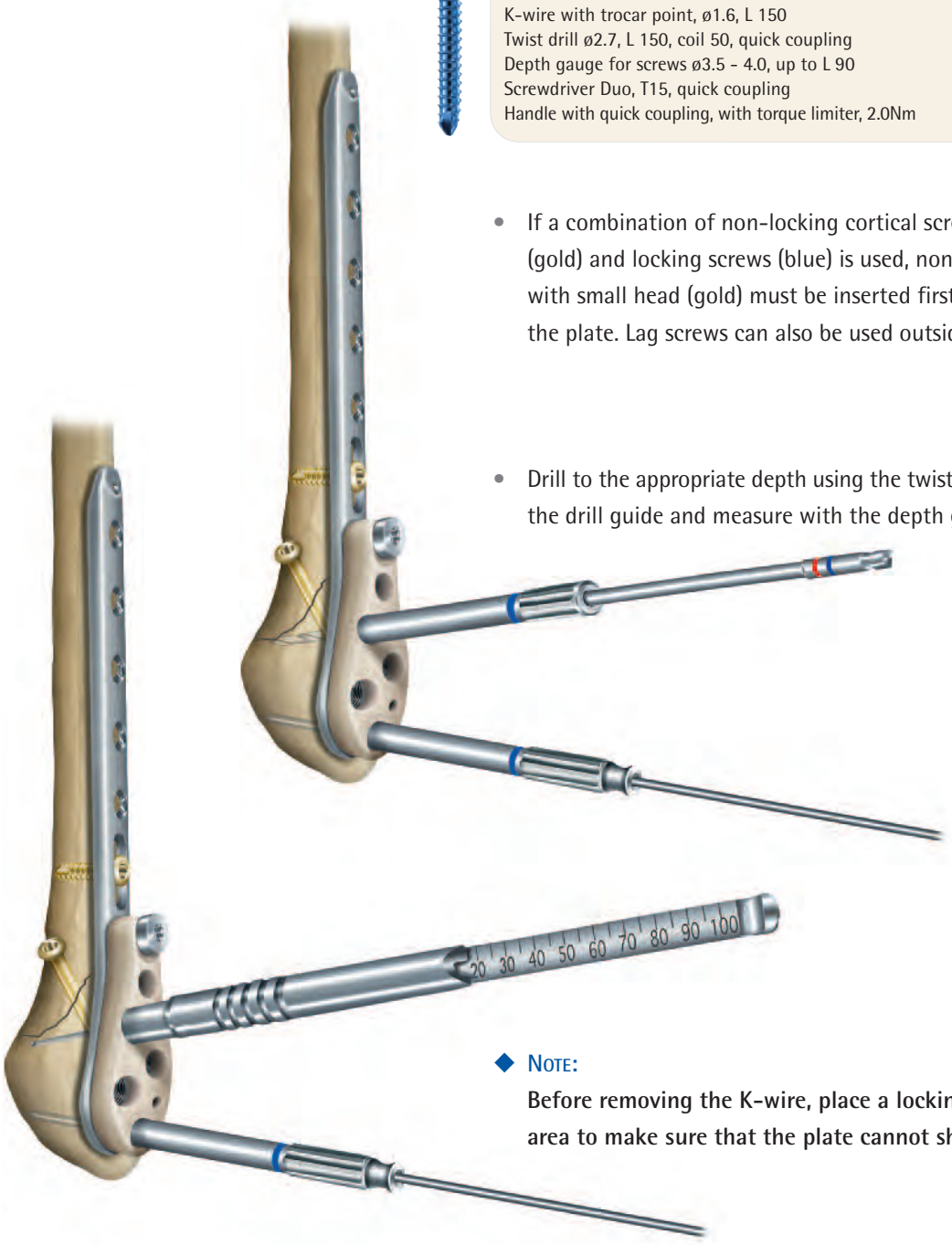


Insertion of locking screws (blue)

INSTRUMENTS	ART.-NO.
Drill guide for round hole LOQTEQ® 3.5, l-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 ø2.7, L 150, coil 50, quick coupling	IU 7427-15
Depth gauge for screws ø3.5 - 4.0, up to L 90	IS 7904-20
Screwdriver Duo, T15, quick coupling	IU 7825-56
Handle with quick coupling, with torque limiter, 2.0Nm	IU 7707-20

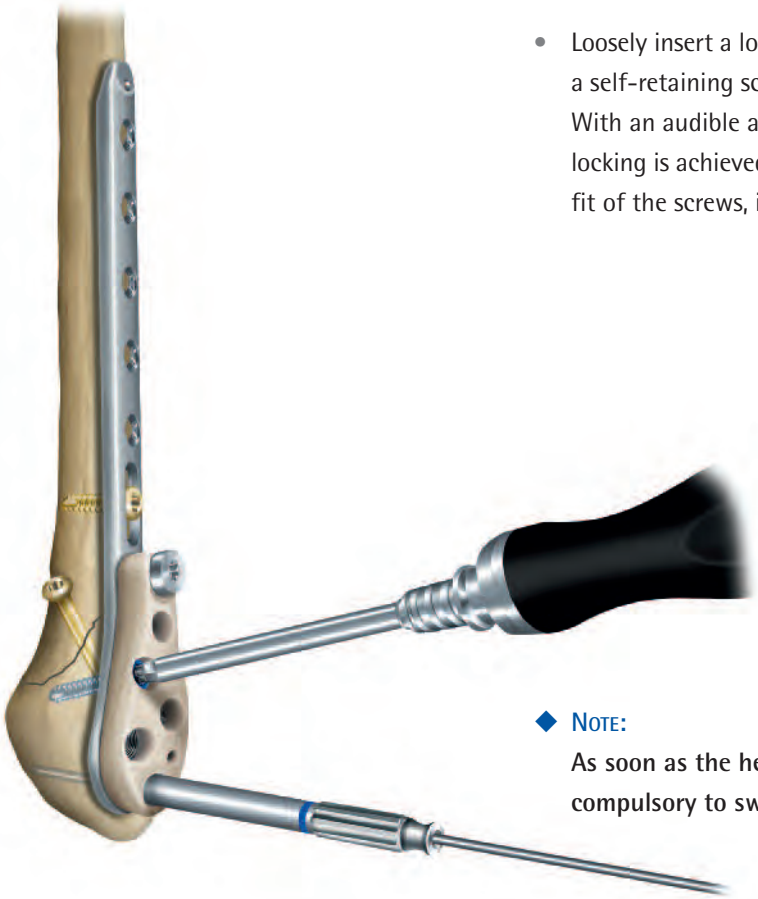
- If a combination of non-locking cortical screws with small head (gold) and locking screws (blue) is used, non-locking cortical screws with small head (gold) must be inserted first to pull the bone to the plate. Lag screws can also be used outside of the plate.

- Drill to the appropriate depth using the twist drill ø2.7, then remove the drill guide and measure with the depth gauge.



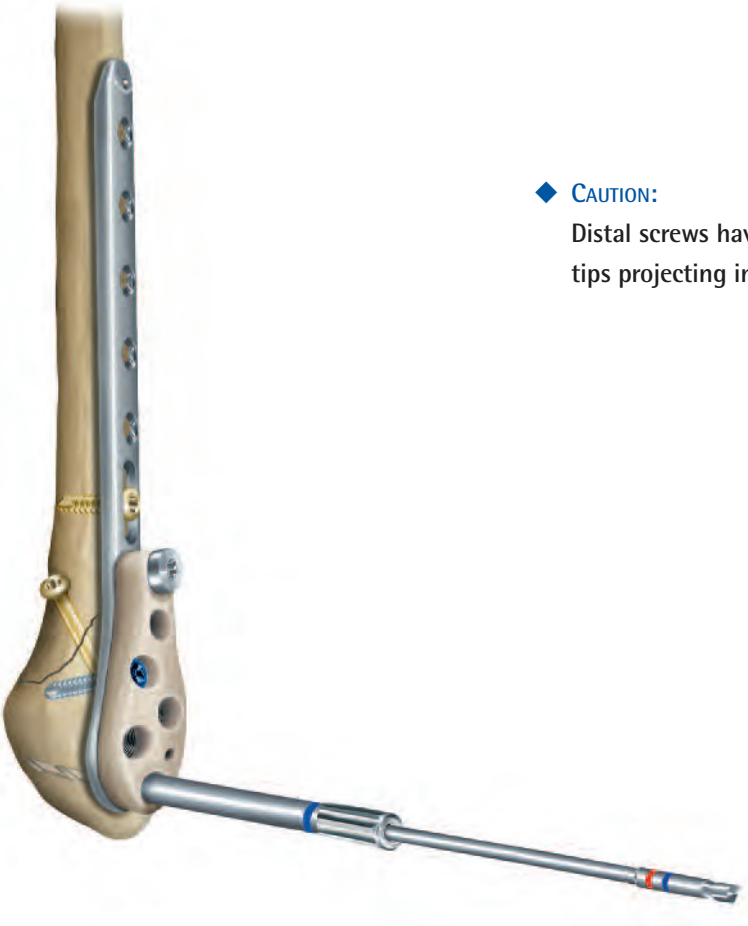
◆ **NOTE:**

Before removing the K-wire, place a locking screw in the distal area to make sure that the plate cannot shift.



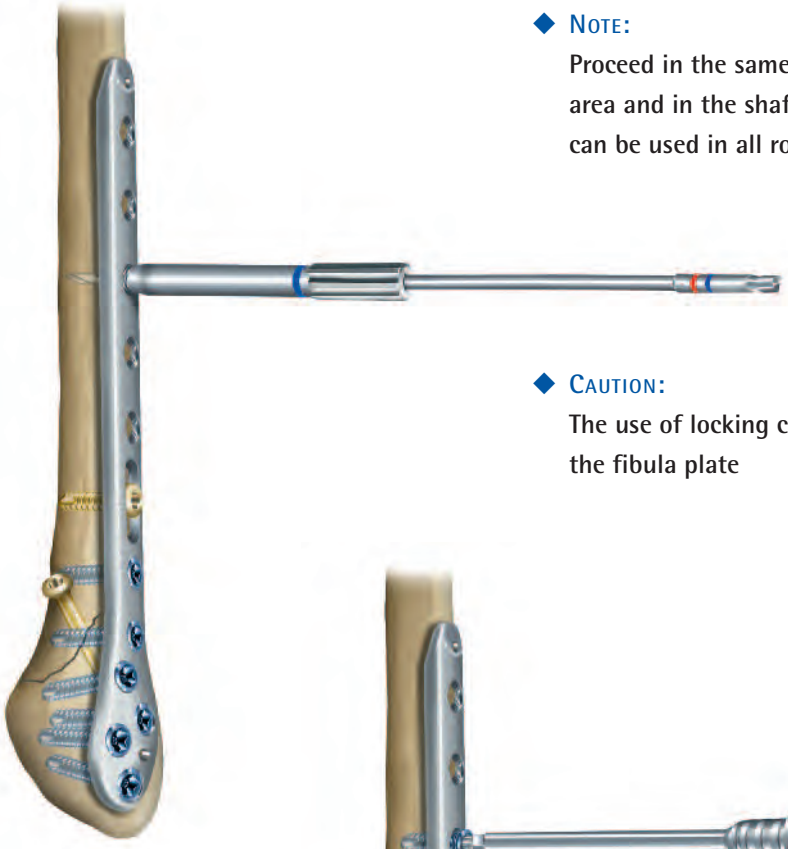
- Loosely insert a locking screw (blue) of the appropriate length using a self-retaining screwdriver T15 and torque limiter 2.0 Nm.
  With an audible and sensible click of the torque limiter the optimal locking is achieved. In addition, it is recommended to ensure correct fit of the screws, i.e. visually or using fluoroscopy.

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



◆ **Caution:**
Distal screws have to be placed monocortically to prevent screw tips projecting into the articular surface.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

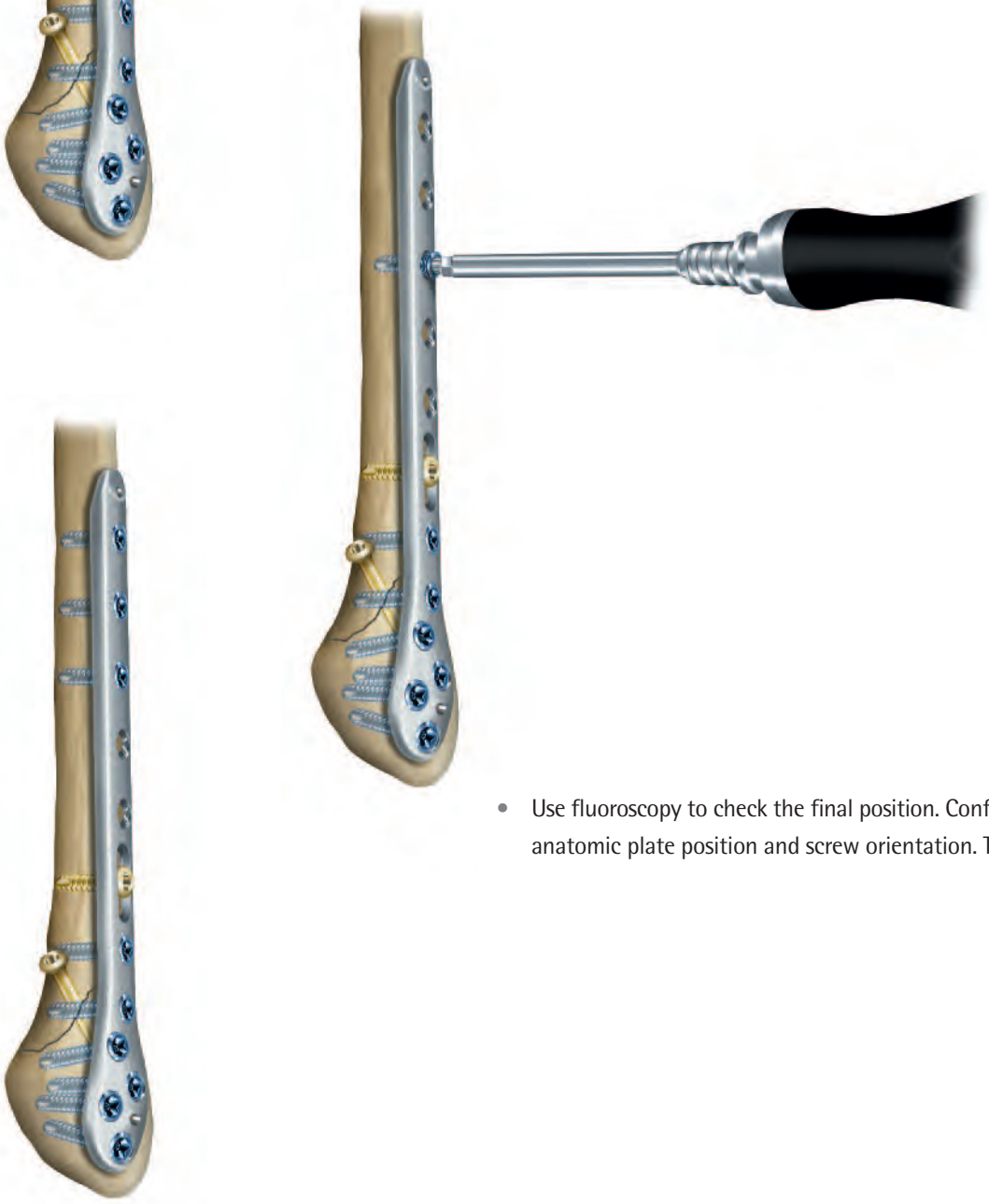


◆ **Note:**

Proceed in the same manner for inserting screws in the distal area and in the shaft area of the plate. Locking screws (blue) can be used in all round holes.

◆ **Caution:**

The use of locking compression screws (red) is not permitted in the fibula plate



- Use fluoroscopy to check the final position. Confirm the repositioning, anatomic plate position and screw orientation. Then close the wound.

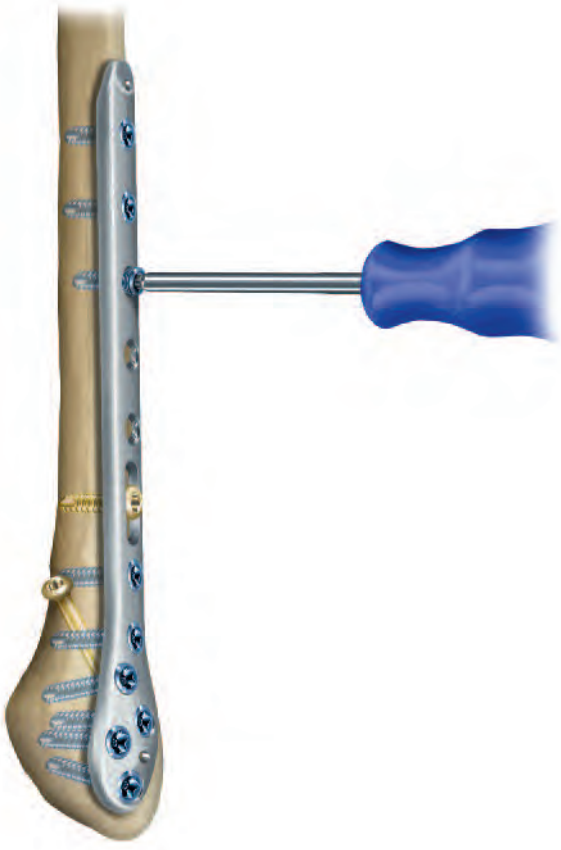
INSTRUMENTS	ART.-NO.
Explantation screwdriver, T15, round handle	IU 7811-15
Screwdriver, hexagonal, ø2.5, blue handle	IU 7841-00

◆ NOTE:

Use the appropriate explantation screwdriver T15 (IU 7811-15) for a safe screw removal. The explantation screwdrivers are not self-retaining and allow for higher torque transmission during screw removal. They should be ordered separately.

The screwdrivers T15 in the set (IU 7825-56) are self-retaining and should not be used for screw explantation.

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



◆ NOTE:

After manually unlocking all screws, the removal can be performed using a power tool.

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

LOQTEQ® Distal Medial Tibia Plate 3.5

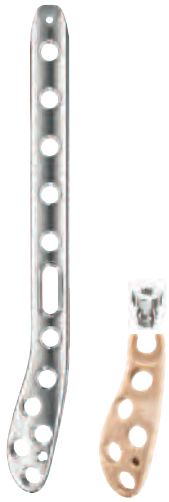
HOLES	LENGTH (mm)	LEFT	RIGHT
3	107	PA 3532-03-2	PA 3531-03-2
4	120	PA 3532-04-2	PA 3531-04-2
6	146	PA 3532-06-2	PA 3531-06-2
8	172	PA 3532-08-2	PA 3531-08-2
10	198	PA 3532-10-2	PA 3531-10-2
12	224	PA 3532-12-2	PA 3531-12-2

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

LOQTEQ® Distal Anterolateral Tibia Plate 3.5

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

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



LOQTEQ® Distal Fibula Plate 3.5

HOLES	LENGTH	LEFT	RIGHT
3	75	PA 3562-03-2	PA 3561-03-2
4	87	PA 3562-04-2	PA 3561-04-2
6	111	PA 3562-06-2	PA 3561-06-2
8	135	PA 3562-08-2	PA 3561-08-2
10	159	PA 3562-10-2	PA 3561-10-2

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

For ordering of the sterile plates please add „S" to the article number,
e.g. PA 3562-03-2S

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

LOQTEQ® Cortical Screw 3.5, T15, self-tapping

◆ NOTE: Not for fibula !

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 42	SK 3525-42-2
L 45	SK 3525-45-2
L 50	SK 3525-50-2
L 55	SK 3525-55-2
L 60	SK 3525-60-2
L 65	SK 3525-65-2
L 70	SK 3525-70-2

Cortical Screw 3.5, self-tapping

◆ NOTE: Not for fibula !

L 12	SK 3510-12-2
L 14	SK 3510-14-2
L 16	SK 3510-16-2
L 18	SK 3510-18-2
L 20	SK 3510-20-2
L 22	SK 3510-22-2
L 24	SK 3510-24-2
L 26	SK 3510-26-2
L 28	SK 3510-28-2
L 30	SK 3510-30-2
L 32	SK 3510-32-2
L 34	SK 3510-34-2
L 36	SK 3510-36-2
L 38	SK 3510-38-2
L 40	SK 3510-40-2
L 42	SK 3510-42-2
L 45	SK 3510-45-2
L 50	SK 3510-50-2
L 55	SK 3510-55-2
L 60	SK 3510-60-2
L 65	SK 3510-65-2
L 70	SK 3510-70-2

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

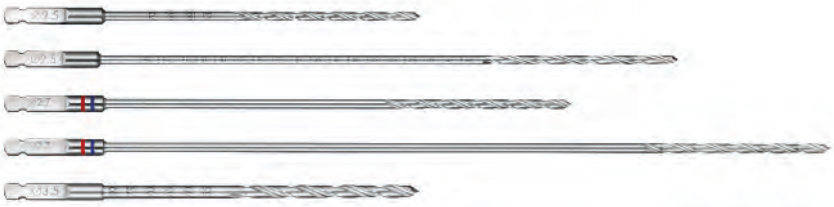
L 12	SK 3526-12-2
L 14	SK 3526-14-2
L 16	SK 3526-16-2
L 18	SK 3526-18-2
L 20	SK 3526-20-2
L 22	SK 3526-22-2
L 24	SK 3526-24-2
L 26	SK 3526-26-2
L 28	SK 3526-28-2
L 30	SK 3526-30-2
L 32	SK 3526-32-2
L 34	SK 3526-34-2
L 36	SK 3526-36-2
L 38	SK 3526-38-2
L 40	SK 3526-40-2
L 42	SK 3526-42-2
L 45	SK 3526-45-2
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

Cortical Screw 3.5, small head, self-tapping

L 12	SK 3512-12-2
L 14	SK 3512-14-2
L 16	SK 3512-16-2
L 18	SK 3512-18-2
L 20	SK 3512-20-2
L 22	SK 3512-22-2
L 24	SK 3512-24-2
L 26	SK 3512-26-2
L 28	SK 3512-28-2
L 30	SK 3512-30-2
L 32	SK 3512-32-2
L 34	SK 3512-34-2
L 36	SK 3512-36-2
L 38	SK 3512-38-2
L 40	SK 3512-40-2
L 42	SK 3512-42-2
L 45	SK 3512-45-2
L 50	SK 3512-50-2
L 55	SK 3512-55-2
L 60	SK 3512-60-2
L 65	SK 3512-65-2
L 70	SK 3512-70-2

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 ø3.5 - 4.0, up to L 90	IS 7904-20



Twist drill ø2.5, L 110, coil 50, quick coupling	IU 7425-00
Twist drill ø2.5, L 180, coil 50, quick coupling	IU 7425-18
Twist drill ø2.7, L 150, coil 50, quick coupling	IU 7427-15
Twist drill ø2.7, L 220, coil 50, quick coupling	IU 7427-22
Twist drill ø3.5, L 110, coil 50, quick coupling	IU 7435-00

Large handle, cannulated, quick coupling	IU 7706-00

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

Screwdriver hexagonal, ø2.5, quick coupling	IU 7825-00

Screwdriver Duo, T15, quick coupling	IU 7825-56

Screw forceps, self-holding IU 8004-00

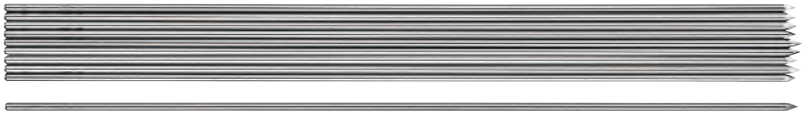
Double drill guide ø2.5/3.5, with spring aided centering IU 8116-50

Load drill guide LOQTEQ® 3.5, compression 1mm	IU 8166-01
Load drill guide LOQTEQ® 3.5, compression 2mm	IU 8166-02
Load drill guide LOQTEQ® 3.5, adjustable up to 2mm	IU 8166-03
Basic insert for load drill guide LOQTEQ® 3.5	IU 8166-05

Drill guide for gliding hole LOQTEQ® 3.5, l-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, l-ø 2.8, blue IU 8166-20



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

Fracture of the Distal Tibia (AO 43-A1)

Preoperative

Postoperative

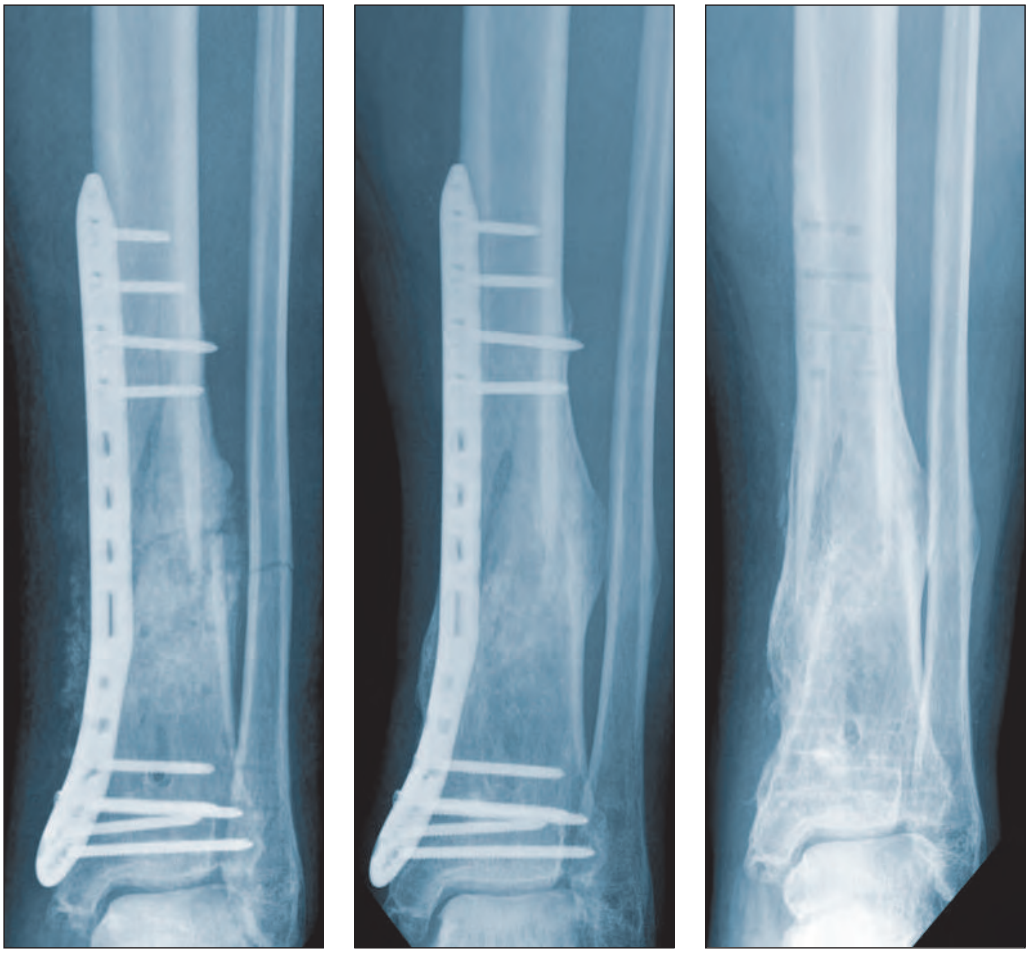
Clinical case and CT images with the kind permission of
Asklepios Clinic Weißenfels, Germany

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

Fracture of the Distal Tibia (AO 43-A1)

Preoperative

Postoperative



Clinical case and CT images with the kind permission of
University Hospital Gießen and Marburg, Germany

aap Implantate AG
Lorenzweg 5 • 12099 Berlin • Germany

Subject to technical modifications,
errors and misprints.

WP 2OP125 DE / 1507

Layout, typesetting:
deSIGN graphic - Wolfram Passlack

Illustrations:
Karen Hilberg

aap Implantate AG
Lorenzweg 5 • 12099 Berlin
Germany

Phone +49 30 75019-0
Fax +49 30 75019-111

customer.service@aap.de
www.aap.de

LOQTEQ®

aap Implantate AG
Lorenzweg 5 • 12099 Berlin
Germany

Phone +49 30 75019-0
Fax +49 30 75019-111

customer.service@aap.de
www.aap.de

WP 2OP125 EN / 1507