

END-TO-END AUTOMATED PACKAGING SOLUTIONS

From railcar unloading to final product distribution



Petrochemical Packaging

Plastic Resin Pellets

The background image shows an industrial facility, likely a petrochemical plant, with a complex system of metal structures, ladders, and conveyor belts. Large white bags of plastic resin pellets, branded with 'ExxonMobil' and 'PE Polyethylene Resin', are being moved along a conveyor system. The entire image has a warm, orange-tinted overlay.

**Where complex challenges
meet tailored solutions.**

A Total Systems Approach

From railcar unloading to final product transportation, IMS offers a comprehensive suite of integrated technologies designed to enhance efficiency, precision, and quality-control at every step of the petrochemical packaging process.

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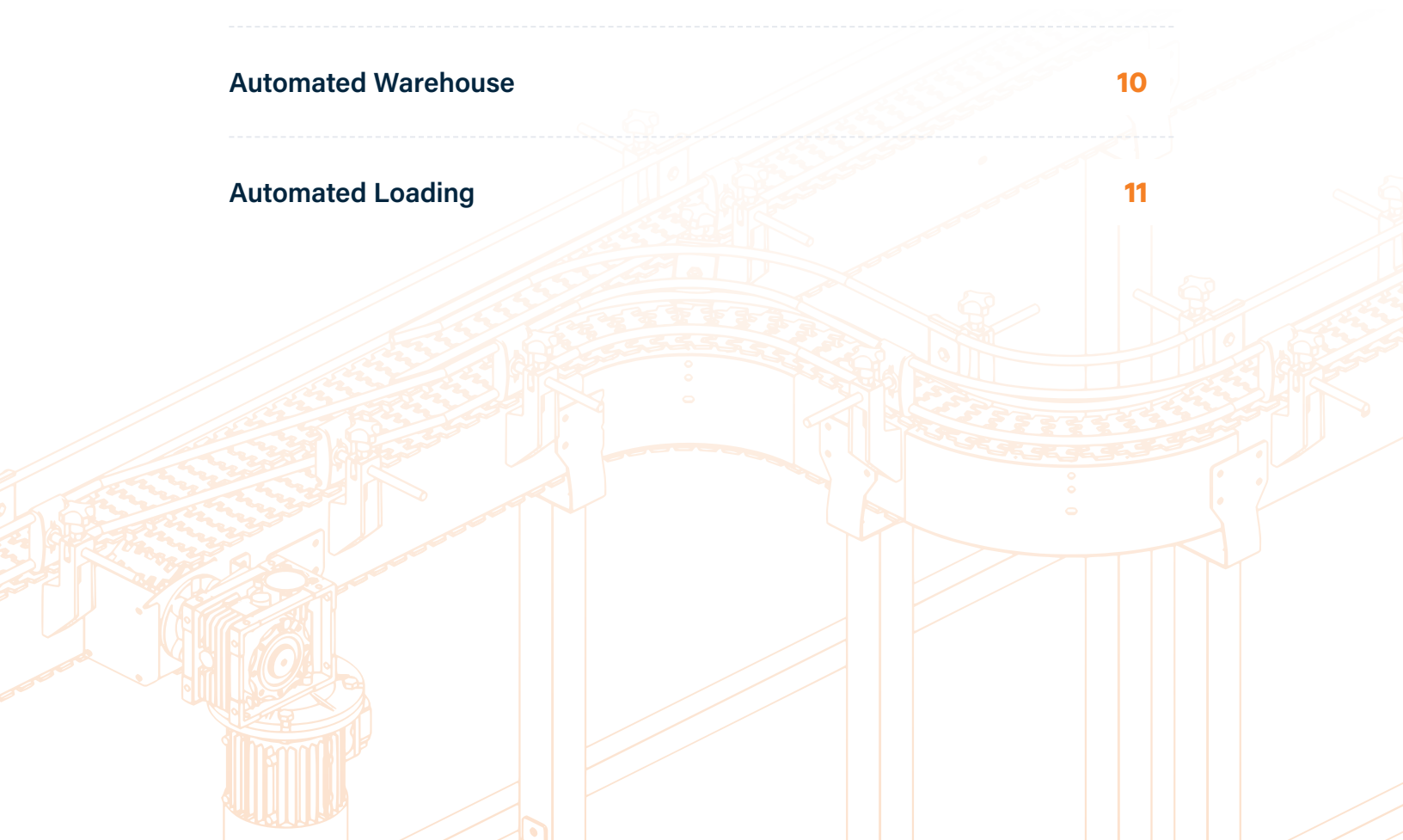
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01. Railcar Unloading

Railcar Unloading

Seamlessly transfer resin pellets from railcars to diverter lines with cutting-edge vacuum systems designed to streamline your infeed process

Features

- Piping for connections from railcars to indoor silo
- Cyclone receiver with air exhaust for vacuum line connection

Vacuum Systems

Vacuum conveying system transfers material from railcar compartments and offloads product via multiple conveying pipes, running in parallel to maximize unloading capacity.

Features

- Rotary valve to discharge pellets from material receiver
- Blowers protected by automatic self-cleaning cartridge filter that prevents dust from entering the compressor

Product Storage + Feeding

Silos engineered to safeguard the integrity of your materials, placed on a steel platform to gravity feed the packaging line underneath.

Features

- Silos made of aluminum alloy
- Minimum and maximum level sensor, vibrating probe type
- Pneumatic slide gate valve for product discharge into the bagging machine

Concept Scale

Industry leading system, virtually eliminating product giveaway

Features

- High accuracy with an error margin of +/- one ounce
- Filling speed of up to 2,500 bags per hour
- Processes over 30 gallons of product per second



02. Product Bagging

Tubular FFS Bagging Machines

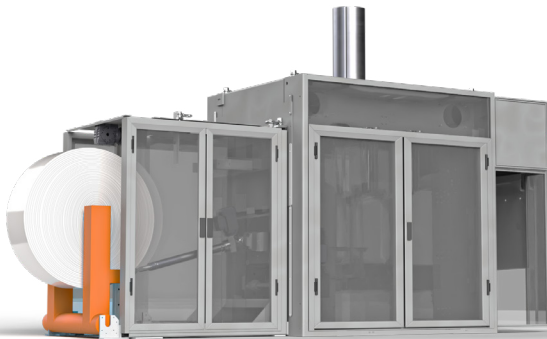
Efficient and versatile solution for packaging a wide range of materials,, offering high-speed and reliable performance

Compacta Series FFS Machines

Designed to be reliable, cost effective, and completely customizable. The versatile design accommodates various bag sizes and materials, offering unmatched flexibility.

Features

- Production speed up to 2,800 bags/hour
- User-friendly HMI software for easy diagnostics
- Fully customizable feeding and dosing systems



MACHINE CYCLE

- 01. Form:** Bag length may be preset and stored in the HMI, controlled by an encoder or by a photocell
- 02. Fill:** A unique system tightly joins the feeding mouth with the inside of the bag to minimize dust
- 03. Seal:** Ropex Impulse Seal is controlled to minimize temperature spikes + increases longevity of ware parts
- 04. Transfer:** Continuous fluid motion ensures low strain and reduced vibrations, resulting in consistent bag filling

Tubular FFS Packaging Film

High-performance film on a roll for bags of various formats + sizes

Features

- In-line gusseting for longer film yield
- Simple changeovers
- 100% recyclable polyethylene

Fill weight: 10 - 110 lbs.



Small machine footprint
for confined spaces



Larger film reels for
reduced downtime



Reduced labor
requirement



ROI within four to
six months



03. Quality Control

Checkweigher + Metal Detection

In-line checkweigher and metal detection system ensure each bag meets specified weight requirements and quality standards in real-time

Can be designed in different configurations based on:

- Size and type of the product
- Speed of the production line
- Available space

In-line Checkweigher

Able to accommodate various products and sizes, offering unsurpassed accuracy and speed

Features

- Compatible with various types of rejection system
- Intuitive, easy to use software
- Export production data via USB or ethernet



In-line Metal Detection

Customizable system that seamlessly integrates into any production line, ensuring accurate metal detection for any packaged product

Features

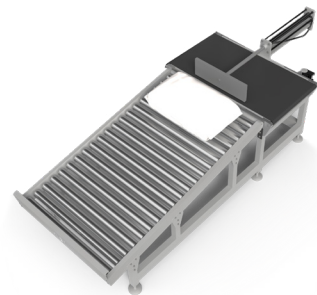
- Magnetic and non-magnetic metal detection
- Variable conveyor belt width
- Integrates seamlessly into new and existing lines



Rejection Systems

Pusher Rejection System

Bags that do not meet specified requirements are removed from production line using a gate attached to an air cylinder



04. Palletizing

Palletizers

Cutting-edge palletizing solutions to boost your productivity and efficiency. Our advanced robotic and layer palletizers cater to a wide range of industries, ensuring improved load stability and streamlined packaging processes

Robotic Palletizer

A compact solution for palletization of up to four concurrent lines. Adaptive robotic arms ensure flexible stacking patterns, making it ideal for varying bag sizes and pallet configurations.

Features

- Up to 1,800 bags/hour
- Single or multiple picking gripper
- Easy integration with pre-existing systems



Layer Palletizer

Designed for high-speed production in demanding work environments, stacking layer by layer to ensure uniform pallets

Features

- Up to 2,800 bags/hour
- Easy-to-use software with automatic pallet pattern change
- Up to 20 stored programs for multiple bag sizes + stacking patterns



PALLET STACKING PATTERNS



05. Stretch Wrapping / Hooding

Stretch Wrap + Stretch Hood Machines

Secure and stabilize products on pallets for storage and transportation, ensuring protection throughout the supply chain

Stretch Wrap Machines

Seamlessly automates the pallet wrapping process, offering load stability and protection without requiring operator intervention

Variations

- Rotating turntable machines
- Rotating arm machines
- Rotating ring machines

Features

- Adjustable arm speed: 30 rpm max
- Up to 55 pallets per hour
- Adjustable wrapping height

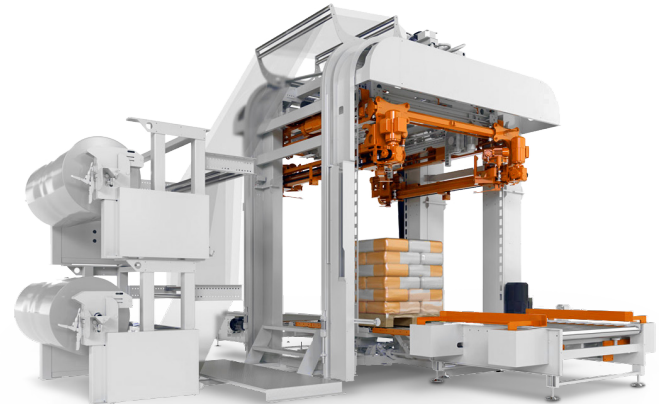


Stretch Hood Machines

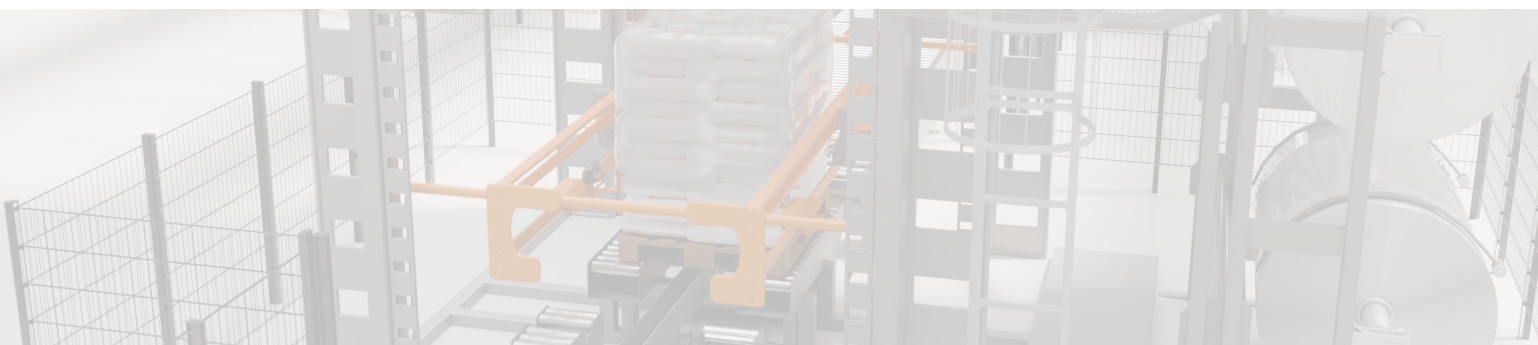
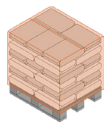
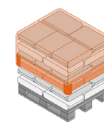
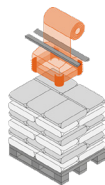
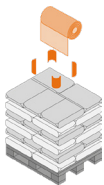
Utilizes the elasticity of tubular plastic film, stretched and released around the pallet load, leveraging vertical and transverse forces to achieve maximum stability

Features

- Up to 150 pallets per hour
- No heat required
- Uses recyclable material
- Optional branding/printing on film



STRETCH HOODING PROCESS



06. Pallet Handling + Transport

Pallet Shuttle Conveyors + AGV Forklifts

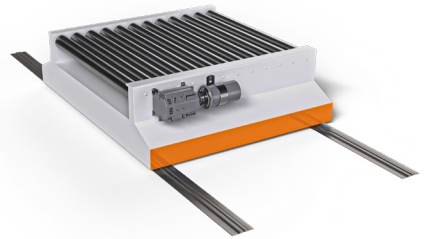
Advanced material handling systems designed to enhance the efficiency and automation of warehouse operations by streamlining the transport and storage of palletized loads

Pallet Shuttle Conveyor

Transports pallet loads to various discharge points on two or more conveyor lines for efficient end-of-line pallet handling

Applications

- Can consolidate multiple lines into one or more product flows
- Can be engineered to carry one or more pallets
- Designed to allow hi-lo traffic through transportation paths



AGV Forklifts

Increase workplace safety and reduce labor requirements with Automated Guided Vehicle (AGV) Forklifts designed to maximize productivity and minimize downtime

Features

- Scalable, with ability to add unlimited number of vehicles
- Real-time communication between supervisor and all vehicles
- Magnetic or laser-guided



Standard AGV

Fully customizable for efficient pallet handling in various applications



Counterbalanced AGV Forklift

Rear counterweight enables high load capacity at various heights



Trilateral AGV Forklift

Equipped with 180° rotating forks for navigating narrow aisle racking systems



Completely automatic functioning



Proximity laser scanner + other safety features



Automatic battery recharge



Software integration for easy inventory tracking



07. Automated Warehouse

Racking Systems + Warehouse Management Software

Powerful solutions for optimizing storage, organization, and inventory control within warehouses, enabling streamlined operations and maximized space utilization

Racking Systems

Maximize warehouse space and efficiency with our diverse range of racking systems, designed to seamlessly integrate into your automated operations and optimize your storage capabilities



Block Storage

Flexible, inexpensive storage of pallets that can be rearranged as needed

Features

- Variable configurations
- Compatible with standard AGV forklift

Drive-In/Through Racks

Allows for pallet pickup and drop-off on both sides of the aisle

Features

- Compatible with standard AGV forklift

VNA Racks (Very Narrow Aisle)

Best use of available space, maintaining direct access to all pallets

Features

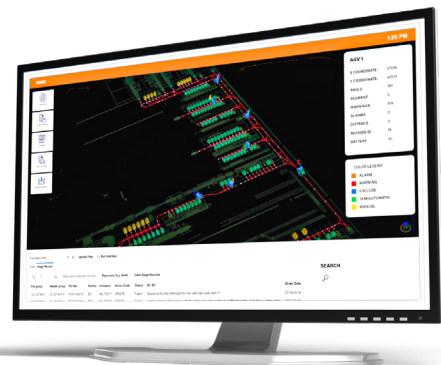
- Increased warehouse capacity
- Use with trilateral AGV Forklift

Warehouse Management Software

Transform your warehouse operations with our state-of-the-art Warehouse Management Software, engineered to enhance inventory accuracy, streamline workflows, and boost overall productivity

Features

- AGV status information
- AGV mission list
- Easy interfacing with other software



08. Automated Loading

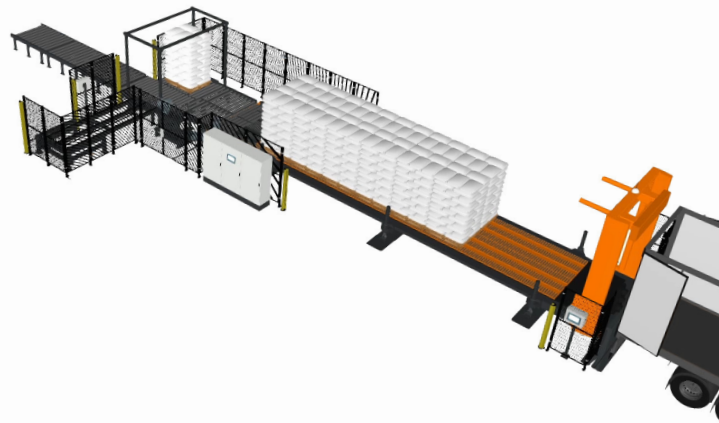
Automated Truck Loading

Streamline the flow of outbound material with automated loading systems offering speed and safety to your operation

Features

- Reduce operational costs
- Seamless integration with your existing warehouse
- Runs on electricity, eliminating harmful emissions

Guaranteed loading times of 10 minutes or less

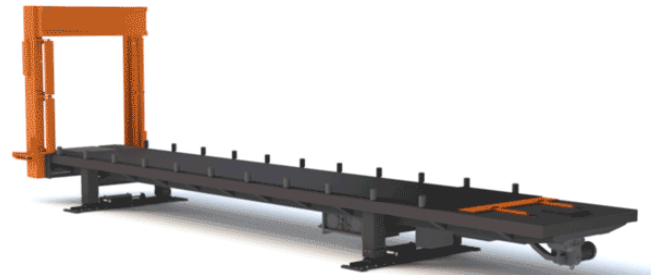


Semi-Automatic Loading System

For long or complex cargo, such as steel or lumber

Features

- Loads 30 tons of cargo into a 40-foot container in 5 minutes
- 33% capacity increase compared to traditional loading
- Reduces fixed asset costs, replacing a fleet of forklifts with one loading machine



Fully-Automatic Loading System

For palletized or palletless industrial goods

Features

- Reduces loading times from 1/2 hour to a matter of minutes
- Loads up to 72 pallets / hour (4 containers / hour)
- Save over 80% in labor and handling



Seamless integration

Compatible with any existing production or warehouse system for smooth installation



Enhanced safety

Minimize the inherent risk of accidents associated with manual loading processes.



Damage prevention

Reduce the risk of product or machine damage that can occur during manual loading.



Long-term savings

Eliminate the need for a team of operators + fleet of forklifts for efficient return on investment





**INNOVATIVE MACHINERY
— SOLUTIONS —**



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