

XPERT ANKLE.



TRIMALLEOLAR ANKLE
TRAUMA PLATES AND
SCREWS





Xpert Ankle.

TRIMALLEOLAR ANKLE TRAUMA PLATES AND SCREWS

Indications for use:

The implants of the Xpert Ankle range are indicated for the fixation of fractures, osteotomies and pseudarthroses of the distal and the diaphyseal fibula, the distal tibia and for the syndesmotic repair in adults.

Contraindications:

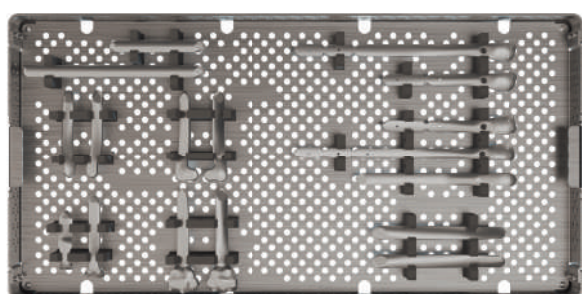
- Pregnancy.
- Acute or chronic local or systemic infections.
- Allergy to one of the materials used or sensitivity to foreign bodies.

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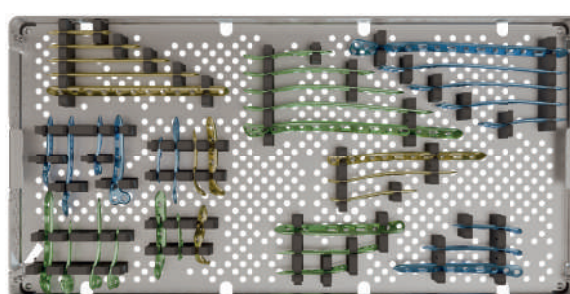
A modular kit.

- A complete range of implants dedicated to **distal fibula and tibia surgeries**.
- Dedicated instrumentations for specific surgical techniques.
- **Sterile and non-sterile configurations** (see page 37).

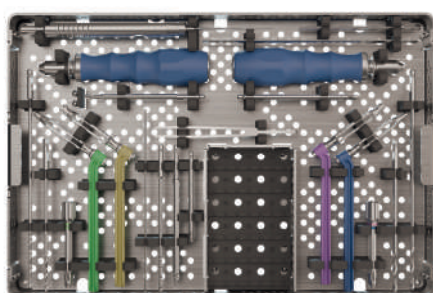


Anatomical templates tray for sterile version

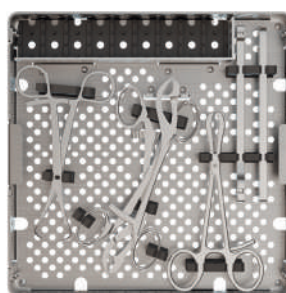
OR



Plates tray for non-sterile version



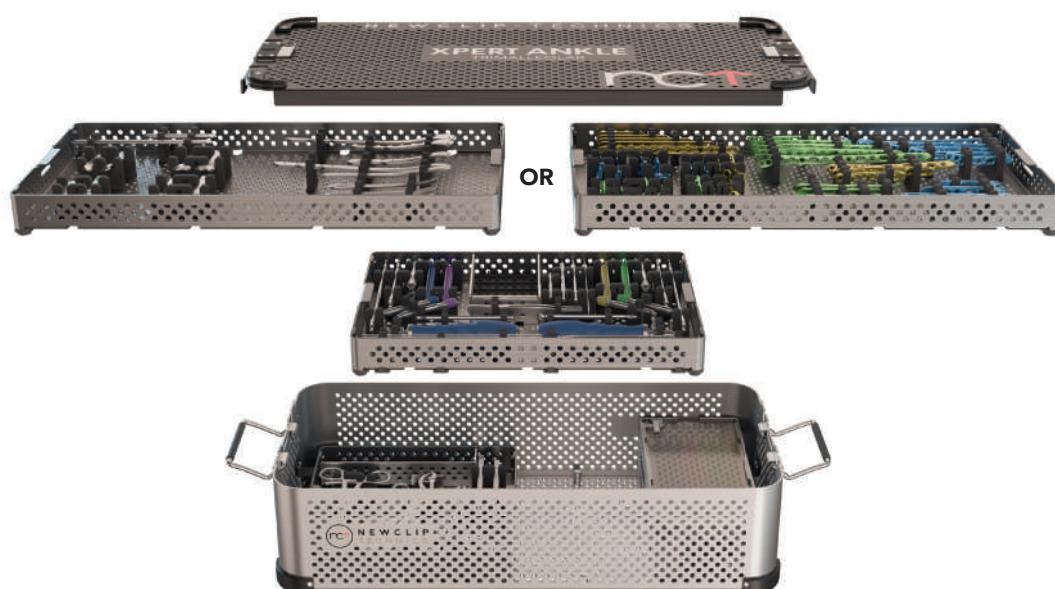
Specific plates and screws instrumentation



General instrumentation (pliers, forceps, bending irons)



Screw rack for non-sterile version



A dedicated range of plates.

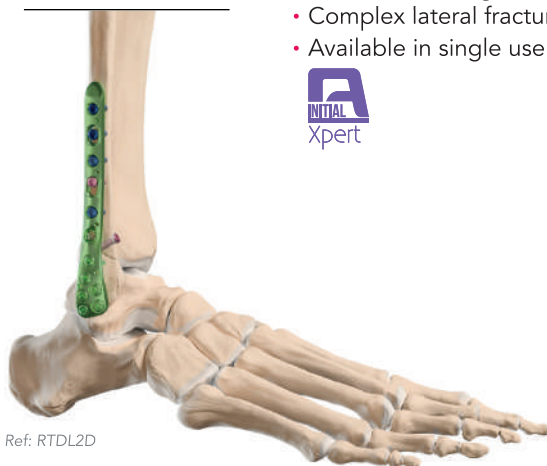
360° OF FIXATION FOR TRIMALLEOLAR FRACTURES

Xpert Ankle presents a wide range of anatomical plates to treat trimalleolar fractures. The treatments of posterolateral, posteromedial and posterior are particularly important and challenging. That is why Xpert Ankle dedicates three specific designs to them.

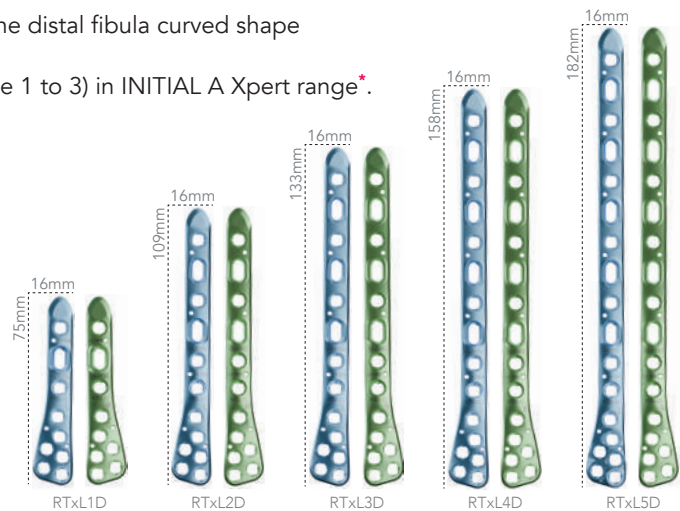
DISTAL FIBULA - ANATOMICAL LATERAL STANDARD PLATES

5 sizes, right and left specific:

- Anatomical design to fit the distal fibula curved shape
- Complex lateral fractures
- Available in single use (size 1 to 3) in INITIAL A Xpert range*.



Ref: RTxL2D



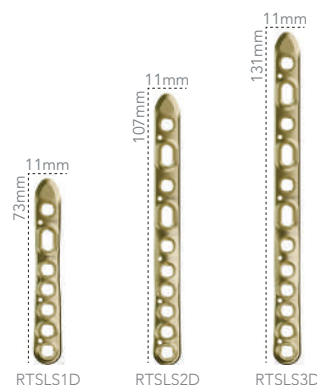
DISTAL FIBULA - ANATOMICAL STRAIGHT LATERAL PLATES

3 sizes, symmetrical:

- Anatomical design to fit the distal fibula curved shape
- Simpler lateral fractures
- Available in single use (size 1 to 3) in INITIAL A Xpert range*.



Ref: RTSLS2D



(*) May not be available depending on your country.

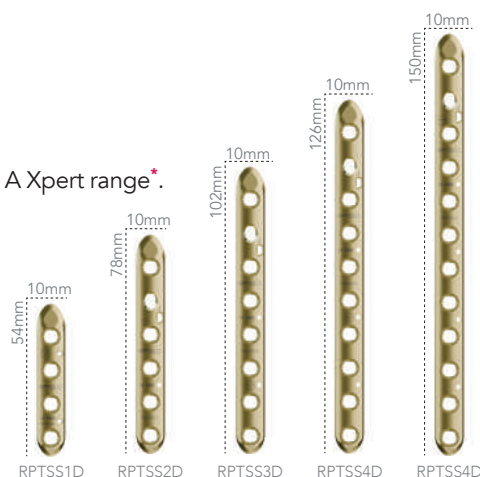
STRAIGHT SYMMETRICAL PLATES



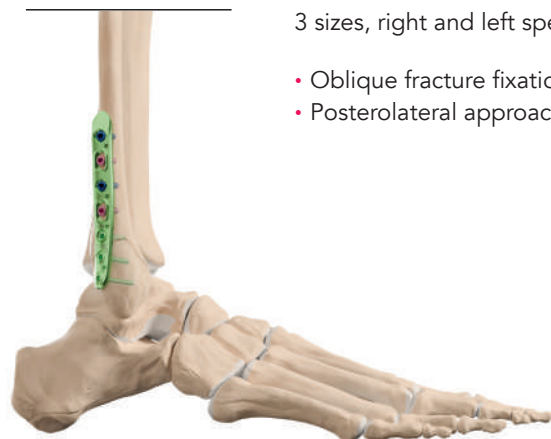
Ref: RPTSS2D

5 sizes, symmetrical:

- Diaphyseal fibula / distal tibia fractures
- Locking, polyaxial straight plate
- Available in single use (size 2 to 4) in INITIAL A Xpert range*



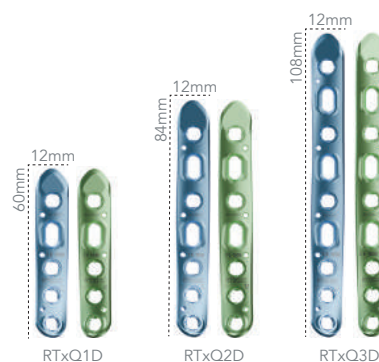
DISTAL FIBULA - POSTEROLATERAL ANATOMICAL PLATES



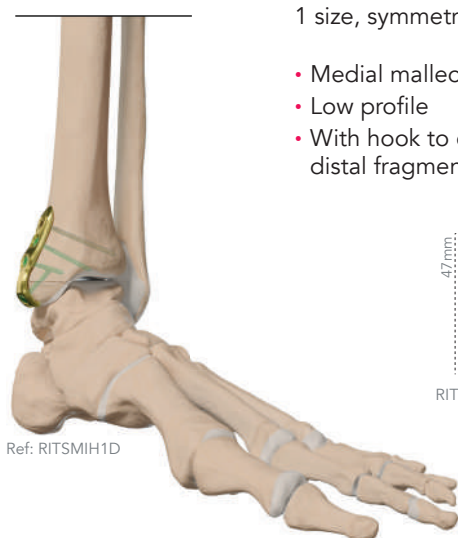
Ref: RTDQ2D

3 sizes, right and left specific:

- Oblique fracture fixation
- Posterolateral approach



DISTAL TIBIA - HOOK PLATE



Ref: RITSMIH1D

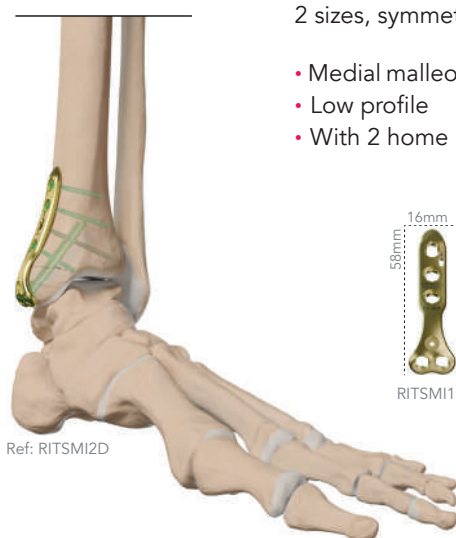
1 size, symmetrical:

- Medial malleolus fractures
- Low profile
- With hook to catch very distal fragments



RITSMIH1D

DISTAL TIBIA - STANDARD PLATES



Ref: RITSMI2D

2 sizes, symmetrical:

- Medial malleolus fractures
- Low profile
- With 2 home run screws



RITSMI1D

RITSMI2D

(*) May not be available depending on your country.

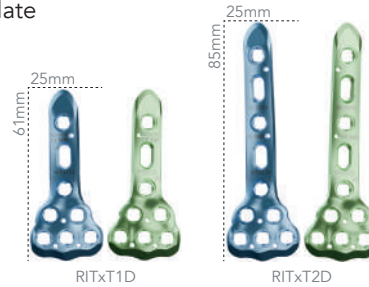
DISTAL TIBIA - POSTERIOR PLATES



Ref: RITDT2D

2 sizes, right and left specific:

- Fully posterior malleolus fractures
- Anatomical plate



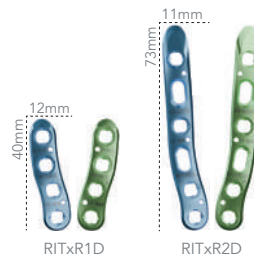
DISTAL TIBIA - POSTEROMEDIAL PLATES



Ref: RITDR2D

2 sizes, right and left specific:

- Posteromedial malleolus fractures
- Anatomical plate
- Can be combined with the posterolateral plate



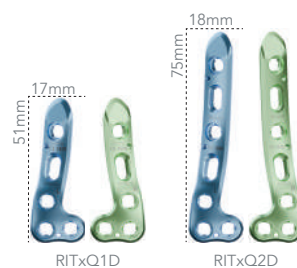
DISTAL TIBIA - POSTEROLATERAL PLATES



Ref: RITDQ2D

2 sizes, right and left specific:

- Posterolateral malleolus fractures
- Anatomical plate
- Can be combined with the posteromedial plate



Classifications.

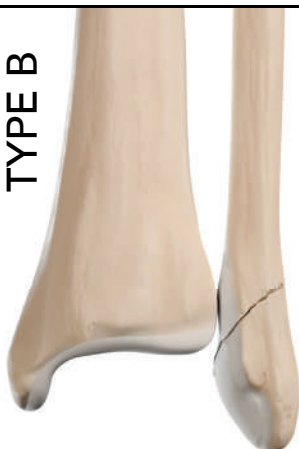
A 360° SOLUTION TAILORED TO ADDRESS THE FULL SPECTRUM OF CLASSIFICATION FRACTURES

FIBULA - WEBER CLASSIFICATION*

TYPE A



TYPE B

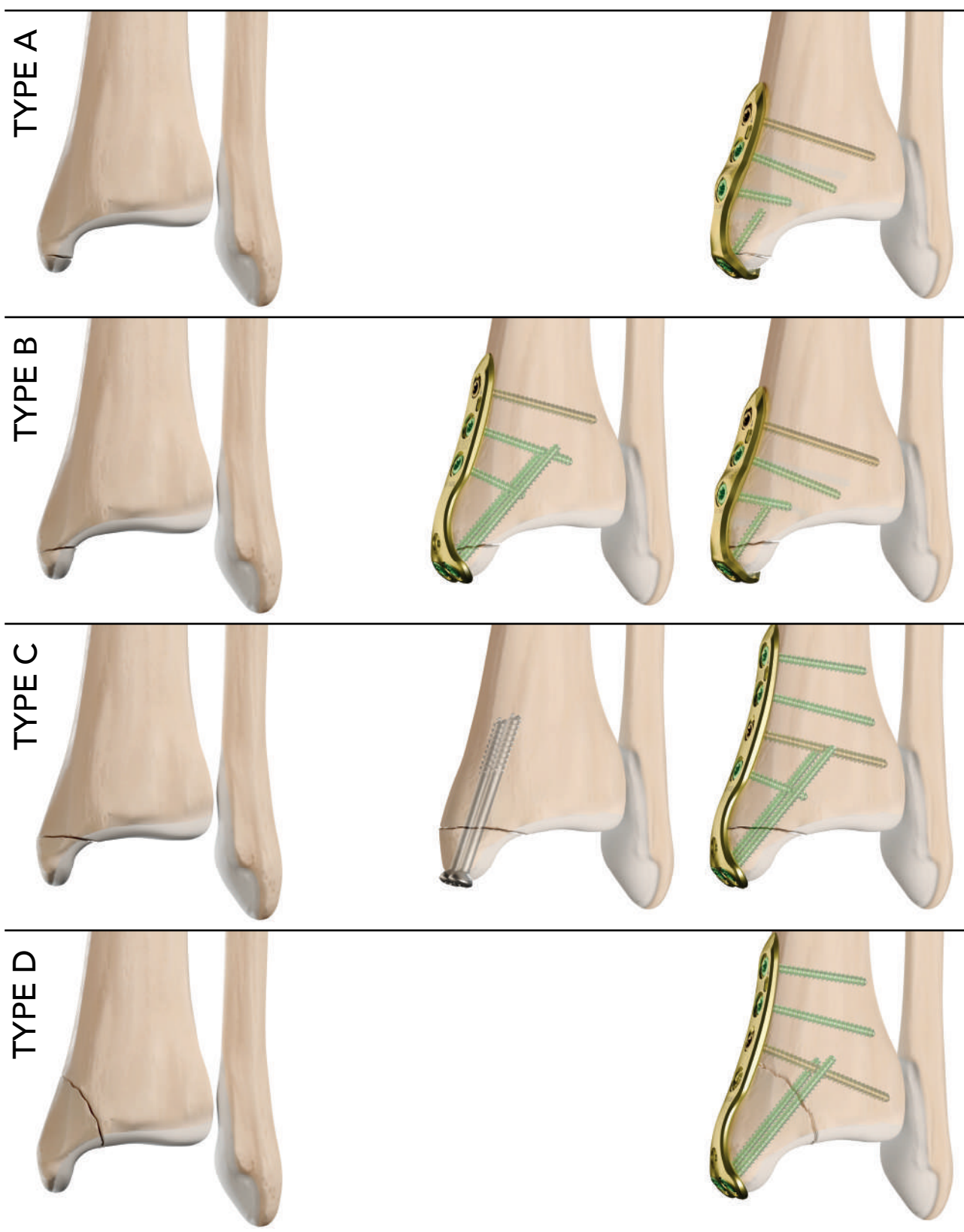


TYPE C



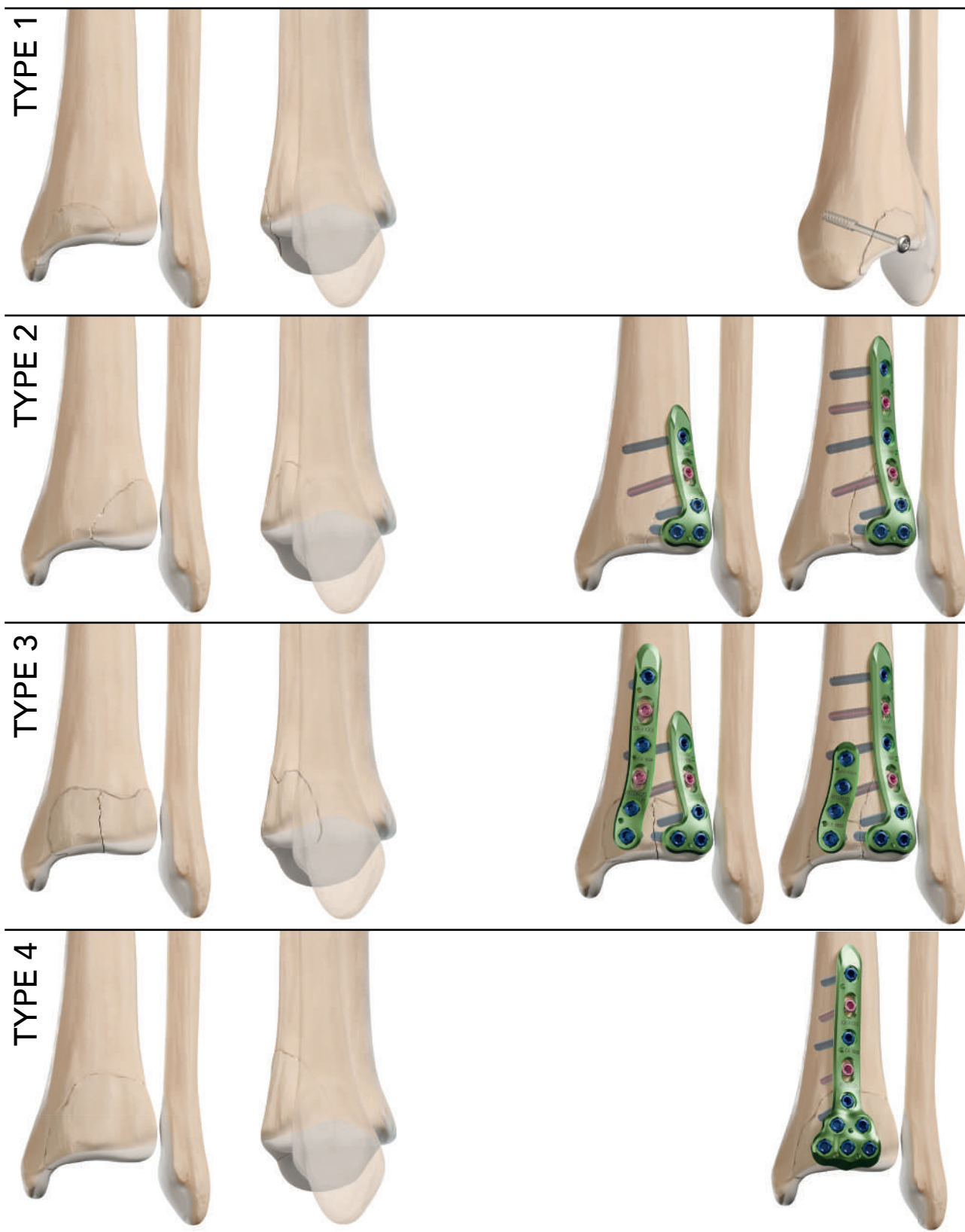
(*) Examples of possible assemblies for a type of associated fracture

TIBIA - MEDIAL MALLEOLUS - HERSCOVICI CLASSIFICATION*



(*) Examples of possible assemblies for a type of associated fracture

TIBIA - POSTERIOR MALLEOLUS - BARTONICEK CLASSIFICATION*



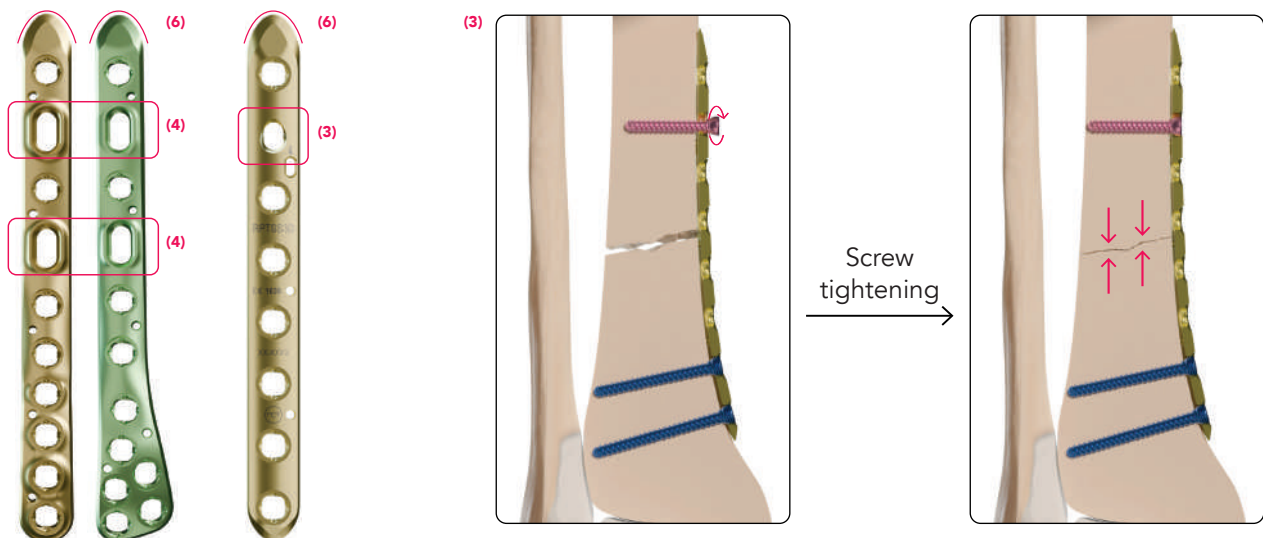
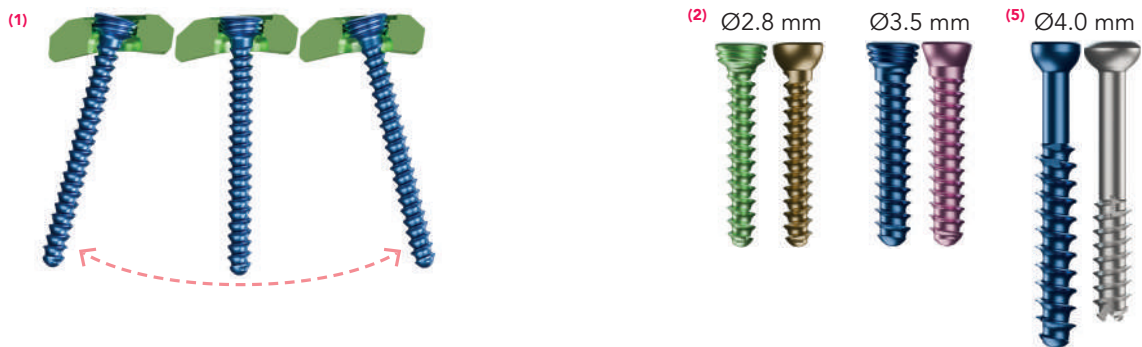
(*) Examples of possible assemblies for a type of associated fracture

General features.

FIXATION AND SCREWS FEATURES

XPERT ANKLE OFFERS A VERSATILE SYSTEM OF FIXATION

- Polyaxiality for every hole⁽¹⁾.
- All the holes are compatible with locking and non-locking screws and different screws diameter (Ø2.8 & Ø3.5 mm)⁽²⁾. Except for the ramp oblong hole which enables a guided axial compression through the screw/plate interface⁽³⁾, where only a non-locking screw can be used.
- Locking oblong hole(s)⁽⁴⁾ compatible with:
 - Compression screw for plate positioning or plate compression.
 - Locking screw.
- Ø4.0mm lag screw cannulated or non cannulated to catch fragments⁽⁵⁾.
- Tapered tip⁽⁶⁾.



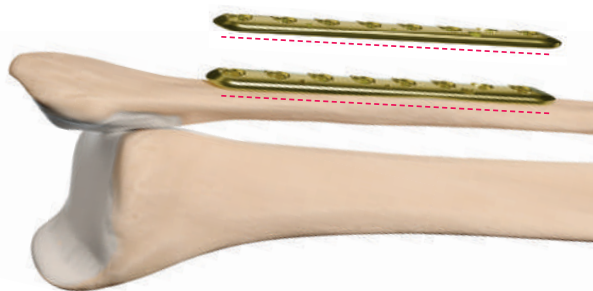
ANATOMICAL FEATURES

PRECONTOURED IMPLANTS

- Xpert Ankle presents a wide range of anatomical plates and precontoured implants as well as a straight plate.



Refs: RTDL2D/RTSL52D

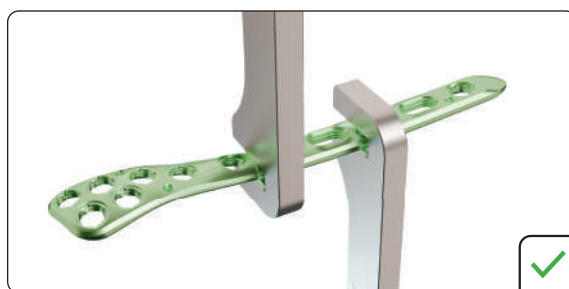


Ref: RPTSS3D

BENDABLE PLATES

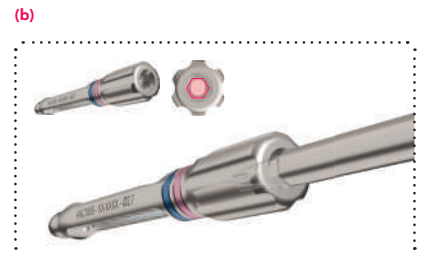
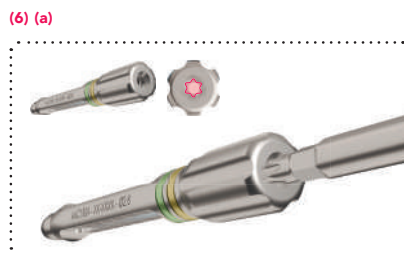
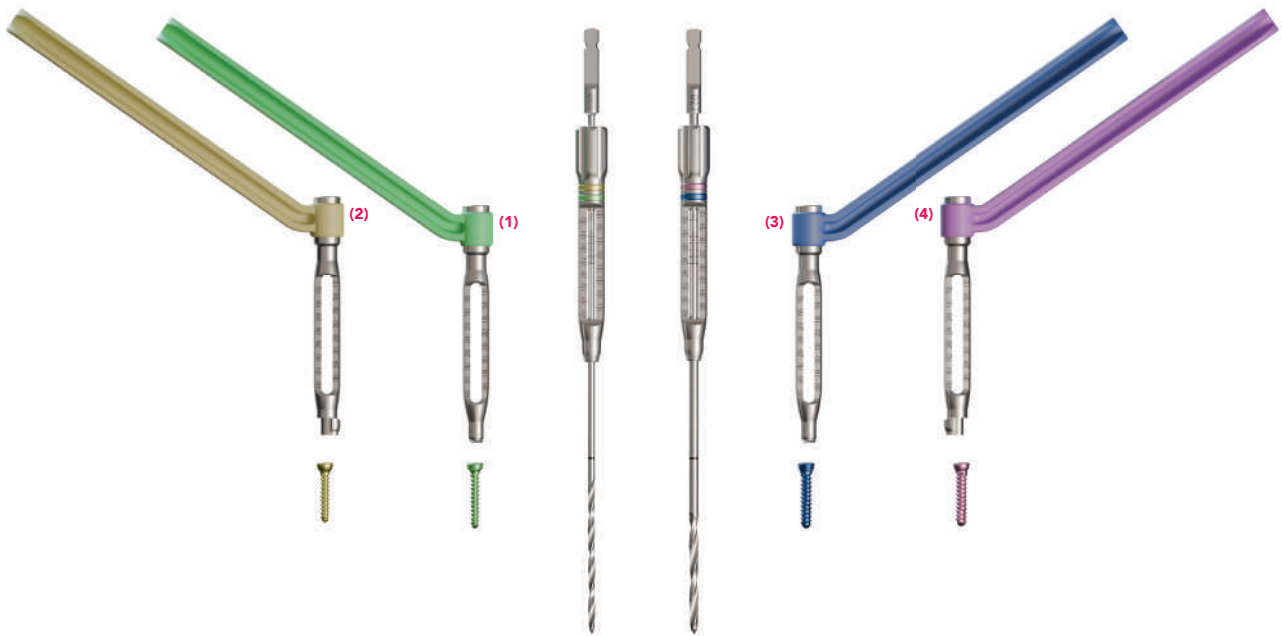
However, in the case of difficult bone anatomy, all the Xpert Ankle plates can be bent with the appropriate bending irons (ANC452) in a **parallel position**. The bending of these plates must be performed **once and in one direction only** and **the stress of the irons must not be applied to a screw hole**.

Please refer to the IFU for bending precaution.



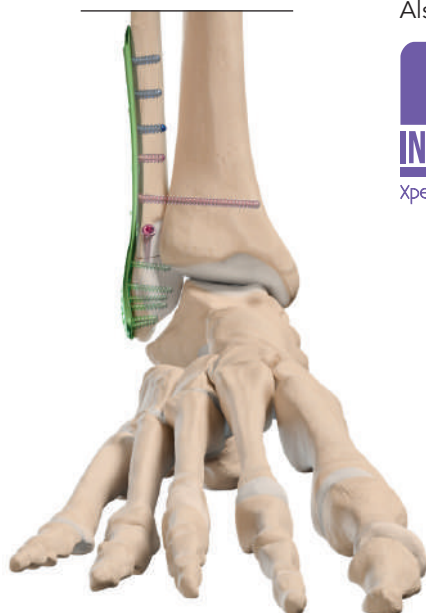
USER FRIENDLY INSTRUMENTS

- Color coding: each instrument reprises the color of its associated screw:
 - Green for Ø2.8 mm locking screws⁽¹⁾
 - Yellow for Ø2.8 mm non-locking screws⁽²⁾
 - Blue for Ø3.5 mm locking screws and Ø4.0 mm lag screws⁽³⁾
 - Purple for Ø3.5 mm non-locking screws⁽⁴⁾
- Polyaxial guide ensures the angular range of the screw.
- From 10 to 40 mm the measurement is read in the guide gauge, beyond 40mm the value is read directly on the drill bit at the back of the guide⁽⁵⁾.
- An easy drilling guide locking possible thanks to the screwdriver⁽⁶⁾.



Ankle Syndesmosis management.

Newclip Technics offers treatment of syndesmosis injuries by fixation by screw Ø 3.5mm (CAT3.5LxD)

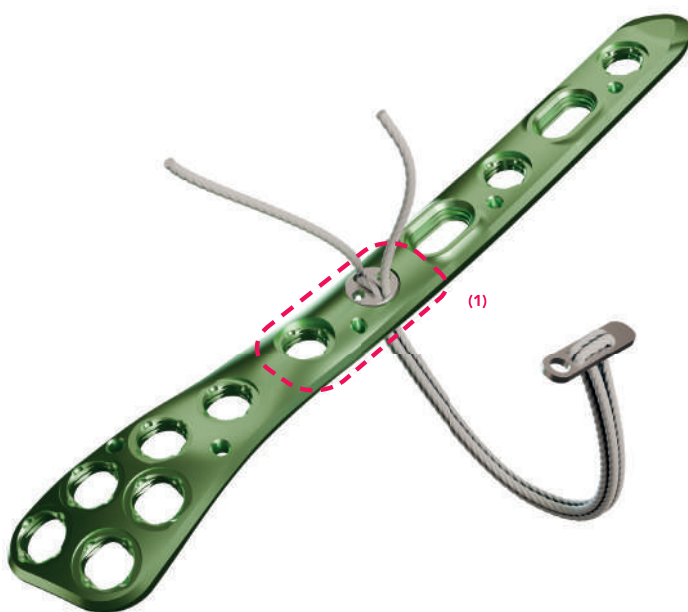


Also available in single use^(*)



- Xpert Ankle anatomical standard and straight lateral plates have two dedicated holes⁽¹⁾ to hold the syndesmosis implant (with screw or with double button fixation).

Warning: They are intended for use with round syndesmosis buttons made of titanium or stainless steel with a minimum diameter of 4.4mm and a maximum diameter of 6.8mm.



^(*) May not be available depending on your country.

Approaches.

The techniques presented below are some surgical techniques possibilities. The choice is made according to surgeon's expertise.

LATERAL APPROACH

SURGICAL TECHNIQUE:

The patient is positioned in the supine position.

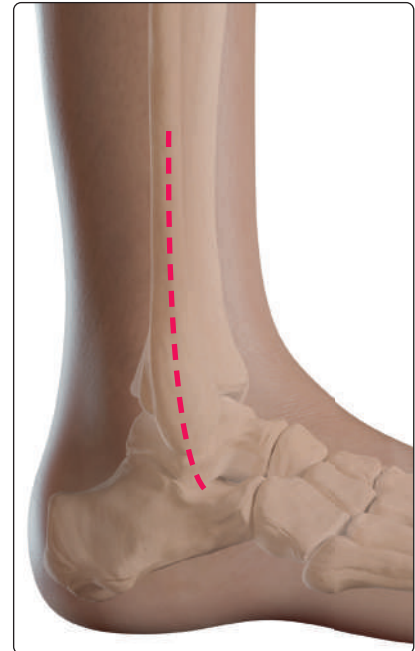
The incision begins approximately 5 cm proximal to the ankle joint, slightly medial to Chaput's tubercle, and is continued distally in a straight line toward the base of the third and fourth metatarsals.

The superficial peroneal nerve is identified and protected. Dissection proceeds through the subcutaneous tissue to expose the superior and inferior extensor retinacula, as well as the tendons of the extensor digitorum longus, peroneus tertius, and extensor hallucis longus.

After division of the extensor retinaculum, the extensor digitorum longus and peroneus tertius tendons are mobilized, and the deep peroneal nerve and dorsalis pedis artery are identified and gently retracted medially.

Distally, the muscle belly of the extensor digitorum brevis is visualized and may be mobilized if additional distal exposure is required.

This approach allows full visualization of the anterior surface of the distal tibia, with excellent exposure of the lateral articular surface.



MEDIAL APPROACH

SURGICAL TECHNIQUE:

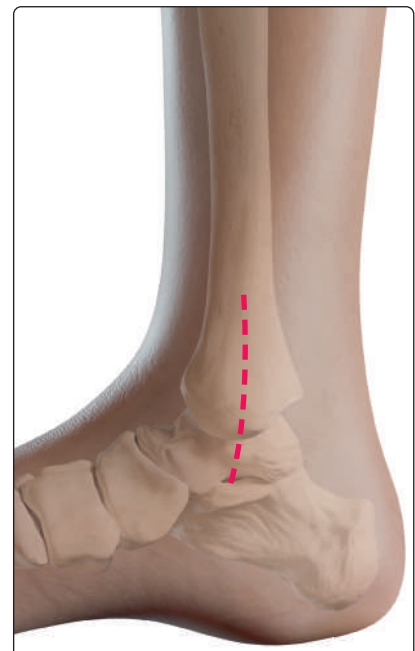
The patient is positioned in the supine position.

A longitudinal incision is made over the medial malleolus.

The skin incision begins approximately 2-3 cm proximal to the tip of the medial malleolus and is extended distally along the medial aspect of the tibia, ending just distal to the fracture site. The length of the incision is typically 4-6 cm, depending on the exposure required.

Care is taken to identify and protect the saphenous vein and the saphenous nerve, which course just anterior to the incision.

Blunt dissection through the subcutaneous tissue is performed to expose the periosteum over the medial malleolus. The periosteum is then incised and elevated, allowing direct visualization of the fracture site for reduction and fixation.



POSTERIOR APPROACH

SURGICAL TECHNIQUE:

The patient is positioned in the prone position.

A longitudinal posterior skin incision is made passing on the medial side of the Achilles tendon.

The deep fascia is incised, taking care to identify and protect the posterior tibial neurovascular bundle.

The interval between the flexor hallucis longus (FHL) laterally and the flexor digitorum longus (FDL) medially is developed.

The FHL is retracted laterally and the FDL medially to allow exposure of the posterior aspect of the distal tibia. Gentle retraction is maintained and excessive soft-tissue stripping is avoided.



POSTEROMEDIAL APPROACH

SURGICAL TECHNIQUE:

The patient is positioned in the prone position.

A slightly more posterior approach is used compared to the standard medial malleolar incision.

The skin incision is made along the posteromedial border of the tibia, beginning approximately 3-4 cm proximal to the tip of the medial malleolus and extending distally toward the sustentaculum tali.

The incision follows the natural curvature of the posteromedial aspect of the ankle, providing direct access to the posteromedial fracture fragment.

During dissection, care is taken to identify and protect the saphenous vein and saphenous nerve, which lie anteriorly, as well as the posterior tibial tendon and the posterior tibial neurovascular structures, located deeper and posteriorly.

The interval between the flexor digitorum longus (FDL) and the posterior tibial tendon is typically developed to expose the fracture site.



POSTEROLATERAL APPROACH

SURGICAL TECHNIQUE:

The patient is positioned in the prone position.

The incision is made along the posterolateral aspect of the ankle, just posterior to the fibula.

It typically begins 3-4 cm proximal to the tip of the lateral malleolus and extends distally along the fibula toward the base of the fifth metatarsal. The incision curves slightly around the lateral malleolus to provide adequate exposure.

The sural nerve and small saphenous vein are identified and carefully protected. The peroneal tendons, located posterior to the fibula, are also preserved.

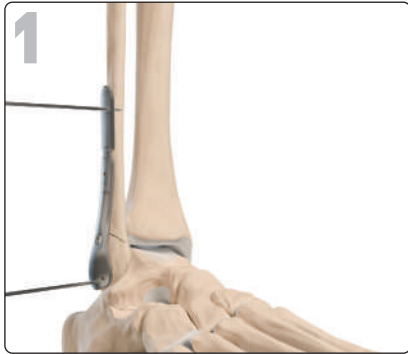
The interval between the peroneal tendons laterally and the flexor hallucis longus (FHL) medially is developed to expose the posterior malleolus fragment.



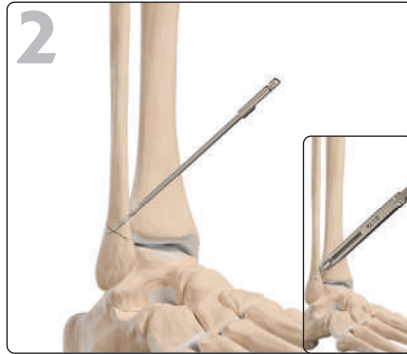
Surgical techniques.

SURGICAL TECHNIQUE - DISTAL FIBULA PLATES (PAGE 1/3)

Example using the Lateral plate - Distal fibula - Right - Size 2 (RTDL2D). All the distal fibula plates follow the same steps.



Reduce the fracture with the K-wires or with forceps and choose the appropriate plate size : for sterile plates apply the template on the bone to select the correct size.



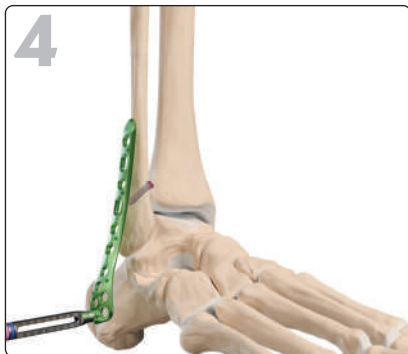
To insert an interfragmentary screw, drill using the Ø2.7 mm drill bit (ANC1805).

Determine the screw length using the length gauge.

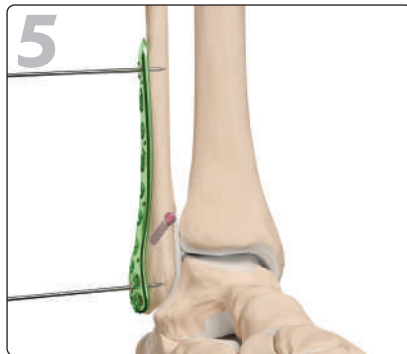
When a lag effect is necessary, use the countersink (ANC1807) to widen the first cortex previously drilled



Insert the interfragmentary fuchsia Ø3.5 mm non-locking screw (CAT3.5LxxD) using the screwdriver.



Lock a threaded guide gauge (ANC1804 or ANC1836) into one of the distal holes to manipulate the plate and insert it along the bone until the appropriate position.

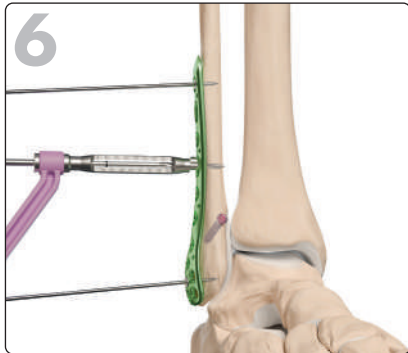


Temporary fixation is then achieved by positioning olive pin (ANC1644) or K-wires (33.0216.180) within the K-wire holes in the head and shaft of the plate.

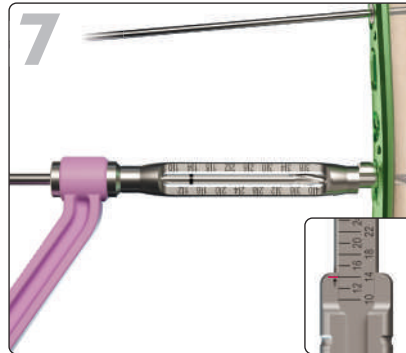
Temporary fixation may also be achieved by using a forceps to compress the plate to the bone.

SURGICAL TECHNIQUE - DISTAL FIBULA PLATES (PAGE 2/3)

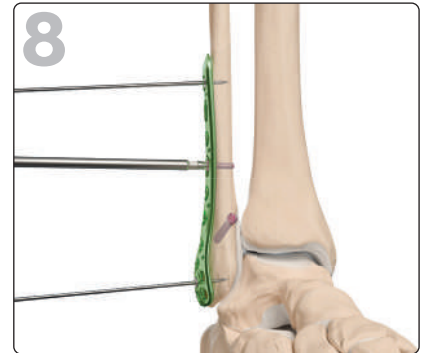
INSERTION OF A 3.5MM COMPRESSIVE SCREW IN THE MOST DISTAL OBLONG HOLE:



Position the Ø2.7mm oblong hole guide gauge (ANC1838 - Purple color) in the oblong hole and drill using the Ø2.7mm drill bit (ANC1805).



Length drilled can be measured directly with the drill bit on the guide gauge or with the length gauge (ANC1801) on the mark (highlighted in pink on the picture).



Insert the appropriate compressive screw (CAT3.5LxxD) in the oblong hole using the screwdriver (ANC1808).

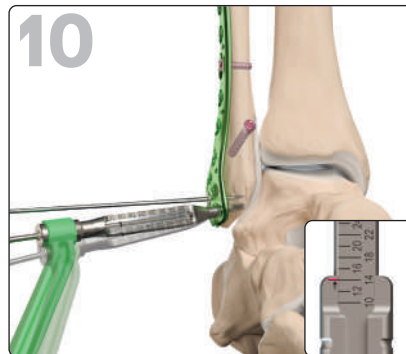
N.B.:

- If the plate position must be adjusted, unscrew CAT3.5LxxD, reposition the plate, and repeat this step.
- Alternatively, a locking screw (SAT3.5Lxx) can be used in the oblong hole.

INSERTION OF THE DISTAL LOCKING SCREWS:



Position the Ø2.0mm (ANC1834) polyaxial guide gauge in one of the distal hole of the plate.



Choose the appropriate angulation of the screw and drill using the corresponding drill bit (ANC1802).

Length drilled can be measured directly with the drill bit on the guide gauge or with the length gauge (ANC1801) on the mark (highlighted in pink on the picture).



Insert the appropriate locking screw (SAT2.8Lxx) in the locking hole.

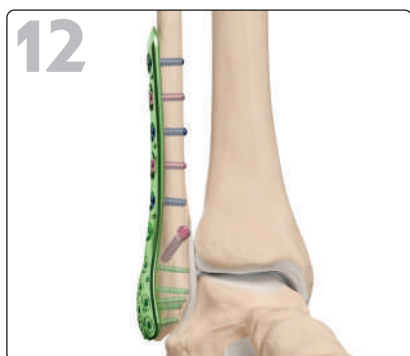
Repeat the whole procedure for every distal hole.

N.B.: If the mean angulation of the locking hole is wanted, the monoaxial guide gauges (ANC1804 for a Ø2.8mm screw - Green color or ANC1836 for a Ø3.5mm screw - Blue color) can be used instead of the polyaxial drilling guides. They can be easily locked in the hole using the screwdriver inserted at the rear of the drilling guide.

Warning: When using the length gauge in a monocortical hole, please add 2 mm to the markings read.

SURGICAL TECHNIQUE - DISTAL FIBULA PLATES (PAGE 3/3)

INSERTION OF THE PROXIMAL LOCKING SCREWS AND FINALISATION OF THE ASSEMBLY:



If compression of the plate on the proximal/diaphyseal part of the bone is needed, repeat steps 6 to 8 for the other oblong holes of the plate.

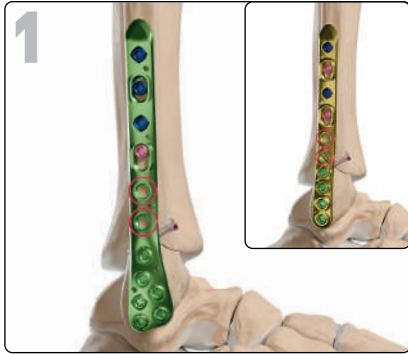
Repeat the same procedure as the distal locking screws (steps 9 to 11) for the required remaining proximal holes.

Then, remove the k-wires, perform final check using fluoroscopy, AP and lateral, and close the surgery site.

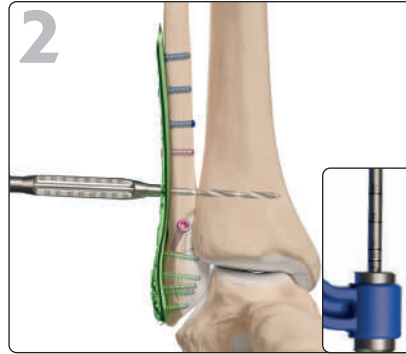
FINAL RESULTS.



SURGICAL TECHNIQUE - SYNDESMOSIS

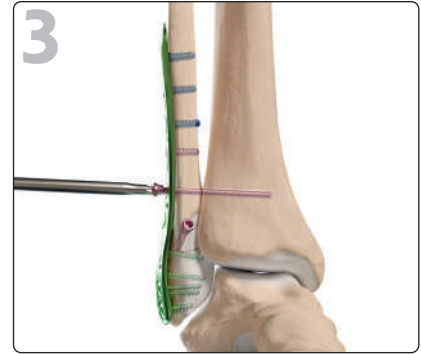


A syndesmotic screw (CAT3.5LxxD) can be inserted in the plates size 2 & 3 in the two most distal diaphyseal holes.



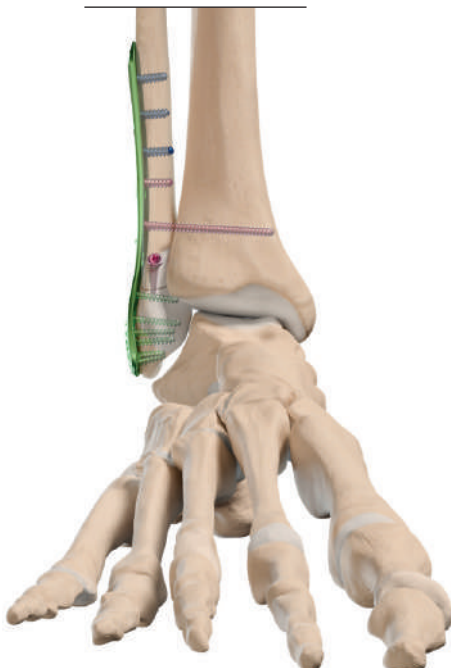
Position the Ø2.7mm polyaxial guide gauge (ANC1837 - Blue color) inside one of the syndesmotic hole. Choose the appropriate angulation of the screw and drill using the corresponding drill bit (ANC1806).

Length drilled can be read directly on the drill bit at the back of the guide gauge or with the length gauge (ANC1801).



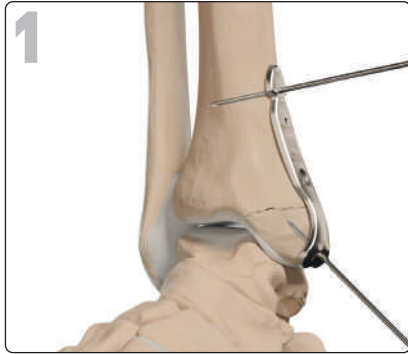
Insert the syndesmotic fuchsia Ø3.5 mm non-locking screw (CAT3.5LxxD) using the screwdriver (ANC1808). Perform the final tightening by hand.

FINAL RESULT.

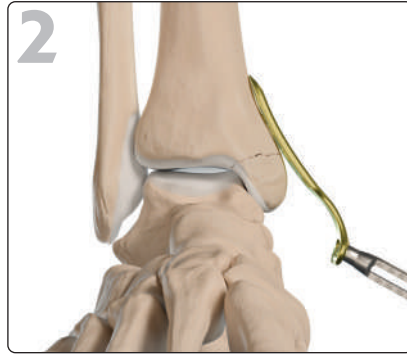


SURGICAL TECHNIQUE - MEDIAL MALLEOLUS PLATES (PAGE 1/2)

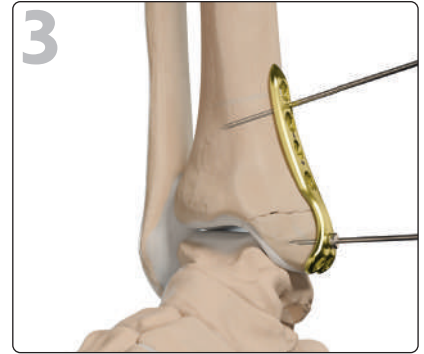
Example using the Medial malleolus plate - Distal tibia - Symmetrical - Size 2 (RITSMI2D). All the medial malleolus plates follow the same steps.



Reduce the fracture with the K-wires or with forceps and choose the appropriate plate size : for sterile plates apply the template on the bone to select the correct size.



Lock the threaded guide gauge (ANC1804) into one of the distal holes to manipulate the plate and insert it along the bone until the appropriate position.

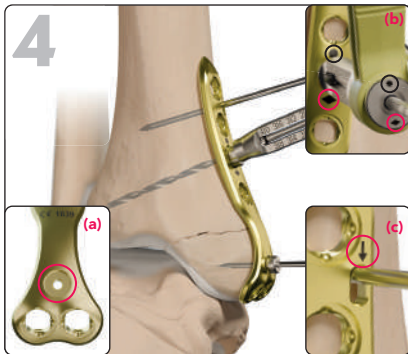


Temporary fixation is then achieved by positioning olive pin (ANC1644) or K-wires (33.0216.180) within the K-wire holes in the head and shaft of the plate.

Temporary fixation may also be achieved by using a forceps to compress the plate to the bone.

USE OF THE RAMP OBLONG HOLE (OPTIONAL):

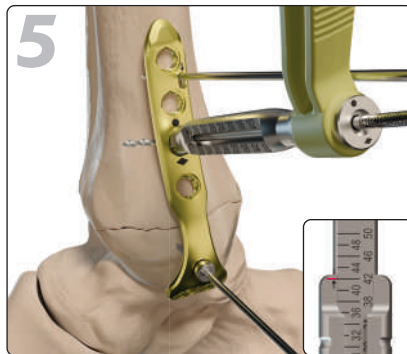
If the compression of the fracture is needed in distal part.



Insert an olive pin (ANC1644) inside the dedicated hole^(a). Insert the Ø2.0 mm oblong hole guide gauge (ANC1835 - Yellow color) in the ramp oblong hole and drill bi-cortically using the Ø2.0mm drill bit (ANC1803).

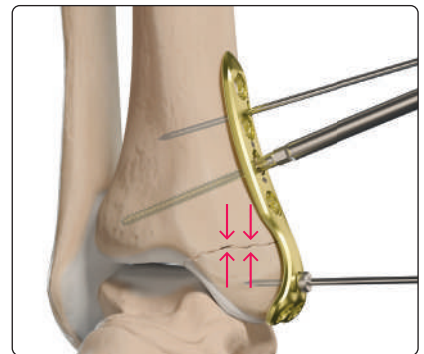
The orientation of the drill guide must be taken into account to allow compression^(b).

N.B.: The proximal pin Ø1.6 mm (33.0216.180) must be positioned in the distal part of the oblong pin hole (shown by the black arrow^(c)).



Length drilled can be measured directly with the drill bit on the guide gauge (for the lengths of 42 mm and above, the measurement is read on the drill bit at the back of the guide gauge) or with the length gauge (ANC1801) on the mark (highlighted in pink on the picture).

N.B.: When using the length gauge on the ramp oblong hole, please deduct 2mm from the markings read.

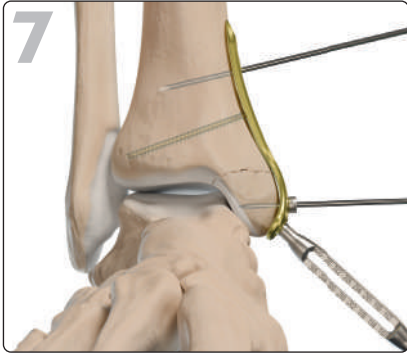


Insert the appropriate compressive screw (CAT2.8LxxD) in the ramp oblong hole. Then, remove the olive pin.

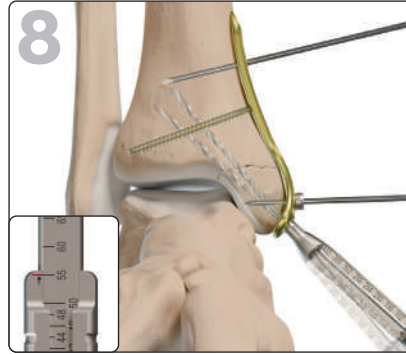
N.B.: If there is no need for compression, insert the screw directly in the proximal part of the ramp oblong hole using the Ø2.0 polyaxial guide gauge (ANC1834 - Green color).

SURGICAL TECHNIQUE - MEDIAL MALLEOLUS PLATES (PAGE 2/2)

INSERTION OF THE DISTAL LOCKING SCREWS:

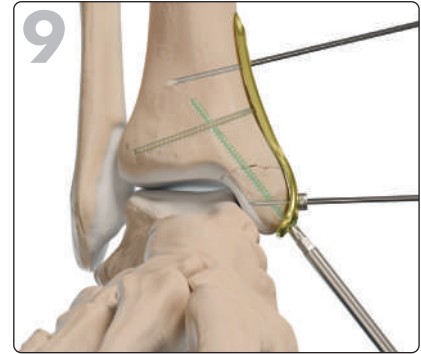


Position the Ø2.0mm polyaxial guide gauge (ANC1834 - Green color) in one of the distal hole of the plate.



Choose the appropriate angulation of the screw and drill using the Ø2.0mm drill bit (ANC1803).

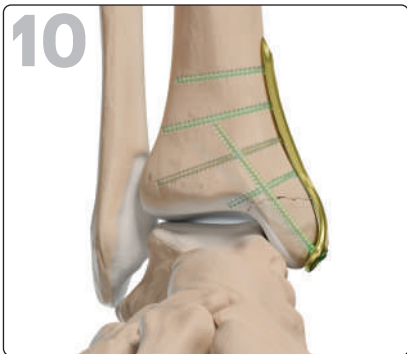
Length drilled can be measured directly with the drill bit on the guide gauge (for the lengths of 42 mm and above, the measurement is read on the drill bit at the back of the guide gauge) or with the length gauge (ANC1801) on the mark (highlighted in pink on the picture).



Insert the appropriate locking screw SAT2.8Lxx in the locking hole.

Repeat the whole procedure for every distal hole.

INSERTION OF THE PROXIMAL LOCKING SCREWS AND FINALISATION OF THE ASSEMBLY:

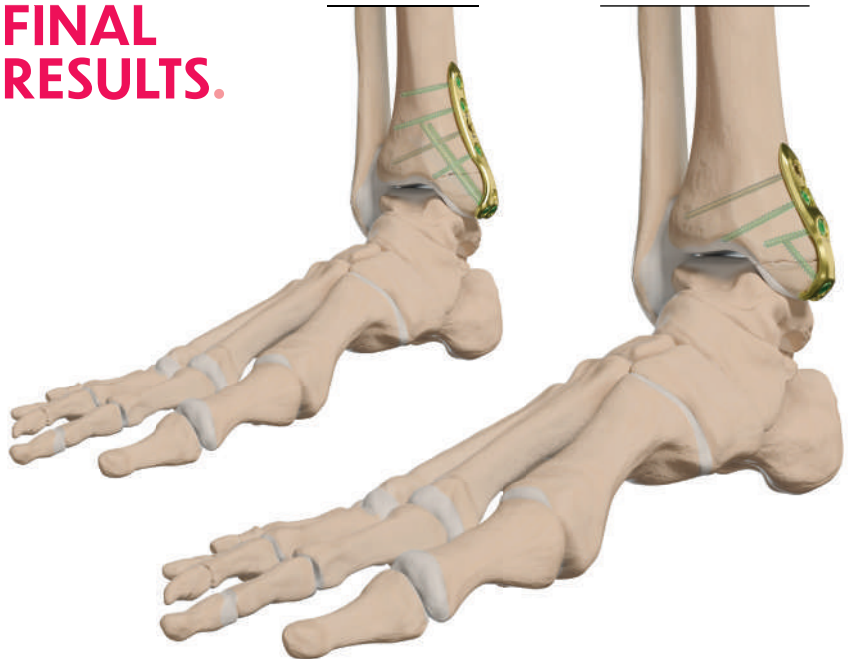


If compression of the plate on the proximal part of the bone is needed, insert non-locking screws CAT2.8LxxD.

Repeat the same procedure as the distal locking screws (steps 7 to 9) for the required remaining holes.

Then, remove the k-wires, perform final check using fluoroscopy, AP and lateral, and close the surgery site.

FINAL RESULTS.



N.B.: If the mean angulation of the locking hole is wanted, the monoaxial guide gauge (ANC1804 - Green color) can be used instead of the polyaxial drilling guide. It can be easily locked in the hole using the screwdriver inserted at the rear of the drilling guide.

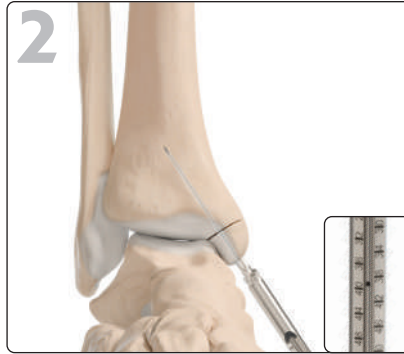
Warning: When using the length gauge in a monocortical hole, please add 2 mm to the markings read.

SURGICAL TECHNIQUE - CANNULATED COMPRESSIVE SCREWS

Example of surgical technique with H1.4QT4.0LxD screws.



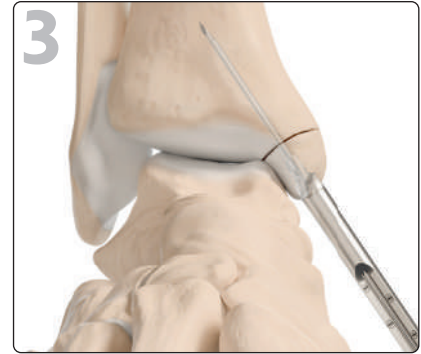
1 Insert the Ø1.3 mm pin (ANC1456) to stabilize the two fragments.



2 Slide the 3 in 1 instrument for Ø4.0 mm screws (ANC1288) along the Ø1.3 mm pin until the cortex is reached.

Determine the insertion depth using the marking on the pin.

N.B.: The pin can then be inserted deeper in order to prevent its removal during drilling.



3 If reaming is required, widen the surface of the insertion using the countersink part of the 3-in-1 instrument.



4 In case of a hard bone density, it is recommended to drill before the screw insertion (ANC1895). The drilling depth can be checked using the marking on the drill bit.



5 Select the appropriate screw length and insert the cannulated screw (H1.4QT4.0LxD) along the pin using the screwdriver part of the 3-in-1 instrument or the ANC1675 until the desired reduction and compression are achieved.

Then remove the pin.

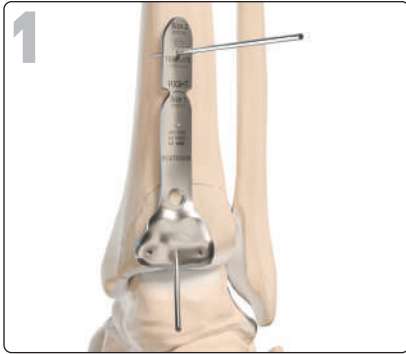
N.B.: In case of osteoporotic bone, it is possible to add a compression washer under the screw head to obtain more compression

FINAL RESULT.



SURGICAL TECHNIQUE - POSTERIOR DISTAL TIBIA PLATES (PAGE 1/2)

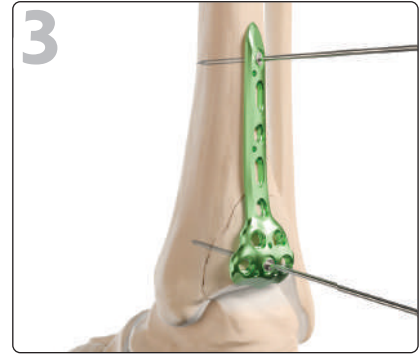
Example using the Posterior plate - Distal tibia - Right - Size 2 (RITDT2D). All types of posterior distal tibia plates follow the same steps.



Reduce the fracture with the K-wires or with forceps and choose the appropriate plate size : for sterile plates apply the template on the bone to select the correct size.



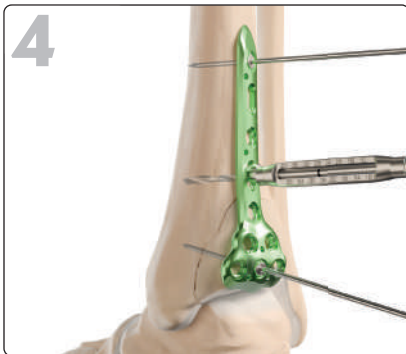
Lock the threaded guide gauge (ANC1804 or ANC1836) into one of the distal holes to manipulate the plate and insert it along the bone until the appropriate position.



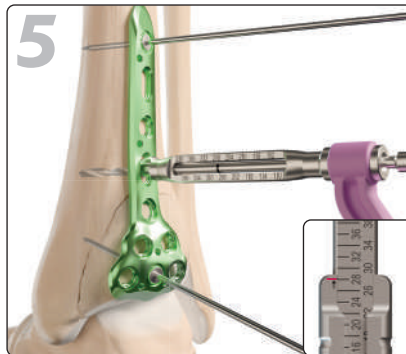
Temporary fixation is then achieved by positioning olive pin (ANC1644) or K-wires (33.0216.180) within the K-wire holes in the head and shaft of the plate.

Temporary fixation may also be achieved by using a forceps to compress the plate to the bone.

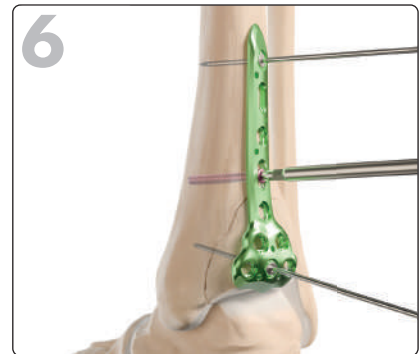
INSERTION OF A 3.5MM COMPRESSIVE SCREW IN THE MOST DISTAL OBLONG HOLE:



Position the Ø2.7mm oblong hole guide gauge (ANC1838 - Purple color) in the oblong hole and drill using the Ø2.7mm drill bit (ANC1806).



Length drilled can be measured directly with the drill bit on the guide gauge (for the lengths of 42 mm and above, the measurement is read on the drill bit at the back of the guide gauge) or with the length gauge (ANC1801) on the mark (highlighted in pink on the picture).



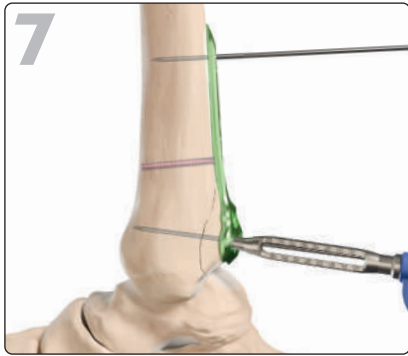
Insert the appropriate compressive screw (CAT3.5LxxD) in the oblong hole using the screwdriver (ANC1808).

N.B.: If the plate position must be adjusted, unscrew CAT3.5LxxD, reposition the plate, and repeat this step.

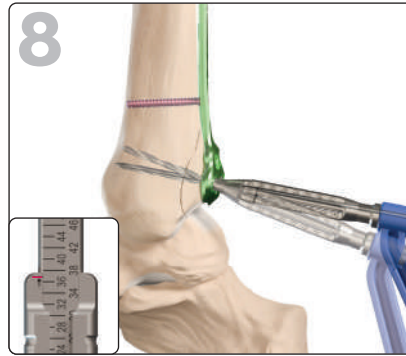
N.B.: Alternatively, a locking screw (SAT3.5Lxx) can be used in the oblong hole.

SURGICAL TECHNIQUE - POSTERIOR DISTAL TIBIA PLATES (PAGE 2/2)

INSERTION OF THE DISTAL LOCKING SCREWS:

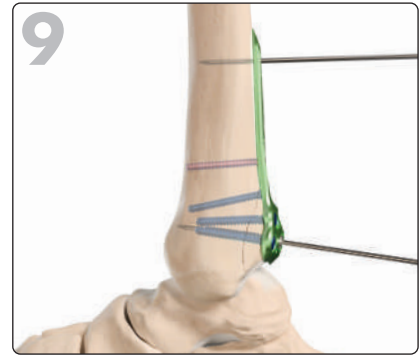


Position the Ø2.0mm (ANC1834 - Green color) or the Ø2.7mm (ANC1837 - Blue color) polyaxial guide gauge in one of the distal hole of the plate.



Choose the appropriate angulation of the screw and drill using the corresponding drill bit (ANC1803 for a Ø2.8mm screw or ANC1806 for a Ø3.5mm screw).

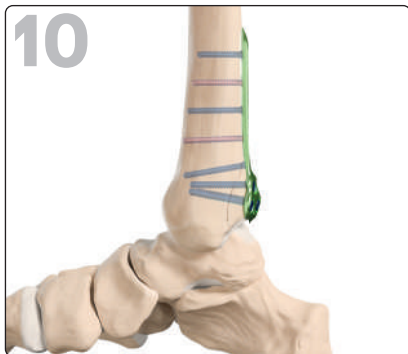
Length drilled can be measured directly with the drill bit on the guide gauge (for the lengths of 42 and above, the measurement is read on the drill bit at the back of the guide gauge) or with the length gauge (ANC1801) on the mark (highlighted in pink on the picture).



Insert the appropriate locking screw (SAT2.8Lxx - Green color or SAT3.5Lxx - Blue color) in the locking hole.

Repeat the whole procedure for every distal hole.

INSERTION OF THE PROXIMAL LOCKING SCREWS AND FINALISATION OF THE ASSEMBLY:



If compression of the plate on the proximal/diaphyseal part of the bone is needed, repeat steps 4 to 6 for the other oblong holes of the plate.

Repeat the same procedure as the distal locking screws (steps 7 to 9) for the required remaining holes.

Then, remove the k-wires, perform final check using fluoroscopy, AP and lateral, and close the surgery site.

FINAL RESULTS.

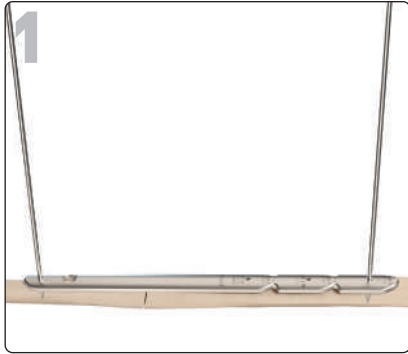


N.B.: If the mean angulation of the locking hole is wanted, the monoaxial guide gauge (ANC1804 for a Ø2.8mm screw - Green color or ANC1836 for a Ø3.5mm screw - Blue color) can be used instead of the polyaxial drilling guide. It can be easily locked in the hole using the screwdriver inserted at the rear of the drilling guide.

Warning: When using the length gauge in a monocortical hole, please add 2 mm to the markings read.

SURGICAL TECHNIQUE - STRAIGHT SYMMETRICAL PLATES (PAGE 1/2)

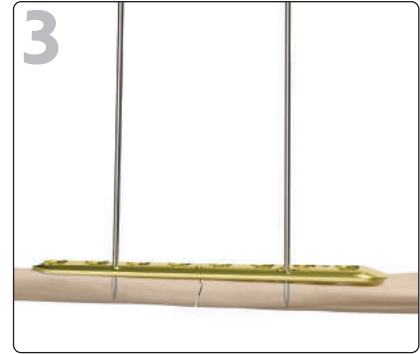
Example of surgical technique with an ankle straight symmetrical plate - Size 3 (RPTSS3D). This technique is compatible with all sizes of ankle straight plates.



Reduce the fracture with the K-wires or with forceps and choose the appropriate plate size : for sterile plates apply the template on the bone to select the correct size.



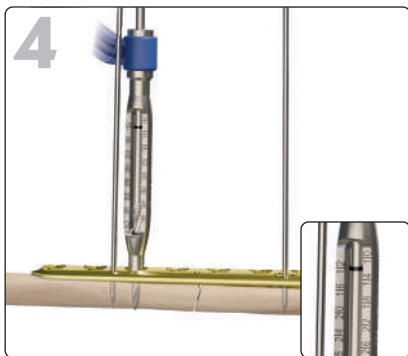
Lock the threaded guide gauge (ANC1804 or ANC1836) into one of the distal holes to manipulate the plate and insert it along the bone until the appropriate position.



Temporary fixation is then achieved by positioning olive pins (ANC1644) or K-wires (33.0216.180) within the K-wire holes in the head and shaft of the plate.

Temporary fixation may also be achieved by using a forceps to compress the plate to the bone.

INSERTION OF THE LOCKING SCREWS:



Position the Ø2.0mm (ANC1834 - Green color) or the Ø2.7mm (ANC1837 - Blue color) polyaxial guide gauge in one of the distal hole of the plate.

Choose the appropriate angulation of the screw and drill using the corresponding drill bit (ANC1802 for a Ø2.8mm screw or ANC1805 for a Ø3.5mm screw).

Length drilled can be measured directly with the drill bit on the guide gauge



Insert the appropriate locking screw (SAT2.8Lxx - Green color or SAT3.5Lxx - Blue color) in the locking hole.

Repeat the whole procedure for the remaining holes.

SURGICAL TECHNIQUE - STRAIGHT SYMMETRICAL PLATES. (PAGE 2/2)

USE OF THE RAMP OBLONG HOLE (OPTIONAL):

If the compression of the fracture is needed.



Insert the Ø2.7mm oblong hole guide gauge (ANC1838 - Purple guide) in the ramp oblong hole and drill bi-cortically using the Ø2.7mm drill bit (ANC1805).

The orientation of the drill guide must be taken into account to allow compression^(a).

N.B.: The proximal pin Ø1.6 mm (33.0216.180) must be positioned in the distal part of the oblong pin hole (shown by the black arrow^(b)).



Length drilled can be measured directly with the drill bit on the guide gauge

N.B.: When using the length gauge on the ramp oblong hole, please deduct 2mm from the markings read.



Insert the appropriate non-locking screw CAT3.5LxD.

N.B.: If there is no need for compression, insert the screw directly in the proximal part of the ramp oblong hole using the Ø2.7 polyaxial guide gauge (ANC1510 - Blue color).



Repeat the same procedure as the locking screws (steps 4 & 5) for the required remaining holes.

Then, remove the k-wires, perform final check using fluoroscopy, AP and lateral, and close the surgery site.

FINAL RESULT.



N.B.: If the mean angulation of the locking hole is wanted, the monoaxial guide gauge (ANC1836 - Blue color) can be used instead of the polyaxial guide gauge. It can be easily locked in the hole using the screwdriver inserted at the rear of the guide gauge.

Warning: When using the length gauge in a monocortical hole, please add 2 mm to the markings read.

Services.

NEWCLIP FACULTY: TRAINING COURSES FOR SURGEONS

Newclip Faculty regularly organizes two-day **training** courses **combining theory and practice**. These courses allow surgeons to benefit from **technical advices**, stay up to date with product developments and **exchange with internationally renowned experts** on various surgical philosophies and techniques.

The surgical training center features **a state-of-the-art laboratory** closely replicating the operating room environment, modular training rooms, and a social area for informal moments.

Please contact your Newclip Technics representative for more information.

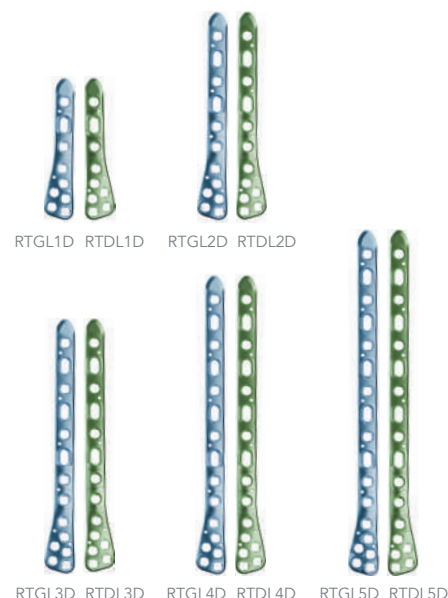


Implants references.

Remark: Please note that all implants (plates, screws and washer) are also available in sterile packaging. An "-ST" code is added at the end of the reference.
Ex. : "RTDL1D-ST" stands for a Lateral plate - Distal fibula - Right - Size 1 - Sterile.

Lateral plates - Distal fibula

Ref.	Description	Length
RTDL1D	Lateral plate - Distal fibula - Right - Size 1	75 mm
RTGL1D	Lateral plate - Distal fibula - Left - Size 1	75 mm
RTDL2D	Lateral plate - Distal fibula - Right - Size 2	109 mm
RTGL2D	Lateral plate - Distal fibula - Left - Size 2	109 mm
RTDL3D	Lateral plate - Distal fibula - Right - Size 3	133 mm
RTGL3D	Lateral plate - Distal fibula - Left - Size 3	133 mm
RTDL4D	Lateral plate - Distal fibula - Right - Size 4	158 mm
RTGL4D	Lateral plate - Distal fibula - Left - Size 4	158 mm
RTDL5D	Lateral plate - Distal fibula - Right - Size 5	182 mm
RTGL5D	Lateral plate - Distal fibula - Left - Size 5	182 mm



Straight lateral plates - Distal fibula

Ref.	Description	Length
RTSL1D	Straight lateral plate - Distal fibula - Symmetrical - Size 1	73 mm
RTSL2D	Straight lateral plate - Distal fibula - Symmetrical - Size 2	107 mm
RTSL3D	Straight lateral plate - Distal fibula - Symmetrical - Size 3	131 mm



Posterolateral plates - Distal fibula

Ref.	Description	Length
RTDQ1D	Posterolateral plate - Distal fibula - Right - Size 1	60 mm
RTGQ1D	Posterolateral plate - Distal fibula - Left - Size 1	60 mm
RTDQ2D	Posterolateral plate - Distal fibula - Right - Size 2	84 mm
RTGQ2D	Posterolateral plate - Distal fibula - Left - Size 2	84 mm
RTDQ3D	Posterolateral plate - Distal fibula - Right - Size 3	108 mm
RTGQ3D	Posterolateral plate - Distal fibula - Left - Size 3	108 mm



Posterior plates - Distal tibia

Ref.	Description	Length
RITDT1D	Posterior plate - Distal tibia - Right - Size 1	61mm
RITGT1D	Posterior plate - Distal tibia - Left - Size 1	61mm
RITDT2D	Posterior plate - Distal tibia - Right - Size 2	85mm
RITGT2D	Posterior plate - Distal tibia - Left - Size 2	85mm



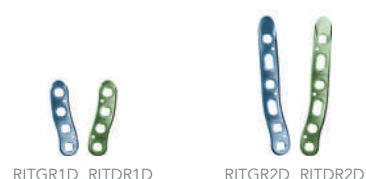
Posterolateral plates - Distal tibia

Ref.	Description	Length
RITDQ1D	Posterolateral plate - Distal tibia - Right - Size 1	51 mm
RITGQ1D	Posterolateral plate - Distal tibia - Left - Size 1	51 mm
RITDQ2D	Posterolateral plate - Distal tibia - Right - Size 2	75 mm
RITGQ2D	Posterolateral plate - Distal tibia - Left - Size 2	75 mm



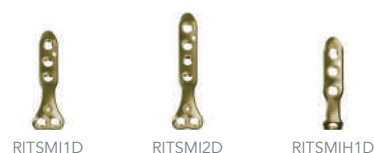
Posteromedial plates - Distal tibia

Ref.	Description	Length
RITDR1D	Posteromedial plate - Distal tibia - Right - Size 1	40 mm
RITGR1D	Posteromedial plate - Distal tibia - Left - Size 1	40 mm
RITDR2D	Posteromedial plate - Distal tibia - Right - Size 2	73 mm
RITGR2D	Posteromedial plate - Distal tibia - Left - Size 2	73 mm



Medial malleolus plates - Distal tibia

Ref.	Description	Length
RITSMI1D	Medial malleolus plate - Distal tibia - Symmetrical - Size 1	58 mm
RITSMI2D	Medial malleolus plate - Distal tibia - Symmetrical - Size 2	67 mm
RITSMIH1D	Medial malleolus hook plate - Distal tibia - Symmetrical - Size 1	47 mm



Straight plates

Ref.	Description	Length
RPTSS1D	Straight plate - Ankle - Symmetrical - Size 1	54 mm
RPTSS2D	Straight plate - Ankle - Symmetrical - Size 2	78 mm
RPTSS3D	Straight plate - Ankle - Symmetrical - Size 3	102 mm
RPTSS4D	Straight plate - Ankle - Symmetrical - Size 4	126 mm
RPTSS5D	Straight plate - Ankle - Symmetrical - Size 5	150 mm



Ø2.8 mm Locking screws*

Ref.	Description
SAT2.8L10 to SAT2.8L50	Ø2.8 mm locking screw - L10 to 50 mm (2mm increments)
SAT2.8L50 to SAT2.8L60	Ø2.8 mm locking screw - L50 to 60 mm (5mm increments)

*Green anodized



Ø2.8 mm Non- Locking screws*

Ref.	Description
CAT2.8L10D to CAT2.8L50D	Ø2.8 mm non-locking screw - L10 to 50 mm (2mm increments)
CAT2.8L50D to CAT2.8L60D	Ø2.8 mm non-locking screw - L50 to 60 mm (5mm increments)

*Yellow anodized



Ø3.5mm Locking screws*

Ref.	Description
SAT3.5L10 to SAT3.5L50	Ø3.5 mm locking screw - L10 to 50 mm (2mm increments)
SAT3.5L50 to SAT3.5L60	Ø3.5 mm locking screw - L50 to 60 mm (5mm increments)

*Blue anodized



Ø3.5 mm Non-locking screws*

Ref.	Description
CAT3.5L10D to CAT3.5L50D	Ø3.5 mm non-locking screw - L10 to 50 mm (2mm increments)
CAT3.5L50D to CAT3.5L70D	Ø3.5 mm non-locking screw - L50 to 70 mm (5mm increments)

*Fuchsia anodized



Ø4.0 mm Lag screws*

Ref.	Description
QAT4.0L40D to QAT4.0L50D	Ø4.0 mm lag screw - L40 to 50 mm (2mm increments)
QAT4.0L50D to QAT4.0L70D	Ø4.0 mm lag screw - L50 to 70 mm (5mm increments)

*Dark blue anodized



Ø4.0 mm Cannulated screws*

Ref.	Description
H1.4QT4.0L40D to H1.4QT4.0L50D	Ø4.0 mm compressive screw - cannula Ø1.4 - short thread - L40 to 50 mm (2mm increments)
H1.4QT4.0L50D to H1.4QT4.0L70D	Ø4.0 mm compressive screw - cannula Ø1.4 - short thread - L50 to 70 mm (5mm increments)

*Non anodized



Compression Washer

Ref.	Description
WASH-T4	Compression washer for Ø4.0 mm compressive screws

*Non anodized



PLATES AND SCREWS REMOVAL

If you have to remove Xpert Ankle implants, make sure to order the Newclip Technics removal set which includes the following instruments:

- ANC042: Mini set - Base
- ANC351: Ø4.5 mm AO quick coupling handle - Size 2
- ANC1675: T15 prehensor screwdriver with AO quick coupling system - cannula Ø1.4 mm
- ANC1808: T15 / 3.5 mm hexagonal prehensor screwdriver with AO quick coupling system

To remove any of the Xpert Ankle plates, first loosen all the screws without completely removing them (this prevents rotation of the plate when removing the last screw). Finally, completely remove all screws and the plate.

An extraction set can also be ordered separately.

This information is intended to demonstrate the Newclip Technics portfolio of medical devices. Always refer to the package insert, product label and/or user instructions including cleaning and sterilization before using any Newclip Technics product. These products must be handled and/or implanted by trained and qualified staff who have read the instructions before use. A surgeon must always rely on her or his own professional clinical judgement when deciding whether to use a particular product when treating a particular patient. Product availability is subject to the regulatory or medical practices that govern individual markets. Please contact your Newclip Technics representative if you have questions about the availability of Newclip Technics products in your area.

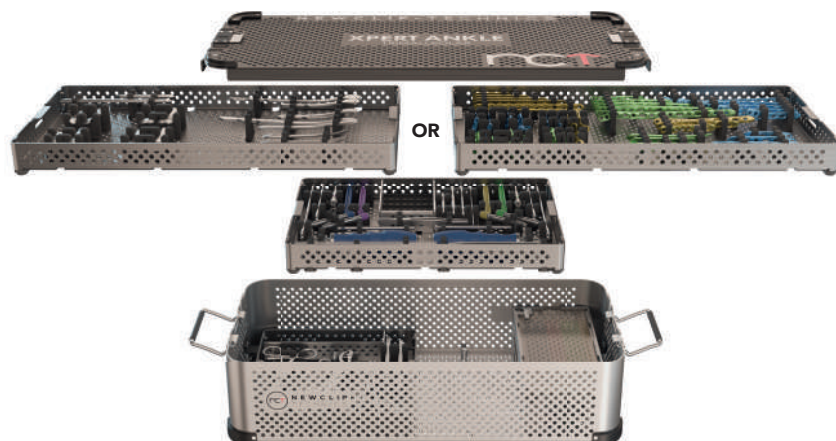
Manufacturer: Newclip Technics - Brochure US - Xpert Ankle - Ed.2 - 07/2026 - US class: II - Read labelling and instructions before the use of Newclip Technics medical devices. These products must be handled and/or implanted by trained and qualified staff who have read the instructions before use. Non-contractual pictures.
Newclip Technics - 45 rue des Garottières - 44115 Haute Goulaine, France. Our subsidiaries: Newclip USA - Newclip Australia - Newclip Germany - Newclip Japan - Newclip Iberia - Newclip Belgium - Newclip Italia - Newclip UK.

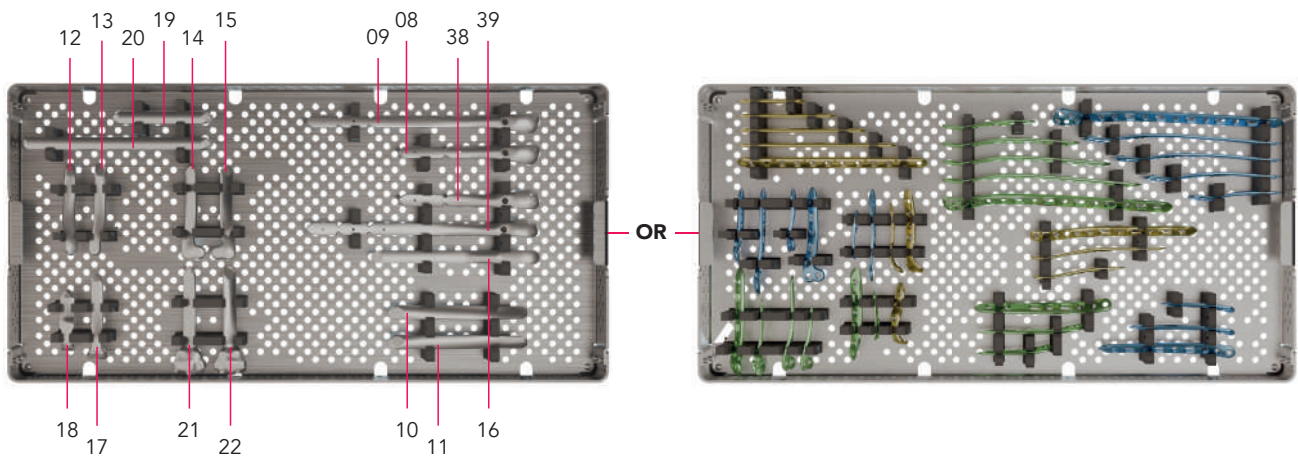
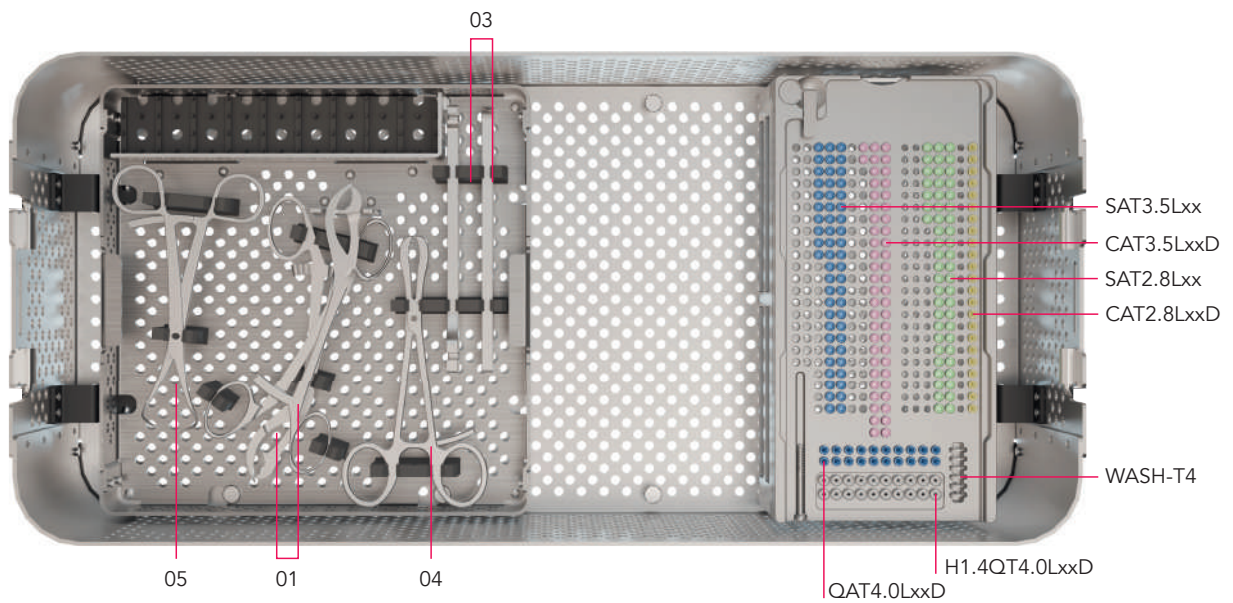
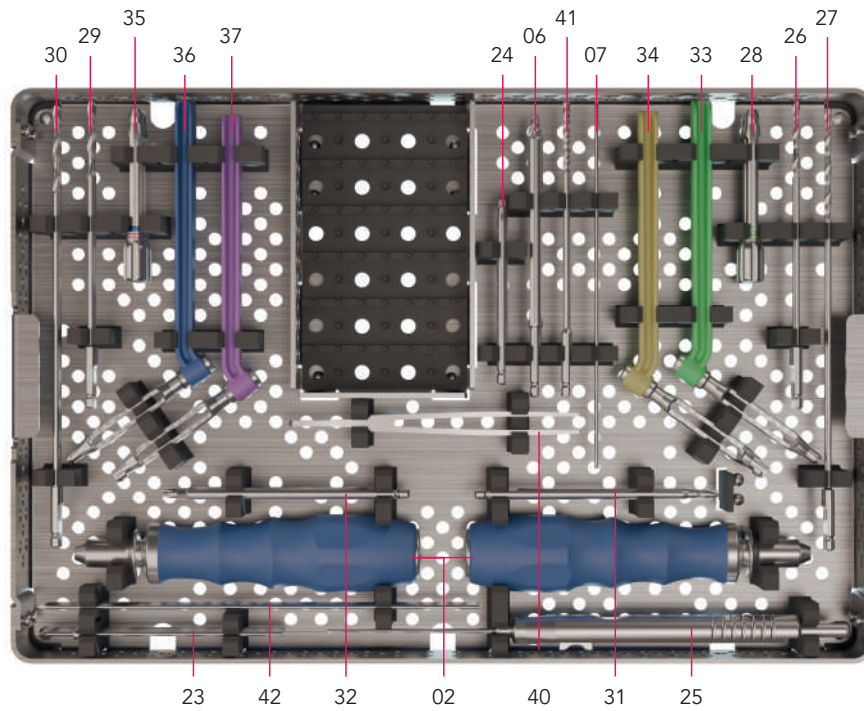
Instruments references.

N.B.: Depending on your set composition, implants are included in the set or available separately in sterile packaging.

#	Ref.	Description	Qty
01	ANC349	15 cm verbrugge forceps	2
02	ANC351	Ø4.5 mm AO quick coupling handle - Size 2	2
03	ANC452	Bending iron	2
04	ANC503	150 mm reduction forceps	1
05	ANC504	150 mm pointed reduction forceps	1
06	ANC1288	3 in 1 instrument for Ø4.0 mm screws	1
07	ANC1456	Pin Ø1.3 - L150 mm	3
08	ANC1620	Template for distal fibula lateral plates - Left - Sizes 1-2 (RTGL1-2D)	1
09	ANC1621	Template for distal fibula lateral plates - Left - Sizes 3-4-5 (RTGL3-4-5D)	1
10	ANC1622	Template for distal fibula posterolateral plates - Left - Sizes 1-2-3 (RTGQ1-2-3D)	1
11	ANC1623	Template for distal fibula posterolateral plates - Right - Sizes 1-2-3 (RTDQ1-2-3D)	1
12	ANC1624	Template for distal tibia posteromedial plates - Left - Sizes 1-2 (RITGR1-2D)	1
13	ANC1625	Template for distal tibia posteromedial plates - Right - Sizes 1-2 (RITDR1-2D)	1
14	ANC1626	Template for distal tibia posterolateral plates - Left - Sizes 1-2 (RITGQ1-2D)	1
15	ANC1627	Template for distal tibia posterolateral plates - Right - Sizes 1-2 (RITDQ1-2D)	1
16	ANC1628	Template for distal fibula straight lateral plates - Symmetrical - Sizes 1-2-3 (RTSLS1-2-3D)	1
17	ANC1629	Template for medial malleolus plates - Symmetrical - Sizes 1-2 (RITSMI1-2D)	1
18	ANC1630	Template for medial malleolus hook plate - Symmetrical - Size 1 (RITSMIH1D)	1
19	ANC1631	Template for ankle straight plates - Symmetrical - Sizes 1-2 (RPTSS1-2D)	1
20	ANC1632	Template for ankle straight plates - Symmetrical - Sizes 3-4-5 (RPTSS3-4-5D)	1
21	ANC1633	Template for distal tibia posterior plates - Left - Sizes 1-2 (RITGT1-2D)	1

#	Ref.	Description	Qty
22	ANC1634	Template for distal tibia posterior plates - Right - Sizes 1-2 (RITDT1-2D)	1
23	ANC1644	Olive pin Ø1.6 - L100 mm	2
24	ANC1675	T15 prehensor screwdriver with AO quick coupling system - cannula Ø1.4 mm	1
25	ANC1801	Length gauge for Ø2.8, Ø3.5 and Ø4.0 mm screws	1
26	ANC1802	Ø2.0 mm quick coupling drill bit - L125 mm	2
27	ANC1803	Ø2.0 mm quick coupling drill bit - L180 mm	2
28	ANC1804	Ø2.0 mm threaded guide gauge for Ø2.8 mm screw	2
29	ANC1805	Ø2.7 mm quick coupling drill bit - L125 mm	2
30	ANC1806	Ø2.7 mm quick coupling drill bit - L180 mm	2
31	ANC1807	Ø3.6 mm countersink	1
32	ANC1808	T15 / 3.5 mm hexagonal prehensor screwdriver with AO quick coupling system	2
33	ANC1834	Ø2.0 mm non threaded polyaxial guide gauge for Ø2.8 mm screws	1
34	ANC1835	Ø2.0 mm non threaded guide gauge for Ø2.8 mm screws - Oblong hole	1
35	ANC1836	Ø2.7 mm threaded guide gauge for Ø3.5 and Ø4.0 mm screws	2
36	ANC1837	Ø2.7 mm non threaded polyaxial guide gauge for Ø3.5 and Ø4.0 mm screws	1
37	ANC1838	Ø2.7 mm non threaded guide gauge for Ø3.5 and Ø4.0 mm screws - Oblong hole	1
38	ANC1887	Template for distal fibula lateral plates - Right - Sizes 1-2 (RTDL1-2D)	1
39	ANC1888	Template for distal fibula lateral plates - Right - Sizes 3-4-5 (RTDL3-4-5D)	1
40	ANC1890	Prehensive plier for implants	1
41	ANC1895	Ø2.9 mm quick coupling drill bit - cannula Ø1.4 mm - L120 mm	1
42	33.0216.180	Pin Ø1.6 - L180 mm	4

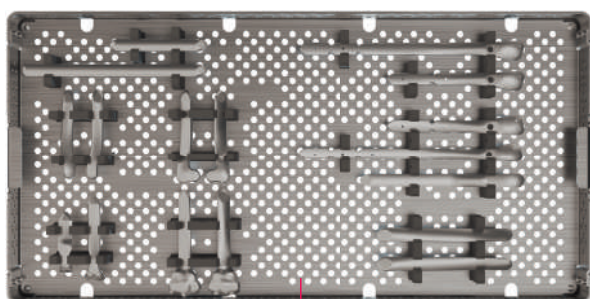
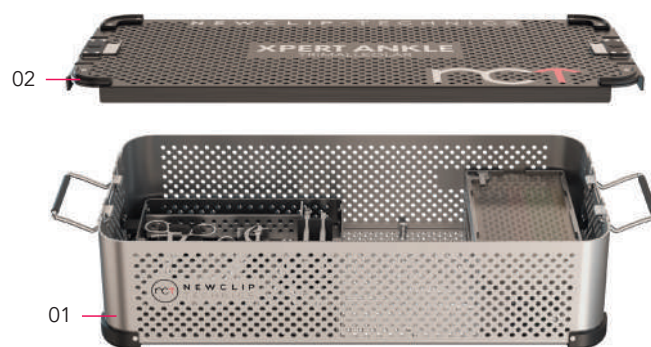




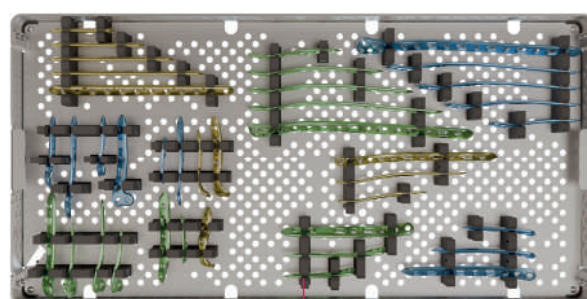
Container references.

Container

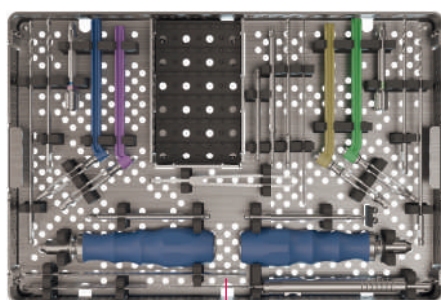
#	Ref.	Description
01	ANC1434/B3	3 levels set - Base
02	ANC1647/C	Xpert Ankle set - Lid
03	ANC1647/M1	Xpert Ankle set - Module 1 - Templates
04	ANC1647/M2	Xpert Ankle set - Module 2 - Plates
05	ANC1647/M3	Xpert Ankle set - Module 3 - Instrumentation
06	ANC1647/M4	Xpert Ankle set - Module 4 - General instrumentation
07	ANC1647/R	Xpert Ankle set - Screw rack
/	ANC1235/M16	Set - Size 1/4 - Module - Silicone mat
/	ANC1655/C	Set - Size 1/4 - Lid
/	ANC042	Mini set - Base



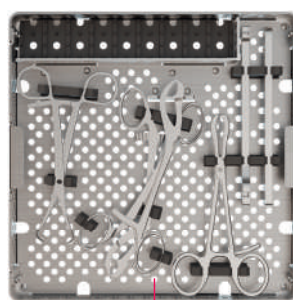
03



04



05



06



07

Available in single-use solution.

Newclip Technics also offers a range of sterile single-use kits with ready-to-use instruments and implants.



INITIAL A Xpert
Distal fibula plate kit



INITIAL A Xpert
Straight symmetrical plate kit



INITIAL A Xpert syndesmosis
/ medial malleolus kit



For more information, please refer to the **Initial A Xpert specific brochure:**



INITIAL SOLUTION - READY WHEN YOU ARE !



TRACEABILITY

- Easiest traceability with detailed label sheets.
- Easy inventory management.
- Streamlining of logistic monitoring for nurses and pharmacists.



SAFETY

- Reduced risk of contamination⁽¹⁾.
- Reduced risk of a bacterian biofilm formation⁽²⁾.
- New instruments for each surgery.



EFFICIENCY

- No sterilization costs for hospitals.
- Less transportation costs.
- Reduced operative costs⁽³⁾.
- Reduced perioperative time⁽⁴⁾.
- Reduced receiving and handling costs.
- Increased turnover in the OR⁽⁴⁾.



AVAILABILITY

- Equipment availability: no restocking and waiting time.
- Shorter and easiest process⁽⁵⁾.
- Full range of latest-generation implants in sterile format.
- No interruption of preoperative flow⁽³⁾.



RESPONSIBILITY

- External packaging in recyclable cardboard.
- Dematerialized instructions for use.
- Less CO2 emissions during manufacture and use than a reusable kit⁽⁶⁾.



PRACTICALITY

- Immediate identification and intuitive use.
- Ergonomic format for gears.
- Simplified orderings.

(1) Mont et al. Single-use instrumentation, cutting blocks, and trials decrease contamination during total knee arthroplasty: a prospective comparison of navigated and nonnavigated cases. J Knee Surg. 2013;26(4):285-290. - (2) Costa D de M, Lopes LK de O, Tipple AFV, Johani K, Hu H, Deva AK, et al. Evaluation of stainless-steel surgical instruments subjected to multiple use/processing. Infect Dis Heal. 2018;23(1):3-9. - (3) Shippert RD. A Study of Time-Dependent Operating Room Fees and How to save \$100'000 by Using Time-Saving Products. Am J Cosmet Surg. 2005;22(1):25-34. - (4) Siegel GW et al., Cost Analysis and Surgical Site Infection Rates in Total Knee Arthroplasty Comparing Traditional vs. Single-Use Instrumentation. J Arthroplasty. 2015;30(12):2271-4. - (5) Matron P., Etude comparative économique et pratique de plaques d'ostéosynthèse de l'extrémité distale du radius présentées individuellement et en kit stérile "tout en un" dans un établissement de santé privé, 2016, 1-21. - (6) Empreinte carbone comparée de deux dispositifs médicaux implantables - Etude Carbon 4.

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