Linde Material Handling

Automatic Reach Truck

R-MATIC k

Load capacity 1.1 t – 2.3 t | Series 5190

PB ION

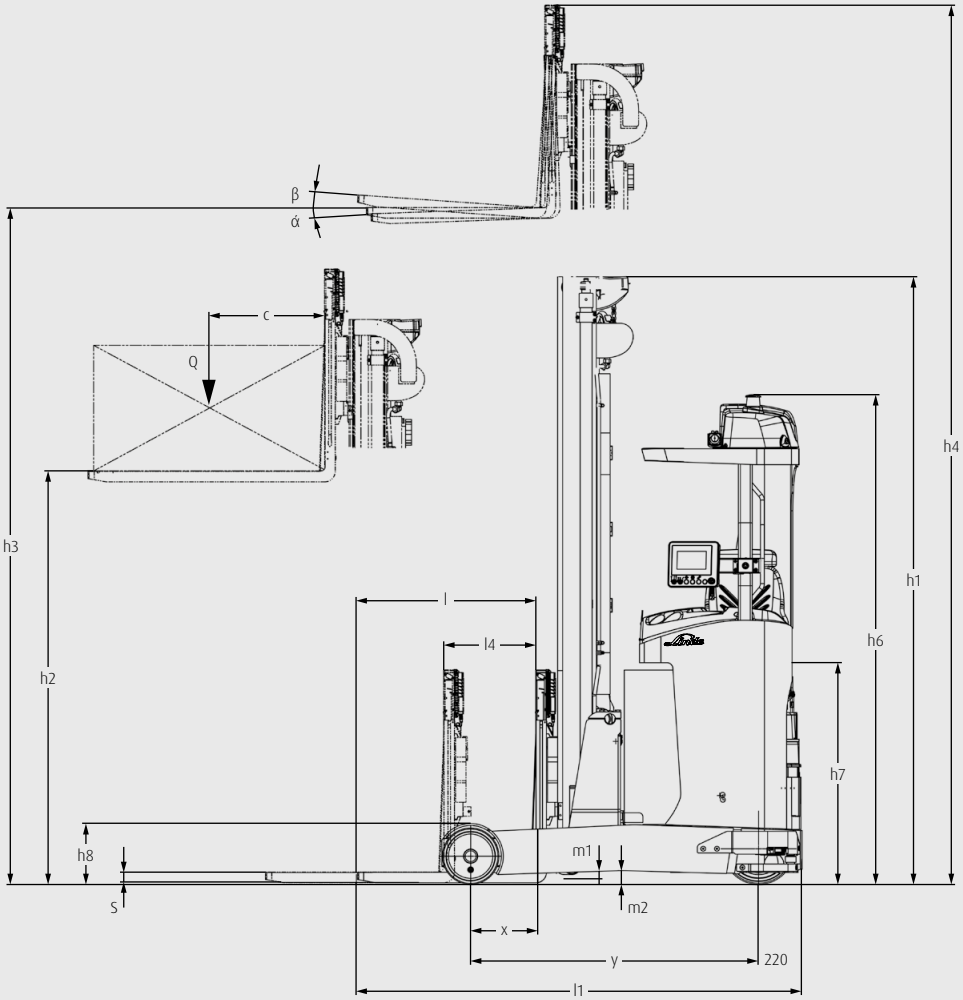
Flexible warehouse assistant

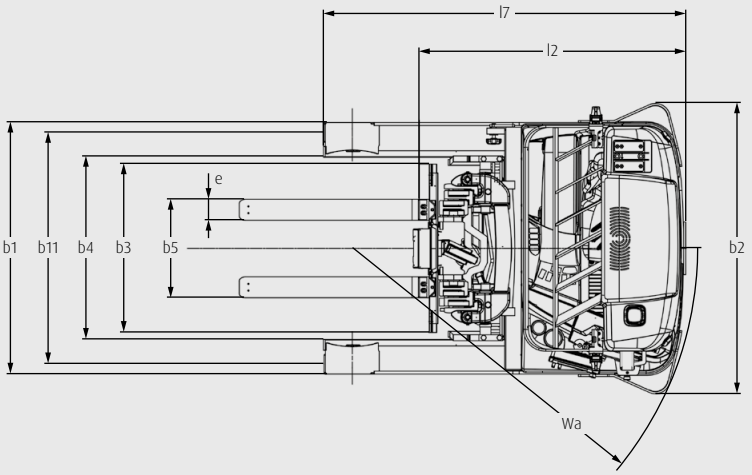
→ Precise storage and retrieval of goods up to 2300 kg at heights of up to 10 m thanks to pallet positioning system
→ For transport, incoming and outgoing goods, storage in high shelving, replenishment and supply
→ Flexible configuration thanks to varied selection of masts and lifting capacities
→ Option to choose between lead-acid and Li-ION batteries with optional quick-charge solution
→ Dual mode allows for manual control as needed
→ Easy implementation and scalability thanks to Linde MATIC:move and Linde MATIC:move+ software

STANDARD AND OPTIONAL EQUIPMENT

	Manufacturer's type designation/equipment	R-MATIC k
Safety	360° safety scanner	●
	2D laser protection curtain in direction of travel for detecting objects above ground level	○
	2D laser protection curtain on the sides for detecting objects suspended above ground level	○
	Linde BlueSpot – visual drive path warning for pedestrians and co-workers	○
	Red warning lights at sides – red lines projected onto floor at either side of the vehicle	○
	Visual warnings – multicolour flashing lights indicating vehicle status	●
	Acoustic warning signals	●
	Emergency stop switches (5x)	●
	Emergency stop switches on the left/right load arms for enhanced safety in the load direction	○
	Additional sensor (ultrasonic) for enhanced personal protection in front of load arms	○
Operation/load handling	2D sensors for detecting charge carriers and charge environments	●
	Load detection (detection of pallet cages by pallet sensors at the sides)	○
	Load detection (detection of stacked load carriers during loading)	○
	Safety field kit 850 × 1250 mm (standard load carrier EPAL1 and pallet cage for longitudinal transport)	○
	Safety field kit 1250 × 1250 mm (standard load carrier for longitudinal and lateral transport)	○
	Touch display	●
	Remote control	○
Digitalisation	MATIC:move (easy commissioning)	○
	MATIC:move+ (comprehensive system solutions)	○
	MATIC:analytics (analysis tool for optimising use and performance)	○
	Data transmission WiFi	●
Attachments/ forks	Fork length: 850/1050/1250 mm	○
	Side shifter +- 80 mm	●
	Fork tilt 2/4°	●
Energy	Lead-acid battery 465–775 Ah	○
	Li-ION battery 13–35 kWh	○
	Charger	○
	Charging contact for automated charging	○
	Charging station for automated charging	○

● Standard equipment ○ Optional equipment


β
α
c
Q
h4
h3
h1
h2
l
l4
h6
h7
h8
m1
s
m2
x
y
220
l1


l7
l2
e
b1
b11
b4
b3
b5
b2
Wa

MAST TABLE

TRIPLEX MAST (in mm)

Lift	h3:5524	h3:6774	h3:6874	h3:8374	h3:10274	h3:5354	h3:6704	h3:8074	h3:10474
Height measurements	h1: 2450 h2:1475 h2':1445 h4:6499 h4':6529 h*:5224	h1: 2900 h2:1925 h2':1895 h4:7749 h4':7779 h*:6474	h1: 2900 h2:1925 h2':1895 h4:7849 h4':7879 h*:6574	h1: 3400 h2:2425 h2':2395 h4:9349 h4':9379 h*:8074	h1: 4200 h2:3225 h2':3195 h4:11249 h4':11279 h*:9974	h1: 2450 h2:1475 h2':1445 h4:6329 h4':6359 h*:5054	h1: 2900 h2:1925 h2':1895 h4:7679 h4':7709 h*:6404	h1: 3400 h2:2425 h2':2395 h4:9049 h4':9079 h*:7774	h1: 4200 h2:3225 h2':3195 h4:11449 h4':11479 h*:10174
Manufacturer's type designation									
R-MATIC 12 k	○	○	–	–	–	–	–	–	–
R-MATIC 17 k	○	–	○	○	○	–	–	–	–
R-MATIC 25 k	–	–	–	–	–	○	○	○	○

○ Optional equipment – Not available

h1: Mast height, lowered
h2: Free lift operating
h2': Free lift with load backrest
h3: Lift
h4: Mast height, extended
h4': Height of mast, extended with load backrest
h*: Maximum automated storage height

TECHNICAL DATA (according to VDI 2198)

Characteristics	1.1	Manufacturer (abbreviation)		Linde MH	Linde MH	Linde MH
	1.2	**Manufacturer's type designation**		**R-MATIC 12 k**	**R-MATIC 17 k**	**R-MATIC 25 k**
	1.2a	Series		5190	5190	5190
	1.3	Drive		Electrical	Electrical	Electrical
	1.4	Operation		Seated/automated	Seated/automated	Seated/automated
	1.5	Rated capacity/rated load	Q (t)	1.07	1.55	2.33
	1.6	Load centre distance	c (mm)	625	625	625
	1.8	Load distance, centre of drive axle to fork	x (mm)	184	316	388
	1.9	Wheelbase	y (mm)	1275	1453	1669
Weight	2.1	Service weight	kg	3440	3670	4310
	2.3	Axle loading, unladen front/rear	kg	2280/1250	2440/1330	2790/1620
	2.4	Axle loading, fork advanced, laden front/rear	kg	1000/3730	880/4590	960/5940
	2.5	Axle loading, fork retracted, laden front/rear	kg	1970/2760	2180/3290	2570/4340
Tyres/chassis	3.1	Tyres (solid rubber, super-elastic, pneumatic, polyurethane)		Polyurethane	Polyurethane	Polyurethane
	3.2	Tyre size, front		360×130	360×130	360×140
	3.3	Tyre size, rear		285×100	285×100	350×100
	3.5	Wheels, number front/rear (x = driven wheels)		1x/2	1x/2	1x/2
	3.7	Tread, rear	b11 (mm)	1167	1167	1167
Dimensions	4.1	Mast/fork carriage tilt, forward/backward	α/β (°)	2/4	2/4	2/4
	4.2	Mast height, lowered	h1 (mm)	2900	2900	2900
	4.3	Free lift	h2 (mm)	1925	1925	1950
	4.4	Lift	h3 (mm)	6774	6874	6704
	4.5	Mast height, extended	h4 (mm)	7749	7849	7679
	4.7	Height of overhead guard (cabin)	h6 (mm)	2472	2472	2472
	4.8	Seat height relating to SIP/stand height	h7 (mm)	1140	1140	1140
	4.10	Height of wheel arms	h8 (mm)	308	308	373
	4.19	Overall length	l1 (mm)	2640	2686	2830
	4.20	Length to fork face	l2 (mm)	1390	1436	1580
	4.21	Overall width	b1/b2 (mm)	1302/1464	1302/1464	1302/1464
	4.22	Fork dimensions DIN ISO 2331	s/e/l (mm)	40/100/1250	40/100/1250	50/100/1250
	4.23	Fork carriage to ISO 2328, class/type A, B		2/A	2/A	2/A
	4.24	Fork carriage width	b3 (mm)	760	760	760
	4.25	Fork spread	b5 (mm)	500	500	500
	4.26	Distance between wheel arms/loading surfaces	b4 (mm)	920	920	920
	4.28	Reach distance	l4 (mm)	449	591	695
	4.31	Ground clearance, laden, below mast	m1 (mm)	50.5	50.5	50.5
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	70	70	50
	4.34.1	Aisle width for pallets 1000 × 1200 crossways	Ast (mm)	3025	3175	3275
	4.34.2	Aisle width for pallets 800 × 1200 lengthways	Ast (mm)	2950	3075	3200
	4.35	Turning radius	Wa (mm)	1540	1710	1950
	4.37	Length across wheel arms	l7 (mm)	1775	1953	2202
Performance	5.1	Travel speed, laden/unladen	m/s	2/2	2/2	2/2
	5.1.1	Travel speed, laden/unladen, backward	m/s	1.2/1.2	1.2/1.2	1.2/1.2
	5.2	Lifting speed, laden/unladen	m/s	0.5/0.5	0.5/0.5	0.5/0.5
	5.3	Lowering speed, laden/unladen	m/s	0.35/0.35	0.35/0.35	0.35/0.35
	5.4	Reaching speed, laden/unladen	m/s	0.15/0.15	0.15/0.15	0.15/0.15
	5.9	Acceleration time, laden/unladen	s	5/5	5/5	5/5
	5.10	Service brake		Regenerative electric/ hydraulic	Regenerative electric/ hydraulic	Regenerative electric/ hydraulic
Electric-engine	6.1	Drive motor rating S2 60 min	kW	6.5	6.5	6.5
	6.2	Lift motor rating at S3 15%	kW	14	14	14
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		43531 C/254-2	43531 C/254-2	43531 C/254-2
	6.4	Battery voltage/nominal capacity K5	V/Ah (V)/kWh	48/465 Li-ION: 48/11	48/465 Li-ION: 48/35	48/775 Li-ION: 48/35
	6.5	Battery weight (±5%)	kg	750	750	1120

CHARACTERISTICS

Red warning lines

Safety

→ Ideal for mixed traffic thanks to extensive safety features to protect people, loads and surroundings
→ 360° safety scanner for complete monitoring of the working environment
→ Visual and acoustic warning systems trigger when there are hazards
→ Automatic speed adjustment prevents collisions
→ Five easy-to-reach emergency stop switches for an immediate stop
→ Optional warning and safety systems for additional protection

Pallet positioning system

Handling

→ 2D pallet positioning system for precise handling even when pallets are not precisely aligned
→ Safe storage and retrieval of different loads thanks to advanced load detection
→ Cantilevered fork makes handling closed load carriers on the floor easier
→ Compact truck masters narrow aisles from 2.95 metres
→ Reflector-based navigation makes it possible to precisely operate the storage and retrieval position

Designed to service

Service

→ Highly reliable thanks to tried-and-tested technology from Linde MH
→ Strong service network ensures quick maintenance and repair
→ Easily accessible components for time-saving service
→ Durable, low-maintenance drive system for high availability
→ Digital twin supports reliable hardware and software maintenance

Process-oriented as standard

Sales and realisation

→ Individual, automated solutions with dynamic simulation and the option to run a demo in a real process environment on site
→ Analysis of manual handling processes and optimisation of the degree of automation as required for specific customer needs
→ Software solutions, such as MATIC:move and MATIC:move+ in particular, enable rapid commissioning, flexible customization, scalability, and optimal process control

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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