

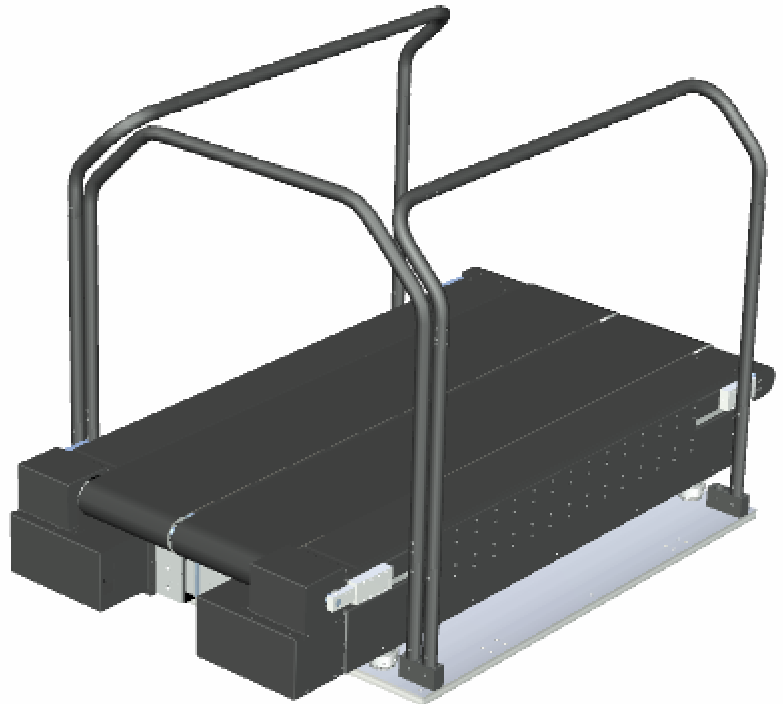


### Applications

Bertec's line of instrumented treadmills is designed to reduce gait laboratory space requirements and to eliminate the limitations inherent in a traditional gait walkway. Our fully instrumented treadmills (FIT) allow researchers and clinicians to perform numerous test protocols in a compact 2-meter space with variable incline and speed settings. FIT is well suited for gait, sports, ergonomic, and dynamic motion analysis. Strain gage technology, state-of-the-art electronics, innovative mechanical designs, and quality manufacturing have created superior instrumented treadmills suitable for any clinical or research use.

### Design

Bertec's Instrumented Treadmills are optimized by designing a treadmill around a force plate. Unique design features result in superior dynamic characteristics of the treadmill. The dual belt treadmills have two belts, which can be controlled independently, each half having its own 6-component force plate. An optional, modular incline feature can be added to the system for uphill and downhill analysis of movements. The control electronics incorporate medically isolated transformers. A smaller version of FIT is available for animal studies (Mini-FIT). The Mini-FIT can be configured to have 4 independent belts for quadrupedal animal studies (Quad-FIT). Bertec treadmills are mounted on mounting plates, which are glued to the floor. Such a configuration along with total isolation of each half from the other ensures stable operation of the treadmill.



<b>FIT Fully Instrumented Treadmill</b>	<b>Mini-FIT for Animal Applications</b>	<b>Quad-FIT for Quadrupedal Applications</b>
Two (2) independent running belts, approximately 1.5 m (60") long and 30 cm (12") wide per belt (40 cm (16") version available).	Two (2) independent running belts, approximately 1 m (40") long and 30 cm (12") wide per belt (15 cm (6") version available).	Four (4) independent running belts, approximately 1 m (40") long and 30 cm (12") wide per belt.



### Unique Features

All Instrumented Treadmills come with the following standard features:

- **Load Range:** 5,000 N (1,100 lb) vertical, 2,500 N (550 lb) horizontal force capacity (for mini-FIT and Quad-FIT vertical: 2,500 N (550 lb), horizontal: 1,250 N (275 lb))
- **Speed Range:** 0-24 km/hr (15 mi/hr) both forward and reverse
- **Acceleration Range:** 0-25 m/s<sup>2</sup> (0-82 ft/s<sup>2</sup>)
- Independent 6-component load measurement from each belt (Fx, Fy, Fz, Mx, My, Mz)
- Independent control of individual belts in both directions
- Adjustable handrail (FIT only)
- Safety stepping area on the sides of the belts
- Software Development Kit to develop your own treadmill control protocols
- One year standard warranty with optional maintenance packages

*Optional equipment for Fully Instrumented Treadmill include:*

- **Incline** – *Do more tests.* Analyze uphill and downhill movements up to 15° (FIT only)
- **Instrumented Handrail** – *Get full body measurements.* Measure the grip forces from both hands independently (FIT only).
- **Overhead Harness** – *Ensure patient safety.* Prevent falls and off-track movement.

### Customization

If none of our standard treadmills meet your requirements, years of experience and a willingness to solve any challenge gives Bertec the edge in custom designing a solution for you. We can construct treadmills of any size for any load capacity.



**BERTEC**  
DOMINATE YOUR FIELD

**INSTRUMENTED TREADMILLS**  
Product Information



### Technical Specifications

Model Designation	FIT	Mini-FIT	Quad-FIT
Max Load Range, N (lb)	Fx, Fy : 2,500 (550) Fz : 5,000 (1,100)	Fx, Fy : 1,250 (275) Fz : 2,500 (550)	
Speed Range, km/h (mi/h)	0-24 (0-15)		
Acceleration, m/s <sup>2</sup> (ft/s <sup>2</sup> )	0-25 (0-82)		
Number of Belts	2		4
Walking Area, m (in)	1.5 x 0.6 (60 x 24) 1.5 x 0.8 (60 x 32)	1 x 0.6 (40 x 24) 1 x 0.3 (40 x 12)	2 x 0.6 (80 x 24)
Weight*, kg (lb)	115 (250)		80 (175)
Overall Dimensions**, m (in)	L : 1.93 (76) W : 1.25 (49) H : 0.36 (14)	L : 1.40 (55) W : 0.84 (33) H : 0.36 (14)	L : 2.80 (110) W : 0.84 (33) H : 0.36 (14)

\* The approximate weights given are for one tread only and do not include any handrails and mounting plates.

\*\* Values given are approximate overall dimensions with length and width covering the footprint area. Height includes the mounting plate. Optional incline unit adds an additional 23 cm (9"). For exact dimensions contact Technical Support ([support@bertec.com](mailto:support@bertec.com)). If you are planning to put the treadmill in a pit, please refer to our ***Treadmill Installation Guidelines***.