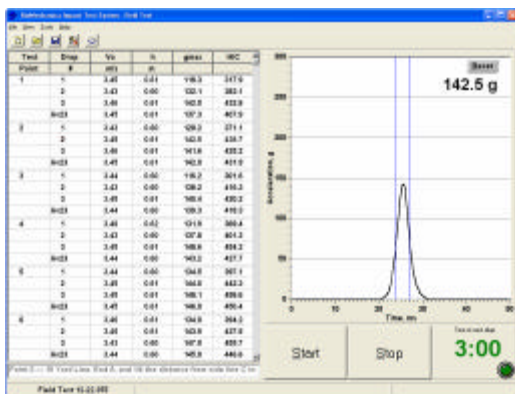


Turnkey systems for impact testing to ASTM standards

F355 • F1936 • F1702 • F1292

*Drop Mechanisms
Accelerometers
Velocimeters
Signal Conditioning
Data Acquisition
Software
Systems*



*Sports Surface
Impact Test System*

Sports Surface Impact Test System

A complete package for measuring the shock-absorbing properties of sports surfaces using the ASTM F355, F1936 and F1702 standard protocols.

Features

Hardware

- Standard 'A'-type missile conforming to the F355 standard.
- Precision machined guidance tube, made of engineering grade nylon for durability and low friction.
- Precision accelerometer for impact shock measurement.
- Digital velocimeter timer accurate to one millionth of a second.
- Signal conditioning and data acquisition package for capturing data.
- Tube mountable electronics package.

Software

- Familiar Windows Interface.
- Software guides you through the F355 and F1936 data collection protocols.
- Automatically calculates g-max, impact velocity, Severity Index and Head Injury Criterion.
- Automatic calculation of test point mean values.
- Built in interval timer.
- System manual and documentation available from the "Help" menu.
- Automated generation of customized reports.

Specifications

Accelerometer

Mass	6.8 grams
Range	± 500 g
Nominal Sensitivity	10.0 mV/g
Frequency Response	2 to 10000 Hz
Resonant Frequency	30 kHz
Time Constant	2.0 s
Linearity	± 1%

Signal Conditioner

Sensor Current	2.0 mA
Voltage Gain	Unity
Coupling Time Constant	5 seconds
Frequency Response	0.05 - 500,000Hz
Batteries	2 x 9V
Battery Life (Typical)	80 hours

Acceleration Data Channel

Channel Frequency Class	SAE J211 CFC 1000
Digital Filter	4 th order Butterworth
Filter Cutoff	-5 % at 1023.5 Hz -3 dB at 1686.1 Hz

Drop Tube and F355-A Missile

Nominal Drop Height	0.61 meters (2 feet)
Missile Mass	9.1 kg (20 lb)
Missile Face Area	129 cm ² (20 in ²)

Analog to Digital Converter

ADC Method	Successive
Input Range	± 5 V
ADC Resolution	16 bit
Accelerometer Resolution	0.02 g
Max Sampling Rate	50 kS/s
Actual Sampling Rate	20 kS/s

Velocimeter

Type	Infrared Photogate
Response Time	5 μs
Timer Clock Rate	1 MHz

Computer

We supply Panasonic Toughbook computers: conveniently sized, water and shock resistant laptops with magnesium alloy frames and transfective touch screens. Great for field testing in almost any conditions.

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Package price includes

- Operator training at our facility .
- One year warranty includes free tech support and hardware & software updates.
- First annual accelerometer re-calibration.
- Rugged shipping case.
- Testing accessory kit.