

MINILOAD FOR TRENDY TEXTILE PRODUCTS

carhartt

Case Study
Work in Progress GmbH,
Weil am Rhein (D)





Nearly 42,000 bin locations are available in the Miniload.

Project objective

- ▶ To replace mainly manual activities by an automated and economic solution
- ▶ Doubling of the orderlines per day
- ▶ Clousure of the satellite warehouse
- ▶ Create storage locations for four different box sizes and adequate bin locations
- ▶ Concentrate and restructure logistic processes at one site



With a Twister V load-carrying devices the SRMs are able to store and retrieve two different load units double deep.

Our scope of supply and services

- ▶ Implementation planning
- ▶ Rack system
- ▶ Storage and retrieval machines (small parts)
- ▶ Bin/box conveyor system
- ▶ Bins
- ▶ Visualization
- ▶ Warehouse management and control system
- ▶ Spare parts package and maintenance contract

Automatic small parts storage system (Miniload)

L x W x H	63 x 49 x 9,75 m
Loading aids	Bins, cardboard boxes
Storage locations	
	aisle 1+2: 12,500 cardboard boxes
	aisle 3-8: 42,000 bins
	aisle 9-10: 10,500 bins extension
Weight	20 kg bins 30 kg cardboard boxes
Type of storage	double deep
Bin type	LTF 6320 VBO2

Miniload storage and retrieval machine (SRM)

Quantity SRM / aisles	
	aisle 1+2: 2 for cardboard boxes / bins
	aisle 3-8: 6 for bins
	aisle 9-10: 2 extension
Load-carrying device	Combined telescope / Twister V
Traveling speed	6 m/sec.
Lifting speed	2 m/sec.
Throughput	Aisle 1+2: approx. 129 DC/h Aisle 3-8: approx. 118 DC/h



In the four order-picking aisles for partly automated order-picking the employees responsible for order-picking move with dollies through the warehouse.

Twister for Freestyler: Despatch of Sportswear to Europe, Australia and New Zealand

With the trademark carhartt the textile company Work in Progress GmbH is one of the favourites in the skateboard and BMX scene regarding sportswear. To get the trendy branded articles into the trade and to the end customers very fast, WIP has built a new logistic center in Weil am Rhein, has concentrated and restructured the storage, order-picking and dispatches processes there. The general contractor SSI SCHÄFER implemented an approximately 18,000 square meters large logistic complex with nearly 60,000 locations and an eight aisles automatic small parts storage system (AKL) for cardboard boxes and bins in the existing building. Among other things, two storage and retrieval machines (SRM) with efficient Twister V load-carrying device provide the nearly doubled throughput of up to 1,000 units per hour compared to the previous solution. They enable, amongst others, the storage and assignment of pre-picks.



The bins are conveyed via a sorter to the order-picking locations and back to storage in AKL.

Bin conveyor system

- Components
 - Belt, multiple-strand, curve-going, Angular roller conveyor
 - Multiple-stand discharger
 - Scales
 - Autom. box erectors, Labeling machine, strapper, Palletizer
 - Compressed-air system with Pipeline network

Warehouse management system

- Computer hardware HP Blade (provided by customer)
- Operating system Windows (provided by customer)
- Database system ORACLE 10G
- WMS Software



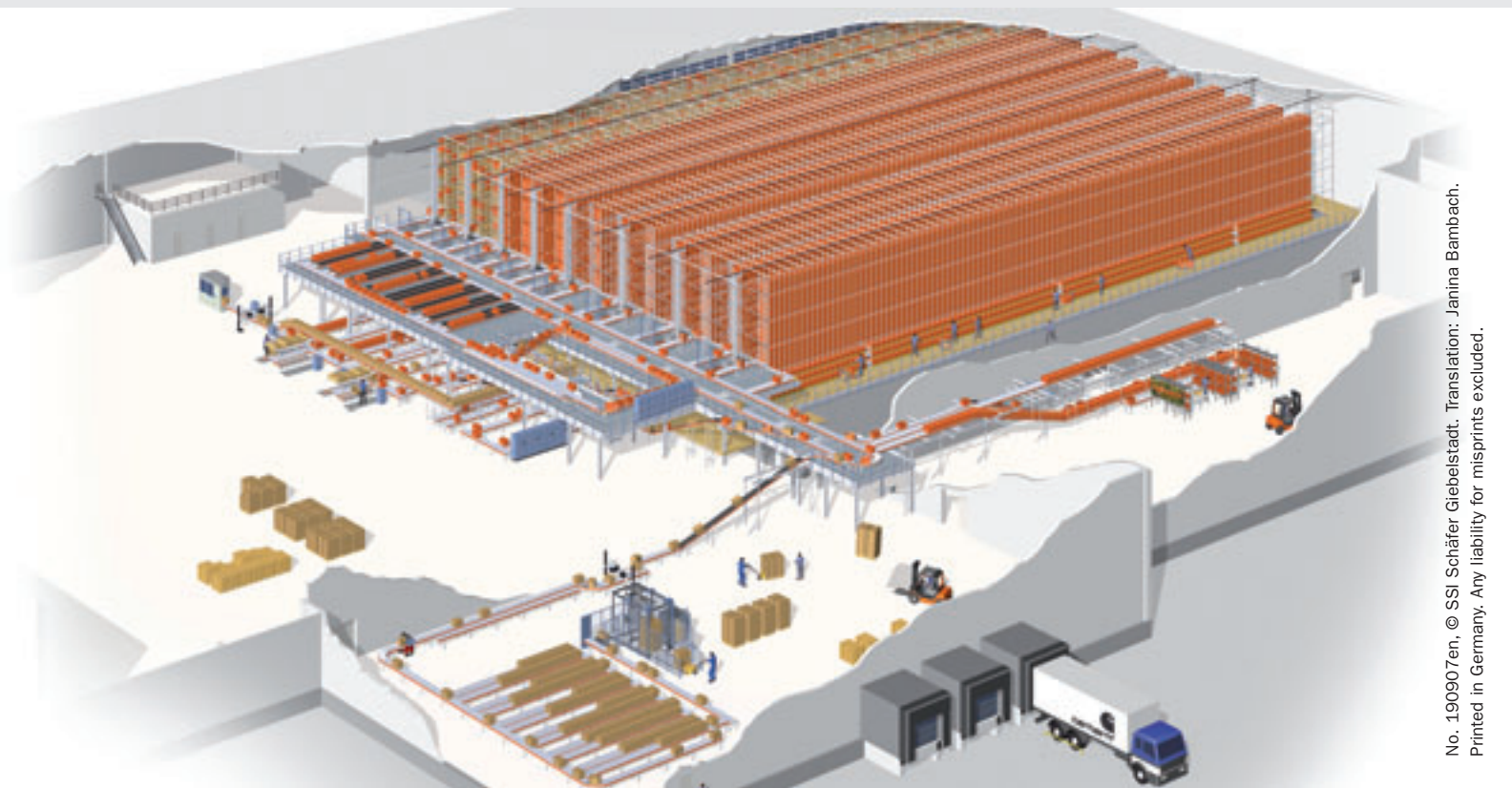
- Functionalities
 - Warehouse management
 - Goods receiving/ -shipping
 - Order-picking
 - Material flow control
 - Visualization
 - DISPO
 - Sequencing
 - Reorganisation
 - Returns handling



If necessary, several orders can be parallel picked at four order-picking locations.



The packed pallets can be conveniently removed from the palletizer with forklifts.



- ▶ General contracting
- ▶ Planning and consulting
- ▶ Warehouse management system
- ▶ Control systems
- ▶ Steel structure / racking systems
- ▶ Storage and retrieval machines
- ▶ Conveyor system
- ▶ Service and maintenance



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