General Motors Improves Loading Dock Safety with OSHA-Compliant Defender Gates™

Equipment Focus: **NOVA Defender Gate™ 20**

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The General Motors Lockport Component facility in New York is a 2.6 million-square-foot facility that contains four industrial buildings and has over 1,400 employees. The plant manufactures radiators, HVAC modules and other automotive parts for GM subsidiaries, which are used in the Chevrolet Camaro, GMC Sierra, Buick Regal, Cadillac Escalade and other popular vehicle models. Each building at the Lockport facility receives raw materials for production and ships finished components for installation at various GM manufacturing sites, resulting in high-traffic loading dock areas that require maximum protection and the highest safety standards.

Due to the high volume of goods shipped and received daily, Dan Fitch, the Facility Engineer for GM at Lockport, determined that the existing safety barrier systems did not provide the level of protection and functionality needed for the amount of forklift and pedestrian activity at the loading docks. The existing barrier systems were made of thin fiberglass mesh material that retracted into a bollard, requiring employees to manually drag the barriers out and lock them into place. The automatic retracting design generated a constant pull against employees as they opened and closed the barriers, creating the risk that they could slip out of a worker's hands and potentially injure personnel or damage products and nearby equipment. Along with being difficult and awkward to

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Impact & Results

End-User Focus:
Easy Operation
Easy-glide hinges for effortless opening/closing.

Key Impact:
Increased Safety
Meets and exceeds OSHA guidelines for fall protection.

Financial Benefit:
Accident Prevention
Ideal for protecting equipment, pedestrian zones, hazardous areas and other in-plant safety operations.

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GOAL: Increase safety at 34 loading docks by replacing existing mesh barrier systems with easy-to-use, low-maintenance, OSHA-compliant gates.

use, the barrier also sagged and required frequent maintenance to remain taut.

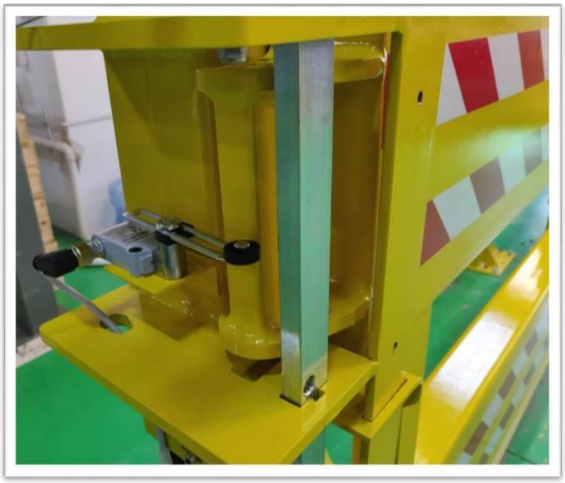
The amount of effort required while operating the barriers along with the unsafe design and flimsy material led Fitch to believe that "the existing safety barrier systems were hazardous to workers and we wanted barriers that wouldn't flex when pressure was applied." GM also was interested in having a gate that could interlock to their existing vehicle restraints and create a safe sequence of operations to increase overall protection for dock attendants, truck drivers, equipment and products.

Along with operational efficiency and ease, GM also needed to ensure that their new safety barriers would meet OSHA regulations for fall protection. In 2017, OSHA introduced additional standards for safety gates at the loading dock that aimed to help protect pedestrians and forklift drivers from unprotected edges. The 1910.28 and 1910.29 OSHA standards state that loading dock safety barriers must maintain a continuous top-rail height of no lower than 39 inches when downward pressure is applied and include a midrail that reaches at least 21 inches high.

THE SOLUTION

Defender Gate™ 20 with Electronic Switch Option

After reviewing several safety barrier options, General Motors chose the Defender Gate™ 20. "Other dock safety barriers that we looked at did not match the longevity, ease of use and safety features of the Defender Gate™," said Fitch.



Electronic Limit Switch interlocks equipment to create a safer order of operations

"Other dock safety barriers did not match the longevity, ease of use and safety features of the Defender Gate™."

Dan Fitch, Facility Engineer, General Motors Company

A total of 34 existing barrier systems were removed from the Lockport facility and replaced with the Defender Gates™. To further enhance dock safety, an electronic switch option was included to interlock the gates and vehicle restraints, which established a safe order of operation and prevented truck restraints from disengaging until the barriers were closed.

The Defender Gate™ 20 features an all-steel construction and has been tested to stop a 13,500-pound forklift traveling at 6.5 miles per hour. It has double guardrails to meet and exceed OSHA standards for fall protection and heavy-duty bollards to protect doors, door tracks and other equipment against impacts from forklifts and pallet jacks. The Defender Gate™ has easy-glide hinges for quick, effortless operation and can open/close with minimal effort. Employees simply hold onto the top grab handles as they walk the gates open or closed, further preventing workplace accidents by keeping hands away from pinch points at all times. With an opening range of 90 to 180 degrees, the Defender Gate™ allows full pass-through clearance and includes an adjustable backstop so employees can choose the best operational angle for loading and unloading.

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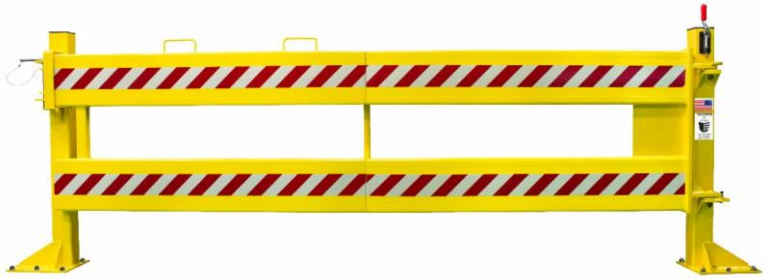
RESULTS: The Defender Gate™ 20 meets and exceeds OSHA standards for fall protection at the loading dock and is designed to prevent pedestrian and forklift falls. General Motors was able to further enhance safety at their docks by interlocking the Defender Gates™ with their vehicle restraints.

The Defender Gate™ safety barriers installed at the GM Lockport Component facility protect against loading dock falls for both pedestrians and forklift operators. Securing the loading dock is top priority, and the lockable latch mechanism stops accidental or inadvertent opening until the area is secure. Once opened, the panel magnet prevents float, and the steel hold down prohibits the gate from closing prematurely, ensuring the path to and from the trailer remains unobstructed for forklift operators.



All-steel Defender Gate™ can stop a 13,500-pound forklift traveling at 6.5 miles per hour

"The goal was to make our loading docks safer and more secure."

Dan Fitch, Facility Engineer, General Motors Company

"The goal was to make our loading docks safer and more secure," Fitch said. By installing the Defender Gates™, GM can better protect the health and safety of its workers while also protecting their loading areas from potential downtime, preventing product damage and maintaining efficiency at each dock. Fitch continued, "We decided to install Defender Gates™ because they are tough, simple and reliable."

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