



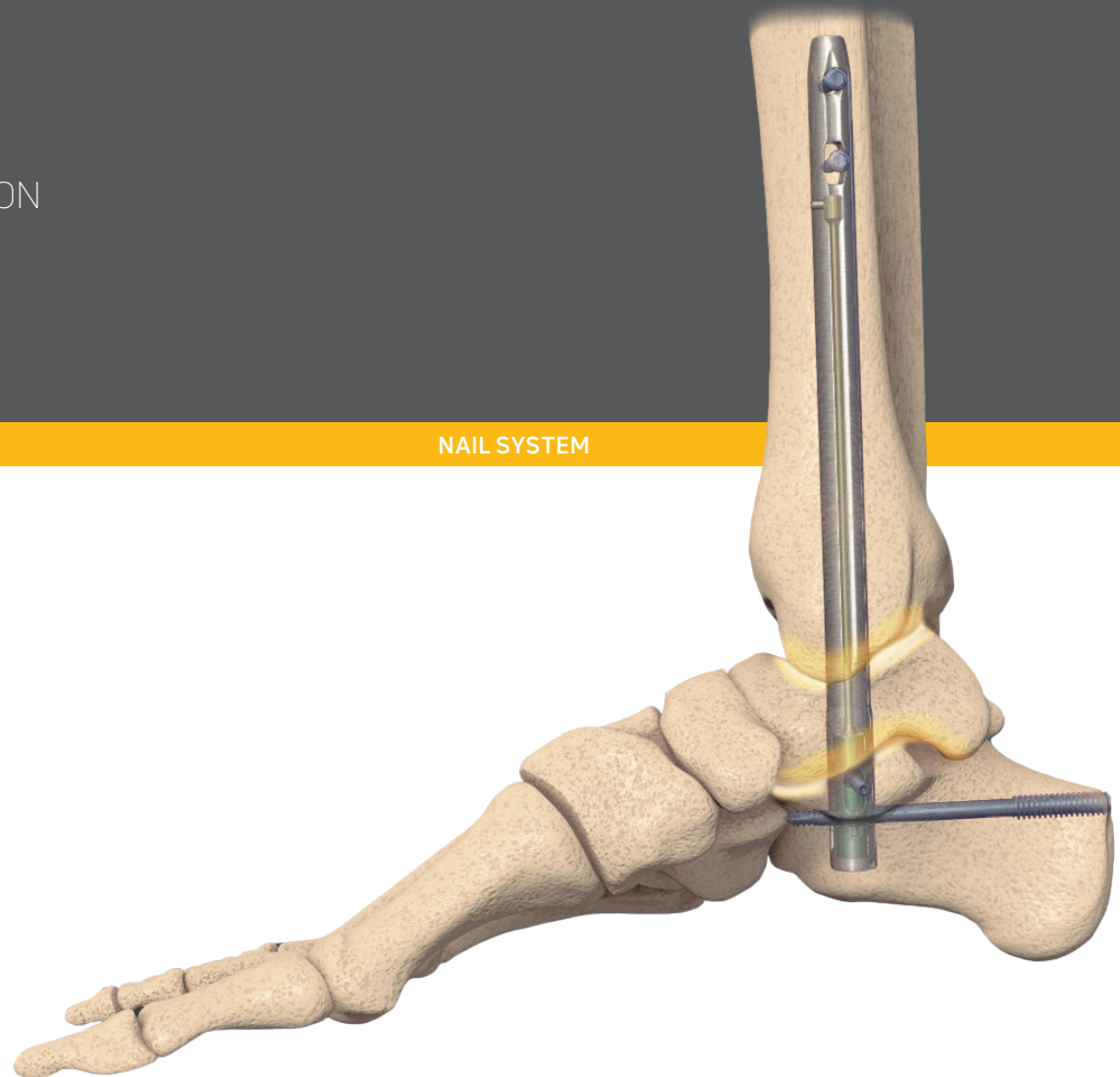
FEATURES
BROCHURE

enovis™

DYNANAIL®

ACTIVE, ADAPTIVE HEALING FOR TTC FUSION

NAIL SYSTEM



MAINTAINED COMPRESSION WITHOUT EXTERNAL FIXATION?

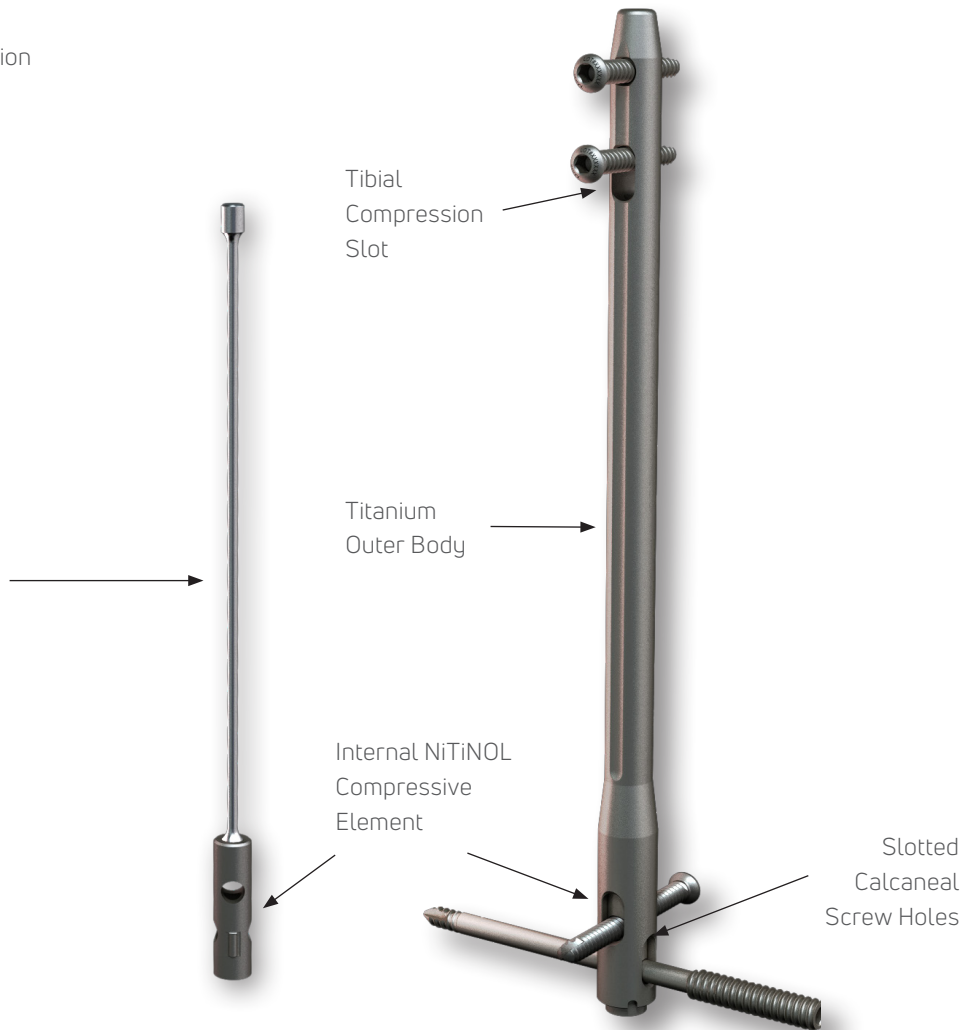
NAILED IT

The DynaNail® TTC Fusion System is the only fusion approach that offers the compression performance of an external fixator inside an intramedullary nail.

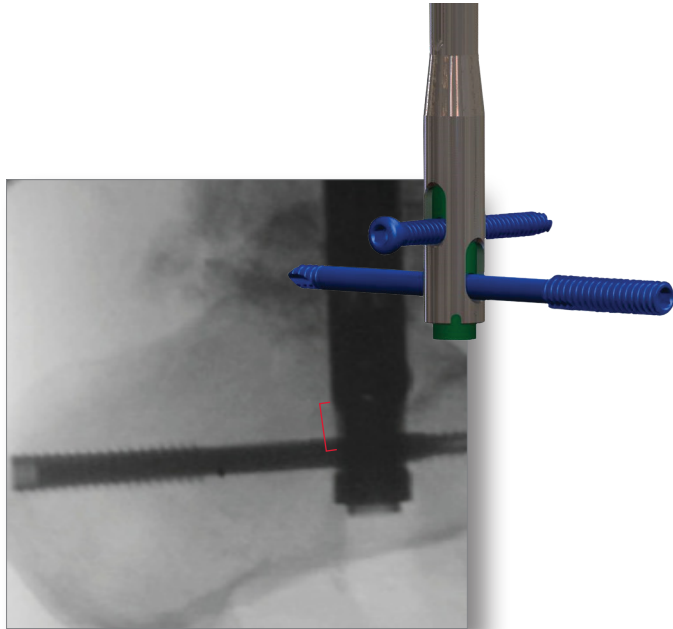
Achieve 6 mm of active, dynamic compression, PLUS 6 mm of intraoperative manual compression.¹

Featuring an innovative, internal superlastic
NiTiNOL Compressive Element that:

- Automatically adapts and responds to bone resorption or settling
- Maintains active dynamic compression throughout the healing process

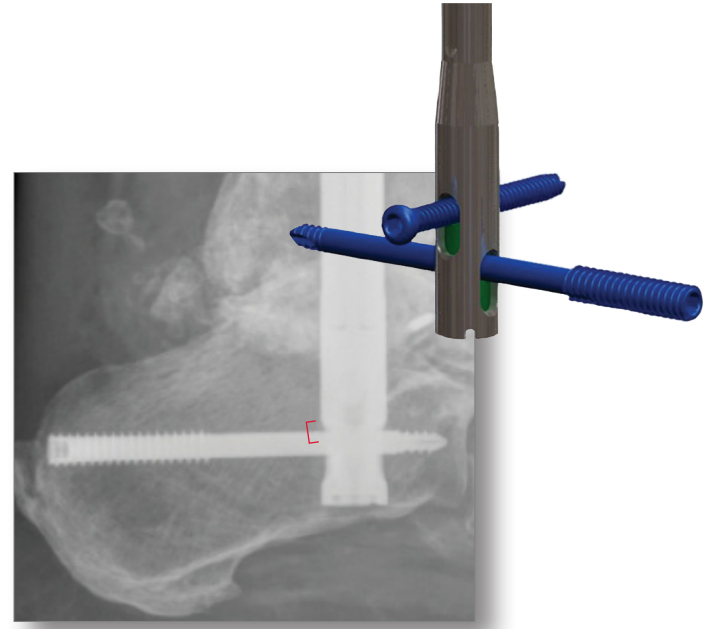


SEE THE COMPRESSIVE ELEMENT IN ACTION



IMMEDIATE POST-SURGERY

Compressive Element is fully stretched, and PA Screw is located distally in the nail body slot, indicating 6 mm of post-operative compression available.



6 WEEKS POST-SURGERY

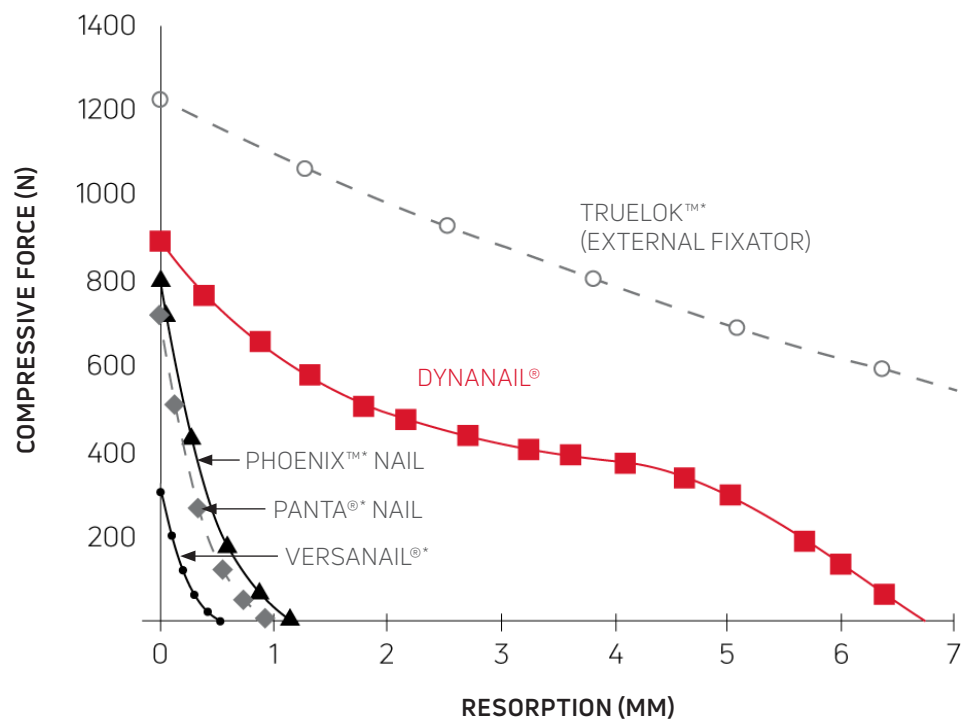
Compressive Element has fully recovered, as indicated by the proximal position of the PA screw in the nail body slot.²

THE PROOF IS IN THE SCIENCE

MAINTAINED ACTIVE, DYNAMIC COMPRESSION

Until now, external fixators were the only devices capable of maintaining compression in the face of significant bone resorption. Existing IM nails only provide intra-operative compression and will lose 90% or more of their compression when just 1 mm of bone resorption occurs.

The DynaNail® maintains up to 6 mm of post-operative compression in response to bone resorption or settling, similar to an external fixator.^{3,4}



6 mm

of post-operative compression is offered by the DynaNail, comparable only to the compression provided by an external fixator.

Data represents loss of compression as function of increased bone resorption in synthetic bone. Laboratory testing does not necessarily indicate clinical performance.⁵

*Phoenix™ and VersaNail® are trademarks of Biomet, C.V.

*Panta® is a registered trademark of Smith & Nephew plc.

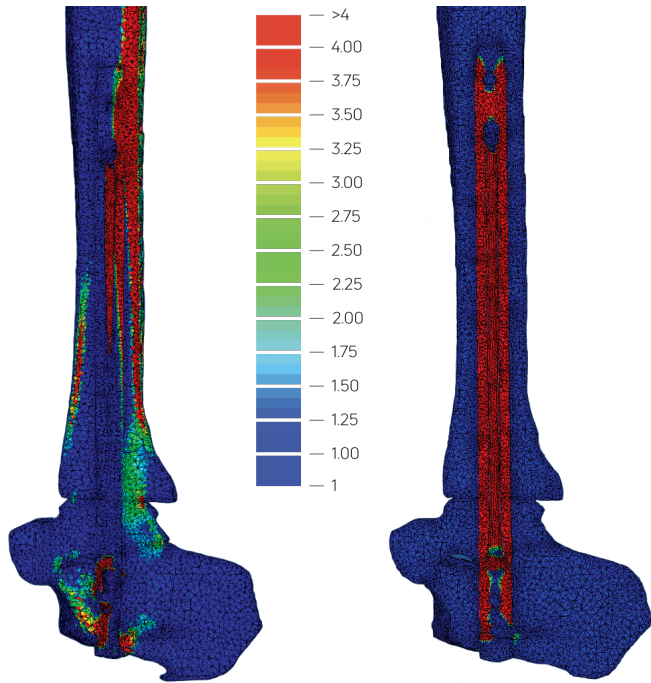
*Truelok™ is a trademark of Orthofix Medical, Inc..

IMMEDIATE DYNAMIZATION

Static IM nails will stress shield the bone, transferring approximately 20% of forces during weight-bearing.

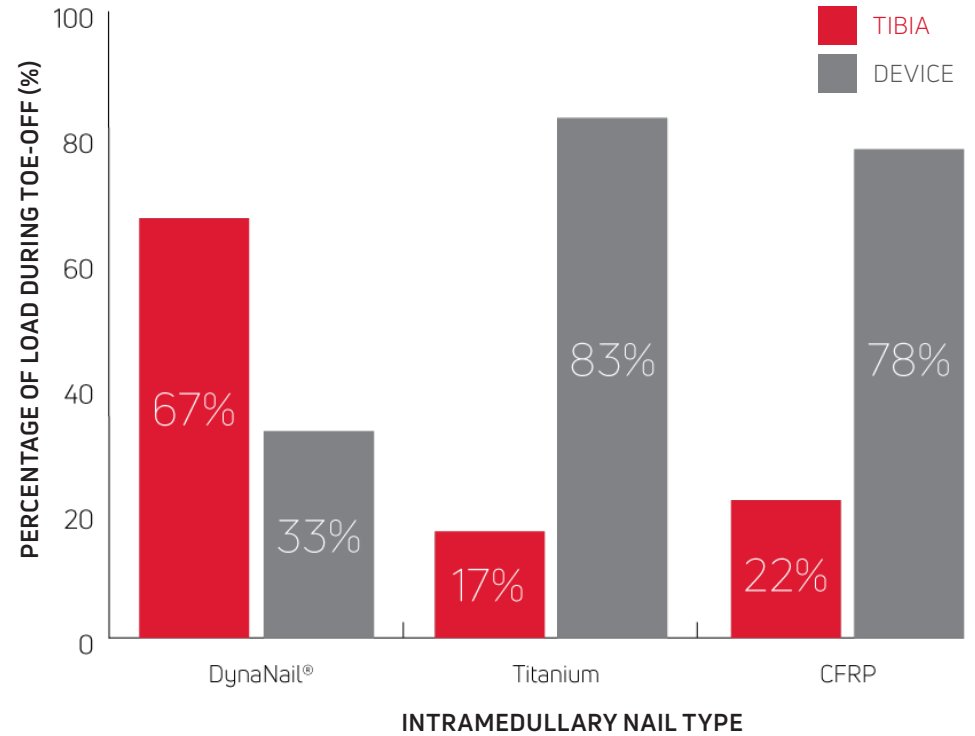
The axial compliance of DynaNail's Compressive Element allows DynaNail® to transfer almost 70% of forces across the bone during weight-bearing.^{6,7}

FINITE ELEMENT MODEL OF STRESSES DURING WEIGHT-BEARING



DYNANAIL®

STATIC TITANIUM NAIL



67%

of forces are transferred across the bone during weight-bearing, enabled by the axial compliance of DynaNail's Compressive Element.

PROVEN CLINICAL SUCCESS

BACKED BY MORE THAN A DOZEN PUBLISHED STUDIES IN PEER-REVIEWED JOURNALS

Unlike static intramedullary nails with reported nonunion rates as high as 50%, the DynaNail® has a track record of proven clinical success.⁸

“The DynaNail® has been shown to achieve successful arthrodesis in a population at high risk for nonunion, using less hardware and at a faster rate than [nondynamized] nails.”⁹

FOOT & ANKLE SPECIALIST

June 2020

“These benchtop, modeling, and clinical results as a whole suggest that the [DynaNail] can produce favorable clinical outcomes in accordance with foundational mechanobiological principles.”⁸

GLOBAL JOURNAL OF ORTHOPEDICS & RESEARCH

October 2019

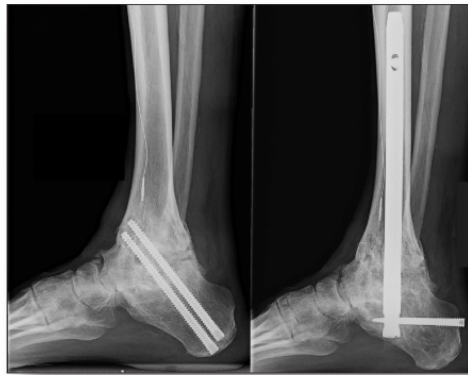
NOTABLE PUBLICATIONS

- Steele JR, Kadakia RJ, Cunningham DJ, Dekker TJ, Kildow BJ, Adams SB. Comparison of 3D Printed Spherical Implants versus Femoral Head Allografts for Tibiotalocalcaneal Arthrodesis. J Foot Ankle Surg, 2020; 59(6): 1167-1170.
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- Bejarano-Pineda L, Sharma A, Adams SB, Parekh SG. Three-Dimensional Printed Cage in Patients With Tibiotalocalcaneal Arthrodesis Using a Retrograde Intramedullary Nail: Early Outcomes. Foot Ankle Spec, 2020 May;1 938640020920947
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- Dupont KM, Shibuya N, Bariteau JT. Tibiotalocalcaneal Arthrodesis with Intramedullary Nails – Mechanobiological Background and Evolution of Compressive Technology. Glob J Ortho Res, 2019; 1(5): 873-84.

A RANGE OF INDICATIONS

As the proven tibiotalocalcaneal fusion system, DynaNail® may be indicated to treat high-risk patients with complex pathologies.

NON-UNIONS FROM PRIOR ARTHRODESIS
Images courtesy of Dan Latt, MD, Tucson, AZ



PRE-OP

POST-OP

LARGE BONY DEFECTS - ABSENT TALUS
Images courtesy of Tom SanGiovanni, MD, Coral Gables, FL



PRE-OP

POST-OP

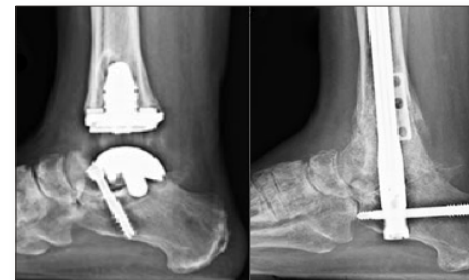
CHARCOT FOOT
Images courtesy of Jeffrey Covell, MD, Danville, KY



PRE-OP

POST-OP

FAILED TOTAL ANKLE REPLACEMENT
Images courtesy of Mark Conklin, MD, Golden, CO



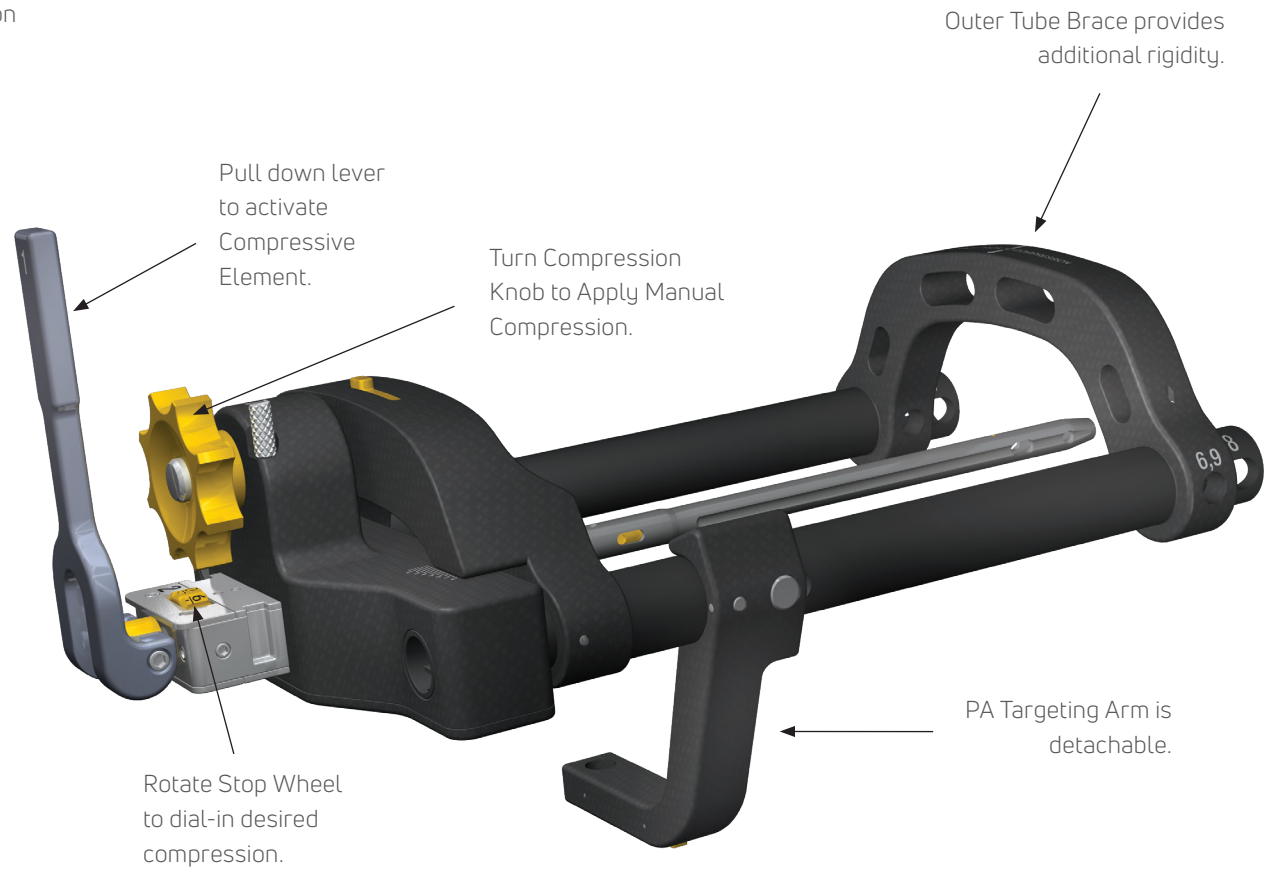
PRE-OP

POST-OP

INSTRUMENTATION THAT PROMOTES ACCURACY

THE DYNAFRAME™ CF DEPLOYMENT SYSTEM

- Unique two-armed design provides stability and versatility in targeting approach
- Manufactured out of durable carbon-fiber PEEK
- Rigid, robust construction for accurate targeting and screw placement
- Radiolucent to permit radiographic visualization



WHAT OUR SURGEONS SAY...



"The DynaNail® is an unrivaled orthopaedic device and my implant of choice for hindfoot arthrodeses. No other hindfoot fusion device allows for intra-operative compression and accounts for post-operative bone resorption by maintaining active compression. It's amazing to 'see' the DynaNail at work!"

SAMUEL ADAMS, MD
Durham, NC



"After nearly 9 years of experience using DynaNail, I can literally say that we have been able to heal and save many limbs that have been deemed unsalvageable with the active, adaptive healing that is present with the sustained dynamic compression of the NiTiNOL element. The device is able to reach Clinical Osteogenic/Osteoinductive compressive loads in fusion sites without creating compression necrosis or stress shielding the bone. The clinical data supports this device for all my fusions and especially the difficult salvage cases."

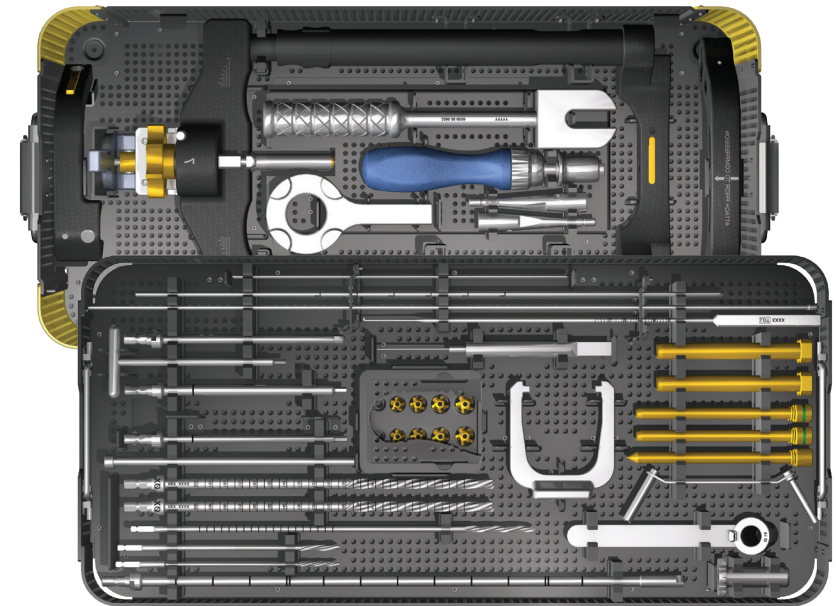
DOUGLAS PACACCIO, DPM
Sycamore, IL

DYNANAIL® IMPLANTS

DESCRIPTION	PART #
DYNANAIL, 10 MM X 22 CM	1200-01-1022
DYNANAIL, 12 MM X 22 CM	1200-01-1222
DYNANAIL XL, 10 MM X 26 CM	1200-01-1026
DYNANAIL XL, 12 MM X 26 CM	1200-01-1226
DYNANAIL XL, 10 MM X 30 CM	1200-01-1030
DYNANAIL XL, 12 MM X 30 CM	1200-01-1230
HEADED CORTICAL SCREW, 5.0 MM X 20 MM	1200-02-5020
HEADED CORTICAL SCREW, 5.0 MM X 22.5 MM	1200-02-5022
HEADED CORTICAL SCREW, 5.0 MM X 25 MM	1200-02-5025
HEADED CORTICAL SCREW, 5.0 MM X 27.5 MM	1200-02-5027
HEADED CORTICAL SCREW, 5.0 MM X 30 MM	1200-02-5030
HEADED CORTICAL SCREW, 5.0 MM X 35 MM	1200-02-5035
HEADED CORTICAL SCREW, 5.0 MM X 40 MM	1200-02-5040
HEADED CORTICAL SCREW, 5.0 MM X 45 MM	1200-02-5045
HEADED CORTICAL SCREW, 5.0 MM X 50 MM	1200-02-5050
HEADED CORTICAL SCREW, 5.0 MM X 55 MM	1200-02-5055
HEADLESS PA SCREW, 5.0 MM X 60 MM	1200-03-5060
HEADLESS PA SCREW, 5.0 MM X 65 MM	1200-03-5065
HEADLESS PA SCREW, 5.0 MM X 70 MM	1200-03-5070
HEADLESS PA SCREW, 5.0 MM X 75 MM	1200-03-5075
HEADLESS PA SCREW, 5.0 MM X 80 MM	1200-03-5080
HEADLESS PA SCREW, 5.0 MM X 85 MM	1200-03-5085
HEADLESS PA SCREW, 5.0 MM X 90 MM	1200-03-5090
HEADLESS PA SCREW, 5.0 MM X 95 MM	1200-03-5095
HEADLESS PA SCREW, 5.0 MM X 100 MM	1200-03-5100
HEADLESS PA SCREW, 5.0 MM X 105 MM	1200-03-5105
HEADLESS PA SCREW, 5.0 MM X 110 MM	1200-03-5110
ENDCAP	1200-04-0000

DYNANAIL® SINGLE USE INSTRUMENTS

DESCRIPTION	PART #
4 MM DRILL	2200-09-0040
TROCAR TIPPED GUIDEWIRE (3.1 MM x 400 MM)	2200-18-4031
BEAD TIPPED GUIDEWIRE (3.1 MM x 500 MM)	2200-18-5031
STEINMAN PINS, 2 MM X 9"	2200-19-0020
2.5 MM X 15 CM DRILL	2201-09-0025
4 MM X 15 CM DRILL	2201-09-0040



INSTRUMENTATION COMES PACKAGED IN A SINGLE TRAY FOR PROCEDURAL EFFICIENCY

REFERENCES

1. Kildow BJ, Gross CE, Adams SB, Parekh SG. Measurement of NiTiNOL Recovery Distance Using Pseudoelastic Intramedullary Nail in Tibiotalocalcaneal Arthrodesis. *Foot Ankle Spec* 2016; 9(6): 494-499.
2. Latt LD, Smith KE, Dupont KM. Revision Tibiotalocalcaneal Arthrodesis With a Pseudoelastic Intramedullary Nail. *Foot Ankle Spec*. 2017 Feb;10(1):75-81. doi: 10.1177/1938640016656782. Epub 2016 Jul 9. PMID: 27390289.
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5. Data on file at DJO Global.
6. Anderson RT, Pacaccio DJ, Yakacki CM, Carpenter RD. Finite element analysis of a pseudoelastic compression-generating intramedullary ankle arthrodesis nail. *J Mech Beh Biomed Mat*, 2016; 62: 83-92.
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9. Steele JR, Kildow BJ, Cunningham DJ, Dekker TJ, DeOrio JK, Easley ME, Nunley JA, Parekh SG, Adams SB. Comparison of Tibiotalocalcaneal Arthrodeses Using Sustained Dynamic Compression Nail Versus Nondynamized Nails. *Foot Ankle Spec*, 2020; (13)3: 193-200.

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