emPOWER
Reclaim your power.

Quality for life

Information for technicians
emPOWER
Powered propulsion for more freedom in life

The emPOWER Ankle is an innovation in the field of prosthetic feet. It is equipped with an active ankle joint, making it the only prosthesis with powered propulsion.

emPOWER is the next generation design of the BiOM Ankle. Only the emPOWER Ankle continues to offer the combination of power, control and stability:

Power

- Emulates the function and power of lost muscles and tendons \(^1,^2\)
- Provides energy instead of taking it away – even up ramps, hills and stairs \(^1,^6\)

Control

- Life-like ankle movement that normalises user’s walking gait \(^4\)
- Reduces joint forces which may result in less pain and fewer long-term orthopedic problems \(^1,^2,^5,^6\)

Stability

- Adjusts ankle power, resistance and flexion in real-time
- Provides balance on variable terrain \(^3\)

emPOWER
Functions and Benefits

**Increased energy and less fatigue to walk farther and faster**
The emPOWER Ankle replaces the function and power of lost muscles and tendons, giving users energy rather than taking it away – even up ramps, hills and stairs. Its powered propulsion drives the user forward and upward while smoothly transitioning weight to the remaining limb. The emPOWER Ankle provides the exact amount of energy needed for each step, enabling users to cope effortlessly with longer distances, stairs and sloping terrain.

**Improved safety and stability on different terrain**
To ensure a smooth rollover of the foot, the emPOWER Ankle decelerates the body at heel strike before accelerating again for toe-off. At the same time, the amount of plantar flexion is adjusted to the slope of terrain. The system uses high resolution sensors to determine the exact amount of ankle power, resistance and flexion in real-time. This helps the user maintain balance and to cope better with variable terrain.

**Gentler on joints**
Many users suffer from painful joints as a result of changing their gait pattern. Unbalanced movement patterns and compensatory movements can even lead to osteoarthritis. With its active powered propulsion, the emPOWER Ankle improves the user’s gait pattern and reduces the adduction moment. This aids in preventing pain and incorrect gait patterns.
Details

Dynamic Adaptation
Intrinsic control firmware analyzes ankle joint torque and angle data from high resolution sensors, in real-time, to mimic the user’s physiological ankle function.

Ankle Display
The power button and battery indicator lights reflect the state of charge and are located in front of the Ankle.

Lithium-Polymer Battery
The integrated battery lasts for up to 8 hours depending on user activity. The dual bay charger can charge two batteries simultaneously in as little as 90 minutes.

Weather sealed components
The Ankle is resistant to rain, snow and dirt to withstand the varied demands of everyday life.

360° top cap access
The pyramid adapter enables a quick and easy fitting.

Powered Propulsion
A battery-powered, motorized actuator coupled with a high energy spring provide powered propulsion that emulates the gastrocnemius and soleus muscles.

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A battery-powered, motorized actuator coupled with a high energy spring provide powered propulsion that emulates the gastrocnemius and soleus muscles.
**Warranty and service**

The comprehensive warranty package provides your customers with guaranteed mobility for 3 years with no repair costs:

- 3-year manufacturer’s warranty*
- Free repairs**
- Free service inspection in month 24
- Free service unit during repair and service inspections

As an alternative, a 6-year warranty package is offered. The warranty can be extended to 6 years at a later date.

* The wear parts footshell and battery are covered by a one year warranty.
** Does not cover superficial damage and damage resulting from improper use, intent, negligence, or force majeure.

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**Technical data**

<table>
<thead>
<tr>
<th>Reference number</th>
<th>1A1-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitable for</td>
<td>MG 3 + 4</td>
</tr>
<tr>
<td>Amputation level</td>
<td>TT, KD, TF</td>
</tr>
<tr>
<td>Maximum body weight</td>
<td>130 kg</td>
</tr>
<tr>
<td>Sizes</td>
<td>25 – 30 cm</td>
</tr>
<tr>
<td>Weight*</td>
<td>approx. 1,928 g (without footshell)</td>
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<tr>
<td></td>
<td>approx. 2,200 g (with footshell)</td>
</tr>
<tr>
<td>Minimum clearance*</td>
<td>222 mm</td>
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<tr>
<td>Approved knee joints**</td>
<td>C-Leg, Genium, Genium X3</td>
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</table>

* Based on size 27
** Available as custom fitting only. Please contact the sales representative responsible for your region.

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**Scope of delivery**

The foot is available in two colours (grey and black) and comes complete with two rechargeable batteries and a dual bay charger.

**Software**

Thanks to tablet-based software, orthopaedic technicians can customise the emPOWER Ankle for each individual user. The software and the tablet are delivered together with the first order.