

Electric Medium-Level Order Picker 1000 kg

Linde

V 10



015

V 10 medium-level order pickers are compactly built high-performance machines designed for picking at heights up to 3500 mm.

Two versions are available:

- Model V 10-01 with fixed forks welded to the operator platform, for working with walk-on pallets
- Model V 10-02 with supplementary fork lift mast on operator platform, forks welded to fork carriage

Main features:

- Overall chassis width 880 mm
- Operator platform width 880-1500 mm
- MOS-FET electronic travel and steering control
- Platform main lift 1165 mm or 1900 mm with simplex mast

Operator compartment:

Dedicated platform design for order picking operations. Ample working space due to integration of control console in mast guide structure, very low platform step height for easy mounting and dismounting. Platform is suspension-mounted and has a floor designed to absorb shock and vibration that may occur during travel, lifting and lowering motions. Deadman's pedal flush with floor. Storage space and control and display panel integrated on front between mast sections. Ergonomic arrangement of steering knob on left, grab handle and butterfly drive switch on right. LED wheel position indicator. Low cab step height increases safety for operator and allows order picking at floor level. Neat, non-confusable control layout. Foot drive switch and controls arranged for secure

standing position. Two-hand operation in compliance with safety regulations for externally guided trucks. Travel only enabled when deadman's switch is depressed. Forward-reverse travel direction and travel speed controlled by butterfly switch opposite grab handle. Hydraulic functions and horn actuated by pushbuttons in grab handle bay. Steering knob, key-lock switch and emergency stop palm button mounted on control console.

Model V 10-01, fixed forks, no supplementary lift:

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

Model V 10-02, supplementary lift forks:

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.

Chassis:

Torsion-resistant steel construction, large-diameter wheels. Hinged steel equipment compartment hood opening upwards, supported by gas jacks. Metal battery hood.

Drive:

Fixed vertical drive motor. Unitized assembly of motor, electromagnetic brake, gearbox and steered drive wheel. Rail guide rollers can be fitted for narrow aisle working.

Control:

Control system very neatly constructed of small number of components, high standard of safety. Based on proven power MOSFET technology. Microprocessor-

controlled signal processing for all travel motions. Diagnosis and service interface allows convenient configuring and initialization via laptop computer. Small spares stocking expense due to use of standardized control components and reduced number of components altogether.

Battery and battery compartment:

Battery change on either side using lift truck. Optional battery change by crane or roller track for multi-shift operation or when using swap batteries. DIN standard batteries, 24 V, 440-560 L Ah.

Steering:

Electric steering with defined centre position. Easy and precise manoeuvring by steering knob. Optional steering wheel available. Truck wheel position indicated by LED on control console. Steer angle monitoring ensures safe high-performance driving characteristics.

Mast and hydraulics:

Sturdy simplex mast of large inside width enabling control console to be integrated in mast. Outstanding visibility through and to either side of mast for utmost safety when travelling. Integrated mast and console design results in very short and highly manoeuvrable truck. Lift and lower motions controlled by pushbutton actuation of solenoid valve manifold with pressure accumulator. Relief valve for overload protection. Hydraulic cushioning of cylinder on lowering stroke ensures that cab sets down gently at bottom end position regardless of load weight, reducing wear and maintaining full operator comfort.

LINDE

Order Picking Truck

Designatin acc. to VDI 3586

Data sheet for materials handling equipment

June 2004

		Linde		Linde	
Characteristics	1.1	Manufacturer		Linde	Linde
	1.2	Model designation		V 10 Simplex mast ① Low lift	V 10 Simplex mast ② Low lift with supplementary lift
	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)	1000	1000
	1.6	Load centre	c (mm)	400/600	400/600
	1.8	Axle centre to fork face	x (mm)	130	130
	1.9	Wheelbase	y (mm)	1320	1410
Weights	2.1	Service weight	kg	1475 1)	1575 1)
	2.2	Axle load with load, front/rear (drive side/load side)	kg	315/2160	315/2260
	2.3	Axle load without load, front/rear (drive side/load side)	kg	880/595	880/695
Wheels and tyres	3.1	Tyres: solid rubber, contoured solid, pneumatic polyurethane		Polyurethane / Polyurethane	Polyurethane / Polyurethane
	3.2	Tyre size, front (drive side)		ø 250 x 80	ø 250 x 80
	3.3	Tyre size, rear (load side)		ø 150 x 100	ø 150 x 100
	3.5	Wheels, number front/rear (drive side/load side) [x = driven]		1x/2	1x/2
	3.6	Track width, front (drive side)	b10 (mm)	0	0
	3.7	Track width, rear (load side)	b11 (mm)	768	768
	Dimensions	4.2	Height of mast, lowered	h1 (mm)	1470
4.3		Free lift	h2 (mm)	-	-
4.4		Lift	h3 (mm)	965	965
4.5		Height of mast, extended	h4 (mm)	2290	2290
4.7		Height of overhead guard (cabin)	h6 (mm)	-	-
4.8		Height of seat/stand-on platform	h7 (mm)	200	200
4.11		Supplementary lift	h9 (mm)	-	740
4.14		Platform height, raised	h12 (mm)	1165	1165
4.15		Fork height lowered	h13 (mm)	85	85
4.19		Overall length	l1 (mm)	2465/2865	2555/2955
4.20		Length to fork face	l2 (mm)	1665	1755
4.21		Overall width	b1/b2 (mm)	880	880
4.22		Fork demensions	s/e/l (mm)	60 x 120 x 800 or 1200	60 x 120 x 800 or 1200
4.23		Fork carriage to DIN 15 173, class/form A, B		no	no
4.24		Width of fork carriage	b3 (mm)	-	640/560
4.25		Fork spread, minimum/maximum	b5 (mm)	640/560	640/560
4.27		Width over side guide rollers	b6 (mm)	1280/1080	1280/1080
4.31		Ground clearance, mast	m1 (mm)	30 2)	30 2)
4.32		Ground clearance, centre of wheelbase	m2 (mm)	30 2)	30 2)
4.33		Aisle width with pallet 1000 x 1200 across forks	Ast (mm)	1380	1380
4.34	Aisle width with pallet 800 x 1200 along forks	Ast (mm)	1080	1080	
4.35	Turning radius	Wa (mm)	1530	1620	
4.41	End aisle width, with/without load	Au (mm)	2840/3120	2930/3210	
Performance	5.1	Travel speed, with/without load	km/h	9.0/9.0	9.0/9.0
	5.2	Lifting speed, with/without load	m/s	0.10/0.15	0.10/0.15
	5.3	Lowering speed, with/without load	m/s	0.25/0.24	0.25/0.24
	5.9	Acceleration time, with/without load	s	78/6.5	78/6.5
	5.10	Service brake		Regenerative	Regenerative
Drive	6.1	Drive motor, 60 minute rating	kW	2.1	2.1
	6.2	Lift motor, 15% rating	kW	2.0	2.0
	6.3	Battery according to IEC		254-2	254-2
	6.4	Battery voltage/rated capacity (5h)	V/Ah	24/440 L (560 L)	24/440 L (560 L)
	6.5	Battery weight (± 5%)	kg	380 (510)	380 (510)
Other	8.1	Type of drive control		MOSFET	MOSFET
	8.4	Noise level at operator's ear	dB (A)	69.8	69.8

1) Values including battery, see line 6.5.

2) Sensors, antennas, min. 10 mm.

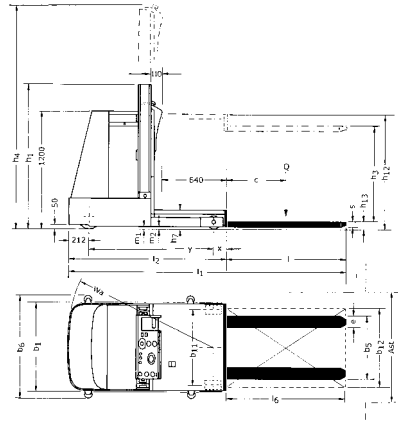
EKU

Abbreviation acc. to VDI 3586

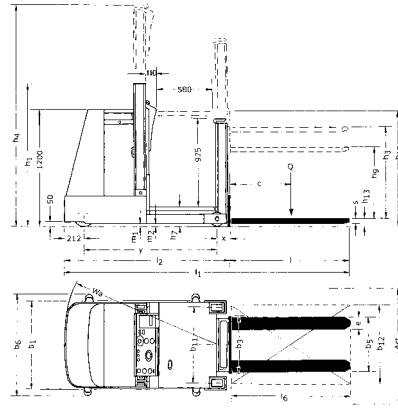
VDI 2198

Linde	Linde
V 10 Simplex mast ③ High lift without supplementary lift	V 10 Simplex mast ④ High lift with supplementary lift
Battery	Battery
Order picker	Order picker
1000	1000
400/600	400/600
130	130
1320	1410
1810 1)	1910 1)
470/2340	470/2440
1010/800	1010/900
Polyurethane / Polyurethane	Polyurethane / Polyurethane
ø 250 x 80	ø 250 x 80
ø 150 x 100	ø 150 x 100
1x/2	1x/2
0	0
768	768
2200	2200
-	-
1700	1700
3023	3950
2250	2250
200	200
-	740
1900	1900
85	85
2465 / 2865	2555 / 2955
1665	1755
880	880
60 x 120 x 800 or 1200	60 x 120 x 800 or 1200
no	no
640 / 560	640 / 560
640 / 560	640 / 560
1280 / 1080	1280 / 1080
30 2)	30 2)
30 2)	30 2)
1380	1380
1080	1080
1530	1620
2840 / 3120	2930 / 3210
9.0 / 9.0	9.0 / 9.0
0.11 / 0.15	0.11 / 0.15
0.25 / 0.24	0.25 / 0.24
7.8 / 6.5	7.8 / 6.5
Regenerative	Regenerative
2.1	2.1
4.5	4.5
254-2	254-2
24 / 560 L (440 L)	24 / 560 L (440 L)
510 (380)	510 (380)
MOS-FET	MOS-FET
69.8	69.8

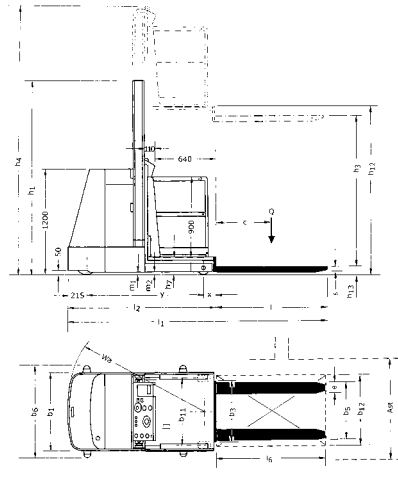
①



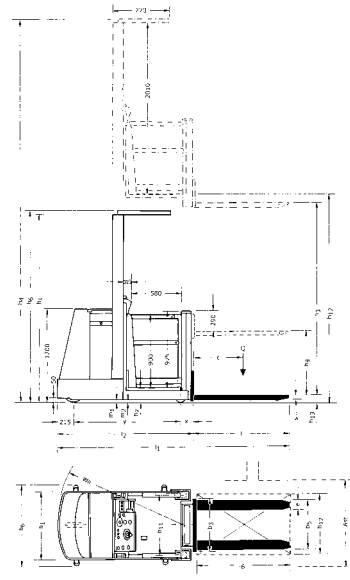
②



③



④



Equipment



Brakes:

Dual braking system, almost no wear. Spring-load brake on drive motor as stationary safety brake and regenerative braking by drive motor when travelling. Automatic electronically controlled service brake actuated on decelerating with drive switch. Soft, controlled braking by reversing position of drive switch.

Safety and ergonomic design:

- Truck built in compliance with EU Directives, CE mark
- All travel and lift motions interlocked through deadman's switch
- Generously sized picking platform, high riding comfort
- Convenient mounting and dismounting due to low platform step height
- Safely rounded contours, smooth and padded surfaces, plenty of integrated storage space

Standard equipment:

- V 10-01: Pallet sensor for 1900 mm platform lift height in conjunction with safety barrier.
- Electronic drive switch to control travel and steering

- Hydraulic safety valves
- Electronic overload and short circuit protection
- Side safety barriers for platform lift height over 1160 mm
- Lowering slowdown
- Overhead guard for fork lift height above 1800 mm

Options:

- Alternative truck versions
 - Low lift with supplementary lift
 - High lift without supplementary lift
 - High lift with supplementary lift
- Overhead guard
- Operator compartment lighting
- Worklamps
- Rear view mirror
- Supplementary fork lift
- Triple side barriers
- Combination battery charge indicator and hour meter
- Order-picking operation from floor level whilst walking with the machine
- Operation from load or mast side
- Refrigerated store design
- Forced braking at the aisle end
- Padding of the load-side rear wall as far as the knee area

- Steering wheel with spinner knob
- Two mast heights
- Intermediate lift stop
- Lift/lower follower storage console
- Clipboard writing stand for storage console
- Adapter shelf for data terminal, printer and scanner
- Alternative platform and chassis widths
- Alternative fork carriages for different pallets
- Mechanical guidance with/without aisle recognition
- Alternative battery sizes
- Roll-out battery change
- Swap battery cable harness
- Custom options subject to agreement

Service and maintenance:

- Equipment compartment designed for servicing convenience, hood opens wide even in aisle
- Central servicing and diagnosis interface
- Battery hood for top-side battery maintenance

Other options available on request.

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