

Navigation

precisionN Knee Navigation System



Modify Implant Position

Doe John

Left Leg

Varus

1.5°

Var./Val

0.0°

max. Gap 1mm

Cut 8mm M

Cut 6mm L

Gap 20mm

Gap 19mm

PD Shift

1mm

Rotation

0.0°

Cut 10mm M

Cut 8mm L

AP Shift

1mm

Flexion

5.5°

Flex./Ext

0.0°

F Size

7

Use the buttons to manually modify the implant's position and size.

Default

Cancel

OK

precision Knee Navigation System

How can precision Navigation simplify your procedure?

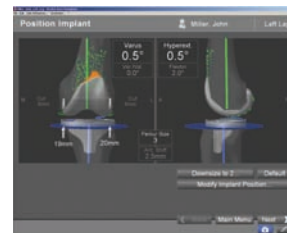
- **Automatic Implant Sizing & Positioning:** Based upon the digitized patient's anatomy, Stryker's unique sizing and positioning algorithm offers an enhanced visualization of the anterior match and calculates the "best fit" for implant size, flexion, and AP position.
- **Dedicated Instrumentation:** Navigated Drill Templates offer high flexibility regarding AP shift and eliminates the need for conventional AP Sizers.
- **Customization:** Customizable workflow allows the surgeon to adapt the software to their specific surgical technique.
- **Sizing Flexibility:** Informs the surgeon when a sufficient number of points have been digitized on the anterior cortex and suggests a patient specific implant size.
- **Intuitive Software Solutions:** The Reactive Workflow feature seamlessly maneuvers through kinematic and resection screens based upon the tracker's position without the need for manual software interaction.

How can precision Navigation add confidence?

- **"Fit Analysis":** Amount of uncovered bone above and below the implant's anterior flange is represented graphically in real time prior to cut.
- **"Fit Analysis":** Maximum gap between the implant's anterior flange and the bony anatomy is represented graphically and numerically in real time.
- **Gap Balancing:** The optional Gap Balancing feature provides the surgeon with a preview of the flexion/extension gaps in real time before any femoral cuts are made.
- **Assurance:** Software notifies the user of potential anterior cortex notching before cut is made.
- **Implant Downsize Option:** Quickly allows the surgeon to virtually view the results of utilizing a smaller femoral implant.
- **Versatility:** Open platform software and cutting guides allow for navigation of primary femoral and tibial resections as well as kinematic analysis for surgeon's preferred implant system.

How can precision Navigation help improve results?

- **Original Condyle Estimation:** For a more accurate reconstruction of the joint line in certain varus deformities, the software can estimate the patient's pre-pathologic medial condyle.
- **Prevention:** Software helps prevent overstuffing of the joint by detecting excessive medial/lateral implant overhang.
- **Stryker Implant Database:** Complete implemented database of Triathlon, Scorpio, and Scorpio NRG implants and dedicated instrumentation available to surgeon.



**Automatic
Implant
Positioning**



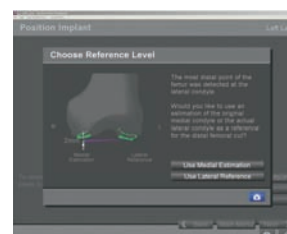
**Dedicated
Instrumentation**



Fit Analysis



**Implant
Downsize
Option**



**Original
Condyle
Estimation**



Accuracy

Stryker's precision knee sizing and positioning algorithm assists me in placing the "best fit" implant in the best place on the femur, thus optimizing joint kinematics and component wear for longevity of the entire implant construct.

The power that precision Knee Navigation has is the ability to completely plan and see the final implant position on the screen before committing to any bony cuts. In addition, the ability to use simple navigation guides to position the cutting block eliminates the need of the more complicated mechanical devices available. This is particularly helpful when smaller incisions with reduced exposure are used for total knee replacements.

- Richard L. Wixson, M.D.

Joint Reconstruction and Implant Service,
Northwestern Memorial Hospital, Chicago, Illinois, USA

Stryker Smart Instrumentation

- Effortless manipulation of software through integrated handpieces helping to improve efficiency.
- Higher accuracy with Active Tracking (LED based technology).
- Steady flow of information uninterrupted by vibration, impaction or soiled instruments.
- Open platform technology for navigation of non-Stryker instruments.

Stryker Camera Technology

- Highly accurate and reliable digital camera.
- Easy to use wireless remote software control from the sterile field with the use of Stryker's Smart instrumentation.
- Large working volume with virtually no jitter.
- Stryker engineered - Stryker manufactured.

Why use precision Navigation?

- **Optimization:** Optimizes implant size and position to reach enhanced anterior match without overstuffing the patella-femoral joint as well as addresses potential registration error.
- **Versatility:** Open platform system and cutting guides allow for navigation of primary cuts for surgeon's preferred implant system.
- **Durability:** Wireless infrared tracking reduces interference due to the presence of liquid or tissue on the tracker.

Having the opportunity to be involved in the development of multiple iterations of Stryker's knee navigation technology since 2002 has allowed me to test, experience, and enjoy the creation of software and hardware that yields optimal implant placement in both the M/L and A/P planes.

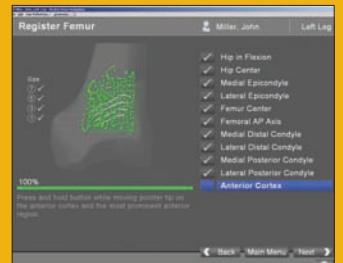
- Knute Buehler, M.D.

Chief of Arthritis and Joint Reconstruction, The Center - Orthopedic and Neurosurgery Care and Research, Bend, Oregon, USA

Intra-Operative Features and Offerings

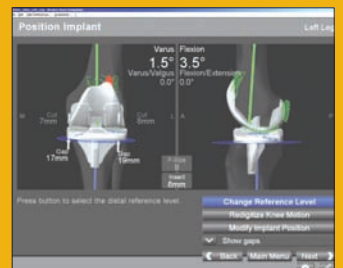
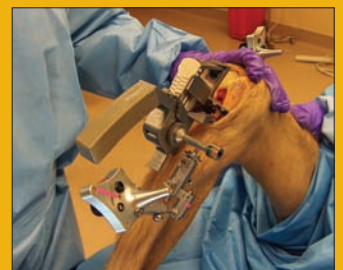
Sizing Flexibility

Informs the surgeon when a sufficient number of points have been digitized on the anterior cortex to suggest a patient specific implant size.



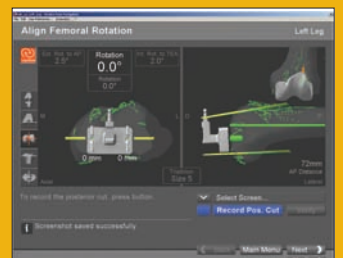
Medial/Lateral Gap Balancing

Implant database allows the surgeon to view medially and laterally in real time, the results of soft tissue releases when balancing the knee.



Align Femoral Rotation

Implant specific guides allow the surgeon to virtually assess anterior and posterior resection levels, femoral rotation, and notching potential helping to ensure appropriate implant choice.



Parts List

Part No.	Description	
6007-003-000	OrthoLock™	
6007-103-110, 6007-104-150	OrthoLock™ EX-Pins	
6007-003-100, 6007-003-150, 6007-004-100	Navigation Pins	
6003-100-110	Universal Joint Screwdriver	
6003-100-100	Screwdriver	
6003-012-000	Ortho Grip Knee Pointer	
6003-010-000	Femoral Tracker	
6003-005-000	Tibial/Pelvic Tracker	
6000-005-000	Universal Tracker	
6003-027-000	Resection Plane Probe	
6003-070-000	Posterior Plane Probe	
6003-100-020	Adjustment Component	
6003-300-020	Mini Fixation Plate	
6003-300-010	Mini Cutting Guide	
6003-100-090	Tracker Adapter	
6003-200-010	MIS Jig A	
6003-200-020	MIS Jig B	
6003-200-030	Tracker Adapter	
6541-002-808	Navigated Tibial Alignment Handle	
6541-005-610	MIS Femoral Navigated Stylus	
6541-004-401	Navigated Tracker Adapter Triathlon	
8001-0315	Navigated Drill Template - Scorpio	
6541-1-688	Navigated Drill Template - Triathlon	

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Literature Number: 9100-001-116 Rev. None
Tisha/PS 08/07