



## Pallet Stackers

# D12 – D14 AP

Capacity 1.2 t–1.4 t | Series 1173

PB

ION

H<sub>2</sub>

### Flexible performance engine

- Folding platform for a wide range of applications
- Up to 1400 kilograms on two pallets for maximum productivity
- Creep speed function makes manoeuvring in narrow aisles easier
- Linde OptiLift mast control ensures precise load handling
- Excellent visibility through open-centre mast aids accurate load handling
- Powerful 2.3 kW AC motor enables speeds of up to 10 km/h for high productivity

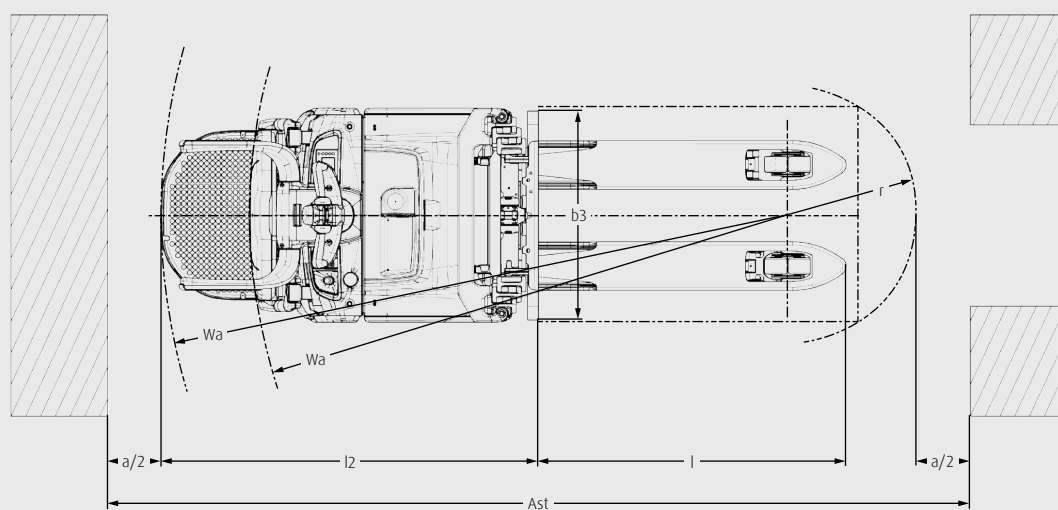
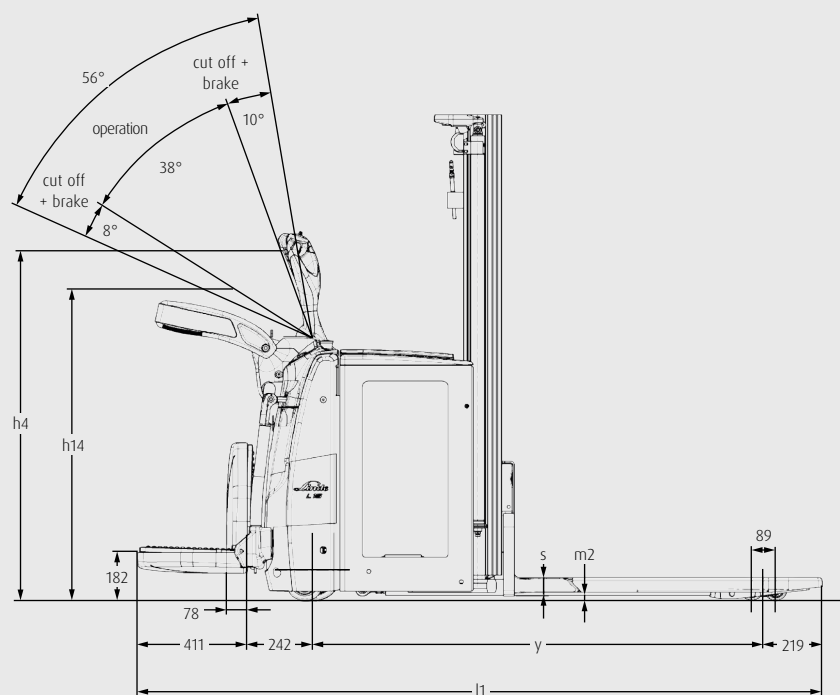
# TECHNICAL DATA (according to VDI 2198)

|                         |        |                                                            |                 |                                       |                                       |
|-------------------------|--------|------------------------------------------------------------|-----------------|---------------------------------------|---------------------------------------|
| Characteristics         | 1.1    | Manufacturer (abbreviation)                                |                 | Linde MH                              | Linde MH                              |
|                         | 1.2    | Manufacturer's type designation                            |                 | D12AP                                 | D14AP                                 |
|                         | 1.2a   | Series                                                     |                 | 1173-01                               | 1173-01                               |
|                         | 1.3    | Drive                                                      |                 | Battery                               | Battery                               |
|                         | 1.4    | Operation                                                  |                 | Pedestrian                            | Pedestrian                            |
|                         | 1.5    | Rated capacity/rated load                                  | Q (t)           | 1.2                                   | 1.4                                   |
|                         | 1.6    | Load centre distance                                       | c (mm)          | 600                                   | 600                                   |
|                         | 1.8    | Load distance, centre of drive axle to fork                | x (mm)          | 842                                   | 842                                   |
|                         | 1.9    | Wheelbase                                                  | y (mm)          | 1,597                                 | 1,597                                 |
| Weight                  | 2.1    | Service weight                                             | kg              | 1,150 <sup>9a)</sup>                  | 1,150 <sup>9a)</sup>                  |
|                         | 2.2    | Axle loading, laden front/rear                             | kg              | 967 / 1,383 <sup>9a)</sup>            | 997 / 1,553 <sup>9a)</sup>            |
|                         | 2.3    | Axle loading, unladen front/rear                           | kg              | 785 / 365 <sup>9a)</sup>              | 785 / 365 <sup>9a)</sup>              |
| Tyres/chassis           | 3.1    | Tyres: solid rubber, superelastic, pneumatic, polyurethane |                 | R+P/P <sup>7)</sup>                   | R+P/P <sup>7)</sup>                   |
|                         | 3.2    | Tyre size, front                                           |                 | Ø 230 × 90                            | Ø 230 × 90                            |
|                         | 3.3    | Tyre size, rear                                            |                 | Ø 85 × 85 (Ø 85 × 60) <sup>8)</sup>   | Ø 85 × 85 (Ø 85 × 60) <sup>8)</sup>   |
|                         | 3.4    | Auxiliary wheels (dimensions)                              |                 | 2x Ø 140 × 50                         | 2x Ø 140 × 50                         |
|                         | 3.5    | Wheels, number front/rear (× = driven wheels)              |                 | 1x + 2 / 2 (1x + 2 / 4) <sup>8)</sup> | 1x + 2 / 2 (1x + 2 / 4) <sup>8)</sup> |
|                         | 3.6    | Tread, front                                               | b10 (mm)        | 534 <sup>3)</sup>                     | 534 <sup>3)</sup>                     |
|                         | 3.7    | Tread, rear                                                | b11 (mm)        | 380 <sup>3)</sup>                     | 380 <sup>3)</sup>                     |
| Dimensions              | 4.2    | Mast height, lowered                                       | h1 (mm)         | 1,915                                 | 1,915                                 |
|                         | 4.3    | Free lift                                                  | h2 (mm)         | 1,395                                 | 1,395                                 |
|                         | 4.4    | Lift                                                       | h3 (mm)         | 4,266                                 | 4,266                                 |
|                         | 4.5    | Mast height, extended                                      | h4 (mm)         | 4,786                                 | 4,786                                 |
|                         | 4.6    | Initial lift                                               | h5 (mm)         | 125                                   | 125                                   |
|                         | 4.9    | Height drawbar in driving position min./max.               | h14 (mm)        | 1,163 / 1,306                         | 1,163 / 1,306                         |
|                         | 4.15   | Height, lowered                                            | h13 (mm)        | 86 <sup>3)</sup>                      | 86 <sup>3)</sup>                      |
|                         | 4.19   | Overall length                                             | l1 (mm)         | 2,225 (2,558) <sup>3)9)22)</sup>      | 2,225 (2,558) <sup>3)9)22)</sup>      |
|                         | 4.20   | Length to fork face                                        | l2 (mm)         | 1,075 (1,408) <sup>3)9)22)</sup>      | 1,075 (1,408) <sup>3)9)22)</sup>      |
|                         | 4.21   | Overall width                                              | b1/b2 (mm)      | 800 <sup>3)</sup>                     | 800 <sup>3)</sup>                     |
|                         | 4.22   | Fork dimensions DIN ISO 2331                               | s / e / l (mm)  | 71 × 180 × 1,150                      | 71 × 180 × 1,150                      |
|                         | 4.24   | Fork carriage width                                        | b3 (mm)         | 780 <sup>3)</sup>                     | 780 <sup>3)</sup>                     |
|                         | 4.25   | Fork spread                                                | b5 (mm)         | 560 / 680 <sup>3)</sup>               | 560 / 680 <sup>3)</sup>               |
|                         | 4.26   | Distance between wheel arms/loading surfaces               | b4 (mm)         | 200 / 320 <sup>3)</sup>               | 200 / 320 <sup>3)</sup>               |
|                         | 4.32   | Ground clearance, centre of wheelbase                      | m2 (mm)         | 30 <sup>23)</sup>                     | 30 <sup>23)</sup>                     |
|                         | 4.34.1 | Aisle width for pallets 1000 × 1200 crossways              | Ast (mm)        | 2,756 (3,084) <sup>9)13)22)</sup>     | 2,756 (3,084) <sup>9)13)22)</sup>     |
|                         | 4.34.2 | Aisle width for pallets 800 × 1200 lengthways              | Ast (mm)        | 2,673 (3,001) <sup>9)13)22)</sup>     | 2,673 (3,001) <sup>9)13)22)</sup>     |
|                         | 4.35   | Turning radius                                             | Wa (mm)         | 1,936 (2,264) <sup>9)22)</sup>        | 1,936 (2,264) <sup>9)22)</sup>        |
| Performance data        | 5.1    | Travel speed, laden/unladen                                | km/h            | 4/4 6/6 (8/10) <sup>9)16)</sup>       | 4/4 6/6 (8/10) <sup>9)16)</sup>       |
|                         | 5.2    | Lifting speed, laden/unladen                               | m/s             | 0.16 / 0.3 (0.4) <sup>6)17)</sup>     | 0.15 / 0.3 (0.4) <sup>6)17)</sup>     |
|                         | 5.3    | Lowering speed, lade/unladen                               | m/s             | 0.4 / 0.35 <sup>6)</sup>              | 0.45 / 0.35 <sup>6)</sup>             |
|                         | 5.8    | Max. gradeability, laden/unladen                           | %               | 10.0 / 24.0                           | 10.0 / 24.0                           |
|                         | 5.10   | Service brake                                              |                 | Electric                              | Electric                              |
| Electric-engine         | 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                                   |
|                         | 6.3    | Battery according to DIN 43531/35/36 A, B, C, no           |                 | no / 3PzS                             | no / 3PzS                             |
|                         | 6.4    | Battery voltage/nominal capacity K 5                       | (V)/(Ah) o. kWh | 24 / 375                              | 24 / 375                              |
|                         | 6.5    | Battery weight (± 5%)                                      | kg              | 280/320 <sup>18)</sup>                | 280/320 <sup>18)</sup>                |
|                         | 6.6    | Power consumption according to VDI cycle                   | kWh/h           | 1.27                                  | 1.47                                  |
|                         | 6.6    | Energy consumption according to DIN EN 16796               | kWh/h           | -                                     | -                                     |
|                         | 6.6.1  | CO2 equivalent according to DIN EN 16796                   | kg/h            | -                                     | -                                     |
|                         | 6.7    | Turnover output according to VDI 2198                      | t/h             | 63.0                                  | 70.4                                  |
|                         | 6.8    | Turnover efficiency according to VDI 2198                  | t/kWh           | 34                                    | 38                                    |
| Drive/lifting mechanism | 8.1    | Type of drive unit                                         |                 | LAC w. microprocessor                 | LAC w. microprocessor                 |
| Additional data         | 10.7   | Sound pressure level LpAZ (at the operator's seat)         | dB (A)          | < 66                                  | < 66                                  |

- 1) 2000 kg on the load arms (initial lift)  
2) [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) Solid rubber + polyurethane / polyurethane  
8) Figures in parenthesis with tandem load wheels

- 9) Values in parenthesis refer to lowered Rider Plattform  
10) Without/with Initial lift  
11) (± 2 mm)  
12) With creep speed = tiller in vertical position  
13) Including a 200 mm (min.) operating aisle clearance  
14) (± 20 mm)  
15) With lowered Rider Plattform Wa = 1964 mm,  
with initial lift Wa = 1603 mm,  
with initial lift and lowered Rider Plattform Wa = 1886 mm  
16) (± 5%)

- 17) Figures in parenthesis for optional "Lift Speed Booster"  
18) Min./max.  
19) CO2 Equivalent 1,0 kg/h  
20) CO2 Equivalent 1,03 kg/h  
21) With lowered Rider Plattform Wa = 2078 mm,  
with initial lift Wa = 1717 mm,  
with initial lift and lowered Rider Plattform Wa = 2000 mm  
22) ± 0 mm = 3 PzS side change;  
+ 75 mm = 4 PzS side change or Li-ION 205/410 Ah  
23) Min.



# MAST TABLES

## STANDARD MAST (in mm)

| Lift                            | h3: 1574                                     | h3: 1924                                     | h3: 2424                                     | h3: 2924                                     | h3: 3324                                     | h3: 3824                                     |
|---------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|
| Height measurements             | h1: 1315 h2: 150<br>h3+h13: 1660<br>h4: 2110 | h1: 1490 h2: 150<br>h3+h13: 2010<br>h4: 2460 | h1: 1740 h2: 150<br>h3+h13: 2510<br>h4: 2960 | h1: 1990 h2: 150<br>h3+h13: 3010<br>h4: 3460 | h1: 2190 h2: 150<br>h3+h13: 3410<br>h4: 3860 | h1: 2440 h2: 150<br>h3+h13: 3910<br>h4: 4360 |
| Manufacturer's type designation |                                              |                                              |                                              |                                              |                                              |                                              |
| D12 AP                          | ○                                            | ○                                            | ○                                            | ○                                            | ○                                            | ○                                            |
| D14 AP                          | ○                                            | ○                                            | ○                                            | ○                                            | ○                                            | ○                                            |

## DUPLEX MAST (in mm)

| Lift                            | h3: 1574                                     | h3: 1924                                     | h3: 2424                                      | h3: 2924                                      | h3: 3324                                      | h3: 3824                                      |
|---------------------------------|----------------------------------------------|----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| Height measurements             | h1: 1240 h2: 704<br>h3+h13: 1660<br>h4: 2110 | h1: 1415 h2: 879<br>h3+h13: 2010<br>h4: 2460 | h1: 1665 h2: 1129<br>h3+h13: 2510<br>h4: 2960 | h1: 1915 h2: 1379<br>h3+h13: 3010<br>h4: 3460 | h1: 2115 h2: 1579<br>h3+h13: 3410<br>h4: 3860 | h1: 2365 h2: 1829<br>h3+h13: 3910<br>h4: 4360 |
| Manufacturer's type designation |                                              |                                              |                                               |                                               |                                               |                                               |
| D12 AP                          | ○                                            | ○                                            | ○                                             | ○                                             | ○                                             | ○                                             |
| D14 AP                          | ○                                            | ○                                            | ○                                             | ○                                             | ○                                             | ○                                             |

## TRIPLEX MAST (in mm)

| Lift                            | h3: 1574                                     | h3: 3516                                      | h3: 4266                                      |
|---------------------------------|----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| Height measurements             | h1: 1165 h2: 629<br>h3+h13: 1660<br>h4: 2067 | h1: 1665 h2: 1129<br>h3+h13: 3602<br>h4: 4052 | h1: 1915 h2: 1379<br>h3+h13: 4352<br>h4: 4802 |
| Manufacturer's type designation |                                              |                                               |                                               |
| D12 AP                          | ○                                            | ○                                             | ○                                             |
| D14 AP                          | ○                                            | ○                                             | ○                                             |

○ Optional equipment

**h1:** Mast height, lowered

**h2:** Free lift

**h3:** Lift

**h4:** Mast height, extended

**h3+h13:** Lift + fork height

# STANDARD AND OPTIONAL EQUIPMENT

| Manufacturer's type designation/equipment |                                                                                                                           | D12 AP | D14 AP |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------|--------|
| Safety                                    | Folding side guards                                                                                                       | ●      | ●      |
|                                           | Progressive speed reduction depending on the steering angle                                                               | ●      | ●      |
|                                           | Key switch                                                                                                                | ●      | ●      |
|                                           | Log in PIN code                                                                                                           | ○      | ○      |
| Service                                   | CAN bus technology                                                                                                        | ●      | ●      |
| Digitalisation                            | Linde connect:ac access control – via PIN or RFID                                                                         | ○      | ○      |
|                                           | Linde connect dt:crash detection – electronic damage monitor                                                              | ○      | ○      |
|                                           | Linde connect an:usage analysis – digital usage analysis                                                                  | ○      | ○      |
|                                           | Data transmission online                                                                                                  | ○      | ○      |
|                                           | Data transmission WiFi                                                                                                    | ○      | ○      |
|                                           | Bluetooth USB stick                                                                                                       | ○      | ○      |
| Operation/<br>load handling               | Ultra fast lifting                                                                                                        | ○      | ○      |
|                                           | Creep speed control                                                                                                       | ●      | ●      |
|                                           | Linde OptiLift: proportional lift control on the tiller                                                                   | ●      | ●      |
|                                           | Lift end stop sensor                                                                                                      | ●      | ●      |
|                                           | Load backrest: height above forks – 1000 mm                                                                               | ○      | ○      |
|                                           | Initial lift                                                                                                              | ●      | ●      |
|                                           | Soft landing of forks                                                                                                     | ○      | ○      |
| Environ-<br>ment                          | Cold store protection: -35 °C (in/out)                                                                                    | ○      | ○      |
| Workplace                                 | Suspended platform                                                                                                        | ●      | ●      |
|                                           | Multi-function colour display including hour meter, battery discharge, maintenance due and internal fault code indication | ●      | ●      |
|                                           | Spacious storage compartments                                                                                             | ●      | ●      |
|                                           | DIN A4 clipboard                                                                                                          | ○      | ○      |
| Mast                                      | Standard mast                                                                                                             | ○      | ○      |
|                                           | Simplex mast                                                                                                              | ○      | ○      |
|                                           | Duplex mast                                                                                                               | ○      | ○      |
|                                           | Triplex mast                                                                                                              | ○      | ○      |
|                                           | Mast protection, polycarbonate                                                                                            | ●      | ●      |
|                                           | Mast protection, wire mesh                                                                                                | ○      | ○      |
| Attachment/<br>forks                      | Width over forks, fork length and overhang: 560/1150/55 mm                                                                | ●      | ●      |
|                                           | Width over forks, fork length and overhang: 680/1150/55 mm                                                                | ○      | ○      |
| Axles and tyres                           | Drive wheels, polyurethane                                                                                                | ●      | ●      |
|                                           | Drive wheels, cushion rubber, non marking, wet grip                                                                       | ○      | ○      |
|                                           | Single load wheels, polyurethane                                                                                          | ●      | ●      |
|                                           | Tandem load wheels, greasable/not greasable                                                                               | ○      | ○      |
|                                           | Double castor wheels                                                                                                      | ●      | ●      |
|                                           | Double castor wheels, greasable                                                                                           | ○      | ○      |
| Drive and<br>brake system                 | 2.3 kW AC maintenance-free drive motor                                                                                    | ●      | ●      |
|                                           | Electromagnetic braking system                                                                                            | ●      | ●      |
| Energy                                    | Battery compartment 3 PzS (345 Ah/375 Ah), lateral change                                                                 | ●      | ●      |
|                                           | Battery compartment 4 PzS (460 Ah/500 Ah), lateral change                                                                 | ○      | ○      |
|                                           | Battery compartment, Li-ION battery 4.5 kWh (205 Ah)/9.0 kWh (410 Ah) including side plug for opportunity charging        | ○      | ○      |
|                                           | Li-ION 24 V charger                                                                                                       | ○      | ○      |
|                                           | Li-ION technology available – different battery capacities with laterally or vertically mounted opportunity charging plug | ○      | ○      |
|                                           | On-board charger for lead-acid and Li-ION batteries                                                                       | ○      | ○      |
|                                           | External chargers available                                                                                               | ○      | ○      |

● Standard equipment

○ Optional equipment

# CHARACTERISTICS



Folding side guards protect the operator

## Safety

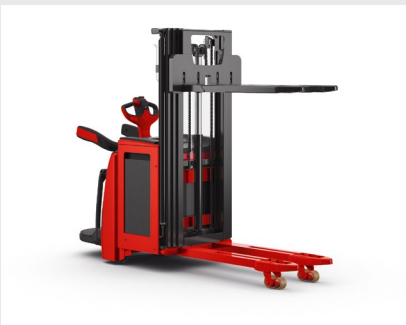
- Folding side guards protect the operator from injury
- Electromagnetic brake prevents accidents
- Soft, non-slip rubber padding



Spacious workstation

## Ergonomics

- Fully suspended operator's compartment for increased operator comfort
- Single handed operation of all driving and lifting functions for quick, easy transportation
- Numerous storage compartments
- Creep speed enables precise, convenient load handling
- Platform can be easily folded up or down



Efficient transport of two pallets

## Handling

- Linde OptiLift mast control ensures precise operation for maximum work throughput
- Pallet stop ensures optimal positioning of pallets
- Top speed of 10 km/h unloaded and 8 km/h loaded
- Double stacking function allows simultaneous transport of two pallets with a weight of 1000 kg each



Computerised diagnostic

## Service

- Multi-function display provides an overview of all truck information
- Maintenance-free 2.3 kW AC motor guarantees high availability
- CAN bus system for quick and easy laptop diagnosis of faults
- Easy access to all components

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

Presented by:



## Linde Material Handling GmbH

Carl-von-Linde-Platz | 63743 Aschaffenburg | Germany  
Phone + 49 6021 99 0 | Fax + 49 6021 99 1570  
[www.linde-mh.com](http://www.linde-mh.com) | [info@linde-mh.com](mailto:info@linde-mh.com)

Printed in Germany | DS\_D12-D14\_AP\_1173\_en\_B\_0524