Integra®
PANTA® Arthrodesis Nail System Implantation and Removal
## Table of Contents

Surgical Technique ........................................................................................................................................................................................... 02
Patient Positioning ............................................................................................................................................................................................ 02
Preparation of the Joint Surfaces ................................................................................................................................................................. 02
Incision ............................................................................................................................................................................................................... 02

Indications for Use .......................................................................................................................................................................................... 03
Contraindications ............................................................................................................................................................................................ 03
Design Rationale Panta .................................................................................................................................................................................. 04
Design Rationale Panta XL ......................................................................................................................................................................... 04
Implant Description ...................................................................................................................................................................................... 05
Instrument Description ............................................................................................................................................................................... 06
Applying Compression ............................................................................................................................................................................... 06

Panta Arthrodesis Nail Insertion ................................................................................................................................................................. 07
Step 1: First Drilling .................................................................................................................................................................................... 07
Step 2: Canal Enlargement ......................................................................................................................................................................... 08
Step 3: Reaming and Nail Choice .............................................................................................................................................................. 08
Step 4: Nail Assembly .................................................................................................................................................................................. 10
Step 5: Nail Positioning ............................................................................................................................................................................ 11
Step 6: Calcaneus Pre-Drilling ............................................................................................................................................................... 12
Step 7: Proximal and Distal Calcaneus Drilling ..................................................................................................................................... 12
Step 8: Measurement Method ................................................................................................................................................................. 13
Step 9: Calcaneus Fixation ....................................................................................................................................................................... 13
Step 10: Compression Device ................................................................................................................................................................. 14
Step 11: Rod Incision .................................................................................................................................................................................. 14
Step 12: Distal Drilling ............................................................................................................................................................................... 15
Step 13: Proximal Drilling ....................................................................................................................................................................... 15
Step 14: Distal Rod Insertion ................................................................................................................................................................. 15
Step 15: Proximal Rod Insertion ............................................................................................................................................................ 16
Step 16: Compression ............................................................................................................................................................................... 16
Step 17: Tibial Screw Assembly .............................................................................................................................................................. 17
Step 18: Tibial Screw Drilling ................................................................................................................................................................. 17
Step 19: Tibial Screws Measurement ...................................................................................................................................................... 18
Step 20: Tibial Screws Insertion ............................................................................................................................................................ 18
Step 21: Talar Screw (optional) .............................................................................................................................................................. 19
Step 22: Support Device Removal ......................................................................................................................................................... 19
Step 23: Guided End Cap Insertion ......................................................................................................................................................... 20
Step 24: Post Operative Recommendations ......................................................................................................................................... 20

Panta Arthrodesis Nail Removal .............................................................................................................................................................. 21
Step 1: End Cap Unscrewing ................................................................................................................................................................... 21
Step 2: Calcaneal Screw Removal ........................................................................................................................................................... 21
Step 3: Tibial Screws Removal ................................................................................................................................................................. 22
Step 4: Nail Removal with the T-Handle ................................................................................................................................................ 23
Step 5: Nail Extraction with the Sliding Hammer .................................................................................................................................. 23

Integra Panta Nail Removal Kit ................................................................................................................................................................. 24

Bibliography .................................................................................................................................................................................................................. 27

Ordering Information .................................................................................................................................................................................................................. Back Cover
Surgical Technique

This technique has been developed with the help of James W. Brodsky, MD.

As the manufacturer of this device, Integra does not practice medicine and does not recommend this or any other surgical technique for use on a specific patient. The surgeon who performs any implant procedure is responsible for determining and using the appropriate techniques for implanting the device in each patient.

Patient Positioning

The patient is placed supine or prone with foot close to the end of the table to facilitate the procedure.

Preparation of the Joint Surfaces

A range of surgical approaches and incisions can be utilized including anterior, posterior, anterolateral or lateral approaches to the tibiotalar joint and subtalar joint. Single or separate incisions can be utilized depending upon the particular characteristics of the case. The essential issue is to achieve satisfactory preparation of the bone surfaces for arthrodesis and satisfactory alignment of the limb through the arthrodesis sites.

Incision

A plantar incision is made to prepare for insertion of the nail and support device assembly. This may be a longitudinal or transverse incision.

Care must be taken to protect the plantar neurovascular structures, both in the dissection and during the procedure, as these structures are at risk.
Indications for Use

The Panta Nail is intended for use in tibio-talo-calcaneal arthrodesis and treatment of trauma to the hindfoot and distal tibia. Depending on particular patient factors, indications may include:

- Post-traumatic and degenerative arthritis involving both ankle and subtalar joints
- Rheumatoid arthritis
- Revision of failed ankle arthrodesis with subtalar involvement or with insufficient talar body
- Revision of failed total ankle arthroplasty with subtalar intrusion
- Talar deficiency conditions (requiring a tibiocalcaneal arthrodesis)
- Avascular necrosis of the talus
- Neuroarthropathy or neuropathic ankle deformity
- Severe deformity as a result of talipes equinovarus, cerebral vascular accident, paralysis or other neuromuscular disease
- Severe pilon fractures with trauma to the subtalar joint

* See package insert for full prescribing information

Contraindications:

The contraindications of this system are similar to those of other systems of similar design. Contraindications include the following conditions:

**Absolute Contraindications:**

- Active posterior infection.
- Allergy to titanium.

**Relative Contraindications:**

- Fever.
- Pregnancy, unless internal fixation of the spine is indicated for unstable fracture.
- Signs of infection in the area to be implanted.
- A patient unwilling or unable to follow instructions.
Design Rationale PANTA®

The talo-tibio-calcaneal arthrodesis is characterized by its challenging technique. The use of a retrograde nail is part of the therapeutic option that allows:

- Re-alignment of the foot on the weight-bearing axis.
- Correction of coronal and sagittal plane deformities.
- Rotational stability.
- Axial compression.

The PANTA® nail system has been designed to best achieve these targets through:

- Precise and radiolucent instrumentation.
- A unique system to apply compression balanced with multi-planar screw fixation — in the tibia, the talus and the calcaneus — and enhanced calcaneal fixation to optimize stability and alignment of the arthrodesis.

Design Rationale PANTA® XL

Incorporated features are longer lengths and a conical extremity shape designed to reduce stress at the proximal tip of the nail.

Another feature is the addition of nail autodynamisation. The proximal edge of the slot maintains compression while allowing dynamisation with postoperative weight bearing, providing continuous compression.
Implant Description

The PANTA® and PANTA® XL nails are available in 14 sizes. All nails are color coded for easy size identification. Bony fixation is achieved using two tibial screws, two calcaneal screws and one (optional) talar screw.

Two kinds of screws are available:

- Fully threaded screws (FTS) with cortical thread over the entire length providing increased bony fixation.
- Partially Threaded Screw (PTS) with cortical threads on extremities only providing more resistance.

Screws length is available from 20mm to 110mm in 5mm increments. An end cap may be inserted into the distal nail threads to prevent tissue ingrowth and facilitate future nail removal. The nail, cross locking screws and end cap are manufactured from titanium alloy: Ti-6Al-4V ELI, ISO 5832-3, ASTM F136.

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Length</th>
<th>Color</th>
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<tr>
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<td>Yellow</td>
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<tr>
<td>11mm</td>
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<td>Dark Blue</td>
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<td>13mm</td>
<td>240mm</td>
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<tr>
<td>13mm</td>
<td>240mm</td>
<td>Light Blue</td>
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</table>

Fully Threaded Screws
- Cortical threads on the entire length.
- The thread provides more grip.
- The head avoids a too deep insertion of the screw in the bone.

Partially Threaded Screws
- Cortical threads on the extremities only.
- The smooth part provides more resistance.
- The headless design enables the implant being totally embedded.

(For Panta XL, use only partially threaded screws.)
Instrument Description

Instrument Rationale
The instrumentation for the PANTA® and PANTA® XL nails is designed to achieve unique compression across the ankle and subtalar joints.

The patented compression/targeting device incorporates the following features:

- A combination of a radiolucent targeting frame to allow optimal placement of the calcaneal screws.
- A dual armed targeting device allows equal application of compression across tibiotalocalcaneal joints.
- A simple design conforming to natural hindfoot anatomy (calcaneus and ankle joint).
- A threaded compression mechanism to provide increased mechanical advantage and enhanced bony apposition.

Application of compression through the bone rather than through the soft tissue allowing more effective, direct and controllable alignment of the arthodesis sites.

Compression System
The patented compression/targeting device consists of a radiolucent frame and metallic support that are assembled together. Compression rods are used to stabilize the device to the bone and offer the compression.

Applying Compression
When the compression wheel is turned clockwise, the metallic support slides out, applying compression. Up to 12mm of compression can be applied. Direct and controllable alignment of the arthodesis sites.

Applying Compression
PANTA® Arthrodesis Nail Insertion
Step 1 • First Drilling

1-1a Assemble the plantar protection sleeves:
   A – internal 3.2mm (519 028)
   B – central 9mm (519 029)
   C – external 13.5mm (519 030)

1-2b The skin incision and guide wire placement should be slightly lateral to accommodate the lateral offset of the calcaneus relative to the medullary canal of the tibia.

1-2c Appropriate Alignment Is Critical
   Introduce the 3.2mm diameter guide wire through the protection sleeves.
   Use the 400mm (519 032ND) or the 600mm (519 034ND) guide wire depending on surgeon preference.

1-2d Note:
   Ensure canula is flush on inferior surface of calcaneus.

1-3a Advance through the calcaneus and the talus using fluoroscopy to control the position in both the anteroposterior and mediolateral planes.

1-3b Confirm the alignment of the calcaneus and talus and the anatomic axis of the tibia.

Advance the guide wire into the tibia.
Step 2 • Canal Enlargement

2-1 Warning: While reaming, position of foot may be lost due to plantar flexion at ankle. Consider provisional fixations to avoid plantar flexion of the foot on the ankle.

2-2 Change to the central protection sleeve B (519029), by removing the internal sleeve A (519028).

2-3 The 9 mm central protection sleeve has a built in stop for the 7mm and 9mm drills. The nail insertion point is enlarged by inserting the 7mm drill (519 007) until it contacts the back (plantar) side of the sleeve. Insert the 9mm drill (519 009) to further enlarge the opening.

Step 3 • Reaming and Nail Choice

3-1 Remove the central protection sleeve B (519029).

3-2 Attach the reamers to power using the cannulated quick coupling (519 020 : optional).

3-3a For nail diameter 11 to 13mm, start reaming with the 10.5mm diameter reamer (519 014) on all the chosen length (150 or 180mm) then use progressively all the reamers from diameter 11mm to the diameter that perfectly fits the tibial diaphysis. In case of very fragile bone, start reaming with the 10 mm diameter reamer (519010 : optional). The final diameter of the reamer should be 0.5mm larger than the final implant (see table bellow).
Step 3 • Reaming and Nail Choice (continued)

Specific for Panta® XL Nail:
After each reaming with classical reamers (519 011 to 519 017) sequentially ream with the conical reamers (539 020, 539 021, 539 022, 539 023). Final reamer diameter must be .5mm larger than implant size (highlight this last point with bold print as typed).

The final length of the implant is determined at this stage.

Check insertion with biplanar fluoroscopy and control the insertion depth using the position of the appropriate laser mark (150mm, 180mm, 210mm or 240mm) relative to the back surface of the outer sleeve.

Then proceed sequentially to the selected diameter of the nail.

<table>
<thead>
<tr>
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<th>Nail diameter - Nail length</th>
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<tr>
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<td>10mm - 180mm (proximal)</td>
</tr>
<tr>
<td>11.5mm</td>
<td>11mm - 150mm (Distal)</td>
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<td>11mm - 180mm (Distal)</td>
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<td>12mm - 150mm</td>
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<tr>
<td>13mm</td>
<td>13mm - 150mm</td>
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</tbody>
</table>

Check the reamer under fluoroscopy in the antero-posterior and medio-lateral planes to verify satisfactory position within the medullary canal, Additionally check position clinically to ensure fusion is in desired position.
Step 4 • Nail Assembly

4-1 Nail insertion with support device
The guide wire has to be removed.
Open the final implant and remove the end cap.

**Tip:**
- Insert the nail fixation axis.
- Engage the nail on the thread.
- Position the nail on the three support teeth.
- Finalize assembly.

**Warning:**
Do not discard the end cap. (If the end cap is accidentally discarded or dropped, sterile packaged replacement end caps are available)

4-2 Assemble the toothed wheel (519 121) to the nail fixation axis (519 120).

4-3 Introduce the assembly through the support device (519 110). Position the implant on the nail fixation axis by aligning it with the three teeth on the support device. This ensures the proper orientation of the screw holes. Lock the implant to the support device by tightening the toothed wheel.

**Warning:**
To avoid the nail to toggle on the targeting device assembly, it must be properly tightened with the nail fixation axis (519 120).

4-4 Remove the guide wire. Holding the alignment of the arthrodesis, manually insert the nail assembly under fluoroscopic control.
Step 5 • Nail Positioning

**5-1a** The arthrodesis sites must be satisfactorily aligned under direct vision as well as radiographically.

**5-1b** The arthrodesis sites are manually compressed.

**Tip:**
Align device toward 3rd/4th Ray. Calcaneus is a lateral structure.

**5-2** The final position of the nail/support device assembly is determined based on multiple factors:
- The anatomy of the arthrodesis
- Osseous structures

**Tip:**
The groove between the axis and the distal end of the nail should be at or slightly above superior to the plantar cortex.

After final positioning ensure that the distal end of the nail is flush with the plantar cortex of the calcaneus.

A visual verification of the height is made under fluoroscopy by ensuring that the groove is inside of the calcaneus.

Once the nail is appropriately positioned, jig must be protected at all times.

**Warning:**
No pressure to be placed on jig during course of procedure.
Step 6 • Calcaneus Pre-Drilling

Assemble the 4.3mm drill guide with the 7mm soft tissue protector (519 178ND and 519 183ND). Both instruments contain blue dots for easy identification. The blue dots also correspond to the appropriate insertion holes on the support device.

Place the sleeves on the skin to precisely determine the incision point. Make the incision.

Insert the trocar awl through the protection sleeves and into the posterior cortex of the calcaneus to prepare the bone for drilling.

Warning: To ensure accurate drilling, the 3 short/medium drill guides and soft tissue protector have to be used in association with the trocar awl.

Step 7 • Proximal and Distal Calcaneus Drilling

Warning: If hard or sclerotic bone in calcaneal, peckdrill in calcaneal to adequately insert drill through nail.

Do not torque drill while drilling. This could cause skiving off nail.

Distal Calcaneous Drilling

Drill the distal hole with the 4.3 mm long drill (519 008ND).

Control the depth with fluoroscopy. The surgeon may read depth directly on drill bit.

Warning: If the drill guide is not in contact with the cortex, the depth gauge (519 160 ND) must be used to determine the length of the calcaneal screws. See step 11 for more detail on the screw measurement technique.

Proximal Calcaneous Drilling

Using the 4.3mm medium drill (519 002ND) drill the proximal hole.

Control the drill depth using fluoroscopy. The surgeon may read the screw length from the calibrated drill bit (read from back (posterior side) of the guide).

The drill guides must contact the cortex to provide the accurate screw depth. Read step 10 for measurement method. Leave drill in place.

Warning: To ensure optimum axial stability and prevent the drill from skiving, the proximal drill has to be left in while drilling the distal hole and then inserting the distal screw.
Step 8 • Measurement Method

Two depth measurement methods may be used to determine the correct screw length. If the graduated drill bit is used the inner sleeve must be in contact with the bone.

Step 9 • Calcaneus Fixation

Remove the distal drill after reading the length of the screw on the bit.

Remove the drill guide, leaving the soft tissue protector in place.

Optional: For partially threaded screws only, use the tap (539 015ND) to prepare the head of the partially threaded screw in the bone. Screw down to the right laser mark (C7, C15 or C30), corresponding to the screw head length (see table). Then unscrew the tap.

Assemble the hexagonal screwdriver tip with AO attachment (519 190ND) to the power drill.

Screws are inserted by hand or under power and then completed by hand.

Note:
The partially threaded screws are designed to work with the locking end cap.

Screw insertion should be done using fluoroscopic control in perpendicular planes throughout the procedure.

Repeat these steps for the proximal screw. Control the insertion depth using fluoroscopy.

Specific for PANTA XL:
Only use the partially threaded screws. (ref. 511 020ND to 511 110ND)

Tip:
The “C” laser mark on the screwdriver or screwdriver (power) tip indicates the relative position of the screw head with respect to the posterior cortex of the calcaneus. When the “C” laser mark is flush with the rear face of the tissue protector, the screw head is nearly seated.
Step 10 • Compression Device

10-1 Remove the toothed wheel and assemble the compression wheel.

If one of the plastic O rings is missing, replace it with one of the extra plastic O rings in the instrument set.

10-2 Insert the compression (metal) device into the support device (plastic) (The laser markings and the mm scale should face anteriorly. This will ensure that the scale can be read easily when the patient is in the supine position).

10-3 Zero out the compression wheel by turning it counterclockwise (so that the millimeter scale on the medial and lateral sides is no longer visible).

Recheck nail position under fluoroscopy.

Warning:
If Tibial Compression Rod guides are unable to pass easily through device, apply .5m-1mm compression until clear insertion is adhered.

Step 11 • Rod Incision

11-1 Position two drill guides (519 181ND) on each side of the green dotted holes, with tabs oriented vertically.

Holes will be selected based on the length of the implant.

Make the incisions.
**Step 12 • Distal Drilling**

Drill the distal hole medially with the 5mm drill up to the coaxial drill guide.

**Note:**
If distal drill bit misses nail, continue to proximal compression rod insertion under frequent fluoroscopic imagining. After successful insertion, attempt distal compression rod through a lateral approach.

**Step 13 • Proximal Drilling**

**Warning:**
Prior to drilling, ensure nail is stable and sufficiently locked to compression device.

At this stage, the position of the foot with the tibia should be controlled and aligned at its final position.

Drill the proximal hole up medially to the second drill guide using the 5mm diameter drill (indicated with a green dot) (S19 005ND).

Leave it in place.

**Step 14 • Distal Rod Insertion**

**Warning:**
If compression rod does not pass easily through contralateral compression rod guide, probability is high the rod did not pass successfully through the nail. Fluoro should be used to confirm placement of the rod.

Remove the distal drill and introduce the compression rod using the T-handle.

The 5mm drill guides should be in contact with both sides of the tibial cortex. This facilitates the insertion of the compression rods across the tibia.

**Note:**
If fluoroscopy confirms the compression rod did not pass through the nail, proceed to insertion of Proximal Compression Rod. Prior to Proximal Compression Rod insertion, ensure the nail is sufficiently tight and locked to the compression device. Also, ensure there is no pressure on the jig.
Step 15 • Proximal Rod Insertion

Remove the proximal drill bit and insert the second compression rod using the T-handle.

Ensure that each rod is secured within both the medial and the lateral sleeves that pass through each arm of the compression device.

Remove the T-handle attachment.

Warning:
If compression rod does not pass easily through contralateral compression rod guide, probability is high the rod did not pass successfully through the nail. Fluro should be used to confirm placement of the rod.

Step 16 • Compression

Gently apply compression by turning the compression wheel clockwise. Up to 12mm of compression may be applied.

The compression can be visualized at any point using fluoroscopy.

Stop when desired compression is reached.

Warning:
Over-compression could cause arms of jig to splay and cause tibial locking screws to miss nail.
Step 17 • Tibial Screw Assembly

Note:
Tibial Screw Assembly should be prepared Distal first, then Proximal.

For easy identification, instruments concerning tibial and talus screws contain yellow dots. They also correspond to the appropriate insertion holes on the support device.

Note:
Distal screw should be placed first.

Assemble the long soft tissue protectors (519 185) with the long 4.3mm drill guides (519 180). Position the protector/sleeve assembly in the compression device according to the length of the nail to determine incision height. The screws can be placed from medial to lateral or lateral to medial in the tibia. The advantage of medial--lateral is that the insertion process passes through less soft tissue and avoids intrusion of the fibular. The advantage of lateral-to-medial screw placement is greater soft tissue protection over the screw head. Make incision.

Insert the assembly into the yellow holes until the drill guide contacts the tibial cortex. The guide must contact the cortex to provide an accurate measurement of screw length when using the calibrated scale on the drill. Fluoroscopy is used to control the proper contact of the drill guide and the bone.

Step 18 • Tibial Screw Drilling

18-1 Use the proximal drill (519 004) for pre-drilling the proximal interlocking screws.
18-2a Leave the drill bit in the guide.
18-2b Using the second 4.3 mm drill bit, drill the distal hole.
Step 19 • Tibial Screws Measurement

Read the screw length either from the calibrated drill bit (read from top of sleeve) or with the depth gauge (519 160).

See instructions for measurement Step 12.

Tip:
The graduated drill bit indicates the length of screw to be used.

Step 20 • Tibial Screws Insertion

Remove the distal drill bit and its protection sleeve.

Specific To Partially Threaded Screws:
For partially threaded screws only, use the tap (539 015) to prepare the head of the partially threaded screw in the bone. It should be screwed down slightly up to the right laser mark (T7 or T15), corresponding to the screw head length. Then unscrew slightly the tap.

Specific for PANTA® XL Nail:
Only use the partially threaded screw (PTS) (ref. 511 020 to 511 110).

The screws may be inserted by hand or by power. Check each step of the screw insertion as noted above using fluoroscopy in perpendicular AP and lateral planes.

Remove proximal drill bit.

Proceed as described for the distal screw. Finalize locking manually with the screwdriver.
**Step 21 • Talar Screw (Optional)**

21-1 Assemble the long 4.3mm drill guide (519 180ND) and the soft tissue protector (519 185ND), previously used for tibial screw preparation, and use the yellow color coded drill (519 004ND) to prepare the screw hole.

21-2 Control depth directly using the calibrated scale on the drill or with the depth gauge (519 160ND).

Read the screw length from the calibrated drill bit (read from top of sleeve). See step 19 for measurement method.

21-3 Assemble the hexagonal screwdriver tip (519 190ND) to the power drill.

The screw may be inserted by hand or partially by power and then completed by hand.

Check each step of the screw insertion as noted above using fluoroscopy in perpendicular AP and lateral planes.

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**Step 22 • Support Device Removal**

22-1 Release the compression device several turns counterclockwise on the wheel to ease the tension on the compression rods. Removing the sleeves will further release the tension and facilitate removal of the compression rods.

Using the T-handle (519 021), remove all the compression rods (519 175), then drill guides and soft tissue protectors.

Reattach the toothed wheel to the nail fixation axis and unscrew it to release the compression device from the implant.

Remove the compression device (519 130) and the nail fixation axis (519 120) toothed wheel (519 121). In the same time, hold the support device ref (519 110) in place.
Step 23 • Guided End Cap Insertion

With the screwdriver (519 295) insert the end cap (500 001) in distal part of the Panta® nail through the support device ref (519 110).

**Warning:**
Care should be taken to prevent the end cap from falling into the soft tissues.

**Tip:**
Use the middle reaming sleeve, insert through plantar wound, ensure tip of sleeve rests against planter bone and distal end of nail. Confirm position of canula and nail under fluoro. Insert end cap through canula and tighten until locked.

**Specific To Partially Threaded Screws:**
For Panta® and Panta® XL nails with partially threaded screws, use the end cap (510 005) with the screwdriver (519 295). The distal screw is locked by the end cap. The 510 004 can be inserted manually (out of the support device).

Step 24 • Post Operative Recommendations

Two months of immobilization in a cast or stable walker-boot to get the fusion between the bones healed.

Partial weight bearing and after 6 weeks full weight bearing.

When a bone graft was used to fill bony defects a much longer healing time can be expected (up to 9 months).

Then weight bearing up to surgeons discretion.
PANTA® Arthrodesis Nail Removal

Step 1 • End Cap Unscrewing

1-1 Remove the end cap using the screwdriver (309 645). The protection sleeve (119 552) may be used to find the nail extremity. A fluoroscopy control can be useful during this step.

Step 2 • Calcaneal Screw Removal

2-1 The calcaneal screws (501 020 to 501 110 or 511 020 to 511 110) have to be removed first. Protection sleeves (119 552) may be used to locate the screw head. Using the screwdriver (309 645) remove both screws. In case of talar screw presence, remove it.
Step 2 • Calcaneal Screw Removal (continued)

2-1 Insert the T-handle (519 210) into the nail. The sharp extremity enables the user to find out the cannula. Protection sleeve may be used.

Step 3 • Tibial Screws Removal

3-1 As for the calcaneal screws, the tibial screws (501 020 to 501 110 or 511 020 to 511 110) have to be removed using the screwdriver.
Step 4 • Nail Removal with the T-Handle

4-1 Break possible bony bridge by turning the T-handle. Then pull the T-handle to remove the nail.

Step 5 • Nail Extraction With The Sliding Hammer

5-1 In case of hard bone, the sliding hammer might be used. Attach the sliding hammer to the T-handle while holding the assembly. Slide the hammer in axial until the bony bridges are broken and the nail extracted.
**Integra® Panta® Nail Removal Kit**

1. 519 209  Sliding hammer
2. 519 210  Handle extractor
3. 309 645  Screwdriver hex Dia 3.5 mm
4. 119 552  Protection sleeve
5. 519 950  Container including the following components:
   - Basis
6. 519 951
7. 996 100  Lid (not shown)
Insert

Basic – Upper level

Basic – Lower level
### Insert

1. 519 028ND Internal protection sleeve diam 3.2mm
2. 519 029ND Central protection sleeve diam 9mm
3. 519 030ND External protection sleeve diam 13.5mm
4. 519 032ND K-wire diam. 3.2mm, L. 400mm
5. 519 007ND Diam 7.0mm / cannulated drill
6. 519 009ND Diam 9.0mm / cannulated drill
7. 519 01XND Reamers diam 10.5 mm to diam. 13.5mm (x7)
8. 519 020ND AO Quick Coupling
9. 539 02XND Tapered Reamers diam 10.5mm to diam 13.5mm (x4)

### Basic – Upper level

7. 519 110ND Device for Nail Fixation
8. 519 131ND Threaded axis
9. 519 183ND Diam 7mm medium protector sleeve
10. 519 002ND Medium drill diam 4.3mm for calcaneus
11. 519 040ND Trocar awl
12. 519 175ND Compression rods (x2)
13. 519 195ND AO Hex screwdriver diam 3.5mm
14. 519 295ND AO Hex screwdriver diam 3.5mm
15. 519 185ND Diam 7.0mm Long protector sleve (x2)
16. 519 004ND Drill diam. 4.3mm for tibial screws
17. 519 160ND Depth gauge
18. 519 008ND Diam 4.3 long drill for calcaneal screws (x2)

### Basic – Lower level

19. 519 021ND T-handle with AO attachment
20. 519 120ND Screw for Nail Fixation
21. 519 121ND Impaction wheel
22. 519 133ND Plastic O Rings (x2)
23. 519 135ND Compression wheel
24. 519 130ND Compression device
25. 519 005ND Diam 5mm Drill (x2)
26. 519 190ND AO Hex screwdriver diam 3.5mm
27. 519 290ND AO Hex screwdriver diam 3.5mm
28. 519 178ND Diam 4.3mm medium protecting sleeve (x2)
29. 519 180ND Diam 4.3mm protecting sleeve (x2)
Bibliography

This List Is Provided For Illustrative Purposes Only And Is Not Exhaustive

Tibiotalocalcaneal Arthrodesis with Retrograde Intramedullary Nailing
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Thordarson D, Chang D
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Ankle Arthrodesis in Rheumatoid Arthritis Using an Intramedullary Nail with Fins
Fujimori J, Yoshino S, Koïwa M, Nakamura H, Shiga H, Nagashima S
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A Biomechanical Comparison of Intramedullary Nail and Crossed Lag Screw Fixation for Tibiotalocalcaneal Arthrodesis
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Foot and Ankle International • Volume 18, 11:699-704 • 1997
# PANTA® Arthrodesis Nail System

## Implantation and Removal

Integra®

### PANTA® Arthrodesis Nail System

#### PANTA Nail (Sterile)

<table>
<thead>
<tr>
<th>Catalog Number</th>
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<td>500 050ND</td>
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<td>500 080ND</td>
<td>Diam. 10mm, L. 180mm</td>
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<td>500 150ND</td>
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<td>500 180ND</td>
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#### PANTA XL Nail (Sterile)

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#### Fully Threaded Screw

**Diam 5mm (Sterile)**

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#### Partially Threaded Screw

**Diam 5mm (Sterile)**

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<td>511 105ND</td>
<td>L. 105mm</td>
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<td>511 110ND</td>
<td>L. 110mm</td>
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#### End Cap (Sterile)

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<td>Standard End cap</td>
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<td>500 004ND</td>
<td>Locking End cap</td>
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<td>500 005ND</td>
<td>Long Locking End cap</td>
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#### Associated Instruments

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<td>519 002ND</td>
<td>Medium drill diam. 4.3mm for calcaneus screws</td>
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<td>519 004ND</td>
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<td>519 005ND</td>
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<td>519 008ND</td>
<td>Long drill diam. 4.3mm for calcaneus screws</td>
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<tr>
<td>519 009ND</td>
<td>Cannulated drill diam. 7mm</td>
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<td>519 010ND</td>
<td>Reamer diam. 11mm</td>
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<td>519 012ND</td>
<td>Reamer diam. 12mm</td>
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<tr>
<td>519 013ND</td>
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<td>519 015ND</td>
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<tr>
<td>519 017ND</td>
<td>Optional quick coupling</td>
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<tr>
<td>519 021ND</td>
<td>T-handle with AO attachment</td>
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<tr>
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<tr>
<td>519 023ND</td>
<td>Central protection sleeve diam. 9mm</td>
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<td>External protection sleeve diam. 13.5mm</td>
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<td>Guide wire diam. 3.2mm, L. 400mm</td>
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<tr>
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<td>519 110ND</td>
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<td>Nail fixation axis</td>
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<tr>
<td>519 121ND</td>
<td>Toothed wheel</td>
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<tr>
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<td>Compression device</td>
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<td>519 180ND</td>
<td>Long Drill guide diam. 4.3mm</td>
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<tr>
<td>519 181ND</td>
<td>Drill guide diam. 5mm</td>
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<td>519 183ND</td>
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<td>Long soft tissue protector diam. 7mm</td>
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<td>519 190ND</td>
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<td>Hexagonal screwdriver diam. 3.5mm</td>
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<td>Conical reamer diam. 12.5mm</td>
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<tr>
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#### PANTA Arthrodesis Nail Removal Kit

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<tr>
<td>519 209</td>
<td>Sliding Hammer</td>
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<tr>
<td>519 210</td>
<td>Handle extractor</td>
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<tr>
<td>309 645</td>
<td>Screwdriver hex, Dia 3.5mm</td>
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<tr>
<td>119 552</td>
<td>Protection sleeve</td>
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<tr>
<td>519 950</td>
<td>Container including the following components</td>
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<td>519 951</td>
<td>Basis</td>
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<tr>
<td>996 100</td>
<td>Lid</td>
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</tbody>
</table>

For more information or to place an order, please contact:
Integra • 311 Enterprise Drive, Plainsboro, NJ 08536
877-444-1122 USA • 609-936-5400 outside USA • 866-800-7742 fax
integrailife.com

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