Pressure Indicator™

Offset & Rotogravure

2nd Generation!
Range 20–999 N/cm²
Resolution 1 N/cm²

Nip pressure in Newton/cm²

Pressure

nipcontrol
Why estimate blanket height when interested in pressure?

Optimal transfer of the ink-water emulsion from plate to blanket and, finally, to paper, is fundamental to superior and stable print quality.

Now, for the first time, rapid measurement of nip pressure between cylinders is possible – thanks to the innovative Pressure Indicator™!

Nip Control’s Pressure Indicator™ makes it easy to monitor nip pressure changes over time or determine how pressure changes with different underpackings, blanket compressibility and more. The Pressure Indicator™ can help decide whether a printing problem can be attributed to pressure variation in a cylinder nip.

Peak Value
All nips have a pressure curve. The Pressure Indicator™ monitors the pressure increase as the tip of the sensor blade moves through the cylinder nip (Rolling Nip™). The instrument then displays the peak pressure value. The peak pressure is what transfers the halftone dot from the plate to blanket and – eventually – to the paper!

Commonly, a mounted offset blanket is monitored by measuring the height of the blanket in millimeters or inches. Compared to the precision of the Pressure Indicator™, however, this is something of a “trial and error” approach to estimating the pressure level between plate and blanket, and blanket and impression cylinder.

Simple to use
Allow the cylinders to draw the tip of the thin sensor blade through the nip, to provide an instant nip pressure value on the display.

Simple calibration
Just insert the pressure sensitive tip of the sensor blade into a calibration tool. Press the control button twice – and calibration is complete!
Blanket properties affecting nip pressure

The above illustration shows the multiple blanket properties that combine to determine nip pressure. Blanket properties can vary over time. For example, through usage, the compressibility layer will “sink”, reducing nip pressure. At the same time, the surface rubber hardens, producing an increase in nip pressure.

Uniquely, the Pressure Indicator™ provides a true reading of nip pressure that accounts for any variations in blanket properties at the precise moment of measurement.

Rotogravure

In gravure presses, the measuring is performed between the impression roll and the gravure cylinder.

“We have learned much about nips in different gravure presses and how to standardize”

Mr. Kobayashi Atsuchi
Manager of Dainihon, Japan
Pressure Indicator™ measuring system

- hand device
  + sensor blade
  + calibration tool

Where to measure in the offset printing press

![Diagram of measurement points](image)

- plate to blanket
- blanket to impression (in perfecting machines: blanket to blanket)

**Specification**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Indicator instrument</td>
<td>Part Number P102</td>
</tr>
<tr>
<td>Sensor blade</td>
<td>Part Number PS35001</td>
</tr>
<tr>
<td>Calibration tool</td>
<td>Part Number C101</td>
</tr>
<tr>
<td>Sensor blade length</td>
<td>350 mm/13.8”</td>
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<tr>
<td>Sensor blade thickness</td>
<td>0.2 mm/0.008”</td>
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<tr>
<td>Nip width</td>
<td>≥ 5 mm /0.2”</td>
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<tr>
<td>Cylinder diameter</td>
<td>All sizes</td>
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<tr>
<td>Nip temperature</td>
<td>10–70°C/50–158°F</td>
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<tr>
<td>Cylinder surfaces</td>
<td>Metal to rubber/rubber to rubber</td>
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<tr>
<td>Rubber hardness</td>
<td>&lt; 95° shore A</td>
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<tr>
<td>Measurements per sensor</td>
<td>Tested up to 4000 times</td>
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<tr>
<td>Measuring unit (force/area)</td>
<td>Newton/cm²</td>
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<tr>
<td>Measurement range</td>
<td>20–999 N/cm²</td>
</tr>
<tr>
<td>Display resolution</td>
<td>1 N/cm²</td>
</tr>
<tr>
<td>Patent</td>
<td>SE-519 918. Patent Pending</td>
</tr>
</tbody>
</table>

**Simple to use**

- One-button control
- Bright LED display for easy readings
- Standard AAA batteries and power save function
- Sensor blade can measure with either side towards either cylinder
- Three-step safety design to protect the operator
- Can be used on all offset presses from any manufacturer
- Delivered in a robust instrument case

**Other Nip Control instruments**

- Rapid and precise measurement of nip width between ink and dampening rollers with the

  **Roller Nip Indicator™**

Learn more about offset technology:

- Trend-analysis software featuring customized screen design to simulate your own press

  ![Trend-analysis software](image)

New handbook for printers and universities. Order at [www.optirep.net](http://www.optirep.net)

**Patent**

SE-519 918. Patent Pending

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**Press Release**

**“The Pressure Indicator is of great help when checking press settings and exploring other technical print problems”**

Thomas Sandström, Technical and Production Manager, Daily Print.

Production per day: 300,000 copies