

Nip Roller System

Process Control & Verification

XSENSOR's industrial sensors provide the most accurate pressure profiles for manufacturing engineers who need confidence in applied pressure, alignment, and flatness for production processes.

For product applications like goods manufacturing that rely on nip or pinch rollers, ensuring even weight distribution is critical in maintaining production standards.

KEY BENEFITS

STATIC & DYNAMIC PRESSURE MEASUREMENT

- Get quantifiable, unbiased data and visualizations that help get machines properly aligned, balanced, and calibrated. Prevent misalignment of equipment or product damage.
- Proprietary diamond-shaped design maximizes sensing elements and eliminates electronic noise during measurement, offering the most accurate visualization of nip footprint.
- Configure any area to measure between nip and pinch rolls.
- Continuous thickness and compressibility across the entire contact area allows pressure distribution measurement without disrupting roller balance.

REPEATABLE TESTING PROCEDURES

- Ensure consistent measurements with fast response time, minimal drift and hysteresis. Stable calibrations ensure your sensors are always ready to use without recalibration.
- Save valuable production time with fast set-up and easy-to-interpret measurement visualizations.

EASY-TO-USE SOFTWARE

- View real-time or recorded static or dynamic data in 2D or 3D. Data can be viewed frame by frame.
- View contact area, average and peak pressures, and center of pressure.

NIP ROLLER PRESSURE SYSTEM SPECIFICATIONS

SENSOR	
Accuracy:	±5%
Thickness:	0.7 mm (0.028 in) in sensing area; 0.75 mm (0.030 in) leading edge
Pressure Range:	1-128 psi, 0.7-88.3 N/cm ²
Resolution:	0.61 x 6.35 mm (0.024 x 0.25 in)
Size:	82 x 647 mm (3.23 x 25.47 in)
Sensing Area:	20 x 610 mm (0.79 x 24 in)



768 diamond-shaped sensing elements optimize channels and minimize border widths (converts to 2,976 displayed sensing points).

OUR PLATFORM INTELLIGENT DYNAMIC SENSING

The platform behind our product design & safety testing products, Intelligent Dynamic Sensing (IDS), 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

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