

MTA
innovation is our drive

MTA
WHEEL DRIVE
OMNI

Revolutionary
Groundbreaking
Trendsetting



WHEEL DRIVES Omnidirectional Next generation

Experience the future of drive technology

The innovative **next generation wheel and steering drive** from MTA sets new standards in performance and safety with its **fully integrated drive controller**. With a height of 203 mm and the smallest footprint, the omni-directional drive from MTA **is the most compact in its class**.

As part of a combination of several drive units, the drive can transport weights up to 2000 kg and has an


endless rotating steering drive. The highest standards can be achieved through **safety functions such as STO, SBC, SLS, SS1, SS2,...** up to **Performance Level e**.

The drive system from MTA not only defines the next level of technology, but is also future-proof, even as standards become more stringent.

Features

- Highly integrated traction and steering drive, "smallest in its class"
- Transports **loads up to 2,000 kg** with the smallest footprint
- Endless rotating axis
- Integrated brake
- **Integrated drive controller with Safe Motion Functions** STO, SBC, SLS, SS1, ... via FSOE
- Simple wiring of all components via one hybrid cable
- **Integrated redundant absolute encoder multi-turn capable** – no wiring and no external end position sensors necessary
- Industry 4.0 ready – data transfer via EtherCAT
- Drive manager with automatic controller tuning
- **Low system complexity leads to quicker ROI**
- Maintenance-free

A big powerhouse in a small space



Integrated safety PLe

- STO
- SBC
- SS1, SS2
- SOS
- SLS
- SMS



Steering drive

- For omni-directional driving
- Endlessly rotating axis
- No external end position sensors necessary



Steering angle detection

- Absolute encoder up to 20 bit
- Multi-turn capability
- Secure redundant design



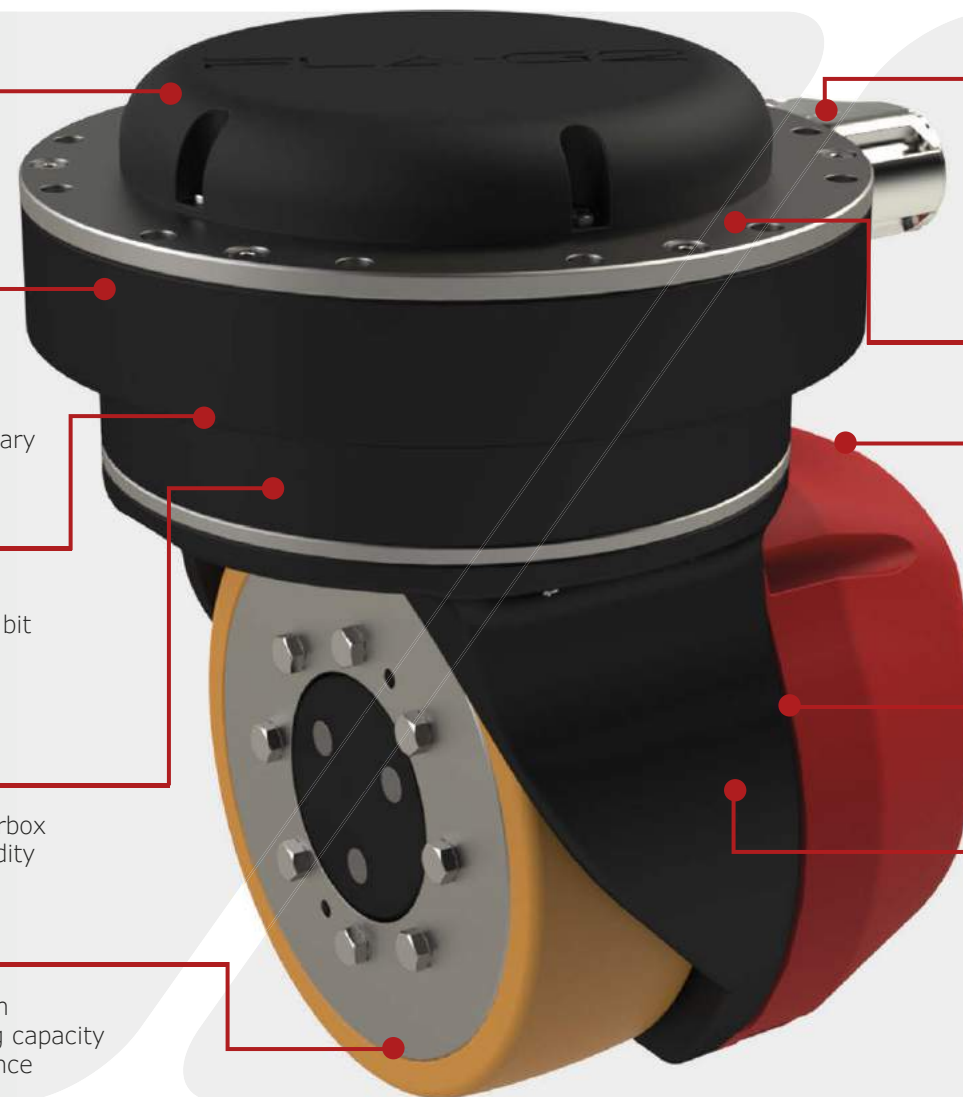
Gearbox

- Backlash-free gearbox
- High torsional rigidity



Wheel

- Diameter 135 mm
- High load-bearing capacity
- Simple maintenance



Interfaces

- Industry 4.0 ready – Predictive maintenance
- Power supply 48VDC
- Field bus EtherCAT/FSOE
- Single cable technology

- Simple connection
- Easy project planning



Drive controller

- Drive manager with automatic controller tuning function
- Model predictive field oriented control
- Maximum supply voltage 60 VDC
- 48 VDC and up to 60 Arms motor phase current
- Motor temperature protection



Wheel drive

- High power up to 720 W
- Speed up to 2 m/s
- Compact design
- Integrated brake



Console / housing

- Compact dimensions
 - Enveloping circle 232 mm
 - Height 203 mm
- Robust design
- Easy assembly

Wheel-steering drive		
Application		Underfloor vehicles, AGV/AMR
Voltage	VDC	48
Speed	m/s	2
Wheel load	kg	500
Construction	mm	203
Ground	mm	11
Wheel diameter	mm	135
Enveloping circle	mm	232
Swing angle	°	360
Integrated motor controller		•
Integrated functional safety		•

MTA is committed to innovation and invests in advanced technologies, to meet the requirements of tomorrow.

Condition monitoring

Our innovative system uses the power of **EtherCAT**, a state-of-the-art communications protocol, to ensure seamless and efficient **data transfer**.

This not only allows you to control and optimise your drive systems **in real time**, but also to **carry out diagnostics** and implement **advanced condition**

monitoring. These functions allow you to identify potential problems early and maximise the availability of your AGV fleet.

Our solution not only offers you improved control over your systems, but also greater reliability and efficiency in operation.

MTA - Your partner for mobile robotics

MTA is a **trustworthy partner** that stands for the highest quality standards and comprehensive support in the development of your solutions! We are at your side from the first request to the final release test.

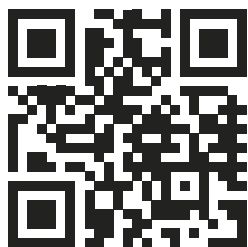
Our products are tested under the toughest conditions in a specially created infrastructure to

ensure that they meet the highest standards.

With our complete package from a single source we lead your project to success.



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