

Smith+Nephew

MEMOFIX[◇]

Super Elastic Nitinol Staple

Surgical Technique

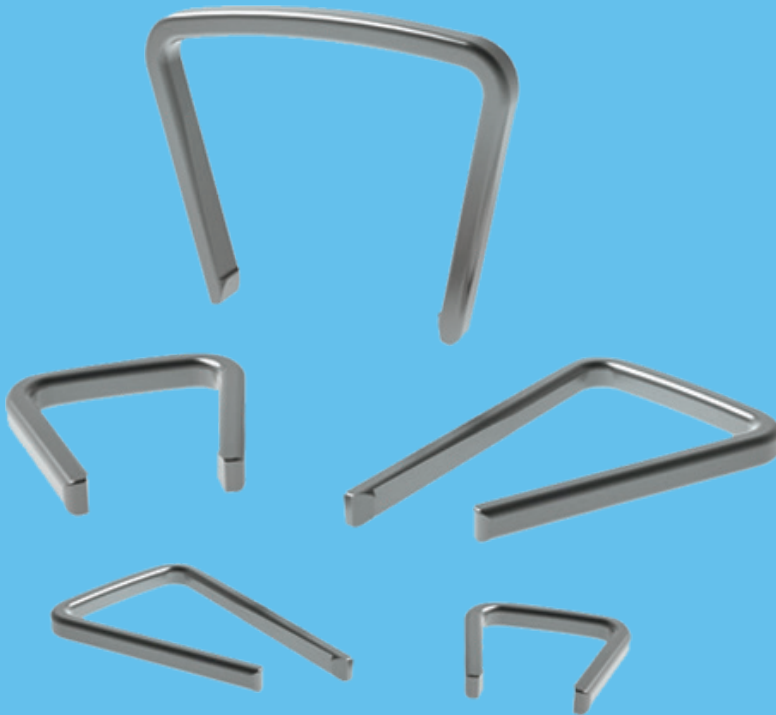


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Design rationale

The MEMOFIX[®] Staples are manufactured from super elastic nitinol and require no specialized storage or temperature sensitive handling. Using proprietary manufacturing processes, Smith+Nephew's staples are designed to provide compression across a fusion site and to reduce the risk of soft tissue irritation by being low profile. The staples are offered in a wide range of sizes and configurations to cover most common extremity procedures.

System features

- No specialized handling or temperature sensitive storage required
- Micro-edge barb technology provides pull-out resistance
- Domed design of staple bridge reduces the dorsal profile
- Easy to use color coded instrumentation

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.



Figure 1-1

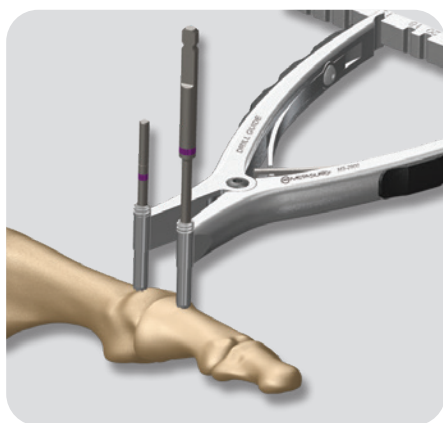


Figure 2-1

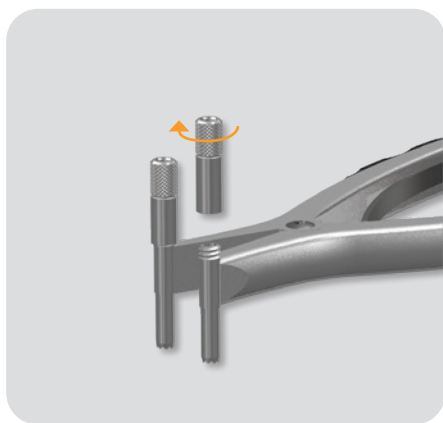


Figure 2-2

Surgical technique

Step 1 • Size selection

Prepare the bone for the corresponding fixation or fusion required to achieve the desired correction.

Using the sizer/drill guide, select the desired staple bridge length by adjusting the handles until the right handle tip is locked into place directly above the marked number indicating the bridge length. (Figure 1-1)

Place the barbed ends of the sizer/drill guide against the bone and verify that the selected bridge length is appropriate for the patient anatomy.

Step 2 • Drilling/Placement

Note: The staple spreaders, drills and pins are color coded to correspond with the various staple sizes. Select the appropriate color instruments for the corresponding staples size that is being utilized. (Figure 2-1)

Once the staple size has been determined, select the corresponding drill for the staple and drill one side of the fixation or fusion site. Remove the drill and place a temporary anchoring pin through the drill guide and into the bone. Drill the second hole on the other side of the fixation or fusion site. (Figure 2-1)

Note: Optional drill stops can be used on one or both sides if precise drilling depth is desired (Figure 2-2). Remove the drill and temporary pin.



Figure 3-1

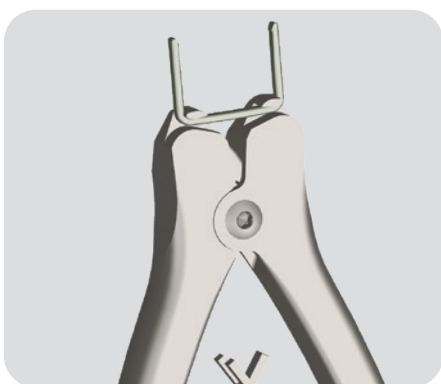


Figure 3-2

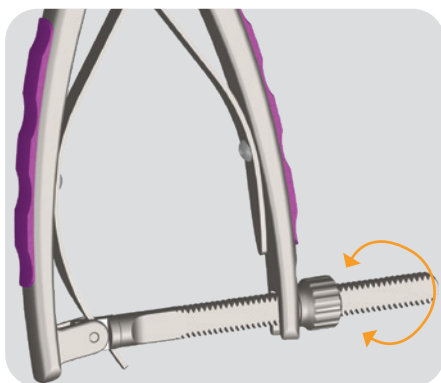


Figure 3-3

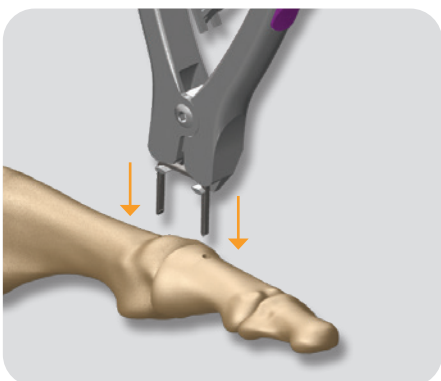


Figure 3-4

Step 3 • Staple Insertion

Load the staple into the staple spreader (Figure 3-1) and secure the staple by squeezing the handles until the staple legs are engaged.

Continue to slowly squeeze the handles until the staple legs are parallel (Figure 3-2).

To maintain the desired distraction of the staple, turn the knob on the locking bar until it touches the handle (Figure 3-3). This will accurately maintain the staple shape during placement without the need to continue squeezing the handles of the spreader. Place the distracted staple into the predrilled holes and press the staple in until the staple spreader is almost flush with the bone.

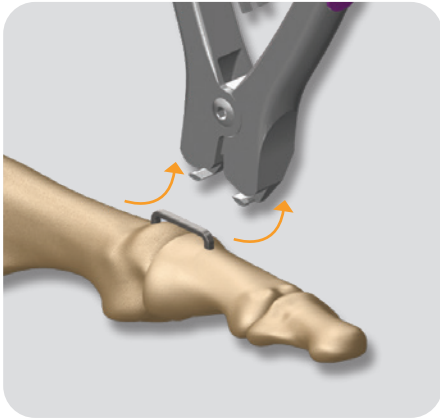


Figure 4-1



Figure 5-1

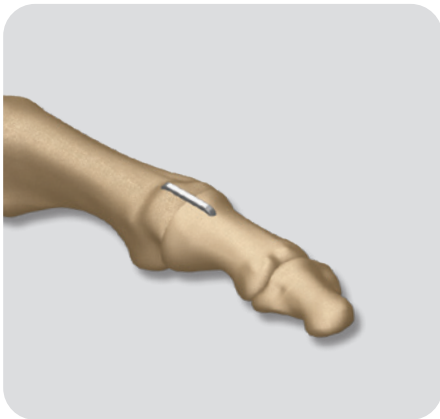


Figure 6-1

Step 4 • Staple Position

Disengage the staple spreader from the staple by lifting the locking bar from the slot on the handle while gently squeezing the handles so they do not snap closed. Carefully remove the tips of the jaws from underneath the staple bridge. (Figure 4-1)

Step 5 • Tamping

Using the tamp, push the staple into the bone until the underside of the bridge is flush with the top surface of the bone. Additional tamping on each of the staple bridge corners can further reduce the profile of the final staple position. (Figure 5-1)

Note: Use of a mallet is optional.

Step 6 • Verification/Closure

Verify the placement of the staple is correct. Verification can be confirmed by utilizing a mini C-arm (or equivalent) in multiple axes.

If additional compression or stabilization is desired, multiple staples can be used by repeating Steps 1-5. The incision can be closed with the suture material of choice.

Post operative care is according to surgeon preference and should follow protocol for fixation or fusions of a similar nature. (Figure 6-1)

Removal:

If it becomes necessary to remove a staple, the removal tool can be utilized to lift the staple bridge to a position allowing the staple spreader to be engaged. Once the staple spreader is engaged, the handles can be squeezed to distract the legs sufficiently to remove the staple.

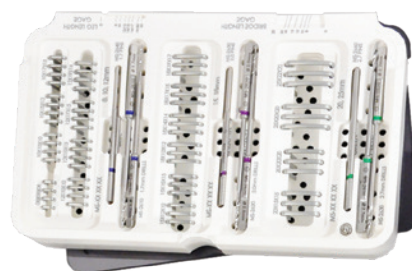
Implants

Reference	Description
MS080808	MEMOFIX® Staple 08mm x 08mm x 08mm
MS101010	MEMOFIX Staple 10mm x 10mm x 10mm
MS101513	MEMOFIX Staple 10mm x 15mm x 13mm
MS101715	MEMOFIX Staple 10mm x 17mm x 15mm
MS121010	MEMOFIX Staple 12mm x 10mm x 10mm
MS121513	MEMOFIX Staple 12mm x 15mm x 13mm
MS121715	MEMOFIX Staple 12mm x 17mm x 15mm
MS121916	MEMOFIX Staple 12mm x 19mm x 16mm
MS151212	MEMOFIX Staple 15mm x 12mm x 12mm
MS151515	MEMOFIX Staple 15mm x 15mm x 15mm
MS181212	MEMOFIX Staple 18mm x 12mm x 12mm
MS181414	MEMOFIX Staple 18mm x 14mm x 14mm
MS181715	MEMOFIX Staple 18mm x 17mm x 15mm
MS181917	MEMOFIX Staple 18mm x 19mm x 17mm
MS201515	MEMOFIX Staple 20mm x 15mm x 15mm
MS202020	MEMOFIX Staple 20mm x 20mm x 20mm
MS252020	MEMOFIX Staple 25mm x 20mm x 20mm
MS252222	MEMOFIX Staple 25mm x 22mm x 22mm



Instrumentation

Reference	Description
MS2610	MEMOFIX Drill Bit - 1.7mm
MS2620	MEMOFIX Drill Bit - 2.0 mm
MS2630	MEMOFIX Drill Bit - 2.7mm
MS2640	MEMOFIX Pin - 1.7mm
MS2650	MEMOFIX Pin - 2.0mm
MS2660	MEMOFIX Pin - 2.7mm
MS2708	MEMOFIX Drill Stop Adapter - 8mm
MS2710	MEMOFIX Drill Stop Adapter - 10mm
MS2712	MEMOFIX Drill Stop Adapter - 12/13mm
MS2714	MEMOFIX Drill Stop Adapter - 14/15mm
MS2716	MEMOFIX Drill Stop Adapter - 16/17mm
MS2719	MEMOFIX Drill Stop Adapter - 19/20mm
MS2722	MEMOFIX Drill Stop Adapter - 22mm
MS2810	MEMOFIX Staple Spreader - 8, 10, 12mm
MS2815	MEMOFIX Staple Spreader - 15, 18mm
MS2820	MEMOFIX Staple Spreader - 20, 25mm
MS2900	MEMOFIX Drill Guide
MS2920	MEMOFIX Tamp
MS2930	MEMOFIX Pickup Forceps
MS2940	MEMOFIX Removal Tool
MT3000	MEMOFIX Sterilization Instrument Tray
MT4000	MEMOFIX Staple Sterilization Tray Caddy



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