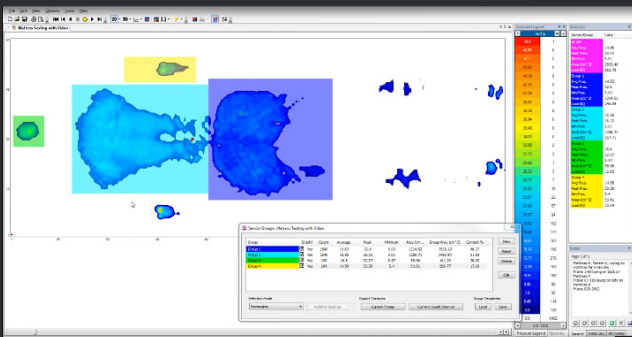


X3 Mattress Design R&D Sensor

Evidence-Based Mattress Design

The X3 Mattress Design R&D Sensor is a high-resolution pressure mapping solution designed specifically for mattress designers, R&D engineers, and product development teams. It provides objective, repeatable data to evaluate comfort, support, and pressure redistribution across the full body on mattress surfaces.

By combining ultra-thin, flexible pressure sensors with XSENSOR's Pro software platform, X3 enables evidence-based validation of mattress designs, helping teams confidently compare materials, refine constructions, and verify performance throughout the development lifecycle.



KEY BENEFITS

ENABLE EVIDENCE-BASED MATTRESS DESIGN

- Capture detailed, full-body pressure distribution data to objectively evaluate comfort and support.
- Compare designs, materials, and prototypes using quantitative data rather than subjective feedback.
- Validate design changes with repeatable, reliable measurements.

GAIN DEEPER PERFORMANCE INSIGHTS

- High-resolution pressure maps clearly reveal pressure points and load distribution.
- Advanced visualizations support analysis of body position, contact area, and pressure relief.
- Record pressure over time to assess dynamic performance and material response.

STREAMLINE R&D AND VALIDATION WORKFLOWS

- Powerful Pro software enables quick comparisons and before-and-after evaluations.
- Group sensors to analyze specific anatomical regions or zones of interest.
- Export data for external analysis and reporting to support internal or regulatory requirements.

KEY FEATURES

HIGH-RESOLUTION SENSOR TECHNOLOGY

- **Pressure Range:** Up to 0.1–3.87 psi (5–200 mmHg)
- **Accuracy:** ±10% full-scale
- **Technology:** Capacitive
- **Sensor Resolution:** Up to 0.5" (12.7 mm)
- **Sensing Points:** Up to 10,240
- **Sensor Characteristics:**
 - Ultra-thin and flexible for full-body conformity
 - Low hysteresis and creep
 - Durable construction for repeated testing
 - Calibration is maintained over time

ADVANCED SOFTWARE ANALYSIS

- Real-time pressure visualization
- High-resolution 2D and 3D pressure views
- Sensor grouping and anatomical region analysis
- Statistical reporting and comparison tools
- AI-powered data analysis for performance insights
- Data export for external analysis and documentation

SPECIFICATIONS

SENSOR	SPATIAL RESOLUTION	SENSING AREA	CALIBRATION RANGE	RESOLUTION
PX100:26.64.01	1" (25.4 mm)	32" x 80" (81.2 cm x 203.2 cm)	0.1-3.87 psi (5-200 mmHg)	Low
PX100:48.144.02	0.5" (12.7 mm)	24" x 72" (61 cm x 182.9 cm)	0.1-3.87 psi (5-200 mmHg)	High
PX100:64.160.02	0.5" (12.7 mm)	32" x 80" (81.3 cm x 203.2 cm)	0.1-3.87 psi (5-200 mmHg)	High

XSENSOR is ISO/IEC 17025 accredited

OUR PLATFORM INTELLIGENT DYNAMIC SENSING

The platform behind our R&D products, Intelligent Dynamic Sensing, 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

XSENSOR

SALES
+1 (403) 266-6612
sales@xsensor.com

WEBSITE
xsensor.com

Learn More
or Schedule a
Demonstration

