

E-MAG Active

More dynamic in everyday life

**NOW BILATERAL
UP TO 100 KG (220 LBS)
OR UNILATERAL
UP TO 85 KG (180 LBS)**



Quality for life



E-MAG Active

The E-MAG Active is a trend-setting innovation in the development of orthotic knee joint systems. It sets new standards in terms of safety, dynamics and mobility.

Thanks to unique functions, the E-MAG Active offers the user noticeable advantages:
It is the first electronically controlled system knee joint with a controlled stance phase and free swing phase that is not dependent on the ankle and sole of the foot. With significantly less noise and temporary enable function.



Higher mobility and safety

The principle of the E-MAG Active is both, innovative and consistent. An intelligent sensor system measures the position of the leg during walking and causes the orthotic joint to switch accordingly.

Decisive plus: As the joint works independently from the ankle joint and foot sole, the patient can use the function of the orthotic joint even if his ankle is without function.

The E-MAG Active offers the patient a significant gain in mobility and safety, enables him to walk much more naturally and smoothly, and thus increases his quality of life.

It is suitable for patients with increased need for mobility who up to now have not been able or have declined to be adequately fitted with an orthosis for different anatomical reasons. Use of the E-MAG Active can help prevent contractures and joint damage caused by immobilization, reduce muscular atrophy, and promote the development of existing muscles. The contralateral side is relieved, and compensating movements are avoided. Less energy is required for walking, and the patient benefits from an increased mobility.



Advantages at a glance

- E-MAG Active is a joint system for custommade orthoses
- Free selection of the orthosis design in the lower leg-foot area
- High safety thanks to coordination of angle and acceleration sensors
- The system operates independently of various terrains and environments
- It works independently from the ankle joint
- No disturbing electronic components in the lower leg and foot area
- Easy calibration due to self-adjusting software
- Possibility of running the first functional test by means of the E-MAG Active test orthosis
- In addition to the delivery with preset 5° flexion angle, 7.5° and 10° are also available
- The mechanical (temporary) enable function allows for extended field of application, e.g. riding bicycle
- Inconspicuous use of the system thanks to less noise

Indications

The E-MAG Active was developed for patients who, due to a paresis or a complete failure of the knee extensors, are unable to stabilize their knee without compensatory measures.

Safe use of the knee joint system requires certain residual muscle functions or hyperextension of the knee joint. This will ensure safe switching of the swing phase and stance phase.

The E-MAG Active is approved for a body weight up to 100 kg / 220 lbs (with 17B205 Medial Support). Observing the contraindications, a fitting without medial support is possible for patients with body weight of up to 85 kg / 187 lbs.

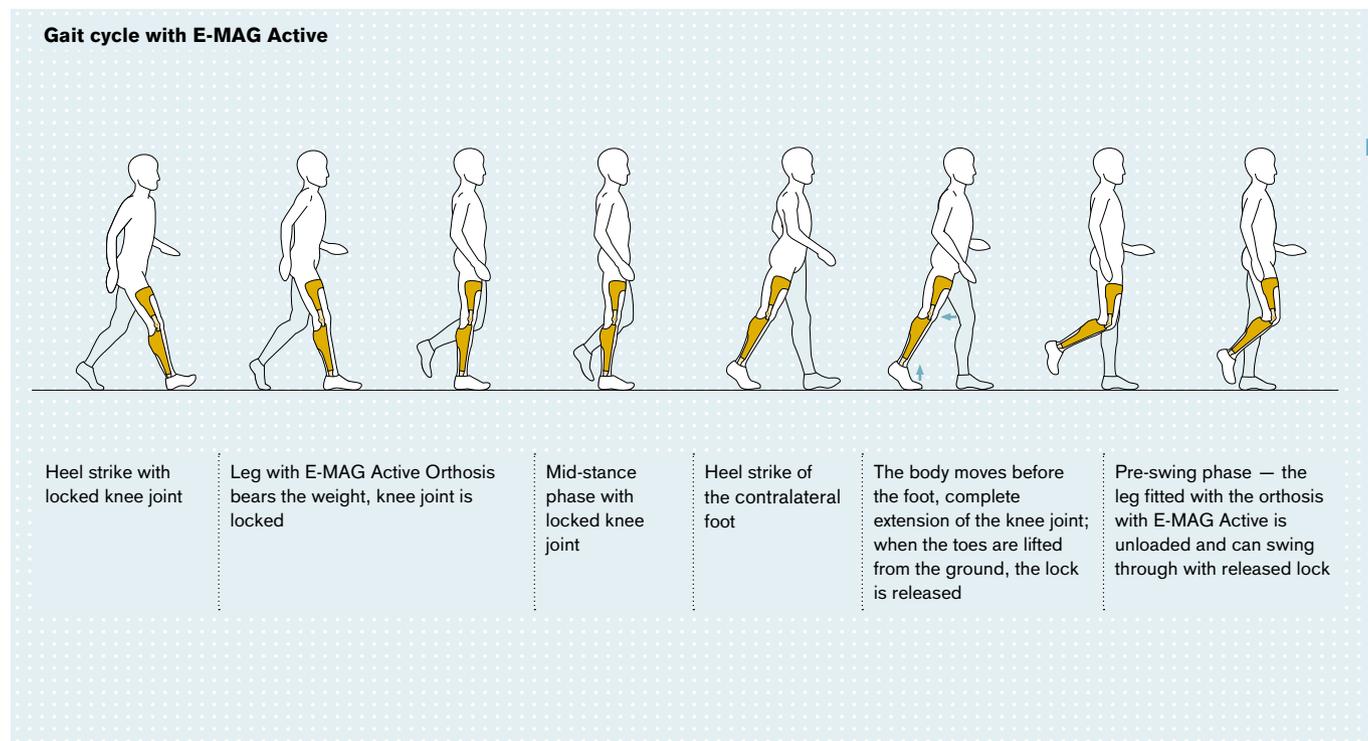
Ankle joint function is not required.
The E-MAG Active can also be used in case of reduced leg length or with orthoprostheses.



Contraindications

- Insufficient residual muscle function that would ensure safe use of the E-MAG Active, as well as nonexistent knee joint hyperextension
- No possibility of influencing knee joint extension with a dorsal stop
- Knee joint flexion contracture of more than 15°
- Cognitive problems
- Severe spasms putting safe function at risk

Controlled stance phase – free swing phase



Gait cycle with stance control knee joint systems

In contrast to the gait cycle of a healthy person, the knee joint of patients with lacking function of the knee stabilizing muscles must be stabilized by an orthosis.

The stance control knee joint systems from Ottobock provide stability only in the phase where it is needed. The swing phase is not compromised. Between heel contact and toe-off, i.e. when the foot bears weight on the ground, the joints secure the knee joint and support the knee stabilizing muscles.

During the entire stance phase, the orthoses remain locked.

The orthotic joint is then released between the terminal stance phase and the pre-swing phase, allowing the patient's knee joint to move freely during the swing phase. This provides the patient a degree of mobility that is nearly comparable with the gait of a healthy person.

Studies have shown that, in comparison with a locked orthosis, stance control orthoses offer considerable advantages with regard to energy expenditure, walking speed and reduction of the strain on the contralateral side.

Scope of delivery



The E-MAG Active joint system is supplied as a complete system in a case including the following components:

1	Electromagnetic knee joint
1	Electronic unit with receptacle
1	Battery unit with receptacle
4	Lamination resin dummies
each 1	Electronics cable and 1 battery cable
1	Battery charger
1	Instructions for Use
1	Mounting and Service Instructions
1	Quick-Start

An ankle joint (e.g. 17B66=*, 17LA1=*), the appropriate bar material as well as, depending on the body weight, the 17B205=* Medial Support are used in addition.

Spare parts for the E-MAG Active as well as service sets for maintenance of the joint bearings are available.

▶ Attention

Only certified technicians are permitted to fit patients with the E-MAG Active. Please contact your customer service/ your regional contact person for this purpose.

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