



Automated Transporting Solutions

G-MATIC

Capacity 0.6 t – 1.5 t | Series 8924/25/26

ION

Compact, automated solution for the efficient transport of goods over short and medium distances

- Effortless transport on load tables capable of travelling under or between transfer stations
- Rotating plate to reorientate the load
- Models with capacities from 600 to 1500 kg
- Intelligent software control with efficient orientation via QR codes
- Safety technology for hazard-free operation in dedicated areas

TECHNICAL DATA (according to VDI 2198)

Characteristics	1.1	Manufacturer (abbreviation)		Linde MH	Linde MH	Linde MH
	1.2	Manufacturer's type designation		C-MATIC 06	C-MATIC 10	C-MATIC 15
	1.2a	Series		8924-02	8925-02	8926-02
	1.3	Drive		Electric	Electric	Electric
	1.4	Operation		Automated	Automated	Automated
	1.5	Rated capacity/rated load	Q (t)	0.6	1.0	1.5
Weight	2.1	Service weight	kg	145	205 ¹⁾	215 ¹⁾
Tyres/chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Polyurethane	Polyurethane	Polyurethane
	3.4	Additional wheels (dimensions)		200 × 40	200 × 40	200 × 40
	3.5	Wheels, number front/rear (x = driven wheels)		2x +2	2x +2	2x +2
	3.6	Tread, front	b10 (mm)	668	758	758
Dimensions	4.4	Lift	h3 (mm)	55	60	60
	4.15	Height, lowered	h11 (mm)	240	260	260
	4.16	Length of loading surface	l3 (mm)	Ø 680	950 ³⁾	1000 ³⁾
	4.18	Width of loading surface	b9 (mm)	Ø 680	750 ³⁾	780 ³⁾
	4.19	Overall length	l1 (mm)	956	1182	1182
	4.21	Overall width	b1/b2 (mm)	730	832	832
	4.33	Load dimension b12 × l6	b12 × l6 (mm)	900 × 900 ³⁾ (780 × 780) ⁴⁾	1200 × 1200 ³⁾ (1080 × 1080) ⁴⁾	1200 × 1200 ³⁾ (1080 × 1080) ⁴⁾
	4.34	Aisle width predetermined load dimensions	Ast (mm)	1473 ⁴⁾	1897 ⁴⁾	1897 ⁴⁾
	4.35	Turning radius	Wa (mm)	478	618.5 ⁷⁾	618.5 ⁷⁾
	Performance	5.1	Travel speed, laden/unladen	km/h	5.4 / 7.2	4.3 / 5.4
5.2		Lifting speed, laden/unladen	m/s	0.29	0.29	0.29
5.3		Lowering speed, laden/unladen	m/s	0.21	0.21	0.21
5.8		Max. gradeability, laden/unladen	%	<5% ⁸⁾	<5% ⁸⁾	<5% ⁸⁾
Electric engine	6.4	Battery voltage/nominal capacity K5	(V)/(Ah) or kWh	48/36 ⁹⁾	48/38.5 ⁹⁾	48/38.5 ⁹⁾
	6.6	Energy consumption according to DIN EN 16796	kWh/h	0.25 ¹⁰⁾	0.3 ¹⁰⁾	0.52 ¹⁰⁾
Additional data	10.7	Sound pressure level LpAZ (at the operator's seat)	dB(A)	<75	<75	<75

- 1) Adaptor plate weight for C-MATIC 10: (h13 = 450 mm, +70 kg), (500 mm, +75 kg) (700 mm, +94 kg); C-MATIC 15: (450 mm, +62 kg), (500 mm, +66 kg), (700 mm, +86 kg)
- 2) Loading platform rotation diameter: C-MATIC 10: Ø 1060 mm; C-MATIC 15: Ø 1114 mm
- 3) With loading platform: tables as load carrier are required
- 4) Load inner dimensions (l6.1 × b14)
- 5) Pallet handling with adaptor plate (l3 × b9 = 1200 × 887 mm) with 3 fixation positions l6: 1016 mm (Position 1), 1000 mm (Position 2), 800 mm (Position 3) b12: <1219 mm
- 6) Including a 200 mm (min.) operating aisle clearance. With adaptor plate and load dimensions (b12 × l6) of Euro pallet (1200 × 800) = 1642 mm; UK pallet (1200 × 1000) = 1762 mm; US pallet (1219 × 1016) = 1898 mm

- 7) Unloaded rotation diameter C-MATIC 06/10/15: Ø 956/1237/1237 mm with adaptor plate: C-MATIC 10/15: Ø 1411 mm
- 8) Suggested max. climbing angle is ≤3%, allowed step height ≤5 mm, traversable gap ≤15 mm
- 9) Li-ION battery
- 10) Battery running time (50% fully loaded) C-MATIC 06/10/15: 9 h/7.5 h/6.5 h; Battery charging time from SOC 0 ~ 100%: ~1.5 h

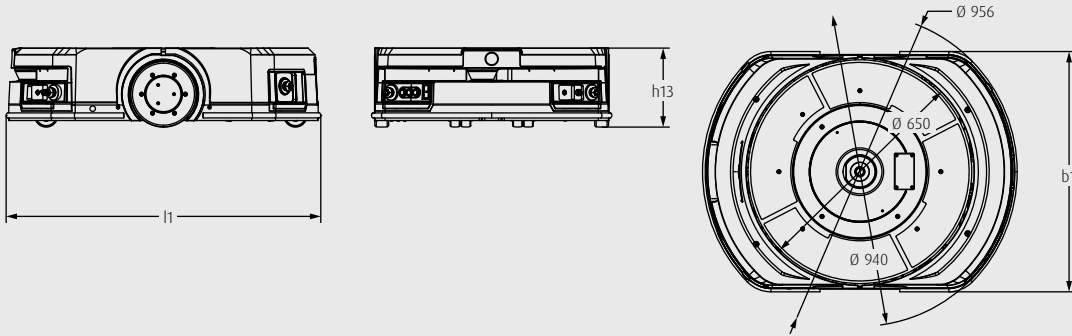
PLATFORM AND ADAPTOR PLATE

1) h13 = height from floor to top of vehicle (lift lowered)

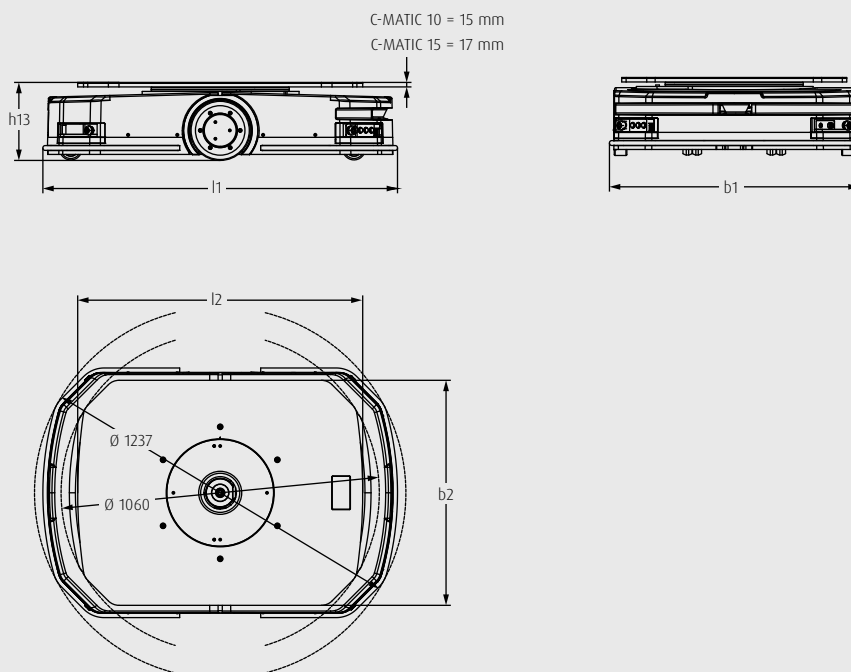
2) h2 = free lift

C-MATIC 06	Lift	Height of platform extended max.	Pick up and drop-off height	Max. height of CoG (from floor)	Max. displ. of CoG		Max. capacity	Load carrier type
h13 ¹⁾ (mm)	h3 (mm)	h4 (mm)	h13 ¹⁾ + h2 ²⁾ (mm)	hc1 (mm)	c1 (mm)	c2 (mm)	Q (kg)	l6 × b12 [× m2] (mm)
240	55	295	270	740	110	140	600	Table 900 × 900 × 270
C-MATIC 10	Lift	Height of platform extended max.	Pick up and drop-off height	Max. height of CoG (from floor)	Max. displ. of CoG		Max. capacity	Load carrier type
h13 ¹⁾ (mm)	h3 (mm)	h4 (mm)	h13 ¹⁾ + h2 ²⁾ (mm)	hc1 (mm)	c1 (mm)	c2 (mm)	Q (kg)	l6 × b12 [× m2] (mm)
260	60	320	290	890	120	160	1000	Table 1200 × 1200 × 290
290	60	350	320	1000	140	166	1000	Pallets l6 × b12
450	60	510	480	840	127	153	1000	Pallets l6 × b12
500	60	560	530	790	125	151	900	Pallets l6 × b12
700	60	760	730	590	117	143	900	Pallets l6 × b12
C-MATIC 15	Lift	Height of platform extended max.	Pick up and drop-off height	Max. height of CoG (from floor)	Max. displ. of CoG		Max. capacity	Load carrier type
h13 ¹⁾ (mm)	h3 (mm)	h4 (mm)	h13 ¹⁾ + h2 ²⁾ (mm)	hc1 (mm)	c1 (mm)	c2 (mm)	Q (kg)	l6 × b12 [× m2] (mm)
260	60	320	290	890	120	160	1500	Table 1200 × 1200 × 290
290	60	350	320	1000	140	166	1500	Pallets l6 × b12
450	60	510	480	840	127	153	1500	Pallets l6 × b12
500	60	560	530	790	125	151	1300	Pallets l6 × b12
700	60	760	730	590	117	143	1300	Pallets l6 × b12

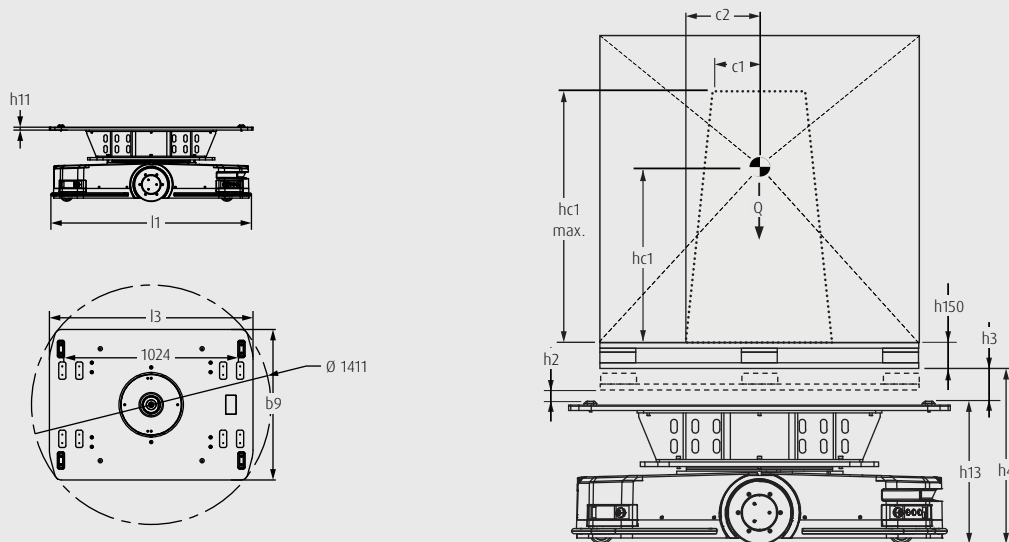
C-MATIC 06



C-MATIC 10, C-MATIC 15



ADAPTOR PLATE: C-MATIC 10, C-MATIC 15

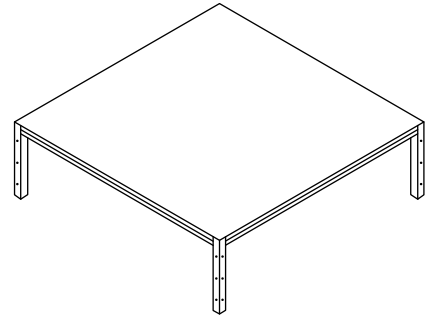
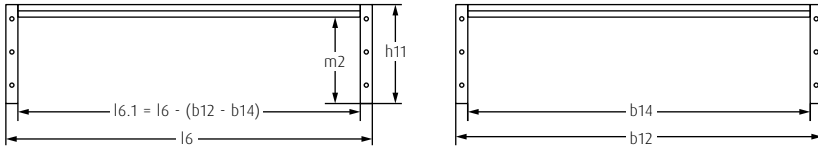


1) h13 = height from floor to top of vehicle (lift lowered)

2) h2 = free lift

APPLICATION INFORMATION

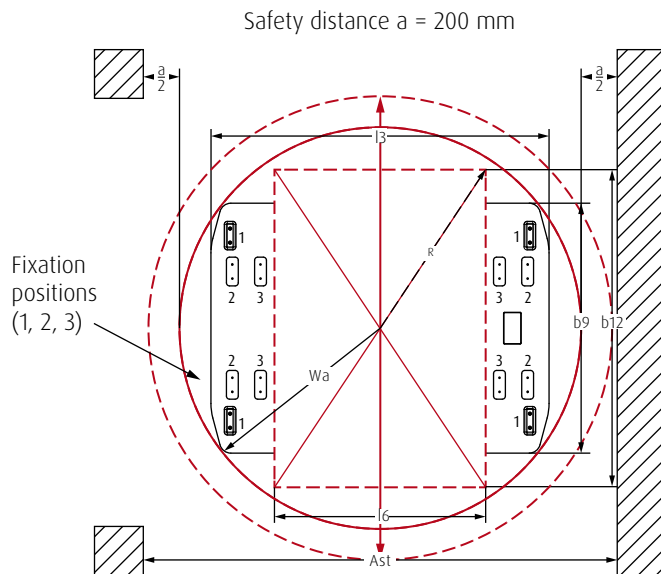
PLATFORM: TABLE REQUIREMENTS



A QR code must be located centrally underneath the table for load identification and orientation.

Manufacturer's type designation	C-MATIC 06	C-MATIC 10	C-MATIC 15
Dimension $l6 \times b12 \times m2$ (mm)	900 × 900 × 270	1200 × 1200 × 290	1200 × 1200 × 290
Inner Dimensions $l6.1 \times b14$ (mm)	780 × 780	1080 × 1080	1080 × 1080
Capacity (kg)	600	1000	1500

ADAPTOR PLATE: PALLET REQUIREMENTS



$$Ast = 2 \times \max(Wa, R) + a,$$

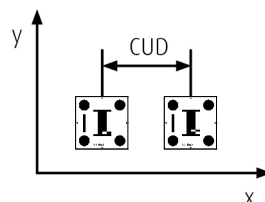
with $a = 200$ mm

$$R = \sqrt{\left(\frac{b12}{2}\right)^2 + \left(\frac{l6}{2}\right)^2}$$

Adaptor plate	C-MATIC 10	C-MATIC 15	Ast (mm)
Adaptor plate dimensions $b3 \times b9$ (mm)	1200 × 887	1200 × 887	1611 mm
Load dimensions ($l6 \times b12$)	Fixation position 1, 2 or 3		
EPAL1, CP2: 800 × 1200 mm	Position 3	Position 3	1642 mm
EPAL3, CP1: 1000 × 1200 mm	Position 2	Position 2	1762 mm
Australia, GMA and North America: 1016 × 1219 mm	Position 1	Position 1	1898 mm

LOCALISATION TECHNOLOGY

The max. QR codes unit distances (CUD) is limited to 1500 mm for vehicle localization.
The different models are optimized for a standard CUD for loads without overhang.



Manufacturer's type designation	Standard CUD (mm × mm)
C-MATIC 06	1000 × 1000
C-MATIC 10	1350 × 1350
C-MATIC 15	1350 × 1350

STANDARD AND OPTIONAL EQUIPMENT

Manufacturer's type designation/equipment		C-MATIC 06	C-MATIC 10	C-MATIC 15
Off board software	Smart routing algorithm	○	○	○
	Smart charging logic	○	○	○
	Interfaces to existing WMS, ERP, etc	○	○	○
	Interfaces with infrastructure: doors, conveyors, etc	○	○	○
	Interfaces with Linde Warehouse Management Systems	○	○	○
On board software	QR code navigation	●	●	●
	QR code load identification	●	●	●
	User-friendly log-on to the vehicle	●	●	●
Safety	Personal detection safety scanner in main direction of travel	●	●	●
	Safety field switches between lifted and lowered platform	●	●	●
	Emergency stop buttons on all sides (left and right corners at both front and rear)	●	●	●
	Safety bumper around the vehicle (front, side, rear)	●	●	●
Navigation	Positional accuracy ±10 mm	●	●	●
	Stop accuracy ±5 mm	●	●	●
	Angular accuracy ±1°	○	○	○
	Navigation QR codes with interval 1000 × 1000 mm	○	—	—
	Navigation QR codes with interval 1350 × 1350 mm	—	○	○
HMI interface	Control buttons	●	●	●
	LED indicators	●	●	●
	Depending on situation plays warning sounds and/or voice package	●	●	●
Operation/ load handling	QR code load table identification	○	○	○
	Turn, transport and drop load through 90°, 180° and 270°	●	●	●
	Load table dimensions 900 × 900 mm	○	—	—
	Load table dimensions 1200 × 1200 mm	—	○	○
	Adaptor plate for pick and drop station at height = 320 mm	—	○	○
	Adaptor plate for workstations at height = 480 mm	—	○	○
	Adaptor plate for conveyor at height = 530 mm	—	○	○
	Adaptor plate for heights between h13 = 290 mm and 700 mm	—	■	■
	Differential drive with dual wheels	●	●	●
Turn on the spot with and without locked platform	●	●	●	
Environment	Wifi communication	●	●	●
	Ambient operating temperature +0 - +40°C	●	●	●
Energy	Li-ION battery	●	●	●
	Automatic Opportunity Charging Connector	●	●	●
Service	Switch for automated or maintenance mode	●	●	●
	Plug for Hand Control Unit	●	●	●
	Hand Control Unit	○	○	○
	Ramp to operate C-MATIC from delivery pallet	○	○	○

● Standard equipment ○ Optional equipment — Not available ■ Special Equipment

CHARACTERISTICS



Dynamic safety fields

Safety

- Laser scanner for reliable detection of vehicle's surroundings
- Immediate reaction to people, other vehicles or obstacles
- Ideal combination of maximum productivity and highest possible safety
- Stable collision protection and emergency stop switch for additional protection



Flexible load handling

Handling

- Orientation based on QR codes on the floor
- Calculation of the optimal route for each individual transport job
- QR codes on optional transport tables for load tracking
- Direct transport of pallets with adaptor plate for different transfer heights
- Optional self-charging station for fully automated battery charging



Low-maintenance design

Service

- Robust technology and long maintenance intervals for maximum availability
- Easy access to all main components for fast maintenance
- Rapid fault diagnosis via cable connection



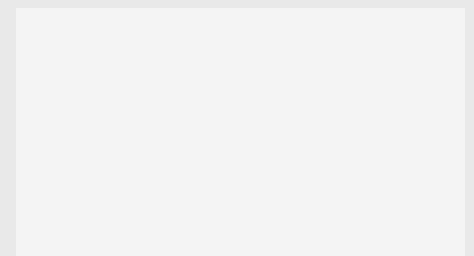
Customer process focus as a standard

Sales and realisation

- Project-specific concept design including dynamic simulation and proof of concept on site if required
- Combination of manual handling processes and the degree of automation can be optimised to fit the customer needs
- One face to the customer for the whole process from first contact to the lifecycle phase
- Intelligent, scalable software solutions to provide customers with full control of their processes
- Project management and commissioning according to Linde standards with unified tools and templates over the entire network

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.

Presented by:



Linde Material Handling GmbH

Carl-von-Linde-Platz | 63743 Aschaffenburg | Germany

Phone + 49 6021 99 0 | Fax + 49 6021 99 1570

www.linde-mh.com | info@linde-mh.com

Printed in Germany | DS_C-MATIC_8924-02_8925-02_8926-02_en_C_0424