# TGW's Integrated Logistics Solution Makes Fashion Retailer Bestseller Ready For The Catwalk

**What is a worldwide fashion company looking for that needs to handle a great variety of products in diverse logistics ways? It is looking for an integrated logistics solution that covers all these requirements. Systems integrator TGW realized an impressive logistics solution in Haderslev, Denmark, for the Danish multi-label fashion retailer Bestseller, together with sorter specialist Crisplant.**

Near the Danish city of Haderslev, there are two warehouse blocks in the award-nominated building of the fashion giant. Two automated mini-load warehouses storing and retrieving thousands of products for the outfits of Bestseller's customers. And they are perfectly staged. Design is an important aspect in their fashion as well in the architectural realisation of the new Bestseller logistics centre.

Since their foundation in 1975, the family-owned Danish multi-label fashion retailer has developed rapidly. With more than 15,000 employees worldwide, Bestseller generates revenues of more than 2.6 billion Euros (3.5 billion US Dollars) per year. The product range is diverse and offers fashionable outfits including clothing, shoes and matching accessories. Bestseller operates about 3,000 shops in 38 countries and delivers to more than 12,000 independent retailers in 53 markets across Europe, the Middle East and Canada.

**A new system for the European market**

In 2009, Bestseller decided to establish new logistics processes. The aim was to monitor all logistics activities in Europe from one single distribution centre as well as to fulfil the requirements through high efficiency and the competency for a widespread product range. This wish was realised by TGW by implementing two material flows differing from each other within one installation:

* Assortment: The stores receive pre-configured kits of products. These kits are sent to the shops without modifications by the distribution centre. The TGW CrossDocking solution enables the goods to get through the centre to the dispatch area.
* Classic store replenishment: Never-out-of-stock goods, products that are available in stores independent of the season, are continuously ordered by the stores. These orders are transported through the classic material flow from goods-receiving to goods-out and are picked especially for the stores.

**TGW solution promises individual routes for two diverse requirements**

In the goods-in area on the ground floor, the new products are received, labelled as well as weighed and measured. In this area, up to 4,000 cartons per hour are processed. TGW cares for short routes between the goods-receiving station and the sorter, which is operating throughout the entire installation. Supported by telescope belt conveyors, the trucks are discharged and the cartons are transferred to the conveyor equipment which takes over the distribution and inducts to the sorter.

The tilt tray sorter is a key element of the Bestseller installation. The Crisplant sorter connects all functional areas of the distribution centre. Controlled by the superior IT system, the sorter enables each carton to reach its goal, from goods receiving directly to the dispatch palletising or via the warehouse and picking to the dispatch area. Due to its silent operation, it is well-suited for being embedded into the ergonomic working environment of the employees at the distribution centre. The sorter's technology only requires minimum energy and offers high throughput rates at high availability. The specific aspect is the multifunctional implementation of the sorter in this case.

**Storage for classic store replenishment**

Goods that are not pre-configured by Bestseller or arrive at the centre without a specific order find their way to the goods-receiving area and into the automated mini-load warehouse. The warehouse hosts up to 450,000 cartons in various sizes and dimensions. The stacker cranes in the automated mini-load solution are able to handle 95 % of the cartons, which is why an automated pallet warehouse was not necessary. The cartons can be stored up to triple-deep, which offers a higher performance as well as a safe and easy access for maintenance via wide aisles. Twenty-two TGW Magito single mast stacker cranes care for smooth storage and retrieval processes supported by TGW's Twister load handling device. At peak times, about 4,000 cartons per hour are moved. One carton weighs between 2.5 and 30 kilograms. The Twister load handling device adapts to the dimensions of the carton and adjusts the size of the load surface to the carton.

**Ergonomic picking stations for high performance**

Throughout the entire installation, high performance is an important aspect, so it is at the picking stations. On average, one picking employee reaches a throughput of 293 order lines per hour with peaks of up to 340 order lines per hour at the ergonomically designed TGW Putstations; at peak times, 130,000 pieces are picked per day. The arrangement of the picking stations allows Bestseller to flexibly deploy their staff. Two workstations are arranged in front of each other which means that during off peak times, one employee can handle two stations. During peak times, one employee works at each Putstation. When designing the logistics installation, TGW and Bestseller focused on ergonomics for their employees. Natural daylight and high ergonomic requirements create a comfortable working environment at the picking stations. The proximity to their colleagues at the workstations allows for mutual support and a great social climate.

In order to assure that all areas served by employees correspond to the ergonomic requirements, Bestseller and TGW collaborated with Danish ergonomics experts. And the result is worth showing: The TGW Putstation was designed to be adapted to the personal requirements of every picking employee. This means that the cartons with articles to be picked arrive at the workstation at the ideal height for the employee. Due to the inclined position of the source cartons, the employee can easily grasp the items and put them into the order carton at ideal body posture. Displays and buttons have been attached according to ergonomic acknowledgements, thus, only little stretching or twisting of the body is necessary in order to be aware of all parts of the workstation. The TGW Putstation offers two source positions with fast carton exchange. Therefore, waiting times during the carton exchange are omitted and the employee is able to pick without interruptions. Finally, the TGW Putstation automatically takes the order cartons away – the employee does not have to lift nor to push the cartons, there is no load at all for the picking employee. The system smoothly continues to the next picking process, and the next source carton has already reached its position.

**Highly automated palletising of single cartons**

After the items are picked into the cartons, their journey takes them to the semi-automated palletising stations, to one of the four TGW SlotStax. Country-specific pallets are prepared there consisting of picked items and items from the cross docking solution. The software automatically calculates the ideal pallets for their individual goals and the cartons are collected in the pre-buffers. As soon as all cartons for a pallet have arrived in the pre-buffer area, they are forwarded to one of the SlotStax. At peak times, about 1,000 cartons per hour can be handled at one SlotStax. Similar to the picking area, these workstations are influenced by natural daylight. The material flow controls also consider equal workloads at all stations which enables an efficient deployment of individual employees. At those stations, too, Bestseller can react flexibly to the given circumstances: each station can be handled by one or by two people.

At the ergonomic TGW SlotStax workstations, the finished cartons are provided automatically. The employees push them from the workstation onto the pallet, which is situated in a shaft. Each carton is pushed on an even surface onto the pallet, the body is not strained. The height of the pallet adapts itself to the height of the load. The more cartons are on the pallet, the further the pallet goes down into the shaft. This way, the even surface is kept during the working procedure. As soon as the pallet goes down, the goods are secured by a foil and the employees are able to continue with their work. This procedure assures the safety of the pallet transport and the regular form of the pallet loads guarantees an uncomplicated loading of the trucks.

**Bestseller delivers reliably**

“We are very content with the realisation at Bestseller. Our customer is able deliver reliably – everything that should be shipped on one day, will be shipped. This is very important for logistics installations, especially in the fashion industry,” Harald Stallinger, Managing Director at TGW Systems Integration, is happy. The conversion from several person-to-goods warehouses to highly automated goods-to-person processes was a challenge for Bestseller: “We could release a couple of small warehouses, now, everything happens in one distribution centre in Haderslev. And of course, for Bestseller’s employees this is an improvement of their working quality – they do not have to search for the desired item throughout the whole distribution centre, it is automatically transported to them,” says Stallinger. Another important point was that Bestseller optimised the carton and packing quality with their suppliers so that the availability of the installation could be increased. “A highly automated logistics installation is something completely new at Bestseller. Therefore, our teams were quite challenged to find the ideal solution for Bestseller’s individual requirements together with the customer,” Stallinger remembers. With this logistics system, Bestseller is in good hands on the catwalk.

www.tgw-group.com

**About TGW Logistics Group:**

TGW Logistics Group is an integrated solution network. Since 1969 the company has been implementing different internal logistics solutions, from small material handling applications to complex logistics centres.

The companies of TGW Logistics Group can look back on a successful development. With about 1,700 employees worldwide by now, the Group implements logistics solutions for leading companies in various industries. In the business year 2012/13, the TGW Logistics Group generated sales revenues of 388.9 million Euros.

**Pictures:**

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\_MG\_5272.jpg: In the warehouse, up to 450,000 cartons can be stored.

\_MG\_4800.jpg: At peak times, 130,000 pieces are picked per day at the ergonomic picking workstations.

\_MG\_4849.jpg: Ergonomics experts collaborated with TGW to provide the ideal working environment for Bestseller's picking employees.

\_MG\_5257.jpg: 4,000 cartons per hour are moved by TGW's Twister load handling device.

\_MG\_4936.jpg: The TGW SlotStax palletizes the picked cartons and cares for a safe wrapping.

\_MG\_5235.jpg: Bestseller can react flexibly to the given circumstances: each station can be handled by one or by two people.

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