Successful Logistics Concept

**Ergonomic-Dynamic Picking System (E-DPS)**

- 1,000 order lines picked per hour with just one module
- Extremely high picking performance
- Optimum ergonomics and picking accuracy
- Minimal footprint required
- Effective, integrated system solution
- Maximum cost-effectiveness
E-DPS – Successful Logistics Concept

How does E-DPS work?

The basic design of an E-DPS module consists of a multi-aisle automated small parts warehouse, with a racking construction, which integrates storage, replenishment and consolidation functions.

What is special about the system is that highly dynamic vehicles – known as Picking Mini Loads (PMLs) – operate in up to three tiers within the middle aisle to supply the order picking stations with goods. The middle aisle is replenished by the two stacker cranes, which transfer goods from the two outermost storage racks to the racks either side of the middle aisle. Sophisticated vehicle technology ensures that an extremely high number of storage and retrieval movements is possible.

The PMLs operate in conjunction with an integrated vertical lift and a minimum of conveyor technology to supply two order picking stations with storage totes. The system’s software controls and optimizes all processes, decoupling the storage and retrieval operations from the order picking. This ensures that the goods are made available in the required amount and the correct sequence. The system can also buffer completed order totes and deliver them to the shipping area after consolidation, in accordance with shipping instructions.
The Ergonomic-Dynamic Picking System (E-DPS) is a modular system solution which makes possible a picking performance of up to 1,000 order lines per module per hour.

Using standard storage components and minimum conveyor technology, E-DPS provides highly cost-effective storage, sequencing, picking and consolidation. E-DPS sets a milestone in advanced ergonomic picking design.

Finely tuned software combined with proven standard mechanics is the basis of this high performance picking system allowing pickers to work in a sitting and relieving position.

When is E-DPS suited to your logistics?

E-DPS is a tote picking solution that can be used across a range of applications and for a wide selection of article spectra. There are just two basic considerations:

- For reasons of system availability, the E-DPS uses standard totes with a base size of 600 x 400 mm (24 x 16 inches)
- Orders are picked into shipping totes or directly into shipping cartons

ATRIA OY, largest producer of meat products in the Baltic Sea region, bets on WITRON system technology at its distribution center in Nurmo since 2001 and was nominated Finland’s Logistics Company of the Year 2003. ATRIA once again opted for WITRON to integrate the “high speed” picking system E-DPS in Nurmo.

“E-DPS’s performance and ergonomics convinced me at first sight. Because of it, we are realizing our logistics goals ideally in regard to order-picking quality, cost effectiveness and flexibility. This compact warehouse module wins you over through high performance and through its decoupling of all system elements. Delivery to and from the work stations guarantees that the order picker is always supplied with work. The work stations themselves are designed so ergonomically and progressively that the highest levels of pick performance are possible without great exertions. And as an operator, E-DPS offers me the absolute advantage of being able to control workstations and employees flexibly, in accordance with work load. Our requirement to be able to expand the system without interrupting operations can also be met without a problem, due to the system’s modular structure. All in all, E-DPS offers us the ideal pre-conditions for supplying over four thousand customers every day with articles at top quality and freshness. That’s what ATRIA stands for.”

Jaakko Takala, Logistics Director ATRIA

Customers benefit:

- The 3-dimensional E-DPS concept requires only a small footprint and minimises building investment
- No walking required for picking
- Excellent ergonomics for the pickers due to an optimal sitting position combined with tilting of the storage and order totes
- Maximum picking accuracy due to articles being picked from just one storage tote into just one order tote
- Software-supported picking operation with automatic confirmation and without the need to count pick units
- Intuitive picking processes
- Reduced order processing times through precise system control
- Order consolidation capability
- Sequential picking of order totes to ensure store-friendly delivery
- Highly flexible personnel planning due to individual activation of work stations
- Low investment risk owing to high system flexibility and modular expansion capability
- Rapid implementation, with short planning and installation times (just six months for one E-DPS module)

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Easy to scale

All components used in the E-DPS – including the racking, conveyors and stacker cranes – are standard products, allowing the system to be adapted easily through a variety of combinations to suit specific customer requirements and various industry or business applications.

Beginning with one module as a basic solution, E-DPS can be customized easily to suit existing buildings and warehouse layouts. The modules can later be extended as order volumes increase, product ranges expand or higher system capacity is required.

These benefits ensure that your investment in the E-DPS concept will meet future demands in terms of performance and ergonomics fully.

About WITRON:

WITRON Logistik + Informatik GmbH, established in 1971 (headquarters Parkstein, Bavaria, Germany), designs, realizes, and operates customized logistics and material flow systems that generate sustainable competitive advantages for its clients. WITRON has all the decisive key elements of a successful project under one roof: logistics design, information and control technology, mechanics design and production, as well as functional responsibility as general contractor for logistics.

The WITRON Corporate Group has 3,100 employees worldwide. WITRON’s annual revenue in 2017 amounted to 515 million Euros. Other WITRON branches are located in Rimpar (Germany), Arlington Heights, Illinois (USA), Toronto (Canada), Venray (The Netherlands), Stoke-on-Trent (UK), Madrid (Spain), Strasbourg (France), and Singapore.