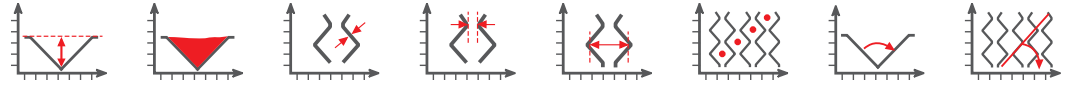




ANICAM™ GRAVURE QC

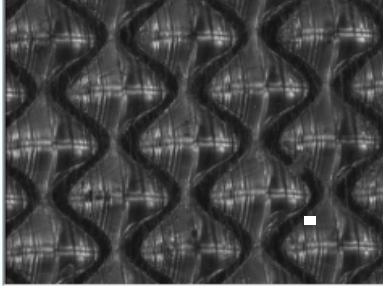
FOR ACCURATE VOLUMETRIC AND DEPTH MEASUREMENT



Volume, Depth, Openings, Wall, Channel and Consistency of Gravure Cells

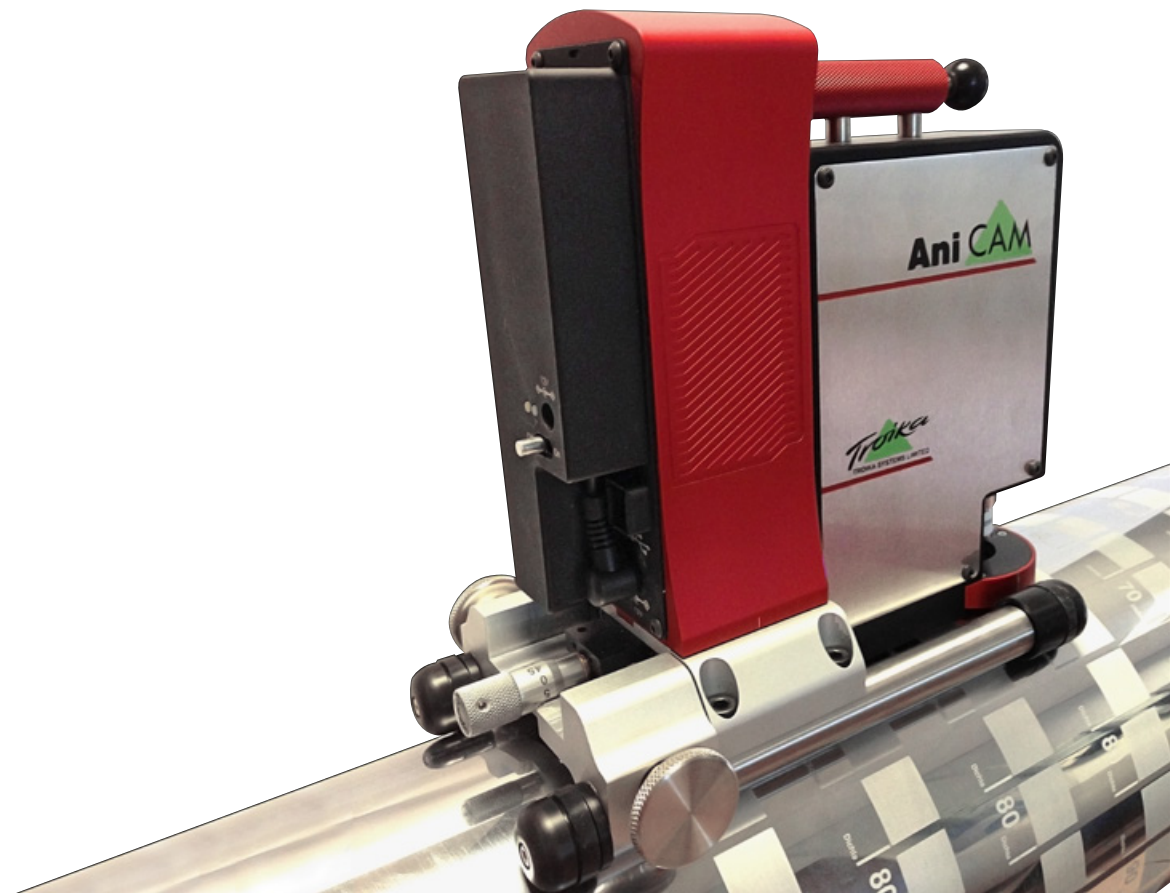
PLUS: **CYLINDER MANAGEMENT SYSTEM (CMS)**
FOR CONTINUOUS CONTROL OF YOUR CYLINDER INVENTORY

Subsequent readings: - [3] + Import: CMS

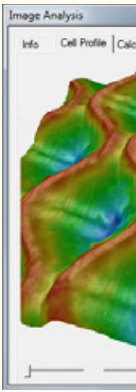
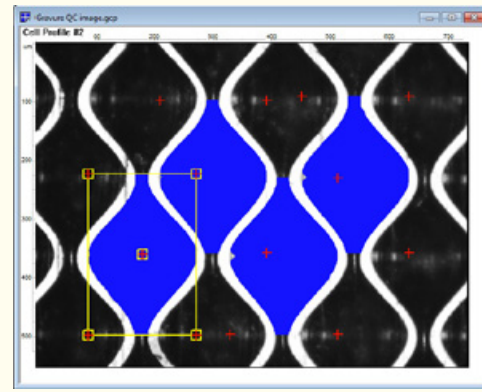
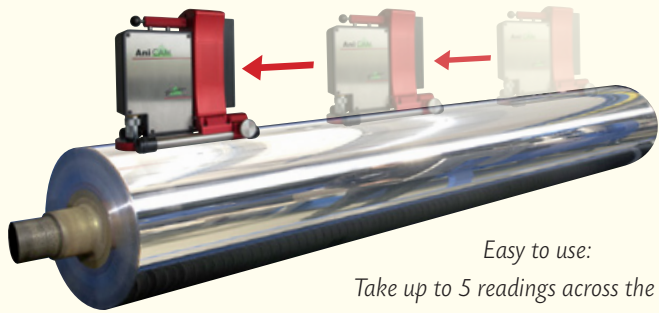


Date: 21/05/2013 - 14:10 - Operator: HR

Position	Depth	Volume	Opening	Height	Wall	Channel
Left	40	10.9	165	46	24	17
Middle	39	10.8	162	46	25	18
Right	40	10.9	164	46	23	17
Average	39	10.9	163	46	24	17



THE GRAVURE QC WORKFLOW



EASY TO USE AND PORTABLE QUALITY MANAGEMENT SYSTEM

The AnCAM 3D Scanning Microscope is a very professional instrument – its operation is really simple: To take a reading simply place the portable camera system on top of your gravure cylinder, select the appropriate setup and click the 3D Scan button. The readings are shown in the Info section, where you also enter the Job name, cylinder-ID and operator name. The system generates a report which can be printed or the data can be exported to the CMS Cylinder Management System.

WHY GRAVURE CYLINDER QUALITY CONTROL?

The AnCAM Gravure QC was developed for gravure printers where Management and Quality Control of their cylinders is desired. In particular for inhouse recording of cylinder data, condition during use, and to enable financial planning for refurbishing or replacement.

ENGRAVERS

Measuring the actual opening, depth and volume on copper and subsequently chrome cells is becoming more important for quality control purposes during the manufacturing process.

Engraving mechanically with styluses or using a laser – it is important to analyse the engraving results regarding shape, depth, angles and consistency.

Variations can lead to considerably different depths and volumes which cannot be detected when making theoretical calculations.

PRINTERS

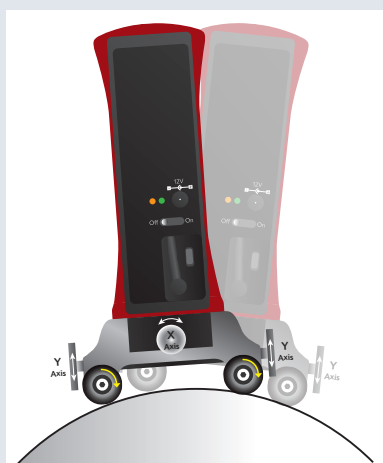
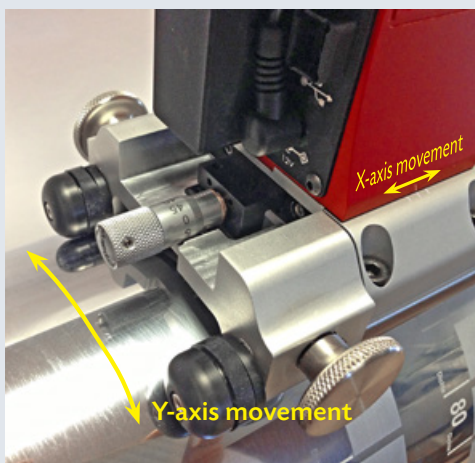
Using the AnCAM System and Gravure QC application helps to establish the quantity of ink required for a job. The quality of worn, refurbished or replaced cylinders can be compared to the original, important when establishing the characteristics for print.

Knowing the condition and wear of each cylinder in the inventory enables the printer to schedule refurbishing and replacements of cylinders.

Knowing that the cylinders have been properly cleaned and do not hold ink or varnish residue can save many hours of press set up time.

Knowing the actual volume measurements can help establishing better deltaE's and consequently less press set up time.

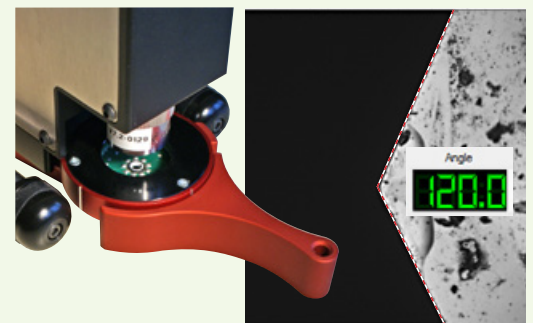
X/Y-AXIS MICRO-ADJUSTERS



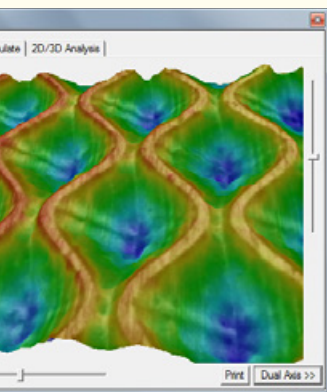
The **X/Y MICRO ADJUSTERS** have been developed to allow users to move the analysis head of the camera laterally up to 10 mm (± 5 mm) along the x-axis and across the y-axis by turning the feet to assist in finding special engravings.

Exact Y-positioning: The Y-axis adjustment turns the wheels of the AnCAMs feet. As a unique feature this assures a constant distance of the whole measuring area to the camera – regardless the amount of movement.

STYLUS ANALYSIS OPTION



Stylus angle measurement: Simple stylus mount and software to check the angle and condition of the stylus. The hardware mount supports OHIO, HELL and MDC styluses. The software allows the visual representation of the stylus for condition and to measure the angle to ± 0.1 degree.



3D View for visual inspection

Results can be viewed in the Info tab

..or printed as a report form or exported as.csv

OPTIONAL: CYLINDER MANAGEMENT SYSTEM (CMS)

Reference:

Position	Depth	Volume	Opening	Height	Wall	Channel
Left	44	13.7	172	46	21	17
Middle	43	13.5	171	48	21	18
Right	44	13.6	172	46	21	17
Average	43	13.6	171	46	21	17

Subsequent readings - [3]

Position	Depth	Volume	Opening	Height	Wall	Channel
Left	40	10.9	165	46	24	17
Middle	39	10.8	162	46	25	18
Right	40	10.9	164	48	23	17
Average	39	10.9	163	46	24	17

The CMS application can ideally be used to analyse the wear of all cylinders in the inventory.

The left example shows the history of a single cylinder

- The results of the reference readings across the width are displayed in this area.
- All subsequent readings will be displayed individually and averaged below the reference reading.
- The reading dates can be selected by the drop-down-header.

TROIKA CMS - Cylinder Inventory Report

Filter: Show All - No Filters
Sorted by: Cylinder ID (Ascending)
Report generation date: 07/06/2013

Site:	Highworth						
Job count:	5						
Job name:	_Unassigned						
Cylinder count:	2						
Cylinder ID	Last profiled	cm ³ /m ²	Trend / Variance	Depth	Trend	Distance	Comments
6679	23/05/2013	6.7	0.0 / 0.0	26	0	0	
8081	23/05/2013	7.8	0.0 / 0.0	28	0	0	
Job name:	'Brand A' Soap						
Cylinder count:	4						
Cylinder ID	Last profiled	cm ³ /m ²	Trend / Variance	Depth	Trend	Distance	Comments
7014-C	03/06/2013	10.9	-2.7 / 0.3	40	-4	54500	wear beyond limits
7015-M	03/06/2013	8.8	-1.8 / 0.0	32	-5	54500	
7016-Y	03/06/2013	11.4	-1.7 / 0.0	38	-4	41000	Cylinder pulled due to damage on 6/5/13
7017-K	03/06/2013	7.5	-1.3 / 0.0	27	-4	54500	
Job name:	TastyBisc Belgium						
Cylinder count:	2						
Cylinder ID	Last profiled	cm ³ /m ²	Trend / Variance	Depth	Trend	Distance	Comments
Cyan	24/04/2013	0.0	0.0 / 0.0	18	18	0	
Magenta	25/04/2013	2.3	2.3 / 0.0	18	18	0	
Job name:	ABC Chocolate						
Cylinder count:	4						
Cylinder ID	Last profiled	cm ³ /m ²	Trend / Variance	Depth	Trend	Distance	Comments
100-Black	23/05/2013	7.7	0.0 / 0.0	28	0	0	
101-Cyan	23/05/2013	12.3	0.0 / 0.0	45	0	0	
102-Yellow	23/05/2013	13.0	0.0 / 0.0	44	0	0	
103-Magenta	23/05/2013	10.2	0.0 / 0.0	42	0	0	

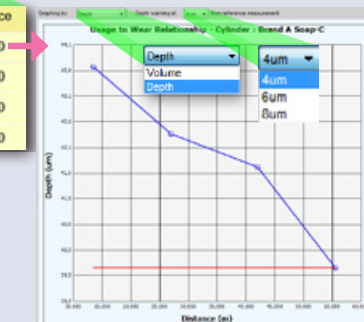
The **Cylinder Management System** provides detailed information on the condition of each cylinder in a job.

Whenever the cylinder is measured, the readings are transferred into **CMS**, which builds a cylinder and volume/wear history from the AniCAM Gravure QC application.

Wear of the cylinders can be monitored numerically and graphically at relevant points in the cylinders life.

Every job is entered with its *job name*, its cylinders subsequently have their own *unique ID*, *screen count*, *date received* and all *measurement details*.

If the printer is fully aware of the condition of his cylinder inventory he will be able to improve the press set up time, reduce ink matching and improve production and profitability.



Graphs visualise the wear (depth or volume) of individual cylinders or a set of cylinders used for a particular job.

The **Depth Usage-to-Wear Analysis** lets you select one of three warning values.

The values describe the maximum acceptable difference to the initial Reference depth readings. This value is marked with a red line.

PRODUCT SPECIFICATIONS

▼ Media
Chrome and Copper Gravure Cylinders (20 - 200 lpcm 50 - 500 lpi)
Minimum roll/cylinder diameter: 3.25" / 82 mm
▼ Cell Evaluation
Volume calculation in cm ³ /m ² or BCM
Measurements:
• Cell Volume • Cell depth • Cell screen count • Cell opening ∅ height • Cell wall width • Cell angle • Channel width • Engraving angle
Geometric measurements
Averaged readings over <i>n</i> sections across the roll
▼ Image Analysis
Images are taken by the camera and transferred via USB to the PC. The image analysis and calculations are done by the dedicated <i>Gravure QC Application</i> .
Software based Vibration detection and suppression (4 levels)
Digital Zoom range 1:1 up to 6:1
▼ Variance of Readings
Volume readings: typically better than ± 2% @ 12cm ³ /m ² 8 BCM
▼ Data archiving
.gcp format (incl. 2D/3D info); JPEG and BMP (bitmap export)
▼ Light Source
1 co-axial and 2 x 9 radial white light LEDs (SW-controlled)

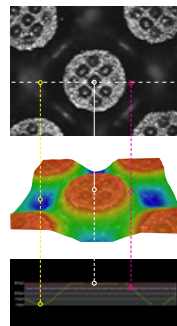
OPTIONS
▼ Software Options
Cylinder Management System (CMS)
Additional QC Applications (<i>see separate brochures</i>): FlexoPlate/Sleeve Analysis and Anilox Analysis
▼ Calibration / Maintenance / Service
ACP AniCAM Certification Package for X/Y/Z and Volume calibration
Annual Service Contract GTM Online Training and Support
▼ Hardware Options
Stylus Holder + Stylus inspection application software

TECHNICAL SPECIFICATIONS – ANICAM

▼ Electronics
Mono CMOS camera with 640 x 480 pixel resolution.
USB2.0 Control via PC
External ac power supply
▼ Lenses
Three lenses (x04, x10 and x20)
▼ Dimensions
AniCAM: 21 x 12.5 x 21 cm (W x D x H)
AniCAM Case: 40 x 30 x 16 cm (W x D x H)
▼ Weight
AniCAM: 2.9 kg / 6.5 lbs
AniCAM with Case: 5.4 kg / 12.0 lbs
▼ Environmental conditions
Temperature: 16° - 32° C / 60° - 90° F
Humidity: 40% - 60%, non-condensing
▼ Minimum PC-requirements
Intel or AMD processor, 2+ GHz, 4+ GB RAM, 1024 x 768, 24-bit Display, USB2.0, 150+ GB hard disk space
▼ Operating Systems
Windows 7 / Windows 8 / Windows 10
▼ Warranty
12 months return to base. Software upgrades FOC for 12 months.

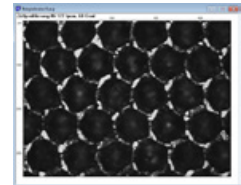
ADDITIONAL QC APPLICATIONS

FLEXOPLATE ANALYSIS



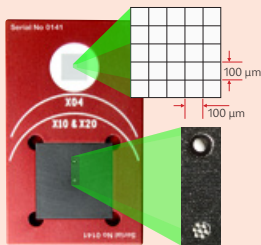
for 2D- and 3D-measurement of flexo plates and sleeves (*dot height, percentage, screen count, profile, angle, distances etc.*).

ANILOX ANALYSIS



for 2D and 3D measurement of Anilox rolls (*volume, depth, wall width, opening, screen count, angle, distances etc.*).

OPTIONAL: ANICAM CALIBRATION & CERTIFICATION PACKAGE (ACP)



An accurate X/Y/Z and mathematically proven volumetric measurement system, enabling Troika AniCAM users to test and calibrate their AniCAM systems in-house.

The **ANICAM CERTIFICATION PACKAGE** consists of an application designed to allow users to carry out mechanical, optical and electronic tests and subsequently a full **Calibration & Certification** of their unit that leads to self-certification and address ISO-requirements. The package uses a calibration tool for the X & Y axis calibration tests and calibrated spheres for Z-axis and volume calibration.

June 2016, E&OE. – Specifications and details subject to change without notice | "Troika", "AniCAM" and "SurfaceCAM" are trademarks of Troika Systems Limited



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