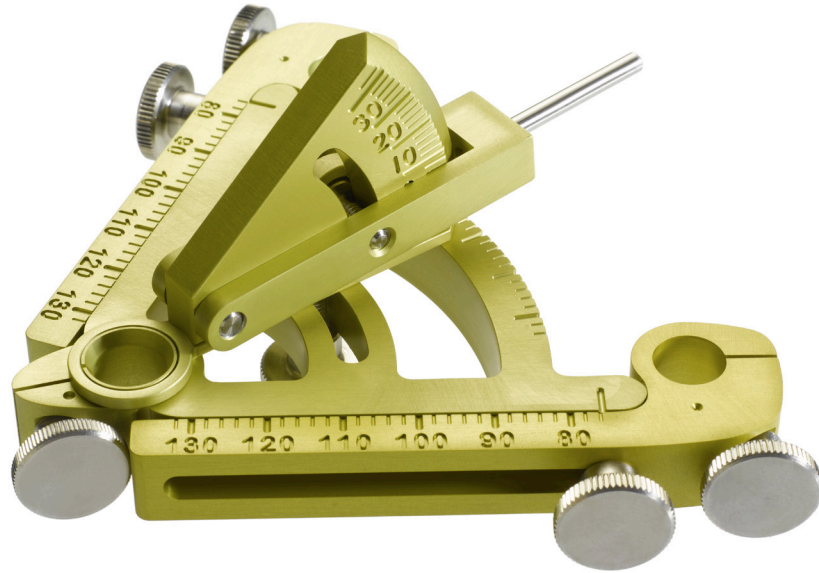


HIPXPERT

So simple, it's brilliant.



FREQUENTLY ASKED QUESTIONS

What is the HipXpert?

The HipXpert is a smart mechanical navigation instrument that surgeons use to accurately align the acetabular cup during total hip arthroplasty (THA) and hip resurfacing.

What problem does it solve?

Acetabular cup malpositioning is one of the most significant problems associated with THA and hip resurfacing¹. Studies show that surgeons malposition cups more than 50% of the time during these surgeries¹ and that cup malpositioning is the single greatest factor² associated with the two most common reasons for revision THA: dislocation and wear/osteolysis³.

Surgeons simply have not had a practical, cost-effective instrument for accurately aligning cups. Traditional techniques (anatomical landmarks, intraoperative imaging and anterior hip surgery which, is also expensive) are not reliably accurate⁴, and computer-assisted and robotic approaches are expensive, time-consuming and complex, making them impractical for widespread use. The HipXpert provides a superior approach with a cost-effective and easy-to-learn instrument that takes minutes to use, with accuracy equal to or better than high-end, computer-assisted navigation⁵.

What are the consequences of cup malpositioning?

Cup malpositioning is the single greatest factor associated with wear/osteolysis and dislocation, which are also the most common reasons for revision THA. In fact, 54.5% of revision THAs are attributable to these factors³, representing \$1 billion of annual costs to the U.S. healthcare system alone⁶.

Why would a surgeon use the HipSextant rather than other cup placement approaches?

The HipXpert is superior to other cup-positioning techniques because it delivers accuracy equal to or better than computer-assisted and other high-end navigation technologies, at a fraction of the time, cost and complexity. In fact, a recent study comparing the HipSextant to CT-based navigation found that the HipXpert delivered superior results – both in terms of cup alignment accuracy, and incision-to-dressing time⁷.

Considering these factors, the reasons why a surgeon would use the HipXpert are clear: it is easy to adopt, easy to use, cost-effective and accurate.

Why would a patient want their surgeon to use the HipXpert?

Patients want the results of their surgery to last as long as possible and understand that surgical precision is the key to long-term success. As patients learn about hip surgery, they learn that traditional techniques and instruments do not provide the surgeon with sufficient reliability to meet their goals. Many patients now search for surgeons and hospitals that recognize and address this problem.

How does the HipXpert work?

It works by docking to the pelvis in a patient-specific way. Once the three legs of the HipXpert are docked, cup alignment is easy: the surgeon simply follows the HipXpert's direction indicator for fast, accurate cup placement.

How much training does it require?

Surgeons report that it takes a matter of minutes to learn how to use the HipXpert. This is due to the simplicity of the instrument, and to the fact that HipXpert's experts do all the planning for the surgeon. The surgeon's imaging department or HipXpert representative simply uploads the patient's image data to the HipXpert website, where experts create a complete plan that surgeons can download and modify before or even during surgery.

How does HipXpert use fit into the flow of surgery?

The HipXpert is much less obtrusive to surgical flow than other approaches. It takes as few as three minutes for an experienced surgeon to use the HipXpert to accurately align the acetabular cup. This compares quite favorably to traditional computer-assisted hip navigation, which can take 15 minutes or more, and to robotics, which is even more time-consuming.

How much does the HipXpert cost?

The HipXpert software is free and instrument use, including the patient-specific planning, is priced on a flexible "pay as you go" model. This eliminates financial barriers to adoption, which means the HipXpert can be deployed across as many ORs as needed.



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¹ Callanan MC, Jarrett B, Bragdon CR, Zurakowski D, Rubash HE, Freiberg AA, Malchau H. The John Charley Award: Risk Factors for Cup Malpositioning: Quality Improvement Through a Joint Registry at a Tertiary Hospital. *Clin Orthop Relat Res.* (2011) 469:319-329.

² Kennedy JG, Rogers WB, Soffe KE, Sullivan RJ, Friften DG, Sheehan LJ. Effect of Acetabular Component Orientation on Recurrent Dislocation, Pelvic Osteolysis, Polyethylene Wear, and Component Migration. *J. Arthroplasty.* 13(5): 530-534, 1998.

³ Ali Khan MA, Brakenbury PH, Reynolds IS. Dislocation following total hip replacement. *J Bone Joint Surg Br.* 1981;63-B(2):214-8.

⁴ Saxler G, Marx A, Vandeveld D, Langlotz U, Tannast M, Wiese M, Michaelis U, Kemper G, Grutzner PA, Steffen R, von Knoch M, Holland-Letz T, Bernsmann K. The accuracy of free-hand cup positioning – a CT based measurement of cup placement in 105 total hip arthroplasties. *Int Orthop.* 28:198-201. 2004.

⁵ Steppacher SD, Kowal JH, Murphy SB. Improving Cup Positioning Using A Mechanical Navigation Instrument. *Clin Orthop Relat Res.* (2011) 469:423-428.

⁶ Katz J, Wright J, Wright E, Losina E. Failures of Total Hip Replacement: a Population-Based Perspective. *The Orthopaedic Journal at Harvard Medical School, Volume 9* (2007).

⁷ Steppacher SD, Kowal JH, Murphy SB. Improving Cup Positioning Using A Mechanical Navigation Instrument. *Clin Orthop Relat Res.* (2011) 469:423-428.