

Pallet Stackers

D12 - D14 SP | D12 HP SP/AP

Capacity 1.2 t - 1.4 t | Series 1161

Agile double transporter

- → Simultaneous pick-up of two pallets for speedy loading and unloading, efficient goods transport and order picking
- → Solid steel skirt around the standing platform to protect the operator in the event of collision (SP version)
- → Unique platform concept with standing position at 45° angle and Linde e-driver control for better all-round vision and an ergonomic body posture (SP version)
- → Foldable vehicle platform for flexible use in pedestrian and driving mode (AP version)
- → High-performance version (HP version) with greater travel and lifting speed for maximum handling performance

TECHNICAL DATA (according to VDI 2198)

| 1.1 | Manufacturer | | Linde MH | Linde MH | Linde MH | Linde MH | |
|--------|---|----------------|-----------------------------------|-----------------------------------|--------------------------------|--------------------------------|--|
| 1.2 | Manufacturer's type designation | | D12 SP | D14 SP | D12 HP SP | D12 HP AP | |
| 1.2a | Series | | 1161-00 | 1161-00 | 1161-00 | 1161-00 | |
| 1.3 | Power unit | | Battery | Battery | Battery | Battery | |
| 1.4 | Operation | | Stand on | Stand on | Stand on | Pedestrian/stand on | |
| 1.5 | Load capacity/load | Q (t) | 1.2/1.0/1.0/2.0 1) | 1.4/1.0/1.0/2.0 1) | 1.2/1.0/1.0/2.0 1) | 1.2/1.0/1.0/2.0 1) | |
| 1.6 | Load centre distance | c (mm) | 600 | 600 | 600 | 600 | |
| 1.8 | Axle centre to fork face | x (mm) | 874/944 ^{2) 3)} | 874/944 ²⁾³⁾ | 874/944 ^{2) 3)} | 874/944 ^{2) 3)} | |
| 1.9 | Wheelbase | y (mm) | 1541/1611 ^{2) 3)} | 1541/1611 ^{2) 3)} | 1541/1611 ^{2) 3)} | 1541/1611 ^{2) 3)} | |
| 2.1 | Service weight | kg | | - | 1361 ^{4) 5)} | 1351 ^{4) 5)} | |
| 2.2 | Axle load with load, front/rear | kg | | | 1308/1253 (1965/1396) 4) 5) 6) | 1316/1235 (1973/1378) 4 | |
| 2.3 | Axle load without load, front/rear | kg | | | 321/1040 4) 5) | 329/1022 4) 5) | |
| 3.1 | Tyres rubber, SE, pneumatic, polyurethane | | Polyurethane | Polyurethane | Polyurethane | Polyurethane | |
| 3.2 | Tyre size, front | | Ø 254 × 102 | Ø 254 × 102 | Ø 254 × 102 | Ø 254 × 102 | |
| 3.3 | Tyre size, rear | | Ø 85 × 85 (2x Ø 85 × 60) 7) | Ø 85 × 85 (2x Ø 85 × 60) 7) | Ø 85 × 85 (2x Ø 85 × 60) 7) | Ø 85 × 85 (2x Ø 85 × 60 | |
| 3.4 | Auxiliary wheels (dimensions) | | 2x Ø 140 × 50 | 2x Ø 140 × 50 | 2x Ø 125 × 60 | 2x Ø 125 × 60 | |
| 3.5 | Wheels, number front/rear (x = driven) | | 1x + 1/2 (1x + 1/4) ⁷⁾ | 1x + 1/2 (1x + 1/4) ⁷⁾ | 1x + 2/2 (1x + 2/4) 7) | 1x + 2/2 (1x + 2/4) 7) | |
| 3.6 | Track width, front | b10 (mm) | 491 2) | 491 ²⁾ | 572 2) | 572 ²⁾ | |
| 3.7 | Track width, rear | b11 (mm) | 380/500 ²⁾ | 380/500 ²⁾ | 380/500 ²⁾ | 380/500 ²⁾ | |
| 4.2 | Height of mast, lowered | h1 (mm) | 1665 ²⁾ | 1665 ²⁾ | 1915 ²⁾ | 1915 ²⁾ | |
| 4.3 | Free lift | h2 (mm) | 1145 ²⁾ | 1145 ²⁾ | 1395 ²⁾ | 1395 ²⁾ | |
| 4.4 | Lift | h3 (mm) | 2424 2) | 2424 ²⁾ | 4266 ²⁾ | 4266 ²⁾ | |
| 4.5 | Height of mast, extended | h4 (mm) | 2944 ²⁾ | 2944 2) | 4786 ²⁾ | 4786 ²⁾ | |
| 4.6 | Initial lift | h5 (mm) | 115 8) | 115 8) | 115 8) | 115 8) | |
| 4.7 | Height of overhead guard (cabin) | h6 (mm) | 2224 2) | 2224 2) | 2224 2) | - | |
| 4.9 | Height of tiller arm in operating position, min/max | h14 (mm) | 1207/1287 2) | 1207/1287 2) | 1207/1287 2) | 11/10 / 1357 2) | |
| 4.10 | | h8 (mm) | 80 9) | 80 9) | 80 9) | 1149/1357 ²⁾ | |
| | Height laward | | | | | 86 ⁹⁾ | |
| 4.15 | Height, lowered | h13 (mm) | 86 ⁹⁾ | 86 ⁹⁾ | 86 ⁹⁾ | | |
| 4.19 | Overall length | 11 (mm) | 2497 2) | 2497 2) | | 2470 2) | |
| 4.20 | Length to fork face | 12 (mm) | 1347 2) | 1347 2) | 1347 2) | 1320 2) | |
| 4.21 | Overall width | b1/b2 (mm) | 800 2) | 800 ²⁾ | 800 ²⁾ | 800 ²⁾ | |
| 4.22 | Fork dimensions DIN ISO 2331 | s/e/l (mm) | 71 × 180 × 1150 ¹⁰⁾ | 71 × 180 × 1150 ¹⁰⁾ | 71 × 180 × 1150 ¹⁰⁾ | 71 × 180 × 1150 ¹⁰⁾ | |
| 4.24 | Width of fork carriage | b3 (mm) | 780 ²⁾ | 780 ²⁾ | 780 ²⁾ | 780 ²⁾ | |
| 4.25 | Fork spread | b5 (mm) | 560/680 ²⁾ | 560/680 ²⁾ | 560/680 ²⁾ | 560/680 2) | |
| 4.26 | Distance between wheel arms/loading surfaces | b4 (mm) | 196/316 ²⁾ | 196/316 ²⁾ | 196/316 ²⁾ | 196/316 ²⁾ | |
| 4.31 | Ground clearance, below mast | m1 (mm) | 135/20 ³⁾ | 135/20 3) | 135/20 3) | 135/20 3) | |
| 4.32 | Ground clearance, centre of wheelbase | m2 (mm) | 135/20 ³⁾ | 135/20 3) | 135/20 3) | 135/20 3) | |
| 4.33 | Load dimension b12 × l6 | b12 x l6 (mm) | 800 × 1200 | 800 × 1200 | 800 × 1200 | 800 × 1200 | |
| 4.34 | Aisle width predetermined load dimensions | Ast (mm) | 2937/2966 3) 11) | 2937/2966 3) 11) | 2937/2966 3) 11) | 2910/2939 3) 11) | |
| 4.34.1 | Aisle width for pallets 1000 × 1200 crossways | Ast (mm) | 3034/3094 3) 11) | 3034/3094 3) 11) | 3034/3094 3) 11) | 3007/3067 3) 11) | |
| 4.34.2 | Aisle width with pallet 800 × 1200 along forks | Ast (mm) | 2937/2966 ^{3) 11)} | 2937/2966 ^{3) 11)} | 2937/2966 3) 11) | 2910/2939 3) 11) | |
| 4.35 | Turning radius | Wa (mm) | 2221/2291 ³⁾ | 2221/22913) | 2221/22913) | 2194/22643 | |
| 5.1 | Travel speed, with/without load | km/h | 10/12 12) | 10/12 12) | 11/14 12) | 11/14 12) | |
| 5.2 | Lifting speed, with/without load | m/s | 0.19/0.32 5) | 0.19/0.32 5) | 0.15/0.27 (0.04/0.07) 5) 6) | 0.15/0.27 (0.04/0.07) 5) 0 | |
| 5.3 | Lowering speed, with/without load | m/s | 0.37/0.19 5) | 0.37/0.19 5) | 0.35/0.34 (0.08/0.08) 5) 6) | 0.35/0.34 (0.08/0.08) 5) | |
| 5.8 | Maximum climbing ability, with/without load | % | - | - | - | - | |
| 5.9 | Acceleration time, with/without load | S | 6.3/4.8 | 6.3/4.8 | - | - | |
| 5.10 | Service brake | | hydr./electro-mech. | hydr./electro-mech. | hydr./electro-mech. | hydr./electro-mech. | |
| 6.1 | Drive motor rating S2 60 min | kW | 3 | 3 | 3 | 3 | |
| 6.2 | Lift motor rating at S3 15% | kW | 3.2 | 3.2 | 2.6 | 2.6 | |
| 6.3 | Battery according to DIN 43531/35/36 A,B,C,no | | 43 535 B/3PzS | 43 535 B/3PzS | 43 535 B/3PzS | 43 535 B/3PzS | |
| 6.4 | Battery voltage/rated capacity (5h) | (V)/(Ah)o. kWh | 24/375 | 24/375 | 24/375 | 24/375 | |
| 6.5 | Battery weight (±5%) | kg | 327 | 327 | 327 | 327 | |
| 6.6 | Power consumption according to VDI cycle | kWh/h | - | - | - | - | |
| 6.6 | Energy consumption according to DIN EN 16796 | kWh/h | - | - | - | - | |
| 6.6.1 | CO ₂ equivalent according to EN 16796 | kg/h | - | - | - | - | |
| 6.7 | Turnover output according to VDI 2198 | t/h | - | - | - | - | |
| 6.8 | Turnover efficiency according to VDI 2198 | t/kWh | - | - | - | - | |
| 8.1 | Type of drive unit | | KWPC 05 | KWPC 05 | KWPC 05 | KWPC 05 | |
| | Sound pressure level LpAZ (at the operator's seat) | dB(A) | | | | | |

¹⁾ LP only/LP/LI/LI only

^{2) (±5} mm)

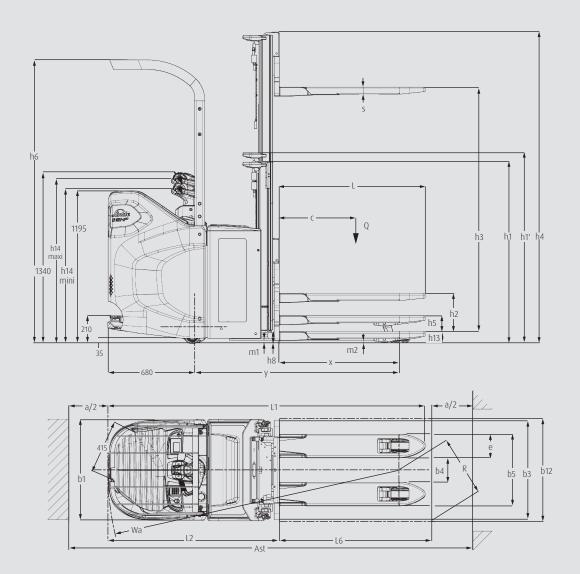
⁴⁾ Figures with battery, see line 6.4/6.5. 7) Figures in parenthesis with tandem 9) (0/+5 mm) 5) (±10%)

load wheels

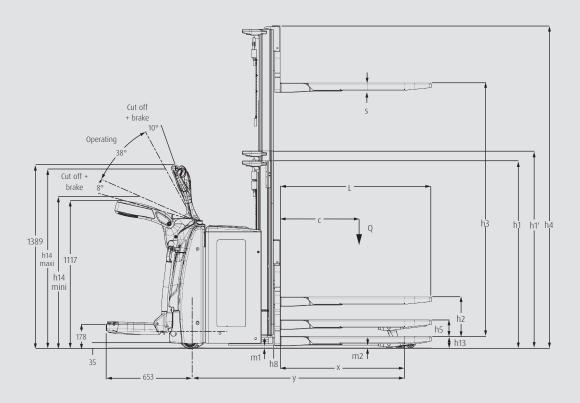
¹⁰⁾ Reach legs 75 × 150 × 1115

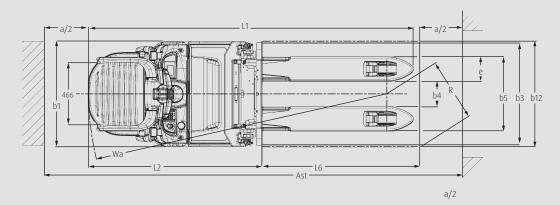
¹¹⁾ Including a 200 mm (min.) operating aisle clearance

D12 - D14 SP | D12 HP SP



D12 HP AP





D12 HP AP with side guards



D12 SP with initial lift



D12 HP SP with forks up



MAST TABLES

STANDARD MAST (in mm)

| Series | 1177 | | | | | | |
|------------------------|--|--|--|--|--|--|--|
| Lift | h3: 1574 | h3: 1924 | h3: 2424 | h3: 2924 | h3: 3324 | h3: 3824 | |
| Height measurements | h1: 1240 h2: 150 h3: 1574 h4: 2094 h1': 1315 | h1: 1415 h2: 150 h3: 1924 h4: 2444 h1': 1490 | h1: 1665 h2: 150 h3: 2424 h4: 2944 h1': 1740 | h1: 1915 h2: 150 h3: 2924 h4: 3444 h1': 1990 | h1: 2115 h2: 150 h3: 3324 h4: 3844 h1': 2190 | h1: 2365 h2: 150 h3: 3824 h4: 4344 h1': 2440 | |
| Model | | | | | | | |
| D12 SP | 0 | 0 | 0 | 0 | 0 | 0 | |
| D14 SP | 0 | 0 | 0 | 0 | 0 | 0 | |
| D12 HP SP | 0 | 0 | 0 | _ | _ | _ | |
| D12 HP AP | 0 | 0 | 0 | _ | _ | _ | |

SIMPLEX MAST (in mm)

| Series | 1177 | | | | | |
|------------------------|--|--|--|--|--|--|
| Lift | h3: 1462 | h3: 1612 | | | | |
| Height measurements | h1: 1915 h2: 1395 h3: 1462 h4: 1982 h1': - | h1: 2065 h2: 1545 h3: 1612 h4: 2132 h1': - | | | | |
| Model | | | | | | |
| D12 SP | 0 | 0 | | | | |
| D14 SP | 0 | 0 | | | | |
| D12 HP SP | _ | _ | | | | |
| D12 HP AP | _ | _ | | | | |

DUPLEX MAST (in mm)

| Series | 1177 | | | | | | |
|------------------------|---|---|--|--|--|--|--|
| Lift | h3: 1574 | h3: 1924 | h3: 2424 | h3: 2924 | h3: 3324 | h3: 3824 | |
| Height measurements | h1: 1240 h2: 720 h3: 1574 h4: 2094 h1': - | h1: 1415 h2: 895 h3: 1924 h4: 2444 h1': - | h1: 1665 h2: 1145 h3: 2424 h4: 2944 h1': - | h1: 1915 h2: 1395 h3: 2924 h4: 3444 h1': - | h1: 2115 h2: 1595 h3: 3324 h4: 3844 h1': - | h1: 2365 h2: 1845 h3: 3824 h4: 4344 h1': - | |
| Model | | | | | | | |
| D12 SP | 0 | 0 | 0 | 0 | 0 | 0 | |
| D14 SP | 0 | 0 | 0 | 0 | 0 | 0 | |
| D12 HP SP | 0 | 0 | 0 | _ | _ | _ | |
| D12 HP AP | 0 | 0 | 0 | _ | _ | _ | |

TRIPLEX MAST (in mm)

| Series | 1177 | | | | | |
|------------------------|--|--|--|--|--|--|
| Lift | h3: 3516 | h3: 4266 | | | | |
| Height measurements | h1: 1665 h2: 1145 h3: 3516 h4: 4036 h1': - | h1: 1915 h2: 1395 h3: 4266 h4: 4786 h1': - | | | | |
| Model | | | | | | |
| D12 SP | 0 | 0 | | | | |
| D14 SP | 0 | 0 | | | | |
| D12 HP SP | _ | _ | | | | |
| D12 HP AP | _ | _ | | | | |

STANDARD AND OPTIONAL EQUIPMENT

| | Model/equipment | D12 HP SP | D12 HP AP | D12 SP | D14 SP |
|-----------------------------|---|-----------|-----------|---------------|--------|
| | Automatic speed reduction when cornering | _ | • | | |
| | Key switch | | | | |
| | Log in PIN code | 0 | 0 | 0 | 0 |
| ity | Folding sidequards and platform | _ | | _ | _ |
| Safety | Unique, safe and intuitive 45° operating position | | _ | _ | _ |
| • | BlueSpot® option – visual warning of truck presence integrated in the chassis contours | 0 | _ | 0 | 0 |
| | BlueSpot® option – visual warning of truck presence mounted on accessory support | | 0 | | |
| | Foot detection sensor – trucks slows down or stops if operator's foot is detected outside of the platform contours | 0 | _ | 0 | 0 |
| e e | | U | | | |
| Service | CAN bus technology | • | • | • | • |
| | Data transmission online | 0 | 0 | 0 | 0 |
| atic | Data transmission WiFi | | 0 | | |
| Digitalisation | Linde connect:desk - local fleet management with different functional modules | 0 | 0 | 0 | 0 |
| igit | Linde connect:cloud - fleet management as a service (hosted version) | | | | |
| ٥ | Linde Pre-Op Check App – personalised daily check protocol for operational readiness | 0 | 0 | 0 | 0 |
| <u>g</u> | Speed Management – intelligent management of speed in double deck mode in relation to load on forks | 0 | 0 | 0 | 0 |
| 틀 | Soft landing on forks | 0 | 0 | 0 | 0 |
| nar | Lift end stop sensor | | 0 | 0 | 0 |
| Operation/load handling | Low speed if initial lift lowered | 0 | 0 | 0 | 0 |
|) - | Maximum operating speed limitation (8, 10, 12, 14 km/h, depending on the model) | 0 | 0 | 0 | 0 |
| <u>io</u> | Load backrest h=700 mm or 1000 mm | 0 | 0 | 0 | 0 |
| rat | Overhead quard | | | 0 | 0 |
| obe | Dedicated work station (with storage compartments) | | | | |
| | bedicated work station (with storage compartments) | | | | |
| environ- ment | Coldstore -35°C (in/out) – with metal grid or standard floor mat | 0 | 0 | 0 | 0 |
| | Fully suspended operator compartment – both feet platform and steering unit are suspended | • | • | • | • |
| | Padded leg rest and backrest | | | | |
| | Twin-grip handlebar | • | | • | • |
| a | Innovative Linde e-driver control perfectly suited for the 45° operation | 0 | _ | 0 | 0 |
| ace | Height-adjustable steering unit | 0 | _ | 0 | 0 |
| Workplace | Multifunction coloured display hour meter, maintenance indication, battery discharge indicator and internal fault code indication | 0 | 0 | 0 | 0 |
| > | Accessory support | 0 | 0 | 0 | 0 |
| | Support for data terminal and power supply cable 24V | 0 | 0 | 0 | 0 |
| | Scanner support and clipboard | 0 | 0 | 0 | 0 |
| | Electrical socket USB SV | - 0 | | 0 | |
| | Standard | 0 | | 0 | 0 |
| | | | 0 | 0 | |
| st | Simplex | | | | 0 |
| Mast | Duplex | | 0 | 0 | 0 |
| | Triplex | | _ | 0 | |
| | Mast protection: mesh | 0 | 0 | 0 | 0 |
| orks | Width over fork carriage 560 mm with fork length 1150 mm | _ | 0 | <u> </u> | 0 |
| Attacnment /forks | Width over fork carriage 680 mm with fork length 1150 mm | 0 | 0 | 0 | 0 |
| | Drive wheel heavy duty, polyurethane non-marking | • | • | • | • |
| 10 | Drive wheel high grip, polyurethane non-marking | 0 | 0 | 0 | 0 |
| yre | Drive wheel rubber | | | $\overline{}$ | 0 |
| d t | Single load wheel, polyurethane | • | | • | • |
| Axles and tyres | Tandem load wheel, polyurethane (also available in greasable version) | 0 | 0 | 0 | 0 |
| xle | Castor wheels with spring cylinder | • | | • | |
| ⋖ | Hydraulic castor wheels, electronically controlled | | 0 | 0 | |
| | Double castor wheel (also available in greasable version) | _ | _ | | • |
| | Power steering | _ | | | |
| <u>g</u> | Maintenance-free AC motor | | | | |
| ğ _ | Electromagnetic braking system (or electromechanic) | | | | |
| Drive and braking system | | | | | |
| ve ar | Li-ION and lead-acid technology available with different battery capacities depending on the model | 0 | 0 | 0 | 0 |
| | Integrated charger for lead-acid and Li-ION batteries | | 0 | 0 | 0 |
| 5 | | | | | |
| Lighting ^{DI} | External chargers available | 0 | 0 | | 0 |

CHARACTERISTICS



Safety enhanced with speed reduction when cornering



Ergonomic, height-adjustable tiller

Safety

- → Automatic adjustment of operating speed when cornering to prevent risky manoeuvres
- → Wide mast design for optimal visibility of the load and the immediate vehicle environment
- → Operator always remains within the contours of the vehicle for optimum protection in any situation
- → Solid steel skirt as a protective shield to protect the operator from injury in the event of a collision (SP version)
- → Foot detection automatically brings the vehicle to a smooth stop when operator's feet leave the platform (SP version)

Ergonomics

- → Linde OptiLift assistance system for precise control of mast functions at high working speeds and quiet, energy-saving load handling
- → Fully decoupled operator platform to protect the operator from vibrations and shocks
- → Innovative steering concept Linde e-driver for optimum, single-handed control of the vehicle in the 45° position if required (SP version)
- → Electric power steering for effortless vehicle control in any work situation
- → Automatic and gradual adjustment of the travel speed to the steering angle for precise manoeuvring in tight spaces



Perfect combination between power and manoeuvrability

Handling

- → High residual capacities for maximum vehicle stability when working at height
- ightarrow Powerful 3 kW three-phase motor for rapid acceleration even with double load
- → High top speeds (14 km/h without load, 11 km/h with load, 7.5 km/h with double load) for fast transport travel (HP version)
- → Five-point configuration with optional electrically controlled and hydraulically operated castor wheels for perfect vehicle stability (HP version)
- → Optional shortened truck version with Li-ION battery allows for smaller turning radius, especially in tight spaces (HP version)



Easy access to components and data

Service

- → Robust 3 kW three-phase motor for long service intervals and low maintenance costs
- → Solid construction with durable parts and sturdy chassis for maximum vehicle availability
- → Design-to-service principle for effortless accessibility to all relevant components
- → Innovative CAN bus structure for fast error analysis via diagnostic connector
- → Modern E/E architecture allows remote installation of updates and new functions

Presented by:

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



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Printed in Germany | DS_D12-D14_SP_AP_HP_1161_en_A_0423