



DIGIFUSE[◇]

Cannulated Intramedullary Fusion

Surgical Technique



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Note Bena

The following technique is for informational and educational purposes only. It is not intended to serve as medical advice. It is the responsibility of treating physicians to determine and utilize the appropriate products and techniques according to their own clinical judgment for each of their patients. For more information on the product, including its indications for use, contraindications, and product safety information, please refer to the product’s label and the Instructions for Use packaged with the product.

Design rationale

The DIGIFUSE[®] Cannulated Implant System is designed for ease of use and enhanced stabilization for intramedullary fusions of the lesser digits. The 2.0mm and 2.5mm diameter sizes and standard, short and mini blade options, combined with the zero and ten degrees of plantar flexion, provide a variety of configurations to match patient anatomy and achieve desired results. Manufactured from titanium alloy, the implants do not require specialized handling prior to surgery.

System features

- Combined screw / anchor blade system
- Cannulated implant / instruments aid in accurate placement
- 2.0mm and 2.5mm diameters with 0° and 10° angle options
- Standard, short and mini implant options cover a wide range of anatomy
- Manufactured from titanium alloy



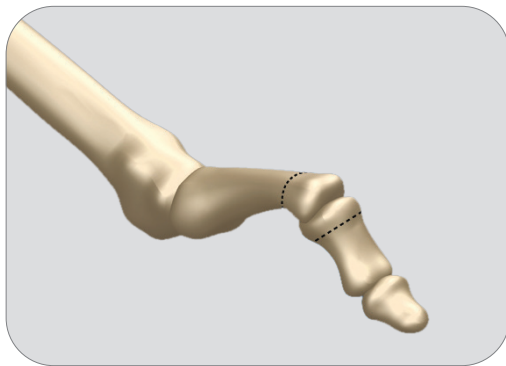


Figure 1-1

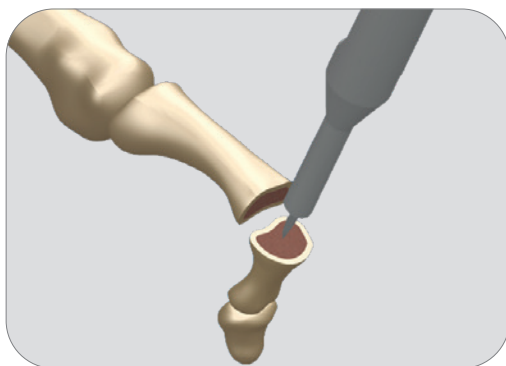


Figure 2-1

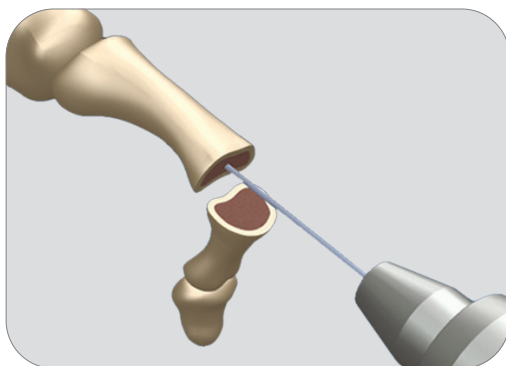


Figure 3-1

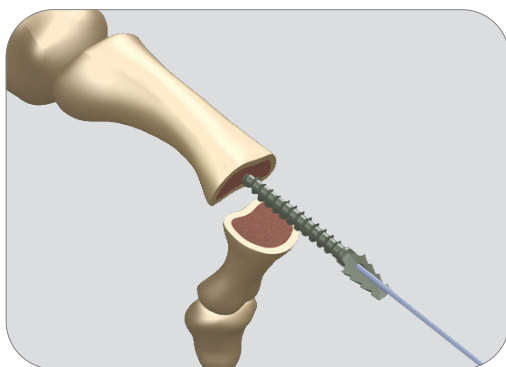


Figure 4-1

Step 1 • Incision, Exposure and Resection

1-1 Perform an incision, of the surgeon's choice, over the proximal interphalangeal (PIP) joint. Reflect the soft tissues surrounding the PIP joint to completely expose the joint for resection. Determine at this point if the 0° or 10° plantar correction implant will be utilized. While standard perpendicular osteotomies will provide effective results, any resection cuts at this point can be made to reflect the eventual use of the corresponding implant as it relates to plantar correction. Complete the resection of the PIP joint in preparation for the PIP joint fusion.

Step 2 • Broaching the Middle Phalanx

2-1 Position the tip of the broach on the middle phalanx in the correct orientation, and insert the broach while holding the middle phalanx to secure it. The broach features a marked line indicating the correct dorsal positioning of the implant when situated in the phalanx and should be oriented in the 12 o'clock position during broaching. The broach should be inserted until the shoulder contacts the resected portion of the middle phalanx. In soft bone, broaching can be eliminated at the surgeon's discretion.

Step 3 • Placement of Guide Wire

3-1 Drive the guide wire into the center of the resection site, parallel to the longitudinal axis of the phalanx. Advance the wire through the medullary canal into the subchondral bone, closest to the MP joint. Intra-operative radiographs should be taken at this time to verify proper positioning of the guide wire. If the guide wire is not positioned in the center of the proximal phalanx, repeat step 3 until proper positioning is achieved.

Step 4 • Implant Selection

4-1 After the guide wire is correctly placed, select the appropriate sized implant based on the size of the proximal phalanx and previously selected plantar correction. Place the distal end of the threaded portion of the implant over the guide wire, and advance the implant up to the resection site.

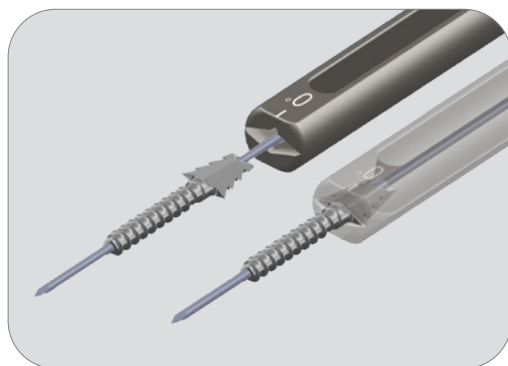


Figure 4-2

Step 4 • Implant Selection *(Continued)*

4-2 Slide the driver (0° or 10°) over the guide wire, and engage the barbed end of the implant.

4-3 Care should be taken to make sure the 0° or 10° driver is utilized on the corresponding 0° or 10° implant.

Step 5 • Implant Placement in Proximal Phalanx

5-1 Turn the screw into the proximal phalanx until the threaded portion of the implant is completely or near completely recessed into the phalanx, and the dorsal mark on the driver is aligned in the 12 o'clock position.

It is important to leave a gap between the blade tips and the proximal phalanx to maximize engagement in the middle phalanx.

Step 6 • Placement of Middle Phalanx and Closure

6-1 Manually distract the middle phalanx, and place the broached hole over the barbed end of the implant that is protruding from the proximal phalanx using care to align the broached hole with the implant blade.

Using firm pressure, press the middle phalanx onto the barbed end until the resected surfaces of the middle phalanx and proximal phalanx meet. Once the implant is fully seated, carefully check for retention.

Verification can be confirmed by utilizing intra-operative radiographs in multiple axes.

Close the incisions with the suture material of choice.

Post-operative care is according to surgeon preference and should follow protocol for fusions of a similar nature.

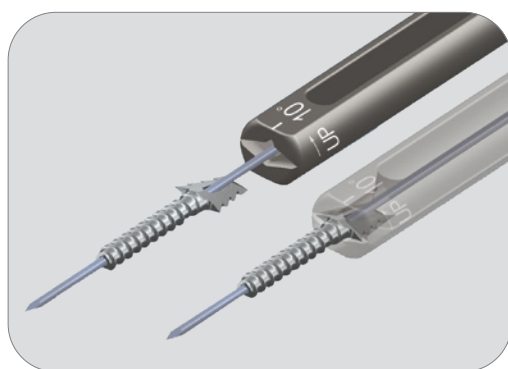


Figure 4-3

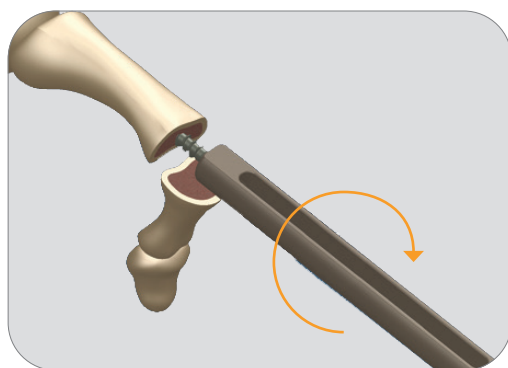


Figure 5-1

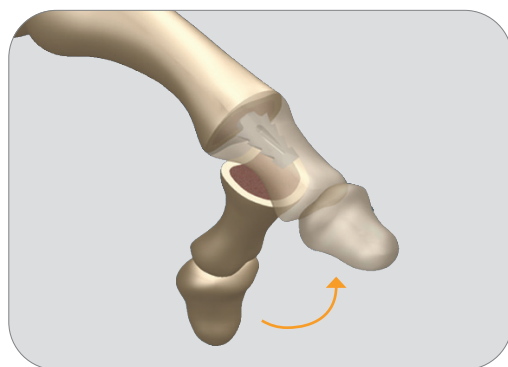


Figure 6-1

Product information



Implants / Guide Wires

Reference	Description
DF2000	DIGIFUSE Implant 2.0mm - 0° Angle
DF2000M	DIGIFUSE Implant 2.0mm - 0° Angle - Mini
DF2000S	DIGIFUSE Implant 2.0mm - 0° Angle - Short
DF2010	DIGIFUSE Implant 2.0mm - 10° Angle
DF2010S	DIGIFUSE Implant 2.0mm - 10° Angle - Short
DF2500	DIGIFUSE Implant 2.5mm - 0° Angle
DF2510	DIGIFUSE Implant 2.5mm - 10° Angle
DW2590	DIGIFUSE Guide Wire (.80 x 70mm)

Instrumentation

Reference	Description
DF1500	DIGIFUSE Ratchet Handle
DF2600	DIGIFUSE Driver Shaft - 0°
DF2610	DIGIFUSE Driver Shaft - 10°
DF2670	DIGIFUSE Broach
DF2680	DIGIFUSE Screw Pick Up
DT4500	DIGIFUSE Sterilization Tray

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