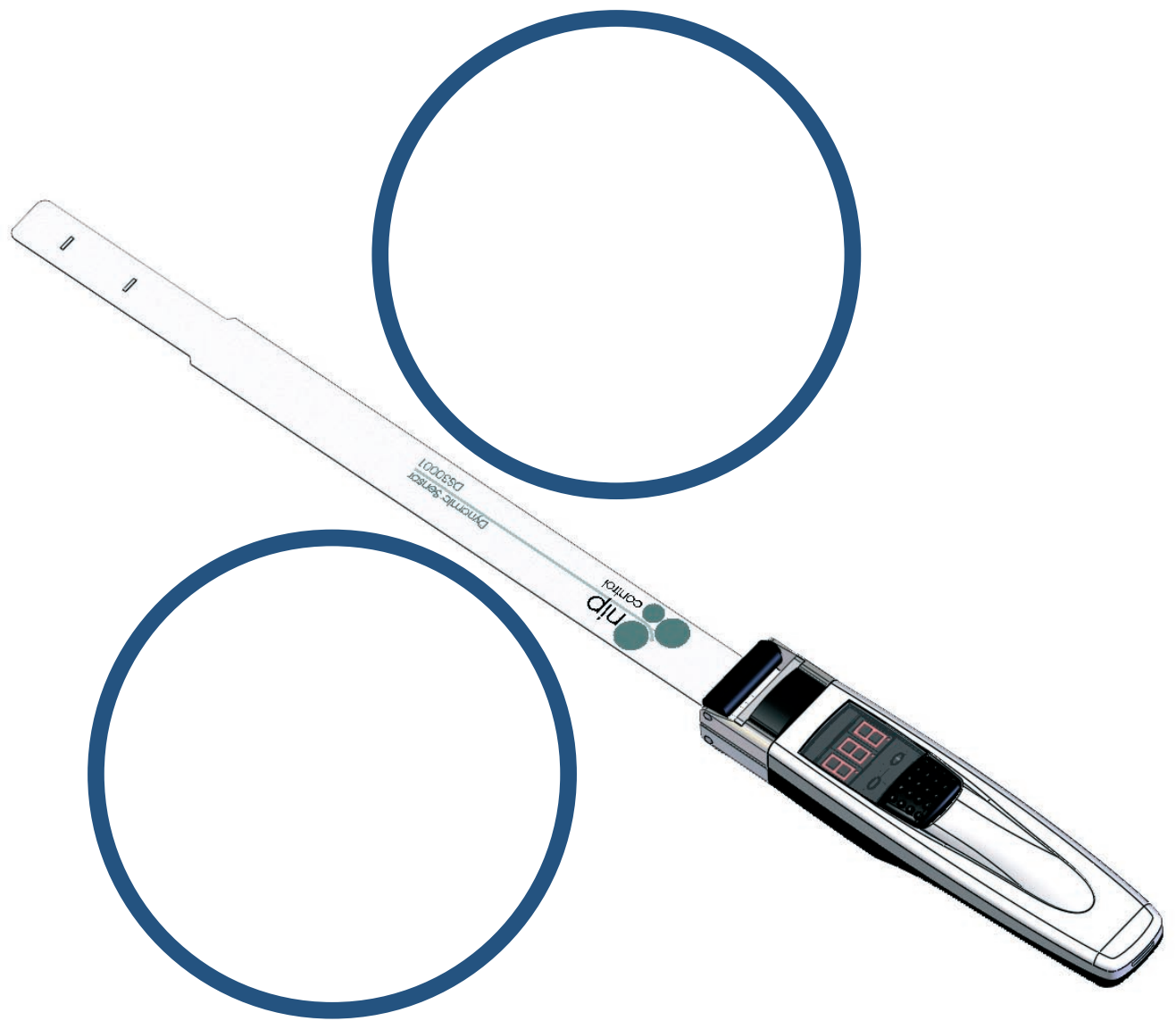


Next Generation Roller Nip Control

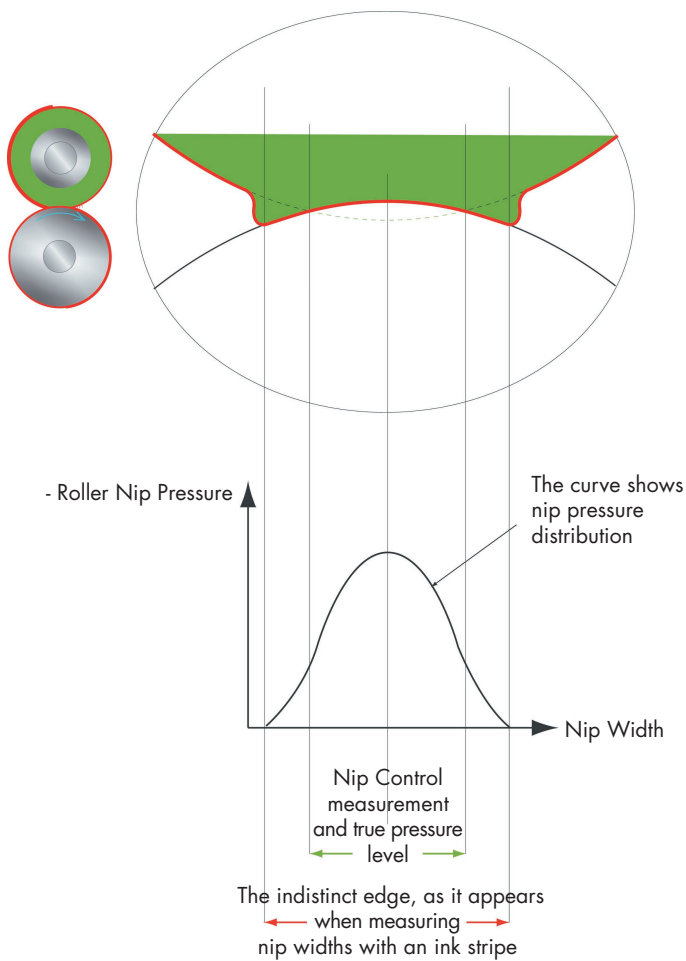


**Precise, Clean
and Consistent**



NEXT GENERATION ROLLER NIP CONTROL

Precise, Clean and Consistent



When measuring with stationary rollers the rubber expands equally on both sides (see illustration)

During dynamic measurement the rubber expands asymmetrically as the rollers are in motion

Why is the roller nip so important?

The roller nip is critical for offset printing since it both transports and processes the ink and fountain solution. This technology is unique in that the process components, ink and water, are mixed under pressure during printing, creating a new solution.

Contact width - estimated by applying ink to the rollers, rotating them and measuring the width of the stripe - varies according to type of ink and final viscosity after mechanical mixing. The dynamic properties of the rubber roller constantly change too. The rubber ages, hardens and is also affected by the heat generated from friction during printing.

The Nip Control digital measuring system has been designed to generate improved roller nip data and to ensure that the roller nips are always correctly adjusted.

Precise, clean and consistent.

Nip pressure indication with a strip

A plastic strip is placed between the printing press rollers. The operator tests resistance manually, to estimate drawing power and mean nip pressure.

Nip width reading with inked stripe

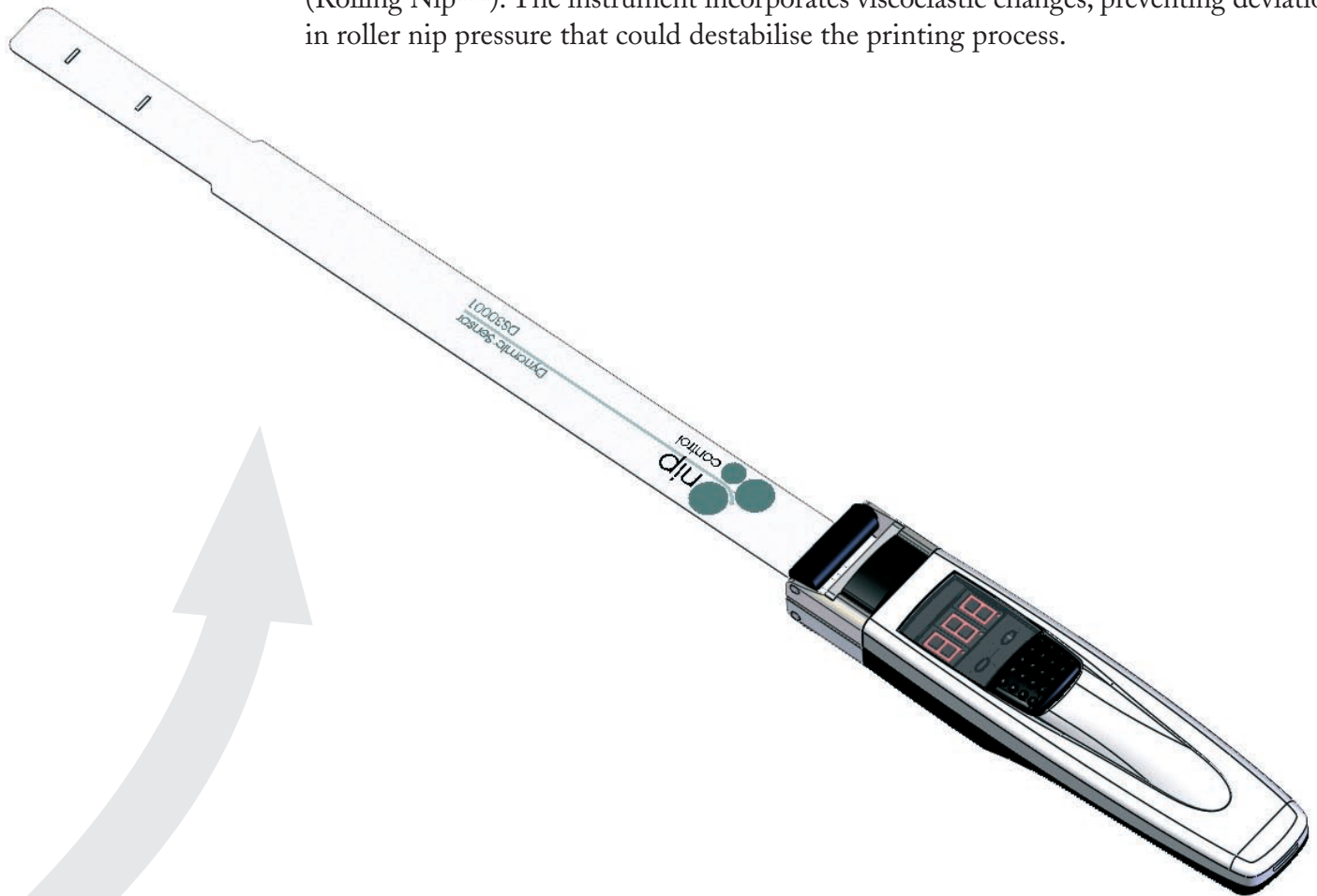
The rollers have to be inked. Roller contact width in millimeters (mm) is estimated by measuring a line with an indistinct edge. This method detects neither the viscoelastic changes in the rubber or aging effects.

Semi-Dynamic roller nip control with digital device

Semi-dynamic measuring is performed with the print rollers at slow speed. This is the most authentic technique for analyzing a roller nip, since the shape of the rubber roller changes when in motion. For optimum roller control, semi-dynamic measuring is the right choice.

When adjusting the roller nip, the most common mistake is applying too much pressure. This often occurs when the roller is old and the rubber hard. To achieve the desired nip width, pressure is increased to give the correct measurement in millimeters (mm). However, this will result in an incorrect dynamic pressure level.

The Nip Control device, the Roller Nip Indicator, featuring a dynamic sensor, measures the nip width relative to a pre-determined dynamic pressure level between the rollers (Rolling Nip™). The instrument incorporates viscoelastic changes, preventing deviation in roller nip pressure that could destabilise the printing process.



Static roller nip control with digital device

Static roller nip measurement is easily performed. The Nip Control static sensor is placed between the static rollers. A reading in millimeters (mm) is displayed continuously on the easyview display. Pressure is adjusted as required, until the correct value has been achieved. Measurements are taken on the sides of the roller and in the center.

No ink is needed, and no cleaning is necessary. The measurement and the settings will always be the same – whoever performs the task. However, if troubleshooting is still required while in production mode, it is possible to do so with ink on the rollers.

Optimally adjusted roller nips promote competitiveness

Improved Productivity

- * Consistent settings ensure correctly adjusted roller nips regardless of who performs monitoring or adjustment
- * Increased machine up-time through reliable press performance, and up to 50 percent quicker measurements and adjustments during maintenance.
- * Facilitates quality-assured, preventive maintenance, which also minimizes the need for later interventions
- * During troubleshooting the roller nips quickly, easily and securely can be eliminated as the cause of the problem.

Assured Print Quality

- * Consistent measuring method offers input to quality programs
- * Correctly adjusted roller nips ensure that the process variables, ink & water, are optimally transported and mechanically processed

Lower Cost

- * Swelling, shrinkage or general wear & tear are detected, ensuring that roller changes are executed at optimal time
- * Changes in the roller nips are quickly detected and adjusted, making it possible to keep the rollers longer
- * Defined machine settings preclude unnecessary start-up waste
- * Correct pressure between the rollers saves energy and reduces ink and water costs.

Environmentally friendly and a cleaner work area

- * A cleaner measuring technique needing no ink or cleaning agent
- * Reduced energy, ink and water consumption
- * Safety front with three consecutive safety levels protects the user from injury

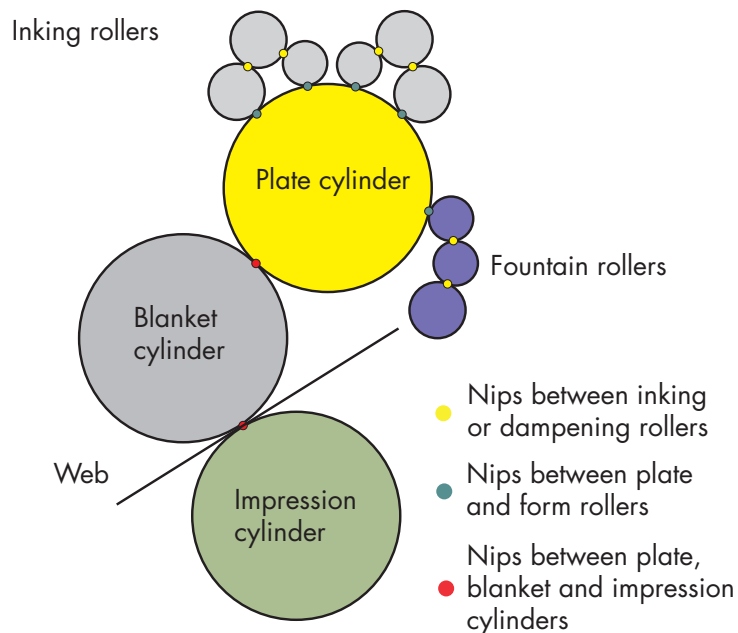


Nip Control's measuring system consists of a hand device (Roller Nip Indicator) and a flexible static or dynamic sensor, specially developed for offset printing presses

- Roller Nip Indicator (RNI)
- Static sensor: Length 300 mm
- Dynamic sensor: Length 300 mm

- Part Number W101
- Part Number SS30001
- Part Number DS30001

Where to measure in the printing press



Nip Control's Sensors

The sensors are developed for roller nips (yellow) and nips between the plate and the form rollers (green), where the nip pressure is lower than between cylinders.

The sensors are good for more than 500 measurements.

Nip Width:	2 - 20 mm
Roller Diameter:	30 - 200 mm
Nip Temperature:	20 - 50° C
Roller Surfaces:	Metal/Hard Plastic-Rubber or Rubber-Rubber
Rubber Hardness:	20 - 60° shore A

Measuring units

- RNI with static sensor: mm/mil
- RNI with semi-dynamic sensor: DNU™ (Dynamic Nip Units)

Water Resistance & Cleaning

- RNI: IP 20. Sensor: IP 65
- Always wipe the sensor clean after measuring
- Do not use solvents

Easy to Use

- One button control
- Only one operator needed
- Bright LED display for easy readings
- Indicator lights when correct or incorrect measurement
- Automatic shut-off for maximum use of standard batteries (AAA): Life span exceeds 1000 measurements
- Sensors can measure with either side towards either roller
- 3-step safety front guards the operator
- Developed for both roll and sheet offset printing presses, and small and large presses from various manufacturers

Nip Control... the Roller Nip specialist



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