

Phoenix TN-1,0 Lk

DRIVERLESS



Type of vehicle

- High-lift fork truck
- High-shift stacker
- Straddle truck
- Telescoping mast stacker
- Spreader stacker
- Drawbar stacker
- Telescoping fork stacker
- Side shift stacker
- Narrow-aisle stacker
- High-rack stacker
- Tractor
- Drive-under tractor
- Platform truck
- Other**

Special equipment

- RFID-/barcode reader
- Weighing function
- Metering function
- Roll conveyer
- Belt conveyer
- Chain conveyer
- Flexible load handling
- Cover lift
- Dual operation
- Stainless steel vehicle
- Clean room vehicle
- Outdoor vehicle
- Lifting plate**
- Telescopic table**

Application example Boehringer Ingelheim

MLR replaced and modernized an existing automated guided vehicle system (AGVS) at the pharmaceutical company Boehringer Ingelheim.

The Phoenix model specialized automated guided vehicles handle supply and disposal on the production floor. They transport pallets and special bulk containers between packaging lines, the front zone rack, and staging. Full and empty trash containers are also swapped out between the production floor and the trash station. There is also a clean room area where two stainless steel vehicles transport aluminum pallets.

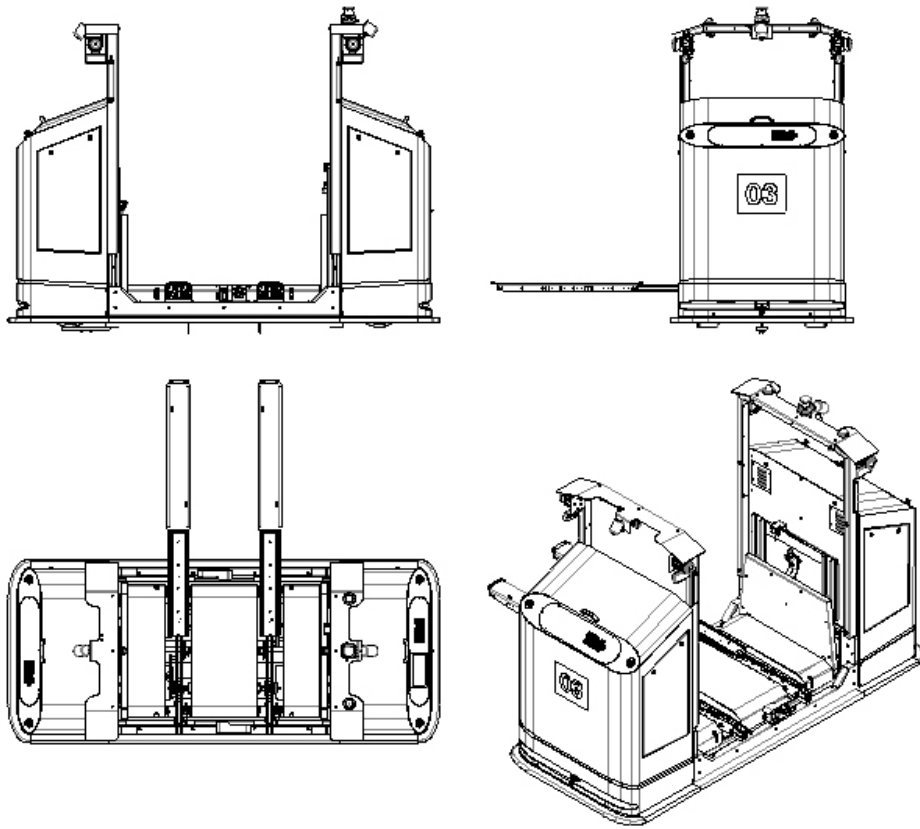
Loads are exchanged at rack positions at the packaging lines, on the bottom level of the front zone rack, and at various transport systems.

Transfer heights range from 340 to 400 mm and loads are automatically picked up and dropped off by the automated vehicles using a telescoping platform.

Coordination and control of the vehicles are handled by MLR's proprietary LogOS control and management system, which interfaces with the customer's SAP system and initiates transport orders for the AGVS. LogOS also controls 15 high-speed doors and three fire doors.

The system runs around the clock, 24 hours a day, seven days a week, 365 days a year.

Technical data



Phoenix TN-1,0 Lk

Length	3,130 mm
Width	1,330 mm
Height	2,320 mm
Lift height	80 mm
Weight (with battery)	4.350 kg
Load capacity	max. 1,000 kg
Speed	Forward and reverse travel: 1.6 m/s Sideways crab move travel: max. 0.3 m/s
Battery	LiTO 41.4 V / 120 Ah
Protective devices	Laser scanner front and rear, strip sensors on the sides, front and rear bumpers, 2 E-stop buttons each front and rear
Appropriate loads	Pharmaceutical products on load carriers Dimensions: max. 1,300 x 1,000 x 250 (L x W) Weight: max. 1,000 kg