# STOROJET REFERENCE PROJECT

**Brillenplatz.de** 











# Automated STOROJET System enables up to 31,000 Storage Spaces in a 100 m<sup>2</sup> Footprint at Brillenplatz.de

Brillenplatz.de, the online eyewear store established in 2011 offers a wide range of quality glasses with individual prescriptions, branded eyewear, sunglasses and ski goggles. With over 5,000 different models available, most of which are in stock, Brillenplatz.de ensures customer satisfaction through its extensive range of products.



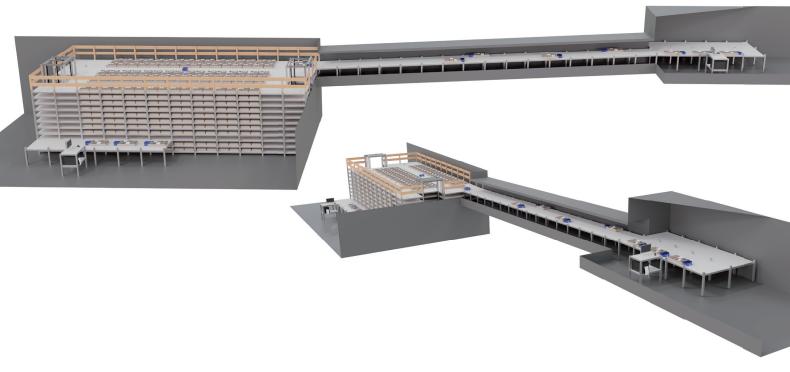
# From Test Warehouse to Operational Deployment

Originally utilized for testing purposes during the development phase, the STOROJET system seamlessly transitioned into operational use at Brillenplatz.de. Despite limited space, an automated small parts warehouse using STOROJET was implemented within an area of only 100 m<sup>2</sup>. The automated storage an retrieval system spans a height of approximately 3.6 meters across six levels, currently accommodating up to 17,000 storage spaces for eyewear and accessories. To ensure redundancy, two high-performance lifts are employed, facilitating up to 3.5 presentations of carriers per minute for inbound and outbound processes. Only 15 robots are required to maintain the material flow using a goods-to-person principle. To facilitate work, Brillenplatz uses a supporting Pick-by-Light system that precisely illuminates the individual compartments on the differently sized carriers. This is particularly helpful in the applied multipick order picking process and helps to drastically minimize the error rate. This feature proves especially beneficial during the multipick order picking process, significantly reducing the error rate.

#### Why STOROJET?

A broad product range combined with customers demand for short delivery times necessitates flexible solutions with high storage density. The highly redundant STOROJET system offers the required scalability during ongoing operations. Even small systems can be easily planned and implemented, growing in tandem with the company over time. Another significant advantage is the ability to use differently sized carriers with customized compartment configurations within a single system, with carrier lengths ranging from 50 to 90 cm.





The Brillenplatz.de system in its final expansion stage with 11 levels and inter-hall conveyor system

# **Underestimated Factors: Returns Management and Inventory**

An often underestimated factor in manual warehousing is the processing of returns. E-commerce stores, in particular, face significant time and cost investments in managing returns due to naturally higher return rates. Previously, each product had to be individually returned to its respective storage location, often leading to misplacements. With STOROJET, returns are seamlessly integrated into the daily storage process, minimizing the time-consuming individual storage of goods. Combined with continuous inventory checks during regular operations, this approach drastically reduces personnel efforts while maintaining an up-to-date inventory.

# **Prepared for the Future**

The pillars of the storage tower have been equipped with additional suspension points, allowing the automatic small parts warehouse to be expanded from 5 to 11 levels at any time. The efficient compartment configuration of the carriers could increase the storage capacity to approximately 31,000 storage spaces. Due to space constraints, the inbound and outbound processes occur in an adjacent warehouse. The high modularity of the system enables the STOROJET conveyors to be directly integrated into the system, with these column-supported pathways serving as conveyor routes for the robots, eliminating the need for costly conveyor belts. In the future, a cross-hall corridor will transport goods directly to the neighboring warehouse, reducing travel distances for employees and further enhancing system efficiency.





# **STOROJET Automated Storage and Retrieval System**

Reference Project: Brillenplatz.de





#### **Overview of data**

#### STOROJET storage shelf

Height: 3.6 m (plus 1 m for lifts)
Levels: 6 (clearance 600 mm)
Opt. level expansion: 11 (clearance 260 mm)

Foorptint: 93 m<sup>2</sup>
Highspeed Lifts: 2
Robots: 15

Goods carriers

500x600 mm (WxD): 560 500x660 mm (WxD): 50

Customized carrier configurations with around 17,000 storage spaces.

# **▶** Goods carriers after optional level expansion

500x600 mm (WxD): 1,020 500x660 mm (WxD): 105

Customized carrier configurations with around 31,000 storage spaces.

# Ports

Storage and retrieval: 1

Performance

Daily operating time: 8 hours Picks\*/Hour per Port: 210

\*The number of picks always refers to the presentation of individual goods carriers. If multiple items can be picked from the same goods carrier, the picking performance significantly increases.



#### **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