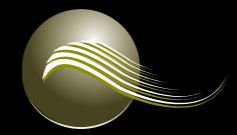




EPIRUS

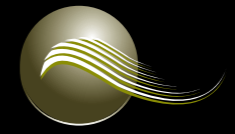
EVERYTHING YOU NEED

The Epirus Foot is the latest development in prosthetics technology to bring anatomically positioned ankle/foot movement to moderately active users. The foot combines a multi-axial ankle joint with e-carbon composite foot springs and delivers an energetic roll over with good ground compliance.



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There are around 26 bones in the human foot and approximately 30 joints: all of which combine to adapt the foot position in response to the type of terrain and activity encountered. Over 100 muscles, tendons and ligaments are involved in the control of the foot ensuring that the maximum level of efficiency and comfort is achieved at all times.

Achieving the finesse of human locomotion in a prosthesis demands an informed and innovative approach to biomimicry. The Epirus Foot takes us one stage further on our journey to achieve perfectly natural gait.



EPIRUS

DESIGN PHILOSOPHY

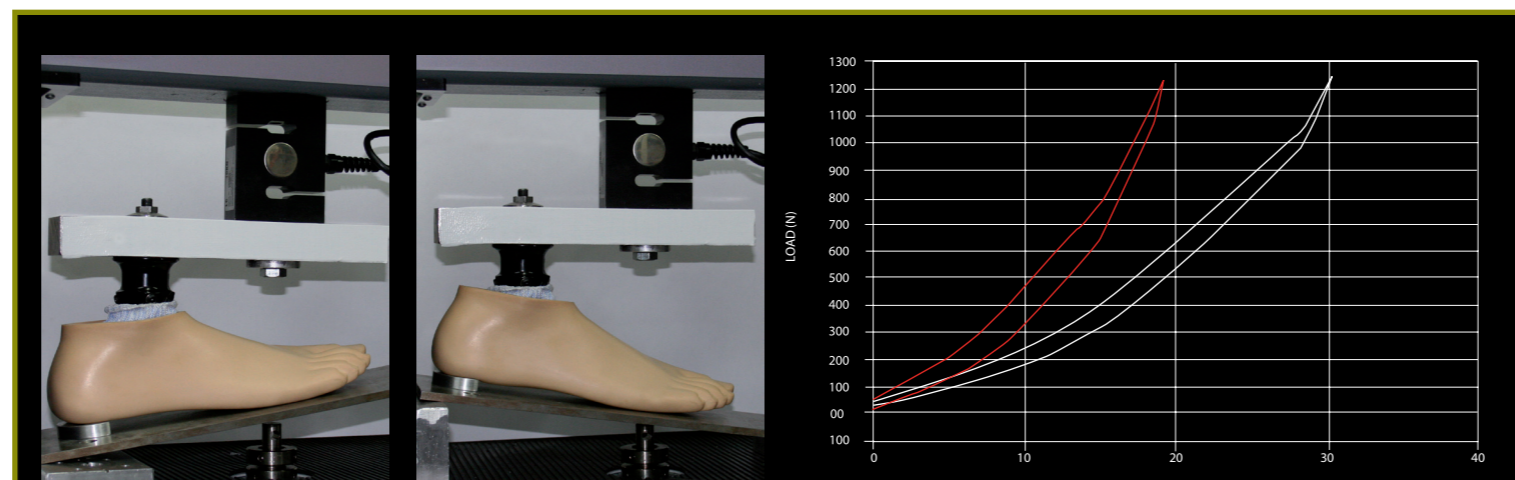
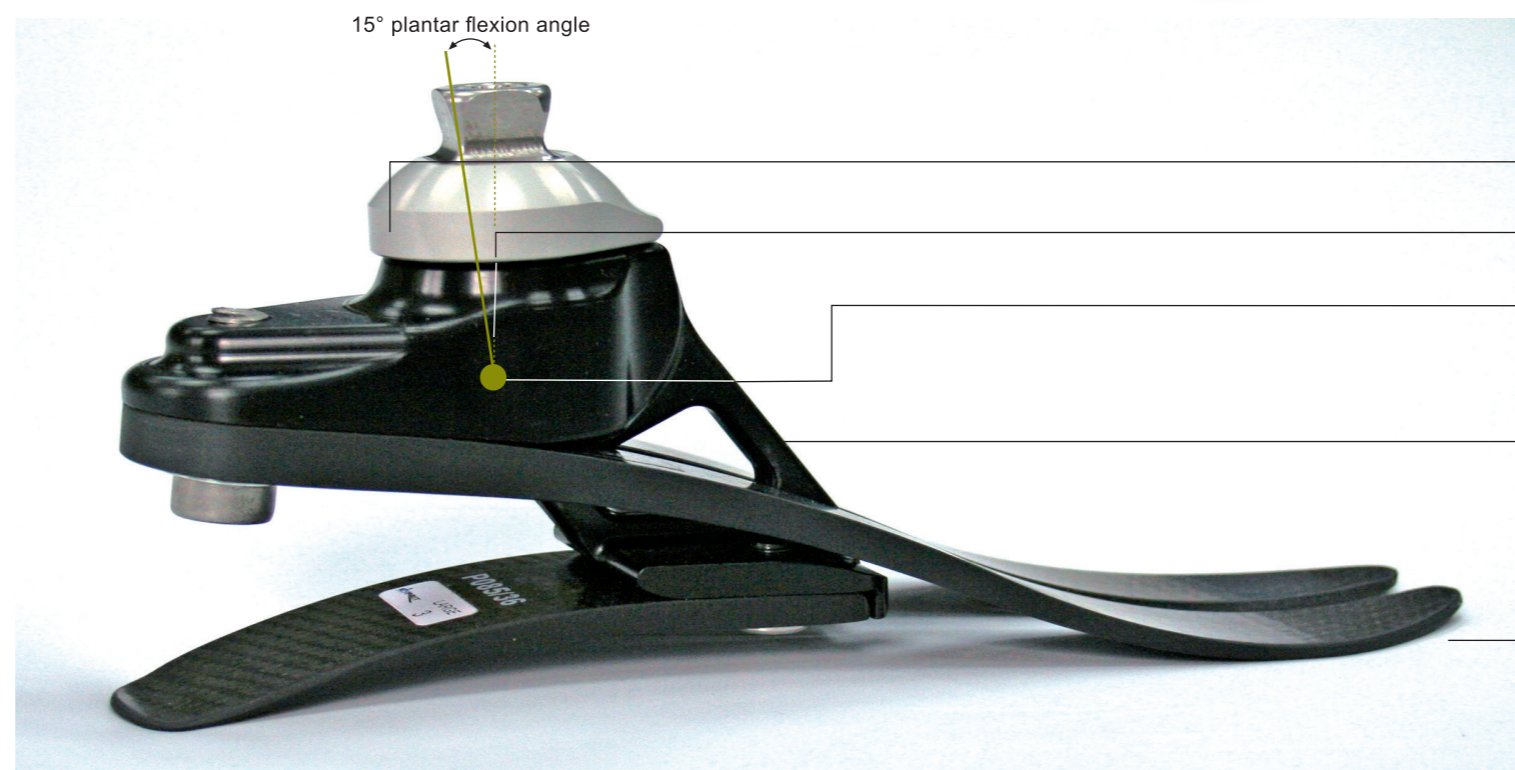
The biomimetic replacement of the foot.

Prosthetic foot design criteria are constrained by the availability of lightweight materials able to pass the stringent test requirements for safe function. The result is feet, which often contain efficient springs for energy return, but do not have a natural level of compliance to make walking feel comfortable and harmonious with body posture.

With this in mind our engineers combined a multi-axial component with e-carbon springs in the design of the Epirus to allow the foot to abduct and adduct promoting the 2nd rocker function seen in natural ankle movement. This sophisticated and yet simple combination adapts to changes in gait and enhances the transfer of weight from heel to fore foot and 3rd rocker phase. Foot comfort is augmented by the more natural profile of compliance.

The double spring toe lever simulates the action of the medial and lateral arches of the foot allowing a degree of pronation and supination on uneven terrain. The heel and toe springs combine with the multi-axial joint to provide a dynamic balance replicating the longitudinal arch of the foot during weight bearing; hence the design components of the Epirus combine and mimic many of the functional elements of the anatomical foot.

The Epirus design was specifically influenced by our profound focus on real biological systems and their detailed structure and anatomy. We have created a series of working relationships with universities, which have research interests in biomechanics, resulting in a number of collaborative papers on human gait. These in-depth studies inform our product development and refine the thinking behind our decisions so that each new product gets closer to the ideal of natural, symmetrical and energy efficient locomotion.



In multi-axial tests, the Epirus Foot demonstrates excellent energy return and compliance properties. The pictures show the foot on the dorsiflexion and plantar flexion tests and the results illustrate that the foot provides good plantar flexion resistance allowing controlled rotation to foot flat on level or inclined surfaces, whilst the front stop ensures that the dorsiflexion is nicely balanced to provide optimal energy response from the toe springs.

FEATURES

- The integral buffer allows adjustment of the plantar flexion characteristics for each individual
- Movement at heel strike is an optimised combination of ankle plantar flexion and heel spring deflection
- The Epirus spherical joint provides anatomically positioned ankle motion, plantar flexion, dorsiflexion, medial and lateral and torsional movement
- Ground compliance through mid stance is achieved through inversion / eversion of the ankle plus the tripod action of the independent heel and toe springs, with an additional benefit of some resilient torsional movement due to the ankle
- Dorsiflexion movement and energy return is provided primarily by the efficient toe spring
- Foot shell with cosmetic attachment plate



Order example
 EP 25L 3
Size/side Spring set

| Amputee Weight (kg) | | 44-52 | 53-59 | 60-68 | 69-77 | 78-88 | 89-100 | 101-116 | 117-125 |
|---------------------|--|-------|-------|-------|--------|-------|--------|---------|---------|
| | | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | NONE | | | MEDIUM | | | FIRM | |

Suggested plantar flexion buffer