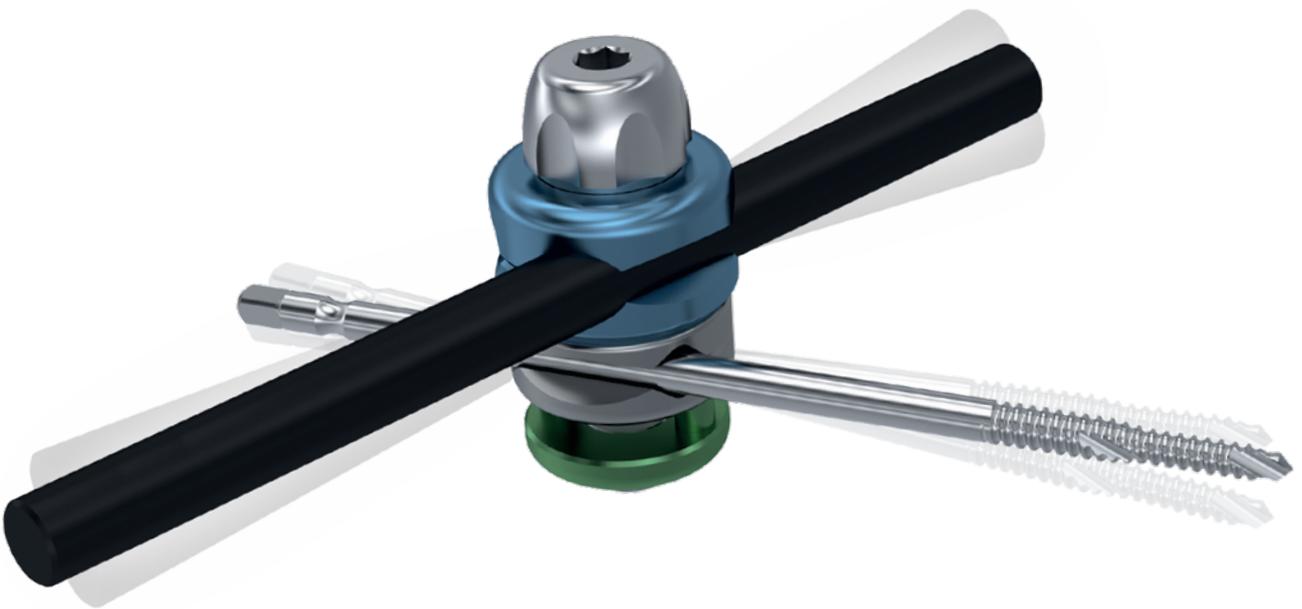


Operative technique

X-frame
external fixation system



**Modular external
fixation system**

The information herein is intended to describe the product. Surgeons must always decide the best approach to follow based on their clinical judgement and the patient's needs. Before use, the surgeon should always refer to the instruction manual included in the product package.

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SYSTEM DESCRIPTION

X-frame is a single use modular external fixation system for the treatment of diaphyseal and periarticular long-bone and pelvic bone fractures.

The many possible configurations, ease of use and variety of accessories make the X-frame system suitable for both temporary [Damage Control] and permanent treatment, in each case ensuring quick and stable application.

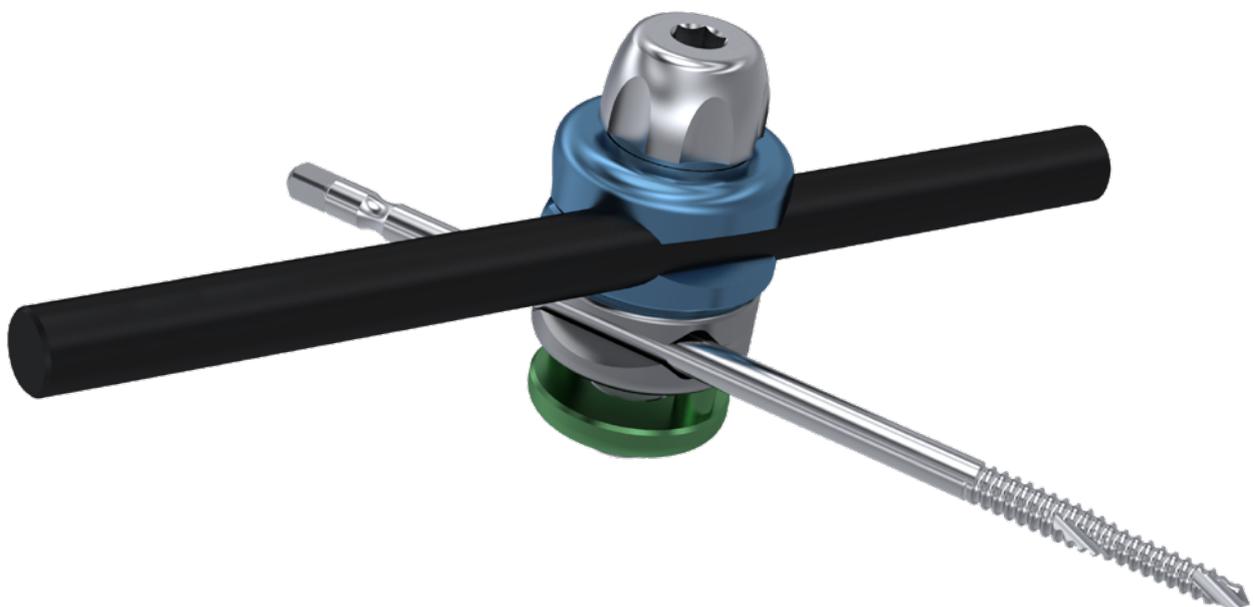
The X-frame system clamps feature the patented double locking system that allows the bone screws and rods to be moved independently, simplifying corrections of the bone segments on different levels.

The individual clamp components are colour-coded to quickly identify the relevant slots for both the rod and the bone screw.

INDICATIONS

The X-frame is indicated for:

- open or closed long bone fractures
- pelvic fractures
- infected and aseptic non-unions
- arthrodesis



MAGNETIC RESONANCE (MR) SAFETY INFORMATION

All the X-frame components must be identified as "MR Conditional" before being positioned near or inside the Magnetic Resonance (MR) environment. The system's versatility allows an unlimited number of configurations to be created, meaning, however, that it is not possible to test all of them. Consequently, we recommend that each configuration be assessed by a radiologist or MR technician, before the MR procedure, to ensure the safety of the patient. All the X-Frame components have been tested in accordance with ASTM F2052, F2119, F2182 and F2213 standards.



Outside the MRI bore

The X-Frame external fixators and relevant titanium bone screws can be safely subjected to magnetic resonance under the following conditions. Failure to observe these conditions may result in serious injury.

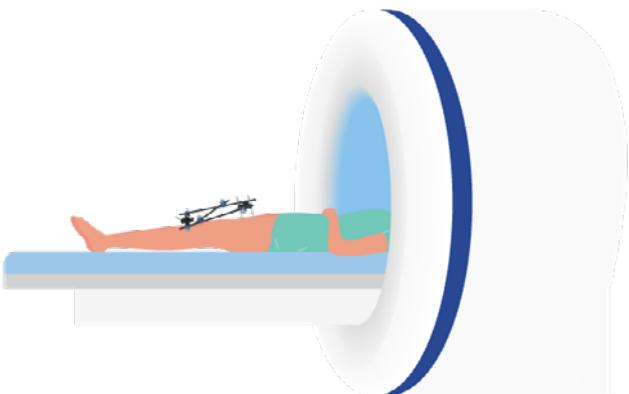
Magnetic field intensity	1.5T and 3T
Maximum spatial gradient	1100 Gauss/cm or less (11 T/m)
RF excitation	Circular polarization (CP)
Type of coil for RF transmission	Body coil
Scan duration	2 W/Kg of average SAR on the entire body for 15 minutes of continuous RF with no temperature increase.
MRI artifact	The presence of this implant may produce a visual artifact if the area in question coincides with that of the implant, or is no more than approx. 7cm from it.
Device positioning	The components of the X-Frame external fixator must not extend into the MRI bore; the configuration must be positioned at least 30 cm from the MRI scanner bore. Scanning the part of the body where X-Frame is present is, therefore, not recommended.

Non-clinical tests have shown that all the X-Frame components are MR Conditional. These components can, therefore, be labelled as "MR Conditional" in accordance with the terminology specified in ASTM F2503.

The following image shows the correct X-Frame positioning.

✓ CORRECT POSITIONING

The configuration is positioned at least 30 cm from the entrance of the MR scanner bore.



✗ INCORRECT POSITIONING

The configuration is positioned less than 30 cm from the entrance of the MR scanner bore.



Information on movement

Non-clinical tests have shown that the X-Frame does not entail additional risks or hazards for the patient in a 1.5T and 3T MR scanner in terms of translational attraction, migration and torque.

Information on heating

Under the above-mentioned scanning conditions, the X-Frame external fixators do not produce a temperature increase at 1.5T and 3T after 15 minutes of continuous scanning.

Patient safety for magnetic resonance

Magnetic resonance for patients with the X-Frame external fixator can only be carried out with the above-mentioned parameters. **The use of other parameters could cause serious injury to the patient.** Since increased in vivo heating cannot be excluded, the patient must be closely monitored and communicated with during the scan.

Stop the scan immediately if the patient feels a sensation of burning or pain.

Tested configurations

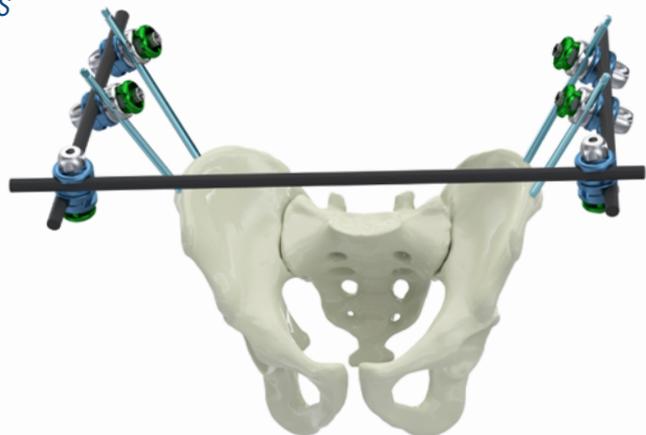
DELTA FRAME



KNEE BRIDGE



PELVIS

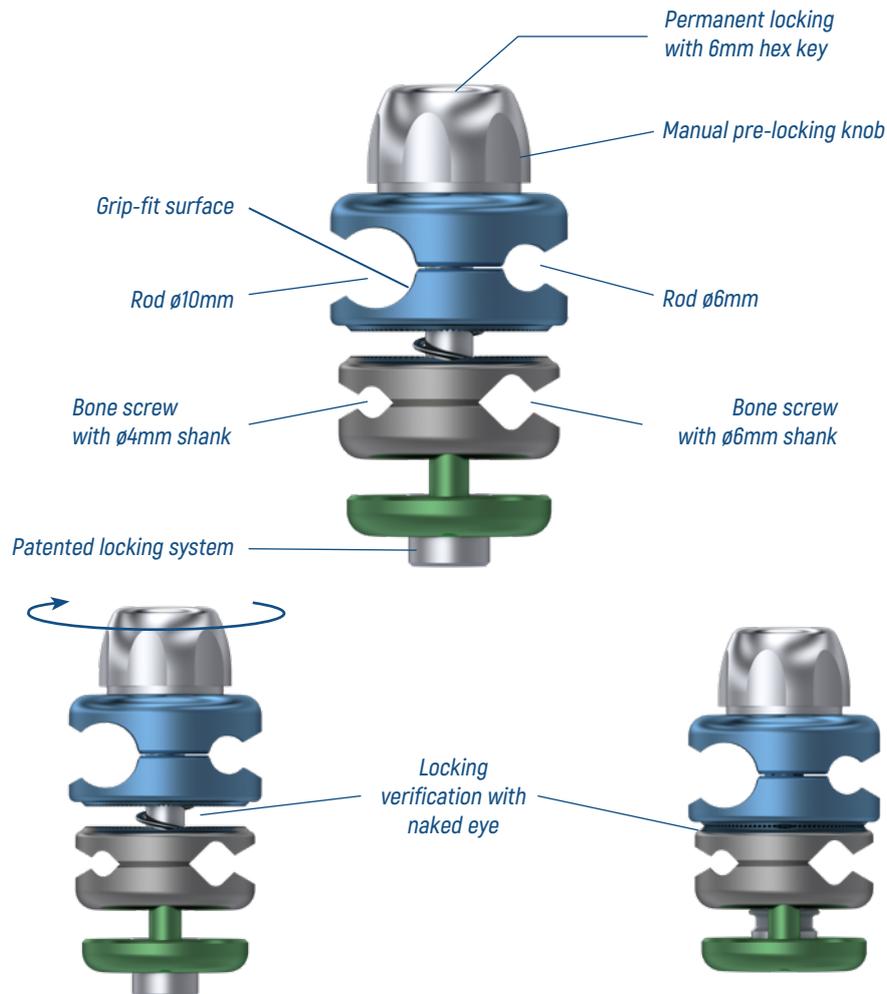


SYSTEM COMPONENTS

Pin-to-rod clamp

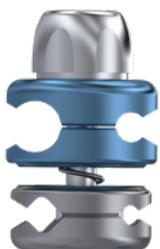
The X-frame pin-to-rod clamp provides an easy and stable connection and features the **patented double locking system** that allows the bone screw to be locked to the clamp, resulting in more freedom when positioning the rods.

The grip-fit coating of the rod slot increases surface roughness to improve rod adhesion.



The X-frame pin-to-rod clamp can be used with both steel and titanium bone screws with $\varnothing 4\text{mm}$ and $\varnothing 6\text{mm}$ shank and different types of thread with diameters ranging from 3mm to 6mm.

Basic pin-to-rod clamp

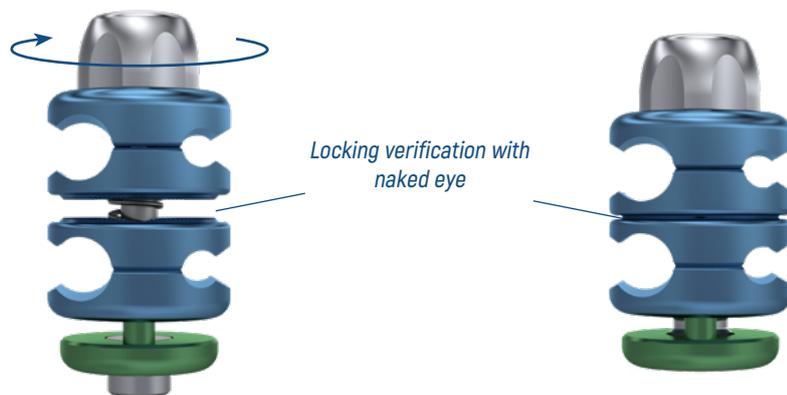
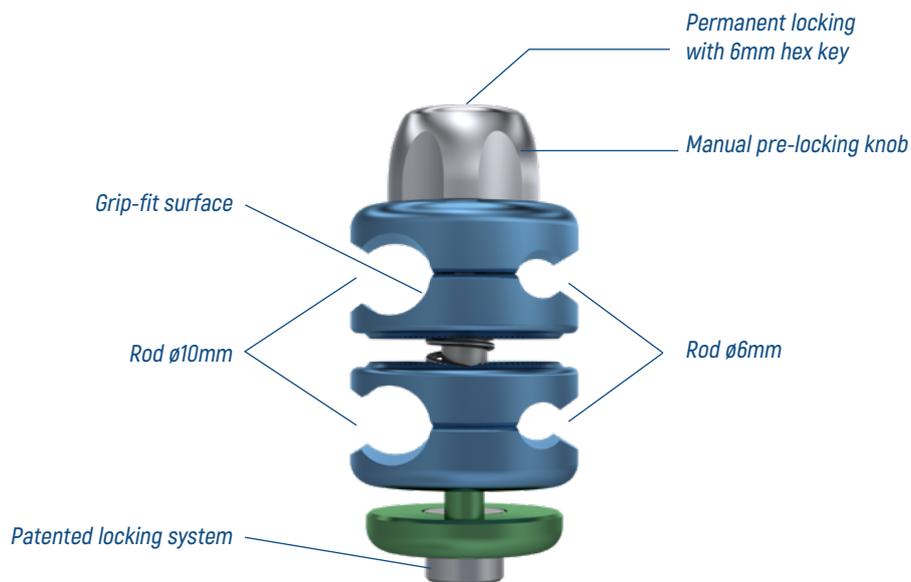


The basic pin-to-rod clamp has the same characteristics as the pin-to-rod clamp **without the independent locking mechanism**.

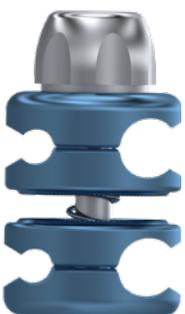
Rod-to-rod clamp

The X-frame rod-to-rod clamp allows for a simple, stable connection between two or more rods and features the **patented double locking system**, so the rods, slotted into one section of the clamp, can be locked while leaving those in the opposite section free.

The grip-fit coating of the rod slot increases surface roughness to improve rod adhesion.



Basic rod-to-rod clamp

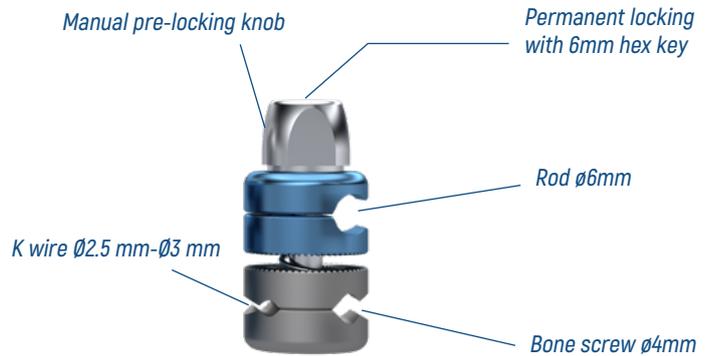
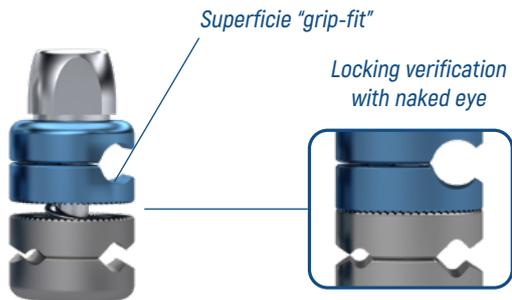


The basic rod-to-rod clamp has the same characteristics as the rod-to-rod clamp **without the independent locking mechanism**.

Small clamps

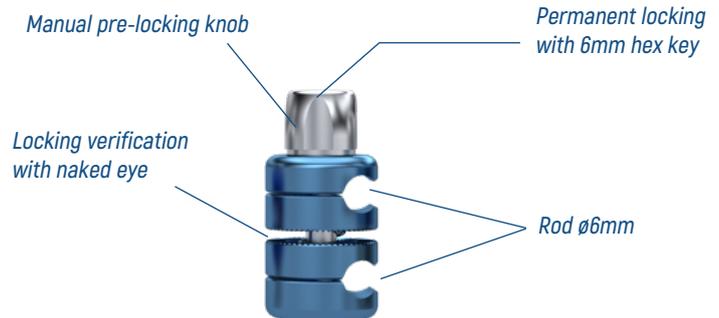
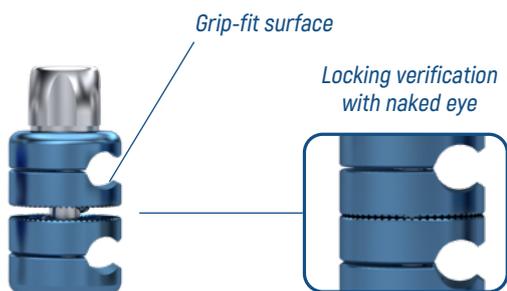
Small rod-to-pin/wire clamp

The Small rod-to-pin/wire clamp allows the connection between a $\varnothing 6\text{mm}$ rod and a $\varnothing 4\text{mm}$ bone screw, or a $\varnothing 2.5\text{mm}$ or $\varnothing 3\text{mm}$ K. wire, **designed without an independent locking mechanism to save space.**



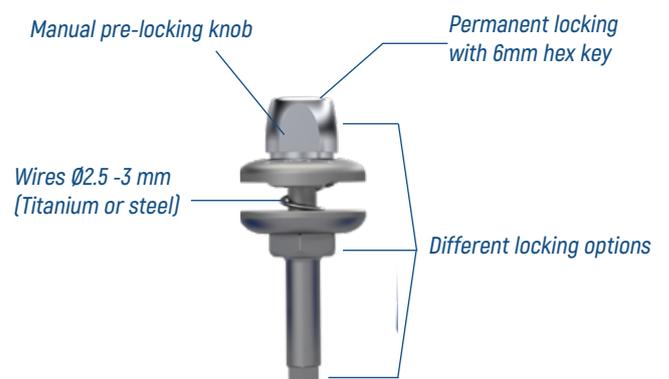
Rod-to-rod Small clamp $\varnothing 6\text{mm}$

The small $\varnothing 6\text{mm}$ rod-to-rod clamp allows the connection between two $\varnothing 6\text{mm}$ rods or as a connection between a $\varnothing 6\text{mm}$ rod and wire clamp, **designed without an independent locking mechanism to save space.**



Wire clamp

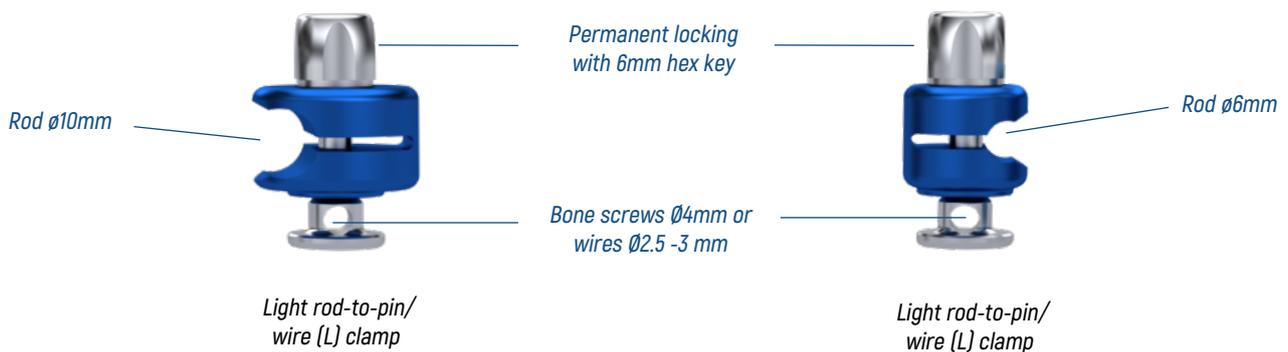
The X-frame wire clamp is suitable for treating proximal humerus fractures. It can be used to connect two parallel threaded Kirschner wires, with a $\varnothing 2.5\text{mm}$ or $\varnothing 3\text{mm}$ diameter.



Special clamps

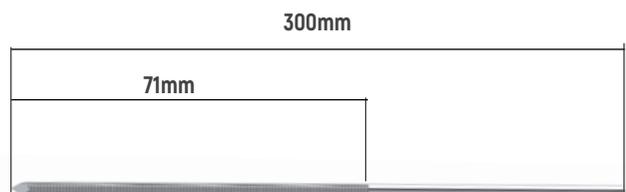
Light rod-to-pin/wire (L) and (S) clamp

The light rod-to-pin/wire (L) and (S) clamps are designed in lightweight alloy to save space and reduce weight. The locking system can be used to connect rods with a $\varnothing 10\text{mm}$ or $\varnothing 6\text{mm}$ diameter and wires and bone screws with a $\varnothing 2.5\text{mm}$ to $\varnothing 4\text{mm}$ diameter. The wires and screws can be inserted in the same hole to save space while maintaining high torsional strength.



Threaded Kirschner wires

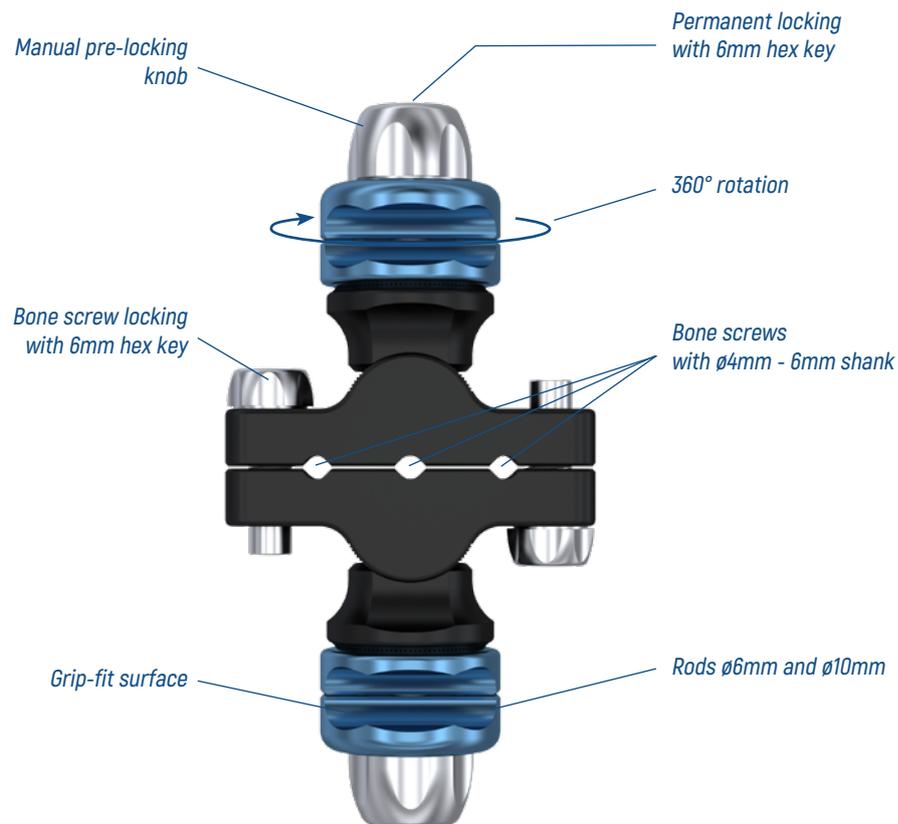
The threaded Kirschner wires are available in two different diameters, $\varnothing 2.5\text{mm}$ and $\varnothing 3\text{mm}$, with the threaded portion measuring 71mm and a total length of 300mm. Both have a self-drilling and self-tapping trocar point.



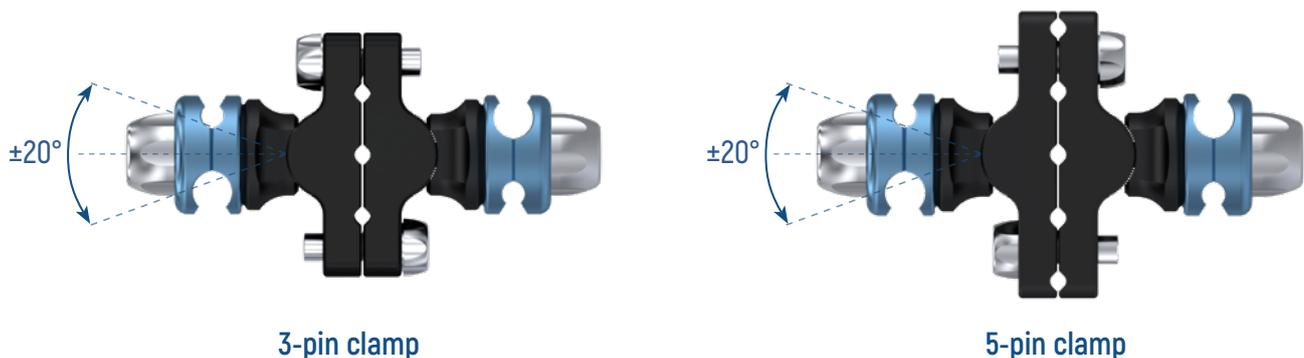
Multi-pin clamp

The X-frame multi-pin clamp enables 3 to 5 bone screws to be positioned and creates a simple, stable connection between two or more rods with a diameter of $\varnothing 6\text{mm}$ and $\varnothing 10\text{mm}$.

The grip-fit coating of the rod slot increases surface roughness to improve rod adhesion.



The multi-pin clamps with 3 to 5 holes feature the same distance between the bone screw seats and the rod slot. Both portions of the rod connection allow a $\pm 20^\circ$ extension.

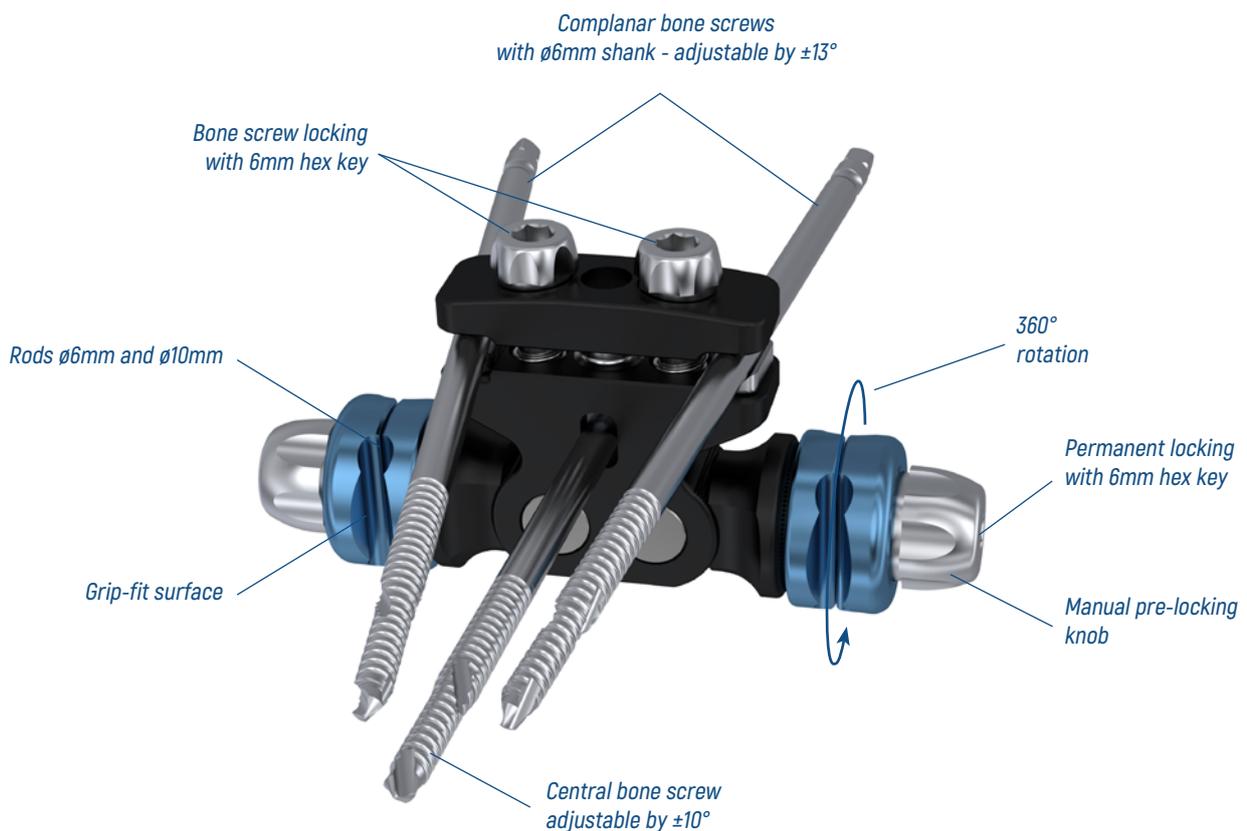


Periarticular clamp

The X-frame periarticular clamp is suitable for the treatment of periarticular fractures and can be used for configurations in combination with all X-frames clamps.

The clamp enables tripod bone screws to be positioned in the metaphyseal zone using two coplanar screws that can be adjusted to a $\pm 13^\circ$ angle and a third central bone screw that can be adjusted to a $\pm 10^\circ$ angle.

The grip-fit coating of the rod slot increases surface roughness to improve rod adhesion.



The periarticular clamp has the same distance between the rod slots of the multi-pin clamps with 3 and 5 holes. Both portions of the rod connection allow a $\pm 20^\circ$ extension.

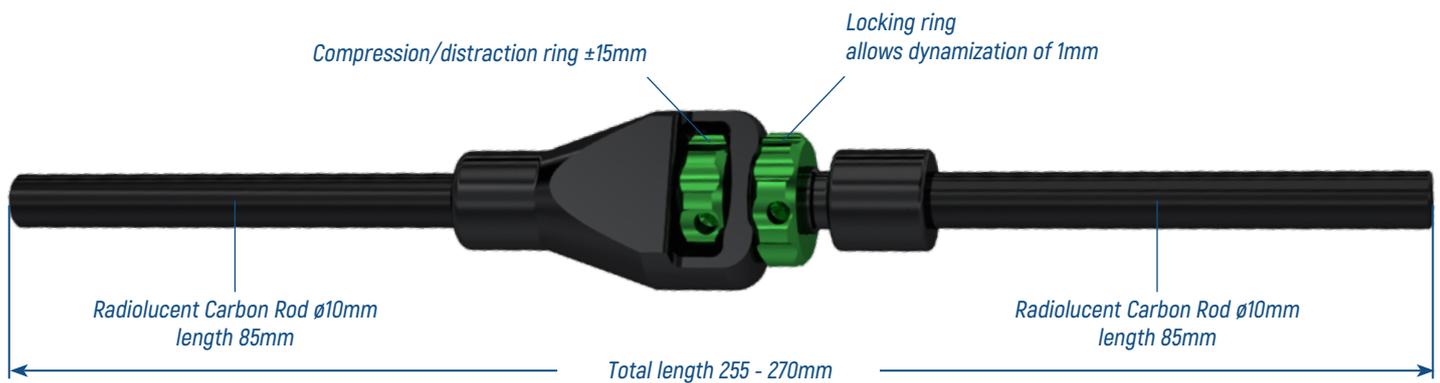


Dynamization device

The X-frame dynamization device provides controlled dynamization of the site and compression/distraction of the fracture. Controlled dynamization, i.e. allowing controlled micro-movements to the fracture site, stimulates callogenesis while protecting the bone callus from excessive crushing.

When the locking ring is fully closed, dynamization is limited, i.e. relying solely on the elasticity of the implant. If the locking ring is turned, controlled dynamization on the bone callus of 1mm is possible.

On the other hand, compression or distraction of the fracture is achieved by turning the compression/distraction ring either manually or using the bolt: one full turn equals a movement of 2mm.



OPERATIVE TECHNIQUE - Lower limb

Bone screw insertion

The position and length of the bone screws and the type of clamps to be used must be planned according to the fracture site and type.

Bone screws must be positioned so as to achieve maximum mechanical stability with bicortical grip of the threaded section of the screw; incorrect positioning could weaken the bone and the seal of the fixator.

Both titanium and steel self-drilling and self-tapping screws do not require pre-drilling and the double thread diameter design allows the screw to be retracted without losing stability.



Make a deep incision where the bone screw is to be inserted and dissect down to the cortex.

Slide the trocar into the cannula (same diameter as the screw to be implanted) and insert into the incision until it touches the cortex.

NOTE: it is possible to introduce a wire with $\varnothing 2\text{mm}$ diameter to assess the correct position of the bone screw before it is inserted.



Keep the cannula in contact with the cortex, remove the trocar (and wire if fitted) and insert the bone screw.

Insert the bone screw through the cannula with a low-speed electric drill, brace or T-handle.

Make sure the screw thread passes through both cortices and protrudes from the second cortex by at least 2mm.

If pre-drilling is required (only necessary for constant diameter titanium screws and HA-coated screws), a $\varnothing 3\text{mm}$ or $\varnothing 4.8\text{mm}$ drill bit can be used based on the thread diameter used.

INSTRUMENTS REQUIRED



SF1250
Cannulated trocar $\varnothing 6\text{mm}$
for $\varnothing 2\text{mm}$ K. wire



SF1220
Cannula $\varnothing 6\text{mm}$ L. 120mm
with handle

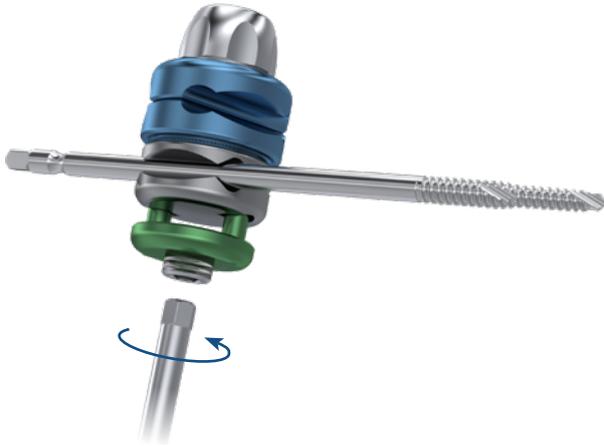


F4-0220
T handle for chuck



SF1070-SF1090
Chuck for $\varnothing 4\text{mm}$ - $\varnothing 6\text{mm}$ bone screws

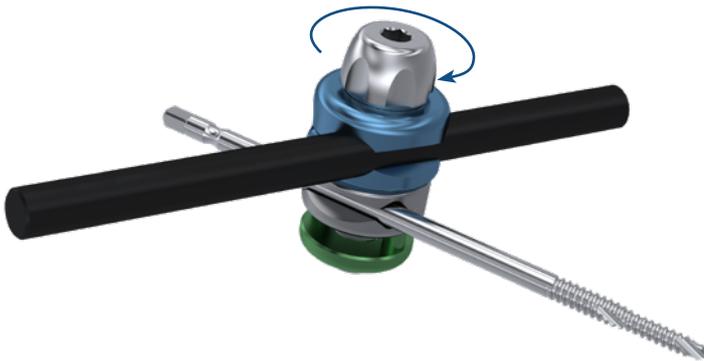
Pin-to-rod clamp connection



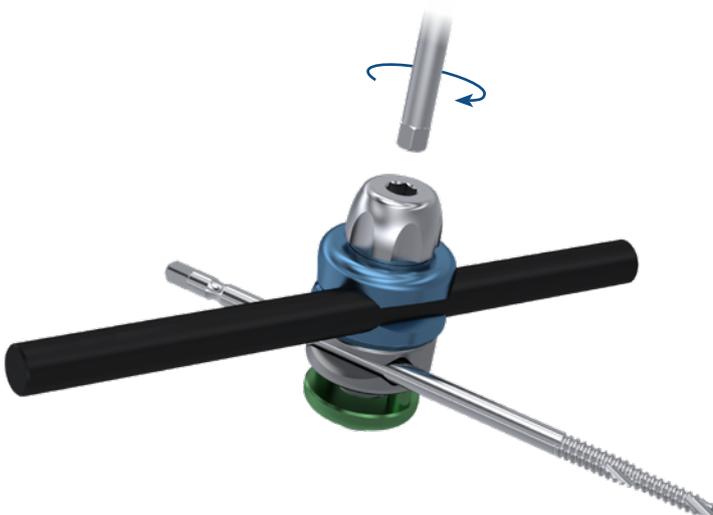
Connect the bone screw to the clamp, and check the distance to the skin surface.

It is possible to pre-lock the clamp by using a 6mm T-wrench, on the locking mechanism.

This ensures that the clamp remains integral with the bone screw, leaving the construct free to facilitate reduction.



Connect the rod of the desired diameter and length to the clamp and, once it is in the correct position, turn the manual pre-locking knob clockwise.



Once the reduction manoeuvres have been completed, use the 6mm T-wrench to permanently lock the clamp.

Rod-to-rod clamp connection



Connect the first rod of the chosen diameter and length to the clamp.

It is possible to pre-lock the clamp by using a 6mm T-wrench, on the locking mechanism.

This ensures that the clamp remains integral with the rod, leaving the construct free to facilitate reduction.

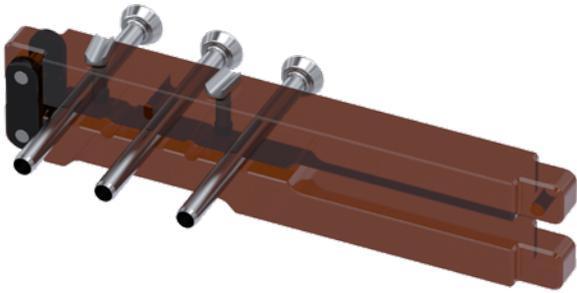


Connect the second rod and, once it is in the correct position, turn the manual pre-locking knob clockwise.



Once the reduction manoeuvres have been completed, use the 6mm T-wrench to permanently lock the clamp.

Insertion of bone screws for 3-hole and 5-pin clamps

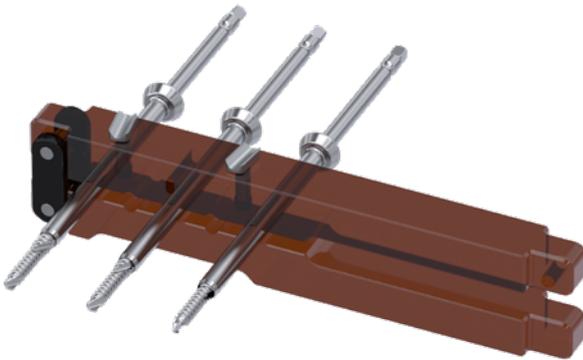


Bone screws can be inserted into the multi-pin clamps using a drill guide.

Set the drill guide on the multi-pin clamp side.

Slide the trocar into the cannula (with the same diameter as the screw to be implanted) and insert it through the guide holes until it touches the cortex.

NOTE: it is possible to introduce a wire with $\varnothing 2\text{mm}$ diameter to assess the correct position of the bone screw before it is inserted.



Insert the first bone screw into one of the holes in the guide and then insert the other screws.

It is advisable to place the outermost screws first and then the middle ones, if necessary.

Remove the drill guide and insert the permanent multi-pin clamp.

Tighten the two side locking screws with the 6mm T-wrench.



INSTRUMENTS REQUIRED



SF1200

Drill guide for multi-pin clamps



SF1230

Cannula $\varnothing 6$ L 90mm



SF1250

Cannulated trocar $\varnothing 6\text{mm}$ for $\varnothing 2\text{mm}$ K. wire

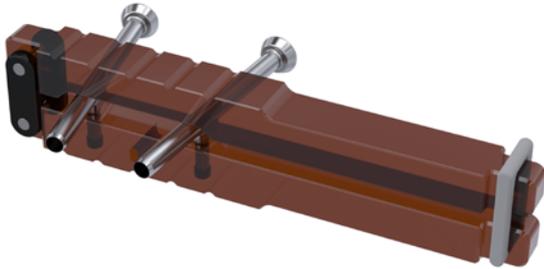


SF1011

6mm T-wrench

Insertion of bone screws for periarticular clamp

Bone screws can be inserted into the periarticular clamp using a drill guide.

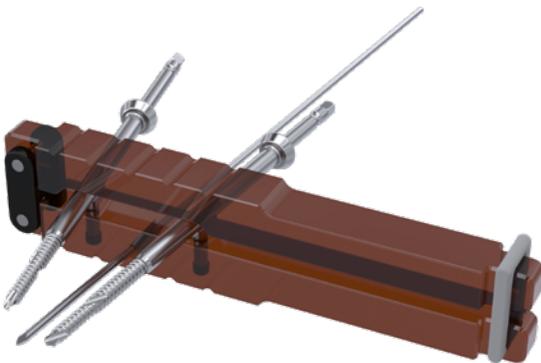


Set the drill guide on the periarticular clamp side.

Slide the trocars into the $\varnothing 6\text{mm}$ cannulas (we recommend using a cannulated trocar) and position them on the moveable slides.

They can be adjusted to the desired angle.

The two $\varnothing 2\text{mm}$ K wires can be inserted under ampliscopic control to assess the correct positioning.



Then, insert the two bone screws through the cannulas with a low-speed electric drill, brace or T-handle.

Under ampliscopic control, a $\varnothing 2\text{mm}$ K-wire can be inserted through the central hole to assess the insertion of the third screw.



Remove the drill guide and insert the periarticular clamp, then tighten the two side locking screws with the 6mm T-wrench.

Remove the K-wire and, under ampliscopic control, insert the third bone screw.

Tighten the locking screw in the centre of the clamp with the 6mm T-wrench.

INSTRUMENTS REQUIRED



SF1200

Drill guide for multi-pin clamps



SF1230

Cannula $\varnothing 6$ L 90 mm



SF1250

Cannulated trocar $\varnothing 6\text{mm}$ for $\varnothing 2\text{mm}$ K. wire

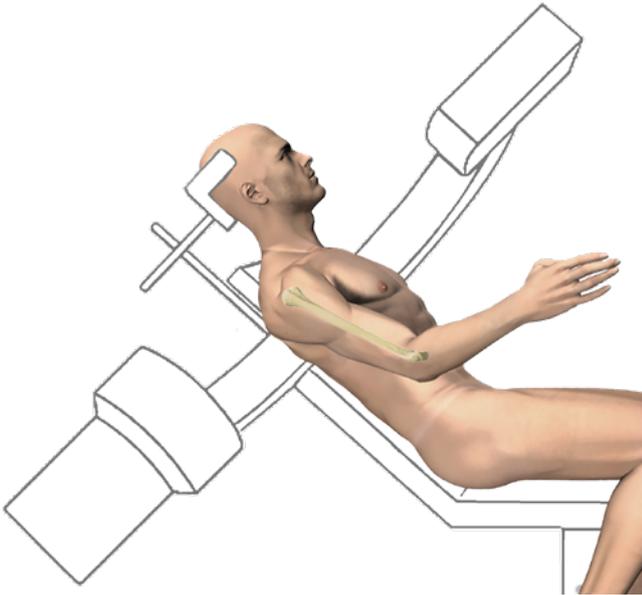


SF1011

6mm T-wrench

OPERATIVE TECHNIQUE - proximal humerus

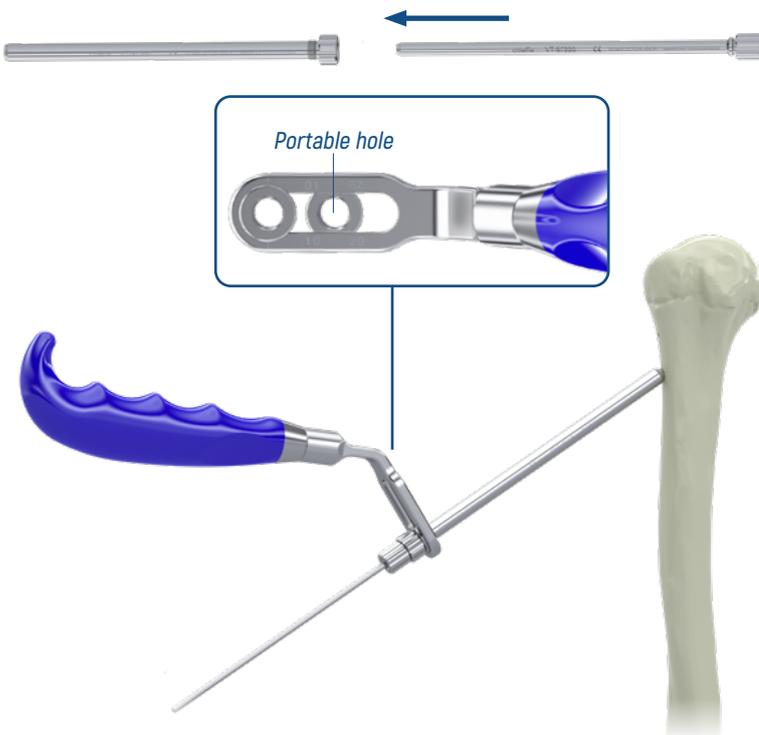
Patient positioning



Position the patient on their back or in a semi-seated position ("beach chair position"); it must be possible to freely move the upper limb.

Place the image intensifier so you have a clear A/P view and in transthoracic projection and/or axillary view. Depending on the type of fracture, reduce the fracture and then, perform percutaneous osteosynthesis.

Insertion of first wire



Insert the first wire with the drill at low speed, which will be positioned distally, about 9 cm from the lateral border of the acromion and anteriorly to the median line.

The wire should be inserted in the direction of the coracoid with a posterior tilt of about 20° to follow the anatomical retroversion of the humeral head.

It is possible to position the first wire freehand or use the Handle for canulas, parallel wires.

Screw the cannula and the trocar into the handle for canulas. Move the trocar into contact with the cortex. Introduce the threaded wire into the trocar with the drill at low speed.

The end of the threaded wire should reach the subchondral area of the humeral head.

Check the correct position with the image intensifier.

INSTRUMENTS REQUIRED



VT-97200
Handle for canulas, parallel wires



VT-97250
Canula L50mm for drill ø5mm



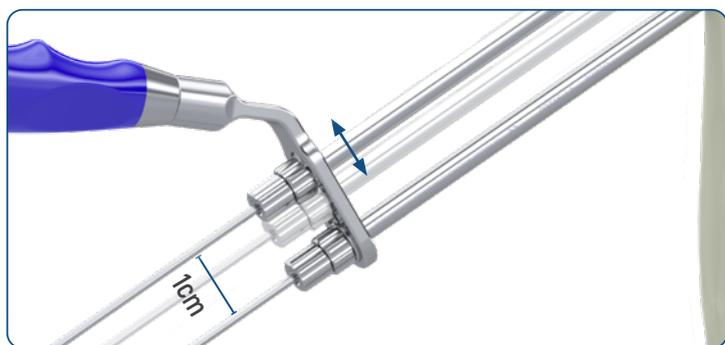
VT-97210
Trocar L50mm for wire ø3mm

Insertion of second wire



Insert the second wire with a drill at low speed, to about 1cm from the first one.

The Handle for canulas can be used to position the second parallel wire.



The distance between the cannulae can be changed by loosening the portable cannula.

The wire should be inserted in the direction of the coracoid with a posterior tilt of about 20° to follow the anatomical retroversion of the humeral head.

The end of the threaded wire should reach the subchondral area of the humeral head.

Check the correct reduction and position of the wires with the image intensifier in intra- and extra-rotation.

Insertion of further wires



Repeat the steps for the remaining wires.

The implant should have at least 4 wires and it is possible to insert 1 or 2 more wires in the proximal-distal direction, depending on the type of fracture.

INSTRUMENTS REQUIRED



VT-97200

Handle for canulas, parallel wires



VT-97250

Canula L50mm for drill ø5mm



VT-97210

Trocar L50mm for wire ø3mm

Insertion of wire clamp

Once the reduction has been checked, insert the wire clamp for each pair of wires.

Insert the clamp on first pair of wires, carefully following the arrows marked on the top of the clamp.



If necessary, it is possible to bend the wires 90° with the wire bender, leaving a gap of about 3 cm from the skin. This will allow the wire clamp to be correctly positioned.



INSTRUMENTS REQUIRED

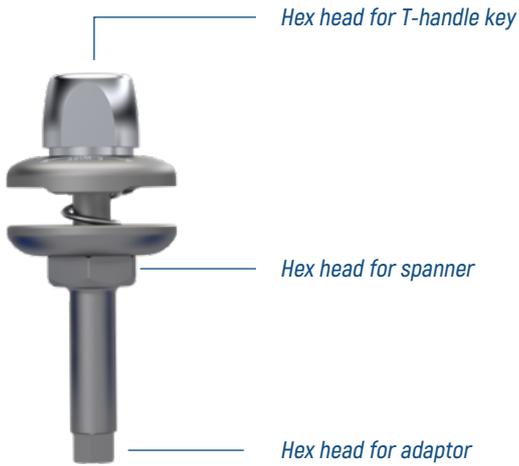


3309
Wire Bending Pliers

or



33091
Wire Bending Pliers



Lock the wires in place using both 6mm T-wrench at the same time:

A) Locking using the 6mm T-wrench and 6mm T-wrench with adaptor.



B) Locking using the 6mm T-wrench and spanner.



INSTRUMENTS REQUIRED



Insertion of rod-to-rod clamps $\varnothing 6\text{mm}$



Connect each wire clamp with a Small $\varnothing 6\text{mm}$ rod-to-rod clamp, making sure that the locking knob is facing the surgeon to make it easier to lock.



Then, connect the $\varnothing 6\text{mm}$ rods to the Small $\varnothing 6\text{mm}$ rod-to-rod clamps and stabilise them against each other with another Small $\varnothing 6\text{mm}$ rod-to-rod clamp. Manually lock the clamps and then, tighten the clamps using the 6mm T-wrench.

Check the stability of the implant under ampliscopic control and cut off the excess wire.

INSTRUMENTS REQUIRED



SF1011
6mm T-wrench

CONFIGURATIONS

Periarticular fracture - Tibia



Code	Description	Qty
XF241600	Periarticular clamp	1
XF231605	5-pin clamp	1
XF310350	Carbon straight rod \varnothing 10mm L350mm	2
F4-156150	Bone screw \varnothing 6mm - L. 150x40mm	3
F4-156180	Bone screw \varnothing 6mm - L. 180x50mm	3

Tibial pilon - Delta frame



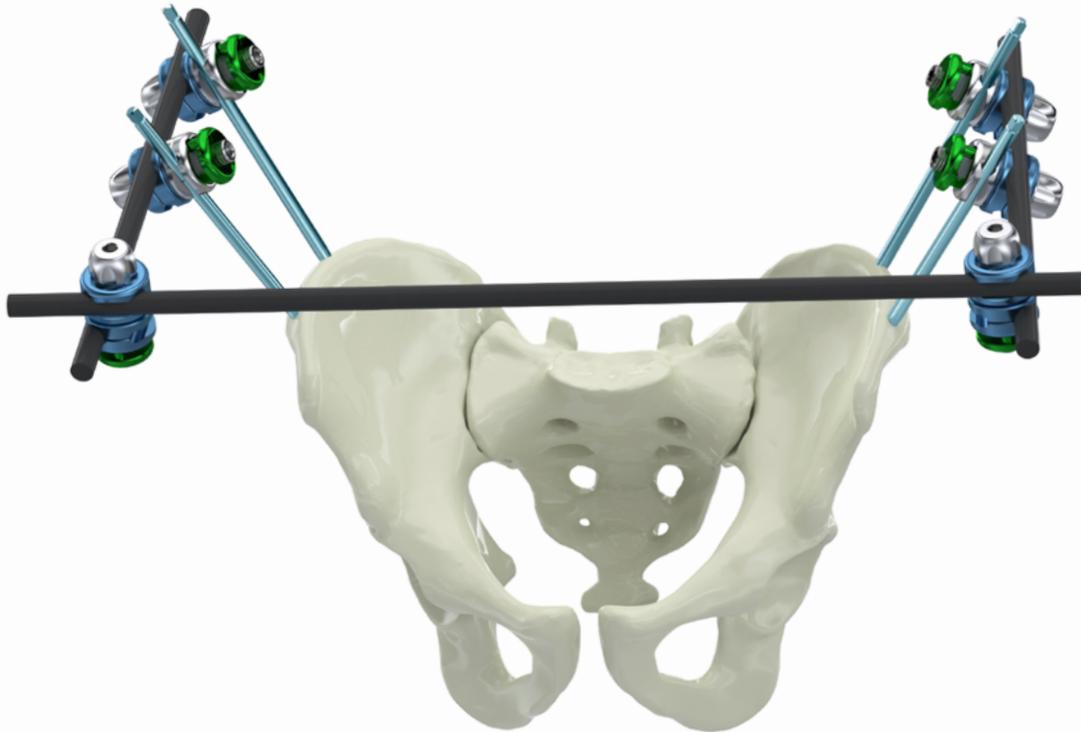
Code	Description	Qty
XF221600	Pin-to-rod clamp	3
XF211600	Rod-to-rod clamp	1
XF231603	3-pin clamp	1
XF310350	Carbon straight rod \varnothing 10mm L350mm	2
XF310200	Carbon straight rod \varnothing 10mm L200mm	1
DF424120	Bone screw Damage control \varnothing 4mm - L. 120x30mm	1
DF406160	Bone screw Damage control \varnothing 6mm - L. 160x45mm	2
DF415220	Transfixing bone screw \varnothing 5mm - L. 220mm	1

Knee bridge



Code	Description	Qty
XF231605	5-pin clamp	2
XF211601	Basic rod-to-rod clamp	2
XF310450	Carbon straight rod \varnothing 10mm L450mm	2
XF310200	Carbon straight rod \varnothing 10mm L200mm	1
DF406160	Bone screw Damage control \varnothing 6mm - L. 160x45mm	6

Pelvis



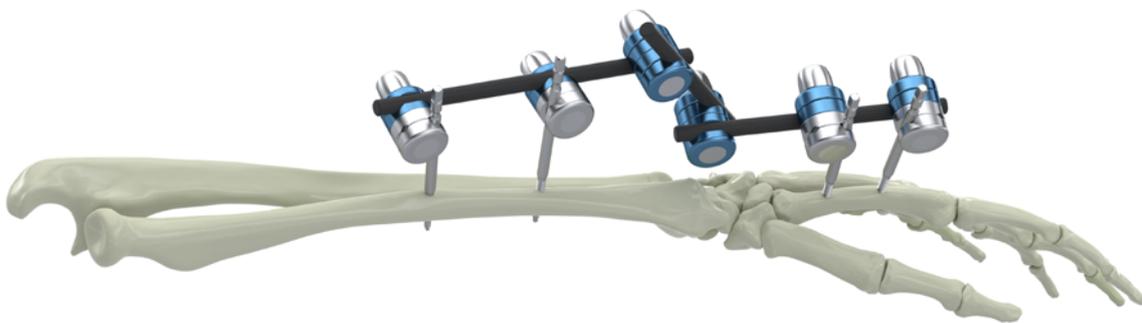
Code	Description	Qty
XF221600	Pin-to-rod clamp	4
XF211600	Rod-to-rod clamp	2
XF310400	Carbon straight rod \varnothing 10mm L400mm	1
XF310200	Rod Carbon straight rod \varnothing 10mm L200mm	2
DF406200	Bone screw Damage control \varnothing 6mm - L. 200x45mm	4

Proximal humerus



Code	Description	Qty
XF210600	Rod-to-rod Small clamp \varnothing 6mm	4
XF250000	Wire clamp	3
XF306150	Carbon straight rod \varnothing 6mm L150mm	1
XF306100	Carbon straight rod \varnothing 6mm L100mm	1
TKZ0000131567	Kirschner wire \varnothing 2,5x300mm, threaded trocar tip L.71mm	6

Wrist



Code	Description	Qty
XF220604	Small rod-to-pin/wire clamp	4
XF210600	Rod-to-rod Small clamp \varnothing 6mm	2
XF306100	Carbon straight rod \varnothing 6mm L100mm	2
XF306075	Carbon straight rod \varnothing 6mm L75mm	1
F4-125380	Bone screw \varnothing 4mm - L. 80-20mm	4

Forearm



Code	Description	Qty
XF250600	Wire/pin-to-rod Light clamp (S)	4
XF210600	Rod-to-rod Small clamp \varnothing 6mm	2
XF306100	Carbon straight rod \varnothing 6mm L100mm	3
F4-134095	Bone screw \varnothing 4mm - L. 95-34mm	4

Diaphyseal humerus



Code	Description	Qty
XF220604	Wire/pin-to-rod Small clamp	4
XF210600	Rod-to-rod Small clamp \varnothing 6mm	2
XF306125	Carbon straight rod \varnothing 6mm L125mm	2
XF306100	Carbon straight rod \varnothing 6mm L100mm	1
F4-134120	Bone screw \varnothing 4mm - L. 120-34mm	4

ORDERING INFORMATION

STERILE



XF211600 Rod-to-rod clamp



XF211601 Basic rod-to-rod clamp



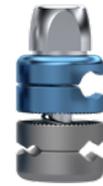
XF210600 Rod-to-rod Small clamp ø6mm



XF221600 Pin-to-rod clamp



XF221601 Basic pin-to-rod clamp



XF220604 Wire/pin-to-rod Small clamp



XF251000 Wire/pin-to-rod Light clamp (L)



XF250600 Wire/pin-to-rod Light clamp (S)



XF250000 Wire clamp



XF231603 3-pin clamp



XF231605 5-pin clamp



XF241600 Periarticular clamp

STERILE



XF712000 Dynamization device

Straight rod \varnothing 6mm - radiolucent



Code	L. mm
XF306050	50
XF306075	75
XF306100	100
XF306125	125
XF306150	150
XF306175	175
XF306200	200

Straight rod \varnothing 10mm - radiolucent



Code	L. mm
XF310050	50
XF310075	75
XF310100	100
XF310150	150
XF310200	200
XF310250	250
XF310300	300

Code	L. mm
XF310350	350
XF310400	400
XF310450	450
XF310500	500
XF310550	550
XF310600	600
XF310650	650

Semicircular rod \varnothing 10mm - aluminium



Code	L. mm
XF510140	140
XF510180	180
XF510220	220

Ordering information - Procedural kits *

* Kits available on request with components packaged and labelled individually

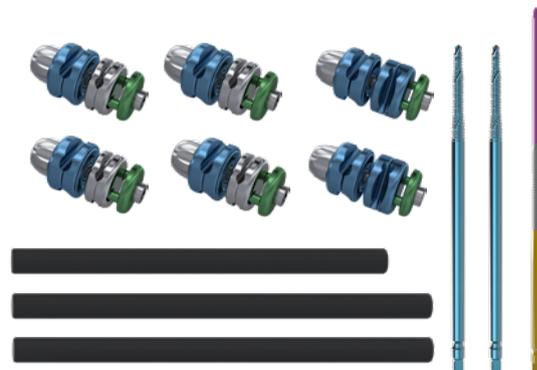
*PK-150 Delta frame procedure kit, titanium pin

STERILE 

**On request*

CONTENT

Code	Description	Qty.
XF221600	Rod-to-pin clamp	4
XF211600	Rod-to-rod clamp	2
XF310200	Carbon straight rod ø10mm L200mm	1
XF310300	Carbon straight rod ø10mm L300mm	2
DF406160	Bone screw ø6mm L160mm	2
DF415220	Transfixing bone screw ø5mm L220mm	1



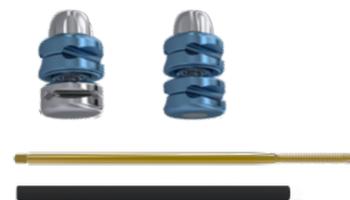
*PK-151 Metatarsal procedure kit, titanium pin

STERILE 

**On request*

CONTENT

Code	Description	Qty.
XF306125	Carbon straight rod ø6mm L125mm	1
XF211601	Rod-to-rod clamp, basic	1
XF221601	Rod-to-pin clamp, basic	1
DF424120	Bone screw ø4mm L120-30mm	1



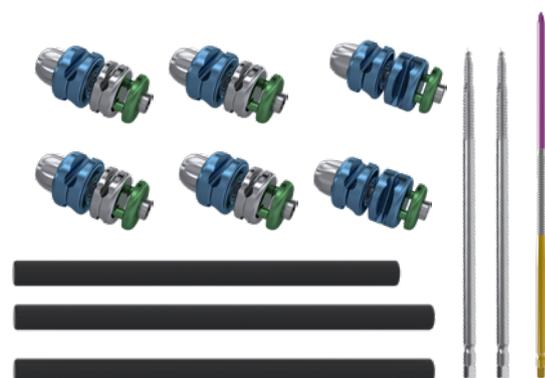
*PK-152 Delta frame procedure kit, StSt pin

STERILE 

**On request*

CONTENT

Code	Description	Qty.
XF221600	Rod-to-pin clamp	4
XF211600	Rod-to-rod clamp	2
XF310200	Carbon straight rod ø10mm L200mm	1
XF310300	Carbon straight rod ø10mm L300mm	2
F4-156150	Cortical bone screw ø6mm L150-40mm	2
DF415220	Transfixing bone screw ø5mm L220mm	1



Ordering information - Procedural kits *

* Kits available on request with components packaged and labelled individually

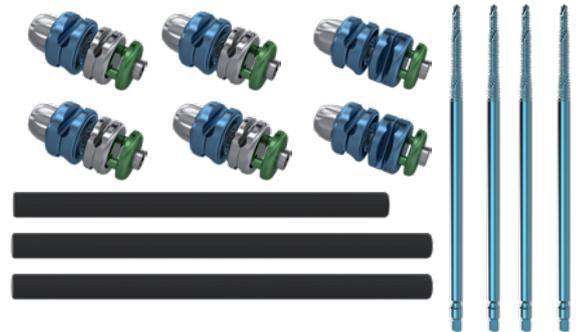
*PK-153 Lower limb procedure kit, titanium pin

STERILE 

*On request

CONTENT

Code	Description	Qty.
XF221600	Rod-to-pin clamp	4
XF211600	Rod-to-rod clamp	2
XF310200	Carbon rod \varnothing 10mm L. 200mm	1
XF310300	Carbon rod \varnothing 10mm L. 300mm	2
DF406160	Bone screw \varnothing 6mm L160mm	4



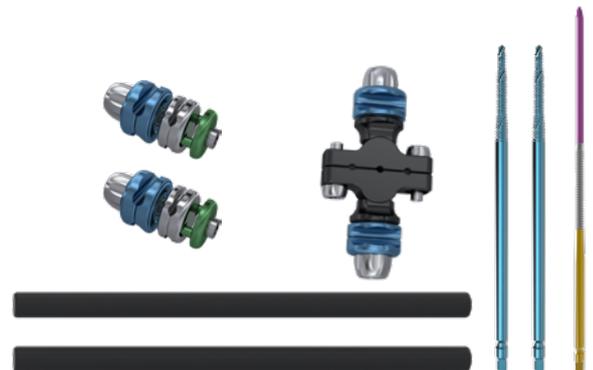
*PK-154 Delta frame procedure kit, 3-pin clamp, titanium pin

STERILE 

*On request

CONTENT

Code	Description	Qty.
XF231603	3 pin clamp	1
XF221600	Rod-to-pin clamp	2
XF310400	Carbon rod \varnothing 10mm L. 400mm	2
DF406160	Bone screw \varnothing 6mm L160mm	2
DF415220	Transfixing bone screw \varnothing 5mm L220mm	1



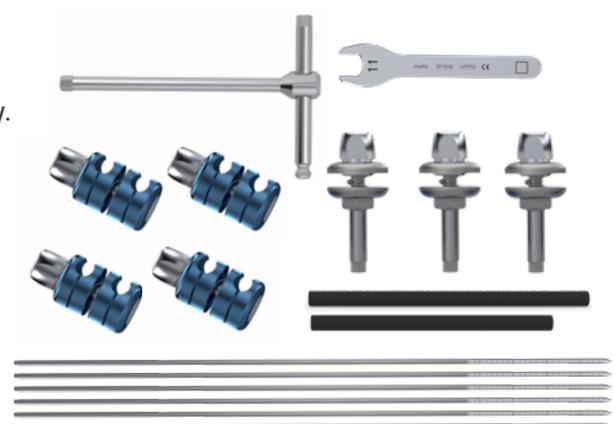
*PK-156 XF proximal humerus procedure kit

STERILE 

*su richiesta

CONTENT

Code	Description	Qty.
XF210600	Small rod-to-rod clamp \varnothing 6	4
XF250000	Wire clamp	3
XF306100	Carbon straight rod \varnothing 6mm L100mm	1
XF306150	Carbon straight rod \varnothing 6mm L150mm	1
TKZ0000131567	Kirschner wire \varnothing 2,5x300mm, threaded trocar tip L71mm	6
SF1011	6mm T-wrench	1
SF1018	Spanner, 11mm	1



Ordering information - Pre-assembled kits*

** Kits with components in a single pack and one label

XF800001 X-Frame pilon fractures kit

STERILE 

CONTENT

Description	Qty.
3-pin clamp	1
Rod-to-pin clamp	2
Carbon straight rod \varnothing 10mm L350mm	2
6mm T-wrench	1



XF800002 X-Frame lower limb basic kit

STERILE 

CONTENT

Description	Qty.
Rod-to-rod clamp	2
Carbon straight rod \varnothing 10mm L300mm	1
Carbon straight rod \varnothing 10mm L200mm	2
Rod-to-pin clamp	4
6mm T-wrench	1



XF810001 X-Frame Small Kit

STERILE 

CONTENT

Description	Qty.
Small rod-to-rod clamp \varnothing 6	2
Small rod-to-pin/wire clamp	4
Carbon straight rod \varnothing 6mm L100mm	2
Carbon straight rod \varnothing 6mm L150mm	1
6mm T-wrench	1

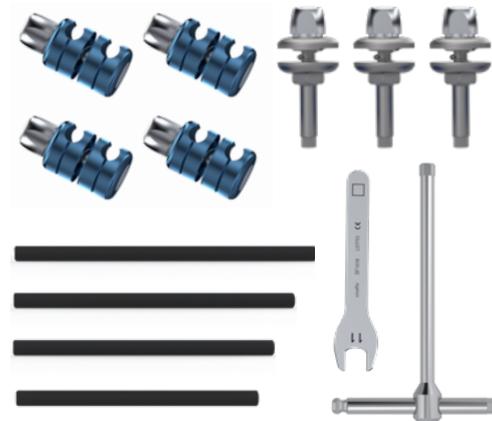


XF810002 X-frame proximal humerus kit

STERILE 

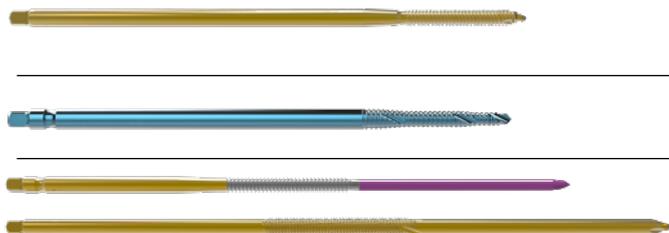
CONTENT

Description	Qty.
Small rod-to-rod clamp Ø6	4
Wire clamp	3
Carbon straight rod Ø6mm L100mm	1
Carbon straight rod Ø6mm L125mm	1
Carbon straight rod Ø6mm L150mm	1
Carbon straight rod Ø6mm L175mm	1
Spanner, 11mm	1
6mm T-wrench	1



Bone screw - titanium 

Titanium bone screws in combination with X-Frame components are indicated for the temporary stabilisation of fractures where there is no load due to the patient's weight



Code	Thread Ø mm	Shank Ø mm	Thread L. mm	Total L. mm
DF424120	4	6	30	120
DF425180	5	6	40	180
DF426200	6	6	45	200
DF406160	4 - 5 - 6	6	45	160
DF406200	4 - 5 - 6	6	45	200
DF415220 *	5	6	50	220
DF417260 *	7	6	60	260

* Transfixing bone screw

STERILE **Nickel-free cortical bone screw - steel**

Code	A - B thread \varnothing (mm)	C shank \varnothing (mm)	Thread L. (mm)	Total L. (mm)
F4-434080	3 - 4	4	20	80
F4-434120	3 - 4	4	34	120
F4-434150	3 - 4	4	40	150
F4-456150	5 - 6	6	40	150
F4-456180	5 - 6	6	50	180
F4-456200	5 - 6	6	60	200

Cortical bone screw - steel

Code	Thread \varnothing mm	Shank \varnothing mm	Thread L. mm	Total L. mm
F4-125360	2.5 - 3	4	20	60
F4-125380	2.5 - 3	4	20	80
F4-125390	2.5 - 3	4	20	100
F4-134080	3 - 4	4	20	80
F4-134095	3 - 4	4	34	95
F4-134120	3 - 4	4	34	120
F4-134150	3 - 4	4	40	150
F4-140118	3 - 4	4	25	120
F4-150120	4 - 5	6	30	120
F4-150150	4 - 5	6	30	150
F4-150178	4 - 5	6	30	180
F4-150180	4 - 5	6	40	180
F4-156118	5 - 6	6	30	120
F4-156120	5 - 6	6	40	120
F4-156148	5 - 6	6	30	150
F4-156150	5 - 6	6	40	150
F4-156178	5 - 6	6	35	180
F4-156180	5 - 6	6	50	180
F4-156198	5 - 6	6	40	200
F4-156200	5 - 6	6	60	200
F4-156240	5 - 6	6	60	240

STERILE

HA-coated cortical bone screw - steel



Code	Thread \varnothing mm	Shank \varnothing mm	Thread L. mm	Total L. mm
ST340100HA	3 - 4	4	30	100
ST340120HA	3 - 4	4	40	120
ST256150HA	5 - 6	6	40	150
ST256180HA	5 - 6	6	50	180
ST256200HA	5 - 6	6	60	200
ST360120HA	5 - 6	6	30	120
ST360148HA	5 - 6	6	30	150
ST360150HA	5 - 6	6	40	150
ST360178HA	5 - 6	6	35	180
ST360180HA	5 - 6	6	50	180
ST360198HA	5 - 6	6	40	200
ST360200HA	5 - 6	6	60	200
ST360240HA	5 - 6	6	60	240

HA-coated cortical bone screw for allergies - steel



Code	Thread \varnothing mm	Shank \varnothing mm	Thread L. mm	Total L. mm
ST134060HA	3 - 4	4	20	60
ST134080HA	3 - 4	4	20	80
ST134120HA	3 - 4	4	34	120
ST134150HA	3 - 4	4	40	150
ST156150HA	5 - 6	6	40	150
ST156180HA	5 - 6	6	50	180
ST156200HA	5 - 6	6	60	200
ST156240HA	5 - 6	6	60	240

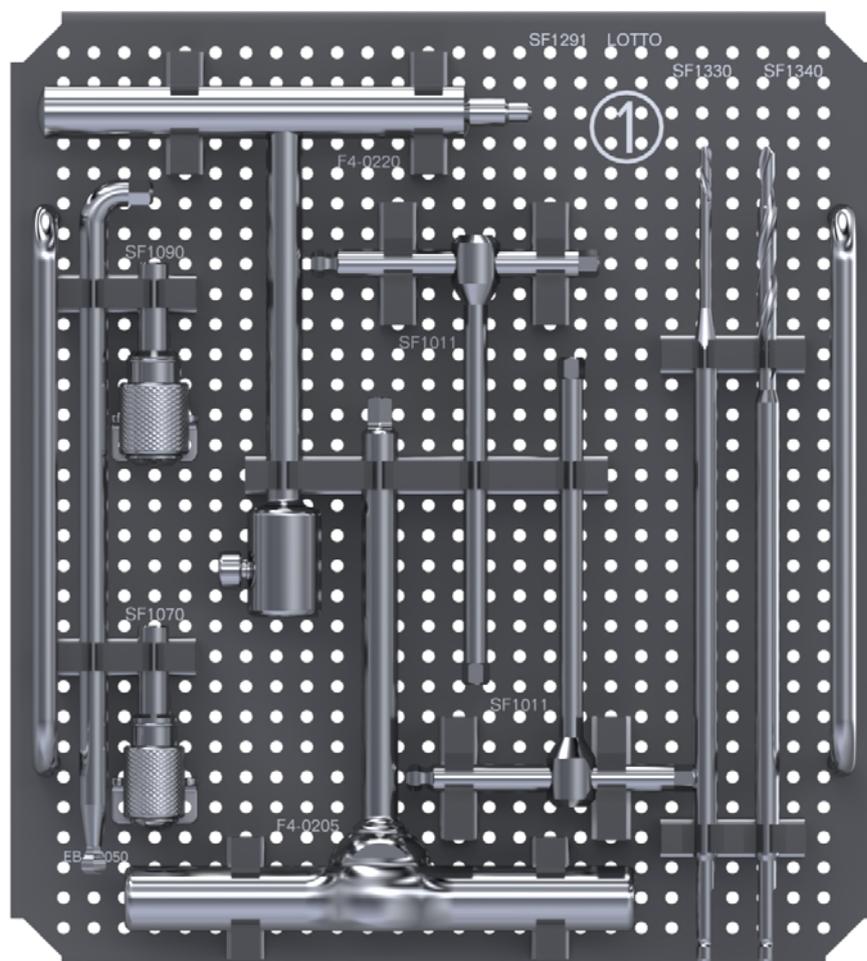
Kirschner wires

NOT STERILE

Code	Shank \varnothing mm	Thread L. mm	Total L. mm
TKZ0000131567	\varnothing 2.5	71	300
TKZ0000131568	\varnothing 3	71	300

ORDERING INFORMATION - INSTRUMENT SETS

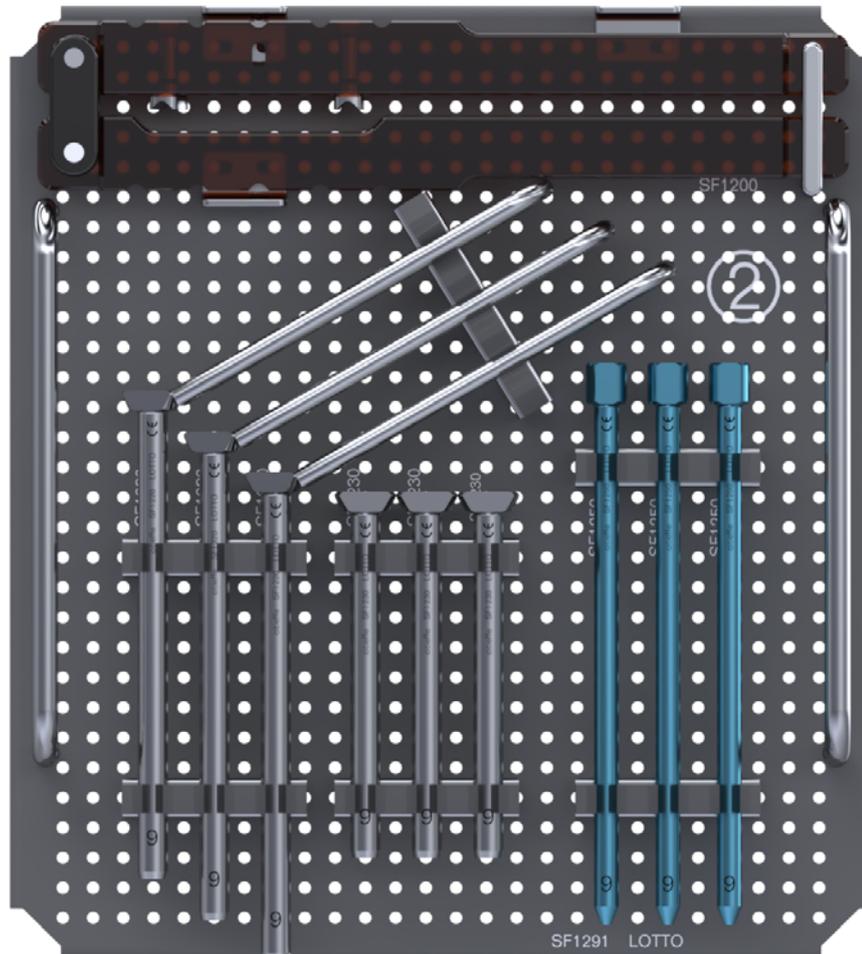
TRAY 1



Code	Description	Q.ty
F4-0220	T handle for chuck	1
SF1011	6mm T-wrench	2
EBA-0050	Allen wrench, 6mm	1
SF1070	Chuck for \varnothing 4mm bone screws	1
SF1090	Chuck for \varnothing 6mm bone screws	1
SF1330	Drill bit \varnothing 3mm for \varnothing 6mm cannula	1
SF1340	Drill bit \varnothing 4.8mm for \varnothing 6mm cannula	1
F4-0205	Torque wrench	1

ORDERING INFORMATION - INSTRUMENT SETS

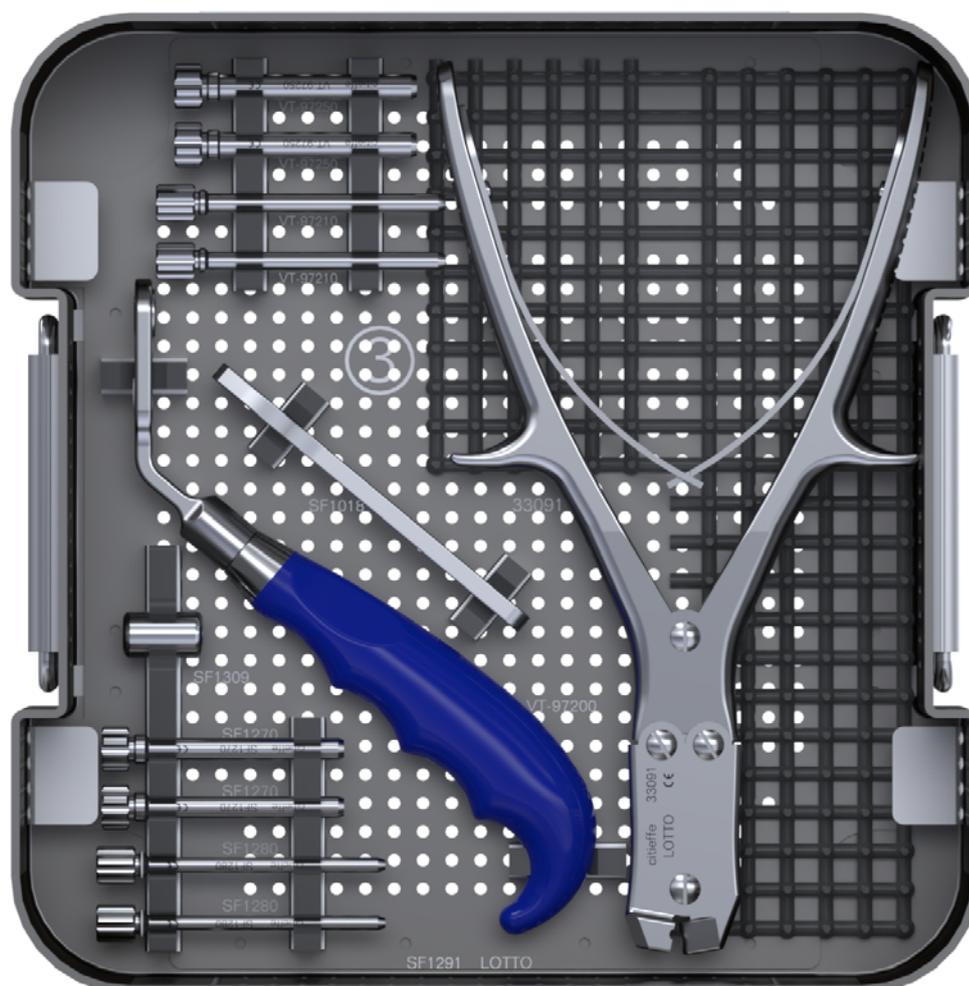
TRAY 2



Code	Description	Q.ty
SF1220	Cannula \varnothing 6mm L. 120mm with handle	3
SF1230	Cannula \varnothing 6mm L. 90mm	3
SF1250	Cannulated trocar \varnothing 6mm for \varnothing 2mm K. wire	3
SF1200	Drill guide for multi-pin clamps	1

ORDERING INFORMATION - INSTRUMENT SETS

TRAY 3



Code	Description	Q.ty
SF1309	Adapter hexagon 5-6mm	1
SF1018	Spanner, 11mm	1
VT-97200	Handle for canulas, parallel wires	1
VT-97250	Canula L50mm for drill \varnothing 5mm	2
VT-97210	Trocar L50mm for wire \varnothing 3mm	2
SF1270	Canula L50mm for drill \varnothing 4mm	2
SF1280	Trocar L.50mm for wire \varnothing 2mm	2
33091	Wire Bending Pliers	1
SF1291	X-frame instrument box, empty	1

Optional instruments

Codice	Descrizione	Quantità
SF1050	Drill brace	1
SF1304	Quick-connect adapter for screws (ø4mm stem)- STERILE	1
SF1306	Quick-connect adapter for screw ø6mm - STERILE	1



Modular external fixation system



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