

AEB Success Story  
ERBE Elektromedizin GmbH





ERBE logistics center as seen from outside

## — Forward-looking logistics for German medical technology manufacturer ERBE Elektromedizin

The entire warehouse process – from goods receipt to stock putaway, from picking and stock removal to packing, from complete freight document preparation to loading – is mapped by the transport and warehouse management software ASSIST4.

For years, German medical technology company ERBE has achieved strong growth both at home and abroad. Exports currently account for some eighty percent of revenue. The structure that had evolved over the years was not equipped to fully meet these and other challenges.

The cornerstone of a new logistics center, built adjacent to the existing facility on the southern outskirts of Tübingen, was laid in February 2007. Production and logistics operations had to be maintained throughout the entire construction period. After thirteen months of construction, the new warehouse was ready for operations. It took just three days for ERBE to move into the new logistics center with its six storage areas and get up to production level. The nearly 3,000 square meters of floor space in the new logistics center accommodate the following:

- Automatic small-parts storage area featuring storage trays for nearly 15,000 boxes and with a capacity of 260 stock removals per hour
- High-rack storage area with wire-guided narrow-aisle turret truck technology
- Block storage
- Quick-turnover zone
- Dangerous goods storage
- Sterile goods storage

### IT support from ASSIST4 Warehouse Management

The entire intralogistical process – from goods receipt to stock putaway, from picking and stock removal to packing, from complete freight document preparation to loading – is mapped by the transport and warehouse management software ASSIST4, developed by AEB in Stuttgart. Standardization and automation were the benchmarks in planning and designing the IT architecture of the new logistics process. For ERBE

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Elektromedizin GmbH, automation means not only mechanized support but process support.

This support is ensured by:

- Consistent use of scanners with an online link to the warehouse management system
- Generation of efficient transport chains within the warehouse
- Interfaces to the ERP system, so inventory is continuously synchronized among the systems
- Electronic processing of all documents needed for the shipping process
- Online transmission of import and export declarations to the customs authorities

of both a laser-guided display and a monitor display.

When an employee initiates stock removal during the picking process in the small-parts storage area, for example, movement orders are generated and the material flow computer controls the transport of the tray to the appropriate picking bin. A laser beam points to the tray segment from which the goods are to be removed. A graphic display also indicates the right compartment on the monitor. To avoid errors in the picking process, the picker first scans

removal of the goods in all storage areas. The pull principle, already implemented in production processes as “kanban” control, is now applied to logistics – for example, through the installation of “pulling” packing stations that are mapped in the warehouse management system. While consolidating goods from the various storage areas at the packing stations, bottlenecks are avoided by triggering a picking order only after a line or location in the staging area shows the appropriate capacity. Picked goods – whether from the automatic small-parts storage, block storage or high-rack storage area – are now made available at the consolidation shelf or line originally defined for this consignment. The employee sees the consignment’s consolidation bin on the handheld device through control and monitoring scans. The consignment volume and weight determine whether the merchandise must be brought to the staging area or to one of the ten lines. Following the system-supported check for completeness, the consignment is released for packing. The packer receives a corresponding alert in the packing station application. Data such as package type and package content and other information needed for the shipping process is collected and administered at the consignment level. The packing process is “qualified”: Each article with a batch or serial number is scanned once more before being physically packed to make sure it is in the right consignment. This provides an extra layer of control against the



Laser-guided and visually supported picking in the automatic small-parts storage area

This represents another important step toward faster and more efficient order processing. As soon as goods are received, the warehouse management system takes over inventory management, using diversified multi-stage transport order chains to route the goods into precise bin locations that have been predefined according to stock placement strategies. Interfaces to the ERP system ensure that inventory is continuously synchronized among the systems.

One innovation that facilitates stock putaway and removal in the automatic small-parts storage area is the inclusion

the handling unit from which the goods are to be removed, then the article to be removed, and finally the handling unit into which the article is placed for further transport to the packing station. ASSIST4 also supports the picking process in the manual warehouses. The warehouse management software calculates the best route within the warehouse using transport chains and priorities stored in the master data. Employees receive route-optimized driving orders on the forklift control terminal in the high-rack storage area. In the other storage areas, handheld devices are used. Scanners support the

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errors of individuals in support of a system-wide zero-error strategy. It also enhances traceability based on batch and serial number. Like the other consignment-specific documents, the package list is generated by the system during the process and printed and checked in the dispatch office, where it can then be added to the consignment as soon as the packing is complete. The electronic link through ATLAS to the customs administration office also helps shorten lead times in shipment processing. Integrated compliance screening, which automatically checks all ship-to and bill-to parties against EU and US sanctions lists, ensures that no consignment is sent out to anyone with suspected links to terrorism.

### Status monitor and logistics indicators

The warehouse cockpit gives ware-house managers important information for planning and controlling the processes they oversee. For example:

- Current number of open transport orders
- Number of open and completed warehouse order items
- Overview of the number of warehouse orders, with color icons indicating their status

The entire process is controlled and monitored by a system of indicators. All relevant process information – involved parties, lead times, consignment contents, consignment routes, track-and-trace information – is available for



operational control, creating greater transparency in the process, enhancing the reliability and lowering the error rate. By consistently tracking the relevant indicators, ERBE Elektromedizin GmbH is able to continuously increase logistical performance.

End-to-end software support yielded logistical processes that were less individualized but more reliable and efficient. The consolidation bins before the packing area have proven to be both physically and logically critical to shipping management. Here it is essential to have a seamless transition of the picking results into the packing process. The aim is to achieve the current benefits of consistently consignment-based but manual picking by an employee through quick and error-free consolidation of the now fragmented picking process. This will be a critical success factor of the warehouse process, which is much more heavily reliant on a division of labor.

Here we can see that the system was designed with very robust support to offer users rapid resolutions when incorrect entries are made or unpredictable inventory situations arise. The conscious selection of an integrated software package – in which warehouse, transport and export processes are mapped in a single

environment – has paid off by reducing the number of interfaces.

### More customer service through transparency

In 2012, Erbe also implemented AEB's "Monitoring & Alerting" Visibility & Collaboration Platform. The online application lets Erbe employees in the company headquarters and at its subsidiaries around the world see the status of any shipment at a glance. Erbe subsidiaries in Belgium or the United States can call up their own orders and see whether the goods have already been picked, packed, or issued. The status updates of the transport service providers that Erbe works with – DHL, FedEx, Kühne + Nagel, Transmed, etc. – are also integrated and visible in real time. It's not only the consignees who have access to more information: The "Performance Indicator" presents logistics managers with all key performance data at a glance, so they always know how many shipments went out in a given period and which percentage was on time.

The logistics experts at Erbe wanted to bring greater transparency to the flow of goods – both in-house movements and shipments to customers – so they could act early to prevent possible delays. The visibility solution now lets

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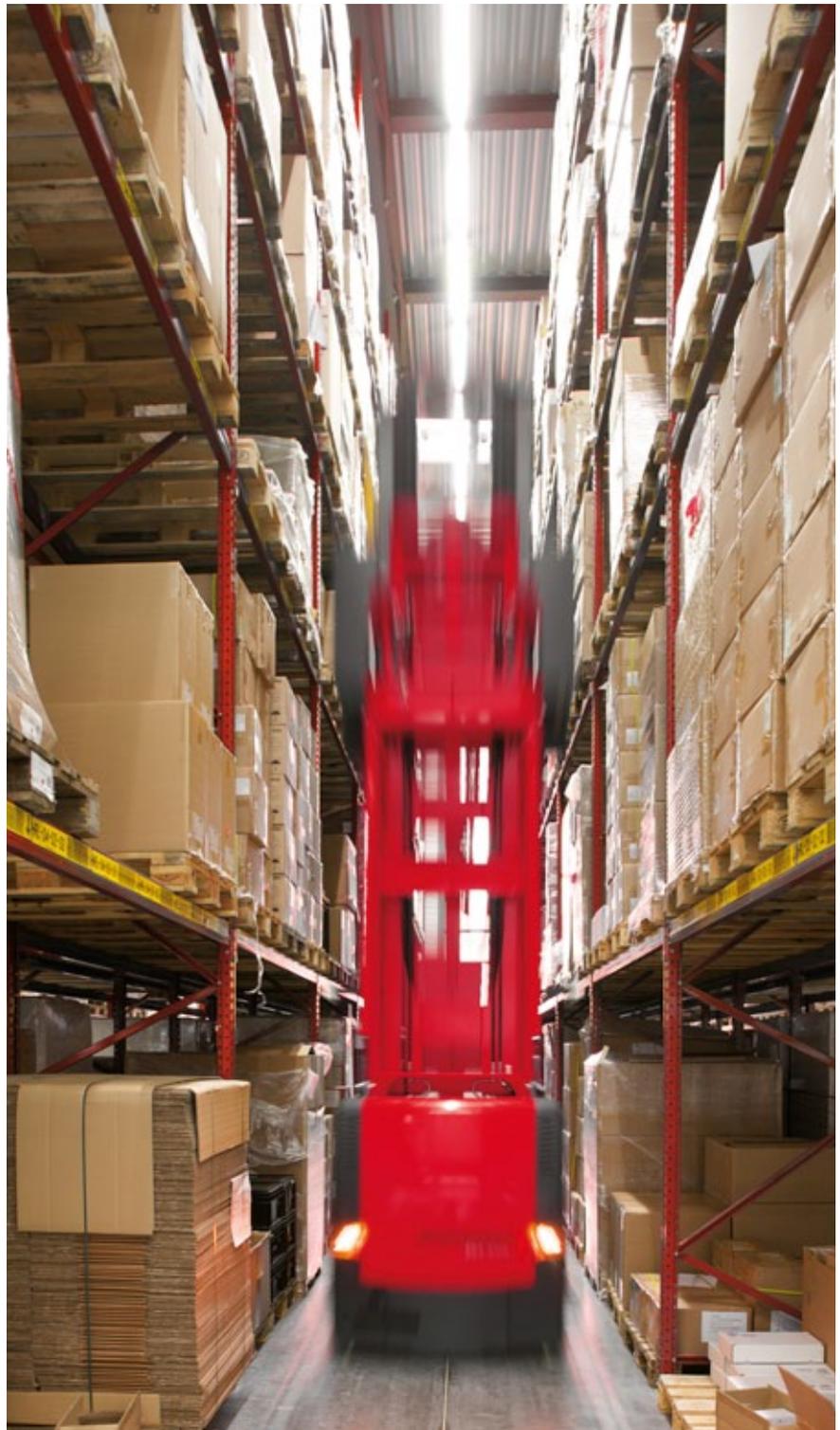
you quickly see if goods remain too long at a hub or an outbound delivery faces a possible delay. Information technology makes it possible to schedule and plan the direct shipment of goods to customers throughout Europe. Erbe has the capacity to respond quickly to any incidents and head off possible delays.

The customs department also benefits from having transparent export transactions. If a proof of export is not received on time, the case manager is notified by e-mail. Overall, both Erbe and its customers now benefit from end-to-end transparency throughout the process until the shipment arrives at its final destination.

### Summary and outlook

ERBE Elektromedizin GmbH has responded to legal requirements and internal targets by reorienting itself and completely reorganizing its logistical processes within two years. The sales department has been relieved of organizational responsibilities and is now able to focus exclusively on customer contact, shipment releases and availability checks.

ERBE customers now benefit from faster and more reliable deliveries. And ERBE customers will enjoy more benefits in the future – as ERBE continues to shorten lead times, for example, by eliminating European logistical processing stages still in place to exploit further cost-cutting potential. In this way, logistics helps protect competitiveness. The quality of logistics is rising, meanwhile, as the risk of defects is lessened, which in turn decreases the number of costly returns. The implementation of a



new logistics concept already enables faster, more efficient and more customer-centered processing while offering further potential for future developments.

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## At a glance

### Customer

- Name: ERBE Elektromedizin GmbH
- Industry: Medical technology
- Employees: 810 (worldwide)

### Challenges

- New 38,000 sqm logistics center required more comprehensive IT support
- Complex individual management requirements for six different warehouse areas
- Electronic processing of all shipping and export processes
- Automated compliance check

### Solution

- Implementation of ASSIST4 Warehouse Management, Customs Management, Compliance & Risk Management, Visibility & Collaboration Platform
- Standardization and automation of intralogistics processes
- Interfaces to the ERP system

### Results

- One single solution supporting all warehouse and transport processes
- Integrated compliance management
- Shorter lead times for picking and dispatch processing
- Reliable and efficient logistics processing
- Constant visibility of shipment status