



NEWCLIP
TECHNICS



PSI XPERT WRIST 2.4

DISTAL RADIUS OSTEOTOMY USING
PATIENT SPECIFIC CUTTING GUIDE

PSI XPERT WRIST 2.4

Indications: The implants of the Xpert Wrist 2.' range are intended for hand and forearm fractures, osteotomies and arthrodeses in adults.

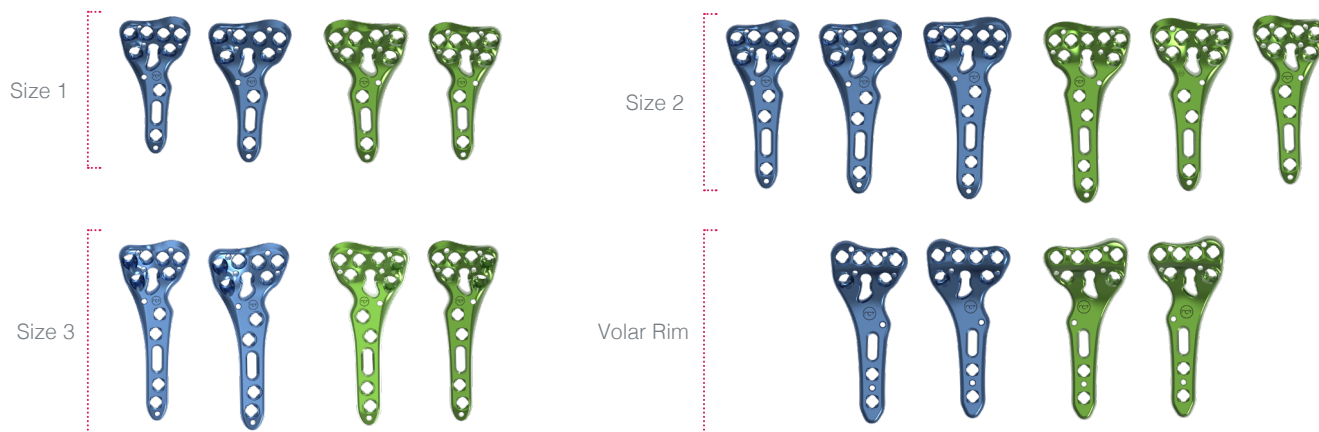
Contraindications:

- 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 good 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.

PLATES FOR DISTAL RADIUS OSTEOTOMIES

Comprehensive range of plates : 9 volar plates (including 3 sizes, 3 widths and 2 dedicated volar rim plates) and 6 fragment specific plates, for right (green plates) and left (blue plates) sides, offering a versatile solutions.

→ VOLAR PLATES

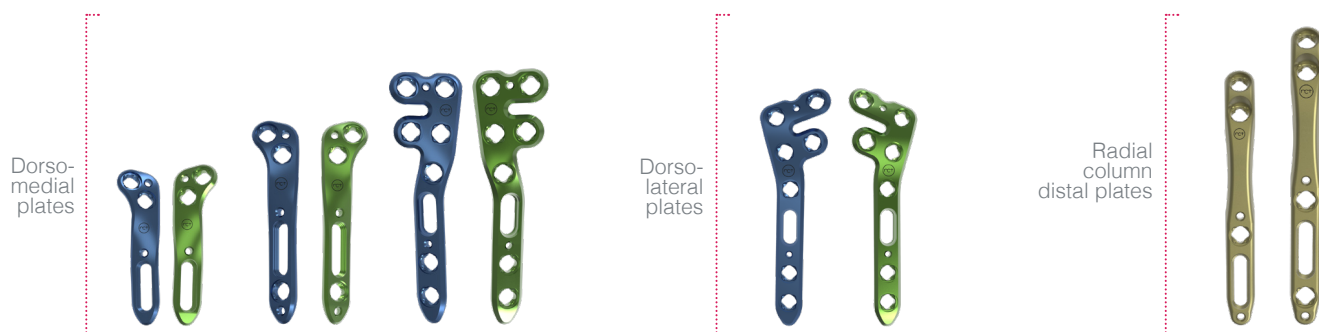


Available in the Initial R™ XPERT 2.4 single use kit

Newclip Technics also offers a single use sterile solution to treat hand and forearm fractures, osteotomies and arthrodeses: Initial R™ Xpert. These kits are a range of single use kits with instrumentation and implants ready to use.

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

→ FRAGMENT SPECIFIC PLATES



TECHNICAL FEATURES

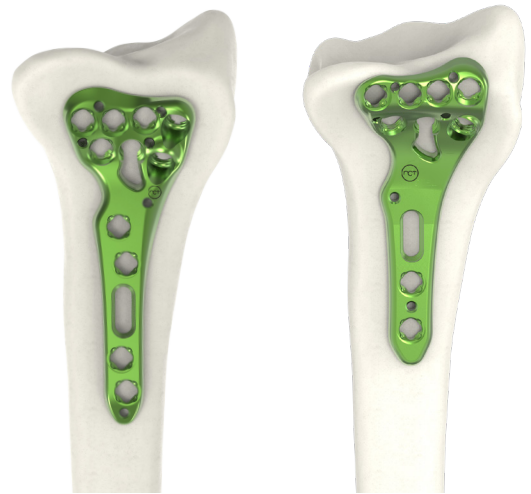
PLATE FEATURES

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.

- **Precontoured plates** for a distal anatomical fit
- **Low overall profile height and chamfered plate contour** to reduce tendons and soft tissues irritation.
- **Various pin holes possibilities:** to locate the joint space or to temporarily fix specific fragments
- **Multiple points of fixation** and the ability to reach small fragments (dorsal lip comminution), allowing to treat highly comminutive fractures.

Post-operative consideration for Volar Rim plates (DETxDVx1):

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.



Ref : DTDVS3

Ref : DETDVS1

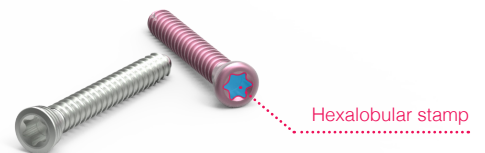
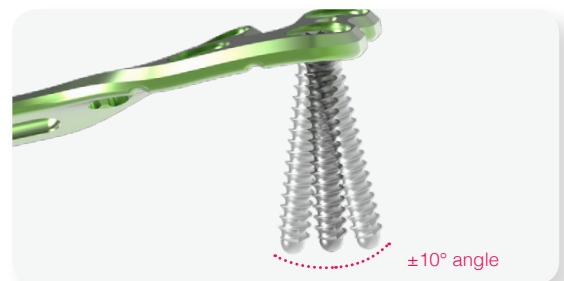
For more information about each plate and design, please refer to Newclip Technics **Xpert 2.4 brochure**

SCREW AND FIXATION FEATURES

- **A single screw diameter** for intra-operative simplicity.
- **Pre-angled holes** for optimized screw placement thanks to the use of the threaded guide gauge (ANC694).
- **New patented polyaxial platform $\pm 10^\circ$.**
- **Hexalobular screw head design** (improved torque transmission - optimized pick and stick).
- Optimized **screw head protuberance limiting** soft tissue irritation.

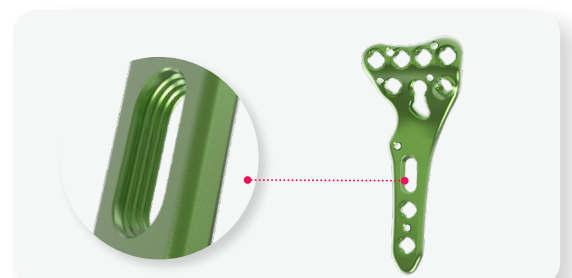


When using the polyaxial drill guide, make sure that the guide is locked in the axis of the hole to avoid over angulation of the drilling, resulting in a failure of the locking mechanism.



- **Atraumatic tip** preventing soft tissue irritation.
- Screw lengths from 8 to 30 mm.
- $\varnothing 1.8$ mm polyaxial **screw pegs**.
- **Locking oblong hole:** based on the surgical technique, cortical screws can be used either to finalize the reduction by creating compression or to stabilize the plate.

In case of poor bone quality, the use of a locking screw can increase the stability.



TECHNICAL FEATURES

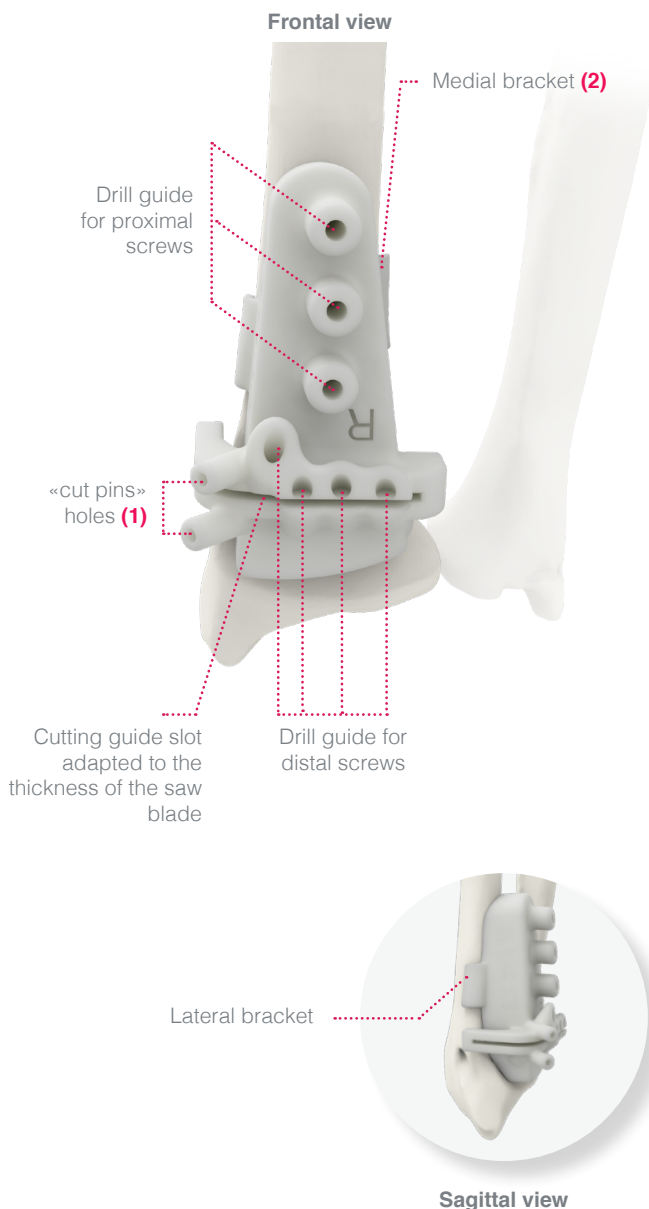
PATIENT SPECIFIC INSTRUMENT – STEP BY STEP

The patient specific cutting guide for distal radius is based on the patient's CT scan and offers a correction into the frontal, sagittal and transversal planes

→ TECHNICAL FEATURES

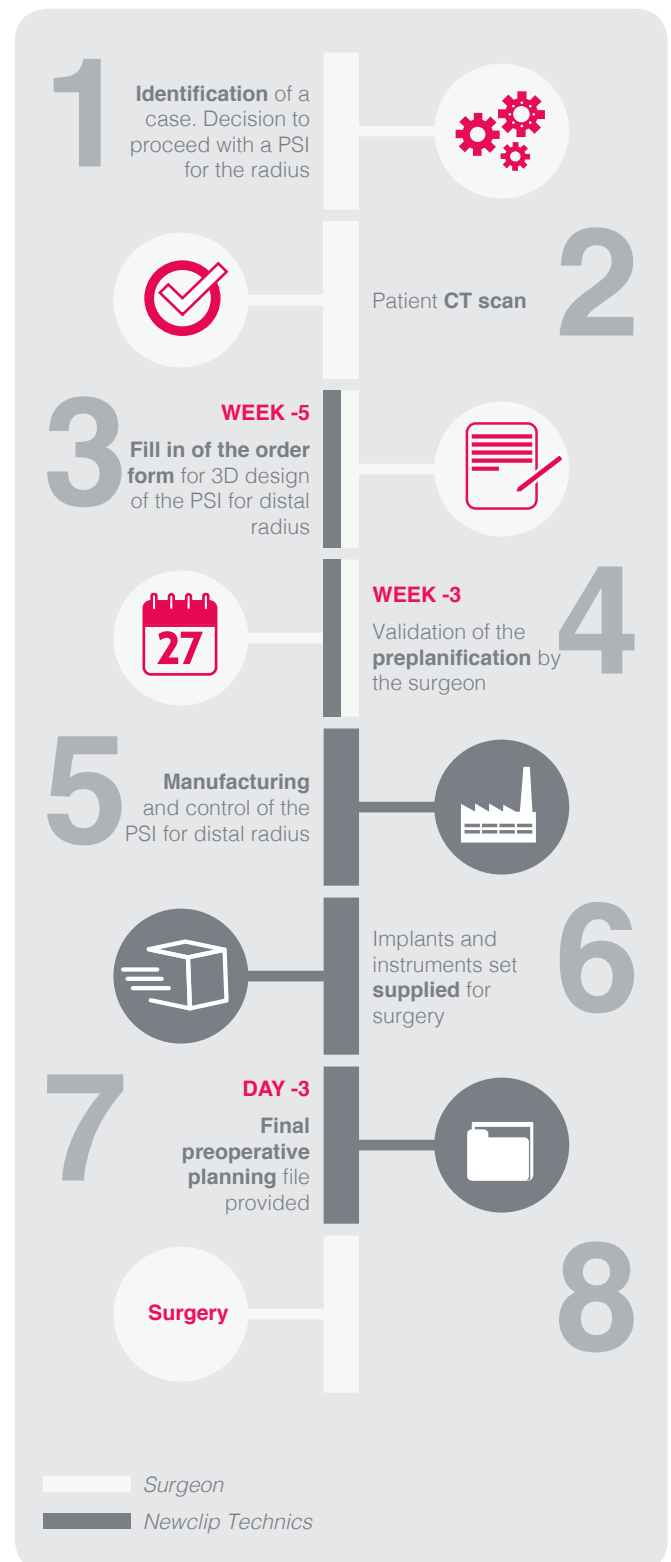
One single use patient specific instrument for each Xpert wrist 2.4 plate.

Also available with the Initial R Xpert kits.



1. The « Cut pins » going through this hole allows to check:
 - The **direction** of the osteotomy cut,
 - The **PSI positioning** (compliant with the planification file).
2. **Brackets** congruent with the surface of the radius for an accurate positioning.

→ PROCESS



SURGICAL TECHNIQUE

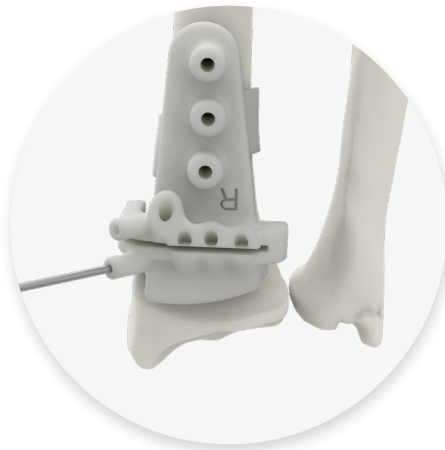
PSI POSITIONING

Example: PSI with DTDVN2 plate



1. Guide positioning

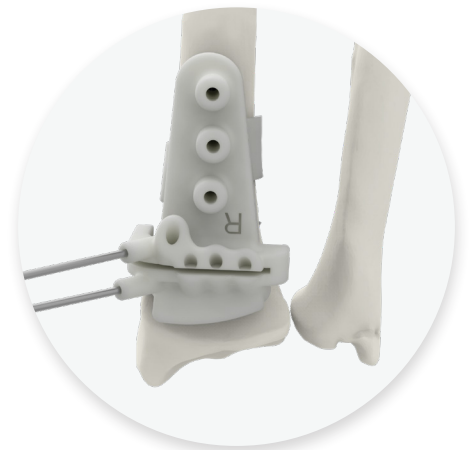
Position the anatomical cutting guide on the palmar face of the radius using the congruence of the guide and the medial and lateral brackets.



2. Distal "cut pin" insertion

Hold the PSI against the bone by keeping pressure on it. Insert a **Ø1.2 mm pin** (33.0212.120) in the distal "cut pin" hole.

To check the insertion depth, measure the part of the pin remaining out of the pin hole. Compare the value with the one mentioned in the planning file.

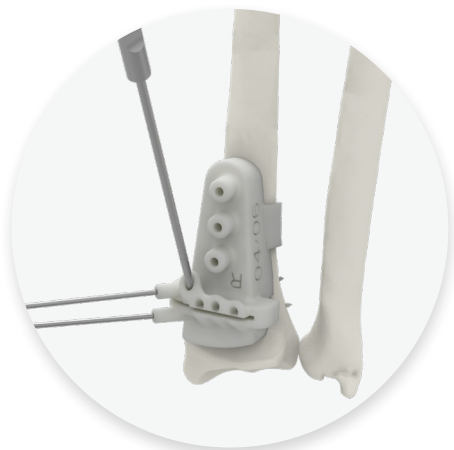


3. Proximal "cut pin" insertion

Insert the second **Ø1.2 mm pin** (33.0212.120) in the proximal "cut pin" hole.

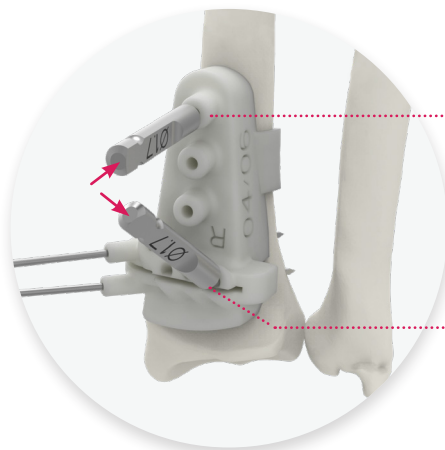
To check the insertion depth, measure the part of the pin remaining out of the pin hole. Compare the value with the one mentioned in the planning file.

Check the positioning of the PSI by x-rays.



4. Drill the holes

Once the guide fixed, drill in a bicortical manner (ANC696) through the 7 holes of the guide.



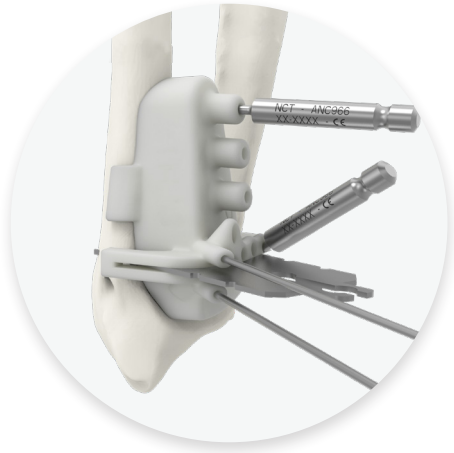
5. Fixation pins insertion

Insert at least two fixation pins L30 mm (ANC966) in the most proximal and most distal holes of the guide using a hammer.

SURGICAL TECHNIQUE

CUTTING

Example: PSI with DTDVN2 plate



6. Perform the cut

Insert the sawblade in the cutting guide slot and perform the cut. Then, remove the saw.



7. Remove the guide

Remove the fixation pins L30 mm (ANC966), the "cut pins" (33.0212.120) and the guide (ANC968).

The osteotomy cut must be total. The cut can be finished with an osteotome.



8a. Perform the opening

The choice of the technique is made according to surgeon's preference and can be performed using the opening wedge osteotomy instrument (ANC642) and Ø2.0 mm pins (33.0220.120).

Then, insert the wedge (ANC956).



8b. Perform the opening (following on)

Position the plate and make sure that the holes previously drilled are in front of the holes of the plate.

The plane opening is reached when the holes previously drilled and the plate holes are facing each other.

SURGICAL TECHNIQUE

PLATE FIXATION

Example: PSI with DTDVN2 plate



9. Graft and plate positioning

Remove the wedge and position the graft previously cut. Again, position the plate and insert 2 fixation pins L15 mm (ANC967) in the distal holes of the plate and 1 fixation pin L15 mm (ANC967) in the most proximal hole.



10. Plate locking

Press the plate against the bone and insert a Ø2.4 mm standard cortical screw (CT2.4Lxx) into the oblong hole using the screwdriver (ANC575). And insert a Ø2.4mm locking screw (SDT2.4Lxx) in the distal part.



11. Drill the remaining holes

Perform the drilling of the remaining holes using the threaded guide gauge (ANC694) and the Ø1.8 mm drill bit (ANC696).



12. Finalize the assembly

Finalize the assembly by inserting the remaining Ø2.4 mm locking screws (SDT2.4Lxx).

Proceed by inserting alternatively proximal and distal screws getting further and further away from the osteotomy site.

Each pin must only be removed right before inserting a screw in it place.



IMPLANT REFERENCES

DISTAL RADIUS VOLAR PLATES

Ref.	Description
DTGVN1	2.4 Polyaxial plate for distal radius - Narrow head - Size 1 - Left
DTDVN1	2.4 Polyaxial plate for distal radius - Narrow head - Size 1 - Right
DTGVS1	2.4 Polyaxial plate for distal radius - Standard head - Size 1 - Left
DTDVS1	2.4 Polyaxial plate for distal radius - Standard head - Size 1 - Right
DTGVN2	2.4 Polyaxial plate for distal radius - Narrow head - Size 2 - Left
DTDVN2	2.4 Polyaxial plate for distal radius - Narrow head - Size 2 - Right
DTGVS2	2.4 Polyaxial plate for distal radius - Standard head - Size 2 - Left
DTDVS2	2.4 Polyaxial plate for distal radius - Standard head - Size 2 - Right
DTGVW2	2.4 Polyaxial plate for distal radius - Wide head - Size 2 - Left
DTDVW2	2.4 Polyaxial plate for distal radius - Wide head - Size 2 - Right
DTGVN3	2.4 Hybrid plate for distal radius - Narrow head - Size 3 - Left
DTDVN3	2.4 Hybrid plate for distal radius - Narrow head - Size 3 - Right
DTGVS3	2.4 Hybrid plate for distal radius - Standard head - Size 3 - Left
DTDVS3	2.4 Hybrid plate for distal radius - Standard head - Size 3 - Right
DETVN1	Extra distal plate for distal radius - Narrow head - Size 1 - Left
DETDVN1	Extra distal plate for distal radius - Narrow - Size 1 - Right
DETVS1	Extra distal plate for distal radius - Standard head - Size 1 - Left
DETDVS1	Extra distal plate for distal radius - Standard head - Size 1 - Right



DORSO-MEDIAL PLATES

Ref.	Description
DTGRNS1	Dorso-medial plate for distal radius - Extra narrow head - Size 1 - Left
DTDRNS1	Dorso-medial plate for distal radius - Extra narrow head - Size 1 - Right
DTGRNS2	Dorso-medial plate for distal radius - Extra narrow head - Size 2 - Left
DTDRNS2	Dorso-medial plate for distal radius - Extra narrow head - Size 2 - Right
DTGR2	Dorso-medial plate for distal radius - Size 2 - Left
DTDR2	Dorso-medial plate for distal radius - Size 2 - Right



IMPLANT REFERENCES

DORSO-LATERAL PLATES

Ref.	Description
DTGQ2	Dorso-lateral plate for distal radius - Size 2 - Left
DTDQ2	Dorso-lateral plate for distal radius - Size 2 - Right



DTGQ2 DTDQ2

RADIAL COLUMN PLATES

Ref.	Description
DETSL1	Radial column distal plate - Symmetrical - Size 1
DETSL2	Radial column distal plate - Symmetrical - Size 2



DETSL1 DETSL2



LOCKING SCREWS *

Ø2.4 mm

Ref.	Description
SDT2.4L08	Locking screw with conical head - Ø2.4 mm - L 08 mm
SDT2.4L10	Locking screw with conical head - Ø2.4 mm - L 10 mm
SDT2.4L12	Locking screw with conical head - Ø2.4 mm - L 12 mm
SDT2.4L14	Locking screw with conical head - Ø2.4 mm - L 14 mm
SDT2.4L16	Locking screw with conical head - Ø2.4 mm - L 16 mm
SDT2.4L18	Locking screw with conical head - Ø2.4 mm - L 18 mm
SDT2.4L20	Locking screw with conical head - Ø2.4 mm - L 20 mm
SDT2.4L22	Locking screw with conical head - Ø2.4 mm - L 22 mm
SDT2.4L24	Locking screw with conical head - Ø2.4 mm - L 24 mm
SDT2.4L26	Locking screw with conical head - Ø2.4 mm - L 26 mm
SDT2.4L28	Locking screw with conical head - Ø2.4 mm - L 28 mm
SDT2.4L30	Locking screw with conical head - Ø2.4 mm - L 30 mm

* Non anodized



CORTICAL SCREWS *

Ø2.4 mm

Ref.	Description
CT2.4L08	Standard cortical screw - Ø2.4 mm - L 08 mm
CT2.4L10	Standard cortical screw - Ø2.4 mm - L 10 mm
CT2.4L12	Standard cortical screw - Ø2.4 mm - L 12 mm
CT2.4L14	Standard cortical screw - Ø2.4 mm - L 14 mm
CT2.4L16	Standard cortical screw - Ø2.4 mm - L 16 mm
CT2.4L18	Standard cortical screw - Ø2.4 mm - L 18 mm
CT2.4L20	Standard cortical screw - Ø2.4 mm - L 20 mm
CT2.4L22	Standard cortical screw - Ø2.4 mm - L 22 mm
CT2.4L24	Standard cortical screw - Ø2.4 mm - L 24 mm
CT2.4L26	Standard cortical screw - Ø2.4 mm - L 26 mm
CT2.4L28	Standard cortical screw - Ø2.4 mm - L 28 mm
CT2.4L30	Standard cortical screw - Ø2.4 mm - L 30 mm

*Pink anodized



LOCKING SCREW PEG *

Ø1.8 mm

Ref.	Description
BDT1.8L14	Locking screw peg - Ø1.8 mm - L 14 mm
BDT1.8L16	Locking screw peg - Ø1.8 mm - L 16 mm
BDT1.8L18	Locking screw peg - Ø1.8 mm - L 18 mm
BDT1.8L20	Locking screw peg - Ø1.8 mm - L 20 mm
BDT1.8L22	Locking screw peg - Ø1.8 mm - L 22 mm
BDT1.8L24	Locking screw peg - Ø1.8 mm - L 24 mm
BDT1.8L26	Locking screw peg - Ø1.8 mm - L 26 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. « SDT2.4L10-ST ».

INSTRUMENT REFERENCES

SPECIFIC INSTRUMENTS		
Ref.	Description	Qty
ANC642	Opening wedge osteotomy instrument	1
ANC967	Ø1.7 mm pin - L 15 mm	4
ANC966	Ø1.7 mm pin - L 30 mm	4
ANC956	Patient specific wedge for upper limb	1
33.0212.120	Pin Ø1.2 mm L 120 mm	3
33.0220.120	Pin Ø2.0 mm L 120 mm	4

PATIENT SPECIFIC CUTTING GUIDE INSTRUMENTS *		
Ref.	Description	Qty
ANC864	Patient Specific Cutting guide for distal radius osteotomy - Radial column plates	2
ANC968	Patient Specific Cutting guide for distal radius osteotomy - 2.4 Palmar Plates	2
ANC993	Patient Specific Cutting guide for distal radius osteotomy - Dorso-medial plate	2
ANC994	Patient Specific Cutting guide for distal radius osteotomy - Dorso-lateral plate	2

* The set will contain one of these four Patient Specific Cutting guides according to the plate chosen by the surgeon.

According to your needs, Newclip Technics offers the standard kit or the single use Initial R™ Xpert Kit.

For more information on both of these kits, please refer to our Xpert Wrist 2.4 and Initial R Xpert brochures.

XPERT WRIST 2.4 INSTRUMENTS		
Ref.	Description	Qty
ANC102	Length gauge	1
ANC350	Ø4.5 mm AO quick coupling handle - Size 1	1
ANC503	150 mm reduction forceps	1
ANC575	T8 quick coupling screwdriver	2
ANC578 *	Bending pliers	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 - L 125 mm	2
TD-111401-1.0NM-B	Ø4.5 mm AO quick coupling handle with torque Driver 1Nm	1

* BENDING PLIERS

Bending is not recommended when using PSI cutting guide except when specified in the preoperative planing file.

INITIAL R™ XPERT KITS	
Ref.	Description
KIT-XN1D	Distal radius kit - Narrow head - Size 1 - Right
KIT-XN1G	Distal radius kit - Narrow head - Size 1 - Left
KIT-XN2D	Distal radius kit - Narrow head - Size 2 - Right
KIT-XN2G	Distal radius kit - Narrow head - Size 2 - Left
KIT-XN3D	Distal radius kit - Narrow head - Size 3 - Right
KIT-XN3G	Distal radius kit - Narrow head - Size 3 - Left
KIT-XES1D	Distal radius kit - Extra distal - Standard head - Size 1 - Right
KIT-XES1G	Distal radius kit - Extra distal - Standard head - Size 1 - Left
KIT-XS1D	Distal radius kit - Standard head - Size 1 - Right
KIT-XS1G	Distal radius kit - Standard head - Size 1 - Left
KIT-XS2D	Distal radius kit - Standard head - Size 2 - Right
KIT-XS2G	Distal radius kit - Standard head - Size 2 - Left
KIT-XS3D	Distal radius kit - Standard head - Size 3 - Right
KIT-XS3G	Distal radius kit - Standard head - Size 3 - Left
KIT-XW2D	Distal radius kit - Wide head - Size 2 - Right
KIT-XW2G	Distal radius kit - Wide head - Size 2 - Left

Initial R™ XPert 2.4 single use kit

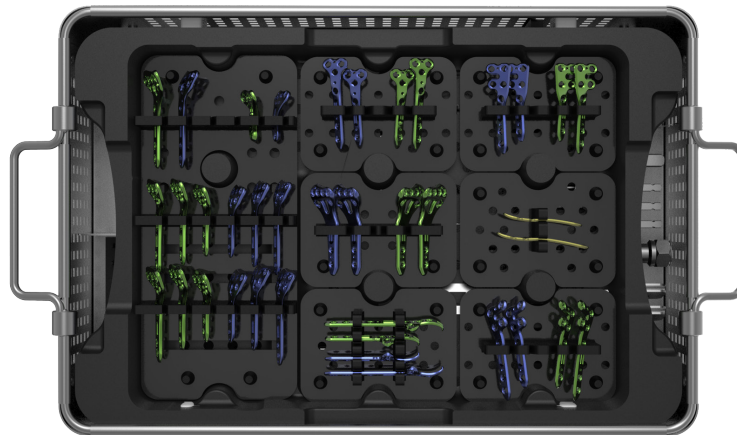
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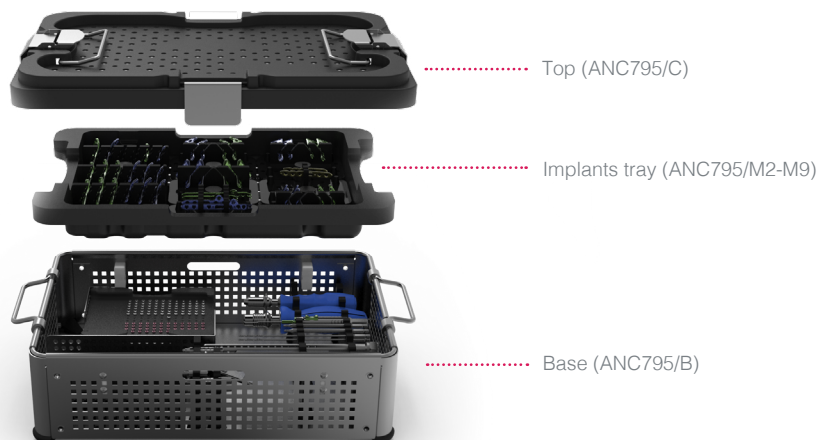
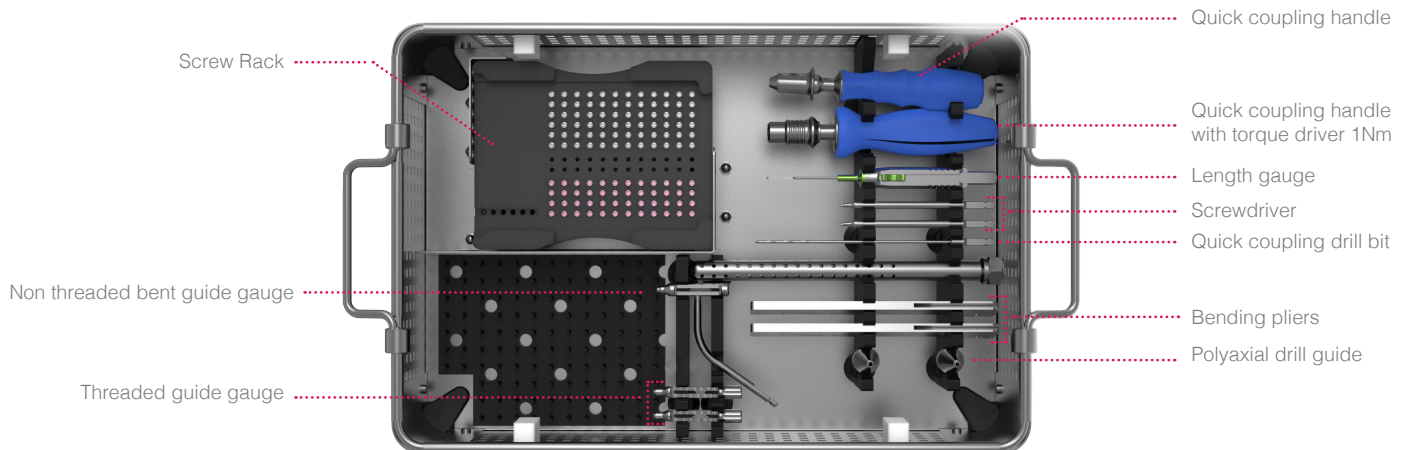
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SET DESCRIPTION

Volar plates



Fragment Specific plates
Find our full range of plates in our
Xpert 2.4 brochure



The information presented in this brochure is intended to demonstrate a NEWCLIP TECHNICS product. Always refer to the package insert, product label and/or user instructions before using any NEWCLIP TECHNICS product. Surgeons must always rely on their own clinical judgment when deciding which products and techniques to use with their patients. Products may not be available in all markets. 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

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