# A Perfect Model Plant For Würth Elektronik eiSos Group – TGW Implements Shuttle System

**TGW installed a sophisticated logistics centre for the expert of electronic equipment Würth Elektronik eiSos at the German site in Waldenburg. A shuttle warehouse, extensive conveyor equipment as well as different workstations deliver high performance rates and help pursue the corporate strategy.**

### When today's successful division Würth Elektronik eiSos was founded as "VBT" (Verbindungstechnik) in 1984, nobody could have guessed that the enterprise with initially eight employees would turn into an international success story. Würth Elektronik eiSos employs more than 6,100 people worldwide. The company has very ambitious plans for the next few years. For that reason, they had to consolidate the existing logistics operations in a new building and automate the previously manual processes. The TGW Logistics Group started this extensive project in 2014 which went finally live in 2016.

**A perfect model plant for the Würth Elektronik eiSos Group   
implemented in two construction stages**

The logistics capacities of the existing facilities had reached their limits given the company's strong growth trend. Therefore, a new logistics centre was designed, including an automatic mini-load warehouse with TGW Stingray Shuttle equipment, goods-to-person order picking and a Pick&Pack order processing solution. The project aimed at creating a perfect model plant for Würth Elektronik eiSos. "The project was divided into two construction stages: first, we implemented the six-aisle shuttle warehouse as well as a functional building including the goods receiving and shipping areas on the ground floor, and the order picking, packing and repacking areas plus empty tote buffer on the upper floor," notes TGW Project Manager Sebastian Hutterer.

The customer service is Würth Elektronik eiSos' flagship division, especially the free sample supplies to the developers. The relevant orders need to be processed quickly, since they represent about 50 per cent of the total order picking performance. "TGW had been the only provider who understood what was special about our material handling operations already during the first meetings, starting the engineering process with high dedication. Particular attention needs to be paid to the small order quantities in our business, which does not make the whole process any easier. Besides, our high customer orientation is reflected in a huge distribution network with a lot of sales representatives," explains Thorsten Rollbühler who is responsible for the Organisation and Logistics division at Würth Elektronik eiSos.

**TGW Stingray in Würth Elektronik eiSos' logistics system**

As soon as the goods arrive at the logistics centre, they are loaded onto the conveyor system in the goods receiving area. The goods are either handled directly in cartons or they are repacked into totes before being handled. Once on the conveyors, the cartons are labelled with a unique barcode and measured automatically to determine the optimum storage pattern in the shuttle warehouse based on the real load dimensions, maximising the storage capacity. After the measurement, all packages are transported to the upper floor, and proceed to the shuttle warehouse. A central high-performance loop located between the shuttle inbound area and the workstations serves to distribute the packages to the order picking area, packing area and the warehouse. At the ten goods-to-person picking workstations, the items are picked directly from totes. Two source positions each, designed as tilting station with illumination, provide for easy and ergonomic picking into the four target positions, three of which are destined for multi-item orders and one for single-item orders. "Implementing a scalable system which we can quickly adapt to, and which we do not reach our limits with again soon was an important aspect for us. We managed to generate an increase in revenues of more than 30 per cent – something our logistics system needed to cope with, too. And we have the option of extending the system at any time, should we need higher performance rates," explains Thorsten Rollbühler.

A similar situation exists with the packing and repacking stations. The currently eight workstations may be extended by another eight stations. In the empty tote buffer, all empty units resulting from the order picking process are distributed to six lines to build stacks. Each of the six lines buffers a certain tote type. These totes are later redistributed to the different system areas as required. After packing, the goods are conveyed to two shipping lanes with automatic shipping label application and wrapping, and proceed to the shipping loop with 18 discharge lanes located on the ground floor. "All in all, we installed more than two kilometres of conveyor equipment to handle the goods safely and quickly within the entire logistics centre", explains TGW Project Manager Sebastian Hutterer. The high-performance loop, delivering a performance rate of 2,700 load carriers per hour, turns Würth Elektronik eiSos into one of the top players concerning logistics efficiency.

High dynamics is delivered by the TGW Stingray shuttle system which was implemented with six aisles and 38 levels. The system was tailored to meet the customer's individual needs, including eleven shuttle vehicles in each aisle. They can switch levels via a lift equipped with two load handling devices at the end of the aisle, which allows the customer to implement a system with scalable performance. As a consequence, 66 shuttles are moving in the warehouse, directly handling both cartons and totes. "The Stingray warehouse provides a storage capacity of more than 170,000 carton locations when filled to the maximum with the smallest carton category, and about 40,000 when using the largest carton size," says Sebastian Hutterer. 300 cartons or totes can be stored or retrieved per hour per shuttle aisle. Thorsten Rollbühler is convinced of the TGW shuttle concept, too: "The modular system is an ideal approach for us. The shuttle lifts allow us to use the eleven shuttles on all levels. If we need more performance one day, we will simply have to add more shuttles. In case our business model or our article structure change, or the order volumes grow, we will be able to quickly respond to the changed requirements. TGW has considered that already in the engineering phase of our material handling system."

In this project, TGW was able to implement almost the entire project with their own product range: from racking steelwork and platforms, KingDrive® conveyor equipment, Commander® controls as well as material flow control system including storage location management, to the Warehouse Control System for the shuttle warehouse. This entails considerable advantages for the customer, since TGW could act as general contractor, always having an influence on the most important components.

**A strong team for powerful logistics**

"Such a large-scale project always involves a lot of responsibility. Therefore, it was important to us right from the beginning that the process worked smoothly with all partners. In the end, you work very closely together, and mutual trust plays an important role. The co-operation with TGW worked perfectly. We maintained a very good, even friendly basis during the whole implementation period, which was particularly important for the success of this project," says Thorsten Rollbühler with satisfaction, and adds: "Another matter of importance was to keep Würth Elektronik's permanent staff. Therefore, TGW organised internal and external trainings to establish an own maintenance team. TGW's engineers intensively dealt with this topic and instructed our colleagues on everything they needed to know for maintaining the system. TGW employees are still supporting us on site to continuously optimise the processes. We are very pleased with the great commitment on the part of TGW and feel well looked after. And this is what it should be like in a long-term partnership."

With the new TGW logistics solution Würth Elektronik eiSos is using state-of-the-art material handling equipment. Sebastian Hutterer is also very happy about the great teamwork with the customer: "The fast and easy order picking operations were an important aspect in the implementation of this site. The combination of the Stingray shuttle warehouse, the TGW conveyor equipment and the Software Suite prepares Würth Elektronik eiSos not only to cope with future turnover volumes but also for future growth."

[www.tgw-group.com](http://www.tgw-group.com)

About Würth Elektronik eiSos GmbH & Co. KG

Würth Elektronik eiSos GmbH & Co. KG is a manufacturer of electronic and electromechanical components for the electronic industry. Würth Elektronik eiSos is part of the Würth Group, the world's market leader for assembly and fastening materials. The company employs more than 6,100 people and generated sales revenues of nearly 475 million Euros in 2015, operating in 50 countries worldwide.

Production sites in Europe, Asia and America supply a growing number of international customers. The product range includes EMC components, inductors, transmitters, RF components, variable resistors, capacitors, power modules, LEDs, plug connectors, power supply elements, switchgear, fasteners and fuse holders. Würth Elektronik eiSos is one of Europe's largest manufacturers of passive components. Würth Elektronik: more than you expect!

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**Contact:**

Würth Elektronik eiSos GmbH & Co. KG  
Sarah Hurst  
Max-Eyth-Straße 1  
74638 Waldenburg  
Germany

Phone: +49 7942 945-5186  
e-mail: sarah.hurst@we-online.de  
www.we-online.de

Press contact at Würth Elektronik eiSos GmbH & Co. KG:

HighTech communications GmbH  
Brigitte Basilio  
Grasserstraße 1c  
80339 Munich

Phone: +49 89 500778-20  
Fax: +49 89 500778-77   
e-mail: b.basilio@htcm.de

[www.htcm.de](http://www.htcm.de)

**About TGW Logistics Group:**

TGW Logistics Group is a global leading systems provider of highly dynamic, automated and turn-key logistics solutions. Since 1969 the company has been implementing different internal logistics solutions, from small material handling applications to complex logistics centres.

With about 2,500 employees worldwide by now, the Group implements logistics solutions for leading companies in various industries. In the business year 2015/16, the TGW Logistics Group generated sales revenues of 532 million Euros.

**Pictures:**

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| **Contact:**  TGW Logistics Group GmbH  4600 Wels, Collmannstraße 2, Austria  T: +43.7242.486-0  F: +43.7242.486-31  e-mail: tgw@tgw-group.com |  |

**Press contact at TGW:**

Martin Kirchmayr Daniela Nowak

Marketing & Communication Manager Marketing & Communication Specialist

T: +43.7242.486-1382 T: +43.7242.486-1059

M: +43.664.8187423

[martin.kirchmayr@tgw-group.com](mailto:martin.kirchmayr@tgw-group.com) [daniela.nowak@tgw-group.com](file:///C:\Users\nod\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.Outlook\R3VUQBPK\daniela.nowak@tgw-group.com)