

QI-Station

Quality Inspection of Furniture Panels



Keep an Eye on your panels

FURNITURE PARTS THAT won't fit together are history. By combining vision technology and laser profiling, QI-Station checks every hole and also inspects your surfaces and edges. Your production is fully inspected inline and in real time.



QI-Station WHAT IS THAT?

QUALITY INSPECTION STATION is a combination of various OptoNova QI technologies that allows automatic inspection of the dimensions and finish of foiled furniture panels.

QI-STATION records several digital images of each object that passes the system. The images are analyzed to check:

- Position, diameter and depth of holes
- Panel dimension
- Surfaces and Edges for defects

The images are analyzed automatically and compared with the tolerances set by the customer. The system then makes a decision on each object: approve or reject.

IKEA PAX wardrobe manufacturer Swedwood Hultsfred has three QI-Station systems that perform the final inspection of every panel before packaging. Automatic inspection will in the near future be a key component in all high-volume production of flat furniture.

QI-Station APPLICATIONS

A QI-Station consists of several inspection functions. The actual selection depends on your needs.



Customer benefits

Automatic inspection gives you higher quality and lower cost.

- Replace manual inspection and allows higher production speed
- Reduced scrap rate, e.g. automatic line-stop if a hole is missing
- Lower cost for customer rejects
- Increased capacity, e.g. reduced set-up time as first piece control takes less than 30 s
- A useful tool for optimization of the production process

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QI-Station Hole inspection

Measure 5000 holes per minute for presence, position, diameter and depth. If there is a systematic error (broken tool) the line will be stopped automatically.

The first piece control will be done automatically and thereby shorten line-stops and increasing the practical capacity of the line.

QI-Station Dimension Control

QI-STATION will monitor the length, width and squareness of the panels, as well as presence, position, size and depth of all holes and grooves.



QI-Station Surface Inspection

QI-STATION can inspect your surfaces for defects like scratches, dents, bubbles, dirt, cracks, color, lacquer defects, missing foil and handling damages. Top as well as bottom surface can be inspected. The modular design of QI-Station enables customized solutions for different types of furniture surfaces and performance requirements

QI-Station Edge Inspection

With separate edge sensors in QI-Station, complete inspection of left and right edges is achieved. Leading and trailing edges are inspected from top camera system. The flexibility of QI-Station thereby allows inspection of all six surfaces in one position.

EDGE-QI • HOLE-QI • SURFACE-QI • VENEER-QI • PROFILE-QI • **QI STATION**

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