



Measurement Excellence™

# BERTEC CORPORATION

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## FP 6012 - 15

### Applications

Bertec Corporation's line of force plates are ruggedly designed to meet any application. The 6012-15 model is well suited for gait, sports, ergonomic, static, and dynamic analysis. It can also be used for industrial research or other studies that require a large surface area. 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 three 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 data acquisition software.



### Unique Features

Our largest plate, the 6012-15 model has a composite top constructed of aluminum and a honeycomb structure. This creates a lightweight plate that will withstand years of use. It is available in three load ranges (1000 lb, 2000 lb, or 4000 lb.) and custom load ranges. The use of a mounting plate is needed with this model. Thoughtful electronic design internally corrects for crosstalk, so the output is a true reading. Excellent resolution and high natural frequency is standard with Bertec force plates.

### 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.



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## Bertec 6012-15

Bertec FP 6012 Parameter	15 - 1000 Specifications				15 - 2000 Specifications				15 - 4000 Specifications			
	English Units		S.I Units		English Units		S.I Units		English Units		S.I Units	
	Value	Units	Value	Units	Value	Units	Value	Units	Value	Units	Value	Units
Width (x)	23.62	in	600	mm	23.62	in	600	mm	23.62	in	600	mm
Length (y)	47.26	in	1200	mm	47.26	in	1200	mm	47.26	in	1200	mm
Height	5.91	in	150	mm	5.91	in	150	mm	5.91	in	150	mm
Mass	120	lb	55	kg	120	lb	55	kg	120	lb	55	kg
Fx, Fy Load Capacity (*)	500	lb	2224	N	1000	lb	4448	N	2000	lb	8896	N
Fz Load Capacity	1000	lb	4448	N	2000	lb	8896	N	4000	lb	17793	N
Fx, Fy Overload Capacity (50%FSO)	750	lb	3336	N	1500	lb	6672	N	3000	lb	13345	N
Fz Overload Capacity (50%FSO)	1500	lb	6672	N	3000	lb	13345	N	6000	lb	26689	N
Mx Capacity	23630	lb-in	2669	N-m	47260	lb-in	5338	N-m	94520	lb-in	10676	N-m
My Capacity	11810	lb-in	1334	N-m	23620	lb-in	2669	N-m	47240	lb-in	5338	N-m
Mz Capacity	11815	lb-in	1334	N-m	23630	lb-in	2669	N-m	47260	lb-in	5338	N-m
Mx Overload Capacity	35445	lb-in	4003	N-m	70890	lb-in	8007	N-m	141780	lb-in	16014	N-m
My Overload Capacity	17715	lb-in	2002	N-m	35430	lb-in	4003	N-m	70860	lb-in	8007	N-m
Mz Overload Capacity	17723	lb-in	2002	N-m	35445	lb-in	4003	N-m	70890	lb-in	8007	N-m
Fx, Fy Natural Frequency	450	Hz	450	Hz	450	Hz	450	Hz	450	Hz	450	Hz
Fz Natural Frequency	250	Hz	250	Hz	250	Hz	250	Hz	250	Hz	250	Hz
Fx, Fy Sensitivity	0.10	lb/mv	0.44	N/mv	0.20	lb/mv	0.89	N/mv	0.40	lb/mv	1.78	N/mv
Fz Sensitivity	0.20	lb/mv	0.89	N/mv	0.40	lb/mv	1.78	N/mv	0.80	lb/mv	3.56	N/mv
Mx Sensitivity	4.73	lb-in/mv	0.53	N-m/mv	9.45	lb-in/mv	1.07	N-m/mv	18.90	lb-in/mv	2.14	N-m/mv
My Sensitivity	2.36	lb-in/mv	0.27	N-m/mv	4.72	lb-in/mv	0.53	N-m/mv	9.45	lb-in/mv	1.07	N-m/mv
Mz Sensitivity	2.36	lb-in/mv	0.27	N-m/mv	4.73	lb-in/mv	0.53	N-m/mv	9.45	lb-in/mv	1.07	N-m/mv
Crosstalk Fx -- Fy	0	% (**)	0	% (**)	0	% (**)	0	% (**)	0	% (**)	0	% (**)
Crosstalk Fx, Fy -- Fz	0	% (**)	0	% (**)	0	% (**)	0	% (**)	0	% (**)	0	% (**)
Crosstalk Fz -- Fx, Fy	0	% (**)	0	% (**)	0	% (**)	0	% (**)	0	% (**)	0	% (**)
Linearity	+/- 0.2	%FSO	+/- 0.2	%FSO	+/- 0.2	%FSO	+/- 0.2	%FSO	+/- 0.2	%FSO	+/- 0.2	%FSO
Hysteresis	+/- 0.2	%FSO	+/- 0.2	%FSO	+/- 0.2	%FSO	+/- 0.2	%FSO	+/- 0.2	%FSO	+/- 0.2	%FSO
Center of Pressure Error - CoPx, CoPy	+/- 0.04	in	+/- 1.0	mm	+/- 0.04	in	+/- 1.0	mm	+/- 0.04	in	+/- 1.0	mm

(\*) Load Capacity is customizable (\*\*) Crosstalk is internally corrected

The 6012-15 is the **largest standard force plate** and handles research **demands** requiring a **large area**.

The **tops** are composed of **aluminum** and a **honeycomb structure** making a lightweight plate.

Bertec force plates have **no Crosstalk**, which results in **true readings**.

All Bertec plates have excellent **Resolution**.

The 6012-15 model has a **high Natural Frequency** considering its size