



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.

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



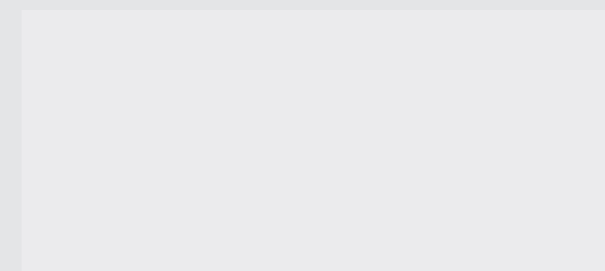
User interface

- 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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Subject to modification in the interest of progress. Illustrations and technical details could include options and not binding for actual constructions. All dimensions subject to usual tolerances.

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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)
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 access
 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...

