

HS Impact System

Vehicle Safety & Impact Testing

The High-Speed (HS) Impact system provides safety engineers with quantitative measurements and visualizations of impact pressures from surfaces, as well as passive and active restraints during crash tests.

Motor vehicle deaths approach 40K each year in the US alone. Until now, the automotive industry has never had the ability to measure impact pressure at high resolution and speed. Acquiring accurate data during impacts requires fast and responsive sensors and powerful software tools.



KEY BENEFITS

High-Speed Data Capture

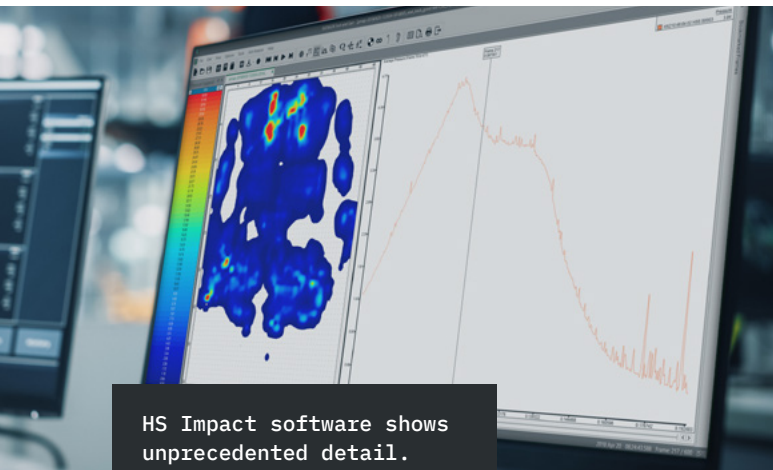
- The thin, conformable sensors contain thousands of sensing points sampled at over 2,000 frames per second, offering unprecedented detail for analysis during and after sudden impacts.

Product Performance Evaluation for Vehicle Design and Improved Safety

- Get detailed and consistent impact pressure information to evaluate design performance. Ensure and improve product and occupant safety with accurate and repeatable testing.

Repeatable Testing and Enhanced Injury Prediction Simulations

- The rugged data logger is designed for crash sled and in-vehicle testing. Recordings can be triggered remotely and dynamic pressure data can be visualized throughout the impact.
- Visualize how much interface pressure is being exerted on a driver from airbags and seatbelts during high-speed front impacts.
- Improve design to minimize elevated body surface pressures and verify performance of head restraints and seat backs during high-speed rear impacts.
- Proven calibration stability ensures accuracy and repeatability, leading to consistent data and reduced re-calibration frequency over repeated cycles.
- The high-speed sensors provide accurate, consistent measurements and are capable of withstanding the vibration and shocks during normal use in crash test applications.



HS Impact software shows unprecedented detail.

HS IMPACT SYSTEM SPECIFICATIONS

SENSOR	USE CASE	SAMPLE RATE FPS	PRESSURE RANGE N/CM2 (PSI)	SENSING AREA CM X CM (IN X IN)
HX210:48.64.02	Back-of-Seat	2,500	0.07 - 22 (0.1 - 32)	61 x 81 (24 x 32)
HX210:40.64.02	Back-of-Seat	3,000	0.07 - 22 (0.1 - 32)	51 x 81 (20 x 32)
HX210.50.50.05	Head Restraint	2,400	0.7 - 70 (1 - 100)	25.4 x 25.4 (10 x 10)
HX210:36.48.05M	Vest	3,300	0.7 - 207 (1 - 300)	18 x 24 (7.1 x 9.4)



Data logger records data from each sensor pack up to a total 64 x 64 sensing array.

OUR PLATFORM INTELLIGENT DYNAMIC SENSING

The platform behind our vehicle safety testing products, Intelligent Dynamic Sensing (IDS), enables precise measurements and features highly-detailed visualizations and smart data with AI-powered analysis — resulting in optimized performance, comfort, and safety.



Maximum performance sensing



Real-time data measurement and highest-quality visualizations



AI-powered data analysis and optimization

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