

## Standard Equipment/Optional Equipment

### Standard Equipment

#### General

Three-wheel configuration  
 Overall width (reach legs) 1270mm  
 Linde Load Control for lift/lower, reach, tilt and side shift  
 Linde Digital Control system (LDC) incorporating CAN bus technology  
 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 & 14 kW AC lift motor  
 Polyurethane drive and load wheel tyres  
 Self-adjusting service brakes  
 Linde proportional 180° electric steering  
 Fork length 1150mm  
 Lift height indicator/Soft stop lowering

#### Batteries and chargers

48 V, 480 Ah to 1000 Ah depending on model and application  
 Wide selection of chargers available to suit application

### Optional Equipment

Panoramic fixed mast lifts to 9455mm (R14X/R14X high), 9955mm (R16X), 11455mm (R17X, R17X HD)  
 360° steering (single accelerator pedal only)  
 Single accelerator pedal, automotive layout  
 Alternative fork lengths  
 Fork extensions  
 Load backrest  
 Single axis joysticks for lift, reach, tilt and additional functions  
 Manual fork tilt  
 Horizontal fork leveling  
 Side shift centering  
 Additional hydraulic circuit  
 Height pre-selector  
 High vision glass roof for standard overhead guard and increased height overhead guard (plus 175mm)  
 Increased height overhead guard (plus 175mm)  
 PVC seat

#### 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  
 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 8500mm lift

#### Mast

Torsion-resistant fixed triplex panoramic mast  
 Integral side shift  
 High residual capacities

Seat backrest extension  
 10° Rotating seat (R17X, R17X HD)  
 Vertical adjustment armrests  
 Heated super-comfort seat  
 Seat interlock alarm  
 Cold store protection to minus 30°C  
 Mesh or polycarbonate protection on overhead guard  
 Mast mounted CCTV camera system  
 Linde Connected Solutions (connect:)  
 PIN access  
 Blue Spot™  
 Working lamps/beacons  
 Audible traction alarm  
 Mounting bracket for terminals  
 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 116-03

### 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.

### 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.

## Features

#### Superb working environment

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

#### Manoeuvrability

- The compact, short wheelbase chassis combines with a small diameter steering wheel and effortless electric steering for impressive manoeuvrability in narrow aisles
- Faster and safer work cycles for higher productivity



#### Precision

- Seamless travelling and pinpoint manoeuvring with Linde twin accelerator pedals
- Precision load handling with Linde Load Control
- Responsive 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
- Integrated side shift is standard
- Unique Booster - cylinder for reduced mast deflection



#### Battery

- Batteries uniquely located under operator's compartment
- Capacities to suit every type of application: 480 - 1000 Ah (heavy duty)
- Battery easily changed/checked using pallet truck or hoist attachment

#### Stability

- Robot-welded chassis, designed and built for maximum strength and operational stability
- The fixed, panoramic mast has high resistance to torsional stresses for safe and exceptionally stable load handling
- Heavy duty materials provide a low centre of gravity for impressive stability and high residual capacities

#### Optional equipment

- High vision glass roof
- Heated super-comfort seat
- 10° swivel seat (R17X, R17X HD)
- 360° steering (with single drive pedal only)
- Single pedal with separate direction selector



#### Servicing

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

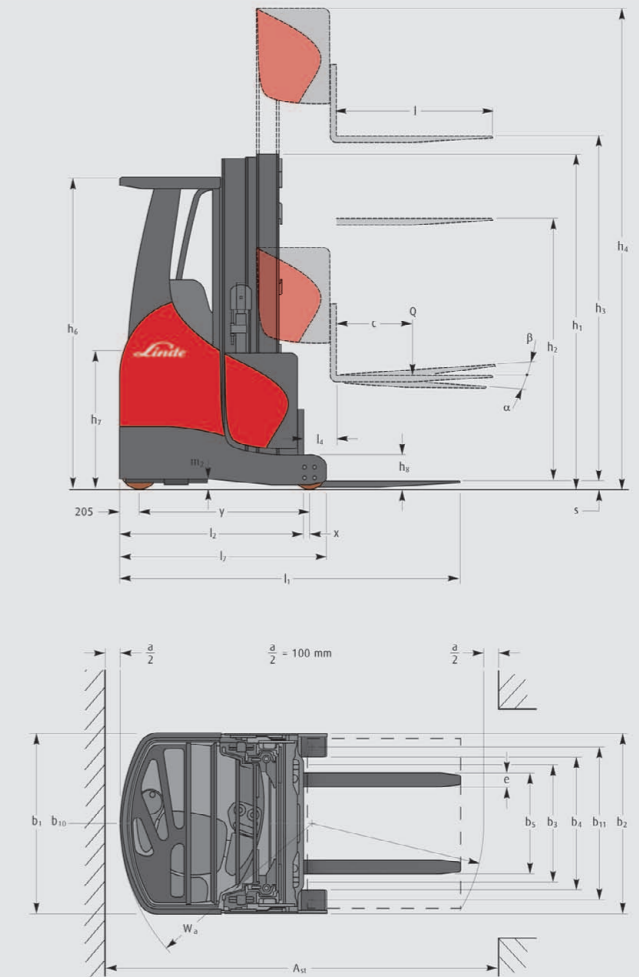


# Technical Data according to VDI 2198

		LINDE							
		R14X	R14X High	R16X	R17X	R17X HD			
Characteristics	1.1	Manufacturer	LINDE	LINDE	LINDE	LINDE	LINDE		
	1.2	Manufacturer's type designation	R14X	R14X High	R16X	R17X	R17X HD		
	1.2a	Series	116-03	116-03	116-03	116-03	116-03		
	1.3	Power unit	Battery	Battery	Battery	Battery	Battery		
	1.4	Operation	Seat	Seat	Seat	Seat	Seat		
	1.5	Load capacity/Load	Q (t)	1.4 <sup>1)</sup>	1.4 <sup>1)</sup>	1.6 <sup>1)</sup>	1.7 <sup>1)</sup>		
	1.6	Load centre distance	c (mm)	600 / 500	600 / 500	600 / 500	600 / 500		
	1.8	Axle centre to fork face	x (mm)	46	46	41	41		
	1.9	Wheelbase	y (mm)	1130	1130	1130	1346		
Weights	2.1	Service weight	(kg)	3620 <sup>2)</sup>	3770 <sup>2)</sup>	4170 <sup>2)</sup>	4960 <sup>2)</sup>	5080 <sup>2)</sup>	
	2.3	Axle load without load, front/rear	(kg)	1960 / 1660 <sup>2)</sup>	1960 / 1810 <sup>2)</sup>	1992 / 2178 <sup>2)</sup>	1852 / 3108 <sup>2)</sup>	2121 / 2959 <sup>2)</sup>	
	2.4	Axle load, fork outreached, with load, front/rear	(kg)	910 / 4110	906 / 4264	860 / 4910	896 / 5764	1180 / 5600	
	2.5	Axle load, fork retracted, with load, front/rear	(kg)	1150 / 3870	1117 / 4053	1162 / 4608	1375 / 5285	1415 / 5365	
	3.1	Tyres rubber, SE, pneumatic, polyurethane		Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	
Wheels/Tyres	3.2	Tyre size, front		Ø 343 x 135	Ø 343 x 135	Ø 343 x 135	Ø 343 x 135	Ø 343 x 135	
	3.3	Tyre size, rear		Ø 230 x 140	Ø 230 x 140	Ø 230 x 140	Ø 230 x 140	Ø 230 x 140	
	3.5	Wheels, number front/rear (x = driven)		1x / 2	1x / 2	1x / 2	1x / 2	1x / 2	
	3.7	Track width, rear	b11 (mm)	1072	1072	1072	1072	1072	
	4.1	Mast/fork carriage tilt, forward/backward	a/b (°)	0.0 / 2.5 (2.0 / 2.5) <sup>3)</sup>	0.0 / 2.5 (2.0 / 2.5) <sup>3)</sup>	0.0 / 2.5 (2.0 / 2.5) <sup>3)</sup>	0.0 / 2.5 (2.0 / 2.5) <sup>3)</sup>	0.0 / 2.5 (2.0 / 2.5) <sup>3)</sup>	
	4.2	Height of mast, lowered	h1 (mm)	2455	2955	3455	3230	4605	
	4.3	Free lift	h2 (mm)	1541	2041	2541	2316	3691	
Dimensions	4.4	Lift	h3 (mm)	5655	6955	7555	7855	10655	
	4.5	Height of mast, extended	h4 (mm)	6614	7914	8514	8814	11614	
	4.7	Height of overhead guard (cabin)	h6 (mm)	2190 [2365] <sup>4)</sup>	2355 [2530] <sup>4)</sup>	2355 [2530] <sup>4)</sup>	2190 [2365] <sup>4)</sup>	2355 [2530/2410] <sup>3)</sup>	
	4.8	Height of seat/stand on platform	h7 (mm)	970 / 1130	1135 / 1295	1135 / 1295	970 / 1130	1135 / 1295	
	4.10	Height of reach legs	h8 (mm)	245	245	245	245	245	
	4.19	Overall length	l1 (mm)	2444	2444	2444	2660	2660	
	4.20	Length to fork face	l2 (mm)	1294	1294	1294	1510	1510	
	4.21	Overall width	b1/b2 (mm)	1270 / 1270	1270 / 1270	1270 / 1270	1270 / 1270	1270 / 1270	
	4.22	Fork dimensions DIN ISO 2331	s/e/l (mm)	40 x 80 x 1150	40 x 80 x 1150	45 x 100 x 1150	45 x 100 x 1150	45 x 100 x 1150	
	4.23	Fork carriage to ISO 2328, class/type A, B		2A	2A	2A	2A	2A	
	4.24	Width of fork carriage	b3 (mm)	710	710	710	710	710	
	4.25	Fork spread	b5 (mm)	296 / 690	296 / 690	316 / 710	316 / 710	316 / 710	
	4.26	Distance between wheel arms/loading surfaces	b4 (mm)	930	930	930	930	930	
	4.28	Reach travel	l4 (mm)	170	170	170	170	170	
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	70	70	70	70	70	
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	2662 <sup>4)</sup>	2662 <sup>4)</sup>	2666 <sup>4)</sup>	2882 <sup>4)</sup>	2882 <sup>4)</sup>	
	4.34.2	Aisle width with pallet 800 x 1200 along forks	Ast (mm)	2756 <sup>4)</sup>	2756 <sup>4)</sup>	2761 <sup>4)</sup>	2977 <sup>4)</sup>	2977 <sup>4)</sup>	
	4.35	Turning radius	Wa (mm)	1335	1335	1335	1551	1551 [-/1611] <sup>3)</sup>	
	4.37	Length of chassis	l7 (mm)	1451	1451	1451	1667	1667	
Performance	5.1	Travel speed, with/without load	(km/h)	14 / 14 <sup>2)</sup>	14 / 14 <sup>2)</sup>	14 / 14 <sup>2)</sup>	14 / 14 <sup>2)</sup>	14 / 14 <sup>2)</sup>	
	5.2	Lifting speed, with/without load	(m/s)	0.44 / 0.7 <sup>2)</sup>	0.41 / 0.7 <sup>2)</sup>	0.41 / 0.7 <sup>2)</sup>	0.4 / 0.7 <sup>2)</sup>	0.4 / 0.7 <sup>2)</sup>	
	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>	0.55 / 0.45 <sup>2)</sup>	0.55 / 0.45 <sup>2)</sup>	
	5.4	Reach speed, with/without load	(m/s)	0.1 / 0.105 <sup>2)</sup>	0.1 / 0.105 <sup>2)</sup>	0.1 / 0.105 <sup>2)</sup>	0.1 / 0.105 <sup>2)</sup>	0.1 / 0.105 <sup>2)</sup>	
	5.7	Climbing ability, with/without load	(%)	3.9 / 7.1	3.9 / 7.1	3.9 / 7.1	3.9 / 7.1	3.9 / 7.1	
	5.8	Maximum climbing ability, with/without load	(%)	10.0 / 10.0	10.0 / 10.0	10.0 / 10.0	10.0 / 10.0	10.0 / 10.0	
	5.9	Acceleration time, with/without load	(s)	5.8 / 5.0 <sup>2)</sup>	5.8 / 5.0 <sup>2)</sup>	5.8 / 5.0 <sup>2)</sup>	5.8 / 5.0 <sup>2)</sup>	5.8 / 5.0 <sup>2)</sup>	
	5.10	Service brake		Electric/hydraulic	Electric/hydraulic	Electric/hydraulic	Electric/hydraulic	Electric/hydraulic	
	Drive	6.1	Drive motor rating S2 60 min	(kW)	6.5	6.5	6.5	6.5	6.5
		6.2	Lift motor rating at S3 15%	(kW)	14	14	14	14	14
6.3		Battery according to DIN 43531/35/36 A,B,C,no		43 531 / A	43 531 / A	43 531 / A	43 531 / A	43 531 / A	
6.4		Battery voltage/rated capacity (5h)	(V)/(Ah)	48 / 480	48 / 690/750	48 / 690/750	48 / 640	48 / 920/1000	
6.5		Battery weight (± 5%)	(kg)	720	1013	1013	946	1315	
6.6		Power consumption according to VDI cycle	(kWh/h)	upon request	upon request	upon request	upon request	upon request	
Others	8.1	Type of drive unit		Electronic/stepless	Electronic/stepless	Electronic/stepless	Electronic/stepless	Electronic/stepless	
	10.1	Operating pressure for attachments	(bar)	180 <sup>4)</sup>	180 <sup>4)</sup>	180 <sup>4)</sup>	180 <sup>4)</sup>	180 <sup>4)</sup>	
	10.2	Oil flow for attachments	(l/min)	25 <sup>4)</sup>	25 <sup>4)</sup>	25 <sup>4)</sup>	25 <sup>4)</sup>	25 <sup>4)</sup>	
	10.7	Sound pressure level LpAZ (at the driver's seat)	(dB(A))	upon request	upon request	upon request	upon request	upon request	

1) Capacity could degrade with high lift height  
 2) Drive, lift, lower and push speed as well as weight can change with other lift heights.  
 3) Values in parenthesis with manual fork tilt  
 4) Values in [...] for option OHG raised.  
 5) Values in [...] for option OHG raised / cold store cabin.

6) Including a 200 mm (min.) operating aisle clearance.  
 7) Reduced speed and acceleration on request.  
 8) With attachment carriage



Triplex masts									
Lift	<b>h3</b>	5155	5655	6355	6455	6555	6655	6955	7055
Height of mast, lowered	<b>h1</b>	2455	2455	2955	2955	2955	2955	2955	2955
Height of mast, extended	<b>h4</b>	6114	6614	7314	7414	7514	7614	7914	8014
Free lift	<b>h2</b>	1541	1541	2041	2041	2041	2041	2041	2041
Lift	<b>h3</b>	7555	7855	7955	8255	8455	8555	9055	9155
Height of mast, lowered	<b>h1</b>	3455	3455	3455	3455	3455	3955	3955	3955
Height of mast, extended	<b>h4</b>	8514	8814	8914	9214	9414	9514	10014	10114
Free lift	<b>h2</b>	2541	2541	2541	2541	2541	3041	3041	3041
Lift	<b>h3</b>	9255	9455	9655	9755	10655	11155	11355	11455
Height of mast, lowered	<b>h1</b>	3955	3955	4455	4455	4930	4930	4930	4930
Height of mast, extended	<b>h4</b>	10214	10414	10614	10714	11614	12114	12314	12414
Free lift	<b>h2</b>	3041	3041	3541	3541	4016	4016	4016	4016

Alternative lift heights available on request. Lift height = h3 + s  
 Maximum lifts:  
 R14X = 9455 mm  
 R16X = 9955 mm  
 R17X/R17X HD = 11455 mm