INSTRUMENTATION FOR MINIMALLY-INVASIVE FOREFOOT SURGERY
INSTRUMENTATION FOR MINIMALLY INVASIVE FOREFOOT SURGERY

MIS

A complete solution

> Precise indications
> Innovative techniques

The aim of the surgical approach to Hallux Valgus referred to as "minimally invasive" is the same as that of open-air surgery:

1st shaft
M1:
>> to reduce the prominence of the medial side of the 1st metatarsal head;
>> to perform osteotomy of the basis of M1;
>> to perform distal osteotomy of M1;
   - with translation or not;
   - with correction of excess DMAA (Distal Metatarsal Articular Angle), by realignment of the distal articular surface of the 1st metatarsal.

MTP joint:
>> to perform lateral arthrolysis of the MTP joint (Metatarsophalangeal joint).

P1:
>> to perform every type of osteotomies: variation, derotation, shortening.

Lesser rays:
>> to perform Distal Metatarsal Mini-Invasive Osteotomies (DMMO).
>> to perform lesser toes deformities corrections.

The type of surgery is based on the use of specific equipment (Manual instruments, Fluoroscope, and appropriate power system) to allow the use 1 or 3 mm incisions (minimally invasive approaches). The FH ORTHOPEDICS manual instruments are ideally suited to the specific requirements of this type of surgery: a complete instrumentation and a wide range of specific burrs.

Instrumentation

> Simple, compact instrumentation.
> 7 essential instruments:
   - 2 rasps to extract bone debris.
   - Separator and retractors to ease the surgical procedure.

Rasps

The rasps were designed to extract small bone debris and not to rasp the bone produced when reducing the volume of the 1st metatarsal head by the use of burr.

- They have different orientations (angle: 15°) and are available in 2 widths (1.5 mm and 3 mm).
- Anatomic handle for efficient ergonomy.

Beaver handle (ref. 254 137) + Beaver blade 3 mm (ref. 266 154)

Surgical knife

To permit minimal invasive approaches.
>> Consists of a blade holder 75 mm long perfectly adapted to MIS gestures.
>> The Beaver blades have the advantage of permitting an incision in the line of the surgical knife over a width of between 1 to 3 mm.

Separator

To elevate the soft tissues and create a "working" area.
>> To work directly in contact with the bone.
>> 1 elevator and 1 raspatory assembled in one unique instrument.

Retractors

Percutaneous bone lever is designed to displace easily (lateral translation) the 1st shaft osteotomy, by percutaneous approach.

Retractors are used to create a "working area" by exposing the metatarsal head for osteotomy procedure by mini-open approach.
The power system and burrs:

A handpiece should be used. 8 specific burrs have been designed. Depending on their shape they enable the surgeon to perform osteotomies or bone resections.

>> Single use;
>> Individually sterile packed;
>> Protection by a silicone ring;
>> Easy identification thanks to the color coded;
>> Connection possibility: rounded end for Jacob chuck;
>> Rotation rate: 1500 to 8000 RPM (max); the use of a torque reducer is highly recommended.

A complete surgical technique is also available: “Minimally Invasive Surgery”, a document produced by the GRECMIP group (Research and Study Group for Minimally Invasive Foot Surgery) and the TALUS group from GECO (www.geco-medical.org).

### Instruments set

<table>
<thead>
<tr>
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<th>be POD MIS II</th>
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<td>258 158</td>
<td>RASP THICK. 1.5 MM MIS II be POD</td>
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<td>PERCUTANEOUS OSTEOPTOMY BONE LEVER MIS II be POD</td>
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<td>254 327</td>
<td>BEAVER HEX. HANDLE 7.5 CM D. 0.5 CM MIS II be POD</td>
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<tr>
<td>258 164</td>
<td>BOX FOR MIS FOOT INSTRUMENTS MIS II be POD</td>
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**Single use instruments**

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<th>Ref.</th>
<th>MIS BURR (BOX OF 5)</th>
<th>INDICATIONS</th>
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#### OSTEOTOMIES

- **256 016** WEDGE BURR 3.1x13mm MIS | Metatarsal osteotomy with substantial level of correction (10 to 20°). To flatten and thin the bone; to contour in certain cases.  
- **256 018** STRAIGHT SHANNON BURR 2.0 x 12 mm MIS | Primary metatarsal osteotomy of M1 or osteotomy of P1, neutral level of correction (<10°).  
- **256 019** SHORT SHANNON BURR 2.0 x 08 mm MIS | All surgical bone procedures of the lesser toes (R2 to R3) - claw of toes, flat, clinodactyly, shortening, soft corn.  
- **256 020** LONG SHANNON BURR 2.0 x 12 mm MIS | Metatarsal osteotomy of M1 or osteotomy of P1 allowing the maximal correction of angle (10°) DMMO (Distal Metatarsal Mini Invasive Osteotomy) - Contouring of metatarsal heads (R2 to R5)  
- **258 156** PERCUTANEOUS CHEVRON BURR 3.0 x 20 mm MIS II | Percutaneous chevron type osteotomy, with shortening effect.  
- **258 157** PERCUTANEOUS CHEVRON BURR 2.5 x 14 mm MIS II | Percutaneous chevron type osteotomy.  
- **264 425** PERCUTANEOUS CHEVRON BURR 2.0 x 20 mm MIS II | Percutaneous chevron type osteotomy, without shortening effect.  

#### BONE RESECTION

- **256 017** WEDGE BURR EXTRA 4.1 x 13 mm MIS | To shave and reduce (the medial part of the M1 head) as primary procedure; cheilectomy of Hallux Rigidus.  

#### INCISION

- **264 259** BEAVER BLADES (ROUNDED) 1 mm be POD (BOX x 24) | Small incision of 1mm for lateral rays  
- **266 354** BEAVER BLADES (ROUNDED) 3 mm be POD (BOX x 20) | Incision / Arthrolysis / Tenotomy  
- **266 356** BEAVER BLADES (POINTED) 3 mm be POD (BOX x 20) | Incision / Arthrolysis / Tenotomy  

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FH ORTHOPEDICS S.A.S.
3 rue de la Forêt - F 68990 HEIMSBRUNN
Tel.: +33 3 89 81 90 92 / Fax: +33 3 89 81 80 11
e-mail: orthopedie@fhorthopedics.fr
www.fhorthopedics.com

POLSKA, IMPLANTS INDUSTRIE
Ul. Garbary 95/A6, 61-757 Poznan
Tel.: +48 61 863 81 27 / Fax: +48 61 863 81 28
Email: fh.orthopedics@poczta.internetdsl.pl

USA, FH ORTHOPEDICS INC.
4118 N. Nashville Ave. - Chicago - IL 60654
Tel.: +1 (773) 290 1039 / Fax: +1 (773) 539 9328
e-mail: info-us@fhorthopedics.com
www.FHortho.com