HANDLING & TRANSPORT

FABMATICS
Automate your success

HERO FAB 300

Mobile robot for 300mm FOUP transportation and handling tasks



HERO Fab 300 with 4 buffer positions for swapping

Our HERO Fab series combines an established, clean & 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 HERO LogIQ.

Key Features

- **Fully free-moving** platform & 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**
- **Safe collaboration of human and machine** with laserscanners and 3D cameras.
- **High material safety** due to redundant sensors, active lock in an emergency case and occupancy check of load ports (special: earthquake protection)
- HERO LogIQ fleet manager for **multi robot management**

Further versions of HERO Fab

- **HERO Fab 200** for handling of SMIF pods, open cassettes
- **HERO Fab wet** equipped with a 60 litre water basin for un-/loading of polishing machines

Technical data

HERO FAB 300	
Dimensions (length x width x height)	860 x 660 x 1,700 mm (Basis with 3D cameras)
Reach of robot (shelf height)	Up to 200 – 1,700 mm
Weight	310 kg
Payload	Up to 20 kg
Speed	Up to 900 mm/s
Min. aisle width	Approx. 900 mm
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	Up to 1:10 (depending on selected robot arm and use case)
Battery data	LiFePo4, Capacity 42 Ah Certifications: UN38.3, IEC/UL 62133, IEC 62619, UL2271
Battery charging	Automatically via floor-mounted charging station on-the-fly during handling
Safety (driving & handling)	360° monitoring via 2 horizontal scanners, 3D cameras or virtual safety curtain via 4 vertical laser scanners (optional)
Navigation	Based on laser scanner data
Communication Command interface Equipment interface	 E82/IBSEM via WiFi E23/E84 optical or WiFi

Our complete Mobile Robot Family
managed by Fleet Manager HERO LogIQ







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