



## 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



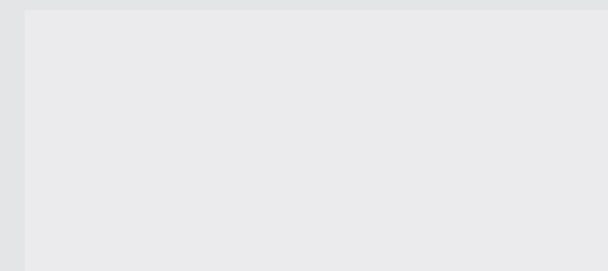
### User interface

- 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		<b>T-MATIC</b>
	1.2a	Series		131-01
	1.3	Power unit		Battery
	1.4	Operation		Robotic/manual
	1.5	Load capacity/Load	Q (t)	3.0 <sup>1)</sup>
	1.6	Load centre	c (mm)	1200
	1.8	Axle centre to fork face	x (mm)	1702 / 1763 <sup>2)3)</sup>
	1.9	Wheelbase	y (mm)	2364 / 2425 <sup>2)4)3)</sup>
Weights	2.1	Service weight	(kg)	1360 <sup>5)6)</sup>
	2.2	Axle load with load, front/rear	(kg)	1607 / 2753 <sup>5)6)</sup>
	2.3	Axle load without load, front/rear	(kg)	970 / 390 <sup>5)</sup>
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 <sup>3)</sup>
	3.7	Track width, rear	b11 (mm)	374 <sup>3)</sup>
	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 <sup>3)</sup>
4.20		Length to fork face	l2 (mm)	915
4.21		Overall width	b1/b2 (mm)	790 <sup>3)</sup>
4.22		Fork dimensions	s/e/l (mm)	60 x 166 x 2400
4.25		Fork spread, min/max	b5 (mm)	540 <sup>3)</sup>
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 <sup>4)</sup>	
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...

