



Applications

Bertec Corporation's line of force plates are ruggedly designed to meet any application. The 6090-15 model is well suited for gait, balance, sports, ergonomic, static, and dynamic analysis. It is commonly used for clinical and research gait analysis, sports applications and is capable of handling high impact forces. Strain gage technology, state-of-the-art electronics, innovative mechanical designs, and quality manufacturing have created superior force plates suitable for any clinical or research use.

Design

Each force plate consists of precision-engineered, strain gaged 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 four external amplifiers: digital (AM6500), analog (AM6501, AM6504), or digital and analog (AM6800). This system allows the use of long output cables 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). A software package is offered to enable quick data collection without the hassle of writing your own software. Bertec also has software libraries and device drivers available upon request for researchers who want to develop their own digital data acquisition software.



Unique Features

Our premier plate, the 6090-15 model has a composite top and a composite base constructed of aluminum and a honeycomb structure. This creates a lightweight plate that will withstand years of use. It is available in three standard load ranges (5,000 N, 10,000 N and 20,000 N) and custom load ranges. The use of a mounting plate is recommended with this model. State-of-the-art electronic design internally corrects for cross-talk, so the output is a true reading. Excellent resolution and high natural frequency is standard with Bertec force plates. The 6090-15 comes in two different mounting versions: Foot Mount and Top Mount.

Customization

If none of our standard models 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 plates of any size for any load capacity, and most can be made waterproof.

At Bertec, our aim is to provide the variety that you want with the quality you deserve. See the back for specific technical specifications for the standard load ranges.





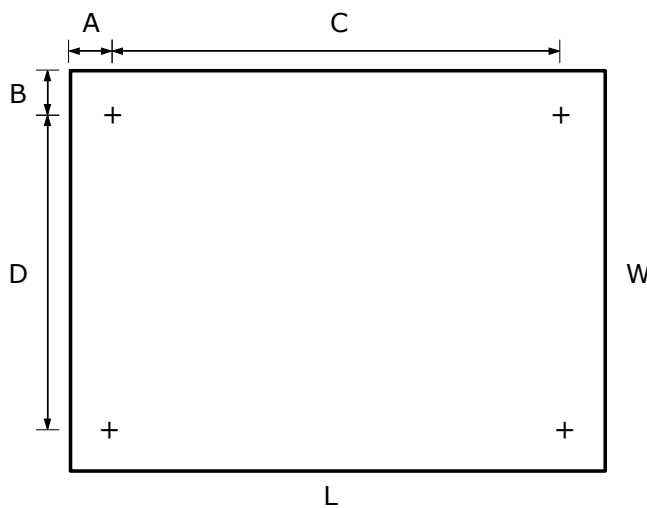
Technical Specifications

Model Designation	FP6090-15-1000	FP6090-15-2000	FP6090-15-4000
Width, mm (in)	600 (23.62)		
Length, mm (in)	900 (35.43)		
Height, mm (in)	150 (5.91)		
Mass, kg (lb)	45 (99)		
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 (13,200)	3,000 (26,600)
Natural Frequency Fz (Hz)	400		
Natural Frequency Fx, Fy (Hz)	450		
Static Resolution* Fz, N (lb)	±0.5 (0.11)	±1 (0.22)	±2 (0.44)
Resolution** Fz, N/LSB (lb/LSB)	0.09 (0.02)	0.19 (0.04)	0.37 (0.08)
Linearity, %FSO [†]	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 = 24 (0.94), B = 29 (1.13)

C = 852 (33.54), D = 542 (21.34)

Top Mount[‡]:

A = 203 (8.00), B = 127 (5.00)

C = 494 (19.44), D = 346 (13.62)

L = 900 (35.43), W = 600 (23.62)

‡ 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.