



Electric Counterbalance Trucks Capacity 1200 – 1800 kg E 12, E 14, E 15, E 16, E 18

SERIES 386

Safety

Linde ProtectorFrame: The protective overhead guard and its supporting frame together form a strong and completely enclosed protective zone providing optimum structural integrity, safety and protection for the operator. The top mounted tilt cylinders provide seamless, smooth control of the tilt movements for excellent load stability in all operating conditions. This unique design also enables slimmer mast profiles to be fitted for outstanding visibility.

Performance

One would expect a high performance truck to have a high performance traction system – and that is exactly what the Linde compact drive axle and lift system delivers. Powerful motors, maintenance-free brakes and intelligent electronic control form an impressive power pack to deliver the highest levels of efficiency and productivity.

Comfort

Consistently high levels of performance and efficiency for extended periods is only possible if the operator is comfortable. The ergonomic layout of all the controls, the adjustability the armrest and seat, Linde Load Control, and twin accelerator pedals provide the best possible intuitive interface between the truck and the operator.

Reliability

An electric fork lift truck depends on reliable electronic systems. The Linde electronic control system provides a high level of reliability because of its dual circuit monitoring system and the sealed aluminium housing which provides total protection for the electronics from the ingress of dust and moisture. For additional adaptability a simple programming system enables the performance parameters to be adjusted to meet individual application requirements.

Productivity

Effective in operation, efficient in reducing costs: the unique Linde energy management system ensures intelligent and economical consumption of energy. Energy can also be obtained quickly utilising the optional built-in charging unit or one of the five simple and rapid battery changing methods. The result: more uptime and increased productivity.

Linde Material Handling

Linde

Technical data

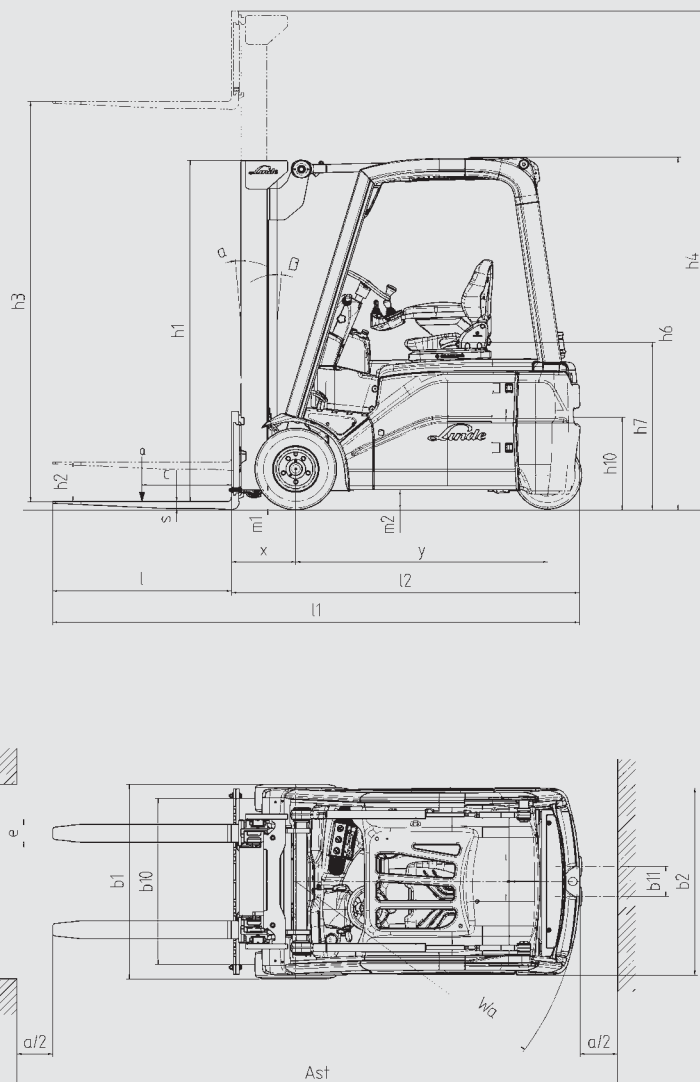
		E 12	E 14	E 15	E 16 C	E 16
Distinguishing mark	1.1	Manufacturer (abbreviation)	LINDE	LINDE	LINDE	LINDE
	1.2	Manufacturer's type designation	E 12	E 14	E 15	E 16 C
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Battery	Battery	Battery	Battery
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker	Seated	Seated	Seated	Seated
	1.5	Load capacity/rated load Q (t)	1.2	1.4	1.5	1.6
	1.6	Load centre distance c (mm)	500	500	500	500
	1.8	Load distance, centre of drive axle to fork x (mm)	365	365	365	365
	1.9	Wheelbase y (mm)	1156 ¹⁾	1301 ¹⁾	1301 ¹⁾	1301 ¹⁾
	1409 ¹⁾					
Weight	2.1	Service weight kg	2680	2861	2952	3055
	2.2	Axle loading, laden front/rear kg	3386/494	3758/503	3903/549	4091/564
	2.3	Axle loading, unladen front/rear kg	1288/1392	1427/1433	1406/1546	1427/1628
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane	SE	SE	SE	SE
	3.2	Tyre size, front	18 x 7 - 8 ²⁾	18 x 7 - 8 ²⁾	18 x 7 - 8 ²⁾	18 x 7 - 8 ²⁾
	3.3	Tyre size, rear	15 x 4 1/2 - 8 ³⁾	15 x 4 1/2 - 8 ³⁾	15 x 4 1/2 - 8 ³⁾	15 x 4 1/2 - 8 ³⁾
	3.5	Wheels, number front rear (x = driven wheels)	2x/2	2x/2	2x/2	2x/2
	3.6	Tread, front b10 (mm)	930	930	930	930
	3.7	Tread, rear b11 (mm)	168	168	168	168
	Dimensions	4.1	Tilt of mast/fork carriage forward/backward Grad	5/7.5	5/7.5	5/7.5
4.2		Height, mast lowered h1 (mm)	2194 ⁴⁾	2194 ⁴⁾	2194 ⁴⁾	2194 ⁴⁾
4.3		Free lift h2 (mm)	150	150	150	150
4.4		Lift h3 (mm)	3110	3110	3110	3110
4.5		Height, mast extended h4 (mm)	3713	3713	3713	3713
4.7		Height of overhead guard (cabin) h6 (mm)	1970	1970	1970	1970
4.8		Seat height/stand height h7 (mm)	908	908	908	908
4.12		Coupling height h10 (mm)	510	510	510	510
4.19		Overall length l1 (mm)	2601	2746	2638	2746
4.20		Length to face of forks l2 (mm)	1701	1846	1738	1846
4.21		Overall width b1/b2 (mm)	1090/1050 ⁷⁾	1090/1050 ⁷⁾	1090/1050 ⁷⁾	1090/1050 ⁷⁾
4.22		Fork dimensions s/e/l (mm)	40 x 80 x 1000	40 x 80 x 1000	40 x 80 x 1000	40 x 80 x 1000
4.23		Fork carriage DIN 15 173, class/type A, B	2A	2A	2A	2A
4.24		Fork-carriage width b3 (mm)	1040	1040	1040	1040
4.31		Ground clearance, laden, below mast m1 (mm)	89	89	89	89
4.32		Ground clearance, centre of wheelbase m2 (mm)	96	96	96	96
4.33		Aisle width for pallets 1000 x 1200 crossways Ast (mm)	3040	3177	3177	3196
4.34		Aisle width for pallets 800 x 1200 lengthways Ast (mm)	3164	3301	3301	3320
4.35		Turning radius Wa (mm)	1349	1486	1486	1505
4.36		Internal turning radius b13 (mm)	-	-	-	-
Performance data	5.1	Travel speed, laden/unladen km/h	12.5/13.5	16/16	12.5/13.5	16/16
	5.2	Lift speed, laden/unladen m/s	0.3/0.5	0.4/0.6	0.3/0.5	0.4/0.6
	5.3	Lowering speed, laden/unladen m/s	0.58/0.47	0.58/0.47	0.58/0.47	0.58/0.47
	5.5	Drawbar pull, laden/unladen N	2400/2400	2300/2300	2400/2400	2300/2300
	5.6	Max. drawbar pull, laden/unladen N	6450/6450	9200/9200	6450/6450	9200/9200
	5.7	Gradeability, laden/unladen %	7.7/11.4	7.3/11.0	7.1/10.9	6.7/10.3
	5.8	Max. gradeability, laden/unladen %	15.6/23.6	22.6/34.7	14.5/22.5	20.6/32.3
	5.9	Acceleration time, laden/unladen s	6.2/5.4	4.5/4.0	6.5/5.6	4.5/4.0
	5.10	Service brake	hydr./mech.	hydr./mech.	hydr./mech.	hydr./mech.
	Electric engine	6.1	Drive motor rating S2 60 min kW	2 x 3.5	2 x 4.6	2 x 3.5
6.2		Lift motor rating at S3 15 % kW	5	10	5	10
6.3		Battery acc. to DIN 43 531/35/36 A, B, C, no	43535 A	43531 A	43535 A	43531 A
6.4		Battery voltage, nominal capacity K ₅ V/Ah	24/550 (575) ⁹⁾	48/440 (460) ⁹⁾	24/880 (920) ⁹⁾	48/440 (460) ⁹⁾
6.5		Battery weight kg	445	708	676	708
6.6		Energy consumption acc. to VDI cycle kWh/h	-	6.2	-	6.4
Addition data	8.2	Operating pressure for attachments bar	170	180	190	170
	8.3	Oil volume for attachments l/min	32 ⁸⁾	32 ⁸⁾	32 ⁸⁾	32 ⁸⁾
	8.4	Sound level at the driver's ear according to DIN 12053 dB(A)	<65	<65	<65	<65
	8.5	Towing coupling, type DIN	-	-	-	-

1) With lifting mast vertical
2) Optional: pneumatic tyres, 18x7-8 7 16PR or wrap-around
3) Optional: pneumatic tyres, 15x4 1/2-8/12PR
4) Optional: pneumatic tyres, 16x6-8/10PR

5) Optional: wrap-around tyres
6) With 150 mm free lift
7) With wrap-around tyre, 18x6 b1-1074
8) At 80 % nominal pressure (8.2)

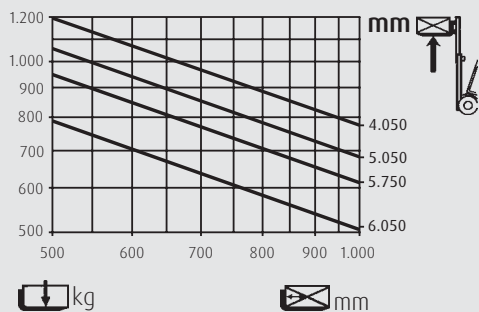
9) Data between brackets are taken from the instruction leaflet on "Use of European-series DIN-standard batteries" (July 2002 edition).

16		E 18	
LINDE	LINDE	LINDE	LINDE
E 16L	E 16H	E 18	E 18L
Battery	Battery	Battery	Battery
Seated	Seated	Seated	Seated
1.6	1.6	1.8	1.8
500	500	500	500
365	365	370	370
1517 ¹⁾	1461 ¹⁾	1409 ¹⁾	1517 ¹⁾
3005	3168	3262	3244
4103/502	4199/568	4451/611	4456/588
1590/1414	1652/1516	1540/1723	1623/1621
SE	SE	SE	SE
18 x 7 - 8 ²⁾	18 x 7 - 8 ²⁾	200/50 - 10 ³⁾	200/50 - 10 ³⁾
15x4 1/2-8 ³⁾	15x4 1/2-8 ³⁾	140/55-9	140/55-9
2x/2	2x/2	2x/2	2x/2
930	930	965	965
168	168	172	172
5/7.5	5/7.5	5/7.5	5/7.5
2194 ⁴⁾	2194 ⁴⁾	2194 ⁴⁾	2194 ⁴⁾
150	150	150	150
3110	3110	3110	3110
3713	3713	3713	3713
1970	2130	1970	1970
908	1065	908	908
510	594	510	510
2961	2906	2859	2968
2062	2006	1959	2067
1090/1050 ⁷⁾	1090/1050 ⁷⁾	1172/1050 ⁷⁾	1172/1050 ⁷⁾
40 x 80 x 1000	40 x 80 x 1000	40 x 80 x 1000	40 x 80 x 1000
2A	2A	2A	2A
1040	1040	1040	1040
97	97	97	97
96	96	96	96
3387	3332	3305	3394
3511	3456	3429	3518
1697	1641	1609	1697
-	-	-	-
16/16	16/16	16/16	16/16
0.4/0.6	0.4/0.6	0.4/0.6	0.4/0.6
0.58/0.47	0.58/0.47	0.58/0.47	0.58/0.47
2300/2300	2300/2300	2300/2300	2300/2300
9200/9200	9200/9200	9200/9200	9200/9200
6.8/10.4	6.6/9.9	6.2/9.6	6.2/9.6
20.8/32.8	20.1/31.0	18.9/30.0	18.9/30.2
4.6/4.1	4.6/4.1	4.6/4.1	4.6/4.1
hydr./mech.	hydr./mech.	hydr./mech.	hydr./mech.
2 x 4.6	2 x 4.6	2 x 4.6	2 x 4.6
10	10	10	10
43531A	43531A	43531A	43531A
48/660 (690) ⁹⁾	48/700 (700) ⁹⁾	48/550 (575) ⁹⁾	48/660 (690) ⁹⁾
1013	1118	856	1013
6.5	6.6	6.6	6.7
170	170	170	170
32 ⁸⁾	32 ⁸⁾	32 ⁸⁾	32 ⁸⁾
<65	<65	<65	<65
-	-	-	-

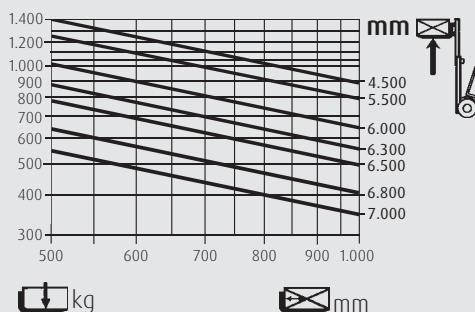


security distance a = 200 mm

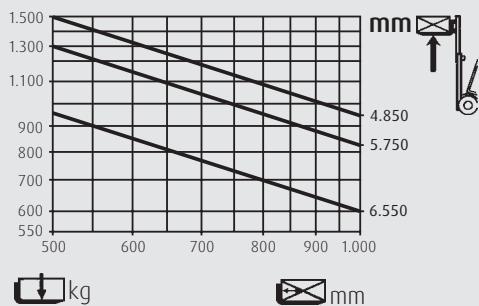
E12



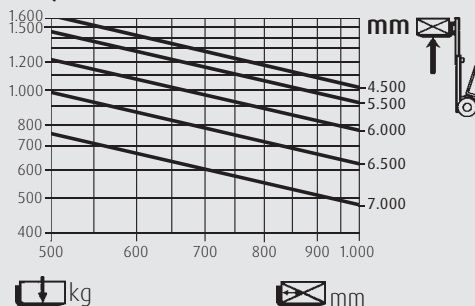
E14



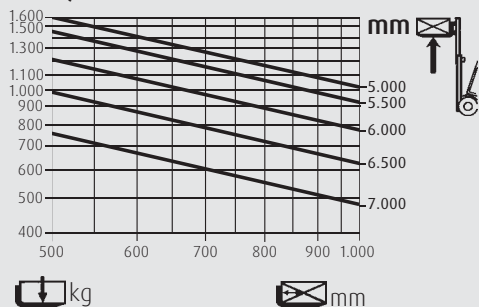
E15



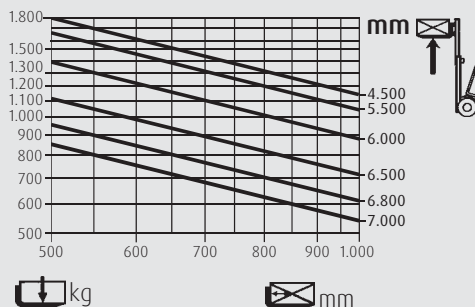
E16/E16C



E16L/E16H



E18/E18L



Standard mast (in mm)		E12/E15/E14/E16C/E16/E16L/E18/E18L			E16H	
Lift	h3	2760	3110	4210	-	3110 4210
Overall height, retracted (to 150 mm free lift)	h1	2021	2196	2746	-	2196 2746
Overall height, extended	h4	3363	3713	4813	-	3713 4813

Duplex mast (in mm)		E12/E15/E14/E16C/E16/E16L/E18/E18L			E16H	
Lift	h3	2775	3125	3825	-	3125 3825
Overall height, retracted	h1	1946	2579	2929	-	2579 2929
Overall height, extended	h4	3377	3727	4427	-	3727 4427
Special free lift	h2	1343	1518	1868	-	1518 1868

Triplex mast (in mm)		E12/E15/E14/E16C/E16/E16L/E18/E18L			E16H	
Lift	h3	4100	4625	5475	-	4625 5475
Overall height, retracted	h1	1946	2121	2471	-	2121 2471
Overall height, extended	h4	4702	5227	6077	-	5227 6077
Special free lift	h2	1344	1519	1781	-	1519 1781

Other lift heights on request
 Minimum lift height does not apply to tall vehicle

Standard and optional equipment

Standard equipment

Truck

Hydrostatic power steering

Linde twin accelerator pedals for all vehicle movements

Three wheeled configuration

Dual axis fingertip joystick controls (Linde Load Control) integrated into the adjustable arm rest

2 x 3.5 kW maintenance free AC drive motors (24 V E 12, E 15)

2 x 4.6 kW maintenance free AC drive motors (48 V E 16 C, E 16, E 16 L, E 16 H, E 18, E 18 L)

5 kW AC maintenance free lift motor (24 V E 12, E 15)

10 kW AC maintenance free lift motor (48 V E 16 C, E 16, E 16 L, E 16 H, E 18, E 18 L)

Proportional reduction of travel speed when cornering (Linde Driver Assistant)

Seamless electronic control of all traction and hydraulic movements

Standard chassis suitable for working in ISO containers with appropriate mast

Hydraulically adjustable full suspension PVC operator's seat with armrest

Comprehensive digital instrument display

Superelastic tyres

Generous storage facilities for writing materials and miscellaneous items

Battery capacity for flat version (height h₆ = 1,970 mm)

E 12 = 24 V/575 Ah, E 15 = 24 V/920 Ah, E 14 = 48 V/460 Ah, E 16 = 48 V/575 Ah, E 16 C = 48 V/460 Ah, E 16 L = 48 V/690 Ah, E 18 = 48 V/690 Ah, E 18 L = 48 V/690 Ah

Raised version for greater battery capacity (height h₆ = 2,130 mm)

E 16 H = 48 V/700 Ah

Mast

Clearview standard mast 3,110 mm lift

Fork length 1,000 mm

Fork carriage width 1,040 mm

Options

Single pedal accelerator with forward/reverse selector in the armrest

Standard mast lifts up to 5,610 mm

Duplex mast lifts (full free lift) up to 3,825 mm

Triplex mast lifts (full free lift) up to 6,075 mm

Integrated sideshift

Integrated fork spreader

Tilt cylinder protection

Load guard

Single and double additional hydraulics for attachments

Alternative fork lengths

Alternative fork carriage widths

Polycarbonate top screen on overhead guard

Front and rear screens, wipers and top screen

Full cab with hinged doors

Overhead guard sun blind

Heating (with pollen protection filter)

Radio with cassette player

Fabric covered comfort seat

Super-comfort seat with air suspension, heater and backrest extension

Swivelling seat

Integrated charger unit, 2-phase and 3-phase versions, optionally with electrolytic recirculation

Individual hydraulic control joysticks

Scanner terminal docking port

Truck lighting/flashing amber beacon/working lamps

Driving mirror

Full road lighting

Audible reversing alarm

Clipboard

Cold store protection

Alternative colour schemes

Linde Fleet Management (LFM)

Alternative tyre types

Other options available on request

Features

Linde clearview mast design

- with top mounted tilt cylinders for seamless load control and stability
- Excellent view of load and surroundings through the robust yet slim mast profiles
- Nominal capacity retained to maximum lift heights
- High residual capacities in all applications
- Exceptionally stable



Linde hydrostatic power steering

- Progressive steering torque
- Minimal physical demands on the operator
- Compact ergonomically designed steering wheel
- Linde close coupled steer axle for outstanding maneuverability

Linde twin accelerator control

- Seamless, rapid reversing without repositioning the feet
- Short pedal travel
- Fatigue-free working
- Increased throughput and performance

Linde Load Control

- Safe and seamless load handling with millimetre accuracy
- Effortless fingertip control of all mast functions
- Joystick controls integrated into the armrest

Economical AC drive

- Two powerful AC drive motors integrated in the front axle
- Seamless acceleration and variable torque characteristics
- Excellent structural integrity and stability
- Extremely quiet in operation



Linde operator's compartment

- Ergonomically designed for efficient, fatigue-free working
- Spacious operator's compartment with generous floor plate area
- Cushioned comfort – mast and drive axle are isolated from the chassis and cab by a unique resilient suspension system that absorbs shock loadings

Linde compact drive axle

- Twin drive design with high performance Linde AC technology
- Integrate lift motor
- Optimum energy efficiency
- Maintenance-free oil-bath vane brake
- Electronic components housed in sealed unit for complete protection

Linde energy management

- Optimised energy consumption
- Accurate battery condition indicator
- Simple horizontal or vertical battery changing options
- Optional built-in high frequency charger for convenience and flexibility
- Record of battery usage

Linde AG

Linde Material Handling Division, Postfach 10 01 36, 63701 Aschaffenburg, Germany
Phone +49.60 21.99-0, Fax +49.60 21.99-15 70, www.linde-forklifts.com, info@linde-forklifts.com

Linde Material Handling



The manufacturer reserves the right to alter specifications without notice.
All dimensions are subject to manufacturing tolerances.