XPERT WRIST 2.4

VOLAR
PLATES

XPERT WRIST 2.4 - VOLAR PLATES

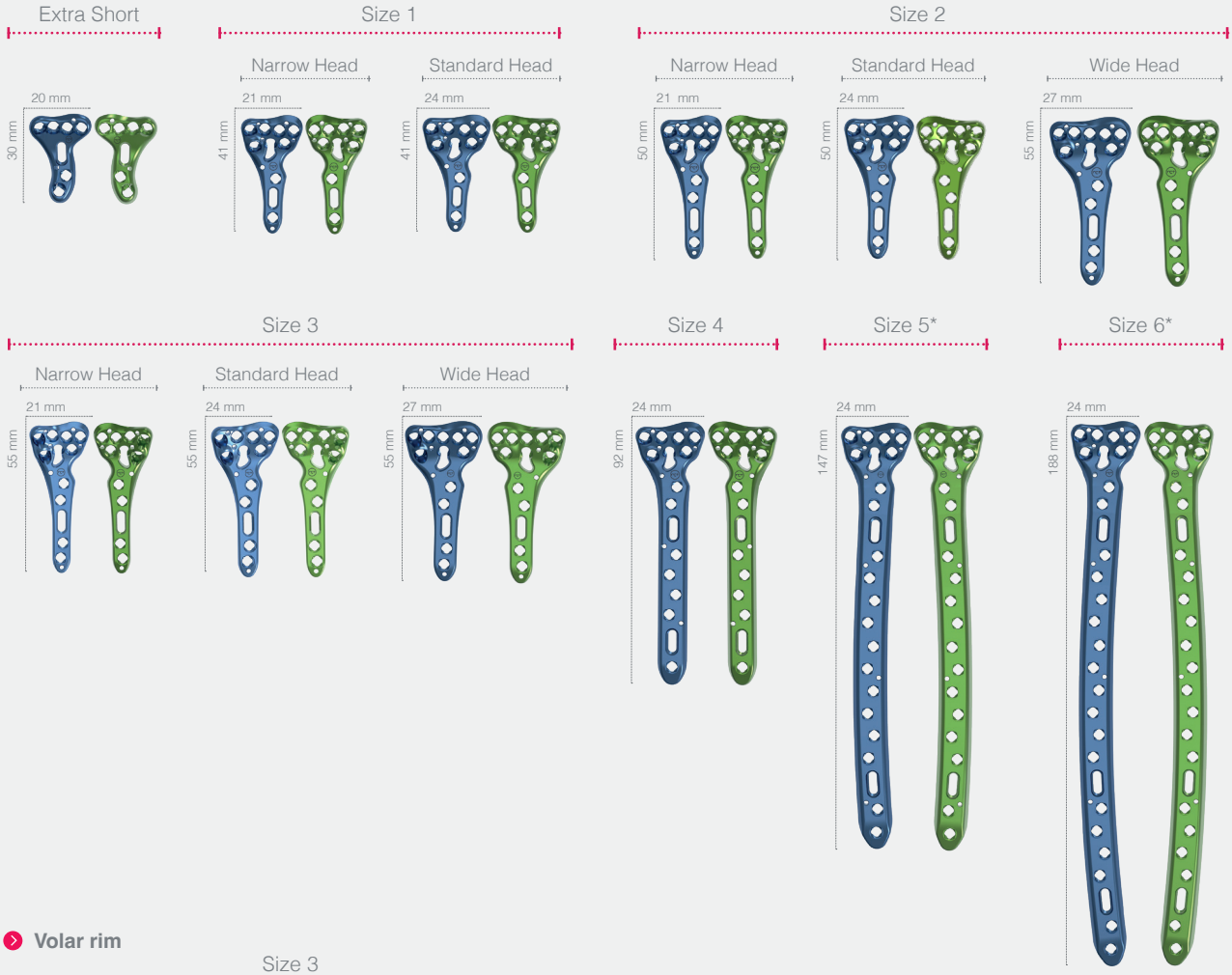
Intented purpose:
The implants of the Xpert Wrist range are intended for the fixation of hand and forearm fractures, osteotomies and arthrodeses in adults.

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

TECHNICAL FEATURES

A COMPREHENSIVE RANGE OF PLATES

Volar Plates



Volar rim

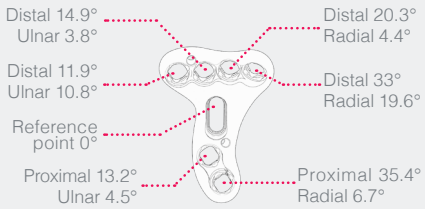
** Available only in a sterile version*

TECHNICAL FEATURES

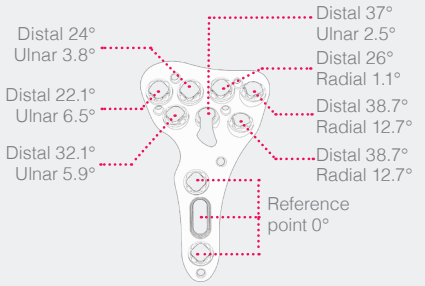
SIZES XS, 1, 2, 4, 5 & 6

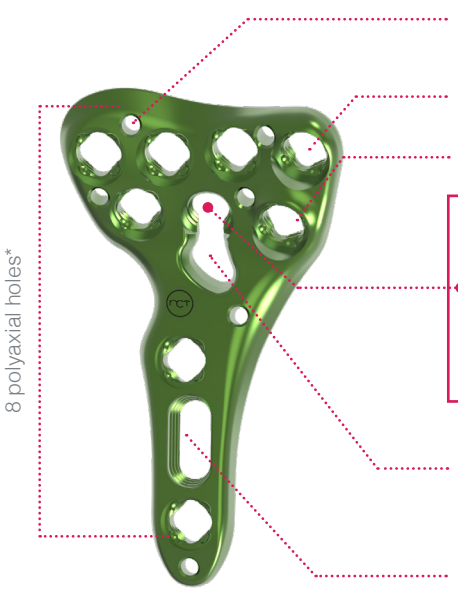
⚠ Dedicated instruments for mini invasive surgery (MIS) are available for narrow and standard plates, sizes XS and 1.

Pre-angled holes for extra-short (XS) plate



Pre-angled holes for narrow and standard plates sizes 1, 2, 4, 5 & 6





Ref: DTDVS1

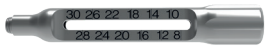
Hole for Ø1.4 mm pin insertion to locate the joint space

1st distal screws row to support the volar lip

2nd distal screws row to support the dorsal lip

Monoaxial fixation only using the threaded gauge (ANC694) for:

- Window's monoaxial locking hole.



ANC694

The window in the plate allows a better visualization of the fracture reduction or for a bone graft insertion

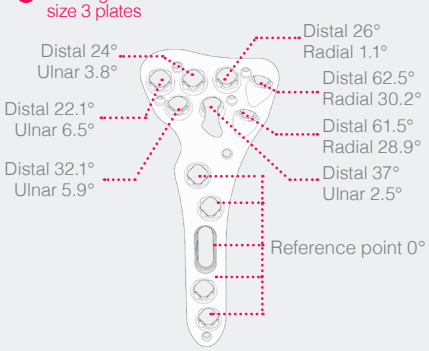
Locking oblong hole allows to adjust the plate positioning with a non-locking screw; in case of poor bone quality, a locking screw can be used to increase stability

*9 polyaxial holes for the plate size 2, 11 polyaxial holes for the wide plate size 2, 13 polyaxial holes for the plate size 4, 20 polyaxial holes for the plate size 5 & 24 polyaxial holes for the plate size 6.

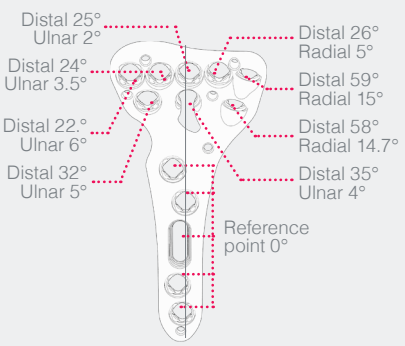
SIZE 3

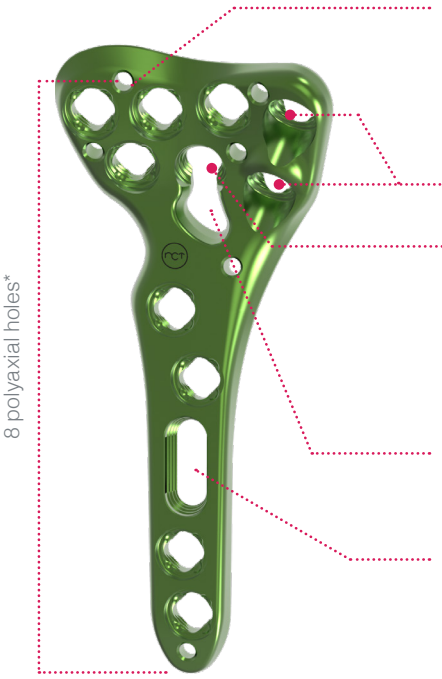
⚠ Plate dedicated to targetting the radial styloid tip.

Pre-angled holes for narrow and standard size 3 plates



Pre-angled holes for wide size 3 plates





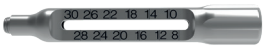
Ref: DTDVS3

*(9 polyaxial holes for the wide plate size 3)

Hole for Ø1.4 mm pin insertion to locate the joint space

Monoaxial fixation only using the threaded gauge (ANC694) for:

- 2 pre-angulated monoaxial locking holes targeting the radial styloid.
- Window's monoaxial locking hole.



ANC694

The window in the plate allows a better visualization of the fracture reduction or for a bone graft insertion

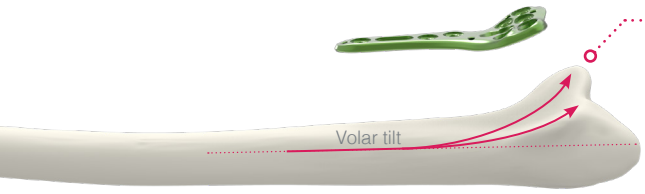
Locking oblong hole allows to adjust the plate positioning with a non-locking screw; in case of poor bone quality, a locking screw can be used to increase stability

TECHNICAL FEATURES

PLATE FEATURES

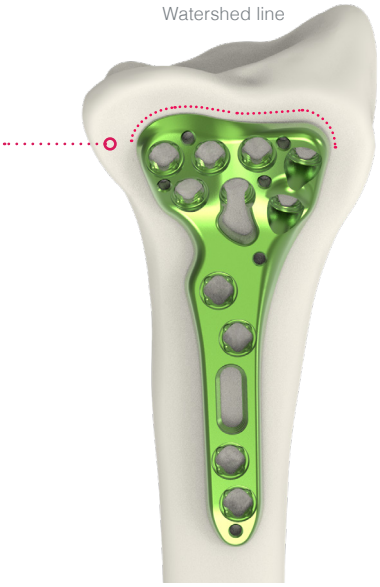
→ ANATOMICAL SHAPE

- **Precontoured plates** for an anatomical fit.
- **Various pin holes:** possibility of locating the joint space or to temporarily fix specific fragments.



Different medial and lateral radii of curvature for optimized volar tilt.

The distal edge of the plate runs alongside the watershed line



Ref: DTDVS3

→ VOLAR RIM PLATES

- **Precontoured plates** for anatomical fit
- **Lateral lip** allowing the plate positioning on the watershed line.

Lateral lip allowing the plate positioning on the watershed line

Ref: DETDVS1

Post-operative consideration

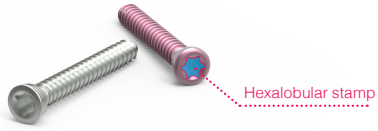
The plate positioning onto the watershed line may increase the risk of tendon injury. The surgeon should take this into consideration during subsequent follow-up of the patient. Plate removal post-healing is mandatory.

TECHNICAL FEATURES

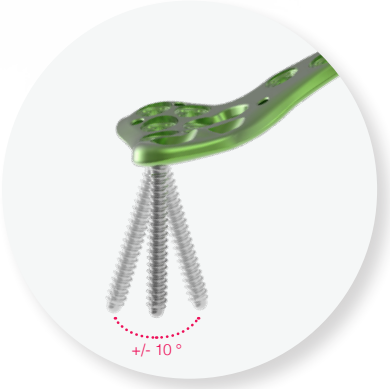
SCREW AND FIXATION FEATURES

→ POLYAXIAL AND MONOAXIAL LOCKING FIXATION

- **Ø2.4 mm screw diameter**
- **New patented polyaxial locking platform** +/-10°
- **Hexalobular screw head design**



⚠ 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.

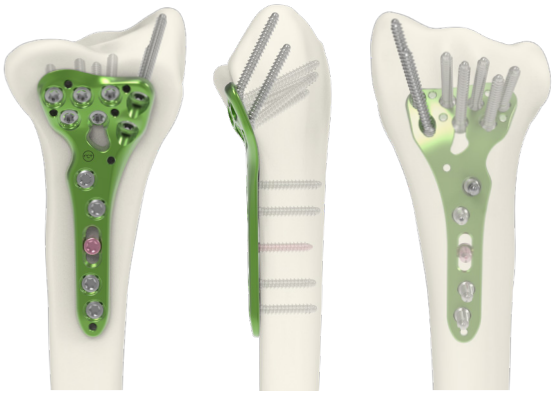


- Screw lengths from 8 to 30 mm
- Ø1.8 mm polyaxial **screw pegs**
- Ø2.4 mm monoaxial **cannulated screw pegs**

→ LOCKING OBLONG HOLE – Ø2.4 MM LOCKING AND NON LOCKING SCREWS

→ OPTIMIZED SCREW POSITIONING TO RESTORE BONE ANATOMY

- Screws targeting the tip of the radial styloid (only for the Ø2.4 mm size 3 plates (DTxNV3, DTxVS3 and DTxVW3).
- 2 rows of subchondral support:
  - > 1st row with 4 locking screws (5 for the DTxVW3) to support the volar lip,
  - > 2nd row with 3 locking screws to support the dorsal lip.



Ref: DTDVS3

DISTAL RADIUS VOLAR PLATE

Example with volar plate for distal radius - Size 3 (DTDVS3)

1. Position the plate on the volar aspect of the radius and below the watershed line. Align the diaphyseal position of the plate to the radial shaft.

Depending on the fracture pattern and the reduction technique, use a Ø1.4 mm pin (33.0214.120) inserted through one of the pin holes to temporary fix the plate or a bone fragment distally.
For the next steps the order of screws and pins insertion may vary depending on the reduction technique.

2. Position the Ø1.8 mm non-threaded bent guide gauge (ANC695) and perform the drilling (ANC696) into the oblong hole.

Option 1 - Determine the screw length using the gauge (ANC695).

Option 2 - Determine the screw length using the length gauge (ANC102).

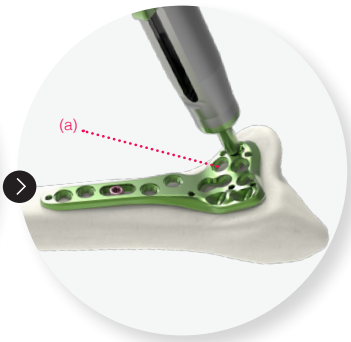
3. Insert a Ø2.4 mm non-locking screw (CT2.4Lxx) into the oblong hole to hold the plate. The final tightening of the screws must be performed by hand.

NB : In case of poor bone quality, insert a Ø2.4 mm locking screw (SDT2.4Lxx).

4. Insert a Ø1.4 L120 mm pin (33.0214.120) into the most distal hole for pin and check the joint space. Then, remove the pin.

If necessary, the position of the plate can be adjusted by loosening the non-locking screw (CT2.4Lxx) to the oblong hole and by sliding the plate. Then, tighten the non-locking screw (CT2.4Lxx).

The plate can be also provisionally stabilized with pins (33.0214.120).

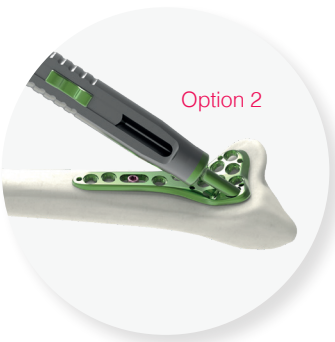


5a. Radioulnar screw positioning: variable-angle use

Insert the polyaxial drill guide (ANC687) into the radioulnar hole and drill using the Ø1.8 mm drill bit (ANC696).

Determine the screw length using the length gauge (ANC102) and insert a Ø2.4 mm locking screw (SDT2.4Lxx) using the screwdriver (ANC575). Proceed similarly with the proximal ulnar hole (a).

If the polyaxiality is not necessary, the use of the monoaxial technique is also possible with the threaded guide gauge (ANC694)



5b. Radial styloid screw positioning: fixed-angle use

The use of the threaded guide gauge (ANC694) is **compulsory** for the 2 styloid holes and the window's locking hole.

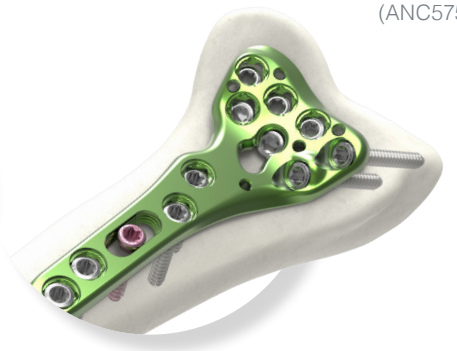
Insert the threaded guide gauge (ANC694) into the radial styloid locking holes and the window's locking hole, and drill using the drill bit (ANC696).

Option 1 - Determine the screw length using the guide gauge (ANC694).

Option 2 - Determine the screw length using the length gauge (ANC102).

Then, insert a Ø2.4 mm locking screw (SDT2.4Lxx) using the screwdriver (ANC575).

6. Proceed with the variable or fixed-angle solution for the remaining locking holes.

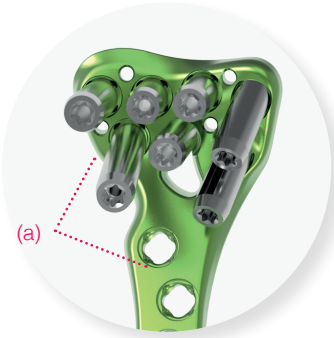


FINAL RESULT

⚠ The final tightening of the screws must be performed by hand.

DISTAL RADIUS VOLAR PLATE - ARTHROSCOPIC STEPWISE REDUCTION

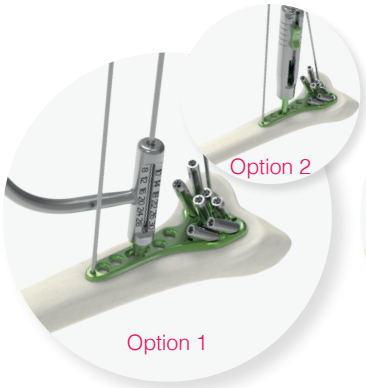
Example with volar plate for distal radius - Size 3 (DTDVS3))



1. Lock the two long pin guides (ANC1024) into the ulnar holes to spread the soft tissue (a) and five short pin guides (ANC1023) in the remaining holes.

2. Position the plate on the volar aspect of the radius and below the watershed line. Align the diaphyseal position of the plate with the radial shaft.

A proximal Ø1.4 mm pin (33.0214.120) is used to temporarily hold the proximal end of the plate centered on the radial shaft. A distal Ø1.4 mm pin may be used to hold the radio-ulnar position of the distal part of the ulnar plate. A fluoroscopy is then used to check the plate positioning. When acceptable, a screw is inserted through the oblong hole.



3. Position the Ø1.8 mm non-threaded bent guide gauge (ANC695) and perform the drilling (ANC696) into the oblong hole.

Option 1 - Determine the screw length using the guide gauge (ANC695).

Option 2 - Determine the screw length using the lenth gauge (ANC102).

4. Insert a Ø2.4 mm non-locking screw (CT2.4Lxx) into the oblong hole to hold the plate.

After the removal of the pins, the position of the plate can be adjusted by loosening the non-locking screw (CT2.4Lxx) in the oblong hole and by sliding the plate. Then, tighten the non-locking screw (CT2.4Lxx).

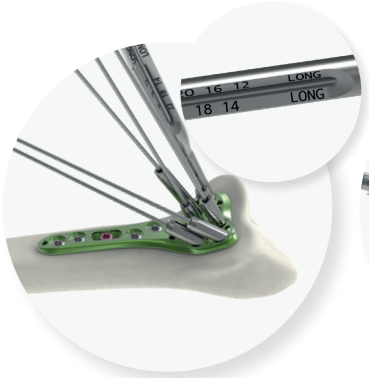
The final tightening of the screws must be performed by hand.

NB: In case of poor bone quality, insert a Ø2.4 mm locking screw (SDT2.4Lxx).

5. Use the variable- or fixed- angle technique (steps 5a or 5b on page 6) for the insertion of Ø2.4 mm locking screws (SDT2.4Lxx) in the remaining diaphyseal locking holes.

6. The reduction of the volar fragments is stabilized by inserting Ø1.2 mm (33.0212.120-MAR1) pins from 5 to 10 mm in depth. The dorsal fragments should remain free.

In traction, under arthroscopic control, the dorsal fragments are sequentially reduced then provisionally fixed by the appropriate pins.

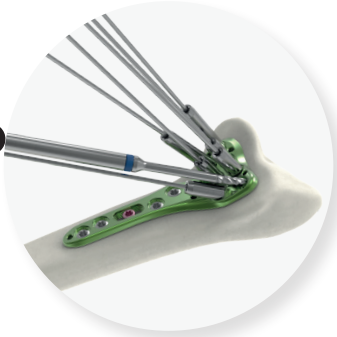


Long pin swapped for pegs

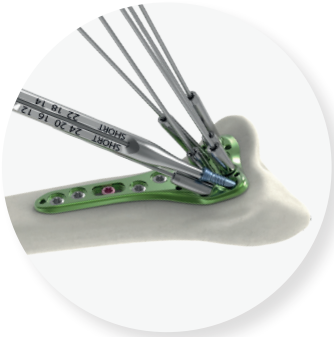
7a. Position the 2-in-1 instrument (ANC1025) over the pin into the head of the long pin guide. Using the «LONG» graduations, measure the length of the pin.

Short pin swapped for pegs

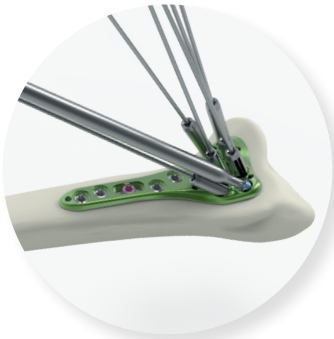
7b. Position the 2-in-1 instrument (ANC1025) over the pin into the head of the short pin guide. Using the «SHORT» graduations, measure the length of the pin.



8. Remove the short pin guide with the 2-in-1 instrument (ANC1025), and drill over the pin with the cannulated drill bit (ANC1026).



9. Insert a cannulated locking screw peg (H1.3BDT2.4Lxx) of the length previously determined with the 2-in-1 instrument until the head of the screw peg engages the plate. Remove the pin.



10. To finalize the screwing use the non-cannulated screwdriver (ANC575).

Repeat steps 7, 8 and 9 for the remaining holes, starting from the 1st row.

FINAL RESULT

⚠ The final tightening of the screws must be performed by hand.

EXTRA DISTAL RADIUS PLATE

Example with an extra-distal plate for distal radius - Narrow head (DETDVN1)

1. Position the plate on the watershed line using the lateral lip of the plate.
2. Drill (ANC696) using the threaded guide gauge (ANC694) or the non-threaded bent guide gauge (ANC695) into the oblong hole.

   Determine the screw length directly on the guide gauge (ANC694) or use the length gauge (ANC102).
3. Insert the Ø2.4 mm standard non-locking screw (CT2.4Lxx) using the screwdriver (ANC575).

OPTIONAL STEPS :

4. To ensure that the screws do not go into the joint, insert the pin (33.0214.120) into the radioulnar pin hole of the plate and verify its positioning by X-Ray.

   If necessary, remove the pin and readjust the plate positioning using the oblong hole.

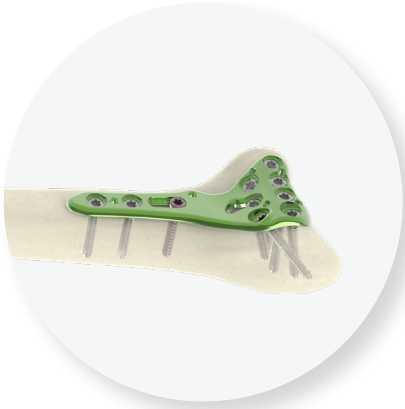
5. Lock the threaded guide gauge (ANC694) in the radioulnar locking hole.

   Determine the screw length directly on the guide gauge (ANC694) or use the length gauge (ANC102).

NB : It is possible to modify the angulation using the polyaxial drill guide (ANC687) and the drill (ANC696). Then measure the depth using the length gauge (ANC102).

6. Insert a Ø2.4 mm locking screw (SDT2.4Lxx) using the screwdriver (ANC575). The final tightening of the screws must be performed by hand.
7. Repeat the last 2 steps for the remaining locking screws (SDT2.4Lxx) going from the distal to the proximal part of the plate.

8. In order to support the distal part, proceed in the same way as steps 5 and 6 for the monoaxial hole in the window.



FINAL RESULT

⚠ The plate positioning onto the watershed line may increase the risk of tendon injury. Surgeon should take this into consideration during subsequent follow-up of the patient. Plate removal post–healing is mandatory.

IMPLANT REFERENCES

DISTAL RADIUS VOLAR RIM PLATES

Ref.	Description
DETGVN1 •	Distal radius plate - Volar rim - Narrow - Left - Size 1
DETDVN1 •	Distal radius plate - Volar rim - Narrow - Right - Size 1
DETGVS1 •	Distal radius plate - Volar rim - Standard - Left - Size 1
DETDVS1 •	Distal radius plate - Volar rim - Standard - Right - Size 1
DETGVW1 •	Distal radius plate - Volar rim - Wide - Left - Size 1
DETDVW1 •	Distal radius plate - Volar rim - Wide - Right - Size 1

DETGVN1 DETDVN1 DETGVS1 DETDVS1 DETGVW1 DETDVW1

DISTAL RADIUS VOLAR PLATES

Ref.	Description
DTGVNS1 •	Distal radius plate - Narrow - Extra short - Left - Size 1
DTDVNS1 •	Distal radius plate - Narrow - Extra short - Right - Size 1
DTGVN1 •	Distal radius plate - Narrow - Left - Size 1
DTDVN1 •	Distal radius plate - Narrow - Right - Size 1
DTGVS1 •	Distal radius plate - Standard - Left - Size 1
DTDVS1 •	Distal radius plate - Standard - Right - Size 1
DTGVN2 •	Distal radius plate - Narrow - Left - Size 2
DTDVN2 •	Distal radius plate - Narrow - Right - Size 2
DTGVS2 •	Distal radius plate - Standard - Left - Size 2
DTDVS2 •	Distal radius plate - Standard - Right - Size 2
DTGVW2 •	Distal radius plate - Wide - Left - Size 2
DTDVW2 •	Distal radius plate - Wide - Right - Size 2
DTGVN3 •	Distal radius plate - Narrow - Left - Size 3
DTDVN3 •	Distal radius plate - Narrow - Right - Size 3
DTGVS3 •	Distal radius plate - Standard - Left - Size 3
DTDVS3 •	Distal radius plate - Standard - Right - Size 3
DTGVW3 •	Distal radius plate - Wide - Left - Size 3
DTDVW3 •	Distal radius plate - Wide - Right - Size 3
DTGVS4 •	Distal radius plate - Standard - Left - Size 4
DTDVS4 •	Distal radius plate - Standard - Right - Size 4
DTGVS5-ST	Distal radius plate - Standard - Left - Size 5 - STERILE
DTDVS5-ST	Distal radius plate - Standard - Right - Size 5 - STERILE
DTGVS6-ST	Distal radius plate - Standard - Left - Size 6 - STERILE
DTDVS6-ST	Distal radius plate - Standard - Right - Size 6 - STERILE

• Available in an Initial R Xpert 2.4 single use kit (see below for more information)

DTGVNS1 DTDVNS1 DTGVN1 DTDVN1 DTGVS1 DTDVS1
DTGVN2 DTDVN2 DTGVS2 DTDVS2 DTGVW2 DTDVW2
DTGVN3 DTDVN3 DTGVS3 DTDVS3 DTGVW3 DTDVW3
DTGVS4 DTDVS4 DTGVS5 DTDVS5 DTGVS6 DTDVS6

Initial R™ XPERT 2.4 single use kit

Newclip Technics also offers a single use sterile solution to treat hand and forearm fractures, osteotomies and arthrodeses: **Initial R™ Xpert 2.4**.

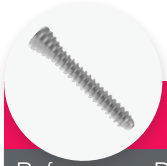
These kits are a range of single use kits with ready to use instruments and implants.

For more information, please refer to the Inital R Xpert 2.4 brochure.

Please contact your NEWCLIP TECHNICS representative if you have questions about the availability of NEWCLIP TECHNICS products in your area.

IMPLANT REFERENCES

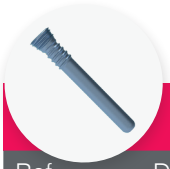
→ Ø2.4 MM SCREWS



Ø2.4 MM LOCKING SCREWS*

Ref.	Description
SDT2.4L08	Ø2.4 mm locking screw - L08 mm
SDT2.4L10	Ø2.4 mm locking screw - L10 mm
SDT2.4L12	Ø2.4 mm locking screw - L12 mm
SDT2.4L14	Ø2.4 mm locking screw - L14 mm
SDT2.4L16	Ø2.4 mm locking screw - L16 mm
SDT2.4L18	Ø2.4 mm locking screw - L18mm
SDT2.4L20	Ø2.4 mm locking screw - L20 mm
SDT2.4L22	Ø2.4 mm locking screw - L22 mm
SDT2.4L24	Ø2.4 mm locking screw - L24 mm
SDT2.4L26	Ø2.4 mm locking screw - L26mm
SDT2.4L28	Ø2.4 mm locking screw - L28 mm
SDT2.4L30	Ø2.4 mm locking screw - L30 mm

* Non anodized



Ø2.4 MM LOCKING CANNULATED SCREW PEGS*

Ref.	Description
H1.3BDT2.4L14	Ø2.4 mm locking screw peg - cannula Ø1.3 - L14 mm
H1.3BDT2.4L16	Ø2.4 mm locking screw peg - cannula Ø1.3 - L16 mm
H1.3BDT2.4L18	Ø2.4 mm locking screw peg - cannula Ø1.3 - L18 mm
H1.3BDT2.4L20	Ø2.4 mm locking screw peg - cannula Ø1.3 - L20 mm
H1.3BDT2.4L22	Ø2.4 mm locking screw peg - cannula Ø1.3 - L22 mm
H1.3BDT2.4L24	Ø2.4 mm locking screw peg - cannula Ø1.3 - L24 mm
H1.3BDT2.4L26	Ø2.4 mm locking screw peg - cannula Ø1.3 - L26 mm
H1.3BDT2.4L28	Ø2.4 mm locking screw peg - cannula Ø1.3 - L28 mm
H1.3BDT2.4L30	Ø2.4 mm locking screw peg - cannula Ø1.3 - L30 mm

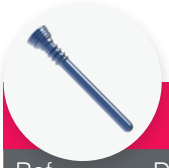
* Light blue anodized

Ø2.4 MM NON-LOCKING SCREWS*

Ref.	Description
CT2.4L08	Ø2.4 mm non-locking screw - L08 mm
CT2.4L10	Ø2.4 mm non-locking screw - L10 mm
CT2.4L12	Ø2.4 mm non-locking screw - L12 mm
CT2.4L14	Ø2.4 mm non-locking screw - L14 mm
CT2.4L16	Ø2.4 mm non-locking screw - L16 mm
CT2.4L18	Ø2.4 mm non-locking screw - L18 mm
CT2.4L20	Ø2.4 mm non-locking screw - L20 mm
CT2.4L22	Ø2.4 mm non-locking screw - L22 mm
CT2.4L24	Ø2.4 mm non-locking screw - L24 mm
CT2.4L26	Ø2.4 mm non-locking screw - L26 mm
CT2.4L28	Ø2.4 mm non-locking screw - L28 mm
CT2.4L30	Ø2.4 mm non-locking screw - L30 mm

* Pink anodized

→ Ø1.8 MM SCREWS



Ø1.8 MM LOCKING SCREW PEGS*

Ref.	Description
BDT1.8L14	Ø1.8 mm locking screw peg - L14 mm
BDT1.8L16	Ø1.8 mm locking screw peg - L16 mm
BDT1.8L18	Ø1.8 mm locking screw peg - L18 mm
BDT1.8L20	Ø1.8 mm locking screw peg - L20 mm
BDT1.8L22	Ø1.8 mm locking screw peg - L22 mm
BDT1.8L24	Ø1.8 mm locking screw peg - L24 mm
BDT1.8L26	Ø1.8 mm locking screw peg - L26 mm

* Blue anodized

Remark:
All implants are also available in a sterile version.
An «-ST» is added to the end of the reference.
Ex: «SDT2.4L08-ST»

INSTRUMENT REFERENCES

MADE IN FRANCE

INSTRUMENTS		
Ref.	Description	Qty
ANC102	Length gauge for Ø2.8 mm screws	1
ANC350	Ø4.5 mm AO quick coupling handle - Size 1	2
ANC503	150 mm reduction forceps	1
ANC504	150 mm pointed reduction forceps	1
ANC575	T8 quick coupling screwdriver	2
ANC687	Polyaxial drill guide - SDT2.4 hole	2
ANC694	Ø1.8 mm threaded guide gauge for Ø2.4 mm screws	2
ANC695	Ø1.8 mm non threaded bent guide gauge for Ø2.4 mm screws	1
ANC696	Ø1.8 mm quick coupling drill bit - L125 mm	2
ANC904** •	MIS distal guide for distal radius plate - Narrow - Left	1
ANC905** •	MIS distal guide for distal radius - Narrow head - Right	1
ANC906** •	MIS distal guide for distal radius - Standard head - Left	1
ANC907** •	MIS distal guide for distal radius - Standard head - Right	1
ANC1061 ** •	MIS distal guide for distal radius - Extra short - Right	1
ANC1062** •	MIS distal guide for distal radius - Extra short - Left	1
ANC908** •	Ø1.8 mm non threaded guide gauge	1
ANC909** •	Ø1.8 mm threaded guide gauge for Ø2.4 mm screws - MIS	2
ANC910** •	T8 screwdriver with AO quick coupling system	1
ANC1023** •	Ø1.2 mm short pin guide for distal radius arthroscopy	6
ANC1024** •	Ø1.2 mm long pin guide for distal radius arthroscopy	4
ANC1025** ** •	2 in 1 instrument : T8 screwdriver Ø1.3 mm cannulated - Guide gauge	1
ANC1026** •	Ø2.45 mm quick coupling drill bit - cannula Ø1.3 mm	1
ANC1105	Plate holding forceps	1
33.0212.120-MAR1 •	Pin Ø1.2 - L120 mm	8
33.0214.120	Pin Ø1.4 - L120 mm	5
33.0218.080 •	Pin Ø1.8 - L80 mm	4

** Available on demand
• Minimally Invasive Surgery
• Arthroscopic dedicated instruments

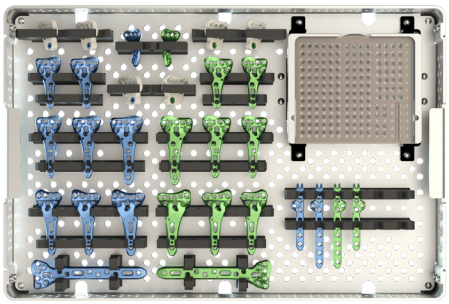
REMOVAL KIT

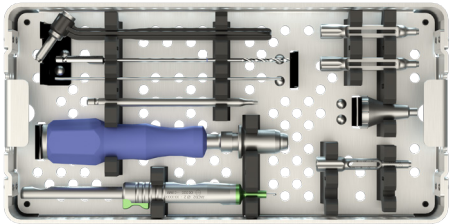
If you have to remove XPERT WRIST 2.4 implants, make sure to order the **Newclip Technics** removal set, which includes the following instruments:

- ANC575: T8 quick coupling screwdriver
- ANC350: Ø4.5 mm AO quick coupling handle - Size 1
- KIT-REMOVE-2: sterile T8 prehensor screwdriver for Initial R Xpert kit.

BENDING PLIERS

The bending pliers must not be used with the XPERT WRIST 2.4 - VOLAR PLATE RANGE





newcliptechnics.com