

Troika AniCAM-P Portable Anilox Roll Measurement System for accurate cell volume measurement

TECHNICAL ARTICLE
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Increasing efficiency on press – a practical method.

The ability to produce better print quality and greater consistency is driving demand for flexo-printed packaging; however margins are being squeezed at the same time, but with typical machine time costs at anywhere between \$450 and \$875 an hour, the importance of getting the job right before it hits the press is crucial to the bottom line, and anilox management can be an essential key. For printers, the equipment to control and manage an anilox inventory in house, once the domain of anilox manufacturers, has become a reality.'

One prominent wide web group in the USA with 10 units has confirmed they are saving up to 1 hour per set-up per job. The consequences of this are greater profitability though improved press run-time, reduced costly ink adjustment and waste.

By managing everything possible offline and minimising the need to use the press as a proofing device by reducing the need to make ink adjustments to achieve density, or plate corrections, or media issues on press and reduce the waste associated with inefficiencies can be virtually eliminated.

Complete offline management can realistically save a printer \$2900 per week, per press, says Phil Hall, managing director of Troika Systems, the UK developer of quality control instruments for the printing industry. 'Between 80% and 90% of flexo printing is prepress and if all of the process variables are in control before you start the job, the printing should be carried out in the minimum of time and cost, and be relatively easy.

However, when talking to print managers it is apparent that often up to 60% of jobs need some ink adjustment, strengthening or extending, to achieve the colours required. 'This happens even on process colours, which should run up quickly and efficiently every time. If the process inks are suitably matched there should be no reason to strengthen or extend the ink. Many ink technicians believe a high proportion of ink adjustment is directly related to the anilox.'

A set of four process colour anilox rolls that have a difference in volume of greater than 5-10% will result in a visible difference in density requiring adjustments to the inks, impression setting and press speeds, among other things, to try and run the job (see image 1). This takes time and is difficult to recreate on a repeat job.

'Modern, practical anilox measuring equipment enables printers to ensure the aniloxs are matched and are clean across the roll, the equipment produces a report in minutes and allows the printer to optimise the efficiencies on press,' Mr Hall said.

As more and more printers realise that an annual check by the anilox manufacturer is not an optimum solution, they are choosing to manage their anilox inventory and the associated cleaning equipment by having their own measurement equipment,' Mr Hall said.

Differences in anilox rolls are often identified and could be because they were manufactured at different times or are from different manufacturers using different volume measurement methods. Natural wear will inevitably cause a loss of volume. There are also cleaning issues despite the quality of cleaning equipment, this is not as infrequent as might be thought. Cleaning issues are often not identified due to the inability to measure the anilox from the cleaning machines due, historically, to the lack of practical anilox volume measurement equipment.

Troika Systems has sold more than 230 of its AniCAM handheld devices to label, wide web and corrugated printers around the world. The AniCAM uses a camera to measure cell volume, depth and frequency, cell angles, opening diameter and wall width. It has two light sources; one directed downward for focusing and a specially configured system of LEDs to radiate into the cells. The device is placed on the roll, the set-up selected and measurements taken to determine if the cells are plugged or damaged. A USB link to a PC allows the user to create and archive a 3D-visualisation and full statistical report.

As more and more printers look to improve their productivity by fully managing their anilox inventory off-line the levels of production, quality of flexo printing and its profitability can only continue to improve.

For further information on Troika Systems quality control products visit www.webconvert-ltd.com

Alpha Anilox						
Roll ID	Maker	Press	cm3/m2	Variance	Capacity	Suitability
R1000	▶ Alpha Anilox	Wide Web 1	4.7	14%	72%	A - Process Work
R1002	▶ Alpha Anilox	Wide Web 1	6.6	4%	96%	A - Process Work
R1003	▶ Alpha Anilox	Wide Web 1	4.8	10%	85%	A - Process Work
R 1004	▶ Alpha Anilox	Wide Web 1	4.6	2%	99%	A - Process Work

Volume variation on an anilox set will guarantee ink adjustment on press



AniCam Operating on an Anilox Sleeve