

Standard and optional equipment

Standard equipment

Truck

Hydrostatic power steering
 Linde twin accelerator pedals for all vehicle movements
 Four wheeled configuration
 Dual axis fingertip joystick controls (Linde Load Control) integrated into the adjustable arm rest
 2 x 5.0kW maintenance free AC drive motors
 11kW AC maintenance free lift motor
 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 16 P = 24V/575 Ah, E 20 PL = 24V/690 Ah
 Raised version for greater battery capacity (height h6 = 2,130mm)
 E 16 PH = 48V/700 Ah, E 18 PH = 48V/700 Ah,
 E 20 PH = 48V/700 Ah, E 20 PHL = 48V/840 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



Safety

Linde Protect... supporting fr... enclosed pro... integrity, saf... mounted tilt... the tilt moven... conditions. Th... profiles to be

Performan

One would e... performance... Linde compa... motors, main... control form a... levels of effie

Comfort

Consistently h... extended peri... The ergonom... the armrest a... pedals provid... the truck and



Electric Counterbalance Trucks Capacity 1600 – 2000 kg E 16, E 18, E 20

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.

Features

Linde clearview mast

- with top mounted tilt cylinders for seamless load control
- Excellent view of surroundings through yet slim mast profile
- Nominal capacity up to 2000 kg, maximum lift height up to 3.5 m
- High residual capacity in all applications
- Exceptionally stable mast

Linde twin accelerator

- Seamless, rapid repositioning the truck
- Short pedal travel
- Fatigue-free work
- Increased throughput performance



Linde operator's cab

- Ergonomically designed for fatigue-free work
- Spacious operator's cab with generous free space
- Cushioned comfort seats, front axle are isolated from the cab by a unique suspension system to absorb shock loadings



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 combi axle

- Unique Linde combi axle offers total flexibility
- Combi axle gives this four wheeled truck the maneuverability of a three wheeler
- Excellent four wheeled stability and safety on hard uneven surfaces
- The perfect flexible combination for inside/outside working

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
- Integrated AC 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

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

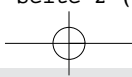
Technical data

	Model group	E16P		E18P		
Distinguishing mark	1.1	Manufacturer (abbreviation)	LINDE	LINDE	LINDE	LINDE
	1.2	Manufacturer's type designation	E 16 P	E 16 PH	E 18 PH	E 20 PL
	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)	1.6	1.6	1.8	2.0
	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	370	374
	1.9	Wheelbase y (mm)	1429 ¹⁾	1481 ¹⁾	1481 ¹⁾	1537 ¹⁾
	Weight	2.1	Service weight kg	3015	3360	3385
2.2		Axle loading, laden front/rear kg	4090/525	4260/755	4565/625 ¹⁾	4785/575
2.3		Axle loading, unladen front/rear kg	1525/1490	1670/1690	1705/1680 ¹⁾	1646/1710
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⁾	200/50 - 10 ³⁾	200/50 - 10 ³⁾
	3.3	Tyre size, rear	16 x 6 - 8 ⁴⁾	16 x 6 - 8 ⁴⁾	16 x 6 - 8	16 x 6 - 8
	3.5	Wheels, number front rear (x = driven wheels)	2 x / 2	2 x / 2	2 x / 2	2 x / 2
	3.6	Tread, front b10 (mm)	930	930	965	965
	3.7	Tread, rear b11 (mm)	807	807	807	807
	Dimensions	4.1	Tilt of mast/fork carriage forward/backward Grad	5/7	5/7	5/7
4.2		Height, mast lowered h1 (mm)	2019 ⁴⁾	2194 ⁴⁾	2194 ⁴⁾	2019 ⁴⁾
4.3		Free lift h2 (mm)	150	150	150	150
4.4		Lift h3 (mm)	2800	3150	3150	2800
4.5		Height, mast extended h4 (mm)	3401	3751	3751	3401
4.7		Height of overhead guard (cabin) h6 (mm)	1970	2130	2130	1970
4.8		Seat height/stand height h7 (mm)	908	1065	1065	908
4.12		Coupling height h10 (mm)	538	602	602	538
4.19		Overall length l1 (mm)	2929	2978	2983	3045
4.20		Length to face of forks l2 (mm)	2029	2078	2083	2145
4.21		Overall width b1/b2 (mm)	1090/1050 ⁷⁾	1090/1050 ⁷⁾	1172/1050 ⁷⁾	1172/1050
4.22		Fork dimensions s/e/l (mm)	40 x 80 x 900	40 x 80 x 900	45 x 100 x 900	45 x 100 x 900
4.23		Fork carriage DIN 15173, 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)	97	97	97	97
4.32		Ground clearance, centre of wheelbase m2 (mm)	103	103	103	103
4.33		Aisle width for pallets 1000 x 1200 crossways Ast (mm)	3355	3404	3409	3470
4.34	Aisle width for pallets 800 x 1200 lengthways Ast (mm)	3479	3528	3533	3595	
4.35	Turning radius Wa (mm)	1664	1713	1713	1771	
4.36	Internal turning radius b13 (mm)	-	-	-	-	
Performance data	5.1	Travel speed, laden/unladen km/h	20/20	20/20	20/20	20/20
	5.2	Lift speed, laden/unladen m/s	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6
	5.3	Lowering speed, laden/unladen m/s	0.58/0.5	0.58/0.5	0.58/0.5	0.58/0.5
	5.5	Drawbar pull, laden/unladen N	2300/2300	2300/2300	2300/2300	2300/2300
	5.6	Max. drawbar pull, laden/unladen N	10000/10000	10000/10000	10000/10000	10000/10000
	5.7	Gradeability, laden/unladen %	6.8/10.4	6.6/9.9	6.1/9.4	5.8/9.2
	5.8	Max. gradeability, laden/unladen %	22.6/36.9	21.9/34.1	20.3/32.1	19.3/31.6
	5.9	Acceleration time, laden/unladen s	4.5/4.0	4.5/4.0	4.5/4.0	4.6/4.0
	5.10	Service brake	Hydraulic/mechanical	Hydraulic/mechanical	Hydraulic/mechanical	Hydraulic/mechanical
	Electric-engine	6.1	Drive motor rating S2 60 min kW	2 x 5	2 x 5	2 x 5
6.2		Lift motor rating at S3 15 % kW	11	11	11	11
6.3		Battery acc. to DIN 43531/35/36 A, B, C, no	43531 A	43531 A	43531 A	43531 A
6.4		Battery voltage, nominal capacity K ₅ V/Ah	48/550 (575) ⁹⁾	48/700 (700) ⁹⁾	48/700 (700) ⁹⁾	48/660 (690) ⁹⁾
6.5		Battery weight kg	856	1118	1118	1013
6.6		Energy consumption acc. to VDI cycle kWh/h	6.8	7.1	7.4	7.6
Addition data	8.1	Type of drive control	digital control/stepless	digital control/stepless	digital control/stepless	digital control/stepless
	8.2	Operating pressure for attachments bar	170	170	170	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, 18 x 7-8 7 16PR or wrap-around
 3) Optional: pneumatic tyres, 15x4 1/2-8/12PR
 4) Optional: pneumatic tyres, 16 x 68 / 10PR

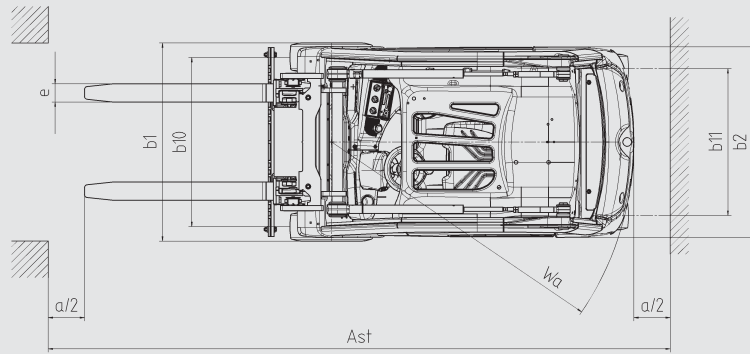
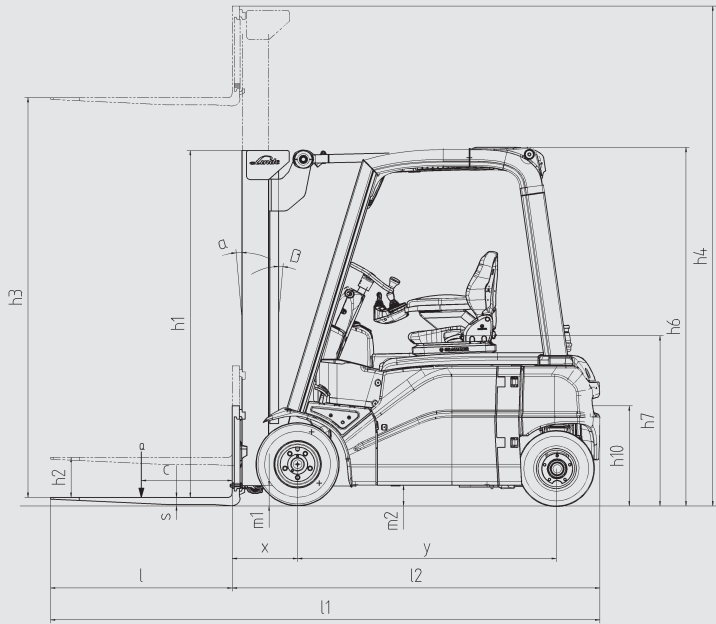
5) Optional: wrap-around tyres
 6) With 150 mm free lift
 7) With wrap-around tyre, 18 x 6 b1 - 1074
 8) At 80% nominal pressure (8.2)

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



E20P		
LINDE E20 PL	LINDE E20 PH	LINDE E20 PHL
Battery	Battery	Battery
Seated	Seated	Seated
2.0	2.0	2.0
500	500	500
374	374	374
1537 ¹⁾	1481 ¹⁾	1589 ¹⁾
3360	3520	3600
4785/575	4890/630	4905/695
1646/1710	1705/1815	1805/1795
SE	SE	SE
200/50-10 ³⁾	200/50-10 ³⁾	200/50-10 ³⁾
16 x 6-8	16 x 6-8 ³⁾	16 x 6-8 ³⁾
2 x /2	2 x /2	2 x /2
965	965	965
807	807	807
5/7	5/7	5/7
2019 ⁴⁾	2194 ⁴⁾	2194 ⁴⁾
150	150	150
2800	3150	3150
3401	3751	3751
1970	2130	2130
908	1065	1065
538	602	602
3045	2987	3095
2145	2087	2195
1172/1050	1172/1050	1172/1050
45 x 100 x 900	45 x 100 x 900	45 x 100 x 900
2A	2A	2A
1040	1040	1040
97	97	97
103	103	103
3470	3412	3520
3595	3537	3645
1771	1713	1821
-	-	-
20/20	20/20	20/20
0.5/0.6	0.5/0.6	0.5/0.6
0.58/0.5	0.58/0.5	0.58/0.5
2300/2300	2300/2300	2300/2300
10000/10000	10000/10000	10000/10000
5.8/9.2	5.7/8.9	5.7/8.9
19.3/31.6	18.8/30.3	18.8/30.3
4.6/4.0	4.6/4.0	4.7/4.1
Hydraulic/mechanical	Hydraulic/mechanical	Hydraulic/mechanical
2 x 5	2 x 5	2 x 5
11	11	11
43531A	43531A	43531A
48/660 (690) ³⁾	48/700 (700) ³⁾	48/840 (840) ³⁾
1013	1118	1309
7.6	7.6	7.9
digital control/stepless	digital control/stepless	digital control/stepless
170	170	170
32 ³⁾	32 ³⁾	32 ³⁾
< 65	< 65	< 65
-	-	-

Between brackets are taken from the ZVEI leaflet on "Use of European-series cells in standard batteries" (July 2002 edition).



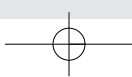
Safety distance a = 200 mm

Standard mast (in mm)		E 16 P / E 20 PL			E 16 PH / E 18 PH / E 20 PH / E 20 PHL		
Lift	h3	2800	3150	4250	-	3150	4250
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)		E 16 P / E 20 PL			E 16 PH / E 18 PH / E 20 PH / E 20 PHL		
Lift	h3	2795	3145	3845	-	3145	3845
Overall height, retracted	h1	1946	2121	2471	-	2121	2471
Overall height, extended	h4	3377	3727	4427	-	3727	4427
Special free lift	h2	1343	1518	1868	-	1518	1868

Triplex mast (in mm)		E 16 P / E 20 PL			E 16 PH / E 18 PH / E 20 PH / E 20 PHL		
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

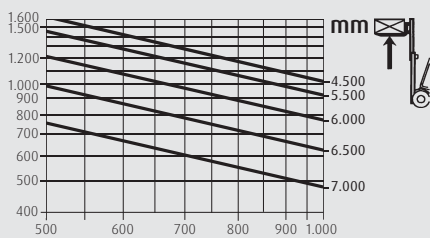
Other lift heights on request
Minimum lift height does not apply to tall vehicle





Lifting capacity diagrams

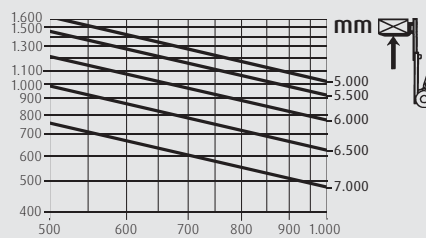
E 16 P



kg

mm

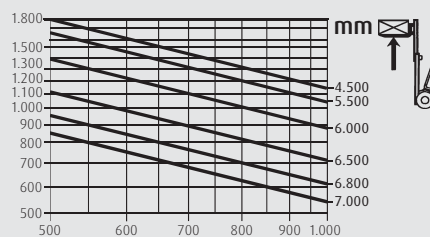
E 16 PH



kg

mm

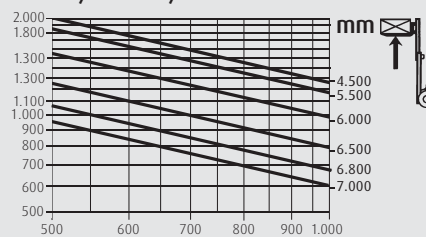
E 18 PH



kg

mm

E 20 PL / E 20 PH / E 20 PHL



kg

mm

HL
4250
2746
4813
PHL
3845
2471
4427
1868

HL
5475
2471
6077
1781