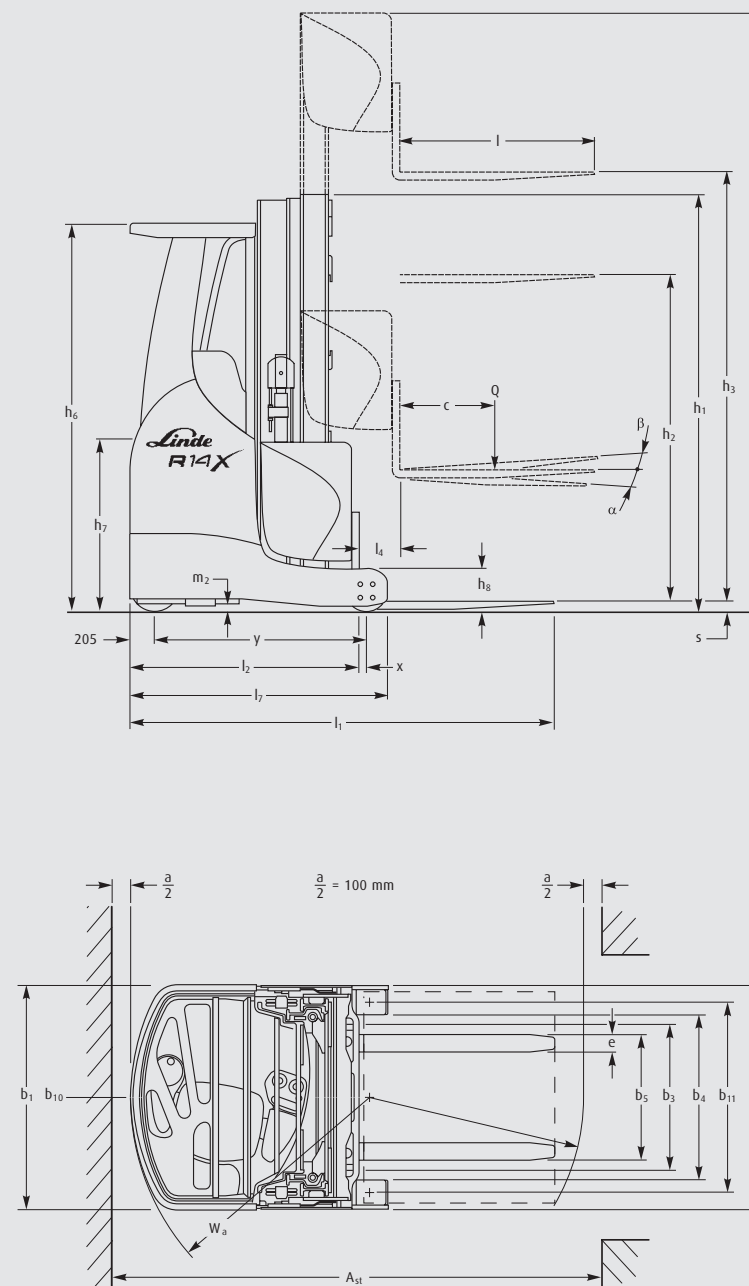


## Technical data

			LINDE			
			R 14 X	R 16 X	R 17 X	R 17 X HD
			Battery	Battery	Battery	Battery
Characteristics	1.1	Manufacturer	LINDE	LINDE	LINDE	LINDE
	1.2	Model designation	<b>R 14 X</b>	<b>R 16 X</b>	<b>R 17 X</b>	<b>R 17 X HD</b>
	1.3	Power unit: battery, diesel, petrol, LP gas, mains power	Battery	Battery	Battery	Battery
	1.4	Operation: manual, pedestrian, stand-on, seated, order picker	Seated	Seated	Seated	Seated
Weights	1.5	Load capacity	Q (kg)	1.400 <sup>1)</sup>	1.600 <sup>1)</sup>	1.700 <sup>1)</sup>
	1.6	Load centre	c (mm)	600/500	600/500	600/500
	1.8	Axle centre to fork face	x (mm)	41	41	41
	1.9	Wheelbase	y (mm)	1130	1130	1346
Wheels & Tyres	2.1	Service weight	kg	3620	3810	3746
	2.3	Axle load without load, front (drive)/rear (load)	kg	1960/1660 <sup>2)</sup>	1980/1830 <sup>2)</sup>	1817/1929 <sup>2)</sup>
	2.4	Axle load, fork outreached with load, front (drive)/rear (load)	kg	910/4110 <sup>2)</sup>	860/4550 <sup>2)</sup>	896/4550 <sup>2)</sup>
	2.5	Axle load, fork retracted with load, front (drive)/rear (load)	kg	1150/3870 <sup>2)</sup>	1150/4260 <sup>2)</sup>	1340/4106 <sup>2)</sup>
Dimensions	3.1	Tyres, front (drive)/rear (load) C = cushion rubber, P = polyurethane		P/P	P/P	P/P
	3.2	Tyre size, front (drive) wheel	mm	Ø 343 x 135	Ø 343 x 135	Ø 343 x 135
	3.3	Tyre size, rear (load) wheel	mm	Ø 230 x 140	Ø 230 x 140	Ø 230 x 140
	3.5	Wheels, number front (drive)/rear (load) (x = driven)		1x/2	1x/2	1x/2
Performance	3.6	Track width, front (drive)	b <sub>10</sub> (mm)	0	0	0
	3.7	Track width, rear (load)	b <sub>11</sub> (mm)	1072	1072	1072
	4.1	Mast/fork carriage tilt, forward/backward	α/β (°)	0/2.5 (2/2.5) <sup>3)</sup>	0/2.5 (2/2.5) <sup>3)</sup>	0/2.5 (2/2.5) <sup>3)</sup>
	4.2	Height of mast, lowered	h <sub>1</sub> (mm)	2455 <sup>4)</sup>	2455 <sup>4)</sup>	2955 <sup>4)</sup>
Other	4.3	Free lift	h <sub>2</sub> (mm)	1541 <sup>4)</sup>	1541 <sup>4)</sup>	2041 <sup>4)</sup>
	4.4	Lift	h <sub>3</sub> (mm)	4655 <sup>4)</sup>	5155 <sup>4)</sup>	6355 <sup>4)</sup>
	4.5	Height of mast, extended	h <sub>4</sub> (mm)	5614 <sup>4)</sup>	6114 <sup>4)</sup>	7314 <sup>4)</sup>
	4.7	Height of overhead guard (cab)	h <sub>6</sub> (mm)	2190 (2365) <sup>5)</sup>	2355 (2530) <sup>5)</sup>	2190 (2365) <sup>5)</sup>
Drive	4.8	Height of seat, minimum/maximum	h <sub>7</sub> (mm)	970/1130	1135/1295	970/1130
	4.10	Height of reach legs	h <sub>8</sub> (mm)	245	245	245
	4.19	Overall length	l <sub>1</sub> (mm)	2294	2294	2510
	4.20	Length to fork face	l <sub>2</sub> (mm)	1294	1294	1510
Dimensions	4.21	Overall width	b <sub>1</sub> /b <sub>2</sub> (mm)	1270/1270	1270/1270	1270/1270
	4.22	Fork dimensions	s/e/l (mm)	40 x 80 x 1000	45 x 100 x 1000	45 x 100 x 1000
	4.23	Fork carriage to DIN 15173, class/form A, B		2A	2A	2A
	4.24	Width of fork carriage	b <sub>3</sub> (mm)	820	820	820
Performance	4.25	Fork spread, minimum/maximum	b <sub>5</sub> (mm)	316/710	316/710	316/710
	4.26	Width between reach legs	b <sub>4</sub> (mm)	910	910	910
	4.28	Reach travel	l <sub>4</sub> (mm)	170	170	170
	4.31	Ground clearance, mast	m <sub>1</sub> (mm)	-	-	-
Other	4.32	Ground clearance, centre of wheelbase	m <sub>2</sub> (mm)	70	70	70
	4.33	Aisle width, pallet 1000 x 1200 across forks	Ast (mm)	2666	2666	2882
	4.34	Aisle width, pallet 800 x 1200 along forks	Ast (mm)	2761	2761	2977
	4.35	Turning radius	W <sub>3</sub> (mm)	1335	1335	1551
Performance	4.37	Length of chassis	l <sub>7</sub> (mm)	1451	1451	1667
	5.1	Travel speed, with/without load	km/h	14/14 <sup>2)</sup> 6)	14/14 <sup>2)</sup> 6)	14/14 <sup>2)</sup> 6)
	5.2	Lifting speed, with/without load	m/s	0.44/0.7 <sup>2)</sup> 6)	0.41/0.7 <sup>2)</sup> 6)	0.4/0.7 <sup>2)</sup> 6)
	5.3	Lowering speed, with/without load	m/s	0.55/0.45 <sup>2)</sup>	0.55/0.45 <sup>2)</sup>	0.55/0.45 <sup>2)</sup>
Drive	5.4	Reach speed, with/without load	m/s	0.10/0.105 <sup>2)</sup>	0.10/0.105 <sup>2)</sup>	0.10/0.105 <sup>2)</sup>
	5.7	Climbing ability, with/without load, 30 minute rating	%	3.9/7.1	3.9/7.1	3.9/7.1
	5.8	Maximum climbing ability, with/without load, 5 minute rating	%	10/10	10/10	10/10
	5.9	Acceleration time, with/without load	s	5.8/5 <sup>4)</sup>	5.8/5 <sup>4)</sup>	5.8/5 <sup>4)</sup>
Other	5.10	Service brake		Hydraulic/electric	Hydraulic/electric	Hydraulic/electric
	6.1	Drive motor, 60 minute rating	kW	6.5	6.5	6.5
	6.2	Lift motor, 15% rating	kW	14	14	14
	6.3	Battery to DIN/IEC		43531A/254-2	43531A/254-2	43531A/254-2
Performance	6.4	Battery voltage/rated capacity (5 h)	V/Ah	48/480	48/660	48/920
	6.5	Battery weight (±5%)	kg	720	1013	1530
	6.6	Power consumption to VDI cycle	kWh/h	7)	7)	7)
Other	8.1	Type of drive control		Electronic/stepless	Electronic/stepless	Electronic/stepless
	8.2	Working pressure for attachments	bar	200	200	200
	8.3	Oil flow for attachments	l/min	6.5	6.5	6.5
	8.4	Noise level at operator's ear	dB (A)	7)	7)	7)

1) Traction, lift, lower and reach speeds and weights may vary with alternative lift heights  
2) Figures in brackets are with manually operated hydraulic fork tilt  
3) For other heights, see table  
4) Figure in brackets is for optional overhead guard with increased headroom

5) Figure in brackets is for intrusive stacking  
6) Reduced speed and acceleration on request  
7) Refer to manufacturer for figures



Triplex mast		h3	h1	h2	h3	h1	h2	h3	h1	h2	h3	h1	h2
Lift	h3	4655	5155	5755	6355	6655	6955	7255	7555				
Height of mast, lowered	h1	2455	2455	2955	2955	2955	2955	3455	3455				
Height of mast, extended	h4	5614	6114	6714	7314	7614	7914	8214	8514				
Free lift	h2	1541	1541	2041	2041	2041	2041	2541	2541				
Lift	h3	7955	8255	8555	8955	9155	9455	9755	10155				
Height of mast, lowered	h1	3455	3455	3955	3955	3955	3955	3955	4455				
Height of mast, extended	h4	8914	9214	9514	9914	10114	10414	10714	11114				
Free lift	h2	2541	2541	3041	3041	3041	3041	3041	3541				
Lift	h3	10655	10755	11155	11455	-	-	-	-				
Height of mast, lowered	h1	4455	4455	4930	4930	-	-	-	-				
Height of mast, extended	h4	11614	11714	12114	12414	-	-	-	-				
Free lift	h2	3541	3541	4016	4016	-	-	-	-				

Alternative lift heights on request. Lift height = h3 + s

Maximum lifts - R 14 X : 9455 mm  
R 16 X : 9955 mm  
R 17 X / R 17 X HD : 11455 mm





## Standard and optional equipment

### Standard equipment

#### General

Three-wheel configuration  
Overall width (reach legs) 1270 mm  
Linde Load Control for lift/lower, reach, tilt and sideshift  
Linde twin accelerator pedals  
Full suspension fabric seat with electric lumbar support and adjustable armrests  
Comprehensive head-up digital instrument display  
6.5 kW maintenance-free AC drive motor  
14 kW maintenance-free AC lift motor  
Polyurethane drive and load wheel tyres  
Self-adjusting service brakes  
Linde proportional 180° electric steering  
Panoramic clearview triplex fixed mast lift 4655 mm (R 14 X), 5155 mm (R 16 X), 6355 mm (R 17 X), 6955 mm (R 17 X HD)  
Integral sideshift and automatic fork tilt  
Fork length 1000 mm  
Lift height indicator  
Soft stop lowering  
Standard colour scheme vermilion and charcoal grey

#### Batteries and chargers

48 V, 480 Ah to 920 Ah  
depending on model and application  
Wide selection of chargers available to suit application

### Optional equipment

Panoramic fixed mast lifts to 9455 mm (R 14 X), 9955 mm (R 16 X), 11455 mm (R 17 X, R 17 X HD)  
Single accelerator pedal, automotive layout  
Alternative fork lengths  
Fork extensions  
Load backrest  
Single axis joysticks for lift, reach, tilt and functions  
Audible traction alarm  
360° steering (single accelerator pedal only)  
Seat heater  
PVC seat material  
Seat back extension  
Cold store protection  
Variable electronic drive unit brake

#### Electronics

Linde Digital Control system (LDC) incorporating CAN bus technology

#### Safety

Monitoring system stops truck in the event of traction, steering or lift failure  
Dual channel fail-to-safe circuitry  
Emergency circuit isolator  
Three independent braking systems  
All-wheel braking  
Seat-actuated traction interlock  
Electric horn  
Automatic slowdown at maximum lift  
Reach travel soft stop  
Protective glass screen between operator and mast  
Battery locking interlock  
Electrical and hydraulic overload protection  
Overhead guard  
Automatic creep speed above 8500 mm lift

#### Mast

Torsion-resistant fixed triplex panoramic mast  
Automatic fork tilt  
Integral sideshift  
High residual capacities

Cold store cab (R 17 X HD only)

Manual fork tilt

Automatic fork leveling (manual tilt only)

Automatic sideshift centring

Working lamps/beacons

Additional hydraulic circuit

Mesh or polycarbonate protection on overhead guard

Height pre-selector

PIN access

Data logger

CCTV

Seat interlock alarm

Audible traction alarm

Increased height overhead guard (plus 175 mm)

Alternative colour schemes

Other options available on request



Electric Reach Trucks  
Capacity 1400 kg – 1700 kg  
R 14 X, R 16 X, R 17 X

SERIES 116-02

### Safety

The revolutionary Linde X range of reach trucks sets new industry standards for comfort and performance combined with outstanding safety in narrow aisle storage and retrieval applications.

### Performance

The Linde drive and lift system employing advanced control technology translates the powerful output of the AC motors into seamless productivity. A comprehensive selection of DIN batteries ensures each truck is precisely matched to the demands of individual applications.

### Comfort

A perfect interface between operator and truck is assured with the Linde X range concept, which has doubled the space in the cab. The comfort-class seat with lumbar support, incorporates the compact steering wheel and all hydraulic controls integrated into adjustable armrests. Unrestricted comfort and a truly intuitive control layout provides the perfect working environment for optimum performance.

## Features

#### Superb working environment

- Linde Load Control: precise, effortless fingertip control of all mast movements
- Ergonomic full suspension, comfort-class seat fully adjustable to the operator's personal preferences including two adjustable armrests
- The compact electric steering wheel is integrated in the left armrest

#### Stability

- Chassis designed and built for maximum strength and durability
- Heavy-duty materials provide low centre of gravity for stability and high residual capacities

#### Manoeuvrability

- A short wheelbase, compact chassis dimensions and smooth electric power steering ensure easy and efficient manoeuvring

#### Precision

- Assured manoeuvring with Linde twin accelerator pedals
- Precision load handling with Linde Load Control
- Responsive, progressive and adjustable electric steering with essential 'road feel'
- Digital head-up instrument display for instant read out of truck status
- Excellent visibility of load and surrounding environment

#### Unique ultra-wide mast design

- Panoramic view of the load and storage zones
- The mast is fixed to the chassis while a traversing head provides the reach movement.
- Automatic tilt and integrated sideshift are standard



#### Linde twin accelerator pedals

- Effortless forward/reverse selection places minimal demands on operator
- Operator is able to maintain high efficiency and productivity levels

#### Batteries

- Capacities to suit every type of application: 480 Ah to 920 Ah
- Quick and easy battery change

#### Servicing

- Maintenance-free AC traction and lift motors
- Configurable Linde Digital Control system
- Incorporates diagnostic technology
- Easy service access
- Up to 1000 operating hours uptime between services



Linde Material Handling

Linde

### Reliability

The Linde X range is constructed for consistent reliability in demanding applications. Its compact, robot-welded chassis ensures maximum structural integrity and durability. The rugged construction and components provide a low centre of gravity for excellent stability and high residual capacities.

### Productivity

Efficiency at work, efficiency in servicing. With uptime ratios of 1000 hours between services and a computerised diagnostic system, maintenance intervals are minimal and operating costs are reduced. All the truck's performance parameters can easily be configured to match the requirements of the customer's application.

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Linde Material Handling

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