

FIT5

 BERTEC



Bertec® Fully Instrumented Treadmill v5 (FIT5)

The Bertec Fully Instrumented Treadmill v5 (FIT5) allows gait researchers to reduce laboratory space requirements and remove the limitations inherent in a traditional force plate walkway. The unique design features result in superior dynamic characteristics and a high natural frequency making it the preferred research-grade fully instrumented treadmill. The Bertec treadmill enables walking and running research with speeds up to 11.5 m/s and six-component force data output at 1000 Hz.

Split Belt Treadmill Design

- Two independent belts, individually controllable, measuring 1.75 x 0.5 m (~ 70 x 20 in) each
- Keeps data from each foot separate for accurate data during walking
- Six-component force output from each treadmill half (Fx, Fy, Fz, Mx, My, Mz) at 1000 Hz
- Max load range of: Fx, Fy: 2,500 (550) N (lb)
Fz: 5,000 (1,100) N (lb) per belt
- Each treadmill half is mechanically isolated from the other to minimize crosstalk between belts

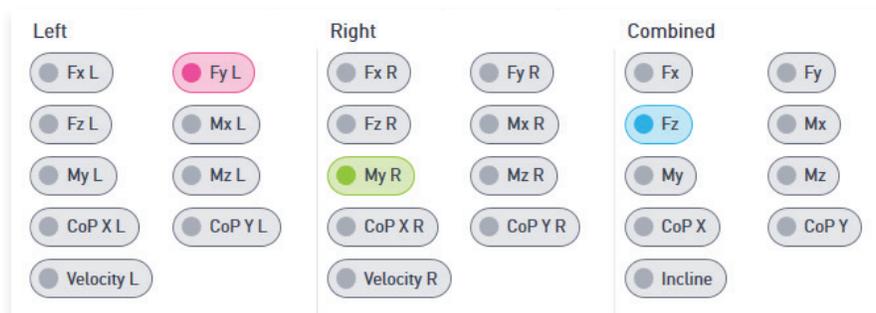




Control Software UI

Full-Featured FIT5 Software

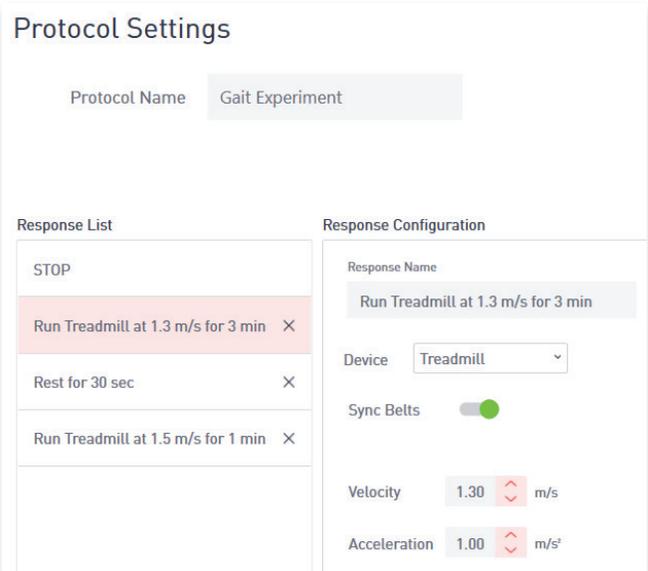
- Control your treadmill and capture your data in a single software
- Modern UI with user-friendly design
- Quick controls for fast, easy speed changes in increments of 0.1 m/s
- Live data view with data channel toggles for easy one-click viewing of data stream
- 2D center of pressure display to monitor subject location during trials



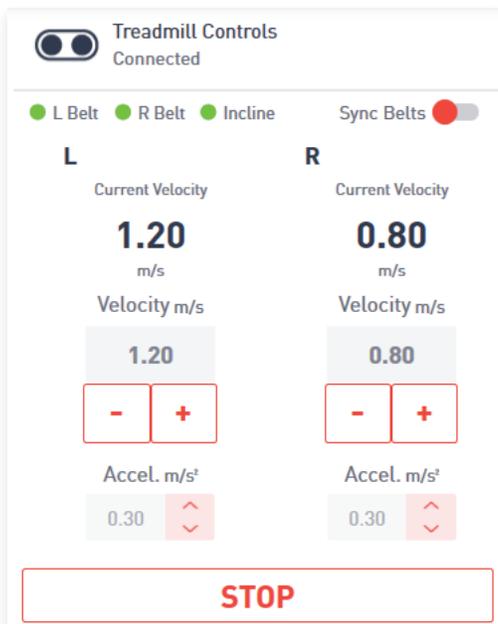
Data Channel Toggles

Protocol Builder

- Create custom treadmill protocols to operate your device with unique playlist-style functionality
- Offers repeatability for experiments by saving protocols and highlighting your favorite playlists
- Sync your data capture with your custom protocol for one-click operation during experiments



Protocol Builder



Treadmill Controls

Industrial Grade Servo Motors

- High precision motion control for biomechanics research applications
- 6.5 Nm/74.2 Nm Continuous/Peak Torque for smooth and consistent acceleration
- High Performance – speeds up to 11.5 m/s (25 mph), acceleration up to 25 m/s²

Improved Drive Belt and Rollers

- Reduces belt slippage under heavy load
- Updated design requires lower maintenance over time



Low Friction Wear Board

- Reduces belt sticking during high intensity applications
- Less heat generation during running so you can run longer trials
- Lower maintenance – wax-impregnated board is self-lubricating

Standalone Electronics Cabinet

- Keeps electrical noise separate from your data and away from sensitive force measuring instruments
- An internal isolation transformer provides electrical safety, and a locking cabinet door keeps the electronics that power the treadmill safe and secure

Remote Control API

- Python integration via Remote Control API for advanced programmatic control, including real-time feedback-based controls

Options

Incline Base: Used to tilt the treadmill up to 15°

One-year standard warranty included. Optional extended warranty available.

Overhead Structure and Harness ensures patient safety and prevents falls and off-track movements.

Users can be comfortable and confident during testing.

Instrumented handrails available – each handrail outputs three components of force (Fx, Fy, Fz)

For more information, contact Bertec at 614-543-8099 or at info@bertec.com

