Surgical Technique

smith&nephew

JET-X◇

Bar Unilateral Fixator

Ankle Spanning, Knee Spanning, Long Bone and Pelvic









JET-X◇ BAR Unilateral Fixator

Ankle Spanning, Knee Spanning, Long Bone and Pelvic Surgical Technique

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Nota Bene

The technique description herein is made available to the healthcare professional to illustrate the author's suggested treatment for the uncomplicated procedure. In the final analysis, the preferred treatment is that which addresses the needs of the specific patient.

Product Overview

Ball Joints for Ultimate Flexibility

- JET-X® Bar Clamps provide an extra degree of freedom over the competition, with the ability to angle pins up to 25°
- Ball joint component of clamps allows linear reduction of fractures, with true translation of long bone fragment ends

Designed for Ease-of-use

- Cartridge clamp design is positive locking, allowing no passive release of pins or bars – even when clamps are loosened
- Self-drilling, self-tapping JET-X Half Pins
- Various clamps and bar lengths give the surgeon the versatility to assemble needed frame constructs

Design Features

Bar to Pin Clamp

Part Number: 7106-2001



Description:

The Bar to Pin Clamp is designed to attach a half pin to a composite bar. The design contains a cartridge capture mechanism that allows snap-fit assembly, but prevents passive release of pins or bars during reduction. The design contains a ball joint mechanism that allows multi-planar movement in any direction up to 50° included and allows 360° of rotation.

Engineering Data:		**Used With:**
Overall Width	1.044 inches	10.5mm Bar,
Overall Length	1.344 inches	5mm Pins,
Total Rotation	360°	10mm Wrench
Total Angulations	50° Included	
Overall Height	1.630 inches	
Tightening Nuts	10mm	
Bar Attachment	10.5mm	
Pin Attachment	5mm	
Material	7075 T-6 Aluminum Anodized	
	Ti-6AL-4V Titanium	
	17-4PH Stainless Steel	
Wrench Needed:	10mm	

Bar to Bar Clamp

Part Number: 7106-2002



Description:

The Bar to Bar Clamp is designed to connect two composite bars. The design contains a cartridge capture mechanism that allows snap-fit assembly of the bars but prevents passive release of either bar during reduction. The design contains a ball joint mechanism that allows multi-planar movement in any direction up to 50° included and allows 360° of rotation.

Engineering Data:		**Used With:**
Overall Width	1.044 inches	10.5mm Bar,
Overall Length	1.577 inches	10mm Wrench
Total Rotation	360°	
Total Angulations	50° Included	
Overall Height	1.775 inches	
Tightening Nuts	10mm	
Bar Attachment	10.5mm	
Material	7075 T-6 Aluminum Anodized	
	Ti-6AL-4V Titanium	
	17-4PH Stainless Steel	
Wrench Needed:	10mm	

Bar to Ring Clamp

Part Number: 7106-2004

Description:

The Bar to Ring Clamp is designed to attach a composite bar to an ILIZAROV™ Composite Ring. The design contains a cartridge capture mechanism that allows the bar to be easily inserted from the side but prevents separation during reduction. The design contains a ball joint mechanism that allows multi-planar movement in any direction up to 50° included and allows 360° of rotation. The ring attachment allows placement from the side and has infinite position around the ring.

Engineering Data:

Overall Width	1.044 inches
Overall Length	1.854 inches
Total Rotation	360°
Total Angulations	50° Included
Overall Height	2.234 inches
Tightening Nuts	10mm
Bar Attachment	10.5mm
Ring Attachment	Ilizarov Composite
Material	7075 T-6 Aluminum Anodized
	Ti-6AL-4V Titanium
	17-4PH Stainless Steel
Wrench Needed:	10mm

Bar to Pin Clamp – MR SAFE

Part Number: 7106-4001

Description:

The Bar to Pin Clamp is designed to attach a half pin to a composite bar. The design contains a cartridge capture mechanism that allows snap-fit assembly, but prevents passive release of pins or bars during reduction. The design contains a ball joint mechanism that allows multi-planar movement in any direction up to 50° included and allows 360° of rotation.



Engineering Data:

Overall Width	1.044 inches
Overall Length	1.344 inches
Total Rotation	360°
Total Angulations	50° Included
Overall Height	1.630 inches
Tightening Nuts	10mm
Bar Attachment	10.5mm
Pin Attachment	5mm
Material	7075 T-6 Aluminum Anodized
	Ti-6AL-4V Titanium
	300 Series Stainless Steel
Wrench Needed:	10mm

Used With:

10.5mm Bar, 5mm Pins, 10mm Wrench, A/O T-Handle Connector with 10mm Hex

Bar to Bar Clamp – MR SAFE

Part Number: 7106-4002



Description:

The Bar to Bar Clamp is designed to connect two composite bars. The design contains a cartridge capture mechanism that allows snap-fit assembly of the bars but prevents passive release of either bar during reduction. The design contains a ball joint mechanism that allows multi-planar movement in any direction up to 50° included and allows 360° of rotation.

Engineering Data:

Overall Width	1.044 inches
Overall Length	1.577 inches
Total Rotation	360°
Total Angulations	50° Included
Overall Height	1.775 inches
Tightening Nuts	10mm
Bar Attachment	10.5mm
Material	7075 T-6 Aluminum Anodized Ti-6AL-4V Titanium 300 Series Stainless Steel
Wrench Needed:	10mm

Used With:

10.5mm Bar,
10 mm Wrench,
A/O T-Handle
Connector with
10mm Hex

Bar to Ring Clamp – MR SAFE

Part Number: 7106-4004



Description:

The Bar to Ring Clamp is designed to attach a composite bar to an ILIZAROV™ Composite Ring. The design contains a cartridge capture mechanism that allows the bar to be easily inserted from the side but prevents separation during reduction. The design contains a ball joint mechanism that allows multi-planar movement in any direction up to 50° included and allows 360° of rotation. The ring attachment allows placement from the side and has infinite position around the ring.

Engineering Data:

Overall Width	1.044 inches
Overall Length	1.854 inches
Total Rotation	360°
Total Angulations	50° Included
Overall Height	2.234 inches
Tightening Nuts	10mm
Bar Attachment	10.5mm
Ring Attachment	Ilizarov Composite
Material	7075 T-6 Aluminum Anodized Ti-6AL-4V Titanium 300 Series Stainless Steel
Wrench Needed:	10mm

Used With:

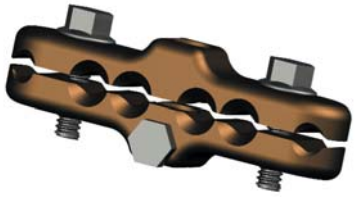
10.5mm Bar, ILIZAROV
Composite Rings,
10mm Wrench, A/O T-Handle
Connector with 10mm Hex

Multiple Pin Clamp – MR SAFE

Part Number: 7106-2005

Description:

The Multiple Pin Clamp is designed to attach half pins to a composite bar. The design allows for planar pin placement.



Engineering Data:

Overall Width	.850 inches
Overall Length	3.300 inches
Overall Height	1.068 inches
Tightening Nuts	10mm
Bar Attachment	10.5mm
Pin Attachment	5mm
Material	7075 T-6 Aluminum Anodized 300 Series Stainless Steel
Wrench Needed:	10mm

Used With:

10.5mm Bar, 5mm Half Pin, 10mm Wrench, 5mm Tissue Protector

Add-a-Bar Coupler

Part Number: 7106-2006

Description:

The Add-a-Bar Coupler is designed to connect composite bars to one another in line. The Coupler provides a simple way to extend the length of bars on preassembled frames without losing reduction.



Engineering Data:

Overall Length	1.500 inches
Outer Diameter	0.875 inches
Set Screws	3/32 inch Hexagonal Socket
Material	
Material	17-4PH Stainless Steel 304 Stainless Steel
Wrench needed:	3/32 inch Hex Wrench (provided with Coupler in sterile packaging)

Used With:

3/32 inch Hex Wrench and 10.5mm Bars

Add-a-Bar Coupler – MR SAFE

Part Number: 7106-4006

Description:

The Add-a-Bar Coupler is designed to connect composite bars to one another in line. The Coupler provides a simple way to extend the length of bars on preassembled frames without losing reduction.



Engineering Data:

Overall Length	1.500 inches
Outer Diameter	0.875 inches
Set Screws	3/32 inch Hexagonal Socket
Material	17-4PH Stainless Steel 300 Series Stainless Steel
Wrench needed:	3/32 inch Hex Wrench (provided with Coupler in sterile packaging)

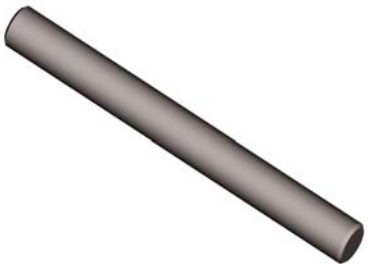
Used With:

3/32 inch Hex Wrench and 10.5mm Bars

Composite Bar

Part Number:

7106-2100	7106-2350
7106-2150	7106-2400
7106-2200	7106-2500 (Packaged Sterile)
7106-2250	7106-2600 (Packaged Sterile)
7106-2300	



Description:

A 10.5mm Composite Bar made from unidirectional carbon fiber laminate. Designed with a round cross section for strength and stiffness.

Engineering Data:

Overall Diameter	10.5mm
Overall Length	100mm, 150mm, 200mm, 250mm, 300mm, 350mm, 400mm (Non-Sterile)
Overall Length	500mm, 600mm (Packaged Sterile)
Material	Carbon Fiber Composite

Used With:

Bar to Bar Clamps, Bar to Pin Clamps, Hybrid Clamp, Multi Pin Clamp, Add-a-Bar Coupler, Bar Drill Guide

Aluminum V-Bars and L-Bars



Part Number:

7106-2180 Aluminum V-Bar
7106-2160 Aluminum L-Bar

Description:

6061 T6 Aluminum V-bar and L-bar. Designed for use in the proximal tibia and ankle for stable fixation of fractures.

Engineering Data:

V-bar:

Overall Diameter	10.5mm
Overall Length	8.223 inches
Material	6061 T6 Aluminum
Angle	45° on each bend



L-bar:

Overall Diameter	10.5mm
Overall Length	4.2 inches
Material	6061 T6 Aluminum
Angle	90° at bend

Used With:

Bar to Bar Clamp, Bar to Pin Clamp, Multi Pin Clamp, Bar Drill Guide

Ankle Spanning Surgical Technique



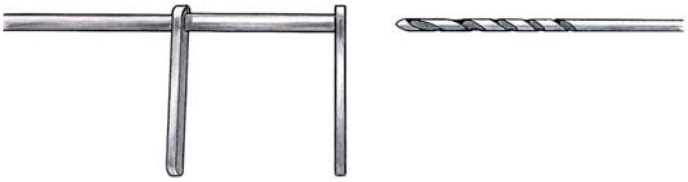
Indications

Temporary or definitive stabilization of pilon fractures.
Adjunct to internal fixation for treatment of fractures.

JET-X◇ Bar Unilateral Fixator Ankle Spanning Surgical Technique

Pin Insertion

Make a stab incision at the desired pin site. Dissect down to bone using a small elevator, being careful to elevate the periosteum, so that the drill and pin avoid as much soft tissue as possible. Insert the 3.5mm drill sleeve into the 5mm tissue protector and place the sleeve combination through the stab incision to bone.

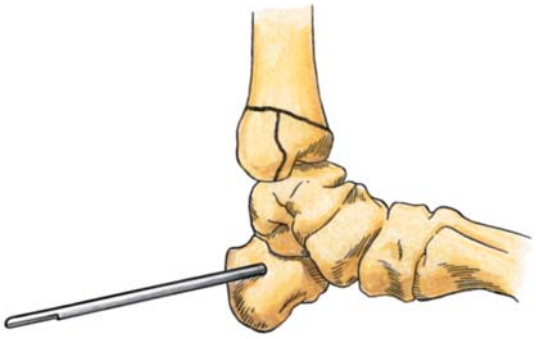


Note: Pre-drilling is optional when using the JET-X Half Pins, which are self-drilling and self-tapping.

Using the 3.5mm drill, pre-drill the bone, using the C-arm to assist in pre-drilling. Measure using the drill and sleeve combination to determine pin thread length. Remove the drill sleeve and insert the appropriate 5mm half pin attaining bicortical purchase.

Pin Placement/ Frame Construction

The working construct is a delta frame.



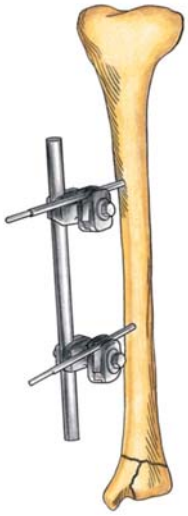
Calcaneal Pin Placement

Place a centrally threaded half pin (traction pin) through the calcaneous in the safe zone from medial to lateral. Position this pin parallel to the ankle joint or perpendicular to the mechanical axis of the tibia. The pin should be positioned in the tuberosity, posterior to the sagital axis line to produce a dorsiflexion moment with distraction. Confirm pin placement using the C-arm.

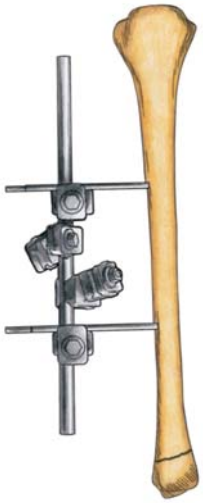
Tibial Pin Placement

The first pin is placed just proximal to the zone of injury and planned future fixation. The pin is placed approximately 30° off straight AP, just medial to the tibial crest.

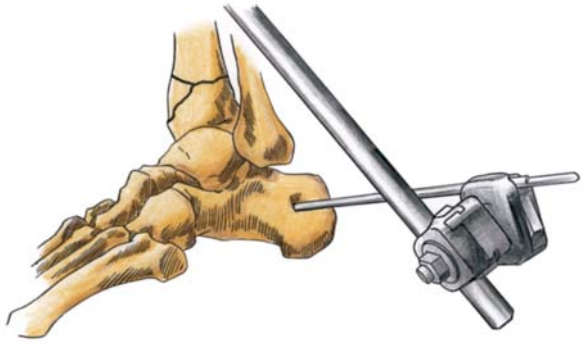
Insert the second pin at least 10cm proximal to the first pin to maximize pin spread.



Connect Bar to Pin Clamps to the tibial pins. Attach a bar of the appropriate length to connect the two tibial pins. The bar should be positioned two finger breadths above skin level to allow for soft tissue swelling. Tighten the pin side of the Bar to Pin Clamps with a 10mm wrench.



Snap two Bar to Bar Clamps to the bar in between the two Bar to Pin Clamps. Snap a Bar to Pin Clamp to each side of the traction pin with the pin clamp facing the ankle to maximize stability. Tighten the pin side of each Bar to Pin Clamp using a 10mm wrench.



Use a bar to connect a proximal Bar to Bar Clamp to a distal Bar to Pin Clamp on each side of the calcaneous.

Apply distraction and other reduction maneuvers as needed. Confirm with C-arm. Tighten all bar clamps.



Knee Spanning Surgical Technique



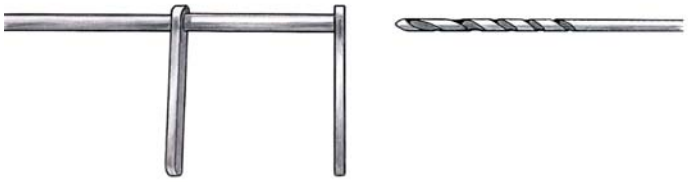
Indications

Temporary stabilization of fractures and severe soft tissue injuries, such as tibial plateau, supracondylar femur, extensor mechanism disruption and knee dislocation.

JET-X◇ Bar Unilateral Fixator Knee Spanning Surgical Technique

Pin Insertion

Make a stab incision at the desired pin site. Dissect down to bone using a small elevator, being careful to elevate the periosteum, so that the drill and pin avoid as much soft tissue as possible. Insert the 3.5mm drill sleeve into the 5mm tissue protector and place the sleeve combination through the stab incision to bone.



Note: Pre-drilling is optional when using the JET-X Half Pins, which are self-drilling and self-tapping.

Using the 3.5mm drill, pre-drill the bone, using the C-arm to assist in pre-drilling. Measure using the drill and sleeve combination to determine pin thread length. Remove the drill sleeve and insert the appropriate 5mm half pin attaining bicortical purchase.

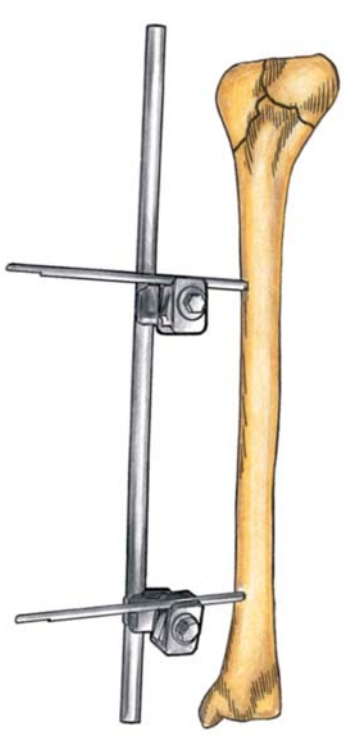
Pin Placement/ Frame Construction

Tibial Pins

Place initial half pin just distal to the zone of injury and distal to planned future fixation. The pin should be placed AP, just medial to the anterior tibial crest.

The second tibial pin should be inserted distally at the diaphyseal-metaphyseal junction to obtain maximum pin spread. Apply Bar to Pin Clamps to each tibial pin.

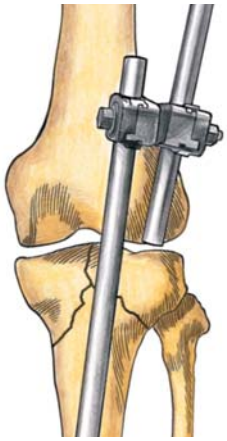
Choose a bar of appropriate length to end at the level of patella. Attach this bar to the Bar to Pin Clamps. This bar is placed approximately two finger breadths above skin level to allow for swelling of the soft tissue. Tighten the pin side of the Bar to Pin Clamps using the 10mm wrench.



Femoral Pins

(Frame Option #1)

Insert two half pins straight anterior through the quadriceps. Pins should be spread apart to ensure stability of the frame. Apply Bar to Pin Clamps to each femoral pin.



Choose a bar that is long enough to cross the proximal end of the tibial bar. Attach this bar to the Bar to Pin Clamps. This bar should be placed approximately two finger breadths above skin level to allow for swelling of the soft tissue. Tighten the pin side of the Bar to Pin Clamps using the 10mm wrench.

Use a Bar to Bar Clamp to connect the tibial and femoral bars and apply longitudinal distraction. Verify alignment by C-arm and tighten all bar clamps.

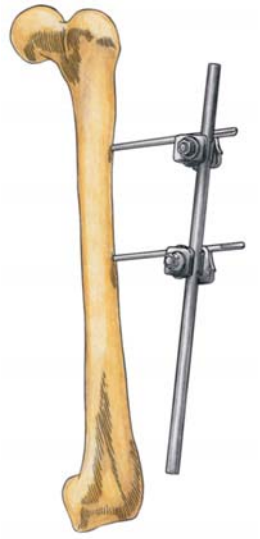
Double-stack bars as needed for added strength.



Femoral Pins (Frame Option #2)

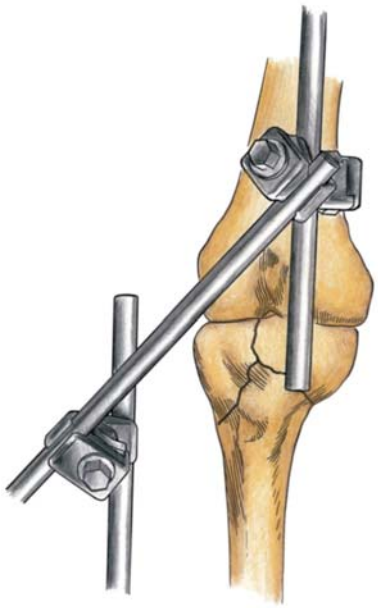
This construct is more stable for larger people and better suited for more unstable injuries and frames that will be on for greater than two weeks.

Two femoral half pins should be inserted anterior and lateral to avoid trapping the quadriceps. Again, pin spread is critical for maximizing stability of construct. Apply Bar to Pin Clamps to each femoral pin.



Apply a bar of appropriate length, connecting the two femoral pins. Bar to Bar Clamps are attached to both the tibial and femoral bars. A third bar is snapped into these two Bar to Bar Clamps, connecting the first two bars. The leg is distracted and the fracture is reduced. Confirm reduction with the C-arm and tighten the bar side of all clamps.

Double-stack bars as needed for added strength.



Long Bone Surgical Technique



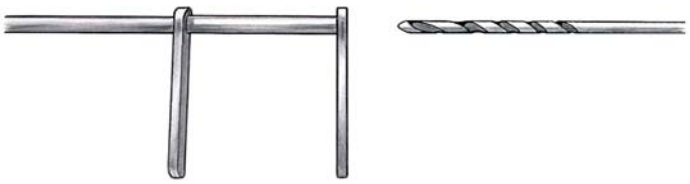
Indications

Treatment of long bone fractures. First stage stabilization of fractures that will be treated definitively with ORIF.

JET-X◇ Bar Unilateral Fixator Long Bone Surgical Technique

Pin Insertion

Make a stab incision at the desired pin site. Dissect down to bone using a small elevator, being careful to elevate the periosteum, so that the drill and pin avoid as much soft tissue as possible. Insert the 3.5mm drill sleeve into the 5mm tissue protector and place the sleeve combination through the stab incision to bone.

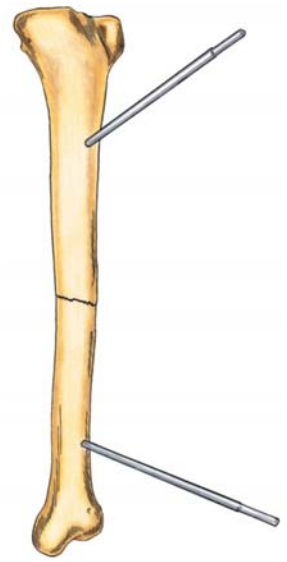


Note: Pre-drilling is optional when using the JET-X Half Pins, which are self-drilling and self-tapping.

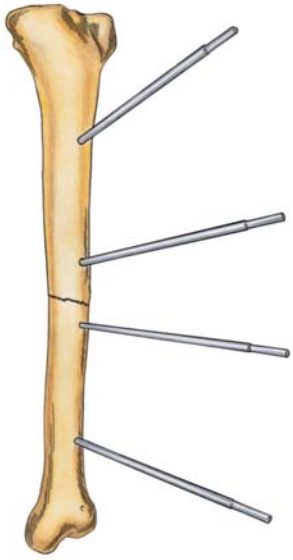
Using the 3.5mm drill, pre-drill the bone, using the C-arm to assist in pre-drilling. Measure using the drill and sleeve combination to determine pin thread length. Remove the drill sleeve and insert the appropriate 5mm half pin attaining bicortical purchase.

Pin Placement

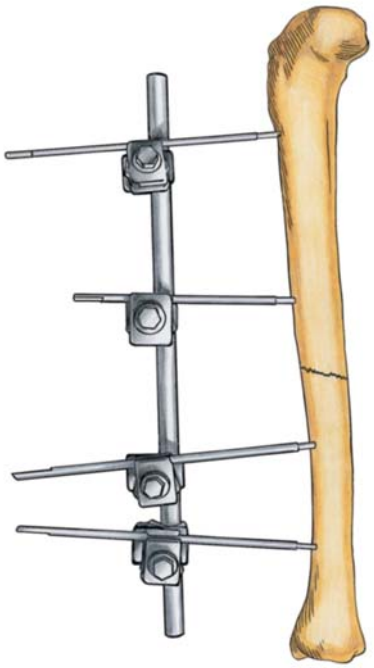
A simple stable frame is achieved by placing four pins with maximal spread along the length of the bone. Correct pin placement should provide for one pin on either side of the fracture as **far** from the fracture line as can be achieved.



Place two additional pins as **close** as possible on either side of the fracture.



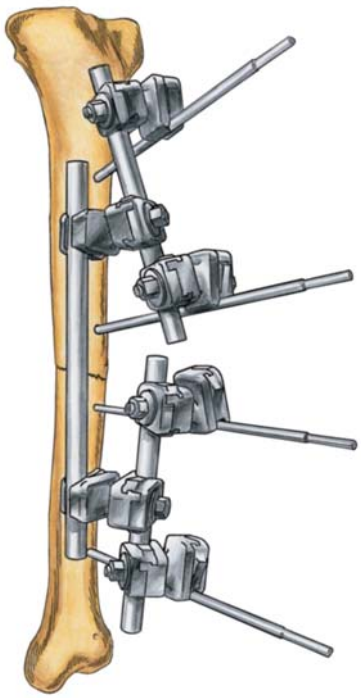
Using Bar to Pin Clamps, snap the pin clamps onto the pins. Snap the appropriate length bar(s) into the bar clamps.



If fracture reduction is satisfactory, the wide adjustability of the clamps allows for one connecting bar to be snapped into all four Bar to Pin Clamps. Once tightened, the reduction is maintained.

If reduction is difficult to maintain, the proximal and distal pin couples can each be connected with separate short bars. Using both bars as reduction tools, the fracture can be manipulated to achieve reduction and stability. Bar to Bar Clamps are then attached to each short bar, and a long bar is then snapped into place to connect the proximal and distal fracture blocks.

After assembly of the needed frame, tighten the pin side of the Bar to Pin Clamps using a 10mm wrench. This will only lock the clamp to the pin, leaving the ball component free to move to aid in reduction. Reduce the fracture and tighten the bar side of the Bar to Pin Clamps and the Bar to Bar Clamps.



Pelvic Surgical Technique



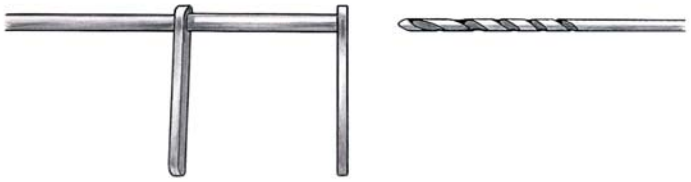
Indications

Closed fracture fixation such as unstable open book pelvic fractures, unstable anterior pelvic ring with bilateral rami fracture not amenable to internal fixation.

JET-X◇ Bar Unilateral Fixator Pelvic Surgical Technique

Pin Insertion

Make a stab incision at the desired pin site. Dissect down to bone using a small elevator, being careful to elevate the periosteum, so that the drill and pin avoid as much soft tissue as possible. Insert the 3.5mm drill sleeve into the 5mm tissue protector and place the sleeve combination through the stab incision to bone.

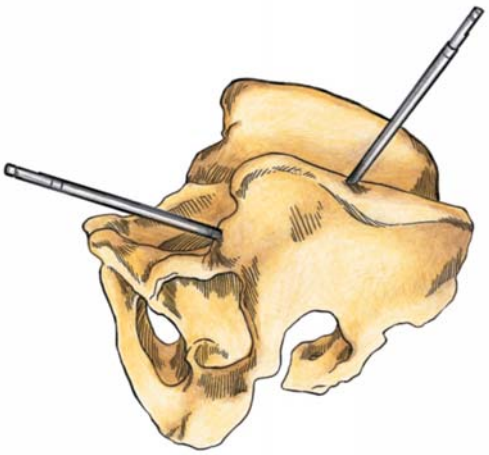


Note: Pre-drilling is optional when using the JET-X Half Pins, which are self-drilling and self-tapping.

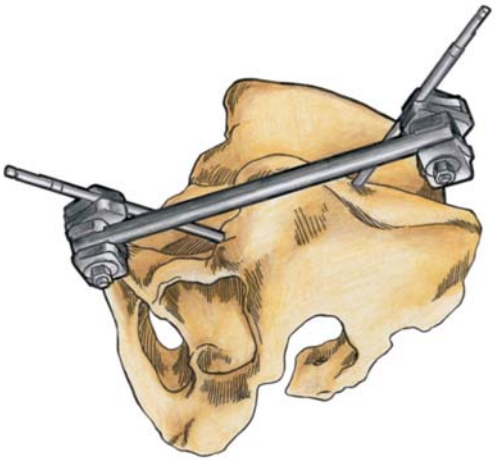
Using the 3.5 mm drill, pre-drill the bone, using the C-arm to assist in pre-drilling. Measure using the drill and sleeve combination to determine pin thread length. Remove the drill sleeve and insert the appropriate 5mm half pin attaining bicortical purchase.

Pin Placement/ Frame Construction

Two half pins should be inserted on each side of the pelvis. One pin is inserted at each anterior inferior iliac spine under C-arm guidance directed obliquely toward the PSIS and/or greater sciatic notch (best available bone).

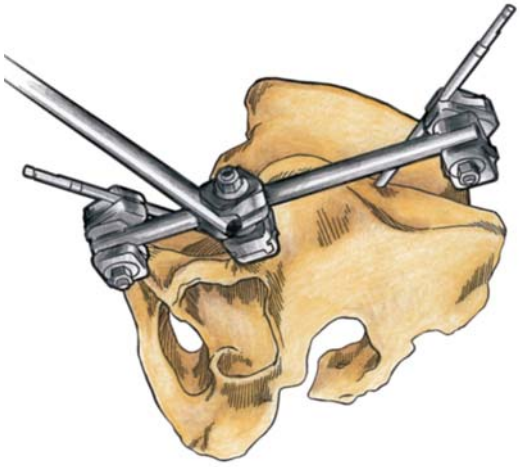


A second pin is inserted just cephalad to the ASIS on each side between the inner and outer tables. Using Bar to Pin Clamps, snap the pin clamps onto the four pins. Snap the appropriate length bar(s) into the Bar to Pin Clamps and secure the pin portion of the clamp using a 10mm wrench. Check for soft tissue clearance with leg flexed to 90°.

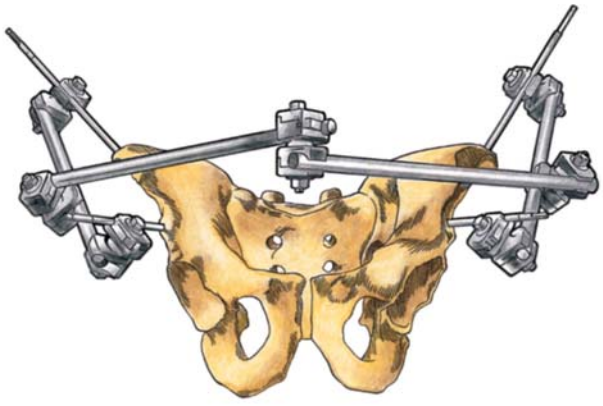


Apply a Bar to Bar Clamp by snapping the clamp onto each bar between fixation pins. Attach one bar of the appropriate length into the Bar to Bar Clamp on each side of the pelvis. These two bars should be connected by a Bar to Bar Clamp, anterior to the pelvis.

Align the bars depending on need for access to abdomen or need for sitting. The pelvis is manually compressed on each iliac wing until adequately reduced. Once the frame is positioned appropriately, tighten both sides of the Bar to Bar Clamps.



Using the Bar to Bar Clamps, add an additional cross bar or double stack as needed. Simply snap the bars into the cartridge mechanism of the clamps.



Catalog Information

Bar to Pin Clamp
Cat. No. 7106-4001 (MR SAFE)
7106-2001



Bar to Bar Clamp
Cat. No. 7106-4002 (MR SAFE)
7106-2002



Bar to Ring Clamp
Cat. No. 7106-4004 (MR SAFE)
7106-2004



Multiple Pin Clamp (MR SAFE)
Cat. No. 7106-2005



Bar to Pin Clamp (MR SAFE)
(Not Shown)
Cat. No. 7106-2009

Bars



Cat. No.	Description
7116-2100	100mm
7116-2150	150mm
7116-2200	200mm
7116-2250	250mm
7116-2300	300mm
7116-2350	350mm
7116-2400	400mm

Bar Caps – Sterile Package
(Not Shown)
Cat. No. 7106-2008

Bars – Sterile Package



Cat. No.	Description
7116-2500	500mm
7116-2650	600mm

L-Bar
Cat. No. 7106-2160



V-Bar

Cat. No. 7106-2180



Half Pins

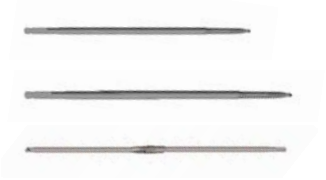


Cat. No.	Thread Diameter	Shank Length	Material	Thread Length	Pin Length*
7106-3101	3mm	4mm	SST	10mm	65mm
7106-3151	3mm	4mm	SST	15mm	65mm
7106-3201	3mm	4mm	SST	20mm	65mm
7106-3251	3mm	4mm	SST	25mm	65mm
7106-3108	3mm	4mm	SST w/TiN	10mm	65mm
7106-3158	3mm	4mm	SST w/TiN	15mm	65mm
7106-3208	3mm	4mm	SST w/TiN	20mm	65mm
7106-3258	3mm	4mm	SST w/TiN	25mm	65mm
7106-4151	4mm	4mm	SST	15mm	95mm
7106-4201	4mm	4mm	SST	20mm	95mm
7106-4251	4mm	4mm	SST	25mm	95mm
7106-4301	4mm	4mm	SST	30mm	95mm
7106-4351	4mm	4mm	SST	35mm	95mm
7106-4158	4mm	4mm	SST w/TiN	15mm	95mm
7106-4208	4mm	4mm	SST w/TiN	20mm	95mm
7106-4258	4mm	4mm	SST w/TiN	25mm	95mm
7106-4308	4mm	4mm	SST w/TiN	30mm	95mm
7106-4358	4mm	4mm	SST w/TiN	35mm	95mm
7106-5304	5mm	5mm	SST w/TiN	30mm	65mm
7106-5354	5mm	5mm	SST w/TiN	35mm	65mm
7106-5404	5mm	5mm	SST w/TiN	40mm	65mm
7106-5454	5mm	5mm	SST w/TiN	45mm	65mm
7106-5301	5mm	5mm	SST	30mm	110mm
7106-5351	5mm	5mm	SST	35mm	110mm
7106-5401	5mm	5mm	SST	40mm	110mm
7106-5451	5mm	5mm	SST	45mm	110mm
7106-5501	5mm	5mm	SST	50mm	110mm
7106-5551	5mm	5mm	SST	55mm	110mm
7106-5601	5mm	5mm	SST	60mm	110mm
7106-5651	5mm	5mm	SST	65mm	110mm
7106-5701	5mm	5mm	SST	70mm	110mm
7106-5308	5mm	5mm	SST w/TiN	30mm	110mm
7106-5358	5mm	5mm	SST w/TiN	35mm	110mm
7106-5408	5mm	5mm	SST w/TiN	40mm	110mm
7106-5458	5mm	5mm	SST w/TiN	45mm	110mm
7106-5508	5mm	5mm	SST w/TiN	50mm	110mm
7106-5558	5mm	5mm	SST w/TiN	55mm	110mm
7106-5608	5mm	5mm	SST w/TiN	60mm	110mm
7106-5658	5mm	5mm	SST w/TiN	65mm	110mm
7106-5708	5mm	5mm	SST w/TiN	70mm	110mm
7106-5302	5mm	5mm	SST	30mm	160mm
7106-5352	5mm	5mm	SST	35mm	160mm
7106-5402	5mm	5mm	SST	40mm	160mm
7106-5452	5mm	5mm	SST	45mm	160mm
7106-5502	5mm	5mm	SST	50mm	160mm
7106-5552	5mm	5mm	SST	55mm	160mm
7106-5602	5mm	5mm	SST	60mm	160mm
7106-5652	5mm	5mm	SST	65mm	160mm
7106-5702	5mm	5mm	SST	70mm	160mm
7106-5309	5mm	5mm	SST w/TiN	30mm	160mm
7106-5359	5mm	5mm	SST w/TiN	35mm	160mm
7106-5409	5mm	5mm	SST w/TiN	40mm	160mm
7106-5459	5mm	5mm	SST w/TiN	45mm	160mm
7106-5509	5mm	5mm	SST w/TiN	50mm	160mm
7106-5559	5mm	5mm	SST w/TiN	55mm	160mm
7106-5609	5mm	5mm	SST w/TiN	60mm	160mm
7106-5659	5mm	5mm	SST w/TiN	65mm	160mm
7106-5709	5mm	5mm	SST w/TiN	70mm	160mm
7106-6409	6mm	6mm	SST w/TiN	40mm	160mm
7106-6459	6mm	6mm	SST w/TiN	45mm	160mm
7106-6509	6mm	6mm	SST w/TiN	50mm	160mm
7106-6559	6mm	6mm	SST w/TiN	55mm	160mm
7106-6609	6mm	6mm	SST w/TiN	60mm	160mm

*Pin length does not include A/O connector or threads.

Traction Pins

Cat. No.	Description			
7106-5503	5mm	SST	50mm	Long
7106-5507	5mm	TiN	50mm	Long
7106-5504	5mm	TiN	50mm	Short



1.6mm Cannulated

Cat. No.	Description			
7106-5405	5mm	SST	40mm	110mm
7106-5407	5mm	TiN	40mm	110mm



Caps – Sterile Package

Cat. No.	Description
7106-2007	Pin

Implant Tray

(Not Shown)
Cat. No. 7106-2000

Outer Tray

Cat. No. 7112-9400



Outer Lid

(Not Shown)
Cat. No. 7112-9402

Add-a-Bar Coupler – Sterile Packages

Cat. No. 7106-4006 (MR SAFE)
7106-2006



10mm Universal Flex Head Wrench

Cat. No. 10-2907



A/O T-Handle Connector with 10mm Socket

Cat.No. 7106-3001



Distraction Clip (Optional)

Cat.No. 7106-3002



Ratchets

Cat. No.	Size
7106-3003	10mm
7106-3015	10mm - Open Face



A/O to Hall Power Adapter

Cat. No. 7106-3004



A/O to Trinkle Power Adapter

Cat. No. 7106-3005



3.5mm Graduated Drill with A/O Connector

Cat. No. 7106-3006



3.5mm Graduated Step Drill

(Not Shown)
Cat. No. 7106-3028

Tissue Protector

Cat. No.	Size
7106-3007	5mm
7106-3016	5mm - Short



3.5mm Drill Guide
Cat. No. 7106-3008



Distraction Instruments (Optional)
Cat. No. 7106-3009



5mm Bar to Pin Drill Guide
Cat. No. 71106-3010



5mm Trocar
Cat. No. 7106-3012



Instrument Tray
(Not Shown)
Cat. No. 7106-3000

Half Pin Tray
(Not Shown)
Cat. No. 7106-5000

Outer Tray – Shallow
Cat. No. 7112-9401



Outer Lid
(Not Shown)
Cat. No. 7112-9402

7106-9350 Mini Instrument Set

Cat. No.	Description	
7106-3001	A/O T-Handle Connector with 10mm	1
7106-3003	10mm Ratchet	1
7106-3200	Mini Tray	1
7106-3203	Drill/3mm Short Half Pin	2
7106-3204	Drill/4mm Short Half Pin	2
7106-3205	Mini Drill Sleeve /Tissue Protector	2
7106-3210	8mm Ratchet Wrench	2
7106-3211	Mini Drill Guide	1
7106-3212	Mini Trocar	1
7112-9401	All Outer Case – 2.4"	1
7112-9402	Lid for Outer Case	1

7106-9250 Mini Implant Set with TiN Half Pin

Cat. No.	Description	
7106-2010	Bar 10.5mm to Clamp 4mm	4
7106-2011	6mm to 4mm Clamp	12
7106-2012	6mm to 6mm Clamp	6
7106-2015	Multiple Pin Clamp	2
7106-2019	Standard Bar to 6mm Bar Clamp	4
7106-3108	3mm x 10mm x 175mm TiN	4
7106-3158	3mm x 15mm x 175mm TiN	4
7106-3208	3mm x 20mm x 175mm TiN	4
7106-3258	3mm x 25mm x 175mm TiN	4
7106-4158	4mm x 15mm x 175mm TiN	4
7106-4208	4mm x 20mm x 175mm TiN	4
7106-4258	4mm x 25mm x 175mm TiN	4
7106-4308	4mm x 30mm x 175mm TiN	4
7106-4358	4mm x 35mm x 175mm TiN	4
7106-5050	6mm x 50mm Bar	4
7106-5075	6mm x 75mm Bar	4
7106-5150	6mm x 150mm Bar	4
7106-5180	6mm V Bar	2
7106-5225	6mm x 225mm Bar	4

7106-9251 Mini Implant Set with SST Half Pin

Cat. No.	Description	
7106-2010	Bar 10.5mm to Clamp 4 mm	4
7106-2011	6mm to 4mm Clamp	12
7106-2012	6mm to 6mm Clamp	6
7106-2015	Multiple Pin Clamp	2
7106-2019	Standard Bar to 6mm Bar Clamp	4
7106-3101	3mm x 10mm x 175mm	4
7106-3151	3mm x 15mm x 175mm	4
7106-3201	3mm x 20mm x 175mm	4
7106-3251	3mm x 25mm x 175mm	4
7106-4151	4mm x 15mm x 175mm	4
7106-4201	4mm x 20mm x 175mm	4
7106-4251	4mm x 25mm x 175mm	4
7106-4301	4mm x 30mm x 175mm	4
7106-4351	4mm x 35mm x 175mm	4
7106-5050	6mm x 50mm Bar	4
7106-5075	6mm x 75mm Bar	4
7106-5150	6mm x 150mm Bar	4
7106-5180	6mm V Bar	2
7106-5225	6mm x 225mm Bar	4

7106-9252 Mini Implant Set with Ti Half Pin

Cat. No.	Description	
7105-3101	3mm x 10mm x 175mm Ti	4
7105-3151	3mm x 15mm x 175mm Ti	4
7105-3201	3mm x 20mm x 175mm Ti	4
7105-3251	3mm x 25mm x 175mm Ti	4
7105-4151	4mm x 15mm x 175mm Ti	4
7105-4201	4mm x 20mm x 175mm Ti	4
7105-4251	4mm x 25mm x 175mm Ti	4
7105-4301	4mm x 30mm x 175mm Ti	4
7105-4351	4mm x 35mm x 175mm Ti	4
7106-2010	Bar 10.5mm to Clamp 4mm	4
7106-2011	6mm to 4mm Clamp	12
7106-2012	6mm to 6mm Clamp	6
7106-2015	Multiple Pin Clamp	2
7106-2019	Standard Bar to 6mm Bar Clamp	4
7106-5050	6mm x 50mm Bar	4
7106-5075	6mm x 75mm Bar	4
7106-5150	6mm x 150mm Bar	4
7106-5180	6mm V Bar	2
7106-5225	6mm x 225mm Bar	4

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