



**Polygraphische innovative
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Press Information

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NIP CON SMART – The Best Way for Adjusting Rollers

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In order to ensure correct ink transfer within the offset printing units, and as a result essential for achieving the highest print quality, the uniform adjustment of the nip width between the inking unit rollers is essential. Several years ago, PITSID Polygraphische innovative Technik Leipzig GmbH introduced the contact zone gauge NIP CON. Due to its simple operation and the fast and extremely precise adjustment of the nip width between the inking unit rollers, it was a welcome device that provided help and support to printers and service technicians in many printing plants and printing press manufacturers worldwide.

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The device provided dependable measurements for adjusting the pressure between the rollers. The use of paired sensors on the left and right-hand sides between the rollers allowed for an immediate adjustment to be made. The device also offered the possibility of entering the set values for the nip width so that only the correct roller pairing had to be selected for the printing units to make the adjustment. This was further simplified by the use of three LEDs for each sensor, which clearly indicated whether the set value was correct. Of course, the measurement could also be carried out on other roller pairings, e.g. in the dampening system, on transport rollers or in different types of manufacturing machines.

After years of unmodified operation, the time has come to take the measuring device to a new level, to make it suitable for the current conditions in the pressroom and to integrate it into the user's data networks. While the main improvements have been made to the operation and data communication, the reliable pressure sensors and the measuring procedure have remained unchanged. Operating the device is now carried out via tablet or smartphone. The screen, which is much larger than the previous two-line display, provides a much better overview of the current settings, such as setpoint and measured values, the roller combination in the inking unit and for a fast selection between the individual measuring locations.

The greatest progress was made in the preparation and evaluation of the measurements. This is because these can now be carried out on a PC with a graphical user interface. The roller diagram is loaded as a graphic file into a supplied program and the operator enters all technical data as well as the

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setpoint values for each individual measuring location. The measuring system consists of a tablet, the hand-held device and two sensors including cables. The data is transmitted via a wireless connection between the hand-held device and the tablet. Switching between the measuring locations is now also done with a tap of the screen - and the current setpoints are displayed. After inserting the sensors between the rollers, the measured values can be viewed instantly. During the adjustment the sensors remain inserted. Therefore, any change is displayed immediately. The previous system's signal light function for the measured values has also been retained. The operator therefore has everything in view, both on the hand-held device with the LEDs and on the mobile screen. The extremely lightweight sensors also ensure that adjustment can be carried out easily by a single person.

Saving or protocolling the measured values was not possible with the previous model. Thanks to the new interface and the software, a wide range of options for data handling are now available. Simply transfer the data to the PC and research and evaluation can begin.

In addition to the considerable time reduction attained for the contact zone adjustment compared to the visual method and correction, the operation has also been made easier. The changeover to a "smart" interface and the possible integration of the system into existing data networks fulfils an important prerequisite which supports the ever-increasing digitalisation of production processes within the framework of "Industry 4.0".

PITSID Polygraphische innovative Technik GmbH in Leipzig is a sister company of the Sächsisches Institut für die Druckindustrie. Their comprehensive product range offers a wide variety of measuring systems for the printing industry and manufacturing machines. For example, the systems can be used to determine printing press and colour register, roller adjustments, tensile forces, packing heights and the IPA content of offset dampening solutions, to name but a few of the possible applications.



Image 1: NIP CON SMART with tablet, hand-held device and sensors



Image 2: Simple adjustment of the nip width with immediate display of the actual measured values