OVERFIX®

TRAUMA

SURGICAL TECHNIQUE

TIBIAL NAIL RAMIC

INTRAMEDULLARY NAIL SYSTEMS

bioadvance®

MEDICAL DEVICES

CONTENTS

RAMIC · TIBIAL NAIL

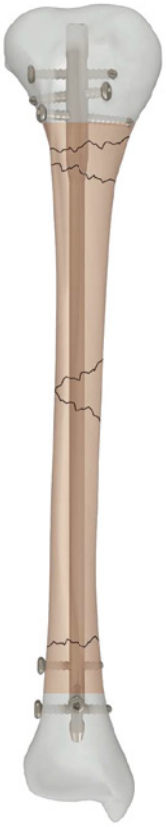
INTRAMEDULLARY NAIL SYSTEMS

Indications

Tibial diaphyseal fractures

Tibial metaphysis fractures

Certain intra-articular fractures of tibia plateau and PILON fractures



Contraindications

A medullary canal obliterated by a previous fracture or tumor

Bone shaft having excessive bow or deformity

Active infection

Lack of bone substance which makes stable seating of the implant impossible

Allergy to the implant material

Patient conditions including blood supply limitations, and insufficient quantity or quality of bone

Features & Benefits

Proximal locking

Multi-plane Locking options, in combination with cancellous bone locking screws, increase the stability of the proximal fragment for intra-articular fractures of tibia.

Distal Locking

Multi-plane locking options increase the stability of distal fragment Oblique locking screw creates an axially stable angle of 28° to the coronal plane.

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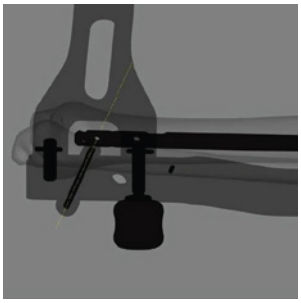
Intra-Operative Compression

Oblong hole in the coronal plane enable intra-operative compression or post—operative compression.

Distal Targeting Device

Adjustable radiolucent targeting arm



Lever-compression targeting arm

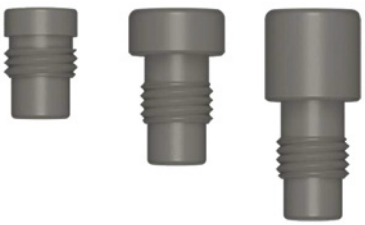
Locking Screw Design

Dual-lead thread and large core diameter increase bending and shear strength

Dual core shaft design (cortex thread and cancellous thread) for optimized purchase in cancellous bone

Tibial End Caps

Different specifications of end cap, 5 and 10mm end caps may extend nail length if nail is over inserted.



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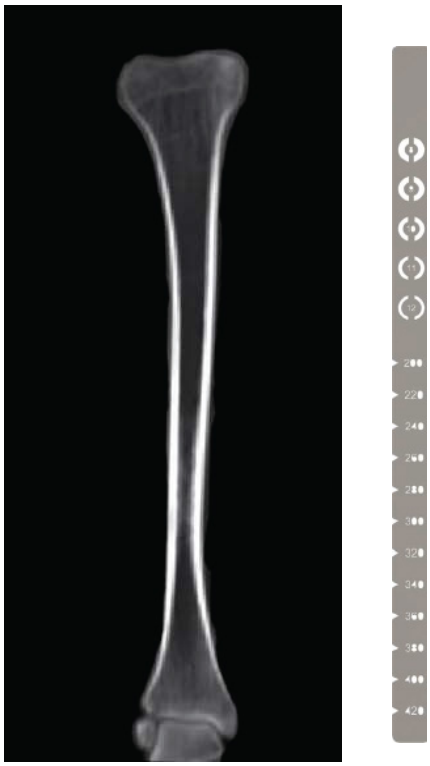
Surgical Technique

Step 1. Position Patient

Position the patient in supine position on a radiolucent table or orthopedic traction bed, with the knee of the affected leg flexed 90°, and with the unaffected leg abduced.



Step 2. Choose a Tibial Nail

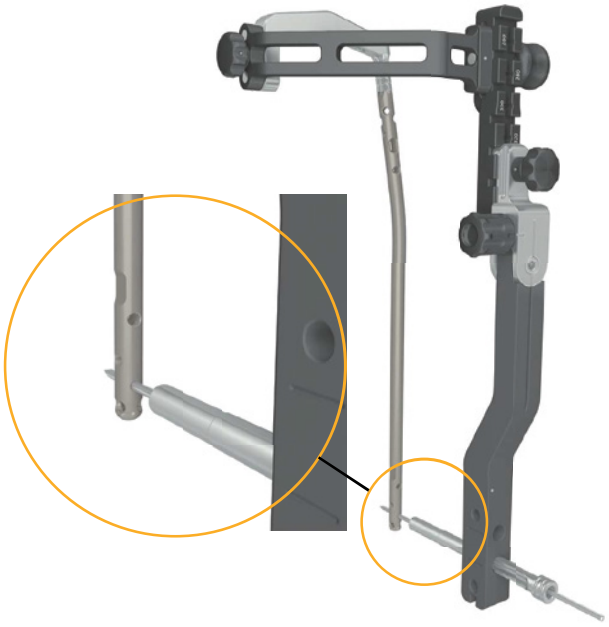
Choose a tibial nail of proper length and diameter by measuring the diameter of the isthmus and the length of the tibia in the unaffected leg. When choosing the length of the tibial nail, dynamization and compression should be taken into consideration, meaning the tibial nail should be slightly shorter than the measured length.
The dynamic locking hole allows for 6 mm of travel.
When using unreamed technique, the edge of isthmus should be slightly broader than radiographic ruler, that is, the edges of the isthmus are visible on both sides of the marking.
If reamed technique is used, the diameter of the soft reamer should be 0.5 mm to 1.5 mm larger than the nail diameter.

Step 3. Choosing an Aiming Method

Before fracture reduction, an aiming method must be chosen for the surgery. For distal locking of Ramic- tibial nail, two aiming methods are available.

Adjustable Aiming

Assemble the distal Adjustable Aiming Device for the tibial nail, and confirm that the distal end of the tibial nail is properly aimed as shown below:



Lever–Compression Aiming

Assemble Lever-Compression Aiming Arm for the tibial nail, and adjust the adjustable knob such that the Stabilizing Rod (13033016) is closely contacted with distal lever-compression plateau.

Step 4. Reduce Fracture

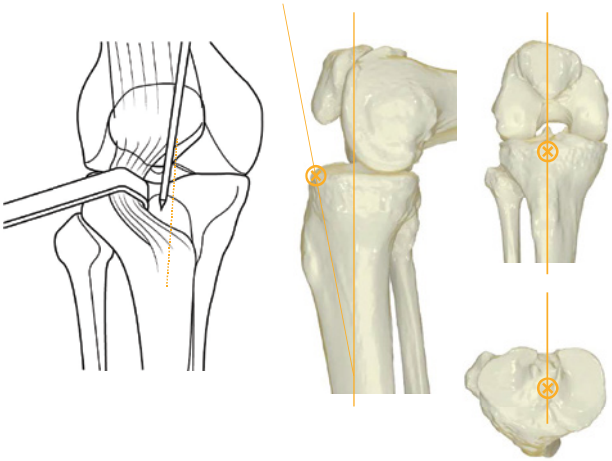
Use Instrument for Closed Reduction (13030007) ,if necessary, use reduction devices for fractures in upper and lower extremities, as well as external immobilizer for temporary immobilization.
With fractures of proximal and distal tibial joints, reduction should be first achieved and then maintained.

13030007
Instrument for Closed Reduction

Note

When using device-assisted reduction, the reduction needle should be slightly deviated from the central axis of the tibial medullary canal, lest it hinders nail insertion.

Step 5. Approach and Entry Point



Both trans-patellar and para-patellar approaches are viable. The opening of the medullary canal determines the final position of the tibial nail.

AP view: the opening is located on the central axis of the medullary canal, and the upper edge of the lateral tubercle of the inter-condylar eminence.

ML view: it is located on the anterior edge of the tibial plateau.

Step 6. Insert Guide Wire

Insert the Entry Drill Guide (13033001) and the Entry Drill Guide Sleeve for Guide Wire (13033002) via the incision. Insert a Φ3.2 Threaded Guide Wire(13030003) using a power drive via the Drill Guide Sleeve for Guide Wire . The insertion angle should be 1 1° anteverted from the central axis of medullary canal on ML view. The Threaded Guide Wire should be not over inserted, preferably at 5 cm to 8 cm when the Threaded Guide Wire reaches the top of the medullary canal.

13033001
Entry Drill Guide

13033002
Entry Drill Guide Sleeve for Guide Wire

13033003
Entry Reamer, Tibia

Step 7. Open Proximal Entry Point

Remove the Entry Drill Guide Sleeve for Guide Wire(13033002) and assemble the Entry Reamer, Tibia(13033033) on to the power drive. Insert the reamer along theΦ3.2 Threaded Guide Wire(13030003) until it is limited. Remove Entry Drill Guide, Entry Reamer and Φ3.2 Threaded Guide Wire.

13030003
ϕ 3.2 Threaded Guide Wire

Step 8. Ream Medullary Canal

Confirm fracture reduction on X-ray, and insert a Guide wire with Spheral Head, Φ2.5(13030008) via the opening to distal medullary canal. Use the skin protector to

13030008
Guide wire with spheral head, ϕ 2.5

protect proximal soft tissue, start reaming from 7.5 mm. The reamed canal should be 0.5 mm to 1.5 mm larger than previously confirmed diameter of the tibial nail.

Note

Do not force and avoid retrograde reaming during the reaming. If resistance is encountered, retract the reaming device and then insert again.

Flexible Reamer Head		Flexible Reamer Shaft	
specification	Product Code	Product Name	Product Code
Φ7.5	13033004	Flexible Reamer Shaft –small	13030025
Φ8	13033005		
Φ8.5	13033006		
Φ9	13030010	Flexible Reamer Shaft	13030009
Φ9.5	13030011		
Φ10	13030012		
Φ10.5	13030013		
Φ11	13030014		
Φ11.5	13030015		

13030025
Flexible Reamer Shaft–Small

13030009
Flexible Reamer Shaft

Step 9. Assemble Nail Insertion Device

Remove the reaming device, and insert the Locking Bolt (13033013) through the Insertion Handle (13033008) and secure the chosen tibial nail to the handle with a Hexagonal Screwdriver with spheral head, SW7. (13030033)

13033008
Insertion Handle

13033013
Locking Bolt

13030033
Hexagonal Screwdriver with spheral head, SW7

Step 10. Insert Tibial Nail

Insert the nail by slow twisted motion. To avoid poor fraction reduction, monitor the nail passage across the fracture. Check the nail position on AF or ML view.

Every 5mm there is a marking on the Insertion Handle(13033008) which corresponds to the length of the Tibial End Caps , 0 mm, 5 mm ,10mm,and 15 mm. The markings on the Insertion Handle are designed to allow adjustment of the depth of nail insertion. If primary compression or secondary dynamization is planned, then the distance generated by compression should be taken into consideration.

13033008
Insertion Handle

If nail insertion is difficult, use a Combined Hammer(13030047)to blow gently. A smaller tibial nail or further reaming may be adopted. After the hammer blows, it is essential to confirm the connection between the tibial nail and the Insertion Handle, in case it is loosened or deformed. If it is loosened, fasten again.

13030047
Combined Hammer

Note:

The depth of nail insertion is critical for distal segment. Make sure two locking screws are placed in the distal fractured segment.

Selection of locking screw :

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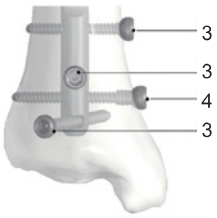
Proximal fractures: It is recommended to use three proximal locking screws. This neutralizes or reduces the deforming force on the proximal segment caused by the quadriceps, as well as the pressure on soft tissue caused by nail insertion devices.

Shaft fractures: It is recommended to lock the distal screws first, follow by compression and proximal locking.

Distal fractures: Lock the distal end first to facilitate reduction.

Tibial distal screw choice

Tibia screw hole Image	Holes	Screw Description	Screw picture
	1	5.0mm Tibial Condyles Locking Screws	
		5.0mm Tibial Locking Screw A	
	2	5.0mm Tibial Locking Screw A	
	3	4.2mm Tibial Locking Screw A	
		4.2mm Tibial Locking Screw B	
	4	4.2mm Tibial Locking Screw B	

Step 11. Distal Locking

Connect the Insertion Handle(13033008)of the tibial nail to the Connector for Distal Aiming Arm(13033010)and Connector for Proximal Aiming Arm(13033009), and connect the Adjustable Aiming Device(13033011) to the Connector for Distal Aiming Arm (13033010)at the corresponding place and fasten the fixation knob. Trauhui tibial nail provides adjustable aiming and lever-compression aiming for distal aiming.
Calibration must be performed before nail insertion according to the chosen aiming method.

13033008
Insertion Handle

13033009
Connector for Proximal Aiming Arm

13033010
Connector for Distal Aiming Arm

13033011
Adjustable Aiming Device

Adjustable Aiming

1. Insert the Radiopaque Stick(13030026) via the distal holes of the Adjustable Aiming Device(13033011).

13030026
Radiopaque Stick

13033011
Adjustable Aiming Device

2. Make sure the extended line of the core of the Radiopaque Stick pass through the far distal transverse locking hole under C-arm.

3. Insert the Protector, Φ4(13030036) and Sleeve for Drill Bit(13030035)Sleeve for Lateral Stabilizing Rod (13030029)via the distal aiming hole of the Adjustable Aiming Device.Guide aΦ3.3 Locating Pin (13030037) through the Sleeve for Drill Bit and make a stab on the bone surface for positioning purpose.Drill the bone with Drill, Φ3.3(13033019) to pass through the distal hole.If the Drill, Φ3.3 (13033019) can not make it through the distal hole of the tibial nail, insert the Radiopaque Stick into the most distal locking hole of the Adjustable Aiming Device. Adjust the C arm device to obtain ML view of the distal locking holes of the tibial nail. Turn the micro-adjustment knob to make the distal aiming arm up and down. Make sure the extended line pass through the distal hole of tibial nail.

Incorrect Position

Correct Position

13030029
Sleeve for Lateral Stabilizing Rod

13030036
Protector, φ4

13030035
Sleeve for Drill Bit

13033019
Drill, φ3.3

13030037
Locating Pin

4. After the calibration,penetrate both cortices of the tibia with the Drill, Φ3.3(13033019)

II, ϕ3.3

5. Confirming passage of Drill, 3.3 (13033019)through corresponding locking hole to the far cortex with the C arm, remove the Drill, Φ3.3 and Sleeve for Drill Bit(13030035) connect a Reamer for Lateral Cortex(13033021) and power drive.Expand the hole in the lateral cortex with the Reamer for Lateral Cortex.

13033019
Drill, ϕ3.3

13030035
Sleeve for Drill Bit

13033021
Reamer for Lateral Cortex

6. Remove the Reamer for Lateral Cortex(13033021)Choose a Lateral Stabilizing Rod with threads (13033017).Insert it through Sleeve for Lateral Stabilizing Rod (13030029).Until its thread is completely tightened with the distal hole thread. Insert Stabilizing Spacer(13033018). This signifies the completion of positioning.

13033017
Lateral Stabilizing Rod with threads

13030029
Sleeve for Lateral Stabilizing Rod

13033018
Stabilizing Spacer

7. Insert Sleeve for Locking Screw(13030034) and Protector, Φ4(13030036), Sleeve for Drill Bit(13030035) via the second locking hole on the adjustable aiming arm, Assemble Drill, Φ3.3(13033019) with power drive to drill a hole, then measure the depth and insert Φ4.2 Tibial Locking screws-A.

13030034
Sleeve for Locking Screw

13033022
Depth Gauge for Locking Bolt

13030035
Sleeve for Drill Bit

13030041
Stardrive Wrench, Quick Coupling, Φ5.6

13030036
Protector, Φ4

1303006
Universal Chuck with T–handle

13033019
Drill, Φ3.3

8. Assemble the Transverse Targeting Arm(13033012).

13033012
Transverse Targeting Arm

9. Follow above procedure, insert 4.2 Tibital Locking Screw-A via the central locking hole on the sagittal plain of the Transverse Targeting Arm(13033012) and the most distal locking hole on the Transverse Targeting Arm. Connect the Drill, Φ3.3 to the power drive to drill a hole, and then measure the depth and insert proper length Φ4.2 Tibial Locking screws-A.

   Remove the Lateral Stabilizing Rod with threads(13033017) insert a proper length Φ4.2 Tibial Locking screws-B.

13033017
Lateral Stabilizing Rod with threads

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Lever–compression Targeting

1. Assemble the Connector for Distal Aiming Arm(13033010) and Connector for Proximal Aiming Arm(13033009) onto the Insertion Handle(13033008). Assemble the Adjustable Aiming Device(13033011) at the marking on the gearing arm corresponding to the length of the tibial nail. Tighten the fixation knob. Connect the Transverse Targeting Arm (13033012)to the distal upper edge of the Adjustable Aiming Device.

13033009
Connector for Proximal Aiming Arm

13033012
Transverse Targeting Arm

13033010
Connector for Distal Aiming Arm

13033011
Transverse Targeting Arm

2. Insert Sleeve for Drill Bit(13030035) via the distal lever-compression hole of the Transverse Targeting Arm(13033012), and make a small incision on corresponding skin site. Connect the Drill,Φ3.3(13033019) to the power drive and drill a hole until the drill reaches the tibial nail plateau. Remove Sleeve for Drill Bit and the Drill,Φ3.3, and insert Drill for Stabilizing Rod(13030051) to ream the hole. Thereafter, insert the Stabilizing Rod(13033016) completely until the distal end of the Stabilizing Rod touches the tibial nail plateau and the groove and until it is tightly fastened to the snap joint of the Transverse Targeting Arm.

13030035
Sleeve for Drill Bit

13030051
Drill for Stabilizing Rod

13033019
Drill, ϕ3.3

13033016
Stabilizing Rod

3. The method of positioning of distal locking hole is same with that of Adjustable Aiming Way, Please refer to above procedure 4, 5, 6 .

4. Insert four distal locking screws using the procedures described for adjustable aiming method.

Step 12. Proximal Locking

Dynamization option is available above the dynamic hole and allows for dynamic compression on the fractured segment to a certain extent. In type C plateau fracture as in AO classification, make a small incision to expose the condyle, and insert cannulated lag screw after reduction. But note not to interfere with the insertion of tibial nail.

Dissemble the Transverse Targeting Arm(13033012), Adjustable Aiming Device(13033011) and Connector for Proximal Aiming Arm(13033009), and connect the Proximal Aiming Device, double transverse holes(13033014) to the Insertion Handle. Check the connection between the tibial nail and the Insertion Handle, and between the Insertion Handle and the Connector for Proximal Aiming Arm for any loosening.

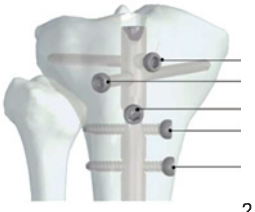
13033012
Transverse Targeting Arm

13033011
Transverse Targeting Arm

13033014
Proximal Aiming Device,
double transverse holes

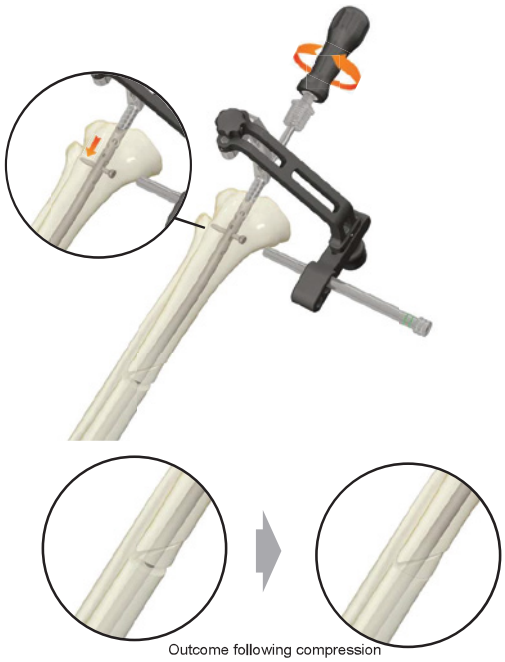
Assemble a Stopper for Φ4 Drill(13030039) to theDrill,Φ4 and set aproper length. Insert a Φ5.0 locking screw.

Tibial proximal screw choice

Tibia screw hole Image	Holes	Screw Description	Screw picture
 2	1	5.0mm Tibial Condyles Locking Screws	
		5.0mm Tibial Locking Screw A	
	2	5.0mm Tibial Locking Screw A	
	3	4.2mm Tibial Locking Screw A	
		4.2mm Tibial Locking Screw B	
	4	4.2mm Tibial Locking Screw B	

Intra–Operative Compression

If compression is to be used, compression screw technique may be used in addition to the back-striking compression following distal locking. Insert the Proximal Compression Shaft(13033024) from the handle top such that the Φ5.0mm proximal locking screw slides, causes depression of the proximal fractured segment and generates compression.



Outcome following compression

13033024
Proximal Compression Shaft

To insert the second 5.0 locking screw in static hole at the lower edge of coronal plain in proximal end.

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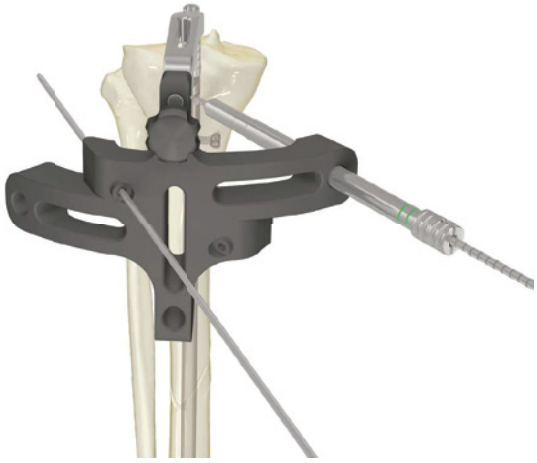
Remove the Proximal Aiming Device, double transverse holes(13033014) and Connector for Proximal Aiming Arm(13033009). Connect the Proximal Aiming Device, cross locking holes(13033015) to the Insertion Handle.

13033014
Proximal Aiming Device, double transverse holes

13033009
Connector for Proximal Aiming Arm

Proximal locking includes:
Two upper oblique locking options(use either 5.0mm Tibial Condyles Locking screws or 5.0 Tibial Locking Screw A)and one AP locking options(use 4.2 Tibial Locking Screw A) .



These two oblique locking screws along with the end cap create an angled stable construct. For unstable fractures, or upper third tibial fracture and metaphyseal fracture, insert an oblique screw below the plateau.

Insert the Protector,4(13030036) via the Proximal Aiming Device, cross locking holes(13033015) and locking aiming hole.

13030036
Protector, φ4

13033015
Proximal Aiming Device, cross locking holes

The guide wire hole of the proximal aiming arm provides hint about the length of cross locking screws, so as to avoid injury to popliteal artery, common peroneal nerve, and tibial nerve. Do not penetrate the far cortex during insertion.

Finish all the proximal locking by drilling, measuring, insertion steps.

Step 13. Insert Tibial End Caps

Tibial end caps are available in fore lengths, 0 mm, 5 mm ,10mm,and 10 mm. Select a end cap of proper length, remove the Proximal Aiming Device, cross locking holes(13033015) and Insertion Handle, and insert the tibial end cap.

13033015
Proximal Aiming Device, cross locking holes

Step 14. Remove Implants

Remove Distal Locking Screws

Make an incision on the scar tissue, and remove distal locking screws with a Stardrive Wrench, Quick Coupling,Φ5.6(13030041).

13030041
Stardrive Wrench, Quick Coupling, ϕ5.6

Remove Tibial End Caps

Remove the end cap with a Stardrive Wrench, Quick Coupling,Φ5.6(13030041) and connect the Extractor for Intramedullary Nail (13033023) to the tibial nail.

13030041
Stardrive Wrench, Quick Coupling, ϕ5.6

13033023
Extractor for Intramedullary Nail

Remove Proximal Locking Screws

Make an incision on the scar tissue, and remove proximal locking screws with a Stardrive Wrench, Quick Coupling, Φ5.6(13030041).

13030041
Stardrive Wrench, Quick Coupling, ϕ5.6

Remove Tibial Nail

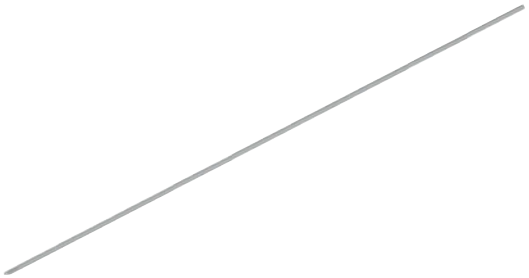
Connect the Hammer Guide(13030049) to Extractor for Intramedullary Nail(13033023), blow gently on Hammer Guide with a Combined Hammer(13030047) and extract the tibial nail.

13030049
Hammer Guide

13033023
Extractor for Intramedullary Nail

13030047
Combined Hammer

Step 15. Cleanse Instruments



After the surgery, cleanse all cannulated instruments with the Φ3.2 Threaded Guide Wire.

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Implants

Tibial Nail

specification		Product Code
D	L	
Φ8.0	260	55108026
Φ8.0	280	55108028
Φ8.0	300	55108030
Φ8.0	320	55108032
Φ8.0	340	55108034
Φ8.0	360	55108036
Φ9.0	260	55109026
Φ9.0	280	55109028
Φ9.0	300	55109030
Φ9.0	320	55109032
Φ9.0	340	55109034
Φ9.0	360	55109036
Φ10	260	55101026
Φ10	280	55101028
Φ10	300	55101030
Φ10	320	55101032
Φ10	340	55101034
Φ10	360	55101036
Φ11	260	55101126
Φ11	280	55101128
Φ11	300	55101130
Φ11	320	55101132
Φ11	340	55101134
Φ11	360	55101136

Tibial Locking screws-B

specification		Product Code
D	L	
Φ4.2	22	55134222
Φ4.2	24	55134224
Φ4.2	26	55134226
Φ4.2	28	55134228
Φ4.2	30	55134230
Φ4.2	32	55134232
Φ4.2	34	55134234
Φ4.2	36	55134236
Φ4.2	38	55134238
Φ4.2	40	55134240
Φ4.2	42	55134242
Φ4.2	44	55134244
Φ4.2	46	55134246
Φ4.2	48	55134248
Φ4.2	50	55134250
Φ4.2	52	55134252
Φ4.2	54	55134254
Φ4.2	56	55134256
Φ4.2	58	55134258
Φ4.2	60	55134260
Φ4.2	62	55134262
Φ4.2	64	55134264
Φ4.2	66	55134266
Φ4.2	68	55134268
Φ4.2	70	55134270
Φ4.2	72	55134272
Φ4.2	74	55134274
Φ4.2	76	55134276
Φ4.2	78	55134278
Φ4.2	80	55134280

Tibial End Caps

specification	Product Code
L	
0	55140000
5	55140005
10	55140010
15	55140015

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Tibial Locking screws-A

specification		Product Code
D	L	
Φ4.2	22	55124222
Φ4.2	24	55124224
Φ4.2	26	55124226
Φ4.2	28	55124228
Φ4.2	30	55124230
Φ4.2	32	55124232
Φ4.2	34	55124234
Φ4.2	36	55124236
Φ4.2	38	55124238
Φ4.2	40	55124240
Φ4.2	42	55124242
Φ4.2	44	55124244
Φ4.2	46	55124246
Φ4.2	48	55124248
Φ4.2	50	55124250
Φ4.2	52	55124252
Φ4.2	54	55124254
Φ4.2	56	55124256
Φ4.2	58	55124258
Φ4.2	60	55124260
Φ4.2	62	55124262
Φ4.2	64	55124264
Φ4.2	66	55124266
Φ4.2	68	55124268
Φ4.2	70	55124270
Φ4.2	72	55124272
Φ4.2	74	55124274
Φ4.2	76	55124276
Φ4.2	78	55124278
Φ4.2	80	55124280
Φ5.0	24	55030024
Φ5.0	26	55030026
Φ5.0	28	55030028
Φ5.0	30	55030030
Φ5.0	32	55030032
Φ5.0	34	55030034
Φ5.0	36	55030036
Φ5.0	38	55030038
Φ5.0	40	55030040
Φ5.0	42	55030042
Φ5.0	44	55030044
Φ5.0	46	55030046
Φ5.0	48	55030048
Φ5.0	50	55030050
Φ5.0	52	55030052
Φ5.0	54	55030054
Φ5.0	56	55030056
Φ5.0	58	55030058
Φ5.0	60	55030060
Φ5.0	62	55030062

specification		Product Code
D	L	
Φ5.0	64	55030064
Φ5.0	66	55030066
Φ5.0	68	55030068
Φ5.0	70	55030070
Φ5.0	72	55030072
Φ5.0	74	55030074
Φ5.0	76	55030076
Φ5.0	78	55030078
Φ5.0	80	55030080

Tibial Condyles Locking screws

specification		Product Code
D	L	
Φ5.0	31	55115031
Φ5.0	35	55115035
Φ5.0	39	55115039
Φ5.0	43	55115043
Φ5.0	47	55115047
Φ5.0	51	55115051
Φ5.0	55	55115055
Φ5.0	59	55115059
Φ5.0	63	55115063
Φ5.0	67	55115067
Φ5.0	71	55115071
Φ5.0	75	55115075
Φ5.0	79	55115079
Φ5.0	83	55115083
Φ5.0	87	55115087
Φ5.0	91	55115091
Φ5.0	95	55115095

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INTRAMEDULLARY NAIL SYSTEMS

Implant placement status

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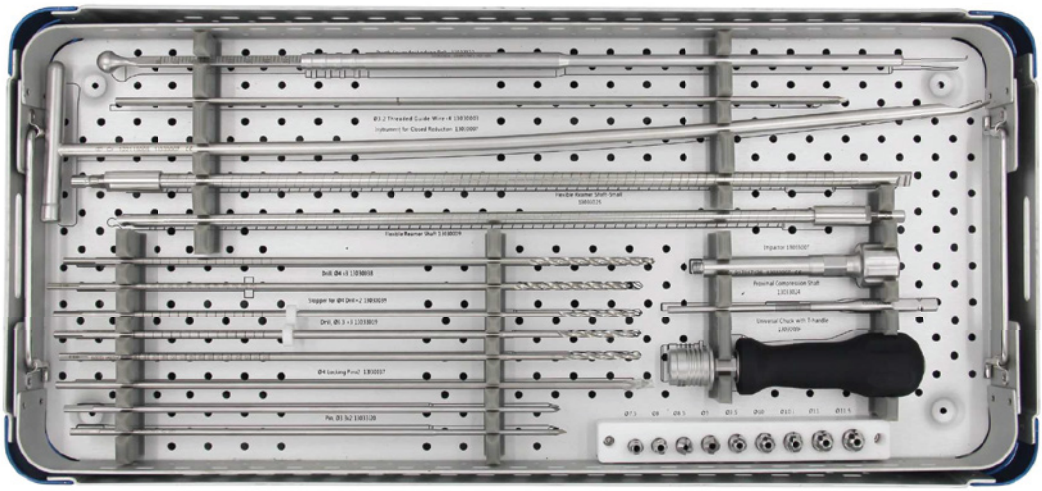
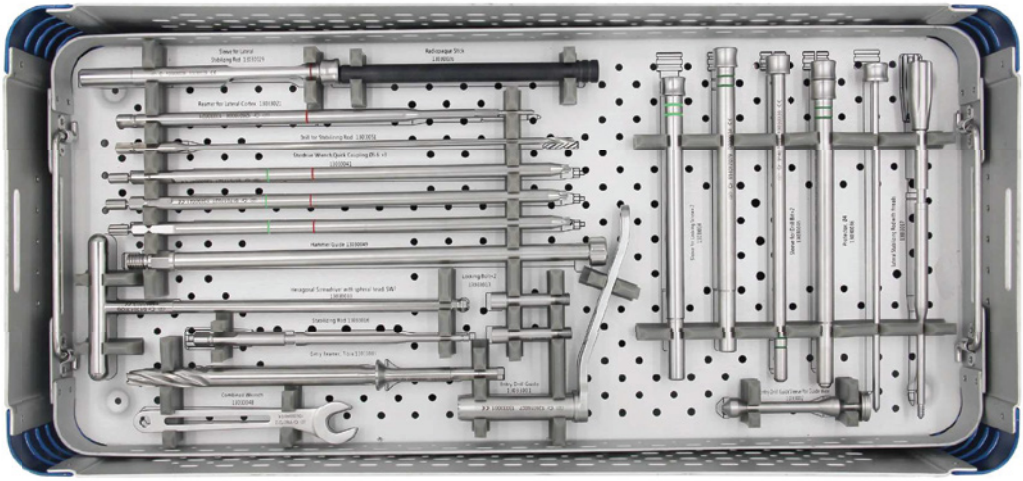
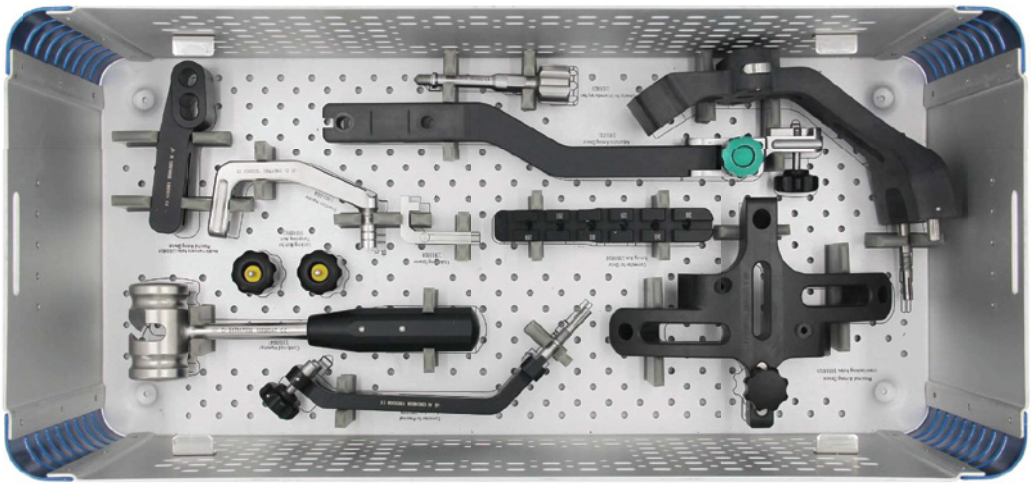
INTRAMEDULLARY NAIL SYSTEMS

Instruments placement status







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INTRAMEDULLARY NAIL SYSTEMS

Instruments

Product Code	Parts Description	QTY	Picture
13033001	Entry Drill Guide	1	
13033002	Entry Drill Guide Sleeve for Guide Wire	1	
13033003	Entry Reamer, Tibia	1	
13030004	Awl	option	
13030059	ϕ3.2 Threaded Guide Wire–B	4	
13030006	Quick Handle	1	
13030007	Instrument for Closed Reduction	1	
13030008	Guide wire with spheral head, ϕ2.5	1	
13030009	Flexible Reamer Shaft	1	
13033025	Flexible Reamer Shaft–Small	1	
13033007	Impactor	1	
13033008	Insertion Handle	1	

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INTRAMEDULLARY NAIL SYSTEMS

Product Code	Parts Description	QTY	Picture
13033004	Flexible Reamer Head– ϕ 7.5	1	
13033005	Flexible Reamer Head– ϕ 8	1	
13033006	Flexible Reamer Head– ϕ 8.5	1	
13030010	Flexible Reamer Head– ϕ 9	1	
13030011	Flexible Reamer Head– ϕ 9.5	1	
13030012	Flexible Reamer Head– ϕ 10	1	
13030013	Flexible Reamer Head– ϕ 10.5	1	
13030014	Flexible Reamer Head– ϕ 11	1	
13030015	Flexible Reamer Head– ϕ 11.5	1	
13033009	Connector for Proximal Aiming Arm	1	
13033010	Connector for Distal Aiming Arm	1	
13033011	Adjustable Aiming Device	1	
13033012	Transverse Targeting Arm	1	
13033013	Locking Bolt	2	
13033014	Proximal Aiming Device, double transverse holes	1	

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INTRAMEDULLARY NAIL SYSTEMS

Product Code	Parts Description	QTY	Picture
13033015	Proximal Aiming Device, cross locking holes	1	
13033016	Stabilizing Rod	1	
13033017	Lateral Stabilizing Rod with threads	1	
13030026	Radiopaque Stick	1	
13030029	Sleeve for Lateral Stabilizing Rod	1	
13033018	Stabilizing Spacer	1	
13030032	Locking Bolt for Targeting Arm	2	
13030033	Hexagonal Screwdriver with spheral head, SW7	1	
13030034	Sleeve for Locking Screw	2	
13030035	Sleeve for Drill Bit	2	
13030036	Protector, ϕ4	1	
13030037	Locating Pin	2	

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INTRAMEDULLARY NAIL SYSTEMS

Product Code	Parts Description	QTY	Picture
13030038	Drill, ϕ4	3	
13030039	Stopper for ϕ4 Drill	2	
13033019	Drill, ϕ3.3	3	
13033020	Pin, ϕ3.3	2	
13033021	Reamer for Lateral Cortex	1	
13033022	Depth Gauge for Locking Bolt	1	
13030041	Stardrive Wrench, Quick Coupling, Φ5.6	3	
13030047	Combined Hammer	1	
13030048	Combined Wrench	1	
13030051	Drill for Stabilizing Rod	1	
13033023	Extractor for Intramedullary Nail	1	
13030049	Hammer Guide	1	

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INTRAMEDULLARY NAIL SYSTEMS

Product Code	Parts Description	QTY	Picture
13033024	Proximal Compression Shaft	1	
13030056	Radiographic Ruler for length	option	
13030057	Radiographic Ruler for diameter	option	
13034210	Guide Wire Gripper	option	
13030069	Ruler For Nail's length	option	
13030075	Guide Wire Pusher	option	
13033991	Instrument Case	1	
13033995	implant Case	option	
13033996	Screw Case	option	

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