Electric High-Level Order Picker 1100 kg V11

SERIES 015

Linde Material Handling

Safety

The V11 truck is designed to guarantee the operator's safety. Its outstanding visibility through and to either side of the mast offers the highest level of security. The low cab step height increases safety, and makes the V11 truck as easy to use at maximum height as at floor level. The V11 will only move once the floor-located deadman's switch is activated.

Performance

Efficiency and high-performance are the best words to describe the V11 high-level order picker. It is capable of picking at heights up to 7000 mm. Its powerful and economical drive unit combines optimal performance with low energy consumption and is extremely resistant.

Comfort

Built to ensure high-performance, the V11 truck is also very comfortable for the operator. Regardless of the weight of the load, the cab always sets it down gently thanks to the hydraulic cushioning of the cylinder during the stroke process. Suspension-mounted, the platform with its several storage compartments absorbs shocks and vibration that may occur during travel lifting and lowering motions.

Reliability

Our expertise in material handling is the guarantee that the V11 order picker is a truck you can rely on. Thanks to the easy maintenance and programming, downtimes are reduced and throughput of goods is increased. Furthermore other technical aspects such as the central servicing and diagnosis interface, and a hood that opens up wide even in an aisle, make the V11 an extremely reliable machine.

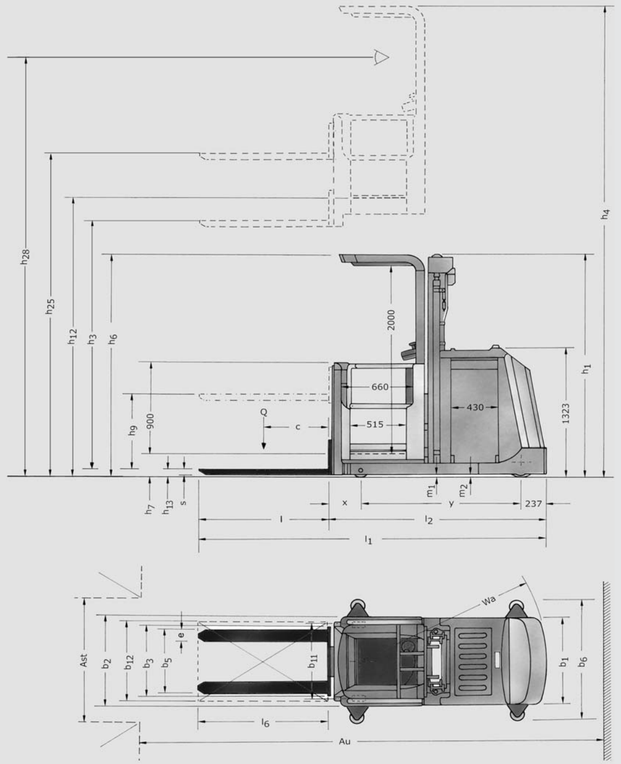
Productivity

The working environment, based on the latest ergonomic standards, and the powerful lifting and driving motors, allow the driver to achieve a high throughput in order picking. Moreover, the integrated mast and console design make the V11 a very manoeuvrable truck which is adapted to narrow aisles.

Technical data (according to VDI 2198)

Characteristics	1.1	Manufacturer		**LINDE**	**LINDE**
	1.2	Model designation		**V11** Simple Mast	**V11** 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	1100
	1.6	Load centre distance	c (mm)	400/600	400/600
	1.8	Axle centre to fork face	x (mm)	298	343
	1.9	Wheelbase	y (mm)	1447	1447
Weights	2.1	Service weight	kg	2600	2700 [2]
	2.2	Axle load with load, front/rear	kg	845/2855	680/3120
	2.3	Axle load without load, front/rear	kg	1415/1185	1360/1340
Chassis	3.1	Tyres: solid rubber, contoured solid (superelastic), polyurethane		Polyurethane/Polyurethane	Polyurethane/Polyurethane
	3.2	Tyre size, front	mm	ø 310 x 125	ø 310 x 125
	3.3	Tyre size, rear	mm	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	700
Dimensions	4.2	Height of mast, lowered	h1 (mm)	2250	2250
	4.3	Free lift	h2 (mm)	-	-
	4.4	Lift	h3 (mm)	1700 [1]	2825 [1]
	4.5	Height of mast, extended	h4 (mm)	4040	5165
	4.7	Height of overhead guard (cabin)	h6 (mm)	2340	2340
	4.8	Height of seat/stand-on platform	h7 (mm)	240	240
	4.11	Supplementary lift	h9 (mm)	740	740
	4.14	Platform height, raised	h12 (mm)	1940	3065
	4.15	Fork height lowered	h13 (mm)	65	65
	4.19	Overall length	l1 (mm)	3180	3227
	4.20	Length to fork face	l2 (mm)	1982	2027
	4.21	Overall width	b1/b2 (mm)	880/900	880/900
	4.22	Fork dimensions	s/e/l (mm)	60/120/1200	60/120/1200
	4.23	Fork carriage to DIN 15 173, class/form A, B		no	no
	4.24	Width of fork carriage	b3 (mm)	660	660
	4.25	Fork spread minimum/maximum	b5 (mm)	560	560
	4.27	Width over guide rollers	b6 (mm)	920	920
	4.31	Ground clearance, mast	m1 (mm)	30 [4]	60 [4]
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	50 [4]	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	1080
	4.35	Turning radius	Wa (mm)	1685	1685
	4.41	End aisle width, with/without load	Au (mm)	3435	3480
Performance	5.1	Travel speed, with/without load	km/h	11/11 [3]	11/11 [3]
	5.2	Lifting speed, with/without load	m/s	0.36/0.39 [3]	0.36/0.39 [3]
	5.3	Lowering speed, with/without load	m/s	0.35/0.35	0.35/0.35
	5.9	Acceleration time, with/without load	s	7.0/7.0	7.0/7.0
	5.10	Service brake		Regenerative	Regenerative
Drive	6.1	Drive motor, 60 minute rating	kW	4.6	4.6
	6.2	Lift motor, 15 % rating	kW	11.5	11.5
	6.3	Battery acc. IEC		254-2; A	254-2; A
	6.4	Battery voltage/rated capacity (5 h)	V/Ah	48/420L	48/420L
	6.5	Battery weight (± 5 %)	kg	720	720
Other	8.1	Type of drive control		MOSFET	MOSFET
	8.4	Noise level at operator's ear	dB (A)	< 68	< 68

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 without supplementary lift	**h3** (mm)	1900	2350	2850	
Lift height with supplementary lift	**h3 + h9** (mm)	2640	3090	3590	
Total lift height from ground	**h25** (mm)	2705	3155	3655	
Supplementary lift	**h9** (mm)	740	740	740	
Platform height	**h12** (mm)	2140	2590	3090	
Picking height	**h28** (mm)	3740	4190	4690	
Retracted height	**h1** (mm)	2450	2900	3400	
Extended height	**h4** (mm)	4240	4690	5190	

Mast Unit with Telescopic Lift Mast					
Lift height without supplementary lift	**h3** (mm)	2825	3225	4125	5125
Lift height with supplementary lift	**h3 + h9** (mm)	3565	3965	4865	5865
Total lift height from ground	**h25** (mm)	3630	4030	4930	5930
Supplementary lift	**h9** (mm)	740	740	740	740
Platform height	**h12** (mm)	3065	3465	4365	5365
Picking height	**h28** (mm)	4665	5065	5965	6965
Retracted height	**h1** (mm)	2250	2450	2900	3400
Extended height	**h4** (mm)	5165	5565	6465	7465

Equipment

Standard equipment

Operators compartment

Mast-side or load-side control position
Suspension-mounted cab to absorb shock and vibration
Very soft and comfortable platform surface
Large padded backrest for relaxed driving and standing position
Storage compartments, pen holders and space for bottles, cans or tools integrated in cab lining
Clear and distinct control layout
Membrane keypad for hour meter, height indicator, wheel position and battery status as well as for operator and service information read-out
Steering angle indicated on control console
Very low step on height for easy on and off

Mast/Forks

Different Forks (b5: 560mm-880mm, length: 800mm-1200mm)

Safety

Regenerative braking by drive motor when travelling for optimal use of energy
Battery discharge indicator with lift cutout
Platform lift with two primary lift chains
Automatic travel speed reduction with high platform lift
Side safety barriers fitted with gas jacks and safety switches
All travel and lift motions interlocked through deadman's switch and integrated two-hand operation
Drain valve under rear hood readily accessible in aisle
Spring-load brake on drive motor as stationary safety brake

Drive and lifting motors

Robust, economical high-performance AC-drive and AC-lifting concept employing minimum wear
Drive motor 4,6 KW
Lift motor 11,5 KW

LSC (Linde System Control)

Height measurement system
Diagnosis and service interface allows convenient configuring and initialization via laptop computer
Very efficient use of energy and energy recovery

Optional equipment

Operators compartment

Mast-side and 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
Alternative overhead guard heights
Writing stand/clipboard
Front console comfort padding and storage facilities
Power outlet on overhead guard for radio, etc.
Macrolon screen for overhead guard
Load side cover with space for tools etc. and replaceable backrest
Electric safety barriers on the load side
Mobile data terminal, printer, scanner preparation
Rearview mirror
Padded side barriers

Mast/Forks

Alternative mast heights for simple and telescopic lifting masts
Fork carriages for various pallets
Lift limiting
Supplementary fork lift
Carriage for adjustable forks (™ FEM)
Mast bracing
Walk on pallet

Environment

Mechanical or inductive wire guidance
Mobile safety system (integrated in control panel)
Alternative chassis widths
Alternative cab widths
Automatic, end of aisle braking (different options)
Cold store version

Battery

Battery hood railing
Roll-out battery change
Add. battery cable set

Other options available on request

Features

Two versions are available:

→ Model V11-01 with fixed forks welded to the operator platform, for working with walk-on pallets
→ Model V11-02 with supplementary fork lift mast on operator platform, forks welded to fork carriage. Pallet can be raised to most convenient working level for picking. Optimum matching of lift carriage and fork carriage minimizes dead space to allow full utilization of pallet surface area

Operators compartment

→ 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
→ Neon lamps can be switched separately and focused to illuminate front of storage racks, load handler and/or cab.
→ Storage compartments, pen holders and space for bottles, cans or tools integrated in cab lining
→ Mast-side plastic screen fitted between mast sections shields operator from drafts and travel noise

Control Panel and Display

→ 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
→ Auxiliary functions such as external positive guidance or mobile safety system also incorporated into control console

Steering

→ Electric steering with defined centre position
→ Steering angle indicated on controle console

Brakes

→ Virtually no wear dual braking system
→ Regenerative braking by drive motor when travelling for optimal use of energy
→ The split operation of the two systems guarantees a minimum wear of the brakes

Safety

→ Two-hand safety operation of controls
→ Automatic travel speed reduction with high platform lift
→ All travel and lift motions interlocked through deadman's switch and integrated two-hand operation
→ Rescue winch integrated in overhead guard, quickly and easily operated without tools
→ Drain valve under rear hood readily accessible in aisle

Motors

→ Robust, economical high-performance AC-drive and AC - lifting concept employing minimum wear
→ Highly responsive and constant driving independent of load weight
→ The powerfull drive and lift motors assure for the driver comfortable working with a high troughput

LSC (Linde System Control)

→ Height measurement system
→ Diagnosis and service interface allows convenient configuring and initialization via laptop computer
→ Very efficient use of energy and energy recovery
→ Small spares stocking expense due to the use of standardized control components and reduced number of components altogether

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