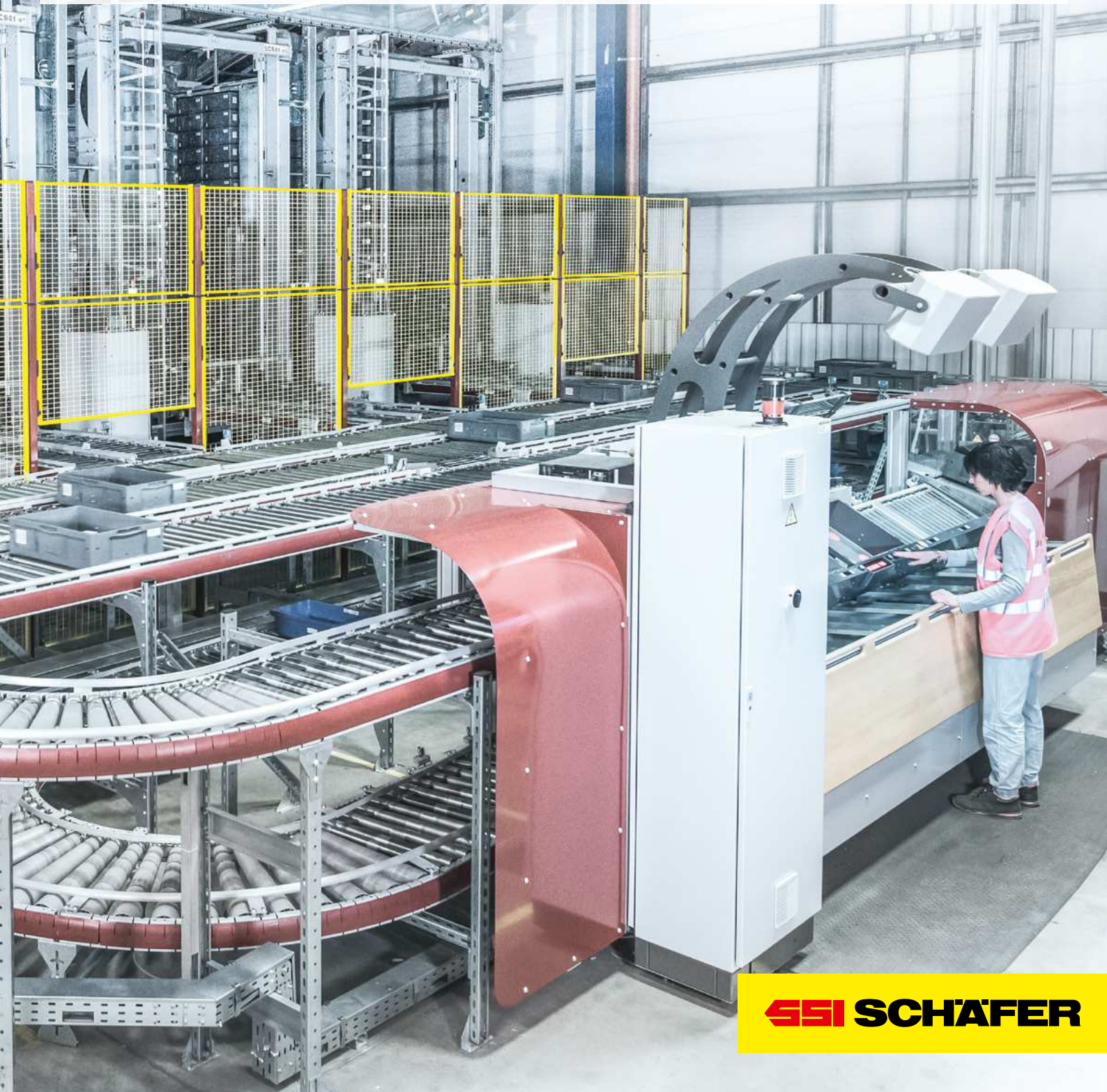


# CASE STUDY

Reference United Drug, Ireland:  
State-of-the-art distribution center  
for pharmaceutical wholesaler

[ssi-schaefer.com](http://ssi-schaefer.com)



**SSI SCHAEFER**

# EFFICIENCY INCREASE BY CLEVER EXPANSION OF EXISTING PHARMACEUTICAL WAREHOUSE

United Drug Wholesale is Ireland’s leading distributor of pharmaceutical items such as medication, health and care products. The company is part of the McKesson group specializing in healthcare services worldwide. United Drug has branches in Dublin, Ballina, Limerick and Belfast to supply public pharmacies as well as hospital pharmacies in Ireland and the UK with the necessary pharmaceutical items.

Due to the continuous growth of the pharmaceutical supply branch and to maintain the market leadership, an extension of the existing distribution center in Dublin was necessary. SSI SCHAEFER was chosen to plan and install the new ware-

house. The intralogistics expert was commissioned to upgrade the picking system from 7,000 to 12,000 order lines per hour, integrate parts of the existing warehouse and automate large parts of the system.



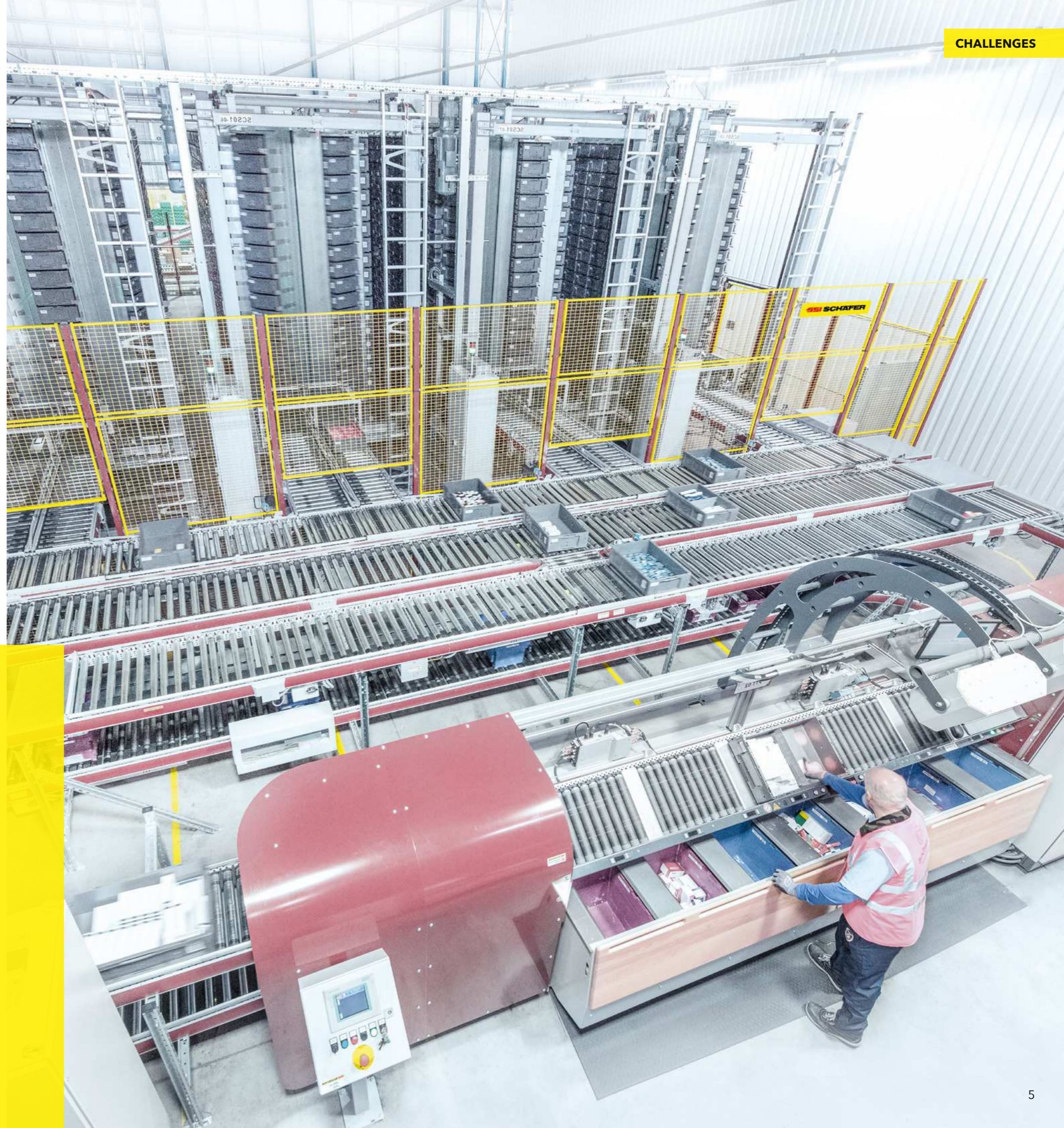
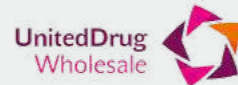
**The United Drug distribution center includes a product portfolio of around 10,000 items. More than 6,000 parcels are sent every day.**

# CHALLENGES

Extending the system during operation was one of the central challenges for implementing the new warehouse under a timescale of only 18 months.

“SSI SCHAEFER allowed us to maintain our day-to-day operation during the retrofit and extension, ensuring a smooth transition to the new technology. We focused on cost efficiency and a sensible degree of automation. SSI SCHAEFER provided a clever solution to achieve a considerable increase with the same footprint during operation.”

Sean Coyle, Divisional Managing Director  
United Drug Supply Chain Services



## PROJECT OBJECTIVES

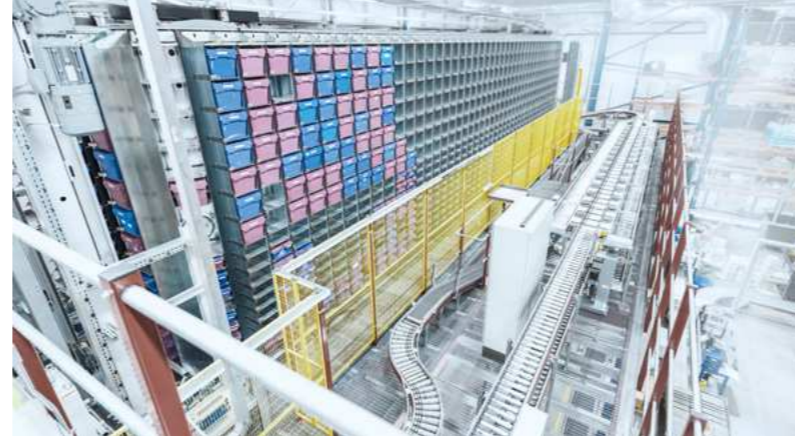
- Significantly increase picking performance from 7,000 to 12,000 order lines/h
- Avoid idle times during picking process and significantly increase picking efficiency
- System for delivery tracking to be prepared for tracking and tracing guidelines of pharmaceutical products
- Clear and structured storage process to increase quality
- Space optimization throughout the warehouse
- Replace manual replenishment process
- Highest possible redundancy
- Options for future extensions



Repacking of delivered goods at ergonomically optimized goods-in workstations



Storage and retrieval SCS



SCS as shipping buffer



A-Frames with double filling point



Automatic picking of fast movers

## STEP-BY-STEP IMPLEMENTATION OF NEW SOLUTION

To extend the existing system during day-to-day operation, SSI SCHAEFER implemented the new installation with a modular solution in five steps. With a product range of about 10,000 items, the overall system has been designed to process more than 6,000 orders per day.

- The cartons are supplied on pallets to the goods-in workstations equipped with pallet lifting tables where they are repacked into storage bins by the goods-in staff.
- Fast and medium movers are transported on the conveying system to the Schaefer Miniload Crane (SMC) with two aisles for storage. The remaining products are stored in the Schaefer Carousel System (SCS), which can accommodate 11,000 bins.
- The orders are started automatically; manual picking from flow racks is accomplished using RF technology. Fast movers are picked from the fully automatic picking system A-Frame, which is equipped with a double filling point and connected to the SMC by flow racks.
- Picking from the SCS with two connected Pick to Tote workstations is done according to the goods-to-person principle. A picking performance of 1,000 picks per hour is achieved at each work station.



Automatic delivery note insertion

### Optimized shipping preparation

Once order picking has been completed, bins are conveyed to the shipping preparation area. The Schaefer Compact Insertion (SCI) automatically adds delivery notes to the bins that are then buffered temporarily in one of the four SCS. Drop sequence sortation optimizes the goods-out order of the bins in the shipping area. Bins and full case cartons are supplied to the pharmacies in one delivery.



Optimized sequence in goods-out

### Logistics software WAMAS®

The system is perfected by the self-developed logistics software WAMAS® that controls the flow of goods in the system. Thus, performance of material flow and throughput rate, as well as the balanced load of conveying system and different work stations can be optimized.

# FLEXIBLE AND SCALABLE: THE SOLUTION COMPONENTS

## Schaefer Miniload Crane (SMC): Maximum storage capacity for fast and medium movers

SSI SCHAEFER installed an SMC with two aisles and more than 21,000 bin storage locations to efficiently supply the fully automatic picking system A-Frame. The Schaefer Miniload Crane is the perfect solution for maximum usage of vertical storage and minimum use of floor space at the

same time. For picking fast and medium movers, the storage-retrieval machines retrieve the bins automatically and transfer them to the dynamic channels. The bins are provided at optimum access height and position for replenishing the A-Frames.



A-Frame replenishment from flow racks



Storage and retrieval of fast and medium movers

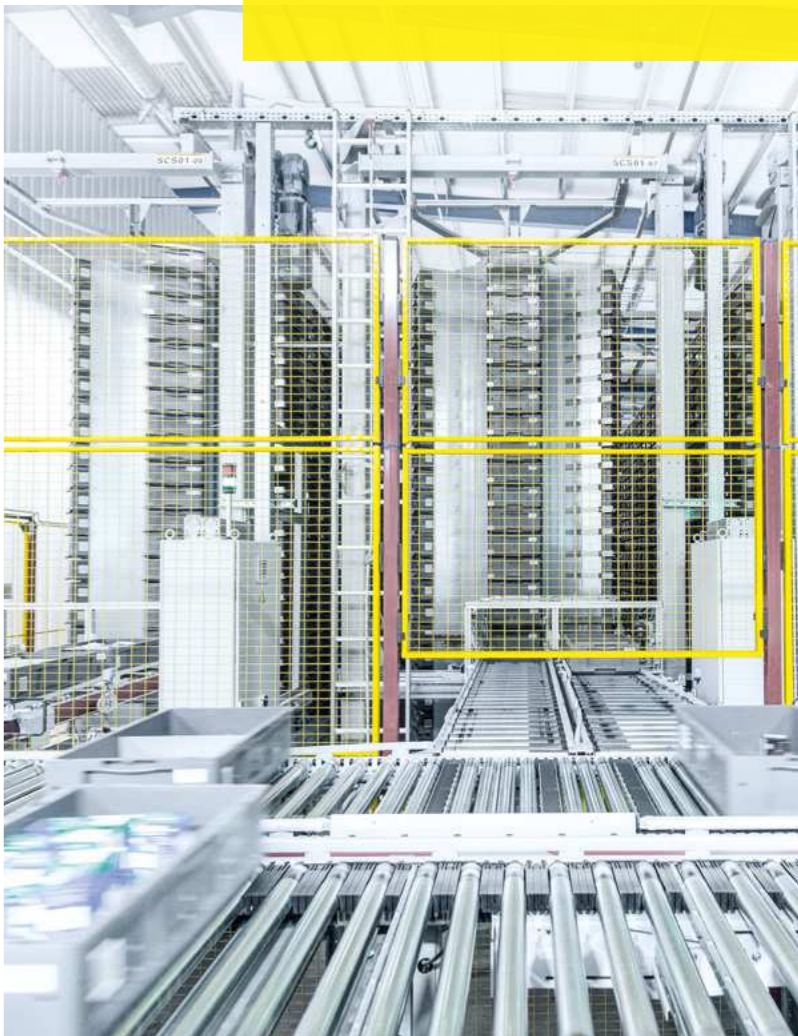
## Schaefer Carousel System (SCS): Efficient storage and ergonomic, error-free picking

For storing and picking medium and slow movers, SSI SCHAEFER implemented eight Schaefer Carousel Systems with 11,000 bin storage locations and two ergonomic Pick to Tote work stations. The goods stored in the carousel are supplied to the Pick to Tote work station according to the goods-to-person principle. Thanks to these optimized work processes, the pick rate per operator can be increased up to 1,000

picks per hour and the error rate reduced to almost zero - and all this with most gentle product handling. Thus, the system guarantees a high level of performance with highest profitability. For fast provision of the previously picked orders in the correct sequence, four SCS with over 6,000 bin storage locations were installed as a shipping buffer including drop sequencer.



Goods-to-person picking with Pick to Tote



SCS with 11,000 bin storage locations

“We clearly opted for SSI SCHAEFER to plan and realize the warehouse in Dublin. In a period of only 18 months, we could double our performance capacity – thanks to an economic solution that increased the automation degree in our warehouse and was extremely cost-effective. We were highly satisfied with SSI SCHAEFER’s implementation”.

Sean Coyle, Divisional Managing Director  
United Drug Supply Chain Services

# FACTS AND FIGURES

## System key figures

SKUs	10,000
Order lines/day	100,000
Orders/day	6,000
Bins/hour	1,200
Picking peaks	Winter
Degree of automation	83%
Number of shifts/day	2 (60%, 40%)

## SSI SCHAEFER scope of supply and services

Conveying system	
Carton & bin conveyor	1,400 m
Load carriers	Carton, bin

Storage systems	
8 Schaefer Carousel Systems (SCS)	11,000 bin locations
2 Schäfer Miniload Cranes (SMC)	21,000 bin locations
Flow racks	

Picking systems	
2 Pick to Tote work stations	
A-Frame with double filling point	
Manual picking stations	

System components	Software solution
4 SCS as shipping buffer with drop sequencer, 6,000 bin storage locations	WAMAS®
12 goods-in work stations	
4 Schaefer Compact Insertions (SCI)	
Full case integration	





## 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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