

Crash Barrier Load Cell System

Strain gauge-based load cells for instrumented crash barriers

Crash Barrier Load Cells

Michigan Scientific Crash Barrier Load Cells are strain gauge-based load cells designed to mount to a rigid mounting plate. They are made of high-grade stainless steel and have a rugged design with all electronics mounted internally. The load cell is available as single-axis or three-axis transducers.



Model CT500

The primary load cell for standard barrier positions. Use for frontal impact, moderate overlap frontal impact, and small overlap frontal impact barriers.

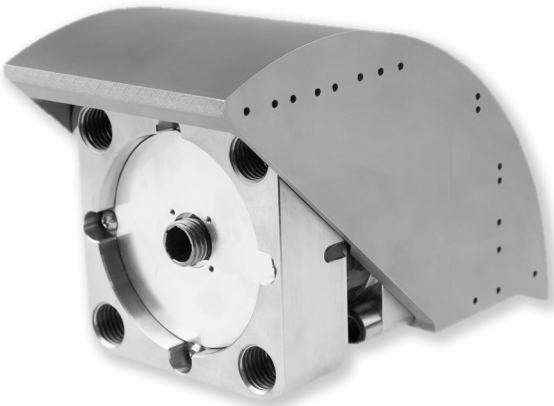
The CT500 can support a variety of attached plates and accessories, enabling customers to adapt the transducer to unique crash barrier designs and specialized testing



Model CT500-R, Radius Configuration

Specifically designed for corner locations in small overlap crash barriers, the CT500-R integrates with a 150 mm radius plate while maintaining the same 500 kN force capacity as the CT500.

Like the CT500, the CT500-R can support a variety of attached plates and accessories, enabling customers to adapt the transducer to unique crash barrier designs and specialized testing.



Specification	CT500	CT500-R
Maximum Force Capacity [Fx]	500 kN	500 kN
Maximum Force Capacity [Fy, Fz] (Three-Axis Only)	125 kN	125 kN
Maximum Force Capacity [My, Mz]	Optional	Optional
Nonlinearity	< 0.5 % of full scale	< 0.75 % of full scale
Hysteresis	< 0.5 % of full scale	< 0.75 % of full scale
Natural Frequency	> 2100 Hz	> 4900 Hz
IP Rating	IP66	IP66
Temperature Range	-40°F to 257°F (-40°C to 125°C)	-40°F to 257°F (-40°C to 125°C)
Connector	Mil-Spec Circular Connector	Mil-Spec Circular Connector
Weight	7.0 kg	3.8 kg; 9.5 kg with radius plate installed

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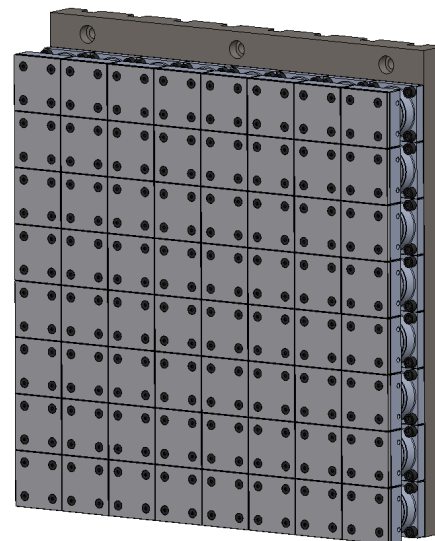
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Instrumented Crash Barrier System

Michigan Scientific offers a fully assembled Instrumented Crash Barrier System with the load cells mounted to the plate and signal wiring routed internally.

Features

- Strain gauge-based load cells
- Single-axis or three-axis configurations
- Customizable size, load capacity, and number of axes
- Compatible with all DAQ systems
- Rugged construction with internal electronics
- Can support a variety of plates and accessories



Rigid mounting plate

- Standard mounting plate is one square meter
- High-grade stainless steel

Mounted load cells

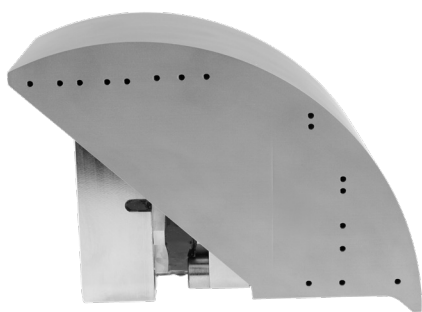
- Configured for 64 load cells
- 1 mm clearance between each load cell

Signal integrations

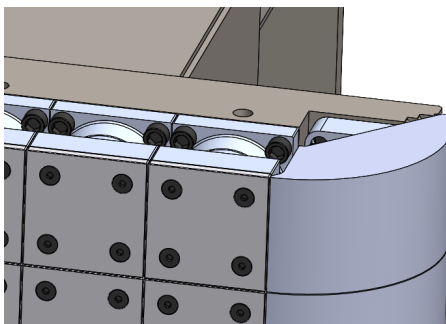
- Signal wires routed within the plate
- No specific DAQ required

Expandable System Configuration

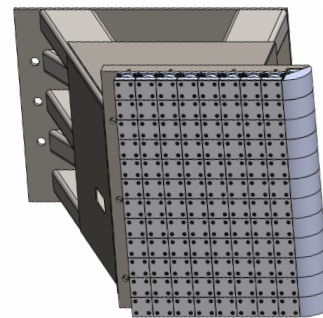
Multiple systems can be combined to expand the barrier face. Each assembly mounts to the customer's barrier frame and can be moved between compatible test setups.



Radius configuration for corner applications



Modular system supporting a variety of plates and accessories



Mounts easily to barrier frame for flexible test setup integration



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Rev: September 3, 2026

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