

# ProStore® SUCCESS STORY

## at TECE



TECE's finished goods warehouse with 10,000 storage places

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### Agile Logistics for „Intelligent housing technology“ ▶

The TECE GmbH has significantly improved the logistical processes in the existing central warehouse as well as in the finished goods store at their headquarters in Emsdetten.

In the course of a comprehensive optimization, the producer and system provider of innovative domestic equipment and installation systems relied on the potentials of ProStore®, TEAM's solution for intralogistics and warehouse management.

## SUCCESS STORY

### ProStore® components

- Goods receipt according to the order information of the host system
- Storage
- Quality assurance
- Warehouse management
- Material flow control
- Paperless order picking with Pick by Voice
- Multi Order Picking
- Pick & Pack for variable shipping cartons of different sizes
- Pick optimization with concentration of the order positions
- Packing with direct link to the parcel services
- Shipping with consideration of partial deliveries and printing of the shipping documents
- Stocktaking

- Inventory management
- Master data management
- Information system
- Batch tracing
- GS1 128-labeling
- Host connection
- Radio-based forklift control system

### Hardware and tools

- Microsoft Windows server
- Oracle Fusion Middleware
- Oracle database
- Oracle tools
- Psion Teklogix radio system
- Vocollect Pick by Voice terminals
- 50 users

Please contact us. We are looking forward to hearing from you.

TEAM GmbH

Hermann-Löns-Straße 88  
33104 Paderborn

Fon +49 5254 8008-0  
Fax +49 5254 8008-19

Mail [team@team-pb.de](mailto:team@team-pb.de)  
Web [www.team-pb.de](http://www.team-pb.de)

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## SUCCESS STORY

TECE products don't exactly catch your eye. They are nevertheless omnipresent: pipe- and pre-wall systems, concealed cisterns and flush valves, industrially manufactured registers and pre-wall installations, liquid separators, drainage gutters. TECE sells these products as well as other Domestic Engineering solutions under the motto "Intelligent housing technology", a promise to the customers in the trades, as well as the ultimate users of the products.

TECE is committed to offering high-quality, durable and easy-to-assemble systems that meet the needs of the market. This customer orientation pays off for the owner-operated company, which was founded in 1955.

Even the global financial and economic crisis could not stop or slow down the growth. After generating 100 million euro the last year, actually the TECE group with about 1,000 employees achieved a turnover of 120 million euro.

### Multi-layered challenges

In view of this development, TECE has successively invested in enlarging its product capacity and in the expansion of logistics structures. As headquarter, the central warehouse in Emsdetten is the focal point of the company. All the deliveries from the production facilities in Germany, Poland and China converge in this warehouse. At the same time, it serves as a platform for global distribution of goods to the specialist retailers in the area of sanitary, heating and climate.

To be able to keep up with this over proportional growth, TECE built a new production facility and increased their existing warehouse capacity from 1,800 to 7,200 square meters in 2007. In addition, a change in the customer's ordering behavior confronted the company with further challenges. Over the last few years, the wholesalers have come to depend on the producers more and more to take the responsibility of maintaining stock. As a conse-

quence, there is an increasing tendency to order minimal quantities which in turn, results in a larger quantity of orders thus creating the need for TECE to review matters in the logistics sector.

### The real benefit is decisive

In the course of further optimization, TECE chose to implement a warehouse management system as the basis for the integration of a paperless, voice-controlled system for an order picking and forklift management system. Automated transportation creates the necessary preconditions for optimal control and utilization of the vehicles and driveways. The company expected a significant growth of the throughput and increased delivery precision from these measures. After an extensive selection process, TECE chose TEAM's solution for intralogistics and warehouse management ProStore®.

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Pick by Voice in action



Optimizing transports with the ProStore® forklift control system



Everything in sight with the logistics control center



Multi Order Picking for up to 20 parallel jobs

Dirk Osterhoff, TECE's head of logistics says "The system has been in use for two years and we are convinced that it's an all-round satisfying package". Products from other suppliers were of course considered beforehand and questions were asked concerning the benefit of several applications and the integration effort. The motto "nice to have" has never been the subject of debate. The determining factor was the real user value for TECE in particular.

Apart from the required range of functions, the system's ability to integrate special functions and be used flexibly was of vital importance. According to TECE, it is good to know that one can easily adapt the system to new requirements anytime. The people "behind the technology" in TEAM also played a major role in convincing the company to select this product.

### Effective cooperation at the software level

TECE's finished goods warehouse offers approximately 10,000 spaces in highbay racking, including a mobile rack warehouse and a long load storage for about 2,500 products and spare parts. Since the program was implemented in 2009, ProStore® carri-

ed out the progresses in the range of storage and order picking on the basis of the integrated forklift management system as well as using Pick by Voice. The receiving of goods is still controlled by the existing ERP-system respectively the host. In this process a unique goods receipt number is formed that is submitted as an enrollment notification to ProStore®, which simultaneously allocates a batch number. The position keeping system is the warehouse management system (WMS) that passes on changes to the host system.

A certificate of arrival is created for every individual pallet of a delivery. This certificate includes the created goods receipt number as well as the article information to identify the stock clearly. Consignment goods are labeled with the owner's number at stock quantities and are therefore allocated unambiguously to one supplier.

After posting the goods receipt inventory to a particular storage location, ProStore® undertakes pallet forming. In doing so, every pallet receives an unambiguous pallet number that is denoted on the barcode. The inventory is automatically booked to the pallet storage after the pallet is created. The storage strategy is determined by

the loading device type, the height as well as the weight. At the same time, a transport order is generated. The target storage location depends on the article master data and the storage strategy. The transport of the pallets is carried out by forklifts. The transport is displayed at the RF terminal after the barcode has been scanned. As soon as the pallet is stored there, the process at the RF terminal is acknowledged by scanning the storage place. This acknowledgement leads to a transfer of the inventory to the storage place and to the deletion of the transport assignment.

### Convincing picking processes and strategies

In addition to that, shipping orders are also registered in the ERP-system and submitted to ProStore®. Subsequently, the WMS undertakes the formation of tours and picking orders that are released after an availability check, a reservation of the pallets and an article quantity check. The master data defines whether the order picking is carried out through Pick by Voice or RF terminal.

The new applications at TECE make it possible to rely on Multi Order Picking as well as on Pick & Pack, which

is the simultaneous order picking and packing of the delivery cartons whose number and size are defined with the help of ProStore®. In doing so, the positions of the same article from several orders is summarized in one order picking position. Up to 20 variable configurable storage positions for cartons are available on a specifically designed order picking vehicle.

The cartons are marked with a barcode and combined with the order. The last two digits of the successive tag numbers form the check digit simultaneously. The storage location followed by the quantity that has to be picked is specified for the next picking article. Then the withdrawal is acknowledged.

According to TECE, the implementation of these different order picking methods and strategies are accompanied by a lot of other advantages. On the one hand the time-consuming manual collection is avoided that often contains errors. On the other hand the order summarization saves a tremendous amount of time. Furthermore the Multi Order Picking turns out to be "simply irreplaceable". Now it is possible to summarize a variety of different delivery orders with the same article and to work off up to 20 orders parallel.

### As quick and reliable as possible

The outsourcing of pallets to the delivery area is also initiated by the control station. In the course of this, the WMS determines the storage locations for the pallets to be outsourced and creates a shipment to the loading bay. The transport order is either displayed at the RF terminal of the loading vehicle or at the forklift terminal. The transport is acknowledged by scanning the storage location. Parallel to this procedure a shipping label as well as the delivery note is created and the inventory is updated.

After order picking, the shipping cartons pass through a packing line with an integrated scale. Just after the carton label is scanned, the ProStore®-dialogue displays the content of the carton as well as its nominal weight and the weight it actually has.

The carton receives its shipping label when the information is ratified. The delivery note is displayed additionally after the last card of an order. The relevant shipping information is automatically transmitted to the shipping systems of the particular parcels service or forwarder. Thereby the time-consuming manual collection of data in the goods dispatch is avoided.

### Positive effects and noticeable reliefs

The changeover to the new system took place on the key date without long-term tests and noteworthy disturbances. According to TECE, the implementation has contributed considerably to the desired optimization of the logistical processes in the central warehouse. One example: "As a sum of everything we were able to increase the pick efficiency and throughput rate by 50 percent. This is also supported by the route optimization", comments Osterhoff. The success is notably obvious especially in the package area. Now the company is able to provide 300 packages via KEP shipping which is twice as much as before – without additional personnel expenses.

In this context, it must be said that the Emdetten house of technology specialists' intention was to install a warehouse management system to improve the working process for the individual worker so that he would gain time to apply himself to the important aspects of his job, and not to reduce the workforce as a whole.

**And we succeeded to do that!**