

FREEDOM

QUATTRO™

MICROPROCESSOR KNEE



PROTEOR FREEDOM QUATTRO

Less Intrusive. More Intuitive.

The Freedom QUATTRO Microprocessor Knee by PROTEOR is designed to allow users to live their lives with no boundaries. The latest innovation in MPK's, PROTEOR have introduced Hyper Active Real Time (H.A.R.T.) Control Technology providing a unique personal experience that tracks users' individual gait patterns.

The QUATTRO boasts 20 user modes, including Cycling and Golf mode, in addition to activity specific features like Sitting and Obstacle Assist, all of which can be adjusted by the prosthetist or the user. The knee also includes features such as remote data capture, outcome measure reporting and independent resistance for ramps, stairs and sitting.



Features and Benefits:

- Patented Hyper Active Real Time (H.A.R.T.) Control Technology allows for fast and continual adjustments to the control valve diameter, resulting in an extremely responsive custom gait experience
- An intuitive stance lock is active within a range from 0-70°, offering additional security, comfort and control
- Advanced stumble recovery which determines the appropriate resistance to recover from a stumble more naturally
- The power-off flexion resistance can be adjusted to accommodate different user preferences and weights
- Prosthetists will find set up simple using the Gait Lab app to set user parameters and modes
- The Freedom Innovations app allows users to adjust and customise 20 modes to suit their lifestyle
- Prosthetists can receive a digital report of a user's usage data
- IP67 rating allows users to fully submerge the device under 1 meter of water for up to 30 minutes
- Lowest MPK build height for added versatility in foot selection
- Field replaceable knee pad cover allowing for rapid replacement and uninterrupted use



Explore the Latest MPK Technology



Hyper Active Real Time Technology (H.A.R.T.) Control Technology

H.A.R.T. Control Technology provides continuous valve adjustments without preset positions. This means the valve diameter (hydraulic resistance) the user requires at that time can be whatever they need it to be (from fully open to fully closed, and anywhere in between).



20 Available Modes

With 20 programmable modes, users can customise their experience to fit their lifestyle without compromise.



Keypad Control

Functionality is integrated into the on-board keypad allowing users to check battery status, manually switch activity modes or set and release flexion lock.



Water Ingress Certified

IP67 tested for occasional submersion in water.



User Customisation

Individual parameters can be set by both clinicians and users to make their own adjustments to create a unique experience.



Manual Lock

Conveniently located inside the app or via the knee keypad.



Ease of Setup

QUATTRO's clinical app provides a simple setup experience for prosthetists, making sure users have more time on their knee and less time in-clinic.

MPK Swing and Swing Control

Whether tackling slopes, stairs or ramps the QUATTRO's sophisticated microprocessor-controlled resistance helps to optimise stability whenever a change in terrain or cadence is detected. The unique H.A.R.T. technology of the QUATTRO means its response is proportionate and not limited by preset values in the same way as other MPK's. Capturing data 250 times per second from various sensors, the knee processes data twice as fast as other microprocessor knees on the market. The result is the user has the support to tackle the toughest terrains with confidence.

Battery Boost

The QUATTRO has up to 3 days battery life depending on level of activity, with a short recharge time of 2-3 hours. The knee also comes with an External Booster Battery Kit. This can recharge the knee while on the go, providing up to an additional 2 days of battery life and giving users confidence that they will need never be without power.

Dedicated User and Prosthetist Apps (Available on IOS and Android)



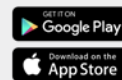
GAIT LAB

Dedicated clinician app for prosthetists to setup and configure QUATTRO. This walks the clinician through the entire set up from bench alignment, to customising modes, and available features.



FREEDOM INNOVATIONS

End users can use this app to adjust and toggle settings set by their prosthetist, providing full control on the go.



Mode Overview

The QUATTRO supports 20 customisable activity modes. Four common activities, described below, are addressed by the system straight out of the box.



Sitting Mode*

Sitting Mode on:

When the knee is unweighted and the thigh reaches +90 degrees, the knee flexes without resistance.

Sitting Mode off:

The knee will continue to have hydraulic resistance to flexion, independent of thigh flexion angle.



Golf Mode

Using the 'Freedom Innovations' App and selecting 'Golf Mode' the user can navigate to the adjustment screen and select from a choice of 15, 30 and 45 degrees of flexion or adjust these to suit. The knee will extend, but will not flex beyond the chosen angle.



Cycling Mode

In Cycling Mode, with the thigh sitting horizontally, the knee will enter a very low resistance condition. The knee will remain in low resistance until the user puts weight on the unit in full extension, QUATTRO will then seamlessly return to standard walking mode.



Obstacle Assist

With Obstacle Assist turned on (default), the knee will flex with no resistance when the thigh reaches 35 degrees of flexion or greater and is unweighted. This is helpful for stepping over tall objects or entering a high vehicle.

*Note: if Sitting mode is turned off, it will also disable Obstacle Assist & Cycling Mode.

Custom Modes

QUATTRO offers 20 customisable modes in total, users can add their own custom modes using the Freedom Innovations app. These modes can be added and the parameters can be adjusted at any time, allowing for a unique and personal experience.

Additional Features

Manual and Intuitive Stance Locking

The QUATTRO features a Stance Lock for stability on a flexed knee. When the user stops the thigh at a flexion angle of between 0-70 degrees and weights the knee, it will automatically lock further flexion. The lock will automatically disengage when the thigh creates an extension moment at the knee or is unweighted.

The knee also features an independant Flexion Lock in which users can lock against flexion by pressing the Mode Button on the front of the knee or via the app.

Power Off Mode

When the battery is depleted or the knee has been put into storage mode, a power-off flexion resistance is used. The power-off flexion resistance can be manually adjusted to accommodate different user preferences and weights.

QUATTRO does not require any software to set power off flexion resistance. It can be manually adjusted as required to make the knee functional based on the circumstances.



Ordering Information

To place an order please contact our friendly Customer Services team via phone on 0870 240 4133 or email customerservices@steepergroup.com quoting the below product codes.

A 30 day trial unit is available for this knee, please contact Customer Services to make arrangements.

Part Number	Description
NQNX0010-6	Freedom QUATTRO MPK (Pyramid Adapter), Battery Booster Kit, 6 Years Warranty
NQNX0011-6	Freedom QUATTRO MPK (Threaded Adapter), Battery Booster Kit, 6 Years Warranty
NQNX0010-NHS	Freedom QUATTRO MPK (Pyramid Adapter), Battery Booster Kit, 5 Years Warranty**
NQNX0011-NHS	Freedom QUATTRO MPK (Threaded Adapter), Battery Booster Kit, 5 Years Warranty**

**Note: NHS part numbers are only available to order through NHS or Veteran funding.

Spare Parts Ordering Information

Part Number	Description
NQNZX0601	Wall Charger & Adapter
NACC0010	Battery Booster Kit

Technical Information

Amputation Level	Transfemoral, Knee & Hip Disarticulation
Build Height	216mm
Weight	Approx 1655g
IP Rating	IP67
Proximal Connector	Pyramid or M36 Thread
Distal Connector	Pyramid
Swing & Stance	Microprocessor Controlled Hydraulics
Axis	Monocentric
Flexion Angle	135°
Maximum Patient Weight	136kg
Activity Level	K2 - K4
Warranty	NHS/Veterans - 5 Years Private - 6 Years

Servicing

Minimal servicing is required for QUATTRO, with no servicing needed until 36 months, a further service is required at 54 months for those with a 6 year warranty. This extended manufacturer's warranty includes service and maintenance inspections and a loaner unit will be provided while this is underway.

For further warranty and servicing information please contact Customer Services.



Brenda, Argentine Tango Dancer

“When I dance with the QUATTRO, I feel both feet on the ground, I feel the proprioception coming out of the ground, and I feel every step I take is effortless. I just glide. I feel comfortable, **it has the security I am looking for in a knee.** It allows me to do moves most people would not believe I could do.”



Jack, Retired Lawyer & Professor

“I spend a lot of time on the golf course and travelling with my wife. QUATTRO allows me to do all that with greater ease, comfort, and confidence. The Golf Mode helps my golf game substantially. **It allows me to be able to put it into a preset fixed position and when I shift my weight I don't worry about losing my balance.** From walking up and down slopes to getting in and out of a car, the transitions are seamless.”



Andre, Community Healthcare Coordinator

“I live a very active lifestyle, I am a triathlete and a dad. It is really important that I have a knee that keeps up with me. Whether hiking, playing with my kid, biking, or at the beach with the family, **the QUATTRO performs. It's there when I need it, it's safe, intuitive, and customised for me. I feel confident** with this knee.”