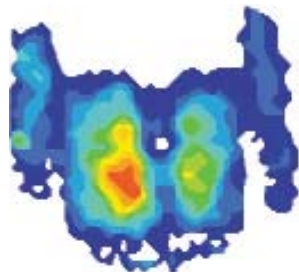


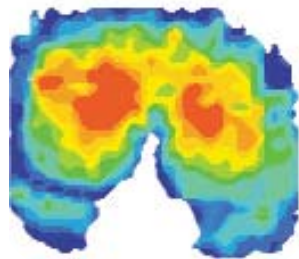


The Advanced *Clinseat*® measures the pressure distribution of a human body on support surfaces such as seats, mattresses, cushions, and backrests. The system includes USB hardware, data acquisition electronics, software, and thin-film pressure (mats) sensors.



Seat back

Pressure output of person sitting on a car seat. Data collected with two sensors model 5315.



Seat Cushion

The mats feature spatial resolutions as high as one sensing element/cm² and contain as many as 2016 individual sensing elements. Multiple mats can be used to cover a surface and provide up to 16,120 sensing elements. The mat's thinness enables the user to confidently incorporate it into the application without altering the characteristics of the support surface. The combination of these factors enables precise measurement of the location and magnitude of peak pressures and overall pressure distribution patterns.

Applications:

- Support surface design:
 - Amount of padding
 - Shape of seat or backrest
 - Contours of seat or backrest
 - Dimensions of seat
 - Firmness
- Automotive driver seat design
- Hospital mattress design
- Home mattress design
- Material testing
- Comfort analysis
- Longevity - how a support surface holds up over time and under various conditions
- Ingress / egress studies
- Psychology studies

Key Features:

- Pressure mapping
- Dynamic recording and playback
- Graphing and analysis capabilities
- Real-time viewing
- Sensors available that cover small or large areas
- High spatial resolution
- Flexible, thin-film sensors (with cover 0.014 in/ 0.35mm)
- Sensors are conformable, durable, and reusable
- Easy to replace sensors - do not have to replace whole sensing surface
- Sampling rates: 0-127 Hz / 830,000 sensels/sec
- 8 bit pressure resolution
- Quality engineering support

Found in:

Research & Development Labs, Test & Design Facilities

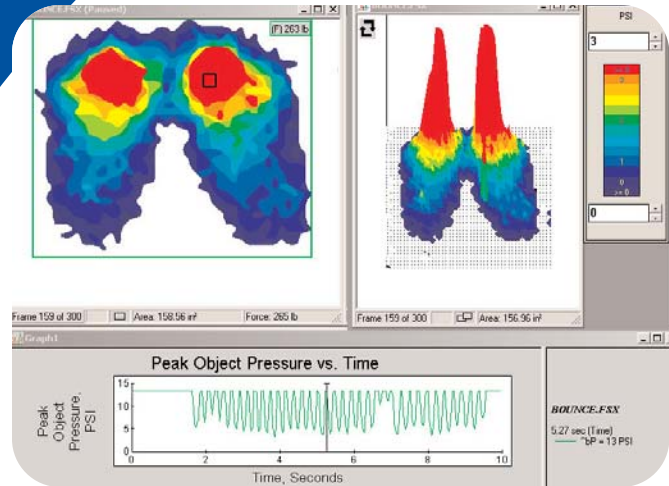
Industries:

Bed, Seat, Cushion, Bike, Motorcycle and Automotive Manufacturers, Universities, and many more...

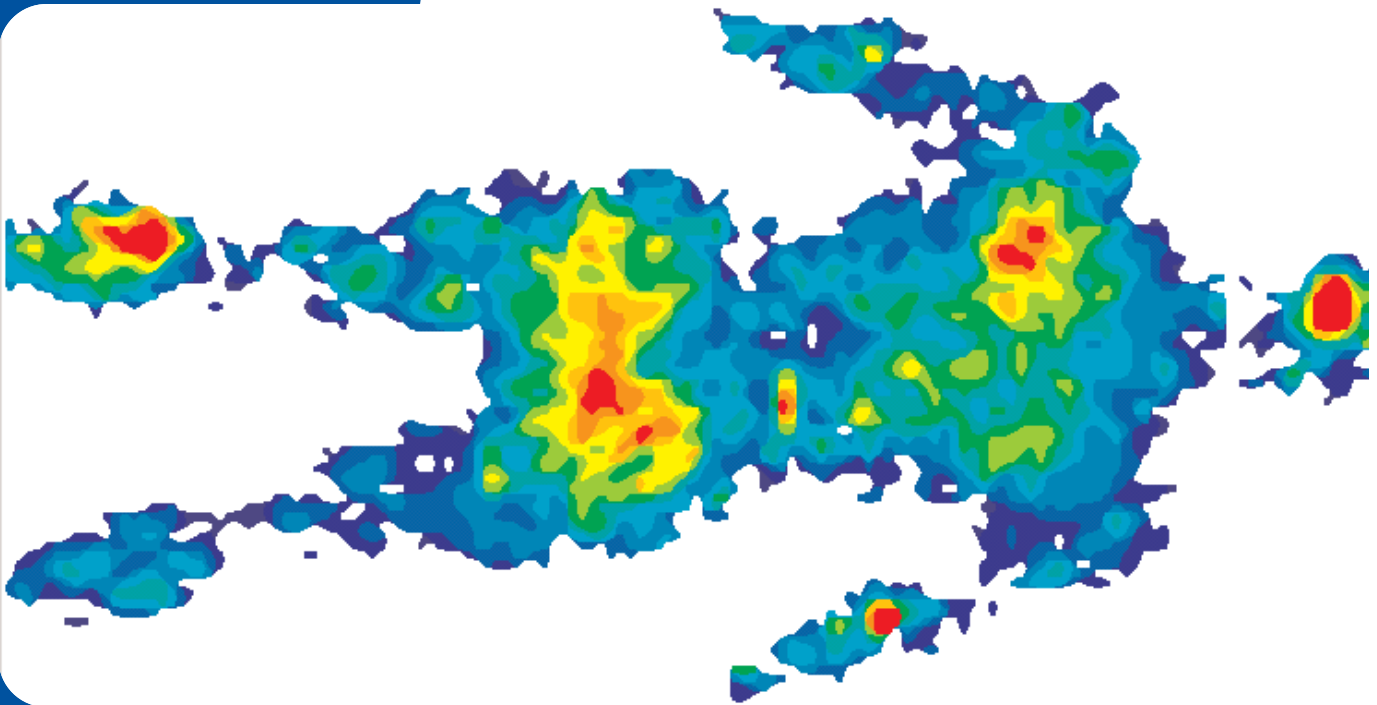
Specifications and Features

Software Features:

- Capture dynamic pressure
- Record pressure output
- Play-back pressure “movies”
- Display real-time and recorded data as 2-D and 3-D images
- Display of pressures and forces curves over time
- Export ASCII file capability
- Display data frame-by-frame, single, and/or multi-frame
- Isolate and analyze specific regions
- Display Center of Force and its trajectory
- View and compare multiple tests simultaneously
- And much, much more!



*Car seat test: pressures caused during driving when vehicle bounces
2-D and 3-D views of peak pressure, with graph of Peak Pressure vs Time*



*Output of subject lying on a 4-sensor configuration (sensor model 5400N)
The high spatial resolution of the sensor allows you to measure and display
the high pressure areas (in red) as the subject is lying down*

System Configurations

Advanced *ClinSeat* is built on a “modular” sensor construct concept. This means you can acquire a system in many ways from one sensor up to four or eight. This allows you to grow your Advanced *ClinSeat* as your needs expand, thus protecting your initial investment.

#5315 Sensor Configurations

# of pads	Size	# of Sensing Elements
1	19.2in x 16.8in (488 mm x 427 mm)	2,016
2	38.4in x 16.8in (976 mm x 427 mm)	4,032
4	76.8in x 16.8in (1,952 mm x 427 mm)	8,064
8	76.8in x 33.6in (1,952 mm x 854 mm)	16,128

Sensor Descriptions: #5315

Spatial Density

6.25 sensels/in² (1 sensel/cm²)

Technology

Resistive

Calibration

Application of known and controlled force

Pressure Range

0-5 or 0-30 PSI (other ranges available)



Subject shown lying on a 4-sensor Advanced ClinSeat configuration (sensor model 5315). Sensors are put into a mattress cover for ease of set-up and testing. Cover is included with system.

#5400N Sensor Configurations

# of pads	Size	# of Sensing Elements
1	22.7in x 34.8in (578 mm x 884 mm)	1,768
2	22.7in x 69.6in (578 mm x 1,768 mm)	3,536
3	68.1in x 34.8in (1,734 mm x 884 mm)	5,304
4	90.8in x 34.8in (2,312 mm x 884 mm)	7,072

Sensor Descriptions: #5400N

Spatial Density

1.95 sensels/in² (0.3 sensel/cm²)

Technology

Resistive

Calibration

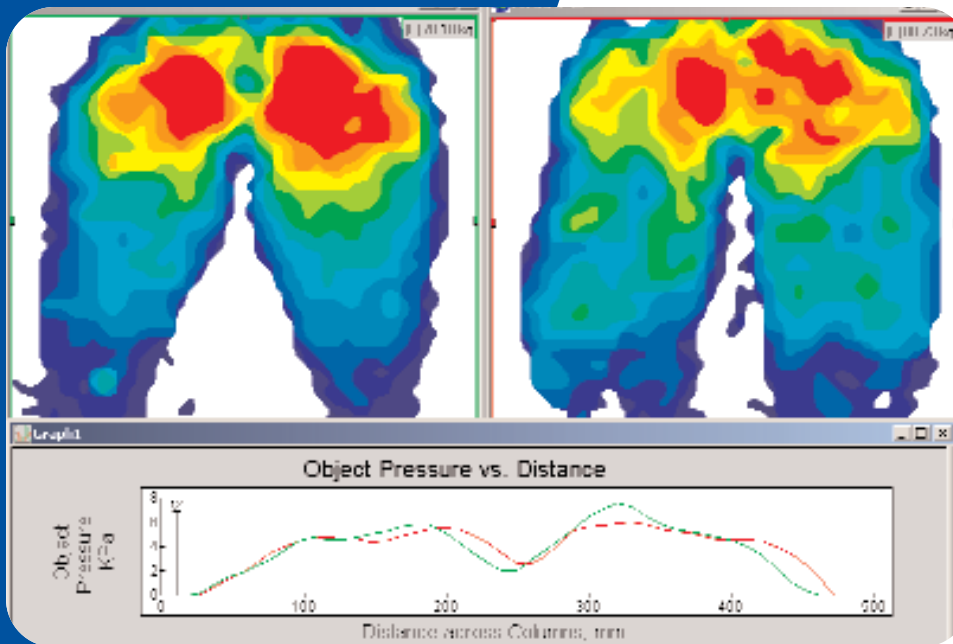
Application of known and controlled force

Pressure Range

0-4 PSI (other ranges available)

Advanced ClinSeat®

With a single sensor system, you can evaluate a cushion; first the back, then the seat. A two sensor system can be used for simultaneous measurements of both. With a four or eight sensor system, a whole bed or mattress can be covered. Even more importantly, the system's modular nature makes replacement of damaged sensors very easy and affordable; one sensor can be purchased without replacing the entire sensing surface.



Two sensor configuration for simultaneous, dynamic views of seat and back

Comparison test of two participants sitting on the same support surface. Advanced ClinSeat allows for multiple pressure "movies" to be opened, analyzed, and compared

Add-On Options:

Virtual System Architecture™ (VSA) - Larger areas are easily accommodated with our *Virtual System Architecture* (VSA) software solution. VSA allows you to view multiple sensors, positioned adjacent to one another, creating a continuous measurement region.

Video Synch™ - Video sequences can be recorded and synchronized with your pressure data and visualized in Tekscan software, enhancing the utility of collected data.

Equilibration Bladders - Pneumatic bladders apply a uniform pressure to the active area of the sensor to normalize output of each sensing element. The system electronically compensates for variation in individual sensing elements.

USB or Parallel Hardware Available

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