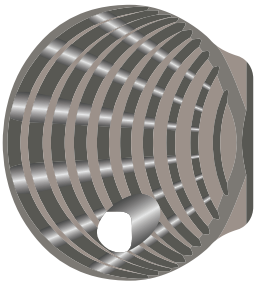
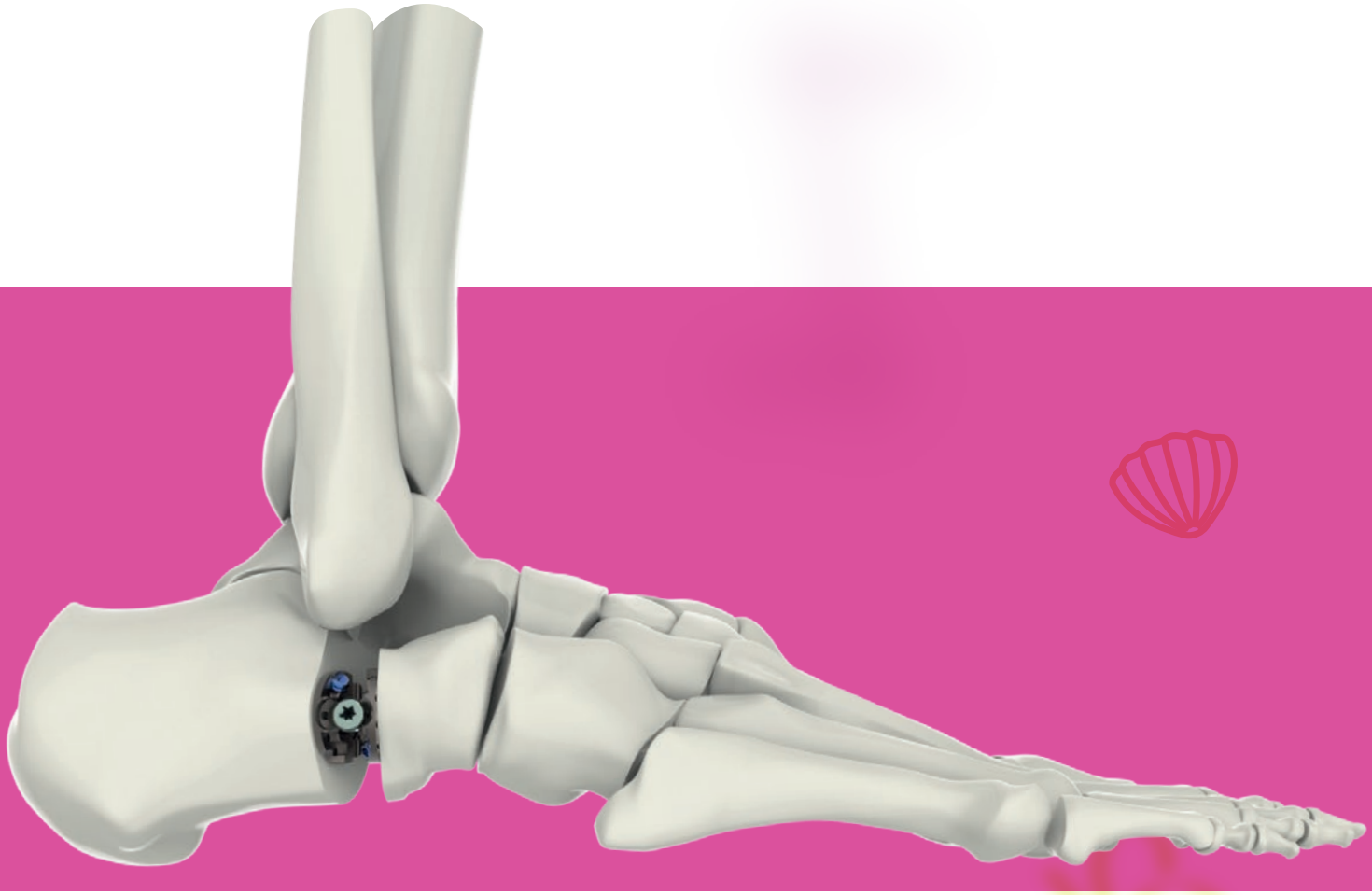


SHELL

CALCANEUS IMPLANT



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Introduction

Planovalgus foot is a major source of disability in children and adults 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 and expanded depending on the desired amount of talonavicular coverage. Optionally, Locking Peg Screws can be used for the fixation of the implant.

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1 Indications
2 Features
3 Instruments

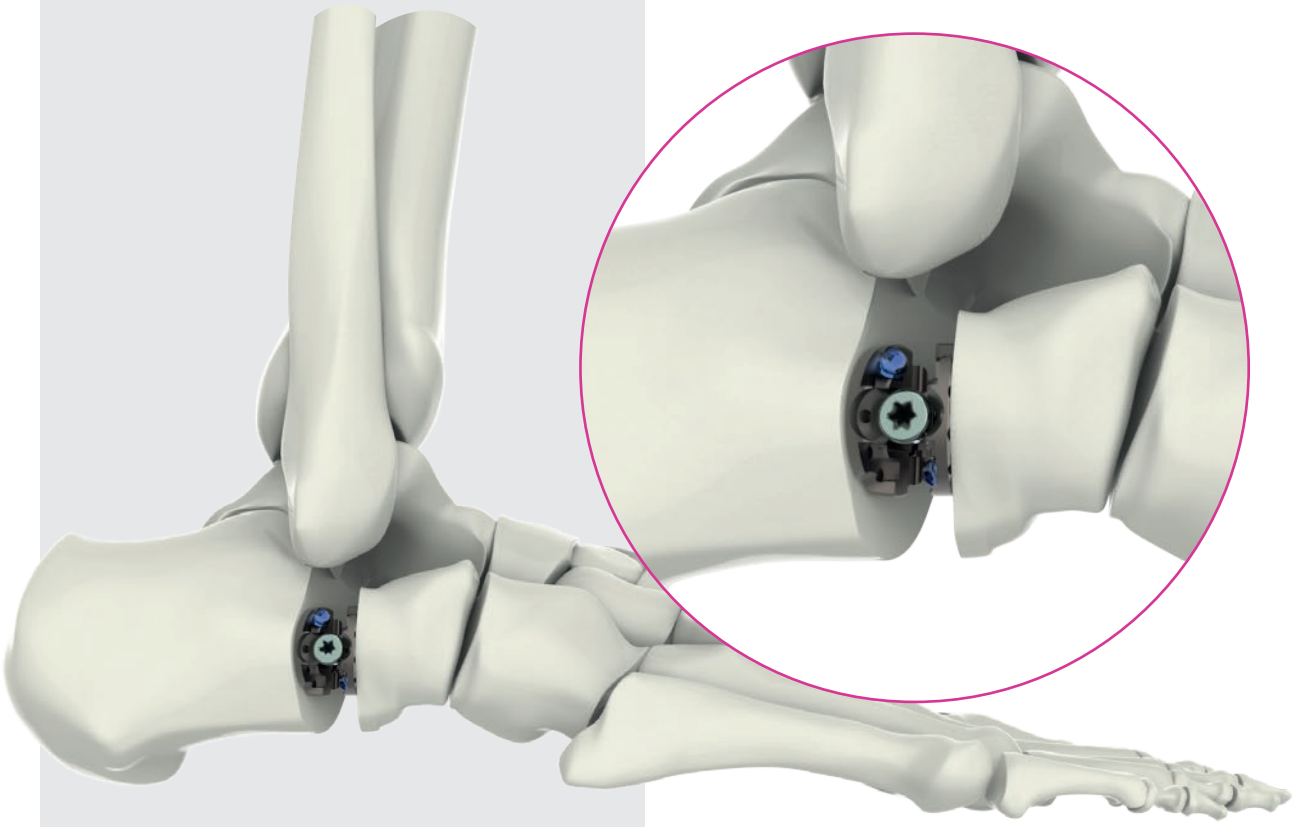
4 Surgical Technique

10 Pre-Op Post-Op
11 Set Detail

Indications

Pes planovalgus deformity

- Hindfoot valgus
- Collapsed medial longitudinal arc
- Forefoot pronation



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.

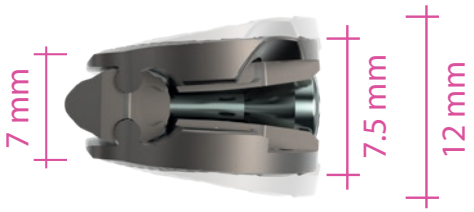
Features

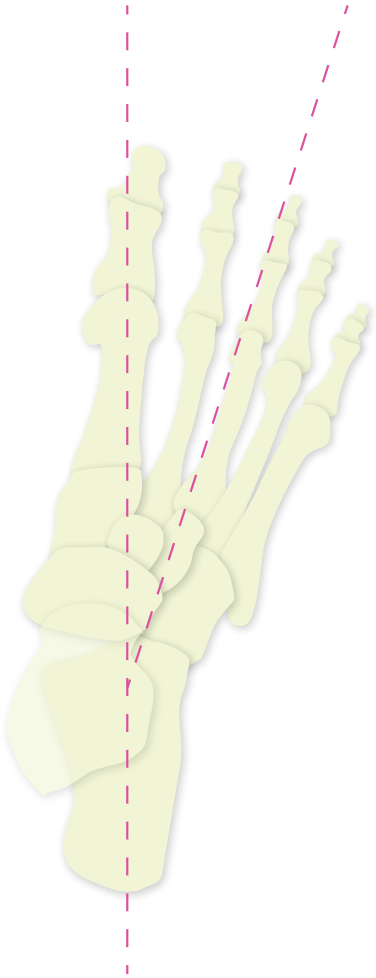
Shell Calcaneus Implant is made of titanium.

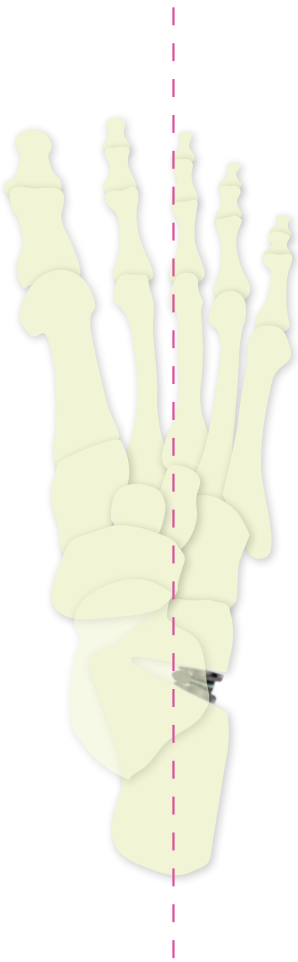
The bone-implant adhesion is improved with the surface design of the implant.

15 mm and 18 mm size options are available.

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

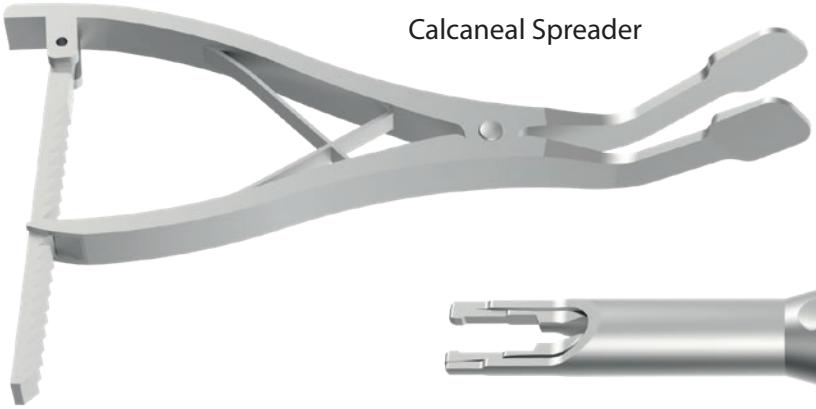






Instruments

Calcaneal Spreader



Shell Plate Holder

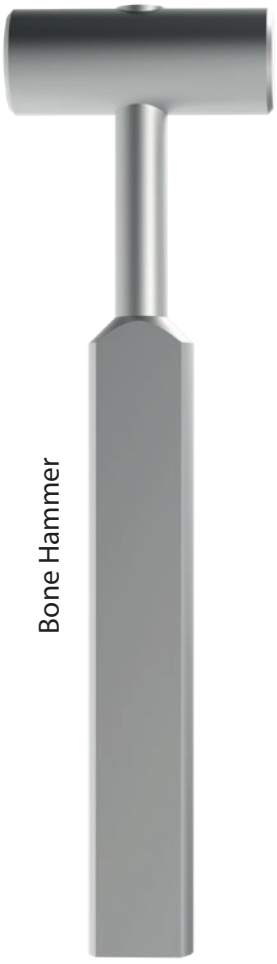
Screwdriver Star Tip T20

Bone Drill 2.0X130 mm

Screwdriver TIP Ø 1.7X80 mm

Threaded Drill Sleeve Ø 2X50 mm

Bone Hammer

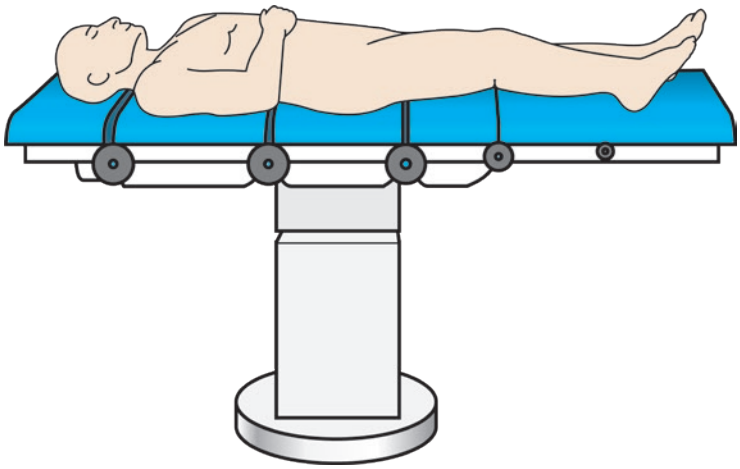


Screwdriver Handle

Shell Plate & Screw Box

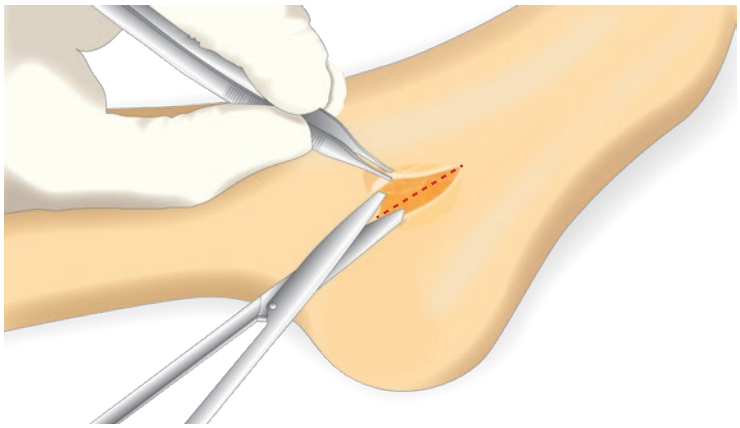
Surgical Technique

The patient is placed in a supine position.

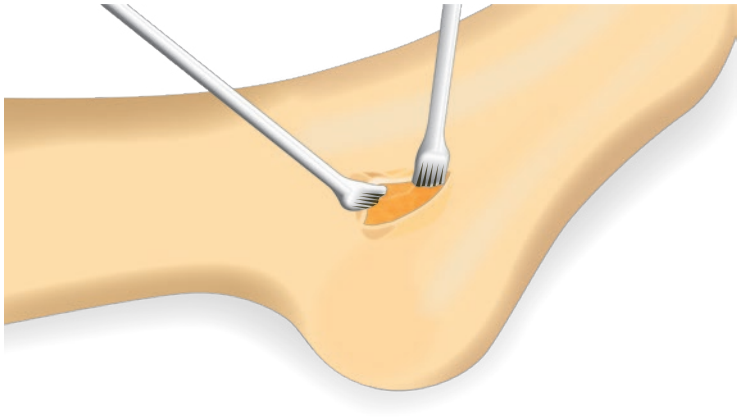


A skin incision of 3-4 cm is made, extending from the distal tip of the lateral malleolus to the proximal end of the calcaneocuboid joint.

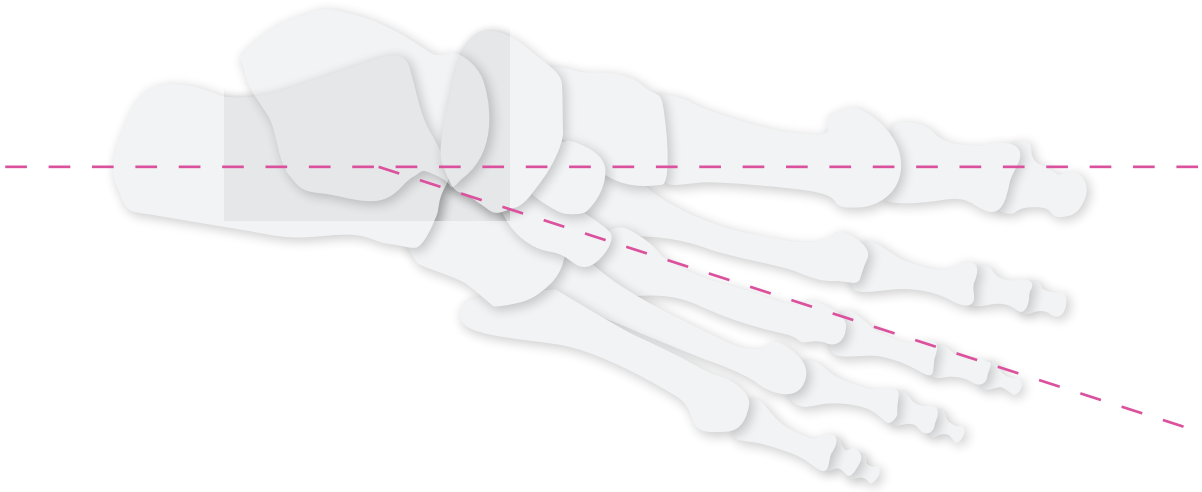
After the soft tissue dissection the periosteum covering the lateral corner of the calcaneus is reached (peroneal muscles must be preserved at this stage).



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

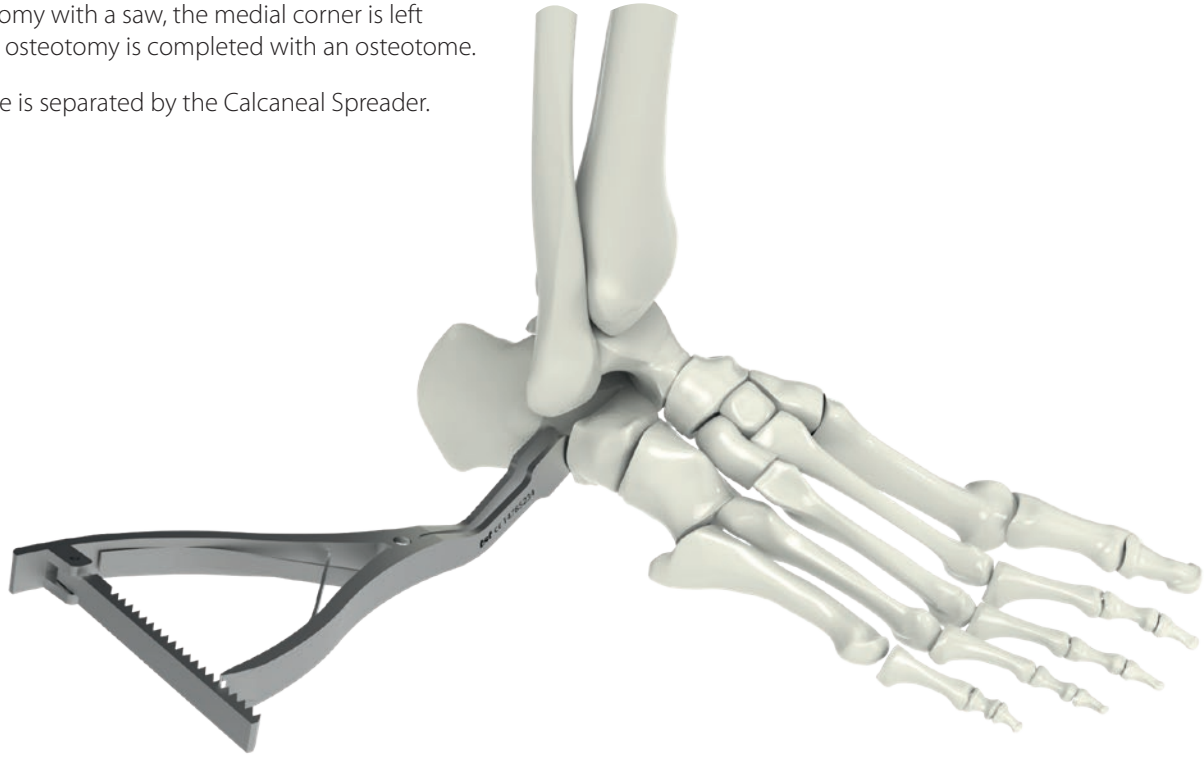


Transverse calcaneal osteotomy is performed from the neck of the calcaneus starting from 10-20 mm proximal to the calcaneocuboid joint between the anterior and middle facets of the calcaneus..

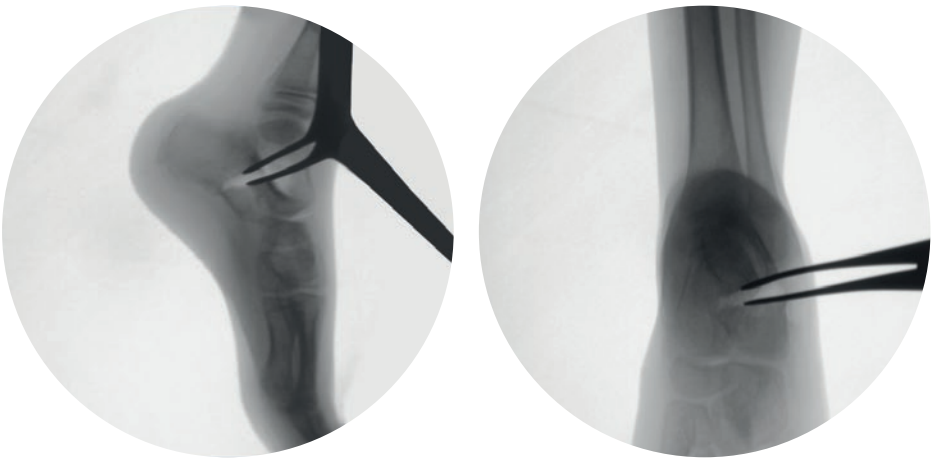


During osteotomy with a saw, the medial corner is left intact and the osteotomy is completed with an osteotome.

Osteotomy line is separated by the Calcaneal Spreader.



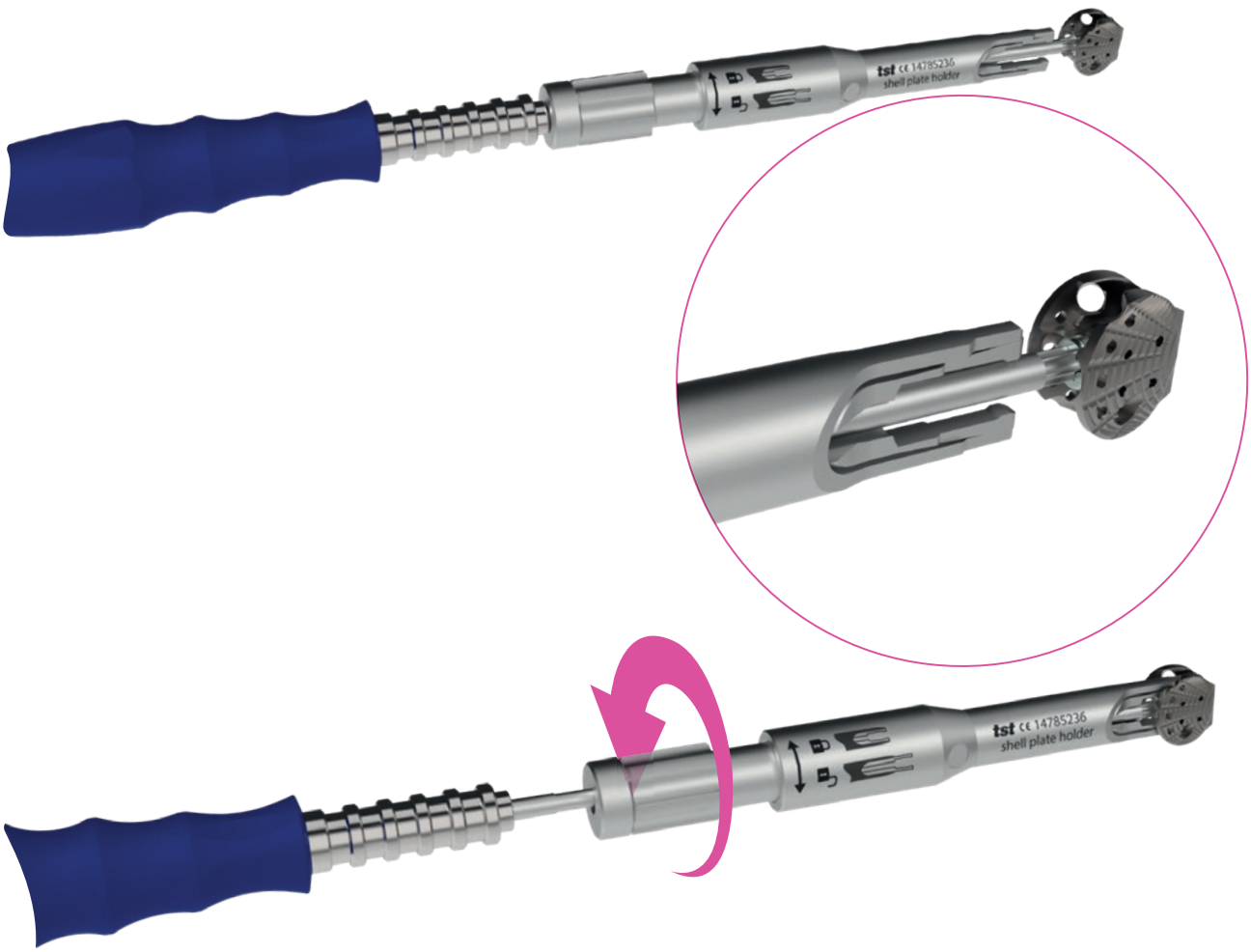
The adequacy of the talonavicular coverage is confirmed by the anteroposterior fluoroscopy.



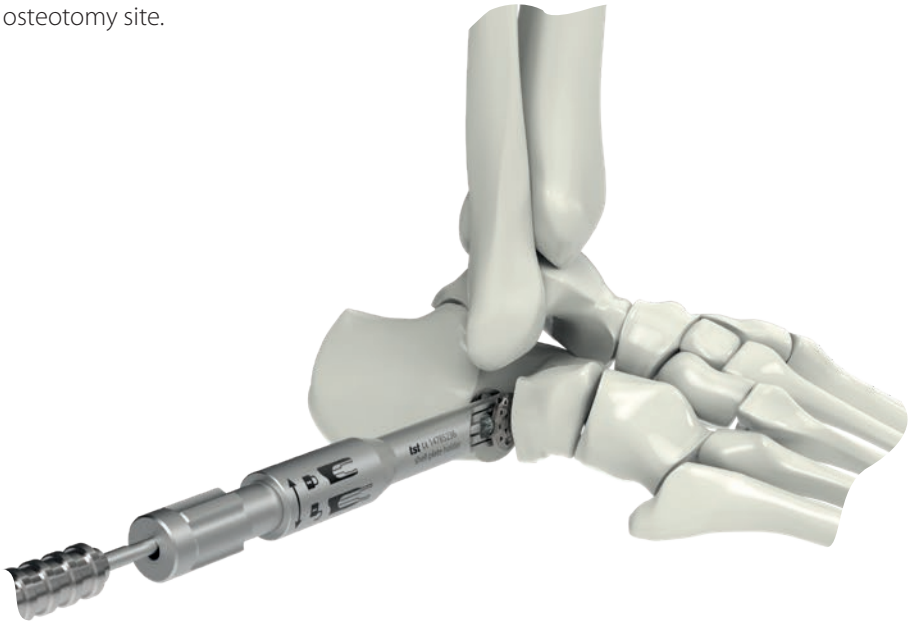
Appropriate width Shell Implant is chosen.

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

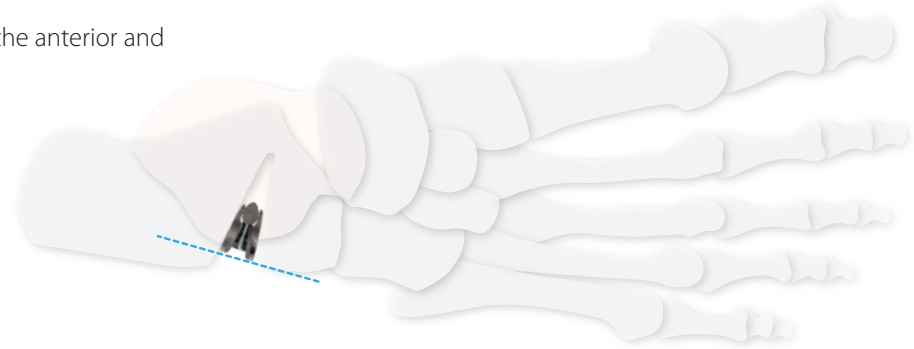
Second, the Shell Plate Holder is mounted to the Shell Implant by tightening the upper part of the plate holder.

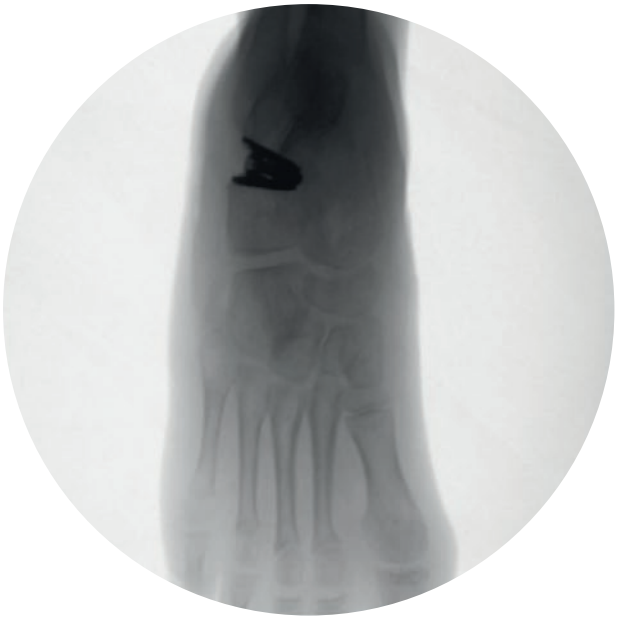


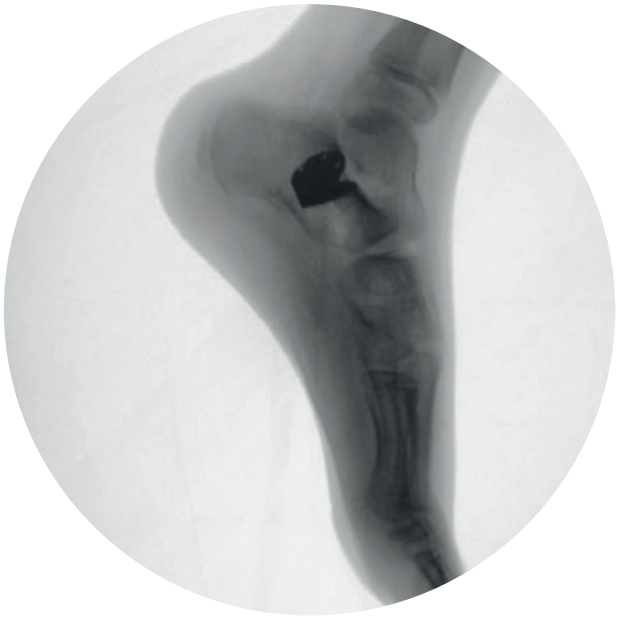
Shell Calcaneus Implant is placed in the osteotomy site.



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

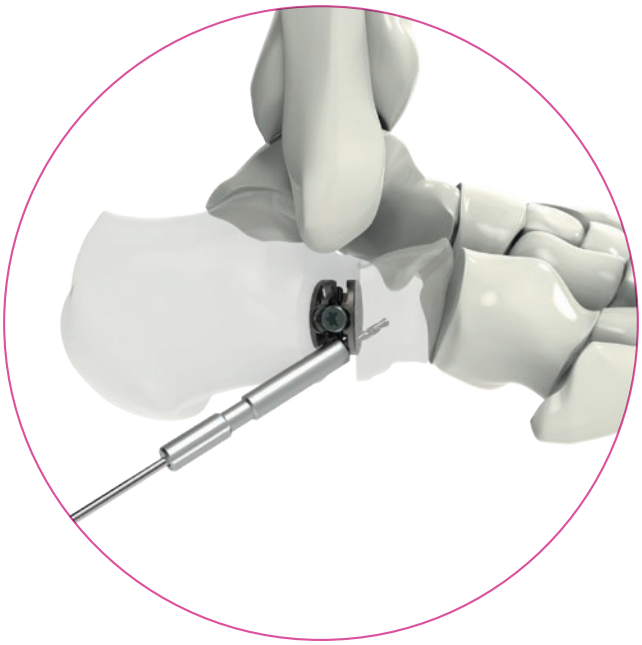




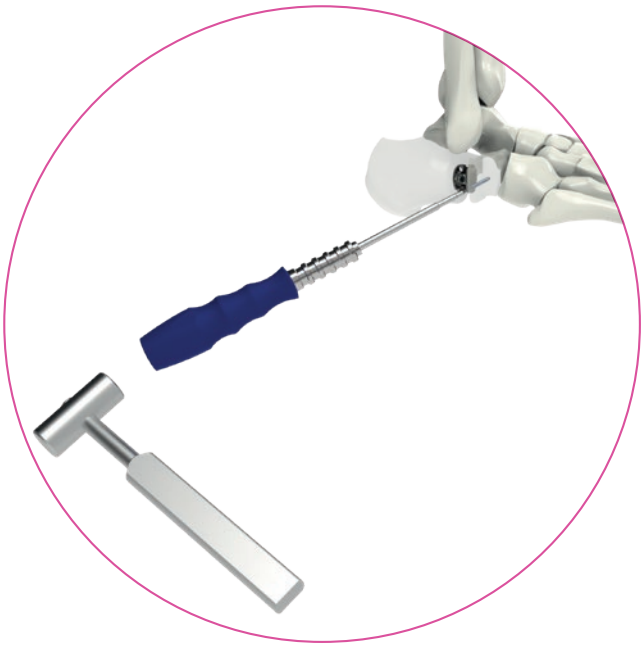


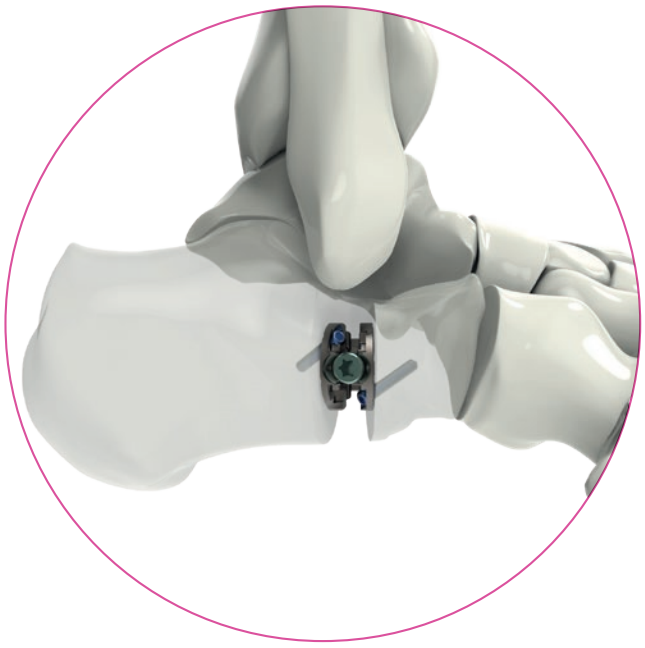
If necessary, it can be fixed to bone with two locking peg screws.

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.





After soft tissue and skin closure, a short leg cast is applied in neutral dorsiflexion of the ankle, with molding of the medial longitudinal arch.

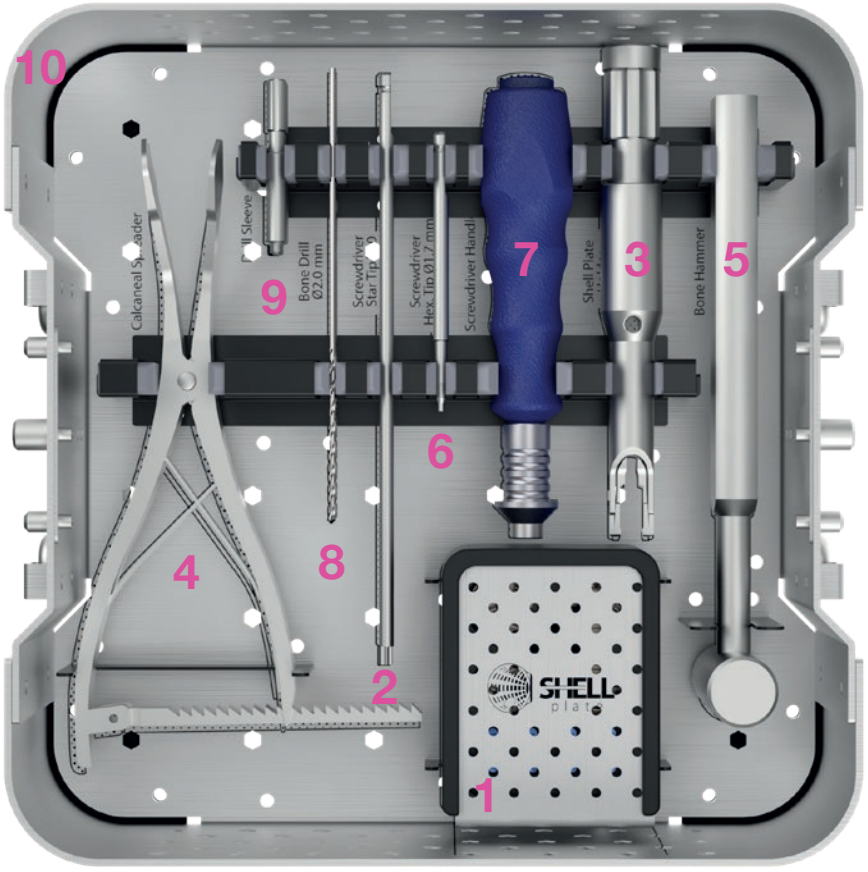
Particular care should be taken to avoid plaster pressure on the ankle and heel during the casting.

pre-op

post-op

Set Detail

no	code	ubb	description	qty
1	00000305000	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



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REV00/01.07.2022