

## Standard and optional equipment

### Standard equipment

#### General

- Four-point wheel configuration (N 20)
- Five-point wheel configuration (N 20 HP/N 24 HP)
- Fork configuration 520 x 2350 mm long (N 20/N 20 HP)
- Fork configuration 520 x 1150 mm long (N 24 HP)
- Linde twin-grip steering incorporating lift, lower and traction functions
- Self-centring electric steering
- Digital instrument display
- 3.0 kW AC maintenance-free drive motor
- 1.5 kW AC maintenance-free lift motor
- Linde digital control system
- Cushion rubber drive wheel
- Polyurethane castor and tandem load wheels
- Battery on rollers in truck
- Suitable for operation down to -10°C
- Standard colour scheme vermilion and charcoal grey

#### Batteries and chargers

- 24 V, 270 Ah to 620 Ah
- Wide selection of chargers available to suit application

#### Electronics

- Linde Digital Control system (LDC) incorporating CAN bus technology

#### Safety

- Emergency circuit isolator
- Three independent braking systems
- Electric horn
- Electrical and hydraulic overload protection
- Hand and foot protection
- Cushioned non-slip platform material
- Resilient front bumper
- All pivoting wheels remain within chassis profile
- Battery retaining device
- Traction interlocks

### Options

- Second level picking with step up access
- Width over forks 520 and 560 mm
- Fork length 1150, 1450, 2150 and 2350 mm
- Inching control
- On-board mounting for computer or clipboard
- Polyurethane drive wheel
- Non marking rubber drive wheel
- Single mounted load wheels

- Accessories pole
- Greasable load wheels
- Single or twin roller stand for battery changing
- Cold store protection to -35° C
- Load backrest 1200 mm
- Adjustable height twin-grip control
- Alternative colour schemes

Other options available on request



## Electric Low Level Order Pickers Capacity 2000 kg & 2400 kg N 20, N 20 HP, N 24 HP

SERIES 132

#### Introduction

The Linde matrix range of low level order pickers sets new industry standards for performance combined with outstanding comfort and safety for highly efficient and productive first level order picking in intensive applications. The unique design places the operator at the front with the battery behind to minimise the number of movements the operator has to make during an intensive picking cycle, enabling optimum productivity without fatigue.

#### Performance

The Linde drive system employing advanced control technology translates the powerful output of the maintenance-free AC traction and pump motors into seamless productivity. A comprehensive selection of DIN batteries ensures that each truck is precisely matched to the demands of individual order picking applications.

#### Operator comfort

A perfect interface between operator and truck is assured with the Linde matrix concept. The new N series incorporates the unique Linde twin-grip steering and control system for effortless travelling and manoeuvring. All truck functions are actuated by tactile, thumb operated dual controls ergonomically grouped on the protected steering control head for ease of use with either hand. The low

120 mm height of the cushioned platform enables effortless entry and exit while a profiled scoop seat provides a superbly comfortable semi-seated driving posture.

#### Durability and safety

The Linde matrix order picking range is constructed for consistent reliability in demanding applications. Its compact, robot-welded chassis ensures maximum structural integrity and durability. The rugged construction and components provide a low centre of gravity for excellent stability in all situations.

#### Maximum uptime and economy

Efficiency at work, efficiency in servicing. With uptime ratios of up to 1000 hours between services and a computerised diagnostic system, maintenance intervals are minimal and operating costs are reduced. All the truck's performance parameters can easily be configured to match the order picking routines of the customers application.

## Features

#### Operating and stability systems

- Four-point wheel configuration for assured stability (N 20)
- Five-point wheel configuration with electronically controlled, hydraulically suspended castor wheels which automatically select the optimum ratio between stability and traction for constant ground contact (N 20 HP/N 24 HP)
- Automatic, regenerative electric braking when traction butterfly released to neutral
- Controlled electric braking when opposite direction of travel is selected
- Self-centring steering

#### Optimum energy solutions

- Wide choice of battery capacities from 270 Ah to 620 Ah and chargers to match the application requirements
- Vertical or side, battery changing options



#### Designed to optimise the picking cycle

The unique design concept of the Linde low level order picking range is based on a thorough study of the order picking process to minimise the physical demands placed on the operator, in order to achieve consistently faster and safer picking rates without fatigue

#### Linde e twin-grip steering control

- The superbly functional twin-grip controller provides the perfect interface between truck and operator
- The operator's arms always remain safely within the profiles of the truck when travelling or manoeuvring
- The twin-grip design minimises the operator's arm movements when turning
- Ensures safe, rapid order picking, internal load transfer and marshalling activities

#### Maximum uptime

- Maintenance-free AC traction motor
- Integrated CAN bus diagnostic system
- Adjustable performance parameters
- Easy service access
- Up to 1000 hours uptime between services



#### Comfortable, intuitive workstation

- The comfortable driving posture ensures effortless and stress-free working
- Wide, easy access and exit from either side
- Ergonomic and intuitive control layout
- Generous storage compartments
- Digital instrument display
- A padded scoop seat provides additional comfort
- A cushioned platform isolates the operator from surface vibrations
- Excellent all-round visibility

#### Safe, impressive performance

- Powerful 3 kW high-torque AC maintenance-free drive motor
- 13% gradient performance fully laden
- Maximum 10/12 km/h, laden/unladen (N 20)
- Maximum 12/12 km/h laden/unladen (N 20 HP/N 24 HP)
- No roll back on hill starts
- Automatic electric braking when traction lever released to neutral

#### Effortless manoeuvrability

- Progressive electric power steering with positive feedback
- Self-centring steering for faster picking cycles
- Automatic speed reduction when cornering

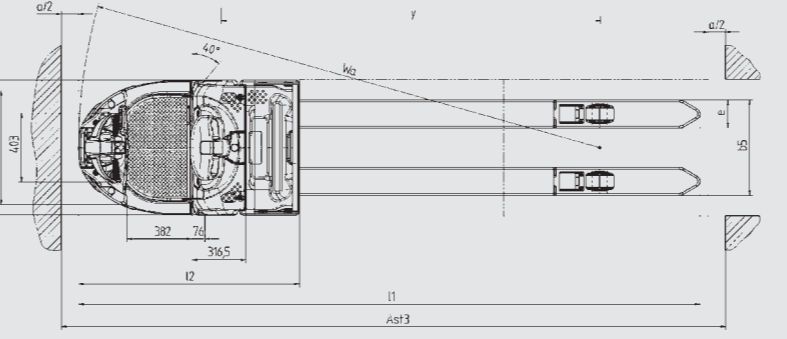
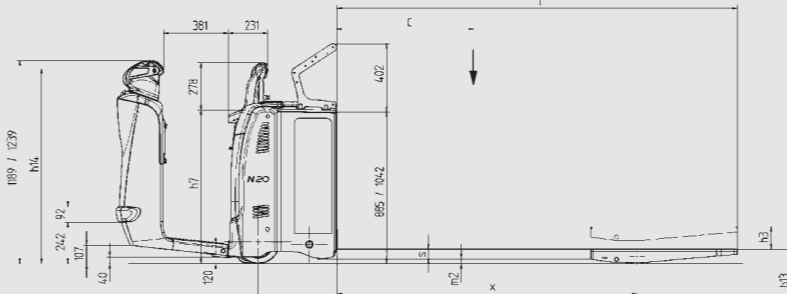
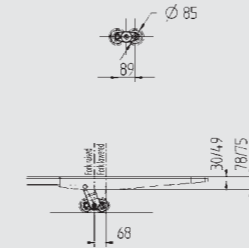
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# Technical data

		N20 (2350 long forks)		N24 (1150 long forks)	
Characteristics	1.1	Manufacturer	LINDE	LINDE	
	1.2	Model designation	<b>N20 (2350 long forks)</b>	<b>N24 (1150 long forks)</b>	
	1.3	Power unit: battery, diesel, petrol, LPGas, mains power	Battery	Battery	
	1.4	Operation: manual pedestrian, stand-on, seated, order picker	Order picker	Order picker	
	1.5	Load capacity	Q (kg)	2000	2400
	1.6	Load centre	c (mm)	1200	600
	1.8	Axle centre to fork face, forks raised/lowered	x (mm)	1702/1763	902/963
	1.9	Wheelbase, forks raised/lowered	y (mm)	2264/2325 <sup>1)</sup>	1464/1525 <sup>1)</sup>
	Weights	2.1	Service weight	kg	1160
2.2		Axle load with load, front (drive)/rear (load)	kg	-	1314/1801
2.3		Axle load without load, front (drive)/rear (load)	kg	-	900/215
Wheels	3.1	Tyres front (drive)/rear (load) C = cushion rubber, P = polyurethane		C + P/P; P + P/P	C + P/P; P + P/P
	3.2	Tyre size, front (drive)	mm	Ø 254 x 102	Ø 254 x 102
	3.3	Tyre size, rear (load)	mm	2 x Ø 85 x 105	2 x Ø 85 x 105
	3.4	Auxiliary wheels (dimensions)	mm	Ø 125 x 60	Ø 125 x 60
	3.5	Wheels, number, front (drive)/rear (load) (x = driven)		1x + 1/4 ; 1x + 2/4 <sup>2)</sup>	1x + 2/4 <sup>3)</sup>
	3.6	Track width, front (drive)	b10 (mm)	544	544
	3.7	Track width, rear (load)	b11 (mm)	-	-
Dimensions	4.4	Lift	h3 (mm)	120	120
	4.8	Height of seat	h7 (mm)	900/1000	900/1000
	4.9	Control handle height, travel position minimum/maximum	h14 (mm)	1140/1190	1140/1190
	4.15	Fork height, lowered	h13 (mm)	85	85
	4.19	Overall length	l1 (mm)	3747 <sup>1)</sup>	2547 <sup>1)</sup>
	4.20	Length to fork face	l2 (mm)	1397 <sup>1)</sup>	1397 <sup>1)</sup>
	4.21	Overall width	b1 (mm)	790	790
	4.22	Fork dimensions	s/e/l (mm)	60 x 166 x 2350	60 x 166 x 1150
	4.25	Fork spread	b5 (mm)	520	520
	4.32	Ground clearance, centre of wheelbase, forks raised/lowered	m2 (mm)	150/30	150/30
	4.33	Aisle width, pallet 1000 x 1200 across forks	Ast (mm)	-	2797 <sup>1)</sup>
4.34	Aisle width, pallet 800 x 1200 along forks	Ast (mm)	3897 <sup>1)</sup>	2797 <sup>1)</sup>	
4.35	Turning radius, forks raised	Wa (mm)	3090/3158 <sup>1)</sup>	2290/2358 <sup>1)</sup>	
Performances	5.1	Travel speed, with/without load (4-point version; 5-point version)	km/h	10/12; 12/12	12/12 <sup>1)</sup>
	5.2	Lifting speed, with/without load	m/s	0.031/0.039	0.031/0.039
	5.3	Lowering speed, with/without load	m/s	0.076/0.073	0.076/0.073
	5.8	Maximum climbing ability, with/without load, 5 minute rating	%	-	-
	5.9	Acceleration time, with/without load (forward/reverse)	s	1.44/1.04 ; 1.51/1.21 <sup>2)</sup>	-
	5.10	Service brake		Electro-magnetic/electric	Electro-magnetic/electric
Drive	6.1	Driving motor, 60 minute rating	kW	3.0	3.0
	6.2	Lift motor 15% rating	kW	1.5	1.5
	6.3	Battery to DIN		43535B	43535B
	6.4	Battery voltage/rated capacity (5 h)	V/Ah	24/620	24/620
	6.5	Battery weight (±5%)	kg	485	485
Other	8.1	Type of drive control		LAC controller	LAC controller
	8.4	Noise level at operator's ear	dB (A)	-	-

Figures for standard truck version may vary with alternative specifications  
 1) Dimensions may vary with alternative batteries  
 2) Data for 4-point version; 5-point version  
 3) N24 is only available in 5-point version  
 4) Optional single load wheels (Ø 85 x 105 mm) are available



AST = Wa - x + l6 + a  
 a: security distance = 200 mm



	N20		Reverse		N24		Reverse	
	Forward	Forward	unloaded	loaded	Forward	Forward	unloaded	loaded
	unloaded	loaded	unloaded	loaded	unloaded	loaded	unloaded	loaded
4-point version	12	10	10	10	-	-	-	-
5-point version	12	12	10	10	12	12	10	10