

STOROJET REFERENCE PROJECT

Solarversand.de



STOROJET
NEXT LEVEL STORAGE

Made in Germany

solarversand.de
Offizieller esotec-Herstellershop





Solarversand.de and STOROJET - Innovative Energy Technology Meets Future-Proof Warehouse Logistics

Since its inception, the online shop Solarversand.de, specializing in high-quality solar lights, solar pond pumps, and pond filters, has undergone impressive development. The company from Weiherhammer in the Oberpfalz not only stands out for the quality

of its products but also emphasizes sustainability in all aspects of its operations. In an effort to optimize work processes, the managing directors Günter and Michael Englert made a groundbreaking decision: the modernization of their distribution center through the implementation of an automatic small parts warehouse from STOROJET.



Embracing Robotics for the Future

A seven-meter-high automatic small parts warehouse was constructed on an area of almost 470 m². Instead of employees navigating through aisles and climbing ladders, over a hundred robots now take on the task of transporting goods carriers with products directly to the storage and retrieval locations. A total of 5000 such goods carriers with varying lengths between 60 to 90 cm and product-specific structures find a place on eleven levels. This allows the experts at Solarversand to increase storage density while simultaneously reducing picking times. Five high-speed lifts, operating at a speed of two meters per second and strategically placed near the four workstations, enable employees to efficiently handle the daily order volume comfortably.

Creating the Perfect Symbiosis for Maximum Efficiency

The stepped construction of the STOROJET storage system on the sloped exterior of the hall allows the warehouse to be placed as close to the hall's edge as possible, creating space for future expansions and optimizing the available height. Simultaneously, the specially



developed Pick-by-Light system enables employees to process up to 32 orders per shelf simultaneously, significantly reducing order processing times. Complemented by a robot arm integrated by IBK, which automates over 60% of all incoming orders, the throughput in the entire warehouse has been significantly increased. The gripper benefits especially from the precise positioning of the STOROJET robots.

Collaborating with Strong Partners for Tailored Solutions

IBK specializes in automation, providing end-to-end solutions from engineering to manufacturing, assembly, commissioning, and startup support for 47 years in core markets such as automotive, SMEs, and the public sector.

In this project, IBK is responsible for the automation of the transfer of goods from the STOROJET storage system to the shipping facility. This transfer boasts a cycle time of 15 seconds and can handle package weights of up to 20 kg. Notably, the packages retrieved from the STOROJET storage system come in various sizes and shapes. Roboception's 3D camera system handles the detection, and a gripper with three installed Schmalz suction pads takes care of the handling. The profile technology comes from the partner item, and a Yaskawa robot is used in this project.



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„The STOROJET provides the missing puzzle piece for efficient warehouse logistics. Thanks to the fully automated goods-to-person principle, we can reliably access products. Choosing STOROJET allowed us to eliminate travel distances and significantly streamline work processes. With our self-developed Pick-by-Light system and a fully automated robot arm, we achieve an impressive increase in throughput. For Solarversand, it is crucial to provide customers with timely delivered orders, and STOROJET contributes significantly to that.“

Michael Englert
Managing Director
esotec GmbH



ibk IngenieurConsult
Die Lösung.

„We aim to bring the comprehensive expertise we possess in automation technology increasingly to SMEs, starting with turnkey solutions in the CobotShop up to complete automation projects like at esotec. Therefore, not only is the successfully implemented project itself important but also the partnership with Storojet that has emerged from it for our future logistics projects.“

Michael Becker
Head of Technical Sales
ibk IngenieurConsult GmbH



Overview of data

STOROJET storage shelf

Height:	6.5 m (plus 1m for the lifts)
Levels:	11 (clearance 540mm)
Footprint:	466 m ²
Highspeed Lifts:	5
Robots:	110

Goods carriers

500x600 mm (WxD):	3.000
500x900 mm (WxD):	2.000

Ports

Storage and retrieval:	4
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Output

Daily operating time:	8 hours
Picks*/Hour per Port:	200

*The number of picks always refers to the presentation of individual product carriers. If several articles can be removed from the same rack, the picking performance increases significantly.

About STOROJET

The automatic small parts warehouse impresses with its high flexibility and offers users the possibility to efficiently store a wide variety of goods even under difficult space conditions. The spacing between the levels of the storage tower can be configured with different heights, and the 50cm wide goods carriers also allow for variable lengths ranging from 50 to 90cm.

The various levels of the shelving system are connected to each other via elevators and enable small autonomous warehouse robots to transport a wide variety of goods carriers in an energy-efficient manner. Thus, in addition to optimized space utilization of up to 12m in height, an inexpensive reduction in picking times can be achieved without difficulty.

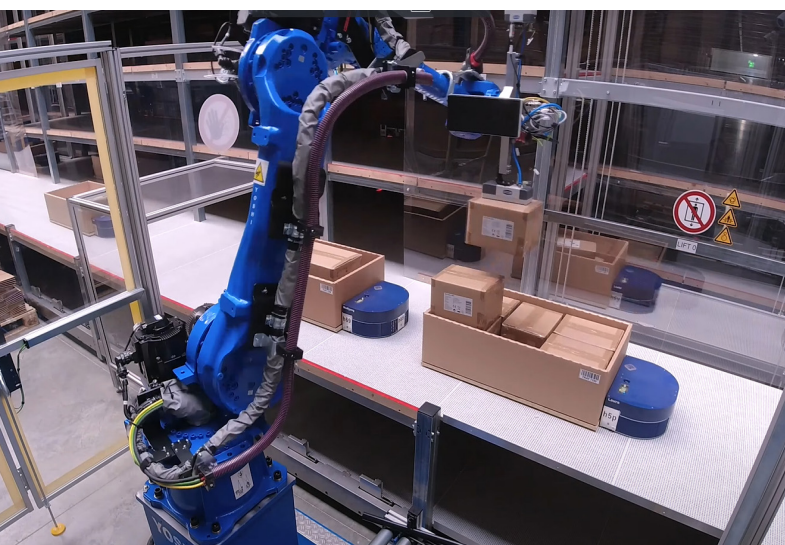
Sustainability - more than just a promise



The STOROJET automated small parts warehouse is designed to deliver not only an economic but also an ecological benefit. According to recent calculations by the Global Footprint Network based in the USA and Switzerland, the world's population would need approximately 1.75 Earths to produce the current level of resources required. This is why particular emphasis was put on a sustainable concept during the development.

The driving and storage surfaces of the high-bay warehouse are made of renewable raw materials. The individual goods carriers of the system are also made from wood as standard. Twice the amount of wood used for each system is returned to nature as part of regional reforestation projects.

For more information visit www.storojet.com/sustainability



6-axle high-speed robot MOTOMAN GP50 by Yaskawa