Packing House Carton Tracking System

Universal has developed a cost saving method of marking tomato cartons during the automatic filling cycle and later identifying these cartons for palletizer control. This technology eliminates the need for high cost reflective tape and unreliable applicators. This system can be used on both standard and in-line fillers and operates at a cost less than that of one roll of reflective tape per season.

The Marking System

The marking system utilizes Universal USMR-20AF Micro-Spray Markers to automatically apply a 1/2" diameter color spot mark on the side of the carton. The marking system receives an initiate signal from the filler when the dribble switch is tripped. A Programmable Logic Controller in the marking system control box activates a pneumatic slide to position the marker in front of the carton. The spot mark is immediately applied and the slide retracts before the carton leaves the scale. The Spray Markers use standard coder ink and can apply hundreds of marks with 1 milliliter of the glycol base ink. The markers have a self cleaning orifice and will not clog even after long idle periods.

The Scanning System

On the downstream conveyor, scanning systems can be used to identify the discretely marked cartons and divert them to the appropriate palletizer using the existing pneumatic kickers. The PLC in the Color Detection System is programmed to look only in a small area of the carton for the specific identifying mark and will ignore even identical color marks in other areas of the carton. Selective area scanning of the carton surface produces nearly 100% accuracy. A hand-held display unit provides access to the PLC program to adjust for line speed and other variables.

Both the marking and the scanning system require 115 VAC, 60 Hz power and an electrical interface with the parent equipment for operation. The marking system requires 80 psi clean, dry, compressed air. A single 64 oz. gravity feed ink reservoir and an air distribution manifold can be used to supply up to 4 markers.

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