

ottobock.

Genium X3

Explore new horizons



Quality for life

Information for users



Genium X3

Explore new horizons

The Genium X3 is a technological evolution in which the Genium paved the way for prosthesis wearers. Benefits from the unique combination of technology, functionality and intuitive use, such as 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 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 the highest of stresses
- Walk-to-run function
- Special running mode for sport activities
- Water and corrosion-resistance

New possibilities, new horizons: the Genium X3 sets a new standard in mobility, made possible by the most advanced prosthesis technology.

Genium X3

Experience water

The water and corrosion resistance of the Genium X3 is impressive. Selected materials such as titanium, hard anodised aluminium, 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 previously unimaginable.









Genium X3

Responds spontaneously

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 by auto-adapating the knee joint. This feature is highly reassuring for wearers, especially in critical situations. It also is able to give freedom and spontaneity back to the wearer.

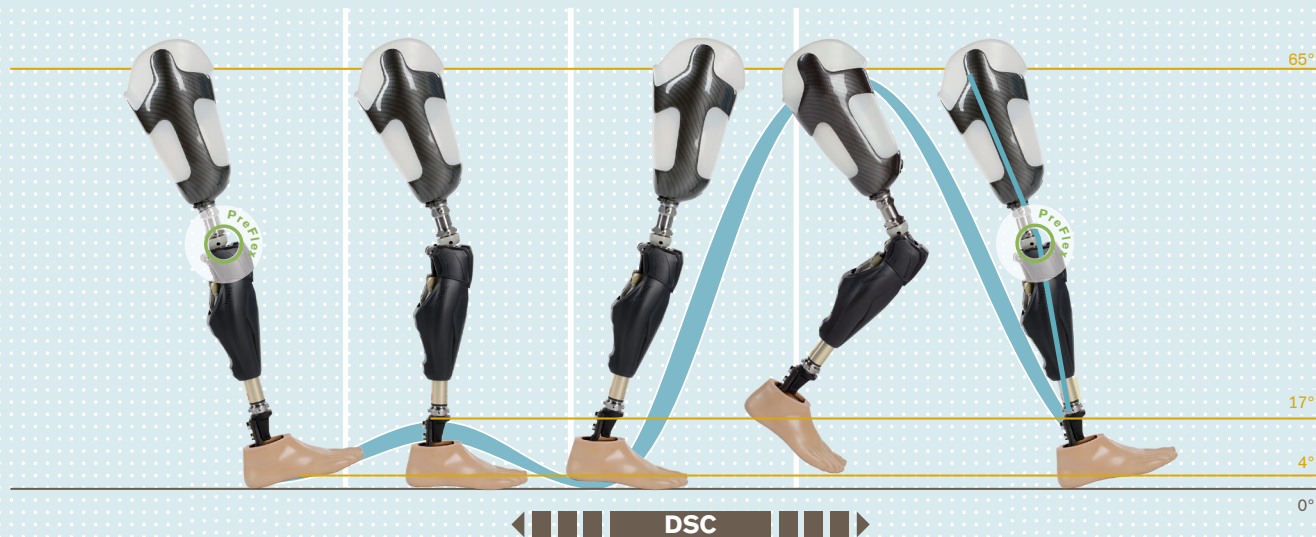
Genium X3

Situational adapt

Whether used for endurance or speed, the Genium X3 sport designed running mode is able to keep up with even the most demanding wearers. Adaptable functions such as a higher maximum swing flexion angle, are able to closely emulate a natural running motion. Running mode focuses solely on what the sporty wearer wants through decisive, effective and powerful motion.







1 PreFlex

2 Adaptive Yielding Control

3 Dynamic Stability Control (DSC)

4 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 a 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 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.



Pyramid Adapter

The pyramid adapter or threaded adapter connects the Genium X3 to the prosthetic socket.

Hydraulic Cylinder

The hydraulic cylinder controls the Genium X3. 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 X3, 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.





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	1,710 g
Weight of the electronic tube adapter	290 g (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



Interested in moving images of the Genium X₃?
Scan the QR Code.

www.ottobock.co.uk