MATERIAL HANDLING STRATEGIES FOR DELIVERY AND RETAIL OPERATIONS

Optimize Your Operations and Limit Product Loss
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Handling for Better Delivery</td>
<td>2</td>
</tr>
<tr>
<td>Navigating Retail Applications</td>
<td>6</td>
</tr>
<tr>
<td>Choosing Your Material Handling Equipment</td>
<td>9</td>
</tr>
<tr>
<td>Lessons from the Toyota Production System</td>
<td>12</td>
</tr>
</tbody>
</table>
FOREWORD

Product delivery and retail settings require specialized material handling equipment and strategies to get products into customers’ hands. This e-book, created by the material handling experts at Toyota, will help you make sure your operation is effective and more safe for your operators and customers, so you can focus on your supply chain.

From best practices in product delivery to applying Toyota Production System principles to your store layout, we’ve covered it all. Use the tips within this guide to keep your product moving and help build a culture of safety.

Note: This is an interactive PDF. Simply click any web address or underlined link to access expanded content online.
MATERIAL HANDLING FOR BETTER DELIVERY
OBSTACLES FOR DELIVERY

Challenges for Operators

Delivering product to its final retail destination comes with a set of challenges as varied as the products on your pallets. Narrow passages. Tight corners. Rough pavement. Each aspect of a unique delivery can make fulfillment a trying experience.

► Case Sizes
As consumer practices have evolved, so have packaging practices. Depending on the product being delivered, packages for one pallet can be many different sizes and shapes that make for a difficult time maneuvering through a trailer and other obstacles.

► Unloading Spaces
Each delivery location will have its own specific aspects that are difficult to navigate and move loads over or through. Rough pavement, crowded receiving areas, doorway ledges without a grade and other issues can cause difficulties no matter the size of the load.

► Heavy Loads
A fully loaded pallet stack of canned beverage cases can weigh well over 2,200 pounds. For different operator sizes and strengths, that weight can be challenging to move and can potentially cause injury. Other industries move, ship, and deliver even heavier weighted products, making each drop-off a challenge to transport and unload safely.

Watch the Ruan logistics case study.
BEST PRACTICES IN DELIVERY

Secrets of Success

Successful delivery practices evolve to meet new challenges as they develop. For instance, the side loading doors commonly used for beverage delivery companies of past years have been traded out for dry van trailers with liftgates. Evolutions in delivery and distribution across industries mean some companies are moving away from two-wheel dollies to pallet jacks for deliveries. These provide several advantages:

1. Electric pallet jack models allow for easier movement of heavier loads, helping to reduce waste from load handling mistakes and injury from too much physical exertion.

2. Preloaded pallets for delivery limit potential operator error in order picking.

3. Pallet jacks reduce risk of product loss from spilled loads, a more common issue with two-wheel dollies.

4. Roll-up doors required stretching and awkward lifting that could cause operator strain or injuries.

5. Liftgates require less effort from operators and reduce risk of dropped product.
PROBLEMS. SOLVED.

Everyday Improvements to Your Operation

The sorts of changes you need to improve your delivery operation depend on your unique circumstances. Before educating your employees, you should educate yourself by reviewing current methods and seeing which challenges the operators face on a daily basis. These reviews can keep your business on top of new developments and prepare you to address concerns before they become problems.

► Are pallets spilling in transit?
  Consider using more wrap and make sure it covers the pallet.

► Have operators been complaining of strains?
  Review their techniques and see if refresher training is needed.

► Are customers receiving the wrong products at delivery?
  Consider preloading pallets for greater accuracy in delivery.
02

NAVIGATING RETAIL APPLICATIONS
MATERIAL HANDLING CHALLENGES FOR RETAIL

Aisle Widths, Racking Height, and Other Considerations

Grocery stores. Big box retailers. Home supply. Every retail outlet requires material handling solutions whether it’s a single pallet jack, an electric walkie, or even several reach trucks. Some things that can affect your equipment decision are:

► Aisle Width
How wide are your aisles between shelves of consumer goods? What about the size of your main walkways? The logistics of your aisle layout can determine whether you need a full-size forklift, as some big-box retailers use, or a simple hand pallet jack for bringing product out front.

► Center Displays
Is your store filled with eye-catching center displays? These can be a boon to your sales but can cause headaches for workers if the display takes up too much space. Be sure to measure the display and the remaining space in the aisle to allow enough room for your material handling equipment to pass. If you don’t measure, you may be dealing with damaged products, broken displays, and unhappy workers.

► High Traffic Areas
Which sections of your operation receive the most consistently high foot traffic? If your store requires restocking throughout the day, your options for getting product on the shelves could be limited. Consider tracking alternative routes around areas with heavy customer flow or tweaking your operation to limit access needs while near customers. If those solutions are not viable, then you may need to make sure a hand pallet jack can complete the job while pedestrians are present.
SAFETY PRACTICES AROUND CUSTOMERS

Avoiding Potential Accidents and Injuries

Material handling equipment can cause significant damage if not used safely and properly. Unfortunately, people are unpredictable and can act in illogical ways around equipment they have not been trained to use. Due to these issues, it is crucial that you limit customer access and exposure to powered material handling equipment.

► Secure Areas
Store your equipment in areas off-limits to customers. Whether these are warehousing spaces requiring keycard entry or monitored sections of your store that you keep roped off, keeping customers away from heavy equipment is the surest way to maintain their safety. If your store requires high stacking, rope off the aisle and those on either side of it where forklifts and heavy machinery will be used. This will keep pedestrians clear of any spilled loads that might occur.

► Limit Operator Access
Beyond restricting access to areas where equipment is stored, restricting operator access is one of the best methods of creating a safer environment for customers and employees. Many fleet management systems include card access requirements before the vehicle can be started, limiting restricted use to employees who are trained and certified. Other equipment includes PIN pads and codes that can be customized for users based on experience level. Either solution has the added benefit of barring a customer from trying to operate your heavy equipment.

► Consider Smaller Material Handling Equipment
Occasionally, a shift will absolutely require you to move pallets through the store to restock popular items. When this problem arises, it is crucial to use appropriate equipment carefully to maintain the safest conditions for your customers. Hand pallet jacks are the best solution, as long as employees are properly trained in operation around untrained pedestrians. If pallets of products are too heavy to move with a hand pallet jack, an electric walkie can serve the same purpose while limiting possible employee strain.
CHOOSING YOUR MATERIAL HANDLING EQUIPMENT

☐ CAPACITY
☐ SPEED
☐ SIZE
SELECTING MATERIAL HANDLING EQUIPMENT

The Right Equipment for the Job

As technology has advanced, material handling offerings have become more specialized. From traditional sit-down forklifts to stand-up riders and advanced warehousing equipment, it is more important than ever to make sure your equipment is appropriate for your work. If you are considering upgrading the equipment used in your operation, here are several things to consider:

- **Ergonomics**
  One of the great advances in equipment design, ergonomics refers to the study of people’s efficiency in their working environment. When applied to material handling equipment, ergonomic designs lessen operator fatigue and reduce risk of strains, injuries, and accidents while also improving productivity and comfort. It’s important to remember that ergonomic considerations vary by application.

- **Higher Capacity, Less Effort**
  How much does your average loaded pallet weigh? Do your employees have to make multiple runs to get a full load of product on the shop floor or loaded onto a trailer? If capacity is an issue, consider whether the work it takes to move a fully-loaded hand pallet jack is justifiable. Just because it has a 5,500 lb. maximum capacity doesn’t mean your employees can handle that weight. An upgrade to an electric walkie pallet jack will keep your capacity at 4,500 lbs., offering a huge increase to productivity thanks to its drive motors.

- **Health Impacts**
  Have employees been complaining of aches and pains from using your current material handling equipment? Have there been injuries on the job or recent insurance claims for repeated use injuries? Updating equipment or choosing the right-sized material handling products can have positive impacts on your employee productivity, health, and morale.

SEE MORE

See if Electric Pallet Jacks & Stackers are right for your needs.
Choosing Your Material Handling Equipment

COMMON MATERIAL HANDLING EQUIPMENT

Economic Impacts

Selecting the right equipment for your needs can make or break your business. Taking the time to research and talk through your needs with a material handling salesperson can help ensure that your economic impacts are positive. The right tool can increase your throughput rate and employee productivity to keep your people and product moving. Some common equipment used for delivery applications and retail stores include:

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<thead>
<tr>
<th>HAND PALLET JACK</th>
<th>ELECTRIC WALKIE</th>
<th>WALKIE STACKER</th>
<th>STAND-UP RIDER</th>
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</thead>
<tbody>
<tr>
<td>Capacity (lbs.)</td>
<td>5,500</td>
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<td>2,500</td>
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<tr>
<td>Speed (mph)</td>
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<td>3.4</td>
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<tr>
<td>Handling</td>
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<tr>
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LESSONS FROM THE TOYOTA PRODUCTION SYSTEM
Lessons from the Toyota Production System

GENCHI
GENBUTSU

Go and See Your Operation

The Toyota Production System (TPS) is known world-wide for its ability to overhaul operations efficiency. “Genchi genbutsu” literally means “actual place, actual thing.” In practice this means “go and see” the operation on the ground floor, as engineers, managers, and other decision makers cannot fully understand an operation and its potential problems/solutions until they have personally observed it in action.

KAIZEN

Always Improving

The concept of kaizen is central to TPS. Kaizen means “continuous improvement” and operates with the understanding that no process can ever be perfect. There is always room to refine and improve, and practicing kaizen makes it possible. You can apply kaizen to your retail or delivery operations by right-sizing your equipment, optimizing ergonomic solutions for operators, and mapping the most effective flows of people and product through your facilities.