Industrial

2nd Generation!

Pressure Indicator™

Nip Width Indicator™
Formerly Roller Nip Indicator

Nip pressure in Newton/cm²

Nip width in millimeters or inches
The Pressure Indicator – nip pressure in Newton/cm²

Featuring the latest nanotechnology, the Pressure Indicator makes rapid measurement of nip pressure between rollers possible for the very first time. As the 5 x 5 mm pressure-sensitive area moves through the nip under pressure, the instrument registers the absolute pressure level thousands of times. And the highest value – peak pressure – remains displayed.

Calibration
Press the control button once, insert the pressure-sensitive tip of the sensor blade into the calibration tool – and calibration is complete.

Substrate labels
In lamination, for example, you may want to measure with a sensor blade having the same thickness as your substrate. If so, use Nip Control’s substrate labels.

Simple handling
1. Let the rollers draw the tip of the sensor blade through the nip
   Then stop. Nip pressure is displayed instantly
2. Reverse the rollers or lift them apart
3. Adjust the rollers if necessary and repeat measurement

The Nip Width Indicator – nip width in millimeters/inches

Two choices
1. Choose between a 300 mm long sensor blade measuring nip widths up to 20 mm and a 500 mm long sensor blade for nips up to 50 mm wide.

2. Determine if your company requires traceable measurements

Verified Calibration™ – the ultimate quality control feature
The standard Nip Width Indicator instrument self-checks the sensor blade during start-up. If the sensing element has become worn from usage and no longer meets specified performance parameters, a message will be displayed, warning that the blade cannot be used.
Many companies, however, have quality process control systems which include measurement traceability. Nip Control’s new calibration and verification system for the Nip Width Indicator fulfills these demands.
Every calibration unit is checked against a reference which is controlled by a “National Competent Body” at pre-defined intervals, ensuring that measurements are verifiable and traceable according to quality standards.
The calibration unit features exceptional accuracy of +/- 0.05 mm – about the thickness of a human hair!

Simple handling
1. Position the tip of the sensor blade between the rollers
   Roll it in or clamp down. The display shows readings in millimeters or inches
2. Adjust nip width to the desired level while keeping the sensor blade in the nip
3. Reverse the rollers or lift them apart
Important to control nip characteristics of process critical nips

Using Digital Nip Measurement is quick and easy. You can set your roller nips accurately and check their status frequently.

The process is repeatable and operator-independent. The measurement data facilitates statistical trend analysis and continuous process improvement, ultimately leading to improved product quality and process control, lower product cost (less scrap) and more production time. Increased job satisfaction is an additional bonus: no more trial and error!

A roller nip

The nip generates a PRESSURE CURVE while determining nip characteristics. The pressure curve is defined in terms of Nip Pressure and Nip Width.

- The Pressure Indicator measures peak pressure in Newton/cm².
- The Nip Width Indicator measures nip width in millimeters or inches.

The life of a roller pair

Rubber is a “living” material and ages from constant expansion and contraction during its service life. It can harden, soften, shrink or swell when affected by temperature changes, chemicals, the extraction of plasticizers, number of revolutions, production speed and change in bulk elasticity (E-module).

Inevitably, the nip pressure curve changes too. What was originally the correct nip setting becomes progressively inaccurate and may lead to process deterioration and instability.

The consequences of a change in the characteristics of the rubber vary, according to whether the roller pairs are fixed or whether one of the rollers is floating, as well as the nature of the change.

See the generic pressure curve examples below.

Fixed rollers

Floating rollers (force controlled)
**Pressure Indicator measuring system consists of a hand device, sensor blade and calibration tool**

**Pressure Indicator (nip measurement in Newton/cm²)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Type of product</th>
<th>Note</th>
<th>Length</th>
<th>Nip width</th>
<th>Sensor blade thickness</th>
<th>Roller surface</th>
<th>Rubber hardness</th>
<th>Measuring range *)</th>
<th>Nip temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>P102</td>
<td>Instrument</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C101</td>
<td>Calibration tool</td>
<td>Calibration of P350001 at 400N/cm²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P350001</td>
<td>Sensor blade</td>
<td>350mm/13.8&quot; ×5mm/0.2&quot; 0.2mm/0.008&quot;</td>
<td>Rubber/rubber Rubber/plastic Rubber/metal</td>
<td>Smooth  &lt;95°</td>
<td>1–999N/cm²</td>
<td>10–70°C/18–158°F</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LP101</td>
<td>Substrate labels</td>
<td>Thickness 0.1 mm/0.004&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T150</td>
<td>Telescopic extension arm</td>
<td>180° joint</td>
<td>1–1.5 m/ 3.3–5 ft</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HN201</td>
<td>Trend analysis software</td>
<td>Trend analysis software</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*) Peak pressure onto sensor blade

**Nip Width Indicator system consists of a hand device and sensor blade. If traceability required add calibration/verification unit**

**Nip Width Indicator (nip measurement in millimeters or inches) – formerly Roller Nip Indicator**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Type of product</th>
<th>Note</th>
<th>Length</th>
<th>Nip width</th>
<th>Sensor blade thickness</th>
<th>Roller surface</th>
<th>Rubber hardness</th>
<th>Sensor blade working range *)</th>
<th>Nip temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>W102</td>
<td>Instrument</td>
<td>0.5mm display resolution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W102CAL</td>
<td>Instrument with calibration software</td>
<td>0.5mm display resolution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAL10SS</td>
<td>Calibration/verification unit</td>
<td>Calibration of SS30002 at 10mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAL30SS</td>
<td>Calibration/verification unit</td>
<td>Calibration of SS50002 at 30mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS30002</td>
<td>Sensor blade</td>
<td>300mm/ 11.8&quot; 2–20 mm/ 0.08–0.8&quot; 0.4mm/ 0.016&quot;</td>
<td>Rubber/rubber Rubber/plastic Rubber/metal</td>
<td>Smooth  20–80°</td>
<td>1–200N/cm²</td>
<td>20–50°C/68–122°F</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS50002</td>
<td>Sensor blade</td>
<td>500mm/ 19.7&quot; 5–50 mm/ 0.2–2&quot; 0.4mm/ 0.016&quot;</td>
<td>Rubber/rubber Rubber/plastic Rubber/metal</td>
<td>Smooth  20–80°</td>
<td>1–200N/cm²</td>
<td>20–50°C/68–122°F</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T150</td>
<td>Telescopic extension arm</td>
<td>180° joint</td>
<td>1–1.5 m/ 3.3–5 ft</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HN201</td>
<td>Trend analysis software</td>
<td>Trend analysis software</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*) Peak pressure onto sensor blade

**Telescopic extension arm**
- Reach nips – left, center and right sides of larger rollers and into human safety areas
- A 180° joint facilitates full flexibility
- Full reach 1.5 meters (5ft)

**Functional**
- One-button control
- Bright LED display for easy readings
- Standard AAA batteries and power-save function
- Delivered in a robust instrument case

**Designed to protect the operator**
- A safety distance between instrument and rollers
- A safety front with mini-rollers which rotate against the machine rollers on contact
- Sensor blade automatically detaches from the instrument if withdrawn from the nip

**Applications**
- Lamination
- Coating
- Squeezing
- General web handling
- Other nips within specification
- Contact Nip Control for application questionnaire

**Nip Control AB**
Gamla Skolvägen 34, 133 35 Saltsjöbaden, Sweden
Phone: +46 8 55 61 64 77 info@nipcontrol.com www.nipcontrol.com

COMING SOON

**COMING SOON**

Get a visual picture of trends for ultimate process control

hansson nips

- trend analysis software -