Hallux Valgus Surgical Technique

**Step 1: First Metatarsal Osteotomy (M1)**

A. Exostectomy
Using an oscillating saw or a percutaneous reamer, perform metatarsal head resection so as to create a smooth surface.

B. Chevron Osteotomy (‘V-shaped’ osteotomy)
1. The first cut is performed distally, dorsally and transversally under visual control, just behind the articular surface, and perpendicularly to the axis of the second metatarsal. The osteotomy depth should be about 5mm.
2. The second cut is performed toward the plantar diaphysis.

C. Translation of bone fragment
Displace the distal fragment laterally to correct alignment. Temporary wire fixation can help maintaining the correct alignment.

D. Positioning the guide wire
Using the appropriate guide, insert the wire corresponding to the chosen screw diameter (Ø0.8mm for Ø2.25mm screws / Ø1.0mm for Ø2.6 and 3.0mm screws – the colour code of the wire holders helps to clearly identify the suitable wire size).

E. Determining screw lengths
Choose the 3-in-1 instrument (measuring device, countersink and screwdriver*) corresponding to the screw diameter** and insert it manually onto the guide wire until it touches the bone. Read the screw length on the measuring gauge at the tip of the wire.

*Each tool is available separately and used with the quick-coupling handle, no power tool is necessary.

**Each instrument is marked with a silicone colour ring matching the colour code of the used screw.

F. Manual preparation of the first cortical surface
Prepare the first cortical surface using the countersink tip of the 3-in-1 instrument, so that the screw head can be safely inserted and flush with the cortex.

NB: The preparation of the cortex is critical in order to get an optimum fracture compression.

G. Inserting the screw
The self tapping property of the screw allows its direct insertion without a pre-drill using the screwdriver tip of the 3-in-1 instrument*. Finalize the screw insertion manually and check if the screw head is totally inserted. Remove the wires and excise the medial eminence of the dorsal fragment.

*In case of a hard cortical bone it is recommended to drill before the screw insertion.

**INTERMEDIATE RESULT**
H. Varus osteotomy
The Akin osteotomy of P1 is performed using a percutaneous reamer.

I. Determining screw length
Stabilize the varus osteotomy with the wire corresponding to the chosen screw diameter: Insert it until lightly touching the second cortical surface.

Choose the suitable 3-in-1 instrument to measure the screw length (cf. E).

J. Manual preparation of the first cortical surface
Prepare the first cortical surface using the countersink tip of the 3-in-1 instrument, so that the screw head can be safely inserted and flush with the cortex.

K. Inserting the screw
Insert the screw* of the appropriate length, using the screwdriver tip of the 3-in-1 instrument.
Finalize the screw insertion manually and check if the screw head is totally inserted. Remove the wire.
*In case of a hard cortical bone or a bicortical fixation it is recommended to drill before the screw insertion.