

ColourBrain[®] Deco

Automatic optical Inspection of printed
and coated material.



The new dimension for web inspection.

With *ColourBrain® Deco*, Baumer Inspection provides one system for all applications in printing and coating of web material.



ColourBrain® Deco.

Inspection and Process monitoring.

- High resolution inspection, single or double sided.
- Detection of smallest defects on printed decors, on coated surfaces or in the materials.
- Inline colour monitoring.
- High speed detection and classification of all defects and deviations.
- Control of stability of the production process and immediate alarms in case of drifts.

ONE system for all applications.

- Same Baumer Inspection high speed cameras, scalable for all applications.
- Same software for inspection and algorithms for every process.
- Same user interface in every line.
- Same way of classification for all defects with different classes for different applications.
- Same data base for analysis of defects detected and for improvement of production.



Inspection of lacquered decor paper.

Automatic optical inspection of printed decor paper for foil wrapped furniture panels.

At production speed up to 450m/min the systems guarantees a resolution of 0,2mm. Cameras and illumination in different orientation detect smallest defects like scratches, spots of dirt, gloss variation and variations in embossing.



Inspection of printed and coated foil.

In the production of printed foil, *ColourBrain® Deco* is analyzing top and bottom side.

Top side colour cameras and cameras in reflection detect printing problems and every flaw on the surface.

Bottom side cameras are monitoring the primer application and triggers an alarm in case of drifts.

Inspection of paper, film or foil.

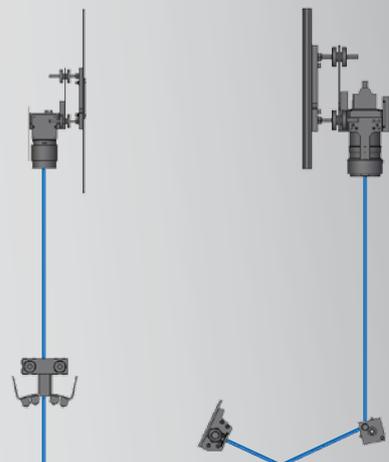
ColourBrain® Deco is installed in production lines of decor paper, film or foil. Different modules with Baumer high speed cameras analyze the surface of all web material in colour, reflex or transmission with highest resolution.

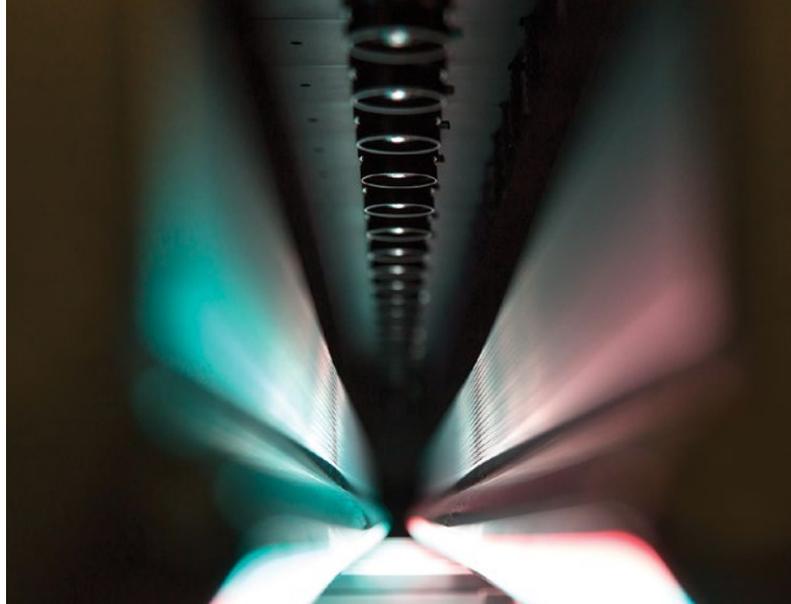
More Advantages:

- Camera Systems made by Baumer with integrated preprocessor for scalable resolution.
- *FlashingSky®* illumination for inspection of all material in every production.
- Supply of inspection system, calenders, marking units, installation and training from one supplier.

ONE modular system for all applications.

ColourBrain® Deco is using different modules, different angles and precise spectra of LED line illuminations to ensure the best contrast for all material, all production processes and all kind of flaws.





Inspection of digital printed web or board.

In digital printing production lines hundreds of thousands of printing nozzles of CMYK colours must be perfectly controlled. *ColourBrain® DoD* is inspecting the printed surface with an extremely high resolution to detect every missing or interrupted nozzle.

The system is designed for board and web inspection up to 720dpi resolution and up to 150m/min printing speed.

Quality improvement and process control.

ColourBrain® DoD is designed for the inspection of digital printed web material like foil, paper, particle boards or glass sheets. All flaws caused by the printing unit, or the coating of the base material or by the base material itself are reliably detected and classified.

ColourBrain® DoD constantly monitors the printing process and triggers an alarm in case of serial defects.

Inspection of digital print.

ColourBrain® DoD is using a spectral specific way of illumination and highest resolution to have the best contrast for all flaws in digital printing. The preprocessor in Baumer cameras is grading every deviation.

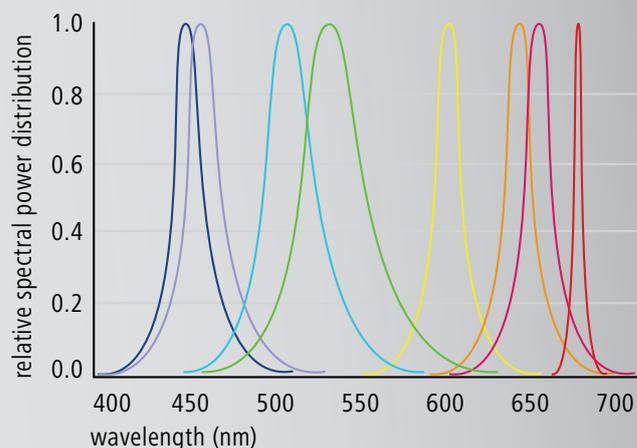
More Advantages:

- On the fly the inspection system adapts inspection parameters with the change of print jobs, without any Teach-In.
- Automatic grading of the visibility of a defect to make sure only alarms for visible flaws are set.
- Classification of every defect to its root cause and alarms in case of process related problems.
- High speed algorithms, designed for Single Pass Digital Print, much more sensitive as any image comparison.

Highest resolution for monitoring of every nozzle.

ColourBrain® DoD is using same cameras as all *ColourBrain® Deco* systems, but at a much higher resolution.

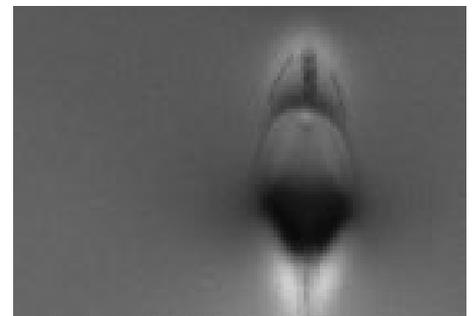
LED line illuminations in spectral specified colours guarantee the best contrast for the detection of flaws in each production process.



ColourBrain® Technology.

The patented *ColourBrain*® technology imitates human perception for the inspection of decorated surfaces. Every defect is classified according to its cause by Baumer's *Q-brain*® inline classification.

The data base *Q-live*® guarantees online process control and statistically analyzes defects and their cause. *Q-live*® assists in order to optimize production.



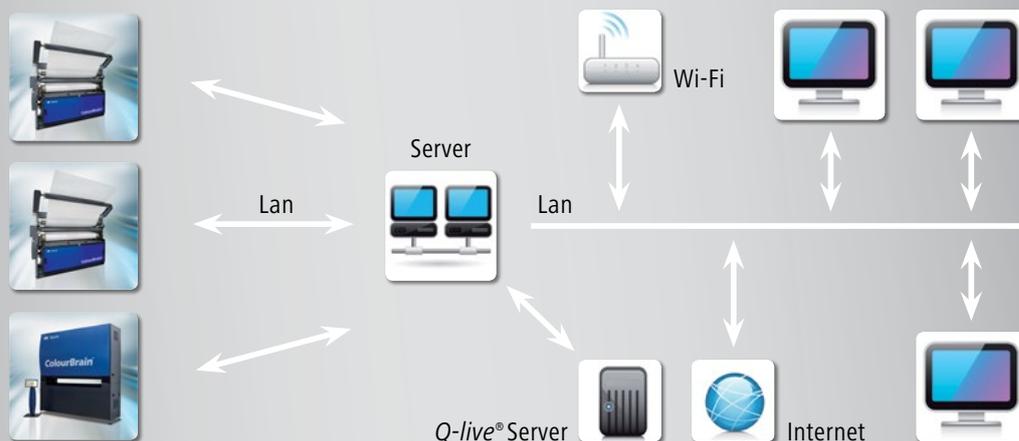
ONE Inspection System.

All *ColourBrain*® *Deco* systems use same inspection modules for all kind of production in printing or coating. Our clients use same cameras and operate the systems with the same user interface: in printing, in coating and lacquering lines.

More Advantages:

- *Q-brain*® for classification of detected flaws and immediate alarm in case of serial defects.
- *Q-live*® data base system to analyze every defect detected in order to improve production.
- *ColourBrain*® *Deco* monitors production of foil material, of decor paper or decor foil and of digital printed web or panel.

Q-live® Data base and statistics.



Product data *ColourBrain® Deco.*



ColourBrain® Deco

ColourBrain® Deco is a modular inline system for the detection of defects on flexible web material at the production line.

By high resolution and high speed line scan cameras, smallest defects and deviations on foil, decor paper and film material are safely detected.

Modules with optimized combination of camera and illumination, monitor all different production processes like calendering, extrusion, coating, lacquering, printing or embossing.

All defects and their position on the web are documented for quality grading and to optimize later cutting.

For statistical analysis, all defects and images of defects could be stored by the *Q-live®* data base system which is giving a lot of tools for analyzing and optimizing the production process.



ColourBrain® DoD

ColourBrain® DoD is a system for inspection at lines with digital printing machines and is adapted on various ink or printer systems.

ColourBrain® DoD is based upon Baumer Inspection cameras and upon the *FlashingSky®* technology to guarantee a perfect contrast for every kind of flaw.

The spectral specific imaging technology, with selected LED line illumination systems, are designed for the inspection of all kind of digital printed web material like foil or paper and for particle boards or glass.

ColourBrain® DoD classifies defects according to their cause and identifies the printing head and the position of nozzles causing the flaws.

The inspection system automatically is adapting from one print job to the other. Flaws detected, are analyzed to grade the visibility for the human observer with regard to the specific position of flaws.

Basic features

Function	Inspection of flexible web material in calendering, coating, lacquering or printing.
Material	Inspection of foil, decor paper or film material.
Detection	All kind of defects like lacquering flaws, stains, scratches, fibers, glossy spots or wrong colour.
Speed and resolution	5 – 500 m/min Resolution up to 100µm.

Function	Inspection of digital printed web or board.
Material	Foil, paper, particle board or glass sheet.
Detection	All nozzle problems, head bandings, streaks, smearing, colour variations crosswise or lengthwise.
Speed and resolution	5 – 150 m/min Resolution for printing with up to 720dpi.

