

Electric High-Level Order Picker 1100 kg

Linde

V 11



V 11 high-level order pickers are compactly built high-performance machines designed for picking at heights up to 6000 mm.

Two versions are available:

- Model V 11-01 with fixed forks welded to the operator platform, for working with walk-on pallets
- Model V 11-02 with supplementary fork lift mast on operator platform, optionally fixed or adjustable forks

Main features

- Overall chassis width 880-980-1080 mm
- Operator platform width 900-1100-1200-1300-1400 mm
- Platform main lift up to 4365 mm

Operator compartment

Operator cab designed to most advanced ergonomic and occupational health standards, combined with high operator comfort to permit high order picking performance. Cab is suspension-mounted and has a floor designed to absorb shock and vibration that may occur during travel, lifting and lowering motions. Rounded contours avoid obstruction and interference with smooth progress of order picking cycle. Large padded backrest for relaxed driving and standing position. Low cab step height and three-piece side barriers increase safety for operator and allow order picking at floor level. Control console fitted with controls sized to afford sure and comfortable grip and maintain correct posture. Clear and distinct control layout enables all main functions to be operated separately or in combination without shifting position of hands. Key-lock truck switch and all controls integrated in housing to provide full order picking capability when installed on load-side. Control console usable on either mast or load-side, supported by rounded contours and load-side working space. Integrated display panel positioned in operator's line of sight shows only operating and status information currently needed. Membrane keypad for hour meter, height indicator, wheel

position and battery status as well as for operator and service information read-out. Separate control panel for special functions and lighting installed in overhead guard. Neon lamps can be switched separately and focused to illuminate front of storage racks, load handler and/or cab. Auxiliary functions such as external positive guidance or mobile safety system also incorporated into control console. Storage compartments, pen holders and space for bottles, cans or tools integrated in cab lining. Prepared mountings on interior walls for additional picking aids and tools. Mast-side plastic screen fitted between mast sections shields operator from drafts and travel noise. Rescue winch integrated in overhead guard. Open upward view. Easy, space-saving integration and mounting of accessories.

Model V 11-01, fixed forks, no supplementary lift

Fixed forks welded to operator platform. Direct walk-on access to picking pallet for operator.

Model V 11-02, supplementary lift forks

Pallet can be raised to most convenient working level for picking. Optimum matching of lift carriage and fork carriage minimises dead space to allow full utilisation of pallet surface area. Optional variation with supplementary lift and walk-on pallet facility.

Chassis

Torsion-resistant steel construction, large-diameter wheels. Hinged steel equipment compartment hood detaches conveniently. Walk-on plastic battery hood usable as storage space. Sloping rear hood gives good view of travel path.

Drive

Robust, economical high-performance drive concept employing minimum-wear, low-maintenance motor in combination with no-load MOSFET technology for highly responsive driving independent of load weight. High economy resulting from deletion of braking and direction switching contactors. Drive status monitored and displayed for efficient preventive maintenance. High riding comfort due to smooth starting and continuous acceleration to maximum travel speed.

LSC (Linde System Control)

Control system very neatly constructed of small number of components, high standard of reliability and safety. The core of the system is modularised control technology, which, working alongside the CAN-Bus and integrated height measurement system, provides optimum levels of working.

- Reliable processing of end position signals with advance ramp functions for pleasant working
- Energy recovery to extend battery run time
- Readily optimisable to specific applications
- Height measurement system
- Different forward and reverse travel speed settings available
- Combined motions, e.g. lifting while travelling, executable outside aisles at maximum allowable speeds
- Diagnosis and service interface allows convenient configuring and initialisation via laptop computer

Steering

Electric steering with defined center position as standard. Steering angle indicated on control console.

Positive guidance

Mechanical or inductive wire guidance. Straight-ahead position of drive wheel automatically set on mechanically guided trucks.

Mast

Compact mast construction of high stability and torsion resistance. Outstanding visibility through mast. Integrated electrical and hydraulic transition and end position cushioning minimises shock loads.

Hydraulics

High-convenience proportional control valves for end position and transition cushioning and for ramped starting and stopping of all hydraulic motions.

LINDE

Order Picking Truck

Designation acc. to VDI 3586

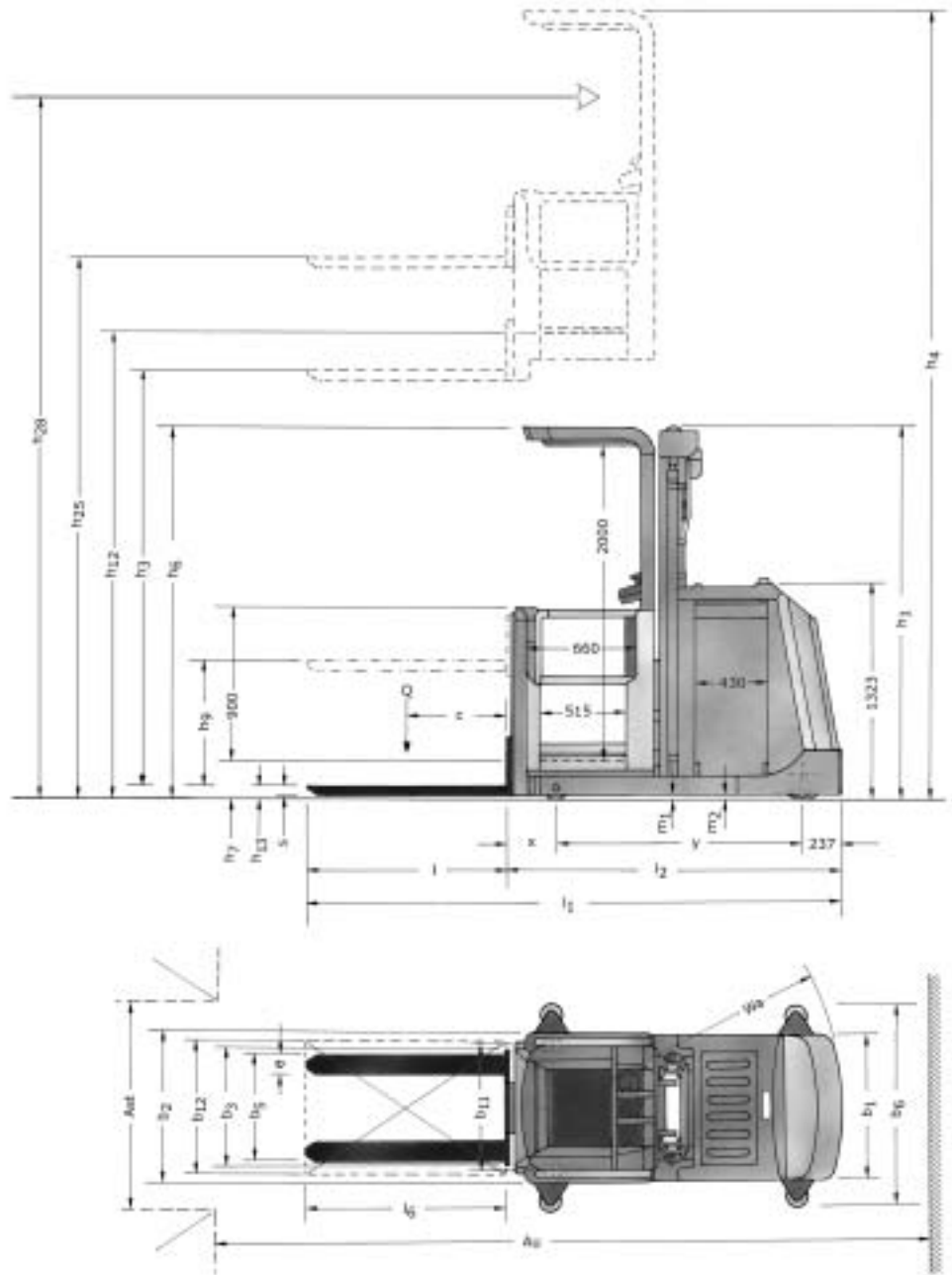
Data sheet for materials handling equipment

Abbre

June 2002

			Linde	Linde
Characteristics	1.1	Manufacturer	Linde	Linde
	1.2	Model designation	V 11 Simple Mast	V 11 Telescopic Mast
	1.3	Power unit: battery, diesel, petrol, LP gas, mains power	Battery	Battery
	1.4	Operation: manual, pedestrian, stand-on, seated, order picker	Order picker	Order picker
	1.5	Load capacity	Q (kg)	1100
	1.6	Load centre	c (mm)	400/600
	1.8	Axle centre to fork face	x (mm)	298
	1.9	Wheelbase	y (mm)	1447
Weights	2.1	Service weight	kg	2600
	2.2	Axle load with load, front/rear	kg	845/2855
	2.3	Axle load without load, front/rear	kg	1415/1185
Wheels and tyres	3.1	Tyres: solid rubber, contoured solid (superelastic), polyurethane	Polyurethane / Polyurethane	Polyurethane / Polyurethane
	3.2	Tyre size, front	Ø 310 x 125	Ø 310 x 125
	3.3	Tyre size, rear	Ø 170 x 152	Ø 170 x 152
	3.5	Wheels, number front/rear	1x/2	1x/2
	3.6	Track width, front	b10 (mm)	-
	3.7	Track width, rear	b11 (mm)	700
	Dimensions	4.2	Height of mast, lowered	h1 (mm)
4.3		Free lift	h2 (mm)	-
4.4		Lift	h3 (mm)	1725 1)
4.5		Height of mast, extended	h4 (mm)	4065
4.7		Height of overhead guard (cabin)	h6 (mm)	2340
4.8		Height of seat/stand-on platform	h7 (mm)	240
4.11		Supplementary lift	h9 (mm)	740
4.14		Platform height, raised	h12 (mm)	1965
4.15		Fork height, lowered	h13 (mm)	65
4.19		Overall length	l1 (mm)	3180
4.20		Length to fork face	l2 (mm)	1982
4.21		Overall width	b1/b2 (mm)	880/900
4.22		Fork dimensions	s/e/l (mm)	60 x 120 x 1200
4.23		Fork carriage to DIN 15173, class/form A, B		no
4.24		Width of fork carriage	b3 (mm)	660
4.25		Fork spread, minimum/maximum	b5 (mm)	560
4.27		Width over side guide rollers	b6 (mm)	920
4.31		Ground clearance, mast	m1 (mm)	30 4)
4.32		Ground clearance, centre of wheelbase	m2 (mm)	50 4)
4.33		Aisle width pallet 1000 x 1200 crosswise	Ast (mm)	-
4.34	Aisle width pallet 800 x 1200 lengthwise	Ast (mm)	1080	
4.35	Turning radius	Wa (mm)	1685	
4.41	End aisle width, with/without load	Au (mm)	3435	
Performance	5.1	Travel speed, with/without load	km/h	10.5/11.0 3)
	5.2	Lifting speed, with/without load	m/s	0.30/0.36 3)
	5.3	Lowering speed, with/without load	m/s	0.35/0.35
	5.9	Acceleration time, with/without load	s	7.0/7.0
	5.10	Service brake		Regenerative
	Drive	6.1	Drive motor, 60 minute rating	kW
6.2		Lift motor, 15 % rating	kW	7.0
6.3		Battery acc. IEC		254-2
6.4		Battery voltage/rated capacity (5 h)	V/Ah	48/420 L
6.5		Battery weight (± 5%)	kg	720
Other	8.1	Type of drive control		MOSFET
	8.4	Noise level, at operator's ear	dB (A)	< 70

- 1) For alternative lift heights, see table.
- 2) Values including battery, see line 6.5.
- 3) Figures valid for minimum lowered mast height.
- 4) Sensors, antennas, min. 10 mm.



Mast Unit with Simple Lift Mast

Lift Height		Total lift height from ground	Supplementary lift	Platform height	Picking height	Retracted height	Extended height
without supplementary lift	with supplementary lift						
h_3 (mm)	h_3+h_9 (mm)	h_{25} (mm)	h_9 (mm)	h_{12} (mm)	h_{28} (mm)	h_1 (mm)	h_4 (mm)
1900	2640	2705	740	2140	3740	2450	4240
2350	3090	3155	740	2590	4190	2900	4690
2850	3590	3655	740	3090	4690	3400	5190

Mast Unit with Telescopic Lift Mast

Lift Height		Total lift height from ground	Supplementary lift	Platform height	Picking height	Retracted height	Extended height
without supplementary lift	with supplementary lift						
h_3 (mm)	h_3+h_9 (mm)	h_{25} (mm)	h_9 (mm)	h_{12} (mm)	h_{28} (mm)	h_1 (mm)	h_4 (mm)
2825	3565	3630	740	3065	4665	2250	5165
3225	3965	4030	740	3465	5065	2450	5565
4125	4865	4930	740	4365	5965	2900	6465

Equipment



Brakes

High-performance electromagnetic safety brake controlled by deadman's pedal. Automatically engaging electronically controlled service brake actuated on decelerating with drive switch. Smooth, controlled braking by reversing position of drive switch. Countercurrent braking. Split operation of braking system eliminates wear for the better part. Spring-loaded brake on drive motor as stationary safety or emergency brake and regenerative braking by drive motor when travelling.

Safety and ergonomic design

- Spring-loaded emergency and parking brake
- Electromagnetic safety brake controlled by deadman's pedal
- Automatic regenerative motor brake and countercurrent brake
- Battery discharge indicator with lift cutout
- Horn
- Beacon lamp actuated during travel
- Two-hand safety operation of controls
- Platform lift with two primary lift chains
- Automatic travel speed reduction with high platform lift
- Programmable deceleration and safety stops with elevated operator platform
- Side safety barriers fitted with gas jacks and safety switches
- Battery lock well accessible at top. Battery hood cannot be closed when lock is open, enhanced safety when changing batteries.

- CE-compliant safety package
- All travel and lift motions interlocked through deadman's switch and integrated two-hand operation
- Safely rounded contours, smooth and padded surfaces, plenty of integrated storage space
- Rescue winch integrated in overhead guard, quickly and easily operated without tools
- Drain valve under rear hood readily accessible in aisle

Servicing and maintenance

- Long-term fault memory, fault code display
- Central servicing and diagnosis interface for connection of portable service computer
- Equipment compartment and rear hood designed to allow convenient access in aisle
- Walk-on battery hood makes maintenance easier

Battery compartment and batteries

Battery change on either side using lift truck. Optional battery change by lift truck or roller track for multi-shift operation. DIN standard batteries, 48 V, 420 L Ah.

Automation

Components available for matching order picker to specialised working conditions or dependencies.

Options

- Positive aisle-end braking
- Lift limiting
- Mechanical or inductive wire guidance
- Mast-side and/or load-side control position
- Lighting focusable on rack compartments, pallet or cab interior
- Fan in overhead guard
- Infinitely variable height adjustment of mast-side control console
- Mobile safety system
- Mobile data terminal, printer, scanner
- Supplementary fork lift
- Alternative chassis widths
- Alternative mast heights for simple and telescopic lifting masts
- Carriage for adjustable forks (≅ FEM)
- Alternative cab widths
- Alternative overhead guard heights
- Writing stand/clipboard
- Front console comfort padding and storage facilities
- Power outlet on overhead guard
- Macrolon screen for overhead guard
- Battery hood railing
- Roll-out battery change
- Add. battery cable set
- Padded side barriers
- Third photo-electric safety barriers on the load side
- Load side cover with space for tools etc. and replaceable backrest
- Other options available on request

Subject to alteration in the interests of technical progress. Illustrations and specifications non-binding. All dimensions subject to the usual tolerances.