

PRODUCT OVERVIEW



QUAT²RO® Valve Check

Valve Bag Opening Detection
powered by AI



RETHINKING EFFICIENCY

QUAT²RO[®] Valve Check



Sit back, enjoy and let an intelligent solution based on artificial intelligence (AI) do the work for you!

Our new technology is revolutionizing the process of bag application within your industrial packaging processes. The system monitors the openings of the valves precisely and reliably. If the AI detects that a bag is not opened correctly, it is automatically rejected and replaced with a new bag. This significantly optimizes your workflow by saving time and minimizing the risk of misapplication.

Our latest digital innovation QUAT²RO[®] Valve Check ensures that every bag is applied perfectly, allowing you to increase efficiency and boost productivity in your business.



YOUR INTELLIGENT SOLUTION

QUAT²RO[®] Valve Check

By combining advanced algorithms and sophisticated image processing technologies, the artificial intelligence of our digital product QUAT²RO[®] Valve Check can precisely detect and analyze the bag valves. Before the filling process starts, the bag valves will be classified into the categories "good" and "not good".

With a remarkable detection reliability of opened valves and inadequately opened valves, which is displayed as a percentage in the image, the system identifies incorrect opened valves and removes them from the filling process as quickly as possible. This procedure minimizes the risk of T-applications and applications of incorrectly opened bags. Therefore it prevents unintentional material discharge into the machine.



QUAT²RO[®] Valve Check minimizes the risk of incorrect application of valve bags by performing an optical inline analysis of the open valve before it is placed on the spout.



QUAT²RO

Evaluation principle of valve opening detection using AI-supported image analysis:



YOUR BENEFITS

QUAT²RO® Valve Check



- Automatic detection and rejection of incorrectly opened bags
- Increased level of cleanliness within the filling machine and less cleaning effort
- Avoidance of T-applications and incorrect application of bags, where the spout fills product right beside the bag
- Significant increase of the bag application rate
- Less downtime for cleaning activities
- Time savings and increased efficiency
- Less product loss
- Higher machine availability
- Increased output
- More sustainable filling process

"Optimizing the bag application rate is the economic cornerstone for minimizing product losses throughout the filling process. Precision during filling not only reduces material costs, but also increases resource efficiency and paves the way for economic benefits."

Dirk Bergmann, Head of AI



YOUR SAVINGS - A CALCULATION EXAMPLE

QUAT²RO® Valve Check



12 MINUTES / DAY

Approx. 5 seconds are saved per avoided incorrect bag application. Therefore, with an average of 140 incorrect applications per day, around 12 minutes (700 seconds) of production time are used efficiently.

(5*140 = 700s = approx. 12min)

50 BAGS / DAY

With a filling time of approx. 14 seconds per 25 kg bag, 50 additional bags can be filled.

(700s/14s filling time per bag = 50 bags)



312 TONS / YEAR

With 250 working days/year, 12,500 more bags can be produced per year.

(50 bags/day*250 days=12,500 bags
12,500 bags*25kg= 312,500kg
=312.5 tons)

13 TRUCKS / YEAR

Approx. 24 tons of material fit into one truck. This means that with the help of QUAT²RO® Valve Check you can produce approx. 13 more truckloads of goods per year.

(312.5 tons/24 tons = 13 trucks)

FURTHER INFORMATION

QUAT²RO[®] Valve Check

Industries:

- All industries in which valve bags are used for filling

Field of application:

Stationary valve bag machines:

- INTEGRA[®]
- ELEMENTRA[®] (with applicator)

Technical features:

- Retrofitting possible
- IPC operating temperature: -25°C to +85°C
- Mains voltage: 24 VDC
- Fanless design
- Cameras with IP67 protection class (explosion-proof housing available)

Scope of delivery:

- IPC
- Industrial-grade camera(s) incl. pre-assembled cables
- Software with integrated AI
- Electronic components
- Installation in the machine cabinet or in a separate housing if required



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digitalize 2 optimize

