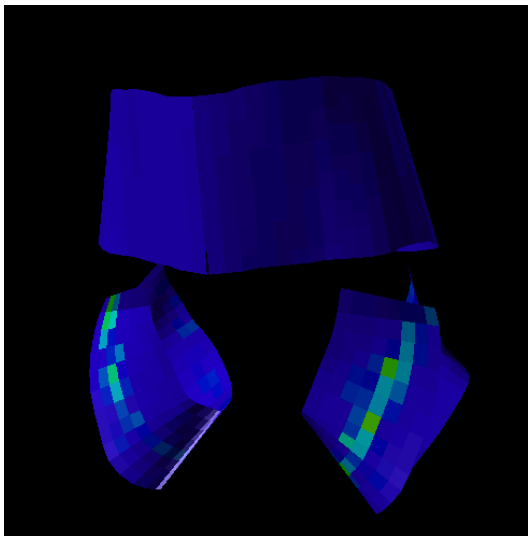
Body Pressure Mapping Systems for Seat

CAPTURING THE SENSE OF TOUCH

Body Pressure Mapping Systems for Seat



Sample Data Display

PRODUCT OVERVIEW

PPS's Body Pressure Mapping System (BPMS) provides a means for designers and clinicians to measure and visualize the key pressure points when a user sits on a seat. Using an array of highly sensitive sensors placed on a seat body pressure points are measured and displayed.

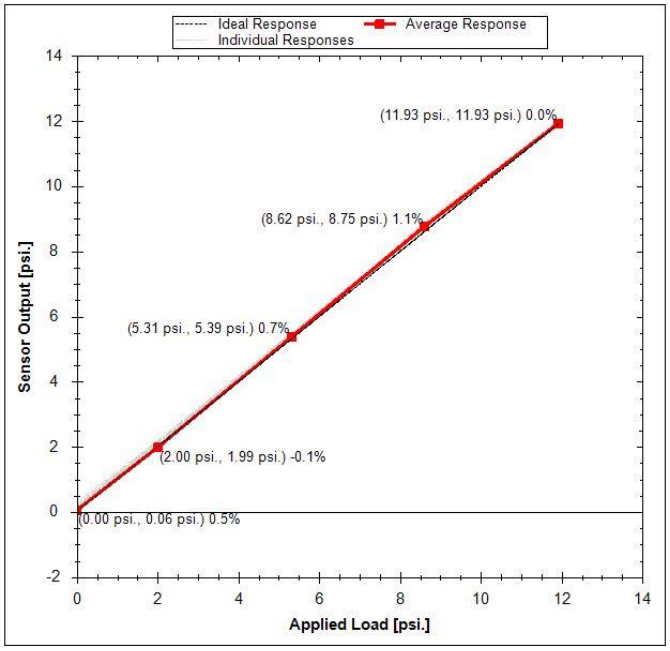
The BPMS was designed for seat manufacturers, for companies that utilize seats in their products, for automotive companies and for researchers that study comfort levels to create healthy and comfortable seats. BPMS is a pressure visualization and measurement system that measures seat and back pressure distribution to determine comfort levels of different chairs. The proprietary stretchable array sensor is constructed with advanced conductive cloth materials for conformability and stretch-ability while maintaining high-performance sensitivity and repeatability. Users can incorporate the sensor into their application without altering the characteristics of the support surface. Data quality is not compromised due to curved surface requirements.

KEY SYSTEM FEATURES AND BENEFITS

- ***High-performance array sensor*** constructed with advanced conductive cloth material allows for conformability and stretch-ability to allow natural seating. This allows the sensors to be incorporated into the application without altering the characteristics of support surface.
- ***Highly sensitive and repeatable tactile sensors*** used in the product while data quality is not compromised even on curved surfaces.
- ***High performance capacitive sensing technology*** saves time and improves results by significantly reducing recalibration and repeated tests allowing developers to resolve problems and answer questions faster.
- ***Chameleon Visualization Software*** provides intuitive, easy to use, high-quality visualization and easy access to data for analysis and export to other applications. The software is fully featured which means export, replay, save and analysis functions are included with every system.

SENSOR MODELS		
Model Number	**5233**	**5474**
Total Sensor Area	340mm x 340mm	~480mm x 960mm
Active Sensing Area	320mm x 320mm	480mm x 960mm
Element Count	256 (16x16)	512 (16x16x2)
Spatial Resolution	20mm x 20mm	30mm x 30mm

SENSOR CHARACTERISTICS AND PERFORMANCE[1]	
Pressure Range	10 PSI
Pressure Sensitivity	0.4%
Signal to Noise Ratio (SNR)	300:1
Repeatability Error	0.3%
Linearity	99.8%
Accuracy Error[2]	<=2%
Contact Surface Material	Spandex
Sensor Thickness	0.12 in (3 mm)
Cable Length	59 in (1.5m)
Operating Temperature	10°C – 50°C



ELECTRONICS SPECIFICATIONS	
Sample Rate	16-32Hz
Computer Interface	Wifi or USB 2.0
ADC Resolution	12 bit
Input Voltage	5V
Input Power	2W
Enclosure Size	6.5×6.2×1 in. (16.5×15.8×2.5 cm)
Weight	1.43 lbs. (650 g)

SYSTEM COMPONENTS

- Stretchable Seat Tactile Sensor
- T4500 interface electronics with USB 2.0 or WiFi
- Chameleon Visualization and Data Acquisition Software
- Synchronized video capture function and hardware
- Remote Installation and Training

[1] Performance numbers are for typical system response. Actual performance may vary.
[2] Measured using PPS standard calibration and test equipment – includes repeatability errors, noise and linearity