

Edition 1/2012

# update

Company magazine

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Randy Lewis  
Senior Vice President Supply Chain & Logistics  
Walgreen Co., Deerfield, Illinois

Dear readers,

How many co-workers with disabilities are working together with you in the same department? How many are there in the entire company? How many people with special needs live in your neighbourhood? In your town? The last question, at the latest, will be a tough one to answer.

All too often, people with disabilities are living almost invisibly in our society, marginalised and faced with serious challenges in finding employment. As a consequence, they are completely depending upon financial support from the community. A couple of years ago, prior to and while we were designing and constructing two new distribution centres together with SSI Schaefer, we raised a decisive question: Why don't we use our market position in order to change the working environment and integrate people with special needs? Of course, we had to take the profitability of these measures into account as well.

Finally, we took a chance, started the experiment and hired roughly 33 % handicapped people. In the United States, 70 % of people with disabilities, and even 95 % of those with autism, don't get a job. I think we can make a difference in the lives of many of them with our new hiring policy. But in the end, everybody has to decide on his own about his place in our society. I believe that each and every one of us is able to – and in fact has to – take responsibility and make a difference. And I believe that the perfect time to start is right now.

Sincerely,

SSI SCHAEFER 2.0

In a time of social networks, SSI Schaefer continuously tracks the progress of these exciting communication platforms. Simply visit us on Facebook or Twitter. Or read the SSI Schaefer blog on our website covering a variety of intralogistics topics.

If you are more interested in moving images, take a look at our YouTube channel ([www.youtube.com/user/warehouselogistics](http://www.youtube.com/user/warehouselogistics)).

**New:** For the first time, we have included QR codes for additional information at selected points in this magazine.

We hope you enjoy visiting us online and we look forward to your feedback!

Your SSI Schaefer team



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## “When you walk into the building, you immediately sense a purpose, a meaning and a task.”

Randy Lewis, Senior Vice President Supply Chain & Logistics, Walgreen Co.



Distribution centre in Anderson with disabled parking spaces

## Taking social responsibility – an example to follow

**Despite the fact that we live in a progressive and enlightened society, people with disabilities still have a hard time taking their place in it and finding a job. Walgreens, the leading drugstore chain in the US, set a shining example here: one third of the staff in two distribution centres consists of handicapped employees. Walgreens demonstrates what a successful integration of people with disabilities into the working environment looks like. This has also generated interest from the media. Just recently, CNN covered this social and economic success story.**

A significant number of disabled people are still unemployed, although they would gladly do their share. They still have to deal with many prejudices, such as being less flexible or being unable to

deliver the same level of performance, etc. They compete with other candidates who've had a head start from the moment they were born. But without a job, handicapped people don't stand a chance to manage their own lives and will never feel like they are a part of society. In many cases, access to a job is denied outright. The reason for this might be that companies are unfamiliar with "disability" as it pertains to the workplace and doubt the candidates' employability and perseverance.

When it comes to integrating people with special needs into the workforce, the success story of drugstore chain Walgreens is a model for others to follow. As a market leader, Walgreens not just sells toiletries, but also drugs, food and non-food products and runs a photo

printing service. The company operates around 7,500 stores throughout the US and employs roughly 240,000 people, 10,000 of which work in twenty distribution centres. With the two most recently built facilities in Anderson (South Carolina) and Windsor (Connecticut), Walgreens dared to experiment and invented a new generation of distribution centres: Equipped with adjustable, operator-friendly workstations, both handicapped as well as non-handicapped people can work in order picking side by side. Walgreens' position as a market leader enabled the company to make a real change in the working world.

But notwithstanding the social achievement of employing people with disabilities, Walgreens is subject to economic requirements as well. As a publicly-trad-

ed company, it needs to answer to shareholders for its policies. This means, that the handicapped members of the staff have to work as hard as anybody else on the team and if necessary even have to work overtime.

It was decided at the launch of the modern distribution centres, that one out of three vacancies should be filled with a handicapped person. This revolutionary idea, which came to be known to Walgreens insiders as "the initiative", was developed by Randy Lewis, Senior Vice President Supply Chain & Logistics. Since 2007, Walgreens hired workers with mental disabilities, deaf-mutes, people with Downs syndrome, autistic people and employees with other handicaps to work here. Those who start working at Walgreens will first receive some training on how to deal with people who are different from themselves. For instance, employees are instructed on how to collaborate on a task with autistic people. Then there are other staff members who need to be trained for their particular tasks and have to adjust themselves to the unfamiliar environment inside a distribution centre (DC).

Equality is at the core of Walgreens new hiring policy. Many of the disabled employees work full-time on the same tasks as their non-disabled co-workers

and therefore also receive the same pay. "When we started with this distribution centre, everything was new. The building, the automation technology, the software, and the staff as well. Everybody had to learn, there was no difference", explains Lewis. Remarkable: by now, this facility has become the most productive distribution centre in the entire Walgreens chain.

At Walgreens, people with disabilities are no longer invisible. They are appreciated, are happy with their jobs and work with a lot of commitment. "But what surprised us the most was the strong effect this had on our non-handicapped workers", says Lewis. He describes the special atmosphere inside the Anderson DC: "Upon entering the facility, you get a feeling of purpose, meaning and mission." Everybody is very cooperative, making themselves useful wherever possible. To improve the orientation of the staff, the individual workplaces are not just numbered, but also signposted with special images (e. g. strawberries). Measures such as these cost less than 25 US dollar per employee.

The result of the initiative: **"People with disabilities cause fewer accidents at work, less absenteeism and also less personnel turnover than non-disabled workers"**, says Lewis. Walgreens' other



distribution centres increased the share of handicapped people as well. Right now, the company is working on plans to adjust the hiring objectives for its stores accordingly. Other companies are already following these visionary goals and put similar social concepts in practice, among them Marks & Spencer, Best Buy and Natura.

The integration of people with disabilities is getting more important. Walgreens' initiative in particular drew a lot of attention from the media. ABC News and NBC News both covered this story in 2007, referring to the Anderson DC as an example. Recently, in July 2011, CNN aired a news report about successful integration at the facility in Windsor.



Order picking station designed to meet the needs of persons with disabilities

### Data and facts

**New generation of distribution centres:**  
**Walgreens I (Anderson)/Walgreens II (Windsor)**

#### Basic components of the facilities:

- ▶ Design of the logistics concept, simulation, visualisation and implementation planning
- ▶ Steel construction with integrated order picking platforms, shelving systems
- ▶ Warehouse management system "ant"
- ▶ High bay racking (120 x 115 x 31 m) with 36,437 storage positions and 11 storage and retrieval devices for pallets
- ▶ Miniload storage (94 x 110 x 18.5 m) with 362,816 spaces for double deep storage and 32 Schaefer Miniload Cranes (SMC1)
- ▶ 124 Schaefer Carousel Systems (SCS) with a total of 103,168 storage spaces
- ▶ Order picking workstations, pallet and container conveyor systems, containers

#### Project objectives

- ▶ Reducing warehousing and transport costs
- ▶ Improving the capabilities to react to seasonal peaks
- ▶ Increasing the accuracy of the deliveries and centralising processes
- ▶ Reducing error rates and speeding up delivery





Interview

# It’s about business, not charity

Randy Lewis, Senior Vice President Supply Chain & Logistics, Walgreen Co., in interview with SSI Schaefer

SSI Schaefer, we thought about the possibility of creating an example with these new facilities. I had the vision to use our position as a market leader to change the work environment.”

**What were your requirements or regulations for the distribution centres of the new generation?**

“There were two rules we put into place right from the start: First, Walgreens has to act economically and remain sustainable. It is about a business based on the demands of the customers and accountable to the shareholders. After all, Walgreens is not a charity organisation, but a publicly traded enterprise. The customer does not care, how the product made it to the store. What counts is

that the right product is available at the right time and in the right place. Second, there’s no need to find an answer right away to every conceivable question. This rule helped to set the project in motion instead of dropping it because of all the concerns.”

**Is your idea applicable to other companies as well?**

“Quite often, I hear people ask: Will this also work in our work environment? And I say, yes it will. Back then, local authorities were also doubting the project’s practicability, just because of a lack of previous experiences. No other company before had built a brand new distribution centre and hired disabled people in such numbers. Nevertheless, we gave it a try.”

**How did you come up with the idea to increase the share of handicapped people in these new distribution centres so drastically?**

“My son has autism and, as his father, I am concerned about his future. When the construction of additional distribution centres became necessary and we were doing the planning together with

124 Schaefer Carousel Systems (SCS) with the associated order picking workstations



High bay racking with 11 storage and retrieval systems and 46,000 storage spaces



Pick-by-voice order picking

## Flexible, automated logistics solution at TJ Morris

### Growth-oriented intralogistics concept with increased efficiency

**Liverpool, Great Britain.** With over 200 “Home Bargains” stores, TJ Morris Ltd is one of Great Britain’s leading and fastest growing food discounters under private ownership. Home Bargains offers a wide range of high quality, ubiquitous brands – from health and beauty to household articles, food, toys and much more - at prices that other retailers can hardly keep pace with. Increased business means a need for increased stock levels and rapid store replenishment. TJ Morris needed greater warehouse capacity and maximum picking efficiency but with low labour costs. As a general contractor, SSI Schaefer created concepts to exceed these expectations in the existing distribution centre in Liverpool, Merseyside.

To meet the growing volume of products on pallets, a high bay racking system has been added to the existing distribution centre. The extension provides space for more than 42,000 pallets, incorporates 11 pallet storage and retrieval machines supplying more than 1,000 floor-

level order picking positions and delivers replenishment orders to an adjacent miniload storage system. The miniload tote warehouse has been set up to store slow-moving SKUs and offers capacity for up to 28,000 storage totes. On the side of the miniload system are 804 pick slots. The entire system is effectively controlled and managed by the “ant” warehouse management system from SSI Schaefer.

Joe Morris, Technical Manager at TJ Morris, reflects: “Without the expertise and systems technology provided by SSI Schaefer, our operation would have struggled to meet the demands placed on the business by the increased sales from a rapidly growing store base throughout Great Britain. Expanding our storage capability and automating the most labour-intensive areas of our distribution operation has enabled us to expand and future-proof our operation without the need for continual investment in additional labour.”

## Automation day hailed a success

**Liverpool, Great Britain.** Efficiency via automation – this was the message from the SSI Schaefer UK automation conference that takes place once a year, most recently in 2011 at TJ Morris. The event highlighted the advantages of implementing automation in existing logistics operations.

Over 70 delegates attended the event, representing some of the country’s largest and best-known retailers. They all were interested in making their own processes considerably more efficient. They also wanted to take a closer look at TJ Morris, a company that has successfully implemented automation in its existing distribution centre. The results are obvious: increased storage capacity, maximum order picking efficiency and low labour costs.





## More efficient order picking

Solar Danmark A/S increases capacity and performance quality

**Vejen, Denmark.** Sensors, ventilation systems or S7 controls for logistics systems, plumbing supplies and electrical goods for engineering and trades – when installations are carried out in Northern Europe, a large number of the items and tools required come from the Solar Danmark A/S central warehouse. “Rising order volumes and increasing logistics demands were straining our storage capacities and order picking strategies to the limit”, explains Lars Kristensen, Technical Manager of the Logistics Systems in Vejen. Our building extension has been in operation since the end of June 2010. Each day, 11,000 orders are picked and dispatched. The majority of the small item picking is achieved using the highly ergonomic order picking stations, which are an integral part of the new automated system.

Around 32,000 totes are provided for small item storage. With the compact miniload tote storage system, the capacity of the distribution centre has doubled and efficiency has increased significantly. A particular benefit is that dismantling the old system has freed up space for a second miniload system of equal size to be set up later on. Eight single-mast Schaefer Miniload Cranes each achieve a goods handling performance of 137 totes per hour. Their telescopic load handling devices permit double-deep storage.

The order picking stations are set up so that they run in the same direction as the miniload aisles, which allows a uniform direction of material flow with no diversions. The result is efficient supply of goods to the order picking stations with compact, economic utilisation of floor space and minimal conveyor technology.

The pick-to-tote workstations offer a throughput that is up to 10 times higher in comparison to conventional strategies. Using special control devices, the system automatically checks the item quantity and that the items are allocated to the correct order, initiating an error correction routine if required. “For us, it was not the high throughput that was the key factor, but rather the reliability and efficiency of the processes”, explains Kristensen. “With 99.8 % error-free Solar deliveries, we are approaching our zero-error target in order picking.”

The ACX warehouse management system manages the automatic retrieval of goods as they are required for the orders and ensures they are fed to the order picking stations in an optimal manner. With its rich functionality and special processes tailored to meet Solar’s business requirements, it covers all modern warehousing tasks from warehouse and stock management to goods receipt and despatch through to order picking and material flow control.

Strategic cooperation: As an intralogistics partner, SSI Schaefer will also be responsible for designing and equipping new Solar facilities in the future.



# solar



## Precisely tailored to distribution requirements

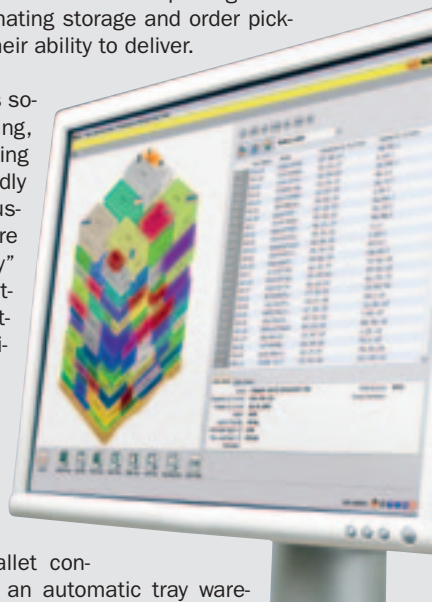
SSI Schaefer’s SCP provides a fully automated concept

**Giebelstadt, Germany.** The challenges of a distribution company are many and varied: growing importance of e-commerce, shorter delivery times, smaller delivery quantities and units, as well as increasing demand for deliveries that are picked according to the store layout in accordance with article groups/classes. It therefore makes sense to critically re-evaluate traditional intralogistics approaches and processes. The objectives are clear: to optimise the use of available storage areas, to move goods even faster and to improve the performance to cost ratio in order picking. Companies are increasingly automating storage and order picking processes to guarantee their ability to deliver.

SSI Schaefer offers numerous solutions here: The award-winning, modular Schaefer Case Picking (SCP) system for store-friendly order compilation, the industrial image processing software “Machine Vision Technology” and the “Schaefer Pack Pattern Generator” (SPPG) software module for full and semi-automated palletising.

A German food company is expanding its logistics centre by adding a 5-aisle high bay warehouse with around 15,000 pallet storage locations and the associated pallet conveyor technology, as well as an automatic tray warehouse from SSI Schaefer. The SCP offers efficient, fully automated order picking processes. It covers all process stages without interruption from incoming goods through automatic de-palletising, buffering, automatic order picking, demand based sequencing of cases to robotic palletisers and dispatch. In the compact buffer system, the goods are automatically separated from the storage pallet, placed onto Euro trays layer by layer and moved into temporary storage, always treating them with care. The Euro trays are then order picked into individual items, in parallel multi-access. The system follows a complete, multi-stage sequencing on conveyor, in line with the store layout; with the associated benefits in costs and processes.

The degree of automation however always needs to be determined individually for each company. Sometimes, partial automation of the processes makes more sense and technology and automation need to be used “appropriately”. Small and medium-sized companies or e-commerce businesses in particular often require modular, scalable and flexible solutions.







## Shuttle solution for beverages

The second largest implementation of the Schaefer Orbiter® System to date

**Mahul/Bazpur, India.** PepsiCo, one of India's leading food and beverage companies, established its business operations in India in 1989. To serve the long-term dynamic needs of consumers in India, it offers products ranging from tasty treats to health food that is nutritional yet affordable for its consumers. With more than 41 bottling plants in India (including 13 owned by the company

directly, and 28 franchises) with three state-of-the-art food plants in Punjab, Maharashtra and West Bengal, PepsiCo is one of the largest multinational investors in the country.

As part of its major modernisation plans, PepsiCo was looking for a suitable buffer store solution to meet its peak season demand. SSI Schaefer India implement-

ed the Schaefer Orbiter System (SOS) in Mahul (Mumbai) and Bazpur (North East Delhi). A total of 7 SOS units along with drive-in racking, long-span racking and a mezzanine floor were delivered to Mahul and 5 SOS units to Bazpur.



**Dubai, UAE.** The greatest challenge in temperature-based logistics is to avoid interrupting the cold chain. Naturally this applies all the more in an environment like the Middle East where temperatures can easily reach +50°C in the summer.

Leading Dubai-based service provider Trilogi Logistic has therefore invested in a new refrigerated storage facility including 6 cold store chambers, each

## Stay cool – even at +50°C

New refrigerated warehouse for fruit and vegetables in Dubai

with 2,000 pallet locations on mobile racking systems. The chambers are refrigerated independently and temperatures can range from +5°C to -28°C for different products. In phase 1, SSI Schaefer Dubai installed mobile racking for 8,000 pallet locations. In the 2nd phase, the system will be extended to a total of 12,000 storage locations.

"The mobile racking system is the ideal combination of storage density, acces-

sibility and high performance", summarises Pieter van Wyk, Head of Logistics and Projects.

The project includes technical equipment and products from SSI Schaefer Switzerland, SSI Schaefer Malaysia and SSI Schaefer Dubai. The installed system is another great example of how the SSI Schaefer Group utilises their global resources and the modular design of their systems.

## More space for baked goods, muesli and more



Lebensgarten GmbH commissioned SSI Schaefer for the construction of a fully automated high bay racking warehouse

**Adorf, Germany.** Vogtland-based company Lebensgarten specialises in environmentally friendly and sustainably produced food. The range includes baked goods such as biscuits, muesli and chocolate products, for example, that are sold primarily in health food stores. Their previous warehouse installation was too small due to the company's expansion. To extend storage capacity, the decision was made in favour of a future-oriented, highly dynamic, flexible solution from SSI Schaefer: A fully automated channel storage system of around 65 metres in length, 15 metres in width, 14 metres in height with approx. 4,100 pallet storage locations. Since the spring of 2012,

a special combination of the Schaefer Compact Crane storage and retrieval system and the Schaefer Orbiter System as a shuttle solution has enabled the fully automated inward and outward storage movements of the 4- and 11-deep channels. The equipment provided by SSI Schaefer also includes conveyor technology, shuttle vehicles, shipping and express tracks. The warehouse management system from SSI Schaefer also handles the control and coordination of all logistics processes. This means that Lebensgarten obtained all the components for the new logistics centre from one source.

Special combination of the Schaefer Compact Crane storage and retrieval system and the Schaefer Orbiter System as a shuttle solution



Cheese from Arla Foods matures in the channel storage system

## Good things come to those who wait

With optimised logistics processes, Arla Foods targets greater market share in Europe and worldwide.

**Nørre Vium, Denmark.** SSI Schaefer Denmark has sold Arla Foods on its extensive product range, expertise and experience in logistics technology. For the dairy warehouse in Nørre Vium (near Videbæk), SSI Schaefer is currently installing a comprehensive solution offering a high level of efficiency: Schaefer Orbiter Systems (SOS) for a channel storage system, combined with a mobile racking system.

The warehouse expansion includes 13,000 pallet storage positions, 8,000 of which will be in the channel storage system operated by 14 SOS. The cheese is here for maturing. During the maturing phase, the cheese is exposed to 4 different temperature stages, and the SOS is ideally suited to do this. This is because it functions in line with the FIFO principle and permits efficient relocation when the cheese needs to be transported to the next temperature stage. In future, remaining pallets will be housed in the mobile racking system, which is used as a packaging warehouse, and will directly supply the cheese production.

For Arla Foods it is particularly important that the channel storage solution with the Orbiter utilizing its unique in-rack power supply system of Power caps can run 24/7 without interruption. Offering significant flexibility and storage capacity, the combination of the SOS with the mobile racking system is therefore an ideal solution.



## Extended warehouse for OEM parts “Down Under”

**Chullora, NSW, Australia.** Volkswagen Group Australia has experienced tremendous growth during the last few years. This has led to its Sydney Distribution Centre (DC) overflowing with automotive parts and accessories for Volkswagen, Audi and Skoda.

With growth in mind, Volkswagen Group Australia relocated to a 16,000 m<sup>2</sup> facility situated in Chullora, New South Wales. This DC will become the master depot for Volkswagen's Australian operations. “Volkswagen has a lot of long side panels that are big and cumbersome and you can't fit them in normal racking”, says Greg Burdon, General Manager Parts. “In the old facility we used to have all of these items sitting on the floor.” SSI Schaefer Australia has now made sure that such items are stored appropri-

ately and away from any potential forklift damage.

The storage of small parts also needed attention. The new concept consists of a two-storey shelving area with a conveyor system connected to it, and a Pickomat vertical storage system. The conveyor system has been designed to take totes up to the second floor, where Volkswagen stores small and medium size parts.

“The team at SSI Schaefer moved heaven and earth for us and came up with ideas that ensured storage density, future growth within the facility and the handling of weird and ugly parts”, says Burdon. The facility also allows for quick and easy expansion, which was one of the project's special requirements.



Correct storage of bulky items

### Data and facts

#### Merseburger street

- ▶ Small parts warehouse: 2-storey racking system, approx. 200 m<sup>2</sup>
- ▶ Bodywork and painting centre: floating platform, approx. 200 m<sup>2</sup>
- ▶ Wheel store centre: 2-storey racking system for 3,400 sets of customer's wheels

#### Delitzscher street

- ▶ Small parts warehouse: 3-storey racking system, approx. 280 m<sup>2</sup>, integrated lift, fitted office

#### Richard-Lehmann-street

- ▶ Small parts warehouse: 3-storey racking system, approx. 280 m<sup>2</sup>, integrated lift



2-storey wheel store centre

## Everything in order

Volkswagen Automobile Leipzig GmbH – Consulting, system and transfer planning, and equipping three parts warehouses using the Locator principle

**Leipzig, Germany.** “Having everything in the correct place saves a lot of time, stress and hassle”. A highly heterogeneous range of parts with minimal fluctuations in the average stock levels is typical for most car dealerships. This is why storage in a route-optimised fixed location storage system is the key focus, taking into account necessary shelf sizes and equipment. An efficient solution is provided by the Locator storage system from SSI Schaefer.

As a result of the various part sizes, shelving bays within the basic layout come in different sizes and configurations depending on the goods stored. In the Locator storage System, each item is assigned an appropriate storage location with a fixed address according to its features. The articles are also positioned in accordance with ABC classification – the more often they are required, the closer they are to the outgoing goods section. The route-optimised storage of articles according to the Locator principle results in short walking distances. The result: Order picking time has been reduced by up to 70 %.

SSI Schaefer has implemented the Locator concept at all three new buildings of Volkswagen Automobile Leipzig GmbH, i.e. in the Delitzscher, Richard-Lehmann and Merseburger street locations. “Impressive depth of planning and an intelligent and process-optimised warehouse concept”, confirms Alexander Sauer, responsible Project Manager for the new buildings and modernisation of the sites in Leipzig as the reasons for awarding the contract. “A positive side-effect is that SSI Schaefer as a total solutions provider was also able to deliver key equipment for hazardous goods, substances

harmful to water, oil, articles with an expiry date, etc. Even the accessories right down to the smallest detail, e.g. clothes rails, were included in the system.”

“This means we have a tailor-made and flexible solution at every point in the system”, according to Sauer. “SSI Schaefer has proved to be a reliable partner and has implemented the complex overall project on schedule, including planning, production, assembly and installation. And the best thing was, within budget.”



Order picking in the small parts warehouse



Link from the conveyor technology to the order picking area

## Improved picking accuracy

**Ingleburn, NSW, Australia.** As the largest reseller and supplier in the automotive parts and accessories aftermarket in Australia and New Zealand and with almost 400 stores across both countries, Repco has continued its expansion with the recent development of its semi-automated Ingleburn Distribution Centre (DC) in New South Wales.

According to Maria Soto, Repco's Distribution Centre Manager, the 10,000 m<sup>2</sup> DC manages approximately 38,000 SKUs and was designed to improve picking accuracy and improve turnaround to

Repco and convenience stores in NSW. “Since moving to the Ingleburn DC, the productivity of the pickers has dramatically improved and we now have visibility of all the orders. The new Schaefer order picking system is linked to our internal software which allows real-time replenishment and ensures that all of the emergency orders and one-day turnaround deliveries are met on-time every time”, Soto said.

The Ingleburn DC has implemented a Schaefer conveyor system that runs through the picking area and feeds into

a sortation loop with seven despatch lanes. The complete system is managed by Schaefer's Order Fulfilment Software, which controls the release of orders and the paperless picking activity.

For storage of the small parts, Repco has implemented a full range of plastic containers and compartment options based on Schaefer's standard shelving systems which can be flexibly combined to meet the especially diverse storage requirements.



## New QX container series for the automotive sector

Highly automatable and with colour codes for container orientation

**Neunkirchen, Germany.** In modern industrial manufacturing, product quality requirements are rising continually. The key points here are often dimensional accuracy, cleanliness and a production process that is as streamlined as possible. The goal is to achieve high cost efficiency, and thus competitive production. The production tools also need to

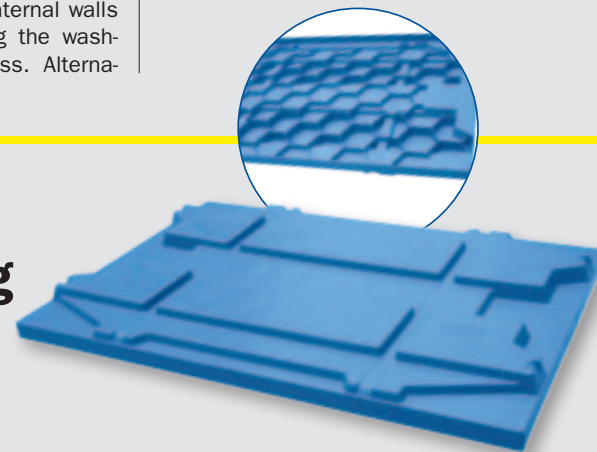
meet increased demands. For this reason, SSI Schaefer has developed the QX container series to rectify the common “issues” in the production and logistics chain as fully as possible. QX therefore represents form stability, automation and ease of cleaning.

The new container series is aimed specifically at the automotive sector, i.e. automobile manufacturers, component plants and suppliers. The containers are available in two basic dimensions 1,000 x 600 mm and 600 x 500 mm, to correspond to the basic industrial pallet dimensions of 1,200 x 1,000 mm, and in different article heights and designs. The QX container is designed for the use of moulded blisters housing form-fit components.

The QX container has smooth internal walls simplifying the washing process. Alternatively,

the side walls can be equipped with a locking device. This means that the blister does not stick to the component when the last component is removed, potentially causing a system fault. The QX containers also have colour codes that are clearly visible even when stacked. This colour code can be used to achieve container orientation and to differentiate various goods. The QX container can accommodate weights up to 70 kg.

The QX container series can be highly automated: With lifting slots and the straight design of the load bearing elements such as corner frames and the upper edge, the QX container offers numerous access points for gripper equipment. It also fulfils current purity requirements for modern industrial manufacturing. This is guaranteed by successfully completing the type IP44 classification test.



## VDA approval for new loading unit cover

Meets industry requirements

**Neunkirchen, Germany.** The logistics divisions of automobile manufacturers and their suppliers formulated the specifications for the loading unit cover for mini-load containers: Reduction in raw material usage with maximum stability, compatibility with existing systems and greater functionality.

The result of the new innovation from SSI Schaefer is clear. The A1208-1 type loading unit cover (LEAD) for the basic 1,200 x 800 mm dimension was ap-

proved and included in VDA recommendation 4500 in October 2011 by the German Car Manufacturing Association [Verband der Automobilindustrie (VDA)].

The new polypropylene variant in blue RAL 5012 is stack-compatible with the existing LEAD A1208 and is around 950 g lighter. The overall height of the new A1208-1 cover has been reduced by 10 mm, reducing the freight costs of single-product type empty goods transports by up to 20 %.

Special design innovations: The surface has cut-outs to house mesh box feet. To protect EPP foam containers, the underside of the lid is also designed to produce as large and smooth a contact surface as possible. This surface prevents the known effect of the reinforcing ribs being embossed on the top edge of the foam container, which in turn extends its service life.



The special automatic small container system design offers space for around 12,000 containers

## Small but perfectly formed

The automatic small container system offers exceptional storage density

**Nürnberg, Germany.** Korrodin GmbH & Co. KG primarily supplies customers in the automotive, aviation and aerospace markets, as well as the electronics industry, with a variety of tested connectors. The wholesaler's product range includes bolts, electronics and standard parts for the aviation sector.

As it was virtually impossible to cope with the order volumes manually, Korrodin decided to implement an automated storage solution. The objective was to reduce the error rate to zero and to design the interfaces as transparently as possible in the process. The plan was also to implement faster and more reliable

order processing to be able to supply customers within 24 hours. To achieve these goals, the company P@P Picking Systems was designated as general contractor who enlisted the skills and expertise of SSI Schaefer.

In an area of just approx. 1,500 m<sup>2</sup>, around 40,000 different items are available in the Korrodin logistics centre. The heart of the new system is the automatic small container system for medium and slow moving parts. It accommodates 12,000 boxes. With 22 levels and 5 containers per shelf, the special design achieves space savings of around 20 % compared to a mini-load system. The distance here between the top container edge and the lower shelf edge is just 14 mm, which required the precise installation of the shelf body. The shelf containers house goods of up to 15 kg. Larger and heavier articles, and articles with greater volumes, are stored in a mobile pallet racking.

The conveyor technology is also a special design, specifically for the lengthwise and crosswise transport of containers with asymmetric loading. Roller and belt conveyors and support mechanisms are used to transport the goods safely in any position.

“The new logistics centre has exceeded all our expectations. Simply what we have saved in time and movements I would have never thought possible”, summarises Alexander Gerlach, Managing Director at Korrodin.

## A business relationship based on tradition

The K+S Group has been using SSI Schaefer racking systems for around 30 years

**Wittenheim, France.** The company K+S headquartered in Kassel is an international business at the top of its game in standard/specialised fertilisers and is a world leader in the salt business. It has gradually equipped all its sites with SSI Schaefer racking systems. This business relationship has been intensified continuously. “On the procurement side, we follow the maxim at all sites of always using the same systems to store comparable products and components”, says Dr. Thomas Andreßen, Head of Systems, Global Standards and Controlling – Purchasing and Materials Management.

At K+S KALI Wittenheim as well, the “Made in Neunkirchen” warehouse equipment meet the requirements for increased transparency of stocks and achieving guaranteed materials provision for production. KALI has been using mainly wooden racks as well as racks welded in-house. Warehouse Manager Fabien Libman adds: “We didn’t have the option of accurately calculating its load bearing capacity.”

The former warehouse structures have given way to reliable systems and organisation. As with all new racking sys-



tems, i.e. pallet, cantilever and longspan racking, the integrated modular shelving system also offers flexible usage and options for expansion. Containers accommodate standard parts among other things, for direct access. “As part of the warehouse re-organisation, we have been able to reduce stocks from 500 t of iron to 200 t”, enthuses Joel Fiorani, Managing Director at K+S KALI Wittenheim. Communication was also a key component in the success of the project. “SSI Schaefer took great care that the fitters on-site also speak French.”



## An attitude to life – a success story

Output increase by 220 % and an error quota of virtually zero

**Eschwege, Germany.** Seven people, five computers, a camera, an endless number of shoes and a good idea. As the founders of online company skatedeluxe OHG Schimberg, Christoph and Katrin Hartleib, together with a couple of friends, sold skater shoes on Ebay, they had no idea of just how quickly a lifestyle can become a success story. The online specialist trade today, with over 12,000 different articles from more than 250 brands, provides everything for skating and snowboarding enthusiasts – from the right boards to streetwear, shoes and accessories. With over 240,000 customers and almost 100 employees at 3 sites, skatedeluxe has become a market leader in its sector in just 6 years. Demand increased so quickly that the space available soon became too small.

In the summer of 2010, skatedeluxe located a suitable building in Eschwege and contracted experienced logistics manager Jörg Kerber. He planned the system with the aim of guiding the young company into the future. Sufficient capacities, fast and clear processes, uncomplicated, error-free order picking as well as plenty of flexibility. These were the requirements from skatedeluxe for its logistics solution. "It was essential that the warehouse was ready in time for the 2010 Christmas business. We wanted to leave the entire process to a company that knows what it is doing and that we could rely on. We also had a number of specific requirements that needed to be implemented", continued Kerber.

SSI Schaefer designed the appropriate solution for an area of around 2,000 m<sup>2</sup>. In the process, the entire re-



Customised cantilever rack for storing skate- and snowboards



2-storey modular shelving system for 64,000 articles

location took place over a weekend, without having to stop shipments to customers. A 2-storey modular shelving system forms the core of the distribution centre providing space for almost 64,000 articles. 10,000 new containers, flat ones on the upper levels and high ones on the lower levels, as well as numerous drawer units provide sufficient space for the goods. For skate-

boards and snowboards, SSI Schaefer has created a storage system within the modular storage system with customised cantilever racking. A double-deep longspan racking system connected to this storage system with 3,500 storage positions for cartons is also used as intermediate storage for new deliveries that cannot be stored directly in the modular shelving system. A pallet racking

system in the incoming goods area accepts newly delivered packages. "And that is only the start as the company's growth continues unabated. We are already planning the next expansion project together with SSI Schaefer", says to Kerber.

## Innovation, performance and quality without compromise

**Gavá, Spain.** In November 2011, the third and final system extension in the central warehouse was commissioned for well-known fashion brand Desigual. The result is both the increase in storage capacities to more than 100,000 storage positions for articles and cartons, as well as an increase in order picking performance to more than 22 million delivery units each year in the "Clothes and Accessories" article sector. The main warehouse has a capacity of around 2.7 million storage units.

The system expansion has seen the aisles of the carton warehouse double from 3 to 6 units. The cartons are stored 3 deep and if required, fed in the pre-

cise sequence of the order picking line or to the direct outgoing goods area. The picking stations have been extended to a total of four units, increasing order picking performance by 50 %. At the stations, the order pickers place the relevant delivery units – in accordance with the information from the WAMAS warehouse management and material flow system – onto the feed belt. At peak times, up to 9,000 delivery units per hour are picked here entirely synchronously. All goods flows within the system are precisely harmonised with one another. This achieves maximum performance, both quantitatively and qualitatively, in the minimum of space.



Source: Desigual

**Desigual®**



# Multiple certifications

SAP has certified SSI Schaefer’s IT expertise by the admission to the Partner Edge programme



**Giebelstadt, Germany.** Beginning in mid-November 2011, SSI Schaefer is a strategic SAP Service Partner (Partner Edge Programme). It supports primarily medium-sized companies in selecting, introducing and operating SAP products. “Admission to the Partner Edge Programme confirms our strategic focus and at the same time rewards the company group’s international direction and its successfully implemented SAP logistics projects”, evaluates Michael Vollmuth, Head of SAP Consulting at SSI Schaefer.

The SAP expertise at SSI Schaefer has for some years been concentrated in Giebelstadt as an in-house department, with growing personnel numbers. With the focus on the sector-specific requirements of the users, it acts as a central SAP service provider for the entire SSI Schaefer Group. Its consulting offers the customer both comprehensive consultation services for the process optimisation of manual tasks as well as the necessary product range and the solutions expertise for the relevant IT hardware components such as servers, wireless data components and printers. The consulting also includes objective advice

on planning and implementing logistics IT, taking into account secondary and downstream processes as well as the impact on adjacent ERP modules, and a complete range of services for retrofit projects and for new logistics system installations. The warehouse-logistics.com internet platform operated by the Fraunhofer Institut for Material Flow and Logistics (IML) also confirms the IT expertise of SSI Schaefer with consulting, handling and customisation of the Extended Warehouse Management Systems SAP EWM.

At Turkish manufacturer of confectionery and baked goods, Sölen, SSI Schaefer created an automated distribution warehouse and successfully implemented SAP EWM. To reduce interfaces and costs, Sölen made the decision to implement SAP EWM as a central integration platform for the new intralogistics systems. Special feature: in terms of its functionality, the SAP warehouse software needed to take into account not only the current processes but also a high level of flexibility for future growth and permit adaptation to future business processes. Numerous tools and integrated functions ensure a high level of trans-

parency. “The warehouse volume has increased by a factor of 9, and goods flows are tracked with one click”, according to Serhan Er, Logistics Manager at the Sölen logistics centre in Istanbul.

Confirmation as an SAP service partner also includes expertise for all other logistics IT products from SAP. For example SAP WM/LES, that unlike SAP EWM, runs on the SAP ERP platform. For Rudolf Ostermann GmbH in Bocholt, a leading European mail order company selling joinery supplies and fittings, SSI Schaefer has installed a high bay racking system as well as creating the optimal IT link-up. The solution needed to run on the SAP WM already installed and ultimately control the processes in the new high bay racking system. Result: targeted, time and route-optimised control of the manual warehouse processes, transparent real-time inventory control as well as resource-efficient, more rapid and more accurate order processing in a standardised SAP system landscape.

References



3D layout of the system at Turkish manufacturer of confectionery and baked goods Sölen



# ES3 uses the fully automated order picking solution SCP from SSI Schaefer

**Keene, NH, USA.** ES3’s direct-to-store (D2S) program has been selected as the winner of the 2011 Supply Chain Innovation Award by the Council of Supply Chain Management Professionals (CSCMP). The D2S program provides a shared, collaborative warehouse for manufacturers and retailers, resulting in significant reductions in costs and carbon usage, improved speed to shelf, and increased on-shelf availability. The D2S solution was presented at the Annual Global CSCMP conference in Philadelphia. The Supply Chain Innovation Award™ recognizes outstanding innovations in supply chain practices that reduced costs, streamlined processes, saved energy, and improved operating efficiencies. Six corporate teams competed for the award, including ADT Security Services, Inc. in collaboration with Inmar, Inc.; The Dow Chemical Company in collaboration with Dr. Timothy Pettit of the Air Force Institute of Technology; IBM Corporation; Motorola Mobility; and Polo Ralph Lauren.

ES3 has the world’s largest grocery warehouse in York, PA. The facility is the first truly collaborative warehouse and serves as the Northeast mixing center for over

60 manufacturers. ES3’s D2S program provides daily delivery to retail stores directly from manufacturer inventory – eliminating the retail warehouse and a leg of transportation. This speed to shelf store is enabled through ES3’s streamlined processes and automation. ES3 uses the fully automated order picking solution “Schaefer Case Picking” (SCP) from SSI Schaefer.

About ES3

ES3 is an experienced team of supply chain experts focused on innovation that will make product move faster, more efficiently, and at less cost than traditional supply chain models. The ES3 network spans the entire US, and includes the world’s largest, multi-manufacturer collaborative warehouse, which services the Northeast with ES3’s revolutionary Consolidation and D2S programs. ES3 provides consolidated warehousing, case pick and transportation services to more than 60 consumer packaged goods manufacturers. [www.es3.com](http://www.es3.com)





## Relocation to DWC

SSi Schaefer has built a regional Head Office with distribution centre and uses the efficient aviation and logistics infrastructure in Dubai



Rashed Bu Qara'a (COO, Dubai Aviation City Corporation), Khalifa Al Zaffin (Executive Chairman, Dubai Aviation City Corporation), Al Mansoori (Minister of Economy, UAE), Rudolf Keller (CEO, International Operations, SSi Schaefer) from the left



**Dubai, UAE.** In Dubai World Central (DWC), SSi Schaefer has moved to their new regional Head Office and distribution centre. The DWC is a large-scale government project and will serve as the new air freight and logistics hub for international companies. Across 140 km<sup>2</sup>, the DWC covers the "Al Maktoum International Airport" with over 2,000 hectares of land for companies in the logistics and aerospace industry. In November, the Secretary of State for Trade and Industry of the United Arab Emirates, Sultan Bin Saeed Al Mansoori, celebrated the opening of the 5,000 m<sup>2</sup> regional headquarters of SSi Schaefer.

At the opening ceremony, managers of the Dubai Aviation City Corporation, Khalifa Al Zaffin and Rashed Bu Qara'a, as well as a number of representatives of different government institutions, Etihad Airways, Emirates Bank and others attended.

The Middle East and Africa are two important growth markets for SSi Schaefer and occupy a strategic position in the worldwide expansion programme. Due to the excellent location and good infrastructure at the DWC, SSi Schaefer can serve the entire region and operate with even greater flexibility.



Layout of the model factory at Landshut University

## Streamlined production in sight

**Landshut, Germany.** As a member of the Lean Factory Group, comprising leading production and logistics system providers, SSi Schaefer is presenting modular preparation systems at the numerous Lean Factory events. Using an actual production environment, the group will be demonstrating lean thinking to visitors.

Lean Production as the aim of many production sites describes the establishment of streamlined production based on the Toyota model. Process changes in line with lean principles focus on wastage, which is to be avoided at all costs. Typical types of waste in production include excess stocks, overly long transport routes, lengthy or unnecessary actions to access or locate items, and waiting times. Results of the process changes: value added activities are the focus, ensuring more efficient use of time. Turnaround times and productivity also improve. Thanks to customer orientation and scheduling production based on actual needs, stock levels and costs are reduced.

How a company can modify its processes in line with lean principles can be learned in the Lean Factory Group training centres, for example. The group includes well-known firms such as the Leonardo Group, Bosch, Würth, Orgatex, SAP, Toyota and SSi Schaefer. Every member brings his expertise for specific solutions to the group. Thanks to comprehensive synergies, lean solutions tailored perfectly to the customer are produced.

The Lean Factory Group is growing: in addition to the Hildesheim, Düsseldorf-Langenfeld and Stuttgart sites, Landshut has been added as a new training centre. All four locations provide visitors with the option of experiencing fully set up reference factories live and direct. Landshut as another permanent site for Lean Factory events means a win/win situation for both partners: the Lean Factory Group saves the installation, disassembly and transport of the installation, and the training facility can use the system permanently as a training and research tool. All current events can be found at: [www.leanfactory.com](http://www.leanfactory.com)



Prof. Dr. Markus Schneider, Professor of Logistics, Material and Production Management and Head of the PuLL Centre of Excellence, Landshut Production and Logistics

## Interview

Prof. Dr. Markus Schneider in interview with SSi Schaefer.

### Why have you decided to set up a model factory?

"We want to extend our students' expertise with the learning factory. In other words, knowledge conveyed in lectures needs to be reconciled with the experience in the actual model factory. As in practice, the Landshut students experience the separate areas of production planning and actual production: The 2D/3D planning and production control is carried out in the lab. Production then needs to be carried out in line with the stipulations in the learning factory."

### Is it only Landshut university that has a set-up of this type?

"Other universities, such as TU Darmstadt and RWTH Aachen, have learning factories, but each with specific focuses. Landshut is the university with the most complete program for learning factory from a lean principles point of view, ranging from virtual factory planning in 3D of a live milkrun, 5 different types of Kanban through to fully operational lean production."

### How do you describe the feedback on the model factory?

"The model factory has enjoyed an enthusiastic reception. The special thing about it is the condensed, efficient way of transferring knowledge. Once you've experienced a production run in the model factory, the basic lean principles tend to stick. If a picture speaks a thousand words, the learning factory speaks more than 1,000 pictures."

## Production in the tiger state

SSi Schaefer expands its in-house production facilities for conveyor technology in Malaysia



Brian Miles (Managing Director APAC/ME, SSi Schaefer), Ezahar Bib Abu Sairin (SR Town Council Secretary), Rudolf Keller (CEO, Int. Operations, SSi Schaefer) from left

Australia/New Zealand. The outsourced production of many conveyor technology components to Malaysia is enabling SSi Schaefer to offer market-compliant quality conveyor technology with a high level of consulting expertise.

In his speech, Rudolf Keller emphasised the significance of the Simpang Renggam site, where the company set up its production hall 13 years ago. The new factory was built in Malaysia, because SSi Schaefer can count on reliable and experienced staff here. With over 300 employees and continuous growth rates, production in Malaysia has been exceptionally successful.

**Simpang Renggam, Malaysia.** The new production site for conveyor technology was officially opened at the end of November 2011 by Rudolf Keller (CEO, International Operations, SSi Schaefer). The guests included a number of high-ranking representatives from the political and business world, among them Tuan Haji Karim, from the District Office, as well as YB Liang Teck Meng, Member of the Parliamentary Assembly of Simpang

Renggam. The production hall for conveyor technology components is 5,000 m<sup>2</sup> in size and is adjacent to the existing 22,000 m<sup>2</sup> production site. In the new hall, a large range of conveyor technology designed and developed by SSi Schaefer will be manufactured in the future.

SSi Schaefer is now focusing on integrated warehouse solutions and combi-solutions, especially for markets in Asia and





2 pick-to-tote workstations are connected to 6 Schaefer Carousel Systems

## The right amount, every time

Symbion applies automated solutions in order picking

**Perth, WA, Australia.** Symbion, one of the leading pharmaceutical wholesalers in Australia, distributes a wide range of prescription and "Over the Counter" products to pharmacies and hospitals. The company operates a number of distribution centres around Australia, and is progressively implementing automation to reduce operating costs, improve fulfilment quality and shorten order response times.



In 2010, Symbion made the decision to set up a goods-to-person picking system from SSI Schaefer at its distribution centre in Perth. It consists of six Schaefer Carousel Systems (SCS) serving two high productivity pick-to-tote workstations. This way, up to 6,000 slow moving SKUs are stored in a compact area of just 1,000 m<sup>2</sup>.

Incoming goods are decanted into storage totes, which are automatically stored directly into the SCS. Particularly small and slow moving items are stored in totes with dividers.

As orders are released into the system for picking, order totes are routed via conveyor to the two goods-to-person pickstations which each handle seven orders at a time. The SKUs required to fulfil the orders are automatically retrieved from the carousels and delivered to the pickstations as required. A screen at the station shows the operator the quantity to pick from the SKU tub



and displays above the order totes indicate which orders are to receive items and how many. Light curtains above the order totes are used to ensure items are placed in the correct totes and optionally to automatically acknowledge the pick. Where they are multiple SKUs stored in a tub, an overhead light array highlights the compartment out of which the operator must pick. Because the goods are brought to the operator at the pickstation, no walking is required and operators can pick up to 1,500 pieces per hour.

Software by SSI Schaefer manages the entire goods-to-person picking system. It receives data from the host computer and controls the storage and routing of the storage totes as well as the conveying and processing of order totes. The software also provides a comfortable user interface, which allows access to helpful reports and statistics.

## Compact projects

### Large quantities stored with ease

Choithram sets new standards for the Middle East with the SOS



## Stone age meets RFID

An electronic mobile racking system with soft start/stop function for historical collections.

**Helsinki, Finland.** Kulttuuritalo is home to the State Office for Archaeology, among other things. The organisation is the central authority responsible for the management of ancient finds and for the protection of historical monuments. The archaeology section is in charge of research, care and protection of monuments, care of the national, archaeological collection and archives, planning of exhibitions and public relations information.

For this respected institution, SSI Schaefer Finland supplied a light load mobile racking system controlled by RFID technology. The requirements for storage compartment dimensions, surfaces and shelf loading were no less exceptional than the location of the system. The order was awarded to SSI Schaefer via the Finnish sales agent Teklacon. Based on customer requirements, the SSI Schaefer project team developed a creative solution: A new ELX with R 1000 as an archive compartment rack-

ing system. The shelf bases are 450 mm deep and reinforced on the underside via cross bracing. The maximum load per shelf base is 110 kg.

The area was not only limited by insufficient space, but also by special safety measures on floor, ceiling and wall surfaces. Everything to preserve the cultural and historical inheritance. The security and authorisation functions of the RFID technology, that also controls the mobile bases, were particularly important. The safety light barriers and fences in important areas conform to the latest standards. The storage capacity has even exceeded the original architect's plan. Due to the special character of the stored goods, a special custom warehouse system design was required. The original layout needed to be modified in terms of mobile vehicle blocking so that a sufficient number of aisles was open simultaneously.



constantly growing business demands", says Choithram COO, Wickus Saunders. The incoming containers are allocated to one of the dedicated channels. The channels have a depth of 24.8 m and permit storage of up to 23 pallets per channel.

The battery-free Schaefer Orbiter System (SOS), which is runs with the latest power cell technology, is working continuously 24 hours a day to fulfil the demand. The achieved storage density and utilisation of the available warehouse space have considerably increased the productivity at Choithram.



Kulttuuritalo is home to the State Office for Archaeology





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