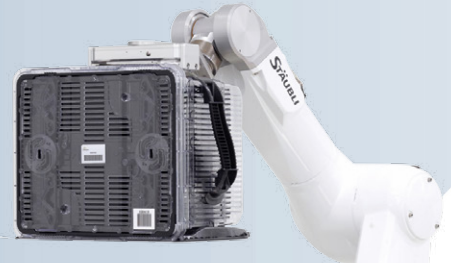




HERO®FAB 300

Autonomous mobile robot
for 300mm FOUP transportation
and handling tasks



Our HERO®FAB series combines an established, clean and safe 6-axis robot system with an autonomous navigating 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 manoeuvrability with **omni-directional drive** technology
- 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 maximum human, object and environmental safety
- **2 FOUP buffer places** for swapping

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 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, recommended 0.35-0.60 m/s
Min. aisle width	Approx. 1,200 mm
Type of drive	Omni-directional drive
Positioning accuracy	± 1 mm (robot), ± 5 mm (vehicle)
Clean room class	ISO 4-5
Loading Voltage	58 V
Relation charging/operating time	1:10
Battery type	Lithium ion technology (UL1642, UN38.3, partially UL1973 certified)
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	E82/IBSEM via WiFi E23/E84 optical
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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