



Surgical Technique

Retrograde Femur Nail

about us

Auxein Medical is an integrated, research based, orthopaedic Implants & instruments manufacturing company, producing a wide range of quality, affordable generic implants, trusted by healthcare professionals and patients across geographies. It is the Company's constant endeavor to provide a wide basket of generic and our innovator products that exceed the highest expectations of customers in term of quality and safety. The company has world-class manufacturing unit established in india and serves customers in over 75 countries worldwide.

Our Achievements



INTRODUCTION

AUXEIN'S Retrograde Femur Nail provides fixation in the cases of fractures above the knee joint or multi-fragment fractures of condyle. Retrograde Femur Nail system provides nail with diameters 9.5mm, 10mm, 11mm & 12mm and length between 180mm and 360mm



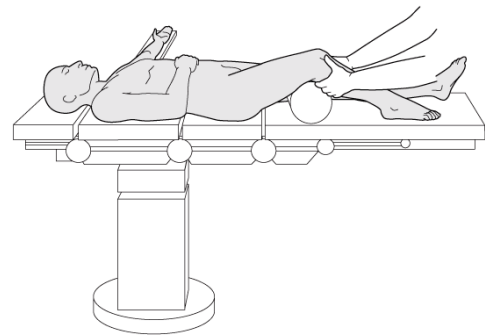
Indications:

The Retrograde Femur Nail is Indicated for use in case of:

- Inter and supra condylar Femur Fracture
- Supra Condylar fracture with diaphyseal extension

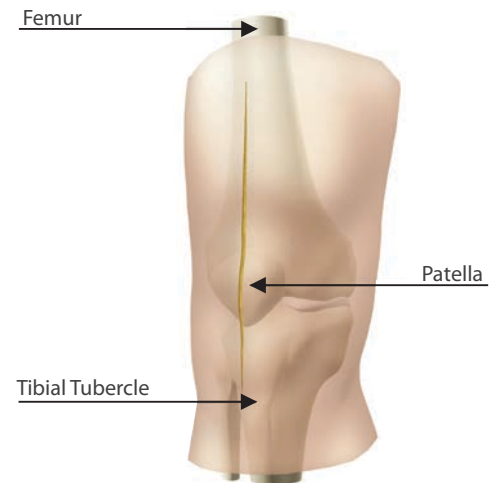


Patient Positioning: Place the patient in the supine position on a fracture or radiolucent imaging table. Place the knee in approximately 45 degrees of flexion. Use manual traction, a femoral distractor or an external fixator to reduce severely displaced fractures and maintain length. Special attention is needed to maintain proper length when using a retrograde approach to treat a comminuted fracture.



Approach: Approach the distal femur through a midline longitudinal incision between the patella and the tibial tubercle. Obtain access to the intercondylar notch by splitting the tendon longitudinally or displacing the tendon laterally.

Alternative approach: Approach the distal femur through a longitudinal incision from the superior pole of the patella to the tibial tubercle, placed along the medial border of the patellar tendon. Expose the intercondylar notch by using retractors to reflect the patellar tendon laterally or perform the procedure percutaneously.



Entry Point: Entry Wire Guide (1458-IN-5) is inserted into the Protection sleeve (1458-IN-4). Now this assembly is placed in line with the intercondylar notch. The 3.2mm threaded guide wire (1458-IN-1) is inserted through the entry guide wire about 6-8cm into the bone.



Remove the Entry Wire Guide (**1458-IN-5**) and insert the Entry Reamer (**1458-IN-6**) protection sleeve (**1458-IN-4**) along the threaded guide wire (**1458-IN-1**). Ream along the guide wire in order to get access to the intramedullary canal. Now remove the Entry reamer and the threaded guide wire along with protection sleeve.

As an alternate to Entry Reamer, the Cannulated awl (**1458-IN-7**) could also be used to access the intramedullary canal.



Guide wire insertion: The Reducer (**1458-IN-44**) is advanced into the intramedullary canal past the fracture site for the reduction. The curved end of the reducer helps in guiding the guide wire with olive (**1458-IN-45**) to the proximal region of the femur. The guide wire with olive is inspected in both AP and lateral views for its final placement in the femur bone using the image intensifier. Finally the reducer is removed from the bone.

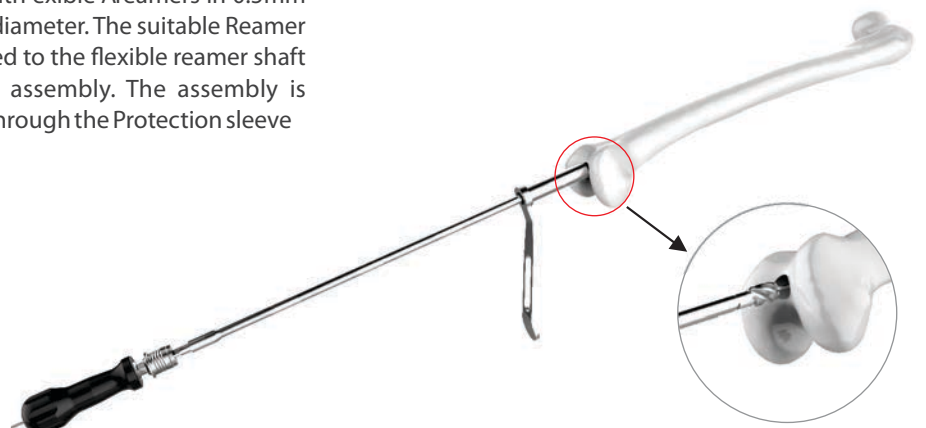


Nail Measurement: The Radiographic ruler is used to measure the size of the desired nail to be inserted. Place the Radiographic ruler in line with the femur bone. Now move the C arm over it and check the required nail length in AP view according to the markings on the ruler.

To measure the required diameter of the nail, the radiographic ruler is placed perpendicular to the femoral axis so that the diameter gauge is located over the intramedullary canal. Now from gauge choose the largest diameter nail that fits into the intramedullary canal.



Reaming: Ream the intramedullary canal with flexible Reamers in 0.5mm steps to 1.0mm more than the selected nail diameter. The suitable Reamer Head (**1458-IN-34 to 1458-IN-42**) is attached to the flexible reamer shaft (**1458-IN-46**) to create a Flexible reamer assembly. The assembly is inserted along the guide wire (**1458-IN-45**) through the Protection sleeve (**1458-IN-4**) and the reaming is performed.



Nail-Jig Assembly: Align the nail slots with the slots on the Insertion Handle (**1458-IN-8**). Now insert the nail holding bolt (**1458-IN-26**) into the nail through the Insertion Handle and rotate it until the threads on the locking bolt sits and lock with the threads of the nail.



Nail Insertion: Before inserting the nail into the bone, it is important to check the alignment of the holes on nail with the holes in the aiming devices by inserting the Outer sleeve (**1458-IN-47**) through the holes of aiming devices and verifying its alignment.

***Note:** The technique for using the aiming devices is mentioned later in the surgical technique according to the requirements of each aiming device.



After verifying all the holes alignment, remove the aiming devices. Insert the nail and Insertion Handle assembly along the guide wire (**1458-IN-45**) and attach the impactor (**1458-IN-28**) to the Insertion Handle (**1458-IN-8**). Now the combined hammer (**1458-IN-55**) is used to gradually tap on the impactor so that the nail is inserted and sits properly into the intramedullary canal upto the required depth. Finally the guide wire is removed.



Proximal Locking: Attach the Proximal/Distal Aiming attachment (**1458-IN-10**) to the Insertion Handle (**1458-IN-8**) and attach with the locking bolt on the Proximal/Distal Aiming attachment. Further attach the Proximal Aiming Arm (**1458-IN-11**) to the Proximal/Distal Aiming attachment in order to aim at the Proximal threaded holes of the nail. The outer sleeve (**1458-IN-47**) is inserted through Proximal Aiming Arm in which the sleeve for drill bit (**1458-IN-48**) is further inserted. Through the sleeve for drill bit, a long trocar (**1458-IN-49**) is inserted in order to make a small incision at the site of screw entry. Now both the sleeves are pushed through the incision hole until it sits on the bone.



Remove the Trocar (**1458-IN-49**) and insert 4.0mm drill bit (**1458-IN-50**) to drill a hole across both the cortices through the threaded hole in the nail.



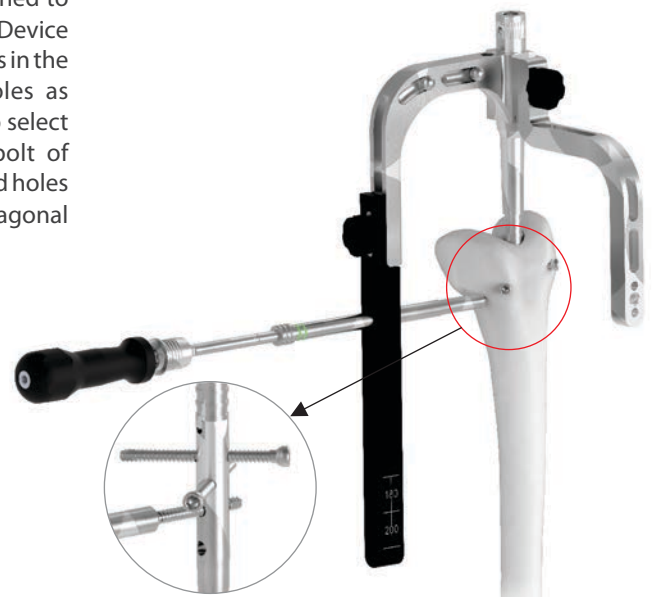
Insert the Depth Gauge (**1458-IN-3**) through the Outer Sleeve (**1458-IN-47**) and measure the required locking bolt length from the readings on the gauge.



Attach the 5.0mm locking bolt of required length to the Hexagonal Wrench (1458-IN-54) using the threads on the wrench. Now attach the assembly to the handle with quick coupling (1458-IN-43) and insert the locking bolt into the predrill hole through the sleeve (1458-IN-47). Similarly insert the second locking bolt through the second threaded hole in the nail using the second hole in the Proximal Aiming Arm (1458-IN-11).



The Proximal/Distal short nail Aiming Device (1458-IN-13) is attached to the Insertion Handle (1458-IN-8). Two distal holes on the Aiming Device are used for drilling the holes along the two distal non-threaded holes in the nail using the similar technique as used for the threaded holes as mentioned above. Again, the Depth Gauge (1458-IN-3) is used to select the locking bolt of appropriate length. The selected 5.0mm bolt of appropriate length is finally inserted into the two distal non-threaded holes through sleeve (1458-IN-47) for locking screw using the Hexagonal Wrench (1458-IN-54).



Distal Locking: The Proximal Aiming Arm (1458-IN-11) is removed once the distal screws are fixed into the nail.

For 180mm and 200mm Nail:

For drilling and inserting proximal 5.0mm bolts in 180 or 200mm nail, the Proximal/Distal short nail Aiming Device (1458-IN-13) is used. There is marking on the Aiming Device clearly indicating the two aiming holes towards the two Distal holes for both 180mm as well as 200mm nail. The same process of drilling and inserting the locking bolt is used as discussed in the distal locking method. The image indicates the insertion of locking bolt for 180mm nail.



For Nail length more than 200mm:

The Distal Arm Attachment for Distal Aiming Device (**1458-IN-12**) is attached to the Proximal/Distal Aiming attachment (**1458-IN-10**). Now the Distal Aiming Device for Long Nail (**1458-IN-9**) is attached to the Distal Arm Attachment for Distal Aiming Device. The markings on the proximal aiming device vary from 300mm to 360mm. Now depending on the selected nail size, the pin of the Distal Arm Attachment for Distal Aiming Device is aligned with the proximal aiming device hole. The proximal aiming device is fixed in place by inserting the Distal aiming device bolt (**1458-IN-14**) through the aligned holes of both Distal Arm Attachment for Distal Aiming Device and Distal aiming device. The Distal arm (**1458-IN-18**) is attached to the groove on the proximal aiming device and held in place by screwing the locking bolt for Distal arm (**1458-IN-19**).



The Stabilizing Rod Guide (**1458-IN-15**) is inserted into the third hole from the Distal side of the Distal aiming device (**1458-IN-9**). First, the drill for stabilizing rod (**1458-IN-29**) is passed through the stabilizing rod guide and a hole is drilled until it comes in contact with the nail and the drill is removed.



The Stabilizing Rod (**1458-IN-16**) is used to push and align the Distal end of nail in position. It is passed through the stabilizing rod guide (**1458-IN-15**) such that it comes in contact with a groove cut on the nail. Now the stabilizing spacer (**1458-IN-17**) is inserted along the intersection of the Distal aiming device (**1458-IN-9**) and the stabilizing rod guide such that it holds the stabilizing rod in place.



The Rod with Threads guide (**1458-IN-20**) is inserted through the hole in Distal arm (**1458-IN-18**) such that it aligns with the threaded hole in the Distal part of nail. The Lateral Stabilizing rod with threads (**1458-IN-21 to 1458-IN-24**) of suitable diameter according to the selected nail size is selected. The Handle with quick coupling (**1458-IN-43**) is assembled with the lateral stabilizing rod with threads. After drilling the bone, it is then passed through the Rod with threads guide and screwed into the nail threaded hole so that the nail is in correct position for insertion of the Distal screws. Finally the rod with thread spacer (**1458-IN-25**) is used to hold the lateral stabilizing rod in correct position.



Now that the nail is stabilized from the Distal end, the two 5.0mm locking bolt can be inserted into two Distal non threaded holes using the two holes on the Distal aiming device (**1458-IN-9**) as the guide with technique similar to one used for Proximal locking.



Once these two locking bolts are inserted, the lateral stabilizing rod with threads (**1458-IN-21 to 1458-IN-24**) is removed and the 5.0mm locking bolt is now inserted in the threaded Distal hole of the nail. As all the 5.0mm locking bolts have been inserted, so now all aiming devices are removed. The Insertion Handle (**1458-IN-8**) is also removed by unscrewing the nail holding bolt (**1458-IN-26**).



End Cap Insertion: The end cap (**1458-01**) is attached to the hexagonal wrench (**1458-IN-54**) and is nally inserted and locked into the distal open end of the nail.



Nail Removal: There are two approaches of removing the nail listed below:

- First all the locking bolts and the end cap is removed and the Hammer guide (**1458-IN-30**) is screwed into the distal open end of the nail. The combined Hammer (**1458-IN-55**) is placed in line with the hammer guide as shown in the image. Now with reverse hammering, the nail is removed.



- According to second approach, rst All the locking bolts and the end cap is removed and then the Insertion Handle (**1458-IN-8**) is attached to the nail. The impactor (**1458-IN-28**) is screwed on top of the Nail holding guide and on top of which the hammer guide (**1458-IN-30**) is attached. The combined hammer (**1458-IN-55**) is placed in line with the hammer guide and with reverse hammering, the nail is removed.



Retrograde Femur Nail

Ø Dia	Length	Stainless Steel	Titanium
9.5mm	180mm	1458-9.5-180	TI-1458-9.5-180
9.5mm	200mm	1458-9.5-200	TI-1458-9.5-200
9.5mm	300mm	1458-9.5-300	TI-1458-9.5-300
9.5mm	320mm	1458-9.5-320	TI-1458-9.5-320
9.5mm	340mm	1458-9.5-340	TI-1458-9.5-340
9.5mm	360mm	1458-9.5-360	TI-1458-9.5-360
10mm	180mm	1458-10-180	TI-1458-10-180
10mm	200mm	1458-10-200	TI-1458-10-200
10mm	300mm	1458-10-300	TI-1458-10-300
10mm	320mm	1458-10-320	TI-1458-10-320
10mm	340mm	1458-10-340	TI-1458-10-340
10mm	360mm	1458-10-360	TI-1458-10-360
11mm	180mm	1458-11-180	TI-1458-11-180
11mm	200mm	1458-11-200	TI-1458-11-200
11mm	300mm	1458-11-300	TI-1458-11-300
11mm	320mm	1458-11-320	TI-1458-11-320
11mm	340mm	1458-11-340	TI-1458-11-340
11mm	360mm	1458-11-360	TI-1458-11-360
12mm	180mm	1458-12-180	TI-1458-12-180
12mm	200mm	1458-12-200	TI-1458-12-200
12mm	300mm	1458-12-300	TI-1458-12-300
12mm	320mm	1458-12-320	TI-1458-12-320
12mm	340mm	1458-12-340	TI-1458-12-340
12mm	360mm	1458-12-360	TI-1458-12-360



5.0mm Locking Screw For Retrograde Femur Nail

Length	Stainless Steel	Titanium
32mm	1458-032	TI-1458-032
34mm	1458-034	TI-1458-034
36mm	1458-036	TI-1458-036
38mm	1458-038	TI-1458-038
40mm	1458-040	TI-1458-040
42mm	1458-042	TI-1458-042
44mm	1458-044	TI-1458-044
46mm	1458-046	TI-1458-046
48mm	1458-048	TI-1458-048
50mm	1458-050	TI-1458-050
52mm	1458-052	TI-1458-052
54mm	1458-054	TI-1458-054
56mm	1458-056	TI-1458-056
58mm	1458-058	TI-1458-058
60mm	1458-060	TI-1458-060
62mm	1458-062	TI-1458-062
64mm	1458-064	TI-1458-064
66mm	1458-066	TI-1458-066
68mm	1458-068	TI-1458-068
70mm	1458-070	TI-1458-070
72mm	1458-072	TI-1458-072
74mm	1458-074	TI-1458-074
76mm	1458-076	TI-1458-076
78mm	1458-078	TI-1458-078
80mm	1458-080	TI-1458-080



End Cap For Retrograde Femur Nail

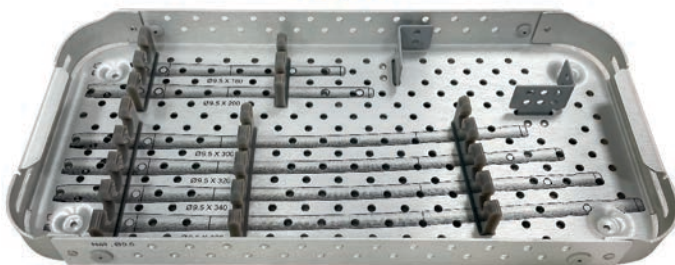
Stainless Steel	Titanium
1458-01	TI-1458-01



1-019 Implant Box for Retrograde Femur Nail



Tray 1



Dia	Length	Qty
Ø9.5mm	180mm to 360mm	1pcs

*Stainless Steel or Titanium Implants
can be placed as per requirement*

Tray 2



Dia	Length	Qty
Ø10mm	180mm to 360mm	1pcs

*Stainless Steel or Titanium Implants
can be placed as per requirement*

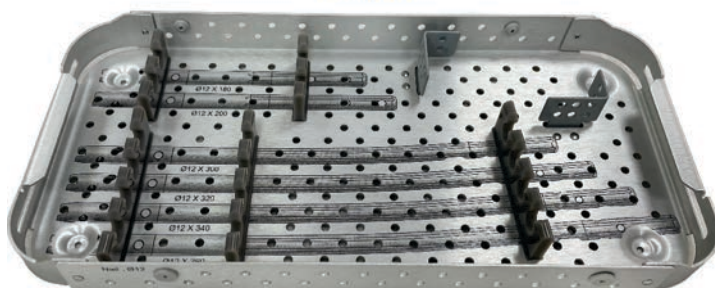
Tray 3



Dia	Length	Qty
Ø11mm	180mm to 360mm	1pcs

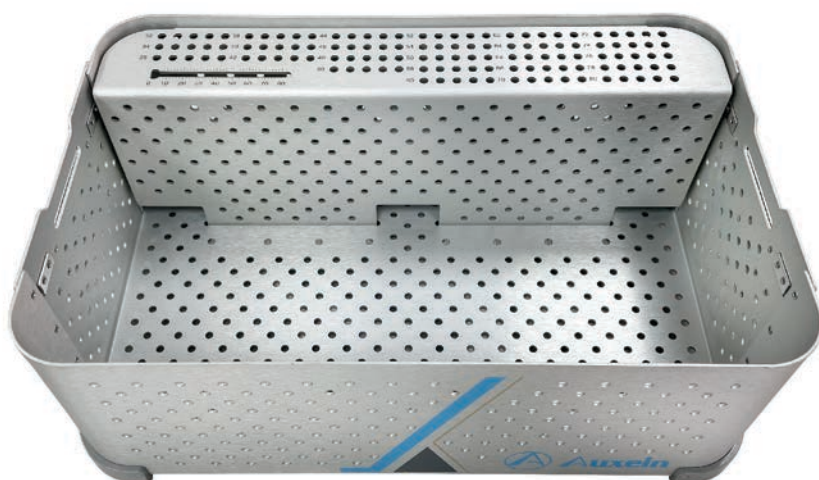
*Stainless Steel or Titanium Implants
can be placed as per requirement*

Tray 4



Dia	Length	Qty
Ø12mm	180mm to 360mm	1pcs

*Stainless Steel or Titanium Implants
can be placed as per requirement*



Ø5.0mm Locking Screw For Retrograde Femur Nail

Dia	Length	Qty
Ø5.0mm	32mm to 80mm	5pcs

Stainless Steel or Titanium Implants
can be placed as per requirement



End Cap For Retrograde Femur Nail

Qty
2pcs

Stainless Steel or Titanium Implants
can be placed as per requirement

1458-IN-1 Guide Wire with Threaded Tip Ø3.2mm x Thread Length 15mm x Length 400mm



1458-IN-2 Tissue Protector for Retrograde Nail



1458-IN-3 Depth Gauge measuring upto 120mm for Retrograde Nail



1458-IN-4 Protection Sleeve 17/14mm For Entry Reamer/Wire Guide for Retrograde Nail



1458-IN-5 Entry Wire Guide Ø14mm for 3.2mm Guide Wire - Retrograde Nail



1458-IN-6 Entry Reamer Ø13.5mm for Retrograde Nail



1458-IN-7 Cannulated Awl Ø13.5mm for Retrograde Nail



1458-IN-8 Insertion Handle for Retrograde Nail



1458-IN-9 Distal Aiming Device for Long Retrograde Nail



1458-IN-10 Proximal/Distal Aiming Attachment for Retrograde Nail



1458-IN-11 Proximal Aiming Arm for Retrograde Nail



1458-IN-12 Distal Arm Attachment for Distal Aiming Device - Retrograde Nail



1458-IN-13 Proximal/ Distal Short Nail Aiming Device for Retrograde Nail



1458-IN-14 Distal Aiming Device Bolt for Retrograde Nail



1458-IN-15 Stabilizing Rod Guide Ø10/8.0mm for Retrograde Nail



1458-IN-16 Stabilizing Rod With Quick Coupling End for Retrograde Nail



1458-IN-17 Stabilizing Spacer for Retrograde Nail



1458-IN-18 Distal Arm for Retrograde Nail



1458-IN-19 Locking Bolt For Distal Arm for Retrograde Nail



1458-IN-20 Rod With Thread Guide 1 1/8.0mm for Retrograde Nail



1458-IN-21 Threaded Lateral Stabilizing Rod with Quick Coupling End Ø9.5mm, for Retrograde Nail



1458-IN-22 Threaded Lateral Stabilizing Rod with Quick Coupling End Ø10mm, for Retrograde Nail



1458-IN-23 Threaded Lateral Stabilizing Rod with Quick Coupling End Ø11mm, for Retrograde Nail



1458-IN-24 Threaded Lateral Stabilizing Rod with Quick Coupling End Ø12mm, for Retrograde Nail



1458-IN-25 Stabilizing Spacer for Threaded Rod, for Retrograde Nail



1458-IN-26 Nail Holding Bolt for Retrograde Nail



1458-IN-27 Allen key, Hex 5.0mm for Retrograde Nail



1458-IN-28 Impactor For Guide Handle for Retrograde Nail



1458-IN-29 Drill For Stabilizing Rod with Quick Coupling End for Retrograde Nail



1458-IN-30 Hammer Guide for Retrograde Nail



1458-IN-31 Extraction Screw for Retrograde Nail



1458-IN-32 Trocar Nail Ø3.2mm for Retrograde Nail



1458-IN-33 Position Rod Ø3.8mm x Length 260mm, for Retrograde Nail



Reamer Head

Code	Dia	Code	Dia
1458-IN-34	Ø9mm	1458-IN-39	Ø11.5mm
1458-IN-35	Ø9.5mm	1458-IN-40	Ø12mm
1458-IN-36	Ø10mm	1458-IN-41	Ø12.5mm
1458-IN-37	Ø10.5mm	1458-IN-42	Ø13mm
1458-IN-38	Ø11mm		



1458-IN-43 Handle with Quick Coupling for Retrograde Nail



1458-IN-44 Reducer for Retrograde Nail



1458-IN-45 Guide Wire with Olive Ø2.5mm x Length 1000mm x Olive Ø3.8mm



1458-IN-46 Flexible Reamer Shaft with AO Coupling, for Retrograde Nail



1458-IN-47 Outer Sleeve 11/8mm for Retrograde Nail



1458-IN-48 Cannulated Sleeve for Drill Bit 8/4mm for Retrograde Nail



1458-IN-49 Long Trocar Ø4.0mm x Length 205mm for Retrograde Nail



1458-IN-50

Drill Bit Plain Shank/Jacob Chuck End Ø4.0mm x Length 320mm, for Retrograde Nail


1458-IN-51

Stopper for Drill Bit Ø4.0mm, for Retrograde Nail


1458-IN-52

Locating Pin Ø4.0mm x Length 320mm, for Retrograde Nail


1458-IN-53

Reamer For Lateral Cortex with Quick Coupling End for Retrograde Nail


1458-IN-54

Hexagonal Wrench, Hex 4.5mm, for Retrograde Nail


1458-IN-60

Threaded Trocar For Hexagonal Wrench Ø2.0mm x Thread 4mm x Length 267mm, for Retrograde Nail



1458-IN-55 Combined Hammer for Retrograde Nail



1458-IN-56 Combined Wrench 11mm for Retrograde Nail



1458-IN-57 L Handle Pin Wrench Ø4.5mm for Impactor - Retrograde Nail



1458-IN-61 Instrument Trays for Retrograde Nailing Instrument Set



1458-IN-59 Container For Retrograde Nailing Instrument Set



INS-1458 Retrograde Nail Instrument Set



INS-1458 Retrograde Nail Instrument Set

Code	Set Consisting of	Units
1458-IN-1	Guide Wire with Threaded Tip Ø3.2mm x Thread Length 15mm x Length 400mm	2
1458-IN-2	Tissue Protector for Retrograde Nail	1
1458-IN-3	Depth Gauge measuring upto 120mm for Retrograde Nail	1
1458-IN-4	Protection Sleeve 17/14mm For Entry Reamer/Wire Guide for Retrograde Nail	1
1458-IN-5	Entry Wire Guide Ø14mm for 3.2mm Guide Wire - Retrograde Nail	1
1458-IN-6	Entry Reamer Ø13.5mm for Retrograde Nail	1
1458-IN-7	Cannulated Awl Ø13.5mm for Retrograde Nail	1
1458-IN-8	Insertion Handle for Retrograde Nail	1
1458-IN-9	Distal Aiming Device for Long Retrograde Nail	1
1458-IN-10	Proximal/Distal Aiming Attachment for Retrograde Nail	1
1458-IN-11	Proximal Aiming Arm for Retrograde Nail	1
1458-IN-12	Distal Arm Attachment for Distal Aiming Device - Retrograde Nail	1
1458-IN-13	Proximal/ Distal Short Nail Aiming Device for Retrograde Nail	1
1458-IN-14	Distal Aiming Device Bolt for Retrograde Nail	2
1458-IN-15	Stabilizing Rod Guide Ø10/8.0mm for Retrograde Nail	1
1458-IN-16	Stabilizing Rod With Quick Coupling End for Retrograde Nail	1
1458-IN-17	Stabilizing Spacer for Retrograde Nail	1
1458-IN-18	Distal Arm for Retrograde Nail	1
1458-IN-19	Locking Bolt For Distal Arm for Retrograde Nail	1
1458-IN-20	Rod With Thread Guide 11/8.0mm for Retrograde Nail	1
1458-IN-21	Threaded Lateral Stabilizing Rod with Quick Coupling End Ø9.5mm, for Retrograde Nail	1
1458-IN-22	Threaded Lateral Stabilizing Rod with Quick Coupling End Ø10mm, for Retrograde Nail	1
1458-IN-23	Threaded Lateral Stabilizing Rod with Quick Coupling End Ø11mm, for Retrograde Nail	1
1458-IN-24	Threaded Lateral Stabilizing Rod with Quick Coupling End Ø12mm, for Retrograde Nail	1
1458-IN-25	Stabilizing Spacer for Threaded Rod, for Retrograde Nail	1
1458-IN-26	Nail Holding Bolt for Retrograde Nail	1
1458-IN-27	Allen key, Hex 5.0mm for Retrograde Nail	1
1458-IN-28	Impactor For Guide Handle for Retrograde Nail	1
1458-IN-29	Drill For Stabilizing Rod with Quick Coupling End for Retrograde Nail	1
1458-IN-30	Hammer Guide for Retrograde Nail	1
1458-IN-31	Extraction Screw for Retrograde Nail	1
1458-IN-32	Trocar Nail Ø3.2mm for Retrograde Nail	1
1458-IN-33	Position Rod Ø3.8mm x Length 260mm, for Retrograde Nail	1
1458-IN-34	Reamer Head Ø9.0mm for Retrograde Nail	1
1458-IN-35	Reamer Head Ø9.5mm for Retrograde Nail	1
1458-IN-36	Reamer Head Ø10.0mm for Retrograde Nail	1

Code	Set Consisting of	Units
1458-IN-37	Reamer Head Ø10.5mm for Retrograde Nail	1
1458-IN-38	Reamer Head Ø11.0mm for Retrograde Nail	1
1458-IN-39	Reamer Head Ø11.5mm for Retrograde Nail	1
1458-IN-40	Reamer Head Ø12.0mm for Retrograde Nail	1
1458-IN-41	Reamer Head Ø12.5mm for Retrograde Nail	1
1458-IN-42	Reamer Head Ø13.0mm for Retrograde Nail	1
1458-IN-43	Handle with Quick Coupling for Retrograde Nail	1
1458-IN-44	Reducer for Retrograde Nail	1
1458-IN-45	Guide Wire with Olive Ø2.5mm x Length 1000mm x Olive Ø3.8mm	1
1458-IN-46	Flexible Reamer Shaft with AO Coupling, for Retrograde Nail	1
1458-IN-47	Outer Sleeve 11/8mm for Retrograde Nail	2
1458-IN-48	Cannulated Sleeve for Drill Bit 8/4mm for Retrograde Nail	2
1458-IN-49	Long Trocar Ø4.0mm x Length 205mm for Retrograde Nail	1
1458-IN-50	Drill Bit Plain Shank/Jacob Chuck End Ø4.0mm x Length 320mm, for Retrograde Nail	3
1458-IN-51	Stopper for Drill Bit Ø4.0mm, for Retrograde Nail	1
1458-IN-52	Locating Pin Ø4.0mm x Length 320mm, for Retrograde Nail	2
1458-IN-53	Reamer For Lateral Cortex with Quick Coupling End for Retrograde Nail	1
1458-IN-54	Hexagonal Wrench, Hex 4.5mm, for Retrograde Nail	2
1458-IN-60	Threaded Trocar For Hexagonal Wrench Ø2.0mm x Thread 4mm x Length 267mm, for Retrograde Nail	2
1458-IN-55	Combined Hammer for Retrograde Nail	1
1458-IN-56	Combined Wrench 11mm for Retrograde Nail	1
1458-IN-57	L Handle Pin Wrench Ø4.5mm for Impactor - Retrograde Nail	1
1458-IN-61	Instrument Trays for Retrograde Nailing Instrument Set	3
1458-IN-59	Container For Retrograde Nailing Instrument Set	1



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