

Femur Nails:

Design:

- Anatomically correct 5° bend and longer, flat proximal bend for easier insertion.
- Anatomic design for easier insertion and improved fit
- Transverse locking holes to allow use of one nail in either left or right extremity
- Conical threads for secure connection to insertion/extraction instruments
- Cloverleaf cross section for the best interference fit in the medullary canal
- Designed to prevent penetration of posterior cortex during insertion, and to glide easily through medullary canal.
- Featured with both dynamic & static transverse.
- Two transverse locking holes and additional AP locking hole distally
- Beveled proximal end to prevent soft tissue irritation
- Wide range of available sizes: 9mm to 12mm diameters and 320mm–440mm Length

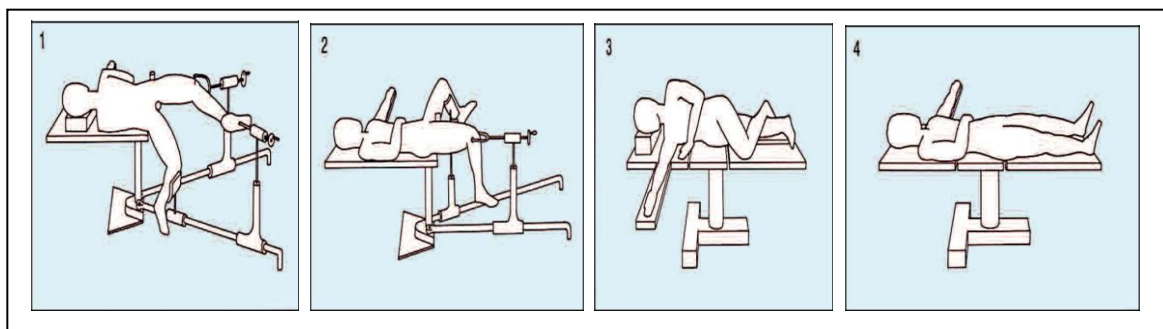


Surgical Steps:

Patient Positioning:

A fracture table with long cantilevers is used. The patient is placed in a lateral decubitus position. The pelvis is held vertical with the supports on each side of the table. The patient is slid downwards on the table until the perineum rests on a well-cushioned perineal post. A traction pin is placed in the intercondylar area of the injured leg to apply traction and aid reduction. The foot of the injured leg is placed in a boot. The uninjured leg is flexed at the hip and knee, and supported by a brace. The uninjured leg should be externally rotated to allow the image intensifier to be adjusted freely.

With the patient in the supine position, the leg of the injured femur is allowed to hang with the knee flexed 90°. The patient's pelvis should be positioned flat, providing correct rotational alignment of the femur. To allow access to the proximal femur, either adduct the injured leg, or shift the torso to the uninjured side, while keeping the pelvis flat. The uninjured leg is placed in a support.



The operating table must be radiolucent. The patient is placed in a supine position. To allow access to the proximal femur, the uninjured leg is abducted as far as possible, and the injured leg is adducted. The Large distracter is used to aid reduction and correct rotational alignment.

Use of the Image Intensifier

An image intensifier is required for both closed reduction and distal locking techniques. The image intensifier allows controlled viewing of the fracture zone for insertion of the reaming rod, medullary reamer heads, and universal nail. Proper positioning of the image intensifier is extremely important for locating the distal locking holes. With the patient in the lateral decubitus or supine position, the

radiation source should be placed on the medial aspect of the femur. This will facilitate the aiming process, which is performed laterally.

Finding of Entry point & medullary canal opening:

Selecting the proper entry point is important to prevent rotation of the nail during insertion the entry point should be over the midline of the medullary canal and as superior as possible without causing damage to the anterior edge of the tibia plate. After finding entry point, bone awl used to open medullary canal.

5000-INS-0006 Bone Awl Curved

Proximal Reaming:

Under image intensification, insert the 2.5 mm guide wire into the canal, across the fracture site, and into the distal metaphysis. T-Handle chuck may be used to facilitate insertion. The Holding Forceps is used to control the guide wire. Ø2.5mm Guide wire is passed through cannulated awl. Proximal Reamer is followed by guide wire which is used to reaming the proximal portion of nail. Ø12.5mm proximal reamer is use for reaming. The holding forceps is used to control the guide wire.

5000-INS-0019 guide wire plain 2.5 mm x 950 mm

5000-INS-0024 proximal reamer 12.5 mm

Nail and insertion handle assembly:

After reaming proximal canal, nail is inserted in femur bone. femur proximal combined jig is attached with nail with the use of connecting bolt. For hammering purpose, force is applied by sliding the ram through ram rod which pushes the jig so that nail can insert properly. Insertion Driving Head is an optional part locked with conical bolt which also used for hammering.

5000-INS-0001 Femur Proximal Combined Jig

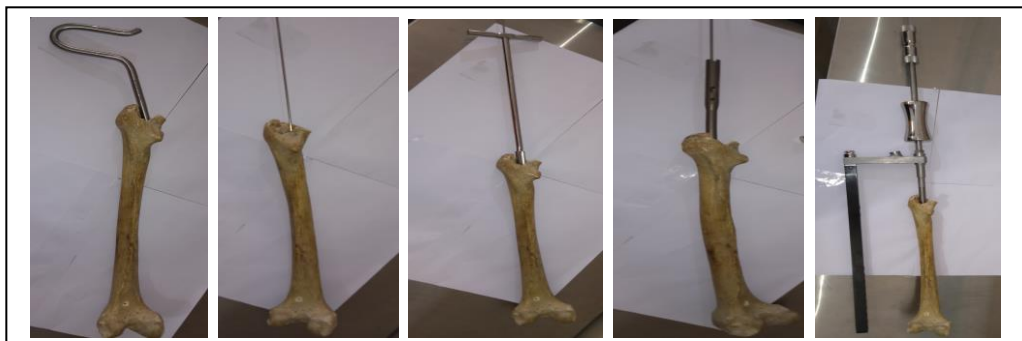
5000-INS-0007 Nail Connecting Bolt

5000-INS-0008 Insertion Driving Head

5000-INS-0009 Ram Rod

5000-INS-0011 Ram Rod Handle

5000-INS-0012 Ram



Proximal Locking:

Protection Sleeve 10.0 mm X 8.0 mm is passed through proximal jig. With the use of trocar Ø8.0mm, entry point of drill identified. Trocar is passed through protection sleeve. Then after trocar is replaced by Drill Sleeve 8.0 X 4.0 mm which is guide the drill bit 4.0mm 12" long. Depth gauge is

used to measure the drill length. With the help of long screw driver, 4.9mm locking bolt is inserting in proximal holes of nail through protection sleeve.



- 5000-INS-0001** Femur Proximal Combined Jig
- 5000-INS-0005** Trocar 8.0 mm
- 5000-INS-0013** Drill Bit 4.0 mm 12 "Long
- 5000-INS-0023** Depth gauge for I.L.
- 5000-INS-0016** I.L. screw driver 4.5mm 12" long
- 5000-INS-0004** Drill Sleeve 8.0 X 4.0 mm
- 5000-INS-0002** Protection Sleeve 10.0 mm X 8.0 mm

Distal Locking:

Protection Sleeve 10.0 mm X 8.0 mm is passed through distal jig. With the use of trocar Ø8.0mm, entry point of drill identified. Trocar is passed through protection sleeve. Then after trocar is replaced by Drill Sleeve 8.0 X 3.0 mm which is guide the drill bit 3.0mm 12" long. Depth gauge is used to measure the drill length. With the help of long screw driver, 3.9mm locking bolt is inserting in proximal holes of nail through protection sleeve.

End-cap insertion:

End-cap is inserted with the use of screw driver at proximal threaded portion of tibia nail.



- 5000-INS-0002** Protection Sleeve 10.0 mm X 8.0 mm
- 5000-INS-0027** Femur Distal Jig – Right
- 5000-INS-0028** Femur Distal Jig – Left
- 5000-INS-0014** Drill bit 3.0 mm 12" long
- 5000-INS-0003** Drill Sleeve 8.0 X 3.0 mm

Instruments:

5000-INS-0001 Femur Proximal Combined Jig



5000-INS-0002 Protection Sleeve 10.0 mm X 8.0 mm



5000-INS-0003 Drill Sleeve 8.0 X 3.0 mm



5000-INS-0004 Drill Sleeve 8.0 X 4.0 mm



5000-INS-0005 Trocar 8.0 mm



5000-INS-0006 Bone Awl Curved



5000-INS-0007 Nail Connecting Bolt



5000-INS-0008 Insertion Driving Head



5000-INS-0009 Ram Rod



5000-INS-0010 Knob for Ram Rod and Driving Head



5000-INS-0011 Ram Rod Handle



5000-INS-0012 Ram



5000-INS-0013 Drill Bit 4.0 mm 12" Long



5000-INS-0014 Drill Bit 3.0 mm 12" Long



5000-INS-0015 Tommy Bar



5000-INS-0016 I.L. Screw Driver 4.5 mm 12" Long



5000-INS-0017 Tissue Protector



5000-INS-0018 Guide wire Plain 2.0 mm X 950 mm



5000-INS-0019 Guide Wire Plain 2.5 mm X 950 mm



5000-INS-0020 Reaming Rod with Olive Point 2.0 mm X 950 mm



5000-INS-0021 Reaming Rod with Olive Point 2.5 mm X 950 mm



5000-INS-0022 Fix Spanner 16 mm



5000-INS-0023 Depth Gauge for I.L.



5000-INS-0024 Proximal Reamer 12.5 mm



5000-INS-0029 Cannulated AWL Curved



5000-INS-0030 Guide Wire Holding Forcep



5000-INS-0031 Teflon Tube



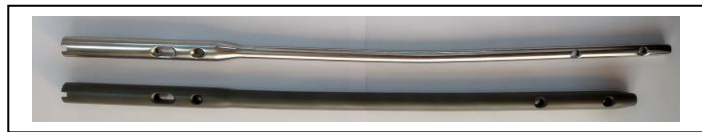
5000-INS-0027 Femur Distal Jig – Right – Aluminium

5000-INS-0028 Femur Distal Jig – Left - Aluminium



Implants Size:

Femur Nail Cannulated



9.0 mm Femur Nail Cannulated

SS 316L	TIT	Length(mm)
1619-SS-9032	1619-TT-9032	320
1619-SS-9034	1619-TT-9034	340
1619-SS-9036	1619-TT-9036	360
1619-SS-9038	1619-TT-9038	380
1619-SS-9040	1619-TT-9040	400
1619-SS-9042	1619-TT-9042	420
1619-SS-9044	1619-TT-9044	440

10.0 mm Femur Nail Cannulated

SS 316L	TIT	Length(mm)
1619-SS-1032	1619-TT-1032	320
1619-SS-1034	1619-TT-1034	340
1619-SS-1036	1619-TT-1036	360
1619-SS-1038	1619-TT-1038	380
1619-SS-1040	1619-TT-1040	400
1619-SS-1042	1619-TT-1042	420
1619-SS-1044	1619-TT-1044	440

11.0 mm Femur Nail Cannulated

SS 316L	TIT	Length(mm)
1619-SS-1132	1619-TT-1132	320
1619-SS-1134	1619-TT-1134	340
1619-SS-1136	1619-TT-1136	360
1619-SS-1138	1619-TT-1138	380
1619-SS-1140	1619-TT-1140	400
1619-SS-1142	1619-TT-1142	420
1619-SS-1144	1619-TT-1144	440

12.0 mm Femur Nail Cannulated

SS 316L	TIT	Length(mm)
1619-SS-1232	1619-TT-1232	320
1619-SS-1234	1619-TT-1234	340
1619-SS-1236	1619-TT-1236	360
1619-SS-1238	1619-TT-1238	380
1619-SS-1240	1619-TT-1240	400
1619-SS-1242	1619-TT-1242	420
1619-SS-1244	1619-TT-1244	440

4.9 mm Interlocking Bolt

1717-SS-5024-80 SS 16mm to 80mm (2mm Diff)

1717-TT-5024-80 TT 16mm to 80mm (2mm Diff)



3.9 mm Interlocking Bolt

1717-SS-4024-80 SS 16mm to 80mm (2mm Diff)

1717-TT-4024-80 TT 16mm to 80mm (2mm Diff)



Address:

Corporate Office

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Plant Office:

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