

Your vision for quality.

# EyeC Proofiler™



# The Company

## Our know-how for your quality

EyeC is a leading vision technology company based in Hamburg, Germany. We are focused exclusively on high performance inspection systems for the print industry. Our R&D and Customer Support staff consists of highly skilled and experienced engineers, graduated in either Electronic Engineering and/or Computer Technology with long experience in industrial inspection applications. Our products are based on the latest pattern recognition technology, designed to meet the needs of the printing industry and its

customers. They have been developed in close cooperation with actual users, with a strong emphasis on reliability, ease of use and conformance to applicable ISO, cGMP, GAMP4, and 21CFR regulations.

EyeC systems are in use at numerous customers in the printing, pharma, cosmetic and other industries across the world, producing offset printed inserts, folding cartons and flexographic pressure-sensitive labels for food, cosmetic, medical and pharmaceutical applications.



## The EyeC History

- 2003** Introduction of the EyeC Proofiler™ 400
- 2004** Development and first installations of the EyeC Proofiler™ 1000 for cartons, EyeC Proofiler™ 600 for labels
- 2005** Development of the EyeC Proofiler™ Braille and EyeC Proofiler™ 700 for patient information leaflets, barcode inspection
- 2006** Development and roll-out of the inline inspection system EyeC ProofRunner™
- 2007** Development of the cigarette warning text control tool and the colour distance tool
- 2008** Extension of the Barcode testing to RSS and Data Matrix. Development of the EyeC ProofRoller™ for round object testing and Development of Layer- and Multi-page capabilities for leaflet and carton testing

# EyeC Profiler™

## 100% verification - print and content

Finally there is an easy and definitive way to check printing results which also lowers the cost of quality and improves security. The EyeC Profiler™ digitally compares the first samples from the printing machine or the samples of your incoming materials against the signed-off proof, so you can always be sure to get exactly what you expect! The inspection is simple, fast, impartial, and reproducible. Every item printed across the web or sheet is processed in one pass. Results are instantly available, giving you the ability and confidence to completely control and monitor your process, and to document this objectively with traceability.

Every EyeC Profiler comes with a very fast, high-resolution scanner. All print formats can be accommodated up to 60" x 43" (1600 mm x 1100 mm). After scanning, all printed items are automatically identified and aligned with the one-up reference before an intelligent comparison takes place. Relevant deviations such as missing characters or punctuation are displayed, so you can easily recognize what's wrong and where. The advanced pattern analysis of the EyeC Profiler is able to distinguish between different types of defects so that deviations caused by the printing process itself, such as minor registration variations, can be accepted.

### Easy to use

The EyeC Profiler™ has been designed with ease-of-use in mind. You don't have to be a computer expert to master this machine within minutes. The entire process consists of three easy steps:

- 1.) scanning the samples
- 2.) automatic inspection
- 3.) printing the report

There is no manual set-up required. All items across the web or sheet are automatically identified and aligned to the signed-off proof for the inspection.



### All typical defects can be found including:

- missing parts of letters (as small as a missing dot in a 5-point font)
- filled in letters
- smudges in text area
- missing ink
- spots
- colour deviations

### Even pre-press related problems can be detected, for example:

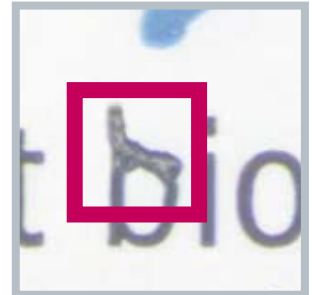
- wrong font (e.g. 'Arial' instead of 'Helvetica')
- undesired bolding or italicizing
- missing special fonts
- incorrect character spacing
- missing special characters or accents

Various parameter sets allow for the specific tolerance requirements of different customers or products. Once the inspection is complete, a report can be printed out or archived.

## Sample applications

### Labels

Self adhesive labels are used in a host of different industries and applications. Some are very simple and low cost, others may be very intricate and have a higher intrinsic value; in both cases the EyeC Profiler™ can be a great aid to setting up the press and ensuring stringent quality control. The first impressions are checked against the customer's signed-off proof. The press can then be run with 100% confidence that the job will be right first time.

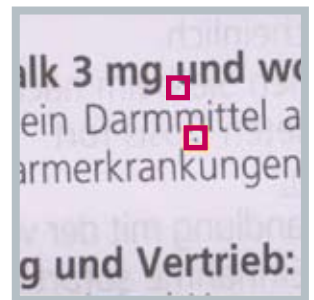
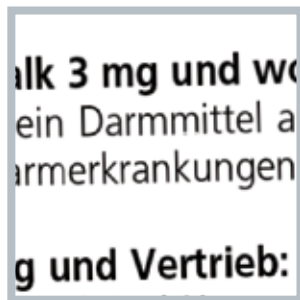


Examples of typographic flaws

### Patient Information Leaflets

Patient information leaflets mostly with multilingual content printed in tiny fonts on both sides of very thin sheets, represent the single most difficult challenge even for the most dedicated human proofreader.

With an EyeC Profiler™, half size sheets (EyeC Profiler™ 700) or full size sheets (EyeC Profiler™ 1000) can be inspected fresh from the press, even if no UV curing is involved. Either system can be equipped with a multiple page inspection option if your process requires it.



Examples of leaflets proofing

### Folding Cartons

The EyeC Profiler™ inspects folding cartons with ease. Single cartons or full press sheets can be inspected against a one-up pdf proof, even for press sheets with nested and butted items. Die cut lines and other non-printable features contained in the proof, such as Braille points, varnish free areas and manufacturing instructions are detected and ignored automatically.

Equipped with the relevant options, the EyeC Profiler™ can also automatically identify and verify printed barcodes and embossed Braille against applicable standards, all within the same inspection cycle.



Examples of barcode proofing

**If you are looking for solutions, which are perfectly adapted to your working process and enable your employees and press equipment to be utilised most effectively, you should talk to us.**



Examples of braille proofing

## Barcode Inspection

The EyeC Barcode Inspection option enables the EyeC Profiler™ to automatically identify, decode and inspect barcodes on the inspected print sample. This software option displays barcode type, content and the ISO/ANSI grade for each identified code. A full quality report is created automatically showing grades for each parameter. It is much faster than any kind of hand-held barcode inspection device, is easier to use and provides more consistent results. This option works with UPC/EAN, Laetus Pharmacode, EAN/UCC 128, Code 128, Code 39, ITF and others including most RSS and two-dimensional codes.

## Braille Inspection

The EyeC Profiler's™ Braille Inspection option checks embossed Braille for

- presence/absence of Braille points
- content
- correct placement in relation to printed artwork
- conformance to Marburg medium
- embossing quality

It ensures compliance with requirements of the pharmaceutical industry as well as EU directive 2004/27/EC.

## Pre-Press Verification

Whenever a new version of an existing artwork file is being created, you want to be absolutely sure that

- all required changes have been implemented correctly, and
- no further alterations have been introduced inadvertently.

The EyeC Profiler™ Graphics is a powerful software comparator that is used in pre-press departments for print proofing and to compare graphical files, for example PDF to PDF, TIFF to PDF, JPEG to BMP etc; ultimately the customer proof can be checked against the RIP'd print-ready-file.

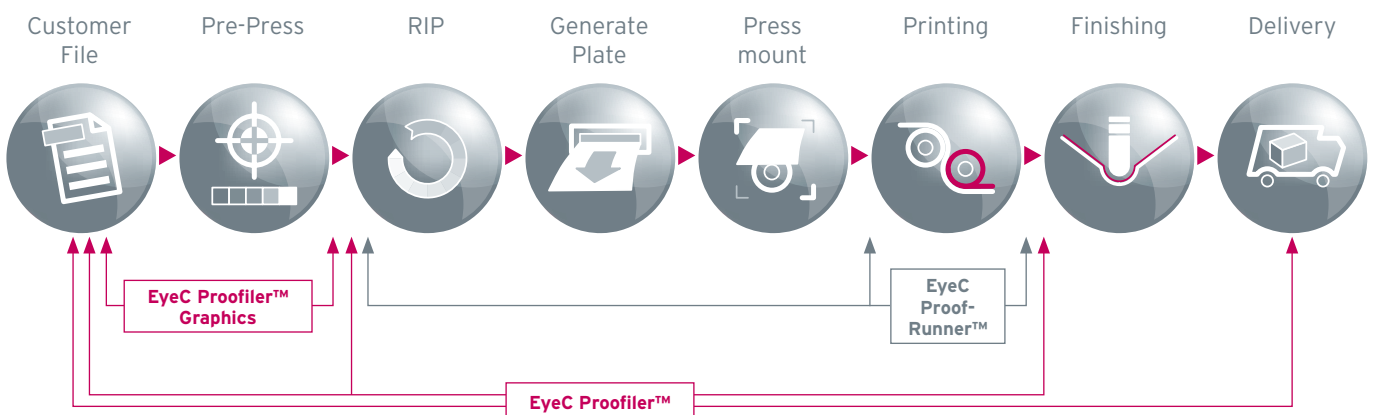
With the EyeC Text verification option the artwork file content can be verified against the customer supplied text file.

The EyeC Profiler™ gives you the confidence that the printed article is exactly what the customer specified.

### The EyeC Profiler™

- delivers reproducible results
- is easy to use
- gives you 100% text verification - in any language and in any alphabet
- checks font and other text attributes
- confirms that all repeats are in accordance with the proof

## The Printing Process



# Typical industries

## Press Shops

Whether you are printing flexographic labels or films, or offset sheets, the EyeC Proofiler™ can be a great aid to setting up the press and ensuring stringent quality control. The first impressions are checked against the customer's signed-off proof so you can have 100% confidence that the job is being run correctly without systematic errors. Every 'up' in the repeat length is checked against the proof and any differences outside of the user selected tolerances are highlighted allowing the operator to decide if further adjustment is required. There is no longer any need for a second pair of eyes to check the press set-up; the report produced by the EyeC Proofiler™ shows all suspicious areas and all decisions made by the operator, so the supervisor only has to assess the information on the report. Once the press is running, samples can be taken off periodically or just at the end of the roll to ensure consistent high quality is maintained throughout the job.

## Brand owners

The package appearance should reflect the product inside. With an EyeC Proofiler™, you may upgrade your incoming materials inspection and make sure your suppliers keep up with your quality standards.

The EyeC Proofiler™ makes sure printed texts and graphics are identical to the proof, and the correct version has been used for printing.

## Food and Drink

Strict controls on the information that is printed on food and drink packaging puts responsibilities on food suppliers that are similar to pharmaceutical companies. The food company however is likely to deal with far more products and more frequent changes to the printed information on the packaging. Also the typical supply chain is longer and needs to move faster. Wrong or missing information regarding contents, storing or cooking can lead to product withdrawals and even recalls; both being very expensive for the supplier in costs and reputation. EyeC products can help by automatically checking both artwork and printed materials at pre-press, printing and packaging stages - the safer way!

## Pharmaceutical Companies

Operating under GMP regulations makes it even more important to ensure correct content, sufficient print quality, and absence of systematic defects.

For our pharmaceutical customers, a wrong version, illegible, incorrect or incomplete information on print products means exposure to litigation. In this environment, dependable inspection processes become an absolute necessity.

The EyeC Proofiler™ is designed to reliably identify significant deviations between the signed-off proof and the printed samples provided for inspection. Patient information leaflets, cartons, and labels can be inspected; and, of course, all EyeC products are produced under GAMP4 guidelines and meet the required technical specifications for complying with 21 CFR Part 11.

However, the gain in product safety lies not just in the capability of the inspection equipment involved, but also in the process surrounding it.

The EyeC Proofiler's™ intuitive operation stands for a seamless integration into your quality process while reducing the risk of operational errors to a minimum.

And, our support goes much beyond providing qualified technology. During the validation phase, we provide our pharmaceutical clients with relevant and valuable documentation including templates for a Functional Requirements Specification (FRS), Installation Qualification (IQ), and Operational Qualification (OQ). The OQ package includes a validation chart which can also be used for ongoing periodic validation checks of the system.

## Tobacco Industry

Besides inspecting for print quality, packages to be used for tobacco goods need to be checked for the presence, legibility and equal distribution of different warning messages as required by law.

Equipped with an optional software module, the EyeC Proofiler™ performs this task automatically during the print inspection process.

# Technical specifications\*



Profiler 400

Profiler 600-2000

Profiler CS

ProofRoller

System		EyeC Profiler™					
Version		400	600	700	1000	1400	1600
Performance	Maximal Sample Size in mm (")	420 mm x 297 mm (16.5" x 11.7")	640 mm x 420 mm (25.2" x 16.5")	740 mm x 535 mm (29.1" x 21.1")	1016 mm x 717 mm (40" x 28")	1414 mm x 1016 mm (55.7" x 40")	1600 mm x 1000 mm (63" x 39.4")
	Scan Time in sec.	21 sec. (typ.)	70 sec. (typ.)	90 sec. (typ.)	110 sec. (typ.)	107 sec. (typ.)	122 sec. (typ.)
	Resolution in dpi	600 dpi	600 dpi	690 dpi	500 dpi	350 dpi	350 dpi
	Pixel size (µm)	42.3 µm	42.0 µm	38.2 µm	50.9 µm	72.6 µm	71.3 µm
	Pixel size (")	0.0017"	0.0017"	0.0015"	0.0020"	0.0029"	0.0028"
Feat.	Operating System	Windows XP Professional (32 bit / 64 bit)					
	Networking	Fast Ethernet					
Requirem.	Ambient Temperature	5°C to 35°C (42°F to 95°F)					
	Ambient Humidity	10% to 80%					
	Power Supply	100-120 V / 50-60 Hz / 9 A or 200-240 V / 50-60 Hz / 4,5 A					
Options	Test vs. Customer Proof	standard	standard	standard	standard	standard	standard
	Barcode inspection	optional	optional	optional	optional	optional	not available
	Color monitoring	optional	optional	optional	optional	optional	optional

System		EyeC Profiler™			
Version		2000	CS	Graphic	Braille
Performance	Maximal Sample Size in mm (")	2000 mm x 1200 mm (78.7" x 47.2")	avail. at a width of 600,1000,1400 mm	unlimited	420 mm x 297 mm (16.5" x 11.7")
	Scan Time in sec.	127 sec. (typ.)	100 sec./m	-	21 sec. (typ.)
	Resolution (dpi)	300 dpi	600 dpi	up to 2400 dpi	600 dpi
	Pixel size (µm)	85.8 µm	42.3 µm	10.6 µm	42.3 µm
	Pixel size (")	0.0034"	0.0017"	0.0004"	0.0017"
Feat.	Operating System	Windows XP Professional (32 bit / 64 bit)			
	Networking	Fast Ethernet			
Requirem.	Ambient Temperature	5°C to 35°C (42°F to 95°F)			
	Ambient Humidity	10% to 80%			
	Power Supply	100-120 V / 50-60 Hz / 9 A or 200-240 V / 50-60 Hz / 4,5 A			
Options	Test vs. Customer Proof	standard	standard	standard	standard
	Barcode inspection	not available	not available	optional	optional
	Color monitoring	optional	optional	optional	optional

System		EyeC ProofRoller™
Version		Cylindrical Objects
Performance	Maximal Sample Size in mm (")	∅ 11 mm up to 200 mm (0.43" up to 7.9") height max. 430 mm (16.9")
	Scan Time in sec.	6 sec. up to 12 sec.
	Resolution (dpi)	240 dpi / 400 dpi / 500 dpi
	Pixel size (µm)	106 µm / 63 µm / 50 µm
	Pixel size (")	0.004" / 0.0025" / 0.002"
Feat.	Operating System	Windows XP Professional (32 bit / 64 bit)
	Networking	Fast Ethernet
Requirem.	Ambient Temperature	5°C to 35°C (42°F to 95°F)
	Ambient Humidity	10% to 80%
	Power Supply	same as other Profiler Versions
Options	Test vs. Customer Proof	standard
	Barcode inspection	optional
	Color monitoring	optional

\* All values provided are to our best knowledge at the time this sheet has been created and subject to change without further notice. These technical specifications are based on standard assumptions, please inquire the available speed and resolution of your system with the quotation. The specifications stated in the quotation and Order confirmation are assured product capabilities.

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