

CASE STUDY

Reference DSV, Canada:
Innovative overall solution as basis for
e-commerce success

ssi-schaefer.com

DSV

Global Transport and Logistics

SSI SCHÄFER



AUTOMATED E-COMMERCE DISTRIBUTION CENTER FOR THE CANADIAN EAST COAST

With the rising demand of consumers shopping online, DSV, a global 3PL transport and logistics company, needed to increase their capacities to deal with the growing number of e-commerce customers. Therefore, DSV had SSI SCHAEFER design and implement a highly automated solution in the existing distribution center in Brampton, Ontario. The driving force behind this modernization was its health and beauty business segment. The warehouse serves all clients who distribute in Canada.



Higher performance rates were successfully achieved in the already existing system and space for growth was created.

As a general contractor, SSI SCHAEFER created a tailor-made logistics solution including turnkey implementation for DSV. The project was evaluated in advance to ensure DSV could continue its normal fulfillment operations during the installation phase. A significant challenge was that the solution had to fit within an existing operation. Also, the distribution fulfillment needs to keep up with capacity during massive seasonal peaks.

The overall solution not only allowed for the existing operation to continue, it also enabled the e-commerce capacity growth that DSV needed to ensure both a smooth online fulfillment as well as meeting peak demands.

PROJECT OBJECTIVES

- Flexible solution for increasing e-commerce volume
- Providing the required performance also during the peak season
- Commissioning and implementation during parallel operation in the warehouse
- Implementation of the new interface to the existing Warehouse Management System
- Introduction of change management to the workforce for the new system



HIGHLY MODERN INTRALOGISTICS WITH COMPACT POUCH SORTER

Innovation comes first at DSV. The company constantly pursues, assesses, tests and assumes all kinds of innovation concepts. The dynamic pouch sorter system SSI Carrier is also part of this innovation strategy.

The process starts with picking in the warehouse. Orders are picked in batches directly into SSI SCHAEFER bins and transferred to automated guided vehicles (AGV) at a transfer station. The AGVs of type WEASEL® transport the bins to a pouch loading station, where the goods are loaded into the pouch sorter system SSI Carrier. Each item is scanned and placed into a pouch individually. The pouches are transported to a batch buffer to temporarily buffer pouches until an entire order batch has been formed. The batch is transported to a matrix sorter to sort the orders according to the desired sequence. At the pouch unloading station, the sequenced items of one order enter into the station and products are taken out of the pouches. The items are packed into shipping cartons and transported towards goods-out where they are finally shipped directly to the customers.

“The biggest challenge we had to face was dealing with the exponential e-commerce growth of our customers. The pouch sorter SSI Carrier gave us the necessary capacity to deal with this growth and the massive seasonal order peaks. The WEASELS are a perfect addition to this. The individually designed solution we had in mind had to fit. We also wanted it to be implemented during running operation.”

Rob Chanona
Managing Director at DSV Solutions, Canada

Flexible Transport of Goods in the Warehouse

The applied WEASELS that connect the warehouse area with the sorting area support the material flow individually and without any barriers. Use of space is still flexible and travel times are optimized. The WEASELS move along an optical track and do not require a difficult installation. Thus, the AGVs can be easily integrated into existing systems and infrastructures. The number of vehicles can be increased in case of higher performance requirements. This enables flexible adaptation to changing market requirements.



Creating Customer Orders in a Defined Sequence

The core of the system is the innovative pouch sorter SSI Carrier, particularly suitable for e-commerce. The highly compact and multi-functional overhead conveying system transports, sorts and sequences items gently and only requires little space. The modular design of the SSI Carrier system allows for individual and economic solutions with a very high sorting performance. With the matrix sorter, orders of various sizes and destinations can be processed at the same time, retrieved at the unloading stations in the desired sequence, packed and made available for shipping. The user-friendly software and control technology by SSI SCHAEFER complements the overhead conveying system perfectly.



FACTS AND FIGURES

System Key Figures

Item range	Healthcare & Cosmetics
Performance items/day	156,000
Sorting performance	6,500 pieces/hour
Performance per loading station	1,000 pieces/hour
Performance per unloading station	230 pieces/hour
Hours of operation	16/6 (peak season: 24/7)

SSI SCHAEFER Scope of Supply and Services

Pouch sorting system SSI Carrier

Modules	1
Number of pouches	9,500
Loading stations	7
Unloading stations	28
Clearing station	1
Buffering and sorting areas	Batch buffer, matrix sorter, unloading buffer
Steelwork	1 platform level

Automated guided vehicle WEASEL®

Number of WEASELS	20
Transport from picking tower to SSI Carrier loading stations	

Conveying system

Carton and bin conveying system	
Transport from SSI Carrier unloading stations to shipping area	

Software

Logistics software WAMAS®	
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System components

Bins	200 (type ELB 6280)
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SIX REASONS FOR CHOOSING SSI SCHAEFER

- **Stability**

As a financially independent family business, SSI SCHAEFER is committed to long-term solutions. You can trust that our team of experts will be there for you today, tomorrow and in years to come.

- **Efficiency**

SSI SCHAEFER solutions are scalable and able to grow with your business. You can always upgrade or retrofit.

- **Quality**

As a systems specialist and original equipment manufacturer, SSI SCHAEFER provides tailor-made and high-quality solutions from a single source, specifically designed to meet your challenges.

- **Reliability**

Thanks to our worldwide Customer Service & Support network, SSI SCHAEFER ensures smooth operation of your system, both during and after installation.

- **Know-how**

SSI SCHAEFER solutions are always up-to-date with the latest technological standards and can be easily integrated into an existing (IT) landscape.

- **Internationality**

As a global organization, SSI SCHAEFER has local offices worldwide. With over 70 operative subsidiaries, our team of experts speak your language.



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