Xpert Ankle.

Single use & Reusable solution



NJ - 2025

01 | Introduction

ANKLE FRACTURES INCIDENCE.

✅ **Fibula Fracture - 1.8 for 1,000 --> More than 125,000 cases in France -> 40.000 osteosynthesis**
Frequently present, may occur in isolation or with a pilon fracture.
Plays an important role in ankle stability. Syndesmosis tears

✅ **Bi-malleolar Fracture – 20% of the Ankle Fracture --> More than 25,000 cases in France -> 10.000 osteosynthesis**
Fracture involving the fibula + medial malleolus or posterior part of the tibia
Affects the stability of the tibiotalar joint.

✅ **Tri-malleolar Fracture – 7% of the Ankle Fracture --> More than 8,000 cases in France -> 4.000 osteosynthesis**
Involves the fibula, medial malleolus and posterior malleolus with several fragments.

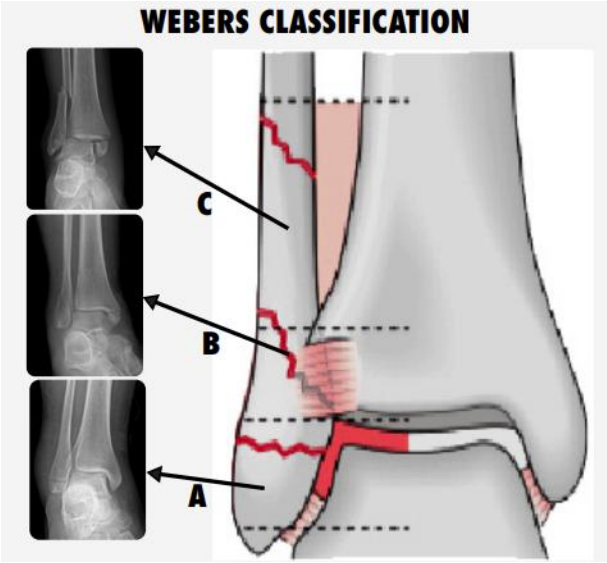
PILON

✅ **Complex Articular Fracture with Severe Comminution – 4% of the Ankle Fracture --> More than 4,000 cases in France -> 3.000 osteosynthesis**
Multiple fragments of the tibial pilon with articular surface involvement.
Often caused by high-energy trauma (motor vehicle accidents, falls from height).

Source : https://www.ncbi.nlm.nih.gov/books/NBK542324/ - Ankle fracture

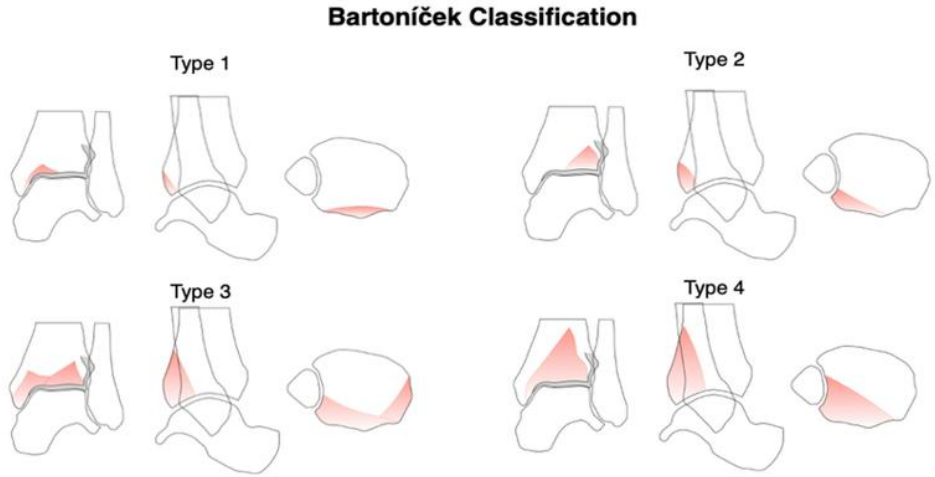
CLASSIFICATIONS – TRI MALLEOLAR.

✓ Fibula « Weber Classification »



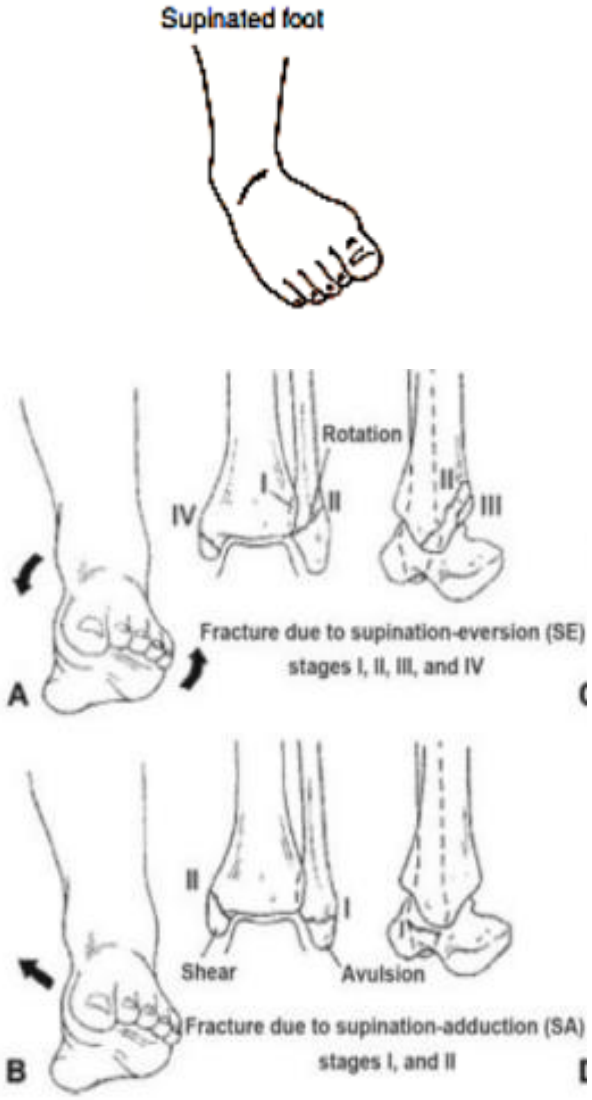


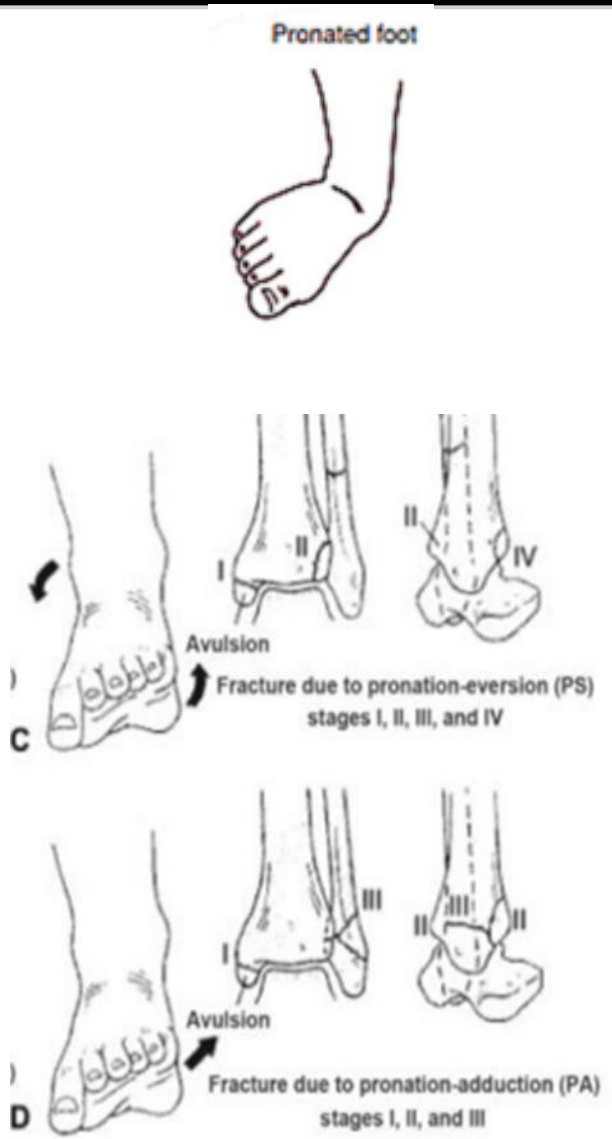
✓ Posterior Malleolus « Bartonicek classification »



✓ Medial Malleolus « Herscovici classification »

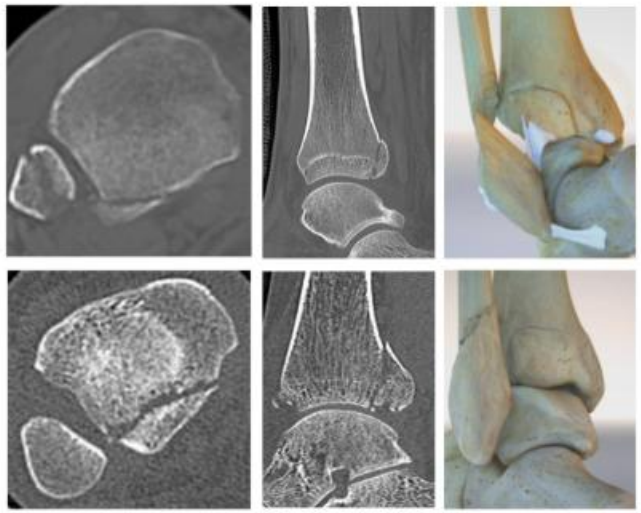
CLASSIFICATIONS – BI MALLEOLAR.





CLASSIFICATIONS – TRI MALLEOLAR.

Mason et al	Haraguchi et al	Bartonicek et al	Mechanism
Type 1	Type 3	Type 1	PITFL Avulsion
Type 2A	Type 1	Type 2	Rotational Pilon
Type 2B	Type 2	Type 3	
Type 3		Type 4	Axial loaded pilon



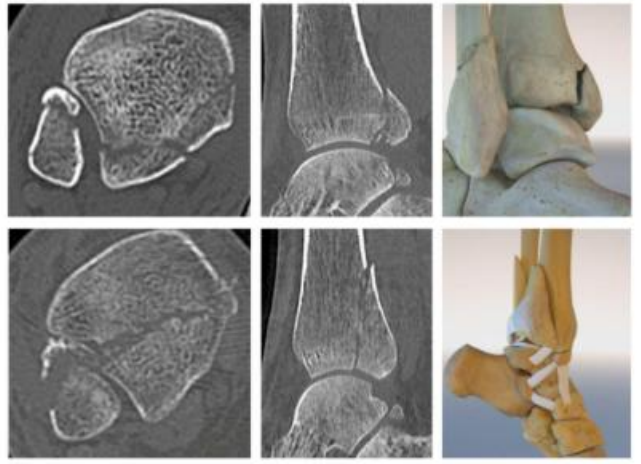
Type 1

PITFL Avulsion



Type 2A

Rotational Pilon Minor



Type 2B

Rotational Pilon Major



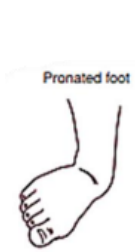
Type 3

Axially Loaded Pilon



Ref :
https://www.bofas.org.uk/hyperbook/trauma/ankle-fractures/posterior-malleolus
https://www.vumedi.com/video/posterior-malleolar-fractures-2/?token=c3132313-ddec-4f2e-9a81-8dadf6f59ce2&utm_source=%5BEmail%20Subscription%5D%20Ortho%20%7C%20Trauma%2C%20F%26A_149678&utm_medium=Video&utm_campaign=%5BCLONED%5D%20Posterior%20Malleolar%20Fractures&utm_content=Posterior%20Malleolar%20Fractures&utm_term=Posterior%20Malleolus&link_data=eyJidWxrX21haWxfYWN0aW9uIjoiYyIsInJlY2lwaWVudF9pZCI6MjU3NzY0MTYxOCwibWFpbF9pZCI6MTQ5Njc4fQ%3A1tgOXV%3ATUkWiBAfCsBjfDBpw0s4NcyFkovR5kxL5cW8KvjEQT8&mail_id=149678

CLASSIFICATIONS – TRI MALLEOLAR.





Type 1 : PITFL Avulsion





ABDUCTION fracture

Fibula : Weber type C

AND/OR

Medial malleolus : Avulsion deltoid ligament

AND/OR

Posterior malleolus : PITFL Avulsion

ADDUCTION fracture

Fibula : Weber type B

AND/OR

Medial malleolus : Avulsion deltoid ligament

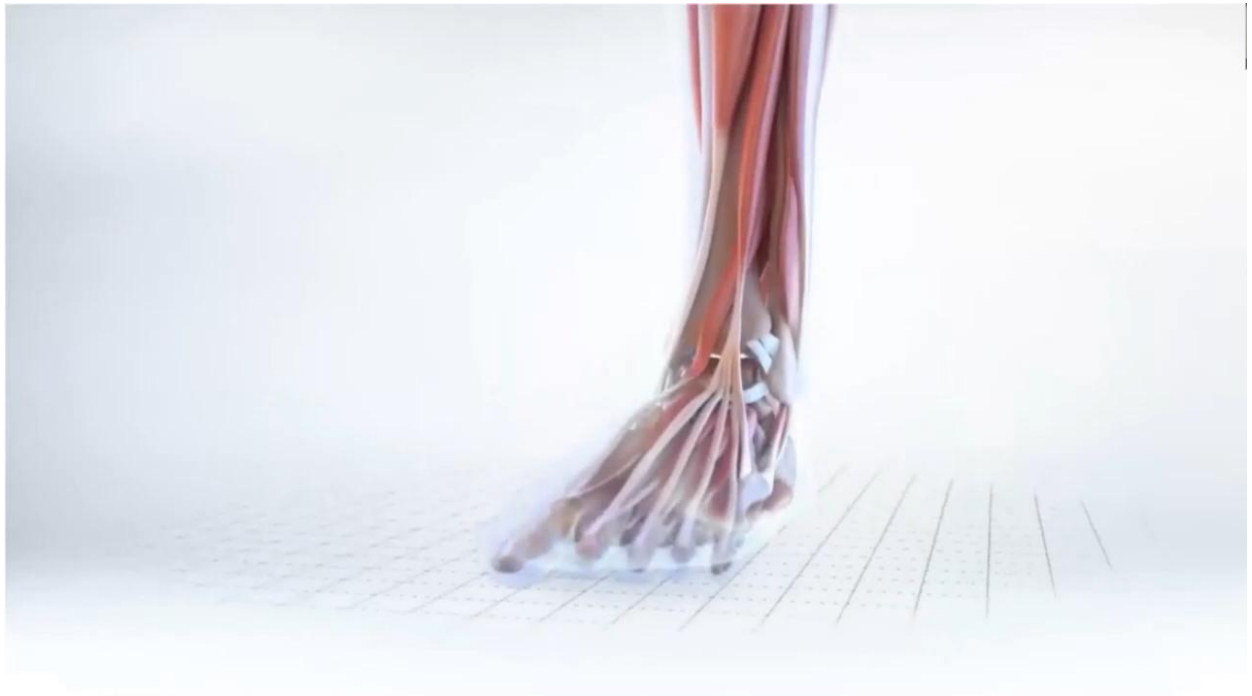
AND/OR

Posterior malleolus : PITFL Avulsion



Type 1

PITFL Avulsion



Type 1 Associated Fractures

Fibular Fracture	None	Low	High	Long Oblique
Number	2 (5%)	29 (71%)	6 (14%)	4 (10%)

Syndesmosis Diastasis	No Diastasis	Full Syndesmosis Diastasis	Posterior Syndesmosis
Number	0	31 (76%)	10 (24%)

Medial Injury	Nil	Deltoid Injury	Anterior Collicular	Anterior Oblique	Posterior Oblique	Y Fracture
Number	9 (22%)	11 (27%)	16 (39%)	2 (5%)	0	3 (7%)

CLASSIFICATIONS – TRI MALLEOLAR.

Type 2A&2B : Rotational Pilon

Minor 2A

Fibula : Weber type C

AND

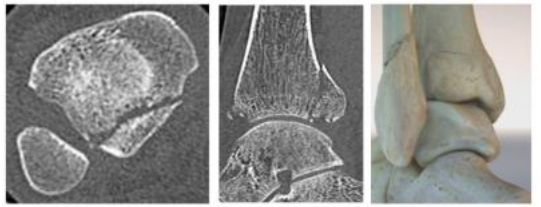
Postero-lateral malleolus fracture (Talus contact)

Major 2B

Fibula : Weber type C

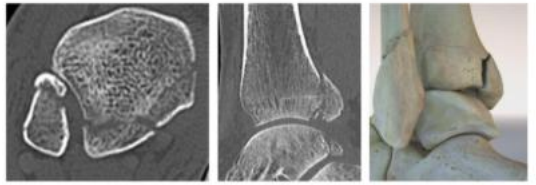
AND

Postero-lateral malleolus fracture (Talus contact)
+
Medial malleolus fracture



Type 2A

Rotational Pilon Minor



Type 2B

Rotational Pilon Major



Type 2 Associated Injuries

Fibular Fracture	None	Low	High	Long Oblique
Number	4 (7%)	31 (56%)	8 (15%)	12 (22%)

Syndesmosis Diastasis	No Diastasis	Full Syndesmosis Diastasis	Posterior Syndesmosis
Number	28 (51%)	16 (29%)	11 (20%)

Medial Injury	Nil	Deltoid Injury	Anterior Collicular	Anterior Oblique	Posterior Oblique	Y Fracture
Number	2 (4%)	10 (18%)	19 (34%)	11 (20%)	5 (8%)	8 (15%)

CLASSIFICATIONS – TRI MALLEOLAR.

Type 4 : Axial Loaded Pilon

↓

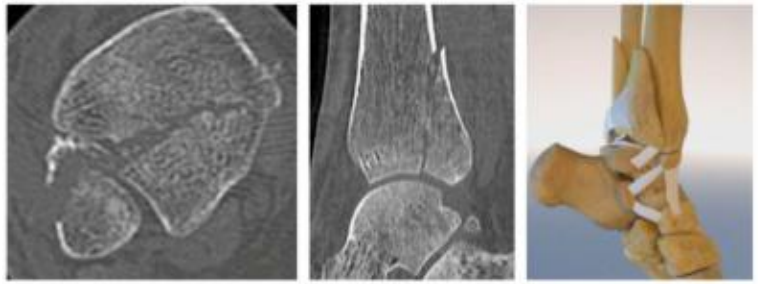
Fibula : Very oblique

AND

↓

Big fully posterior fragment





Type 3

Axially Loaded Pilon



Type 3 Associated Injuries

Fibular Fracture	Low	High	None	Long Oblique
Number	1 (4%)	10 (40%)	7 (28%)	7 (28%)

Syndesmosis Diastasis	No Diastasis	Full Syndesmosis Diastasis	Posterior Syndesmosis
Number	20 (80%)	5 (20%)	0

Medial Injury	Nil	Deltoid Injury	Anterior Collicular	Anterior Oblique	Posterior Oblique	Y Fracture
Number	2 (8%)	1 (4%)	6 (24%)	0	8 (32%)	8 (32%)

Newclip Range - Planning.

INITIAL A

Xpert Ankle

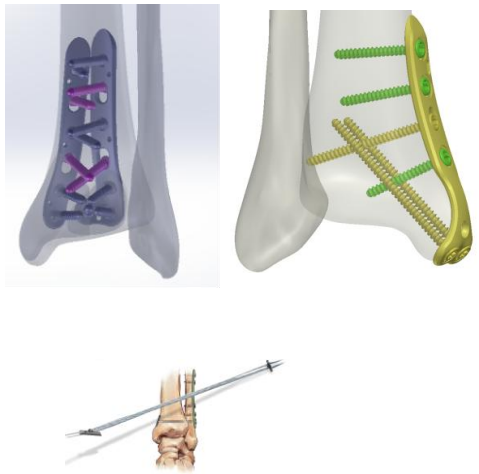
Pilon

SOFCOT

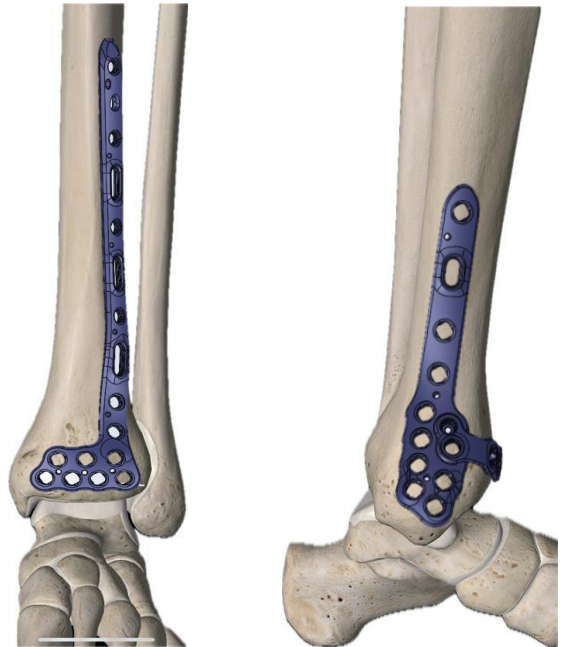
oct 25



Fev 26



Fin 26



02 Overview of the Newclip solution

XPERT ANKLE - fibula.

Oct-25 : single use

Feb-26 : Reusable set



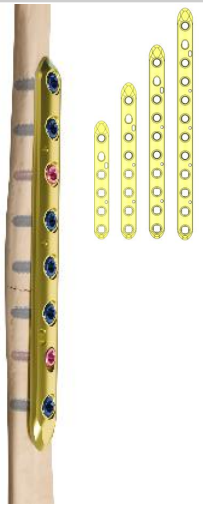
Standard Plate:

- Complex lateral fractures
- Osteoporotic bone



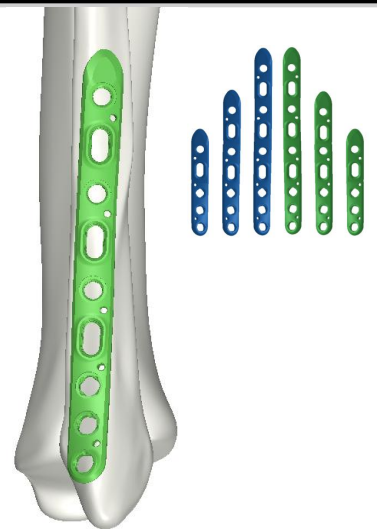
Straight anatomic :

- Simpler lateral fractures
- Better soft tissue handling



Plaque "utility":

- Simpler lateral fractures
- Better soft tissue handling



Posterolaterale plate:

- Oblique fracture type Weber B or 44-B
- Optimum soft tissue preservation
- Postero lateral approach

+ Single Use Solution - INITIAL ANKLE



NEWCLIP SOLUTION – MEDIAL MALLEOLUS.

NEW PRODUCT

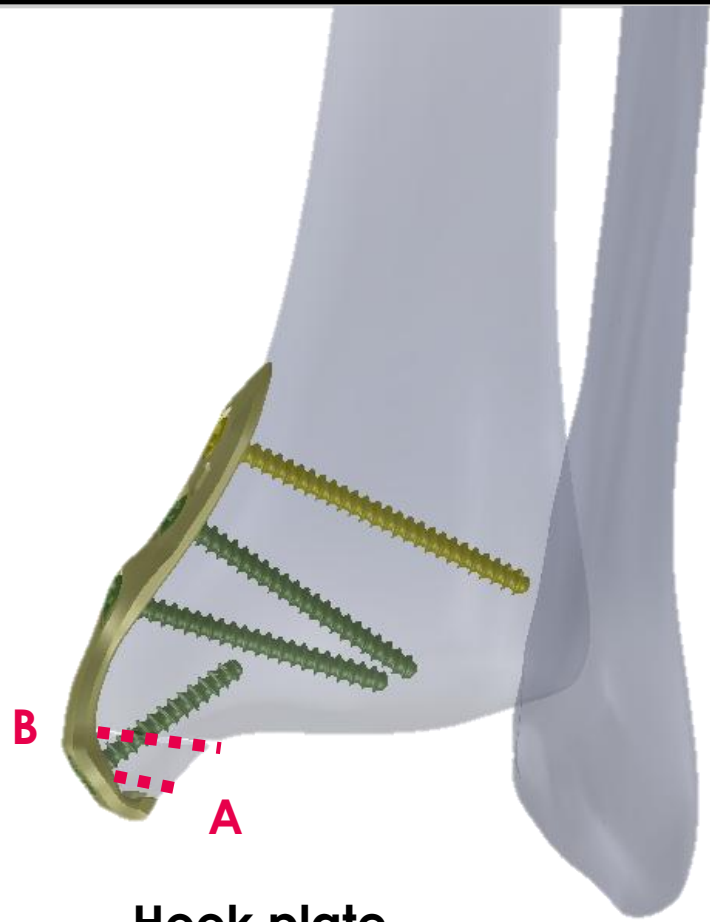
Feb-26 : Reusable set

Fixation by screws **Ø4.0**
Solid or Cannulated
+ Washer



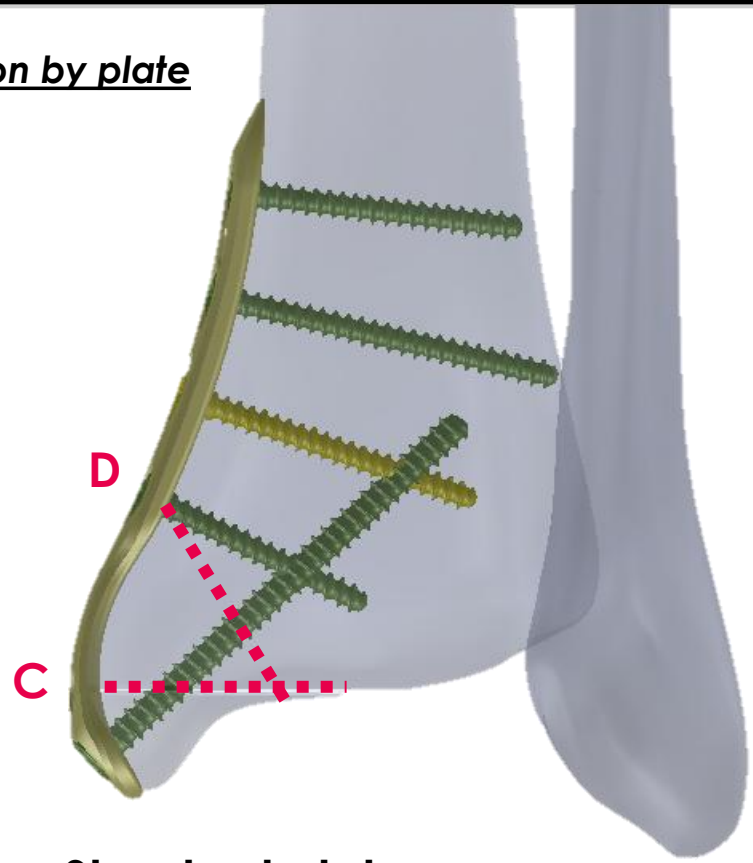


+ Single Use Solution - INITIAL S



Hook plate
cover TYPE A&B

Fixation by plate

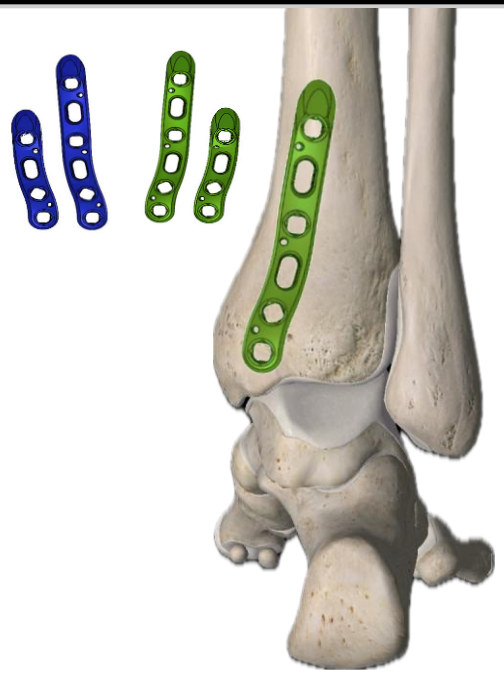


Standard plate
cover TYPE C&D

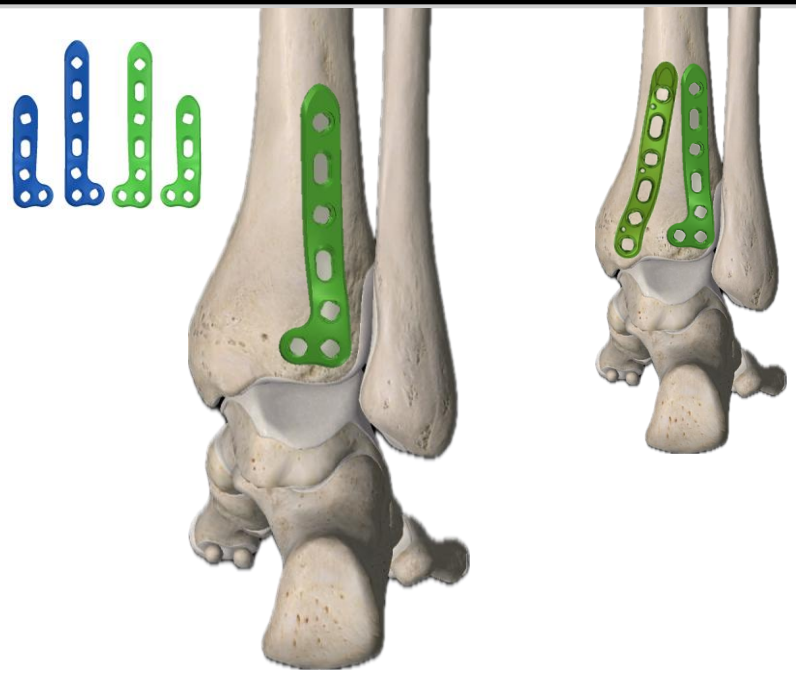
XPERT ANKLE – POSTERIOR MALLEOLUS.

NEW PRODUCT

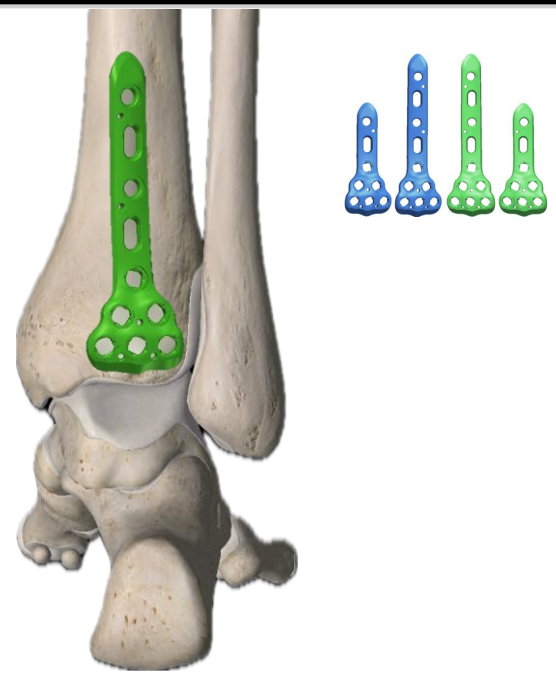
Feb-26 : Reusable set



Posteromedial plate



Posteorlateral plate



Posterior plate

03 | INITIAL A XPERT

Focus

INITIAL ANKLE – RANGE OVERVIEW.



RTGLxD-I
Sizes 1-2-3



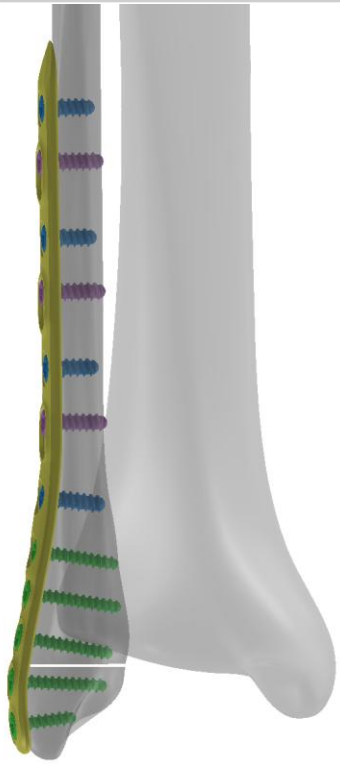
RTDLxD-I
Sizes 1-2-3

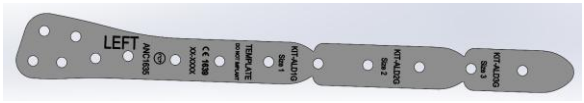


RTSLSxD-I
Sizes 1-2-3

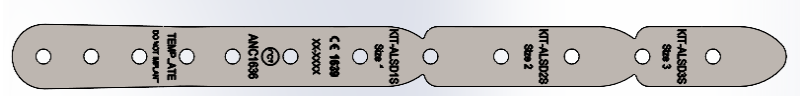


RPTSSxD-I
RPTSSxD-ST
Sizes 2-3-4

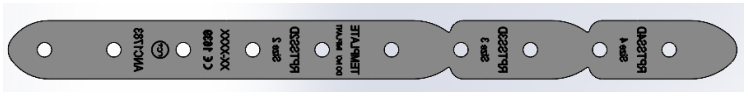




ANC1635-ST



ANC1636-ST



ANC1783-ST

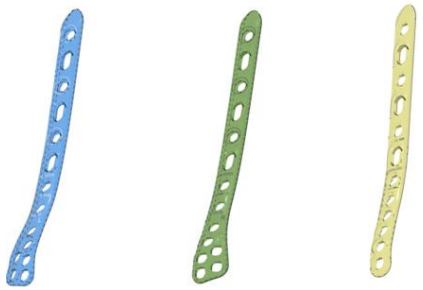
INITIAL A XPERT.

- Sterile & ready-to-use
- Optimized storage
- 100% traceability
- Cost efficiency



INITIAL A XPERT – PACKAGING OVERVIEW.

Fibula plates









Straight Ankle plate kit

+ or +



Instrumentation kit



⌀ 3.5



⌀ 4.0



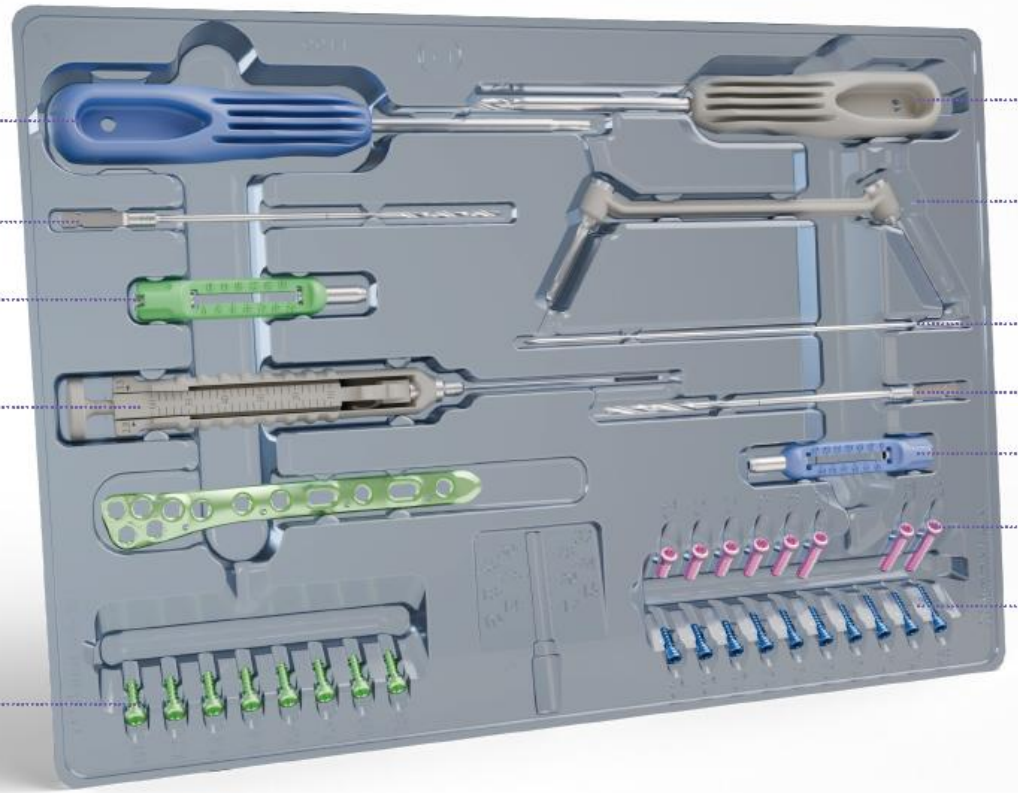


⌀ 4.0
cannulated



INITIAL ANKLE – STANDARD LATERAL PLATE.





T15 prehensor screwdriver

Ø2.0 mm quick coupling drill bit - L125 mm

Ø2.0 mm threaded guide gauge for Ø2.8 mm screws

Length gauge for Ø2.8 and Ø3.5 mm screws - L 10-60 mm

SAT2.8Lxx
Ø2.8 mm locking screws

Ø3.6 mm countersink

Double guide Ø2.0 mm / Ø2.7 mm for Ø2.8 mm & Ø3.5 mm screws

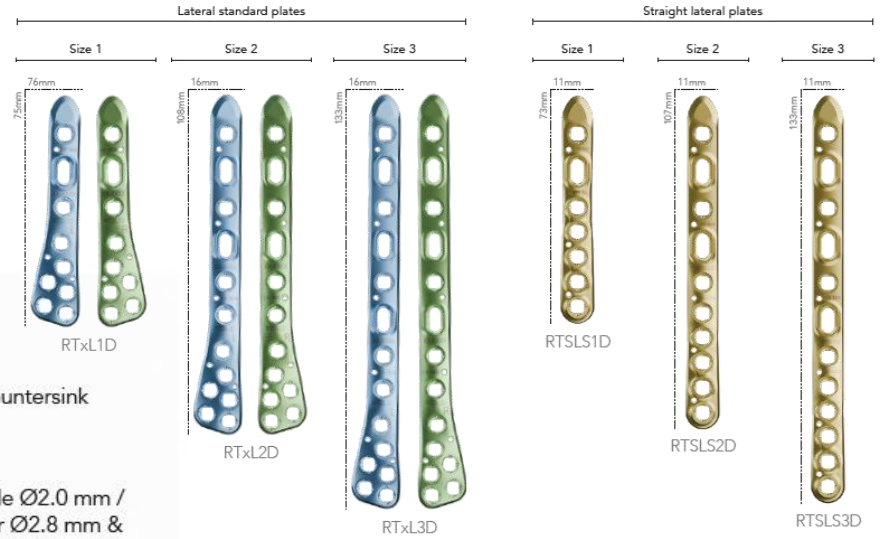
Pin Ø1.6 - L150 mm

Ø2.7 mm quick coupling drill bit - L125 mm

Ø2.7 mm threaded guide gauge for Ø3.5 mm screws

CAT3.5LxxD
Ø3.5 mm locking screws

SAT3.5Lxx
Ø3.5 mm locking screws



INITIAL ANKLE –ANKLE UTILITY PLATE.



Straight Ankle plate kit

+ or



Instrumentation kit

+ = Complete solution



T15 AO quick coupling prehensor screwdriver

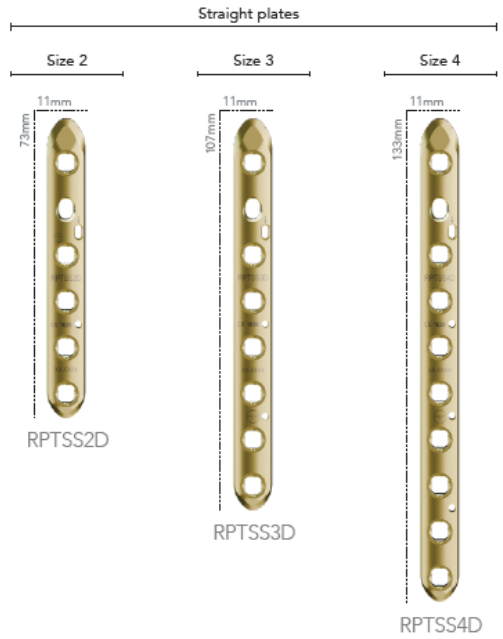
Ø2.7 mm non threaded polyaxial drill guide for Ø3.5 mm screws

Pin Ø1.6 - L150 mm

Length gauge for Ø2.8 and Ø3.5 mm screws - L 10-60 mm

Ø2.7 mm threaded guide gauge for Ø3.5 mm screws

Ø2.7 mm quick coupling drill bit - L150 mm



INITIAL A XPERT – SYNDESMOSIS & MEDIAL MALLEOLUS.

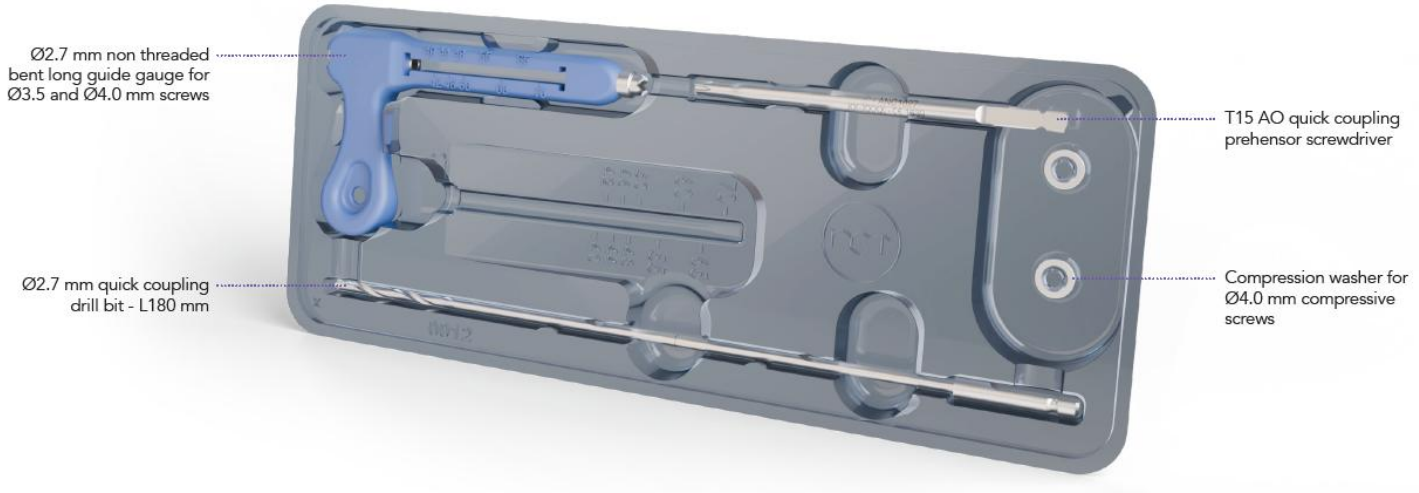
With solid screws



ø 3.5

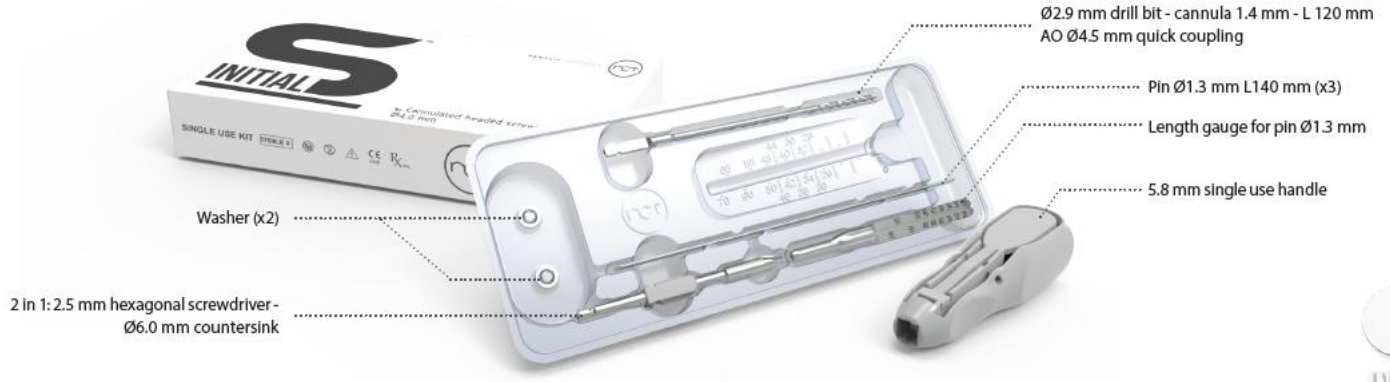


ø 4.0



With canulated screws





INITIAL A XPERT – ADDITIONAL KITS.

- Sterile templates
- Removal kit
- Rescue kit







04 | Xpert Ankle

Trimalleolar

Devices overview.

Lateral plates (fibula)
5 sizes



Narrow lateral plates (fibula)
3 sizes



Posterior-lateral plates (fibula)
3 sizes



Utility plates (fibula&tibia)
5 sizes



➔ 39 plates

Hook-plate for distal tibia (medial malleolus)
1 size



Posterior plate (posterior distal tibia)
2 sizes



Standard plate for distal tibia (medial malleolus)
2 sizes



Posterior malleolus ankle plates

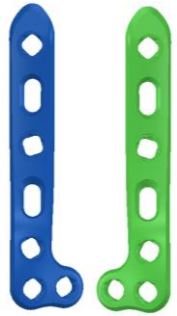
Posteromedial

2 sizes



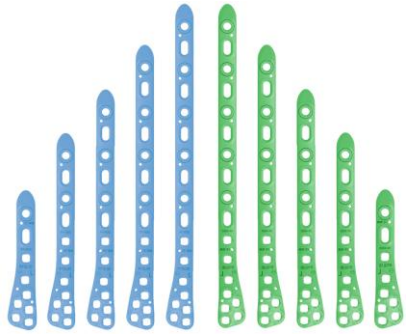
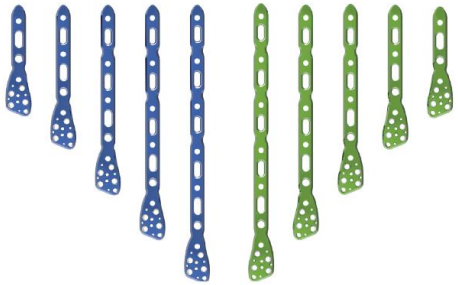
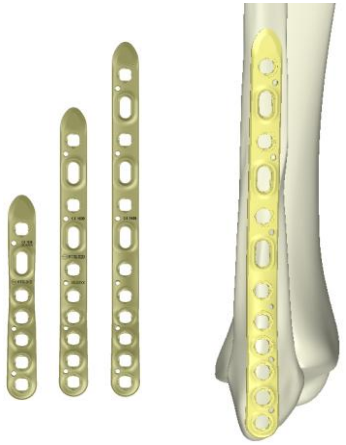
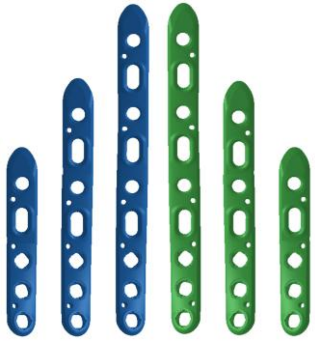
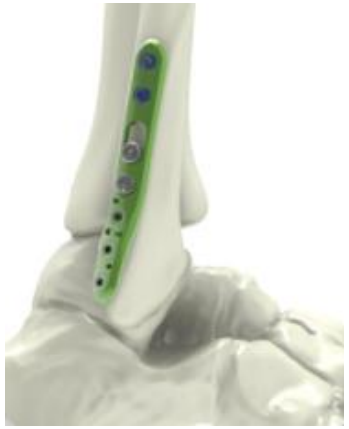
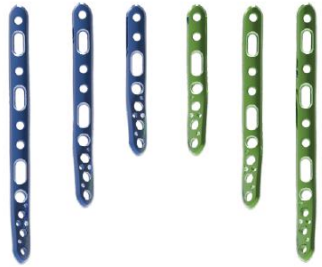
Posterolateral

2 sizes



04

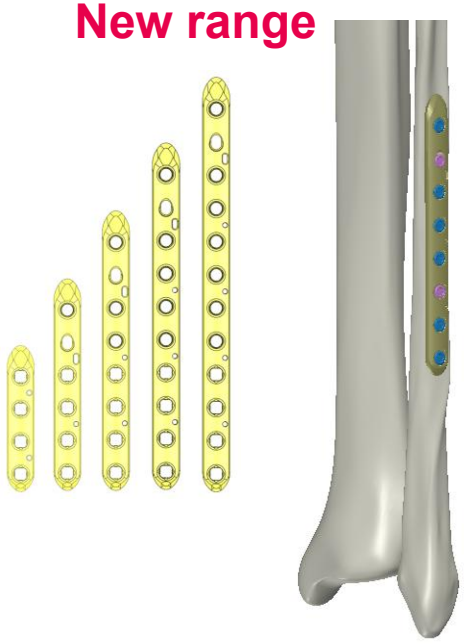
RANGE EVOLUTION.

New range	Evolution	current range
	Thinner / narrower	
	Thinner One more size (S3) A bit more distal	
 	A bit less distal	 

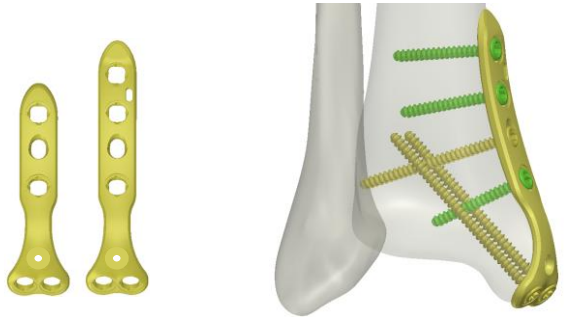
04

RANGE EVOLUTION.

New range | **Evolution** | **current range**



More sizes
Ramp oblong hole for compression (except S1)



Thinner plate
Replacement of one locking hole in distal (the first one) by a olive k-wire
➔ Easier to use, stronger and thinner plate





Thinner plate
Smaller plate ➔ the fractures are only distal fragment and there is no need for a longer plate



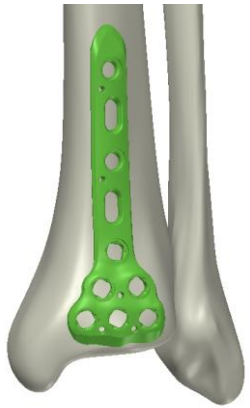
04

RANGE EVOLUTION.

New range



2 sizes



competition

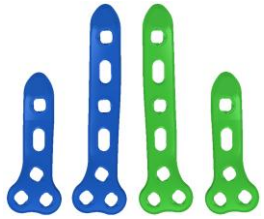
Synthes

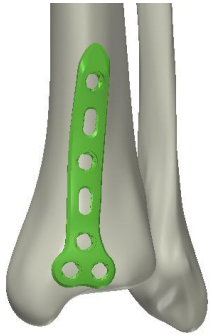


Arthrex

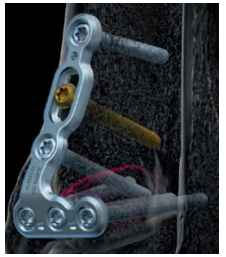


Postero-medial
2 sizes





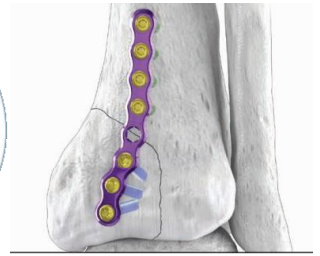
Medartis



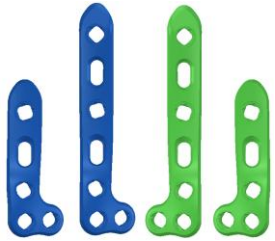
Acumed

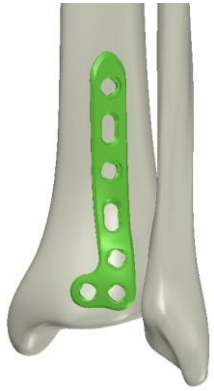


Paragon 28



Postero-lateral
2 sizes





Synthes



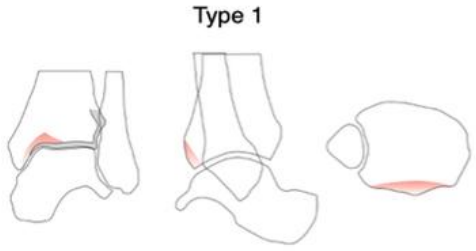
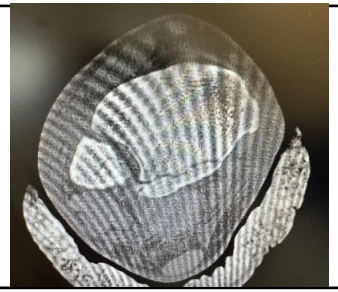
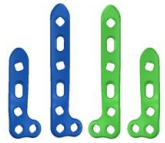
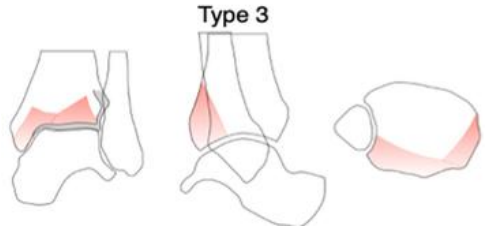
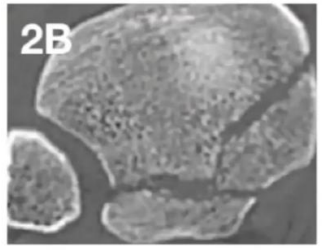
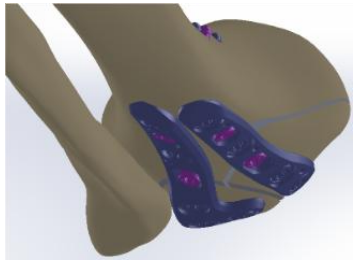
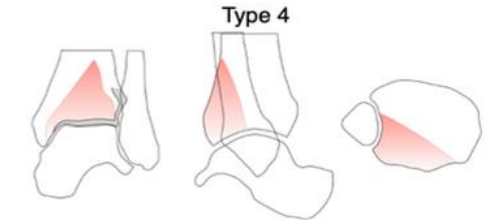
Acumed



Paragon 28

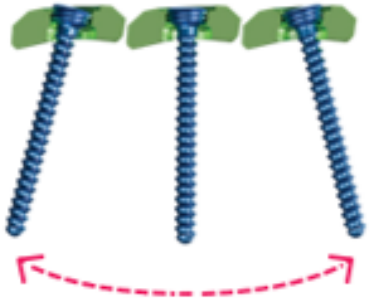


NEWCLIP SOLUTION – POSTERIOR MALLEOLUS.

Type – « Bartonicek »	RX	NCT Solution
		**Stabilization with canulated lag screws 4.0** 
		**Stabilization with postero-lateral plates** **Postero-lateral** 2 sizes  
		***Narrow tibia*** **Fully posterior plate cover PM&PL**   ***Standard tibia*** **2 plates cover PM&PL**
		**Stabilization with big posterior plate**  2 sizes 

PLATES FEATURES.

XPERT ANKLE OFFERS A VERSATILE SYSYEM OF FIXATION.



✓ Polyaxiality for every hole

✓ 3 screw diameters possible, compatible with every hole ⌀2.8 mm, 3.5 mm, 4.0 mm (lag)

✓ Locking oblong hole compatible with:
· Compression screw for plate positioning or plate compression
· Locking screw if needed

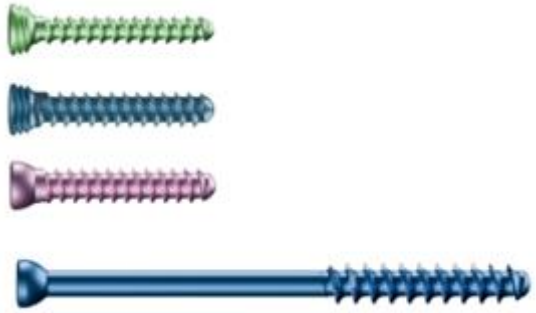
✓ All the holes compatible with locking and non-locking screws and different screws diameter (2.8 & 3.5 mm). (except ramp oblong hole)

✓ Lag screws to catch fragments

✓ Ramp oblong hole to compress axially fragments



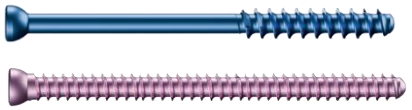


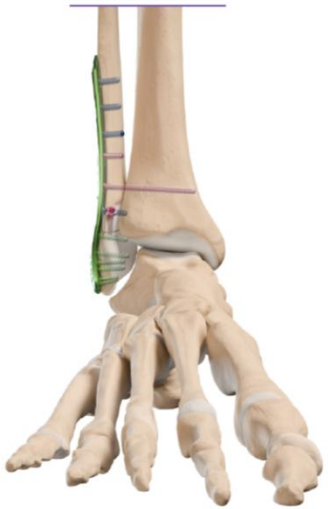


SYNDESMOTIC REPAIR.

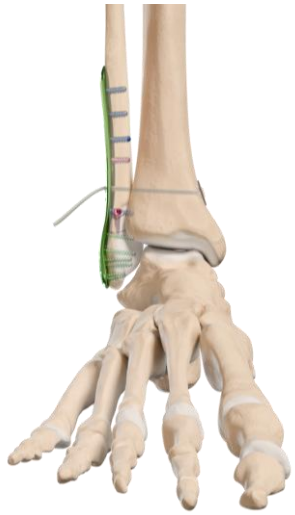
Two holes dedicated to the syndesmotic fixation with screw or with double button fixation (rounded button Ø6.3mm).











MEDIAL MALLEOLUS.

- 4.0mm screws canulated and non cannulated
- Washer available





A VERSATILE AND USER FRIENDLY SYSTEM.

- All polyaxial, All compatible with 2.8 and 3.5mm screws, locking or non locking (even oblong hole)
- Simple instrumentation matching the screws color



Diam 3.5mm locking
L10-70



Diam 3.5mm non locking
L10-60



Diam 2.8 mm locking
L10-60



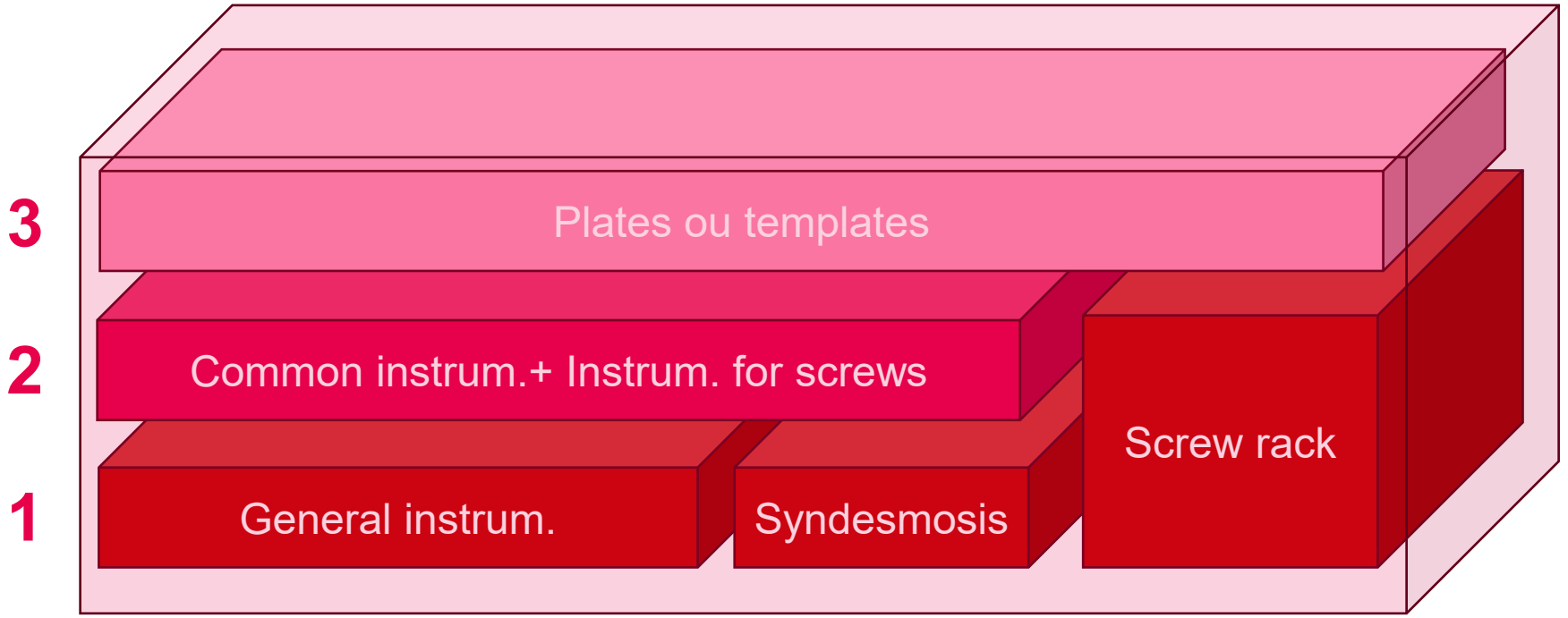
Diam 2.8 mm non locking
L10-60

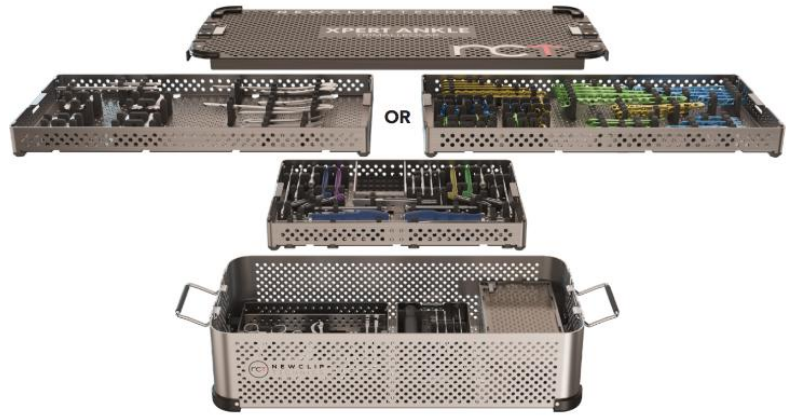


Diam 4.0mm lag screw
Only from 40mm to 70mm inc 5mm



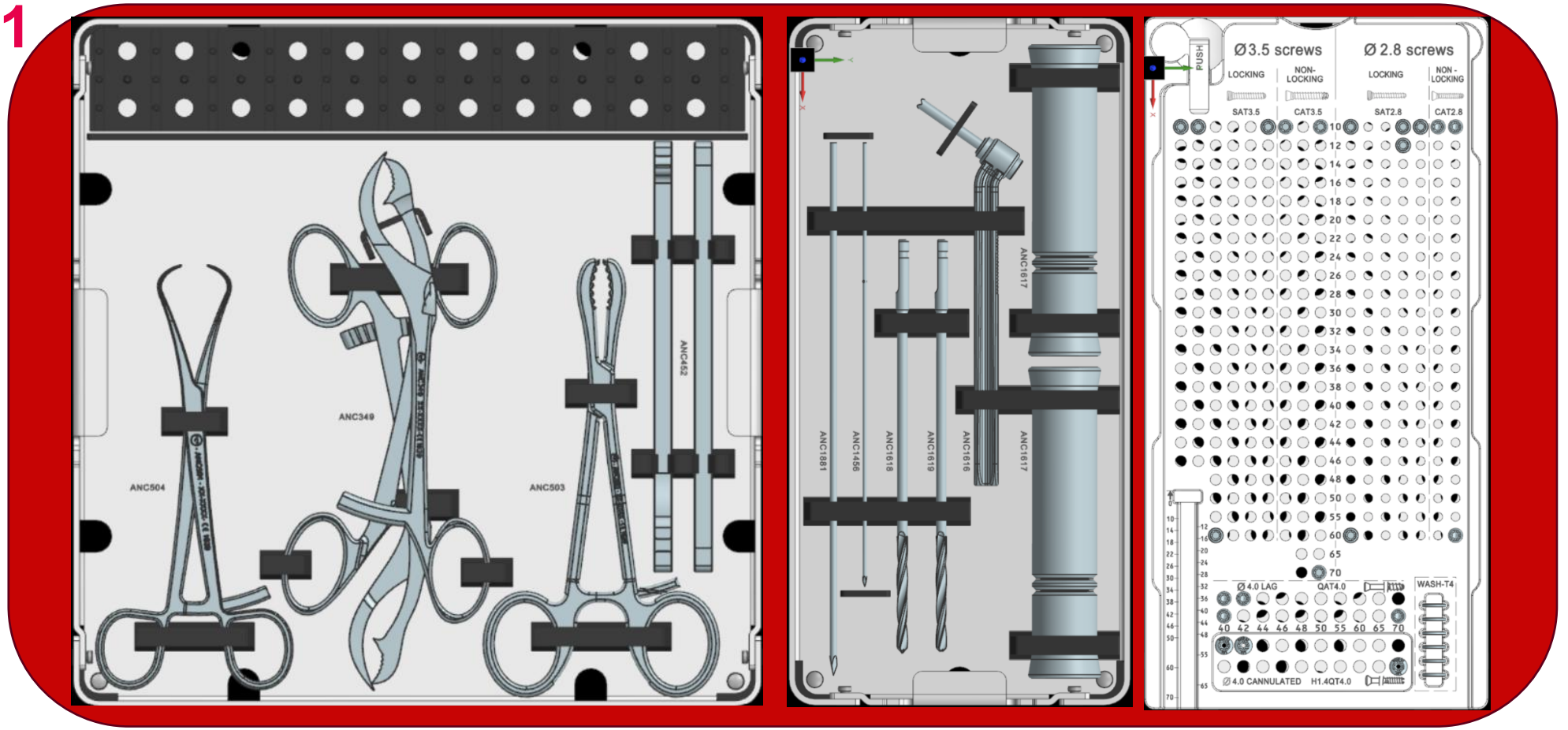
Devices overview.





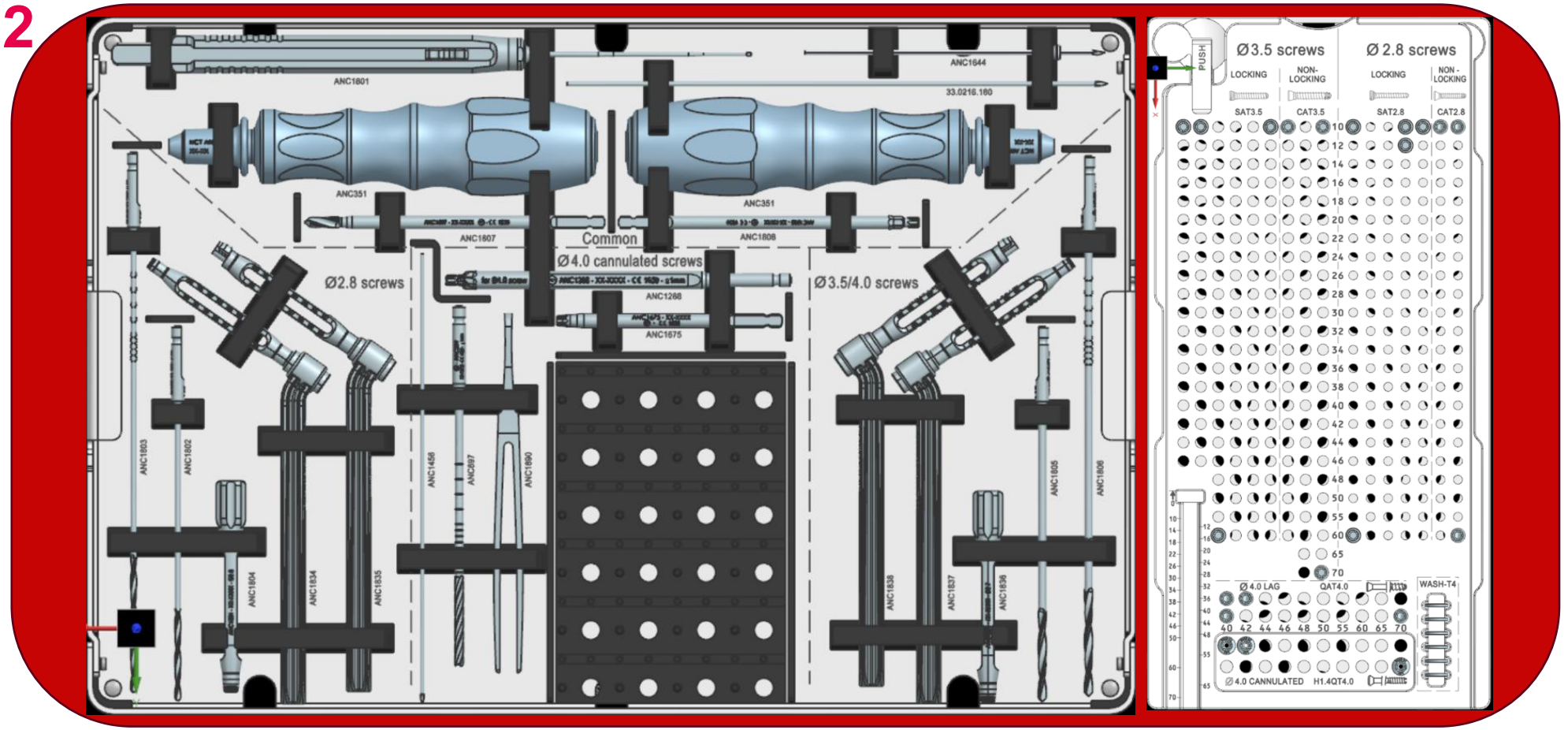
Devices overview.

1



Devices overview.

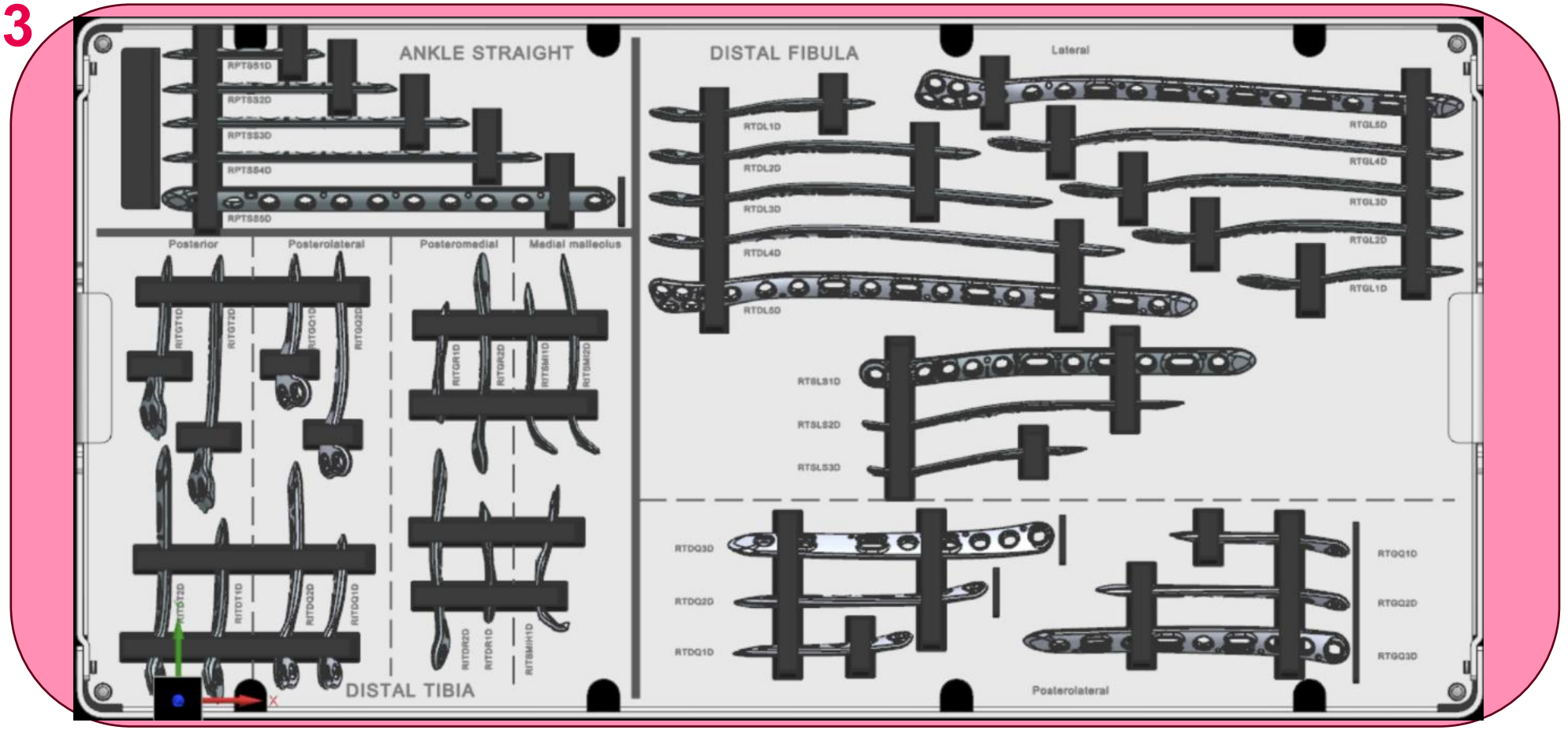
2



Devices overview.

Plates or Templates

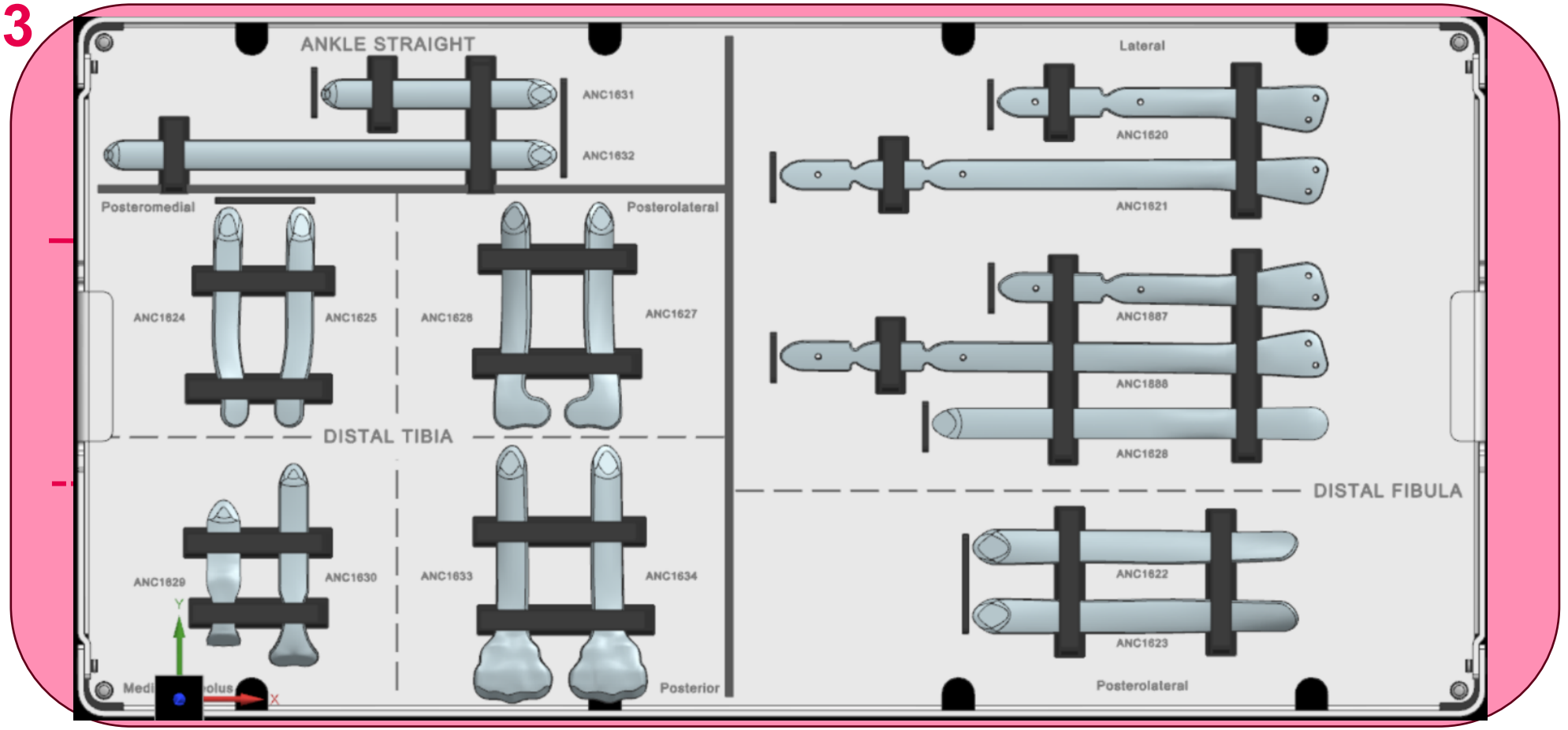
3



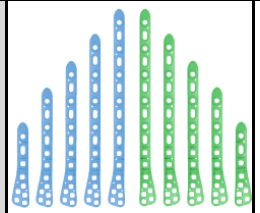
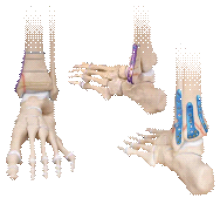
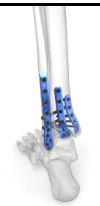
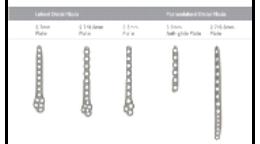
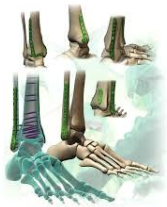
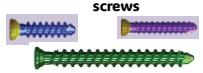
Devices overview.

Plates or **Templates**

3



COMPETITION – TRIMALLEOLAR PLATES.

		NEWCLIP Xpert Ankle - Trimalleolar	STRYKER VariAx® Distal Fibula Locking Plate System	PARAGON28 Gorilla® Ankle Fracture 360™	MEDARTIS Ankle Trauma System 2.8 / 3.5	SYNTHES VA LCP™ Ankle Trauma System 2.7/3.5	ARTHREX Titanium Ankle and Fracture System	ACUMED Ankle Plating System 3	S&N EVOS SMALL Plating System	WRIGHT ORTHOLOC 3Di Ankle Fracture System
Material		ASTMF67 (Grade 4)	ASTMF67 (Grade 4)	ASTMF67 (Grade 4)	Titanium	316L or pure Titanium	Titanium	ASTMF67 (Grade 4)	Stainless Steel/Titanium	Ti6Al4V
Range										
Fibula	Holes in distal part	6	5	4	5	6	5	5	4	3
	Postero-lateral	✓	✓	✓	✓	✗	✓	✓	✓	✗
Pilon	Medial malleolus	✓	✗	✓	✗	✗	✗	✓	✗	✓
	Posterior plate	✓	✗	✗	✓	✗	✗	✗	✓	✓
	Postero-medial	✓	✗	✓	✗	✗	✓	✓	✗	✗
	Postero-lateral	✓	✗	✓	✓	✓	✓	✓	✗	✗
Screws range		Ø2.8mm loking and non-locking screws Ø3.5mm loking and non -locking screws Ø4.0mm lag screws and canulated 	Ø2.7mm loking and non-locking screws Ø3.5mm loking and non -locking screws 	Ø2.7mm loking and non-locking screws Ø3.5mm loking and non -locking screws Ø4.2mm loking and non -locking screws 	Ø2.7mm loking and non-locking screws Ø3.5mm loking and non -locking screws 	Ø2.7mm loking and non-locking screws Ø3.5mm loking and non -locking screws Ø4.0 mm Cortex Screws 	Ø3.0mm loking and non-locking screws Ø3.5mm loking and non -locking screws 	Ø2.7mm loking and non-locking screws Ø3.5mm loking and non -locking screws Ø4.0 mm cancellous screws/ partially threaded 	Ø2.7mm loking screws Ø3.5mm loking and non -locking screws Ø4.0 mm Locking Cancellous 	Ø2.7mm loking and non-locking screws Ø3.5mm loking and non -locking screws Ø4.0 mm cancellous screws/ partially threaded 
Variable angle		✓	✓	✓	✓	✓	✓	✗	✗	✓
Compatible with syndesmotic suture		✓	✗	✗	✓	✗	✓	✓	✗	✓
Single use solution		✓	✗	✗	✗	✗	✗	✗	✗	✗

NEWCLIP SOLUTION.

Newclip advantages – Sum Up :

→ Lateral anatomical, narrow and postero-lateral plates for the fibula

→ 5 holes in distal part to catch fragments

→ Versatile fixation system (2.8/3.5 locking or not, lag screw…) - 3 diameters : for every hole – Locking oblong holes

→ Polyaxiality of 20 degrees for every hole

→ Posterior aspect : 3 designs of plates : fully posterior, postero-medial, postero-lateral

→ Compatible with syndesmotic suture

CONCEPTORS OF THE RANGE.



Dr MAMAN Pascal
APHM – Hôpital Nord
Marseille (France)



Dr SÁNCHEZ LÁZARO Jaime
Hospital San Juan de Dios
León (Spain)



Dr RAHNAMA Ali
Washington, DC (USA)
(Consultant)

05 | Xpert Ankle

Pilon

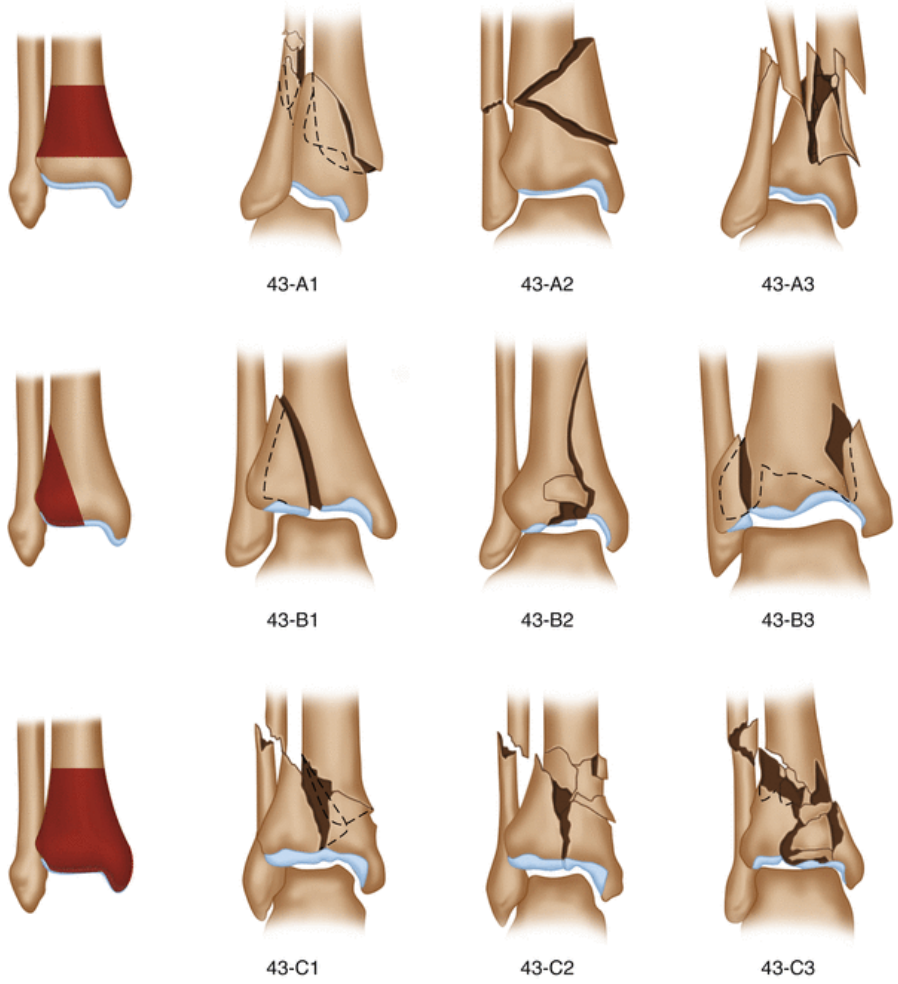
XPERT ANKLE – PLION .

	Estimated data
Overall incidence	3–10% of tibial fractures, ≈ 1% of lower-limb fractures
Rüedi type I / II / III	≈ 10% / 38% / 52%
AO 43B / 43C	≈ 56% / 44% (B3 and C3 subtypes most frequent)
Complications	Infection, osteoarthritis, stiffness, chronic pain
Average time off work	≈ 150 days (≈ 5 months)
Sex	Male predominance (≈ 3 men for 1 woman)
Typical age	40–60 years on average

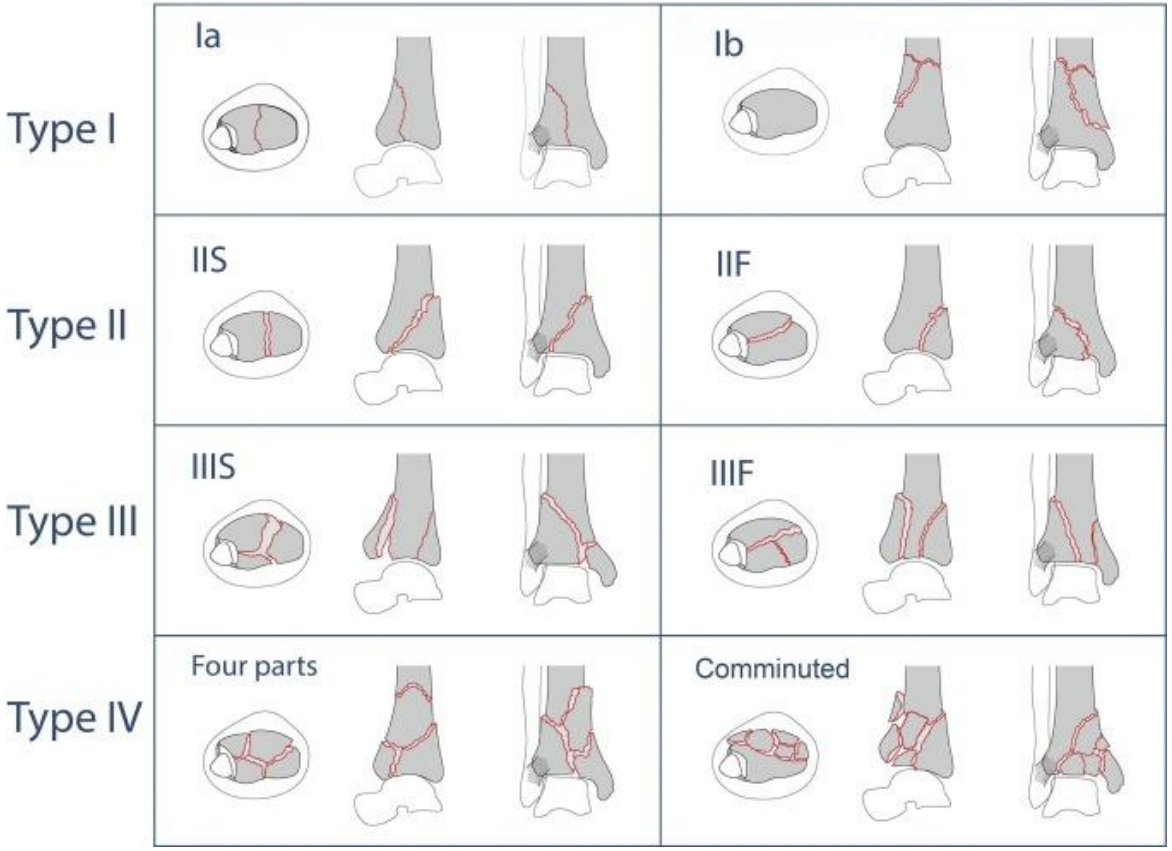
✓ 15 times less frequent than a malleolar fracture → **Two different kits**
✓ 2/3 of pilon fractures are associated with a fibular fracture → **Complementary kits**

CLASSIFICATIONS – PILON.

AO Classification



Pilon fractures: A new classification system based on CT-scan [1]



1 Danilo Leonetti, Domenico Tigani Pilon fractures: A new classification system based on CT-scan, Injury, Volume 48, Issue 10, 2017, Pages 2311-2317,

XPERT ANKLE – Pilon.

Q4-2026 : additional set









Antero-lateral plates
5 sizes
100
140
180
220
260mm(only sterile)

Medial plates
5 sizes
100
140
180
220
260mm(only sterile)





+ Anterior extension

IMPLANTS.



Anterolateral

Implant	Number of sizes (Non-sterile)	Size in sterile	Left/Right specific	MIS GUIDE
Antero-lateral plates	4	1	YES	NO
Medial plate	4	1	YES	YES
+ anterior extension	1	0	YES	NO
Anterior plate	2	0	NO	NO

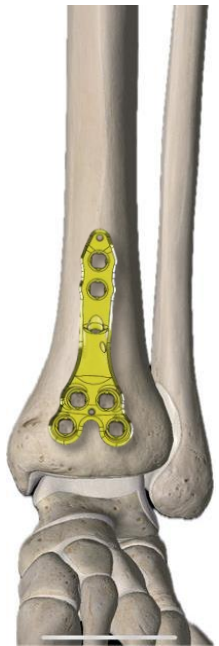
Medial



+ Anterior extension



Anterior



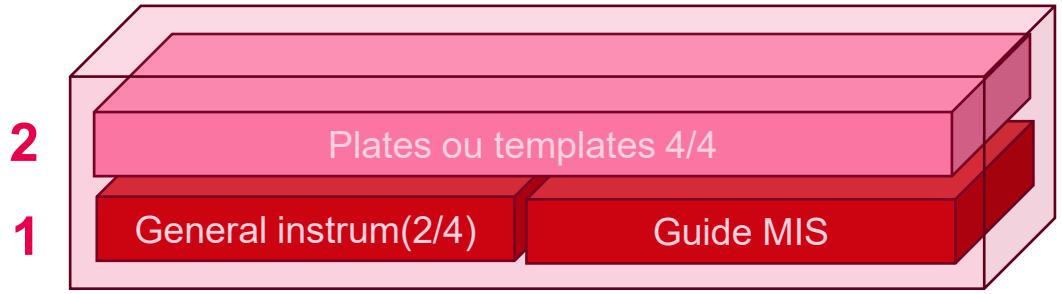
→ 24 PLATES + 2 EXTENSIONS



→ POSTERIOR SIZE 3

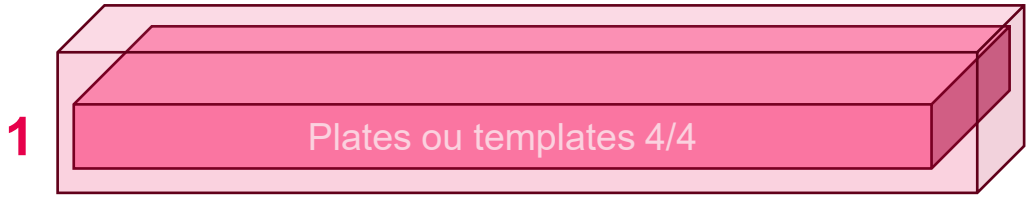
COMPOSITION.

- Classique



- **Base 2 level : ANC ANC1434/B2**
- **2 modules ½ avec possibilité de rajouter un couvercle afin de les vendre séparément**

- Compo réduite (France…)

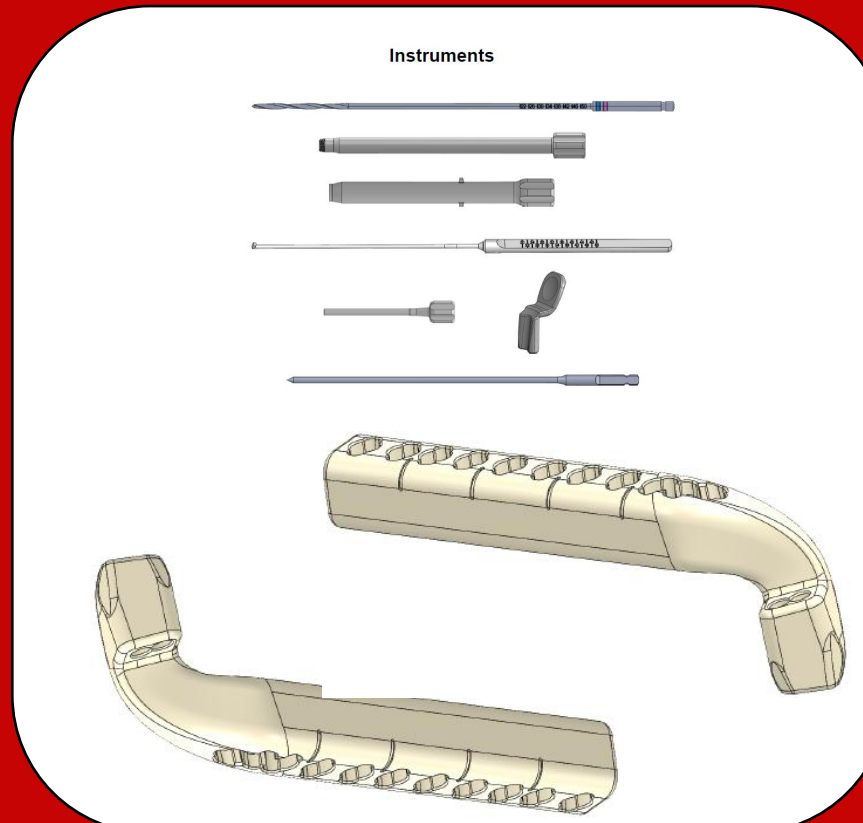


- **Base 1 level : ANC ANC1434/B1**
- **2 modules ½ avec possibilité de rajouter un couvercle afin de les vendre séparément**

SET.

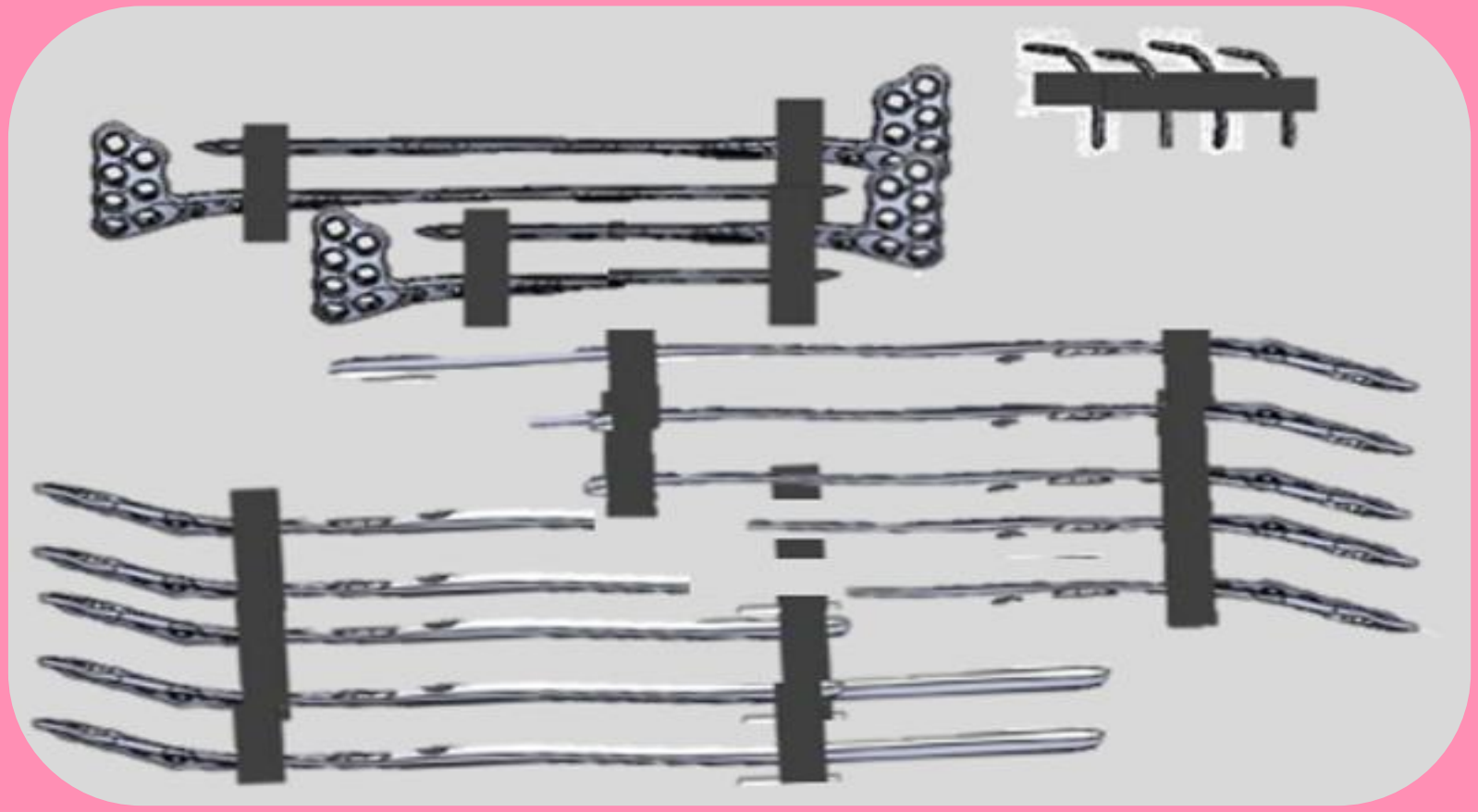
1





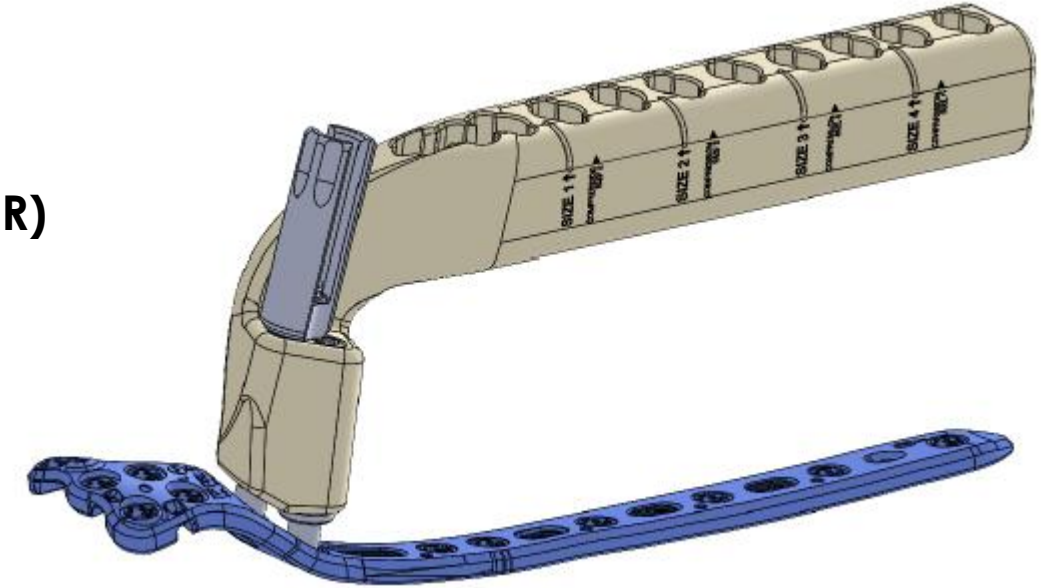
Plates or Templates

2

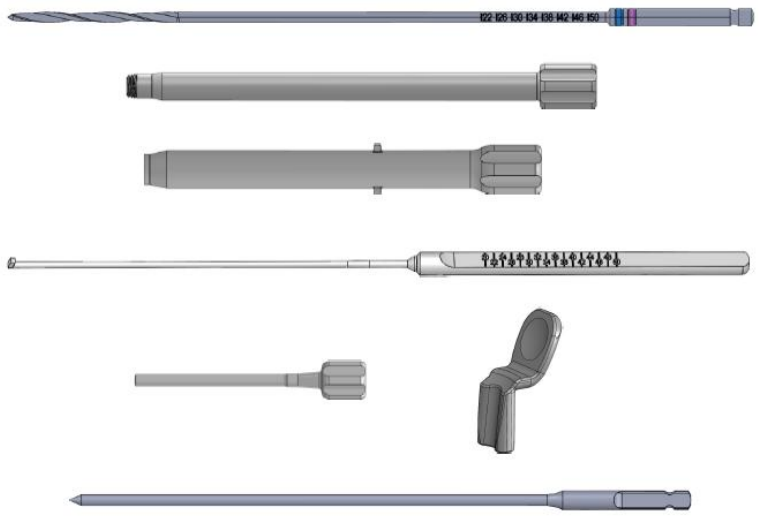


XPERT ANKLE PILON - MIS GUIDE.

- For medial plates only (could be asymmetric for L&R)
- For sizes from 2 to 5
- +specific Instrumentation



Instruments



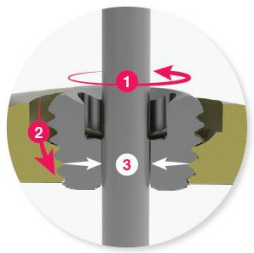


XPERT ANKLE PILON - K-LOCK.

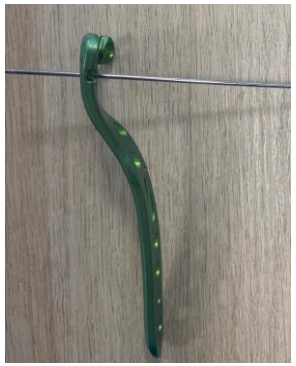
→To be tested for a sandwich technique (AP and ML)

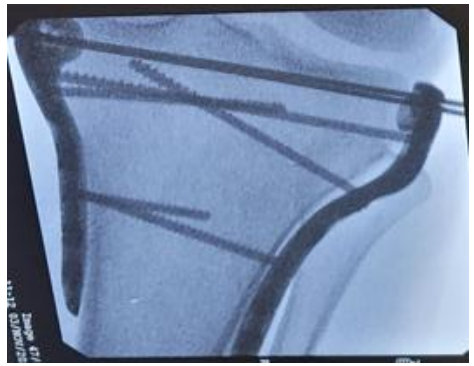
→Diam 1.6??

→Separate set(only in option)











XPERT ANKLE - General Instrumentation.

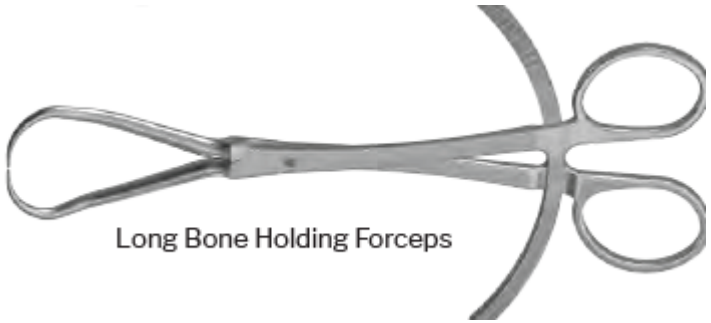
- Long Curved Periosteal Elevator (to be fixed with a handle)



- Reduction clamp



- Pointed reduction clamp



06 | Faculty

Xpert Lower Limb Faculty.

- Faculty

1rts course : **Friday 9-10th April**

- Fractured bone (prox tibia only)
- 2 Days

PRACTICAL SESSIONS possible



Thank you.