**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**

1. 2 offset screws for improving the mechanical features of the assembly (a).

2. Step design to optimize congruency of the plate according to the opening (b).

![2 offset screws (a)](image)

![Step design (b)](image)

**ANTEROLATERAL CLOSING PLATES**

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

![Oblong compression hole (c)](image)

**ZATSM1**
Size 1

**ZATSM2**
Size 2

**ZBTGB1**
Left

**ZBTD1**
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 OSTEOLOGY

- 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.**

→ COMPRRESSIVE 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.

DIFFERENT METHODS OF OPENING OSTEOTOMIES

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

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

6. 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.

HOW TO USE THE CLOSING CUTTING GUIDE
SURGICAL TECHNIQUE

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).

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).
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).

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).

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.
SURGICAL TECHNIQUE

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).

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 RESULT

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

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**

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZBTSM1-ST</td>
<td>Medial closing wedge DTO plate - Symmetrical - Size 1 - STERILE</td>
</tr>
<tr>
<td>ZBTSM2-ST</td>
<td>Medial closing wedge DTO plate - Symmetrical - Size 2 - STERILE</td>
</tr>
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</table>

**ANTEROLATERAL CLOSING PLATES**

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Description</th>
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<tbody>
<tr>
<td>ZBTGB1-ST</td>
<td>Anterolateral closing wedge DTO plate - Left - Size 1 - STERILE</td>
</tr>
<tr>
<td>ZBTD1-ST</td>
<td>Anterolateral closing wedge DTO plate - Right - Size 1 - STERILE</td>
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**MEDIAL OPENING PLATES**

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ZATSM1-ST</td>
<td>Medial opening wedge DTO plate - Symmetrical - Size 1 - STERILE</td>
</tr>
<tr>
<td>ZATSM2-ST</td>
<td>Medial opening wedge DTO plate - Symmetrical - Size 2 - STERILE</td>
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</table>

**FIBULA PLATES**

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>FTPS1-ST</td>
<td>Straight plate for diaphyseal fibula - Symmetrical - Size 1 - STERILE</td>
</tr>
<tr>
<td>FTPS2-ST</td>
<td>Straight plate for diaphyseal fibula - Symmetrical - Size 2 - STERILE</td>
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→ **SCREWS**

**LOCKING SCREWS**

<table>
<thead>
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<th>Ref.</th>
<th>Description</th>
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<tbody>
<tr>
<td>SAT3.5Lxx-ST</td>
<td>Locking screw with conical head Ø3.5 mm - L12 to 50 mm - STERILE (2 mm increments)</td>
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</tbody>
</table>

* Blue anodized

**STANDARD SCREWS**

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Description</th>
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<tbody>
<tr>
<td>CAT3.5LxxD-ST</td>
<td>Standard cortical screw - Ø3.5 mm - L12 to 50 mm - STERILE (2 mm increments)</td>
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</tbody>
</table>

* Fuchsia anodized
## INSTRUMENT REFERENCES

### INSTRUMENTS

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Description</th>
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<tbody>
<tr>
<td>ANC014-1</td>
<td>NCT cutting guide - piece 1</td>
<td>1</td>
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<tr>
<td>ANC014-2</td>
<td>NCT cutting guide - piece 2</td>
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<tr>
<td>ANC024</td>
<td>Handle for metallic wedge and cutting guide</td>
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<tr>
<td>ANC351</td>
<td>Ø4.5 mm AO quick coupling handle - size 2</td>
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<tr>
<td>ANC452</td>
<td>Bending iron</td>
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</tr>
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<td>ANC621</td>
<td>Chisel Pauwels - 10^*240 mm</td>
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<tr>
<td>ANC622</td>
<td>Chisel Pauwels - 25^*240 mm</td>
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<td>ANC626</td>
<td>Chisel Pauwels - 15^*240 mm</td>
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<td>ANC629</td>
<td>Chisel Pauwels - 20^*240 mm</td>
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<td>ANC990</td>
<td>Activmotion Meary pliers</td>
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<tr>
<td>ANC1027</td>
<td>T15 AO quick coupling prehensor screwdriver</td>
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<td>ANC1066</td>
<td>Activmotion Meary pliers</td>
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<td>ANC1067</td>
<td>Ø2.7 mm polyaxial drill guide - SAT3.5 hole</td>
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<td>ANC1088</td>
<td>Metallic wedge for osteotomy - Narrow - 4 mm high</td>
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<td>ANC1089</td>
<td>Metallic wedge for osteotomy - Narrow - 6 mm high</td>
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<td>ANC1090</td>
<td>Metallic wedge for osteotomy - Narrow - 8 mm high</td>
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<td>ANC1091</td>
<td>Metallic wedge for osteotomy - Narrow - 10 mm high</td>
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<td>ANC1092</td>
<td>Metallic wedge for osteotomy - Narrow - 12 mm high</td>
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<td>ANC1093</td>
<td>Metallic wedge for osteotomy - Narrow - 14 mm high</td>
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<td>ANC1094</td>
<td>Ø2.7 mm threaded guide gauge - SAT3.5 hole</td>
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<td>ANC1095</td>
<td>Length gauge for Ø2.6 and Ø3.5 mm screws</td>
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<td>ANC1099</td>
<td>Ø2.7 mm quick coupling drill bit - L180 mm</td>
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<td>ANC1127</td>
<td>Ø2.7 mm non threaded bent guide gauge for ramp oblong hole</td>
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<td>ANC1246</td>
<td>ZATS1 plate template</td>
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<td>ANC1247</td>
<td>ZATS2 plate template</td>
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<td>ANC1248</td>
<td>ZBTSM1 and ZBTSM2 plate templates</td>
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<td>ANC1249</td>
<td>ZTGB1 plate template</td>
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<td>ANC1250</td>
<td>ZTDB1 plate template</td>
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<td>ANC1255</td>
<td>FTPS1 and FTPS2 plate templates</td>
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<tr>
<td>33.0216.150</td>
<td>Pin Ø1.6 L150 mm</td>
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<tr>
<td>33.0222.200</td>
<td>Pin Ø2.2 L200 mm</td>
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* Optional as a replacement for ANC990.

### OPTIONAL BONE SUBSTITUTES

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<tr>
<td>0106C01</td>
<td>Rounded wedge 06 mm</td>
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<td>0108C01</td>
<td>Rounded wedge 08 mm</td>
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<td>0110C01</td>
<td>Rounded wedge 10 mm</td>
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<td>0112C01</td>
<td>Rounded wedge 12 mm</td>
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<tr>
<td>1414C01</td>
<td>Rounded wedge 14 mm</td>
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Manufacturer: BIOMATLANTE (FRANCE)
Class: III
Notified body: TÜV - CE 0123

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**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.

**Patient Specific Instruments (PSI)** are also available. For more information, please do not hesitate to get in touch with our customer service.
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.
NEWCLIP TECHNICS
PA de la Lande Saint Martin
45 rue des Garetières
44115 Haute Goulaine, France
+33 (0)2 28 21 23 25
orders@newcliptechnics.com
www.newcliptechnics.com

NEWCLIP TECHNICS GERMANY
Newclip GmbH
Pruffstraße 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
+34 938 299 626
contact@newclipiberia.com
www.newcliptechnics.com

Brochure EN - Activmotion S DTO - Ed3 - 06/2021 - Medical device EC : class IIb - CE1639 SGS BE - Read labeling and instructions before use.