



NEWCLIP-TECHNICS

INNOVATION MEANS MOTION



## FOOTMOTION PLATING SYSTEM - MTP FIRST METATARSO-PHALANGEAL ARTHRODESIS PLATE

- ▶ Precontoured implants
- ▶ Hexalobe screw recess design
- ▶ Transfixation screw

# FOOTMOTION PLATING SYSTEM - MTP

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

**Contra-indications:**

- Severe vascular damage, bone devitalisation.
- Pregnancy.
- Acute or chronic, local or systemic infections.
- Lack of musculo-cutaneous cover, severe vascular deficiencies affecting the focus.
- Bone deterioration impeding proper fixation of the screws in the bone.
- Muscular deficit, neurological deficiency, or behavioural disorders that could result in abnormal mechanical strains on the fixation.
- Allergy to one of the materials used; or sensitivity to foreign bodies.
- Patients with mental or neurological conditions who are unwilling or incapable of complying with post-operative care instructions.
- Unstable physical and/or mental health.

## TECHNICAL FEATURES

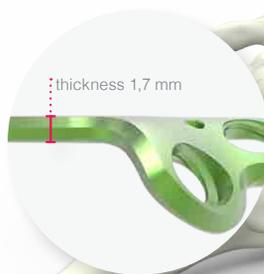
### → ARTHRODESIS PLATE FOR THE FIRST METATARSO-PHALANGEAL (MTP) JOINT

Examples of applications: hallux rigidus, severe hallux valgus, polyarthritis

- **Range of precontoured plates:** the design of this implant is the result of a proprietary state-of-the-art mapping technology to establish an optimized congruence between the plate and the bone.



- **Low profile plate:** approximately 1.7 mm thick, thus limiting soft tissue irritation risks while providing an optimized mechanical stability.



• **Oblong hole for pin** to achieve compression without removing the pin and to ensure the guiding on the metatarsal.

• **Hole for pin** to temporarily stabilize the plate.



• **3 sizes of plates** for the right (green plates) and left (blue plates) sides offering versatile solutions.

# FIXATION - TECHNICAL FEATURES

## FIXATION AND SCREW FEATURES

- **A single screw diameter:** Ø2.8 mm. Both locking (SLT2.8Lxx) and non locking screws (RLT2.8Lxx) are available.

- **The screw head is minimally invasive and buried in the plate (1)** so as to limit the risk of soft tissue irritation.

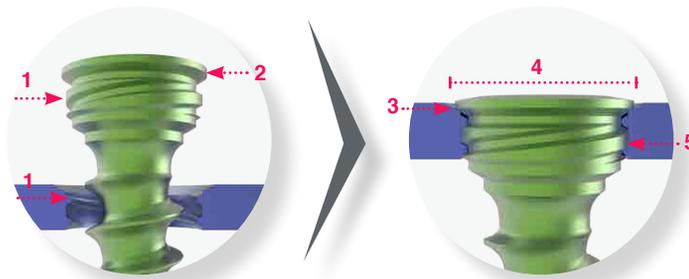
- **The hexalobe screw recess design** improves torque transmission and ability to cope with difficulty arising from screw insertion into the bone.



## MONOAXIAL SELF-LOCKING SYSTEM

### Features:

- The threads under the screw head and inside the hole have strictly the **same characteristics (1)**:
  - Cylindrical internal thread profile.
  - Cylindrical external thread profile.
- Screw head cap (2),
- Plate and screws are all made of titanium alloy.



### Results:

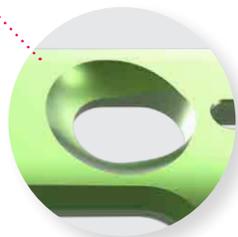
- **Low profile assembly:**
  - The screw head is stopped in the hole by its cap, ensuring the locking (3),
  - The screw head is buried in the plate (4).

**Construct limiting cold welding risks for improved removal properties:** A perfect coaptation of both profiles during locking (5).

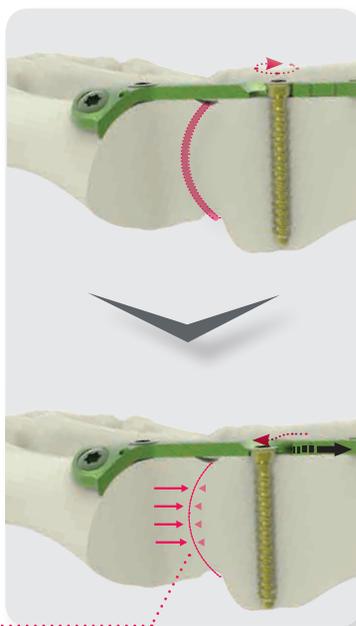
## SPECIFIC FIXATIONS FOR OPTIMAL STABILITY OF THE ASSEMBLY

### Ramp oblong hole

The ramp oblong hole enables a simple and controlled compression thanks to its screw-plate interface.

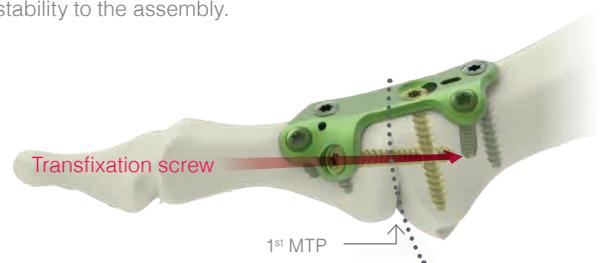


Compression of the joint up to 1.5 mm



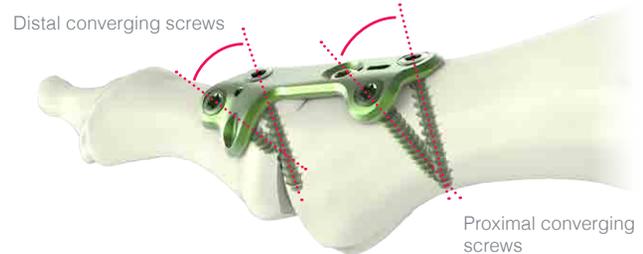
### Hole for transfixation screw

The transfixation screw goes through the 1<sup>st</sup> MTP joint providing stability to the assembly.



### Holes for converging screws in the distal and proximal areas

Converging screws allow a stable fixation of the system.



# SURGICAL TECHNIQUE

## JOINT SURFACES PREPARATION



1. Dislocate the joint so as to expose the head of the first metatarsal and the base of the proximal phalanx.



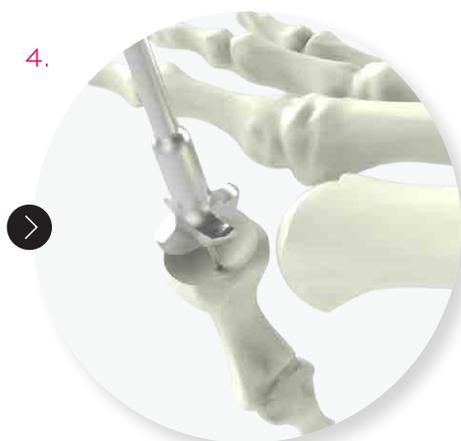
2. Insert the Ø1.6 mm pin (33.0216.150) through the head of the first metatarsal into the medullary cavity.

To determine the appropriate reaming size, insert the convex reamers successively along the pin. Progressively, reduce the diameter until the cartilage surfaces have been removed.

Remove the reamer and pin.



3. Expose the base of the phalanx and insert the Ø1.6 mm pin (33.0216.100) so as to achieve proper alignment with the diaphysis.

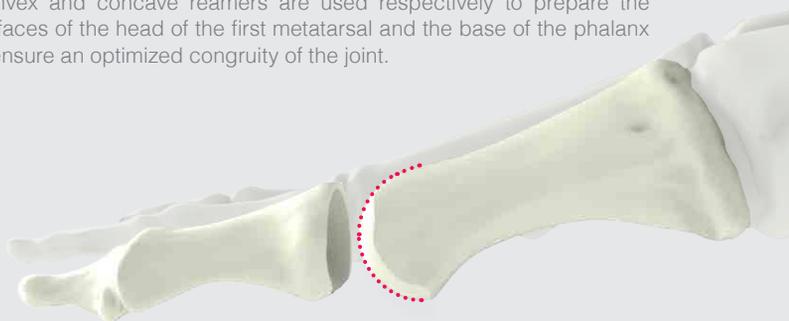


4. Take a concave reamer with the **same diameter** as the convex reamer (determined at step 2). Insert it along the pin and perform reaming until the cartilage surfaces have been removed.

Remove the reamer and the pin.

### → INSTRUMENTATION: CONVEX AND CONCAVE REAMERS

Convex and concave reamers are used respectively to prepare the surfaces of the head of the first metatarsal and the base of the phalanx to ensure an optimized congruity of the joint.



Reamers are available in 4 diameters:



# SURGICAL TECHNIQUE

## POSITIONING OF THE PLATE

5.



5. Position the joint in the desired direction and stabilize it using a Ø1.6 mm pin (33.0216.150).

6.



6. Choose the plate corresponding to the desired correction (three sizes available).

**NB:** The plates of the Footmotion Plating System are precontoured. If necessary, they can be bent to be adapted to the arthrodesis to perform.

### → PLATE BENDING

The plates of the Footmotion Plating System can be bent using the appropriate bending pliers (ANC578) and complying with the following instructions:



- Bending is only possible in the areas intended for this purpose,
- A bendable area must be bent only once and in one direction,
- Bending must not be performed excessively,
- The holes must be protected so as to avoid damaging the fixation.

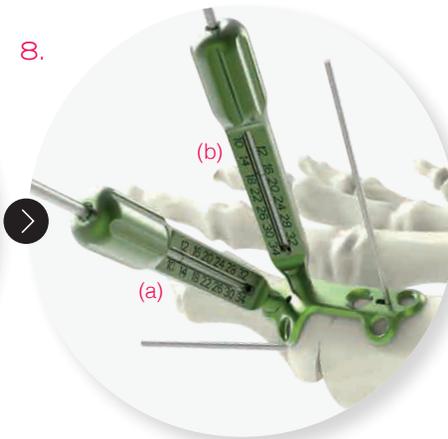
## FIXATION OF THE PLATE

7.



7. Position the plate and stabilize it temporarily by inserting a Ø1.2 mm pin (33.0212.070) into the dedicated oblong hole.

8.

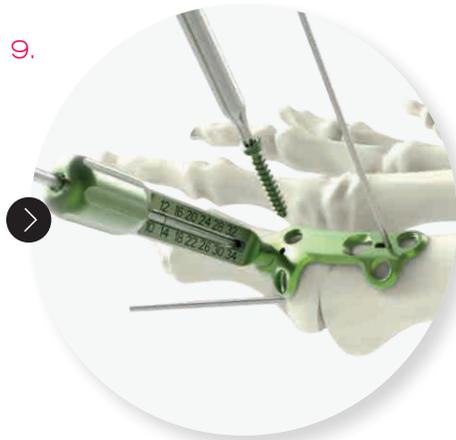


8. Lock the two threaded guide gauges (ANC576) in the two distal holes. Insert the drill bit (ANC590) in the first hole (a) in order to stabilize the plate, and keep it in place. Drill (ANC590) through the second hole (b). Determine the appropriate screw length using the threaded guide gauge (ANC576).

9. Insert a locking screw (SLT2.8Lxx) with the screwdriver (ANC575).

10. After determining the screw length required, remove the drill bit and the guide gauge from the first hole and insert a locking screw using the screwdriver (ANC575). .....▶

9.



10.



**NB:** It is also possible to position the plate and stabilize it temporarily using Ø1.2 mm (33.0212.070) pins:

1. Distally, through the dedicated hole,
2. Proximally, through the proximal part of the oblong hole designed for pins.

# SURGICAL TECHNIQUE

## COMPRESSION OF THE JOINT

### → OPTION 1: COMPRESSION USING THE RAMP OBLONG HOLE



11.a) Drill (ANC590) into the most proximal part of the ramp oblong hole, and directly read the depth on the non-threaded bent guide gauge (ANC586).



11.b) Insert a Ø2.8 mm non locking screw (RLT2.8Lxx) then perform compression using the screwdriver (ANC575) (see § "Ramp oblong hole").



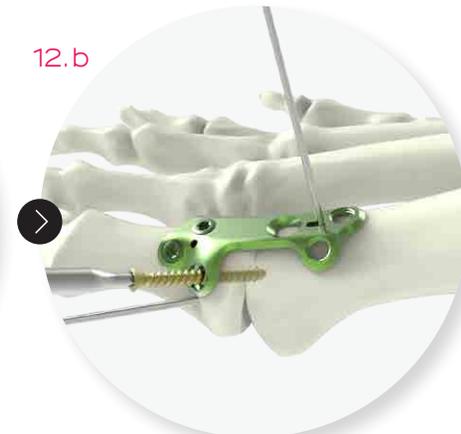
11.c) Insert in the proximal part, the two Ø2.8 mm locking screws (SLT2.8Lxx) into the remaining holes following the steps 8 & 9.

Finalize by inserting a Ø2.8 mm non locking screw (RLT2.8Lxx) into the hole for the transfixation screw in the distal part.

### → OPTION 2: COMPRESSION USING THE TRANSFIXATION SCREW



12.a) Drill through the hole designed for the transfixation screw and through the metatarsophalangeal joint, using a Ø2.0 mm drill bit (ANC590) and the threaded guide gauge (ANC576). To produce the lag effect, drill through the base of the phalanx using a Ø3.0 mm drill bit (ANC611).



12.b) Insert a Ø2.8 mm non locking screw (RLT2.8Lxx) using the screwdriver (ANC575).



12.c) Complete the construct by inserting in the proximal part:

- A Ø2.8 mm non locking screw (RLT2.8Lxx) into the distal part of the ramp oblong hole, so as to avoid additional compression
- Two Ø2.8 mm locking screws (SLT2.8Lxx) into the two remaining proximal holes following the same procedure as steps 8 & 9.

FINAL RESULT



# IMPLANTS REFERENCES

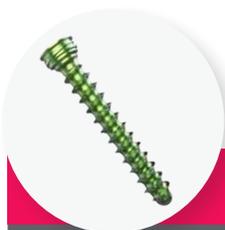
## → PLATES



### 1<sup>ST</sup> MTP ARTHRODESIS PLATES

Ref.	Description
FMTDD1	1st MTP Arthrodesis plate - Right - Size 1
FMTGD1	1st MTP Arthrodesis plate - Left - Size 1
FMTDD2	1st MTP Arthrodesis plate - Right - Size 2
FMTGD2	1st MTP Arthrodesis plate - Left - Size 2
FMTDD3	1st MTP Arthrodesis plate - Right - Size 3
FMTGD3	1st MTP Arthrodesis plate - Left - Size 3

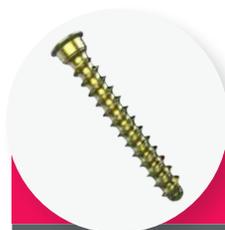
## → Ø2.8 MM SCREWS



### LOCKING SCREWS\*

Ref.	Description
SLT2.8L10	Locking screw - Ø2.8 mm - L 10 mm
SLT2.8L12	Locking screw - Ø2.8 mm - L 12 mm
SLT2.8L14	Locking screw - Ø2.8 mm - L 14 mm
SLT2.8L16	Locking screw - Ø2.8 mm - L 16 mm
SLT2.8L18	Locking screw - Ø2.8 mm - L 18 mm
SLT2.8L20	Locking screw - Ø2.8 mm - L 20 mm
SLT2.8L22	Locking screw - Ø2.8 mm - L 22 mm
SLT2.8L24	Locking screw - Ø2.8 mm - L 24 mm
SLT2.8L26	Locking screw - Ø2.8 mm - L 26 mm
SLT2.8L28	Locking screw - Ø2.8 mm - L 28 mm
SLT2.8L30	Locking screw - Ø2.8 mm - L 30 mm
SLT2.8L32	Locking screw - Ø2.8 mm - L 32 mm
SLT2.8L34	Locking screw - Ø2.8 mm - L 34 mm

\* Green anodized



### NON LOCKING SCREWS\*

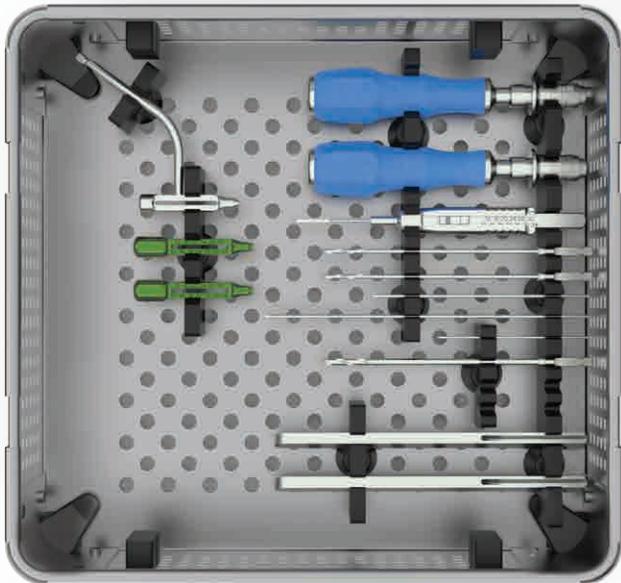
Ref.	Description
RLT2.8L10	Non locking screw - Ø2.8 mm - L 10 mm
RLT2.8L12	Non locking screw - Ø2.8 mm - L 12 mm
RLT2.8L14	Non locking screw - Ø2.8 mm - L 14 mm
RLT2.8L16	Non locking screw - Ø2.8 mm - L 16 mm
RLT2.8L18	Non locking screw - Ø2.8 mm - L 18 mm
RLT2.8L20	Non locking screw - Ø2.8 mm - L 20 mm
RLT2.8L22	Non locking screw - Ø2.8 mm - L 22 mm
RLT2.8L24	Non locking screw - Ø2.8 mm - L 24 mm
RLT2.8L26	Non locking screw - Ø2.8 mm - L 26 mm
RLT2.8L28	Non locking screw - Ø2.8 mm - L 28 mm
RLT2.8L30	Non locking screw - Ø2.8 mm - L 30 mm
RLT2.8L32	Non locking screw - Ø2.8 mm - L 32 mm
RLT2.8L34	Non locking screw - Ø2.8 mm - L 34 mm

\* Golden anodized

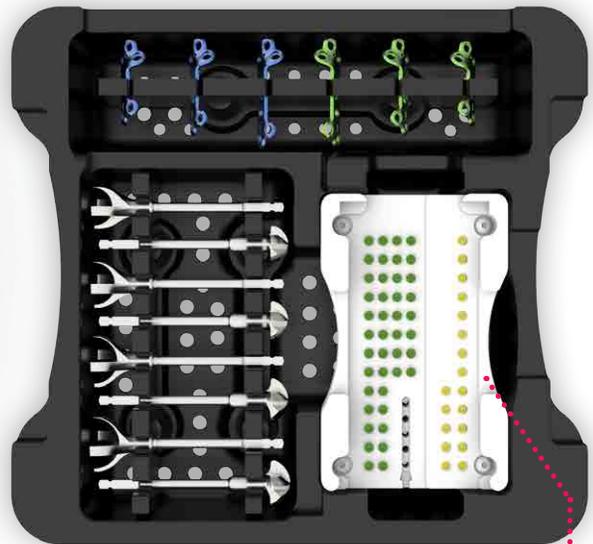
# INSTRUMENTS REFERENCES

FOOTMOTION PLATING SYSTEM - MTP - INSTRUMENTS		
Ref.	Description	Qty
ANC350	Ø4.5 mm AO quick coupling handle - Size 1	2
ANC567	Ø16 mm convex reamer	1
ANC568	Ø16 mm concave reamer	1
ANC569	Ø18 mm convex reamer	1
ANC570	Ø18 mm concave reamer	1
ANC571	Ø20 mm convex reamer	1
ANC572	Ø20 mm concave reamer	1
ANC573	Ø22 mm convex reamer	1
ANC574	Ø22 mm concave reamer	1
ANC575	T8 quick coupling screwdriver	2
ANC576	Ø2.0 mm threaded guide gauge for Ø2.8 mm screws	2
ANC578	Bending plier	2
ANC586	Ø2.0 mm non threaded bent guide gauge for Ø2.8 mm screws	1
ANC589	Length gauge for Ø2.8 and Ø3.5 mm screws	1
ANC590	Ø2.0 mm quick coupling drill bit - L 125 mm	2
ANC611	Ø3.0 mm quick coupling drill bit - L 125 mm	1
33.0212.070	Pin Ø1.2 mm - L 70 mm	5
33.0216.100	Pin Ø1.6 mm - L 100 mm	5
33.0216.150	Pin Ø1.6 mm - L 150 mm	5

## → FOOTMOTION PLATING SYSTEM - MTP SET DESCRIPTION



BASE (ANC648/B)



INSERT  
(ANC648/I)

SCREW RACK  
(ANC648/R)

### REMOVAL KIT

If you have to remove FOOTMOTION PLATING SYSTEM - MTP implants, make sure to order the Newclip Technics removal set which includes the following instruments:

- ANC575: T8 quick coupling screwdriver
- ANC350: Ø4.5 mm AO quick coupling handle - Size 1

This instrumentation is available either in the removal set, or in the FOOTMOTION PLATING SYSTEM - MTP set.

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