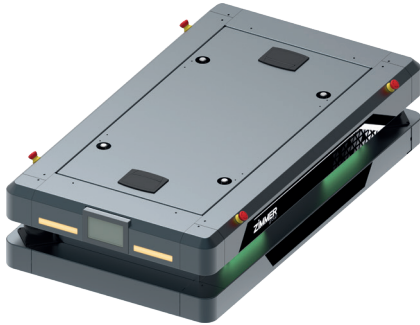


AUTONOMOUS MOBILE ROBOT (AMR)

MILES 500

▶ PRODUCT ADVANTAGES



- ▶ 1.5 m/s driving speed at a max. 5% gradient
- ▶ Long-lasting battery with 48 V on-board voltage
- ▶ User-friendly user interface
- ▶ Complete integration into the entire production process
- ▶ Planning the hall and the AMR fleet using simulation
- ▶ Integrated service and commissioning

▶ HIGHLIGHTS AND TECHNICAL DATA



IP44 (IP54 on request)



Inductive charging



VDA 5050-compliant and natural navigation



500 kg transport load



Integration into the ERP system



Safety based on SICK technology

▶ CHALLENGE AND SOLUTION

- ▶ AMRs support up to 80% of the in-house transport processes for semi-finished and finished goods
- ▶ 24/7 application options for AMRs, very high availability of AMRs
- ▶ Material reaches the right place at the right time, employees receive optimal onsite support
- ▶ Only the stock actually required for work is on the shop floor. This results in an increase in the shop floor area by up to 20%
- ▶ AMRs can be integrated into the existing factory layout without major structural adaptations
- ▶ Fluctuations in demand and orders are compensated via the AMRs
- ▶ Complex supply and disposal of Kanban cycles can be automated

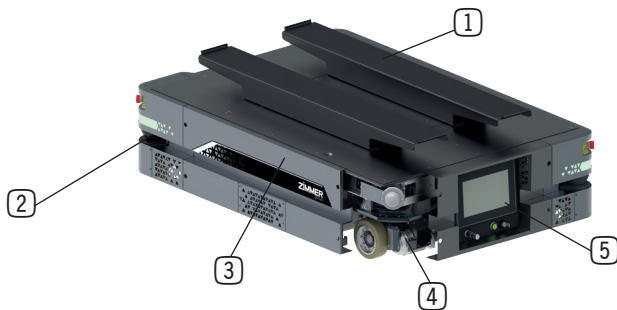
▶ WORKPIECE PARAMETERS

- ▶ Transport load of up to 500 kg
- ▶ Runtime of up to 5 h
- ▶ 55 mm stroke to lift the loading carriers
- ▶ Pallets, chip containers / off-cut containers
- ▶ Transport boxes

▶ APPLICATION EXAMPLES

- ▶ As an AMR with a lifting unit to transport Euro pallets, chip containers, etc.

► FUNCTIONS AND DETAILS



- ① Lifting unit (55 mm)
- ② Safety scanner PL d, SICK Technology, Human-machine safety
- ③ Batteries, 48 V on-board voltage, up to 5 h of runtime, inductive charging
- ④ Differential drive: smallest space requirement, turning radius of 0 m
- ⑤ HMI and software: Navigation, fleet management, ERP interface

► TECHNICAL DATA

Order No.	Miles 500
Base vehicle transport load [kg]	500
Navigation	Via laser
Base vehicle length [mm]	1205
Base vehicle width [mm]	678
Base vehicle height [mm]	293
Speed max. [m/s]	1.5
Protection class	IP44 (IP54 upon request)
Vehicle weight [kg]	300
Runtime [h]	5
Charging time from 0 to 100% [h]	2
Gradient max. [%]	5
Chassis type	Differential drive
Turning radius [m]	0
Charging process	Via induction
Communication interface	VDA 5050

	► Stroke setup
Order No.	Miles 500
Dimensions with lifting unit retracted (LxWxH) [mm]	1380 x 678 x 408
Lifting unit transport load [kg]	500
Transport object (examples)	Chip tubs, Euro pallets, commissioning carts, SLCs
Stroke [mm]	55

► SOFTWARE ADVANTAGES

- Collaborative system – people and machines operate in a single system without limitations
- Interface for setting up different modules possible
- Complete integration into the entire production process with control architecture from a single source
- Seamless integration into existing structures
- The use of different fleet management systems in one system is possible
- Reprogramming of the AMR travel paths possible at any time
- Fast fleet expansion with additional vehicles when there is increased demand
- Easy troubleshooting via remote support

► SOFTWARE FUNCTIONS

- Performance level d (vehicle only)
- VDA 5050-compliant
- Navigation via LiDAR sensors
- Reliable navigation
- Protective field violations are detected by the SICK safety scanner, which stops the vehicle in a timely manner
- Integration into ERP systems and machine interfaces
- Additional AMRs can be integrated into the system later on
- Interface for remote access