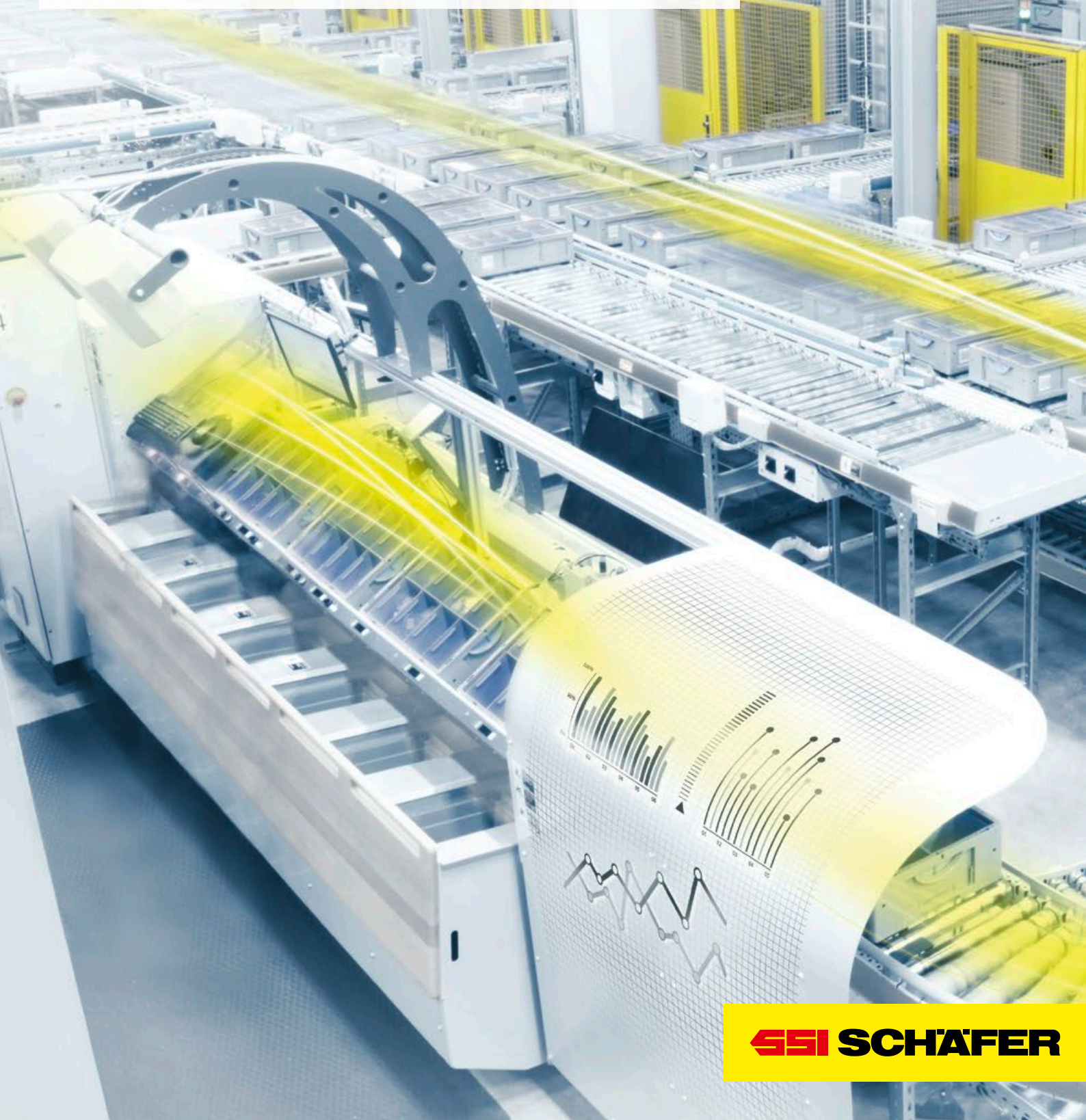


PERFECT FLOW

Systems and Solutions for Error-Free Processes
and Efficient Material Flows

ssi-schaefer.com



SSI SCHÄFER

YOUR STRONG PARTNER FOR LOGISTICS

Efficient picking and seamless order processing are essential components of intralogistics. With modular picking and handling systems, SSI SCHAEFER designs custom solutions to fit your needs, from manual to semi- or fully automated systems.

Economical and Efficient

Increased picking performance, lower error rates, simple and ergonomic operation as well as low-maintenance and reliable technology - these are the main goals of efficient picking and handling systems.

We provide everything you need from the hardware to the software and after-sales service for a complete solution. Our picking and handling systems offer superior quality, modular mix and match design, and ultimate flexibility.

FEATURES & BENEFITS

- Modular and scalable systems
- A comprehensive range of system solutions from manual to fully automated
- Increased picking performance and minimized error rates
- Ergonomic design
- Efficient order processing resulting in maximum time savings
- Low-maintenance and reliable technology



Complete Solutions from a Single Source

As a global general contractor, SSI SCHAEFER offers complete logistics solutions, including tailor-made conveying systems, flexible picking and handling systems, as well as customized service and maintenance packages.

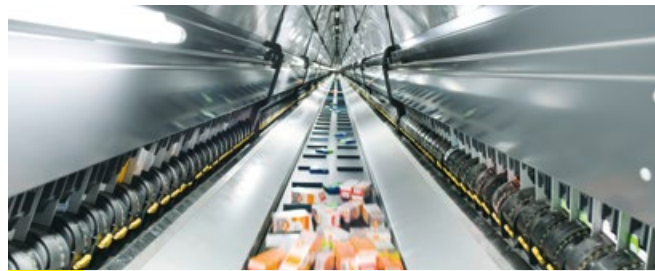
WAMAS® Using our in-house developed WAMAS® logistics software, we combine intralogistics components to create an intelligent overall system. Clear visualizations and comprehensive tools manage processes, resources, and stock levels, ensuring efficient warehouse operation.



1 MANUAL PICKING



2 WORK STATIONS / ergonomics@work!®



3 AUTOMATIC PICKING



4 PAPER AND BIN HANDLING



5 PRODUCT IDENTIFICATION



1

INTELLIGENT SYSTEMS FOR MANUAL PICKING

SSI Manual Picking systems are based on the person-to-goods principle and can be easily integrated into an existing or planned picking process and strategy.

They are excellently suited for use in dynamic, static, and pallet racks and impress with their fast implementation capabilities, user friendliness, and low maintenance requirements. We offer intelligent picking solutions such as

Pick by Device or Pick by Light / Put to Light. Additionally, we offer a combined warehousing and picking solution – the SSI LOGIMAT® vertical lift.

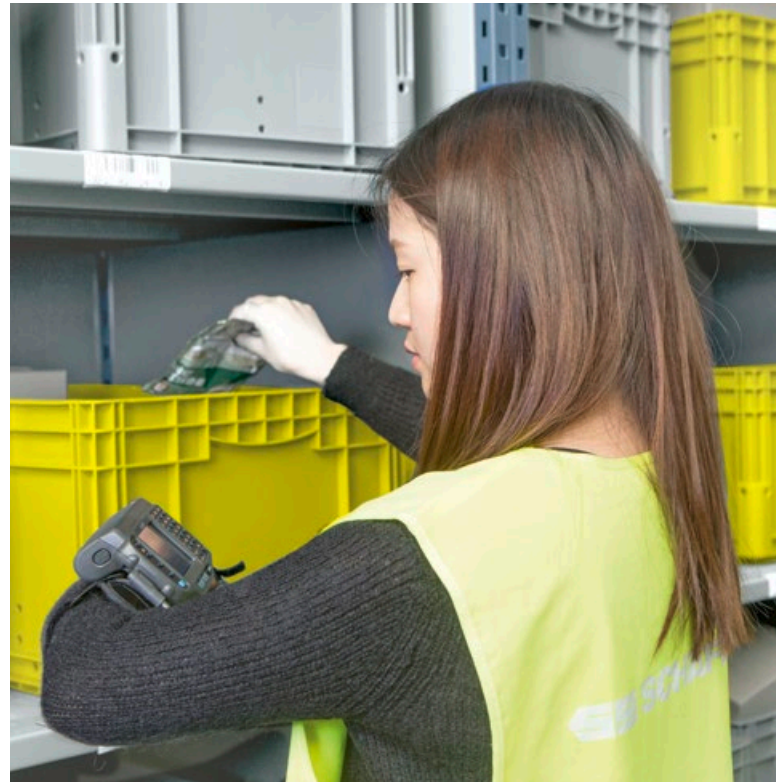
FEATURES & BENEFITS

- Extensive product portfolio
- Superior picking quality
- Low error rates
- Gentle product handling
- Scalable and modular design
- High throughput
- Ergonomic work stations
- Easy integration

Paperless Picking via RF Picking Technology

Radio Frequency Picking (RF Picking) is the ideal solution when you need to efficiently guide your warehouse employees.

Our RF-terminal is connected to a ring scanner which your employees simply wear on their arm. This allows them to read the order data from the display and to acknowledge the completed procedure on the RF-terminal.





Hands-Free with Voice Control via Pick by Voice

Pick by Voice is a picking solution that guides employees through the picking process by voice and allows them to give voice responses to confirm accurate order picking or

to correct the quantity. This keeps their hands free for their task and helps improve the picking quality and speed.

Pick by Light / Put to Light Picking with Display at the Storage Compartment



Pick by Light minimizes the number of picking errors. Each storage compartment is equipped with a signal lamp with a display and at least one acknowledgment button. If the order bin is placed in picking position, the lamp shows the employee the correct picking compartment, and the number of products to be picked appears on the display. Removal is then confirmed by pressing the acknowledgment button.

Put to Light works exactly the other way around: The specified number of products is not removed from the displayed position but added to it.

Superior Delivery and Reliability at Riachuelo Thanks to Pick by Light

In response to the increasing demands of omni-channel shipping, SSI SCHAEFER stepped in to help with the expansion of Riachuelo's distribution warehouse in Sao Paulo, turning it into a highly dynamic warehouse. The warehouse processes hanging and flat goods and uses 23 SSI Carousel Systems for high-performance warehousing. Orders are picked based on the Pick by Light principle. Simple and safe operation increases the picking quality and ensures reliable delivery.

2



ERGONOMIC SOLUTIONS FOR IMPROVED EFFICIENCY AND QUALITY

We developed ergonomics@work!® in an effort to promote a healthy and productive work environment.

Ergonomics play an important role, especially in picking. With our SSI Work Stations, we create work stations for employees with the goal of increasing motivation, improving corporate climate, and helping to prevent unnecessary stress, health problems, and potential signs

of fatigue. Movements, especially lifting and carrying, are supported with ergonomic pulling and pushing. Intelligent communication and display systems intuitively guide the operator.

FEATURES & BENEFITS

- Optimized arrangement of control elements
- Clear, easy-to-follow, and logical user guidance
- Quiet work environment
- Gentle product handling
- Natural materials that are gentle on the skin yet durable
- Integrated error detection and troubleshooting support



Advanced Pick Stations Are the Ultimate in Ergonomics and Efficiency

Our Advanced Pick Stations increase picking speed up to 1,000 picks per hour. Orders are picked directly into order bins and cartons. Clear operator guidance with optional bin compartment illumination, Pick by Light and light grid monitoring of the target points ensure superior picking quality. One particular advantage of

this system is the well thought-out human-machine interface based on ergonomics@work!®. Light-controlled picking guidance, ergonomic design, and touch-friendly surfaces optimize and ease the working processes. The systems design also takes operators with disabilities into consideration.

A Highly Automated Omni-Channel Distribution Center for Suning

SSI SCHAEFER planned and successfully implemented a new state-of-the-art distribution center in Nanjing, China for Suning. It supplies both Suning retail storefronts and e-commerce customers. Products are conveyed from the SSI Carousel System and picked at the directly connected, semi-automated work stations. The goods-to-person work station can quickly process large quantities per order line.

SUNING
苏宁物流

Goods-In Work Stations for Maximum Productivity

Goods-in Stations from SSI SCHAEFER are the ideal solution to reduce the workload of your employees and ensure gentle processing of products, especially at fast turnover rates. Our system can increase productivity up to 20%. As a fully implemented function, returns can also be stored via goods-in work stations.



State-Of-The-Art Distribution Center for Pharmaceutical Wholesaler United Drug

SSI SCHAEFER was instrumental in increasing the picking performance at United Drug Supply Chain Services, Ireland's leading distributor of pharmaceutical items, from 7,000 to 12,000 order lines per hour at United Drug's distribution center in Dublin. The palletized cartons delivered to goods-in are transported to twelve ergonomically designed work stations featuring pallet lifting tables, where employees repack cartons into storage bins. The used carton conveyor automatically removes the empty boxes.



3

AUTOMATIC PICKING WITH TOP SPEED AND QUALITY

Extremely fast order processing while maintaining top quality, even during peak utilization, guarantees maximum productivity and optimum warehouse material flows. Our SSI Automatic Picking Systems offer all of this.

Get High Picking Performance for Fast-Moving Products with the A-Frame

The A-Frame performs a fully automated and reliable compilation of complex orders in record time. It is suitable for reliable and error-free picking of even the smallest packaging units. The sophisticated system with straight and inclined product channels enables a dramatic performance increase for items moving at fast and medium

speeds. Replenishment and order picking are performed separately. To optimize staff utilization, employees perform replenishment processes during low load periods, while order picking is performed fully automatically during peak load periods.

FEATURES & BENEFITS

- High productivity at peak times
- Efficient use of space thanks to high storage density
- Improved efficiency by eliminating time consuming manual picking
- Full expandability thanks to a modular design
- Consistent high quality and reliability - even during peak periods

Expanding the Galexis Distribution Center

Galexis, a Galencia Group company, operates a distribution center in Niederbipp, Switzerland. The distribution center efficiently supplies pharmacies, medical practices, drugstores, homes, and hospitals. Thanks to the successful expansion of its warehouse with the support of SSI SCHAEFER, the company was able to increase the throughput of the entire plant to 4,000 bins per hour. The automated A-Frame picking system achieves a picking performance of 1,600 bins per hour.



Buffer to Belt: Fast Order Picking for the Pharmaceutical Industry

The interdisciplinary solution from SSI SCHAEFER and BD Rowa consists of a combination of several Rowa Vmax® systems, which automate goods-in, warehouse

management, and picking processes. Two different order buffer systems ensure high throughput. Both systems guarantee reliable and precise picking.

Robot-Assisted Picking Solutions

SSI SCHAEFER's robot applications perfect your automated picking processes and can be seamlessly integrated into your system. We offer robotic systems that fit your specific needs, whether it is an articulated arm robot or a gantry robot. The modules of our in-house developed WAMAS®

logistics software provide the robots with the necessary "intelligence", preparing them for integrated logistics applications. With our Pack Pattern Generator and the Vision Technology image processing technology, we have all the necessary IT expertise in-house.

4



INCREASED PRODUCTIVITY WITH PAPER AND BIN HANDLING SYSTEMS

Automatic paper and bin handling systems guarantee fast material flows in the warehouse and significantly increase productivity.

SSI Document Handling Systems Are the Perfect Additions Matched to Throughput

Paper handling systems from SSI SCHAEFER provide a wide range of tasks within a semi- or fully-automated picking warehouse, and are easily combined with existing systems.

They assume tasks such as automatic order start, on-time invoice insertion, as well as addressing and labeling all shipment goods.

FEATURES & BENEFITS

- Dramatic time savings with features like just-in-time printing
- Automated order transactions and processes
- Automation of repetitive manual tasks
- Low-noise operation



- **Document Drop:**
Automatically places receipts in empty or filled load carriers
- **Lidding and Inserting:**
Automatic lidding of bins with simultaneous insertion of an address sheet

SSI Bin Handling Systems for Fast Order Processing

Automatic bin handling perfects the material flow and increases productivity. This is why our bin handling systems perform individual bin handling steps at the speed of

the warehouse flow. In the process, the system takes into account maximum peak volumes.



- **Stacking:** Space-saving storage of unused bins
- **Destacking:** Separation of stacked bins
- **Bin Emptying:** Removes any packaging material from inside the bin
- **Bin Lidding:** Closes bins with lids after order picking is complete
- **Lid Closing:** Automatically closes bins with flaps
- **Tray Loading:** Loads trays with single goods
- **Tray Unloading:** Separates trays and goods

FEATURES & BENEFITS

- Simple maintenance thanks to easy accessibility
- Flexible and easy integration into existing systems
- Bin handling that is gentle to products
- Extremely quiet operation even at high speeds
- Modular design



Robot-Assisted Handling Solutions

Smart robotics solutions by SSI SCHAEFER facilitate continuous automation of your process chain. Our robot applications for automated palletizing and de-palletizing distinguish themselves with their dynamic operation, flexibility, and functional reliability.

5

SSI PRODUCT IDENTIFICATION: DIGITALIZE AND SORT IN A SINGLE PROCESS

In many industries, the picking of sensitive products must be traceable and error-free. In these applications, the ability to track batches and serial numbers is key. An efficient implementation of legal requirements increases safety and ensures a competitive edge.

We offer a variety of solutions for intelligent product identification and precise picking. An intelligent image processing system is used to identify, document, and sort items. The integrated scanner reads 1D and 2D bar codes from six sides for an effective item identification process.

FEATURES & BENEFITS

- Traceable and error-free picking
- Batch or serial number detection
- Automated check processes
- Easy integration into existing warehouses

Get Automatic Quality Assurance with the Order Verifier

With the Order Verifier, manually handed in articles of an already picked customer order are identified, counted, checked, verified, and documented in a single step - regardless whether the article is cubic or cylindrical, packaged in a blister pack, tube, or bag. With a performance of up to 3,000 items per hour, the system has proven itself to be a reliable check solution, reducing costly manual check processes.





Fully Automated Detection and Picking Using the Product Verifier

The combination of the fully automated A-Frame picking system and the Product Verifier enables efficient single product picking and detection according to the guidelines for product tracking and tracing. Depending on the order

structure, the system is able to read up to 8,000 units per hour. This makes the solution much quicker than manual scanning, allowing fully automated documentation of batch numbers, expiry dates, and serial numbers.

End-To-End Verification in Pharma Logistics for Slawex

To meet the requirements of the pharmaceutical industry for zero-error tolerance and full traceability, the Polish pharmaceutical wholesaler Slawex has completely reorganized its picking and documentation process. The implemented overall solution, including a fully automated A-Frame picking system in conjunction with the Product Verifier, offers picking accuracy and, thanks to the automated digitization of all required data, also an important stepping stone for the alignment of processes to Industry 4.0.



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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