

# MOBILE ROBOTICS

**MTA**  
*innovation is our drive*

**AGV- and AMR drives  
for highest precision  
and efficiency**



# APPLICATIONS MOBILE ROBOTICS

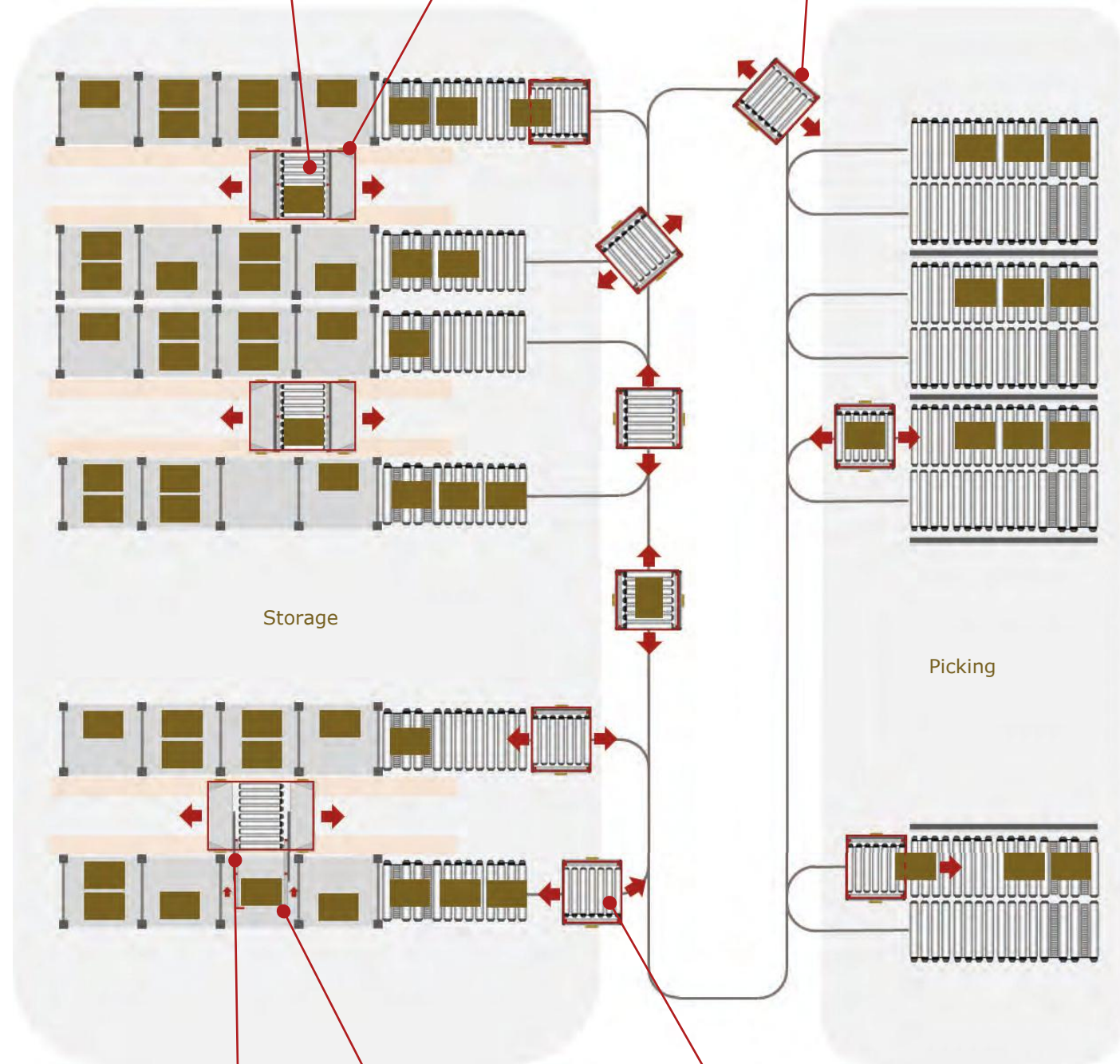
MOTORIZED ROLLERS for load handling devices for single/multi-deep storage of boxes, totes or small load carriers (SLC).



Energy efficient WHEEL DRIVES with high power density for rail-bound shuttles.



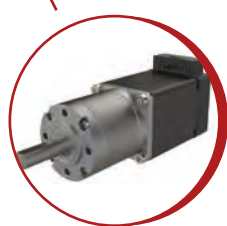
WHEEL DRIVES, optimized for mini- and micro-AGVs/-AMRs.



Powerful GEARED MOTORS as a telescopic drive for loading multi-deep storage channels.



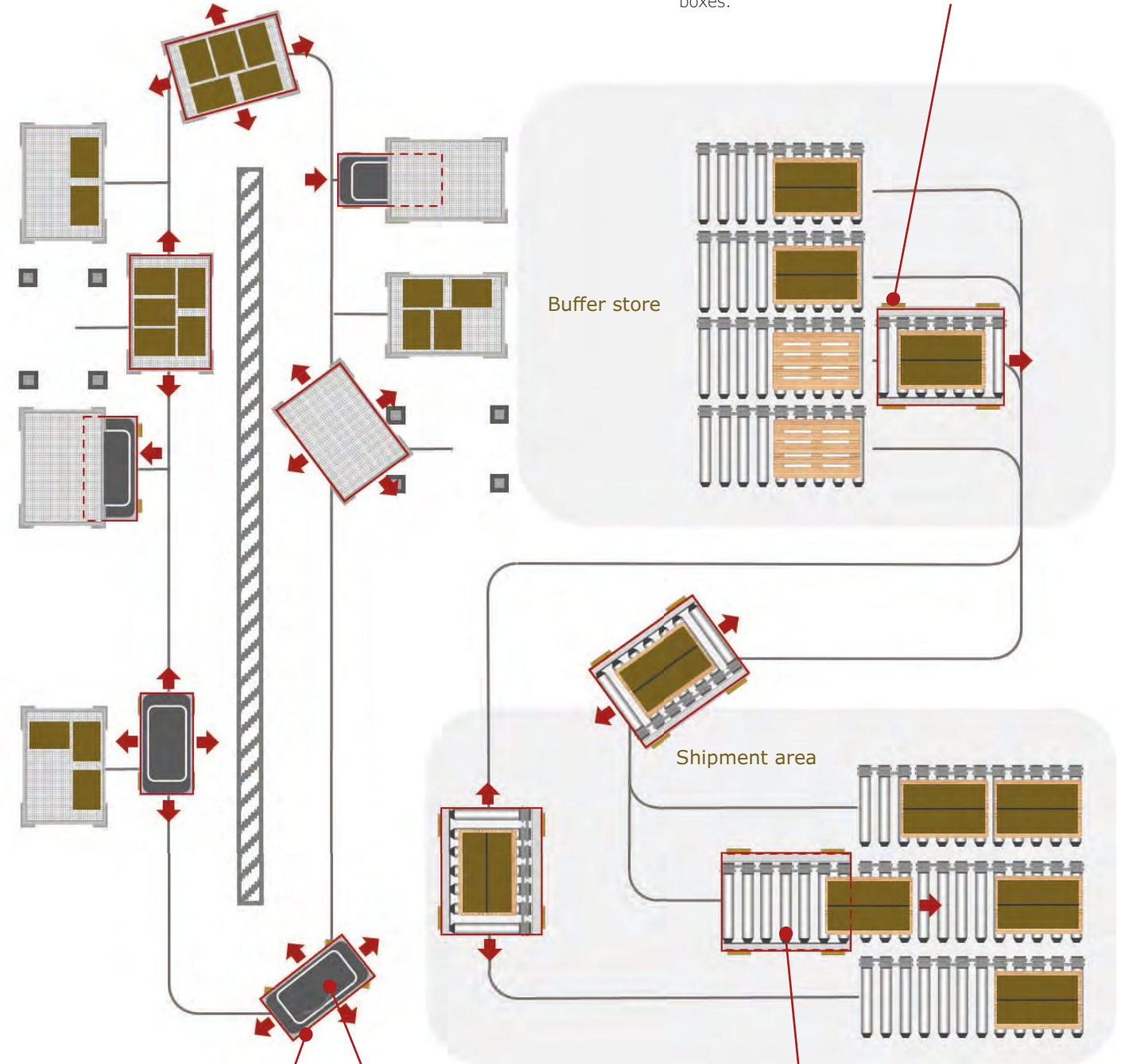
GEARED MOTORS as a flap drive on load handling devices for quickly picking up all storage units such as totes, boxes, trays, etc.



Energy-efficient DRUM MOTORS for fast and safe load handling on AGVs and AMRs.



Powerful WHEEL DRIVES for AGVs and AMRs with heavy loads such as pallets or lattice boxes.



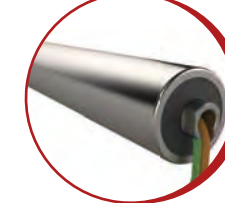
Combined driving/steering drives (WHEEL DRIVES) for omnidirectional material transport at AGVs and AMRs.



Powerful GEARED MOTORS for lifting and vertical movements of assembly and packing stations.



DRUM MOTORS for the load handling of heavy loads on transport vehicles.





# INNOVATIVE

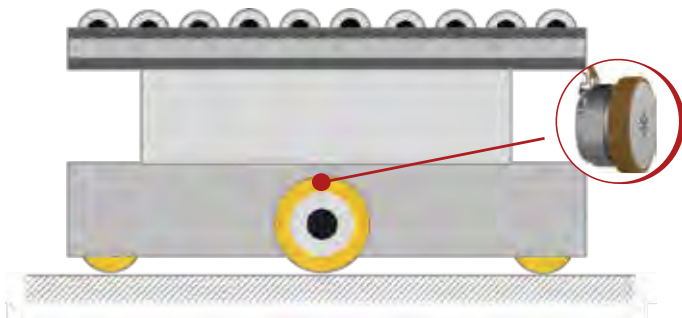


## Differential WHEEL DRIVES for transportation of heavy loads

The power pack for effortless pallet transport on shuttles, transfer trolleys or AGVs / AMRs.

- Synchronous motor with planetary gear in an extremely short design
- High-resolution encoder systems for high positioning accuracy
- Integrated holding brake
- Service brake and safety encoder optional

Performance data	
Power	1020 W
Voltage	48 VDC
Speed	0 - 2.6 m/s
Length without wheel	120 mm
Motor diameter	200 mm
Wheel diameter	250 mm



Applications:

- AGVs and AMRs with high payloads
- Compact underdrive vehicles
- Transfer trolleys in warehouse logistics

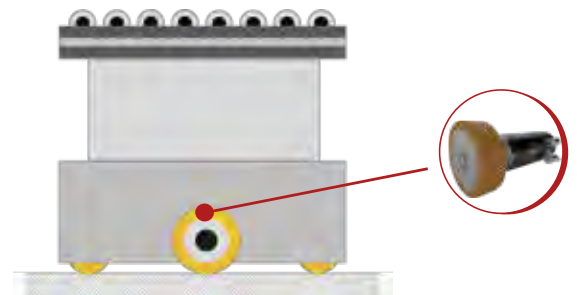


## Compact MECHATRONIC UNITS for micro AGVs and AMRs

Dynamic transport of small loads or courier containers.

- Compact drive with integrated motor controller
- Tailor-made drive solution for individual vehicle integration
- Best energy efficiency for optimized battery management

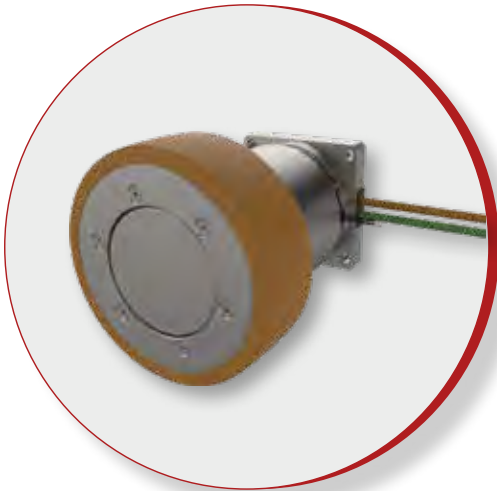
Performance data	
Power	150 W
Voltage	48 VDC
Speed	0 - 1.5 m/s
Length without wheel	225 mm
Motor diameter	80 mm
Wheel diameter	140 mm



Applications:

- AGVs and AMRs for smaller loads
- Vehicles in the laboratory environment
- Vehicles for courier services

# HIGH-PERFORMANCE

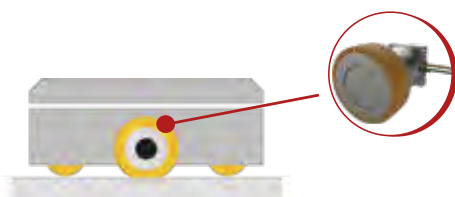


## **Gearless WHEEL DRIVES for small, fast AGVs / AMRs**

Almost unlimited possibilities for AGVs and mobile robotics.

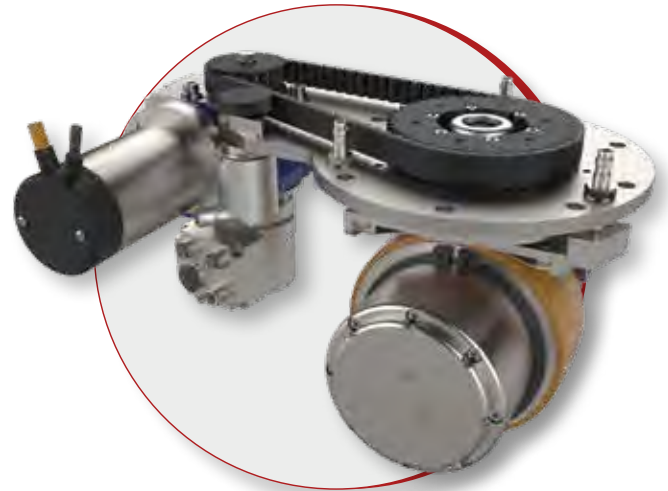
- Compact, space-saving design
- Redundant encoder system for safety-related operating states
- Flexible structure of the mechanical drive construction for a high degree of integration into the vehicle mechanics

Performance data	
Power	240 W
Voltage	48 VDC
Speed	0 - 5 m/s
Length with wheel	172 mm
Wheel diameter	140 mm
Motor diameter	98 mm



Applications:

- AGVs and AMRs with small payloads
- Shuttles in automated warehouses
- Vehicles for process interlinking

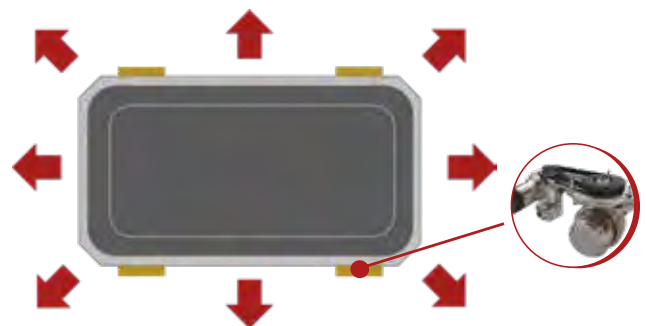


## **Omnidirectional WHEEL DRIVES for movements in any direction**

Navigate and manoeuvre in smallest spaces by the combination of drive and steer.

- For all conceivable ridemovements in mobile robotics
- Integrated brake with emergency stop function
- Optionally with built-on safety encoders
- Highest positioning accuracy in combination with the MTA motor controller

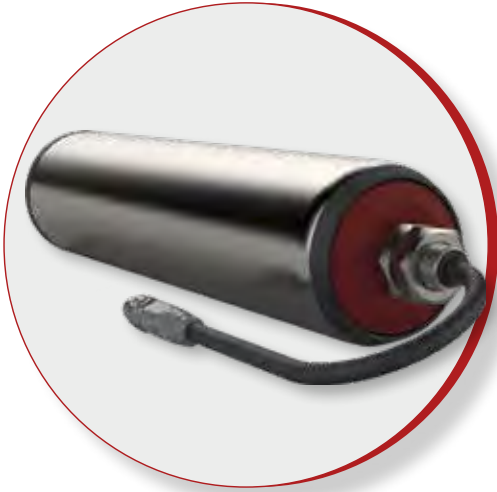
Performance data	
Power	260 W
Voltage	48 VDC
Speed	0 - 1.7 m/s
Steering speed	270°/s
LxWxH	302 x 222 x 187 mm
Wheel diameter	130 mm



Applications:

- Omnidirectional AGVs and AMRs
- Vehicles with high payloads
- For low underride heights

# STURDY

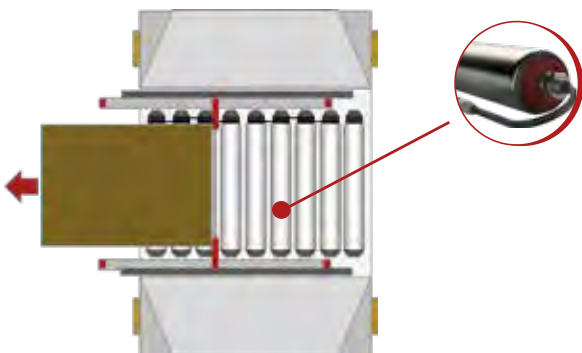


## Highly efficient **MOTORIZED ROLLERS** for load handling devices

Reliable use in line conveyor technology as well as shuttles, AGVs and AMRs.

- Integrated motor controller
- Gearless with lowest noise emission
- Communication via standardised I/O interfaces
- Full digitalisation and diagnostics in the version with CANopen

Performance data	
Power	35 W
Voltage	24 VDC and 48 VDC
Speed	0 - 1 m/s
Clamping length	225 - 1300 mm
Diameter	50 mm



Applications:

- Load handling devices on AGVs and AMRs
- Accumulation conveyor technology
- Conveying boxes and trays

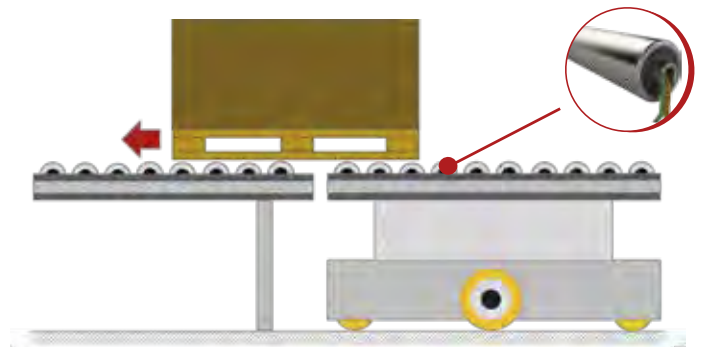


## Innovative **DRUM MOTORS** for heavy loads

Safe load handling and smooth transport of high loads on pallet AGVs.

- High power range for transporting heavy loads
- Low energy requirement
- Flexible adaptation to decentralised third-party controllers
- Available in the MOTORIZED ROLLERS version with an integrated motor controller

Performance data	
Power	260 W
Voltage	48 VDC
Speed	0 - 1 m/s
Clamping length	235 - 1300 mm
Diameter	80, 89 mm



Applications:

- Load handling devices on AGVs and AMRs with heavy loads
- Load handling devices on transfer trolleys
- Conveying pallets, storage racks and lattice boxes

# COMPACT

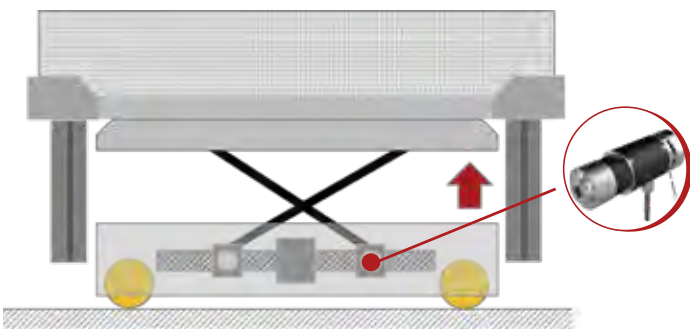


## Powerful GEARED MOTORS for lifting applications

Reliable and safe lifting and lowering of platforms.

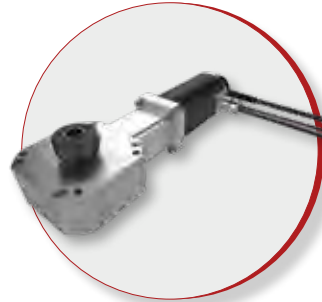
- Synchronous motor with planetary gear for high lifting capacity
- High-resolution encoder system for high positioning accuracy
- Optional with holding brake
- Synchronisation operation with MTA motor controller

Performance data	
Power	260 W
Voltage	48 VDC
Drive speed	0 - 330 rpm
Length	238 mm
Motor diameter	75 mm



Applications:

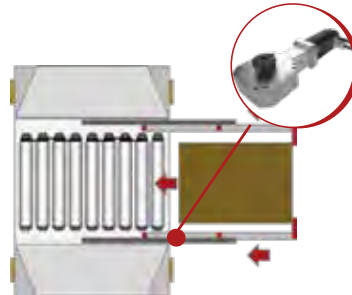
- Assembly platforms with vertical height adjustment
- Lifting of load handling devices onto AGVs and AMRs
- Lifting functions in stationary systems



## GEARED MOTORS (telescopic drive)

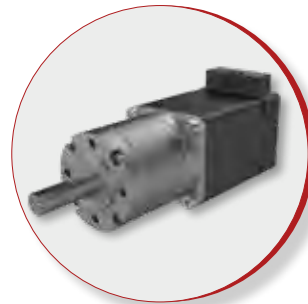
For the loading of multi-deep storage channels.

Performance data	
Power	190 W
Voltage	48 VDC
Drive speed	0 - 420 rpm
Length	265 mm
Motor diameter	55 mm



Applications:

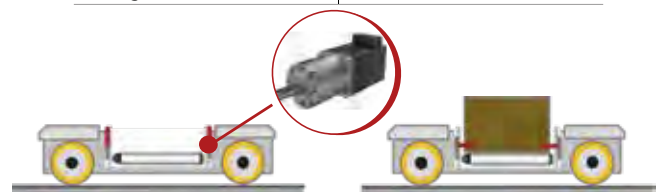
- Load handling devices on storage and retrieval machines and shuttles
- For single and multi-deep storage and retrieval



## GEARED MOTORS (flap drive)

The cost-optimized drive for storing and retrieving containers or boxes.

Performance data	
Power	3.5 W
Voltage	24 VDC
Step angle	0.11°
Length	96 mm
Flange dimension	□ 28 mm



Applications:

- Load handling equipment on storage and retrieval machines and shuttles
- For single and multi-deep load handling






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