

# **SINGLE PIECE ORDER PICKING**

Efficiency through ergonomics and  
modularity of technology and software



# Single piece order picking: Modular and scalable

Single pieces are the smallest units that are sent from a distribution center to a customer (e.g. chain store). Single pieces can characteristically be put in totes and are goods that are not automatically manipulable. The conventional approach is, to process these items in different systems that require a high consolidation effort.

The modular and scalable solution by SSI SCHÄFER provides a significant increase in pick-efficiency due to a continuous approach for fast-moving (A) as well as for slow-moving items (BC).



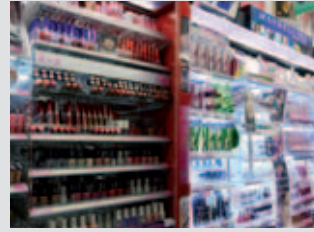
**supply**

**goods receiving**

**unit load storage system**

**repacking**





#### Business solutions for

- Retail
- Publishing companies
- Textile industry
- Spare parts
- Perishable / refrigerated products
- Standard parts

#### Scalable solutions in dependence on

- Number of items
- Size of order
- ABC structure
- Number of orderlines
- Volume
- Range

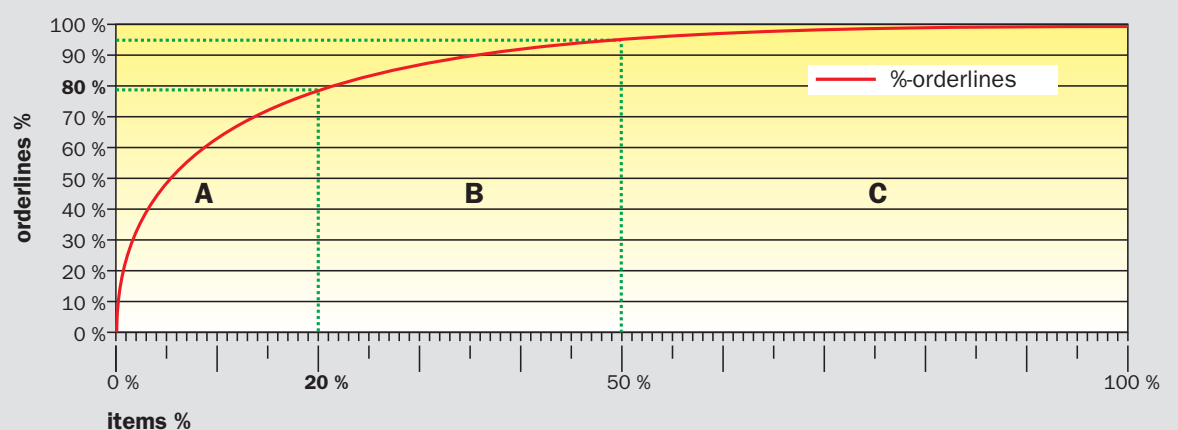


storing

order-picking

consolidation

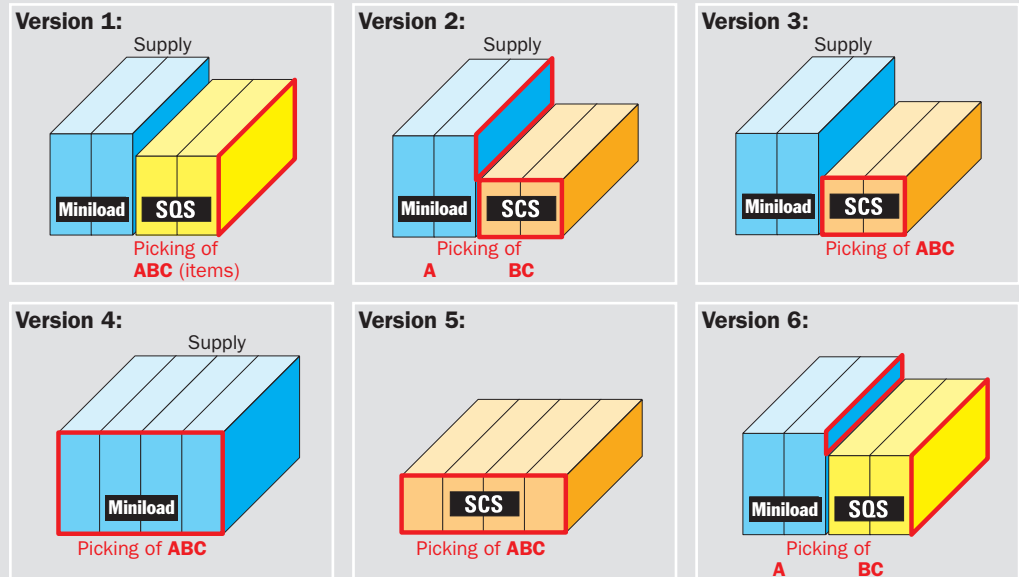
palletizing  
goods issuing



# Modular Concept: Scalable and expandable for any requirement

## SSI SCHÄFER System solutions

- Standardized system components
- Modular combinable
- Scalable solutions
- Ergonomic design of workplace



Schäfer Carousel System (SCS)



Automatic small parts storage system (Miniload)



Schäfer Quad System (SQS)



SCS/SQS-picking

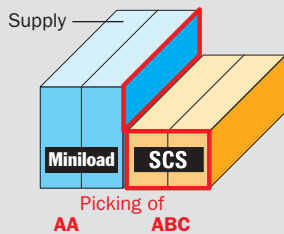


Miniload-picking



# Example publishing houses

## Version 2:

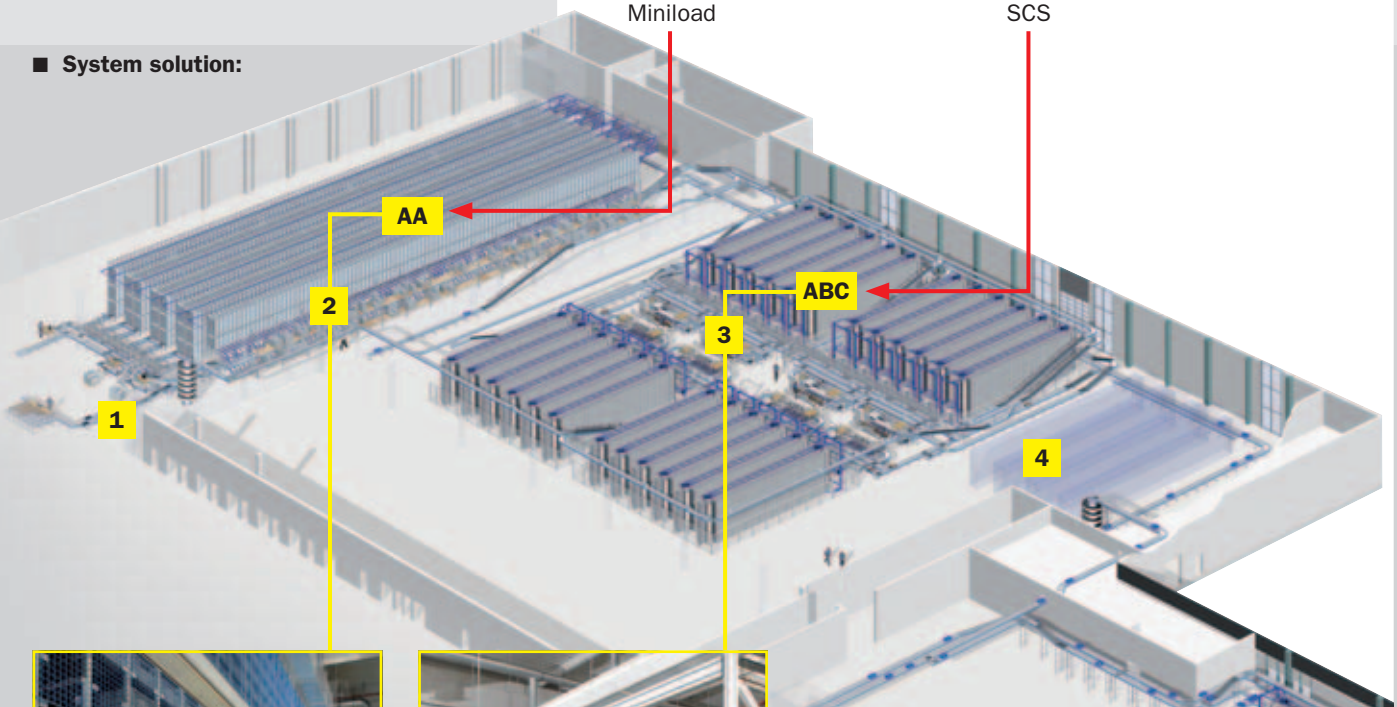
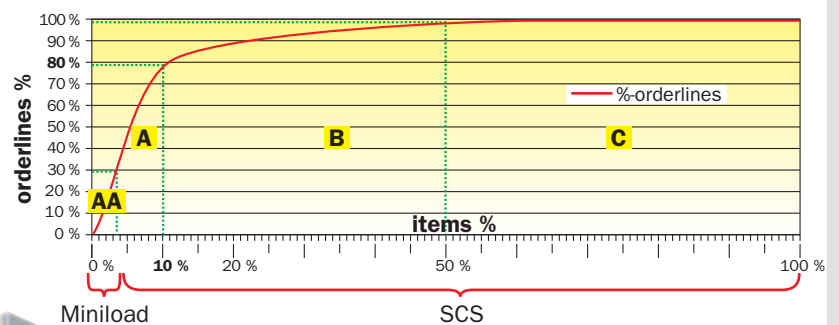


- **Operating figures:** 45,000 items  
15,000 pieces/h  
80,000 orderlines/h

## ■ System solution:

## Description of process for single piece picking

- 1 Repacking to tray / tote / box (600 x 400 mm)
- 2 Tote-buffer Miniload + picking of fast-moving items
- 3 Carousel system SCS for picking of fast-/medium-/slow-moving items (ABC)
- 4 Carousel system as sequence buffer for goods issuing department

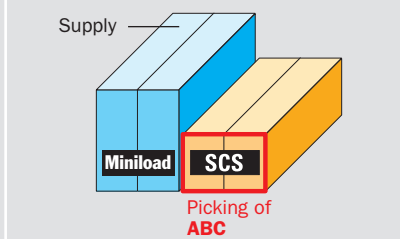


## ■ Advantages of system:

- Increase in pick-performance to more than 1,000 pieces/h
- Increasing the pickrate per person by 200 %
- Quadruple throughput using only half the space
- Expansion of product line

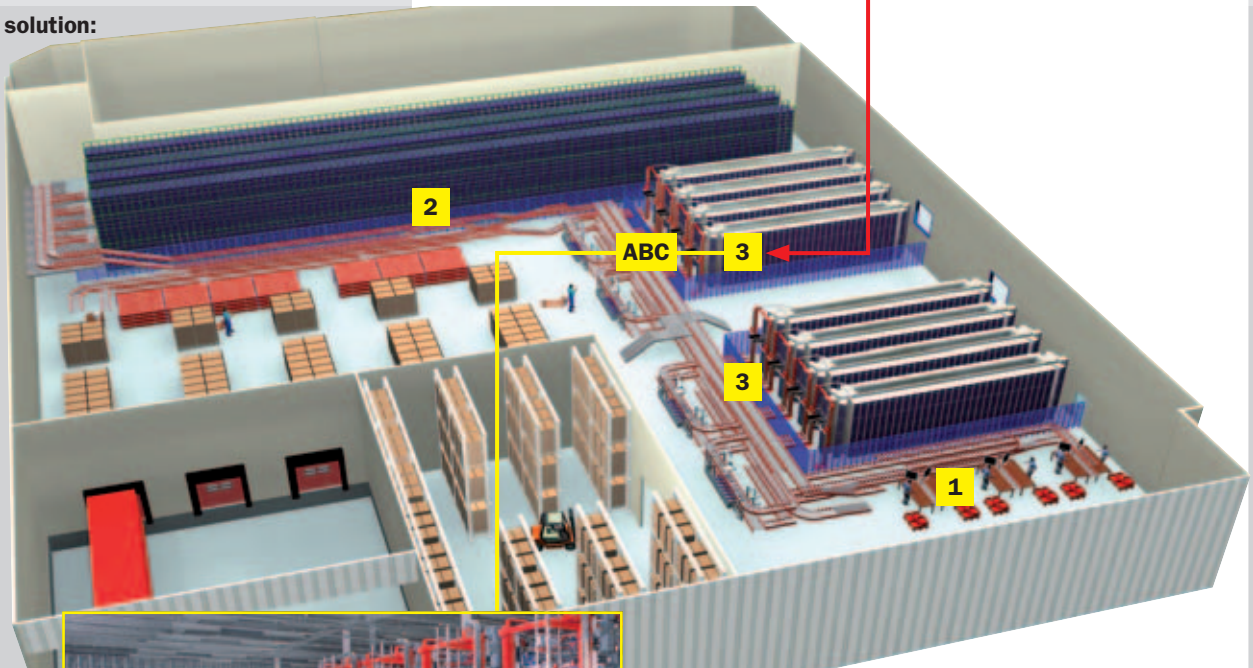
# Example specialized trade

## Version 3:



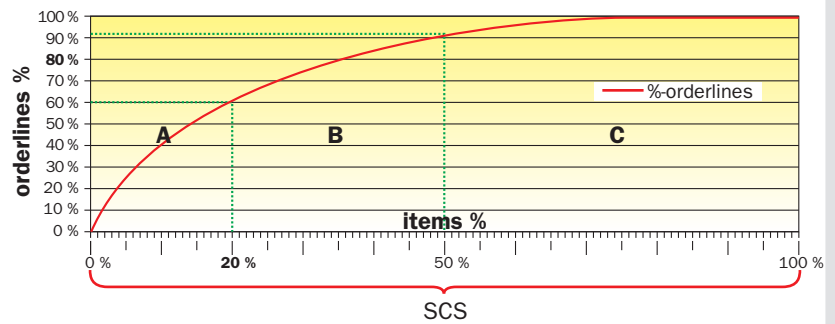
- **Operating figures:** 5,000 items  
5,000 pieces/h  
1,200 orderlines/h

## ■ System solution:



## Description of process for single piece picking

- 1 Repacking to tray / tote / box (600 x 400 mm)
- 2 Tote-buffer Miniload + picking of fast-moving items
- 3 Carousel system SCS prioritized + picking of medium-/slow-moving items



## ■ Advantages of system:

- Increase in pick-performance to more than 900 pieces/h
- Increasing the pickrate per person by 100 %
- Threefold throughput using only half the space
- Minimization of error rate to < 0.1 %



## Modular Pick Positions

- Pick-to-Tote (SCS/SQS)



- Pick-to-Tote (Miniload)



- Pick-by-Light (Miniload/SQS)



- RF Picking (Miniload)



- Pick-by-Voice (Miniload)



## Modular Software-Components

**With their own Warehouse Management System SSI SCHÄFER provides the information technology basis for continuous transparency and reliable, efficient control of all operational processes for warehouse management and distribution.**

The modern, interbranch system architecture and its consequent user-orientation are reflected in the modular design of the system and the diversity in available user-interfaces. The broad spectrum of existing operating interfaces, the control of a wide range of different picking-systems in manual (RF, pick-to-voice) as well as in automatic areas (Schäfer Case Picking, Mercury, goods-to-man picking) ensure that an adequate solution is available for each task.



# Customer's Benefit

Economical overall solution for the entire product line



Use in logistics of perishables

## Advantages

- Modularity and scalability
- Realization times and integration in existing system
- Reduction of personnel cost due to high pick-efficiency
- Flexible in case of item- and process modification
- Integration in existing building structures
- Minimization of error rate to nearly 0
- Shortest order-processing times
- Highest capacity throughput on minimum space
- Shortest product-allocation-times



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