# Four-Corner Fusion With DynaNite® Staples





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Introduction



The DynaNite nitinol staple combines low-profile compressive fixation with easy-to-use instrumentation

- Low-profile, 1 mm bridge height available in sizes:
  9 mm × 7 mm, 9 mm × 10 mm, 11 mm × 10 mm,
  11 mm × 12 mm, and 11 mm × 15 mm staples
- Fourteen different sizes offered in a combination of bridge widths and leg lengths
- Easy-to-use instrumentation makes insertion quick and accurate
- Staple is delivered preloaded on the DynaNite delivery device; the staple is also reloadable should it be required

- Trocar-tipped alignment pins provide a great bite in bone and are particularly useful for fluoroscopy
- Ergonomically designed DynaNite delivery device allows the surgeon to control the opening of the staple legs
- Drill guide "windows" facilitate easy location of staple legs in drilled holes
- Sold in single-use disposable kits

#### Surgical Technique



Perform a scaphoid excision. Expose and prepare the joints through decortication of cartilage of the capitolunate, capitohamate, triquetrohamate, and lunotriquetral joints. Reduce the joints with guidewires placed out of the trajectory of the DynaNite staples.



With the joint reduced, determine the correct implant size with the DynaNite staple sizing guide. Open the corresponding DynaNite staple kit.



Remove the DynaNite delivery device (with preloaded DynaNite staple) from the sterilized kit.

Note: The DynaNite staple legs will come slightly bent inward and in tension against the device. The legs will be opened to parallel before placement in bone.



Center the DynaNite drill guide across the fusion site. Use the DynaNite drill bit to drill the first hole. Note: The drill bit is laser-marked to help drill to the correct depth.

### Surgical Technique (Cont.)



Insert a DynaNite<sup>®</sup> alignment pin through the drill guide into the first drilled hole.



Drill the second hole on the lunate using the drill bit and drill guide. If desired, insert the second alignment pin. Remove the drill guide, leaving the alignment pins in place to help identify drill hole locations. A trough can be created between the two drill holes to allow the staple to be recessed.



Turn the knob on the DynaNite delivery device clockwise until the staple legs are open to a width equal to the predrilled holes.

Note: The staple legs should be in a parallel, or near parallel, position prior to insertion to facilitate compression of the osteotomy once the staple is inserted.



Remove the alignment pins and hold the drill guide against the cortical surface to maintain the location of the drill holes if needed. Use the windows in the drill guide to help position the tips of the staple legs into the drilled holes. Once the surgeon is satisfied with the position of the staple, the drill guide can be removed.

### Surgical Technique (Cont.)



Using the delivery device, advance the staple legs into the drill holes until the device is seated against the bone. A mallet can be used if necessary.



Once the DynaNite® staple is inserted and seated against the bone, turn the delivery device knob counterclockwise until the staple is no longer under tension with the delivery device. Slide the delivery device away from the staple.



Use the DynaNite tamp to fully seat the staple against the cortical surface. Repeat steps 2 through 11 for additional fixation.



Final construct. Additional staples can be added as desired.

# Surgical Technique (Cont.)



Examples of two common constructs.

## Ordering Information

#### DynaNite® Nitinol Compression Staples – All Available Sizes

Product Description	Item Number
DynaNite Nitinol Staple, 9 mm × 7 mm	AR- <b>8717-0907</b>
DynaNite Nitinol Staple With Instruments, 9 mm × 7 mm	AR- <b>8717DS-0907</b>
DynaNite Nitinol Staple, 9 mm × 10 mm	AR-8717-0910
DynaNite Nitinol Staple With Instruments, 9 mm × 10 mm	AR- <b>8717DS-0910</b>
DynaNite Nitinol Staple, 11 mm × 10 mm	AR- <b>8717-1110</b>
DynaNite Nitinol Staple With Instruments, 11 mm × 10 mm	AR- <b>8717DS-1110</b>
DynaNite Nitinol Staple, 11 mm × 15 mm/12 mm	AR-8717-111512
DynaNite Nitinol Staple With Instruments, 11 mm × 15 mm/12 mm	AR- <b>8717DS-111512</b>
DynaNite Nitinol Staple, 13 mm × 10 mm	AR- <b>8718-1310</b>
DynaNite Nitinol Staple With Instruments, 13 mm × 10 mm	AR- <b>8718DS-1310</b>
DynaNite Nitinol Staple, 13 mm × 15 mm/12 mm	AR-8718-131512
DynaNite Nitinol Staple With Instruments, 13 mm × 15 mm/12 mm	AR- <b>8718DS-131512</b>
DynaNite Nitinol Staple, 15 mm × 12 mm	AR- <b>8718-1512</b>
DynaNite Nitinol Staple With Instruments, 15 mm × 12 mm	AR- <b>8718DS-1512</b>
DynaNite Nitinol Staple, 15 mm × 15 mm	AR- <b>8719-1515</b>
DynaNite Nitinol Staple With Instruments, 15 mm × 15 mm	AR- <b>8719DS-1515</b>

Product Description	Item Number
DynaNite Nitinol Staple, 18 mm × 15 mm	AR- <b>8719-1815</b>
DynaNite Nitinol Staple With Instruments,	AR-8719DS-1815
18 mm × 15 mm	
DynaNite Nitinol Staple, 18 mm × 18 mm	AR- <b>8719-1818</b>
DynaNite Nitinol Staple With Instruments,	AR-8719DS-1818
18 mm × 18 mm	
DynaNite Nitinol Staple, 18 mm × 18 mm/15 mm	AR-8719-181815
DynaNite Nitinol Staple With Instruments,	AR-8719DS-181815
18 mm × 18 mm/15 mm	
DynaNite Nitinol Staple, 20 mm × 15 mm	AR-8719-2015
DynaNite Nitinol Staple With Instruments,	AR-8719DS-2015
20 mm × 15 mm	
DynaNite Nitinol Staple, 20 mm × 20 mm	AR-8719-2020
DynaNite Nitinol Staple With Instruments,	AR-8719DS-2020
20 mm × 20 mm	
DynaNite Nitinol Staple, 25 mm × 20 mm	AR- <b>8719-2520</b>
DynaNite Nitinol Staple With Instruments,	AR-8719DS-2520
25 mm × 20 mm	
Optional	
Sizing Guide	AR- <b>8717T</b>

\*Common staple sizes for the four-corner fusion staples range from 10 mm-15 mm

View U.S. Patent information at www.arthrex.com/corporate/virtual-patent-marking



This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience and should conduct a thorough review of pertinent medical literature and the product's directions for use. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level or outcomes.

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