

CASE STUDY

Reference HARIBO, Germany:
Ensuring international goods availability for HARIBO
with a centralized, fully-automated distribution center

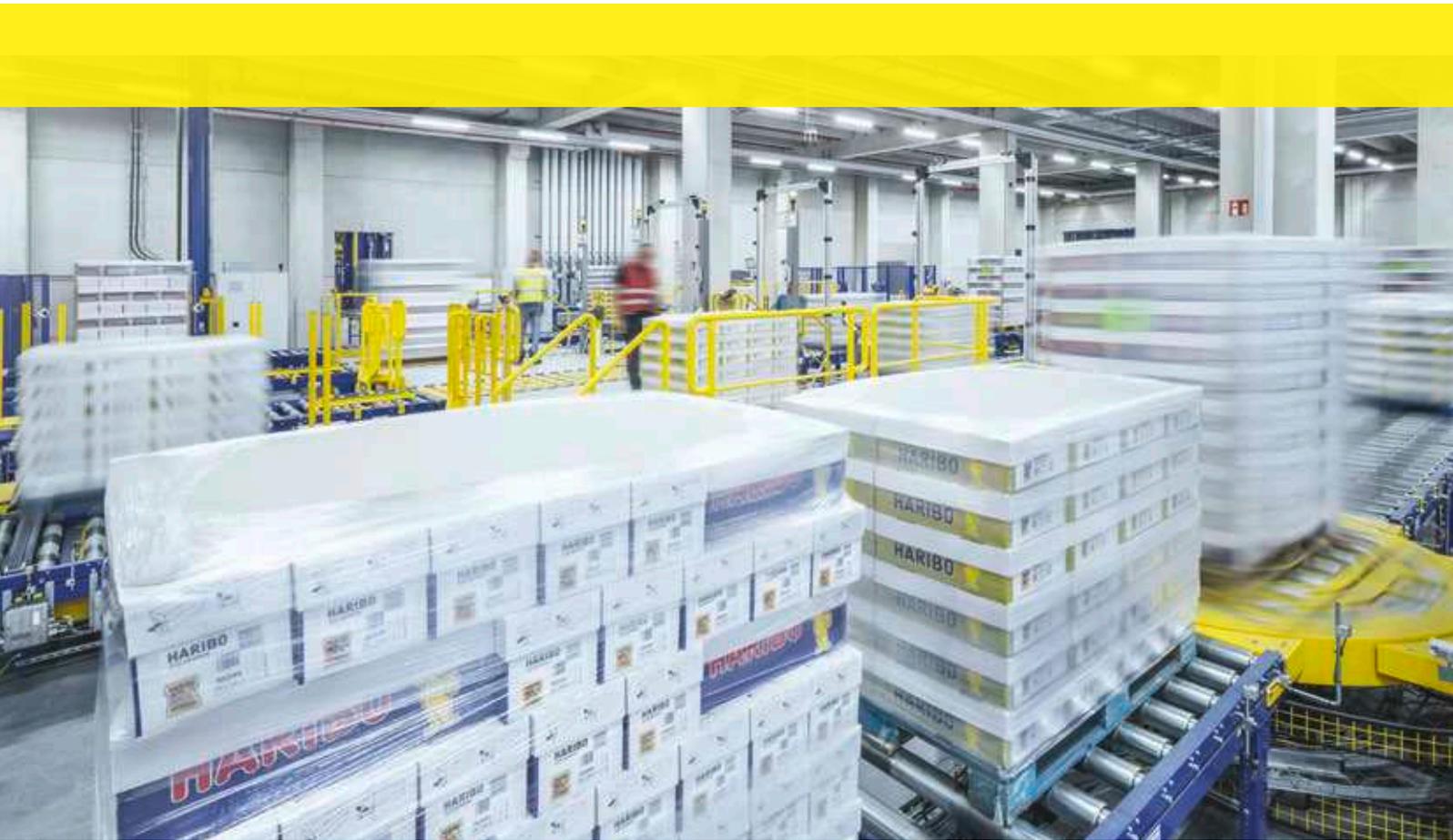
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HARIBO

SSI SCHÄFER

HITTING THE SWEET SPOT WORLDWIDE

Tasty creations from worldwide known HARIBO - Gold-Bears, licorice wheels, Happy Cola candies, and more - are well known and loved. But a number of tasks needs to be completed before these sweet treats can be enjoyed. From sourcing ingredients, to manufacturing, distribution and delivery to retailers, where each product finds its way to consumers, HARIBO treats



For nearly a century, HARIBO was headquartered in Bonn, in the German state of North Rhine-Westphalia. Now, its HQ is moving to Grafschaft, in the state of Rhineland-Palatinate. HARIBO is also establishing a new production facility at this location. It is the largest standalone project in company history; the production area alone spans seven soccer fields.

HARIBO has created approximately 750 jobs at the new site, which 350 of these jobs have been transferred from Bonn to Grafschaft. Offices, production lines, packaging plants, and a central logistics warehouse, covering an area of 27 hectares, have been erected at the Innovationspark Rheinland, right next to the A61 freeway.

migrate through a number of distribution feats. In addition to taste and quality, intelligent systems and solutions that operate in the background help contribute to the success of HARIBO. As the general contractor for building and logistics, SSI SCHAEFER has achieved this goal by delivering a fully automated distribution center.



"SSI SCHAEFER has made our vision a reality. They took our high-level plans and turned them into a fully viable facility, just as we had imagined.

Despite the pressure to deliver an exceptional warehouse, the chemistry between the two parties was always good."

Stefan Sorce
Managing Director
Haribo Logistics

SSI SCHAEFER built a silo-style high-bay warehouse that is 120 meters long, 100 meters wide, and 43 meters high, which covers 24,000 square meters. The warehouse has a capacity of 92,800 pallet storage locations. A total of 22 energy-efficient Exyz storage and retrieval machines ensure storage for 645 pallets with the ability of retrieving 590 pallets every hour.

This function serves as the backbone of a manufacturing infrastructure designed to meet the imperatives of the 21st century.

Or as fans of the brand might put it, the Gold-Bears have found a new home.

A TALE OF LITTLE GOLD-BEARS AND MAJOR CHALLENGES

From the outset, HARIBO was well aware of the huge task at hand. It was essential to choose the right partner and to avoid multiple supplier interfaces.

This prompted a decision in favor of a one-stop solution from SSI SCHAEFER. The company has a deep understanding of the industry and its processes and was able to deliver multiple systems and components with in-house manufacturing resources. This meant HARIBO could be sure of effective project coordination. This was an important point, as HARIBO had a tight timeline - with just two years from start to finish. SSI SCHAEFER passed the test with flying colors, not only staying within budget but completing ahead of schedule.

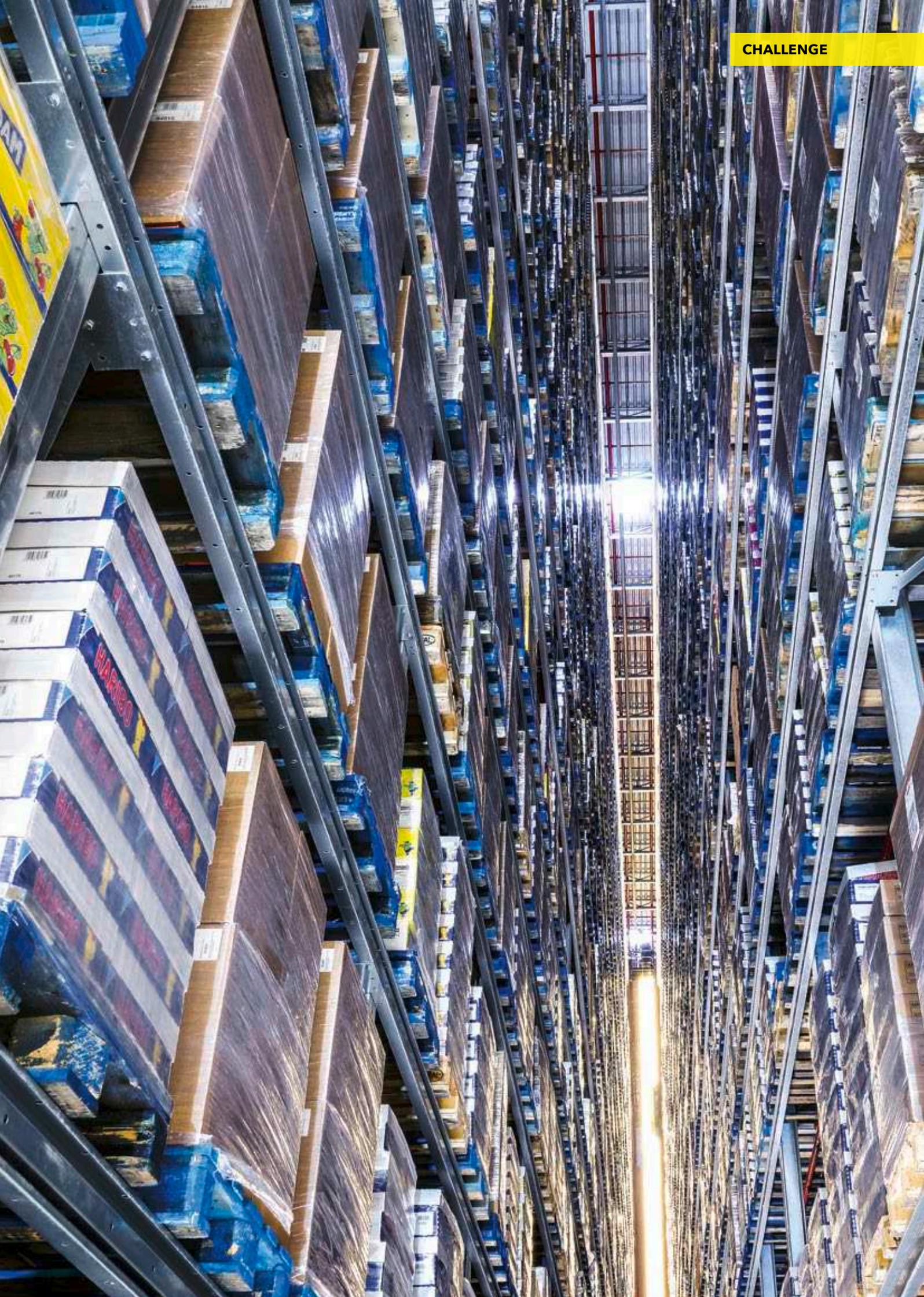
"From the outset, we were looking for someone to provide an end-to-end solution, encompassing material flows, software and the buildings themselves. We wanted to keep this mammoth project as simple as possible and minimize the number of interfaces. SSI SCHAEFER did an excellent job making this possible."

Stefan Sorce
Managing Director
Haribo Logistics

THE PROJECT GOALS

- Cost optimization and greater efficiency for internal processes to streamline workflow routes
- Increased availability of goods and quality assurance, even at peak times, through fully automated goods flows
- Bi-directional link between production and logistics
- Low space utilization and high redundancy levels through mirroring of material flows throughout two levels
- Efficiency gain through customer-, route- and day-specific sequencing in goods-out
- 24/7 resident maintenance service team on site
- Establishment of a logistics hub for distribution of goods across Europe
- Intelligent control and management of all intralogistics processes using WAMAS® logistics software







Roughly 2.6 km of conveying system for economical transport



Maximum quality due to a semi-automated picking area

EVERYTHING FROM A SINGLE SOURCE ENSURES A SWEET DELIVERY

This custom solution combines the creation of a logistics concept, a seamless execution and planning, and the turn-key construction of a central warehouse.

The new build comprises roof and wall coverings, standard building services like sprinkler systems and the base foundation. Furthermore, traditional SSI SCHAEFER automation system components like a pallet conveying system, storage and retrieval machines, and the high-bay warehouse - including a special flavoring warehouse and manually operated rack systems were included in the construction.

To visualize the processes and workflows and to control, monitor, and optimize productivity, HARIBO uses WAMAS® Lighthouse from SSI SCHAEFER. Freely configurable dashboards enable visualization of the logistics cycle, while the display of key performance indicators makes logistics processes more efficient.

In addition, SSI SCHAEFER has set up goods-in, goods-out, and loading areas. A semi-automated, order-specific picking area, an assembly area, and manual warehouse areas span several floors. Internal transport is carried out by two rail-guided vehicle systems and a pallet conveying system.



Rail-guided vehicle systems connect all areas



SOLUTION

Picking is carried out according to the person-to-goods principle

To enable direct delivery of pallets from production, a bridge links the production building to the logistics center.

The central warehouse encompasses two stories. In conjunction with the condensed storage design, there is a second advantage, which enables important material flows to link the high-bay warehouse to adjacent logistics areas. These two levels provide a natural redundancy, which means all areas can be supplied and emptied safely at any time. This offers HARIBO a high level of safety and a high level of service in its daily customer deliveries.

Suppliers from numerous European countries are bringing goods to the new distribution center, which primarily serves Germany, France, and the Benelux states. In the past, the confectionary producer operated several external warehouses, which are now being gradually phased out and replaced by the new central warehouse in Graftschaff and a smaller high-bay warehouse at the Solingen site.



Fully automated high-bay warehouse with 22 storage and retrieval machines

THE SOLUTION COMPONENTS MAKE EVERYTHING FLEXIBLE AND SCALABLE

For stock management and process control, HARIBO is using WAMAS® logistics software from SSI SCHAEFER. Numerous functionalities of the warehouse management suite are in use for this application - including some additional features tailored to specific HARIBO processes. WAMAS® combines all intralogistics components into one intelligent system. All intralogistics processes at HARIBO are automatically managed and controlled, from efficient and flexible order processing to goods movement and resource optimization, right through to provision and analysis of logistics performance indicators.

A technical highlight of the system is the 100 percent automated sequencing in goods-out through the use of a multilevel goods-out buffer. This is where pallets are prepared for loading across several buffer stations in an optimal sequence for outbound delivery. This customer-specific, route-specific, and day-specific sequencing results in large efficiency gains when it comes to shipping. Trucks are loaded with a specific type of product for a specific customer or with several products combined for different unloading stations.



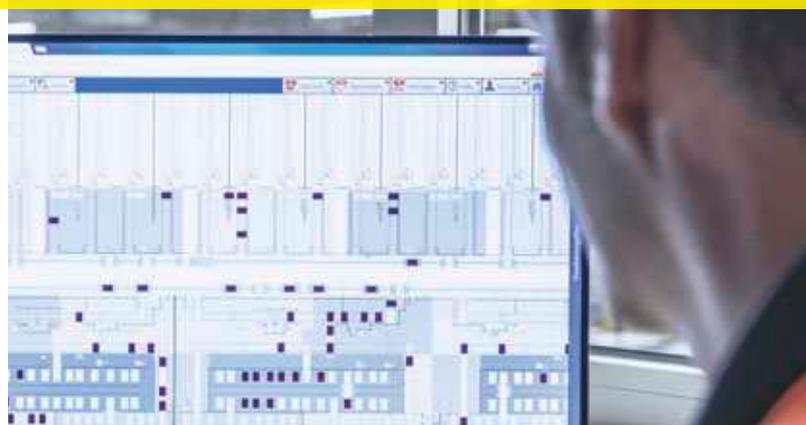
A fully automated goods-out buffer prevents waiting times

SSI Resident Maintenance® employees work on-site over two shifts, to ensure smooth operation within the system on a permanent basis. Thanks to the support of well-trained and experienced personnel, maximum availability of the system is achieved while maintaining a high degree of utilization.

Spare parts management and direct access to specialists for PLCs and software via the SSI SCHAEFER hotline are integral components of this solution. Furthermore, the team monitors

the system using the WAMAS® Lighthouse visualization system, which records, analyzes, and documents all essential system characteristics.

The SSI Resident Maintenance® service module is playing an increasingly important role, especially in projects of this size. HARIBO can therefore concentrate on its core business and leave the 24/7 system support in the experienced hands of service employees.



WAMAS® combines all intralogistics components into one intelligent system



View the entire warehouse material flow at a glance with WAMAS® Lighthouse

FACTS AND FIGURES

System key figures

Site area	270,000 m ²
Total usable area	36,000 m ²
Building area	24,000 m ²
High-bay warehouse area	12,000 m ²
Picking hall area	8,600 m ² / two-story
Picking warehouse area	6,700 m ² per floor
Picking principle	Person-to-goods

Scope of supply and services by SSI SCHAEFER

Planning, implementation, and services	
Concept design	<ul style="list-style-type: none"> - Creation of a turn-key solution as the general contractor - Creation of a logistics concept - Simulation and execution planning - Visualization
Services	- SSI Resident Maintenance®
High-bay warehouse	
L x W x H	120 m x 100 m x 43 m
Storage locations (approx.)	92,800
Storage type	Single-deep
Number of storage and retrieval machines	22 Exyz
Load handling device	Telescopic fork
Technical performance rate (approx.)	645 double cycles/h
Conveying systems	
Components	Roller conveyor, chain conveyor, loading and unloading stations, vertical conveyor, corner transfer, turning station with roller conveyor 90°, shuttle car, rail-guided vehicle system
Software	
Logistics software	WAMAS®
Functionalities	<ul style="list-style-type: none"> - Warehouse management - Goods-in/-out - Picking - Assembly area - Material flow control - Visualization - Radio data transmission system
Visualization system	WAMAS® Lighthouse: Visualization, monitoring, and optimization of productivity





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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