Product Overview
Acumed® Total Wrist Fusion Plating System

The Acumed Total Wrist Fusion Plating System is designed for wrist arthrodesis due to deformities associated with degenerative arthritis, brachial plexus palsies, and spastic disorders. This five-plate system features both innovative and traditional designs. Specifically, four of the five plates are positioned on the second metacarpal, which may help reduce extensor tendon irritation. Additionally, the fifth plate is a neutral option that is placed on the third metacarpal and is developed for use with a proximal row carpectomy. All plates have a 15° dorsal bend, established as a balance between anatomic resting position, hand function, and grip strength.
System Features

Carpal cross-screw is designed to offer additional implant stability.

Neutral plate for placement on third metacarpal with an associated proximal row carpectomy.

Converging distal screw construct is designed to assist with pullout resistance.
Total Wrist Fusion

The left- and right-specific plates were designed to sit on the second metacarpal based on published literature that found that plate design is less important than plate position with regard to hardware removal rates. Plate placement in relation to extensor tendon location is important, and this is why Acumed included left- and right-specific second metacarpal plates in the system. Additionally, the left- and right-specific plates place the wrist in a slight ulnar deviation that may improve grip strength.¹

15° of dorsal bend

Left- and right-specific plates for placement on the second metacarpal places wrist into 10° of ulnar deviation
SaveLock Compression Sleeve
The instrument covers the threads on the head of the Hexalobe MultiScrews while compressing the plate to the bone when inserting the screw. The sleeve is threaded over the screw head only and prevents these threads from engaging the plate when inserting the screw shaft into the bone.
A 42-year-old patient with a brachial plexus injury resulting in partial paralysis of the shoulder, elbow, and hand was treated with the Acumed Total Wrist Fusion Plating System.
A patient elected for total wrist arthrodesis following hand replantation in order to improve grip strength.
For reference only. For full instructions, see the current Total Wrist Fusion System Surgical Technique.
Surgical Technique Overview

Carpal Screw Placement
(3.5 mm cortical or hexalobe screw)

Closure
<table>
<thead>
<tr>
<th>Smith &amp; Nephew</th>
<th>Stryker Synthes</th>
<th>Depuy Synthes</th>
<th>Acumed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior Clavicle Plates</td>
<td>Hook Plates</td>
<td>Scapula Border Plates</td>
<td>Glenoid Plates</td>
</tr>
<tr>
<td>Anterior Clavicle Plates</td>
<td>Hook Plates</td>
<td>Scapula Border Plates</td>
<td>Glenoid Plates</td>
</tr>
<tr>
<td>Clavicle Screws/Pins</td>
<td>Clavicle Screws/Pins</td>
<td>Clavicle Screws/Pins</td>
<td>Clavicle Screws/Pins</td>
</tr>
<tr>
<td>Acromion Plates</td>
<td>Acromion Plates</td>
<td>Acromion Plates</td>
<td>Acromion Plates</td>
</tr>
<tr>
<td>Proximal Humeral Nails</td>
<td>Proximal Humeral Nails</td>
<td>Proximal Humeral Nails</td>
<td>Proximal Humeral Nails</td>
</tr>
<tr>
<td>Midshaft Plates</td>
<td>Midshaft Plates</td>
<td>Midshaft Plates</td>
<td>Midshaft Plates</td>
</tr>
<tr>
<td>90/90 Plates</td>
<td>Parallel Plates</td>
<td>External Fixation</td>
<td>Olearon Plates</td>
</tr>
<tr>
<td>Distal Humerus Plates</td>
<td>Distal Humerus Plates</td>
<td>Distal Humerus Plates</td>
<td>Distal Humerus Plates</td>
</tr>
<tr>
<td>Proximal Ulna Plates</td>
<td>Proximal Ulna Plates</td>
<td>Proximal Ulna Plates</td>
<td>Proximal Ulna Plates</td>
</tr>
<tr>
<td>Proximal Ulna Nails</td>
<td>Proximal Ulna Nails</td>
<td>Proximal Ulna Nails</td>
<td>Proximal Ulna Nails</td>
</tr>
<tr>
<td>Radial Head Plates</td>
<td>Radial Head Plates</td>
<td>Radial Head Plates</td>
<td>Radial Head Plates</td>
</tr>
<tr>
<td>Radial Head Replacement Short Stem</td>
<td>Radial Head Replacement Long Stem</td>
<td>Radial Head Replacement Long Stem</td>
<td>Radial Head Replacement Long Stem</td>
</tr>
<tr>
<td>Ulna Plates</td>
<td>Anatomic Midshaft Volar Radius Plates</td>
<td>Anatomic Midshaft Volar Radius Plates</td>
<td>Anatomic Midshaft Volar Radius Plates</td>
</tr>
<tr>
<td>Screws</td>
<td>Screws</td>
<td>Screws</td>
<td>Screws</td>
</tr>
<tr>
<td>Headless</td>
<td>Continuous Compression</td>
<td>Differential Pitch</td>
<td>Headed</td>
</tr>
<tr>
<td>Partial Thread</td>
<td>Partial Thread</td>
<td>Partial Thread</td>
<td>Partial Thread</td>
</tr>
<tr>
<td>Full Thread</td>
<td>Full Thread</td>
<td>Full Thread</td>
<td>Full Thread</td>
</tr>
<tr>
<td>Product in Portfolio</td>
<td>Product Not in Portfolio</td>
<td>Partial Offering</td>
<td>Product in Development</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Acumed</td>
<td>DePuy</td>
<td>Synthes</td>
<td>Stryker Smith &amp; Nephew</td>
</tr>
</tbody>
</table>

### Upper Extremity Competitor Product Comparison

- **Shoulder**
  - Clavicle/Scapula
    - Superior Clavicle Plates
    - Anterior Clavicle Plates
    - Hook Plates
    - Scapula Border Plates
    - Glenoid Plates
    - Acromion Plates
    - Clavicle Screws/Pins

- **Humerus**
  - Proximal Humeral Nails
  - Proximal Humeral Plates
  - Midshaft Plates

- **Elbow**
  - Distal Humerus
    - 90/90 Plates
    - Parallel Plates
    - External Fixation
  - Proximal Ulna
    - Olecranon Plates
    - Coronoid Plates
    - Proximal Ulna Nails

- **Radial Head**
  - Radial Head Plates
  - Radial Head Replacement, Short Stem
  - Radial Head Replacement, Long Stem

- **Wrist**
  - Midshaft Forearm
    - Ulna Plates
    - Anatomic Midshaft Volar Radius Plates
    - Dorsolateral Midshaft Radius Plates
    - Ulna Nails
  - Distal Ulna
    - Distal Ulna Plates
    - Ulnar Shortening Plates
    - Volar Distal Radius Plates
    - Dorsal Distal Radius Plates
    - Radial Stylloid Plate
    - Dorsal Rim Plates
    - Dorsal Lunate Plates
    - Volar Lunate Plates
    - Wrist Spanning Plates
    - External Fixation

- **Hand**
  - Carpal
    - Wrist Fusion
    - Nitinol Staples
    - Hand Fracture Plates
    - MCP Fusion Plates
    - External Fixation
    - Specialty Hand Plates
    - Continuous Compression
    - Differential Pitch
    - Partial Thread
    - Full Thread
  - Phalangeal & Metacarpal
    - Hand Fracture Plates
    - MCP Fusion Plates
    - External Fixation
    - Specialty Hand Plates
    - Continuous Compression
    - Differential Pitch
    - Partial Thread
    - Full Thread
  - Screws
    - Headless
    - Headed
    - Partial Thread
    - Full Thread
Reference


Competitor Data Sources

DePuy Synthes website
https://www.depuy synthes.com/

Stryker website

Smith & Nephew website
https://www.smith nephew.com/

All websites accessed on February 1, 2018