Genium X3


ottobock.

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 mode for switching from walking to running
- Special running mode for sport activities
- Mute mode that silences all signal functions
- 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.


SEA-DOO
GTX
SEA-DOO
MILLENNIUM EDITION

Genium X3 –
Experience water.

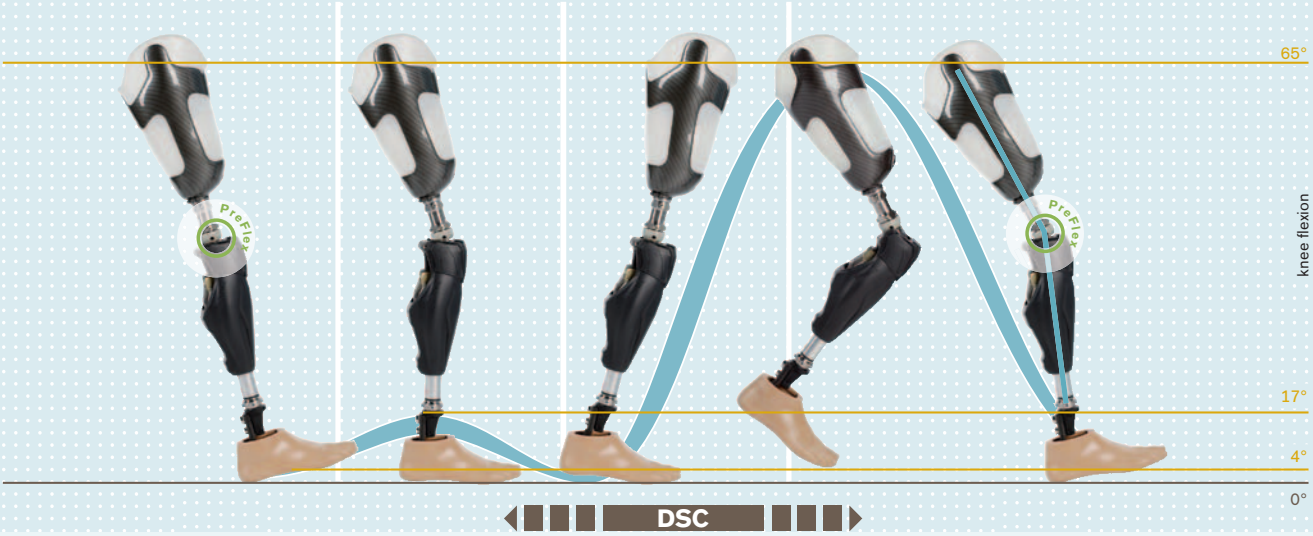
The water and corrosion resistance of the Genium X3 is impressive. Selected materials such as titanium, hard anodised aluminum, stainless steel and high-end coatings combined with especially sealed components protect the joint's sensitive sensor technology and electronics. Showering, swimming, playing 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.

Takeoff!
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 mode, 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.

Running!
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 flexion angle) and based on the natural model. Running mode focuses solely on what the sporty user wants: running. Decisive, effective, powerful.



	1 PreFlex	2 Adaptive Yielding Control	2 Dynamic Stability Control (DSC)	2 Adaptive Swing Phase Control
User benefits	• 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		• Considerably increased safety when walking backwards or making lunges	• 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

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

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 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.

Carbon Fibre Frame
In order to withstand the variety of day-to-day stresses, the frame is made of carbon – an especially strong, high-grade and lightweight material.

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.

Pyramid Adapter
The pyramid adapter connects the Genium to the prosthetic socket.

Hydraulic Cylinder
The hydraulic cylinder controls the Genium. It generates movement resistance for the stance and swing phases.

Bluetooth®
Integrated Bluetooth® technology permits straightforward communication with the joint.

Battery and Electronics
In the Genium, the battery and electronics are enclosed and protected by the frame. The integrated microprocessor coordinates all measurement and control processes.

Inductive Charging
The inductive charger is connected with magnets to the back of the knee joint. This technology permits charging through clothing and cosmetic covers.


HYPERLITE

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, installation wrench 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	1,710 g
Weight of the electronic tube adapter	290 g (2R19)
Weight of the electronic tube adapter with torsion function	530 g
Operating time with fully charged battery	Approx. 5 days
Individually adjustable additional modes	5 (MyModes)
Compatible 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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