

Force Plate FP4060-NC

Product Details and Specifications

Bertec's FP4060-NC model is a non-conductive model designed for analysis of gait, balance, jump, running and many other movements in environments requiring measurement of magnetic fields. Strain gage technology, state-of-the-art electronics, innovative mechanical design, and quality manufacturing have created superior force plates suitable for a variety of applications.

Design

Each force plate consists of precision-engineered, strain gage load transducers that precisely measure six components: three orthogonal forces and the moments about each axis. Each plate contains a built-in, 16-bit digital gain amplifier and signal conditioning unit, which make the use of calibration matrices obsolete. You then have the choice of three external amplifiers: digital, analog, or digital and analog in one. This system allows the use of long output cables (up to 100m) without any signal degradation. The digital output can be directly plugged into your PC's USB port. Simple installation and a minimum amount of setup time result from this plug and play technology. For the analog output, you have the choice of either six individual BNC type outputs or seven individual bare wire outputs (custom output cables available per request). Digital acquire is offered to enable quick data collection. Bertec offers an SDK solution for researchers who want to develop and use their own software.



Unique Features

- Specially designed to work with magnetic field based motion analysis systems
- 1000 Hz sampling frequency
- Superb resolution with minimized crosstalk
- Documented, superior accuracy, with minimal drift
- Both top-mount and foot-mount options available
- Available in load ranges of 5,000 N, 10,000 N, and 20,000 N
- No signal interference from out-side sources with 100% digital encoding
- Strongest industry warranty: seven years on hardware and electronics!

Model Designation	FP4060-NC-1000	FP4060-NC-2000	FP4060-NC-4000
Width, mm (in)	400 (15.75)	400 (15.75)	400 (15.75)
Length, mm (in)	600 (23.62)	600 (23.62)	600 (23.62)
Height, mm (in)	100 (3.94)	100 (3.94)	100 (3.94)
Mass, kg (lb)	39 (86)	39 (86)	39 (86)
Max. Load Fz, N (lb)	5,000 (1,100)	10,000 (2,200)	20,000 (4,400)
Max Load Fx, Fy, N (lb)	2,500 (550)	5,000 (1,100)	10,000 (2,200)
Max. Load Mx, N·m (in·lb)	1,500 (13,300)	3,000 (26,600)	6,000 (53,200)
Max. Load My, N·m (in·lb)	1,000 (8,900)	2,000 (17,800)	4,000 (35,600)
Max. Load Mz, N·m (in·lb)	750 (6,600)	1,500 (13,300)	3,000 (26,600)
Natural Frequency Fz (Hz)	480	480	480
Natural Frequency Fx, Fy (Hz)	550	550	550
Static Resolution* Fz, N	± .4	± .4	± .5
Resolution** Fz, N/LSB	0.2	0.4	0.8
Linearity, %FSO [†]	0.2	0.2	0.2

* Static Resolution is the peak-to-peak noise amplitude of the static signal.

** Resolution is given in terms of the sensitivity of the internal digitization and indicates the amount of signal produced (in N or lb) per LSB (least significant bit) of digitized signal.

† FSO: Full Scale Output

Mounting Locations, mm (in)

Foot Mount[‡]:
A = 37 (1.44), B = 29 (1.13)
C = 527 (20.75), D = 343 (13.50)
L = 600 (23.62), W = 400 (15.75)

[‡] Foot Mount version require four M8x1.25 bolts and flat washers if they are used with a Bertec Mounting Plate. For the Top Mounting option four spring loaded M8 bolts are an integral part of the force plate.