

UNIVERSAL CARRIER SYSTEM

MODULAR AGV
PLATFORM

COMPOSED TO COMPETE

- Flexible Autonomous Transport System for Multiple Purposes
- Scalable from Small to Very Large Systems
- High-Precision Laser-based Positioning





UNIVERSAL CARRIER SYSTEM - TECHNICAL INFORMATION


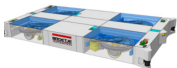
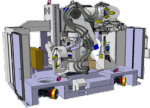

Area of Application

The Universal Carrier System is a modular, scalable AGV platform. It is highly configurable and the ideal solution for industrial manufacturing environments. From small cobots to complex machines and logistics systems, Broetje-Automation offers AGVs based on the Universal Carrier System with a large variety of load capacity and high-precision positioning.

The innovative SLAM navigation system is based on latest LIDAR technology. Combined with the proprietary omnidirectional wheel technology* the system offers highest flexibility, robustness and precision for your production environment.

Proven standard components ensure low operating costs and easy maintenance. In combination with our state-of-the-art software, the universal carrier system is perfectly qualified for clean floor automation in industrial production.

Technical Data

| | small | medium | large | extra large |
|------------------------|--|--|---|--|
| |  |  |  |  |
| Load Capacity | 660 kg | 6t | 24t | 80t |
| Wheels | 3 | 4 | 4 | 16 |
| Speed | 1,5 m/s | 1,5 m/s | 1,1 m/s | 1,1m/s |
| Acceleration | 0,75 m/s ² | 0,6 m/s ² | 0,6 m/s ² | 0,6m/s ² |
| Power Supply | >1h on flat surface; Battery Stack + external loader; Wireless Option; Lithium Battery | | >1h (optionally extended by larger batteries); external or internal loader; Lithium or Lead Battery | |
| Ground Support | Stays on wheels, optional: automatic pedestal | | | |
| Navigation | Camera and LIDAR-based SLAM (Simultaneous Localization and Mapping), Positional accuracy < ± 3mm, including autonomous path planning | | | |
| Leveling | n.a. (Tripod) | rocker | rocker | rocker |
| Manual controls | Cable based remote control / wireless remote control (optional) | | | |

Special Features

360° Wheel Design*

- Universally scalable for all platforms
- No angle of rotation limit – endless steering movement
- Simple design with standard, off-the-shelf parts
- Assures robustness, no moved cables

Control and Navigation

- Safe Hand Pendant Operation (wireless or cable as backup)
- Camera and LIDAR based SLAM (Simultaneous Localization and Mapping) including path planning
- Monitoring and control can be done with mobile clients

Customized Design

- Load and form can be designed according to task
- Scalable capabilities by size and number of wheels
- Standardized off-the-shelf components
- Power storage on the platform
- Optional lifting axis for stabilization, locking devices to fix load or standard containers, any kind of position controlled axis or couplers



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