



PORT INDUSTRY

MARTIN PRODUCTS FOR THE PORT INDUSTRY

L3936



MARTIN ENGINEERING OFFERS THE PRODUCTS AND SERVICES FOR ALL BULK TRANSPORTATION AND PORT INDUSTRY NEEDS.

Ports are busy, dynamic transportation hubs that move products we touch every day from deep draft ports that accommodate ocean-going vessels. Located in coastal areas, as well as inland, ports are the connection for the majority of import and export goods. Ports connect us to the rest of the world.

From the rail-to-barge trans loading facilities in Brazil to self-unloading steamships in Shanghai, from cross Pacific coal exports from Alaska or mineral ore transfers in Vancouver, we serve every industry in every cargo port in the world.

And behind our great products are great people. Our global team of experts work together to produce and manufacture high quality products that deserve the Martin seal of approval. Our service technicians average 27 years of experience in bulk material handling. Our product engineers and development team work side by side with our sales and service leaders to share innovative ideas within our corporate community around the globe and to help facilitate the development of new products that help our customers succeed.



This experience and expertise makes Martin Engineering the leader in bulk material handling solutions. We have the expertise to make your terminal operations as efficient and productive as possible.

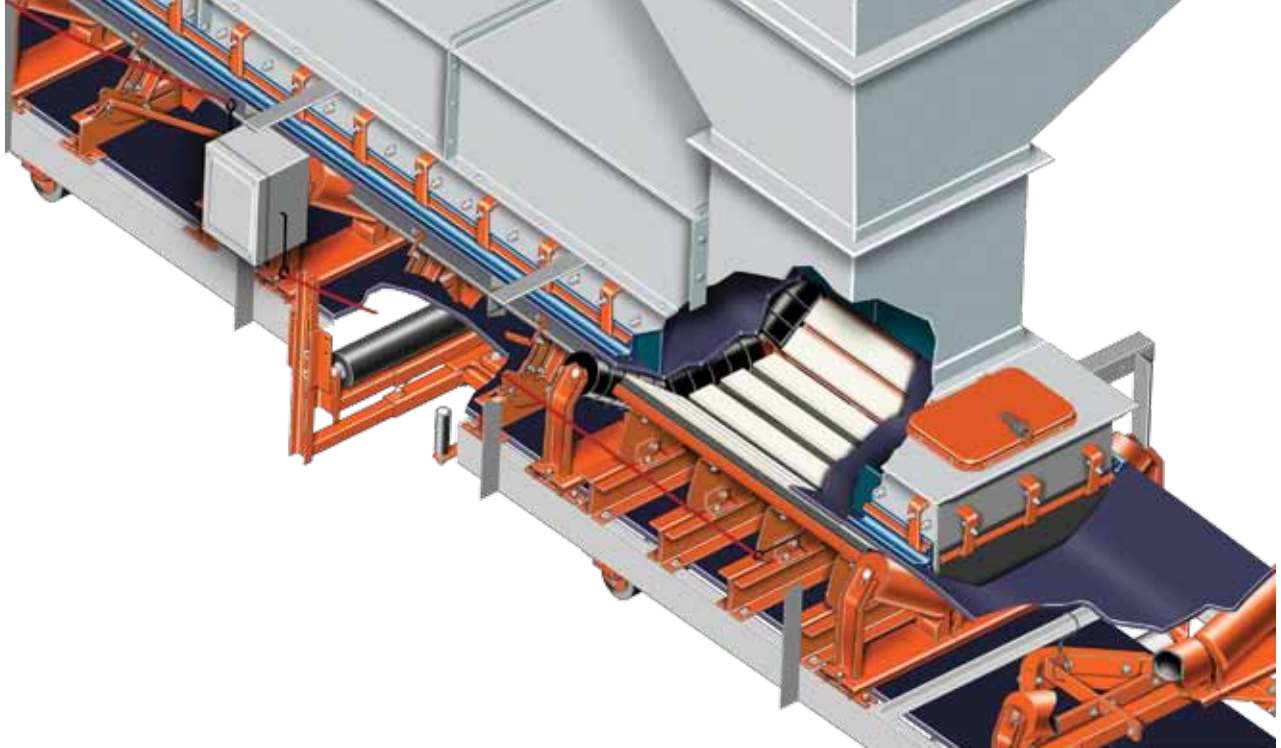
Terminals are always looking for ways to enhance site safety, reduce costs, improve profitability and boost efficiency. Safety is a key priority for our customers. It's a priority to us too. We integrate safety features into all our products to keep people safe when using them or servicing them, which is why safety has been designed into our products and solutions since 1944.

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Problem Solved™

The Kinder Morgan Vancouver Wharves terminal in North Vancouver delivers inbound and outbound services to shippers moving cargo to or from all regions of western Canada. Martin Engineering designed and installed new conveyors ranging from 105 ft (32 m) to 709 ft (216 m) in length, employing Martin transfer chutes to place material onto the belt being loaded. Kinder Morgan was pleased with the level of support they received from Martin throughout the project.



CONVEYOR PRODUCTS

To prevent carryback and the expensive problems it can cause, Martin offers the most comprehensive line of belt cleaners, incorporating patented designs and industry-leading materials. Many of our primary cleaners are specifically designed for a variety

The loading zone is critical to the successful operation of any belt conveyor.

of challenging applications involved in loading and unloading cargo and our cartridge-mount secondary cleaners offer a safe and easy removal procedure.

The loading zone is critical to the successful operation of any belt conveyor. Martin Engineering's Transfer Point Systems upgrade belt conveyors by eliminating dust and spillage, reducing maintenance, extending component life and improving conveyor performance.

Martin has transfer point products that improve performance by stabilizing the belt line and preventing spillage and keeping conveyor belts aligned. Our EVO® transfer point products are track-mounted to simplify installation and maintenance.

Martin can also help you control airborne dust to improve regulatory compliance, working conditions and community relations. Our Dust Fighter™ products solve the problem of airborne dust by keeping fine particles in the load or by returning them to the main material body.

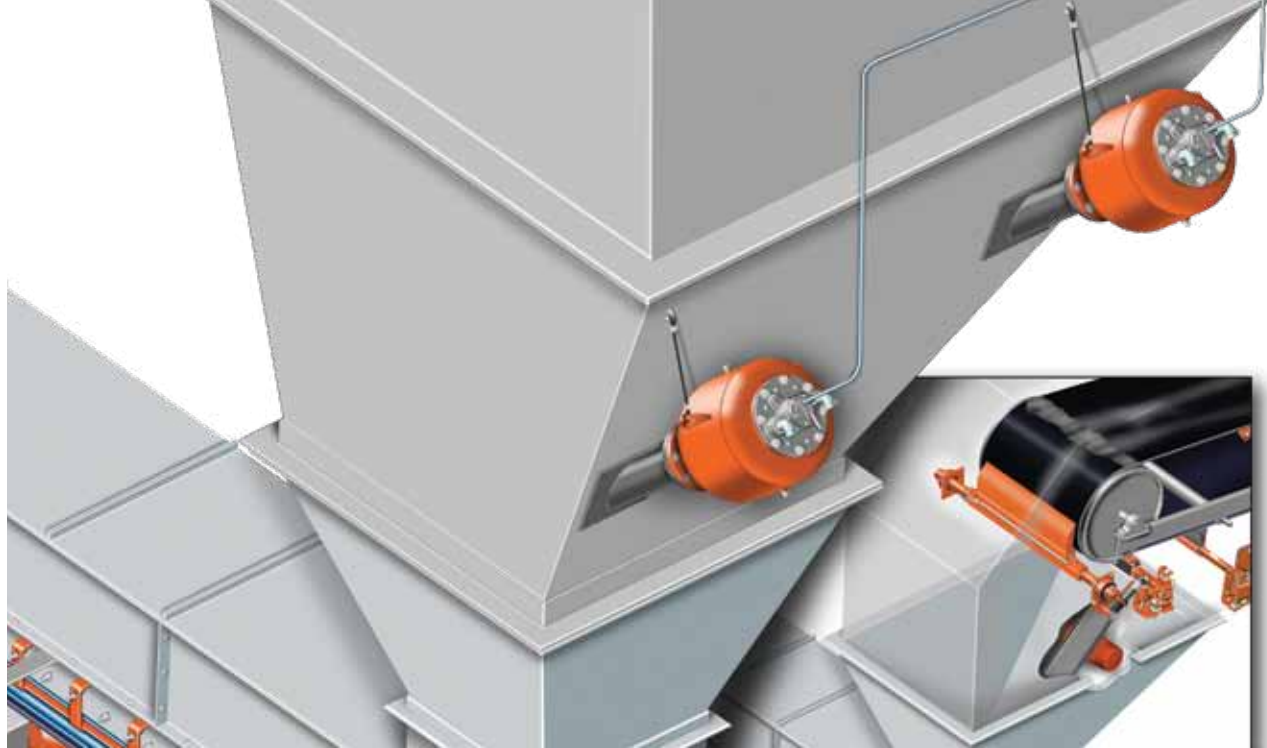
Problem Solved™

To allow expansion of its cross-Pacific coal exports, Aurora Energy Services (AES) needed to increase the flow of coal through the shiploader at the Port of Seward terminal. Martin installed several conveyor products to increase throughput, improve safety and reduce environmental impact. Since installing the new products, Port of Seward has raised its loading rate, resulting in a significant reduction in demurrage charges. With the improved control of the material stream, there is also less dust.





▲ Martin Transfer Point Products stabilize the belt line and prevent spillage, while keeping the conveyor belt aligned.



FLOW AIDS

To prevent buildups and blockages in large-scale storage and process vessels, our Air Cannons are the answer. Air cannons use controlled discharges from a reservoir of compressed air to boost

Martin Flow Aids boost the flow from storage or move material through stackers and chutes.

material movement. Martin pioneered and patented the air cannon and today leads the industry in the development and application of these effective, economical-to-operate systems.

Using the power of applied vibration, Martin Vibration Technologies energize material, reducing friction against container walls as well as internal particle-to-particle cohesion. The material moves more freely, feeds more effectively, sorts more consistently, compacts more efficiently and handles more easily.

Martin's flow aid technology maintains designed air/material flow to lower operating and maintenance costs, while improving equipment proficiency. The combination of flow aid technologies allows Martin to provide a complete solution to ensure maximum process efficiency.

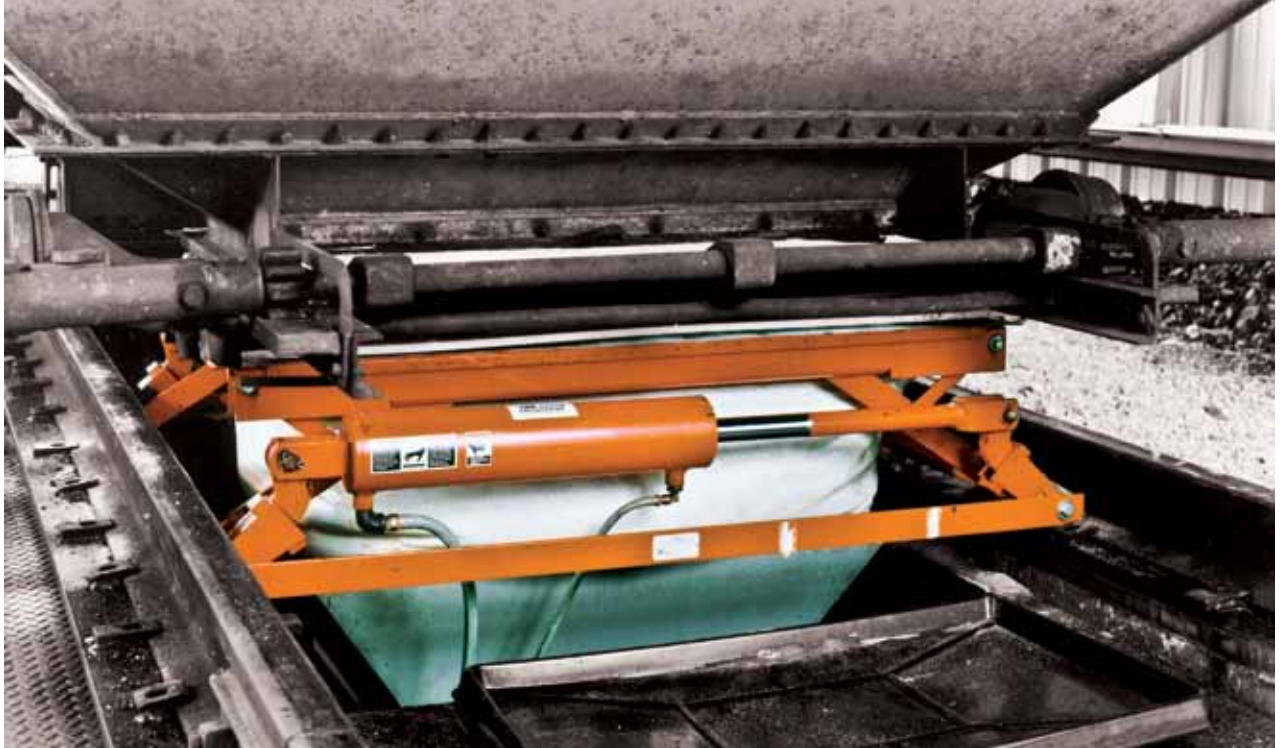
Problem Solved™

At the Kanawha River Terminal rail-to-barge trans loading facility on the Ohio River, a set of stacker tubes connected by conveyors allows the stockpiling of coal. But coal gets hung up inside the tubes, sticking to walls. Martin installed air cannons to the catwalk of the tower to clean out the material. The initial installation was so successful that within weeks Martin installed more air cannons on the remaining stacker tubes.





▲ Martin Flow Aids help remove accumulated material and completely empty stacker tubes.



RAILCAR UNLOADING

The Martin® Railcar Opener improves railcar unloading efficiency without gang tactics, without stoop labor or crawling under the car, without damage to gate or mechanism and without excessive noise.

Martin Engineering also offers railcar connectors to funnel material to the under-track system to prevent wind loss and eliminate the safety hazard of requiring workers to crawl under the car.

Martin Engineering offers the right equipment to boost the safety and efficiency of your operation's unloading of railroad hopper cars.

Engineering provide powerful vibratory energy that enhances material flow to achieve full unloading. Martin® Railcar Vibrators will help you receive the cargo you paid to have shipped to your facility.

The vibration of a railcar over the track compacts the car's bulk material cargo, prohibiting the cargo from flowing out freely once the discharge gate is opened.

Railcar Vibrators from Martin

Problem Solved™

The CEMEX Cement Terminal in Sacramento supplies cement for concrete and ready-mix operations in central California. Cement is delivered to the terminal by rail from CEMEX manufacturing facilities. To keep the trains in motion, and the silos full, each railcar needs to be opened and emptied quickly. To make sure the railcar unloading runs smoothly, the terminal uses Martin® Railcar Openers to open car bottom gates. Its adjustable base allows one worker to maneuver the wheeled cart through tight spaces, while reducing safety risks for personnel and improving unloading efficiency.







SERVICES

Martin Engineering offers a comprehensive selection of in-plant services, all focused on improving the handling of bulk materials. These specialized capabilities will impact the productivity of an operation and improve the bottom line.

New construction or retrofit, from belt cleaners to engineered belt-to-belt transfers; **MartinPLUS® Installation** handles the installation of material handling systems and components. Focus and experience

Martin services focus on improving the handling of bulk materials to improve productivity and the bottom line.

with material handling systems makes certain project completion is on-time, on-spec and on budget.

MartinPLUS® Specialized Maintenance teams take ownership for the maintenance

of your belt conveyors and other systems, with standard packages and customization opportunities to meet your requirements.

MartinPLUS® Process Improvement looks for the opportunities that will make a critical difference in your terminal's performance and profitability. By analyzing your material and assessing your system, we can make a critical difference in moving your operation to the next level.

Problem Solved™

CSL Spirit, from the CSL International fleet, features a patented gravity reclaim system. For unloading, cargo is elevated to the deck by an incline conveyor and onto a fully enclosed tubular boom with a reversible shuttle for discharge to shore. The entire unloading system was designed to minimize noise and eliminate dust. For improved material handling, a number of Martin products were installed including vibrators, belt cleaners and skirting. Additionally, the ships' comprehensive dust management system includes 17 dust collectors.







GLOBAL LOCATIONS

 UNITED STATES	 GERMANY	 SPAIN
 AUSTRALIA	 INDIA	 SOUTH AFRICA
 BRAZIL	 INDONESIA	 TURKEY
 CHINA	 MEXICO	 UNITED KINGDOM
 FRANCE	 PERU	

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