

SYSTEM IN HIGH-BAY STORAGE:
TRAPO WAREHOUSE SHUTTLE (TWS)

TWS Series >
TRAPO Warehouse Shuttle

The TWS takes over products or complete load carriers such as pallets. The TRAPO Warehouse Lift (TWL) picks up the TWS to load and retrieve at different levels via a rail system in the warehouse lanes.

Our solutions - your advantage:

- > TWL for storage and retrieval on the different shelf levels
- > Modular structure shelf system, flexibly extendable

Services:

- > Designed in standard for a payload of 35 kg, other versions on request
- > For load carriers such as pallets up to 1200 kg, higher loads on request
- > Energy storage is accomplished either by battery or capacitor
- > Charging is preferably performed on the TWL or alternatively via a charging point in the gangway
- > Increase in storage and retrieval capacities is achieved via additional TWS and TWL, so the warehouse can be extended in modules

	TTS 100	TTS 500	TTS 1200	TTS 2000	TWS 35*	TWS 1200*
Key system Data						
Transport weight	100 kg	500 kg	1200 kg	2000 kg	35 kg	1200 kg
Conveyor belt dimensions	800 mm × 600 mm	800 mm × 600 mm	1200 mm × 800 mm	1600 mm × 1200 mm	1200 mm × 630 mm	1800 mm × 1200 mm
Tare weight	200 kg	300 kg	400 kg	800 kg	120 kg	800 kg
Acceleration	2 m/s ²	2 m/s ²	0,5 m/s ²	0,5 m/s ²	1 m/s ²	1 m/s ²
Turning radius (surface-directional)	0	0	0,5	0,5	1	1
Driving speed	1 m/s	1 m/s	1 m/s	1 m/s	3 m/s	3 m/s
Environment						
Ambient temperature range	5-35 °C	5-35 °C	5-35 °C	5-35 °C	5-35 °C	5-35 °C
Energy supply						
Lead-crystal battery	✓	✓	✓	✓	✓	✓
Lithium-ion battery	✓	✓	✓	✓	✓	✓
Capacitor	✓	✓	✓	✓	-	-
Charging time approx.	2 h	2 h	2 h	2 h	2 h	2 h
Operating time	24/7	24/7	24/7	24/7	24/7	24/7
Energy transfer						
Inductive	-	-	✓	✓	-	-
Charging stations	✓	✓	✓	✓	✓	-
Battery exchange	✓	✓	✓	✓	-	-
Energy storage						
Lead-crystal battery	✓	✓	✓	✓	✓	-
Lithium-ion battery	✓	✓	✓	✓	-	-
Capacitor	✓	✓	✓	✓	-	-
Navigation						
Optical	✓	✓	✓	✓	-	-
Inductive	-	-	✓	✓	-	-
Autonomous	✓	✓	✓	✓	-	-
Variable structures						
Conveyor	✓	✓	✓	✓	-	-
Lift function	✓	✓	✓	✓	✓	-
Robot	-	-	-	✓	-	-
Telescopic extension	-	-	-	-	✓	✓
Customer-specific	✓	✓	✓	✓	✓	✓

* Other sizes and designs on request

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PARTNER FOR INDUSTRIAL AUTOMATION



FLEXIBLE USE
TRAPO TRANSPORT AND
WAREHOUSE SHUTTLE

TRAPO | DRIVERLESS TRANSPORT SYSTEMS

> Flexible storage and retrieval with TWS and TWL



MOBILE POWER:
TRAPO TRANSPORT SHUTTLE (TTS)



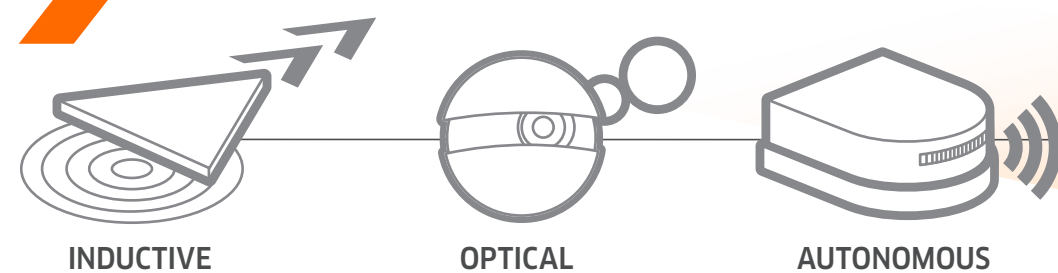
The variants of the TTS series are extremely flexible, approach conveyor lines and take over handling of individual loads or loads on load carriers such as pallets. The TTS approaches fixed conveyor technology and can navigate autonomously through the production floor. TTS can be flexibly adapted to production processes at any time.

The variants of the TTS series are geared to individual customer requirements. Moreover, superstructures are supplied according to customer-specific requirements.

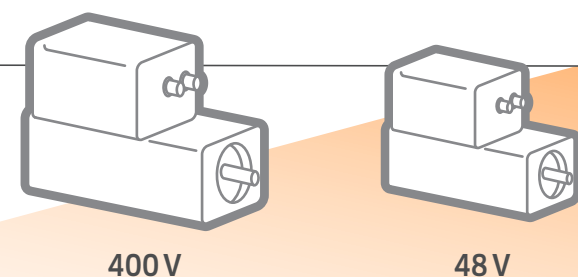
Our solutions - your advantage:

- > Standard up to 2000kg, higher loads on request
- > All destinations are approached autonomously
- > Replaces and supplements fixed conveyor systems, offering more space and flexibility
- > Mecanum wheels which enable a surface-directional movement of the TTS
- > Many possibilities for energy transfer as well as navigation enable a wide range of applications
- > Customized structures such as lift function, conveyor systems or robots

NAVIGATION
+ CLASSIC OR AUTONOMOUS



DRIVE
+ THE SUITABLE POWER

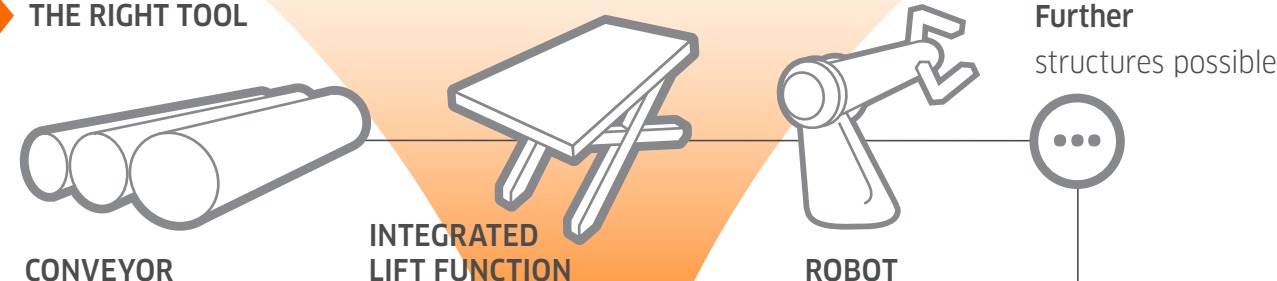


YOU HAVE THE CHOICE:
YOUR INDIVIDUAL TTS

PAYLOAD
+ FROM STRONG TO STRONGER



STRUCTURE
+ THE RIGHT TOOL



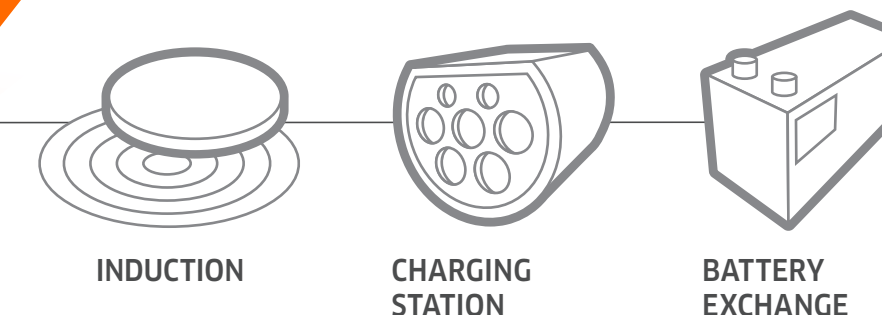
THE PERFECT TEAM:
TTS AND TWS IN COMBINATION

As a TRAPO Transport Shuttle (TTS) and TRAPO Warehouse Shuttle (TWS), the driverless transport systems work together and can be used in combination. As a flexible transfer unit, the TTS handles in-house goods transports - and transfers them to the TWS in the high-bay storage warehouse area. Whether in the individual application or as a fleet: With this portfolio, TRAPO fulfills all requirements with flexible, economical systems.

Our solutions - your advantage:

- > Different designs, payloads and speeds
- > Everything from a single source: no interfaces, mechanically one structure, control technologically one system
- > Modular construction

ENERGY TRANSFER
+ FOR SMOOTH OPERATION



ENERGY STORAGE
+ FOR SECURE OPERATION

