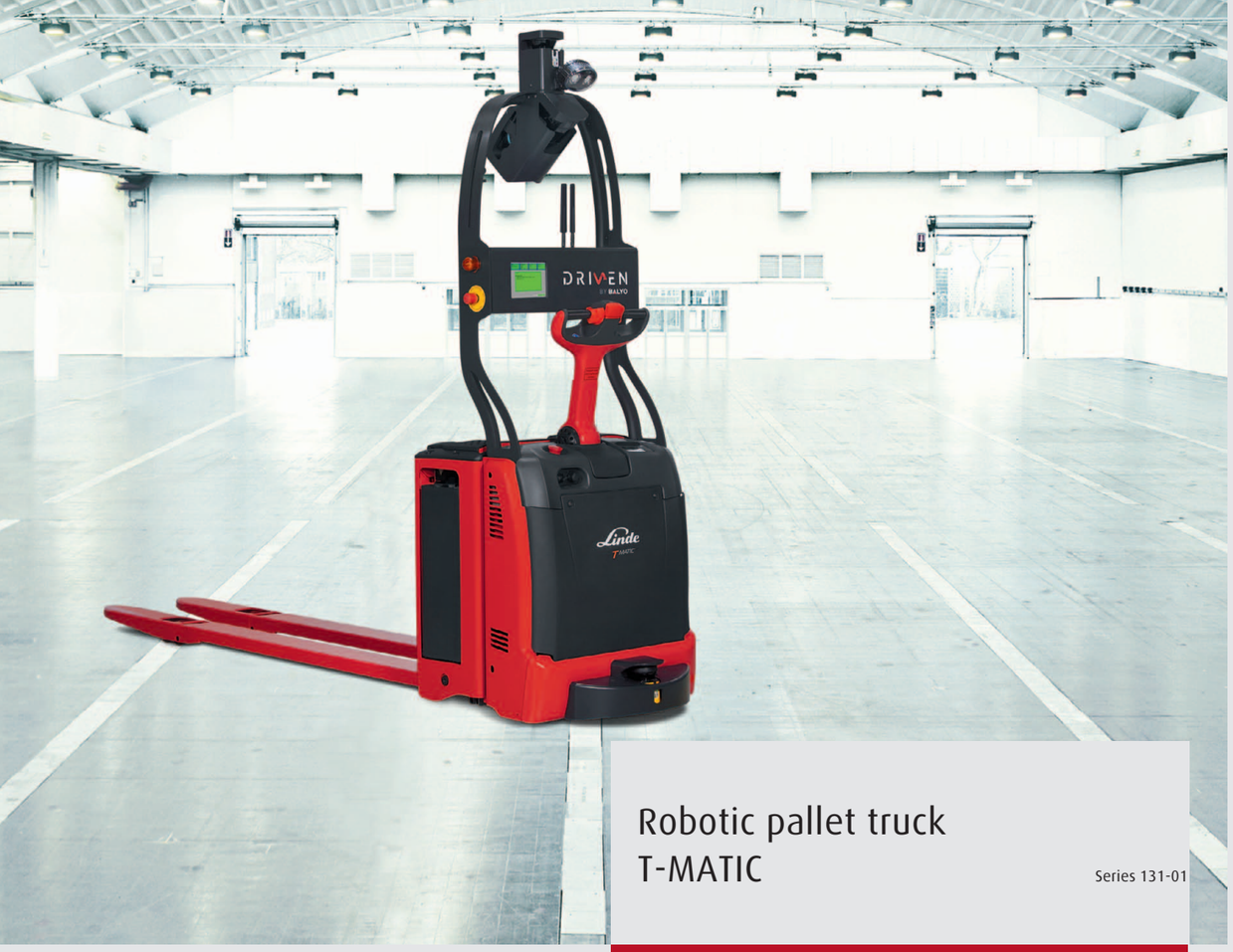


Robotic pallet truck
T-MATIC

Series 131-01

Safety

Thanks to its smart safety management, the T-MATIC anticipates and reacts autonomously to its direct environment. Advanced obstacles' detection provides real time speed adjustment to enhance the productivity while offering the utmost safety.

Performance

The unique infrastructure-free geoguidance system makes the solution flexible and scalable. Stand alone or within larger fleets of robotic trucks, the T-MATIC can easily interact with the customer's environment (doors, conveyors..) and even interface with WMS/ERP. The T-MATIC will always deliver the optimal drive speed to achieve the maximum throughput.

Comfort

The T-MATIC is natively designed to work in a shared environment with people. The user-friendly interface provides all needed controls & information at a glance. Moreover, the dual driving mode makes the T-MATIC intuitive to switch automatic/manual.

Linde Material Handling

Reliability

Fully integrated in the warehouse product range, the T-MATIC benefits from all Linde quality standards, and the robust "DRIVEN BY BALYO" navigation technology. Always available, the T-MATIC will support your business 24/7 while offering significant costs-savings.

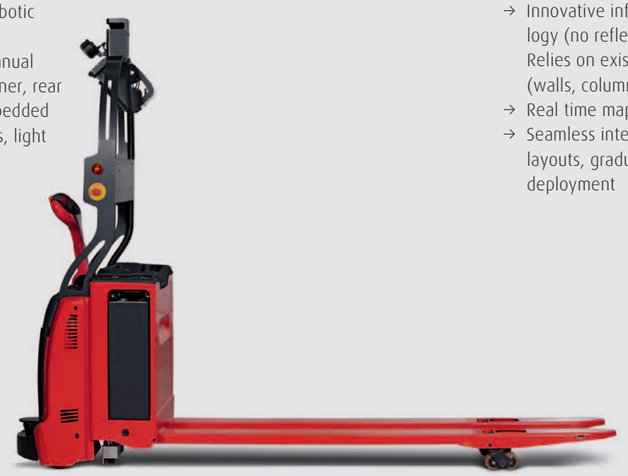
Productivity

Efficiency at work, efficiency in servicing.
With a computerized & remote diagnostic system, combined with predictive maintenance program, the T-MATIC remains available at any time.

Features

Driving system

- → Standard truck converted into a robotic truck
- → Dual driving mode - automatic/manual
- → Navigation laser, safety front scanner, rear perception lasers, 3D camera, embedded computer, emergency stop buttons, light and sound warning indicators



Geoguidance navigation

- → Innovative infrastructure-free technology (no reflector)
  Relies on existing structural features (walls, columns, racks...)
- → Real time mapping and localization
- → Seamless integration in existing layouts, gradual extension or global deployment

Smart safety

- → Real time speed-adaptive detection fields
- → Dynamic cornering detection fields
- → Autonomous decision-making capability with 3D camera
- → Natural cohabitation with operators and other trucks
- → Pallets or obstacles detection thanks to the rear laser scanner

User interface

- → 7'' LCD touch screen
- → Robotic truck, battery and system status
- → Real time task management and report
- → Intuitive path localization
- → Service mode with PIN access
- → Log extraction via USB

Operations management

- → Long transfers management
- → Stand alone or WMS/ERP directed
- → Supervisor software for task and smart traffic management
- → Various task triggers: call buttons, sensors, PLCs, Supervisor software ...

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Technical Data according to VDI 2198

Characteristics	1.1	Manufacturer		LINDE/BALYO
	1.2	Model designation		**T-MATIC**
	1.2a	Series		131-01
	1.3	Power unit		Battery
	1.4	Operation		Robotic/manual
	1.5	Load capacity/Load	Q (t)	3.0 [1]
	1.6	Load centre	c (mm)	1200
	1.8	Axle centre to fork face	x (mm)	1702 / 1763 [2] [3]
	1.9	Wheelbase	y (mm)	2364 / 2425 [2] [4] [3]
Weights	2.1	Service weight	(kg)	1360 [5] [6]
	2.2	Axle load with load, front/rear	(kg)	1607 / 2753 [5] [6]
	2.3	Axle load without load, front/rear	(kg)	970 / 390 [5]
Wheels/Tyres	3.1	Tyres rubber, SE, pneumatic, polyurethane		Polyurethane
	3.2	Tyre size, front		Ø 254 x 102
	3.3	Tyre size, rear		2x Ø 85 x 105
	3.5	Wheels, number front/rear (x = driven)		1x / 4
	3.6	Track width, front	b10 (mm)	544 [3]
	3.7	Track width, rear	b11 (mm)	374 [3]
Dimensions	4.4	Lift	h3 (mm)	120
	4.9	Height of tiller arm in operating position, min/max	h14 (mm)	1140 / 1350
	4.15	Height, lowered	h13 (mm)	85
	4.19	Overall length	l1 (mm)	3315 [3]
	4.20	Length to fork face	l2 (mm)	915
	4.21	Overall width	b1/b2 (mm)	790 [3]
	4.22	Fork dimensions	s/e/l (mm)	60 x 166 x 2400
	4.25	Fork spread, min/max	b5 (mm)	540 [3]
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	35
	4.34e	Aisle width with load length 2400 mm	Ast (mm)	3633
	4.35	Turning radius	Wa (mm)	2735 [4]
Performance	5.1	Travel speed, with/without load	(km/h)	6 / 6
	5.2	Lifting speed, with/without load	(m/s)	0.031 / 0.039
	5.3	Lowering speed, with/without load	(m/s)	0.076 / 0.073
	5.10	Service brake		Electro-magnetic
Drive	6.1	Drive motor, 60 minute rating	(kW)	3
	6.2	Lift motor, rating at S3 15%	(kW)	3
	6.3	Battery according to DIN 43531/35/36 A,B,C,no		no
	6.4	Battery voltage/rated capacity (5h)	(V/Ah)	24 / 345/375
	6.5	Battery weight (± 5%)	(kg)	208
Others	8.1	Type of drive control		LAC
	8.4	Noise level at operator's ear	(dB(A))	< 70

1) With evenly distributed load.
2) Forks upraised / lowered
3) (± 5 mm)
4) ± 0 mm = 3 PzS lateral; + 100 mm = 3 PzS vertical and 4PzS lateral;
+ 150 mm = 4 PzS vertical; + 225 mm = 4 PzS vertical
5) Figures with battery, see line 6.4/6.5.
6) (± 10%)

Standard Equipment/Optional Equipment

Standard Equipment

Navigation module on a robust frame with lighting signals, control panel, touch screen, communication module, navigation laser, front safety scanner, rear perception, traction/steering & lifting software management
Drive wheel and tandem load wheels polyurethane
540 mm load arms
Lateral change 3PzS
Forks dimensions 540/2400/563
Pre-setting for wet battery
Key switch truck acess
Polycarbonate mast protection
Load detection sensor
3D camera for volume perception (technical conditions apply)

Optional Equipment

Load backrest h=1000 mm
Tandem load wheels greasable
Pre-setting for gel battery
Fixed battery stand 2 batteries
Mobile battery trolley 1 battery
Cable/connector Flex
Cable/connector Perfect
3 m cable extension
2D curtain laser
Blue spots single
Additional louder horn
Bar code reader, call button (COMBOX), various sensors...