

Customer Requirement:

Accurately detect the presence and placement of eggs during sorting and packaging

Banner Solution:

Q20 sensors encased in compact, rugged and easy-to-install aluminum housing

Why Banner?

Rapid customization—using readily available components, Banner gave the customer a product designed to meet their specifications

Customer Benefits:

- **Reduced installment time**—the OEM no longer needs to mount, align and wire twelve separate sensors
- **Cost savings**—reduced installation and ease of use translate into cost savings for the OEM and their customer

Q20 sensor array solves egg handling and processing application



Q20 arrays are installed on an egg sorting and packaging machine; one detects eggs as they are dropped into sorting chutes, and the second sees that the eggs are properly placed in their cartons.

Background

Eggs travel a long way from hen to store. In processing facilities, automated conveyor systems clean, quality-check, weigh, sort, and finally, pack the eggs. A Michigan-based manufacturer specializes in egg sorting and packaging components that are used in larger systems.

Challenge

On the packing line, eggs enter chutes and are packaged in cartons six at a time. To ensure that eggs are detected during these two stages, the OEM had installed twelve separate Banner sensors in their packaging components. When rising production costs prompted them to take a second look at this configuration, the OEM realized that one sensor could do the job of six at each stage, allowing them to simplify the wiring configuration and lower installation time. Banner was up against the competition to put the most effective sensors into the right housing, effectively reducing twelve sensors into two.

Solution

Banner's flexibility differentiated them from the competition. Engineers melded two existing Banner products from two different series—Q20 sensors and EZ-SCREEN Safety Light Curtains—to meet the OEM's unique requirements.

Two Q20 Array models were created for the OEM; one with a larger beam spacing to see the eggs during sorting, and one with a smaller spacing to see eggs during carton packaging. Each array contains six Q20 sensors—all wiring is cleanly encased in the aluminum housing to ensure easy installation and upkeep, thereby reducing costs. Fixed field sensing ignores the shiny, stainless steel background of the egg equipment, and status indicators show when array alignment is complete and installation is correct—giving the end user a less complicated solution that is easy to maintain.



Q20 Array Special Features:

- Model Number: Q20PFF100-10999
- Q20 sensors are encased in durable aluminum housing
- Customized Q20 beam spacing enables eggs to be sensed during sorting and packaging process
- Aluminum housing withstands wash down environments

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- [Standard Q20 Overview](#)
- [Product Literature](#)