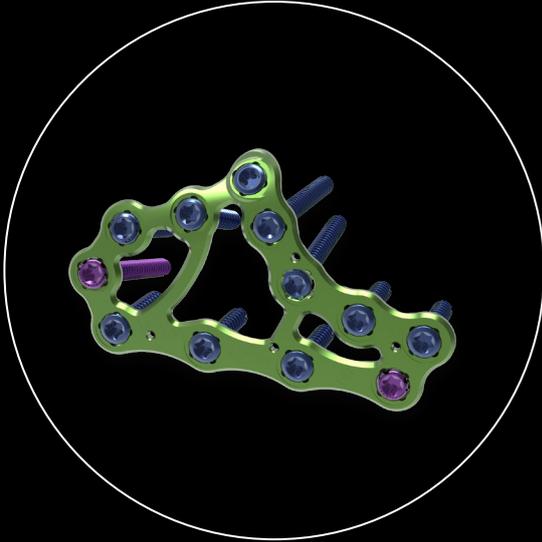




NEWCLIP
TECHNICS



Calcan-
Heal-
FOOT TRAUMA SOLUTION

CALCANHEAL

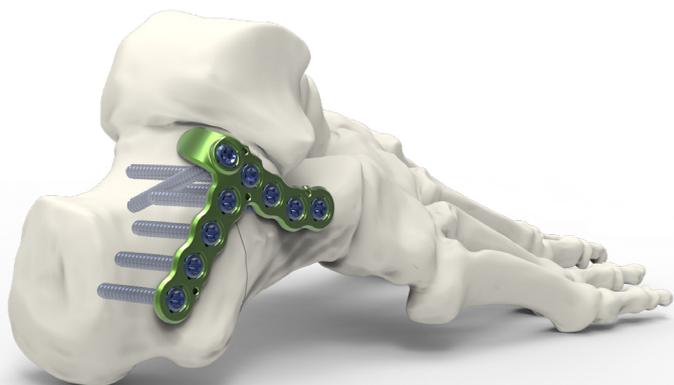
Indications: the implants of the Footmotion Plating System are intended for arthrodeses, fractures and osteotomies fixation and revision surgeries of the foot in adults.

Contraindications:

- Serious vascular deterioration, bone devitalization.
- Pregnancy.
- Acute or chronic, local or systemic infections.
- Lack of musculo-cutaneous cover, severe vascular deficiency affecting the concerned area.
- Insufficient bone quality preventing a good fixation of the implants into the bone.
- Muscular deficit, neurological deficiency or behavioral disorders which could submit the implant to abnormal mechanical strains.
- Allergy to one of the materials used or sensitivity to foreign bodies.
- Serious problems of non-compliance, mental or neurological disorders, failure to follow post operative care recommendations.
- Unstable physical and/or mental condition.

A COMPREHENSIVE RANGE OF PLATES

→ SINUS TARSI PLATES



FSTD4

▶ 4 sizes available



Size 1 (FSTxL1)



Size 2 (FSTxL2)

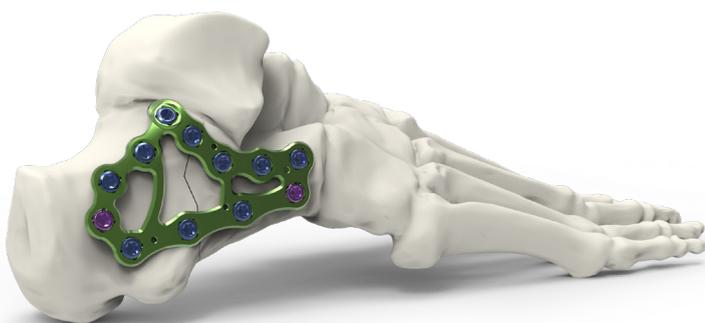


Size 3 (FSTxL3)



Size 4 (FSTxL4)

→ EXTENSILE LATERAL PLATES



FKTDL2

▶ 3 sizes available



Size 1 (FKTxL1)



Size 2 (FKTxL2)

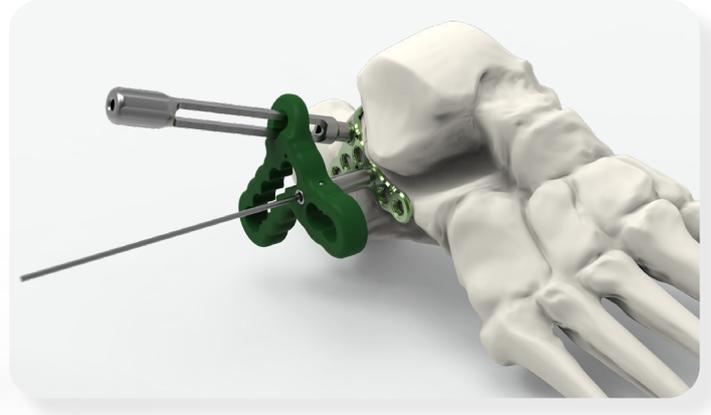


Size 3 (FKTxL3)

TECHNICAL FEATURES

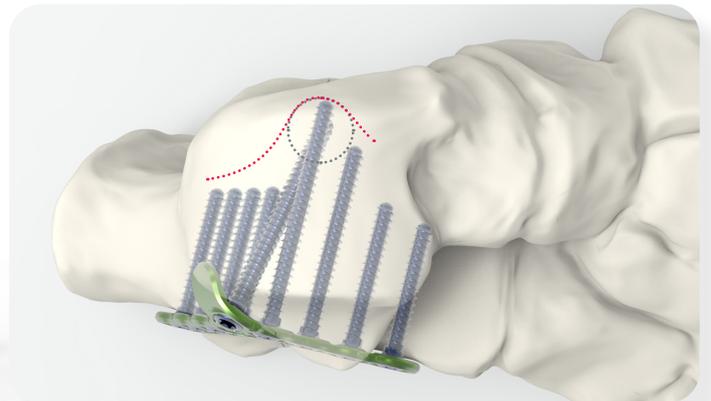
MINIMALLY INVASIVE EXTERNAL GUIDE

- ▶ Allowing the manipulation of the plate under the skin.
- ▶ Targeting of the holes percutaneously.



SUSTENTACULUM TALI TARGETING

- ▶ Targeting the strongest part of the calcaneus: the sustentaculum tali.



TECHNICAL FEATURES

ANATOMICAL FEATURES

▶ Precontoured implants

The design of these implants is the result of a proprietary state-of-the-art mapping technology to establish the maximum congruence between the plate and the bone.

▶ Bendable plates

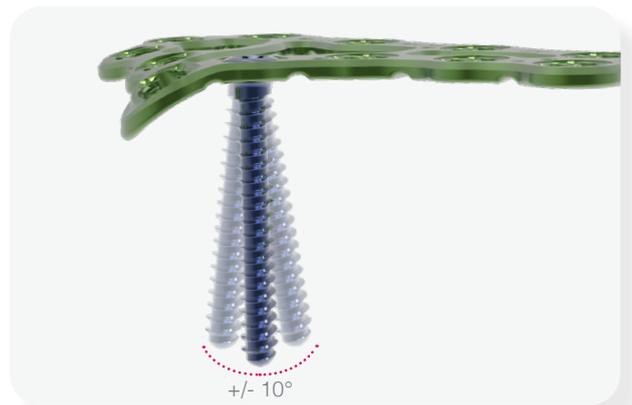
However, in the case of difficult bone anatomy, all the Calcaneal plates can be bent with the appropriate bending irons (ANC578). The bending of these plates must be performed **once and in one direction only**. Please refer to the IFU for bending precautions.

⚠ If the bending irons are used for the sinus tarsi plates, the external guide can no longer be used.



FIXATION AND SCREW FEATURES

- ▶ Ø3.5 mm and Ø2.8 mm locking and non locking (compressive) screws, from 10 mm to 50 mm (2 mm incrementation).
- ▶ The screw head is minimally invasive and buried in the plate to minimize the risk of soft tissue irritation.
- ▶ Polyaxiality of $\pm 10^\circ$ for all the holes of the plate.
- ▶ The hexalobe screw recess design (T15) improves torque transmission and ability to cope with the difficulty arising from screw insertion into the bone.



SURGICAL TECHNIQUE

SINUS TARSI APPROACH

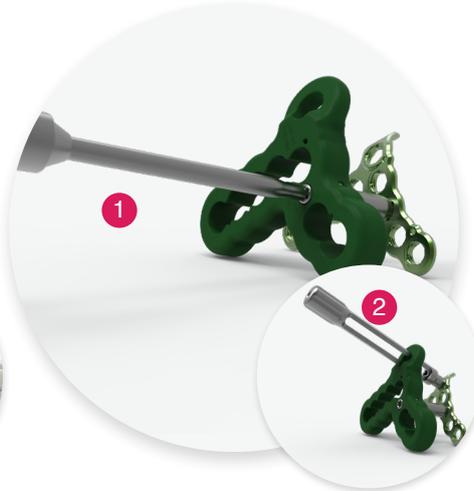
Surgical technique example using the size 4 calcaneal fracture sinus tarsi plate (FSTD4)



1. Make a slightly S-shaped incision from the base of the lateral malleolus to the calcaneocuboid joint. Continue the dissection down to the subtalar joint.

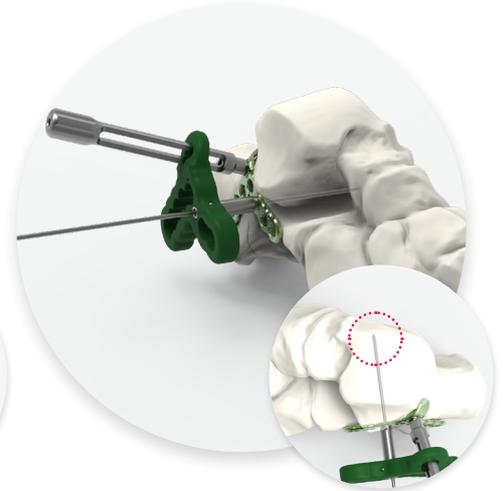
Reduce the posterior tuberosity by placing in the posterior part of the calcaneus a Schanz pin (ANC1162) or a Denham pin (ANC1163). Insert a Ø1.6 mm pin (33.0216.150) to maintain the reduction.

Check the reduction under fluoroscopy and ensure the Bohler's angle is between 20° and 40°.

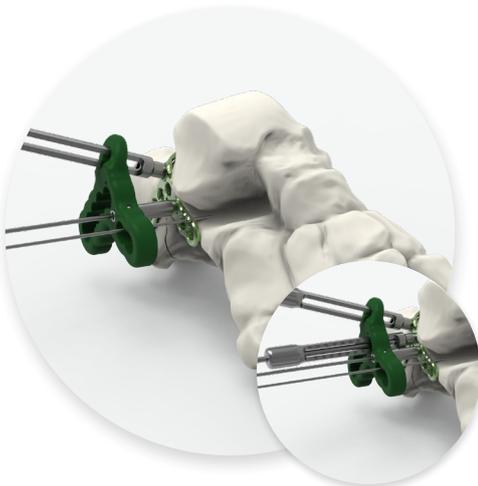


2. Assemble the external drill guide onto the sinus tarsi plate following these 2 steps:

- 1 Use the T15 screwdriver (ANC1027) to insert the centering pin into the plate.
- 2 Lock the guide gauge (ANC1094) into the postero-dorsal hole of the plate (as shown in the picture above) to avoid the rotation of the guide around the plate.



3. Slide the plate under the skin and insert a Ø1.6 mm pin (33.0216.150) into the centering pin to validate its correct positioning. The pin must target the sustentaculum tali.



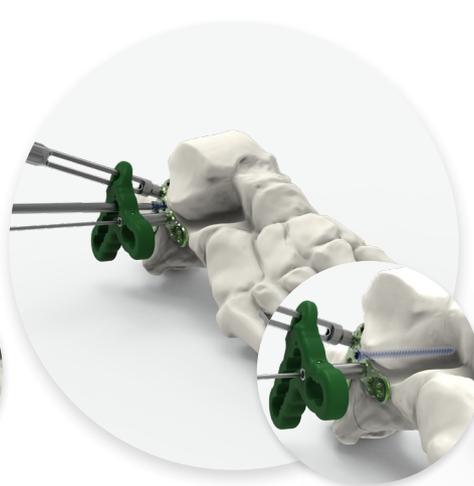
4. Insert Ø1.2 mm pins (33.0212.120) into the guide.

For the drilling, start with the holes following the sinus tarsi.

- For **Ø3.5 mm screws** ●, drill using the Ø2.7 mm drill bit (ANC1099) through the Ø2.7 mm threaded guide gauge (ANC1094).

- For **Ø2.8 mm screws** ●, drill using the Ø2.0 mm drill bit (ANC1098) through the Ø2.0 mm threaded guide gauge (ANC1096).

Read the drilling depth on the guide gauge (ANC1094 or ANC1096 respectively).



5. Insert the Ø3.5 mm locking screws (SAT3.5Lxx) or the Ø2.8 mm locking screws (SAT2.8Lxx) along the sinus tarsi, using the T15 screwdriver (ANC1027).

Use the external guide to drill the holes located on the posterior part of the calcaneus.



FINAL RESULT

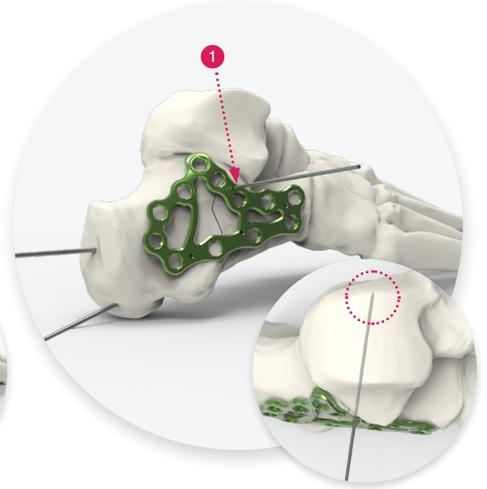
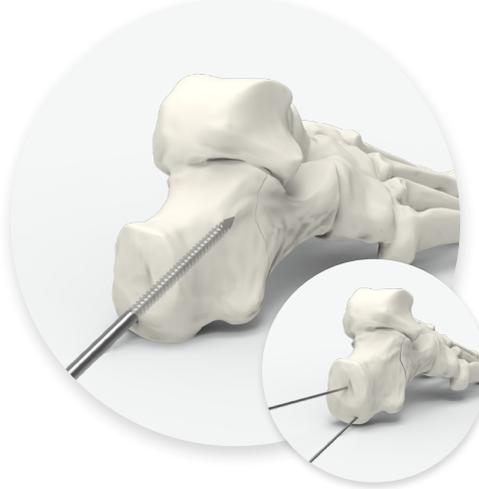
Finalize the procedure by inserting the remaining locking screws. Remove the guide and insert the last screw.

⚠ Final tightening of the screws must be performed by hand.

SURGICAL TECHNIQUE

EXTENSILE LATERAL APPROACH (PAGE 1 / 2)

Surgical technique example using the size 2 calcaneal fracture plate (FKTDL2)



1. Make an incision from the basis of the fifth metatarsal and extend it posteriorly, following the junction between the plantar skin and the lateral skin.

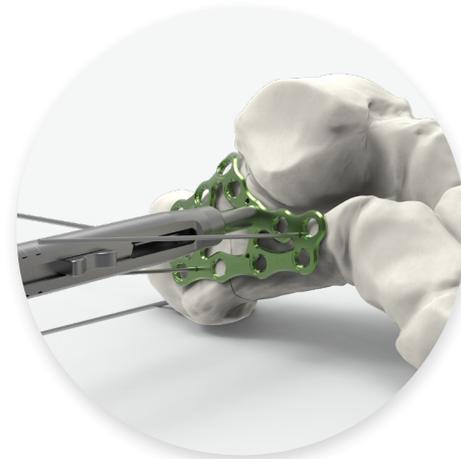
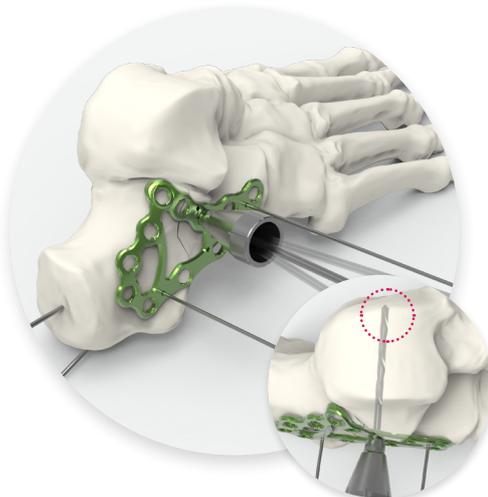
Make a second incision beginning approximately 6 to 8 cm above the skin of the heel, halfway between the posterior aspect of the fibula and the lateral aspect of the Achilles tendon. Extend the second incision distally so it meets the first incision.

2. Perform the reduction of the fracture following step 1 described in the sinus tarsi approach (see page 5).

3. Select the most appropriate plate shape to fit the bone anatomy*. Then, check the correct positioning by inserting a Ø1.2 mm pin (33.0212.120) into the #1 pin hole. The pin must target the sustentaculum tali.

The remaining pin holes can then be filled to stabilize the plate.

* If needed, the plates can be bent with the appropriate bending irons (ANC578), **once and in one direction only**.



4. For the drilling, start with the holes following the sinus tarsi.

- For **Ø3.5 mm screws** ●, drill using the Ø2.7 mm drill bit (ANC1099) through the Ø2.7 mm polyaxial drill guide (ANC1067).

- For **Ø2.8 mm screws** ●, drill using the Ø2.0 mm drill bit (ANC1098) through the Ø2.0 mm polyaxial drill guide (ANC1100).

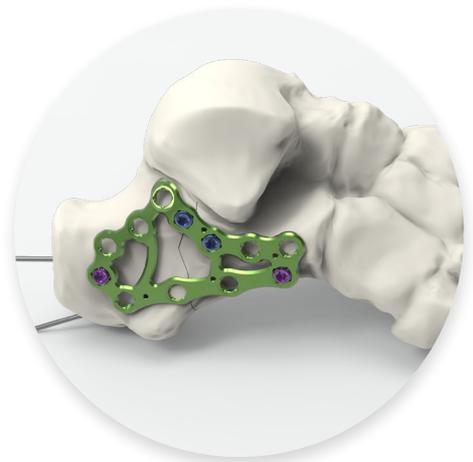
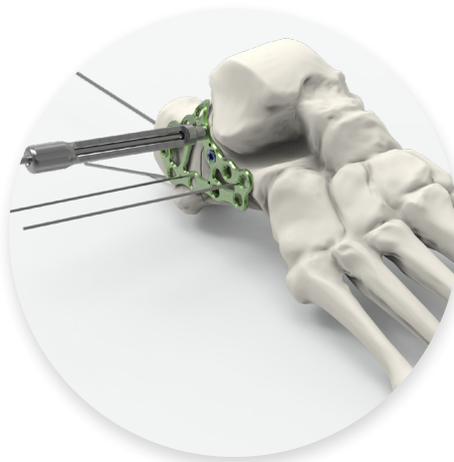
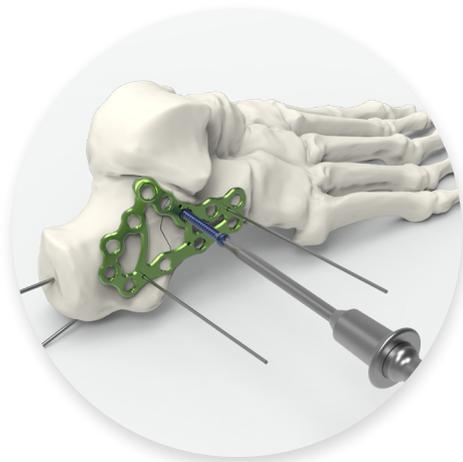
If needed, the pin #1 can be removed before the drilling.

NB: when drilling, target as close as possible the sustentaculum tali.

5. Measure the drilling depth using the length gauge (ANC1095).

SURGICAL TECHNIQUE

EXTENSILE LATERAL APPROACH (PAGE 2 / 2)



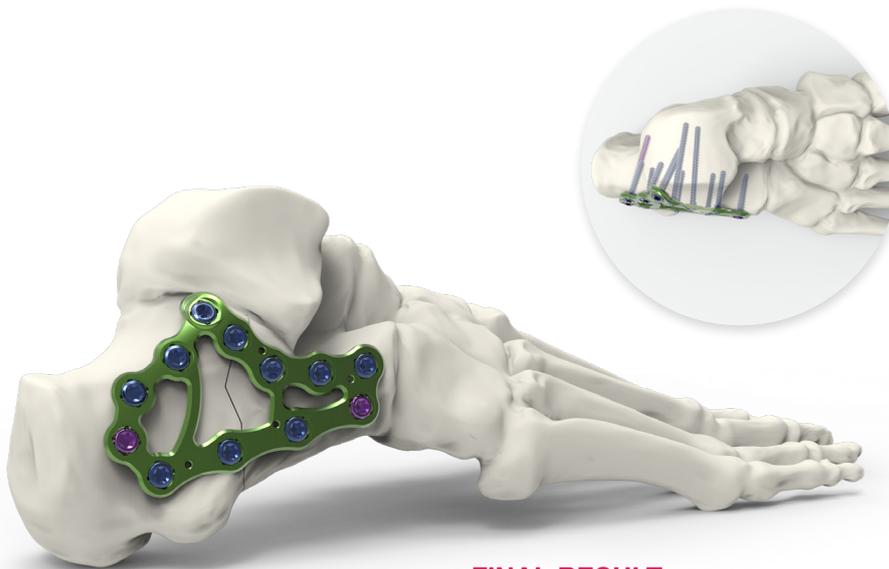
6. Insert a Ø3.5 mm locking screw (SAT3.5Lxx) or a Ø2.8 mm locking screw (SAT2.8Lxx) using the T15 screwdriver (ANC1027).

7. **Ø3.5 mm screws ●**: If a normoaxial targeting is desired, drill using the Ø2.7 mm drill bit (ANC1099) through the Ø2.7 mm threaded guide gauge (ANC1094) and directly read the drilling depth on the guide gauge.

Ø2.8 mm screws ●: It is also possible to drill with the Ø2.0 mm drill bit (ANC1098) through the Ø2.0 mm threaded guide gauge (ANC1096).

8. Insert Ø3.5 mm or Ø2.8 mm non locking screws (CAT3.5LxxD or CAT2.8LxxD) in order to be flush to the bone.

⚠ Final tightening of the screws must be performed by hand.



FINAL RESULT

Finalize the procedure by inserting the remaining screws.

IMPLANT REFERENCES

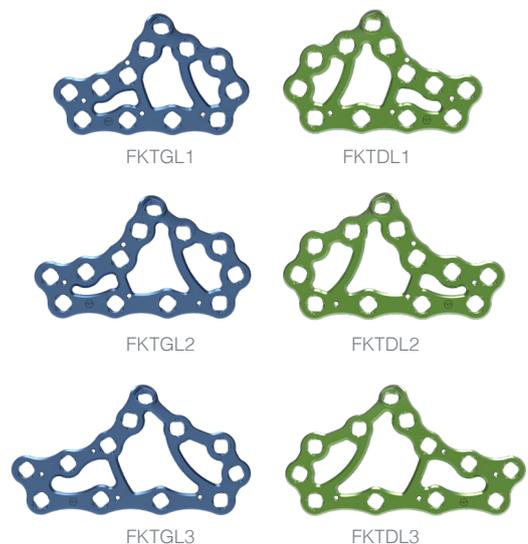
→ SINUS TARSI PLATES

SINUS TARSI PLATES	
Ref.	Description
FSTGL1	Calcaneal fracture sinus tarsi plate - Left - Size 1
FSTD1	Calcaneal fracture sinus tarsi plate - Right - Size 1
FSTGL2	Calcaneal fracture sinus tarsi plate - Left - Size 2
FSTD2	Calcaneal fracture sinus tarsi plate - Right - Size 2
FSTGL3	Calcaneal fracture sinus tarsi plate - Left - Size 3
FSTD3	Calcaneal fracture sinus tarsi plate - Right - Size 3
FSTGL4	Calcaneal fracture sinus tarsi plate - Left - Size 4
FSTD4	Calcaneal fracture sinus tarsi plate - Right - Size 4



→ EXTENSILE LATERAL PLATES

EXTENSILE LATERAL PLATES	
Ref.	Description
FKTGL1	Calcaneal fracture plate - Left - Size 1
FKTDL1	Calcaneal fracture plate - Right - Size 1
FKTGL2	Calcaneal fracture plate - Left - Size 2
FKTDL2	Calcaneal fracture plate - Right - Size 2
FKTGL3	Calcaneal fracture plate - Left - Size 3
FKTDL3	Calcaneal fracture plate - Right - Size 3

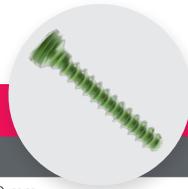


Remark :

Please note that all implants are also available in sterile packaging. An 'ST' code is added at the end of the reference.
Ex : «SAT2.8L30-ST»

SCREW REFERENCES

→ Ø2.8 MM SCREWS ●



LOCKING SCREWS*

Ref.	Description
SAT2.8L10	Locking screw with conical head - Ø2.8 mm - L10 mm
SAT2.8L12	Locking screw with conical head - Ø2.8 mm - L12 mm
SAT2.8L14	Locking screw with conical head - Ø2.8 mm - L14 mm
SAT2.8L16	Locking screw with conical head - Ø2.8 mm - L16 mm
SAT2.8L18	Locking screw with conical head - Ø2.8 mm - L18 mm
SAT2.8L20	Locking screw with conical head - Ø2.8 mm - L20 mm
SAT2.8L22	Locking screw with conical head - Ø2.8 mm - L22 mm
SAT2.8L24	Locking screw with conical head - Ø2.8 mm - L24 mm
SAT2.8L26	Locking screw with conical head - Ø2.8 mm - L26 mm
SAT2.8L28	Locking screw with conical head - Ø2.8 mm - L28 mm
SAT2.8L30	Locking screw with conical head - Ø2.8 mm - L30 mm
SAT2.8L32	Locking screw with conical head - Ø2.8 mm - L32 mm
SAT2.8L34	Locking screw with conical head - Ø2.8 mm - L34 mm
SAT2.8L36	Locking screw with conical head - Ø2.8 mm - L36 mm
SAT2.8L38	Locking screw with conical head - Ø2.8 mm - L38 mm
SAT2.8L40	Locking screw with conical head - Ø2.8 mm - L40 mm
SAT2.8L42	Locking screw with conical head - Ø2.8 mm - L42 mm
SAT2.8L44	Locking screw with conical head - Ø2.8 mm - L44 mm
SAT2.8L46	Locking screw with conical head - Ø2.8 mm - L46 mm
SAT2.8L48	Locking screw with conical head - Ø2.8 mm - L48 mm
SAT2.8L50	Locking screw with conical head - Ø2.8 mm - L50 mm

* Green anodized

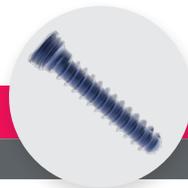


NON-LOCKING SCREWS*

Ref.	Description
CAT2.8L10D	Standard cortical screw - Ø2.8 mm - L10 mm
CAT2.8L12D	Standard cortical screw - Ø2.8 mm - L12 mm
CAT2.8L14D	Standard cortical screw - Ø2.8 mm - L14 mm
CAT2.8L16D	Standard cortical screw - Ø2.8 mm - L16 mm
CAT2.8L18D	Standard cortical screw - Ø2.8 mm - L18 mm
CAT2.8L20D	Standard cortical screw - Ø2.8 mm - L20 mm
CAT2.8L22D	Standard cortical screw - Ø2.8 mm - L22 mm
CAT2.8L24D	Standard cortical screw - Ø2.8 mm - L24 mm
CAT2.8L26D	Standard cortical screw - Ø2.8 mm - L26 mm
CAT2.8L28D	Standard cortical screw - Ø2.8 mm - L28 mm
CAT2.8L30D	Standard cortical screw - Ø2.8 mm - L30 mm
CAT2.8L32D	Standard cortical screw - Ø2.8 mm - L32 mm
CAT2.8L34D	Standard cortical screw - Ø2.8 mm - L34 mm
CAT2.8L36D	Standard cortical screw - Ø2.8 mm - L36 mm
CAT2.8L38D	Standard cortical screw - Ø2.8 mm - L38 mm
CAT2.8L40D	Standard cortical screw - Ø2.8 mm - L40 mm
CAT2.8L42D	Standard cortical screw - Ø2.8 mm - L42 mm
CAT2.8L44D	Standard cortical screw - Ø2.8 mm - L44 mm
CAT2.8L46D	Standard cortical screw - Ø2.8 mm - L46 mm
CAT2.8L48D	Standard cortical screw - Ø2.8 mm - L48 mm
CAT2.8L50D	Standard cortical screw - Ø2.8 mm - L50 mm

* Yellow anodized

→ Ø3.5 MM SCREWS ●



LOCKING SCREWS*

Ref.	Description
SAT3.5L10	Locking screw with conical head - Ø3.5 mm - L10 mm
SAT3.5L12	Locking screw with conical head - Ø3.5 mm - L12 mm
SAT3.5L14	Locking screw with conical head - Ø3.5 mm - L14 mm
SAT3.5L16	Locking screw with conical head - Ø3.5 mm - L16 mm
SAT3.5L18	Locking screw with conical head - Ø3.5 mm - L18 mm
SAT3.5L20	Locking screw with conical head - Ø3.5 mm - L20 mm
SAT3.5L22	Locking screw with conical head - Ø3.5 mm - L22 mm
SAT3.5L24	Locking screw with conical head - Ø3.5 mm - L24 mm
SAT3.5L26	Locking screw with conical head - Ø3.5 mm - L26 mm
SAT3.5L28	Locking screw with conical head - Ø3.5 mm - L28 mm
SAT3.5L30	Locking screw with conical head - Ø3.5 mm - L30 mm
SAT3.5L32	Locking screw with conical head - Ø3.5 mm - L32 mm
SAT3.5L34	Locking screw with conical head - Ø3.5 mm - L34 mm
SAT3.5L36	Locking screw with conical head - Ø3.5 mm - L36 mm
SAT3.5L38	Locking screw with conical head - Ø3.5 mm - L38 mm
SAT3.5L40	Locking screw with conical head - Ø3.5 mm - L40 mm
SAT3.5L42	Locking screw with conical head - Ø3.5 mm - L42 mm
SAT3.5L44	Locking screw with conical head - Ø3.5 mm - L44 mm
SAT3.5L46	Locking screw with conical head - Ø3.5 mm - L46 mm
SAT3.5L48	Locking screw with conical head - Ø3.5 mm - L48 mm
SAT3.5L50	Locking screw with conical head - Ø3.5 mm - L50 mm

* Blue anodized



NON-LOCKING SCREWS*

Ref.	Description
CAT3.5L10D	Standard cortical screw - Ø3.5 mm - L10 mm
CAT3.5L12D	Standard cortical screw - Ø3.5 mm - L12 mm
CAT3.5L14D	Standard cortical screw - Ø3.5 mm - L14 mm
CAT3.5L16D	Standard cortical screw - Ø3.5 mm - L16 mm
CAT3.5L18D	Standard cortical screw - Ø3.5 mm - L18 mm
CAT3.5L20D	Standard cortical screw - Ø3.5 mm - L20 mm
CAT3.5L22D	Standard cortical screw - Ø3.5 mm - L22 mm
CAT3.5L24D	Standard cortical screw - Ø3.5 mm - L24 mm
CAT3.5L26D	Standard cortical screw - Ø3.5 mm - L26 mm
CAT3.5L28D	Standard cortical screw - Ø3.5 mm - L28 mm
CAT3.5L30D	Standard cortical screw - Ø3.5 mm - L30 mm
CAT3.5L32D	Standard cortical screw - Ø3.5 mm - L32 mm
CAT3.5L34D	Standard cortical screw - Ø3.5 mm - L34 mm
CAT3.5L36D	Standard cortical screw - Ø3.5 mm - L36 mm
CAT3.5L38D	Standard cortical screw - Ø3.5 mm - L38 mm
CAT3.5L40D	Standard cortical screw - Ø3.5 mm - L40 mm
CAT3.5L42D	Standard cortical screw - Ø3.5 mm - L42 mm
CAT3.5L44D	Standard cortical screw - Ø3.5 mm - L44 mm
CAT3.5L46D	Standard cortical screw - Ø3.5 mm - L46 mm
CAT3.5L48D	Standard cortical screw - Ø3.5 mm - L48 mm
CAT3.5L50D	Standard cortical screw - Ø3.5 mm - L50 mm

* Fuchsia anodized

INSTRUMENT REFERENCES

INSTRUMENTS				
Ref.	Description	Ø2.8 mm	Ø3.5 mm	Qty
ANC350	Ø4.5 mm AO quick coupling handle - Size 1			2
ANC578	Bending pliers			2
ANC1027	T15 AO quick coupling prehensor screwdriver			2
ANC1067	Ø2.7 mm polyaxial drill guide - SAT3.5 hole		●	2
ANC1094	Ø2.7 mm threaded guide gauge - SAT3.5 hole		●	2
ANC1095	Length gauge for Ø2.8 and Ø3.5 mm screws			1
ANC1096	Ø2.0 mm threaded guide gauge - SAT3.5 hole	●		2
ANC1098	Ø2.0 mm quick coupling drill bit - L180 mm	●		2
ANC1099	Ø2.7 mm quick coupling drill bit - L180 mm		●	2
ANC1100	Ø2.0 mm polyaxial drill guide - SAT3.5 hole	●		2
ANC1162	Schanz pin Ø4.5 mm - L200 mm			1
ANC1163	Denham pin Ø4.5 mm - L200 mm			1
ANC1164	Sinus tarsi MIS guide for calcaneal fracture - Left			1
ANC1165	Sinus tarsi MIS guide for calcaneal fracture - Right			1
33.0212.120	Pin Ø1.2 L120 mm			6
33.0216.150	Pin Ø1.6 L150 mm			6

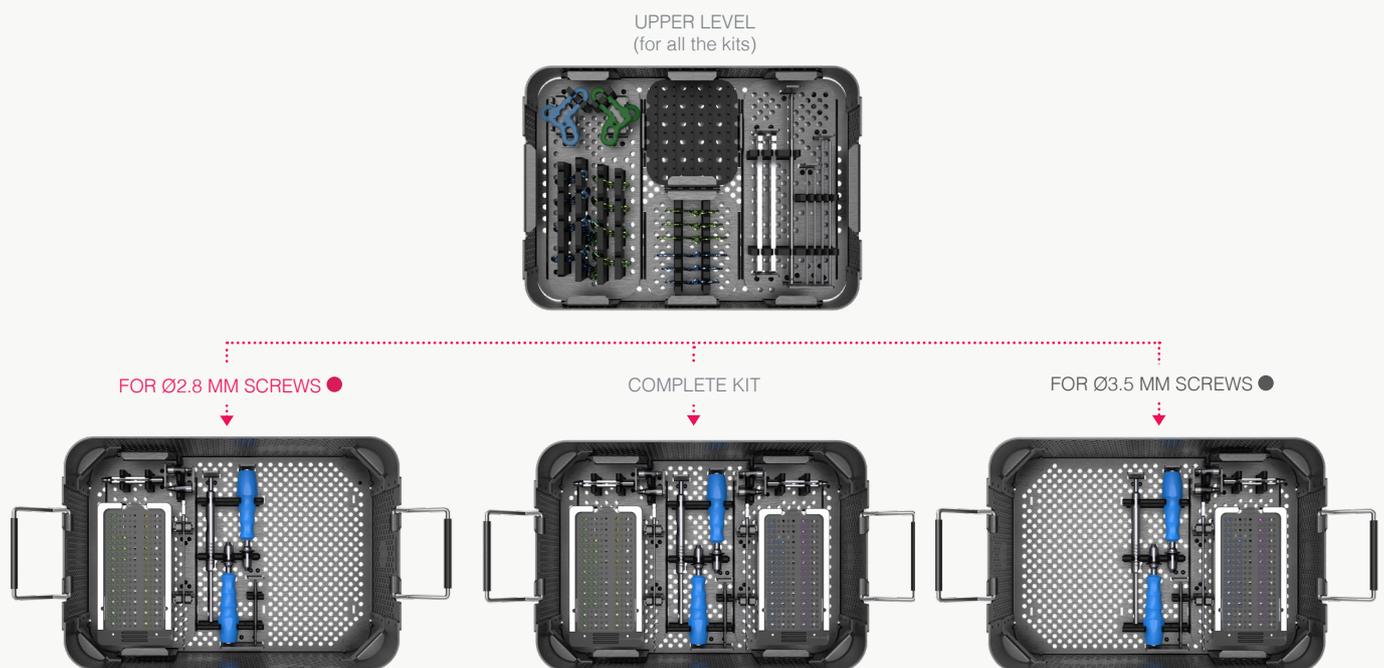
REMOVAL KIT

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

- ANC350: Ø4.5 mm AO quick coupling handle - Size 1
- ANC1027: T15 AO quick coupling prehensor screwdriver

Depending on surgical habits, it is possible to order either:

- a complete kit,
- an adapted kit for Ø2.8 mm screws ● with associated instruments,
- an adapted kit for Ø3.5 mm screws ● with associated instruments.



KIT DESCRIPTION

ANC1164 - ANC1165
Sinus tarsi MIS guide
(left & right)

Sinus tarsi plates
(left & right)

Extensile lateral plates
(left & right)

ANC578 Bending pliers (x2)

ANC1162 Schanz pin Ø4.5 mm
ANC1163 Denham pin Ø4.5 mm

33.0216.150
Pin Ø1.6 mm L150 mm (x6)

33.0212.120
Pin Ø1.2 mm L120 mm (x6)

FOR Ø2.8 MM SCREWS

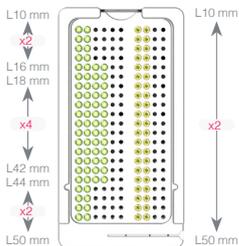
ANC350 Quick coupling handle size 1 (x2)

FOR Ø3.5 MM SCREWS

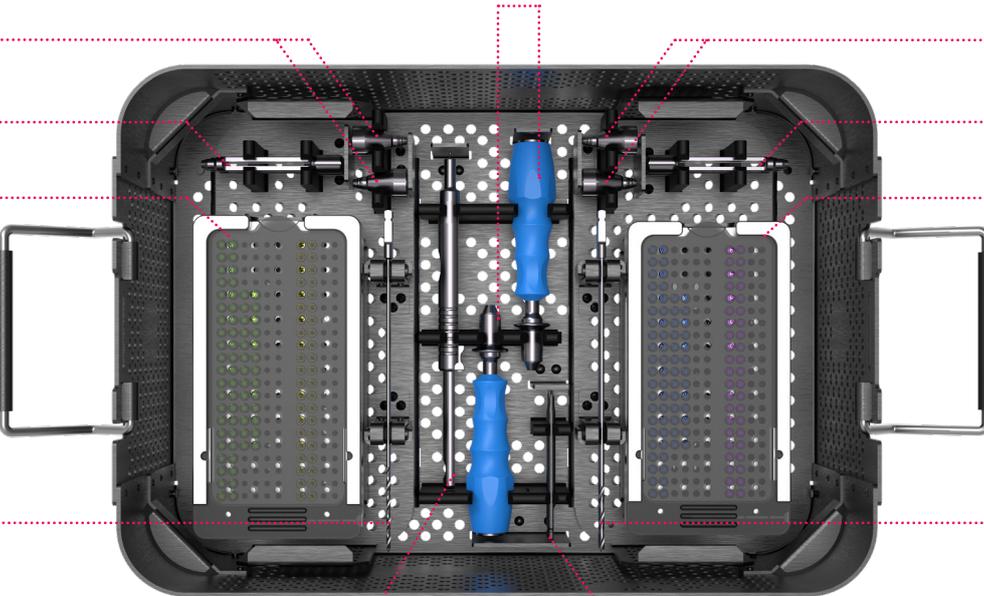
ANC1100
Ø2.0 mm polyaxial
drill guide (x2)

ANC1096
Ø2.0 mm threaded
guide gauge (x2)

Ø2.8 mm screw rack



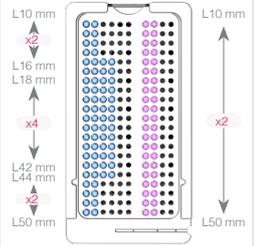
ANC1098
Ø2.0 mm quick
coupling drill bit (x2)



ANC1067
Ø2.7 mm polyaxial
drill guide (x2)

ANC1094
Ø2.7 mm threaded
guide gauge (x2)

Ø3.5 mm screw rack



ANC1099
Ø2.7 mm quick
coupling drill bit (x2)

ANC1095
Length gauge

ANC1027
T15 quick coupling prehensor screwdriver (x2)

- For Ø2.8 mm screws
- For Ø3.5 mm screws



The information presented in this brochure is intended to demonstrate a NEWCLIP TECHNICS product. Always refer to the package insert, product label and/or user instructions before using any NEWCLIP TECHNICS product. Surgeons must always rely on their own clinical judgment when deciding which products and techniques to use with their patients. Products may not be available in all markets. 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.

NEWCLIP TECHNICS

PA de la Lande Saint Martin
45 rue des Garottières
44115 Haute Goulaine, France
+33 (0)2 28 21 23 25
orders@newcliptechnics.com
www.newcliptechnics.com

NEWCLIP TECHNICS GERMANY

Newclip GmbH
Pröllstraße 11
D-86157 Augsburg, Deutschland
+49 (0)821 650 749 40
info@newclipgmbh.com
www.newclipgmbh.de

NEWCLIP TECHNICS USA

Newclip USA
642 Larkfield Center
Santa Rosa CA 95403, USA
+1 707 230 5078
customerservice@newclipusa.com
www.newclipusa.com

NEWCLIP TECHNICS AUSTRALIA

Newclip Australia
3B/11 Donkin Street
West End 4101, Australia
+61 (0)2 81 886 110
solutions@newclipaustralia.com
www.newcliptechnics.com

NEWCLIP TECHNICS JAPAN

Newclip Technics Japan K.K.
KKK Bldg. 502, 3-18-1 Asakusabashi
Taito-Ku, Tokyo, 111-0053, Japan
+81 (0)3 58 25 49 81
Fax: +81 (0)3 58 25 49 86
www.newcliptechnics.com

NEWCLIP TECHNICS IBERIA

Newclip Iberia
Calle Frederic Mompou 4b,
Sant Just Desvern, 08960, Barcelona, Spain
+34 938 299 526
contact@newclipiberia.com
www.newcliptechnics.com