Metatarsal Decompression Implant

Surgical Technique Part No. 10036 - D

The enclosed surgical procedure is furnished for informational purposes only. Each surgeon must evaluate the appropriateness of the device and techniques based on his or her own medical training, clinical judgement and surgical experience. Proper surgical techniques and procedures are the responsibility of the medical professional. Solana Surgical cannot recommend a device or procedure that is suitable for all patients. Indications, contraindications, warnings, and precautions are listed in the implant package insert and should be reviewed by the physician and operating room personnel.

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A longitudinal incision is made just medial to the extensor hallucis longus tendon, over the first metatarsal phalangeal joint. The incision is deepened by sharp and blunt dissection to the joint. A longitudinal capsulotomy is performed and the joint is dissected free. The articular cartilage is inspected and if the degenerative changes are primarily on the metatarsal head, then the patient is a candidate for a metatarsal hemi implant arthroplasty.

**Progressive Decompression**

1. All hypertrophic bone is resected from the first metatarsal head, and the dorsal aspect of the base of the proximal phalanx of the hallux.

2. The osteotomy cutting jig is placed with the inferior tabs positioned within the joint space. There is a built-in retractor for the EHL tendon.

6. The cannulated drill is placed over the K-wire guide pin, and the medullary canal is drilled until the drill hits its stop. The drill and guide pin are now removed.

7. The broach instrument is utilized to square the entrance to the medullary canal.
3. The longitudinal axis of the handle should be parallel to the long axis of the second metatarsal. K-wires may be placed in the dorsal holes of the jig if additional stability is desired. A power saw is utilized to resect the distal aspect of the metatarsal head by placing the saw blade in the proximal slot. **Note:** Care should be taken to protect the articular surface of the proximal phalanx.

4. Sizer instruments are used to select the appropriate size prosthesis. The sizer instrument is placed against the cut surface with the dorsal tab positioned on the dorsal surface of the metatarsal.

5. The size that best covers the exposed bone surface, without over-hanging, would be the appropriate size implant. With the appropriate sizer placed against the cut bone surface, a 0.062 K-wire guide pin is placed through the sizer into the metatarsal. The sizer instrument is now removed leaving the K-wire in the bone to act as a guide pin for drilling the medullary canal.

8. The medullary canal has now been prepared to accept the stem of the trial sizer.

9. A trial sizer is placed in the medullary canal to finalize the fit and check range of motion.

10. The appropriate size implant is now press fit in the medullary canal using the impactor instrument.

11. The joint capsule is repaired with suture of the surgeon’s choice. The prosthesis should be completely covered. Remaining wound closure is performed in the usual manner. Post-operative management is similar to other joint arthroplasty procedures.
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## Sizing and Dimensions

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Size</th>
<th>Head Width A</th>
<th>Head Height B</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD101</td>
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<td>16.3</td>
<td>12.6</td>
</tr>
<tr>
<td>MD102</td>
<td>2</td>
<td>17.9</td>
<td>13.9</td>
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<td>MD103</td>
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<tr>
<td>MD104</td>
<td>4</td>
<td>21.4</td>
<td>16.6</td>
</tr>
</tbody>
</table>

Dimensions are in millimeters.

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