



Trusted. Accurate. Proven.

**OrthoMap®** Precision Knee Navigation Software



# The Total Knee Solution

**Automatic Implant Sizing and Positioning:** Based on each patient's unique anatomy, Stryker's sophisticated sizing and positioning algorithm offers enhanced visualization of the anterior match to calculate the optimal implant size, flexion, and AP position to avoid notching.

**Fit Analysis:** The amount of uncovered bone above and below the implant's anterior flange and the maximum gap between the implant's anterior flange and the bony anatomy is represented graphically and numerically, in real time, prior to resections.

**Intuitive Software Solutions:** The Reactive Workflow feature seamlessly maneuvers through kinematic and resection screens based upon the position of the trackers, eliminating the need for user interaction.

**Custom Workflow Options:** Customizable workflow allows surgeons to adapt the software to their specific operative technique.

**Gap Balancing:** The optional gap balancing feature provides the surgeon with a preview of the flexion/extension gaps in real time before any femoral resections are made. This feature is available for all implant systems.

**Versatility:** Open platform software and cutting guides allow for navigation of primary femoral and tibial resections as well as kinematic analysis for the surgeon's preferred implant system.

**Kinematic Feedback:** Pre-operative and post-operative comparisons of maximum flexion/extension and varus/valgus values provide intra-operative range of motion analysis.

**Supports Minimally Invasive Techniques:** Navigation enables the surgeon to eliminate the intramedullary rod in total knee procedures, which has been found to significantly decrease fat emboli.<sup>1</sup>

# Trusted Accuracy Proven Results

Stryker—the market leader in orthopaedic navigation<sup>2</sup>—is committed to delivering unparalleled accuracy and control. Stryker's proprietary tracking technology has produced the most accurate optical navigation camera on the market.<sup>3</sup> When such industry-leading accuracy is combined with Stryker Navigation's smart instruments, the result is confidence in the OR, where the surgeon is able to completely control the software from the sterile field.

Navigation has proven to accurately reproduce the mechanical axis of the knee for total knee arthroplasty procedures at least 95% of the time.<sup>4</sup> Stryker Navigation utilizes sophisticated algorithms to ensure accurate registration information when calculating the mechanical axis. Ultimately, surgical navigation optimizes implant alignment to promote improved patient outcomes.<sup>5</sup>



Stryker NAV3 Platform



Gap balancing features in flexion and extension



Pre-operative and post-operative kinematic comparison

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**Reconstructive**

Hips  
Knees  
Trauma & Extremities  
Joint Preservation  
Orthobiologics

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**Medical & Surgical**

Power Tools & Surgical Accessories  
Image Guided Navigation  
Endoscopy & Arthroscopy  
Integrated Communications  
Beds, Stretchers & EMS  
Sustainability Solutions

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**Neurotechnology & Spine**

Craniomaxillofacial  
Interventional Spine  
Neurosurgical, Spine & ENT  
Neurovascular  
Spinal Implants

**References**

1. Kalairajah Y, Cossey AJ, Verrall GM, Ludbrook G, Spriggins AJ. Are systemic emboli reduced in computer-assisted knee surgery?: A prospective, randomized, clinical trial. J Bone Joint Surg Br. 2006 Feb; 88(2):198-202.
2. US Markets for Surgical Navigation Systems 2012, Millennium Research Group, May 2012.
3. Elfring R, de la Fuente M, Radermacher K. Assessment of optical localizer accuracy for computer-aided surgery systems. Comput Aided Surg. 2010;15(1-3):1-12.
4. Anderson K, Buehler K, Markel D. Computer Assisted Navigation in Total Knee Arthroplasty Comparison with Conventional Methods. The Journal of Arthroplasty. Vol. 20 No. 7 Suppl.3 2005.
5. Choong P, Dowsey M, Stoney J. Does Accurate Anatomical Alignment Result in Better Function and Quality of Life? Comparing Conventional and Computer-Assisted Total Knee Arthroplasty. The Journal of Arthroplasty. Vol.24 No.4 2009.

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Stryker Navigation  
4100 East Milham Avenue  
Kalamazoo, MI 49001 USA  
t: 269 323 7700, f: 800 999 3811  
toll free: 800 253 3210

Stryker Leibinger GmbH & Co. KG  
Bötzingen Straße 41  
D-79111 Freiburg, Germany  
t: + 49 761 4512 0, f: +49 761 4512 120

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[www.KnowCAS.com](http://www.KnowCAS.com)