



STORAGE



FABMATICS

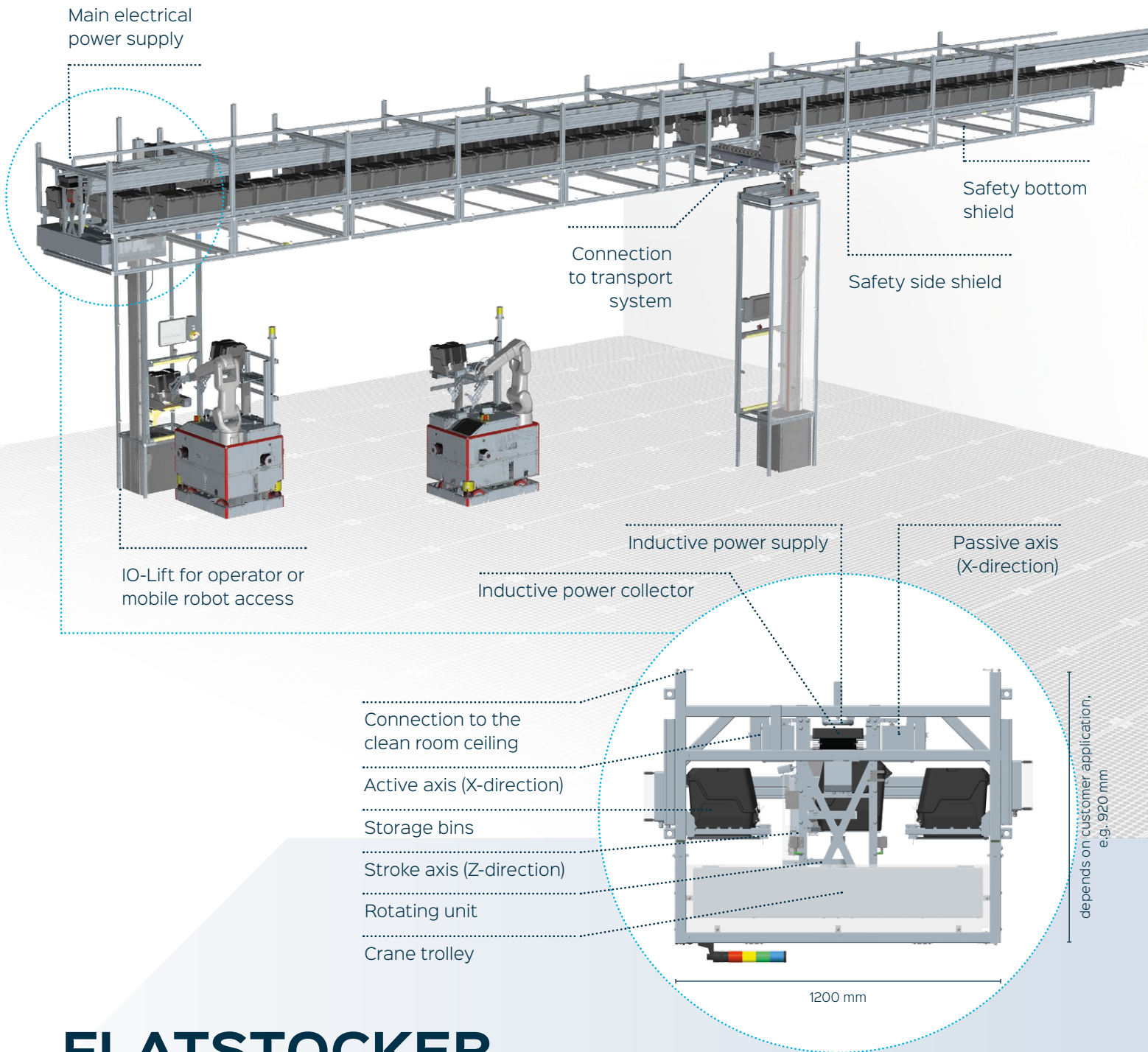
Automate your success

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





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