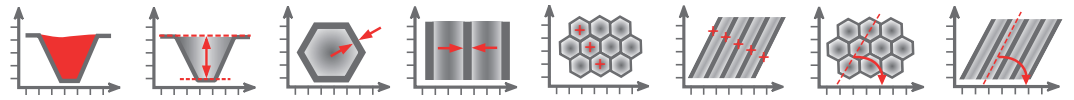


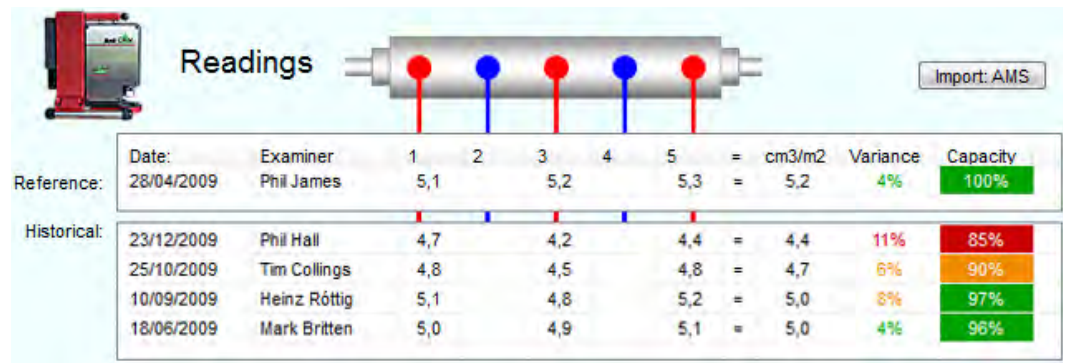
## ANICAM ANILOX QC

FOR ACCURATE VOLUMETRIC MEASUREMENT



Volume, Depth, Width, Wall, Screen Count, Angles and Consistency of Anilox rolls

**PLUS: ANILOX MANAGEMENT SYSTEM (AMS)**  
FOR CONTINUOUS CONTROL OF YOUR ANILOX INVENTORY



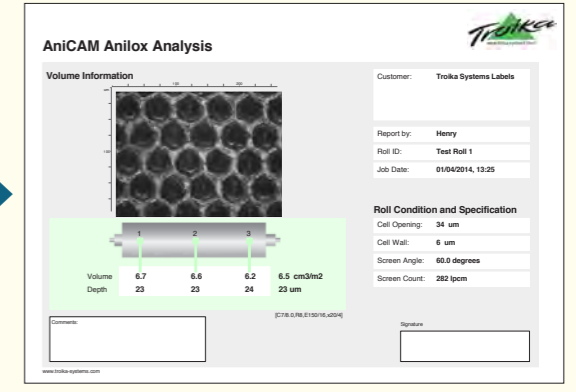
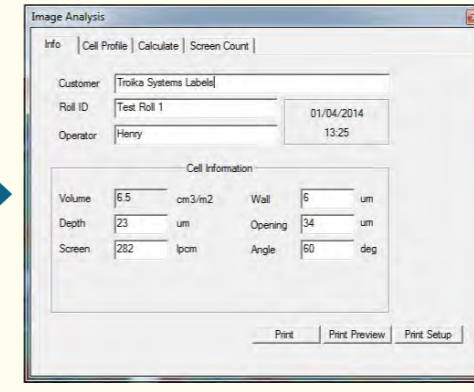
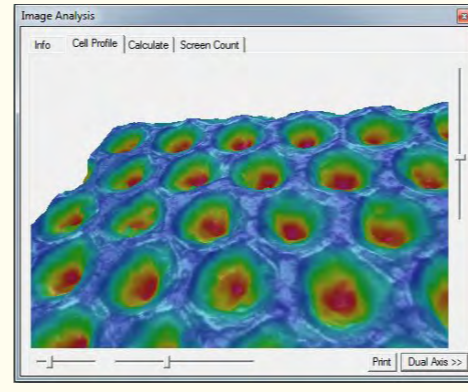
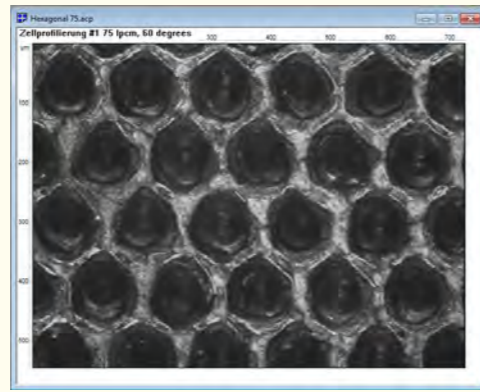
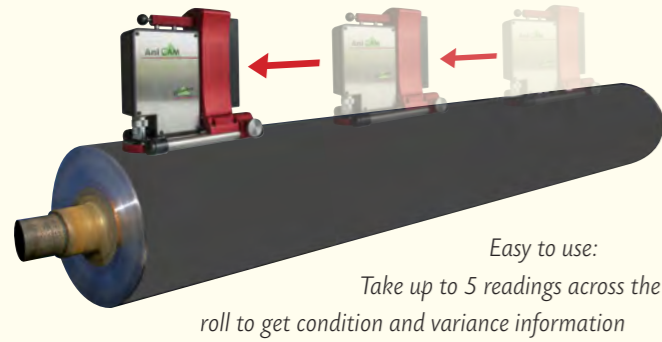
**Readings**

Import: AMS

Reference:	Date:	Examiner	1	2	3	4	5	=	cm <sup>3</sup> /m <sup>2</sup>	Variance	Capacity
	28/04/2009	Phil James	5,1		5,2		5,3	=	5,2	4%	100%
Historical:	23/12/2009	Phil Hall	4,7		4,2		4,4	=	4,4	11%	85%
	25/10/2009	Tim Collings	4,8		4,5		4,8	=	4,7	6%	90%
	10/09/2009	Heinz Röttig	5,1		4,8		5,2	=	5,0	6%	97%
	18/06/2009	Mark Britten	5,0		4,9		5,1	=	5,0	4%	96%



# THE ANILOX QC WORKFLOW



## WHY ANILOX QUALITY CONTROL ?

Knowing the condition of the anilox rolls for a printer converter has been proven to save considerable press setup time and reduce waste which inevitably increases profitability.

Historically, to achieve the required densities, the printers are obliged to adjust the ink, when in reality the difference in volume of the anilox's largely influences the imbalanced densities. Until the advent of this easy to use quality control tool, the actual volume of rolls in the anilox inventory was in reality unknown to printers – making it impossible to know the roll volumes are matched and optimised for press setup.

When discovering that a set of anilox's do not have in reality similar or matched volume capacity – due to either infrequent anilox volume measurement or none at all – many printers realise how much valuable time and cost has been wasted over a period of years; and how quickly they could now make considerable savings for their company by implementing anilox quality control.

Fortunately, due to modern technology the ability to simply and easily measure the volume of aniloxs and archive the inventory information is now a viable and practical for flexo printers.

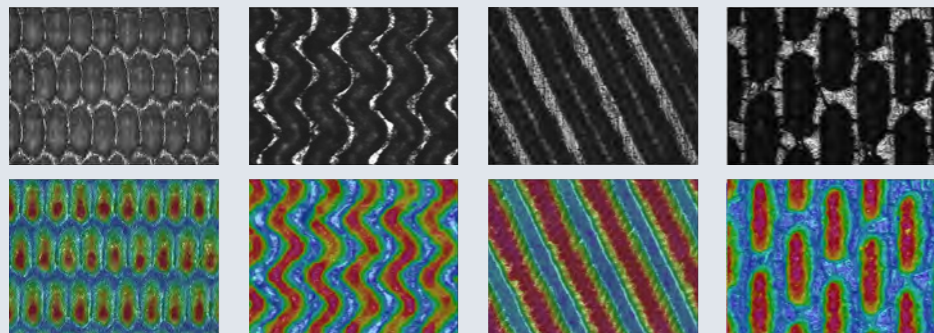
- ▶ Measuring the inventory with the Anilox QC application and AniCAM 3D scanning microscope allows users to eliminate or replace rolls that would require unnecessary ink adjustments to be made by ensuring the rolls are of a similar volume capacity – not only between a set of rolls but also along the width of a roll.
- ▶ Variation across the width of a roll has been identified as a time consuming and waste generating factor in press set up. The variation can be caused for two reasons, either due to poor cleaning or wear – which is caused by too much pressure on one side with the doctor blade often due to poor cleaning.
- ▶ Once the inventory is 'optimised' for matched volume and the cleaning system is proven to be giving a satisfactory result, ongoing monitoring and maintenance of the rolls is required to ensure the inventory is maintained in a satisfactory condition and the refurbishment of rolls can be planned appropriately.

- State-of-the-art 3D scanning technology
- Very high repeatability and accuracy
- Light and portable in a strong carry case
- Electronic knife for enhanced cell profile analysis
- 3D-view to identify plugged or damaged cells
- Export data to AMS or spreadsheet applications

## ANILOX QC OPTIONS

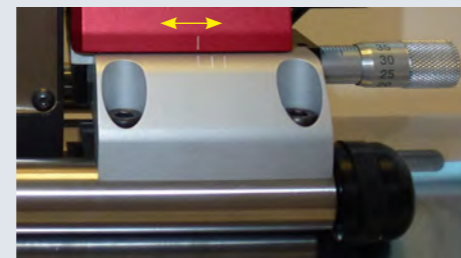
### COMPLEX CELLS

An optional software module for volume and geometric measurement of non-hexagonal cells allows to measure any type of engraving (for instance tri-helical, wave-form, asymmetric and combinations of different engravings).



### X-AXIS MICRO ADJUSTMENT

This option has been developed to allow users to move the analysis head of the camera laterally up to 10 mm (±5 mm) to assist in finding certain measuring positions.



## OPTIONAL: ANILOX MANAGEMENT SYSTEM (AMS)

Readings

Date	Examiner	1	2	3	4	5	=	cm3/m2	Variance	Capacity
Reference:	28/04/2009	Phil James	5,1		5,2		5,3	5,2	4%	100%
Historical:	23/12/2009	Phil Hall	4,7		4,2		4,4	4,4	11%	85%
	25/10/2009	Tim Collings	4,8		4,5		4,8	4,7	6%	90%
	10/09/2009	Heinz Röttig	5,1		4,8		5,2	5,0	9%	97%
	18/06/2009	Mark Britten	5,0		4,9		5,1	5,0	4%	96%

Whenever a roll is measured, the AniCAM readings can be transferred into AMS, an optional database application which builds a roll and volume/wear history based on this information. The AMS application can ideally be used to analyse the wear of all Anilox rolls in the printers inventory.

This example shows a cutout of an individual roll report. The two pictures show the cells of the reference and the last reading imported.

### ROLL HISTORY

The results of the first (reference) readings across the width are displayed in this area.

All subsequent readings are displayed below the reference reading in reverse order – The most recent reading is always displayed underneath the first (reference-) reading.

AMS - Anilox Inventory Report

Roll ID	Manufacturer	LPI	cm3/m2	Variance	Capacity	Suitability	Last reading
1200-2.2	Sandon	1271	2.7	11%	100%	Process Cyan	28/09/2012
1200-2.8	Sandon	1295	3.1	6%	100%	MT Process	28/09/2012
1200-3.7	Sandon	1221	3.2	3%	100%	MT Process	28/09/2012
1200-iPro5 - 002 152	Sandon	1228	3.6	0%	1192		28/09/2012
1200-iPro5 - 002 164	Sandon	1200	4.0	2%	1228		
1200-iPro5 - 002 365	Sandon	1228	3.7	1%	1209		
1200-iPro5 - 002 396	Sandon	1209	4.4	9%	1209		
1200-iPro5 - 002 93	Sandon	1209	4.0	1%	1209		
1000-6.5 - 002195	Sandon	1039	5.9	2%	1078		
1000-6.5 - 002196	Sandon	1078	5.8	2%	1058		
1000-6.5 - 002507	Sandon	1058	6.0	3%	1058		
1000-6.5 - GG25319-1	Sandon	1058	5.8	0%	1058		
800-6.5	Sandon	849	6.2	3%	100%	Line / Solid	28/09/2012
800-7	Sandon	864	6.9	3%	100%	Line / Solid	28/09/2012
800-8.5 - 002 336	Sandon	849	7.1	1%	100%	Line / Solid	28/09/2012
800-8.5 - 002 469	Sandon	864	7.3	3%	100%	Line / Solid	28/09/2012
800-8.5 - 002161	Sandon	849	7.6	0%	100%	Line / Solid	28/09/2012
800-8.5 - 002220	Sandon	864	7.3	5%	100%	Line / Solid	28/09/2012
800-8.5 - 002472	Sandon	849	6.9	7%	100%	Line / Solid	28/09/2012
800-8.5 Cheshire	Cheshire	849	6.9	3%	100%	Line / Solid	28/09/2012

### ROLL INVENTORY REPORTS

The Anilox Management System reports provide detailed information on the condition of each roll in the entire Anilox inventory. The rolls are listed with their unique Roll ID, screen count, date of purchase, manufacturer name, current volume, volume variance across the roll, current capacity in percent compared to the first (reference) reading. In addition the volume variance across the roll width is shown and tracked.

When printers are managing their Anilox inventory they will be able to improve the press set up time through improved ink matching, reduced make-ready and ink/material waste and improved production profitability.

## Product Specifications

<b>▼ Media</b>
Ceramic and chromed Anilox rolls; Minimum diameter: 2.5"/ 63mm
<b>▼ Cell Evaluation</b>
Analysis range:
Std: x20 lens: 236 - 475 lpcm / 601 - 1200 lpi;
Std: x10 lens: 88 - 235 lpcm / 225 - 600 lpi;
Std: x4 lens: 40 - 87 lpcm / 100 - 224 lpi;
Anilox volume calculation in $\text{cm}^3/\text{m}^2$ or BCM
Measurements:
• Cell Volume • Cell depth • Cell screen count • Cell opening • Cell wall width • Cell angle • Engraving angle
Geometric measurements
Averaged readings over $h''$ sections across the roll
Integrated Roll Management for easy tracking of roll histories (date and total average volume).
<b>▼ Image Analysis</b>
Images are taken by the camera and transferred via USB to the PC. The image analysis and calculations are done by the dedicated Anilox QC Application Troika PC software.
Software based Vibration detection and suppression (4 levels)
Digital Zoom range 1:1 up to 6:1
<b>▼ Volume consistency typically:</b>
$\pm 0.1 \text{cm}^3/\text{m}^2$ @ $3.2 \text{cm}^3/\text{m}^2$ $\pm 0.06 \text{BCM}$ @ $2 \text{BCM}$
<b>▼ Data archiving</b>
.acp format (incl. 2D/3D info); JPEG and BMP (bitmap export)
Export of readings (AMS, Spreadsheets, Database applications etc)
<b>▼ Light Source</b>
1 co-axial and 2 x 9 radial white light LEDs (SW-controlled)

## Options

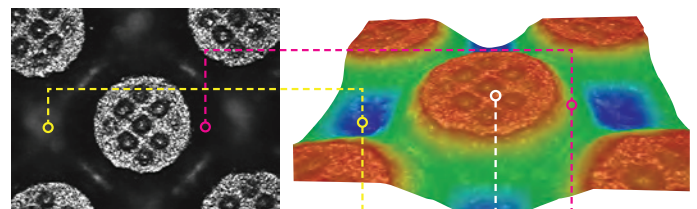
<b>▼ Software Options</b>
AMS Anilox Management System for controlling the total Anilox Inventory regarding Volume, Wear, Variance, Suitability and much more
Complex Cells Analysis for analysing non-hexagonal cells
Special Reports (i.e. Comparison Report for before/after cleaning readings)
Foil Strip Analysis (Press-O-Film Analysis)
Additional QC Applications (separate brochures) FlexoPlate/Sleeve Analysis and Gravure Cell Analysis
<b>▼ Calibration / Maintenance / Service</b>
ACP AniCAM Certification Package for X/Y/Z and Volume calibration
Annual Service Contract   GTM Online Training and Support
<b>▼ Hardware Options</b>
X- axis micro adjuster for improved lateral positioning (increases the minimum roll diameter to 81 mm   3.2")
Y- axis micro adjuster for improved rotational positioning (increases the minimum roll diameter to 81 mm   3.2")

## Technical Specifications – AniCAM

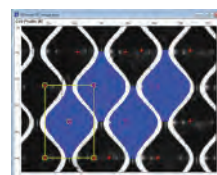
<b>▼ Electronics</b>
Mono CMOS camera with 640 x 480 pixel resolution.
USB2.0 Control via PC
External ac power supply and rechargeable Lithium battery pack
<b>▼ Lenses</b>
Three lenses (x04, x10 and x20)
<b>▼ Dimensions</b>
AniCAM: 15,5 x 9,5 x 19 cm (W x D x H)
AniCAM Case: 37 x 30 x 17,5 cm (W x D x H)
<b>▼ Weight</b>
AniCAM: 2.20 kg / 5.0 lbs
AniCAM with Case: 5 kg / 11.0 lbs
<b>▼ Environmental conditions</b>
Temperature: 16° - 32° C / 60° - 90° F
Humidity: 40% - 60%, non-condensing
<b>▼ Minimum PC-requirements</b>
Intel or AMD processor, 2+ GHz, 4+ GB RAM, 1024 x 768, 24-bit Display, USB2.0, 150+ GB hard disk space
<b>▼ Operating Systems</b>
Windows XP / Windows 7 / Windows 8
<b>▼ Warranty</b>
12 months return to base. Software upgrades FOC for 12 months.

April 2014 E&OE. – Specifications and details subject to change without notice

## Additional QC Applications



FlexoPlate Analysis for 2D and 3D measurement of flexo plates and sleeves (dot height, percentage, screen count, profile, angle, distances etc.).



Gravure Analysis for 2D and 3D measurement of Gravure Cylinders (volume, depth, X/Y Opening, wall width, channel, variance, screen count, angle, distances etc.).

June 2014, E&OE. – Specifications and details subject to change without notice



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