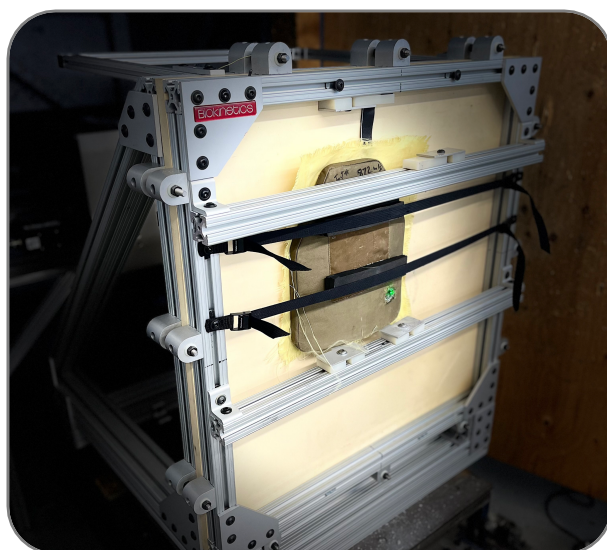


Flat Blunt Trauma Torso Rig (f-BTTR)

Blunt trauma assessment of the thorax with advanced dynamic chest wall measurements



- For soft armour, hard armour, riot gear and torso padding evaluations under blunt force impact conditions.
- Suitable for kinetic less-lethal ammunition blunt trauma safety evaluation based on deflection or VC (e.g. AEP-99).
- Deformable torso membrane replicates human torso stiffness at the sternum under dynamic impact conditions of Bir 2000 (37mm dia. 140g 40 m/s), and Nathan 2012 (65mm dia. 215g 27m/s).
- Estimates of dynamic 3D chest deflection, loading area and volume for impacts at centre (± 20 mm) using two high-speed non-contact laser profilometers.
- Custom software provides peak responses and injury assessment values (Viscous Criterion, AIS 2+).
- Includes computer, data acquisition system, Biokinetics' f-BTTR Software for data capture, sensor alignment and system verification.
- Support frames for membrane, test samples, instrumentation and, impact pendulum for system verification.

Specifications

Sensor Type:	Non-contact IR (660 nm) laser displacement profilometer for horizontal and vertical axes.	Data Collection:	Small deflection mode (40mm): 16 kHz High deflection mode (75mm): 12 kHz
Sensing Range (typical):	600 mm horizontal, 600 mm vertical, 40-75 mm deformation (rate dependant).	Computer, Interface:	PC: Intel i5 or better OS: Windows 11, 64 bit Other: Microsoft Office 365, 64 bit Screen: 1920x1080 min. resolution
Data Resolution (typical):	X-Y (horizontal, vertical) = 1858 points (across measured profile width) Z (depth) = 0.043-0.071 mm.	Verification Pendulum:	100 mm dia., 2.2 kg
Software:	Biokinetics' f-BTTR Software. Outputs: deflection (x-z, y-z), velocity, Viscous Criterion, AIS2+, defl'n area, defl'n volume, peak values. Exports data to MS Excel®.	Part Number:	fBTTR-001

Physical and Electrical

f-BTTR Frame+Membrane:	788 mm W x 940 mm L x 965 mm H	Electrical	120 VAC @ 60 Hz / 240 VAC @ 50 Hz 800 W max.
f-BTTR Frame + Dual Sensor System:	990 mm W x 1730 mm L x 1698 mm H		
Frame+Membrane:	150 kg		