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Genium X3

Explore new horizons



Quality for life



Genium X3

Explore new horizons

The Genium X3 is the evolutionary consequence for which the Genium paved the way. This is because it benefits from the unique combination of technology, functionality and intuitive use – where the Genium has already set new standards: inductive charging, walking backwards, climbing stairs step-over-step and an intuitive standing function are just some of the features offered by the Genium X3. Thanks to OPG (optimised physiological gait), recreating a virtually natural, physiological gait pattern with a leg prosthesis system is possible for the first time.

The Genium X3 goes even further with new functions:

- Extra robust protector, standing up to even high stresses without problems
- Walk-to-run function for switching from walking to running
- Special running mode for sport activities
- Water and corrosion-resistance

New possibilities, new horizons: the Genium X3 sets the standard for mobility that is possible for users thanks to modern computer technology.

Genium X3

Experience water

The water and corrosion resistance of the Genium X3 is impressive. Selected materials such as titanium, hard anodised aluminum, stainless steel and high-end coatings combined with especially sealed components protect the joint's sensitive sensor technology and electronics. Showering, swimming, playing at the pool with the kids or working in wet conditions – the Genium X3 opens up possibilities that used to be unimaginable.









Genium X3

Responds spontaneously

Accelerating. An everyday situation. You are crossing the street and suddenly a car comes around the corner ... You are trying to catch the bus ... You are intercepting a child who is acting spontaneously ... These everyday situations present a problem for many leg prosthesis systems. With walk-to-run function, the Genium X3 is able to respond easily: switching from walking to running is recognised by the electronics within microseconds and reacts the auto-adaptive knee joint. Highly reassuring, especially in critical situations.

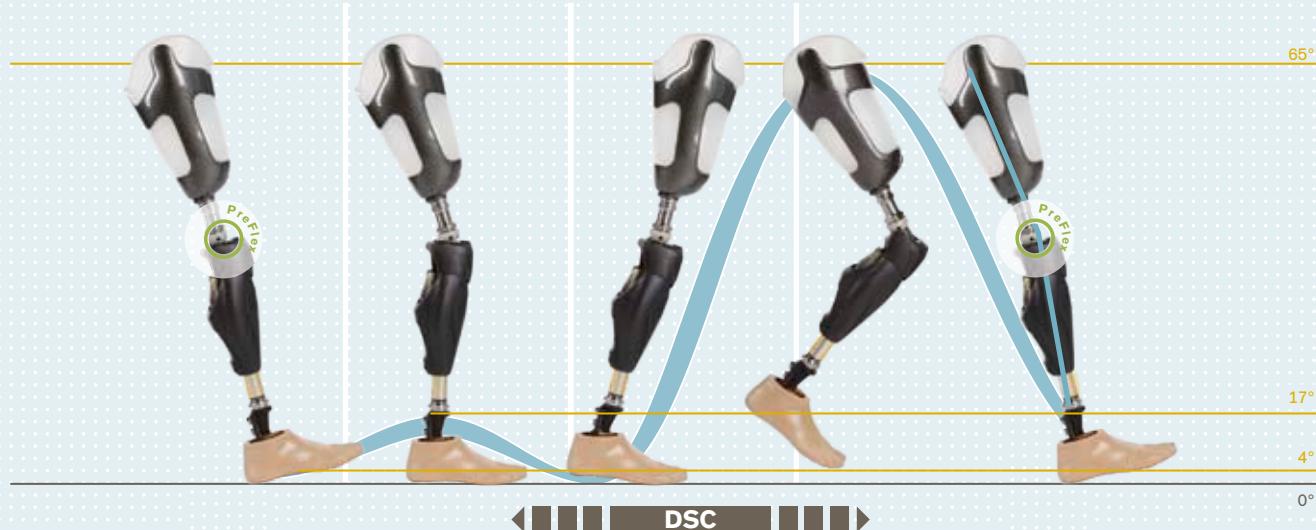
Genium X3

Adapts situational

For endurance or speed... Whatever your demands, running mode keeps up because it was developed explicitly for sports. Its functions are adapted to running behaviour (higher maximum swing flexion angle) and based on the natural model. Running mode focuses solely on what the sporty user wants: running. Decisive, effective, powerful.







User benefits

① PreFlex

- Reduction of ground reaction forces for improved shock absorption and extended knee flexion that minimises subsequent orthopaedic problems
- Reduced stride initiation effort
- Easier and safer negotiation of slopes, inclines and uneven terrain and reduction of compensating movements

② Adaptive Yielding Control

- Reduction of stride length asymmetry
- Significantly reduced cognitive effort and reduced need to control the prosthesis

③ Dynamic Stability Control (DSC)

- Considerably increased safety when walking backwards or making lunges

④ Adaptive Swing Phase Control

- Quality of the swing phase is comparable to that of healthy person
- Increased ground clearance reduces the risk of stumbling and falling
- No limitation on stride variance (short, long, slow, fast, irregular)
- Automatic adaptation to different shoes and clothing
- Slope-dependent swing phase, offers more ground clearance on inclines

Genium X3

Optimised Physiological Gait (OPG)

① PreFlex

Physiological 4° preflexion of the knee joint upon heel strike.
The result: the prosthetic foot reaches full contact faster.

② Adaptive Yielding Control

Intelligent knee flexion control (max. 17°), depending on the forces acting on the prosthesis.
The user has to expend far less effort to control the prosthesis and is able to use it intuitively.

③ Dynamic Stability Control (DSC)

Innovative and patented method to monitor all movement situations. Continuous sampling of six parameters to define the optimal, safest point for switching between the stance and swing phases.

④ Adaptive Swing Phase Control

Precise limitation of the lower leg pendulum movement to 65° of flexion – regardless of the walking speed. Swing phase control also makes a significant contribution towards preventing falls in critical situations.

Gyroscope, Acceleration Sensor and Angle Sensor

The gyroscope and the acceleration sensor allow the acceleration and position of the Genium X3 in space to be measured. An angle sensor determines the flexion angle and flexion angle speed of the joint.

Knee Moment Sensor

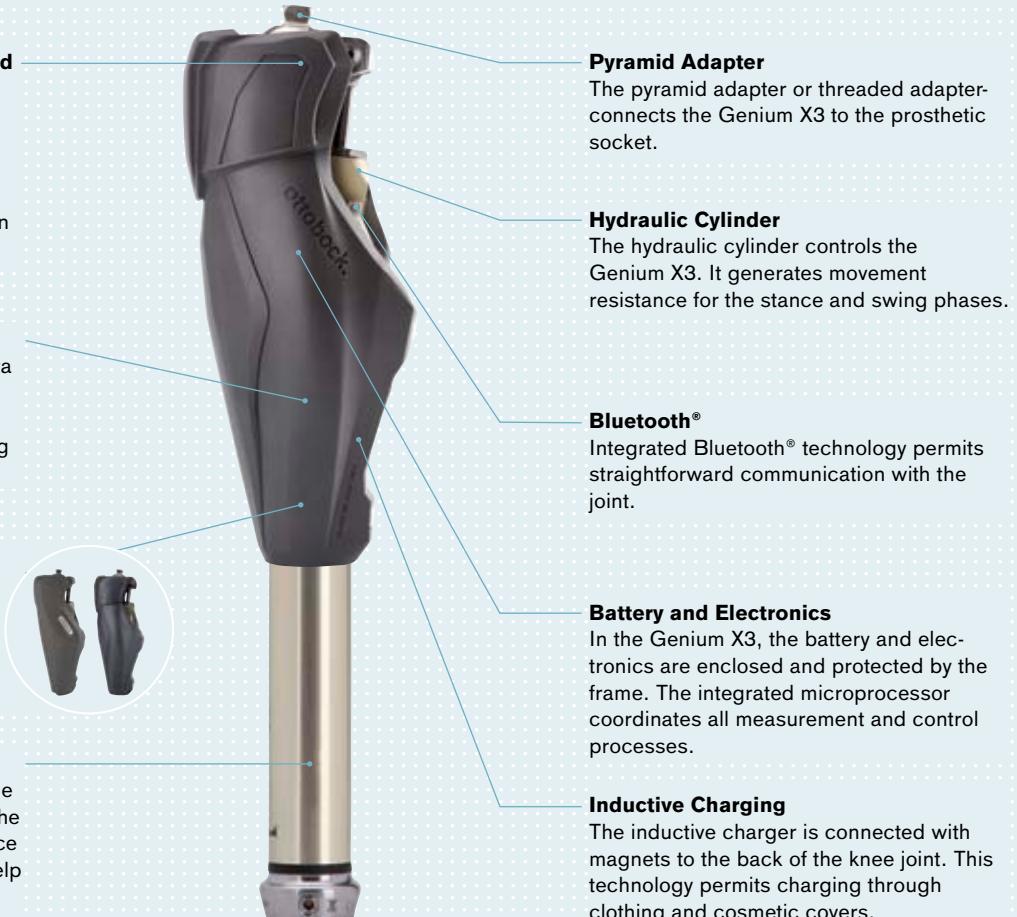
The knee moment sensor supplies data about the knee moment and therefore provides important information for precisely determining the forces acting on the prosthesis.

Robust Protector

In order to withstand all kinds of day to day requirements, the protector covering the knee joint is made of durable PU material - standing up to major stress without problems.

AXON Tube Adapter

Additional sensors are integrated in the tube adapter. They not only measure the ankle moment but also the vertical force acting on the joint. The sensor data help make a natural movement pattern possible.







Genium X3

numbers, data, facts

All components and accessories for the Genium X3 have been designed to work together, guaranteeing maximum user benefits. For example, the Genium X3 is waterproof thanks to the optimised interplay of its individual components.

Genium X3 knee joint including tube adapter, universal battery charger, A/C adapter and remote control

MOBIS	Recommended for mobility grades 3 and 4
User weight	Max. 125 kg (275 lbs)
Fitting	Amputation level: knee disarticulation, transfemoral or hip disarticulation, body size approx. 130 cm and up
Knee flexion angle	Max. 135°
Weight of the knee joint	1,710g
Weight of the electronic tube adapter	290g (2R19)
Operating time with fully charged battery	Approx. 5 days
Individually adjustable additional modes	5 (MyModes)
Waterproof	Protection Class IPX7 (DIN EN 60529)
Recommended prosthetic feet	1C63 Triton Low Profile, 1C64 Triton Heavy Duty
Recommended socket components	452A1 ProSeal Ring, 6Y81 ProSeal SIL Liner, 21Y14 PushValve
Warranty	Choice of 3 or 6-year mobility guarantee



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