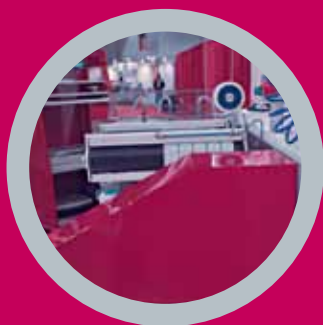


Your vision for quality.

EyeC ProofRunner



The company

EyeC is a leading vision technology company based in Hamburg, Germany. We are focused exclusively on high performance artwork and print inspection systems aimed to assure the highest quality standard throughout the design and printing process.

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 design houses, the printing industry and their 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, GAMP5, 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 self-adhesive labels for food, cosmetic, medical and pharmaceutical applications.



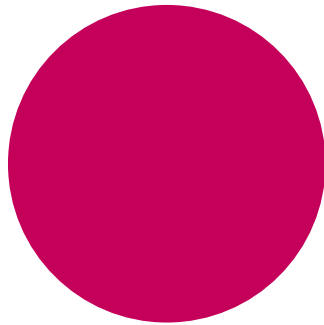
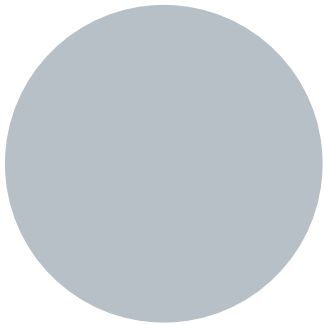
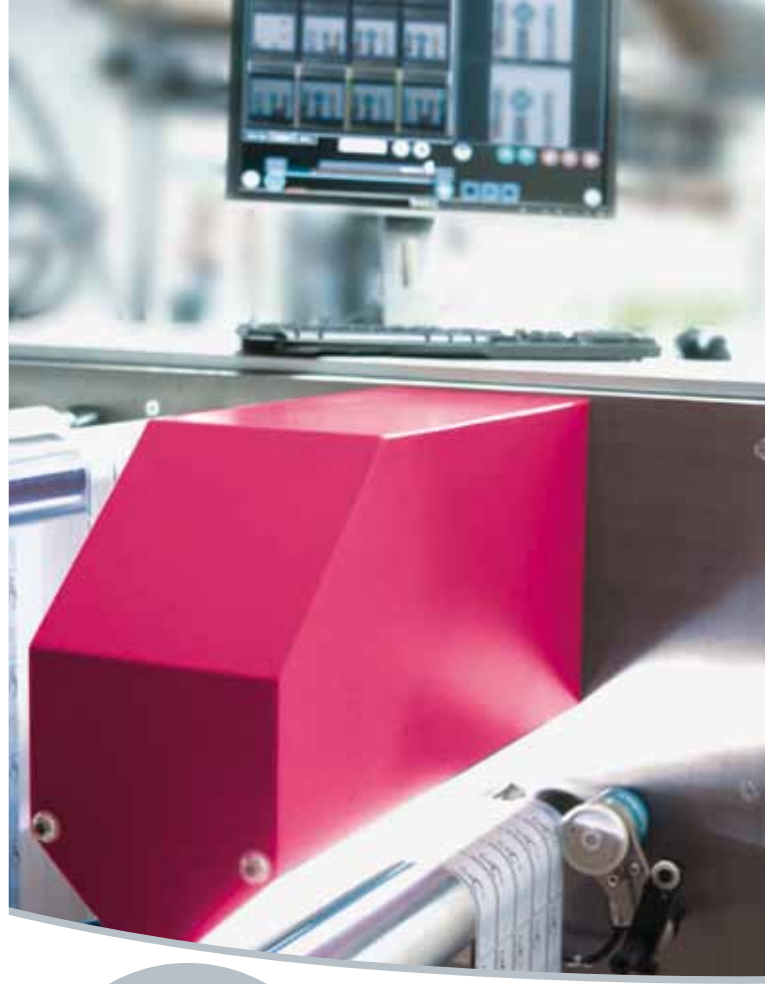
The EyeC History

- | | | | |
|-------------|--|-------------|---|
| 2003 | EyeC Proofiler 400 for off-line inspection | | Folder Gluer and EyeC ProofRunner Variable Data |
| 2004 | EyeC Proofiler 600 for labels and
EyeC Proofiler 1000 for cartons | 2010 | EyeC Proofiler Graphic Multiuser |
| 2005 | EyeC Proofiler Braille, EyeC Proofiler 700 for
patient information leaflets. Barcode inspection | 2011 | EyeC ProofBook for multi-page PDFs. In-line
inspection of foils and patient information leaflets |
| 2006 | EyeC ProofRunner for in-line inspection | 2012 | In-line inspection of sheet for offset machines.
In-line color control |
| 2007 | Cigarette warning text control tool and colour
distance tool | 2013 | EyeC Proofiler Content for the inspection of
texts, graphics and layout |
| 2008 | RSS and Data Matrix Code Inspection,
EyeC ProofRoller for cylindrical objects | 2014 | EyeC ProofRunner Carton Retrofit |
| 2009 | EyeC ProofRunner Carton, EyeC ProofRunner | | |

EyeC ProofRunner

100% verification - print and content

Finally there is an easy way to check all your prints against your customer proof! With an EyeC ProofRunner you get automatic 100% inspection of all items across the web, content verification against your customer proof as well as the best mix-up prevention you can imagine - right on the press or on a rewinder. The process is simple and yields accurate results; so you can rest assured that you will print exactly what your customer expects. Inspection results are instantly available and can be used for immediate corrective action. This gives you the means to completely control and monitor your printing process and to avoid scrap. In short: 100% inspected, 100% content verified and 100% compared to the customer proof!



Easy to use

The EyeC ProofRunner has been designed with ease of use in mind. Any print machine operator can perform a meaningful in-line inspection within minutes.

- **The customer proof is loaded automatically based on the entered job data.**
- **All items across the web are automatically identified.**
- **Irrelevant areas are automatically disregarded**
- **Significant deviations are brought to the operator's attention.**
- **A full job report is instantly available.**

Smart

The EyeC ProofRunner uses a compact, high speed line scan camera to continuously acquire a high resolution image of the entire web. A high performance computer system then identifies all printed items on the web and tracks them through the entire print- or converting run. The same computer also performs an intelligent comparison of each printed item against the customer proof. The advanced pattern analysis of the EyeC ProofRunner is capable of distinguishing between the different types of defects, so every significant deviation will get caught and displayed while permissible fluctuations caused by the printing process itself - like minor registration errors or small squeeze marks around individual letters - can be automatically passed. The intelligent design allows for the inspection of hot- or coldstamping elements.

Reliable

The EyeC ProofRunner finds all typical defects such as: **missing parts of letters, filled in letters, hiccups, smudges, missing ink, spots, color deviations, defects in hot- or coldstamping elements.**

Through the pre-press link to the signed customer proof even content errors resulting from mistakes in the pre-print area can be detected like:

typos, reversed colors in graphical elements, wrong font or font attributes (bold, italic etc.), incorrect character spacing, missing special characters or accents.

Flexible

The use of different parameter sets allows the EyeC ProofRunner's sensitivity to be adapted to product or customer specific quality standards.

Comprehensive

The EyeC ProofRunner gives you the advantage that you can be sure to print and deliver exactly what your customer expects.

The EyeC ProofRunner

- is objective and easy to use
- inspects 100% of the web, graphics and text, color and copy
- asserts consistency between all printed objects that are printed simultaneously
- provides content verification, in any language and any alphabet
- gives you 100% mix-up prevention
- and gives 100% assurance that the print is identical to the signed off customer proof!
- is fully validatable

EyeC ProofRunner Standard

For an application which is very price sensitive.

EyeC ProofRunner Convert Color

For the classic inspection on the converting machine with color.

EyeC ProofRunner Convert Hi-Res

For the classic inspection on the converting machine with the highest resolution at full speed.

EyeC ProofRunner Press

To be mounted on the press, color images with high resolution and web view function.

EyeC ProofRunner Carton/Carton Retrofit

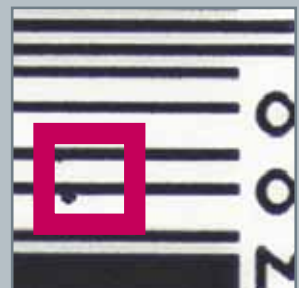
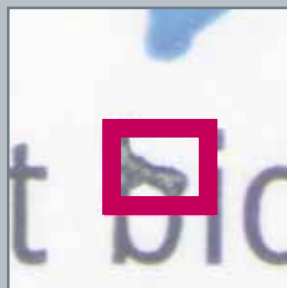
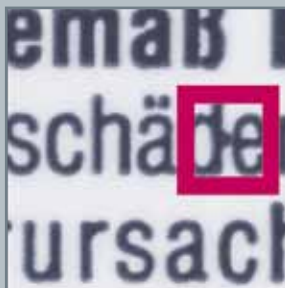
To inspect die-cut cartons and sort them according to defect specifications.

EyeC ProofRunner 550/760/1270 Color

To be mounted on wider presses for high-speed inspection with the highest resolution at 564m/min.

EyeC ProofRunner 550/760/1270 B&W

To be mounted on wider presses for high-resolution inspection and web view function.



Examples of flaws

Technical specifications*

System		EyeC ProofRunner						
	Version	Standard	Convert Color	Convert Hi-Res	Press	Carton	Carton Retrofit	
Performance	Inspection Width	450 mm (17.72")	450 mm (17.72")	450 mm (17.72")	450 mm (17.72")	450 mm (17.72")	400 mm (15.75")	760 mm (30")
	Mode	Grayscale	Color	Grayscale	Color	Color	Color	
	Pixel/Line	2048	2048	4096	4096	2048	4096	
	Speed (Max.)	1200 m/min	421.9 m/min	461 m/min	112.1 m/min	240 m/min	500 m/min	
	Resolution	116 dpi	116 dpi	231 dpi	231 dpi	116 dpi	247 dpi	136 dpi
	Pixel Size	220 µm	220 µm	110 µm	110 µm	220 µm	98 µm	186 µm
Feat.	Operating System	Windows based (64 bit)						
	Networking	1 GbE						
Requirem.	Ambient Temperature	5°C to 35°C (42°F to 95°F)						
	Ambient Humidity	10% to 80% non-condensing						
	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	optional	standard	standard	standard	standard	standard	
	Color Monitoring	not available	optional	not available	optional	optional	optional	
	Serial Number Inspection	not available	not available	optional	optional	optional	optional	

System		EyeC ProofRunner					
	Version	550 Color	550 B&W	760 Color	760 B&W	1270 Color	1270 B&W
Performance	Inspection Width	550 mm (21.7")	550 mm (21.7")	760 mm (30")	760 mm (30")	1270 mm (50")	1270 mm (50")
	Mode	Color	Grayscale	Color	Grayscale	Color	Grayscale
	Pixel/Line	2048	4096	2048	4096	2048	4096
	Speed (Max.)	515 m/min	564 m/min	712 m/min	779 m/min	1190 m/min	1302 m/min
	Resolution	95 dpi	189 dpi	68 dpi	137 dpi	41 dpi	82 dpi
	Pixel Size	268 µm	134 µm	372 µm	186 µm	620 µm	310 µm
Feat.	Operating System	Windows based (64 bit)					
	Networking	1 GbE					
Requirem.	Ambient Temperature	5°C to 35°C (42°F to 95°F)					
	Ambient Humidity	10% to 80% non-condensing					
	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
	Color Monitoring	optional	optional	optional	optional	optional	optional
	Serial Number Inspection	not available	optional	not available	optional	not available	not available

* 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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