

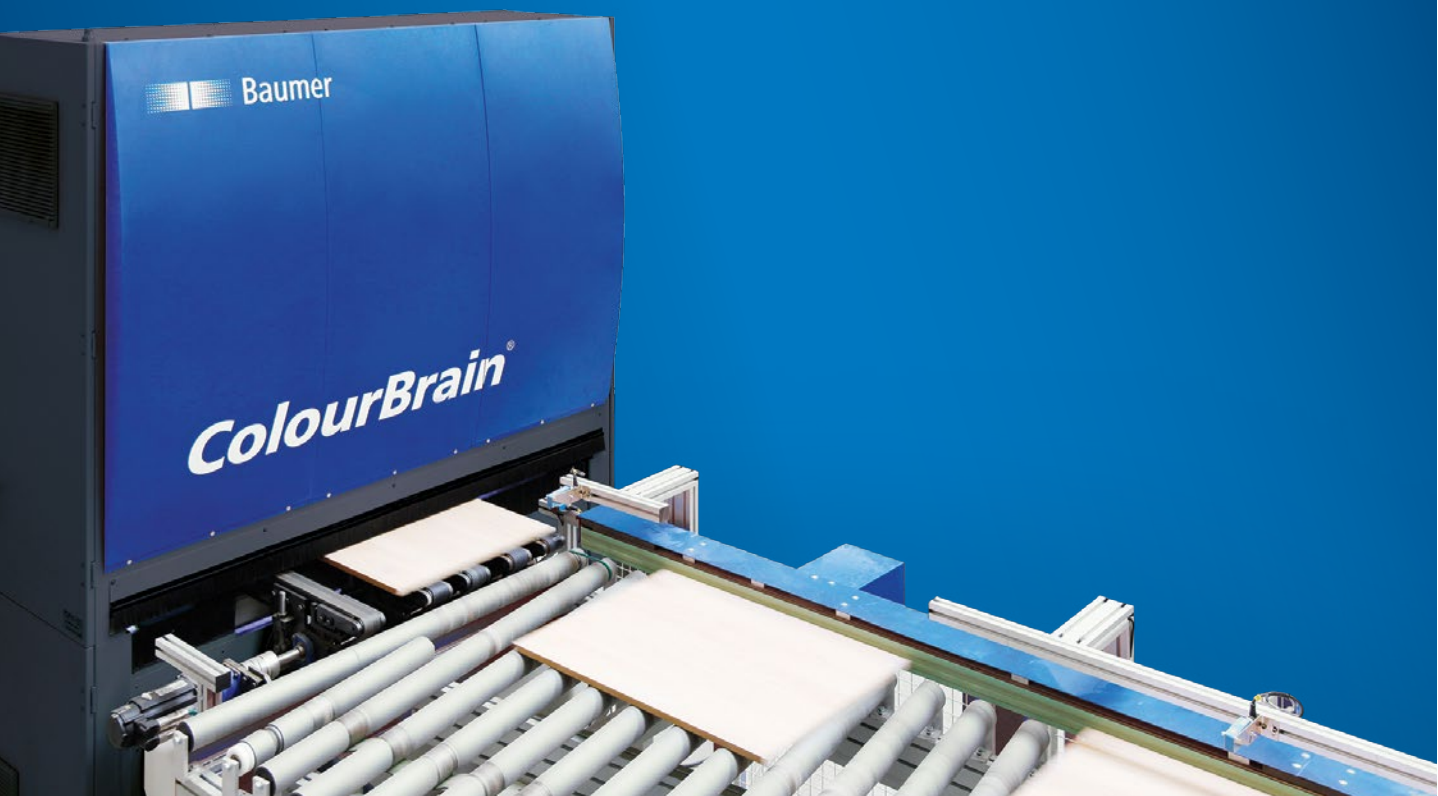
# *ColourBrain<sup>®</sup> Furniture*

Automatic optical inspection and process monitoring for furniture production.



# The new dimension for automatic inspection and process monitoring.

*ColourBrain® Furniture* is the modular inspection system for all production steps and for all products in the kitchen and furniture industry.



## *ColourBrain® Furniture* – the modular system.

### Fast and precise.

- *ColourBrain® Furniture* systems continuously monitor product quality, record deviations and trigger alarm in case of serial defects.
- At production speeds of more than 150 m/min, an automatic grading takes place in accordance with standardised and documented settings.
- The *Q-brain®* classification system matches the detected defect to its cause in the process and provides information for process analysis and process optimisation.

### Modular.

- High-resolution, fast camera systems and laser scanners are combined for complete solutions in kitchen and furniture production.
- One or double-sided, *ColourBrain® Furniture* systems can detect any damage, any decor defect or any print deviation.
- For serial production or single batch: In production frequency, *ColourBrain® Furniture* switches from one product to another with fully automatic change of product specific recipes.

# ColourBrain® Edge – focus on the edge.

## Compact and robust.

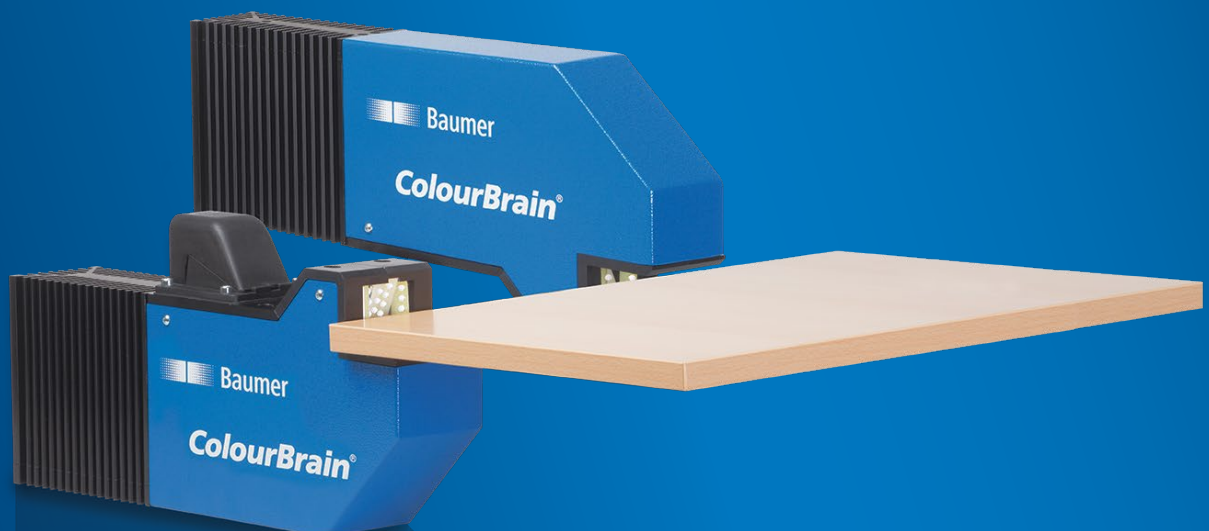
- *ColourBrain® Edge* is designed for integration into all edgebanding systems, with interfaces to all machines and production control.
- The patented *FlashingSky®* technology guarantees automatic inspection for all types of edges and for different decors and coatings.
- Integrated lighting modules flash with different lighting angles to guarantee best detection of every flaw.

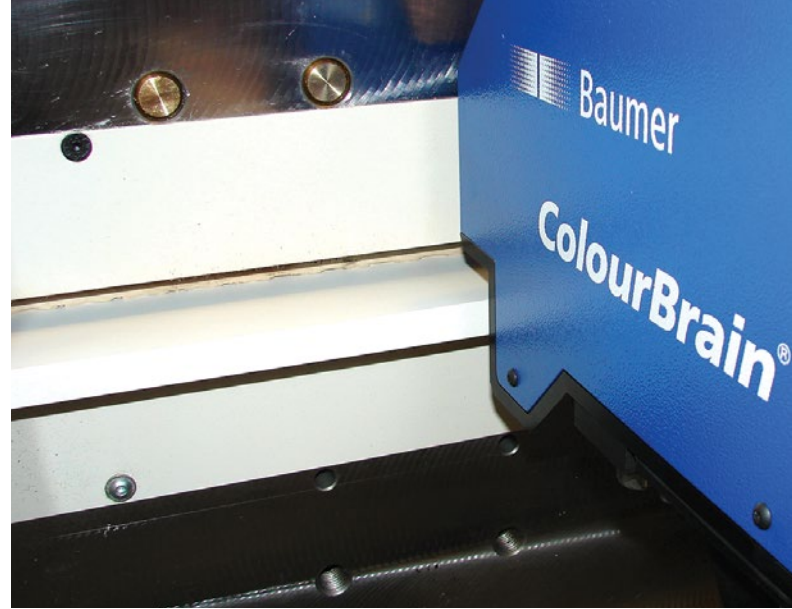
## 360° inspection.

- Highly sensitive and fast cameras, developed and produced by Baumer, with a field of view all around the edge, can detect even the smallest chipping.
- Automated TeachIn processes and automatic change of recipe enable installation with serial production and single batch.
- Detected defects are stored with their images and part codes in the *Q-live®* database for later analysis.

## A new dimension for edge inspection.

*ColourBrain® Edge* is the robust inspection system with a compact mechanical design for installation into any edge processing line.





#### Inspection on both sides of panels.

In every furniture and kitchen production, in coating and varnishing, on one side or both sides: *ColourBrain® Furniture* systems detect any damage with highest precision and speed. The *Q-brain®* classification system matches the detected defect to its cause in the process and transfers all results to the *Q-live®* database for analysis and process optimisation.

#### Installation in one-sided single batch edgebander.

Narrow, compact camera modules with integrated LED lights analyse the image of the edges, detect even the smallest flaw, check the glue joint and set alarms upon detection of production defects in a row. The results of the automatic inspection, are transmitted to a manual reworking station for an immediate repair or to arrange reproduction of the defective panel.

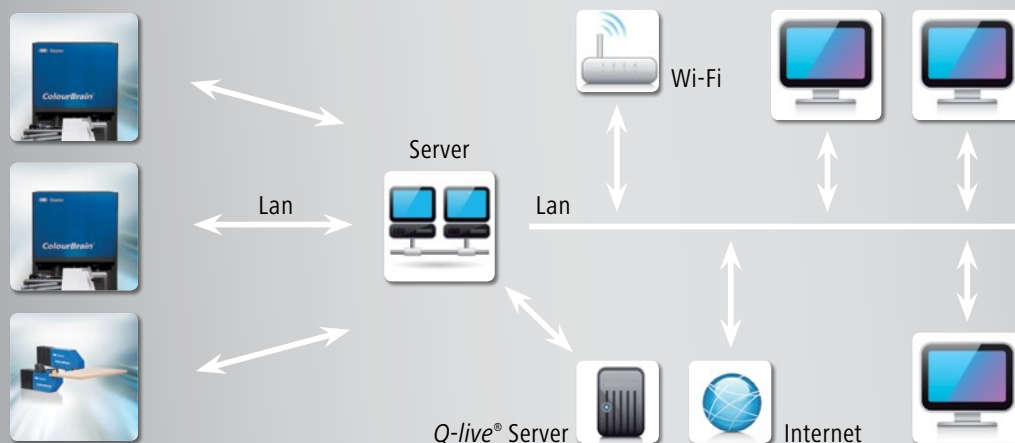
## *ColourBrain® Furniture* – process optimisation.

All *ColourBrain®* systems classify detected defects according to their cause in production and save the results and defect images in a database system.

#### More Advantages:

- *Q-brain®* defect classification so every defect can be matched to its cause in production.
- *Q-live®* database to analyse the production quality and to optimise the production processes.
- Results with defect images and their position are displayed at the manual reworking station for a quick decision on reproduction.

#### *Q-live®* database and process optimisation.



# ColourBrain® and Q-brain®.

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 in order to define new products, to set tolerances and to analyse the frequency and cause of defects with statistics and defect images.

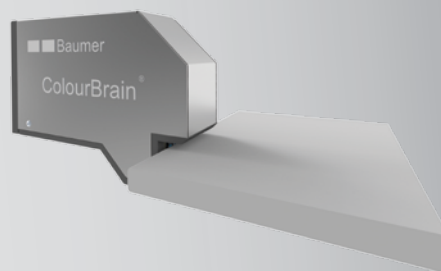
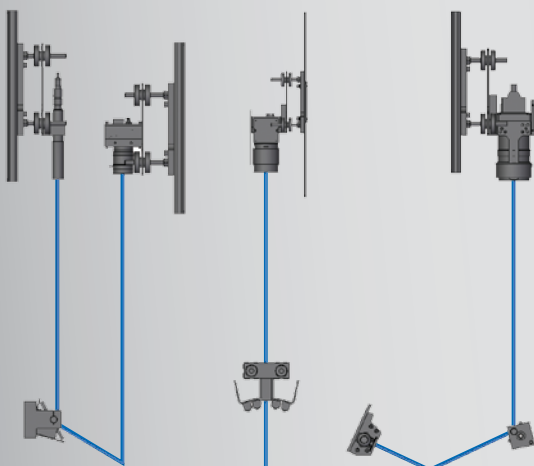


## ColourBrain® Furniture – the integrated system.

*ColourBrain*® Furniture is a modular inspection system for all products. For surface inspection, colour cameras, reflex and laser scanners are combined to guarantee the best inspection result for each application.

More Advantages:

- Identical operation, defect analysis and database for all *ColourBrain*® systems.
- Optical modules for surface inspection for each production line in furniture industry.
- Fast edge modules with highest resolution for the integration in every edge banding line.



# Product data *ColourBrain*<sup>®</sup> Furniture.



## ColourBrain<sup>®</sup> Edge

*ColourBrain*<sup>®</sup> Edge is a compact and modular camera system for installation in single- or double-sided edge banding machines.

High speed cameras developed by Baumer guarantee the resolution and precision of *ColourBrain*<sup>®</sup> Edge, even at highest production rate.

With the patented *FlashingSky*<sup>®</sup> technology, pictures of the furniture edge are taken from different angles, so all damages and the smallest chipping on the edge are detected.



## ColourBrain<sup>®</sup> Furniture

*ColourBrain*<sup>®</sup> Furniture is an automatic inspection system for furniture surfaces, for one and double side inspection.

*ColourBrain*<sup>®</sup> Furniture uses colour cameras, laser scanners and reflex cameras in different combinations to ensure the best defect detection for each product, decor and structure. These linescan cameras are combined depending on the product and the production speed so the best resolution is guaranteed.

*ColourBrain*<sup>®</sup> inspection systems for furniture production can be used in serial production as well as in single batch production. The inspection system automatically loads the specific recipe with the specific settings for the next furniture element.

With *Q-live*<sup>®</sup>, the sorting results of the different *ColourBrain*<sup>®</sup> inspection systems are continually saved and analysed to avoid rejects, detect weak spots and prevent production of rejects caused by serial problems quickly and as early as possible.

*Q-brain*<sup>®</sup> is the novel classification system from Baumer Inspection. *Q-brain*<sup>®</sup> grades defect images depending on cause and type of defect, differentiates between individual defects and process-caused defects and separates overlying dirt particles from real defects.

## Basic features

Function	Inspection of furniture edges, 360° around the edge, installed in the edge banding machine.
Detection	All types of defects and damage during edge processing such as melamine chipping, edge offset or open glue joints.
Part size	Part thickness up to 60 mm standard. Part width and length as required.
Resolution	< 0.15 mm at transport speeds up to 80 m/min.

Function	Surface inspection of furniture body or front elements, single- or double-sided.
Detection	All types of defects and damage on surfaces such as breaks, impressions, scratches and decor or coating defects.
Part size	Modular system for any width, length and thickness.
Resolution	< 0.2 mm at transport speeds up to 100 m/min.

