



## Reach Trucks

# Ri14 – Ri18

Load capacity 1.4 t – 1.8 t | Series 1121

ION

### Compact warehouse pro

- Powerful and efficient reach truck for standard applications
- Ideal for pallet storage, for use in block and rack storage systems and for internal material transport
- Compact design and Li-ION battery integrated (i) as standard ensure high manoeuvrability
- Load capacities of up to 1.8 tonnes and lift heights of up to 11 metres
- Ergonomic work station and a variety of safety features ensure comfort and safety for the operator
- Can be individually tailored to the customer's requirements thanks to a range of mast and equipment variants

# TECHNICAL DATA (according to VDI 2198)

|                  | 1.1   | Manufacturer (abbreviation)                        | Linde MH   | Linde MH                | Linde MH                | Linde MH                           | Linde MH                           |                                    |
|------------------|---|--|--|-------------------------|-------------------------|------------------------------------|------------------------------------|------------------------------------|
| Characteristics  | 1.2   | Manufacturer's type designation                    | Ri14/1504  | Ri16/1504               | Ri14/1505               | Ri16/1505                          | Ri18/1505                          |                                    |
|                  | 1.2a  | Series   | 1121-01  | 1121-01                 | 1121-01                 | 1121-01                            | 1121-01                            |                                    |
|                  | 1.3   | Drive  | Battery  | Battery                 | Battery                 | Battery                            | Battery                            |                                    |
|                  | 1.4   | Operation  | Seat   | Seat                    | Seat                    | Seat                               | Seat                               |                                    |
|                  | 1.5   | Rated capacity/rated load                          | Q (t)  | 1.4                     | 1.6                     | 1.4                                | 1.6                                | 1.8                                |
|                  | 1.6   | Load centre distance                               | c (mm)   | 600/500                 | 600/500                 | 600/500                            | 600/500                            | 600/500                            |
|                  | 1.8   | Load distance, centre of drive axle to fork        | x (mm)   | 272                     | 373                     | 266                                | 367                                | 439                                |
|                  | 1.9   | Wheelbase  | y (mm)   | 1275                    | 1381                    | 1275                               | 1381                               | 1453                               |
|                  | Weight  | 2.1  | Service weight   | kg                      | 2959                    | 3003                               | 3384                               | 3447                               |
| 2.3              |   | Axle loading, unladen front/rear                   | kg   | 1757/1202               | 1850/1153               | 1934/1450                          | 2055/1392                          | 2218/1414                          |
| 2.4              |   | Axle loading, fork advanced, laden front/rear      | kg   | 503/3856                | 475/4128                | 533/4251                           | 504/4543                           | 558/4874                           |
| 2.5              |   | Axle loading, fork retracted, laden front/rear     | kg   | 1397/2962               | 1587/3016               | 1567/3217                          | 1785/3262                          | 2019/3413                          |
| Tyres/chassis    |   | 3.1  | Tyres: solid rubber, superelastic, pneumatic, polyurethane | Polyurethane            | Polyurethane            | Polyurethane                       | Polyurethane                       | Polyurethane                       |
|                  | 3.2   | Tyre size, front                                   | Ø 360 × 130  | Ø 360 × 130             | Ø 360 × 130             | Ø 360 × 130                        | Ø 360 × 130                        |                                    |
|                  | 3.3   | Tyre size, rear                                    | Ø 285 × 100  | Ø 285 × 100             | Ø 285 × 100             | Ø 285 × 100                        | Ø 285 × 100                        |                                    |
|                  | 3.5   | Wheels, number front/rear (x = driven wheels)      | 1x/2   | 1x/2                    | 1x/2                    | 1x/2                               | 1x/2                               |                                    |
|                  | 3.7   | Tread, rear  | b11 (mm)   | 1167                    | 1167                    | 1167                               | 1167                               | 1167                               |
|                  | 3.9   | Wheels braked service brake, number                | 2  | 2                       | 2                       | 2                                  | 2                                  |                                    |
|                  | 3.10  | Wheels braked parking brake                        | 1  | 1                       | 1                       | 1                                  | 1                                  |                                    |
| Dimensions       | 4.1   | Mast/fork carriage tilt, forward/backwards         | α/β (°)  | 2,0/4,0                 | 2,0/4,0                 | 2,0/4,0                            | 2,0/4,0                            | 2,0/4,0                            |
|                  | 4.2   | Mast height, lowered                               | h1 (mm)  | 2435                    | 2435                    | 3385                               | 3385                               | 3385                               |
|                  | 4.3   | Free lift  | h2 (mm)  | 1775                    | 1775                    | 2725                               | 2725                               | 2725                               |
|                  | 4.4   | Lift   | h3 (mm)  | 5720                    | 5720                    | 8570                               | 8570                               | 8570                               |
|                  | 4.5   | Mast height, extended                              | h4 (mm)  | 6275                    | 6275                    | 9186                               | 9186                               | 9186                               |
|                  | 4.7   | Height of overhead guard (cabin)                   | h6 (mm)  | 2245                    | 2245                    | 2245                               | 2245                               | 2245                               |
|                  | 4.8   | Seat height relating to SIP/stand height           | h7 (mm)  | 1183/-                  | 1183/-                  | 1183/-                             | 1183/-                             | 1183/-                             |
|                  | 4.10  | Height of wheel arms                               | h8 (mm)  | 308                     | 308                     | 308                                | 308                                | 308                                |
|                  | 4.19  | Overall length                                     | l1 (mm)  | 2365                    | 2370                    | 2371                               | 2376                               | 2376                               |
|                  | 4.20  | Length to fork face                                | l2 (mm)  | 1215                    | 1220                    | 1221                               | 1226                               | 1226                               |
|                  | 4.21  | Overall width                                      | b1/b2 (mm)   | 1260/1270               | 1260/1270               | 1260/1270                          | 1260/1270                          | 1260/1270                          |
|                  | 4.22  | Fork dimensions DIN ISO 2331                       | s/e/l (mm)   | 40/80/1150              | 45/100/1150             | 40/80/1150                         | 45/100/1150                        | 45/100/1150                        |
|                  | 4.23  | Fork carriage ISO 2328, class/type A, B            | 2A   | 2A                      | 2A                      | 2A                                 | 2A                                 |                                    |
|                  | 4.24  | Fork carriage width                                | b3 (mm)  | 770                     | 770                     | 770                                | 770                                | 770                                |
|                  | 4.25  | Fork spread  | b5 (mm)  | 296/690                 | 316/710                 | 316/710                            | 316/710                            | 316/710                            |
|                  | 4.26  | Distance between wheel arms/loading surfaces       | b4 (mm)  | 920                     | 920                     | 920                                | 920                                | 920                                |
|                  | 4.28  | Reach distance                                     | l4 (mm)  | 457                     | 564                     | 451                                | 558                                | 630                                |
|                  | 4.31  | Ground clearance, laden, below mast                | m1 (mm)  | 75                      | 75                      | 75                                 | 75                                 | 75                                 |
|                  | 4.32  | Ground clearance, centre of wheelbase              | m2 (mm)  | 50                      | 50                      | 50                                 | 50                                 | 50                                 |
|                  | 4.34.1  | Aisle width for pallets 1000 × 1200 crossways      | Ast (mm)   | 2641 <sup>1) 2)</sup>   | 2664 <sup>1) 2)</sup>   | 2646 <sup>1) 2)</sup>              | 2668 <sup>1) 2)</sup>              | 2686 <sup>1) 2)</sup>              |
| 4.34.2           | Aisle width for pallets 800 × 1200 lengthways | Ast (mm)   | 2709 <sup>1) 2)</sup>                                      | 2715 <sup>1) 2)</sup>   | 2714 <sup>1) 2)</sup>   | 2720 <sup>1) 2)</sup>              | 2725 <sup>1) 2)</sup>              |                                    |
| 4.35             | Turning radius                                | Wa (mm)  | 1498   | 1596                    | 1498                    | 1596                               | 1665                               |                                    |
| 4.37             | Length across wheel arms                      | l7 (mm)  | 1633   | 1739                    | 1633                    | 1739                               | 1811                               |                                    |
| Performance data | 5.1   | Travel speed, laden/unladen                        | km/h   | 13/13 <sup>3) 4)</sup>  | 13/13 <sup>3) 4)</sup>  | 11/11 (13/13) <sup>3) 4)</sup>     | 11/11 (13/13) <sup>3) 4)</sup>     | 11/11 (13/13) <sup>3) 4)</sup>     |
|                  | 5.1.1   | Travel speed, laden/unladen, backwards             | km/h   | 13/13 <sup>3) 4)</sup>  | 13/13 <sup>3) 4)</sup>  | 11/11 (13/13) <sup>3) 4)</sup>     | 11/11 (13/13) <sup>3) 4)</sup>     | 11/11 (13/13) <sup>3) 4)</sup>     |
|                  | 5.2   | Lifting speed, laden/unladen                       | m/s  | 0.6/0.61                | 0.6/0.61                | 0.6/0.61 (0.67/0.69) <sup>3)</sup> | 0.6/0.61 (0.67/0.69) <sup>3)</sup> | 0.6/0.61 (0.67/0.69) <sup>3)</sup> |
|                  | 5.3   | Lowering speed, laden/unladen                      | m/s  | 0.57/0.55               | 0.57/0.55               | 0.57/0.56                          | 0.57/0.56                          | 0.57/0.56                          |
|                  | 5.4   | Reaching speed, laden/unladen                      | m/s  | 0.17/0.17               | 0.17/0.17               | 0.17/0.17                          | 0.17/0.17                          | 0.17/0.17                          |
|                  | 5.7   | Gradeability, laden/unladen                        | %  | 10.0/10.0               | 10.0/10.0               | 10.0/10.0                          | 10.0/10.0                          | 10.0/10.0                          |
|                  | 5.8   | Max. gradeability, laden/unladen                   | %  | 10.0/10.0               | 10.0/10.0               | 10.0/10.0                          | 10.0/10.0                          | 10.0/10.0                          |
|                  | 5.9   | Acceleration time, laden/unladen                   | s  | 4.7/4.3 <sup>4)</sup>   | 4.8/4.3 <sup>4)</sup>   | 5.0/4.4 (4.8/4.1) <sup>4)</sup>    | 4.9/4.4 (4.7/4.1) <sup>4)</sup>    | 4.9/4.4 (4.8/4.2) <sup>4)</sup>    |
|                  | 5.10  | Service brake                                      | hydr./mech.  | hydr./mech.             | hydr./mech.             | hydr./mech.                        | hydr./mech.                        | hydr./mech.                        |
|                  | Electric-engine                               | 6.1  | Drive motor rating S2 60 min                               | kW                      | 5.7                     | 5.7                                | 5.7                                | 5.7                                |
| 6.2              |   | Lift motor rating at S3 15%                        | kW   | 12                      | 12                      | 12 (15) <sup>5)</sup>              | 12 (15) <sup>5)</sup>              | 12 (15) <sup>5)</sup>              |
| 6.3              |   | Battery according to DIN 43531/35/36 A, B, C, no   |  | Li-ION                  | Li-ION                  | Li-ION                             | Li-ION                             | Li-ION                             |
| 6.4              |   | Battery voltage/nominal capacity K5                | (V)/(Ah) o. kWh  | (48)/(414)              | (48)/(414)              | (48)/(414)                         | (48)/(414)                         | (48)/(414)                         |
| 6.4.a            |   | Battery energy content                             | kWh  | 21.5/17.2 <sup>6)</sup> | 21.5/17.2 <sup>6)</sup> | 21.5/17.2 <sup>6)</sup>            | 21.5/17.2 <sup>6)</sup>            | 21.5/17.2 <sup>6)</sup>            |
| 6.5              |   | Battery weight (+5%)                               | kg   | 269                     | 269                     | 269                                | 269                                | 269                                |
| 6.6              |   | Energy consumption according to DIN EN 16796       | kWh/h  | 2.7 <sup>7)</sup>       | 2.9 <sup>7)</sup>       | 3 (2.6) <sup>7)</sup>              | 3.5 (3) <sup>7)</sup>              | 3.6 (3.2) <sup>7)</sup>            |
| 6.6.1            |   | CO2 equivalent according to DIN EN 16796           | kg/h   | 1.46 <sup>4)</sup>      | 1.57 <sup>4)</sup>      | 1.62 (1.4) <sup>7)</sup>           | 1.89 (1.62) <sup>7)</sup>          | 1.95 (1.73) <sup>7)</sup>          |
| 6.7              | Turnover output according to VDI 2198         | t/h  | 56 <sup>4)</sup>   | 64 <sup>4)</sup>        | 54 (57) <sup>7)</sup>   | 60 (64) <sup>7)</sup>              | 67 (71) <sup>7)</sup>              |                                    |
| 6.8              | Turnover efficiency according to VDI 2198     | t/kWh  | 19 <sup>4)</sup>   | 20 <sup>4)</sup>        | 16 (17) <sup>7)</sup>   | 17 (18) <sup>7)</sup>              | 18 (20) <sup>7)</sup>              |                                    |
| Additional data  | 10.7  | Sound pressure level LpAZ (at the operator's seat) | dB(A)  | 65                      | 65                      | 65                                 | 65                                 | 65                                 |

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

2) Some truck specification require a reach-back restriction. Please note information in Linde World mast table

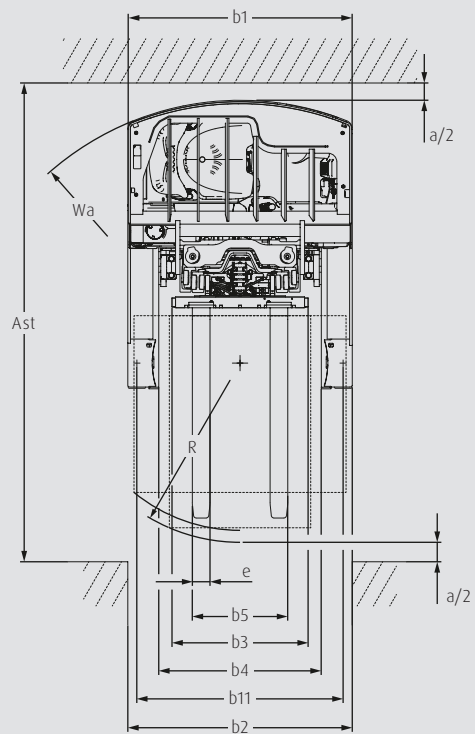
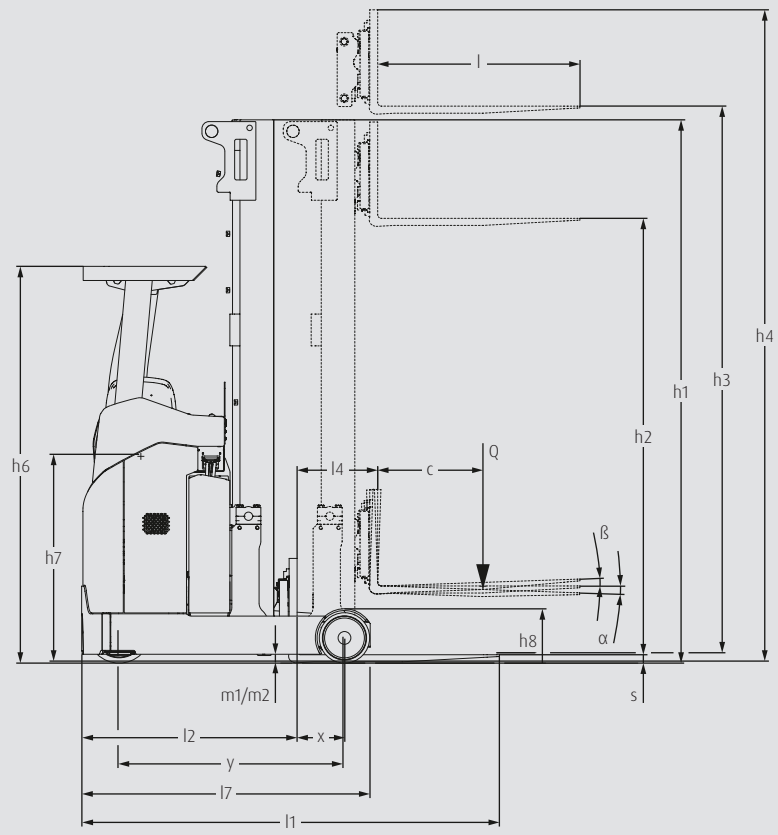
3) Depending on performance setting

4) With PowerDrive option

5) With PowerLift option

6) Installed/usable energy content

7) With option PowerDrive/PowerLift



# STANDARD AND OPTIONAL EQUIPMENT

| Manufacturer's type designation/equipment |   | Ri14 | Ri16 | Ri18 |
|---|---|------|------|------|
| Safety                                    | Linde Curve Assist  | ●    | ●    | ●    |
|   | Hydraulic overload protection   | ●    | ●    | ●    |
|   | Seat-actuated traction interlock  | ●    | ●    | ●    |
|   | Lift height related travel speed reduction  | ●    | ●    | ●    |
| Service                                   | Sealed, maintenance-free AC 5.7 kW drive and 12 or 15 kW lift motors  | ●    | ●    | ●    |
| Digitalisation                            | Comprehensive digital instrument display  | ●    | ●    | ●    |
|   | myLinde fleet management  | ○    | ○    | ○    |
|   | Radio data terminal bracket   | ○    | ○    | ○    |
| Operation/<br>load handling               | 180° electric steering  | ●    | ●    | ●    |
|   | Single axis joysticks   | ○    | ○    | ○    |
|   | Multi-function lever  | ○    | ○    | ○    |
|   | Lift height indicator above free lift zone  | ○    | ○    | ○    |
|   | PowerDrive to increase transport performance  | ○    | ○    | ○    |
|   | PowerLift to increase storing performance   | ○    | ○    | ○    |
|   | Lift height pre-selector  | ○    | ○    | ○    |
|   | Rack Protection Sensor  | ○    | ○    | ○    |
| Environment                               | Cold store protection to -30°C  | ○    | ○    | ○    |
| Electronics                               | Electric horn and emergency isolator  | ●    | ●    | ●    |
|   | Integrated Li-ION battery   | ●    | ●    | ●    |
|   | Linde Li-ION batteries and chargers   | ○    | ○    | ○    |
|   | Vision system, multiple cameras   | ○    | ○    | ○    |
| Workplace                                 | Linde twin accelerator pedals   | ●    | ●    | ●    |
|   | Resiliently mounted operator's compartment  | ●    | ●    | ●    |
|   | Adjustable steering wheel   | ●    | ●    | ●    |
|   | Single accelerator pedal  | ○    | ○    | ○    |
|   | Adjustable floor plate  | ○    | ○    | ○    |
|   | Heated seat   | ○    | ○    | ○    |
|   | Orange seat-belt  | ○    | ○    | ○    |
| Mast                                      | Tilting fork carriage and integral side shift   | ●    | ●    | ●    |
|   | Soft landing of forks   | ○    | ○    | ○    |
|   | Mast mounted CCTV camera system   | ○    | ○    | ○    |
| Attachments<br>and forks                  | Automatic side shifting centering   | ○    | ○    | ○    |
|   | Automatic horizontal fork leveling  | ○    | ○    | ○    |
|   | Green fork tips   | ○    | ○    | ○    |
|   | Additional hydraulic circuit for attachments  | ○    | ○    | ○    |
|   | Load backrest   | ○    | ○    | ○    |
| Axles and<br>tyres                        | Polyurethane drive wheel  | ●    | ●    | ●    |
|   | Extra grip drive wheel  | ○    | ○    | ○    |
|   | Polyurethane drive and load wheels  | ●    | ●    | ●    |
|   | Load wheel protection   | ○    | ○    | ○    |
| Drive and<br>brake system                 | Four independent braking systems. Regenerative and counter-current braking, holding brake control with automatic parking brake and all-wheel braking system | ●    | ●    | ●    |
| Lighting                                  | LED working lights at overhead guard  | ○    | ○    | ○    |
|   | Rotating/flashing beacon  | ○    | ○    | ○    |
|   | BlueSpot/TruckSpot safety light   | ○    | ○    | ○    |
|   | Red Warning Lines   | ○    | ○    | ○    |

● Standard equipment

○ Optional equipment

# MAST TABLES

## TRIPLEX MASTS (in mm)

| Series                          | 1504                             |                                  |                                  |                                  |                                  |                                  |                                  |                                  |  |
|---------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--|
| Lift                            | h3: 4520                         | h3: 5270                         | h3: 5720                         | h3: 6170                         | h3: 7070                         | h3: 8270                         | h3: 8570                         | h3: 9020                         |  |
| Height measurements             | h1: 2035<br>h2: 1375<br>h4: 5061 | h1: 2285<br>h2: 1625<br>h4: 5811 | h1: 2435<br>h2: 1775<br>h4: 6261 | h1: 2585<br>h2: 1925<br>h4: 6711 | h1: 2885<br>h2: 2225<br>h4: 7611 | h1: 3285<br>h2: 2625<br>h4: 8811 | h1: 3385<br>h2: 2725<br>h4: 9111 | h1: 3535<br>h2: 2875<br>h4: 9561 |  |
| Manufacturer's type designation |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |  |
| Ri14                            | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                |  |
| Ri16                            | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                |  |

Other masts available under request

| Series                          | 1505                             |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |  |
|---------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--|
| Lift                            | h3: 4595                         | h3: 5270                         | h3: 5795                         | h3: 6320                         | h3: 6695                         | h3: 7295                         | h3: 7595                         | h3: 7970                         | h3: 8270                         |  |
| Height measurements             | h1: 2060<br>h2: 1398<br>h4: 5073 | h1: 2285<br>h2: 1623<br>h4: 5748 | h1: 2460<br>h2: 1798<br>h4: 6273 | h1: 2635<br>h2: 1973<br>h4: 6798 | h1: 2760<br>h2: 2098<br>h4: 7173 | h1: 2960<br>h2: 2298<br>h4: 7773 | h1: 3060<br>h2: 2398<br>h4: 8073 | h1: 3185<br>h2: 2523<br>h4: 8448 | h1: 3285<br>h2: 2623<br>h4: 8748 |  |
| Manufacturer's type designation |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |  |
| Ri14                            | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                |  |
| Ri16                            | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                |  |
| Ri18                            | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                | ○                                |  |

| Series                          | 1505                             |                                  |                                  |                                  |                                   |                                   |                                   |                                   |  |
|---------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|
| Lift                            | h3: 8570                         | h3: 8870                         | h3: 9170                         | h3: 9470                         | h3: 9770                          | h3: 10070                         | h3: 10520                         | h3: 10970                         |  |
| Height measurements             | h1: 3385<br>h2: 2723<br>h4: 9048 | h1: 3485<br>h2: 2823<br>h4: 9348 | h1: 3585<br>h2: 2923<br>h4: 9648 | h1: 3685<br>h2: 3023<br>h4: 9948 | h1: 3785<br>h2: 3123<br>h4: 10248 | h1: 3885<br>h2: 3223<br>h4: 10548 | h1: 4035<br>h2: 3373<br>h4: 10998 | h1: 4185<br>h2: 3523<br>h4: 11448 |  |
| Manufacturer's type designation |                                  |                                  |                                  |                                  |                                   |                                   |                                   |                                   |  |
| Ri14                            | ○                                | ○                                | ○                                | ○                                | ○                                 | ○                                 | —                                 | —                                 |  |
| Ri16                            | ○                                | ○                                | ○                                | ○                                | ○                                 | ○                                 | ○                                 | —                                 |  |
| Ri18                            | ○                                | ○                                | ○                                | ○                                | ○                                 | ○                                 | ○                                 | ○                                 |  |

Other masts available under request

○ Optional equipment

— Not available

**h1:** Mast height, lowered

**h2:** Free lift

**h3:** Lift

**h4:** Mast height, extended

# CHARACTERISTICS



Armoured glass roof for optimal visibility



Height-adjustable pedal plate for maximum comfort



Effortless and efficient load handling



Quick access to all service components

## Safety

- Load wheel brakes (all-wheel braking system) as standard for short stopping distances, regardless of load weight or mast position
- Linde Curve Assist automatically adjusts the driving speed to the steering angle
- Optimised all-round visibility thanks to raised sitting position and improved workplace design
- Optional assistance systems like Linde Rack Protection Sensor and Linde Safety Guard
- Additional protection for the operator thanks to armoured glass roof and shoulder guard
- A range of warning and lighting options ensure increased visibility

## Ergonomics

- Fully decoupled operator work station and sprung seat minimise vibrations
- Spacious operator work station provides ample storage space and room to move
- Individually adjustable components, such as steering wheel, seat and pedal plate (optionally adjustable), ensure optimal ease of use
- Ergonomically positioned and intuitive controls
- Wide, low-entry step with anti-slip surface ensures effortless operator access and exit

## Handling

- Optional PowerLift and PowerDrive functions for increased lifting and driving speeds
- Short overall length enables precision manoeuvring in tight spaces
- Easy load handling thanks to Linde Load Control and dual pedal control
- Energy-efficient Li-ION batteries with flexible charging options and optional removable battery for multi-shift operation
- Modern 4.3-inch touch display shows all important truck information

## Service

- Sturdy design and maintenance-free components ensure maximum availability
- Easy access to all service-related components saves time during maintenance
- Integration into digital processes and modular design for maximum adaptability
- Innovative E&E architecture plus optional data transfer support remote maintenance and software updates
- Comprehensive, regional Linde MH service network for rapid support

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.



DS\_Ri14-Ri18\_1121\_en\_A\_0326

**ncnielsen**

Nørregade 66, DK-7860 Balling | Tlf.: +45 99 83 83 83  
nc-nielsen.dk | info@nc-nielsen.dk