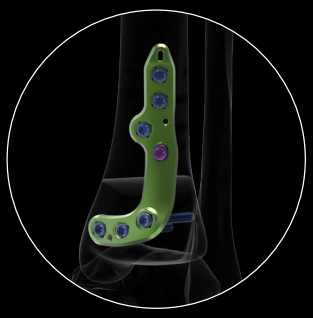
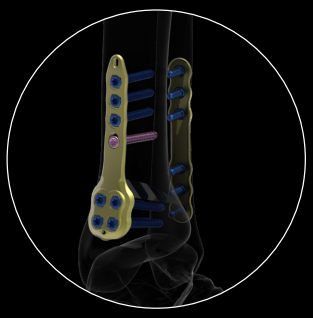
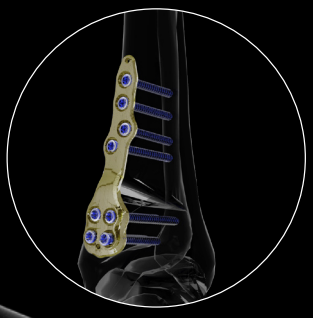
NEWCLIP
TECHNICS







ACTIV MOTION S DTO

DISTAL TIBIAL OSTEOTOMY

ACTIVMOTION S - DTO

Indication: the implants of the Activmotion S DTO range are intended for bone reconstruction of the ankle joint in adults, including fixation of fractures and osteotomies of ankle, distal tibia and fibula.

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 goof fixation of the implants into the bone.
- Muscular deficit, neurological deficiency or behavioural 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.

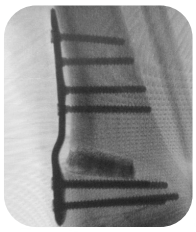
VARUS DEFORMATION

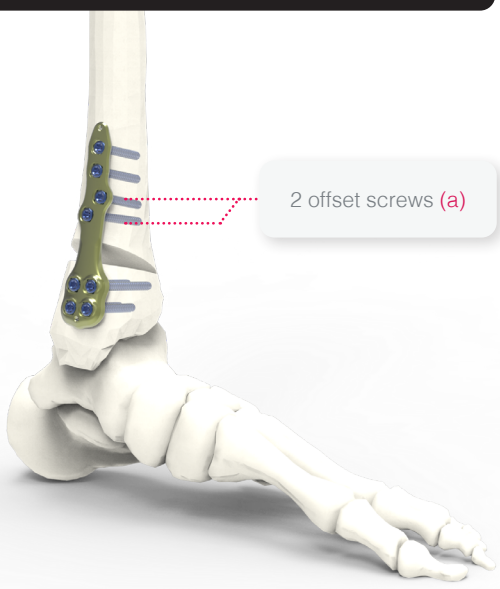
→ MEDIAL OPENING PLATES

- 2 offset screws for improving the mechanical features of the assembly (a).
- Step design to optimize congruency of the plate according to the opening (b).

ZATSM1
Size 1

ZATSM2
Size 2



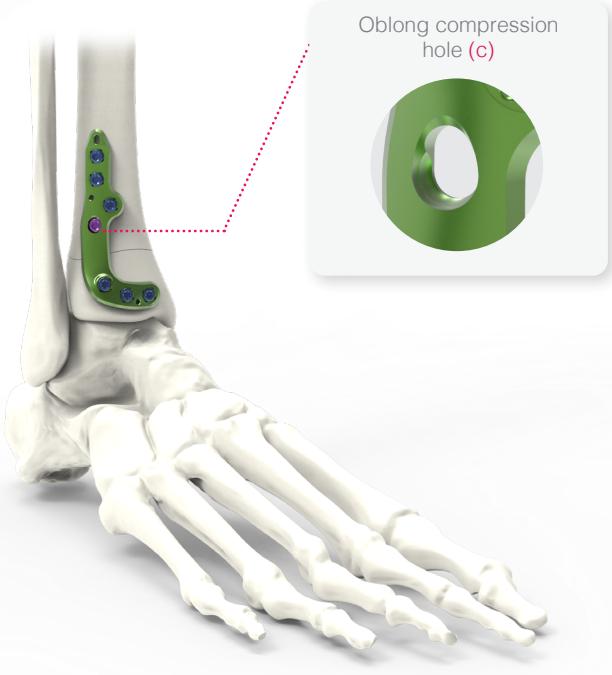


→ ANTEROLATERAL CLOSING PLATES

- One ramp oblong hole allowing a simple and controlled compression for closing (c) (*see page 4*).

ZBTGB1
Left

ZBTDB1
Right

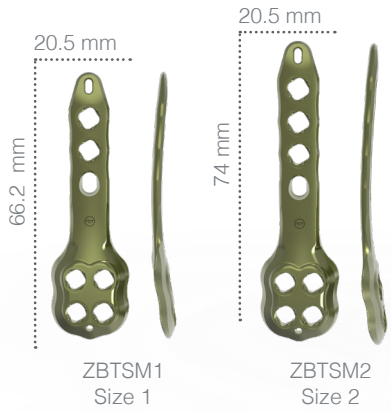


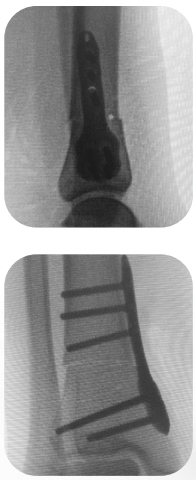
ACTIVMOTION S -DTO

VALGUS DEFORMATION & DEROTATION

→ MEDIAL CLOSING PLATES

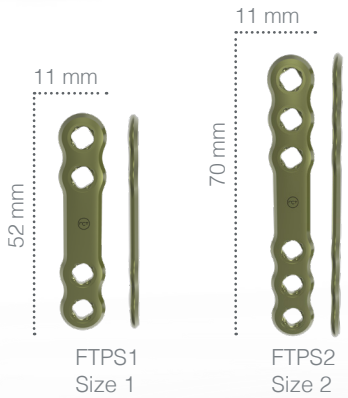
- 2 lengths: 2 or 3 proximal holes.
- One ramp oblong hole allowing for a simple and controlled compression for closing (d) (*see page 4*).





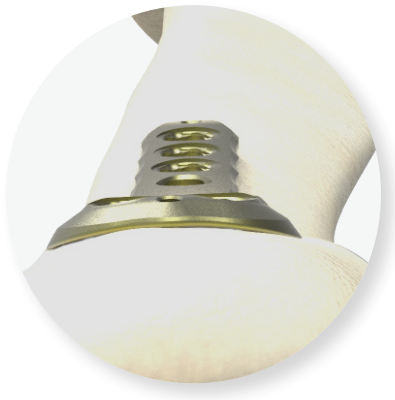
→ ASSOCIATED FIBULA OSTEOTOMY

- 2 lengths to adapt to the osteotomy type.



TECHNICAL FEATURES

ANATOMICAL PLATES



- **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 Activmotion S DTO plates can be bent with the appropriate bending irons (ANC452). The bending of these plates must be performed **once and in one direction only**. Please refer to the IFU for bending precautions.

- **Smooth implant edges**

  Especially on the medial plates to limit soft tissue irritation.

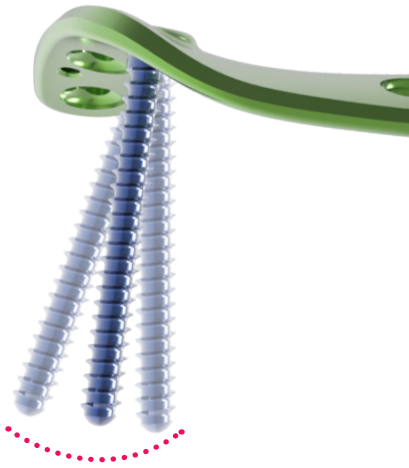
FIXATION & SCREW FEATURES

→ POLYAXIAL AND MONOAXIAL LOCKING FIXATION

- Unique screw diameter (Ø3.5 mm).
- Hexalobular screw head design (improved torque transmission – optimized pick and stick).
- Optimized screw head protuberance limiting soft tissues irritation.
- New patented polyaxial locking platform (+/-10°) with a dedicated polyaxial drilling guide (ANC1067). If the pre-angled positioning is preferred a dedicated monoaxial drilling guide can be used (ANC1094).

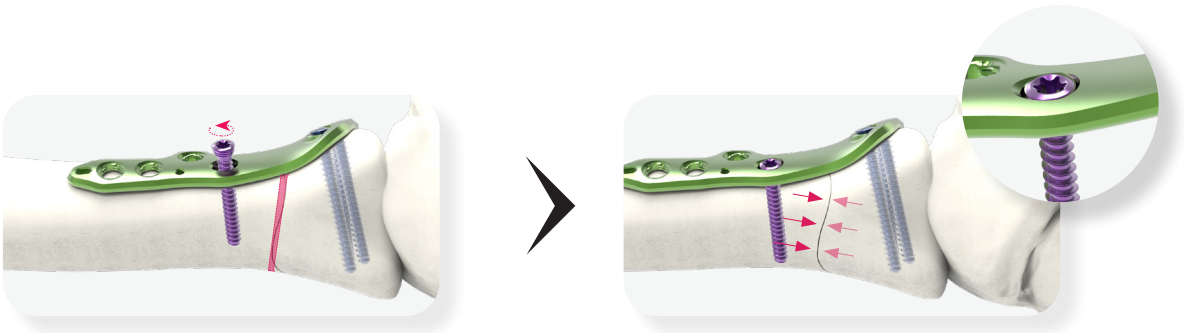
⚠ When using the polyaxial drill guide, make sure that the guide is locked in the axis of the hole to avoid over angulation of the drilling, resulting in a failure of the locking mechanism.

- Atraumatic tip preventing soft tissue irritation.
- The plate holes are compatible with locking (SAT3.5Lxx) and non-locking (CAT3.5LxxD) screws. However, it is recommended to use locking screws for a better mounting stability.



→ COMPRESSIVE RAMP OBLONG HOLE

- The ramp oblong hole allows a simple and controlled compression by the screw/plate interface.

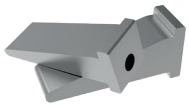


TECHNICAL FEATURES

INSTRUMENTATION

- Dedicated instruments to prepare, create and maintain the appropriate angular correction during osteosynthesis:
  - Chisels (to be used to prepare the opening);
  - 6 metallic wedges (4 mm to 14 mm; 2 mm increment);
  - Meary pliers (controlled opening thanks to the markings - 3 to 19 mm (2 mm increment));
  - Closing cutting guide.

Chisels

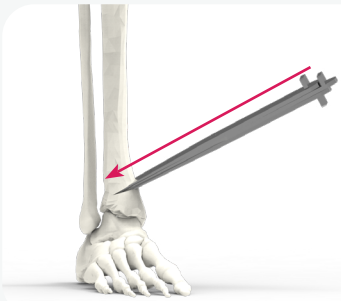


Metallic wedges

Meary pliers

Cutting Guide

→ DIFFERENT METHODS OF OPENING OSTEOTOMIES

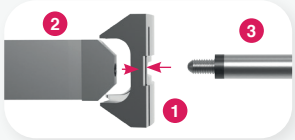


Prepare the opening by inserting progressively the chisels with a hammer. The metallic wedges or the meary pliers can be used to open the osteotomy.

Insert the meary pliers and once in place, turn the knob at the top of the instrument to increase the opening.

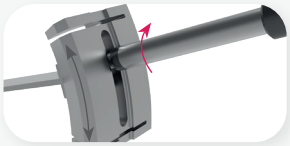
Insert increasing size wedges until finding the appropriate one. Six different wedges are available from 4 to 14 mm.

→ HOW TO USE THE CLOSING CUTTING GUIDE

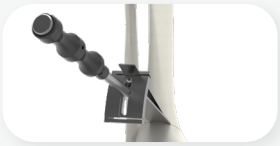


1. Place the NCT cutting guide - piece 1 (ANC014-1) (1) into the NCT cutting guide - piece 2 (ANC014-2) (2), and screw the construct onto the handle (ANC024) (3).

2. Choose the correct side: **R** for right and **L** for left



3. Choose the correct angle by sliding the handle in a vertical movement; once in the correct position, turn the handle to fix in place.



4. The blade can then be inserted into the top slot of the cutting guide to perform the cut.

CLOSING OSTEOTOMY APPROACH (PAGE 1/2)

Example using standard anterolateral plate (ZBTDB1).

1. Insert the two pins and perform the first cut.

2. Perform the second cut and carefully close the osteotomy. The cutting guide (ANC014) can be used to perform the osteotomy (*see on page 5 how to use the cutting guide*).

   NB: the length of the saw must be at least 90 mm.

3. Close the osteotomy and position the plate by inserting two Ø1.6 mm pins (33.0216.150). **The proximal pin must be positioned in the proximal part of the oblong pin**.

   If necessary, the plate can be bent with the dedicated bending irons (ANC452), **one time and in one direction only**.

Step 4: distal screw insertion

To insert the three distal screws below the osteotomy section, start with the most lateral one, 2 options are possible:

Option 1: polyaxiality

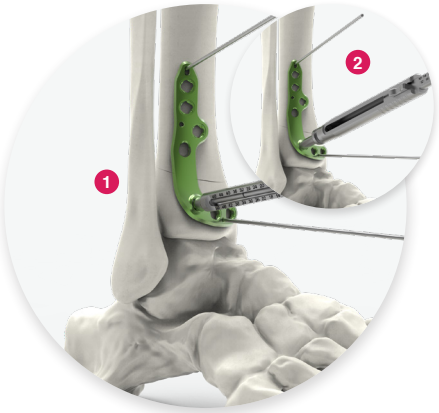
Drill using the Ø2.7 mm drill bit (ANC1099) through the polyaxial drill guide (ANC1067).

or

Option 2: pre-angled direction

If a neutral angulation is needed, drill using the Ø2.7 mm drill bit (ANC1099) through the threaded guide gauge (ANC1094).

CLOSING OSTEOTOMY APPROACH (PAGE 2/2)



5. Depending on the type of drilling used (*see step 4*), determine the screw length directly on the guide gauge (ANC1094) (1) or using the length gauge (ANC1095) (2).

   Then, insert a Ø3.5 mm locking screw (SAT3.5Lxx) using the T15 screwdriver (ANC1027).

ANC1027

6. Repeat the same procedure as steps 4 and 5 for the two other distal locking holes.

7. Drill in the proximal part of the oblong ramp hole, using the Ø2.7 mm drill bit (ANC1099), through the non threaded guide gauge (ANC1127). **The orientation of the drill guide must be taken into account to allow compression.** Determine the screw length directly on the drill guide or using the length gauge (ANC1095).

ANC1095

8. Insert a standard Ø3.5 mm cortex screw (CAT3.5LxxD) and perform the compression with the screwdriver (ANC1027).

FINAL RESULT

Finalize the assembly by inserting the remaining Ø3.5 mm locking screws.

Remark: the surgical technique is the same for all the closing plates of the range.

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

OPENING OSTEOTOMY APPROACH

Example using medial opening plate (ZATSM1).

1. Perform the cut and gradually open the osteotomy site until the desired opening is reached.

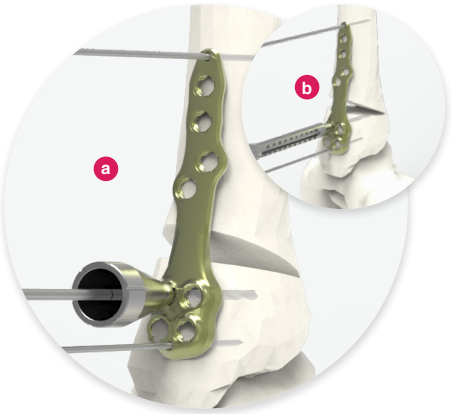
2. Insert wedges of increasing sizes until finding the appropriate one (4-14 mm) while maintaining the lateral surface of the tibia.

   Once the appropriate wedge is inserted, the angular correction is maintained during osteosynthesis.

   Alternatively, the meary pliers can be used to increase the size of the opening (see page 5 for more information).

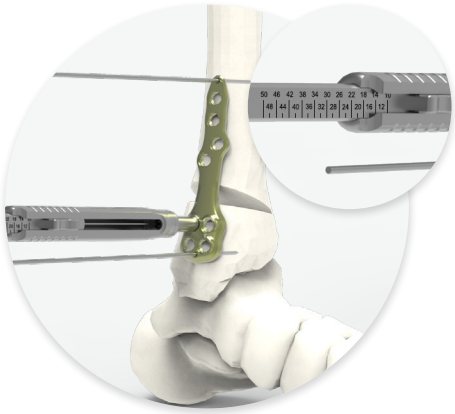
3. Select the more appropriate plate shape to fit the bone by using the plate templates (ANC1246 or ANC1247). Once chosen, position the plate by inserting two Ø1.6 mm pins (33.0216.150).

   If needed, the plates can be bent with the appropriate bending irons (ANC452) **one time and in one direction only.**

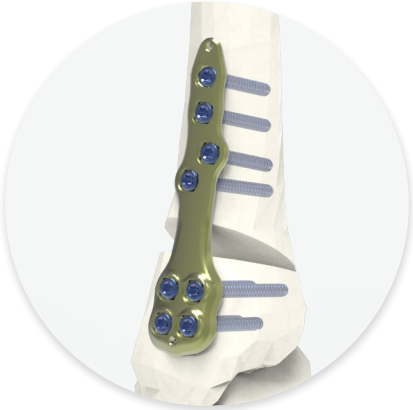


4.a. Drill using the Ø2.7 mm drill (ANC1099) through the polyaxial drill guide (ANC1067).

4.b. If a normoaxial hole is desired, drill using the Ø2.7 mm drill bit (ANC1099) through the threaded guide gauge (ANC1094). The screw length can be determined directly on the guide gauge.

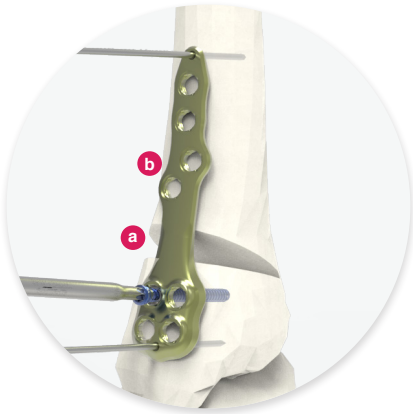


5. Depending on the type of drilling used (*see steps 4a and 4b*), determine the drilling depth directly on the threaded guide gauge (ANC1094) or with the length gauge (ANC1095).



FINAL RESULT

Finalize the procedure by inserting the remaining Ø3.5 mm locking screws.



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

   Do the same for the screw (b) just above the osteotomy.

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

Remark: the surgical technique is the same for all the opening plates of the range.

IMPLANT REFERENCES

→ PLATES

MEDIAL CLOSING PLATES

Ref.	Description
ZBTSM1-ST	Medial closing wedge DTO plate - Symmetrical - Size 1 - STERILE
ZBTSM2-ST	Medial closing wedge DTO plate - Symmetrical - Size 2 - STERILE

ZBTSM1-ST

ZBTSM2-ST

ANTEROLATERAL CLOSING PLATES

Ref.	Description
ZBTGB1-ST	Anterolateral closing wedge DTO plate - Left - Size 1 - STERILE
ZBTDB1-ST	Anterolateral closing wedge DTO plate - Right - Size 1 - STERILE

ZBTGB1-ST

ZBTDB1-ST

MEDIAL OPENING PLATES

Ref.	Description
ZATSM1-ST	Medial opening wedge DTO plate - Symmetrical - Size 1 - STERILE
ZATSM2-ST	Medial opening wedge DTO plate - Symmetrical - Size 2 - STERILE

ZATSM1-ST

ZATSM2-ST

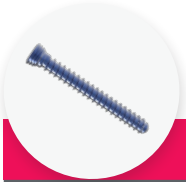
FIBULA PLATES

Ref.	Description
FTPS1-ST	Straight plate for diaphyseal fibula - Symmetrical - Size 1 - STERILE
FTPS2-ST	Straight plate for diaphyseal fibula - Symmetrical - Size 2 - STERILE

FTPS1-ST

FTPS2-ST

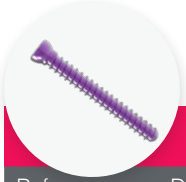
→ SCREWS



LOCKING SCREWS*

Ref.	Description
SAT3.5Lxx-ST	Locking screw with conical head Ø3.5 mm - L12 to 50 mm - STERILE (2 mm increments)

* Blue anodized



STANDARD SCREWS*

Ref.	Description
CAT3.5LxxD-ST	Standard cortical screw - Ø3.5 mm - L12 to 50 mm - STERILE (2 mm increments)

* Fuchsia anodized

INSTRUMENT REFERENCES

INSTRUMENTS		
Ref.	Description	Qty
ANC014-1	NCT cutting guide - piece 1	1
ANC014-2	NCT cutting guide - piece 2	1
ANC024	Handle for metallic wedge and cutting guide	2
ANC351	Ø4.5 mm AO quick coupling handle - size 2	2
ANC452	Bending iron	2
ANC621	Chisel Pauwels - 10*240 mm	1
ANC622	Chisel Pauwels - 25*240 mm	1
ANC628	Chisel Pauwels - 15*240 mm	1
ANC629	Chisel Pauwels - 20*240 mm	1
ANC990	Activmotion Meary pliers	1
ANC1027	T15 AO quick coupling prehensor screwdriver	2
ANC1066*	Activmotion Meary pliers	1
ANC1067	Ø2.7 mm polyaxial drill guide - SAT3.5 hole	2
ANC1088	Metallic wedge for osteotomy - Narrow - 4 mm high	1
ANC1089	Metallic wedge for osteotomy - Narrow - 6 mm high	1
ANC1090	Metallic wedge for osteotomy - Narrow - 8 mm high	1
ANC1091	Metallic wedge for osteotomy - Narrow - 10 mm high	1
ANC1092	Metallic wedge for osteotomy - Narrow - 12 mm high	1
ANC1093	Metallic wedge for osteotomy - Narrow - 14 mm high	1
ANC1094	Ø2.7 mm threaded guide gauge - SAT3.5 hole	2
ANC1095	Length gauge for Ø2.8 and Ø3.5 mm screws	1
ANC1099	Ø2.7 mm quick coupling drill bit - L180 mm	2
ANC1127	Ø2.7 mm non threaded bent guide gauge for ramp oblong hole	1
ANC1246	ZATSM1 plate template	1
ANC1247	ZATSM2 plate template	1
ANC1248	ZBTSM1 and ZBTSM2 plate templates	1
ANC1249	ZBTGB1 plate template	1
ANC1250	ZBTDB1 plate template	1
ANC1255	FTPS1 and FTPS2 plate templates	1
33.0216.150	Pin Ø1.6 L150 mm	6
33.0222.200	Pin Ø2.2 L200 mm	6

OPTIONAL BONE SUBSTITUTES		
Ref.	Description	Qty
0106C01	Rounded wedge 06 mm	1
0108C01	Rounded wedge 08 mm	1
0110C01	Rounded wedge 10 mm	1
0112C01	Rounded wedge 12 mm	1
1414C01	Rounded wedge 14 mm	1

Manufacturer: BIOMATLANTE (FRANCE)
Class: III
Notified body: TUV - CE 0123

01xxC01

* Optional as a replacement for ANC990.

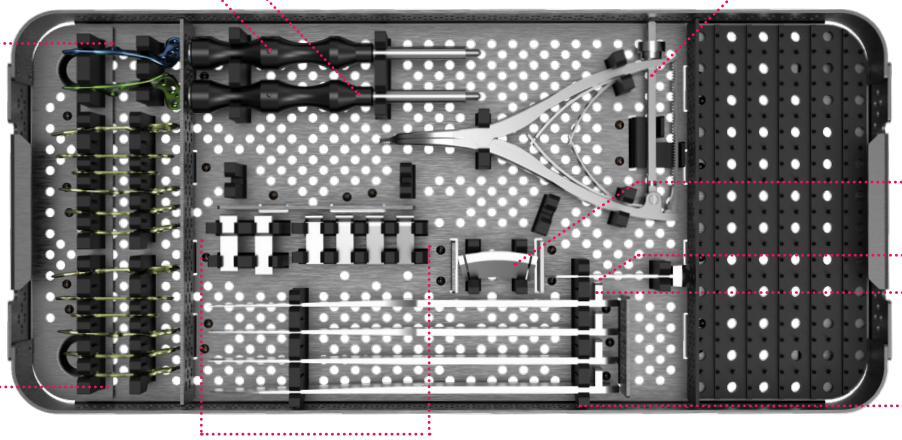
REMOVAL KIT

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

- ANC974: T15 screwdriver with AO quick coupling system
- ANC351: Ø4.5 mm AO quick coupling handle - Size 2

An **extraction set** can also be ordered separately.

KIT DESCRIPTION



ANC024 Handle for metallic wedge & cutting guide (x2)

Plate templates:
ANC1246
ANC1247
ANC1248
ANC1249
ANC1250
ANC1255

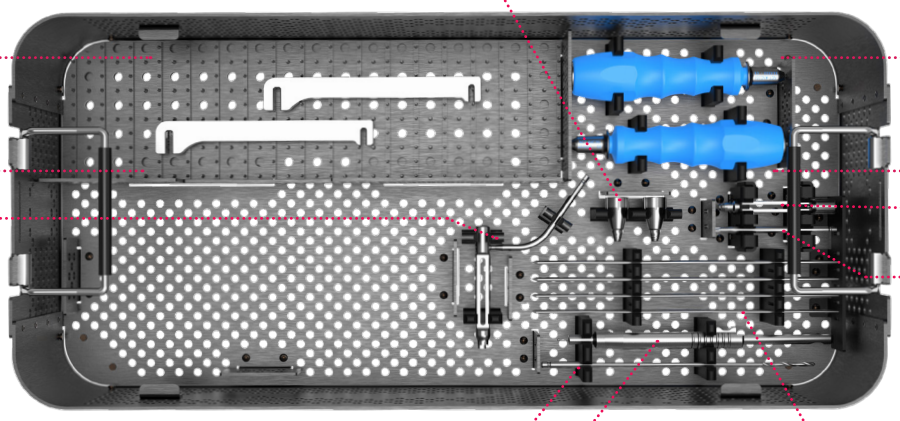
ANC990 or ANC1066
Meary pliers

ANC014-1
NCT cutting guide - piece 1

ANC014-2
NCT cutting guide - piece 2

Chisels:
ANC621
ANC622
ANC628
ANC629

Metallic wedges for osteotomy
ANC1088 ANC1091
ANC1089 ANC1092
ANC1090 ANC1093



ANC1067 Polyaxial drill guide (x2)

ANC452
Bending iron (x2)

ANC1127
Ø2.7 mm non threaded bent guide gauge

ANC351
Ø4.5 mm AO quick coupling handle - size 2 (x2)

ANC1094 Threaded guide gauge (x2)

ANC1027 T15 Screwdriver with AO quick coupling system

ANC1099 Ø2.7 mm quick coupling drill bit - L180 mm (x2)

33.0216.150 Pin Ø1.6 L150 mm (x6)
33.0222.200 Pin Ø2.2 L200 mm (x6)

ANC1095 Length gauge for Ø2.8 and Ø3.5 mm screws

Manufacturer : Newclip Technics - Brochure US - Activmotion S DTO - Ed1 - 12/2021 - Medical device EC : class IIb - CE1639 SGS BE - US Class: II - Read labeling and instructions before use.

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