



M/DN[®]
Intramedullary
Fixation



Minimally invasive, maximally effective

M/DN[®] Intramedullary Fixation

For patients who have sustained diaphyseal and/or metaphyseal long bone fractures, the surgeon's choice of fixation is clear. Developed by surgeons for surgeons, the *M/DN* Intramedullary Fixation System meets the needs of orthopaedic surgeons and hospitals alike with implants and instruments that deliver strength, flexibility, ease of use, and cost effectiveness.

Maximally Effective

The *M/DN* System includes a femoral nail that serves both interlocking and reconstruction applications, a tibial nail, a humeral nail, and a retrograde femoral nail. Innovative targeting instruments help make implantation simple and accurate.

Durable, Logical Instrumentation Cases

M/DN Instrumentation is kept to an absolute minimum. The instruments are clearly labeled, easily accessible, and logically laid out to follow the order of the procedure. The cases are made of durable, autoclavable aluminum.

4 to 1 Efficiency

The design of the femoral/recon nail exemplifies the innovation that has led to this versatile system. It is actually four nails in one. The same nail can be used on both right and left limbs, in either the interlocking or reconstruction mode. This means you can treat a greater range of sizes with less inventory.

Minimally Invasive

With earlier rehabilitation and better surgical outcomes, the Zimmer[®] *Minimally Invasive Solutions*[™] (*MIS*[™]) Procedure helps patients get back to their lives faster. The procedure allows for easier access to the medullary canal and uses fluoroscopy instead of standard palpation to determine the correct entry point. This can help minimize damage to muscles and fascia during nail insertion.



MIS Femoral Instrumentation

Femoral instrumentation is uniquely designed to facilitate nail insertion with minimal soft tissue disruption, while improving accuracy of the entry point.

MIS Tibial Instrumentation

Tibial instrumentation allows for a minimized approach to the tibia, less disruption to the patellar tendon, and easier insertion. This can potentially minimize tissue disruption by allowing you to insert the nail into the tibia while it is in extension.

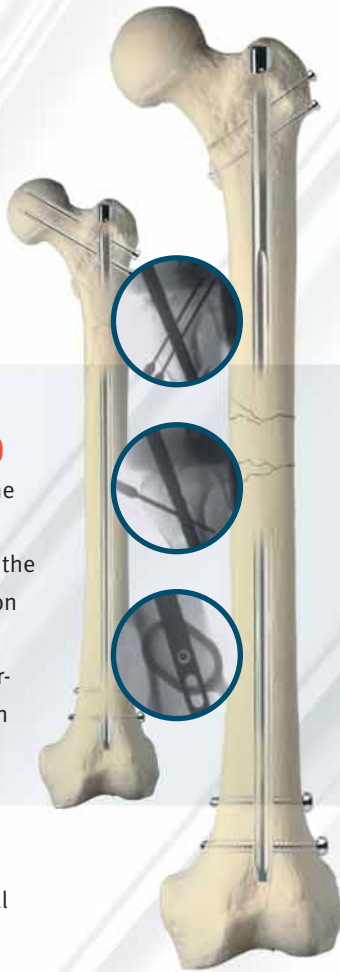
New Cannulated Awls

New Tibial and Femoral Awls allow for less soft tissue disruption, easier access to starting point and a fluid, one step guide wire introduction.

Femoral (Interlock or Recon)

Four nails in one: The same nail can be used in both right and left limbs, while the proximal hole configuration makes the *M/DN* Femoral Nail suitable for both interlocking and reconstruction applications.

Maintaining a strong femoral construct, the *M/DN* Femoral Nail is ideal for unreamed use if that method is desired.



Tibial

Captures fractures close to the joint space with oblique screws that do not compromise the tibial plateau posteriorly.

Transverse holes provide an option to interlock in conventional manner. Proximal dynamic slot allows compression.

Screw holes are located distally to accommodate treatment of distal metaphyseal fractures of the tibia.

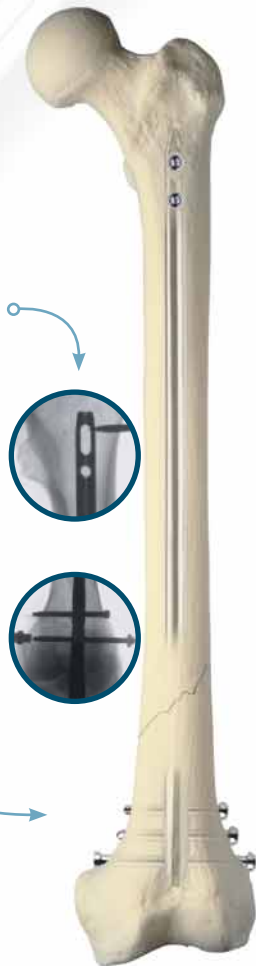
Tip is beveled posteriorly to aid insertion and avoid contact with posterior wall.



Retrograde (Long or Short)

Available with a dynamization slot for use with difficult fractures.

Three distal holes are very close together for optimal fixation, even for supracondylar fractures.

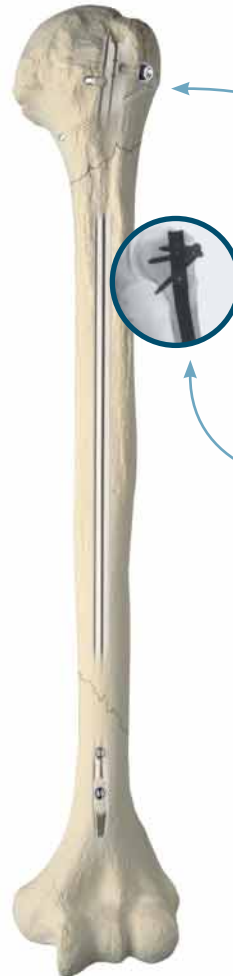


Humeral

Suture holes at proximal end of the Humeral Nail help capture greater tuberosity fragments; holes also accept 1.3mm *Cable-Ready*® Cable Grip System.

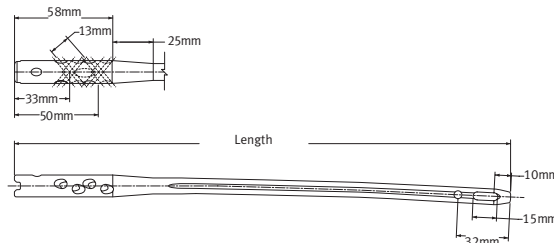
Two oblique holes proximally, complemented by an oblique radiolucent guide to facilitate proximal locking in 3 planes.

Distal dynamic slot allows compression at fracture site.



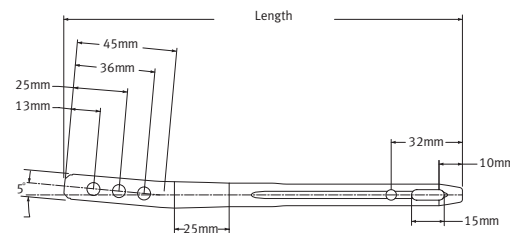
Femoral Nails

Nail Dia. (mm)	Lengths (x 2.0cm)	Head Dia. (mm)	Guide Wire Smooth (mm)	Prox. Screw Size (mm)	Drill Bushing Size (mm)	Prox. Drill Size (mm)	Distal Screw Size (mm)	Trochar Dia. (mm)	Distal Drill Size (mm)	Section
8	24-44	12.0	3.0	5.5	5.0	5.0	3.7	3.2	3.2	closed
9	24-46	12.0	3.0	5.5	5.0	5.0	4.2/4.5	3.7	3.7	closed
10	24-48	13.0	3.0	5.5	5.0	5.0	4.2/4.5	3.7	3.7	closed
11	24-48	13.0	3.0	5.5	5.0	5.0	4.2/4.5	3.7	3.7	closed
12	24-48	13.0	3.0	5.5	5.0	5.0	5.5	5.0	5.0	closed
13	24-50	13.0	3.0	5.5	5.0	5.0	5.5	5.0	5.0	open
14	28-50	14.0	3.0	5.5	5.0	5.0	5.5	5.0	5.0	open
15	30-50	15.0	3.0	5.5	5.0	5.0	5.5	5.0	5.0	open
16	30-50	16.0	3.0	5.5	5.0	5.0	5.5	5.0	5.0	open



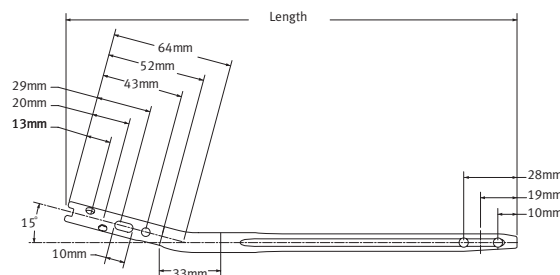
Retrograde Nails

Nail Dia. (mm)	Lengths (mm)	Head Dia. (mm)	Guide Wire Smooth (mm)	Prox. Screw Size (mm)	Prox. Drill Bushing Size (mm)	Prox. Drill Size (mm)	Prox. Trocar Dia. (mm)	Distal Screw Size (mm)	Distal Drill Size (mm)	Section
9	14-18*	12.0	3.0	4.2/4.5	3.7	3.7	3.7	5.5	5.0	closed
10	14-18*	12.0	3.0	4.2/4.5	3.7	3.7	3.7	5.5	5.0	closed
11	14-18*	12.0	3.0	4.2/4.5	3.7	3.7	3.7	5.5	5.0	closed
12	14-18*	12.0	3.0	5.5	5.0	5.0	5.0	5.5	5.0	closed
13	14-18*	13.0	3.0	5.5	5.0	5.0	5.0	5.5	5.0	closed
14	14-18*	14.0	3.0	5.5	5.0	5.0	5.0	5.5	5.0	closed



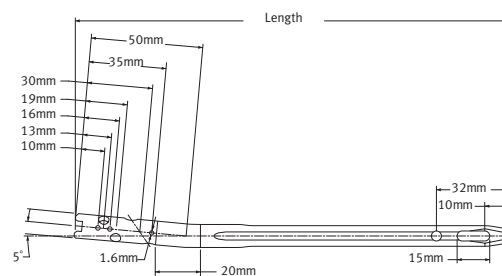
Tibial Nails

Nail Dia. (mm)	Lengths (x 2.0cm)	Head Dia. (mm)	Guide Wire Smooth (mm)	Prox. Screw Size (mm)	Drill Bushing Size (mm)	Prox. Drill Size (mm)	Distal Screw Size (mm)	Trochar Dia. (mm)	Distal Drill Size (mm)	Section
6	18-38	11.0	-	4.2/4.5	3.7	3.7	no holes	-	-	solid
7	18-40	11.0	-	4.2/4.5	3.7	3.7	3.7	3.2	3.2	solid
8	18-42	11.0	3.0	4.2/4.5	3.7	3.7	3.7	3.2	3.2	closed
9	18-42	11.0	3.0	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	closed
10	18-44	11.0	3.0	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	closed
11	18-46	11.0	3.0	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	closed
12	20-46	12.0	3.0	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	open
13	22-46	13.0	3.0	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	open
14	22-44	14.0	3.0	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	open
15	24-44	15.0	3.0	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	open



Humeral Nails

Nail Dia. (mm)	Lengths (x 2.0cm)	Head Dia. (mm)	Guide Wire Smooth (mm)	Prox. Screw Size (mm)	Drill Bushing Size (mm)	Prox. Drill Size (mm)	Distal Screw Size (mm)	Trochar Dia. (mm)	Distal Drill Size (mm)	Section
6	18-30	11.0	-	4.2/4.5	3.7	3.7	no holes	-	-	solid
7	18-30	11.0	-	4.2/4.5	3.7	3.7	3.7	3.2	3.2	solid
8	18-30	11.0	2.4	4.2/4.5	3.7	3.7	3.7	3.2	3.2	closed
9	18-30	11.0	2.4	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	closed
10	18-30	11.0	2.4	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	closed
11	18-30	11.0	2.4	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	closed
12	18-30	12.0	2.4	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	open
13	18-30	13.0	2.4	4.2/4.5	3.7	3.7	4.2/4.5	3.7	3.7	open



Contact your Zimmer representative or visit us at www.zimmer.com



* 14cm to 22cm lengths have a lateral/medial proximal hole and dynamic slot, 24cm to 48cm lengths have an anterior/posterior proximal hole and dynamic slot.



Warning: Screws are not approved by the U.S. FDA for attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic, or lumbar spine.