

# VELYS™ Robotic-Assisted Solution Information Sheet

Previous generation robotic solutions have only penetrated key orthopaedic segments between 5-10% of the global market.<sup>i</sup> In a future where most estimates suggest up to nearly 30% of all joint replacements will be robotic within the next 10 years,<sup>ii</sup> there is demand and opportunity to innovate in this space.

**DePuy Synthes**, The Orthopaedics Company of Johnson & Johnson, believes technology solutions like robotics and implants that help surgeons address pain, function and alignment for better balance can help facilitate better overall clinical outcomes, while digital surgery advancements can improve the overall surgical experience pre-, intra- and post-operatively for surgeons and patients. The **VELYS™ Robotic-Assisted Solution** for total knee arthroplasty is uniquely positioned to address the outstanding needs left unfulfilled by previous generation orthopaedic robotics.

## **About the VELYS Robotic-Assisted Solution**

The VELYS Robotic-Assisted Solution represents the latest addition to DePuy Synthes' VELYS Digital Surgery Platform of connected technologies for orthopedic surgeries. The VELYS Robotic-Assisted Solution, used with the ATTUNE® Knee, is a first-of-its-kind table mounted solution that utilizes advanced planning capabilities, proprietary technology and a next-generation design to help surgeons to accurately resect bones that align and position the implant relative to the soft-tissue during total knee replacement without the need for pre-operative imaging.

As a next generation robotic solution, the VELYS Robotic-Assisted Solution is designed to address future market needs, including reduced complexity, reduced operating room time, rapid operating room turnover, providing an efficient learning curve and all with a smaller footprint to serve both Ambulatory Surgery Centers (ASCs) and specialty hospital settings.

The VELYS Robotic-Assisted Solution is adaptable technology that:

- Helps simplify and adapts to a surgeon's existing workflow
- Has been designed around how surgeons plan, execute and perform knee replacement surgery to provide them the control they're used to while optimizing daily OR flow



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It is designed to reduce complexities inherent to previous generation robotics for knee replacement by providing:

- An accurate, precise and reproducible surgical procedure<sup>iii</sup>
- A surgeon-controlled procedure<sup>iv</sup>
- Limited OR disruption and OR technical support
- No requirements for pre-operative CT imaging

The VELYS Robotic-Assisted Solution works with the ATTUNE Total Knee, which has been shown to improve patient reported outcomes by working in harmony with the patient's anatomy to deliver both stability and motion through proprietary technologies.<sup>v,vi,vii,viii,ix</sup> Together, these technologies aim to define a high standard for patient performance and elevate the overall knee replacement experience.

With the addition of the VELYS Robotic-Assisted Solution to the VELYS Digital Surgery Platform, DePuy Synthes is continuing its vision to be the most personalized and connected orthopaedics company.

For more information, visit <https://www.jnjmedicaldevices.com/en-US/velys/knee/product/robotic-assisted-solution>.

### **About DePuy Synthes**

DePuy Synthes, The Orthopaedics Company of Johnson & Johnson, provides one of the most comprehensive orthopaedics portfolios in the world that helps heal and restore movement for the millions of patients we serve. DePuy Synthes solutions, in specialties including joint reconstruction, trauma, extremities, craniomaxillofacial, spinal surgery and sports medicine, in addition to the VELYS™ Digital Surgery portfolio, are designed to advance patient care while delivering clinical and economic value to health care systems worldwide.

Building on our proud product innovation and legacy of industry firsts, we are reimagining the orthopaedic landscape with new advancements in medical technologies and digital surgery across the entire continuum of care to Keep People Moving today and tomorrow. For more information, visit [www.depuyssynthes.com](http://www.depuyssynthes.com).

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<sup>i</sup> Boylan M, Suchman K, Vigdorichik J, Slover J, Bosco J. Technology-Assisted Hip and Knee Arthroplasties: An Analysis of Utilization Trends. *J Arthroplasty*. 2018 Apr;33(4):1019-1023. doi: 10.1016/j.arth.2017.11.033. Epub 2017 Nov 29. PMID: 29290333.

<sup>ii</sup> Millennium Research Group, Inc. Orthopaedic Surgical Robotic Devices. 2018; M360SU0001.

<sup>iii</sup> Doan G, Curtis P, Wyss J, Clary C. Resection Accuracy Improved during Robotic-Assisted Total Knee Arthroplasty (March 2021). Internal Report 103720852.



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- <sup>iv</sup> User experience evaluation of the VELYS Robotic-Assisted Solution for total knee (July 2020). Internal Report 103744839.
- <sup>v</sup> Hamilton W, Brenkel I, Barnett S, et al. Comparison of P.F.C. SIGMA to ATTUNE: A Prospective, Multicenter Study. Podium Presentation at the Closed Meeting of the Knee Society, Sept 2018, St Louis, MO, USA. 2018.
- <sup>vi</sup> Fisher D, Parkin D. Optimizing the Value of Your Patients' TKA: How to Leverage Data from Patient Reported Outcomes, Becker's Hospital Review, webinar recording, Oct 2019, [www.ATTUNEvidence.com/clinical-evidence](http://www.ATTUNEvidence.com/clinical-evidence), last accessed 10-18-19.
- <sup>vii</sup> Ranawat CS, White PB, West S, Ranawat AS. Clinical and Radiographic Results of ATTUNE and PFC SIGMA Knee Designs at 2-Year Follow-Up: A Prospective Matched-Pair Analysis. *J Arthroplasty* 2017; 32:431-6.
- <sup>viii</sup> Indelli PF, Pipino G, Johnson P, Graceffa A, Marcucci M. Posterior-stabilized total knee arthroplasty: a matched pair analysis of a classic and its evolutionary design. *Arthroplasty Today* 2016; 2:193-8.
- <sup>ix</sup> Pfitzner T, Moewis P, Stein P, et al. Modifications of femoral component design in multi-radius total knee arthroplasty lead to higher lateral posterior femoro-tibial translation. *Knee Surg Sports Traumatol Arthrosc.* 2017. doi: 10.1007/s00167-017-4622-7. [Epub ahead of print].