



Case Study: Northumberland Dairy Miramichi, New Brunswick



Northumberland Dairy in Miramichi, New Brunswick, Canada, recently expanded their modern processing facility, making room for additional processing capacity. Included in the extension is a new automated Empty Case Handling System from Westfalia's Deam Systems division, involving depalletizing, destacking and washing & transporting cases.

Founded in 1942, Northumberland Dairy has shown their commit-

ment to consistently achieve and exceed the Canadian Food Inspection Agency's plant standards. The new Empty Case Handling System from Westfalia Deam Systems is another reflection of this commitment to excellence.

Difficulties were arising from Northumberland's manual depalletizing operations where the Top-Out Destacking system was too slow to accommodate their rising demand, and the case washing

system was old and inefficient. Westfalia Deam's Empty Case Handling solution includes a Case Stack Depalletizer, Stack Conveyors with 3 to 1 merging, a Bottom-Out Destacker, and wheel drives transferring cases overhead to a new Case Washer. Clean cases are then color sorted with a Westfalia Case Reject system, and accepted cases then transported to production on new cable conveyor system supplied by Westfalia. Constructed throughout of stainless steel,

- Empty Case System
- Case Depalletizing

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The Challenge: **Meeting Empty Cases ‘Need for Speed’**



the entire system is suitable for wash-down, as is typical in dairy or beverage production. Northumberland operates with 16 quart plastic dairy cases on a 40" x 40" pallets. Westfalia also offers the Empty Case Handling System for 24 quart plastic dairy cases on 40" x 48" pallets.

As Northumberland's Dairy Plant Director, Randy Guimond, explains, "Northumberland chose Westfalia's Depalletizing system based on the performance of equipment previously purchased from Westfalia (Caser, Case Stacker & Caser Head), and on the genuine interest Westfalia showed towards designing a system that would meet all our requirements. We were particularly impressed with the fact that Westfalia chose to send three representatives to our facility for supervision of installation and commissioning. It's not unheard of for manufacturers to leave customers hanging near the end of a project, but Westfalia saw it through to completion and still provide support and advice, as required. Overall, we are very pleased with the



Bottom-Out Destacking operates at up to 90 cases/minute.

The Solution: Automatic Empty Case Handling System

design, quality of work and professionalism demonstrated.”

From the point of entry where a forklift driver places a full pallet of 7-high case stacks onto the Depalletizer, the system is fully automated. Using “clamp and lift” technology and at rate of 2-3 pallets/minute, the Depalletizer removes stacks from the pallet onto 3 stack conveyors which merge into 1 conveyor leading into the Destacking machine. The Bottom-Out Destacker operates at rates up to 90 cases/minute and discharges cases onto a wheel drive that transfers them via a vertical up-chute to the new case washer located

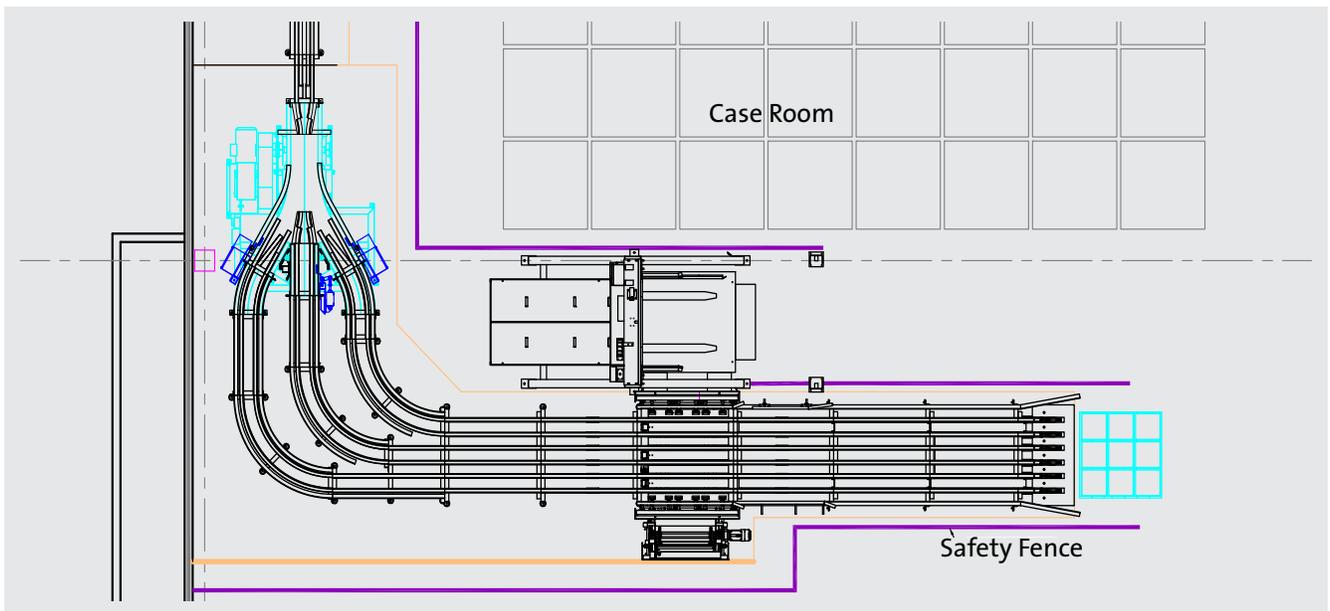
System Features	
Technology	<ul style="list-style-type: none"> ■ Empty Case Depalletizer - full pallet clamp & lift ■ Case Stack Conveyor & Case Conveyors ■ Empty Case Destacker - 60 cases/minute ■ Empty Case Push & Up-Chute to Case Washer ■ Case Reject Pusher & Conveyor
Features	<ul style="list-style-type: none"> ■ Fully automated Empty Case Handling System ■ All stainless steel construction ■ Color HMI touch screens ■ Allen Bradley PLC controls

on an overhead mezzanine. After running through the new steam cleaning Washer, cases are conveyed on cable conveyor through

a color sensing case sorting unit, where rejected cases are pushed off, and accepted cases released to production.



The fully automated Empty Case Handling System has enabled Northumberland to reduce labor costs associated with receiving and handling empty cases, achieve higher operating speeds, and improve washing efficiency. Thanks to Westfalia’s modular design, the construction and installation of the system was easier and faster. Also, the Depalletizer features a full color HMI with touch screen and 330



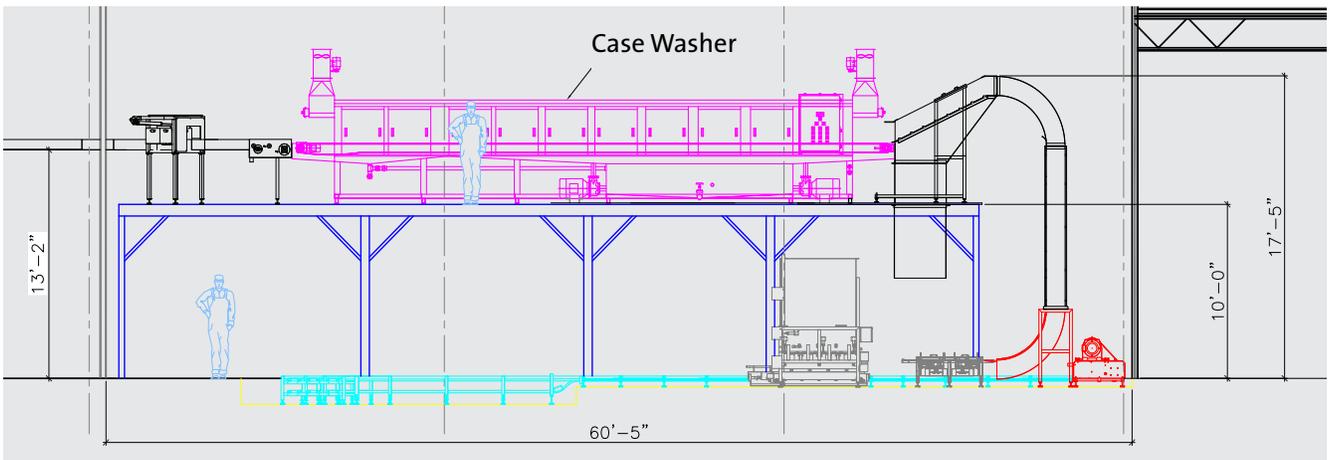
degree swivel mount providing operators easy access to the system controls. Safety of the staff is paramount, and the new Depalletizing system has full safety guarding with light curtain protection.

Above: Depalletizer first floor layout (overhead view)

Below: Elevation drawing showing two levels to depalletizing system (side view)

Benefits

- Customized automated empty case system for 2-story space
- Faster operating speeds achieved to meet production requirements:
 - Depalletizing 2 pallets/minute
 - Destacking 90 cases/minute
- Reduced operating costs associated with more efficient washer
- Reduction in labor costs associated with receiving empty cases
- Modular design for faster, simpler installation
- All stainless steel construction, ideal for wash-down areas



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