



FOOT



# 45b screw

## Surgical technique

MINIMALLY INVASIVE  
CHEVRON & AKIN



GROUP  
**FH** ORTHO™

# Surgical technique

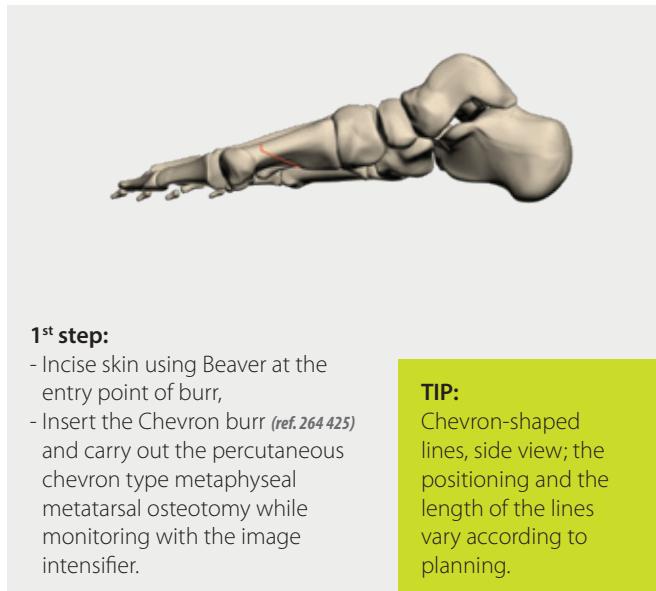
## 45b screw

### INDICATION

Hallux valgus

### PATIENT PREPARATION AND SET UP

- Dorsal decubitus, foot outside the surgical field in order to allow space for an image intensifier
- Unsystematic tourniquet
- Extremity field

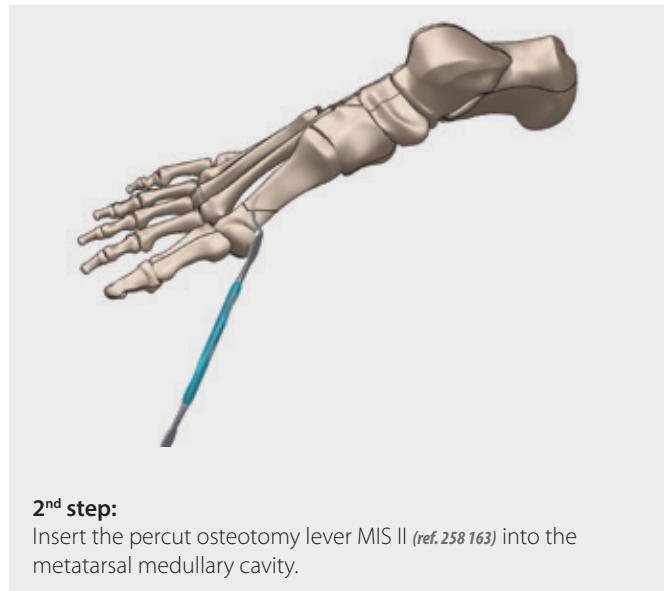


#### 1<sup>st</sup> step:

- Incise skin using Beaver at the entry point of burr,
- Insert the Chevron burr (ref.264 425) and carry out the percutaneous chevron type metaphyseal metatarsal osteotomy while monitoring with the image intensifier.

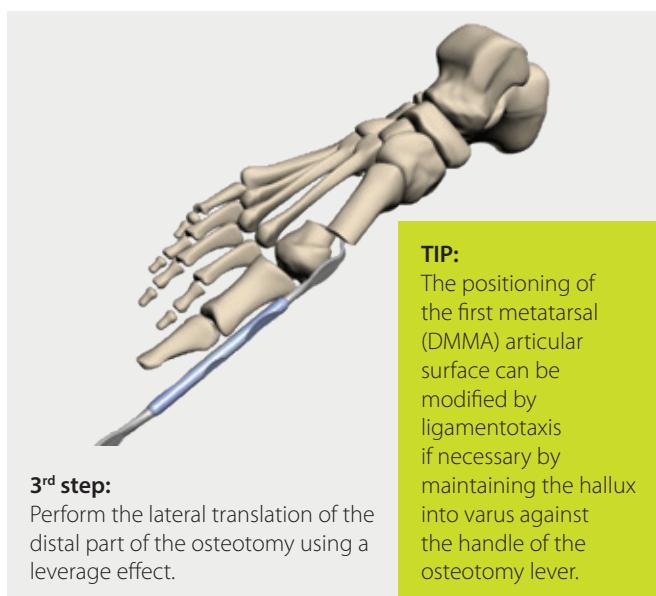
#### TIP:

Chevron-shaped lines, side view; the positioning and the length of the lines vary according to planning.



#### 2<sup>nd</sup> step:

Insert the percut osteotomy lever MIS II (ref.258 163) into the metatarsal medullary cavity.

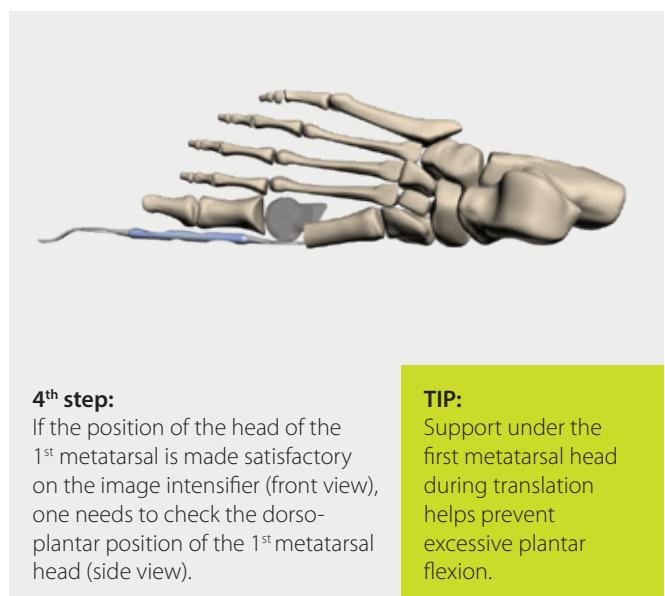


#### 3<sup>rd</sup> step:

Perform the lateral translation of the distal part of the osteotomy using a leverage effect.

#### TIP:

The positioning of the first metatarsal (DMMA) articular surface can be modified by ligamentotaxis if necessary by maintaining the hallux into varus against the handle of the osteotomy lever.

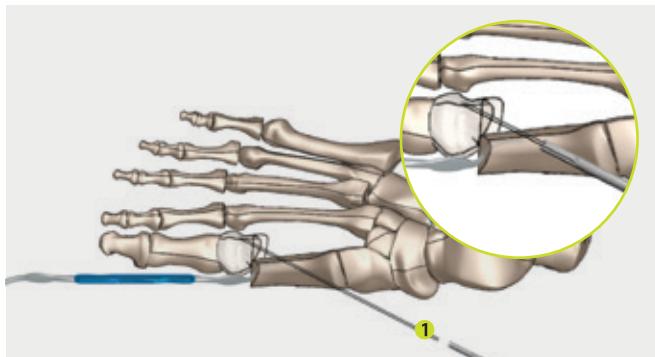


#### 4<sup>th</sup> step:

If the position of the head of the 1<sup>st</sup> metatarsal is made satisfactory on the image intensifier (front view), one needs to check the dorso-plantar position of the 1<sup>st</sup> metatarsal head (side view).

#### TIP:

Support under the first metatarsal head during translation helps prevent excessive plantar flexion.

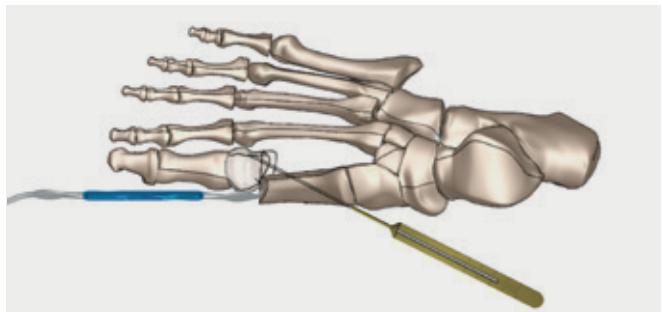


#### 5<sup>th</sup> step:

Insert the proximal k-wire, taking care to cross both cortices. In case of dense bone, insert the cannulated drill (ref. 267 809) towards the metatarsal head. 1  
Drill the first cortex.

#### TIP:

For large displacements, the drill bit can be pushed all the way to the 2<sup>nd</sup> cortex.

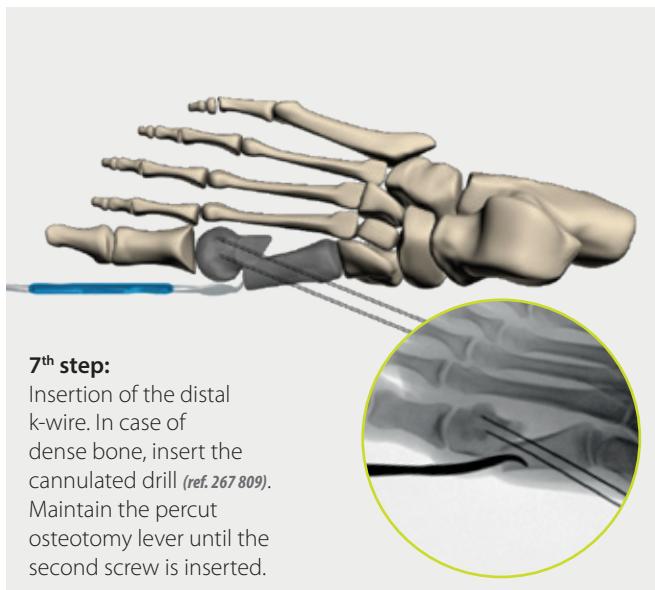


#### TIP:

Before inserting the second k-wire, a check is necessary to verify the translation and positioning of the head to prevent rotation.

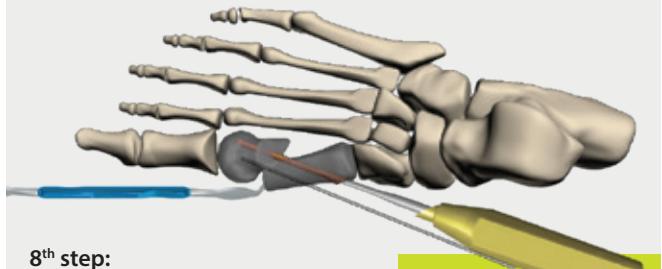
#### 6<sup>th</sup> step:

Direct reading of screw lengths on the measuring indicator (ref. 267 811) for proximal screw placement.



#### 7<sup>th</sup> step:

Insertion of the distal k-wire. In case of dense bone, insert the cannulated drill (ref. 267 809). Maintain the percut osteotomy lever until the second screw is inserted.

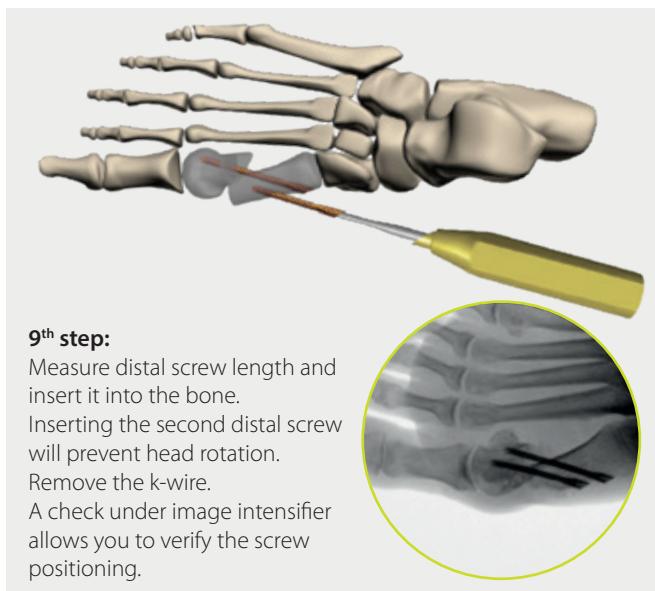


#### 8<sup>th</sup> step:

Insert the proximal screw using a motorized screwdriver (ref. 267 807) or a manual screwdriver (ref. 267 808). The reference mark on the screwdriver indicates the orientation of the screw head bevel. Remove the k-wire. A check under image intensifier allows you to verify the screw positioning.

#### TIP:

Finalize the placement of the beveled screw with a manual screwdriver to optimize bone anchorage without the risk of subcutaneous discomfort.



#### 9<sup>th</sup> step:

Measure distal screw length and insert it into the bone. Inserting the second distal screw will prevent head rotation. Remove the k-wire. A check under image intensifier allows you to verify the screw positioning.

#### 10<sup>th</sup> step:

Burr resection of the medial angle of the proximal fragment of the osteotomy.



#### TIP:

If the fragment is large, it is possible to perform an osteotomy and remove it or place it below the osteotomy site.

#### Note:

Depending on the case, an exostectomy of the metatarsal head, percutaneous lateral arthrolysis, and/or AKIN-type phalangeal arthrolysis are performed to complete the correction. Image intensifier control and dressing.

#### Postoperative course:

- Partial weight-bearing on day 15
- Dressing to be redone on day 15
- Postoperative shoe for 30 to 45 days depending on the extent of the translation

## CLINICAL CASES (post-operative X-rays 1 year follow-up)

Right side



Left side



## IMPLANTS REFERENCES

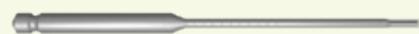
Ref.	Designation
270 681	bePOD beveled cannulated 45B screw Ø3 LG16 mm
270 682	bePOD beveled cannulated 45B screw Ø3 LG18 mm
270 683	bePOD beveled cannulated 45B screw Ø3 LG20 mm
270 684	bePOD beveled cannulated 45B screw Ø3 LG22 mm
270 685	bePOD beveled cannulated 45B screw Ø3 LG24 mm
270 686	bePOD beveled cannulated 45B screw Ø3 LG26 mm
270 687	bePOD beveled cannulated 45B screw Ø3 LG28 mm
270 688	bePOD beveled cannulated 45B screw Ø3 LG30 mm
267 823	bePOD beveled cannulated 45B screw Ø3 LG32 mm
267 824	bePOD beveled cannulated 45B screw Ø3 LG34 mm
267 825	bePOD beveled cannulated 45B screw Ø3 LG36 mm
267 826	bePOD beveled cannulated 45B screw Ø3 LG38 mm

Ref.	Designation
267 827	bePOD beveled cannulated 45B screw Ø3 LG40 mm
267 828	bePOD beveled cannulated 45B screw Ø3 LG42 mm
267 829	bePOD beveled cannulated 45B screw Ø3 LG44 mm
267 830	bePOD beveled cannulated 45B screw Ø3 LG46 mm
267 831	bePOD beveled cannulated 45B screw Ø3 LG48 mm
267 832	bePOD beveled cannulated 45B screw Ø3 LG50 mm
270 689	bePOD beveled cannulated 45B screw Ø3 LG52 mm
270 690	bePOD beveled cannulated 45B screw Ø3 LG54 mm
270 691	bePOD beveled cannulated 45B screw Ø3 LG56 mm
270 692	bePOD beveled cannulated 45B screw Ø3 LG58 mm
270 693	bePOD beveled cannulated 45B screw Ø3 LG60 mm

## INSTRUMENTATION



**267 807** - Motor screwdriver



**267 809** - Drill



**267 811** - Measurer



**267 808** - Manual screwdriver

**254 920** - K-wire D1 L130

**269 057** - K-wire D1,5 L150

## INSTRUMENTATION MIS 2 - OPTIONAL



**258 163** - Percut osteotomy lever MIS II

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DISTRIBUTEURS  
DISTRIBUTORS

**FR, FH ORTHO SAS**  
3 rue de la Forêt - Zone Industrielle  
BP 50009  
68990 Heimsbrunn CEDEX - FRANCE  
Tél. +33 (0)3 89 81 90 92  
Fax : +33 (0)3 89 81 80 11  
info@fhortho.com  
www.fhortho.com

**USA, FH ORTHOPEDICS INC.**  
OrthoEx  
7327 E Tierra Buena Lane  
Scottsdale, Arizona 85260 - USA  
Phone: +1 (412) 965-0950  
customerservice@fhortho-us.com  
www.fhortho.com

**PL, FH ORTHO POLSKA**  
Ul. Garbary 95/A6,  
61-757 Poznan - POLSKA  
Phone: +48 61 863 81 27  
Fax: +48 61 863 81 28  
biuro@implants24.pl  
www.fhortho.com

**FABRICANT  
MANUFACTURER**

**FR, FH INDUSTRIE**  
6 rue Nobel, Z.I. de Kernevez  
29000 QUIMPER - FRANCE  
Tél. +33 (0)2 98 55 68 95  
Fax : +33 (0)2 98 53 42 13  
contact-fhi@fhortho.com  
www.fhortho.com