Tibia Nails:

Design:

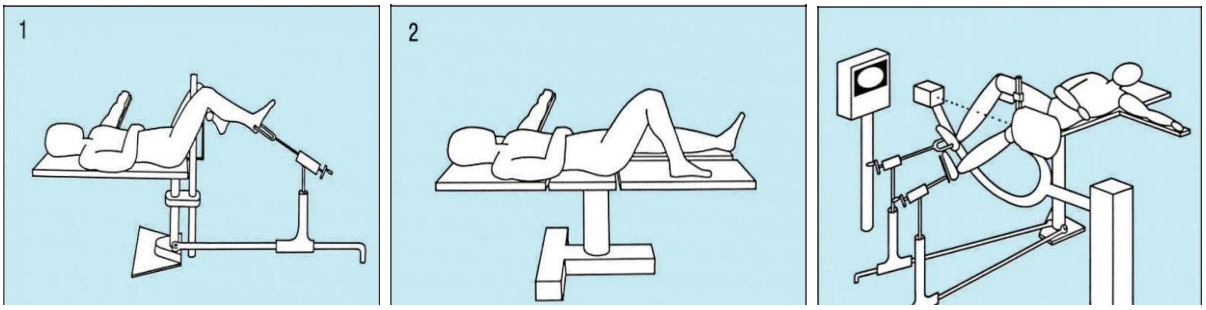
- Anatomic design for easier insertion and improved fit
- Transverse locking holes to allow use of one nail in either left or right extremity
- Conical threads for secure connection to insertion/extraction instruments
- Cloverleaf cross section for the best interference fit in the medullary canal
- Designed 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
- Anatomically correct 10° bend and longer, flat proximal bend for easier insertion, better fit
- Beveled proximal end to prevent soft tissue irritation
- Wide range of available sizes: 8 mm to 11 mm diameters and 260 mm – 400 mm Length

Surgical Steps:

Patient Positioning:

The fracture may be reduced using open or closed technique. Closed reduction is the preferred method, with the patient in the supine position on a fracture table or radiolucent operating table. An image intensifier is needed.

The patient is placed in the supine position, with the injured leg flexed 90° at the knee. The foot of the injured leg is placed in a cushioned boot, or supported by a calcaneal traction pin. For distal locking, the calcaneal traction pin must be used since the shoe extends too far proximally. The uninjured leg is positioned to allow free movement of the image intensifier from the AP to the lateral plane. The foot is placed in a cushioned boot.



The operating table must be radiolucent. The patient is placed in the supine position. The injured leg is positioned freely, with the knee flexed 90°. The uninjured leg is extended. The table should be adjusted to a comfortable operating height for the surgeon.

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 supine position, the radiation source should be placed laterally to facilitate the aiming process, which is performed medially.

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:

Ø2.0mm 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-0018 guide wire plain 2.0 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 tibia bone. Tibia 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 Tibia 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 Tibia 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-0025 Tibia Distal Jig – Right
5000-INS-0026 Tibia 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 Tibia 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

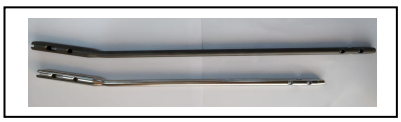
TIBIA NAIL CANNULATED

5000-INS-0031 Teflon Tube

5000-INS-0025 Tibia Distal Jig – Right – Aluminium
5000-INS-0026 Tibia Distal Jig – Left - Aluminium

Implants Size:

Tibia Nail Cannulated



8.0 mm Tibia Nail Cannulated

SS 316L	TIT	Length(mm)
1617-SS-8026	1617-TT-8026	260
1617-SS-8028	1617-TT-8028	280
1617-SS-8030	1617-TT-8030	300
1617-SS-8032	1617-TT-8032	320
1617-SS-8034	1617-TT-8034	340
1617-SS-8036	1617-TT-8036	360
1617-SS-8038	1617-TT-8038	380
1617-SS-8040	1617-TT-8040	400

10.0 mm Tibia Nail Cannulated

SS 316L	TIT	Length(mm)
1617-SS-1026	1617-TT-1026	260
1617-SS-1028	1617-TT-1028	280
1617-SS-1030	1617-TT-1030	300
1617-SS-1032	1617-TT-1032	320
1617-SS-1034	1617-TT-1034	340
1617-SS-1036	1617-TT-1036	360
1617-SS-1038	1617-TT-1038	380
1617-SS-1040	1617-TT-1040	400

9.0 mm Tibia Nail Cannulated

SS 316L	TIT	Length(mm)
1617-SS-9026	1617-TT-9026	260
1617-SS-9028	1617-TT-9028	280
1617-SS-9030	1617-TT-9030	300
1617-SS-9032	1617-TT-9032	320
1617-SS-9034	1617-TT-9034	340
1617-SS-9036	1617-TT-9036	360
1617-SS-9038	1617-TT-9038	380
1617-SS-9040	1617-TT-9040	400

11.0 mm Tibia Nail Cannulated

SS 316L	TIT	Length(mm)
1617-SS-1126	1617-TT-1126	260
1617-SS-1128	1617-TT-1128	280
1617-SS-1130	1617-TT-1130	300
1617-SS-1132	1617-TT-1132	320
1617-SS-1134	1617-TT-1134	340
1617-SS-1136	1617-TT-1136	360
1617-SS-1138	1617-TT-1138	380
1617-SS-1140	1617-TT-1140	400

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:

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Sama-savli road Vadodara-390024

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