

## Standard Equipment /Optional Equipment

### Standard Equipment

Modular designed truck for perfect customization

#### Operators compartment

Operators cabin "Combi" for easy stacking or order picking  
Height and length adjustable and stowable fabric seat  
Suspension-mounted cab to absorb shock and vibration  
Very soft and comfortable platform surface  
Steering knob  
Truck access via key  
Low step on height for easy on and off  
Optic and acoustic user guidance with signalling  
Basic functions without changing position of grip  
Multipurpose full graphic color display  
Sensor area for secured 2 handed driving  
Lateral barriers left and right

#### Throughput

LSC standard  
Synchronized lowering/lifting  
Energy recovery when braking or lowering the cabin  
Synchronous reach & rotate of forks

#### Mast / Forks

L Head or telescopic forks

#### Motors

7 KW drive motor  
20 KW lift motor

### Optional Equipment

#### Operators compartment

Different types of cabins (combi, comfort, coldstore)  
Comfortable seats (air suspended, heated, adjustable backrests, armrests, etc.)  
Radio preparation integrated in the overhead guard  
Rearview (left/right) and panorama mirror  
Clipboard DIN A4  
Wind protection for lateral doors and loadside (glazed doors and cabin)  
Operator fan  
Lighting for operators compartment  
Working lights into racking  
Linde Connect  
Individual configurable attachment bars on load or mast side

#### Throughput

Aisle safety assist  
LSC load or LSC weight  
Dynamic Reach Control  
Retractable outriggers  
Automatic fork cyclus  
Overreach of forks  
Lift height preselection  
Different drive and lift motors available

#### Masts / Forks

Standard masts up to 11800 mm lift height  
Triplex masts available up to 15650 mm lift height  
Telescopic forks  
Manual or hydraulic adaptable forks  
Gear rack cover of L-Head

#### Battery

Different battery (compartment) sizes  
Battery roller for lateral change  
Battery carrier  
Electrical verification for battery lock  
Side covering for battery

#### Environment

Cold store protection (w/w.o. 2nd sliding door, Intercom)  
Antistatic guide rollers

#### Safety

Rescue alarm  
Load wheel brake for increased safety at emergency stop  
Personal safety equipment (PSE)  
Non contact collision avoiding sensor

#### Motors

7 kW Heavy Drive Motor  
24 kW Heavy Lift Motor



## Modular very narrow aisle (VNA) dual purpose combi truck Capacity up to 1.500 kg

Series 5231

### Safety

The K offers various systems to offer safe operation for the operator as well as its environment. The personal safety system prevents damage inside the aisle, while the innovative rescue alarm detects unusual operators behavior and attracts attention in emergency cases.

### Performance

Strong motors enable high lift- and driving-speeds, while the ergonomic control panel enables quick load handling with minimal hand movement. Assisting systems like LSC or the Aisle safety assist support the operator for maximum throughput in safe operation.

### Comfort

With the K trucks superb cabin layout the operator feels immediately at ease and acclimatised. With generous space for freedom of movement, the cab offers a comfortable operational environment for fatigue-free working and promotes optimum efficiency and productivity.

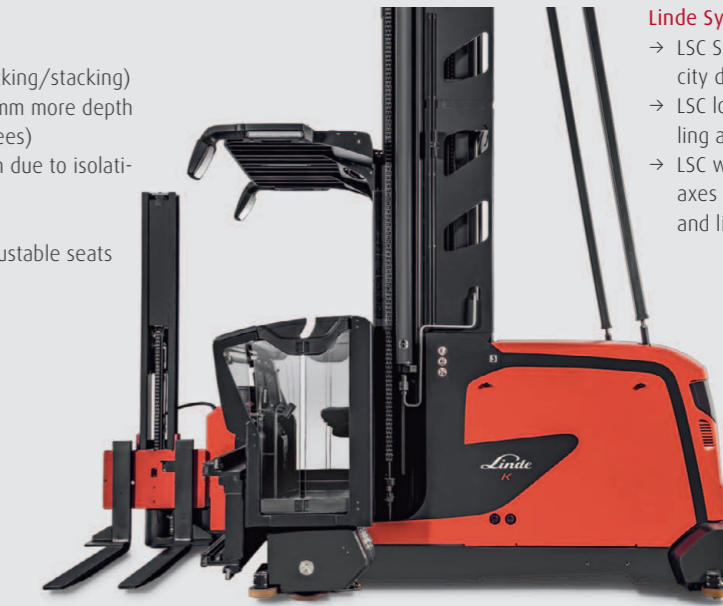
Linde Material Handling

Linde

## Features

#### Cabin

→ 3 different cabins available  
- Combi cabin (combined picking/stacking)  
- Comfort cabin with + 100 mm more depth  
- Cold store cabin (-30 degrees)  
→ Reduced shock and vibration due to isolation of cabin from chassis  
→ Easy and low access height  
→ Various comfortable and adjustable seats



#### Linde System Control (LSC)

→ LSC Standard: Dynamic residual capacity diagram depending on lift height  
→ LSC load: Optimisation of shift, swivelling and suppl. lift by load recognition  
→ LSC weight: Optimization of all moved axes depending on actual load weight and lift height

#### Modular concept

→ Unique modular design concept enables perfect individualization:  
→ Combination of different lift and drive motors  
→ Truck capacities from 0,5 t to 1,5 t  
→ Various cabin widths and executions  
→ Various chassis widths  
→ Different battery compartments

#### Control panel

→ Control panel options for perfect customization:  
→ Split control panel for full pallet handling  
→ Front control panel for order picking or full pallet handling

#### Dynamic Reach Control

→ Effective compensation of lateral mast movements while reaching of forks enables, quicker and more comfortable pallet handling  
→ Reach adjustment depending on lift height and load weight enables exact and even storage of goods



#### Mast

→ New modular design with exceptionally stable, low deflection characteristics  
→ Alternative standard and triplex mast to suit all headroom requirements  
→ More than 60 different masts available  
→ Automatic soft stop of lift, rotate and traverse movements



#### Doors

→ Side barriers for quick access and easy order picking  
→ Glass doors to avoid draft and wind  
→ Tilting barriers for perfect reach to picking position



#### Operator's compartment

→ Powerful, 2 stage ventilation for comfortable working  
→ Low energy consuming and bright LED lamps  
→ Modular storage system for flexible use of individual monitors, scanners, etc.  
→ Comfortable knee pad at cabin front for placing of picks

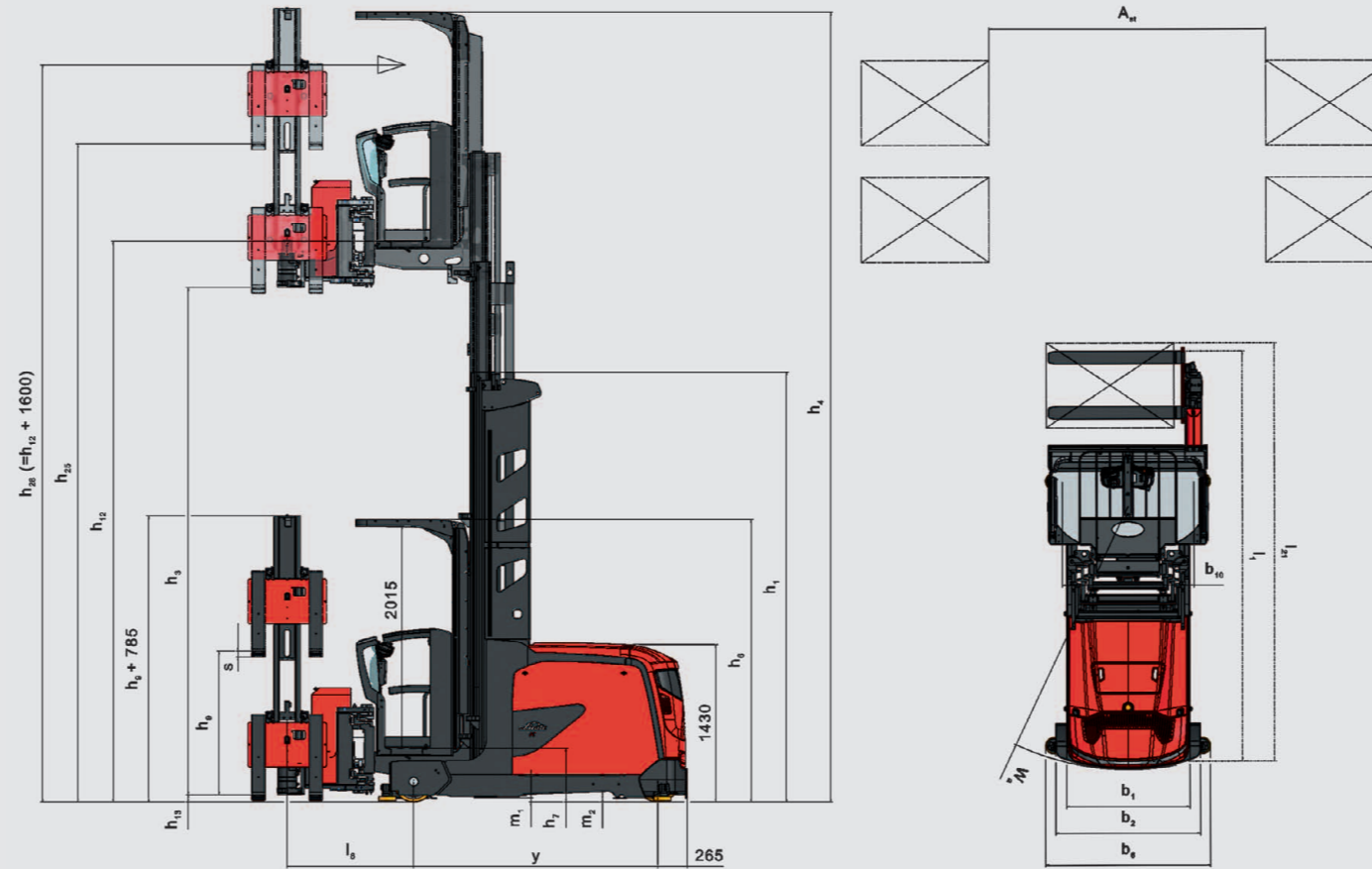


# Technical Data according to VDI 2198

Characteristics		1.1	1.2	1.3	1.4	1.5	1.6	1.9
1.1	Manufacturer		LINDE	LINDE	LINDE			
1.2	Manufacturer's type designation		<b>K-Example 0.7</b>	<b>K-Example 1.1</b>	<b>K-Example 1.5</b>			
1.2a	Series		5231-00	5231-00	5231-00			
1.3	Power unit		Battery	Battery	Battery			
1.4	Operation		Stand/Sitz	Stand/Sitz	Stand/Sitz			
1.5	Load capacity/Load	Q (t)	0.7 <sup>1)</sup>	1.1 <sup>1)</sup>	1.5 <sup>1)</sup>			
1.6	Load centre distance	c (mm)	600	600	600			
1.9	Wheelbase	y (mm)	1614	1758	1992			
Weights								
2.1	Service weight	(kg)	6488 <sup>2)</sup>	8122 <sup>2)</sup>	10228 <sup>2)</sup>			
2.2	Axle load with load, front/rear	(kg)	1982 / 5206	2545 / 6677	3228 / 8500			
2.3	Axle load without load, front/rear	(kg)	2424 / 4064	3183 / 4939	3995 / 6233			
Wheels/Tyres								
3.1	Tyres rubber, SE, pneumatic, polyurethane		Polyurethane	Polyurethane	Polyurethane			
3.2	Tyre size, front		Ø 360 x 130	Ø 406 x 170	Ø 406 x 170			
3.3	Tyre size, rear		Ø 370 x 160	Ø 370 x 160	Ø 370 x 160			
3.5	Wheels, number front/rear (x = driven)		1x / 2	1x / 2	1x / 2			
3.6	Track width, front	b10 (mm)	1245	1245	1245			
Dimensions								
4.2	Height of mast, lowered	h1 (mm)	3900	4900	7400			
4.4	Lift	h3 (mm)	5600	7200	11800			
4.5	Height of mast, extended	h4 (mm)	8155	9755	14355			
4.7	Height of overhead guard (cabin)	h6 (mm)	2555	2555	2555			
4.8	Height of seat/stand on platform	h7 (mm)	460	460	460			
4.11	Supplementary lift	h9 (mm)	1800	1800	1800			
4.14	Platform height, raised	h12 (mm)	6060	7660	12260			
4.15	Height, lowered	h13 (mm)	60	60	60			
4.19	Overall length	l1 (mm)	3244	3388	3622			
4.21	Overall width	b1/b2 (mm)	1160 / 1450 <sup>3)</sup>	1160 / 1450 <sup>3)</sup>	1160 / 1450 <sup>3)</sup>			
4.22	Fork dimensions DIN ISO 2331	s/e/l (mm)	50 x 120 x 1190	50 x 120 x 1190	50 x 120 x 1190			
4.24	Width of fork carriage	b3 (mm)	710	710	710			
4.25	Fork spread	b5 (mm)	470 / 640	470 / 640	470 / 640			
4.27	Width over side guide rollers	b6 (mm)	1585	1585	1585			
4.29	Reach, lateral	b7 (mm)	1305	1305	1305			
4.31	Ground clearance, below mast	m1 (mm)	40	40	40			
4.32	Ground clearance, centre of wheelbase	m2 (mm)	87	87	87			
4.34.2	Aisle width with pallet 800 x 1200 along forks	Ast (mm)	1645 <sup>4)</sup>	1645 <sup>4)</sup>	1645 <sup>4)</sup>			
4.35	Turning radius	Wa (mm)	1870	2014	2248			
4.38	Centre of axle to fork pivot	l8 (mm)	1019	1019	1019			
4.39	Head centre	A (mm)	480	480	480			
4.40	Width of reach carriage	B (mm)	1465	1465	1465			
4.41	Head width	F (mm)	250	250	250			
4.42	End aisle width, with/without load	Au (mm)	3664	3808	4042			
Performance								
5.1	Travel speed, with/without load	(km/h)	9 / 9	12 / 12	12 / 12			
5.2	Lifting speed, with/without load	(m/s)	0.4 / 0.4	0.45 / 0.6	0.39 / 0.39			
5.3	Lowering speed, with/without load	(m/s)	0.45 / 0.45	0.45 / 0.45	0.43 / 0.43			
5.4	Reach speed, with/without load	(m/s)	0.3 / 0.4	0.3 / 0.4	0.3 / 0.4			
5.9	Acceleration time, with/without load	(s)	6.0 / 6.0	6.0 / 6.0	7.0 / 7.0			
5.10	Service brake		Regenerative	Regenerative	Regenerative			
Drive								
6.1	Drive motor rating S2 60 min	(kW)	6.5	7	7			
6.2	Lift motor rating at S3 15%	(kW)	13	24	24			
6.3	Battery according to DIN 43531/35/36 A,B,C,no		43 531 / B	43 536 / A	43 536 / A			
6.4	Battery voltage/rated capacity (5h)	(V)/(Ah)	48 / 775	80 / 620	80 / 775			
6.5	Battery weight (+ 5%)	(kg)	1119	1558	1863			
8.1	Type of drive unit		Microprocessor	Microprocessor	Microprocessor			
10.7	Sound pressure level LpAZ (at the driver's seat)	(dB(A))	68	68	68			

1) Delta Q = 100 kg; from 500-1500 kg with L-Head model and from 500 - 1300 kg with telescopic forks  
2) Figures with battery, see line 6.4/6.5.

3) Step for b2; 50 mm from 1160 - 1800 mm  
4) Including a 180 mm (min.) operating aisle clearance.



Standard mast (Basic)	h1=2400	h1=2900	h1=3400	h1=3900	h1=4400	h1=4900
h3	2600	3600	4600	5600	6200	7200
h25	4460	5460	6460	7460	8060	9060
h9	1800	1800	1800	1800	1800	1800
h28	4660	5660	6660	7660	8260	9260
h4	5155	6155	7155	8155	8755	9755

Standard mast (Basic Plus, Medium, Heavy, Heavy Plus)	h1=2400 <sup>1)</sup>	h1=2900 <sup>3)</sup>	h1=3400 <sup>3)</sup>	h1=3900	h1=4400	h1=4900	h1=5400	h1=5900	h1=6400 <sup>2)</sup>	h1=6900 <sup>2)</sup>	h1=7400 <sup>2)</sup>
h3	2200	3200	4200	5200	6200	7200	8200	9000	10000	10800	11800
h25	4060	5060	6060	7060	8060	9060	10060	10860	11860	12660	13660
h9	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
h28	4260	5260	6260	7260	8260	9260	10260	11060	12060	12860	13860
h4	4755	5755	6755	7755	8755	9755	10755	11555	12555	13355	14355

<sup>1)</sup> only available for Basic Plus standard mast <sup>2)</sup> not available for Basic Plus standard mast <sup>3)</sup> not available for Heavy Plus standard mast

K Triplex mast (Medium, Heavy, Heavy Plus)	h1=2900 <sup>1)</sup>	h1=3400	h1=3900	h1=4400	h1=4900	h1=5400	h1=5900	h1=6400 <sup>2)</sup>	h1=6900 <sup>2)</sup>
h3	5050	6350	7450	8750	10050	11550	12850	14350	15650
h25	6910	8210	9310	10610	11910	13410	14710	16210	17510
h9	1800	1800	1800	1800	1800	1800	1800	1800	1800
h28	7110	8410	9510	10810	12110	13610	14910	16410	17710
h4	7605	8905	10005	11305	12605	14105	15405	16905	18205

<sup>1)</sup> not available for Heavy Plus Triplex mast <sup>2)</sup> only available for Heavy Plus Triplex mast

