



Automated Pallet Stackers

L-MATIC HD | HD k

Capacity 1.6 t | Series 1173-01

PB

ION

Autonomous pallet stacker

- Load capacity up to 1.6 t and lifting height up to 3.5 m
- Ideal for loading and unloading pallets in wide aisles
- Extensive sensors for load and environment detection
- Tailor-made energy solutions (lead-acid or Li-ION batteries)
- Enables 24/7 operation through automated charging

TECHNICAL DATA (according to VDI 2198)

Characteristics	1.1	Manufacturer (abbreviation)		Linde MH	Linde MH
	1.2	Manufacturer's type designation		L-MATIC HD	L-MATIC HD k
	1.2a	Series		1173-01	1173-01
	1.3	Drive		Battery	Battery
	1.4	Operation		Manual/automatic	Manual/automatic
	1.5	Rated capacity/rated load	Q (t)	1.6	1.6
	1.6	Load centre distance	c (mm)	600	625
	1.8	Load distance, centre of drive axle to fork	x (mm)	711/704 ⁴⁾	701
	1.9	Wheelbase	y (mm)	1236/1158 ⁴⁾	1386
Weight	2.1	Service weight	kg	1000	1550
	2.2	Axle loading, laden front/rear	kg	945/1735	1239/1912
	2.3	Axle loading, unladen front/rear	kg	710/365	1146/404
Tyres/chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Rubber + polyurethane/ polyurethane	Rubber + polyurethane/ polyurethane
	3.2	Tyre size, front	Ø × l (mm)	Ø 230 × 90	Ø 230 × 90
	3.3	Tyre size, rear	Ø × l (mm)	Ø 85 × 65 ⁵⁾	Ø 85 × 85
	3.4	Additional wheels (dimensions)	Ø × l (mm)	2x Ø 140 × 50	Ø 150 × 50
	3.5	Wheels, number front/rear (x = driven wheels)		1x + 2/4 ⁶⁾	1x + 1/2
	3.6	Tread, front	b10 (mm)	534	534
	3.7	Tread, rear	b11 (mm)	378	380
Dimensions	4.2	Mast height, lowered	h1 (mm)	1665	1915
	4.3	Free lift	h2 (mm)	150	150
	4.4	Lift	h3 (mm)	2344	2844
	4.5	Mast height, extended	h4 (mm)	4021 ⁶⁾	3364
	4.6	Initial lift	h5 (mm)	60	-
	4.9	Height drawbar in driving position min./max.	h14 (mm)	1163/698	1163/698
	4.15	Height, lowered	h13 (mm)	86	86
	4.19	Overall length	l1 (mm)	2137	2208 ⁶⁾
	4.20	Length to fork face	l2 (mm)	1002	966 ⁶⁾
	4.21	Overall width	b1 (mm)	800	1000
	4.22	Fork dimensions DIN ISO 2331	s/e/l (mm)	61/182/1150	71/182/1250
	4.24	Fork carriage width	b3 (mm)	780	780
	4.25	Fork spread	b5 (mm)	560	560
	4.26	Distance between wheel arms/loading surfaces	b4 (mm)	230	255
	4.31	Ground clearance, laden, below mast	m1 (mm)	20/80 ⁴⁾	20
4.32	Ground clearance, centre of wheelbase	m2 (mm)	20/80 ⁴⁾	20	
4.34.2	Aisle width for pallets 800 × 1200 lengthways	Ast (mm)	2910 (2546) ³⁾	2925 (2530) ^{3) 2) 3)}	
4.35	Turning radius	Wa (mm)	1712	1744 ³⁾	
Performance	5.1	Travel speed, laden/unladen	km/h	6,12/6,12 (6/6) ³⁾	7.2/7.2
	5.2	Lifting speed, laden/unladen	m/s	0.15/0.30	0.16/0.30
	5.3	Lowering speed, laden/unladen	m/s	0.45/0.35	0.40/0.35
	5.8	Max. gradeability, laden/unladen	%	3/3	3/3
	5.10	Service brake		Electromagnetic	Electromagnetic
Electric-engine	6.1	Drive motor rating S2 60 min	kW	2.3	2.3
	6.2	Lift motor rating at S3 15%	kW	3.2	3.2
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		3 PzS SL	3 PzS SL
	6.4	Battery voltage/nominal capacity KS	(V)/(Ah) or kWh	24/375	24/375
	6.5	Battery weight (±5%)	kg	333	333
	6.6	Energy consumption according to DIN EN 16796	kWh/h	1.25	0.925
Drive/lifting mechanism	8.1	Type of drive unit		LAC	LAC

1) +75 mm with 4PzS

2) In brackets: Manual mode

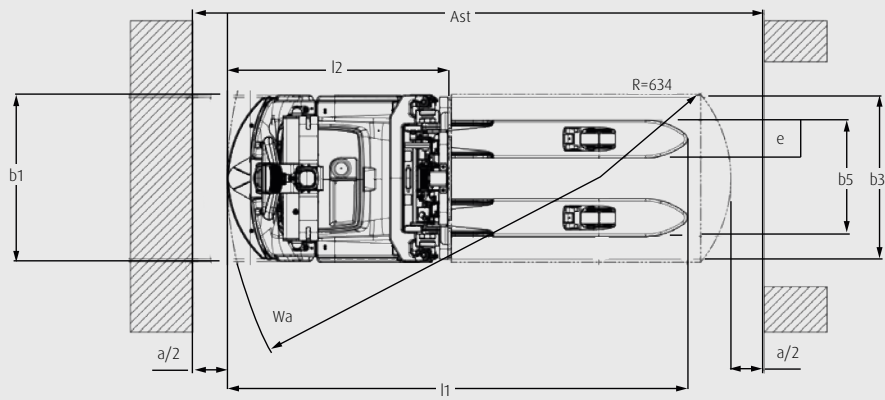
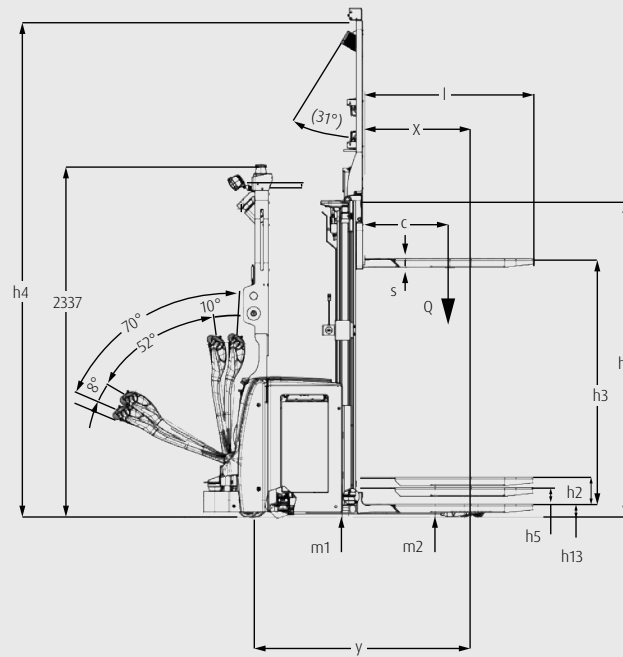
3) Minimum aisle width with reduced speed

4) Wheel arms low position/high position

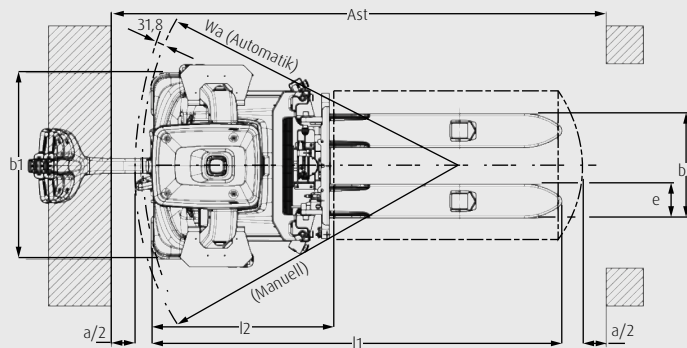
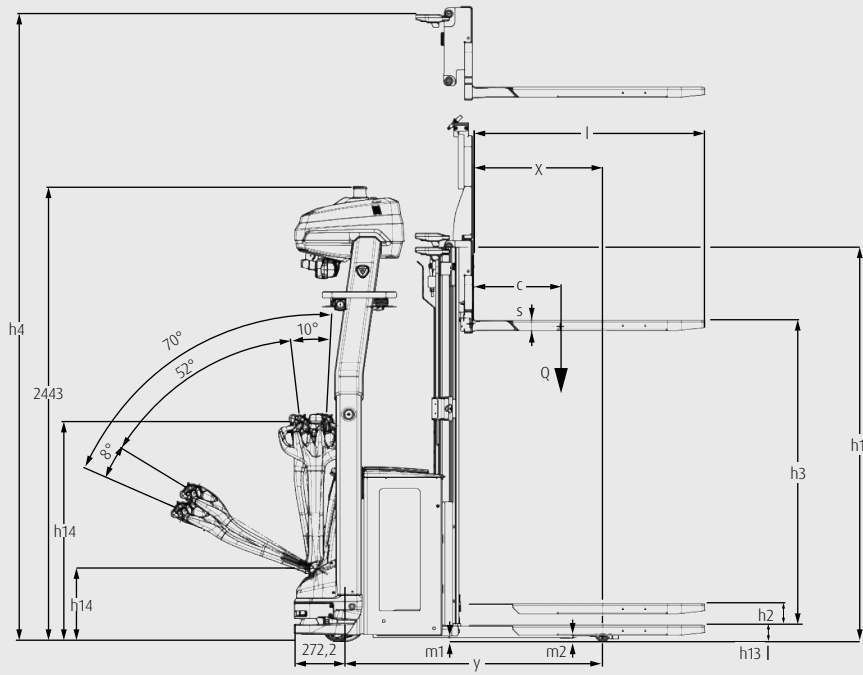
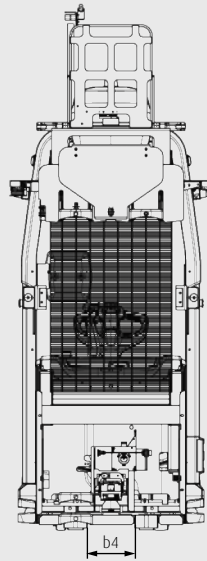
5) With initial lift option

6) Including load backrest with a height of 1591 mm

L-MATIC HD



L-MATIC HD k



STANDARD AND OPTIONAL EQUIPMENT

Manufacturer's type designation/equipment		L-MATIC HD	L-MATIC HD k
Safety	360° safety scanner	○	●
	Side safety boundary	●	-
	2D laser protection curtain in direction of travel	●	○
	2D laser protection curtains on each side	-	○
	Linde BlueSpot – visual warning for pedestrians and operators	●	○
	Visual warnings of vehicle status	●	●
	Acoustic warning signals	●	●
	Red warning lines to vehicle sides – defines safety distance for co-workers	-	○
	Red warning lines in direction of travel – light projects red markings in direction of travel	-	○
Operation/load handling	Sensors for detecting charge carriers and charge environments	●	●
	Mobile load sensing equipment	○	-
	Detection of stacked loads	-	○
	Initial lift	●	-
	1D barcode reader	○	-
	1D/2D barcode reader	○	-
Digitalisation	Wi-Fi data transmission	●	●
Energy	Battery compartment, L16 – 3PzS SL	○	○
	Battery compartment, L16 – 4PzS SL	-	○
Mast	Metal mesh mast protection	●	●
	Standard mast, 2344/1740/150 mm	○	-
	Standard mast, 2844/1990/150 mm	-	○
	Standard mast, 3244/2190/150 mm	○	○
	Standard mast, 3744/2365/150 mm	-	○
Axles and tyres	Single castor wheel	●	●
	Drive wheel, polyurethane	●	●
	Single load wheels, polyurethane	-	●
	Tandem load wheels, polyurethane	●	-

● Standard equipment ○ Optional equipment - Not available

MAST TABLE

STANDARD MAST (in mm)

Series	1570			
	h3: 2344	h3: 2844	h3: 3244	h3: 3744
Lift				
Height measurements	h1: 1665 h2: 150 h4: 4021 ¹⁾	h1: 1915 h2: 150 h4: 3364	h1: 2115 h2: 150 h4: 3764/4997 ¹⁾	h1: 2365 h2: 150 h4: 4264
Manufacturer's type designation				
L-MATIC HD	○	-	○	-
L-MATIC HD k	-	○	○	○

○ Optional equipment - Not available

h1: Mast height, lowered

h2: Free lift

h3: Lift

h4: Mast height, extended

¹⁾ including standard load protection grid on L-MATIC HD

CHARACTERISTICS



360° safety

Safety

- Comprehensive safety package protects load and surroundings
- All-round monitoring of the entire work environment
- Laser scanner independently detects people and obstacles
- Automatic speed adjustment and collision avoidance
- Additional protection provided by acoustic and visual warning systems



Innovative load sensing equipment

Handling

- Intuitive touch screen with easy-to-use user interface
- Routing and job allocation via control software
- Easy connection to WMS or ERP systems
- Sensor-based pallet detection ensures precise handling
- Always possible to switch to manual mode



Digital troubleshooting

Service

- High reliability thanks to proven Linde technology
- Trained service technicians guarantee fast servicing
- Long-lasting and virtually maintenance-free drive systems and batteries
- Electronic diagnostic system maximises availability
- 'Digital twin' supports maintenance of L-MATIC HD k



Process-oriented as standard

Sales and realisation

- Project-specific automated solutions including dynamic simulation and proof of concept on site
- Manual handling processes and the degree of automation can be optimised to suit the needs of the customer
- Single point of contact at Linde MH, from initial contact to project implementation and commissioning
- Intelligent and scalable software solutions give the customer optimal control over their processes
- Project management and commissioning in accordance with Linde MH standards with uniform tools and templates used throughout the sales network

Presented by:

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



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Printed in Germany | TB_L-MATIC_HD_HDK_1173-01_en_B_0224

