

## Standard Equipment/Optional Equipment

### Standard Equipment

Long tiller with low mounting point  
 Fibre-glass reinforced tiller and tiller head (Grivory®)  
 Exxtral® motor and battery cover  
 Creep speed control (T20)  
 Proportional speed control (T20)  
 End-of-stroke resistance  
 Wide and deep storage compartments depending on battery size  
 Multi-function display with hourmeter including scheduled maintenance, fault code and battery discharge indicator  
 Key switch or LFM Go (PIN-code access)  
 AC motor

Linde LAC controller  
 CAN-bus architecture  
 Electromagnetic brake  
 Automatic parking brake  
 Cushion rubber or polyurethane drive wheel  
 Single polyurethane load wheels  
 Fork length: 1150 mm  
 Width over forks: 560 mm  
 Protection to -10°C  
 Vertical 2 PzS battery change  
 Horn  
 Clipboard

### Optional Equipment

Drive wheels: wet grip, non marking polyurethane, treaded polyurethane, treaded cushion  
 Load wheels: tandem polyurethane, single and tandem polyurethane greaseable  
 Vertical 3 PzS (T18, T20) battery change  
 Lateral 2 PzS (T16, T18, T20) and 3 PzS (T18, T20) battery change  
 Mobile roller trolley (1 battery)  
 Fixed roller trolley (2 batteries)  
 Alternative fork lengths and widths  
 Load backrest  
 Creep speed control (T16, T18)  
 Proportional speed control (T18)

Linde Connected Solutions:  
 ac:access control (PIN or RFID Dual), an:usage analysis and dt:crash detection  
 Cold store protection to -35°C  
 Automatic battery watering system  
 Built-in charger  
 High frequency charger  
 Castor wheels with springs & damper  
 Additional emergency stop button  
 Buzzer for noise sensitive areas  
 Initial lift end stop

#### Other options available on request

#### Li-ION technology

Fast Full Charge  
 Opportunity Charging  
 Fast Intermediate Charging  
 Maintenance Free  
 Long Lifetime  
 Good performance in Cold Store

#### Li-ION batteries

- fits in 2 PzS-B comp. (T16 ION, T18 ION): 1,8kWh-3,6kWh (24V/82-164Ah)  
 - fits in 2 PzS comp. (T16 ION, T18 ION, T20 ION): 4,5kWh-9kWh (205-410Ah)  
**Optimized 24V-Li-ION charger**  
 - v90: 1,8kWh (82Ah); v160:3,6kWh (164 Ah)  
 - v225: 4,5kWh-9kWh (205-410 Ah)



## Electric Pallet Truck Capacity 1600, 1800 and 2000 kg T16, T18, T20

Series 1152

Linde Material Handling



## Features

#### Steering system

- Proportional speed control varies truck speed automatically in relation to 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 tiller snapping on the motor cover

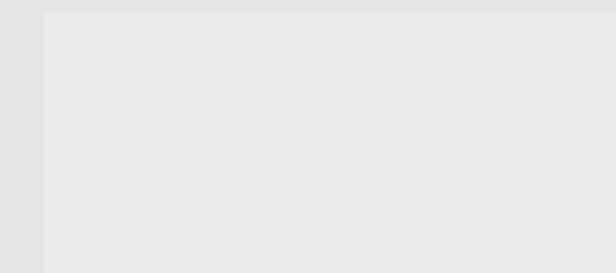
#### Working station & Display

- Wide, deep storage compartment for shrink wrap, pens, markers etc.
- Strong and durable Exxtral® motor and battery cover
- Multi-function display with hourmeter including scheduled maintenance, fault code and battery discharge indicator



#### Braking system

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



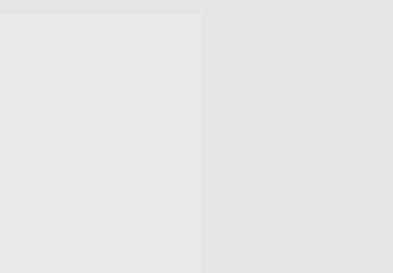
#### Tiller & Tiller head

- The ergonomic Grivory® material ensures effortless operation
- Long tiller with low mounting point provides a large safety clearance between operator and chassis
- Wrap-around hand protection
- Comfortable controls, operable with either hand and gloves



#### Comprehensive energy solutions

- Wide range of lead acid batteries from 2.1kWh to 7.1kWh (150-375Ah) optionally with built in 35A charger, and side battery change on rollers
- Li-ION batteries from 1.8kWh to 9.0kWh (82-410Ah) with optimized charger



#### Chassis & Forks

- Compact, rounded shape
- Strong, robust steel construction
- Low chassis skirt to protect operator's feet
- Sturdy fork tips: each can support a load of 2,000 kg without bending
- Large castor wheels with shock absorbers for stability on ramps and uneven floors



#### AC motor & Booster effect

- Powerful, smooth-running AC motor, 1.2 kW (at 100% output)
- Traction speed adjustable up to 6 km/h, laden or unladen
- Booster effect provides higher torque for additional power
- No roll-back on hill starts
- Gradient performance: 24% unladen, 10% with 2 t load



#### Maintenance/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



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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.

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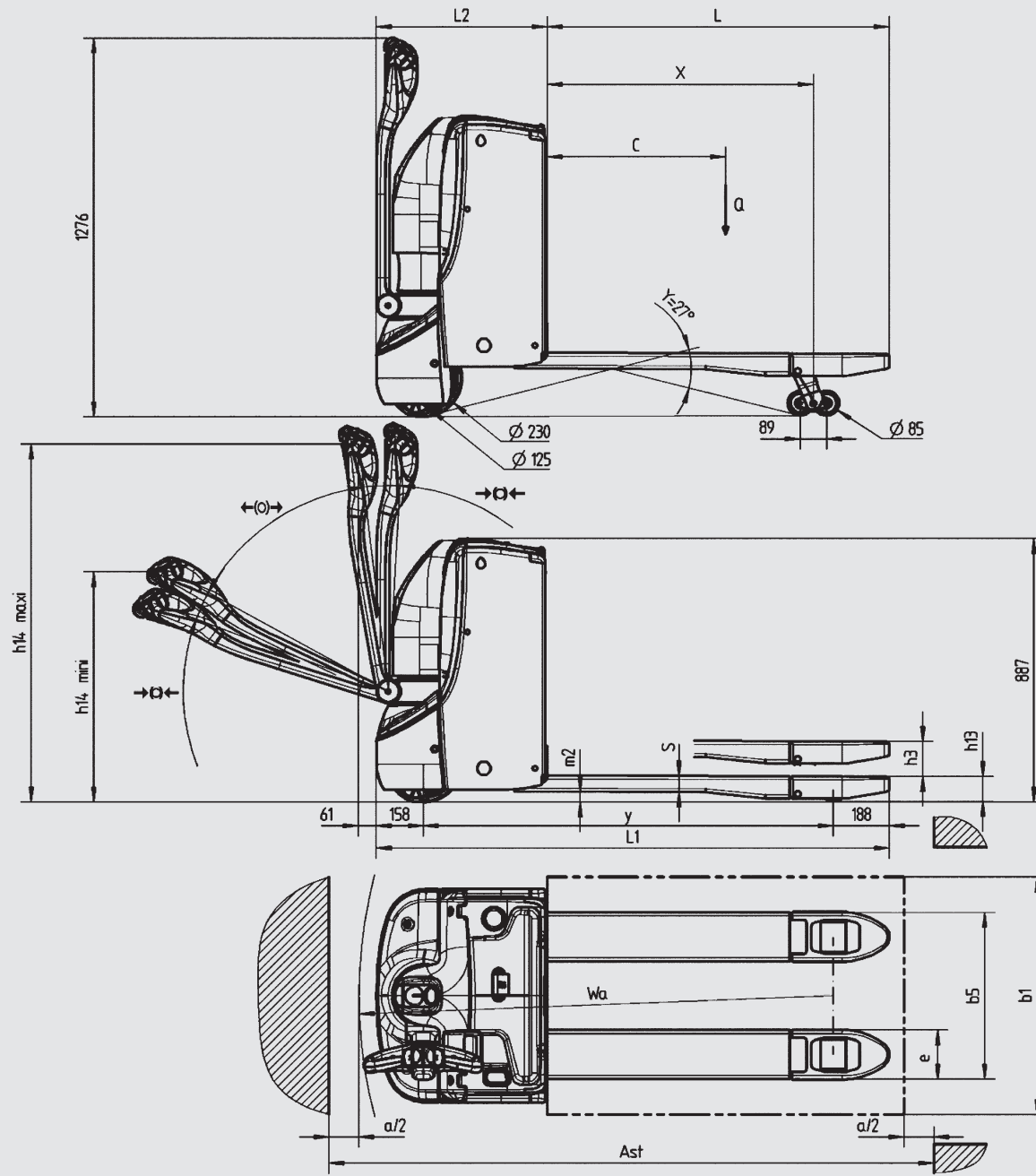


# Technical Data according to VDI 2198

|                 |  |   | LINDE                               | LINDE                                       | LINDE                                       |                                       |
|-----------------|--|---|-------------------------------------|---|---|---------------------------------------|
| Characteristics | 1.1  | Manufacturer  | LINDE                               | LINDE                                       | LINDE                                       |                                       |
|                 | 1.2  | Model designation                                   | <b>T16 / [T16 ION]<sup>1)</sup></b> | <b>T18 / [T18 ION]<sup>1)</sup></b>         | <b>T20 / [T20 ION]<sup>1)</sup></b>         |                                       |
|                 | 1.2a   | Series  | 1152                                | 1152  | 1152  |                                       |
|                 | 1.3  | Power unit  | Battery                             | Battery                                     | Battery                                     |                                       |
|                 | 1.4  | Operation   | Pedestrian                          | Pedestrian                                  | Pedestrian                                  |                                       |
|                 | 1.5  | Load capacity/Load                                  | Q (t)                               | 1.6   | 1.8   | 2.0                                   |
|                 | 1.6  | Load centre   | c (mm)                              | 600   | 600   | 600                                   |
|                 | 1.8  | Axle centre to fork face                            | x (mm)                              | 890 / 962 <sup>2)3)</sup>                   | 890 / 962 <sup>2)3)</sup>                   | 890 / 962 <sup>2)3)</sup>             |
|                 | 1.9  | Wheelbase   | y (mm)                              | 1312 / 1378 <sup>2)3)</sup>                 | 1312 / 1378 <sup>2)3)</sup>                 | 1312 / 1378 <sup>2)3)</sup>           |
| Weights         | 2.1  | Service weight                                      | (kg)                                | 421 [328] <sup>1)</sup>                     | 485 [349] <sup>1)</sup>                     | 582 [426] <sup>1)</sup>               |
|                 | 2.2  | Axle load with load, front/rear                     | (kg)                                | 681/1340 [591/1337] <sup>1)</sup>           | 748/1537 [650/1499] <sup>1)</sup>           | 874/1708 [749/1677] <sup>1)</sup>     |
|                 | 2.3  | Axle load without load, front/rear                  | (kg)                                | 327 / 94 [237 / 91] <sup>1)</sup>           | 350 / 135 [252 / 97] <sup>1)</sup>          | 432 / 150 [307 / 119] <sup>1)</sup>   |
| Wheels/Tyres    | 3.1  | Tyres rubber, SE, pneumatic, polyurethane           |                                     | R+P/P <sup>4)</sup>                         | R+P/P <sup>4)</sup>                         | R+P/P <sup>4)</sup>                   |
|                 | 3.2  | Tyre size, front                                    |                                     | Ø 230 x 75                                  | Ø 230 x 75                                  | Ø 230 x 75                            |
|                 | 3.3  | Tyre size, rear                                     |                                     | Ø 85x105 (Ø 85x100) <sup>5)</sup>           | Ø 85x105 (Ø 85x100) <sup>5)</sup>           | Ø 85x105 (Ø 85x100) <sup>5)</sup>     |
|                 | 3.4  | Auxiliary wheels (dimensions)                       |                                     | Ø 125 x 40                                  | Ø 125 x 40                                  | Ø 125 x 40                            |
|                 | 3.5  | Wheels, number front/rear (x = driven)              |                                     | 1x + 2 / 2 (1x + 2 / 4) <sup>5)</sup>       | 1x + 2 / 2 (1x + 2 / 4) <sup>5)</sup>       | 1x + 2 / 2 (1x + 2 / 4) <sup>5)</sup> |
|                 | 3.6  | Track width, front                                  | b10 (mm)                            | 482   | 482   | 482                                   |
| Dimensions      | 3.7  | Track width, rear                                   | b11 (mm)                            | 355 / 395 / 515                             | 355 / 395 / 515                             | 355 / 395 / 515                       |
|                 | 4.4  | Lift  | h3 (mm)                             | 125   | 125   | 125                                   |
|                 | 4.9  | Height of tiller arm in operating position, min/max | h14 (mm)                            | 740 / 1208                                  | 740 / 1208                                  | 740 / 1208                            |
|                 | 4.15   | Height, lowered                                     | h13 (mm)                            | 88  | 88  | 88                                    |
|                 | 4.19   | Overall length                                      | l1 (mm)                             | 1650  | 1725 [1650] <sup>1)</sup>                   | 1800 [1725] <sup>1)</sup>             |
|                 | 4.20   | Length to fork face                                 | l2 (mm)                             | 500   | 575 [500] <sup>1)</sup>                     | 650 [575] <sup>1)</sup>               |
|                 | 4.21   | Overall width                                       | b1/b2 (mm)                          | 720   | 720   | 720                                   |
|                 | 4.22   | Fork dimensions                                     | s/e/l (mm)                          | 55 x 165 x 1150                             | 55 x 165 x 1150                             | 55 x 165 x 1150                       |
|                 | 4.25   | Fork spread, min/max                                | b5 (mm)                             | 520 / 540 / 560 / 680                       | 520 / 540 / 560 / 680                       | 520 / 540 / 560 / 680                 |
|                 | 4.32   | Ground clearance, centre of wheelbase               | m2 (mm)                             | 36 / 161 <sup>4)</sup>                      | 36 / 161 <sup>4)</sup>                      | 36 / 161 <sup>4)</sup>                |
| 4.33            | Aisle width with pallet 1000 x 1200 across forks | Ast (mm)  | 1900 <sup>7)8)9)</sup>              | 1975 [1900] <sup>1)7)8)9)</sup>             | 2050 [1975] <sup>1)7)8)9)</sup>             |                                       |
| 4.34            | Aisle width with pallet 800 x 1200 along forks   | Ast (mm)  | 1950 <sup>7)8)</sup>                | 2025 [1950] <sup>1)7)8)</sup>               | 2100 [2025] <sup>1)7)8)</sup>               |                                       |
| 4.35            | Turning radius                                   | Wa (mm)   | 1440 / 1510 <sup>7)7)</sup>         | 1515 / 1585 [1440 / 1510] <sup>1)7)7)</sup> | 1590 / 1660 [1515 / 1585] <sup>1)7)7)</sup> |                                       |
| Performance     | 5.1  | Travel speed, with/without load                     | (km/h)                              | 6 / 6                                       | 6 / 6                                       | 6 / 6                                 |
|                 | 5.2  | Lifting speed, with/without load                    | (m/s)                               | 0.035 / 0.044                               | 0.033 / 0.044                               | 0.034 / 0.044                         |
|                 | 5.3  | Lowering speed, with/without load                   | (m/s)                               | 0.065 / 0.062                               | 0.065 / 0.063                               | 0.07 / 0.06                           |
|                 | 5.8  | Maximum climbing ability, with/without load         | (%)                                 | 13.0 / 24.0                                 | 12.0 / 24.0                                 | 10.0 / 24.0                           |
|                 | 5.9  | Acceleration time, with/without load                | (s)                                 | 7.4 / 6.4                                   | 7.5 / 6.4                                   | 7.6 / 6.4                             |
|                 | 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 S3 15%                        | (kW)                                | 1   | 1   | 1.2                                   |
|                 | 6.3  | Battery according to DIN 43531/35/36 A,B,C,no       |                                     | 2PzS-B [Li-ION]                             | 43 535/B 2PzS [Li-ION]                      | 43 535/B 3PzS [Li-ION]                |
|                 | 6.4  | Battery voltage/rated capacity (5h)                 | (V/Ah)                              | 24 / 150 [24 / 82] <sup>1)</sup>            | 24 / 250 [24 / 164] <sup>1)</sup>           | 24 / 375 [24 / 410] <sup>1)</sup>     |
|                 | 6.5  | Battery weight (± 5%)                               | (kg)                                | 157 [63]                                    | 212 [84]                                    | 288 [151]                             |
|                 | 6.6  | Power consumption according to VDI cycle            | (kWh/h)                             | 0.38  | 0.38  | 0.38                                  |
| Others          | 8.1  | Type of drive control                               |                                     | LAC   | LAC   | LAC                                   |
|                 | 8.4  | Noise level at operator's ear                       | (dB(A))                             | <70   | <70   | <70                                   |

1) Figures in [ ] with Li-ION battery see line 6.4  
 2) Forks upraised / lowered  
 3) (+ 5 mm)  
 4) Solid rubber + polyurethane / polyurethane  
 5) Figures in parenthesis with tandem load wheels.

6) min./max.  
 7) With creep speed = tiller in vertical position  
 8) Including a 200 mm (min.) operating aisle clearance.  
 9) With fork length 1150 mm



| Battery compartment | Energy (kWh) Lead Acid [Li-ION] | Battery Capacity (Ah) Lead Acid [Li-ION] | Battery weight (kg) Lead Acid [Li-ION] | Dimension l2 (mm) | Dimension l1 (mm) | Fork length l (mm) | Turning radius Wa (mm) | Aisle width Pallet 800 x 1200 lengthwise | Aisle with Pallet 1000 x 1200 cross-wise | Full charging time for Li-ION width optimized charger |
|---------------------|---------------------------------|--|--|-------------------|-------------------|--------------------|------------------------|--|--|---|
| 2-PzS-B*            | 2,66 [1,8/3,6]                  | 150 [82/164]                             | 140 [63/84]                            | 500               | 1650              | 1150               | 1440                   | 1950                                     | 1900                                     | 1h30min/1h30min                                       |
| 2-PzS               | 4,44 [4,5/9,0]                  | 250 [205/410]                            | 210 [110/151]                          | 575               | 1725              | 1150               | 1515                   | 2020                                     | 1975                                     | 1h30min/2h40min                                       |
| 3-PzS**             | 6,66                            | 270-375                                  | 290                                    | 650               | 1800              | 1150               | 1590                   | 2100                                     | 2050                                     | -   |

\*not available on the T20 ION / \*\*not available on the T16 models

