Seat Mat

About the Seat Mat

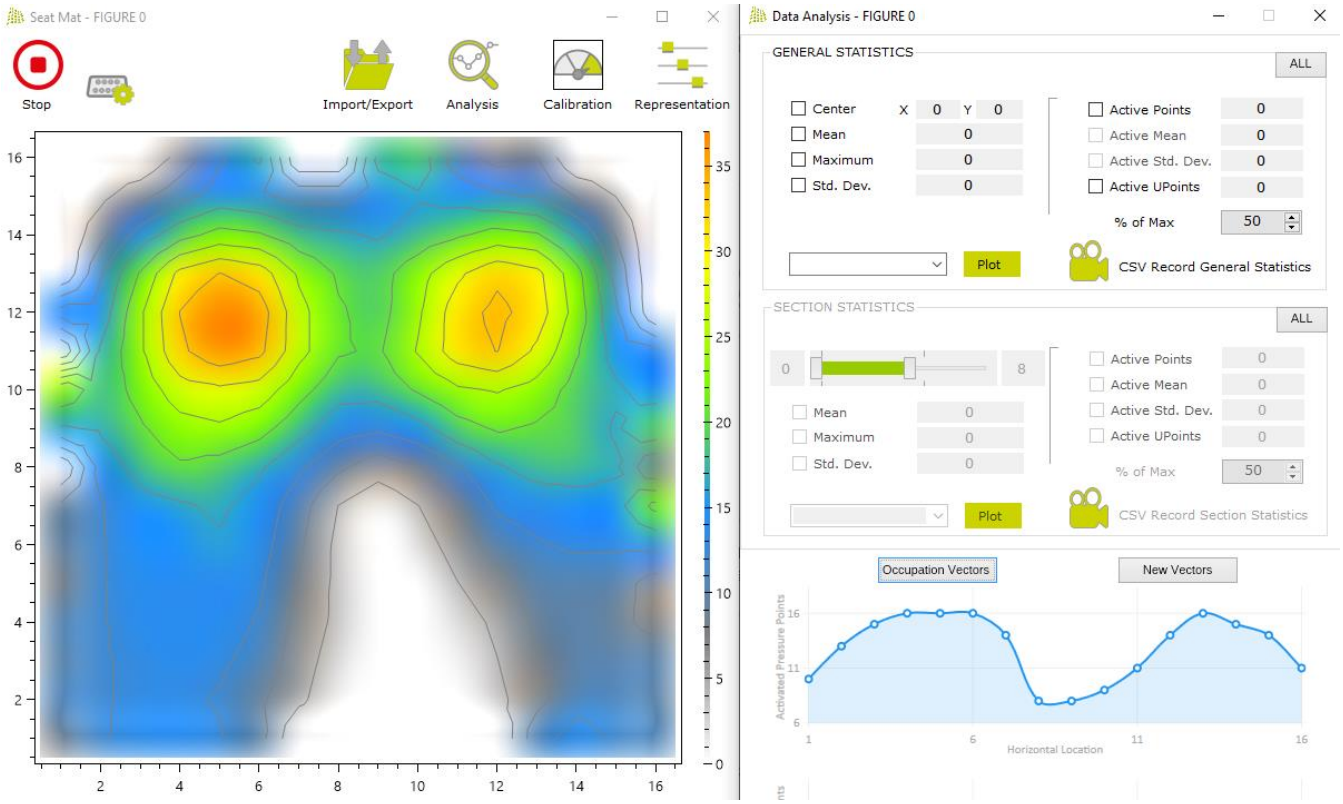
The Seat Mat is a OEM White Label hardware system. The Seat Mat sensor is designed to be placed on top or below a cushion 45x45 cm or on top of a Seat, in a way that is not noticeable for the user.

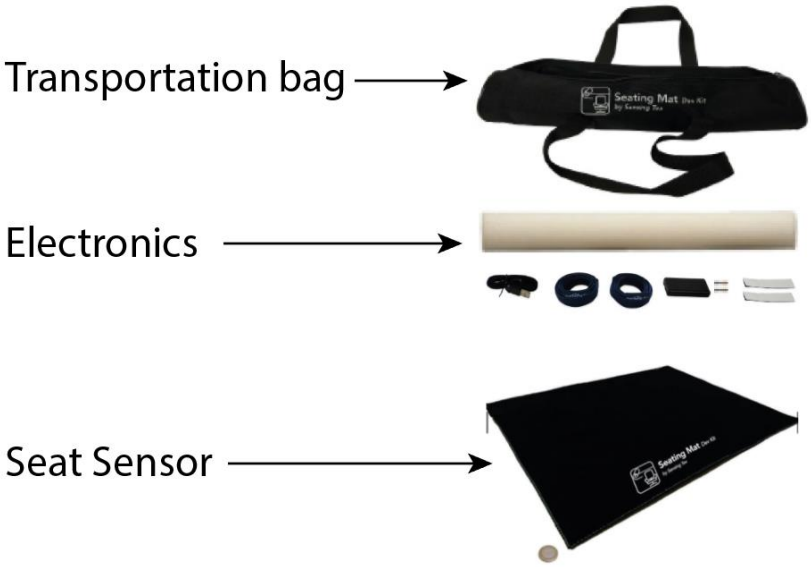
The Seat Sensor is performed by a textile matrix sensor that gathers the pressure maps of users when seating. This data is then treated by our software analytics to obtain useful information such as pressure hotspots, the posture center of balance and pressure distribution

This relevant information is then displayed in the Software provided; the user can use the insight to take the most appropriate decisions to improve their wellness and health products, the system may be integrated with any other software.

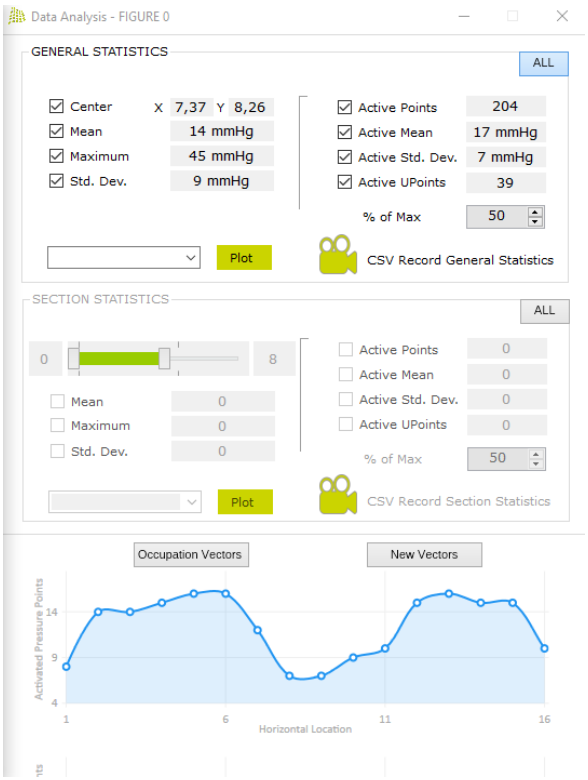
The main application we are exploring is the system as a recommendation for repositioning, as a preventive system in Healthcare (PSH) as well as Wellness applications (PDW) that we are marketing through co-designing process. Please ask more info to info@sensingtex.com if you are interested in.

Screen Shot Software Analytics

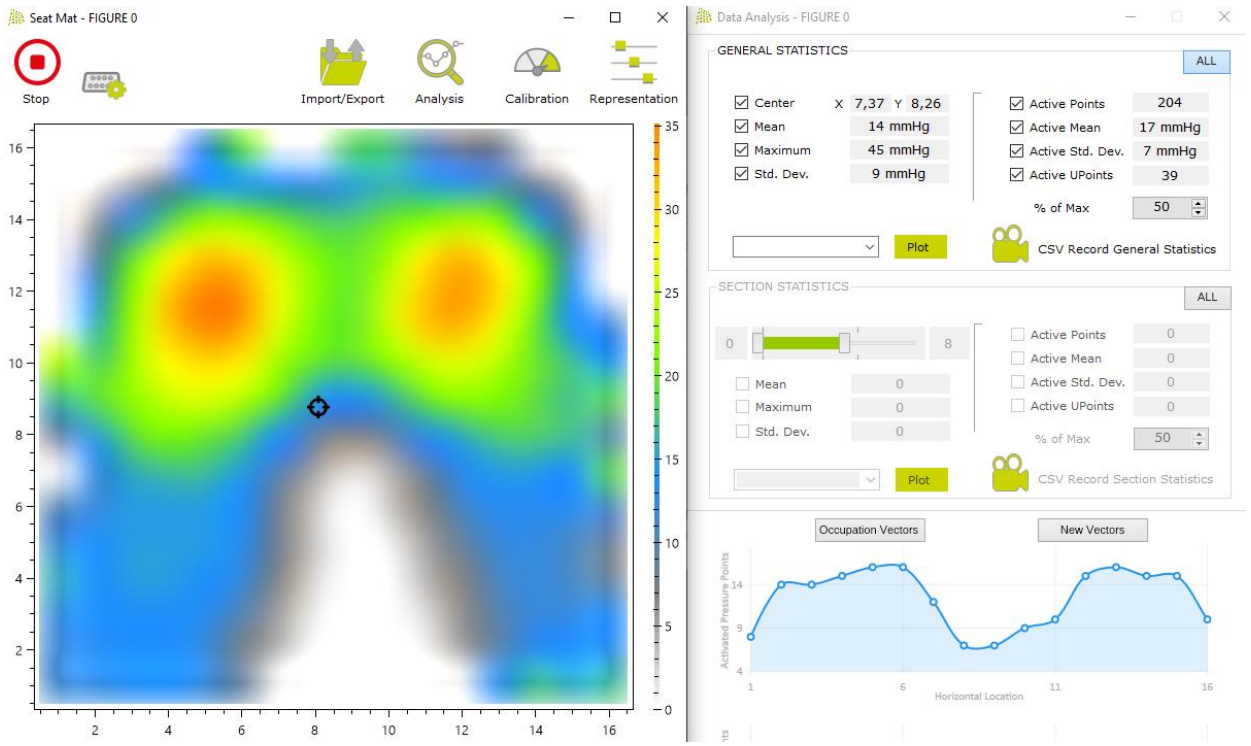




System Components



Software Module
Machine Learning



Main features

1. Software Features

Seat Mat provides a complete software analytics to read out raw data, analyze statistical magnitudes, apply Computer Vision Algorithms and export data to our machines to figure out new services be a part of a team who improve daily life of the users

Movement Analysis

Postural Analysis

Co-creation
New Services

2. Sensing Mat Features

A. Size and Topology Features

Overall Area Sensing Pad [mm] [L x W]	480 x 510
Sensing Area [mm] [L x W]	320 x 320
Number of Sensels	256
Topology [R x C]	16 x 16
Horizontal & Vertical Resolution [mm]	20
Sensor Shape and Size [mm]	Round 10

B. Size and Topology Features

Linearity	Yes Conductance vs Pressure (2 curves)
Hysteresis	12%
Repeatability	<8%
Accuracy	10%
Drift	<12% Model for Correction
Pressure Range	5-250 mmHg

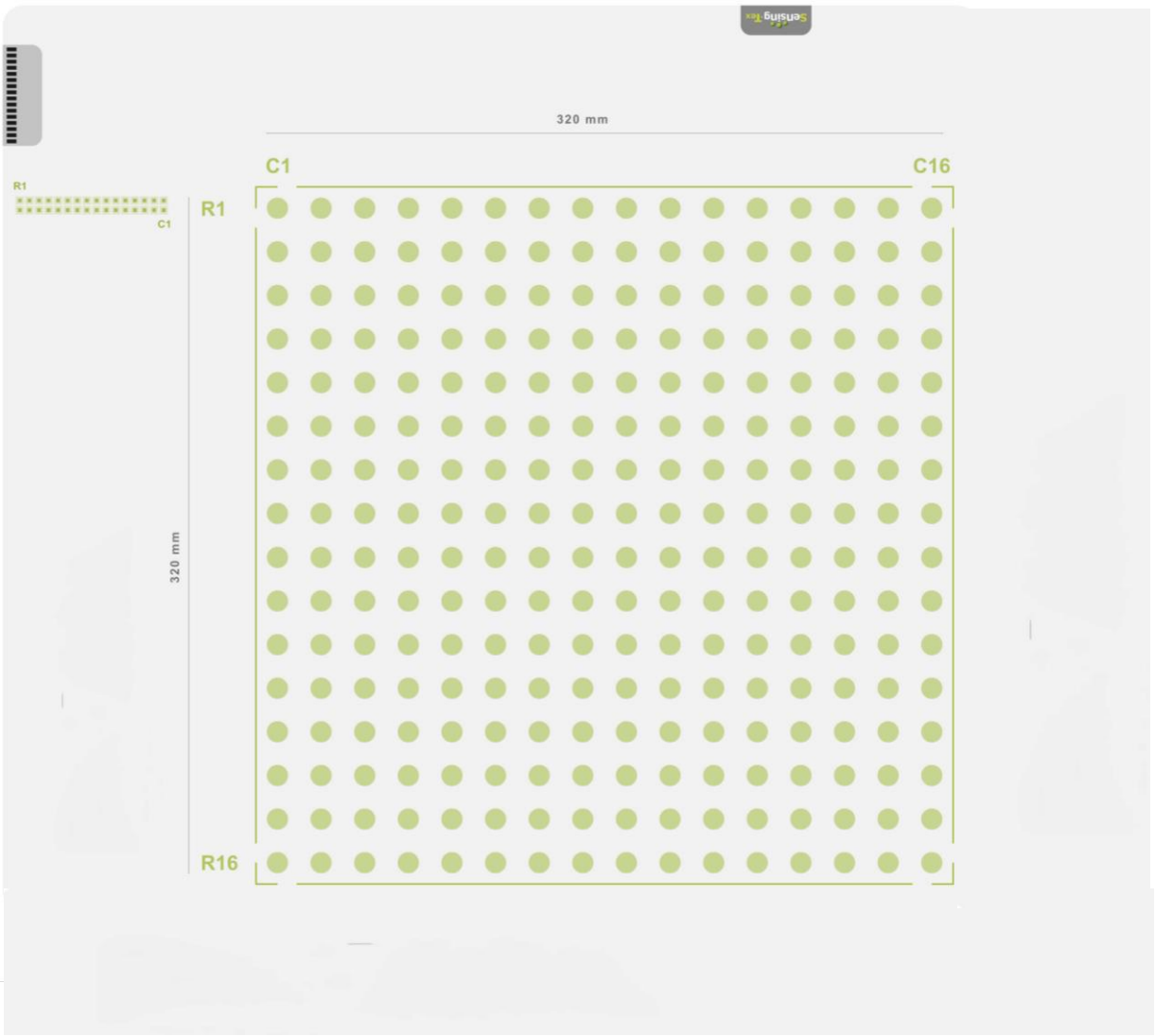
480 x 510 mm Overall Size

320 x 320 mm Sensing Area

256 Sensels

Sensor and Cover

C. Diagram



2. Textile cover features

Mass PES [g/m2]	180 [+/-10]	ISO 3801/5 1977
Coating mass PU [g/cm2]	75 [+/-5]	ISO 3801/5 1977
Water resistence before washability	Ok: 2000 mm	ISO 811 1981
Water resistence after washability	Ok: 2000 mm	ISO 811 1981
Inflammability [Crib 5]	Ok	BS 7175 1989
Breathability [g/m2]	400 g/m2/24h 37oC/65%HR	
Mold and mildew resistence	Ok	

3. Electronic hardware features

A/C circuit	With module multiplexing for Cross-talk reduction and fast processing
Windows compatible	Yes
Resolution	12 bits
Scanning frequency [Hz]	Up to 8
Connectivity	Bluetooth Classic Class II + USB
Battery	Yes

USB 2.0

USB Charger

Bluetooth Classic Class II

Up to 8 Hz Scanning Frequency