

## FULLY AUTOMATED ORDER PICKING OF MEDIA



Case Study  
arvato services, VVA  
Gütersloh, Germany





Prior to storing, the goods received for the Miniload (AKL) are repacked in totes.

## Project objective

- ▶ Bundled delivery of the entire range of products
- ▶ Increase pick performance by 3x - 4x
- ▶ Zero error rate
- ▶ Decrease in processing time
- ▶ Increase in productivity by area-ratio



SCS-system

## Our scope of supply and services

- ▶ Compilation of the logistics concept
- ▶ Planning of project
- ▶ Tote conveyor technology
- ▶ Pallet rack for totes as well as storage and retrieval machines
- ▶ Totes
- ▶ Schäfer Carousel System (SCS)
- ▶ Pick positions – Pick-to-Tote/Pick-by-Light
- ▶ Warehouse management and control system

### Automatic small parts storage supply system (miniload)

L x W x H	54 x 17 x 6 m
Storage positions	24,384 units
Weight	30 kg
Type of storage	double deep
Type of tote	LTF 6220

### Miniload storage and retrieval machine (SRM)

Number of SRM/aisles	4
Load acceptance device	Combi-telescopic fork
Traveling speed	6 m/s
Hoisting speed	3 m/s
Turnover performance	120 double cycles/h

### Schäfer Carousel System (SCS)

Number of carousels	24
Number of storage positions	26,000
Performance (Pick-rate) per PTT	up to 1,500 books/



Allocation at 8 PTT workstations of the SCS

# Automated order picking for bookworms

One of the leading full-service providers of media, the "Vereinigte Verlagsauslieferung" (United Publishing Company) or VVA belongs to arvato AG as a part of arvato services. The core business of arvato consists of services for printing, copying as well as direct marketing, financial services, IT and supply chain management. VVA, a wholly owned subsidiary of Bertelsmann delivers the products of more than 200 publishers to businesses and customers worldwide.

In order to maintain their leading market position, VVA opted for a unique, effective storage and order-picking concept customized by SSI Schäfer, the logistics specialist. All processes between the existing high bay warehouse and the goods issuing department were restructured.



At the pick-positions in the Miniload, goods from totes or from pallets are picked directly into boxes or totes for shipping.

## Operating Figures

- Throughput of 50 million copies per year
- Shipping of 8,000 packages a day
- Miniload as supply storage for warehouse- and pick-modules
- Delivery of more than 45,000 different items to businesses and consumers worldwide

## Order picking

- 8 Pick-to-tote work stations
- 6 optimized Pick-by-light work stations
- Goods-to-man principle

## Tote conveyor system

Components Belt-, strap-, roller conveyor (overall length 2,200 m), Accumulating roller conveyor, Scales, Repacking tables, Cam roller conveyors, Belt diverter, Stacking machines

## Warehouse management system

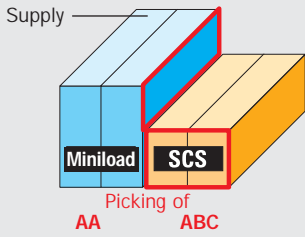
Hardware	4 HP Compaq ProLiant Server
Operating system	Linux
Data bank system	ORACLE
WMS Software	SSI-Schäfer
Functions	Warehouse management system Goods receiving / issuing Order picking Control of material flow Visualization



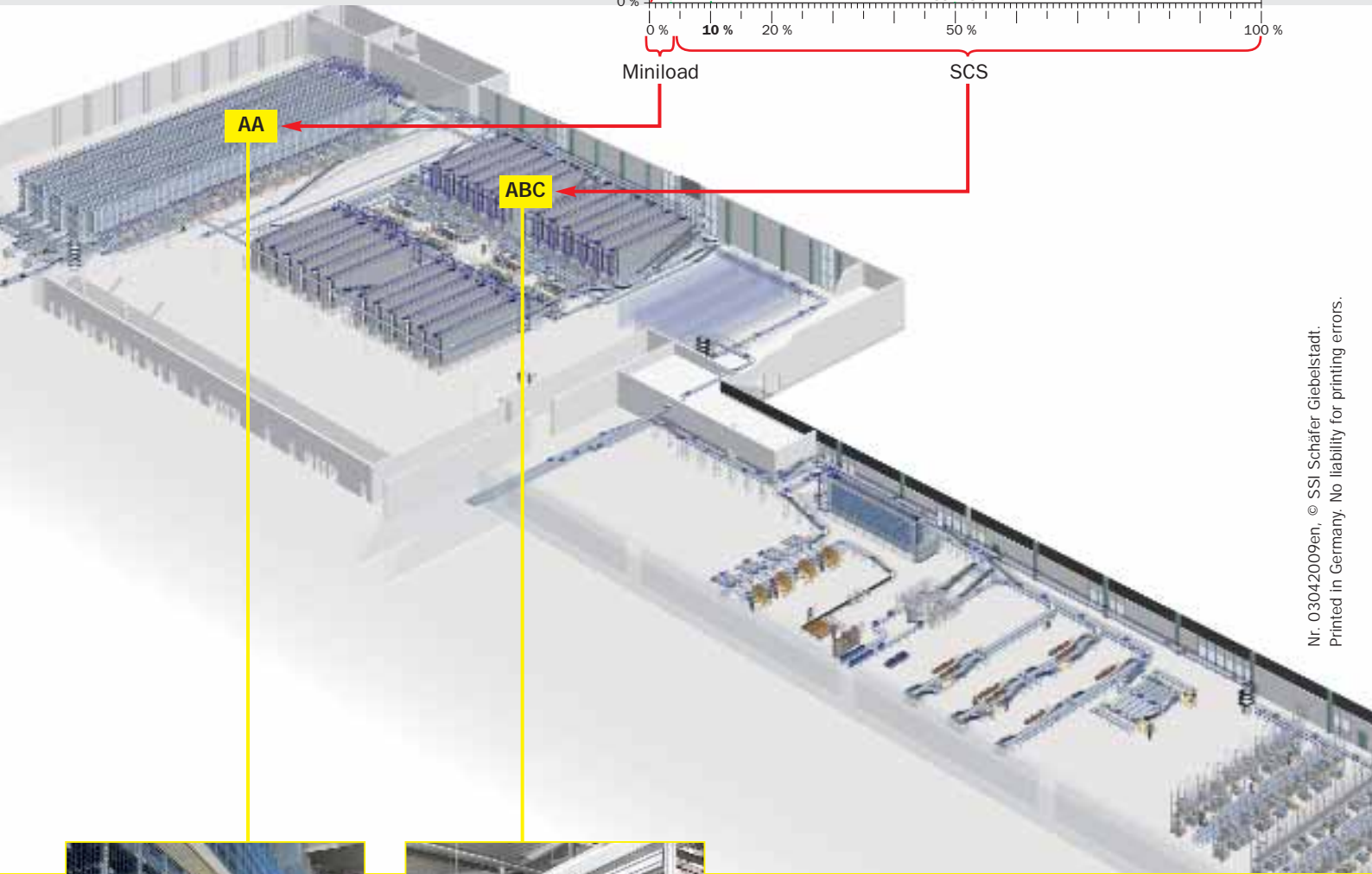
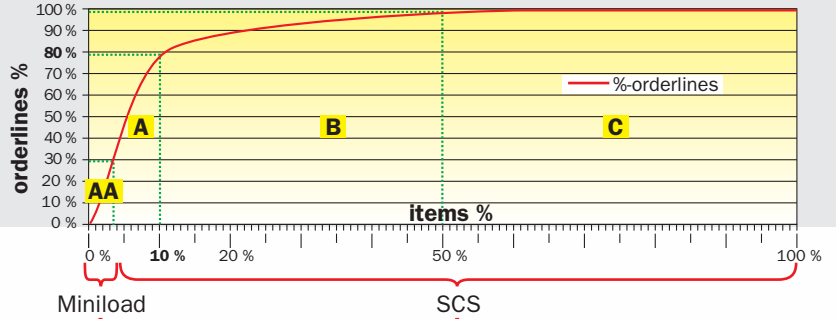
Ergonomically designed workstations: In the SCS goods retrieved from the presented totes are picked downward into boxes for shipping.



Goods issuing department, order picking onto pallet, into large boxes or packing of smaller packages directly into shipping boxes.



- Operating figures: 45,000 items  
15,000 pieces/h  
80,000 orderlines/day



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