

The optimized wheel-drive system for AGVs and AMRs

The mobile motion system is a complete and ready-to-use wheel drive system designed and optimized for the requirements of automated guided vehicles and autonomous mobile robots.



Cost and space saving design

Compact servo drive and gear motor with integrated brake and encoder allow saving space for other components and simplify the cabling and mechanical design of the mobile vehicle.



Robust design for mobile applications

Strong output bearings and a shock & vibration proof servo system ensure a powerful wheel traction and durability in rough surface conditions.

Smooth running at different speeds

Controllability of the AGV over a wide speed range allowing a smooth run even at low speeds.

Low energy consumption

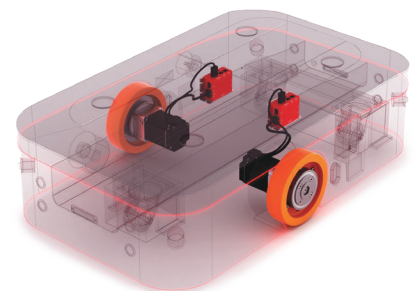
A low current consumption servo system minimizes the recharging cycles and increases the mobility range.

Connectivity to safety control

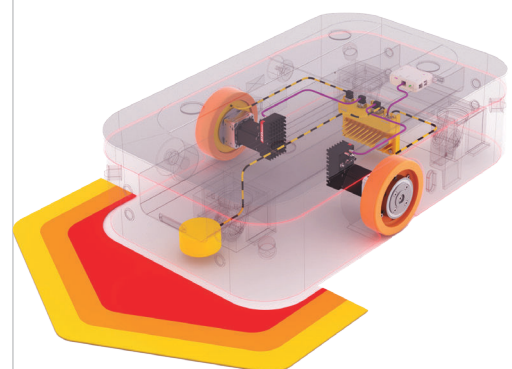
The STO SIL3, Cat 3, PL e safety function can be connected to a master PLC / motion controller and / or to a safety controller. Two additional non-safe encoders can be connected from the motor to the safety controller (e.g. Flexi Mobile from SICK) for safe motion monitoring, minimizing the complexity of the AGV design.

Key benefits

- Developed and optimized for the requirements of AGVs & AMRs
- High durability in rough surface conditions - resistant to shock and vibration
- Compact for an easy fit within AGV size constraints
- STO function for safe operation and connectivity to modular safety
- Energy efficient with low current consumption



Driving axis with compact drives and gearmotors

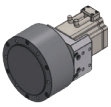
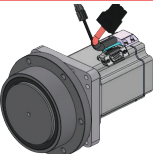



Driving axis with integrated servo motors and safety connectivity

Product offering

A ready-to-use wheel-drive system that can be ordered with or without a mounted wheel.

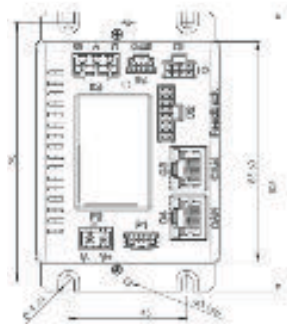
- Motors frame size is 60 and 80 mm. A brake is included.
- Gearboxes have a 10, 16 and 22.5 gear ratio.
- Motors are rated IP40/IP54
- Wheels have a maximum load of 900 kg at 1.1 m/sec, and 600 kg at 2.8 m/sec.
- Other options and combinations are available upon request.

	Wheel (optional)	mobiGM model w/o wheel	Ratio	Nom./Max. torque	Nominal speed	Motor voltage	Motor power
	150 mm	GM-1811-00	10	6/17 Nm	300 rpm (2.35 m/sec)	24/48 VDC	200 W
	150 mm	GM-1913-00	16	18/56 Nm	187 rpm (1.47 m/sec)	24/48 VDC	400 W
	200 mm	GM-0807-00	22.5	28/84 Nm	151 rpm (1.58 m/sec)	24 VDC	500 W
	200 mm	GM-0808-00	22.5	36/119 Nm	191 rpm (2.00 m/sec)	48 VDC	900 W

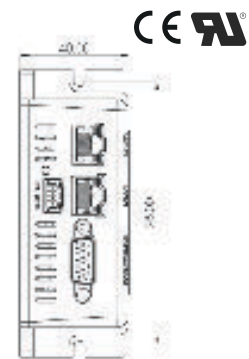
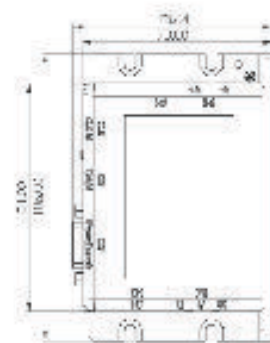
	ZED servo drive	Model	Input bus	Input logic	Cont. current	Peak current
	CANopen® servo drive Digital IN/OUT: 4/2 Feedback: SSI encode / incremental encoder with halls sensor	SD01-015	24 VDC	24 VDC	12 / 14.4(*) Arms	40 Arms
		SD01-030	24 VDC	24 VDC	20 / 23(*) Arms	70 Arms
		SD01-025	48 VDC	24 VDC	18 / 20(*) Arms	63 Arms

Mechanical dimensions

SD01-015



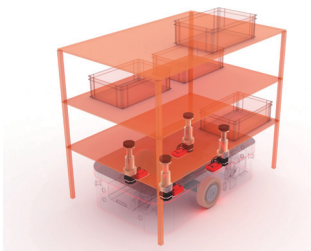
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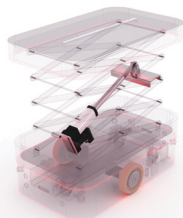
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STXI optimized motion solutions for mobile applications

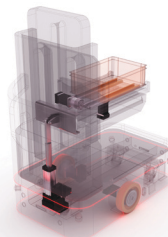
With over three decades of experience, our application knowhow and building blocks allow us to provide products and solutions that are integrated, connected and tailored to the application requirements. Contact us for an optimal motion solution that suits your AGV requirements.



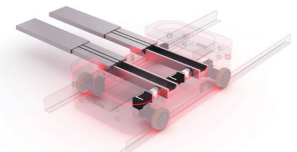
Lifting mechanism with drives and motors as a distributed actuation



Centralized elevation with an integrated actuator



Fork, tilt and lift mechanism for a rotating unit of a mobile robot



Integrated gearmotors for telescopic manipulators in a shuttle system