



Linde Material Handling

Linde



ORDER PICKER V

CAPACITY 1200 KG | SERIES 5213

Safety

The V range truck is designed to guarantee the operator's safety in all conditions while driving, lifting and order picking. Its outstanding visibility through and to either side of the mast offers the highest level of security. The low cab step height increases safety, while the 2 integrated touch sensors on the control panel ensure two handed operation. The LSC monitors driving, lifting and steering movements and reduces their performance automatically, if needed.

Performance

Efficiency and high performance describe the V range order picker. It is capable of picking at heights up to 12000 mm. Its powerful AC drive units combine optimum performance with low energy consumption. Three different driving and lifting options allow the truck to exactly match the application. The tilting barriers increase productivity - the operator can get closer to the rack to pick loads from the back of the pallet.

Comfort

Entering the cabin of the V range truck and stepping onto the

antivibration floor mat gives the operator the feeling of comfortable working from the first second. The wide variety of storage compartments provided by the attachment bar and options means the truck can be equipped for every kind of order picking application. No matter whether it is lifting or lowering, with or without load, the cabin of the V range truck always stops gently and precisely.

Reliability

Our expertise in designing and building material handling equipment is the guarantee that the V model is a truck you can rely on. Thanks to easy maintenance, downtime is reduced and throughput is increased. An active cooling system ensures the maximum availability even in extreme conditions.

Productivity

The unique modular design concept of the V-modular ensures that each truck can be tailored to match the application precisely in order to maximize its productivity at all times. Based on the latest ergonomic standards, the working environment and the controls allow the operator to maximise throughput.

TECHNICAL DATA

ACCORDING TO VDI 2198

Characteristics	1.1	Manufacturer		LINDE	LINDE	LINDE	LINDE
	1.2	Model designation		V 24V Example Standard mast ¹⁾	V 24V Example Triplex mast ¹⁾	V 48V Example Standard mast ¹⁾	V 48V Example Triplex mast ¹⁾
	1.2a	Series		5213-01	5213-01	5213-01	5213-01
	1.3	Power unit		Battery	Battery	Battery	Battery
	1.4	Operation		Order Picker	Order Picker	Order Picker	Order Picker
	1.5	Load capacity	Q (t)	0.8	0.8	1.2	1.2
	1.6	Load centre	c (mm)	600	600	400	400
	1.8	Axle centre to fork face	x (mm)	345	405	345	405
	1.9	Wheelbase	y (mm)	1394	1466	1503	1664
Weight	2.1	Service weight	(kg)	3185 ²⁾	4302 ²⁾	4145 ²⁾	5498 ²⁾
	2.2	Axle load with load, front/rear	(kg)	1272 / 2713 ²⁾	1803 / 3299 ²⁾	1707 / 3638 ²⁾	2289 / 4409 ²⁾
	2.3	Axle load without load, front/rear	(kg)	1814 / 1371 ²⁾	2351 / 1951 ²⁾	2302 / 1843 ²⁾	2870 / 2628 ²⁾
Wheels and types	3.1	Tyres rubber, SE, pneumatic, polyurethane		Polyurethane	Polyurethane	Polyurethane	Polyurethane
	3.2	Tyre size, front		Ø 360 x 130	Ø 360 x 130	Ø 360 x 130	Ø 360 x 130
	3.3	Tyre size, rear		Ø 180 x 156	Ø 180 x 156	Ø 180 x 156	Ø 180 x 156
	3.5	Wheels, number front/rear (x = driven)		1x / 2	1x / 2	1x / 2	1x / 2
	3.6	Track width, front	b ₁₀ (mm)	0	0	0	0
	3.7	Track width, rear	b ₁₁ (mm)	695	895	995	1394
	3.8	Track width, axle	b ₁₂ (mm)	695	895	995	1394
Dimensions	4.2	Height of mast, lowered	h ₁ (mm)	2900	3400	3900	4500
	4.3	Free lift	h ₂ (mm)	-	2750	-	3850
	4.4	Lift	h ₃ (mm)	4125	7160	5725	10160
	4.5	Height of mast, extended	h ₄ (mm)	6415	9450	8015	12450
	4.7	Height of overhead guard (cabin)	h ₆ (mm)	2290	2290	2290	2290
	4.8	Height of seat/stand on platform	h ₇ (mm)	240	240	240	240
	4.11	Supplementary lift	h ₉ (mm)	740	740	740	740
	4.14	Platform height, raised	h ₁₂ (mm)	4365	7400	5965	10400
	4.15	Height, lowered	h ₁₃ (mm)	65	65	65	65
	4.19	Overall length	l ₁ (mm)	3277	3536	3018	3294
	4.20	Length to fork face	l ₂ (mm)	2077	2336	2218	2494
	4.21	Overall width	b ₁ / b ₂ (mm)	880 / 880	1080 / 1080	1080 / 1180	1080 / 1580
	4.22	Fork dimensions	s / e / l (mm)	55 x 120 x 1200	55 x 120 x 1200	55 x 120 x 800	55 x 120 x 800
	4.23	Fork carriage to ISO 2328, class/type A, B		no	no	no	no
	4.24	Width of fork carriage	b ₃ (mm)	660	660	740	740
	4.25	Fork spread, min/max	b ₅ (mm)	560 / 560	560 / 560	640 / 640	640 / 640
	4.27	Width over side guide rollers	b ₆ (mm)	-	1275	1375	1815
	4.31	Ground clearance, below mast	m ₁ (mm)	50	50	50	50
	4.32	Ground clearance, centre of wheelbase	m ₂ (mm)	50	50	50	50
	4.34	Aisle width with pallet 800x1200 along forks	A _{st} (mm)	-	1320	1380	1820
	4.35	Turning radius	W _a (mm)	1732	2034	1873	2089
	4.42	End aisle width, with/without load	A _g (mm)	3528	3888	3866	4135
Performance	5.1	Travel speed, with/without load	km/h	9 / 9	10 / 10	11 / 11	13 / 13
	5.2	Lifting speed, with/without load	m/s	0.28 / 0.3	0.23 / 0.28	0.36 / 0.36 (0.4 / 0.4) ³⁾	0.4 / 0.32
	5.3	Lowering speed, with/without load	m/s	0.28 / 0.28	0.28 / 0.28	0.32 / 0.32 (0.35 / 0.35) ³⁾	0.35 / 0.35
	5.9	Acceleration time, with/without load	s	8.0 / 8.0	8.0 / 8.0	8.0 / 8.0	8.0 / 8.0
	5.10	Service brake		Regenerative / Mechanic	Regenerative / Mechanic	Regenerative / Mechanic	Regenerative / Mechanic
Drive	6.1	Drive motor, 60 minute rating	(kW)	4.5	4.5	6.5	6.5
	6.2	Lift motor, rating at S ₃ 15 %	(kW)	7.6	7.6	11.5	13
	6.4	Battery voltage / rated capacity (5h)	(V/Ah)	24 / 840	24 / 1120	48 / 620	48 / 930
	6.5	Battery weight (±5 %)	(kg)	687	883	933	1309
Others	8.1	Type of drive control		Microprocessor	Microprocessor	Microprocessor	Microprocessor
	8.4	Noise level at operator's ear	(dB(A))	64	64	64	64

¹⁾ Exemplary configuration based on a modular trucksystem.

Please contact your local sales department for an individual truck configuration

²⁾ Figures with battery, see line 6.4/6.5.

³⁾ Figures in parenthesis for optional „Heavy“

MAST TABLES

Telescopic mast with supplementary lift							
Height of mast, lowered (h_i)	Total lift height from ground $h_{25} (h_3 + h_9 + h_{13})$	Total lift height $h_{24} (h_3 + h_9)$	Lift height w/o supplementary lift h_3	Supplementary lift h_9	Platform height $h_{12} (h_3 + h_7)$	Picking height $h_{28} (h_{12} + 1600)$	Extended height h_4
2250	3630	3565	2825	740	3065	4665	5115
2450	4030	3965	3225	740	3465	5065	5515
2900	4930	4865	4125	740	4365	5965	6415
3400	5930	5865	5125	740	5365	6965	7415
3900	6530	6465	5725	740	5965	7565	8015
4400	7530	7465	6725	740	6965	8565	9015
4900	8530	8465	7725	740	7965	9565	10015
5400	9330	9265	8525	740	8765	10365	10815

Triplex mast with supplementary lift								
Height of mast, lowered (h_i)	Total lift height from ground $h_{25} (h_3 + h_9 + h_{13})$	Total lift height $h_{24} (h_3 + h_9)$	Lift height w/o supplementary lift h_3	Free lift h_2	Supplementary lift h_9	Platform height $h_{12} (h_3 + h_7)$	Picking height $h_{28} (h_{12} + 1600)$	Extended height h_4
2250	5215	5150	4410	1600	740	4650	6250	6700
2450	5815	5750	5010	1800	740	5250	6850	7300
2900	7165	7100	6360	2250	740	6600	8200	8650
3400	7965	7900	7160	2750	740	7400	9000	9450
3900	9465	9400	8660	3250	740	8900	10500	10950
4500	10965	10900	10160	3850	740	10400	12000	12450

STANDARD EQUIPMENT / OPTIONAL EQUIPMENT

STANDARD EQUIPMENT

Operators compartment:

Mast or load side controls
Suspension mounted cab to absorb shocks and vibration
Soft rubber mat isolates operator from shocks and vibration
Storage compartments, pen holders and space for bottles, cans or tools integrated into cab interior
LCD "comfort" display with keypad log-on, lift height indicator, speedometer, hourmeter, steer wheel position indicator, battery status and service codes
Very low step height for easy on/off access
Steering knob

Throughput:

Durable polyurethane wheels
Regenerative electric braking through the drive motor for optimum use of energy
Battery discharge indicator with lift cutout

Safety:

Automatic reduction in travel speed with platform raised (LSC 3.0)
All traction and lift functions interlocked through foot switch and sensors, ensuring two handed operation
Linde curve control for safe cornering
Side barriers with gas struts and safety interlocks
Warning light

OPTIONAL EQUIPMENT

Operators compartment:

Alternative cabin widths (900 mm–1800 mm)
Rearview mirror module (left/ right) on load side or mast side including LED working lights
LED cabin working light with two step illumination
Fan on overhead guard included in mirror module
Steering wheel
Macrolon cover for overhead guard
Attachment base for writing pads/terminals/other equipment
Radio preparation 12V/50W with two speakers and antenna
Linde LFM data management system
Overhead guard: 2200 mm height for greater comfort

Throughput:

10 different chassis, 880 mm–1580 mm to suit every application
Supplementary lift 750 mm for easy order picking
Buttons for supplementary lift on load side for easy handling
Truck prepared for data terminal, printer, scanner installation
Semi-automatic navigation system
Different drive and lift motors available

Safety:

Alternative speed reduction and end of aisle stop interlocks
Aisle Safety Assist for individual safety interlocks for each aisle
Lift and traction cut outs
Touchless anti-collision sensor for lifting
LSC for speed reduction with weight and load dependent speed profiles for lifting and driving; weight measuring sensor
Load wheel brakes for increased safety in an emergency

Mast/Forks:

Different fork lengths
Carriage for adjustable forks
Walk on platform
Pallet clamp
Mast soft end stops for lifting/lowering

Environment:

Mechanical aisle guidance
Inductive aisle guidance
Cold store version
Antistatic guide rollers and wheels

FEATURES

Modular concept

- Unique modular design allows the perfect specification for each individual application
- Combination of different lift motors, drive motors, chassis, masts, batteries, cabins, etc. to suit every application
- Two voltage variants provide the perfect solution to customer's needs: 48V for high performance in medium and heavy duty applications and 24V variant for low to medium duty applications



Operator's compartment

- Specially designed side barriers for optimal order picking
- Deadman pedal hidden under suspension floor mat to avoid trip hazard
- Platform is suspension mounted and has a floor mat designed to absorb shocks and vibration
- Very spacious cabin due to integrated control panels for maximum freedom of movement

Variety of applications

- Forks mounted on the operator's platform for working with walk-out pallets. Operator is protected by a cage, the pallet is secured by a clamp
- Platform welded onto the operator's compartment for picking bulky goods
- Suppl. lift on operator's platform. Pallet can be raised to most convenient working height for picking

Control concept

- Controls and integrated display panel are in the operator's field of view
- Standard LCD display gives the driver all necessary information
- Simple, ergonomic controls allow precise operation reducing driver fatigue and increasing throughput
- Simultaneous driving/lifting/lowering
- Safe two-handed operation

Steering

- Electric steering with defined centre position
- Easy and precise maneuvering by steering knob (optional steering wheel available)
- Steer angle monitoring ensures safe high-performance driving characteristics



High performance with intelligent control systems

- Linde System Control (LSC) gives seamless automatic adjustment of speed depending on steering angle, lift height and load weight (optional)
- Safe cornering with curve speed control as standard
- Aisle safety assist tailored for each aisle in your warehouse, including lift or traction interlocks, speed reduction etc.

Safety

- Automatic speed reduction when turning
- All traction and lift functions interlocked through deadman's pedal and 2 handed operation
- Emergency lowering valve under rear cover easily accessible even in the aisle

Drive and lift

- The powerful and energy-efficient drive and lift units combine optimum performance with low energy consumption and long life
- Latest MOSFET technology
- Rail guidance rollers or inductive wire guidance technology can be fitted to the truck for VNA applications

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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