



HERO®FAB 200

Mobile robot for 200mm wafer transportation and handling tasks

Our HERO®FAB series combines an established, clean and safe 6-axis robot system with a free-moving vehicle. It is designed to fully automatically load and unload process machines and to transport wafer carriers between load ports, stockers and racks in the clean room. The HERO®FAB runs completely free without rail or cable connection. This makes it the ideal and flexible alternative to permanently installed transport systems for automating even hard-to-reach areas of a semiconductor factory. The transport jobs are coordinated by the Fabmatics Fleet Manager (HSFM).

Key Features

- **Fully free-moving** platform and ultimate maneuverability with omni-directional drive technology
- **Vibration-free handling** with powerful, for 24/7 use proven industrial 6-axis robot
- Charging on-the-fly during handling enables **24/7 operation**
- Vertical & horizontal laser scanners for a **safe collaboration of human and machine**
- **Autogripping** (camera-based gripping)
- Inductive charging
- **High material safety** due to redundant sensors, active lock in an emergency case and occupancy check of load ports (special: earthquake protection)
- Versions for **SMIF pods and open cassettes** available
- HSFM fleet manager for **multi robot management**

Further versions of HERO®FAB

- **HERO®FAB 300** for handling of FOUPS
- **HERO®FAB wet** equipped with a 60 litre water basin for un-/loading of polishing machines



HERO®FAB 200 with 4 buffers for SMIF pods

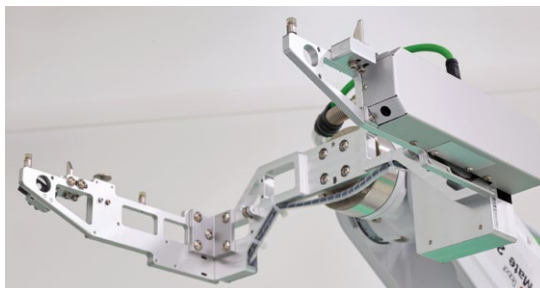


Omni-directional drive technology for moving in confined spaces

Technical data

HERO®FAB 200

Dimensions (length x width x height)	1135 x 824 x 1,407 mm (incl. robot arm and laser scanners)
Reach of robot (shelf height)	Up to 240 – 1,500 mm
Weight	450 kg
Payload	Up to 7 kg
Speed	Up to 0.80 m/s
Min. aisle width	800 mm (w/o scanners)
Type of drive	Omni-directional drive
Positioning & gripping accuracy	Vehicle: ± 5 mm, robot: ± 1 mm (± 0.5 mm with autogripping)
Clean room class	Up to ISO 3
Charging Voltage	56 V
Relation charging/operating time	1:12
Battery data	LiFePo4, Capacity 42Ah Certifications: UN38.3, IEC/UL 62133, IEC 62619, UL2271
Battery charging	Automatically via floor-mounted charging station or inductive on-the-fly during handling
Safety (driving & handling)	360° monitoring via 2 horizontal scanners, Virtual safety curtain via 4 vertical laser scanners
Navigation	Based on laser scanner data
Communication	Command interface Equipment interface
	E82/IBSEM via WiFi E23/E84 optical or WiFi
Un-/Loading times	
With positioning of vehicle	Up to 25 s
W/o positioning	Up to 20 s
Swap with positioning	Up to 40 s
Throughput example	Up to 30 pods/h with 10 m travelling



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