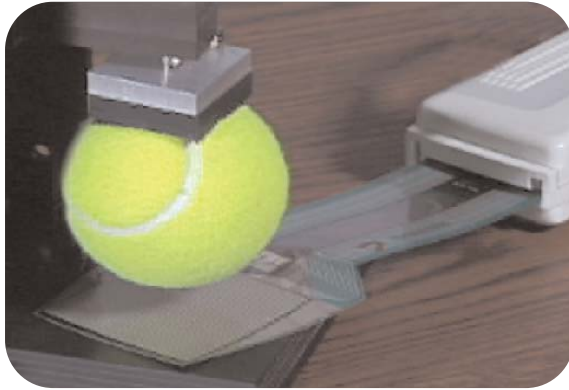




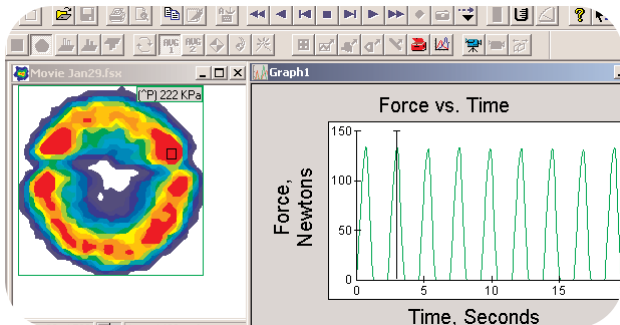
The I-Scan[®] System

Tactile Force and Pressure Measurement System



I-Scan, the user-friendly force and pressure measurement system, displays, records, and saves static and dynamic pressure data directly to your PC. The system includes Windows-based software, interface electronics, and sensors. With a choice of over 200 available sensors in a variety of shapes and sizes, this versatile system is tailored to meet your application needs.

I-Scan's patented technology has played a key role in research and development, test and measurement, and quality control applications worldwide. Our thin, flexible sensors are minimally disruptive to the true pressure pattern and fit almost any application. These characteristics, coupled with our sensors' high spatial resolution (~1,600 sensels/in² or 248 sensels/cm²) have made us the industry leader in solving difficult pressure measurement problems.



Force vs. Time
Graph

One frame of an I-Scan pressure "movie"

The *I-Scan* system provides advanced, yet simple to use, software that displays contact pressure data in real-time. Data can be captured, saved, easily analyzed using a variety of graphs, or exported as an ASCII file to be used with other programs. Tekscan's systems have saved companies millions of dollars in design, design verification, and reengineering costs.

Applications:

- Test and measurement
- Research and development
- Machine set-up
- Quality control
- Automotive
- Brake pad and friction plates
- Catalytic converter
- Hard gaskets and bolted joints
- Soft seals
- Hose clamps and crimps
- Grip and ergonomic
- Fuel cell stack assembly
- Fastener
- Nip and pinch rollers
- Wafer and glass polishing
- Lamination
- Liquid crystal display processing
- Mold filling
- Pressure garments
- Robotics
- Nozzle spray patterns
- Packaging and sealing
- Squeegee balancing
- Railroad

Key Features:

- Pressure mapping
- Dynamic recording and playback
- Graphing and analysis capabilities
- Real-time viewing
- Large variety of ready-to-use sensors
- High spatial resolution
- Flexible, thin-film sensors
- Sensors are durable and reusable
- Sampling rates: 0-127 Hz (over 830,000 sensels/sec)
- Pressure ranges: 0-25,000 PSI (0-175 MPa)
- 8-bit pressure resolution
- Quality engineering support

Found in:

Research & Development Labs, Manufacturing, Test Facilities

Industries:

Automotive, Semiconductor, Pharmaceutical, Ergonomics, Packaging, Paper, Printing, Government Agencies, Universities, and many more...

Specifications and Features

Software Features:

- Display real-time and recorded data as 2-D and 3-D images
- Capture dynamic pressure data
- Play-back pressure “movies”
- Display data frame-by-frame or as a multi-frame movie
- Graph and analyze real-time or stored data (Pressure, Force, Area)
- Export ASCII file capability
- Isolate and analyze specific areas
- Display Center of Force and its trajectory
- View and compare multiple tests simultaneously
- And much, much more!

Sensor Description:

Below is a summary of our sensors' characteristics. Sensors can be selected based on application requirements.

No. of Sensing Elements

Typically 2,288 (to over 146,000)

Spatial Density

Up to 1,600 sensels/in²
(248 sensels/cm²)

Spatial Resolution

0.025 x 0.025 in - 0.7 x 0.7 in
(0.64 x 0.64 mm - 17 x 17 mm)

Operating Temperature

15°F - 140°F (-9°C - 60°C)

Size of Sensing Area

0.12 x 0.12 in - 22.7 x 34.8 in
(3.0 x 3.0 mm - 578 x 884 mm)

Technology

Resistive

Calibration

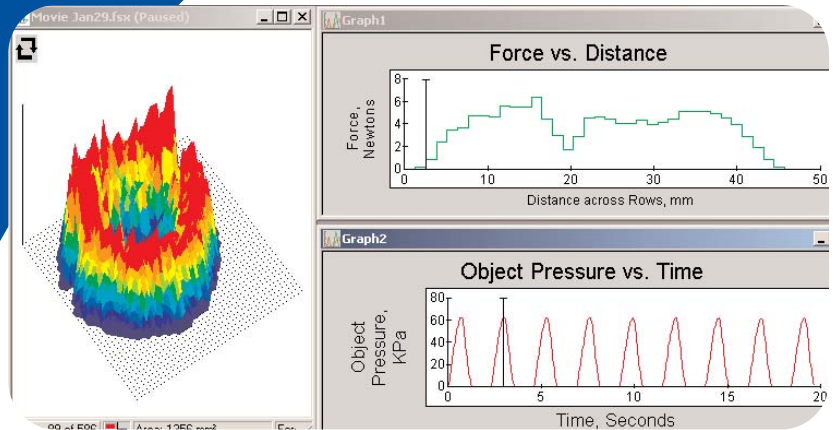
With application of a controlled force by user

Pressure Range

0 - 25,000 PSI (0-175 MPa)

Sensor Thinness

Typically 0.004 in (0.1 mm)



Software Display

3-D contour display of a tennis ball pushing on a sensor. Also shown graphically: Pressure vs. Time and Force vs. Distance across the sensor rows

Related Products & Options

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

API 2 (Application Program Interface) - API software enables a user, with programming knowledge, to write programs that directly access Real-Time sensor data buffers. The user interface is preserved with API 2.

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

Wireless Capability - Wireless connection available between the sensor/handle and your PC allowing for ultimate flexibility in data acquisition.

Advanced Analysis (Polygon/Blob/Tracking Box)- This software package includes three options for more thorough analysis, such as allowing you to add a custom-shaped box or window to a Real-time window, ability to study loaded sensels in a particular area, and the ability to add a box to a movie or Real-time window that will follow the loaded sensels in a given area.

I-Scan Handheld Data-Logger- A PDA version of our *I-Scan* System that records dynamic movies capturing changes over time, making it easy to collect and store data directly from on the field or assembly line.



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