



STORAGE



FABMATICS

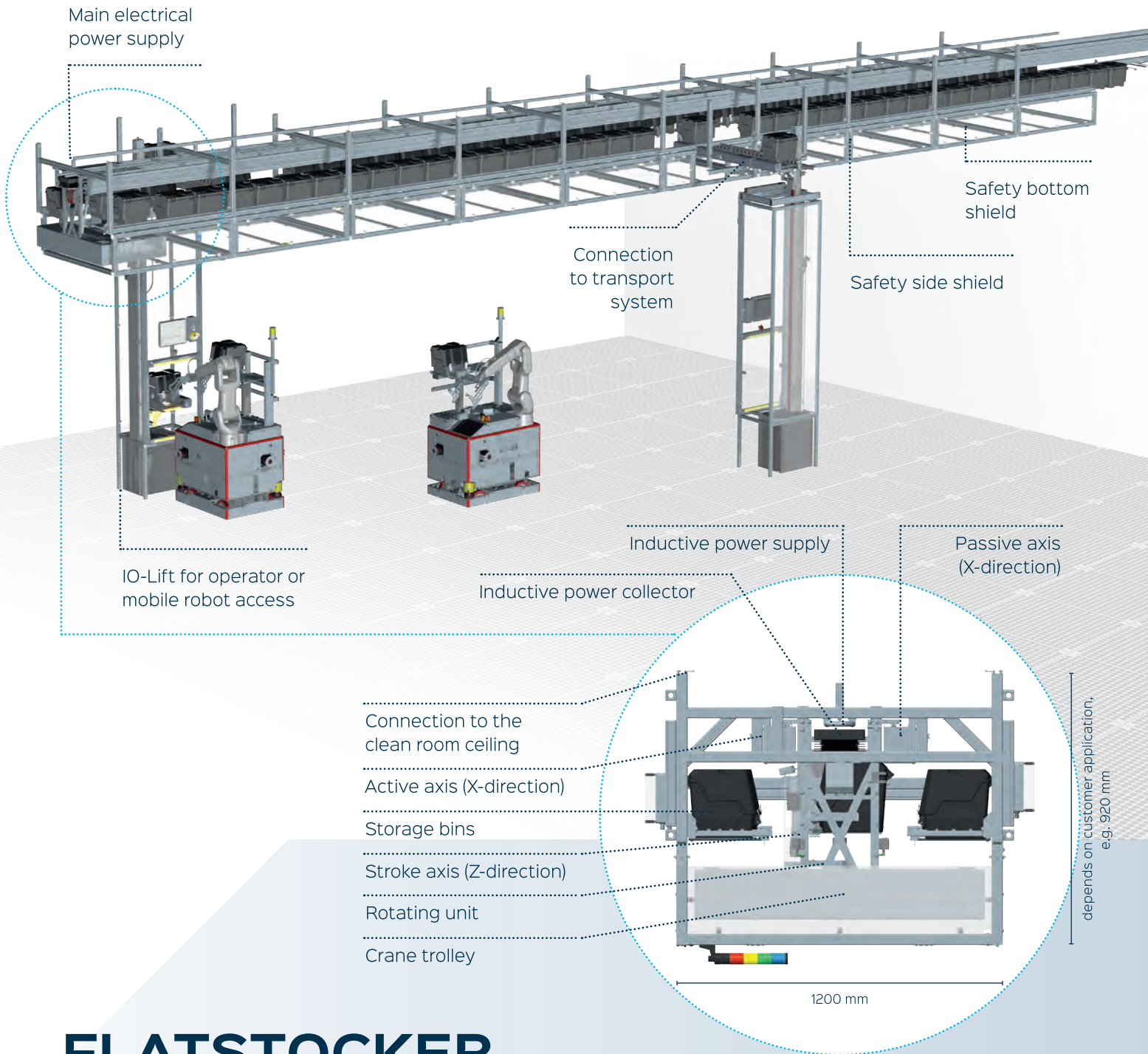
Automate your success

# FLATSTOCKER

Fast random access to materials  
with Zero Footprint Storage



# Application example for HA-200 boxes



## FLATSTOCKER

Fast random access to materials with Zero Footprint Storage

Due to the fact that clean room floor space in semiconductor factories is limited and expensive, Fabmatics developed an innovative stocker concept that **saves the floor space** for process machines by storing the WIP underneath the clean room ceiling. The FlatStocker is installed directly above the process machines or the corridors of interbay and intrabay of the factory.

The system can be designed for different material carriers, e.g. HA-200 boxes, open cassettes or SMIF pods.

The connection to a transport system (e.g. conveyor), combined with vertical lifts to the machine level, enables **fast lot access at any time**. Equipped with ID technology (e.g. RFID, barcode), the FlatStocker reports the material ID information to the host system (MCS/MES). So the material can be located at any time.

The **simple, scalable design**, based on proven industrial components, offers great flexibility to best meet the customer's storage and space requirements.

# Features

## Design

- Freely scalable and also expandable at a later date
- Flexible positioning of lifts (input/output stations) and conveyor connections
- Easy disassembly of the safety bottom shields to enable move-in/out of tall machines

## Efficient

- Construction saves space of valuable clean room floor
- Easy installation during running production
- Random access to storage bins enables quick store and retrieval times
- Semi-automatic teaching of bin positions during commissioning

## Technical

- Inventory tracking via integrated ID technology (e.g. RFID, barcode)
- Non-contact inductive power supply

## Intelligent software

- Software capabilities supporting flexible assignment of storage bins (e.g. zones)
- Lean and flexible control system with SECS GEM compliant host interface based on SEMI E88 (Stocker SEM)
- SEMI E84 interface for carrier transfer to other systems
- Access to material via GUI / host

# Technical data

| FlatStocker             |  |
|-------------------------|--|
| Capacity                | Unlimited  |
| Drive technology        | Linear motor   |
| Operating speed         | 1.5 m/s in ISO 4 clean rooms                                 |
| Length / Scalability    | Depends on required capacity                                 |
| Height                  | Ca. 920 mm (600 mm fixed, 320 mm flexible)                   |
| Width                   | 1,200 mm   |
| Ceiling surface loading | < 80 kg/sqm  |
| Power supply            | 400 V / 50 Hz  |
| Power consumption       | 3 A  |
| Software                | Controller software compliant SECS GEM / SEMI E88 / SEMI E84 |
| Communication           | Ethernet   |



FlatStocker installation with 200 storage bins at Fraunhofer IPMS Dresden, Germany

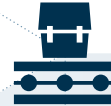
**STORAGE**  
ZERO FOOTPRINT STOCKER  
PURGE SYSTEMS  
RFID RACKS



**HANDLING**  
MOBILE ROBOTS  
ROBOT CELLS  
EFEMS



**TRANSPORT**  
CONVEYOR SYSTEMS  
AGVS / RGVS  
PGVS



# UNIQUE PRODUCT PORTFOLIO FOR THE **COMPLETE MATERIAL HANDLING AUTOMATION**



**IDENTIFICATION**  
RFID SYSTEMS  
RFID RETROFITTING  
RFID BASED LOGISTICS SYSTEMS



**SOFTWARE**  
FLEET MANAGER FOR MOBILE ROBOTS  
SOFTWARE INTEGRATION  
WEB GUIs



**SERVICE**  
CONSULTING & FEASIBILITY STUDIES  
TECHNICAL SERVICES  
THIRD PARTY SUPPORT

 **FABMATICS**



Member of  
**SCIO**  
AUTOMATION

## **Europe**

HQ: Dresden, Germany  
Phone: +49 351 65237-0  
E-mail: [info@fabmatics.com](mailto:info@fabmatics.com)

## **USA**

Location Utica, NY  
Phone: +1 315 316 1480  
E-mail: [info.usa@fabmatics.com](mailto:info.usa@fabmatics.com)

[www.fabmatics.com](http://www.fabmatics.com)

## **Partners in Asia**

**Singapore & Malaysia**  
Phone: +65 9106 2386  
E-mail: [joseph.soo@micro-optics.com.sg](mailto:joseph.soo@micro-optics.com.sg)

## **Taiwan & China**

Phone: +886 912531863  
E-mail: [jeff.chen@gbgtek.com.tw](mailto:jeff.chen@gbgtek.com.tw)

## **Japan**

Phone: +81 92 473 6455  
E-mail: [info@brux.jp](mailto:info@brux.jp)