

## TechnoAlpin AUTOMATES PROCESSES FOR GREATER EFFICIENCY AND CAPACITY IN THE WAREHOUSE

More performance, more storage capacity, more functional space - to achieve all these goals, the South Tyrolean company TechnoAlpin, world market leader in snow-making equipment production, commissioned Pierau Planung with reorganising the storage and logistics processes in its existing buildings in Bolzano. With their concept, the Hamburg logistics experts have come up with a solution that uses automated warehouse technology to increase the efficiency of all processes within inventory logistics. Automation enables reliable and constant delivery, which is also a bonus for TechnoAlpin in terms of securing their location, as it is difficult to find employees in the region. In addition, special conditions for the depreciation of investments offered by the "super ammortamento" Italian tax law are met.

"Pierau Planung has already successfully implemented projects for other companies in Bolzano and people here know each other well," explains Markus Mahlknecht, warehouse manager at TechnoAlpin. "For example, the positive experience that the South Tyrolean market leader for outdoor products had with them in the context of future planning, led us to get the Hamburg logistics experts on board for the much needed conversion of our inventory logistics."

### Restructuring the inventory logistics

The snowmaking systems division is characterised by project business. Complete installations are designed, then assembled from individual technical components and



Dear Readers,  
In this issue of BATCHPOINT we will be reporting on interesting projects for three well-known customers: Internetstores, TechnoAlpin and AMAZONE.

At Internetstores we will be looking at our introduction of a new highly efficient e-commerce returns processing system. At TechnoAlpin we will examine how we restructured the inventory logistics and automated warehouse technology and at AMAZONE we will show you our development of an efficient spare parts logistics system.

However, it's not always all about the really big solutions. Considerable improvements in logistics processing can often be achieved with surprisingly little effort and on page 3 you can find out more about 'Quick Wins' and how to implement them.

The news is about us on page 8: In the future we will appear with joined forces under a new flag. Pierau Planung was acquired by the US logistics specialist Fortna®, The Distribution Experts®. Even if our team, management, offices, brand and services will remain as you are used to, we can imagine that you have questions – we will be happy to answer them, perhaps in a personal meeting at LogiMAT or IntraLogistEX?

We hope you enjoy reading this edition of BATCHPOINT!

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## PROJECTS

finally dispatched. This process requires a corresponding lead-time and is time-consuming. For TechnoAlpin, this means that the components required for each installation must be stored temporarily. Furthermore, the spare parts business also has to be taken into consideration in terms of space and processing. The aim here is to optimise the quantities that are stored and keep them readily accessible as part of the customer service. Previously, the warehouse was housed together with production in one building and was reaching its limits.

“Now that production has moved to a new building as part of our long-term growth strategy, there are new opportunities for logistics,” says Markus Mahlknecht. “Linked with this are new requirements, for example, in order to cover the whole spectrum we need to be able to store as many pallets from as wide a range as possible.” In order to set this in motion from a technical point of view, Andreas Löwe, project manager at Pierau Planung, examined beforehand the possibilities for automating the warehouse technology. Arrangement of the functional areas was also checked, reassigned and dimensioned.

“The previous storage solution consisted exclusively of pallet bays,” says Andreas Löwe. “However, many parts are so small that they are more suitable for container storage. In addition, the relatively low hall height of approx. 6m, the difficulty of finding staff and the possibility of depreciation through ‘super ammortamento’ all mean that automation is the way to go here.”

### Automation for optimised processes

Specifically, this means that the optimal solution is the introduction of two automated systems: the AutoStore® system for components that can be stored in containers and autonomous forklifts to operate the pallet racks. AutoStore® provides very compact storage due to the vertical stacking of the containers.

» The optimal solution presents itself by the introduction of two automated systems. «

“A ‘grid’ system is mounted above the container stacks and picks up the containers independently via the brand-new Black Line robots. The high approach speed enables the powerful robots to move the containers from AutoStore® via a connecting platform straight to the ports at the packing stations,” explains Andreas Löwe. “In the pallet area, fully autonomous forklifts take over this task and because they can move flexibly, they also guarantee direct transport to the packing stations.” Both systems enable dynamic and fully automated goods-to-man order picking, so that conventional conveyor technology can be dispensed with.

At TechnoAlpin, however, the new systems not only simplify processes but also change demands placed on employees. In a region where skilled labour is scarce, this is an important advantage for companies. Employees, whose activities have been taken over by the new technology, will have new responsibilities in other logistical work areas, previously impacted by a lack of staff.

For automation to make a lasting contribution to the efficiency of all processes, it must be optimally managed and controlled. It is, therefore, essential to integrate it into the warehouse management system (WMS). TechnoAlpin is responding to this need by introducing an extensive, independent new warehouse management system.

“Following implementation of the new modern system, not only will we meet our current specifications, but we will also have the option of expanding them as required with additional containers, robots, workstations or even forklifts. We will increase our storage capacity from 2,100 pallet spaces by an additional 10,000 container spaces in the AutoStore® and through automation we will achieve higher performance across the board,” concludes Markus Mahlknecht. «

# TECHNOALPIN®

*Snow-making systems such as this snow cannon use supplied water to produce snow technically using an air stream, thus ensuring perfect slopes.*



© TechnoAlpin



# ★ NEW QUICK WINS ★

## GIVE YOUR LOGISTICS A BOOST

Our team of consultants have seen many different logistics processes ranging from small to big, from manual to automatic and from 'promising potential' to 'peak performance'. We asked them what their top tweaks for improving performance with minimal effort from 2019 were.

### ABC in the warehouse

Inadequate attention to the ABC article structure when selecting storage locations and shelf locations increases workload and reduces performance in picking or replenishment.

- ★ **QUICK WIN** ★ Ergonomically refined and performance-enhancing placement of the most popular articles. Calculate path optimisation in the warehouse. Separate processing for 'top hits' and 'slow burners'.

### Storage

It doesn't make sense to store older or seasonal items together with standard items. They are rarely accessed but occupy prime storage locations and extend walking distances in the manual warehouse, which in turn reduces picking performance.

- ★ **QUICK WIN** ★ Store older items in a separate area or building, or in automatic warehouses in storage bins that are accessed at aisle ends or at top shelf level.

### Special processing Single unit shipments/single unit shipments containing only one item

Single unit shipments/single unit shipments containing only one item of goods are processed together with multi unit shipments thus passing through the entire process chain and creating unnecessary workloads when clearing batches for example.

- ★ **QUICK WIN** ★ Independent processing of Single unit shipments and single unit shipments containing only one item done in parallel before further processing with collective picking and an autonomous packing process.

### Ergonomics

Established processes and workstations are often unproductive and bad for employees' health. Superfluous movements and unnecessary routes - no matter how small - can slow down processes and put a strain on employees.

- ★ **QUICK WIN** ★ Take a fresh and critical look at individual work steps, be objective, simulate them. Slim down the design of workstations, focusing on ergonomic aspects. Here are some examples: use slip lid cartons instead of flap cartons, avoid 90° body rotation, consider left / right-handed employees, optimise dimensioning of workstations and avoid handling unnecessary loads.

### Suitable shipping packaging

Transporting air is bad for the environment! Any unnecessary use of filling and packaging materials costs money and gives bad customer service. The huge variety of different packaging available makes automation of packaging processes difficult.

- ★ **QUICK WIN** ★ Use an article's metadata and exclude its specific properties. Save packaging and filling material costs by balancing the number of standardised packages with the pre-determined packaging. Use volume-optimised packaging technology.

### Optimised storage locations

Storage areas that are too large or too small in range are uneconomical and reduce performance. Likewise, incorrectly dimensioned storage bins reduce overall performance.

- ★ **QUICK WIN** ★ Adjust storage bin size, type and arrangement to the respective goods (evaluate article master data!) as well as access frequency. This saves space and makes picking easier. Store reserve and picking stock separately. Although this requires stock transfers, overall efficiency is increased.

### Tidy up!

Goods that are stored temporarily in aisles, old cardboard and work equipment get in the way in the warehouse, slowing it down and making detours necessary.

- ★ **QUICK WIN** ★ Tidy up, provide areas for old cardboard packaging and temporary storage, keep walkways clear with floor markings.

### Music

Is the warehouse dominated by background logistics noise? This can subconsciously stress employees!

- ★ **QUICK WIN** ★ Music can set the rhythm in logistics, especially in picking and it increases the feel-good factor too!





# AMAZONE SETS

## THE COURSE FOR THE FUTURE WITH NEW SPARE PARTS LOGISTICS

Increased storage capacity, higher performance and improved efficiency in the field of spare parts logistics were the planning targets set by the experts at Pierau Unternehmensberatung GmbH for AMAZONEN-Werke H. Dreyer GmbH & Co. KG. Specific instructions were that structural measures should be avoided as far as possible and thanks to the modular logistics concept designed for the existing building this has been achieved. In future, the internationally renowned manufacturer of agricultural and municipal machinery from Lower Saxony will not only be able to store in an optimised manner, but will also attain more efficient use of capacity and significantly improved throughput times.

The partial relocation of production to a new building in Bramsche has freed up space at the current site at Leeden, which can now be used for the optimised logistics of spare parts. The Pierau Planung team, led by project managers Dirk Wohlgemuth and Jens Pommerning, developed a warehousing concept that encompasses the conversion of space, the integration of specifically selected technology and optimised processes.

### Ensure availability of spare parts

At present the spare parts logistics is located at the AMAZONE headquarters in Hasbergen-Gaste. Since the 40,000

or so articles stored there vary greatly, particularly in terms of their properties and metadata, they are distributed among different storage systems.

„Maintaining the availability of our very specific range of articles, including some large-volume components, over a longer period of time represents excellent service and our customers appreciate that,” explains Carolin Wiebusch-Rakonjac, head of the spare parts department at AMAZONE. However, a strong growth in sales led to a gradual decrease in storage capacity.

In order to ensure that all processes, IT and the performance of personnel continue to run smoothly, spare parts



Visit us at Hall 1, Stand G59



## EXHIBITION POWER

Pierau Planung at LogiMAT and IntraLogisteX 2020

LogiMAT will open its doors in Stuttgart from 10th – 12th March 2020 and Pierau Planung will be taking part again this year. You will find us in our usual place in Hall 1 where at stand G59, the entire management and our team of consultants will be on hand to answer your questions, provide specialist information and engage in a knowledgeable exchange of ideas. We look forward to a successful trade fair and to seeing you! How about a visit of our colleagues from Fortna® at Hall 6, Stand D60?

*Fit for the future with new spare parts logistics: The Leeden site provides AMAZONE with good conditions for functional optimisation and structural extensions.*



© AMAZONEN-Werke H. Dreyer GmbH & Co. KG

logistics will in future be processed at the AMAZONE site in Leeden. Approximately 11,000 m<sup>2</sup> of hall space and around 9,000 m<sup>2</sup> of outdoor space are available for the complete logistical processing at the site of the previous production facility. „The structural arrangement of the halls in Leeden offers good conditions for both functional optimisation and structural extensions. Consequently, efficient processes can be ensured in the long term and the capacity of individual storage areas can be expanded if required,“ explains Jens Pommerening.

**From linear processing to central consolidation**

The detailed planning included measures such as the introduction of new warehouse and order picking technology. This fulfilled all requirements for efficient spare parts logistics including fast availability, high service level, adaptation of the storage locations to articles with widely differing dimensions as well as optimisation of the flow of goods and individual work processes. In future, A, B and C articles will be stored and retrieved fully automatically in an automatic small parts warehouse (ASPW). Articles that are not suitable for the ASPW will be transferred directly from incoming goods to manual storage areas. This includes a narrow-aisle warehouse for pallet-ready articles, which is managed by semi-automatic order picking forklifts, as well as storage areas specifically designed for the storage of long and bulky goods.

AMAZONE has achieved a further increase in storage capacity by optimising the storage space dimensions within the scope of planning. In order to fully exploit this optimisation, the quality of the article master data is of paramount importance. High efficiency is achieved in incoming goods through a semi-automatic process for recording geodata.

„One of the most important innovations is that in future AMAZONE will no longer process orders in a linear way instead they will be centrally consolidated and processed in parallel,“ says Dirk Wohlgemuth. Through this finely tuned process and the combination of fully automatic container supply from the ASPW together with manual order picking, significantly improved throughput times and high performance can be achieved.

The new building for the production expansion in Bramsche has now been completed. Following the move there, the new AMAZONE spare parts logistics in Leeden is gradually taking shape. „This means that our spare parts management is ideally positioned to cope with our target future growth and to guarantee reliable customer service,“ says Carolin Wiebusch-Rakonjac.



© AMAZONEN-Werke H. Dreyer GmbH & Co. KG

*Stock, availability, service and costs – having the spare parts logistics for agricultural machinery giants like the Pantera 4502 from AMAZONE under control is a big task.*

After a successful trade fair presence last year, Pierau Planung’s team of experts will once again travel to Coventry in the UK in 2020 from 31st March – 1st April, where they will be exhibiting at IntraLogisteX. At the nation’s largest annual event for the intralogistics industry, our team of experts will be available to answer questions from interested visitors on all aspects of intralogistics and project management. Björn Brunkow and Ric Nuttall as well as our colleagues from Fortna®, Michael Marienfeld and David Bingham, will be ready and waiting at our stand 612 in the Ricoh Arena.

**INTRALOGISTEX**  
31<sup>ST</sup> MARCH & 1<sup>ST</sup> APRIL 2020 - RICOH ARENA, COVENTRY

**PIERAU PLANUNG**

Visit us on Stand **612**

[www.intralogistex.co.uk](http://www.intralogistex.co.uk)



# INTERNET STORES GETS READY WITH RETURNS

# STORES TO GROW NEW SYSTEM

Internetstores GmbH from Stuttgart/Germany is aiming for an annual growth rate of more than 20 per cent. The company, which belongs to Signa Holding, operates 40 online shops shipping bike and outdoor articles to 14 European countries. To ensure that the logistics can keep pace with the company's success, Pierau Planung has been commissioned to develop a comprehensive concept for expanding capacities, which will be phased in by 2022. In the current project stage, an innovative returns system for efficient processing of bicycle accessories and tyres is being introduced at the Untertürkheim location.

With around 900 brands and 100,000 products in its range, the e-commerce company, Internetstores, has been on an upward trajectory for years. At the logistics centre in Esslingen, investments in optimisation measures have been regularly made – most recently in automatic direct order picking. 'In the interim we have exhausted all available possibilities in terms of space usage in the incoming goods area and productivity in returns processing,' explains Markus Knöller, Head of Group Fulfilment & Logistics SIGNA Sports United. 'For the coming seasons we already require higher productivity in returns processing as soon as possible. For this very reason, we have once more brought in support from the trusted team at Pierau Planung to come up with a suitable solution for our Untertürkheim site.'

### Efficient returns processing for bicycle accessories and tyres

Immediate customer booking following goods receipt, fastest possible goods availability, quality comparison with new goods, use of original packaging, selec-

# INTERNET — STORES



The logistics centre of Internetstores in Esslingen/Germany.

© Internetstores GmbH



Stocked bicycle tyres in the logistics centre in Esslingen. In future, these will be transported in the hall on a modified overhead conveyor system originally developed for textile logistics.


tion of articles without stock, best productivity in processing – are all characteristics of modern returns processes. ‘Together with Heber Fördertechnik and their partner Melkus Mechatronic, we have developed existing technologies into an innovative, highly efficient returns system for Internetstores,’ explains Andreas Spitzki, Project Manager at Pierau Planung. ‘An innovative driverless transport system has been developed under the working name of “E-BoxT” for articles suitable for containers. In addition, an overhead conveyor system, originally developed for textile logistics, has been modified for transporting bicycle tyres.’

Incoming returns are automatically opened at the processing workstations and sorted into containers according to rework groups. The “E-BoxT” units take over further transport between work areas, for example further processing in the textile and hardware returns rework department. They also store and retrieve the containers in a specially designed horizontal storage unit. Autonomous transport and the possibility of interim storage results in a decoupled, uniform use of the workstations and can prioritise certain groups of goods. The “E-BoxT” units can also feed the containers directly onto the conveyor system towards the warehouse. This ensures a smooth integration of the new returns department into the inventory logistics.

Of particular note is that all components of the new returns system can be used and expanded in a modular fashion. This ensures smooth scalability as the volume of returns increases. Thomas Petrovic, Head of Project Management Logistics Internetstores, was immediately impressed by the efficiency and flexibility of the solution and explains, ‘Our calculations have shown that with 120 single cycles per hour to be performed here, 250 operations would be required for a conventional return system with conveyor technology. With the “E-BoxT” system, we need just eight vehicles for this result, achieving financial savings of 30 percent and significantly reducing energy consumption.’

In the new returns processing system, work procedures have been automated where appropriate, for example in the areas of film packaging and package opening. The workstation design was also revised and redesigned according to optimal ergonomic aspects. An easy-on-the-eye lighting concept, ergonomic height adjustability as well as a separate temperature control at each workstation guarantee an ideal working atmosphere for each employee. ‘An optimal work surface length, which avoids unnecessary, shortened steps, also results in a significant increase in productivity,’ says a satisfied Eduard Jesser, Head of Returns Internetstores. ‘Thanks to these measures, we have achieved the best

possible improvements in processing and the articles are quickly taken on to the resale process.’

Part of this innovative returns concept with the newly developed AGV, transport of loose textile parts and the latest workstations can be seen in Pierau Planung’s showroom and can be tried out with your own return. 

## INTERNET — STORES

### QUICK FACTS

Employees:	750
Countries developed:	14
Multinational company locations:	4
Parcels sent per day:	11.000
Digital retailers in Europe:	40
Full-Service Stores:	7
Service partners:	160+

## Dear Readers

In the past years we have continuously expanded our services and portfolio. In search of ways to offer our customers further advantages and to strengthen our international presence; we were in close contact with the US company Fortna®, The Distribution Experts®, for several years. After intensive planning of the further development of both companies, our common future is now taking concrete shape. We would therefore like to inform you personally in this article that, with effect from 1.1.2020, the shares in Pierau Unternehmensberatung GmbH have been fully taken over by Fortna®. It is the declared goal of all those involved to ensure that Pierau Planung's previous business with the proven team on site remains unchanged and continues to grow. Pierau Planung brings to this business relationship its special intralogistics expertise and a central location in Europe. Fortna® complements this with an extended range of services, its own logistics software suite and the strength of a globally operating organization.

Irrespective of the takeover by Fortna®, we have made long-term preparations for a change that will take place in 2020: Lothar Hättich will leave our company on 30 June. After 31 years with the company, during which he contributed to the further development and success of Pierau Planung with great commitment, first as a consultant and then as Managing Director, he is taking his well-deserved retirement. We would like to thank Lothar Hättich for his tireless efforts and hope that we will continue to receive holiday greetings from the most beautiful places in the world from him for many years to come!

We have found a successor in our own ranks: Hubertus Dieckmann will become the third managing director alongside Arne Pierau and Björn Brunkow from July

2020. Many in the industry will know our new management member from his 20 years of service for Pierau Planung and his many successfully completed projects as a logistics and especially logistics IT planner. For us, it is a stroke of luck to be able to fill the gap created by the departure of Lothar Hättich so well. This internal generational change will strengthen the stability of Pierau Planung and provide our customers with another very reliable and competent management contact.

In summary: For our customers, neither contact persons nor our services will change. Together with Fortna®, we can offer a much broader range of services than before. We understand if you would like to discuss these changes in detail with us – we are therefore happy to be at your disposal by telephone or in person at LogiMAT (Hall 1, stand G59, Stuttgart, Germany) or IntraLogistEX (Stand 612, Coventry, UK).

*Yours sincerely*



This customer magazine is published by:  
**Pierau Unternehmensberatung GmbH**  
Grotenbleken 33 · 22399 Hamburg · Germany  
Tel.: +49 40 606899-0  
Email: [info@pierau-planung.de](mailto:info@pierau-planung.de)  
[www.pierau-planung.de](http://www.pierau-planung.de)

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