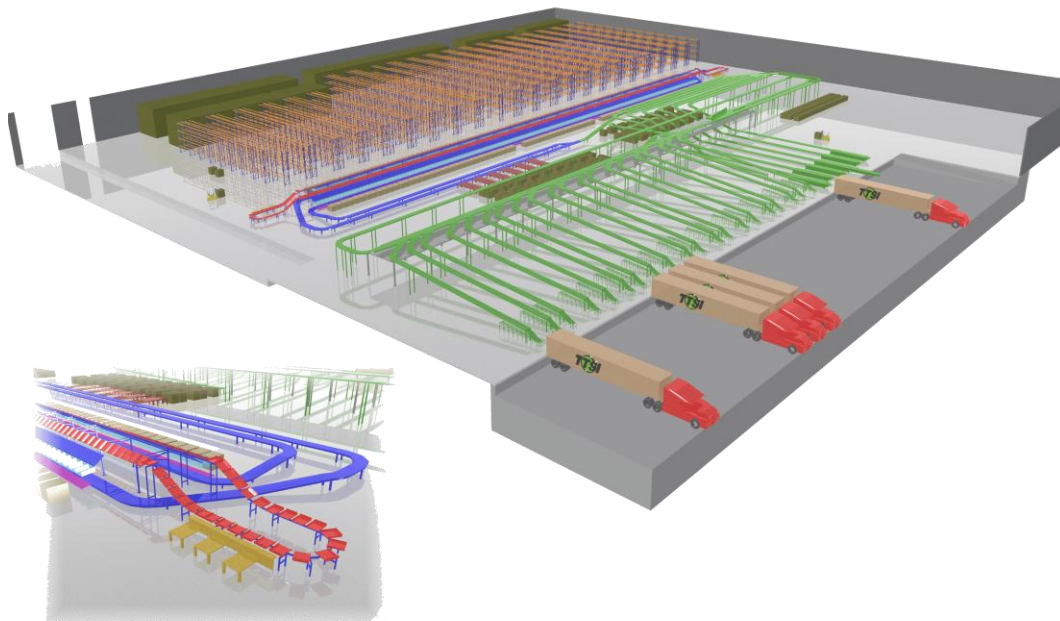




MAJOR THIRD PARTY LOGISTICS PROVIDER  
INCREASED PRODUCTIVITY BY 50%  
RECORD PRODUCTION RATES WITH NO OVERTIME



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Carlstadt, NJ 07072  
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**Port Logistics Group  
(PLG) 3PL Distribution  
Center in Newark, New  
Jersey streamlined  
receiving, storage,  
processing and shipping  
of merchandise  
fulfillment for Macy's  
Logistics.**

The material handling system installed for PLG by W&H Systems was completed on-budget, ahead of schedule and exceeded customer expectations regarding production, delivery and inventory integrity.

The system incorporates the unique RSU™ tilted tray sorter manufactured by W&H Systems and a high-speed sliding shoe sorter by FKI Logistex. In an extremely competitive market, these two pieces of equipment are the heart of an overall system that has allowed PLG to position itself as a leader in the 3PL industry.

Jeffrey Wolpov, Chief Executive Officer of Port Logistics Group stated "W&H Systems has a terrific understanding of 3<sup>rd</sup> party logistics and is a progressive innovator in the material handling requirements for the distribution of general department store merchandise".

## **Cross Dock Process**

Full cartons that are packed ready for shipment to Macy's stores are received at the distribution center and are off loaded directly from an import container onto a powered extendible conveyor. The conveyor can be extended into the import container to facilitate the unloading of cartons. There are six (6) cross dock inbound receiving lines. Each carton passes under a scanner and is identified by the purchase order and SKU barcodes. The data from these barcodes is used to print and apply a new shipping label which the PLG system will utilize for sortation processing. The cartons are then transported to the outbound system and sorted directly to their proper destinations.



Cartons that contain merchandise that does not match Macy's contents requirements must be re-packed. These cartons are directed to a special area where each carton is opened and re-packed to Macy's requirements. The re-packed cartons are then put onto a takeaway conveyor and transported to the outbound system.

Garments On Hangers (GOH) are off loaded at two (2) receiving doors and staged on trolleys for packing into cartons. These garments are packed in cartons according to Macy's specifications (style, color, size and quantity). Full cartons have shipping labels applied, are pushed off onto takeaway conveyor where they pass through a semi-automatic sealing machine and then transported to the outbound system.

## **Replenishment Process**

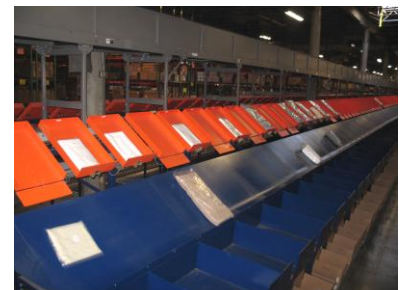
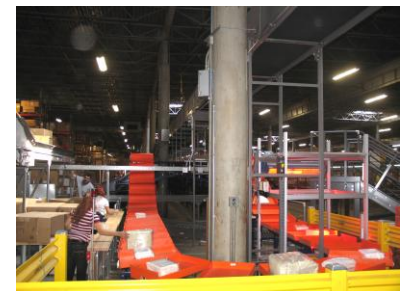
### Individual Unit Picking

Merchandise that is to be stored at the distribution center and shipped as individual units are received unloaded and palletized by SKU. Orders are generated for this merchandise by Macy's store department and carton. One hundred thirty nine (139) order cartons are grouped and the items batched picked for that group/wave.

At the beginning of each wave, cartons with store order barcodes attached are placed onto pack out tables at the sort locations of the RSU™ sorter. A hand-held short range RF scan gun is used to scan each carton bar code and assign it to the RSU™ sort location ID bar code. Wave requirements are downloaded from the host to the sorter control system and the sort operation is now ready to begin.

The RSU™ sorter, developed by W&H Systems, consists of tilted carrying trays traveling on an enclosed track conveyor. The PLG system is configured as a nine hundred sixty five (965) tray single level system. The sorter operates at a speed of 120 feet per minute which presents approximately 60 trays per minute past each of the two (2) induction areas. There are three (3) manual inductions at each end of the sorter. The trays are presented to the product inductors at a 5° angle to make easy item placement onto the sorter trays. The maximum capacity of this sorter with full tray utilization is 7,200 pieces per hour.

Items are loaded with the barcode facing up or forward into trays then scanned by an overhead camera. The data contained in the products' barcode is transmitted to the sorter control system and identified. It is then matched to the wave information previously downloaded and assigned a specific sort location. The carrying trays are tilted in preparation for the sorting process. A roller mounted under the carrying tray rides on a support rail. The carrying trays are tilted by simply modifying the elevation of the support rail.



As the carrying trays reach their proper discharge point, the divert mechanism is fired by the W&H control system that releases the bottom edges of the RSU™ carrying trays. Gravity is utilized to allow the products to gently slide from the tilted trays into a chute where they accumulate.

Each side of the RSU™ sorter has a total of one hundred forty two (142) sort locations; one hundred thirty nine (139) order locations; one (1) for items that have non-readable bar codes, one (1) for not-identified items that the barcode can read but there is no requirement, and one (1) jackpot location.

Operators pick the pieces out of the holding trays and pack them into the cartons on pack out tables. When the carton is full or the wave is complete, the operator pushes the carton onto a takeaway conveyor under the sorter. The cartons are then transported to an accumulation conveyor, which feeds a tape-sealing machine, and then onto the outbound system.

Full Carton Picking

Full cartons are stored at the distribution center and picked when they are required for an order. The full cartons are palletized and then brought to a staging area. Here they are labeled and placed onto a takeaway conveyor and then transported to the outbound system.

**Outbound “Crossdock” System**

Cartons are merged into one line via a high-speed combiner. The combiner directly feeds the shipping sorter. An FKI Logistex Unisort XV sorter diverts cartons into twenty-three (23) pitched gravity conveyor lines that are designed to accumulate cartons for either processing or truck loading. This high speed sliding sorter gently directs cartons to their proper shipping line at a capacity of up to 6,000 cartons per hour. Twenty (20) lines are utilized for direct loading of outbound trucks destined for specific Macy’s distribution centers, one (1) line transports cartons to a re-pack area, one (1) line to a lay down area where cartons are held for other distribution centers that are not actively being loaded, and one (1) line to a no-read/jackpot area for barcodes that cannot be read. Cartons can exit off the end of the sorter if their destination line is full and re-circulated back to sorter induction for another divert attempt.



**Benefits**

- Port Logistics Group has been able to obtain record production numbers with zero overtime.
- Cross-dock operation routinely exceeds operational plans by 10%.
- The RSU™ sorter has processed up to 380,000 units in a one-week timeframe and has increased individual labor productivity by 50%, allowing an increase in efficiency that has resulted in lower variable costs. This allows for consistent pricing and greater margins.
- Twelve-month on-time delivery performance of 99.7%.
- Proper planning, engineering, construction and maintenance created a reliable system that experiences less than a 1% downtime.

**Teamwork/Partnership**

- Together, Port Logistics Group and W&H Systems completed a project that required a twelve month production plan in only six months time.
- The project came in under budget, ahead of schedule and exceeded the collective expectations.

**Suppliers**

Systems Integrator:	W&H Systems	GOH:	W&H Systems
Warehouse Control System:	W&H Systems	Tilt Tray Sorter	W&H Systems
WMOS:	Manhattan Associates	Shipping Sorter	FKI Logistex
Conveyor:	FKI Logistex	Scanners:	Accusort
Merges:	Transnorm	Hand Scanners:	Symbol
Combiner:	FKI Logistex	Carton Sealer:	3M
Powered Extendibles	Stewart Glapat	Gravity Extendibles	Nestaflex

## **Port Logistics Group**

Port Logistics Group (PLG) is a comprehensive logistics, distribution, and transportation company focusing on critical supply chain initiatives. The PLG portfolio of services includes fulfillment, postponement distribution, consolidation and deconsolidation, trans-loading, order replenishment, value added services (including EDI), and a complete scope of trucking and transportation services.

PLG operates a 1.0 million square feet of warehouse space and employs a staff of 450 associates. Their large fleet of trucks and specialized delivery equipment ties together the services that we offer creating a true "One Stop Shop" distribution solution.

Third party distribution and fulfillment is a full-scope business service that requires greater specialization and skill. This creates a tremendous need for companies like PLG. The Port Logistics concept is to be a full service provider of high quality inventory management and distribution services. With state of the art computer systems, large and conveniently located warehouse facilities, and a fleet of 90 trucks, PLG is capable of product fulfillment in an extremely efficient and cost effective manner.

By specializing in the business of inventory management and distribution, PLG can ultimately save its customers considerable amount of time, energy and money, by enabling our customers to concentrate on production, merchandising and sales, while leaving the business of distribution to PLG. This concept allows customers the opportunity to outsource asset intensive operations, while keeping the focus on their core business.

PLG is committed to providing value to their customers because their customer's success is directly related to the quality of service that we provide. It is this partnership that enables their company to succeed and their customers to prosper.

Realizing the importance of first quality goods in today's economy, PLG operation has the capability to satisfy any special handling needs for many product categories. They can ticket, press, clean, repair, label, repackage, and provide inspections. In addition they have the experience to liquidate inventories and creatively solve problems.

## **W&H Systems, Inc.**

Established in 1964, W&H Systems is a \$45 million material handling logistics solution supplier, providing equipment and services to clients worldwide. Headquartered in Carlstadt, New Jersey, they currently employ over 100 experienced professionals, including one of the strongest and most qualified engineering staffs in the distribution logistics field.

W&H Systems offers efficient and cost effective logistics solutions for clients in the retail, warehousing and distribution market segments. W&H has the capability to provide customers with the **total solution**: design, engineering, installation, commissioning and post commissioning support. Since W&H provides complete turnkey solutions, it is able to act as a single source contractor and take **total responsibility** for the success of the material handling system and the project. W&H Systems, Inc. has a proven record of creative and innovative ideas that provide the most efficient and economical solutions to customer-specific requirements.

The RSU™ Sorter was developed in 1996 by W&H Systems and has been successfully installed in over 30 distribution and fulfillment centers throughout the United States. The RSU™ Sorter provides a durable, inexpensive and accurate method of sorting a wide range of product. The flexible nature of the RSU™ enables unique system configurations that match specific application needs, while the simple design allows for a low upfront investment and minimal annual maintenance costs... thus making the RSU™ Sorter an excellent choice for many sorting requirements. It is capable of sorting small to medium sized cartons, totes, polybags and envelopes as well as various individual items such as:

Flat Apparel	Linens and other soft goods
Apparel Accessories	Smalls Parcel
Footwear	Direct Mail/Literature
Greeting Cards	Health & Beauty Aids
Office Supplies	Optical Products
Books/Magazines	Retail Drugs
CD's, DVD's, & Cassettes	Auto Parts
Pharmaceuticals	And others...