



HERO FAB 300

Mobile robot for 300mm FOUP transportation and handling tasks

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**
- Vertical & horizontal laser scanners for a **safe collaboration of human and machine**
- **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



HERO Fab 300 with 2 buffer positions for swapping

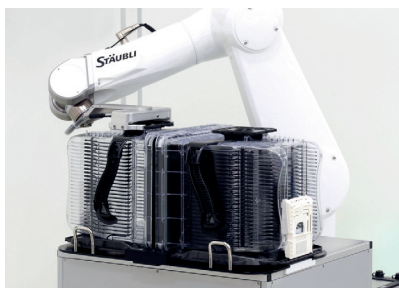
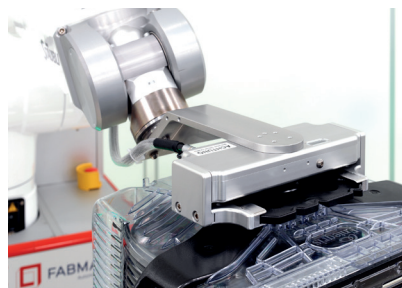


HERO Fab 300 loading 3 rack levels

Technical data

HERO FAB 300

Dimensions (length x width x height)	1,170 x 885 x 1,650 mm (incl. robot arm and laser scanners)
Reach of robot (shelf height)	Up to 200 – 1,500 mm
Weight	510 kg
Payload	Up to 12 kg
Speed	Up to 0.80 m/s
Min. aisle width	Approx. 1,200 mm
Type of drive	Omni-directional drive
Positioning & gripping accuracy	± 5 mm (vehicle), ± 0.5 mm (robot)
Clean room class	ISO 3
Loading Voltage	58 V
Relation charging/operating time	Up to 1:10 (depending on selected robot arm and use case)
Battery data	Lithium ion technology (UL1642, UN38.3, UL 1973 el. items), Capacity 50 Ah
Battery charging	Automatically via floor-mounted charging station on-the-fly during handling
Safety (driving & handling)	360° monitoring via 2 horizontal laser scanners, Virtual safety curtain via 4 vertical laser scanners
Navigation	Based on laser scanner data
Communication	
Command interface	E82/IBSEM via WiFi
Equipment interface	E23/E84 optical or WiFi
Un-/Loading times	
With positioning of vehicle	30 s
W/o positioning	25 s
Swap with positioning	45 s
Throughput example	Up to 15-20 FOUPs/h with 10 m travelling



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