

# T2 Alpha<sup>®</sup>

## Humeral Nail

Design rationale



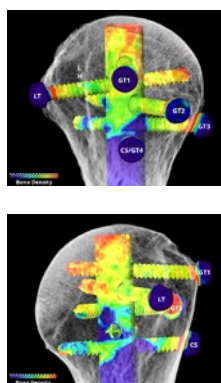
# T2 Alpha Humerus

## Instrumentation & platform overview

### Nail specifications

|            |                                               |
|------------|-----------------------------------------------|
| Long Nail  | <b>Diameters: Ø7-10mm</b>                     |
|            | <b>Lengths: 180-315mm<br/>15mm increments</b> |
| Short Nail | <b>Ø8mm × 150mm</b>                           |

### Stryker Orthopedic Modeling and Analytics (SOMA) Designed Straight Nail<sup>1</sup>



**725** CT scans analyzed across multiple ethnicities and age groups to optimize the anatomic fit and determine size offerings<sup>1</sup>

SOMA defined screw trajectories to capture relevant anatomy (greater tuberosity, lesser tuberosity, calcar) in typical fracture patterns<sup>2</sup>

### Ø4mm Screws (20-60mm)

#### IMN Locking Screws



#### Advanced Locking Screws



Offers **increased axial stability** in any 4mm round locking hole when engaged with the nail's internal threads, providing a 38% increase in fatigue strength compared to standard Ø4mm IMN locking screws.<sup>3,10</sup>

### Washers

- Increases surface area while reducing screw head prominence and improves bone fragment compression<sup>12</sup>
- Countersinks screw 1.5mm
- Includes suture holes



### Instrumentation made easy

Utilizes a single core tray across all Gamma4 and T2 Alpha indications to enhance platform consistency and ease of use.



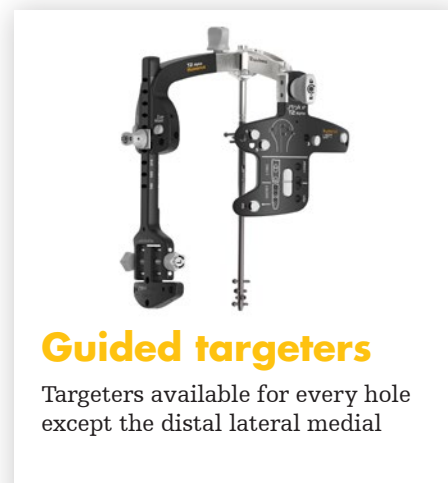
#### Nail height stop

Facilitates precise nail depth placement, while reducing the risk of nail protrusion through the proximal humerus<sup>11</sup>



#### Cuff spreading device

Designed to reduce potential for rotator cuff damage<sup>11</sup>



#### Guided targeters

Targeters available for every hole except the distal lateral medial

# T2 Alpha Humerus

## Long Nail

**Diameter:** Ø7-10mm

**Length:** 180-315mm (15mm increments)

### Five screw multiplanar fixation

SOMA defined trajectories to capture relevant anatomy:<sup>2</sup>

- 3 greater tuberosity
- 1 lesser tuberosity
- 1 calcar

### End Caps



### Proximal Screw Positioning

Screw placed with the triangle formed by the posterior border of the bicipital groove and the cranial border of the greater tuberosity to support proper rotational alignment<sup>11</sup> and guide positioning of subsequent screws

### Transverse Calcar Screw

Biomechanically equivalent in strength compared to the Tornier nail ascending calcar screw<sup>6</sup>

### PEEK Insert

Reduces potential for screw backout with locking screw or advanced locking screw<sup>5</sup>

### 6mm of Active Intraoperative Compression

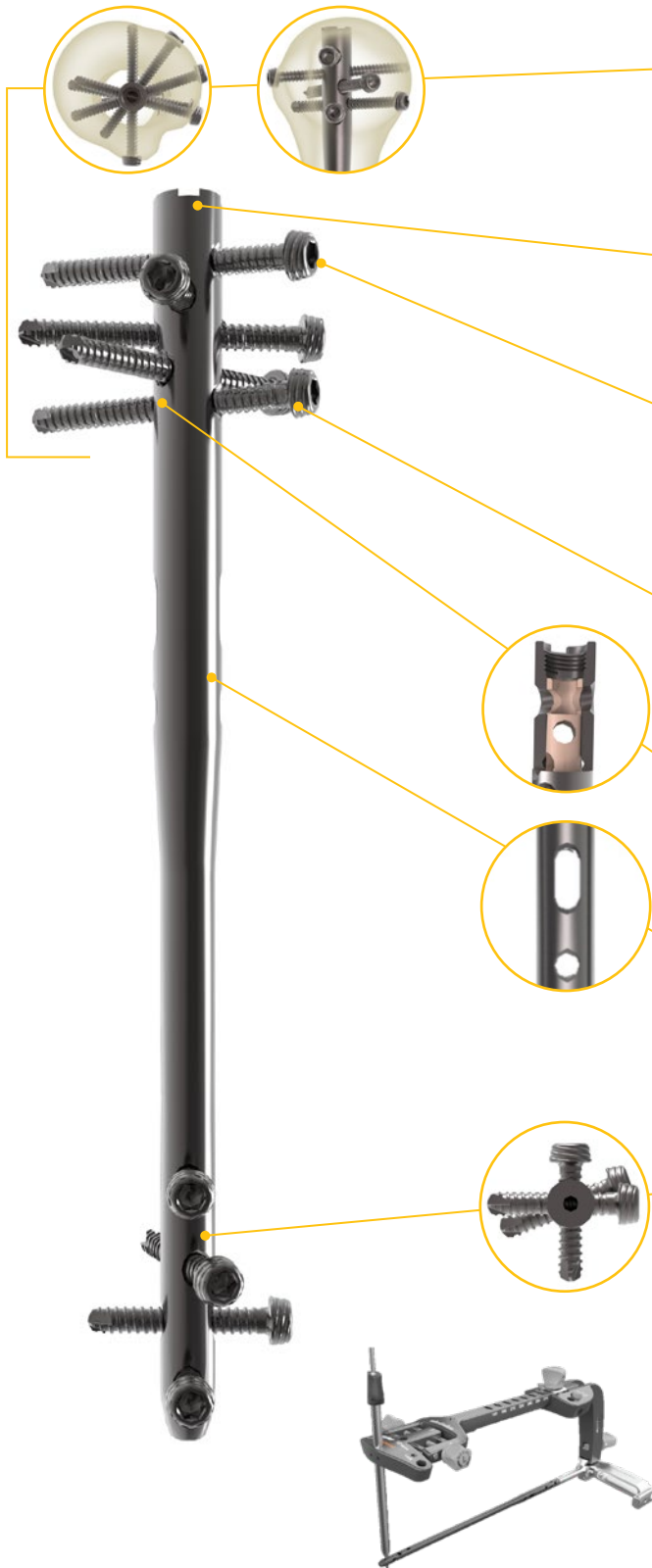
Allows for a more controlled reduction of the fragments when compared to the traditional backslapping method<sup>12</sup>

### Four Distal Screws

Can reduce implant toggle and facilitate higher construct stability, especially in the early postoperative stage<sup>7,8</sup>

### Distal Screw Targeting

- Targets AP and oblique screw holes
- May reduce radiation exposure and time for distal screw placement compared to traditional freehand technique<sup>9</sup>



## Short Nail

**Diameter:** Ø8mm

**Length:** 150mm

### Five screw multiplanar fixation

SOMA defined trajectories to capture relevant anatomy:<sup>2</sup>

- 3 greater tuberosity
- 1 lesser tuberosity
- 1 calcar

### End Caps



### Proximal Screw Positioning

Screw placed with the triangle formed by the posterior border of the bicipital groove and the cranial border of the greater tuberosity to support proper rotational alignment<sup>11</sup> and guide positioning of subsequent screws

### Transverse Calcar Screw

Biomechanically equivalent in strength compared to the Tornier nail ascending calcar screw<sup>6</sup>

### PEEK Insert

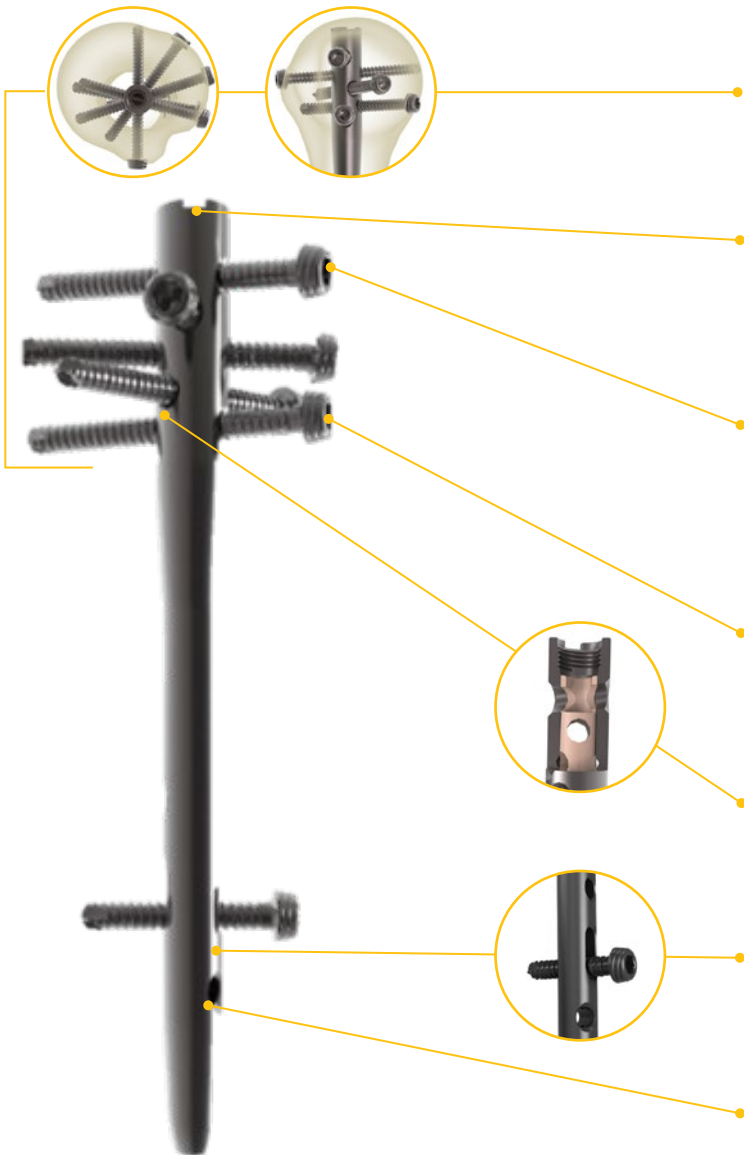
Reduces potential for screw backout with locking screw or advanced locking screw<sup>5</sup>

### Three Distal Screw Holes

- 2 static
- 1 dynamic

### Two Planes

30 degrees



## References:

1. Internal Report № D0000353370, Rev AA.
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4. Konda SR, Maseda M, et al. Observational prospective unblinded case-control study to evaluate the effect of the Gamma3® distal targeting system for long nails on radiation exposure and time for distal screw placement, Injury. 2023;54(2):677-682. doi:10.1016/j.injury.2022.11.046.
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9. Stanley M, Huang K, et al. A Targeting Arm for Interlocking Screws Reduces Radiation Exposure: Results of a Prospective Randomized Controlled Trial. J Orthop Trauma. 2025 Sep 2. doi: 10.1097/BOT.0000000000003066. Epub ahead of print. PMID: 40892974.
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11. Validation lab report Internal Report № D0000373334, Rev AB
12. DIOVV: Internal Report no. D0000276775, Rev AF.

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