

# ORION

Microprocessor Knee Technology



endolite  
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# ORION



*ORION offers users the stability to  
more time to consider how they will*

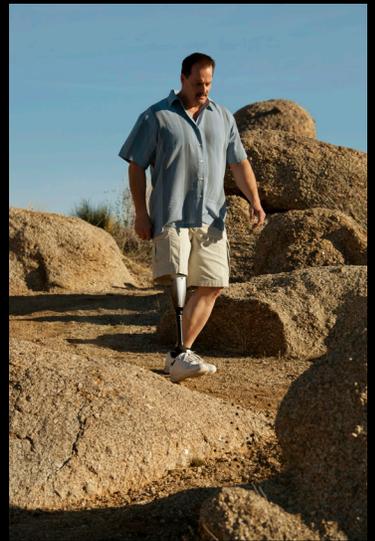
## Lifestyle

Orion Knee users are passionate about their lives and demand prosthetics that ensure they can do it all with less input. We have long distance walkers, bikers, karate experts, security consultants, parents, grandparents, engineers, business people - all relaying stories of weekend trekking, travelling, competing, playing, protecting our homeland, indulging the grandchildren, creating and working: because they can now do so with ease of mobility and comfort. The Orion is a part of their lifestyle, playing a background supporting role, in a subtle way enhancing the pleasure of living.

User feedback suggests better posture because of the support and ease of gait progression along with improved appearance due to the natural walking pattern. Excited is another response, "it has opened doors to new challenges, I can walk backwards again". Clinicians love it because it makes their fittings easier and optimizes their time communicating with the client. Mostly, people like the Orion because it just walks better with less effort.

## Vision

The technical and clinical vision behind the Orion was to create a knee that encompassed the best features of our microprocessor series. It would be built to provide the movement, speed, control and security features amputees have preferred in previous models. Some users liked the immediate response of the pneumatic swing control across the speed range, others the ease and smoothness of knee flexion from mid to late stance. Many loved the "just right" levels of stability that made them feel secure, without giving the sense the leg was controlling their gait rather than nurturing a natural sense of gait equilibrium.



to perform daily routines without needing to focus on every step, allowing  
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## Intuitive Programming

The Orion sensors measure knee action in real time. They feed that information into the micro-processor control system, which immediately adjusts the knee for visually optimal gait. When a micro-processor limb is programmed by a prosthetist standing away from the amputee, there is a delay between the instant of gait and the change in program initiated using the programmer. This increases the time and difficulty of refining and optimizing the knee for specific gait parameters. The continuous loop of information in the Orion ensures that the knee keeps perfect pace with the individual.

Programming the Orion is simple and can be done in minutes. There is no need for an external device. The top of the knee houses the on-board programming console comprised of a LED, and + / - buttons, which are used to initiate programming and increase or decrease settings for response optimization. Most of the process involves the individual walking in their preferred style, at various speeds, until the micro-processor has arrived at an ideal program. The instructions give a clear, pictorial guide from start to finish and the clinician can have as much or as little input into the process as they feel appropriate. The system intuitively seeks the optimal program for each amputee.



The Hybrid Cylinder

Drawing on our expertise with hydraulics and pneumatics the Orion combines the best of both. Our hybrid cylinder provides hydraulic stance control and pneumatic swing control. The microprocessor controlled hydraulic rapidly selects the support needed to safely negotiate environmental obstacles encountered during everyday walking. The microprocessor controlled pneumatic is versatile adapting for slow to fast walking speeds without being restrictive. This reduces the need for increased muscle input and leads to a reduction in energy expenditure throughout the day.

Programming Console



### Key Product Features:

- Suitable for K3 users up to 275 lbs.
- Immediate support on first step of stairs
- Comfortable security on slopes
- Supportive yield for sitting down
- Customized stability levels for individual requirements
- Variable cadence for a wide range of walking speeds
- Swing phase will not initiate until the toe load exceeds a programmed threshold

Order number: ORION  
\*rotating proximal pyramid

Order number: ORION-NRP  
\*non-rotating proximal pyramid

Build Height: 9 3/4"

Weight: 3 lb.

Max. Flexion angle: 130°

Proximal attachment: Male Pyramid

Distal attachment: Male Pyramid

#### Battery and Charger

Battery: Integrated rechargeable

Battery Life: Variable, but at least 24 hours on a full charge. Charge daily.

Charging time to full charge: 2 hours

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