



## ALIANS ULNA 3/3

#### Indications for use:

Indications for Use: The Alians Ulna Locking Plating System is intended for ulnar shortening osteotomy.

#### Contraindications:

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

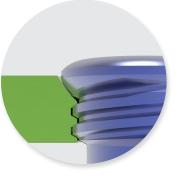
### IMPLANT TECHNICAL FEATURES



### MONOAXIAL LOCKING SYSTEM

- The screw head is stopped in the hole, ensuring its locking.
- The screw head is buried in the plate.
- Plate and screw made from the same material: titanium alloy.
- Non locking screws (CT3.5LxxD) can be used in the locking holes at the surgeon's discretion.





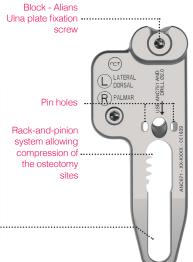
The threads under the screw head and inside the hole have strictly the same characteristics.

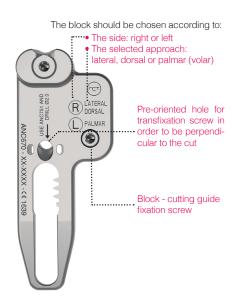
## CUTTING GUIDE AND COMPRESSION DEVICE

### COMPONENTS

2 blocks (ANC670 and ANC671) allowing to manage the operated side (right or left) and the approach (lateral, dorsal or palmar/volar).







2 cutting guides (ANC171/1 and ANC171/2) enabling 2 to 6 mm resections. The indication 'DISTAL' is present on each cutting guide to ensure an appropriate positioning on the block.



### **ASSEMBLING**



 Choose one of the two blocks (ANC670 or ANC671) depending on the operated side (left or right) and the selected approach (lateral, dorsal or palmar/volar).

The illustration above presents a palmar/volar approach on a left ulna.

Choose the appropriate cutting guide (ANC171/1 or ANC171/2) depending on the resection to perform.

Assemble the cutting guide and the block by fastening the preassembled screw with the screwdriver part of the 2-in-1 instrument (ANC083C).



 To perform the resection, adjust and secure the cutting and compression device to the plate. Insert and tighten the screw of the block into the appropriate hole of the plate using the screwdriver part of the 2-in-1 instrument (ANC083C).



FINAL RESULT

## SURGICAL TECHNIQUE

The surgical technique described below is applicable for all the compatible surgical approaches of the range.



1. Position the plate. In the most distal hole, drill ( $\emptyset$ 2.7 mm) (ANC089C) and directly read the drilling depth on the  $\emptyset$ 2.7 mm threaded guide gauge (ANC186).

NB: It is possible to position the plate previously assembled with the cutting guide and compression device.



2.a. To ease the insertion of the  $\emptyset 3.5$  mm locking screw (SOT3.5Lxx) use the countersink part of the 2-in-1 instrument (ANC083C) to widen the previously drilled first cortex.

2.b. Insert a Ø3.5 mm locking screw (SOT3.5Lxx) using the screwdriver part of the 2-in-1 instrument (ANC083C).



3. Snap the Ø2.7 mm non threaded bent guide gauge (ANC750) in the plate oblong hole.

In the proximal hole of the instrument, perform the  $\emptyset$ 2.7 mm drilling (ANC089C) and directly read the drilling depth.

NB: In case where the block is assembled with the plate, the  $\emptyset$ 2.7 mm non threaded bent guide gauge (ANC750) can be snapped in through the block (see § "components").

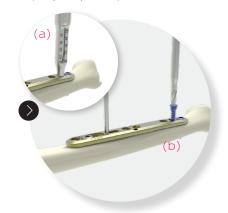




4.a. In the distal hole of the instrument (ANC750), insert a  $\emptyset$ 2.2 mm pin (33.0222.120) using the binon-locking fixation method. Remove the non threaded bent guide gauge (ANC750) by sliding it along the  $\emptyset$ 2.2 mm pin (33.0222.120).

4.b. Insert a Ø3.5 mm non-locking screw (CT3.5Lxx) using the binon-locking fixation method in the proximal part of the oblong hole using the screwdriver part of the 2-in-1 instrument (ANC083C).

The non-locking screw (CT3.5Lxx) and the Ø2.2 mm pin (33.0222.120) help to perfectly align both proximal and distal parts during compression.



5.a. In the second distal hole of the plate, drill ( $\emptyset$ 2.7 mm) (ANC089C) using the  $\emptyset$ 2.7 mm threaded guide gauge (ANC186). Measure the screw length directly on the threaded guide gauge (ANC186) or with the length gauge (ANC124).

5.b. Insert a Ø3.5 mm locking screw (SOT3.5Lxx) using the screwdriver part of the 2-in-1 instrument (ANC083C).

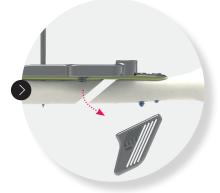
NB: In case where the block is assembled with the plate, the Ø2.7 mm threaded guide gauge (ANC186) can be locked on the second most distal hole without conflict with the block.



6. Assemble the cutting and compression device (see. § "Assembling") and fix it into the distal hole the closest to the osteotomy site.



7. Perform the two cuts necessary for the ulnar shortening osteotomy using the cutting guide at **graduation 0 at first**. Then at the graduation corresponding to the required resection. The resection is thus made by two oblique saw cuts.



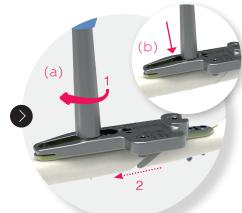
8. Remove the cutting guide (ANC171/1 or ANC171/2) to pull out the resected bone fragment.

## SURGICAL TECHNIQUE OPTION 1: STABILIZATION STANDARD NON-LOCKING SCREW



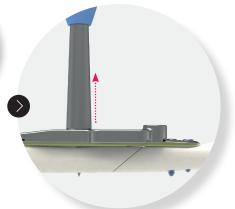
9. Slide the cannulated handle (ANC669) along the Ø2.2 mm pin (33.0222.120) and into the rack-and-pinion section of the block.

Unscrew the non-locking screw (CT3.5Lxx) of only half a turn so that the plate may be slided.



10.a. Rotate the cannulated handle to perform compression of the osteotomy site.

10.b. While maintaining the compression, tighten up the Ø3.5 mm non-locking screw (CT3.5Lxx) into the oblong hole.



11. Remove the cannulated compression handle (ANC669) by sliding it along the  $\emptyset$ 2.2 mm pin (33.0222.120).



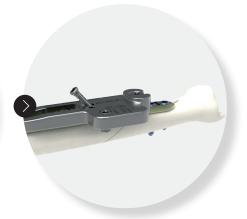
12. Into the most proximal hole, drill ( $\emptyset$ 2.7 mm) (ANC089C) using the  $\emptyset$ 2.7 mm guide gauge (ANC186). Measure the screw lengh directly on the threaded guide gauge (ANC186) or with the length gauge (ANC124).

Insert a Ø3.5 mm locking screw (SOT3.5Lxx) Remove the Ø2.2 mm pin (33.0222.120).

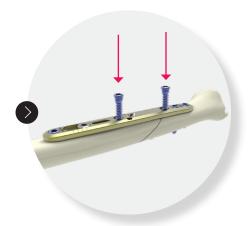


13. Position the  $\varnothing$ 2.0 mm non threaded guide gauge (ANC751) into the pre-angled (50°) hole of the block (ANC670/671), drill ( $\varnothing$ 2.0 mm) (ANC088) and directly read the drilling depth on the guide gauge (ANC751).

⚠ Ø2.7 mm drill **must not be used** into the pre-angled hole (ANC089C).



14. Insert a Ø2.8 mm non-locking screw (CT2.8Lxx) directly through the block using the appropriate screwdriver (ANC082).



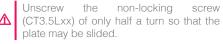
15. Remove the block and complete the procedure by inserting the last two Ø3.5 mm locking screws (SOT3.5Lxx) into the remaining locking holes using the technique described in the step 1 and 2.

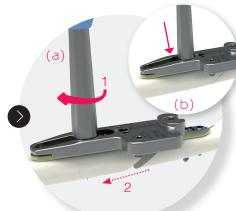


# SURGICAL TECHNIQUE OPTION 2: COMPRESSION LAG SCREW



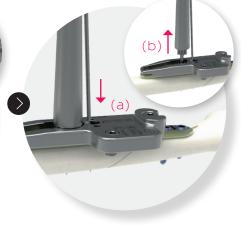






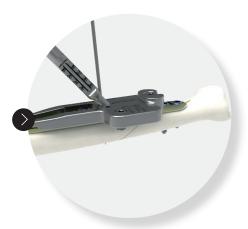
10.a. Rotate the cannulated handle to perform compression of the osteotomy site.

10.b. While maintaining the compression, tighten the Ø3.5 mm non-locking screw (CT3.5Lxx) into the oblong hole.



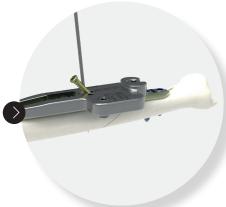
11.a. Insert a Ø1.6 mm pin (33.0216.100) into one of the appropriate side holes for stabilization of the assembly. Make sure to insert the pin into the proximal part of the pin hole in order to allow compression.

11.b. Then remove both the cannulated compression handle (ANC669) and the  $\emptyset$ 2.2 mm pin (33.0222.120).



12. Position the Ø2.0 mm non threaded guige gauge (ANC751) into the pre-angled (50°) hole of the block and perform the drilling (Ø2.0 mm) (ANC088). Read directly the drilling depth on the Ø2.0 mm non threaded guide gauge (ANC751).

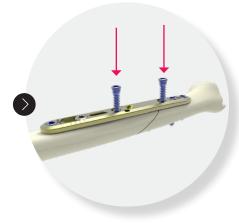
△ Ø2.7 mm drill **must not be used** into the preangled hole (ANC089C).



13. Insert a Ø2.8 mm lag screw (QBT2.8Lxx) directly through the block using the appropriate screwdriver (ANC082).



14. Remove the Ø1.6 mm pin and the block. Into the most proximal hole, drill (Ø2.7mm) (ANC089C) using the Ø2.7 mm threaded guige gauge (ANC186). Insert a Ø3.5 mm locking screw (SOT3.5Lxx) using the screwdriver part of the 2-in-1 instrument (ANC083C).



15. Complete the procedure by inserting the last two Ø3.5 mm locking screws (SOT3.5Lxx) into the remaining locking holes using the technique described in step 1 and 2.



## IMPLANTS REFERENCES

ALIANS ULNA PLATE 3/3		
Ref.	Description	
HTSIS2	Distal ulnar osteotomy plate - Symmetrical - Size 2	

A ROAD OF THE PARTY OF THE PART	Ø2.8 mm
	Non-locking SCREW*
Ref.	Description
CT2.8L16	Ø2.8 mm non-locking screw - L16 mm
CT2.8L18	Ø2.8 mm non-locking screw - L18 mm
CT2.8L20	Ø2.8 mm non-locking screw - L20 mm
CT2.8L22	Ø2.8 mm non-locking screw - L22 mm
CT2.8L24 * Non anodized.	Ø2.8 mm non-locking screw - L24 mm

	Ø2.8 mm LAG SCREW*
Ref.	Description
QBT2.8L18	Ø2.8 mm lag screw - L18 mm
QBT2.8L20	Ø2.8 mm lag screw - L20 mm
QBT2.8L22	Ø2.8 mm lag screw - L22 mm
QBT2.8L24	Ø2.8 mm lag screw - L24 mm

<sup>\*</sup> Yellow anodized.



*	Non	anodized.
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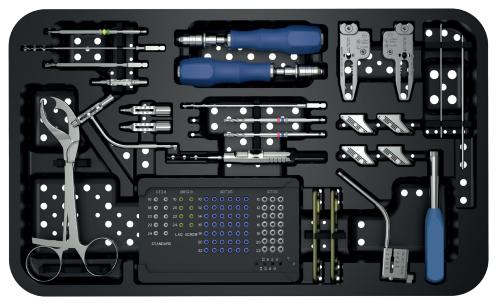
THE REAL PROPERTY.	
7	Ø3.5 mm
	LOCKING SCREW*
Ref.	Description
SOT3.5L10	Ø3.5 mm locking screw - L10 mm
SOT3.5L12	Ø3.5 mm locking screw - L12 mm
SOT3.5L14	Ø3.5 mm locking screw - L14 mm
SOT3.5L16	Ø3.5 mm locking screw - L16 mm
SOT3.5L18	Ø3.5 mm locking screw - L18 mm
SOT3.5L20	Ø3.5 mm locking screw - L20 mm
SOT3.5L22	Ø3.5 mm locking screw - L22 mm
* Blue anodized.	

#### Remark:

Please note that all implants are also available in sterile packaging. An 'ST' code is added at the end of the reference. e.g.  $\,$  CT3.5L10-ST  $\,$   $^{\rm y}$ 

# INSTRUMENT REFERENCES

ALIANS ULNA 3/3 INSTRUMENTS			
Ref.	Description	Qty	
ANC082	2.0 mm quick coupling hexagonal prehensor screwdriver	2	
ANC083C	2 in 1 : 2.5 mm hexagonal prehensor screwdriver - Ø3.5 mm countersink	2	
ANC084	Ø2.8 mm quick coupling countersink	1	
ANC088	Ø2.0 mm quick coupling drill bit – L125 mm	1	
ANC089C	Ø2.7 mm quick coupling drill bit - L125 mm	2	
ANC124	Length gauge for Ø3.5 mm screws	1	
ANC171/1	Ulna cutting guide 3 - 5 mm	1	
ANC171/2	Ulna cutting guide 2 - 4 - 6 mm	1	
ANC186	Ø2.7 mm threaded guide gauge for Ø3.5 mm screws	2	
ANC191	Ø2.7 mm non threaded bent guide gauge for Ø3.5 mm screws	1	
ANC349	15 cm verbrugge forceps	2	
ANC350	Ø4.5 mm AO quick coupling handle – Size 1	2	
ANC669	Ø2.6 mm cannulated handle for Ulna cutting guide	1	
ANC670	Left long block for Ulna plate	1	
ANC671	Right long block for Ulna plate	1	
ANC750	Ø2.7 mm non threaded bent guide gauge – Ø2.5 mm pin guide	1	
ANC751	Ø2.0 mm non threaded guide gauge for Ulna	1	
33.0216.100	Pin Ø1.6 L100	2	
33.0222.120	Pin Ø2.2 L120	2	



ANC796

#### REMOVAL KIT

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

- ANC103 for Ø2.8 mm screws
- ANC 107 for Ø3.5 mm screws
- ANC350: Ø4.5 mm AO quick coupling handle Size 1
- ANC351: Ø4.5 mm AO quick coupling handle Size 2