

Customized Order Picking solutions

Electric Order Pickers - Man-Up range

N20V, V08, V10, V11, V12

Linde Material Handling

Linde



Full liner order picking range.

Of all warehouse processes, order picking gets the most attention. The ability to process customer orders quickly and accurately has become an essential part of what Linde trucks deliver thanks to our market knowledge and design expertise. Linde's key objectives when designing order pickers are to increase productivity by reducing cycle times and increase picking accuracy. As the environment, the type of goods and the methods of order picking vary greatly, Linde offers a wide range of order pickers to fit the needs of every organisation. Many innovative solutions enhance the current range from ground level order picking through to occasional or more frequent medium-level picking up to high multi-level order pickers with guidance systems for maximum productivity and customer satisfaction in the most demanding applications.



Engineered for your performance



Two major picking styles – Horizontal & Vertical.



Vertical order picking range. Linde - a full liner for Man-Up trucks.

Extend the height of a picking zone To optimize picking in a restricted area (e.g.: a growing business, increasing numbers of picked lines), logistics managers have to extend the height of their picking zone.

Man-up order pickers As far as creating new picking levels is concerned, order pickers fitted with a rising platform (the so called Man-up order picker) enable picking at heights from first level to over 11 m.

Linde, full liner Linde offers a comprehensive range of man-up order pickers for applications requiring anything from occasional to frequent picking above ground level.

Choosing the right picker Different characteristics determine the choice of man-up truck for any particular order picking application:

- Maximum picking height and the picking window are two major factors defining the choice of man-up order picker for an application
- Man-up order pickers may also be equipped with different guidance systems to work in very narrow aisles (VNA)
- If the application requires a heavy-duty order picker (for frequent picking at height), man-up order pickers equipped with a 48 V electrical systems will give greater productivity.



Picking Height

11 m

7 m

6.3 m

2.8 m

1.4 m

Ground floor

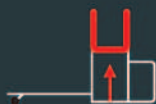
Picking window

Picking window

Model



N20Vi



N20VLi



V08

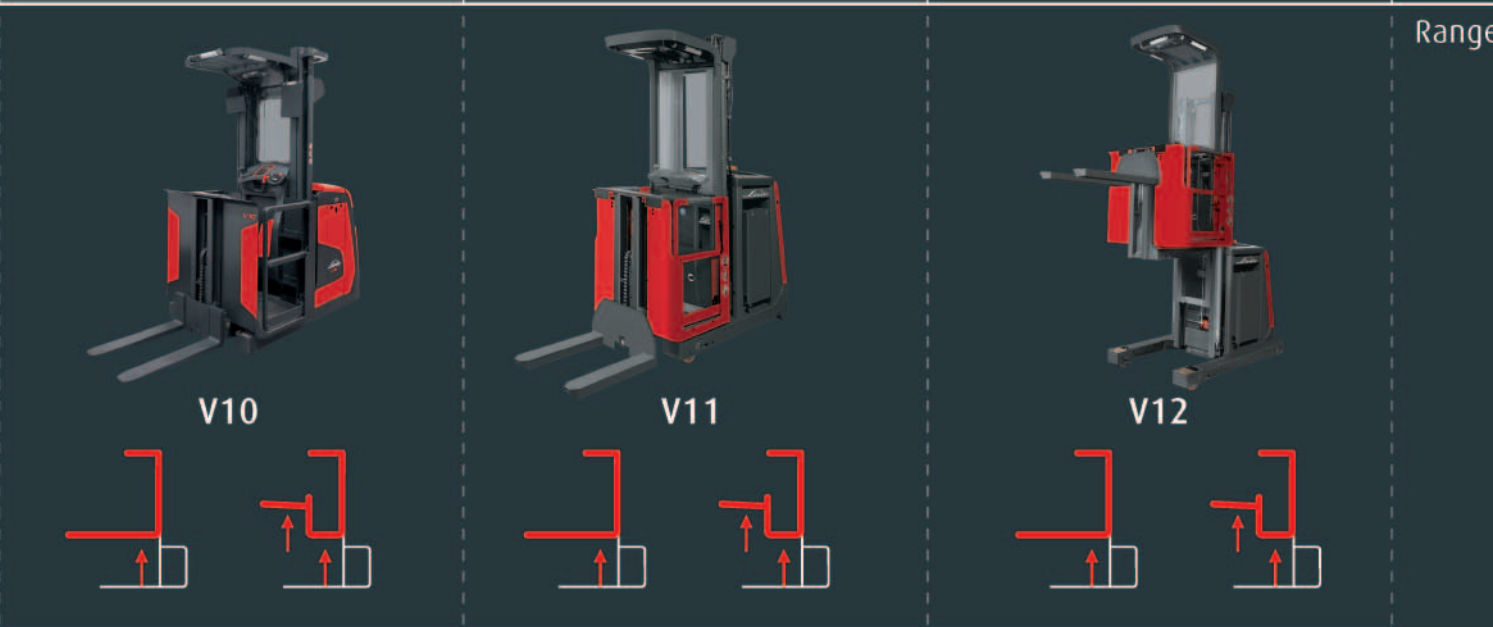


Aisles types

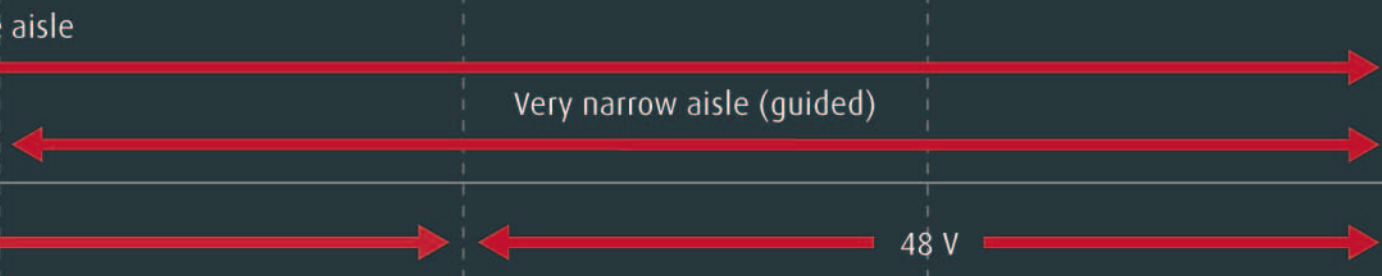
Wide

Power

24 V



Range



Two Order Picking concepts. Up to second level & high

First and second level picking **N20Vi, N20VLi & V08.**
User-friendly design & ergonomic controls.



Access and operator's compartment Low 135 mm step-in height and wide 432 mm entry on both sides allow easy and frequent access to the truck. While picking with the platform up, the operator is at ease with enough space to handle goods and safe with front and rear protection (optional system on the V08).

Rising platform Platform lift with OptiLift® system for accurate operation via user-friendly finger-tip controls. For more comfort, a platform mat acts as a deadman sensor and its edges are slightly inclined for safe picking. On each man-up order picker, the standard soft-padded platform offers further comfort.

Twin-grip steering and controls The user-friendly twin-grip control concentrates all controls within easy reach of either hand. This allows one handed operation while driving or lifting leading to greater productivity. Effortless power-assisted steering is provided as standard. Positive steering feedback is essential for accurate operating when working close to the racking while transferring between two picking areas.

Truck access This range of first & second level man-up order picker offers a choice of three methods to activate the truck - a conventional key, a PIN code log-in or via biometrical technology.

Workstation and equipment The workstation can be supplied with various accessories to meet the specific needs of an application: a rotating clipboard, a central bar to mount specialist equipment or a front shelf. Inching buttons, located on both sides of the chassis, enable the operator to walk to the next pick alongside the truck.

Storage space Several roomy storage compartments are provided all around the operator for fast, easy access to picking accessories such as pens, shrink wrap, knives, scanners...

level picking.

High level picking V10, V11 & V12.
Versatile choice of chassis options & high comfort
operator's concept.



Safety In operation, safety is of paramount importance. When lift heights exceed 1,20m, side barriers are compulsory and, on a Linde truck, these are fitted with gas struts so they open and close easily. When working in guided very narrow aisles, the operator must be protected against contact with the racking or loads, so lifting, lowering and traction controls require both hands to operate while a central dead man pedal keeps his body within the cab footprint. The overhead guard protects him from falling objects.

Rising cabin The cabin floor has a soft padded rubber cover ensuring comfort during a long shift. The central operating position ensures good visibility while the design of the cab ensures that the operator can get

close to loads on either side when picking. These trucks are equipped with soft landing of the forks to absorb shocks and vibration when lowering the cab to the ground.

Control console The ergonomic layout ensures that all functions are within easy reach guaranteeing comfortable operating. Two different steering controls are available: a steering wheel for ease of manoeuvring and a steering knob for very narrow aisle operations.

Wide aisles or very narrow aisles (VNA) When space is limited, not only do picking heights increase but operating aisles get narrower. All Linde trucks work as well free-ranging in wide aisles as they do when guided in very narrow aisles.

Workstation and equipment A supplementary lift mast is available allowing the pallet to be raised and lowered to maintain an ergonomic height when picking. The "walk-out pallet" allows direct access when picking heavy or bulky goods. The work-station can be equipped with a wide range of options such as a radio, fans, data terminals and scanners.

Storage The cab interior is equipped with a wide variety of storage compartments, pen holders and spaces for bottles, cans and tools. Strip lights are available to illuminate the racking, the load handler and/or cab interior.

Frequent ground-level order picking with occasional 1st/2nd level access. Two order pickers for different picking styles.

Warehouses where order picking is increasing due to a greater number of line items often need to extend the picking zone upwards due to a lack of floor area.

This results in operators mainly picking at ground level but occasionally going up with the rising platform to reach an item.

As the proportion of items to be picked at higher levels is small, only the platform needs to lift with the operator; there is no need to lift the pallet during these occasional picks at height.

Even though the operator only occasionally needs to reach the first and second level, no compromise has been made on safety and comfort. The operator is well protected and can pick from the stable platform with ease, comfort and confidence.

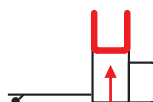
Linde presents two order pickers to fit this occasional first and second level picking requirement: **the N20Vi and the N20VLi.**

N20Vi. Order picker with rising platform.



The N20Vi is ideal as a standard order picker as it can be used to pick occasionally from the first or second level thanks to its rising platform.

This order picker retains the productivity and characteristics of a ground level order picker (order picking onto either 2 pallets lengthwise or 3 roll cages) with the additional benefit of first or second level picking when necessary.





N20VLi. Order picker with supplementary lift and rising platform.

Although the N20VLi allows occasional first and second level picking, this man-up order picker provides ergonomic benefits when picking larger, heavier items.

The configuration of the N20VLi enables the operator to place the picked goods onto a pallet or cage that is at a comfortable working height. This is due to the supplementary lift function which is controlled via the OptiLift control that can be accessed both from the platform and alongside the truck.

The operator can adjust his pallet or cage so he always places his picks at the optimum height, avoiding constant bending and stretching and making the operation stress-free.

The N20VLi is also equipped as standard with initial lift (2000 kg capacity) which increases ground clearance for easier operating over dock levellers or ramps.



Frequent 1st/2nd level order picking.

Two order pickers with dedicated platform concept.

Warehouse organisations with picking locations from ground level up to the 2nd level, need the operator to be able to pick with the same speed and ease whether he is picking at ground level or from the raised platform.

Thus direct access to the pallet is necessary to be able to put down picked items regardless of the height of the platform.

Linde introduces innovation and widens its range with two versions of the Man-up order picker models **V08 "walk-out"** and **V08 "supplementary lift"** each with the forks directly connected to the rising platform so the operator can stack his picked items regardless of the picking height.

V08 "walk-out". Order picker with rising platform and fixed forks.



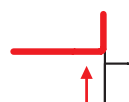
The forks of the V08 "walk-out" are an extension of the rising platform.

The operator is able to access the pallet directly from the platform stack his picked loads without any barrier.

As different applications require different kind of trucks the V08 is also available with short load arms. This reduces its capacity to 700 kg but reduces the turning radius for use in applications with limited space.

If maximum stability is important the truck is equipped with load arms which allow to take up to 1000 kg of load.

To provide additional security while picking at height onto an open pallet, an additional guard can be fitted to either version, providing handgrips for safe picking without compromising pallet access.





V08 “supplementary lift”. Order picker with rising platform and supplementary lift.

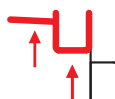
This Man-up version offers direct access to the forks while the operator remains well protected within the comfortable work station.

The V08 “supplementary lift” lifts the pallet to an ergonomic working height for stress-free load placement.

The operator can also adjust the position of the pallet downwards as he fills it up.

Safety is guaranteed when using the supplementary lift as both hands are required to operate the function.

The V08 “supplementary lift” can also be used as a counterbalance stacker as the load arms do not extend beyond the front bulkhead where they could interfere with the “ground zone” of the racking system.





V10 with “walk-out” facility or “supplementary lift”.

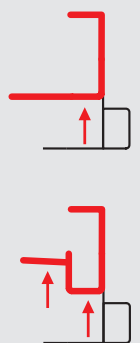
Order pick up to 6350 mm picking height.

When 1st and 2nd level order picking is common and even higher picking is sometimes required, this 24 Volt truck is the ideal solution for picking at heights up to 6350 mm. Designed on a modular basis, the truck specification can be perfectly tailored to the application. For example, there is a choice of 3 lift motors depending on the performance level required. Is block stacking important? If so, then choose the 790 mm chassis width for easy operation between lanes of pallets. The truck is also available with or without supplementary lift to match the loads being picked. Whatever your application, we can match it.

Driving The ergonomic control console makes even first time operation intuitive and simple - the operator immediately feels confident and at home. The truck is equally suited to free-ranging in wide aisles and working in guided very narrow aisles. The optional GPRS on-line function reports potential faults directly to the service engineer, thereby saving time and increasing uptime.

Lifting Integrated sensors tell the truck that both the operator’s hands are on the controls and thus within the cab footprint and safe from contact with racking or loads when lifting. The LSC lift control monitors lift height and steering angle reducing truck speed to guarantee stability. The soft-stop mast improves operator comfort as well as increasing truck durability.

Order picking The supplementary lift mast and the slim cab front make high picking rates possible. The low step-in height of the V10 makes ground level picking easy and convenient, while the wide variety of storage compartments and options such as cooling fans, mountings for radios, data terminals and barcode scanners make the truck easy to equip and use in all order picking applications.





Frequent medium and high level order picking. Two heavy-duty order pickers.

For intensive applications with regular picking at all heights up to a maximum of 11 m – available with either a supplementary lift mast or as a “walk-out” machine with front safety barrier.

Heavy-duty order picking in wide or very narrow aisles with mechanical side guidance or inductive wire guidance.

Driving Whether the truck has a conventional cab or a “walk-out” platform, the operator has an ergonomic and comfortable working position with excellent visibility of racking and loads. The intuitive layout of the control console has been carefully thought through. The clear display provides instant information on status: operating hours, battery charge, steered wheel and truck position...

Lifting Linde order pickers are designed to minimize vibrations. The cab itself is suspension mounted and the floor has a soft padded rubber covering to absorb shocks and guarantee operator safety and comfort throughout the shift.

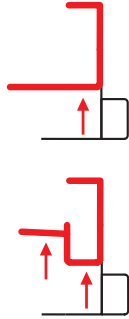
Order picking The low console makes it easy to position picked goods on the pallet while the supplementary fork lift allows the pallet to be kept at a comfortable working height avoiding the operator bending and stretching.

One of Linde’s core brand values is “ergonomics”. We aim to match the operator to the truck so that minimum effort can lead to maximum results. This range of trucks matches an operator’s needs for effective order picking. Combining a high level of technical performance with user-friendly design, Linde’s V range lets the operator concentrate on his task, helps him stay fully motivated and maximizes his efficiency. Linde’s V range guarantees low downtime and high throughput.

V11 with “walk -out” facility
or “supplementary lift”.

Order picker up to
7000 mm picking height.

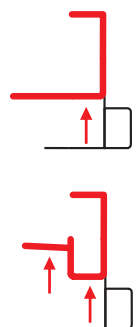
The V11 is the truck to choose
for intensive multi-level picking
applications at up to 7 m.
Its powerful AC lift and traction
motors perform especially well
in these heavy-duty applications.



V12 with “walk -out” facility
or “supplementary lift”.

Order picker up to
11000 mm picking
height.

The V12 is the truck for almost limitless
order picking. With lift heights up to
11 m even the tallest and most
demanding picking applications
can be handled successfully.





Linde Material Handling ranks among the world's leading manufacturers. This position has been justly earned. Linde trucks excel not only with their recognized innovative technology but especially their low energy and operating costs, which can be as much as 40% less than competitors.

High quality in production is matched by the standard of the services we provide. With a comprehensive network of local sales partners, we are at your call around the clock and around the world.

Your local Linde partner offers you a complete single-source package. From qualified pre-sales consulting through the sale to after-sales service; including finance packages matched to your business requirements. Leasing, rental or hire purchase. Flexibility is maintained in your operational and decision-making processes.

Engineered for your Performance

Linde Material Handling

Linde



Low-Level Man-up Order Pickers Capacity 2000 kg N20Vi, N20VLi

SERIES 1111

Safety

At the edge of the platform the operator has a perfect grip thanks to a slightly inclined edge for a safe pick. While lifting/lowering the fork carriage on the N20VLi, the operator is protected from the mast by a polycarbonate window. At no time operator's body exposed beyond the contours of the truck.

Performance

Models N20Vi and N20VLi are designed to optimize occasional 1st and 2nd level order picking with 2 different methods of putting down a picked item on forks. As the proportion of items to be picked at height is small, only the platform rises for faster picking cycle. The OptiLift proportional control rises and lowers platform for accurate picking. Lowering of platform can also be controlled by an easy to use foot switch.

Comfort

Low 135 mm step-in height and wide 432 mm entry on both sides allow easy and frequent access to the order pickers. For more comfort, the damped platform mat is acting as a deadman sensor. The user-friendly twin-grip control concentrates all controls within easy reach of either hand. While lowering, soft landing of the platform brings further comfort to the operator.

Reliability

Linde offers 2 versions of order pickers for occasional 1st and 2nd picking level to provide the optimum solution for individual organisation. The central drive wheel guarantees traction as well as straight drive down the aisle and a perfect braking. In addition, the fork tips (N20Vi) which each withstands 2000 kg contribute to a long, trouble-free life.

Service

Speed and economy continue over into truck diagnosis and preventive maintenance. The digital multifunction instrument display ensures the operator is always well informed. CAN-bus connectivity enables all truck data to be transmitted to a laptop by the service technician. Easy accessibility of all components and maintenance-free AC technology also play an important role in maximising truck uptime.

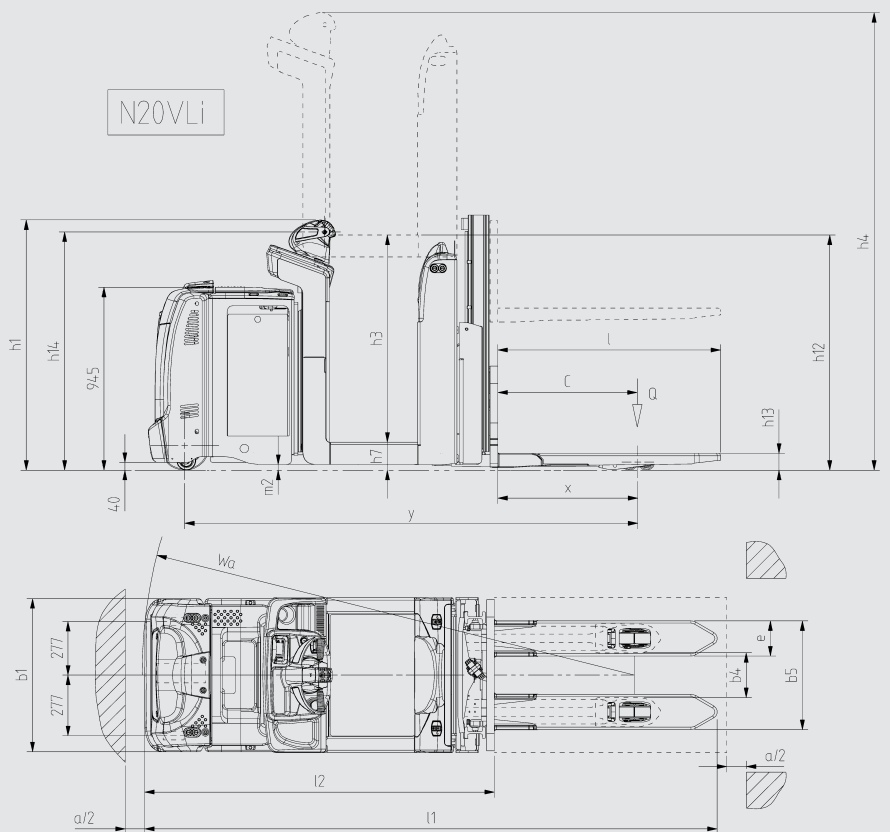
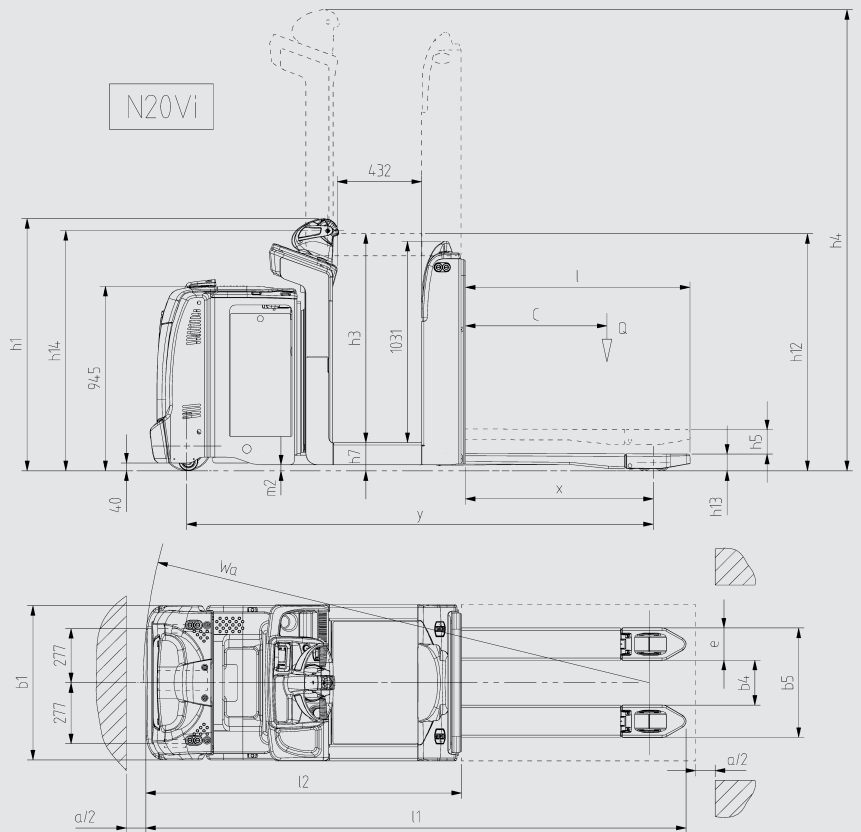
Linde Material Handling

Linde

Technical Data (According to VDI 2198)

Characteristics	1.1	Manufacturer	
	1.2	Model designation	
	1.3	Power unit	
	1.4	Operation	
	1.5	Load capacity	Q (t)
	1.6	Load centre	c (mm)
	1.8	Axle centre to fork face	x (mm)
	1.9	Wheelbase	y (mm)
	Weights	2.1	Service weight
2.2		Axle load with load, front/rear	(kg)
2.3		Axle load without load, front/rear	(kg)
Wheels/Tyres	3.1	Tyres	
	3.2	Tyre size, front	
	3.3	Tyre size, rear	
	3.5	Wheels, number front/rear (x = driven)	
	3.6	Track width, front	b10 (mm)
	3.7	Track width, rear	b11 (mm)
	Dimensions	4.2	Height of mast, lowered
4.4		Lift	h3 (mm)
4.5		Height of mast, extended	h4 (mm)
4.6		Initial lift	h5 (mm)
4.8		Height of seat/stand-on platform	h7 (mm)
4.9		Height of tiller arm in operating position, min/max	h14 (mm)
4.14		Platform height, raised	h12 (mm)
4.15		fork height, lowered	h13 (mm)
4.19		Overall length	l1 (mm)
4.20		Length to fork face	l2 (mm)
4.21		Overall width	b1/b2 (mm)
4.22		Fork dimensions	s/e/l (mm)
4.23		Fork carriage to ISO 2328, class/type A, B	
4.25		Fork spread, min/max	b5 (mm)
4.26		Width between reach legs	b4 (mm)
4.32		Ground clearance, centre of wheelbase	m2 (mm)
4.34		Aisle width with pallet 800 x 1200 along forks	Ast (mm)
4.35	Turning radius	Wa (mm)	
Performance	5.1	Travel speed, with/without load	(km/h)
	5.2	Lifting speed, with/without load	(m/s)
	5.3	Lowering speed, with/without load	(m/s)
	5.8	Maximum climbing ability, with/without load	(%)
	5.10	Service brake	
Drive	6.1	Drive motor, 60 minute rating	(kW)
	6.2	Lift motor rating at S3 15%	(kW)
	6.3	Battery according to DIN 43531/35/36 A,B,C,no	
	6.4	Battery voltage/rated capacity (5h)	(V/Ah)
	6.5	Battery weight (± 5%)	(kg)
	6.6	Power consumption according to VDI cycle	(kWh/h)
Others	8.1	Type of drive control	
	8.4	Noise level at operator's ear	(dB(A))
1) (± 5 mm) 2) ± 0 mm = 3 PzS; +100 mm = 4 PzS 3) Overhang 188 mm 4) (± 10%)		5) Figures with battery, see line 6.4/6.5. 6) (± 5%) 7) (Platform);(forks) 8) (Platform);(initial lift);(forks)	

LINDE	LINDE
N 20 VI	N 20 VLi
Battery	Battery
Order Picker	Order Picker
2.0	2.0
600	600
962 ¹⁾	723 ¹⁾
2289 ²⁾³⁾¹⁾	2239 ²⁾¹⁾
1377.0 ⁴⁾⁵⁾	1781.0 ⁴⁾⁵⁾
1327.0/2050.0 ⁴⁾⁵⁾	1276.0/2505.0 ⁴⁾⁵⁾
1011.0/366.0 ⁴⁾⁵⁾	1166.0/615.0 ⁴⁾⁵⁾
Polyurethane	Polyurethane
254X102	254X102
4xØ85x80	4xØ85x60
1x +2 / 4	1x +2 / 4
277 / 277 ¹⁾	277 / 277 ¹⁾
355/395 ¹⁾	380 ¹⁾
1292 ¹⁾	1500 ¹⁾
1065 ¹⁾	1065 ¹⁾
2357 ¹⁾	2357 ¹⁾
110	110
135	135
1244	1244
1200 ¹⁾	1200 ¹⁾
86	86
2667 ²⁾³⁾¹⁾	2855 ²⁾¹⁾
1517 ²⁾³⁾¹⁾	1705 ²⁾¹⁾
800 ¹⁾	800 ¹⁾
60x165x1150	60x182x1150
no	no
520/560 ¹⁾	560 ¹⁾
246 / 286	230
30	30
2929	2950
2491	2470
10.0/10.0 ⁴⁾	10.0/10.0 ⁴⁾
(0.21/0.21);(0.065/0.117) ⁴⁾⁷⁾	(0.21/0.21);(0.07/0.12);(0.16/0.24) ⁴⁾⁸⁾
(0.5/0.5);(0.068/0.068) ⁴⁾⁷⁾	(0.4/0.4);(0.08/0.08);(0.4/0.15) ⁴⁾⁸⁾
11/15	11/15
Electric/hydraulic	Electric/hydraulic
3.0	3.0
3.0	3.0
43 535	43 535
24/375	24/375
220	220
0,71	0,71
LAC	LAC
74	74





Standard Equipment/Optional Equipment

Standard Equipment

Backlit multifunction display with hourmeter, maintenance indication, battery discharge indicator and internal fault code
Truck activated by entering PIN-code or by ignition key
Safe operator compartment with cushioned mat
Workstation incorporating various storage compartments
Power-assisted steering, adjustable steering resistance
Self-centering steering
Automatic speed reduction on turns
OptiLift® system for rising platform and fork carriage (N20VLi)
AC drive motor
Automatic braking on releasing butterfly switch

Electromagnetic emergency brake acting proportionally to the load weight
CAN-bus architecture
Cushion rubber drive wheel
Tandem polyurethane load wheels
Side battery change on rollers 3 PzS or 4 PzS
Different forks length available from 1150 to 2350 mm (N20Vi)
560 mm fork carriage width (N20VLi)
Standard Mast: 750/1320/750 mm (N20VLi)
Electric horn
Low temperature protection to -10°C

Optional Equipment

Drive wheel: polyurethane, cushion non-marking or wet grip
Tandem polyurethane load wheels greasable
Inching buttons
Rotating clipboard
Support for data terminal on a front bow
Front shelf (50kg capacity)
Picking pack: Rotating clipboard with front shelf
Truck activated by biometry with possibility to parameter each driver access - safest truck access monitoring
Speed reduction when initial lift lowered
Fixed battery stand for side battery change
3 meter extension battery cable
Cold store protection -35°C

Other options available on request

Features

Two versions are available

- Compact chassis width of 800 mm
- Model N20Vi, order picker with initial lift and rising platform
- Model N20VLi, order picker with initial lift, rising platform and additional mast. OptiLift® system for ergonomic lay at operator's height



Rising platform

- Wide access of 432 mm and low step-in height (135 mm)
- OptiLift® system to lift the platform provides fully proportional lifting as well as quiet operation
- Lowering can be controlled by a foot switch
- Soft landing of the forks protects load when lowering

Workstation

- Numerous storage compartments all around the controls and operator to store picking tools
- Battery cover's design offers shrink wrapped paper holder and further storage area
- Various optional accessories designed to streamline picking, including large workshelf



Linde multifunction display

- Digital multifunction display as standard with hourmeter, maintenance indication, battery discharge indicator, fault code indication
- Truck activated by PIN-code, ignition key or by the innovative biometrical access (optional)



Energy

- Battery range available from 375 Ah up to 500 Ah
- Safe and easy side battery change (left or right) mounted on rollers
- Linde locking system secures battery in compartment and eases side change
- Direct access to release the battery from the locking system without rising the platform



Drive system

- Powerful, smooth-running AC motor, 3 kW (at 100% output)
- Traction speed adjustable up to 10 km/h, laden or unladen and 5 km/h with the platform is up
- Automatic braking on releasing the travel switch
- Electromagnetic braking initiated by the emergency stop button acts on the drive motor, proportional to the load carried

Power steering & Linde control twin-grip

- Proportional power-assisted steering, self-centering and effortless to operate
- Positive steering feedback results in an efficient stability
- Automatic speed reduction when cornering
- All controls can be accessible by either right or left hand
- Simultaneous driving/lifting action enables fast move in-between two picks

CAN-bus connectivity/Service

- All truck parameters can be configured by the service technician to achieve best performance in every application
- Electronic management of all components permitting quick and easy diagnosis
- Rapid and convenient access to main components via front service panel
- Moisture and dust-proof motor, with zero maintenance requirement

Subject to modification in the interests of progress. Illustrations and technical details not binding for actual constructions. All dimensions subject to usual tolerances.

Standard Equipment/Optional Equipment

Standard Equipment

Backlit multifunction display with hourmeter, maintenance indication, battery discharge indicator and internal fault code
Truck activated by entering a PIN-code or by ignition key
Safe operator compartment with cushioned mat
Workstation incorporating various storage compartments
Power-assisted steering, adjustable steering resistance
Self-centering steering
Automatic speed reduction on turns
OptiLift® system for rising platform
AC drive motor
Automatic braking on releasing butterfly switch
Electromagnetic emergency brake acting proportionally to the load weight

CAN-bus architecture
Cushion rubber drive wheel
Single (V08) or tandem polyurethane (V08 „Walk out“) load wheels
Side battery change on rollers 3 PzS (V08 „Walk out“) 700 kg) or 4 PzS
560/1150/60 mm forks length (V08 „Walk out“)
Forks 1150 mm length, 80/40/120 mm similar to ISO (V08 „Supplementary lift“)
Electric horn
Low temperature protection to -10°C

Optional Equipment

Drive wheel: polyurethane (V08 „Supplementary lift“), cushion non-marking or wet grip
Inching buttons (V08 „Supplementary lift“)
Rotating clipboard
Support for data terminal on a front bow
Front shelf (50kg capacity)
Picking pack: Rotating clipboard with front shelf
Auxiliary support frame (V08 „Walk-out“)

Truck activated by biometry with possibility to parameter each driver access - safest truck access monitoring
Speed reduction when initial lift lowered
Fixed battery stand for side battery change
3 meter extension battery cable
Cold store protection -35°C

Other options available on request



Low-Level Man-up Order Pickers Capacity 700 and 1000 kg V08

SERIES 1110

Safety

At the edge of the platform the operator has a perfect grip thanks to a slightly inclined edge for a safe pick. While lifting/lowering the supplementary lift on the V08, both hands are requested for further safety. At no time operator's body exposed beyond the contours of the truck.

Performance

V08 models are designed to optimize frequent 1st and 2nd level order picking with 2 different methods of putting down a picked item on forks. Two designs with direct access to the pallet are available to put down picked items regardless of the height of the platform. The OptiLift proportional control rises and lowers platform for accurate picking. Lowering of platform can also be controlled by an easy to use foot switch.

Comfort

Low 135 mm step-in height and wide 431 mm entry allows easy and frequent access to the order pickers. On the V08 „Walk out“ version, forks are welded to the platform giving the operator a wider direct same-level access. For more comfort, the damped mat is acting as a deadman sensor. While lowering, soft landing of the platform brings further control of the preparation and comfort to the operator.

Reliability

Linde offers 2 versions of order pickers for frequent 1st and 2nd picking level to provide the optimum solution for individual organisation. The central drive wheel guarantees traction as well as straight drive down the aisle and a perfect braking. The V08 „Supplementary lift“ is fitted with robust and adjustable ISO forks for various applications.

Service

Speed and economy continue over into truck diagnosis and preventive maintenance. The digital multifunction instrument display ensures the operator is always well informed. CAN-bus connectivity enables all truck data to be transmitted to a laptop by the service technician. Easy accessibility of all components and maintenance-free AC technology also play an important role in maximising truck uptime.

Features

Two versions are available

- Compact chassis width of 800 mm
- Model V08-01 with fixed forks welded to the operator platform, for working with walk on pallets
- Model V08-02 with supplementary lift on operator platform, forks welded to fork carriage. Pallet can be raised to most convenient working level for picking

Workstation

- Numerous storage compartments all around the controls to store picking tools
- Battery cover's design offers shrink wrapped paper holder and further storage area
- Various optional accessories designed to streamline picking, including large workshelf



Drive system

- Powerful, smooth-running AC motor, 3 kW (at 100% output)
- Traction speed adjustable up to 10 km/h, laden or unladen and 5 km/h with the platform up
- Automatic braking on releasing the travel switch
- Electromagnetic braking initiated by the emergency stop button acts on the drive motor, proportional to the load carried

Linde multifunction display

- Digital multifunction display as standard with hourmeter, maintenance indication, battery discharge indicator, fault code indication
- Truck activated by PIN-code, ignition key or by the innovative biometrical access (optional)



Power steering & Linde control twin-grip

- Proportional power-assisted steering, self-centering and effortless to operate
- Positive steering feedback results in an efficient stability
- Automatic speed reduction when cornering
- All controls can be accessible by either right or left hand
- Simultaneous driving/lifting action enables fast move in-between two picks

Rising platform

- Wide access of 431 mm (V08 „Supplementary lift“) and low step-in height (135 mm)
- OptiLift® system to lift the platform provides fully proportional lifting as well as quiet operation
- Lowering can be controlled by a foot switch
- Soft landing of the forks protects load when lowering



Energy

- Battery range available from 375 Ah up to 500 Ah
- Safe and easy side battery change (left or right) mounted on rollers
- Linde locking system secures battery in compartment and eases side change
- Direct and easy access to unlock the system without lifting the platform



CAN-bus connectivity/service

- All truck parameters can be configured by the service technician to achieve best performance in every application
- Electronic management of all components permitting quick and easy diagnosis
- Rapid and convenient access to main components via front service panel
- Moisture and dust-proof motor, with zero maintenance requirement

Linde Material Handling

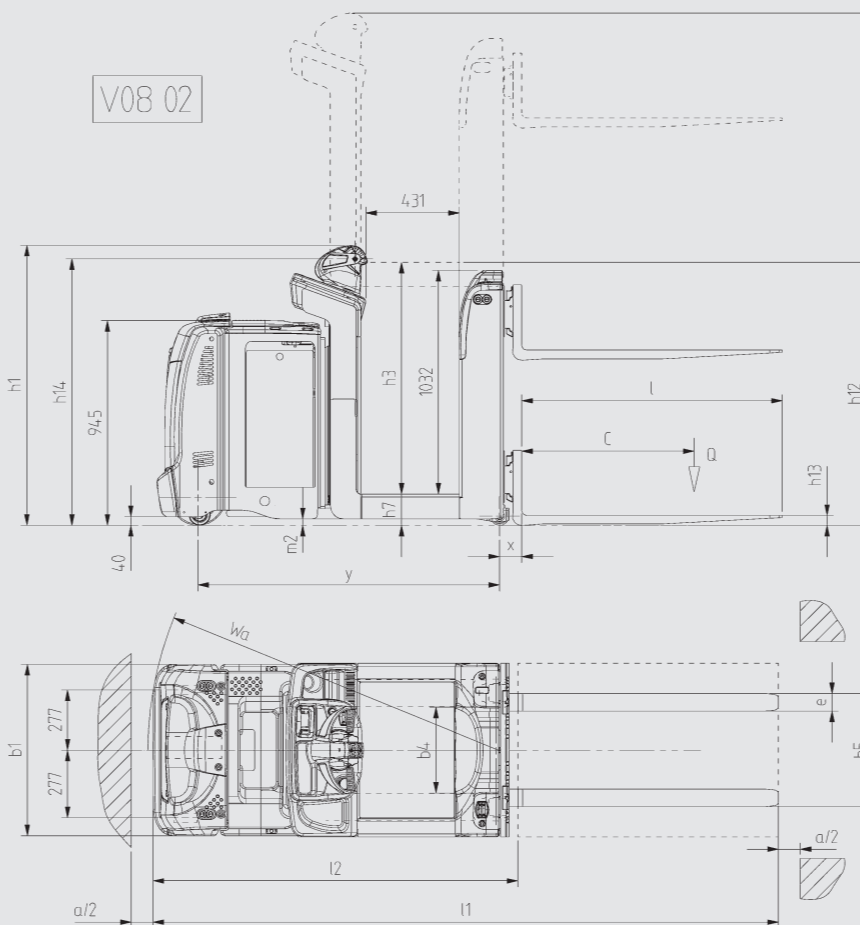
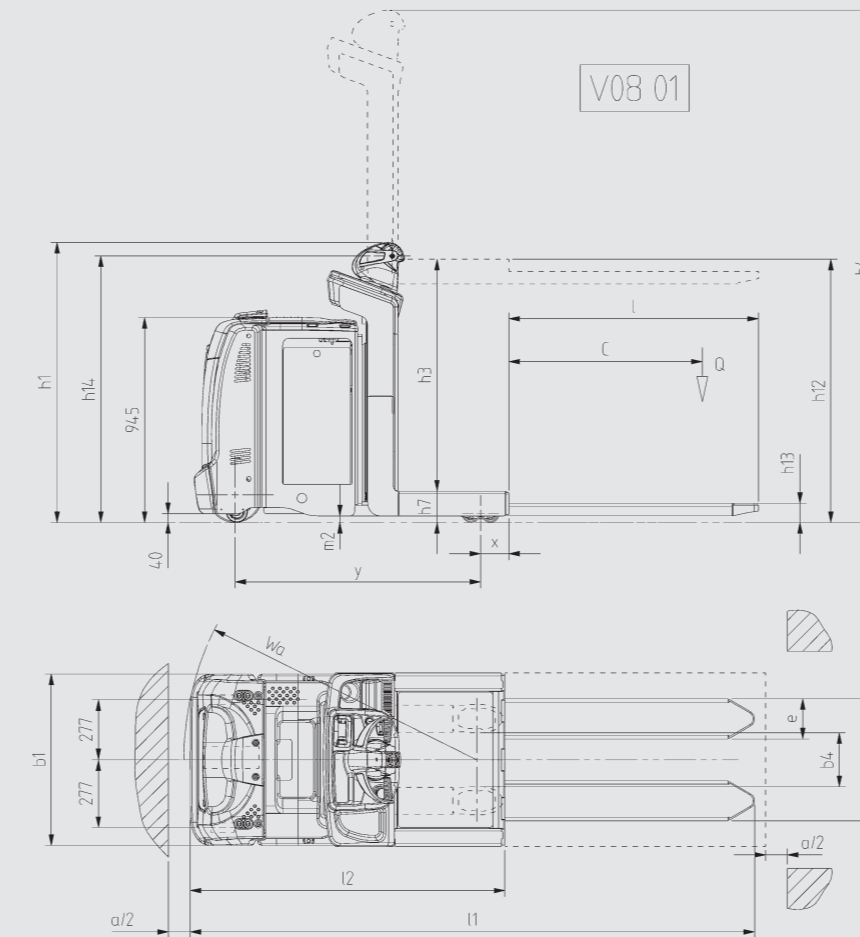
Linde

Technical Data according to VDI 2198

			LINDE	LINDE	LINDE	
Characteristics	1.1	Manufacturer	LINDE	LINDE	LINDE	
	1.2	Model designation	V 08 01 (1000kg)	V 08 01 (700kg)	V 08 02	
	1.3	Power unit	Battery	Battery	Battery	
	1.4	Operation	Order Picker	Order Picker	Order Picker	
	1.5	Load capacity	Q (t)	1.0	0.7	0.8
	1.6	Load centre	c (mm)	600	500	500
	1.8	Axle centre to fork face	x (mm)	395 ¹⁾	-130 ¹⁾	92 ¹⁾
	1.9	Wheelbase	y (mm)	1556 ²⁾	1131 ³⁾	1390 ³⁾
	Weights	2.1	Service weight	(kg)	1299 ⁴⁾	1380 ⁴⁾
2.2		Axle load with load, front/rear	(kg)	789 / 1526 ⁴⁾	390 / 1700 ⁴⁾	496 / 1887 ⁴⁾
2.3		Axle load without load, front/rear	(kg)	928 / 371 ⁴⁾	800 / 580 ⁴⁾	905 / 684 ⁴⁾
Wheels/Tyres	3.1	Tyres	Polyurethane / Solid rubber	Rubber	Polyurethane / Solid rubber	
	3.2	Tyre size, front		Ø 254 x 102	Ø 254 x 102	Ø 254 x 102
	3.3	Tyre size, rear		4x Ø 85 x 60	4x Ø 85 x 60	2x Ø 85 x 80
	3.5	Wheels, number front/rear (x = driven)		1x + 2 / 4	1x + 2 / 4	1x + 2 / 2
	3.6	Track width, front	b10 (mm)	277 / 277 ¹⁾	277 / 277 ¹⁾	277 / 277 ¹⁾
	3.7	Track width, rear	b11 (mm)	380 ¹⁾	380 ¹⁾	525 ¹⁾
	Dimensions	4.2	Height of mast, lowered	h1 (mm)	1292 ¹⁾	1292 ¹⁾
4.4		Lift	h3 (mm)	1065 ¹⁾	1065 ¹⁾	1065 ¹⁾
4.5		Height of mast, extended	h4 (mm)	2357 ¹⁾	2357 ¹⁾	2357 ¹⁾
4.6		Initial lift	h5 (mm)	-	-	-
4.8		Height of seat/stand-on platform	h7 (mm)	135	135	135
4.9		Height of tiller arm in operating position, min/max	h14 (mm)	1244	1244	1244
4.14		Platform height, raised	h12 (mm)	1200 ¹⁾	1200 ¹⁾	1200 ¹⁾
4.15		fork height, lowered	h13 (mm)	86	86	46
4.19		Overall length	l1 (mm)	2500 ²⁾	2600 ³⁾	2880 ³⁾
4.20		Length to fork face	l2 (mm)	1350 ³⁾	1450 ³⁾	1680 ³⁾
4.21		Overall width	b1/b2 (mm)	800 ¹⁾	800 ¹⁾	800 ¹⁾
4.22		Fork dimensions	s/e/l (mm)	60 x 186 x 1150	60 x 186 x 1150	40 x 80 x 1200
4.23		Fork carriage to ISO 2328, class/type A, B		no	no	no
4.25		Fork spread, min/max	b5 (mm)	560 ¹⁾	560 ¹⁾	205 - 733 ¹⁾
4.26		Width between reach legs	b4 (mm)	249	249	396
4.32	Ground clearance, centre of wheelbase	m2 (mm)	30	30	30	
4.34	Aisle width with pallet 800 x 1200 along forks	Ast (mm)	2885	1975	3170	
4.35	Turning radius	Wa (mm)	1860 ²⁾	1535 ³⁾	1660 ³⁾	
Performance	5.1	Travel speed, with/without load	(km/h)	10 / 10 ⁴⁾	10 / 10 ⁴⁾	10 / 10 ⁴⁾
	5.2	Lifting speed, with/without load	(m/s)	0.21 / 0.14 ⁴⁾	0.23 / 0.17 ⁴⁾	0.15 / 0.21 ⁷⁾
	5.3	Lowering speed, with/without load	(m/s)	0.41 / 0.46 ⁴⁾	0.47 / 0.44 ⁴⁾	0.45 / 0.48 ⁷⁾
	5.8	Maximum climbing ability, with/without load	(%)	9 / 15	9 / 15	9 / 15
5.10	Service brake		Electric/hydraulic	Electric/hydraulic	Electric/hydraulic	
Drive	6.1	Drive motor, 60 minute rating	(kW)	3	3	3
	6.2	Lift motor rating at 53 15%	(kW)	3	3	3
	6.3	Battery according to DIN 43531/35/36 A,B,C,no		43 535	43 535	43 535
	6.4	Battery voltage/rated capacity (5h)	(V/Ah)	24 / 375	24 / 500	24 / 500
	6.5	Battery weight (± 5%)	(kg)	295	400	400
	6.6	Power consumption according to VDI cycle	(kWh/h)	0,71	0,71	0,71
Others	8.1	Type of drive control		LAC	LAC	LAC
	8.4	Noise level at operator's ear	(dB(A))	74	74	74

1) (± 5 mm)
 2) Values for 3 PzS batteries. 4 PzS battery = tabled values + 100 mm
 3) With a 4PzS battery
 4) (± 10%)

5) Figures with battery, see line 6.4/6.5.
 6) (± 5%)
 7) forks = 0,18/0,25 lift, 0,50/0,16 lower



Equipements

Equipements standard

Chariot à conception modulaire

Poste de conduite

Choix des commandes côté mât, côté charge, des deux côtés

Choix entre bouton ou volant de direction

Cabine suspendue, qui amortit les chocs et les vibrations

Tapis de sol souple et antidérapant

Accès cabine large avec un seuil bas à 200 mm

Nombreux rangements : stylos, bouteille d'eau, outils...

Afficheur LED

Systèmes de traction, d'élévation & énergie

Moteurs hautes performances asynchrones, étanches et sans entretien

- Moteur de traction : 3,0 kW

- Moteur d'élévation : 3,2 kW

Roues polyuréthane haute durabilité

Equipements en Option

Compartiment opérateur

Tableau de bord LCD multifonctions (horamètre, position de roue, hauteur d'élévation, niveau batterie...)

Démarrage par digicode

Différentes largeurs de cabines de 790 à 1500 mm

Rétroviseurs

Protection Macrolon sur protège-conducteur

Support listing, rangements supplémentaires

Ventilateur sur protège-conducteur

Préparation informatique embarquée - Convertisseur

d'alimentation 12/24V, 50/150W

Pré-équipement autoradio avec support, alimentation

12V/50W, 2 haut-parleurs stéréo et antenne de réception

Sécurité

Protège-conducteur (obligatoire si h25 > 1800 mm)

Barrières latérales repliables (obligatoires si h12 > 1200 mm)

Système de descente avec corde et harnais

(obligatoire si h12 > 2500 mm)

Limiteur de translation / levée paramétrable

Capteur de proximité sans contact anticollision sur protège-conducteur

Blue Spot

Feux à éclats, phares de travail

Large choix de compartiments batterie

Contrôle du niveau d'énergie avec coupure de sécurité en cas de batterie faible

Freinage à récupération d'énergie

Sécurité

Réduction automatique de la vitesse en fonction de la hauteur de la plateforme et de l'angle de direction

Vérification du positionnement des mains / bras effectuée

par capteur sensible sur tableau de bord et pédale de

présence pour tout mouvement du chariot

Châssis et mât

Choix entre 2 largeurs de châssis : 790 ou 980 mm

Choix entre 2 plateformes :

- Accès palette (fourches soudées)

- Mise à niveau ergonomique (mât de levée auxiliaire de 800 mm)

Tablier porte-fourches ajustable (FEM)

Longueur de fourches de 700 à 2500 mm

Motorisation / gestion de l'énergie

Adaptation du moteur de levée selon l'application :

- Moteur éco 3,2 kW

- Moteur standard 4,0 kW

- Moteur hautes performances 7,6 kW

Capacité batterie 24V de 360 à 930 Ah

Sortie latérale sur rouleaux

Contrôle de verrouillage batterie par détecteur sans contact

Applications spécifiques

Guidage mécanique par rails / galets

Guidage par induction (filoguidage)

Protection chambre froide

Protection antistatique

Bouton d'avance en accompagnant

Module de diagnostic à distance GPRS



Préparateur de commandes Petite et moyenne hauteur Capacité 1000 kg V10

Series 5021-01

Le V10 permet la préparation de commandes à moyenne et grande hauteur dans les allées libres, guidées par rail ou par induction.

Sécurité

La sécurité de l'opérateur est au cœur de la conception du V10. Il offre une visibilité totale à travers et sur les côtés du mât. Les capteurs sensibles nécessitent la présence des deux mains pour toute opération, et le contrôleur LSC surveille la hauteur de levage avec les angles de virage pour ajuster automatiquement la vitesse de traction pour plus de sécurité de l'opérateur.

Performances

Grâce à sa stabilité et ses moteurs de levage, Le V10 atteint des hauteurs de picking jusqu'à 6 350 mm. Son moteur asynchrone combine performances optimales avec consommation d'énergie minimale. La conception modulaire du V10 permet de s'adapter à toutes les applications.

Confort

Pour plus de confort, la plateforme est suspendue et le seuil d'accès de la cabine est bas. Le chariot est facile d'utilisation aussi bien à hauteur maximale que lors du travail au sol. Avec ses nombreux espaces de rangement et sa large gamme d'options telles que pré équipement radio, ventilateurs, et terminaux de données, le V10 est un chariot totalement personnalisable.

Caractéristiques

Deux versions disponibles

→ V10-01 avec fourches fixes soudées à la plateforme de la cabine, avec accès palette

→ V10-02 avec levée complémentaire du tablier porte-fourches. La palette peut être élevée à hauteur ergonomique pour la préparation de commandes, et permet l'utilisation de l'intégralité de la surface de la palette

Concept modulaire

→ Une conception modulaire pour s'adapter au besoin de chaque application

→ Combinaison de différents moteurs de levée, de traction, de mâts, de batteries ou de cabines

→ Le chariot peut être équipé :
• de galets latéraux pour le travail en allées guidées par rails
• de filoguidage



Commandes

→ Des commandes simples et ergonomiques pour des mouvements précis et sans efforts

→ Une grande facilité d'utilisation, même avec des gants

→ Possibilité d'installation côté mât, côté charge, ou les deux

→ Affichage LED intuitif ou LCD en option

→ Toutes les fonctions principales sont clairement affichées à l'opérateur

→ Fonctions auxiliaires telles que guidage ou verrouillage batterie intégrées au tableau de bord



Contrôleur LSC

→ Ajustement automatique et progressif de la vitesse selon l'angle de direction et la hauteur d'élévation



Sécurité

→ Vérification de la position des deux mains grâce à des capteurs sensibles intégrés aux commandes : pas de bouton supplémentaire

→ Déverrouillage des fonctions après détection de l'opérateur via capteurs sans contact sur les commandes et pédale de présence

→ Réduction automatique de vitesse en virage

→ Vanne hydraulique de descente d'urgence située sous le capot moteur, facile d'accès en allée

Compartiment opérateur

→ Une cabine suspendue pour amortir les chocs et les vibrations

→ Eclairage de la cabine, de la charge, vers le rack

→ Rangements, porte-stylos et bouteilles intégrés aux garnitures de la cabine

→ Pré-équipement radio, ventilation, préparation pour terminaux de données et lecteurs code-barres

Traction et élévation

→ Des moteurs robustes, économes et performants en standard

→ 3 niveaux de motorisation de levée pour s'adapter au mieux à votre application

→ Mouvements simultanés (levée et translation) en allée libre

→ Moteurs asynchrones étanches IP54, connecteurs SAAB et connectivité CanBus



Gestion de l'énergie

→ Haute efficacité énergétique, récupération d'énergie en freinage et en descente

→ Large choix de batteries allant de 360 Ah à 930 Ah

→ Sortie latérale sur fourreaux ou sur support à rouleaux

→ Sortie verticale par élingage
→ Verrouillage batterie avec détecteur sans contact

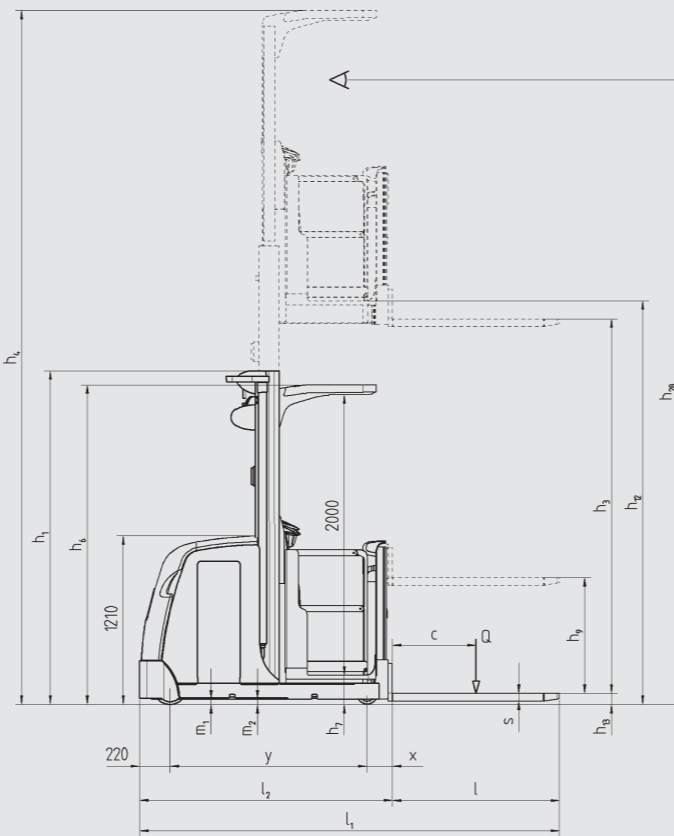
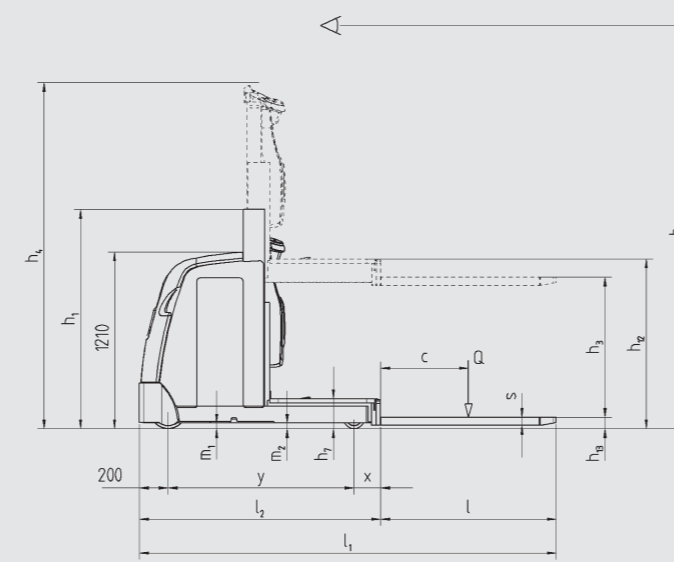


Fiche technique selon VDI 2198

Catégorie	Code	Description	FENWICK-LINDE		
			V10 Mât Simplex ¹⁾	V10 Mât Standard ¹⁾	
Désignation	1.1	Constructeur	FENWICK-LINDE	FENWICK-LINDE	
	1.2	Modèle	V10 Mât Simplex ¹⁾	V10 Mât Standard ¹⁾	
	1.3	Energie	Batterie	Batterie	
	1.4	Position de conduite	Préparation	Préparation	
	1.5	Capacité de charge	Q (t)	1.0	1.0
	1.6	Centre de gravité de la charge	c (mm)	400	400
	1.8	Distance de l'axe des roues porteuses à la face avant des fourches	x (mm)	190	190
	1.9	Empattement	y (mm)	1270	1415
	Poids	2.1	Poids en ordre de fonctionnement	(kg)	1754 ²⁾
2.2		Charge par essieu avant/arrière en charge	(kg)	589 / 2165 ²⁾	1080 / 1531 ²⁾
2.3		Charge par essieu avant/arrière à vide	(kg)	1054 / 700 ²⁾	1497 / 1114 ²⁾
Pneus et roues	3.1	Type de bandage		Polyuréthane	Polyuréthane
	3.2	Dimensions des roues avant		Ø 250 x 100	Ø 250 x 100
	3.3	Dimension de la roue arrière		Ø 150 x 100	Ø 150 x 100
	3.5	Nombre de roues avant/arrière (x = roue motrice)		1x / 2	1x / 2
	3.6	Voie avant	b10 (mm)	0	0
	3.7	Voie arrière	b11 (mm)	655	835
	Dimensions	4.2	Hauteur hors tout du mât en position basse	h1 (mm)	2000
4.4		Levée libre	h3 (mm)	1500	4550
4.5		Hauteur hors tout du chariot mât déployé	h4 (mm)	3750	6800
4.7		Hauteur du protège conducteur	h6 (mm)	2250	2250
4.8		Hauteur de la plateforme en position basse	h7 (mm)	200	200
4.11		Course de levée complémentaire	h9 (mm)	800	800
4.14		Hauteur de la plateforme mât déployé	h12 (mm)	1700	4750
4.15		Hauteur sur les fourches en position basse	h13 (mm)	65	65
4.19		Longueur totale (fourches incluses)	l1 (mm)	2460	2615
4.20		Longueur (jusqu'à la face avant des fourches)	l2 (mm)	1660	1815
4.21		Largeur hors tout du châssis	b1/b2 (mm)	790 / 790	980 / 980
4.22		Dimensions des fourches	s/e/l (mm)	55 x 120 x 800	55 x 120 x 800
4.23		Tablier porte fourches DIN 15173 - classe : A, B, non		non	non
4.24		Largeur du tablier porte fourches	b3 (mm)	740	740
4.25		Ecartement des fourches min./max.	b5 (mm)	560 / 640	560 / 640
4.27		Largeur extérieure des galets de guidage	b6 (mm)	-	1375
4.31		Garde au sol sous le mât, en charge	m1 (mm)	38	38
4.32		Garde au sol au milieu de l'empattement	m2 (mm)	38	38
4.34		Largeur d'allée de stockage entre faces de charges	Ast (mm)	-	1380
4.35		Rayon de giration	Wa (mm)	1470	1635
4.42	Largeur d'allée de transfert, avec/sans charge	Au (mm)	2828	2984	
Performances	5.1	Vitesse de translation avec/sans charge	(km/h)	9 / 9	10 / 10
	5.2	Vitesse de levée avec/sans charge	(m/s)	0.18 / 0.25	0.22 / 0.31
	5.3	Vitesse de descente avec/sans charge	(m/s)	0.3 / 0.24	0.3 / 0.24
	5.9	Accélération avec/sans charge	(s)	7.0 / 7.0	8.0 / 8.0
	5.10	Type de freinage		Electrique à récup. d'énergie	Electrique à récup. d'énergie
	Entraînement	6.1	Puissance du moteur de traction	(kW)	3
6.2		Puissance du moteur de levée	(kW)	4	7.6
6.3		Type de batterie selon IEC 254-2 ; A, B, C, non		43 535 / B	43 535 / A
6.4		Tension de la batterie / capacité (5h)	(V/Ah)	24 / 420	24 / 560
6.5		Poids de la batterie (+5%)	(kg)	385	502
Divers	8.1	Type de contrôleur de traction		Microprocesseur	Microprocesseur
	8.4	Niveau sonore pour l'opérateur	(dB(A))	61	69

1) Configuration réalisée à titre d'exemple à partir de la conception modulaire du chariot. Pour une configuration personnalisée, veuillez contacter votre revendeur local.

2) Estimation selon la batterie, voir lignes 6.4/6.5.



V10 Mâts simplex (1)				
Hauteur hors tout mât replié	h1 (mm)	1500	2000	2500
Course de levée principale	h3 (mm)	1000	1500	1910
Course de levée totale des fourches	h3+h9 (mm)	1800	2300	2710
Hauteur maximale sur fourches	h25 (mm)	1865	2365	2775
Course de levée complémentaire	h9 (mm)	800	800	800
Hauteur maximale de la plate-forme	h12 (mm)	1200	1700	2110
Hauteur maximale de préhension	h28 (mm)	2800	3300	3710
Hauteur hors tout du chariot, mât déplié	h4 (mm)	2390	3750	4160

1.) Disponible avec une largeur de châssis de 790 mm et de 980 mm

V10 Mâts standard (2)				
Hauteur hors tout mât replié	h1 (mm)	2400	2900	-
Course de levée principale	h3 (mm)	3550	4550	-
Course de levée totale des fourches	h3+h9 (mm)	4350	5350	-
Hauteur maximale sur fourches	h25 (mm)	4415	5415	-
Course de levée complémentaire	h9 (mm)	800	800	-
Hauteur maximale de la plate-forme	h12 (mm)	3750	4750	-
Hauteur maximale de préhension	h28 (mm)	5350	6350	-
Hauteur hors tout du chariot, mât déplié	h4 (mm)	5800	6800	-

2.) Disponible avec une largeur de châssis de 980 mm



V10-02, levée complémentaire



V10-02, levée complémentaire



V10-01, simplex avec accès palette