Linear Impactor & Body Block Test System

- Best in class accuracy by high speed closed loop control
- No pretest required for speed adjustment
- No hydraulics means low maintenance cost & minimum downtime
- Controlled by Microsys SureFire and Low operating cost ($1/Launch)
- Fast change between different launchers & tests (<30 min)
Since 2012 Concept & Microsys combined forces inside the “Concept Tech Group” to supply the automotive industry from its global sales & support network. Our family of safety testing products & services includes airbag deployment, cold gas inflation, impactor launch, low speed crash devices and much more.

www.micro-sys.com
sales@micro-sys.com
+ 1 (905) 678-3288
+ 43 (3124) 203-0

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System Description
This Microsys Test System is customized for a variety of linear impact tests and can be refitted for additional load cases later.

Basic System Specification
- Work and Control Medium: Technical Nitrogen N2
- Supply Pressure N2: up to 16 bar
- Control System: B&R
- Required Power Supply: 3-phase AC 2.5 kW
- Standard Weight: approx. 2000 kg

System Performance: Productivity
The following experienced-based number of tests can be performed by a team of 1 system operator and 1 supporter within 8 hours:
- Linear Impact Test: 8-10 tests/day
- Body Block Test: 8-10 tests/day
(These numbers take into account the required time for changing test parts between two tests and the time needed for data acquisition and test set up - technically 1 test per minute is feasible)

System Performance Linear Head Impactor
- Mass of Impactor: 4 kg - 40 kg
- Speed at Impact: up to 45 km/h
- Accuracy of Impact Location: ± 3 mm
- Accuracy of Speed at Impact < 1 %
  (on Customer request down to) ± 0.2 km/h

System Performance Body Block
- Mass of Impactor: 34 kg - 36 kg
- Speed at Impact: 24.1 km/h
- Accuracy of Impact Location: ± 5 mm
- Accuracy of Speed at Impact < 1 %
  (on Customer request down to) ± 0.2 km/h

Load Cases
Torso Launch
- ECE-R12
- ECE-R95
- FMVSS 203
- GB 11557-1998

Linear Impactor
- ECE-R12
- FMVSS 203
- GB 11557-1998
- FMVSS 222 (Kneeform Impact)
- FMVSS 222 (Headform Test)

Travel of System
- X-direction 1.500 mm/accuracy < 0.1 mm
- Y-direction fixed
- Z-direction 1.500 mm/accuracy < 0.1 mm

Control System & Data Analysis
Like all Microsys products, the Linear Head & Body Block Test System is controlled by the Microsys SureFire software. SureFire provides a common test platform for Microsys impactor and airbag testing, which reduces the time and cost for training of technical personnel. Microsys PowerPlay software is implemented into SureFire as a powerful data analysis and data processing tool. It can be used for post processing and automated reporting. DIADEM can be optionally included. SureFire can also be upgraded to manage high-speed cameras and lighting, as well to provide data acquisition and facility safety management.

Certified Quality
The test system is certified by TÜV and will be delivered with the CE mark. The Linear Head Impact & Body Block test system is used by many customers for conformity of production testing, for vehicle engineering, self-certification and type approval.