



## Electric Pallet Stackers Capacity 1000 - 1200 kg L10B, L10, L12, L12i

SERIES 1172

### Safety

Sinergo® interface is implemented on Linde pedestrian pallet stackers. The hand guards of the off-centred tiller head effectively shield hands and keep the operator safely within the truck's contours with excellent visibility through the mast. The long tiller mounted low down on the chassis ensures ample safety clearance between operator and truck.

### Performance

The combination of a new AC motor and Linde LAC digital control makes these pallet stackers highly efficient. Operating parameters can be adjusted to match any application. The OptiLift® mast control provides accurate, fully proportional lifting and assures quiet smooth operation.

### Comfort

Through Sinergo®, all controls on the ergonomic tiller can be easily operated by either hand. A Creep speed button offers utmost manoeuvrability in confined areas. Proportional speed automatically alters traction speed in relation to the truck/operator distance. Finished in tactile materials, these trucks deliver accurate load handling for better productivity.

### Reliability

Despite their visual appeal, these pallet stackers are rugged and durable. The mast channels are made from high grade rolled steel sections for strength and durability. Strong, long-lasting, with memory effect, Exxtral® motor and battery cover protect the technical compartment from outside shocks. In addition, a built-out fork carriage with thinner forks is available to protect the mast when handling gitterboxes.

### Service

It is not just about the truck in operation: a maintenance-free AC motor maximises uptime reducing operating costs. All truck data is immediately and easily accessible to the service engineer via the CAN-bus architecture. Fast, easy access to all internal components ensures service tasks are completed with a minimum of delay.

Linde Material Handling

*Linde*

# Standard Equipment/Optional equipment

## Standard Equipment

- Sinergo®, the operator / truck interface
- Long tiller with low mounting point and off-set head made out of Grivory®
- Exxtral® motor and battery cover
- Creep speed control (L12, L12i)
- Proportional speed control (L12, L12i)
- End-of-stroke resistance
- Storage compartments
- OptiLift® proportional lift system (L10, L12, L12i)
- Hand protection at rear of mast (polycarbonate or steel mesh)

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Multifunction display with hourmeter, maintenance indication, battery discharge indicator and internal fault code indication  
Key switch or LFMgo (PIN-code access)

- AC motor
- Linde LAC controller
- CAN-bus architecture
- Electromagnetic brake
- Automatic parking brake
- Cushion rubber drive wheel
- Single polyurethane load wheels
- Fork length: 1150 mm
- Width over forks: 560 mm
- Initial lift (L12i)
- Built-in or built-out carriage
- Protection to -10°C
- Vertical 2PzS BS battery change (L10B, L10, L12)
- Vertical 3PzS BS battery change (L12i)
- Horn
- Clipboard

## Optional equipment

- Drive wheels: polyurethane, wet grip, non marking cushion, treaded cushion
- Load wheels: Tandem polyurethane, tandem polyurethane greaseable
- Alternative fork lengths and widths
- Load backrest
- Fleet management LFMaccess and LFMbasic

- Creep speed control (L10)
- Proportional speed control (L10)
- Cold store protection to -35°C
- Automatic battery watering system
- Built-in charger
- High frequency charger

Other options available on request

# Technical Data (According to VDI 2198)

|                 |  |   |                        |                                      |                                      |                        |
|-----------------|--|---|------------------------|--------------------------------------|--------------------------------------|------------------------|
| Characteristics | 1.1  | Manufacturer  |                        | LINDE                                | LINDE                                | LINDE                  |
|                 | 1.2  | Model designation                                   |                        | <b>L10B<sup>8</sup></b>              | <b>L10</b>                           | <b>L12</b>             |
|                 | 1.3  | Power unit  |                        | Battery                              | Battery                              | Battery                |
|                 | 1.4  | Operation   |                        | Pedestrian                           | Pedestrian                           | Pedestrian             |
|                 | 1.5  | Load capacity                                       | Q (t)                  | 1                                    | 1                                    | 1.2                    |
|                 | 1.6  | Load centre   | c (mm)                 | 600                                  | 600                                  | 600                    |
|                 | 1.8  | Axle centre to fork face                            | x (mm)                 | 711 <sup>1</sup>                     | 695 <sup>1</sup>                     | 695 <sup>1</sup>       |
|                 | 1.9  | Wheelbase   | y (mm)                 | 1157 <sup>1</sup>                    | 1157 <sup>1</sup>                    | 1157 <sup>1</sup>      |
|                 | Weights  | 2.1   | Service weight         | (kg)                                 | 708 <sup>3</sup>                     | 788 <sup>3</sup>       |
| 2.2             |  | Axle load with load, front/rear                     | (kg)                   | 670/1038                             | 695/1093                             | 720/1266               |
| 2.3             |  | Axle load without load, front/rear                  | (kg)                   | 518/190 <sup>3</sup>                 | 572/216 <sup>3</sup>                 | 572/216 <sup>3</sup>   |
| Wheels/Tyres    | 3.1  | Tyres   |                        | Rubber <sup>4</sup>                  | Rubber <sup>4</sup>                  | Rubber <sup>4</sup>    |
|                 | 3.2  | Tyre size, front                                    |                        | 230 x 75                             | 230 x 75                             | 230 x 75               |
|                 | 3.3  | Tyre size, rear                                     |                        | 2x 85 x 100                          | 2x 85 x 100                          | 2x 85 x 100            |
|                 | 3.4  | Auxiliary wheels (dimensions)                       |                        | 140 x 54                             | 140 x 54                             | 140 x 54               |
|                 | 3.5  | Wheels, number front/rear (x = driven)              |                        | 1x+1/2                               | 1x+1/2                               | 1x+1/2                 |
|                 | 3.6  | Track width, front                                  | b10 (mm)               | 518 <sup>1</sup>                     | 518 <sup>1</sup>                     | 518 <sup>1</sup>       |
|                 | 3.7  | Track width, rear                                   | b11 (mm)               | 380 <sup>1</sup>                     | 380 <sup>1</sup>                     | 380 <sup>1</sup>       |
| Dimensions      | 4.2  | Height of mast, lowered                             | h1 (mm)                | 2390 <sup>8</sup>                    | 1940 <sup>8</sup>                    | 1940 <sup>8</sup>      |
|                 | 4.3  | Free lift   | h2 (mm)                | 150 <sup>8</sup>                     | 1462 <sup>8</sup>                    | 1462 <sup>8</sup>      |
|                 | 4.4  | Lift  | h3 (mm)                | 1912 <sup>18</sup>                   | 2924 <sup>18</sup>                   | 2924 <sup>18</sup>     |
|                 | 4.5  | Height of mast, extended                            | h4 (mm)                | 2393 <sup>8</sup>                    | 3402 <sup>8</sup>                    | 3402 <sup>8</sup>      |
|                 | 4.6  | Initial lift  | h5 (mm)                | -                                    | -                                    | -                      |
|                 | 4.9  | Height of tiller arm in operating position, min/max | h14 (mm)               | 650 / 1190                           | 650 / 1190                           | 650 / 1190             |
|                 | 4.15   | fork height, lowered                                | h13 (mm)               | 85                                   | 85                                   | 85                     |
|                 | 4.19   | Overall length                                      | l1 (mm)                | 1772 <sup>1</sup>                    | 1788 <sup>1</sup>                    | 1788 <sup>1</sup>      |
|                 | 4.20   | Length to fork face                                 | l2 (mm)                | 622 <sup>1</sup>                     | 638 <sup>1</sup>                     | 638 <sup>1</sup>       |
|                 | 4.21   | Overall width                                       | b1/b2 (mm)             | 800 <sup>1</sup>                     | 800 <sup>1</sup>                     | 800 <sup>1</sup>       |
|                 | 4.22   | Fork dimensions                                     | s/e/l (mm)             | 65x180x1150                          | 65x180x1150                          | 65x180x1150            |
|                 | 4.24   | Width of fork carriage                              | b3 (mm)                | 534                                  | 534                                  | 534                    |
|                 | 4.25   | Fork spread, min/max                                | b5 (mm)                | 560                                  | 560                                  | 560                    |
|                 | 4.32   | Ground clearance, centre of wheelbase               | m2 (mm)                | 30                                   | 30                                   | 30                     |
|                 | 4.33   | Aisle width with pallet 1000 x 1200 across forks    | Ast (mm)               | -                                    | -                                    | -                      |
| 4.34            | Aisle width with pallet 800 x 1200 along forks | Ast (mm)  | 2292/2149 <sup>3</sup> | 2276 <sup>4</sup> /2137 <sup>4</sup> | 2276 <sup>4</sup> /2137 <sup>4</sup> |                        |
| 4.35            | Turning radius                                 | Wa (mm)   | 1460                   | 1432 <sup>6</sup>                    | 1432 <sup>6</sup>                    |                        |
| Performance     | 5.1  | Travel speed, with/without load                     | (km/h)                 | 6 / 6 <sup>7</sup>                   | 6 / 6 <sup>7</sup>                   | 6 / 6 <sup>7</sup>     |
|                 | 5.2  | Lifting speed, with/without load                    | (m/s)                  | 0.09/0.2                             | 0.1/0.2                              | 0.08/0.225             |
|                 | 5.3  | Lowering speed, with/without load                   | (m/s)                  | 0.23 / 0.23 <sup>3</sup>             | 0.35 / 0.35 <sup>3</sup>             | 0.4 / 0.3 <sup>3</sup> |
|                 | 5.8  | Maximum climbing ability, with/without load         | (%)                    | 5 / 10                               | 5 / 10                               | 5 / 10                 |
|                 | 5.9  | Acceleration time, with/without load                | (s)                    | 8 / 7                                | 8 / 7                                | 8.3 / 7                |
|                 | 5.10   | Service brake                                       |                        | Electro-magnetic                     | Electro-magnetic                     | Electro-magnetic       |
| Drive           | 6.1  | Drive motor, 60 minute rating                       | (kW)                   | 1.2                                  | 1.2                                  | 1.2                    |
|                 | 6.2  | Lift motor rating at 15%                            | (kW)                   | 0.9                                  | 1                                    | 2.45                   |
|                 | 6.3  | Battery according to DIN 43531/35/36 A,B,C,no       |                        | no                                   | no                                   | no                     |
|                 | 6.4  | Battery voltage/rated capacity (5h)                 | (V/Ah)                 | 24/180                               | 24/180                               | 24/180                 |
|                 | 6.5  | Battery weight (± 5%)                               | (kg)                   | 195                                  | 195                                  | 195                    |
|                 | 6.6  | Power consumption according to VDI cycle            | (kWh/h)                | 0.72                                 | 0.75                                 | 1                      |
| Others          | 8.1  | Type of drive control                               |                        | LAC                                  | LAC                                  | LAC                    |
|                 | 8.4  | Noise level at operator's ear                       | (dB(A))                | 65                                   | 65                                   | 65                     |

1) (± 5 mm)

2) with/without Initial lift

3) (± 10%)

4) Solid rubber + polyurethane / polyurethane

5) (Calculated with the VDI guidelines 3579)

6) With creep speed = tiller in vertical position

7) (± 5%)

8) L 10 B only with mast 1462E, 1912E and 2424S, see d





| Masts (L10/L12) (in mm) | 1462 E         | 1912 E | 2024 S | 2424 S | 2924 S | 3324 S | 3824 S | 4224 S |      |
|-------------------------|----------------|--------|--------|--------|--------|--------|--------|--------|------|
| Lift                    | <b>h3</b>      | 1462   | 1912   | 2024   | 2424   | 2924   | 3324   | 3824   | 4224 |
| Lift + fork height      | <b>h3+h13*</b> | 1547   | 1997   | 2109   | 2509   | 3009   | 4309   | 3909   | 4309 |
| Height lowered          | <b>h1*</b>     | 1940   | 2390   | 1490   | 1690   | 1940   | 2140   | 2390   | 2590 |
| Height raised           | <b>h4</b>      | 1943   | 2393   | 2502   | 2902   | 3402   | 3802   | 4302   | 4702 |
| Free lift               | <b>h2</b>      | 1462   | 1912   | 150    | 150    | 150    | 150    | 150    | 150  |

| Masts (L10/L12) (in mm) | 2024 D         | 2424 D | 2924 D | 3324 D | 3824 D | 4224 D | 3636 T | 4386 T |      |
|-------------------------|----------------|--------|--------|--------|--------|--------|--------|--------|------|
| Lift                    | <b>h3</b>      | 2024   | 2424   | 2924   | 3324   | 3824   | 4224   | 3636   | 4386 |
| Lift + fork height      | <b>h3+h13*</b> | 2109   | 2509   | 3009   | 3409   | 3909   | 3409   | 3721   | 4471 |
| Height lowered          | <b>h1*</b>     | 1490   | 1690   | 1940   | 2140   | 2390   | 2590   | 1690   | 1940 |
| Height raised           | <b>h4</b>      | 2502   | 2902   | 3402   | 3802   | 4302   | 4702   | 4118   | 4868 |
| Free lift               | <b>h2</b>      | 1012   | 1212   | 1462   | 1662   | 1912   | 2112   | 1212   | 1462 |

\* Initial Lift h5 = 130mm

# Features

## Steering system

- Proportional speed control varies truck speed automatically in relation to the tiller angle for safe, comfortable and productive operation
- A Creep speed button ensures high manoeuvrability in confined areas when operating at low speeds with the tiller in the upright position
- End-of-stroke resistance on the tiller avoids accidental, abrupt braking
- Soft tiller fold-back slows down the tiller when returning into upright position, avoiding the tiller snapping on the motor cover

## Working station & Display

- Wide, deep storage compartment for shrink wrap, pens, markers etc.
- Strong Exxtral® motor and battery cover last the lifetime of the truck
- Multifunctional display as standard with hourmeter, maintenance indication, battery discharge indicator, fault code indication



## AC motor & Booster effect

- Powerful, smooth-running AC motor, 1.2kw (at 100% output)
- Traction speed adjustable up to 6km/h, laden or unladen
- Booster effect provides higher torque when additional power is needed
- No roll-back on hill starts

## Lifting system

- OptiLift® mast control provides accurate, fully proportional lifting as well as smooth, quiet operation
- Soft landing of the forks protects load when lowering
- Wide range of mast options available
- Choice of standard or built-out carriage depending on application
- Initial lift on L12i ensures ramps and dock levellers are easily negotiated

## Tiller & Tiller head

- Off-set, ergonomic Grivory tiller head ensures safety and visibility
- Long tiller with low mounting point provides safety clearance between operator and chassis
- Wrap-around hand protection
- Comfortable controls, operable with either hand and gloves



## Braking system

- Highly efficient electromagnetic brake applied by moving tiller to fully up or down position
- Automatic braking on releasing traction butterfly or by reversing direction
- Truck slows before coming to a stop, remaining under total control at all times

## Chassis

- Compact, rounded shape avoids snagging
- Highly resistant, robust steel construction
- Low chassis skirt protects operator's feet
- Mast bolted to chassis for maximum rigidity

## Maintenance and CAN-bus architecture

- Zero maintenance, moisture and dust-proof AC motor
- CAN-bus architecture enables fast, easy access to all truck data
- Individually adjustable parameters via diagnostic plug
- Rapid and convenient access to main components via front service panel

