Linde Material Handling

Pallet Stackers

MM10 | ML10

Capacity 1.0 t | Series 1167

PB

Flexible pallet stacker for stillages or open-bottom pallets

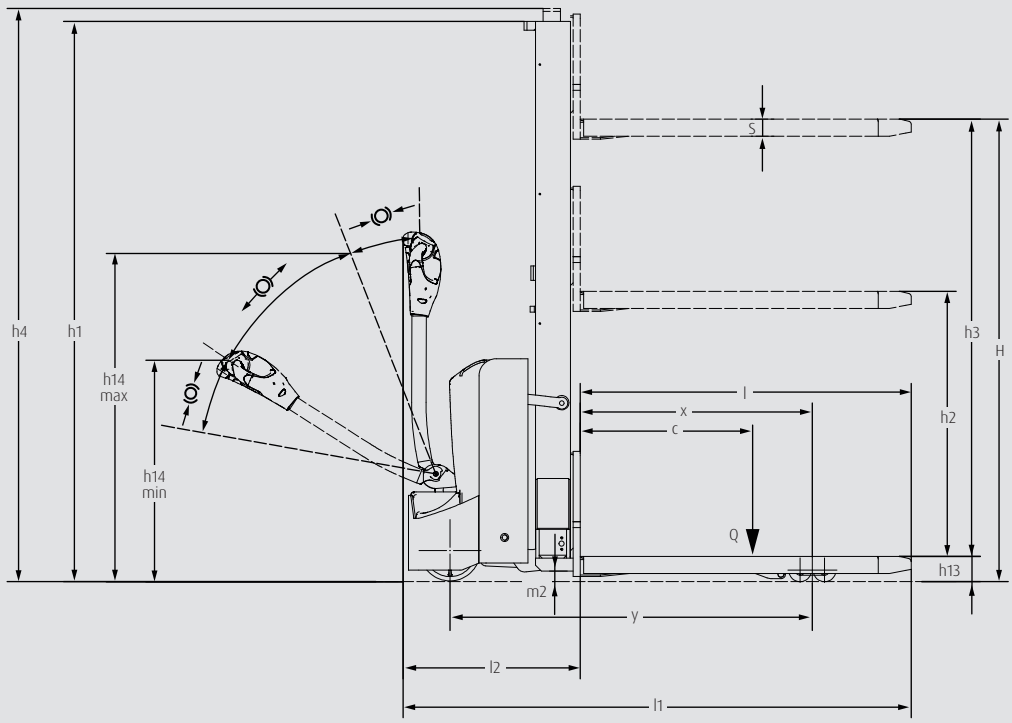
- → Suitable for stacking, transport and order picking duties
- → Adjustable picking height ensures operator comfort
- → Long tiller arm, wrap-around tiller and low chassis skirt protects the operator
- → Automatic speed reduction in corners increases stability
- → Range of mast lift heights suits many different applications
- → Mast design ensures good visibility of forks and load

TECHNICAL DATA (according to VDI 2198)

Characteristics	1.1	Manufacturer (abbreviation)		Linde MH	Linde MH	Linde MH
	1.2	**Manufacturer's type designation**		**MM10**	**MM10i**	**ML10**
	1.2a	Series		1167-02	1167-02	1167-02
	1.3	Drive		Battery	Battery	Battery
	1.4	Operation		Pedestrian	Pedestrian	Pedestrian
	1.5	Rated capacity/rated load	Q (t)	1.0[1)]	1.0[1)]	1.0[1)]
	1.6	Load centre distance	c (mm)	600	600	600
	1.8	Load distance, centre of drive axle to fork	x (mm)	805[1)]	805[1)]	812[1)]
	1.9	Wheelbase	y (mm)	1126	1260	1225
Weight	2.1	Service weight	kg	440[2)]	500[2)]	610[2)]
	2.2	Axle loading, laden front/rear	kg	512/928	523/977	623/987
	2.3	Axle loading, unladen front/rear	kg	330/110[2)]	360/140[2)]	450/160[2)]
Tyres/chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Polyurethane	Polyurethane	Polyurethane
	3.2	Tyre size, front	mm	Ø 210 × 70	Ø 210 × 70	Ø 210 × 70
	3.3	Tyre size, rear	mm	Ø 80 × 60	Ø 80 × 60	Ø 80 × 60
	3.5	Wheels, number front/rear (x = driven wheels)		1x + 1/4	1x + 1/4	1x + 1/4
Dimensions	4.2	Mast height, lowered	h1 (mm)	1940[1)]	1947[1)]	2142[1)]
	4.3	Free lift	h2 (mm)	1430[1)]	1430[1)]	150[1)]
	4.4	Lift	h3 (mm)	1512[1)]	1514[1)]	2922[1)]
	4.5	Mast height, extended	h4 (mm)	1985[1)]	1992[1)]	3532[1)]
	4.6	Initial lift	h5 (mm)	-	105	-
	4.9	Height drawbar in driving position min./max.	h14 (mm)	800/1250	800/1250	800/1250
	4.15	Height, lowered	h13 (mm)	91	94	91
	4.19	Overall length	l1 (mm)	1675[1)]	1766/1810[1)]	1745/1770[1)]
	4.20	Length to fork face	l2 (mm)	525[1)]	660[1)]	620[1)]
	4.21	Overall width	b1/b2 (mm)	796/-[1)]	796/-[1)]	796/-[1)]
	4.22	Fork dimensions DIN ISO 2331	s/e/l (mm)	60/170/1150	60/190/1150	60/170/1150
	4.24	Fork carriage width	b3 (mm)	680	680	680
	4.25	Fork spread	b5 (mm)	550	560	570
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	28	35	28
	4.34.1	Aisle width for pallets 1000 × 1200 crossways	Ast (mm)	2256[3)4)]	2366[3)4)]	2326[3)4)]
	4.34.2	Aisle width for pallets 800 × 1200 lengthways	Ast (mm)	2187[3)4)]	2297[3)4)]	2254[3)4)]
	4.35	Turning radius	Wa (mm)	1425[3)]	1535[3)]	1497[3)]
Performance data	5.1	Travel speed, laden/unladen	km/h	4/4.5[5)]	4/4.5[5)]	4/4.5[5)]
	5.2	Lifting speed, laden/unladen	m/s	0.13/0.2	0.09/0.12	0.13/0.195
	5.3	Lowering speed, laden/unladen	m/s	0.22/0.14	0.2/0.09	0.19/0.14
	5.8	Max. gradeability, laden/unladen	%	5.0/15.0	5.0/15.0	5.0/15.0
	5.10	Service brake		Electromagnetic	Electromagnetic	Electromagnetic
Electric-engine	6.1	Drive motor rating S2 60 min	kW	0.65	0.65	0.65
	6.2	Lift motor rating at S3 15%	kW	2.2	2.2	2.2
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		no	no	no
	6.4	Battery voltage/nominal capacity K 5	(V)/(Ah) o. kWh	24/85	24/85	24/125
	6.5	Battery weight (±5%)	kg	47	47	66
	6.6	Power consumption according to VDI cycle	kWh/h	-	-	-
Drive/lifting mechanism	8.1	Type of drive unit		DC	DC	DC
Additional data	10.7	Sound pressure level LpAZ (at the operator's seat)	dB(A)	74	74	74

1) (±5 mm)
2) (±10%)
3) With creep speed = tiller in vertical position
4) Including a 200 mm (min.) operating aisle clearance
5) (±5%)

MM10 | MM10 i


h4
h1
h14 max
h14 min
S
h3
H
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l
x
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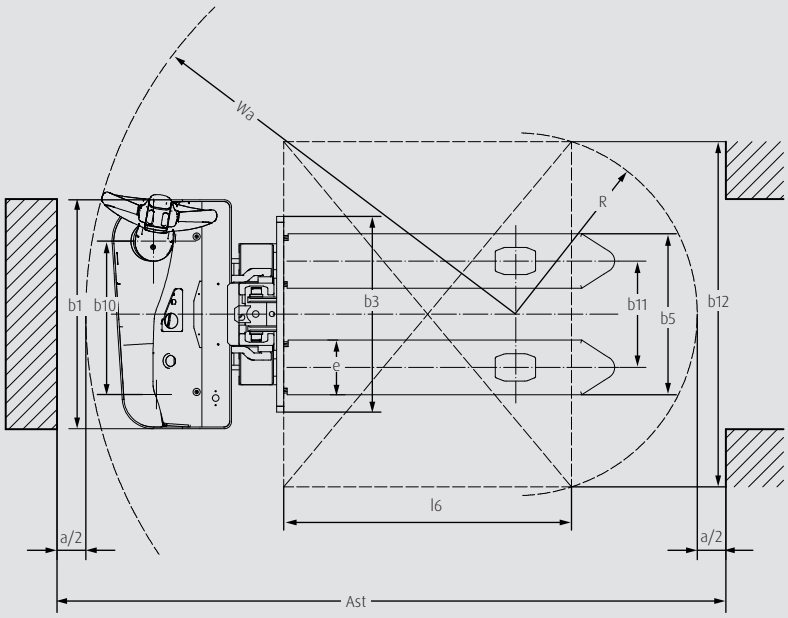
h13
m2
y
l2
l1


Wa
R
b1
b10
b3
b11
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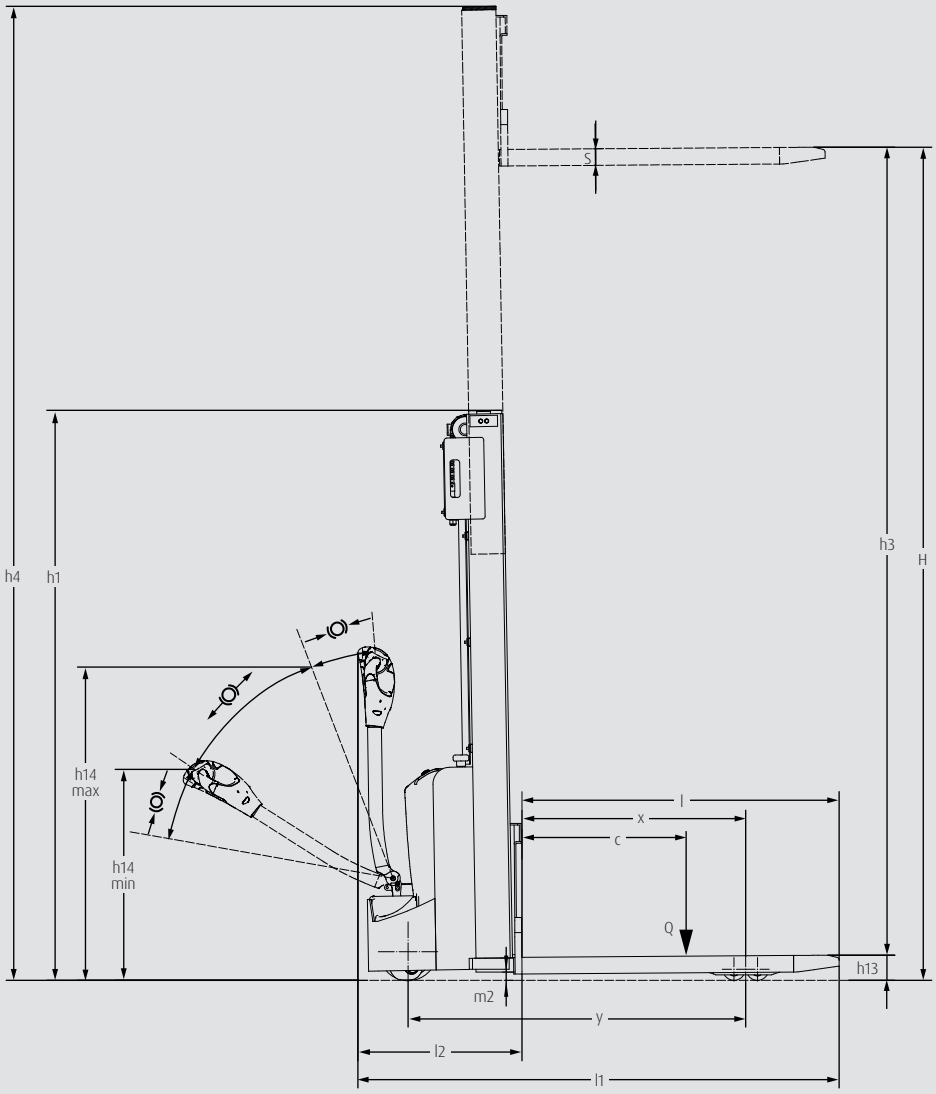
l6
a/2
a/2
Ast

ML10


h4
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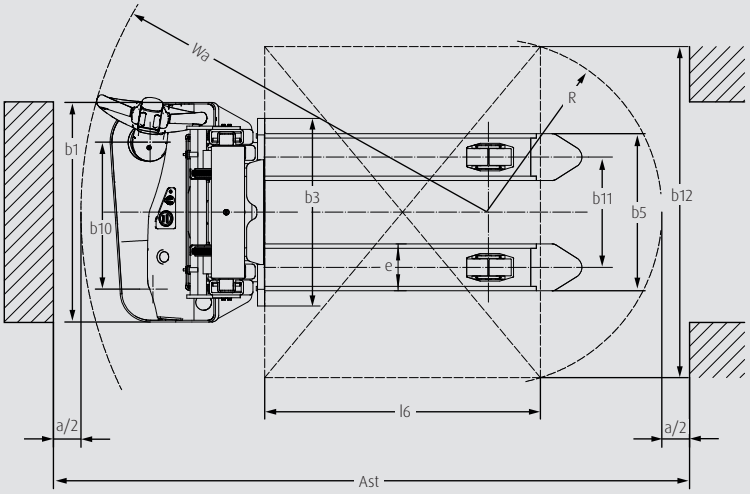
Wa
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b1
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ML 10
Linde
MM 10

MAST TABLES

MONO MAST (in mm)

Lift	h3: 1512	h3: 1862	h3: 1514	h3: 1864
Height measurements	h1: 1940 h2: 1430 h4: 1985 h3+h13: 1603	h1: 2290 h2: 1780 h4: 2335 h3+h13: 1953	h1: 1947 h2: 1430 h4: 1992 h3+h13: 1608	h1: 2297 h2: 1780 h4: 2342 h3+h13: 1958
Manufacturer's type designation				
MM10	○	○	–	–
MM10i	–	–	○	○

STANDARD MAST (in mm)

Lift	h3: 2422	h3: 2622	h3: 2922	h3: 3222
Height measurements	h1: 1817 h1#: 1892 h2: 150 h4: 3032 h3+h13: 2513	h1: 1917 h1#: 1992 h2: 150 h4: 3232 h3+h13: 2713	h1: 2067 h1#: 2142 h2: 150 h4: 3532 h3+h13: 3013	h1: 2217 h1#: 2292 h2: 150 h4: 3832 h3+h13: 3313
Manufacturer's type designation				
ML10	○	○	○	○

○ Optional equipment – Not available

h1: Mast height, lowered
h1#: Mast height with used free lift 150 mm
h2: Free lift
h3: Lift
h4: Mast height, extended
h3+h13: Lift + fork height

STANDARD AND OPTIONAL EQUIPMENT

	Manufacturer's type designation/equipment	MM10	MM10i	ML10
Safety	Height-dependent lifting speed	●	●	●
	Safety reversing button on tiller head	●	●	●
	Automatic parking brake	●	●	●
Service	Maintenance-free AC drive motor	●	●	●
Operation/ load handling	Mechanical steering	●	●	●
	Creep speed	●	●	●
	Initial lift	–	●	–
	4.5 km/h travel speed	●	●	●
Workplace	Display with operating hours counter	●	●	●
	Key switch	●	●	●
Mast	Mono mast	●	●	–
	Standard mast	–	–	●
	Various mast lift heights	○	○	○
Attachment/ forks	Fork length and width across : 1150 × 550 mm	●	–	–
	Fork length and width across : 1150 × 560 mm	–	●	–
	Fork length and width across : 1150 × 570 mm	–	–	●
Axles and tyres	Polyurethane drive wheel	●	●	●
	Tandem polyurethane load wheels	●	●	●
Drive and brake system	Electromagnetic brake	●	●	●
	0.65 kW AC drive motor	●	●	●
Energy	AGM battery 24 V/125 Ah	–	–	●
	AGM battery 24 V/85 Ah	●	●	–
	On-board charger	●	●	●
	UK charger plug	○	○	○
	Plug interlock	○	○	○

● Standard equipment ○ Optional equipment – Not available

CHARACTERISTICS

Long tiller arm and emergency stop switch

Safety

→ Traction speed automatically reduced when forks are more than 800 mm from the floor
→ Long tiller arm ensures operator is always a safe distance from the truck
→ Wrap-around tiller head design protects operator's hands
→ Parking brake for safe operation on ramps and gradients
→ Emergency isolator button cuts power to the truck

Ergonomic tiller handle with integrated drive and lift control

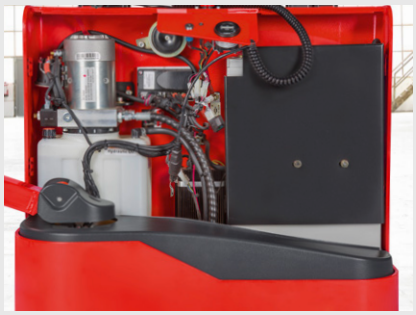
Ergonomics

→ Adjustable picking height avoids back strain
→ Ergonomic tiller handle allows control of all functions with either hand
→ Convenient operation of all controls with either hand
→ Precise manoeuvres in confined spaces thanks to creep speed button

Robust chassis and initial lift (optional)

Handling

→ Powerful electric motors provide speeds of up to 4.5 km/h
→ Robust chassis and reinforced forks for loads up to 1000 kg
→ On-board charger allows charging at any suitable socket
→ Up to three hours of non-stop operation for maximum productivity
→ Initial lift (model MM10i) increases ground clearance aiding operation on ramps



Easy access to all main components

Service

→ Easy access to major components for fast, efficient servicing
→ Robust traction motor reduces maintenance costs
→ Maintenance-free battery maximises up-time and reduces cost
→ Automatic discharge protection ensures long battery life

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.

Linde Material Handling

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