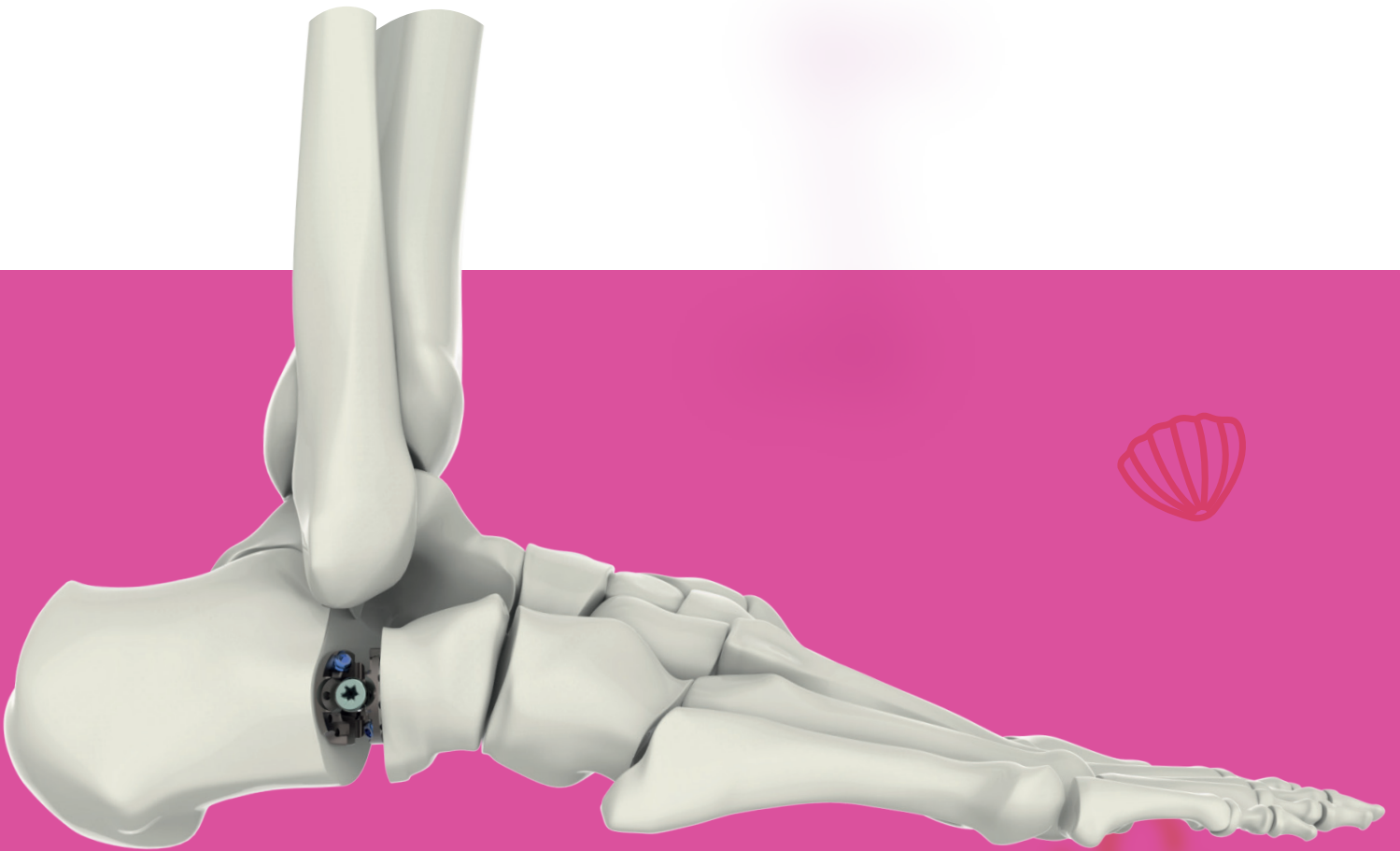


# SHELL

CALCANEUS IMPLANT



# Introduction

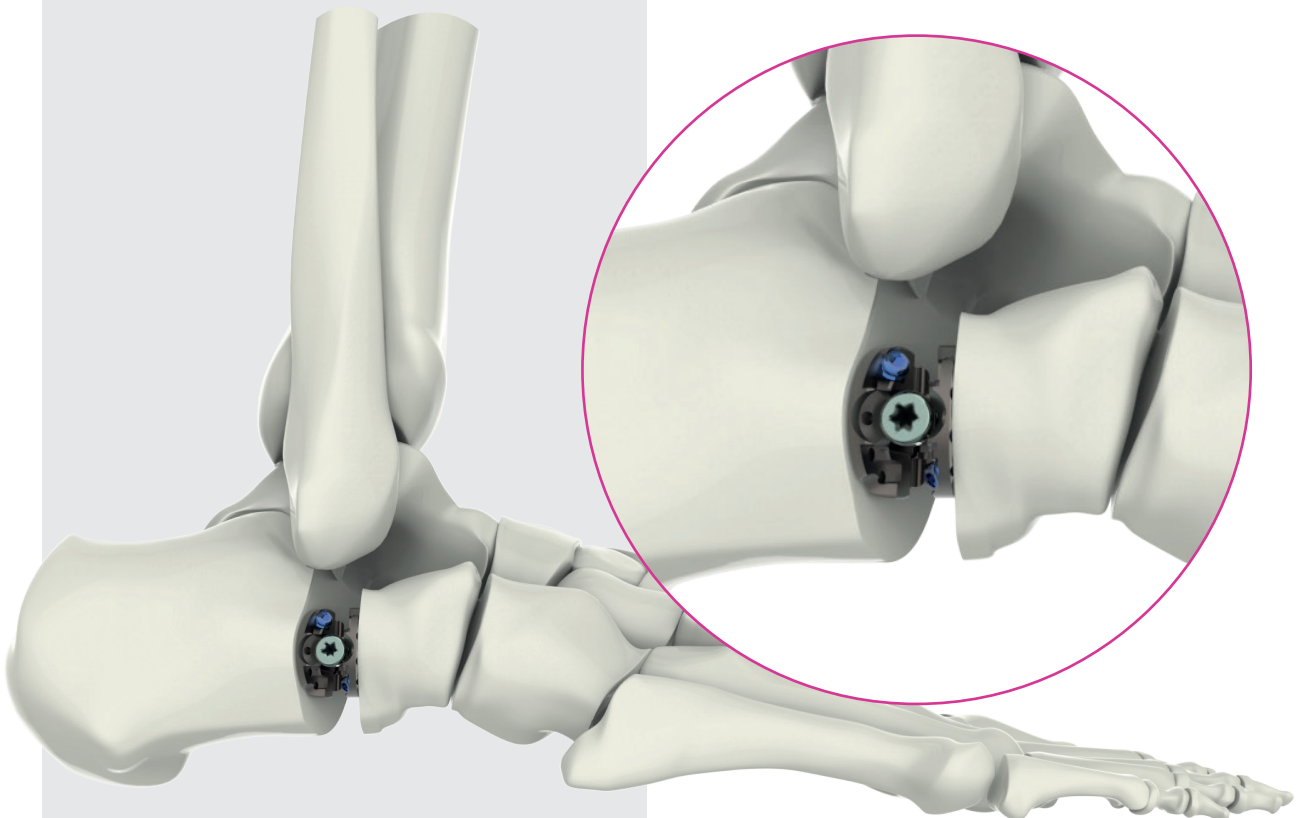
Planovalgus foot is a major source of disability in children with cerebral palsy (CP). Planovalgus foot is clinically associated with depression of the medial arch, walking disabilities, callosities and ulcerations, and pain. Shell Calcaneus Implant is developed for the treatment of planovalgus foot deformity in CP by calcaneal lengthening. The Plate can be inserted into the osteotomy gap based on the amount of talonavicular coverage. Optionally, Locking Peg Screws can be used for the fixation of the implant.

## Index

- 1 Introduction
- 1 Indications
- 2 Features
- 3 Instruments
- 4 Surgical Technique
  
- 10 Pre-Op Post-Op
- 11 Set Detail

## Indications

- Pes planovalgus deformity
- Hindfoot valgus
- Midfoot plantar flexion
- Collapsed medial longitudinal arc
- Forefoot supination



**Warning:**  
This descriptive catalog is not sufficient by itself for proper intraoperative usage of products. It is highly recommended that implantation and instrument sets must be used by a surgeon who is trained-experienced about the product performances and usage.

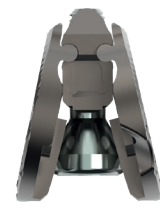
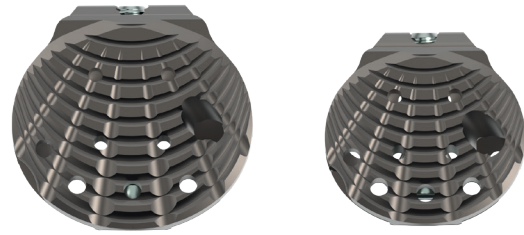
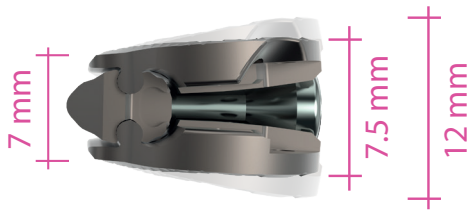
# Features

Shell Calcaneus Implant is made of titanium.

The bone-implant adhesion is improved with the surface design of the implant.

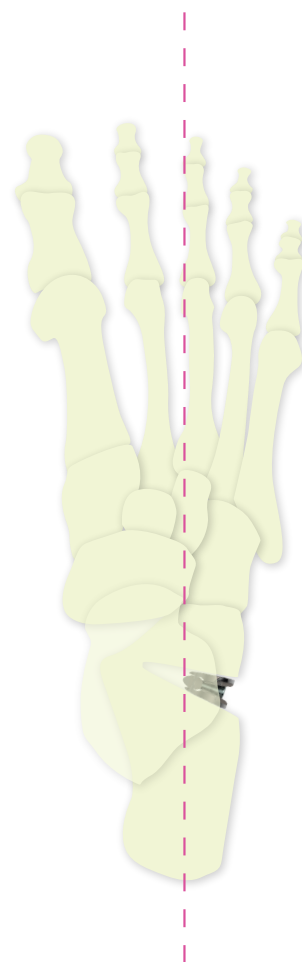
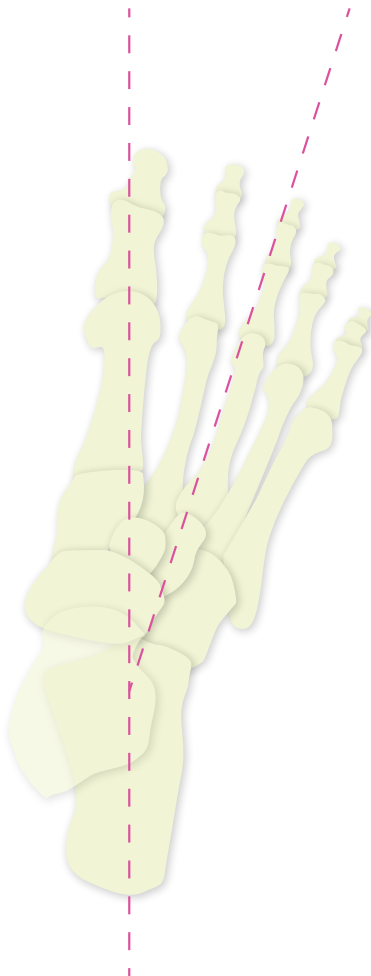
15 mm and 18 mm size options are available.

The plate allows expansion from 7.5 mm up to 12 mm.

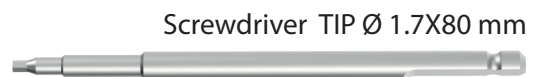
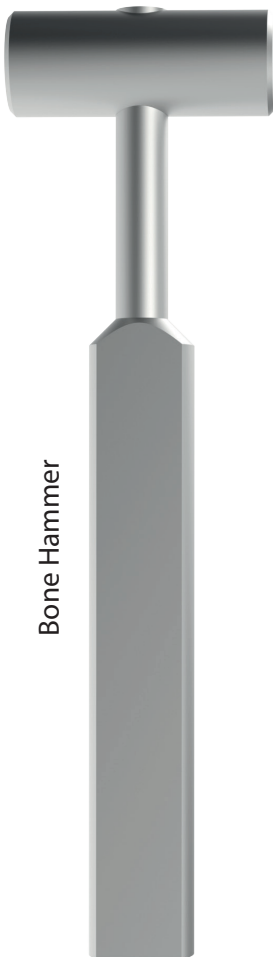
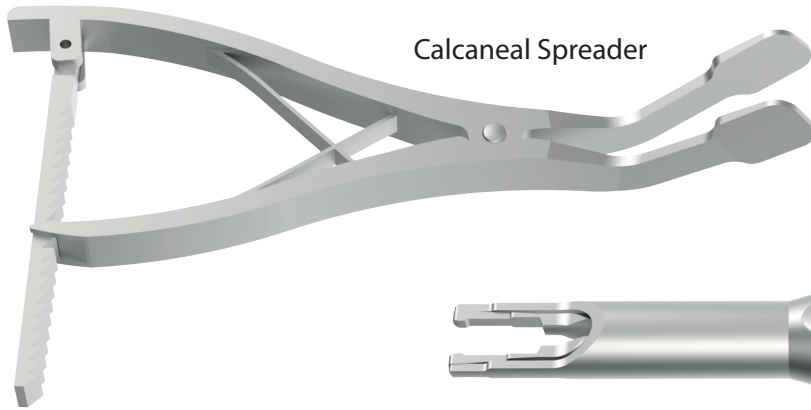


18°

23°

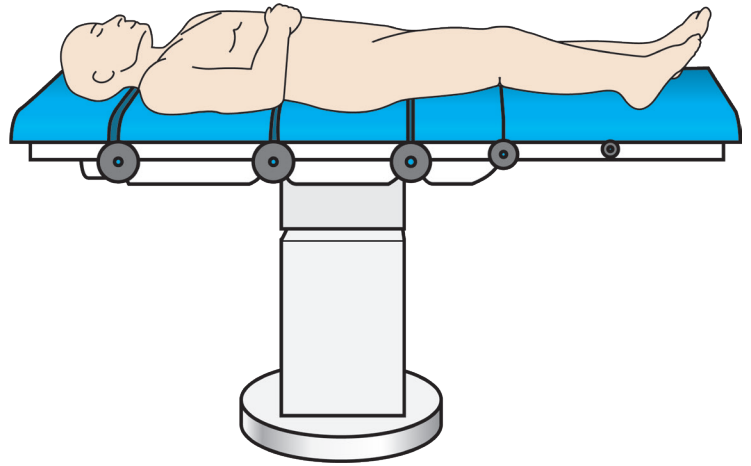


# Instruments



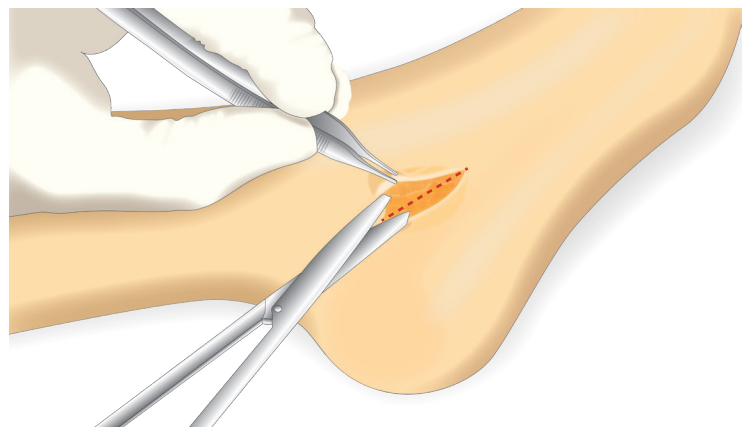
# Surgical Technique

The patient is placed in a supine position.

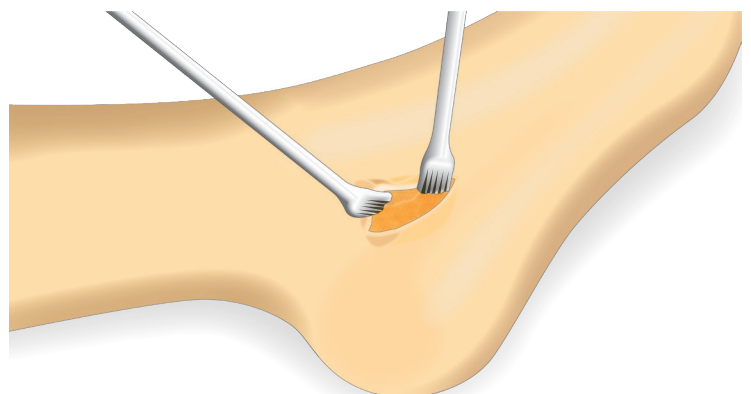


A skin incision of 3-4 cm is made, extending from the distal of the lateral malleolus to the proximal of the calcaneocuboid joint.

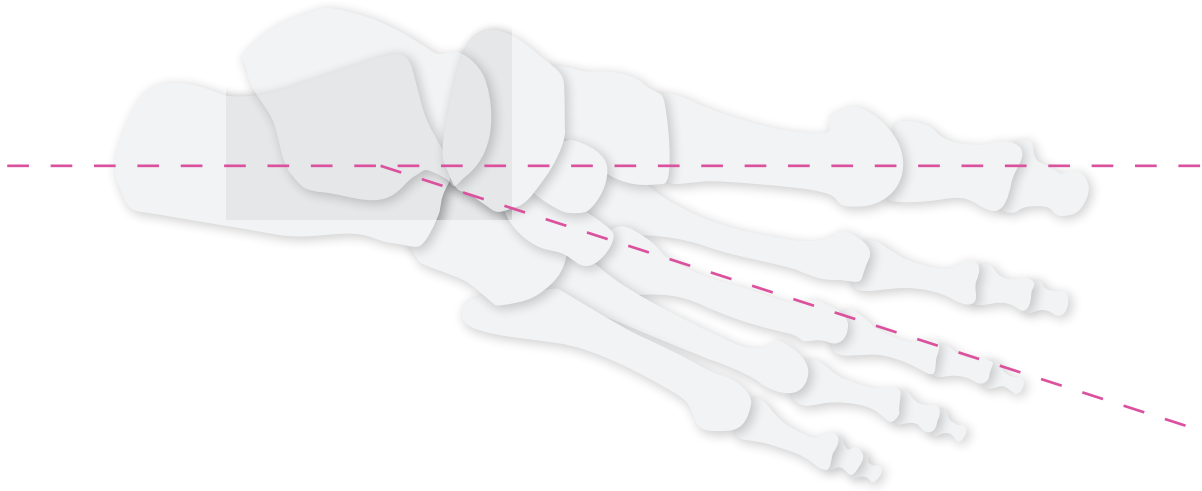
After the soft tissue is passed through, the periosteum covering the lateral corner of the calcaneus is reached (peroneal muscles must be preserved at this stage).



Retractors are placed by exposing the lateral surface of the calcaneus.

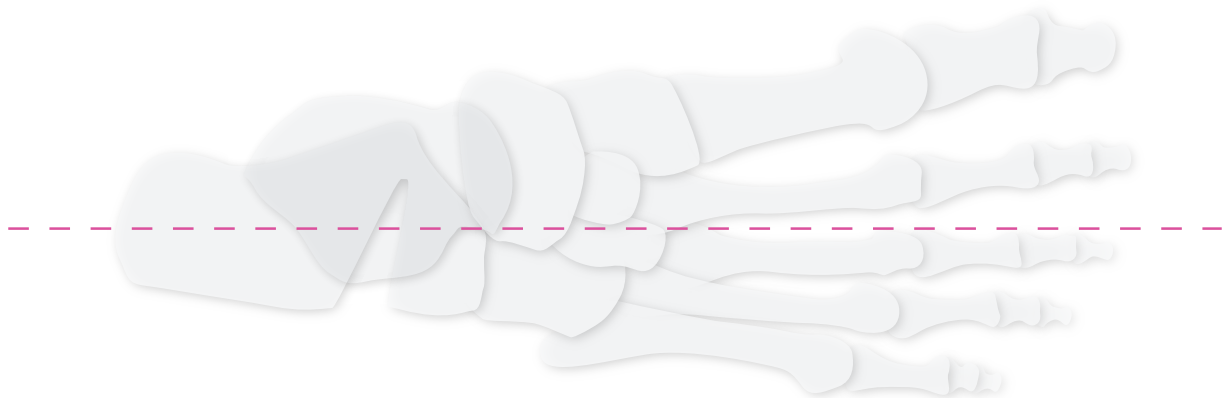
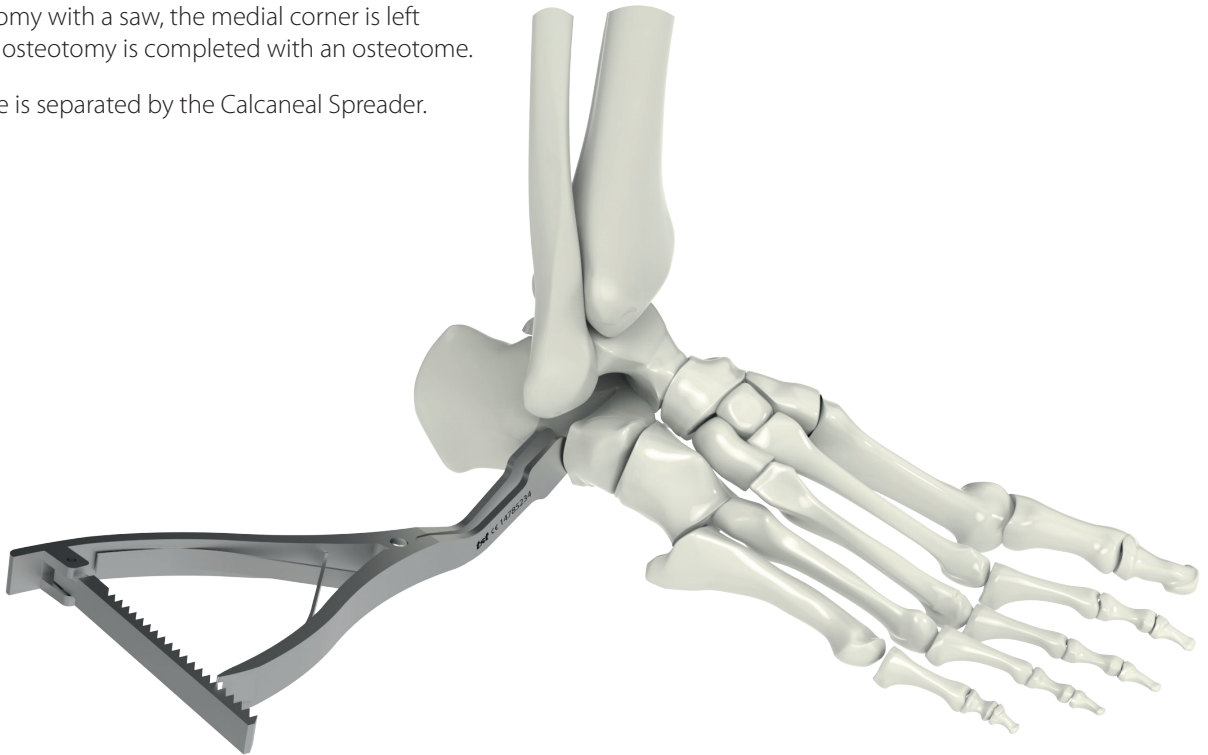


Transverse calcaneal osteotomy is performed from the neck of the calcaneus starting from 10-20 mm proximal to the calcaneocuboid joint.

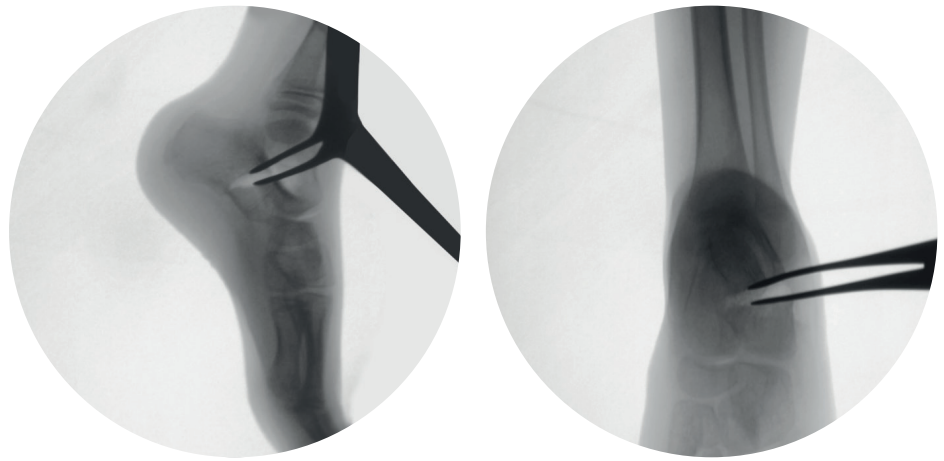


During osteotomy with a saw, the medial corner is left intact and the osteotomy is completed with an osteotome.

Osteotomy line is separated by the Calcaneal Spreader.



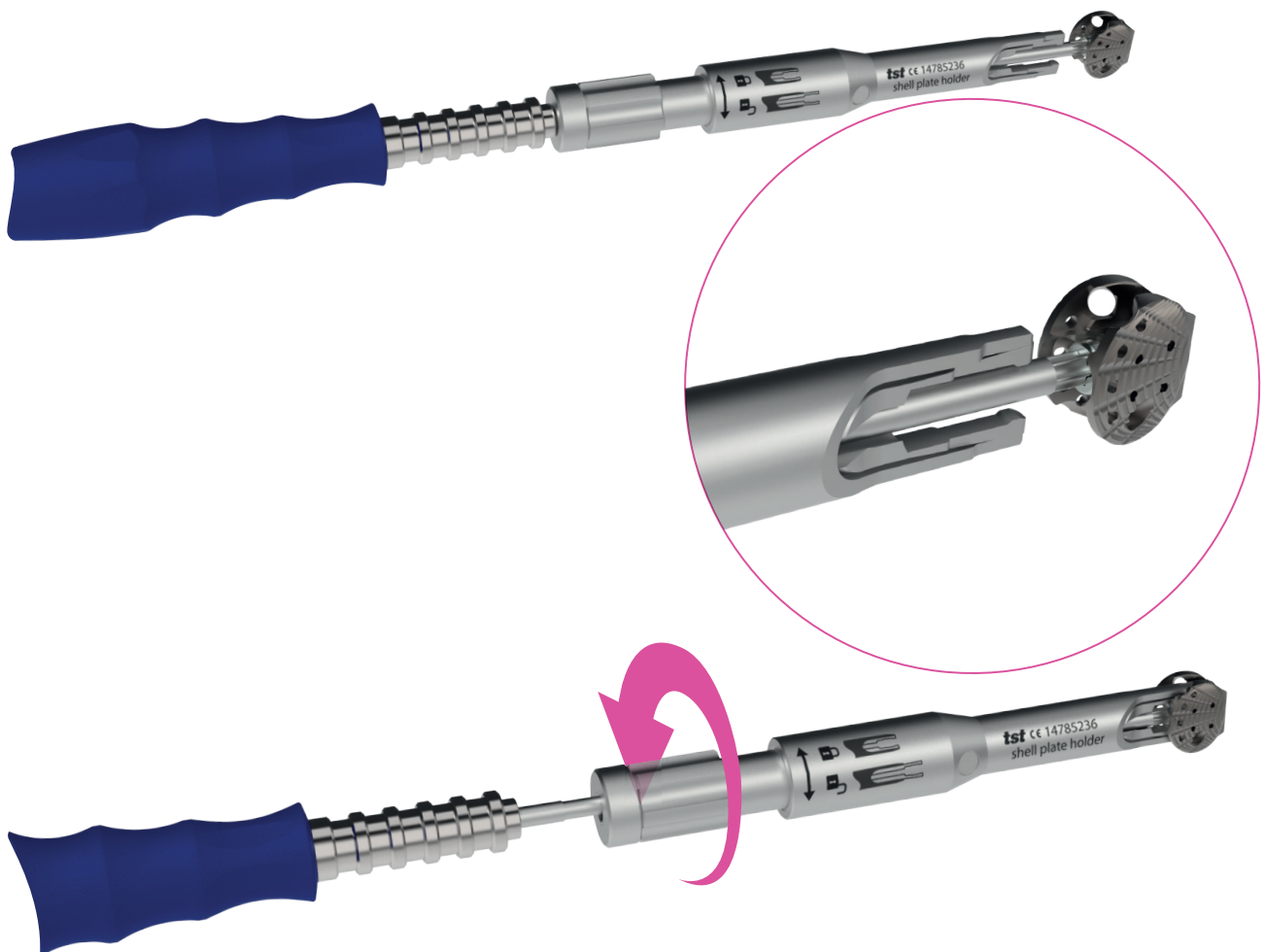
The adequacy of the talonavicular coverage is confirmed by the anteroposterior fluoroscopy.



Appropriate width Shell Implant is chosen.

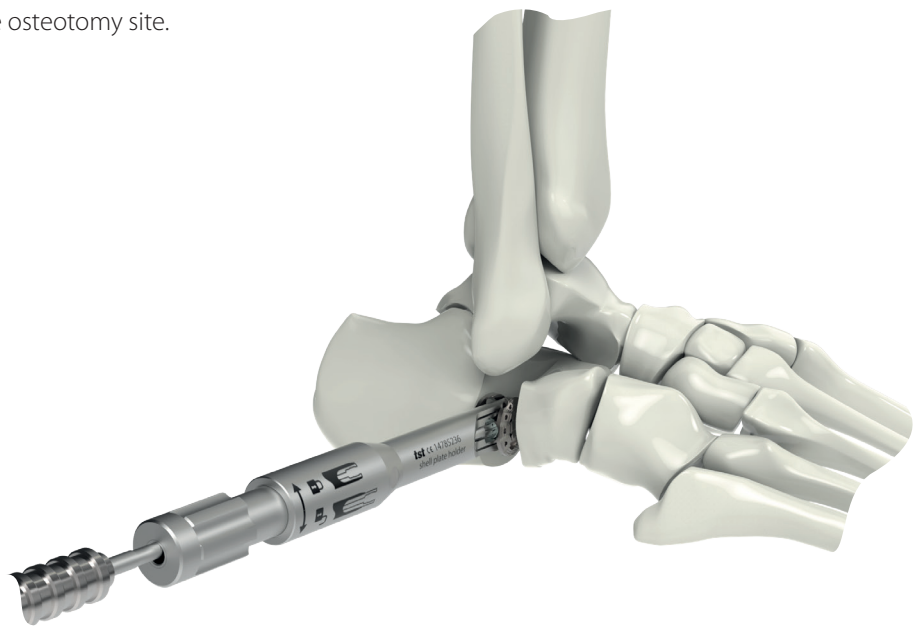
First, the Star Tip Screwdriver is attached to the screw of the shell implant by passing through the Shell Plate Holder.

Secondly, the Shell Plate Holder is mounted to the Shell Implant by tightening the upper part of the plate holder.

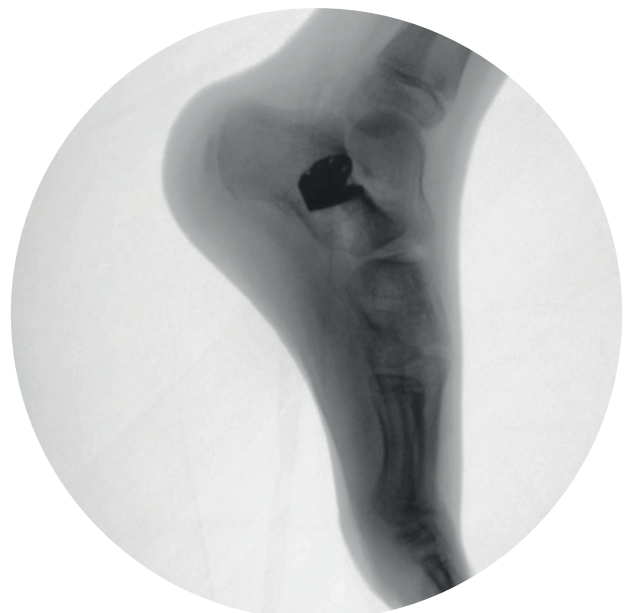
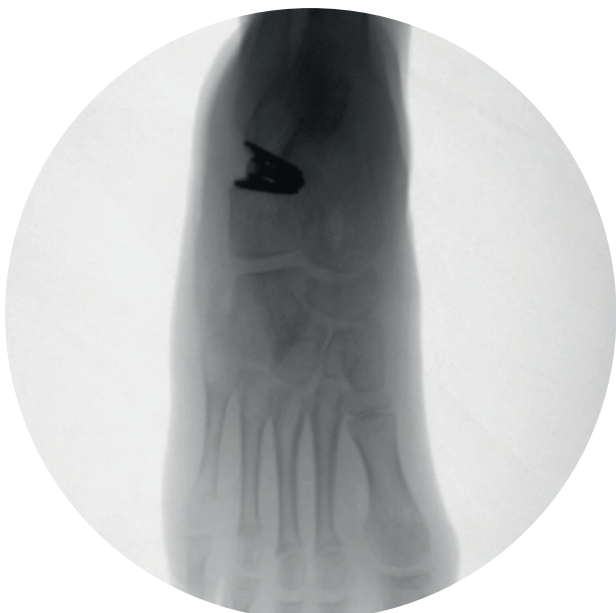
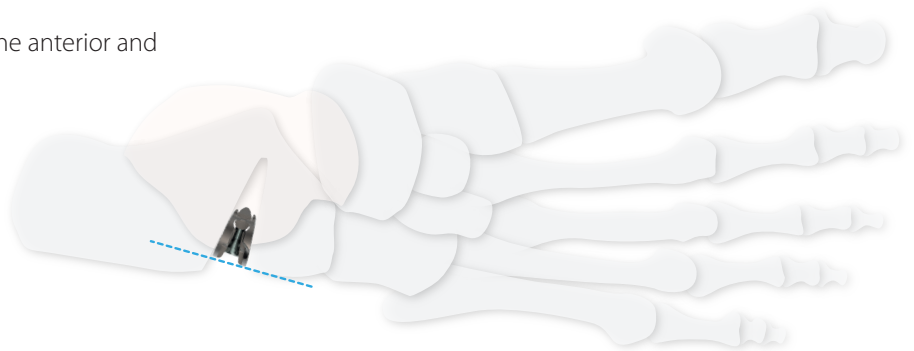




Shell Calcaneus Implant is placed in the osteotomy site.



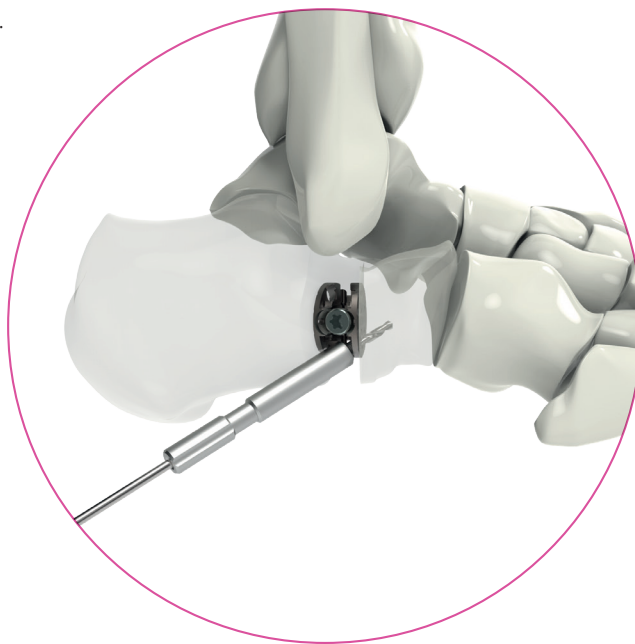
Shell Implant should not protrude from the anterior and lateral of the calcaneus.



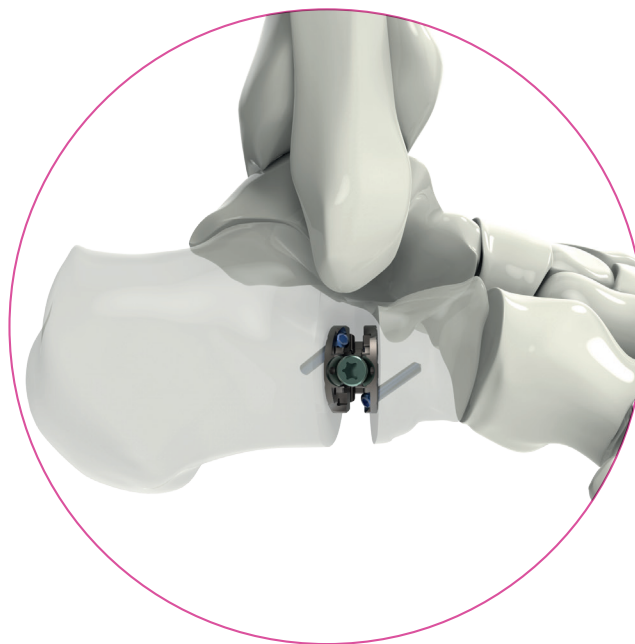
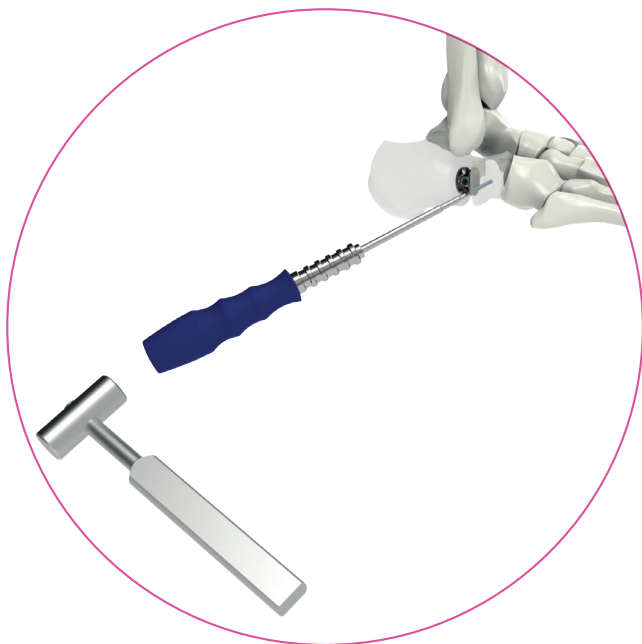


If necessary, it can be fixed to bone with two locking peg screws.

Before inserting the locking peg screw, the relevant site is drilled with the **Bone Drill 2.0X130 mm** through the **Threaded Drill Sleeve 2.5 X250 mm**.



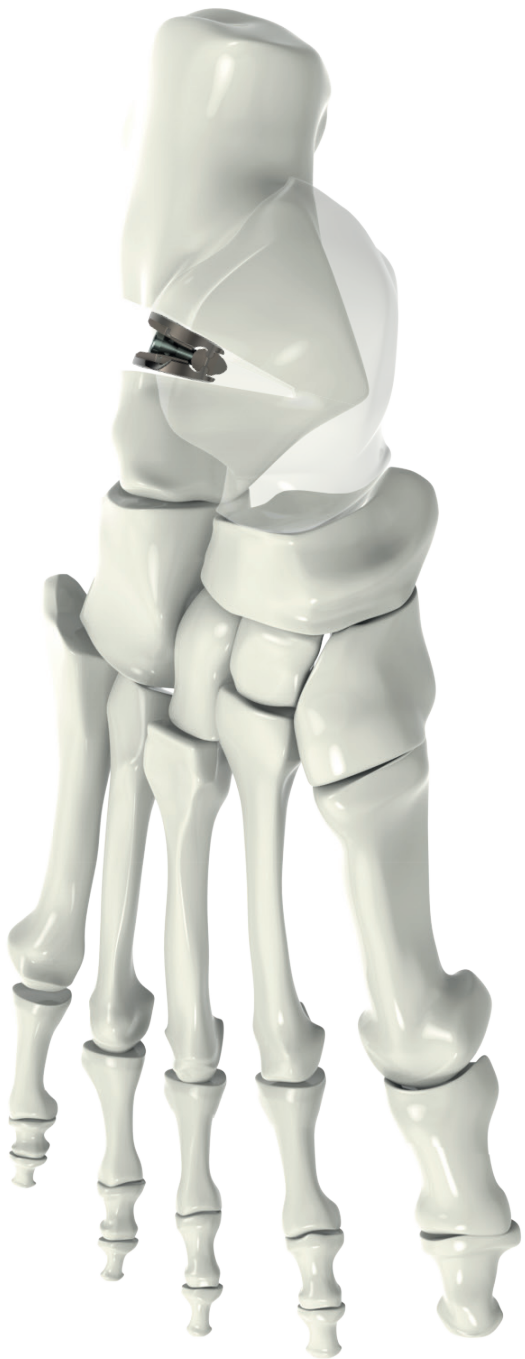
Locking Peg Screw is inserted with Screwdriver TIP Ø 1.7X80 mm by hammering until threaded part of the screw. The threaded part is tightened finally.



It is closed in accordance with the skin and subcutaneous procedure.

A short leg cast is made in neutral dorsoflexion of the ankle.

Particular care should be taken to avoid plaster pressure on the ankle and heel during the casting.



pre-op



post-op



# Set Detail

| no | code        | ubb           | description  | qty |
|----|-------------|---------------|--|-----|
| 1  | 0000305000  | 8680858442225 | SHELL PLATE & SCREW BOX                            | 1   |
|    | 31627010015 | 8680858441136 | SHELL PLATE 15 MM                                  | 2   |
|    | 31627010012 | 8680858441129 | SHELL PLATE 18 MM                                  | 2   |
|    | 24627142027 | 8699931010671 | SMALL HEAD LOCK.PEG SCREW TI 2.7X14 MM             | 4   |
|    | 24627162027 | 8699931010688 | SMALL HEAD LOCK.PEG SCREW TI 2.7X16 MM             | 4   |
|    | 24627182027 | 8699931010695 | SMALL HEAD LOCK.PEG SCREW TI 2.7X18 MM             | 4   |
|    | 24627202027 | 8699931010701 | SMALL HEAD LOCK.PEG SCREW TI 2.7X20 MM             | 4   |
| 2  | 03161700020 | 8680858441150 | SCREWDRIVER STAR TIP T20                           | 1   |
| 3  | 03161700001 | 8680858441143 | SHELL PLATE HOLDER                                 | 1   |
| 4  | 03161700002 | 8680858442249 | CALCANEAL SPREADER                                 | 1   |
| 5  | 01193003009 | 8699931028133 | BONE HAMMER - SMALL                                | 1   |
| 6  | 02000480017 | 8699931029253 | SCREW DRIVER QUICK HEX. TIP Ø 1.7X80 MM            | 2   |
| 7  | 02010101001 | 8698673441187 | SCREWDRIVER HANDLE SMALL                           | 1   |
| 8  | 22310130020 | 8698673450400 | BONE DRILL 2.0X130 MM                              | 2   |
| 9  | 02005805020 | 8680858425730 | THREADED DRILL SLEEVE Ø 2X50 MM FOR SMALL HEAD SCR | 2   |
|    | 00235235070 | 8680858451883 | CONTAINER 235X235X70 MM                            | 1   |

