



Electric Forklift Trucks

Capacity 1200 – 1600 kg

E 12, E 15, E 16 SERIES 324-02

Safety

Due to the twin-wheel center-pivoted steer axle these forklifts combine excellent maneuverability and superb stability. Designed with a high level of engineering expertise and constructed from high-quality materials, they feature supreme cornering stability as a result of their low center of gravity and broad ground contact.

Performance

Separate motors installed in the drive axle for the two front wheels enable the operator to use the truck's outstanding maneuverability and compact dimensions into productivity. All mast and auxiliary hydraulic functions are conveniently operated with the central control lever.

Comfort

Small-capacity forklifts noted for economy. The high level of operator comfort allows a high level of precision and working performance. The suspension seat and the ease of handling afforded by the Linde twin drive pedals provide the basis for fast, stress-free working.

Reliability

Truck structure optimized by the Finite Element Method. Special reinforcing at points of strain contributes to maximum stability and long life.

Productivity

Effective and cost-efficient at work. Linde electric forklifts are equipped with the Linde Digital Control (LDC) system, which achieves driving characteristics very similar to hydrostatic-drive trucks. As a result, productivity is enhanced and energy consumption stays low. A fault diagnosis system reduces time and expense for maintenance.

Linde Material Handling

Linde

Technical data

Characteristics	1.1	Manufacturer		LINDE
	1.2	Model designation		E 12
	1.3	Power unit: battery, diesel, petrol, LP gas, mains power		mains power
	1.4	Operation: manual pedestrian, stand-on, seated, order picker		Seated
	1.5	Load capacity	Q (kg)	1200
	1.6	Load centre	c (mm)	500
	1.8	Axle centre to fork face	x (mm)	350 (375) ²⁾
Weight	1.9	Wheelbase	y (mm)	1095
	2.1	Service weight	kg	2646
	2.2	Axle load with load, front/rear	kg	3405/441
Wheels and tyres	2.3	Axle load without load, front/rear	kg	1280/1370
	3.1	Tyres, front/rear (SE = CS superelastic, L = pneumatic)		SE (L)/SE (L) ⁵⁾
	3.2	Tyre size, front		18 x 7 - 8 SE ³⁾
	3.3	Tyre size, rear		15 x 4 1/2 - 8 SE ⁶⁾
	3.5	Wheels, rubber front/rear (x = driven)		2 x /2
	3.6	Track width, front	b10 (mm)	910
	3.7	Track width, rear	b11 (mm)	168
Dimensions	4.1	Mast/fork carriage tilt, forward/backward	α/β (Grad)	5/8
	4.2	Height of mast, lowered	h1 (mm)	2136 ⁴⁾ (2080) ¹⁾⁸⁾
	4.3	Free lift	h2 (mm)	150
	4.4	Lift	h3 (mm)	3250 (4675) ¹⁾²⁾
	4.5	Height of mast, extended	h4 (mm)	3813 ⁴⁾ (5238) ¹⁾²⁾
	4.7	Height of overhead guard (cabin)	h6 (mm)	1953
	4.8	Height of seat/stand-on platform	h7 (mm)	923
	4.12	Towing coupling height	h10 (mm)	-
	4.19	Overall length	l1 (mm)	2515
	4.20	Length to fork face	l2 (mm)	1615 (1640) ²⁾
	4.21	Overall width	b1 / b2 (mm)	1083 (1000) ⁴⁾
	4.22	Fork dimensions	s/e/l (mm)	40 x 80 x 900
	4.23	Fork carriage to DIN 15173, class/form A, B		2A
	4.24	Width of fork carriage	b3 (mm)	1040
	4.31	Ground clearance, mast	m1 (mm)	82
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	104
	4.33	Aisle width with pallets 1200 x1000 across forks	Ast (mm)	2942 (2965) ²⁾
	4.34	Aisle width with pallets 800 x1200 along forks	Ast (mm)	3066 (3090) ²⁾
	4.35	Turning radius	Wa (mm)	1265
4.36	Min. turning radius, front axle	b13 (mm)	-	
Performance	5.1	Travel speed, with/without load	km/h	11/12.5
	5.2	Lifting speed, with/without load	m/s	0.27/0.45
	5.3	Lowering speed, with/without load	m/s	0.50/0.45
	5.5	Tractive force with/without load, 60 minutes rating	N	2050/2226
	5.6	Maximum tractive force, with/without load, 5 minutes rating	N	5768/5894
	5.7	Climbing ability, with/without load, 30 minutes rating	%	7.4/11.5
	5.8	Maximum climbing ability, with/without load, 30 minutes rating	%	15.5/23.3
	5.9	Acceleration time, with/without load	s	6.2/5.4
	5.10	Service brake		mech./electr.
	Drive	6.1	Drive motor, 60 minutes rating	kW
6.2		Lift motor, 15 % rating	kW	5
6.3		Battery according to IEC 43 531/35/36 A, B, C, no		43 535 A
6.4		Battery voltage/rated capacity (5h)	V/Ah	24/550 ⁷⁾
6.5		Battery weight (\pm 5 %)	kg	445
6.6		Power consumption according to VDI cycle	kWh/h	-
Others	8.1	Type of drive control		Microprocessor
	8.2	Working pressure for attachments	bar	170
	8.3	Oil quantity for attachments	l/min	-
	8.4	Mean noise level at driver' ear	dB (A)	-
	8.5	Towing coupling, design/type DIN, no		-

1) See table on the right for other mast heights

2) Figures in parentheses for triplex masts

3) With 150 mm free lift

4) Figures in parentheses for cushion tyres 18 x 5 x12 1/8 KS front

5) Optionally pneumatic tyres 18 x 7 - 8 /18 PR or cushion tyres 18 x 5 x12 1/8

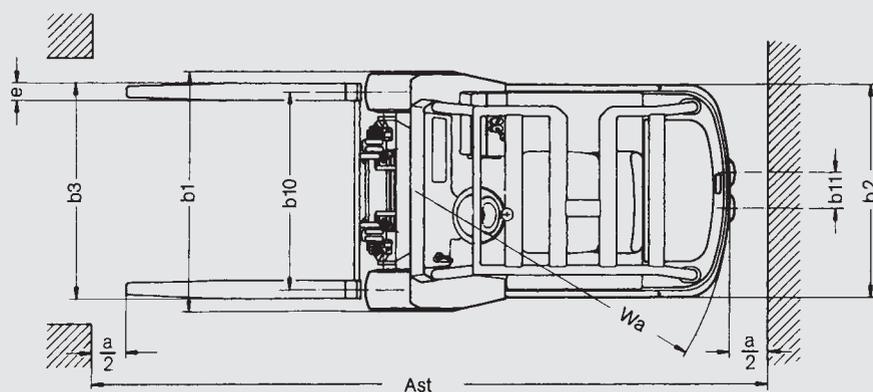
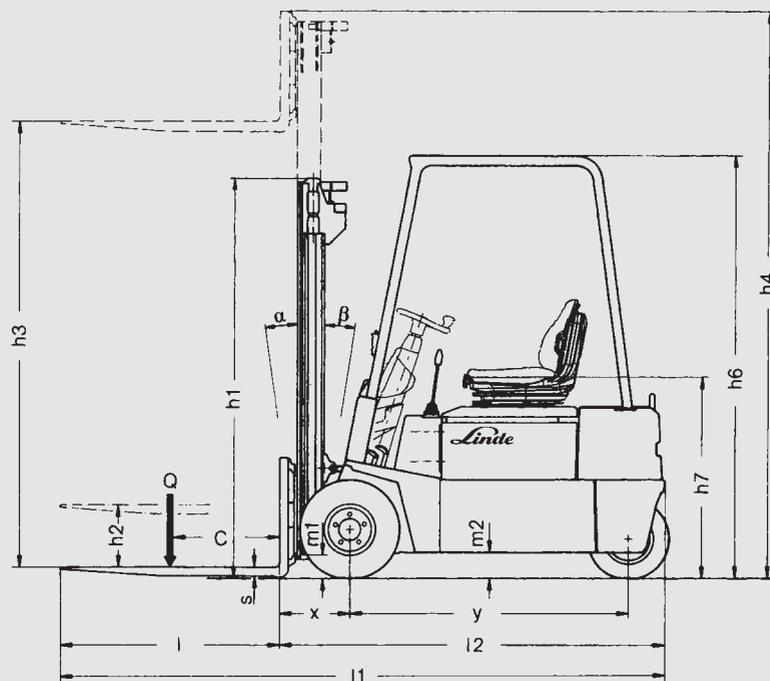
6) Optionally pneumatic tyres 15 x 4 1/2 - 8 /12 PR

7) Other battery capacity to order

8) Figures in parentheses for duplex and triplex masts

LINDE E 15	LINDE E 16
mains power	mains power
Seated	Seated
1500	1600
500	500
350 (375) ²⁾	350 (375) ²⁾
1275	1445
2860	2895
3895/465	4003/492
1390/1470	1465/1430
SE (L)/SE (L) ⁵⁾	SE (L)/SE (L) ⁵⁾
18 x 7 - 8 SE ⁵⁾	18 x 7 - 8 SE ⁵⁾
15 x 4 1/2 - 8 SE ⁶⁾	15 x 4 1/2 - 8 SE ⁶⁾
2x/2	2x/2
910	910
168	168
5/8	5/8
2135 ⁴⁾ (2080) ¹⁾⁸⁾	2137 ⁴⁾ (2080) ¹⁾⁸⁾
150	150
3250 (4675) ¹⁾²⁾	3250 (4675) ¹⁾²⁾
3813 ⁴⁾ (5238) ¹⁾²⁾	3813 ⁴⁾ (5238) ¹⁾²⁾
1953	1953
923	923
-	-
2695	2865
1795 (1820) ²⁾	1965 (1990) ²⁾
1083 (1000) ⁴⁾	1083 (1000) ⁴⁾
45 x 80 x 900	45 x 80 x 900
2A	2A
1040	1040
81	81
103	103
3122 (3145) ²⁾	3292 (103) ²⁾
3246 (3270) ²⁾	3415 (3440) ²⁾
1445	1615
-	-
10.6/12.5	13.4/15.8
0.25/0.45	0.40/0.55
0.55/0.45	0.55/0.45
1860/2189	1900/2147
5678/5857	7383/7557
6.3/10.5	5.7/9.7
13.4/21.4	17/27.7
6.5/5.6	4.9/3.4
mech./electr.	mech./electr.
2 x 3	2 x 4
5	9.5
43 535 A	43 531 A
24/880 ⁷⁾	48/660 ⁷⁾
676	1013
-	-
Microprocessor	Microprocessor
200	210
-	-
-	-
-	-

⁹⁾ Figures for triplex masts on request



Safety distance a = 200 mm

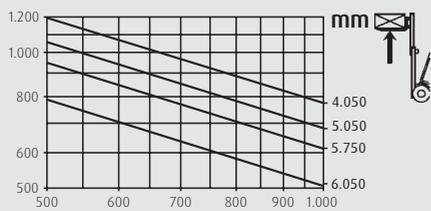
Overall height/lift height (in mm)

Lift	h3	2950	3250	3950	4250	4950
Overall height, retracted (with 150 mm free lift - standard)	h1#	1987	2137	2487	2637	2987
Overall height, retracted (Duplex)	h1	1930	2080	2430	2580	-
Overall height, extended	h4	3513	3813	4513	4813	5513
Special free lift	h2	1367	1517	1867	2017	-



Lifting capacity diagrams

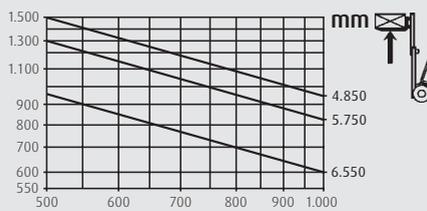
E 12



kg

mm

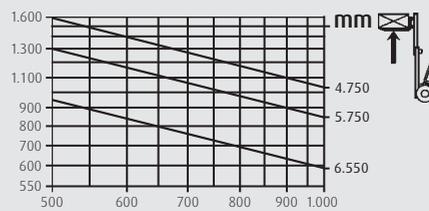
E 15



kg

mm

E 16



kg

mm

Standard and optional equipment

Standard equipment

Truck

Linde twin drive pedals to control forward/reverse travel and braking

Front wheels driven by independent motors with automatic cornering control

Microprocessor controller for infinitely variable, power-economizing control of travel speed and working hydraulics

Battery discharge indicator with automatic lift motor slowdown at 80 % discharge

Carbon brush monitoring for traction and hydraulic function motors

Hydraulically cushioned suspension seat, adjustable for fore-aft position, seat back angle and operator's body size and weight

Adjustable-angle steering wheel

Superelastic tyres

On-demand hydrostatic power steering

Plenty of storage space for writing utensils, beverage cans, etc.

Battery

→ 24 V/550 - 600 Ah for E 12

→ 24 V/440 - 960 Ah for E 15

→ 48 V/660 - 720 Ah bei E 16

Mast

Standard mast lift height h3 = 3250 mm

Standard, duplex and triplex masts

Fork length l = 900 mm

Fork carriage width b3 = 1040 mm

Options

Single drive pedal with direction selector positioned on armrest

Standard masts from 2950 mm to 5750 mm lift

Duplex masts (full free lift) from 2950 mm to 4250 mm lift

Triplex masts (full free lift) from 4225 mm to 6725 mm lift

Integral sideshift

Alternative fork carriage widths

Load backrest

Pneumatic tyres front and rear

One or two auxiliary hydraulic circuits for all mast types

Alternative fork lengths

Cab heater

Mirrors

Highway specifications

Flasher warning lamp

Audible reversing alarm

Truck lighting

Worklamps

Custom paintwork

Battery charger

Semi-cab or full cab with screen wiper

Other options available on request.

Features

Linde hydrostatic steering

- No kickback and almost no play
- Ergonomic size of steering wheel
- Energy-saving control of steer pump unit
- Center-pivoted steer axle gives extremely small turning radius, allowing truck to turn around on the spot

Linde central control lever

- Accurate and safe load handling
- Automatic optimization of motor speed on lift, lower and tilt motions



Linde twin drive pedals

- Quick change of forward/reverse direction without changing feet on pedals
- Short pedal stroke
- Increased productivity
- Fatigue-free working

Battery

- Large selection of batteries for every application: 24 or 48 V, 500 to 720 Ah
- Hinged battery hood streamlines battery charging and maintenance

High-economy motor technology

- Two traction motors integrated in front axle
- High torque
- Excellent gradability
- Superb tractive power
- Low noise emissions



Linde operator compartment

- Ergonomic design for efficient, fatigue-free working
- Central control level for all main functions: lift, lower and tilt
- Excellent visibility of load and surroundings due to slim-line mast sections
- Seat adjustable fore-aft and to operator's body size and weight

Linde Digital Control

- Reliable electronic system
- Ready matching to individual requirements
- High dependability resulting from redundant monitoring systems
- Modern CAN bus architecture
- Controller casing totally enclosed for protection from dust and dirt

Linde clear-view mast

- Superb visibility through slim-profile sections of mast
- Full load capacity up to maximum lift height
- Exceptional residual capacity
- High level of safety

