



Baumer

Passion for Sensors

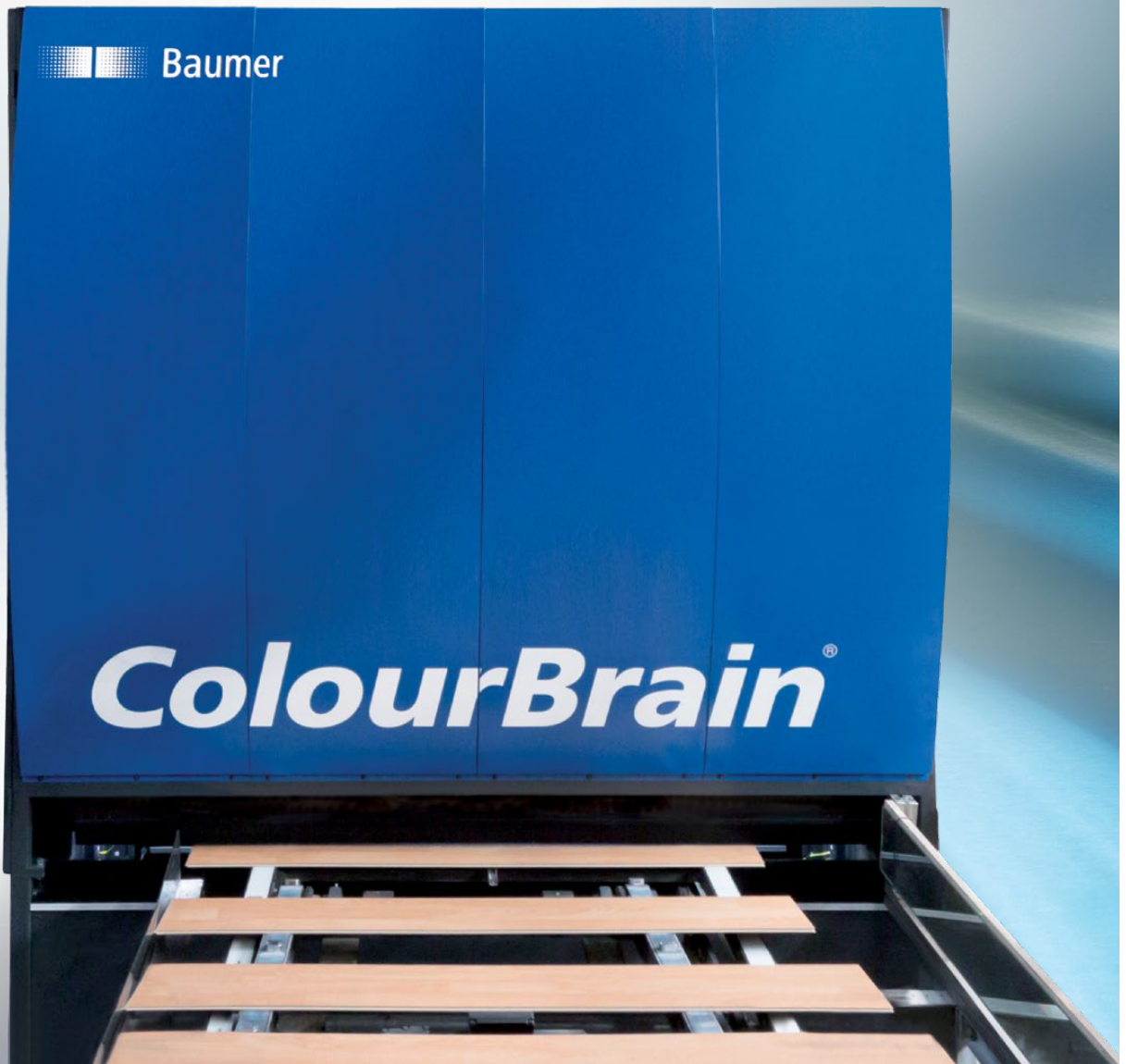
ColourBrain[®] Flooring

Automatic optical inspection and process monitoring
for flooring production.



Baumer

ColourBrain[®]





ColourBrain® Flooring – A new dimension for surface and edge inspection.

Modular for all products.

- For any flooring production, laminate or LVT.
- Quality control of planks immediately after profiling at 250 planks/min.
- Automatic optical inspection with colour cameras and cameras in reflection for all decors and structures.
- Spectrally optimised modules for monitoring the overlays for lucency or damage.
- Individual inspection for standard widths or for long planks up to 2800 mm.

Process control, fast and precise.

- Cameras with highest resolution, scan rate and speed.
- Inspection of the bevel coating for the smallest dropout at over 250 m/min.
- Inspection of the production process with immediate alarm in case of drifts or deviations.
- Standardised and documented quality settings for all production lines and sites.
- A standardised database for analysing all deviations detected.



Quality control prior to packing.

Inspection of floor planks for smallest surface and edge faults in the production line. Precise inspection modules for laminate, LVT and digitally printed surfaces guarantee the best detection performance for each product. Automatic grading and marking for standard quality rules with a production rate up to 250 pieces per minute.



Inspection of long planks.

For the inspection of the long planks, up to 12 camera modules are installed to guarantee the required resolution. Using 4 spectral systems, coating and profiling defects are detected on any decor or surface.

Seamless quality control records all deviations and triggers an alarm in case of serial defects.

Automatic optical inspection guarantees optimised processes.

ColourBrain® Flooring is the automatic inspection system that monitors quality with different camera systems in flooring production and immediately triggers alarm in case too many defects are detected.

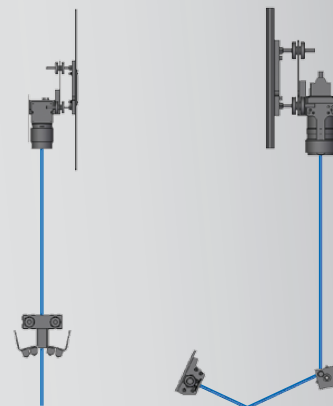
More Advantages:

- Modular for each product and for any length or width of planks.
- Precise inspection modules for automatic detection of decor defects, surface damages or poorly pressed overlay paper.
- Over 250 successfully installed systems worldwide.

Optimised modules for each decor.

ColourBrain® Flooring is scanning the plank surface with four optical systems, each with fast line-scan cameras and with LED line lights from various lighting angles and with precisely defined light spectrum.

As such, an optimal automatic optical inspection is guaranteed for any decor and any type of damage.





Monitoring of bevel coating.

The inspection modules for longitudinal and transversal edges are integrated into the profiling line, directly after the unit for bevel coating. The extremely fast *ColourBrain® V-Shape 4.0* line scan cameras record the coating of the bevelled edge for completeness and quality with highest resolution and scanrate.



Analysis of clip mounting.

The *ColourBrain® Clip* module monitors the correct assembly of the plastic clips after profiling and clip insertion. *ColourBrain® Clip* is detecting automatically all missing, displaced or broken clips and rejects the defective planks prior to packing.

ColourBrain® – Edge modules for quality control of bevel coating and clip mounting.

Compact camera system for monitoring the coating of the bevelled edge and review of the correct clip mounting.

More Advantages:

- Compact and protected camera module for installation directly after coating.
- Extremely fast scanning for monitoring coating at 250 m/min.
- Inspection of the cross profiles for correct insertion of clip.

Highest resolution on the edge.

ColourBrain® V-Shape 4.0 and *ColourBrain® Clip* are two compact optical inspection modules which are directly installed in Double-End Tenoners.

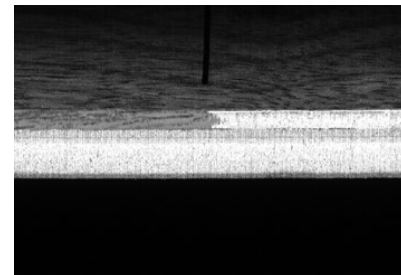
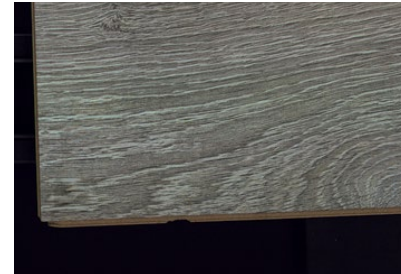
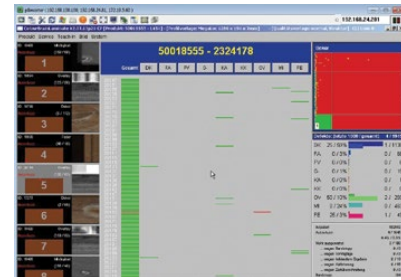
Both systems use cameras developed and produced by Baumer Inspection with high sensitivity and scan rate. Powerful LED lighting enables automatic optical inspection of the edge at the fastest production rate.



ColourBrain® Technology.

The patented *ColourBrain*® technology imitates human perception for checking decorated surfaces. It learns to differentiate between GOOD and BAD based on few samples.

The operator uses an intuitive and easy-to-understand user interface with clearly structured graphical menus to define new products, to set tolerances and to analyse the frequency and cause of defects with statistics and defect images.



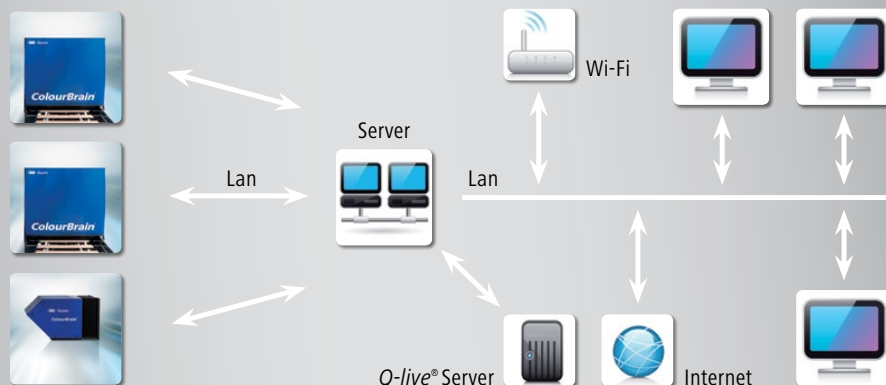
Quality increase and process monitoring.

ColourBrain® Flooring Systems provide data on the production quality and the reject rate of every production line around the clock per period of time, product and batch.

More Advantages:

- *Q-live*® database for statistical analysis of defect types and frequency.
- Optimisation of production resources through reduction of reject rates.
- Automatic marking and sorting.

Q-live® Data base and statistics.



Product data *ColourBrain*® Flooring.



ColourBrain® Flooring

ColourBrain® Flooring is an automatic optical inspection system with four different camera systems on the grading of planks directly prior to packing.



ColourBrain® V-Shape 4.0

ColourBrain® V-Shape 4.0 is a compact and robust optical inspection module, with high speed camera systems, for monitoring the bevel coating directly in the profiling line.



ColourBrain® Clip

ColourBrain® Clip is a compact optical inspection module, with the highest resolution, for inspecting the clip insertion in the profiling line directly after clip mounting.

ColourBrain® inspection systems for flooring production are fast line scanners with very high resolution for automatic optical detection of defects on the plank surface, on the coated chamfer or after clip mounting.

ColourBrain® Flooring is using four independent optical systems with different light angles and with precisely defined light spectra to guarantee optimal inspection for all defects.

With *Q-live*®, the sorting results of the different *ColourBrain*® inspection systems are continually saved and analysed to avoid rejects, detect weak points and prevent series problems quickly and as early as possible.

Basic features

Function	Inspection and sorting of planks after profiling, directly before packing.
Detection	All kind of defects such as overlay flaws, damage and coating flaws.
Speed and Resolution	Up to 250 planks per min. Standard: 200µm

Function	Inspection of the bevelled edge for the smallest dropout directly after coating.
Detection	All defects in bevel coating, height positioning and coating dropout.
Speed and Resolution	Up to 250 meters per min. Standard: 50µm crosswise

Function	Inspection of the cross profiles for correct insertion of the clips directly after they have been inserted.
Detection	All incorrect assembly such as missing clips, broken clips or clip misalignment.
Speed and Resolution	Up to 250 clips per min. Standard: 50µm crosswise



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