



## Automated Transporting Solutions

# G-MATIC

Capacity 1.0 t – 1.5 t | Series 8925

ION

### Flat load carrier for short and medium distances

- Effortless transport on load tables or direct transport on pallets between transfer stations
- Rotating plate to reorientate the load
- Models with capacities from 1000 to 1500 kg
- Intelligent software control with efficient orientation via QR codes
- Safety technology for hazard-free operation in dedicated areas

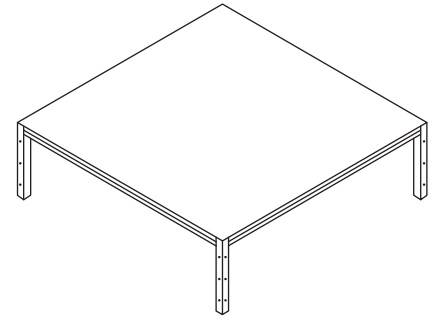
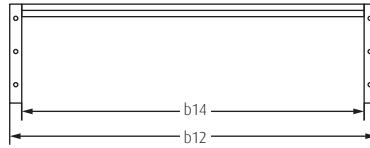
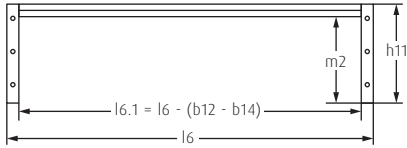
# STANDARD AND OPTIONAL EQUIPMENT

Manufacturer's type designation/equipment		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	●	●
	Dual lidar safety scanners on both front and rear sides for enhanced coverage	○	○
	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 1400 × 1400 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 1200 × 1200 mm	○	○
	Adaptor plate with a height range of 290-1000 mm above the floor – suitable for various handover tasks such as pick and drop stations, workstations, conveyors, etc.	■	■
	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    ■ Special Equipment

# APPLICATION INFORMATION

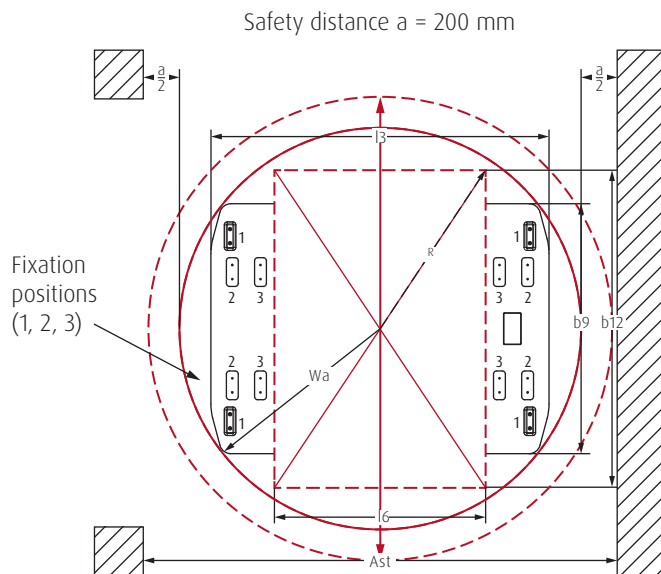
## PLATFORM: TABLE REQUIREMENTS



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

Manufacturer's type designation	C-MATIC 10	C-MATIC 15
Dimension $l6 \times b12 \times m2$ (mm)	1200 × 1200 × 290	1200 × 1200 × 290
Inner dimensions $l6.1 \times b14$ (mm)	1080 × 1080	1080 × 1080
Capacity (kg)	1000	1500
Loading height, unladen $h11$ (mm)	330	330

## ADAPTOR PLATE: PALLET REQUIREMENTS



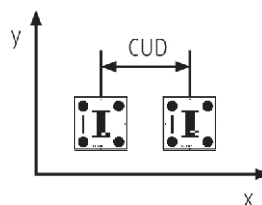
$Ast = 2 \times \max(Wa, R) + a$ ,  
with  $a = 200$  mm

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

Adaptor plate	C-MATIC 10	C-MATIC 15	Ast (mm)
Adaptor plate dimensions $l3 \times b9$ (mm)	1200 × 887	1200 × 887	1611
Load dimensions ( $l6 \times b12$ )	Fixation position 1, 2 or 3		
EPAL1, CP2: 800 × 1200 mm	Position 3	Position 3	1642
EPAL3, CP1: 1000 × 1200 mm	Position 2	Position 2	1762
Australia, GMA and North America: 1016 × 1219 mm	Position 1	Position 1	1898

## LOCALISATION TECHNOLOGY

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



Manufacturer's type designation	Standard CUD (mm × mm)
C-MATIC 10	1400 × 1400
C-MATIC 15	1400 × 1400

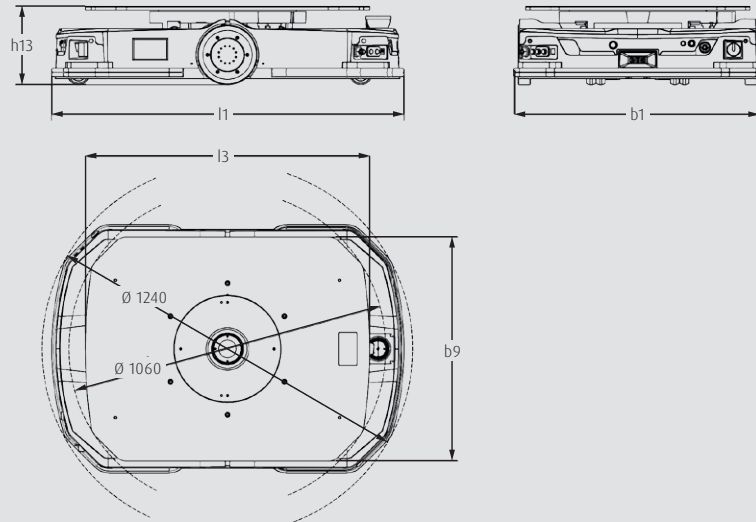
# TECHNICAL DATA (according to VDI 2198)

Characteristics	1.1	Manufacturer (abbreviation)		Linde MH	Linde MH
	1.2	<b>Manufacturer's type designation</b>		<b>C-MATIC 10</b>	<b>C-MATIC 15</b>
	1.2a	Series		8925-23	8925-23
	1.3	Drive		Battery	Battery
	1.4	Operation		Automatic	Automatic
	1.5	Rated capacity/rated load	Q (t)	1.0	1.5
Weight	2.1	Service weight	kg	230 <sup>1)</sup>	235 <sup>1)</sup>
Tyres/chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Polyurethane	Polyurethane
	3.4	Auxiliary wheels (dimensions)		Ø200 × 40	Ø200 × 40
	3.5	Wheels, number front/rear (x = driven wheels)		2x + 4	2x + 4
	3.6	Tread, front	b10 (mm)	758	758
Dimensions	4.4	Lift	h3 (mm)	60	60
	4.15	Height, lowered	h13 (mm)	260	260
	4.16	Length of loading surface	l3 (mm)	950 <sup>2)</sup>	950 <sup>2)</sup>
	4.18	Width of loading surface	b9 (mm)	750 <sup>2)</sup>	750 <sup>2)</sup>
	4.19	Overall length	l1 (mm)	1180	1180
	4.21	Overall width	b1/b2 (mm)	832	832
	4.33	Load dimension	b12 × l6 (mm)	1200 × 1200 // (1080 × 1080) <sup>3)</sup>	1200 × 1200 // (1080 × 1080) <sup>3)</sup>
	4.34	Aisle width predetermined load dimensions	Ast (mm)	1897 <sup>4)</sup>	1897 <sup>4)</sup>
	4.35	Turning radius	Wa (mm)	618.5 <sup>5)</sup>	618.5 <sup>5)</sup>
Performance	5.1	Travel speed, laden/unladen	km/h	4.3/5.4	4.3/5.4
	5.8	Max. gradeability, laden/unladen	%	< 5.0 <sup>6)</sup>	< 5.0 <sup>6)</sup>
Electric engine	6.3	Battery according to DIN 43531/35/36 A, B, C, no		Li-ION	Li-ION
	6.4	Battery voltage/nominal capacity K 5	(V)/(Ah) o. kWh	51.2/42	51.2/42
	6.5	Battery weight (±5%)	kg	22	22

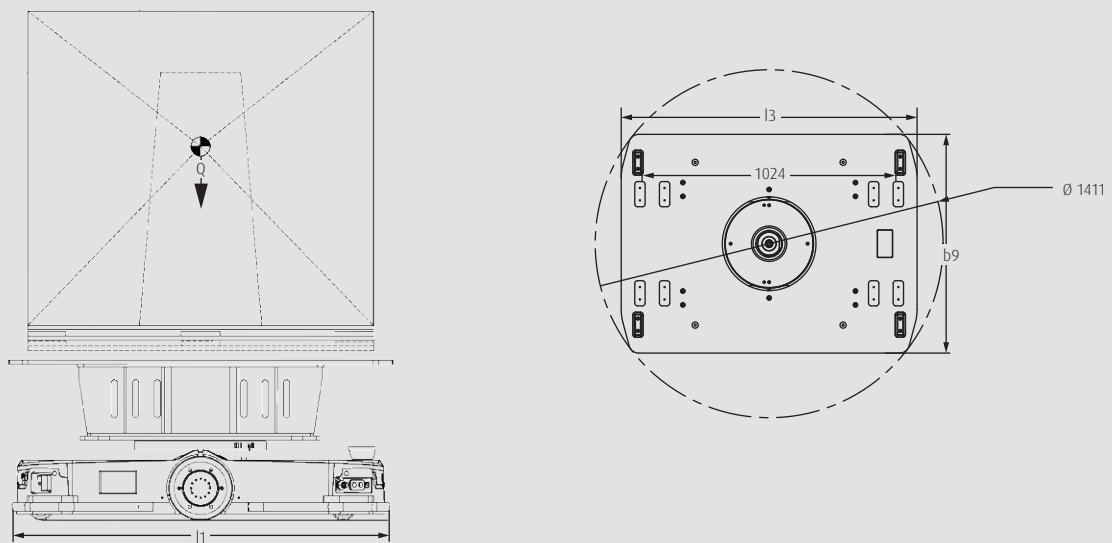
- Without adaptor plate
- Loading platform rotation diameter: C-MATIC 10/15: Ø1060 mm
- With loading platform: tables as load carrier are required.  
Pallet handling with adaptor plate (l3 × b9 = 1200 × 887 mm) with 3 fixation positions l6: 1016 mm (Position 1), 1000 mm (Position 2), 800 mm (Position 3)  
b12: < 1219 mm // (load inner dimensions l6.1 × b14)
- Including a 200 mm (min.) operating aisle clearance.  
With adaptor plate and load dimensions (l6 × b12) of Euro pallet (800 × 1200) = 1642 mm; UK pallet (1000 × 1200) = 1762 mm; US pallet (1016 × 1219) = 1898 mm

- Unladen rotation diameter C-MATIC 10/15: Ø1237 mm with adaptor plate: C-MATIC 10/15: Ø1411 mm
- Allowed step height at rated speed ≤ 5 mm - with reduced speed ≤ 10 mm, traversable gap at rated speed ≤ 5 mm - with reduced speed ≤ 30 mm

## C-MATIC 10, C-MATIC 15



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



For safe transport, it is essential to ensure that the center of gravity and the height of the load are within the permissible range. This will be checked on a project-specific basis.

# 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
- Optionally, the vehicle can be equipped with two laser scanners, providing 360° coverage and enabling equal speed in both driving directions



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



Efficient fault detection

## Service

- Robust technology and long maintenance intervals for maximum availability
- Easy access to all main components for fast maintenance
- Rapid fault diagnosis via WLAN or wired network 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.



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