



Platform Pallet Stacker

Capacity 1400, 1600 and 2000 kg
L 14 AP, L 16 AP, L 20 AP

Series 1173

Safety

The Linde pallet stacker platform version is a perfect fit for any stacking application. A weighing device enables to estimate load's weight up to 1500 mm so as to combine the information with the capacity plate for advanced safety. Traction speed is varied automatically in proportion to the steering angle for maximum safety.

Performance

High operational efficiency is this truck's true strength with its 2,3 kW AC motor with a top speed of 10 km/h and offers capacities from 1400 kg up to a strengthened 2000 kg version complying with heavy loads handling performances. The robust chassis structure gives this truck exceptional residual capacity.

Comfort

The AP configuration of this model offers a unique one piece, damped platform, side guards and tiller structure to absorb shocks & vibrations. The OptiLift system, easy access to the controls and fingertip operation of the truck allow precise and comfortable handling.



Linde Material Handling

Linde

Reliability

The damping material of the fully suspended platform has been selected for its high efficiency and to long-term durability. The robust chassis and cast steel rear skirt ensure a long service life in heavy duty applications. With the initial lift version (option), the ground clearance is improved to cope with gradients and dock levelers.

Service

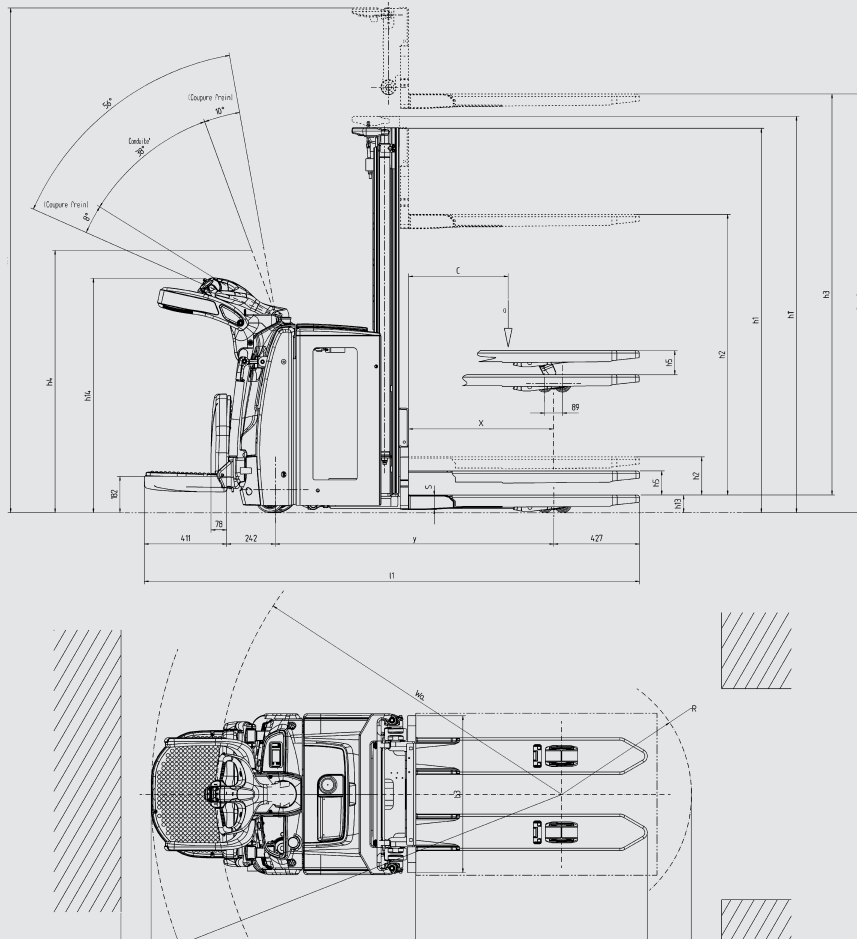
Efficiency at work, efficiency in servicing. A color display provides important information at a single glance, indicates maintenance requirements and battery status. Robust components and a tried and tested, maintenance-free AC motor ensure service intervals are extended and operating costs reduced.

Technical Data according to VDI 2198

Characteristics	1.1	Manufacturer		LINDE	LINDE	LINDE
	1.2	Manufacturer's type designation		L14AP	L16AP	L20AP
	1.2a	Series		1173-00	1173-00	1173-00
	1.3	Power unit		Battery	Battery	Battery
	1.4	Operation		Pedestrian	Pedestrian	Pedestrian
	1.5	Load capacity/Load	Q (t)	1.4 ¹⁾	1.6 ¹⁾	2.0 ¹⁾
	1.6	Load centre distance	c (mm)	600	600	600
	1.8	Axle centre to fork face	x (mm)	724 (646) ²⁾	724 (646) ²⁾	724 (646) ²⁾
	1.9	Wheelbase	y (mm)	1311 (1233) ^{6),2)}	1311 (1233) ^{6),2)}	1425 (1347) ^{6),2)}
Weights	2.1	Service weight	(kg)	1150 ³⁾	1150 ³⁾	1730 [1670] ^{3),4)}
	2.2	Axle load with load, front/rear	(kg)	917 / 1633 ^{3),4)}	936 / 1814 ^{3),4)}	1336 / 2394 [1326 / 2344] ^{3),4),7)}
	2.3	Axle load without load, front/rear	(kg)	785 / 365 ^{3),4)}	785 / 365 ^{3),4)}	1162 / 568 [1152 / 518] ^{3),4)}
Wheels / Tyres	3.1	Tyres rubber, SE, pneumatic, polyurethane		V+P/P ⁸⁾	V+P/P ⁸⁾	V+P/P ⁸⁾
	3.2	Tyre size, front		Ø 230 x 90	Ø 230 x 90	Ø 230 x 90
	3.3	Tyre size, rear		Ø 85 x 85 (Ø 85 x 60) ⁹⁾	Ø 85 x 85 (Ø 85 x 60) ⁹⁾	Ø 85 x 85 [105] (Ø 85 x 60 [80]) ⁹⁾
	3.4	Auxiliary wheels (dimensions)		2x Ø 140 x 50	2x Ø 140 x 50	2x Ø 140 x 50
	3.5	Wheels, number front/rear (x = driven)		1x + 2 / 2 (1x + 2 / 4) ¹⁰⁾	1x + 2 / 2 (1x + 2 / 4) ¹⁰⁾	1x + 2 / 2 (1x + 2 / 4) ¹⁰⁾
	3.6	Track width, front	b10 (mm)	534 ¹¹⁾	534 ¹¹⁾	534 ¹¹⁾
	3.7	Track width, rear	b11 (mm)	380 ¹¹⁾	380 ¹¹⁾	370 ¹¹⁾
Dimensions	4.2	Height of mast, lowered	h1 (mm)	1915 ¹²⁾	1915 ¹²⁾	1915 ¹²⁾
	4.3	Free lift	h2 (mm)	150 ¹²⁾	150 ¹²⁾	150 ¹²⁾
	4.4	Lift	h3 (mm)	2844 ¹²⁾	2844 ¹²⁾	2684 ¹²⁾
	4.5	Height of mast, extended	h4 (mm)	3364 ¹²⁾	3364 ¹²⁾	3284 ¹²⁾
	4.6	Initial lift	h5 (mm)	0 [125] ¹²⁾	0 [125] ¹²⁾	0 [125] ¹²⁾
	4.9	Height of tiller arm in operating position, min/max	h14 (mm)	1163 / 1306 ¹³⁾	1163 / 1306 ¹³⁾	1163 / 1306 ¹³⁾
	4.15	Height, lowered	h13 (mm)	86 ¹³⁾	86 ¹³⁾	86 ¹³⁾
	4.19	Overall length	l1 (mm)	2057 (2390) ^{14),15)}	2057 (2390) ^{14),15)}	2172 (2505) ^{14),15)}
	4.20	Length to fork face	l2 (mm)	907 (1240) ^{14),15)}	907 (1240) ^{14),15)}	1022 (1355) ^{14),15)}
	4.21	Overall width	b1/b2 (mm)	800 ¹⁶⁾	800 ¹⁶⁾	810 ¹⁶⁾
	4.22	Fork dimensions DIN ISO 2331	s/e/l (mm)	71 x 180 x 1150	71 x 180 x 1150	73 x 210 x 1150
	4.24	Width of fork carriage	b3 (mm)	780 ¹⁶⁾	780 ¹⁶⁾	780 ¹⁶⁾
	4.25	Fork spread	b5 (mm)	560 / 680 ¹⁶⁾	560 / 680 ¹⁶⁾	580 / 680 ¹⁶⁾
	4.26	Distance between wheel arms/loading surfaces	b4 (mm)	255 / 375 ¹⁶⁾	255 / 375 ¹⁶⁾	230 / 330 ¹⁶⁾
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	30 [20/140] ^{17),18)}	30 [20/140] ^{17),18)}	14 [20/115] ^{17),18)}
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	2617 (2900) [2539 (2746)] ¹⁹⁾	2617 (2900) [2539 (2746)] ¹⁹⁾	2731 (3014) [2653 (2860)] ¹⁹⁾
	4.34.2	Aisle width with pallet 800 x 1200 along forks	Ast (mm)	2503 (2786) [2425 (2708)] ¹⁹⁾	2503 (2786) [2425 (2708)] ¹⁹⁾	2617 (2900) [2539 (2822)] ¹⁹⁾
	4.35	Turning radius	Wa (mm)	1681 ¹⁹⁾	1681 ¹⁹⁾	1795 ¹⁹⁾
	Performance	5.1	Travel speed, with/without load	(km/h)	4/4 6/6 (8/10) ^{20),21)}	4/4 6/6 (8/10) ^{20),21)}
5.2		Lifting speed, with/without load	(m/s)	0.16 / 0.3 (0.4) ^{20),21)}	0.15 / 0.3 (0.4) ^{20),21)}	0.12 / 0.25 (0.35) ^{20),21)}
5.3		Lowering speed, with/without load	(m/s)	0.4 / 0.35 ²²⁾	0.45 / 0.35 ²²⁾	0.35 / 0.25 ²²⁾
5.8		Maximum climbing ability, with/without load	(%)	10.0 / 24.0	10.0 / 24.0	8.0 / 24.0
5.10		Service brake		Electric	Electric	Electric
Drive		6.1	Drive motor rating S2 60 min	(kW)	2.3	2.3
	6.2	Lift motor rating at S3 15%	(kW)	3.2	3.2	3.2
	6.3	Battery according to DIN 43531/35/36 A,B,C,no		43 535 / B / 2PzS	43 535 / B / 2PzS	43 535 / B / 3PzS
	6.4	Battery voltage/rated capacity (5h)	(V)/(Ah)	24 / 250 (Li-ION 205/410 Ah)	24 / 250 (Li-ION 205/410 Ah)	24 / 375
	6.5	Battery weight (± 5%)	(kg)	212 ²³⁾	212 ²³⁾	288
	6.6	Power consumption according to VDI cycle	(kWh/h)	1.47	1.47	1.52
	8.1	Type of drive unit		LAC w. microprocessor	LAC w. microprocessor	LAC w. microprocessor
10.7	Sound pressure level LpAZ (at the driver's seat)	(dB(A))	< 66	< 66	< 66	

- 1) 2000 kg on the load arms (initial lift)
- 2) Figures in parenthesis with initial lift
- 3) (± 5 mm)
- 4) ± 0 mm = 2 PzS vertical; + 75 mm = 3 PzS vertical or side change; + 150 mm = 4 PzS side change or Li-ION 205/410 Ah
- 5) Figures with battery, see line 6.4/6.5.
- 6) (± 10%)
- 7) [with initial lift]
- 8) Solid rubber + polyurethane / polyurethane
- 9) Figures in parenthesis with tandem load wheels.
- 10) (± 20 mm)

- 11) Values in parenthesis refer to lowered Rider Plattform
- 12) Without/with Initial lift
- 13) (± 2 mm)
- 14) With creep speed = tiller in vertical position
- 15) Including a 200 mm (min.) operating aisle clearance.
- 16) with initial lift Wa = 1449 mm, with bumper Wa = 1640 mm, with initial lift and bumper Wa = 1562 mm
- 17) (± 5%)
- 18) figures in parenthesis for optional „Lift Speed Booster“
- 19) Li-ION 205 Ah = +100 kg-br/>Li-ION 410 Ah = +139 kg



Mast 1.4 and 1.6 t (in mm)		1844 S	2344 S	2844 S	3244 S	3744 S	4144 S	4644 S	1844 D	2344 D
Lift	h3	1844	2344	2844	3244	3744	4144	4644	1844	2344
Lift + fork height	h3+h13	1930	2430	2930	3330	3830	4230	4730	1930	2430
Height, mast lowered	h1	1415	1665	1915	2115	2365	2565	2815	1415	1665
Closed height (with free lift at 150 mm)	h1#	1490	1740	1990	2190	2440	2640	2890	-	-
Height, mast extended	h4	2364	2864	3364	3764	4264	4664	5164	2364	2864
Free lift	h2	150	150	150	150	150	150	150	895	1145
Mast 1.4 and 1.6 t (in mm)		2844 D	3244 D	3744 D	4144 D	3516 T	4266 T	4716 T	5316 T	
Lift	h3	2844	3244	3744	4144	3516	4266	4716	5316	
Lift + fork height	h3+h13	2930	3330	3830	4230	3602	4352	4802	5402	
Height, mast lowered	h1	1915	2115	2365	2565	1665	1915	2065	2265	
Closed height (with free lift at 150 mm)	h1#	1915	2115	2365	2565	1665	1915	2065	2265	
Height, mast extended	h4	3364	3764	4264	4664	4036	4786	5236	5836	
Free lift	h2	1395	1595	1845	2045	1145	1395	1545	1745	
Mast 2 t (in mm)		2684 S	3084 S	3584 S	2684 D	3084 D	3584 D	3276 T	4026 T	4476 T
Lift	h3	2684	3084	3584	2684	3084	3584	3276	4026	4476
Lift + fork height	h3+h13	2770	3170	3670	2770	3170	3670	3362	4112	4562
Height, mast lowered	h1	1915	2115	2365	1915	2115	2365	1665	1915	2065
Closed height (with free lift at 150 mm)	h1#	1990	2190	2440	-	-	-	-	-	-
Height, mast extended	h4	3284	3684	4184	3284	3684	4184	3876	4626	5076
Free lift	h2	150	150	150	1315	1515	1765	1065	1315	1465

Other masts on request
 S=Standard, D=Duplex, T=Triplex

Standard Equipment /Optional Equipment

Standard Equipment

Sinergo®, the operator / truck interface:

Comfortable operator compartment with fully suspended AP platform

Power assisted steering

Creep speed control

Linde Safety-Lift

End-of-stroke resistance

Dedicated work station (with storage compartments)

OptiLift® proportional lift system on the tiller head

Mast protection (polycarbonate or steel mesh)

Multifunction coloured display as well as hourmeter, maintenance indication, battery discharge indicator and internal fault code indication

Folding stand-on platform with side guards

2,3 kW AC motor (maintenance free)

CAN bus technology

Vertical battery change 2 PzS or 3 PzS (3 PzS on the 2 t version)

Linde Load Management (Standard):

Automatic residual capacity calculation Operator warning when approaching the limits Traction speed is varied automatically in proportion to the steering angle for maximum safety

Positive steering (drive wheel) feedback

Automatic speed reduction when cornering

Electromagnetic emergency brake

Key switch or PIN-code access

Cushion drive wheel

Polyurethane single load wheels

Double castor wheel

Width over fork carriage: 560 mm, 680 mm (1.4 t and 1.6 t versions) or 580 mm (2 t version)

Fork carriage length / thickness: 1150 mm/71 mm or 55 mm (preferred while using gitter box), 1150 mm/73 mm on the 2 t version

Protection -10°C

Optional Equipment

Initial lift (h5=125mm)

Ultra fast lifting (up to +40%)

Drive wheels: polyurethane, wet grip, cushion with tread, polyurethane with tread or non marking

Load wheels: tandem polyurethane, tandem polyurethane gresable

Soft landing of forks (free of charge)

Load backrests

Alternative fork carriage length / thickness: 950 mm/71 mm or 55 mm (preferred while using gitter box), 950 mm/73 mm or 55 mm on the 2 t version

Good performance in Cold Store

Lateral battery change 3 PzS or 4 PzS

Standard, Duplex or Triplex masts (mast up to 5316 mm)

Pack Clipboard

Mobile or Fixed battery stand (for lateral battery change)

Automatic battery watering system

Built-in charger

Cold store protection -35°

Linde Connected Solutions:

ac:access control (PIN or RFID Dual), an:usage analysis and dt:crash detection

Li-ION technology:

Fast Full Charge

Opportunity Charging

Fast Intermediate Charging

Maintenance Free

Long Lifetime

Li-ION batteries:

fits in 4 PzS SL compartment (L14-16 AP ION): 4,5kWh-9kWh (205Ah-410Ah)

includes battery housing extra weight

Li-ION charger:

optimized 24V-Charger v255: full charging time 1h30min (4,5kWh) and 2h40min (9,0kWh)

Other options available on request

Linde Load Management Advanced:

Live calculation of weight and height Informs on potential maximum height & weight Management of the remaining residual capacity

Features

Steering system & Tiller

- 3 Electric power steering as standard ensures effortless driving
- 3 Twin grip steering control, operable with either hand for easy handling
- 3 Easy-to-reach control buttons permit fingertip operation for utmost efficiency
- 3 Wrap-around hand protection



AP platform

- 3 Platform concept:
 - One piece platform with tiller and side guards
 - Cushioned platform reduces shocks & vibration for the operator
- 3 Whole Body Vibration is only 0,68m/s²
- 3 Folding side guards allow pedestrian use

Linde Load Management

- 3 Standard or Advanced, the load management system assists control of residual capacity and stability
- 3 Standard: Weight estimation of the load carried up to 1500mm
- 3 Advanced: Immediate calculation of load weight and lifting height for precise handling. Visual & acoustic warning when reaching the max. capacity.

Multifunctional Display

- 3 Important information about truck and the load
- 3 Easy and ergonomic navigation within the different settings and information tabs
- 3 Provides hourmeter, battery status and maintenance information

AC motor

- 3 Powerful, high-torque 2,3 kW AC drive motor
- 3 Moisture and dust-proof AC motor
- 3 No rollback when starting on a slope
- 3 Traction speed adjustable up to 10km/h in platform mode, laden or unladen



Lifting System

- 3 OptiLift® mast control provides precise, fully proportional lifting
- 3 Soft landing of the forks protects the load when lowering
- 3 Initial lift version provides improved clearance on ramps and dock levellers
- 3 Wide range of mast options available to suit any application

Brakes

- 3 Automatic braking on release of traction butterfly or selecting the opposite direction
- 3 Truck slows before coming to a stop, remaining under total control at all times
- 3 Highly efficient electromagnetic brake applied by moving the tiller to fully up or down position
- 3 Easy-to-reach emergency isolator on the top of the front cover

Comprehensive energy solutions

- 3 Wide range of lead acid batteries from 3,5 kWh to 7,1 kWh (250-500 Ah/2PzS-4PzS)
- 3 Vertical battery change or optional lateral change with ergonomic lever
- 3 Li-ION batteries from 4,5 kWh to 9 kWh (205-410Ah/4PzS)

Subject to modification in the interest of progress. Illustrations and technical details could include options and not binding for actual constructions. All dimensions subject to usual tolerances.