



## Electric Man-down Turret Truck 1350 kg A13

SERIES 005

### Safety

The operator is fully protected within the operator's compartment. Three independent braking systems ensure effective stopping power for every eventuality. The innovative mast concept provides exceptional torsion resistance for impressive stability at high lift heights and the operator has excellent visibility to the forks and load for safe, assured handling operations.

### Performance

The powerful 4.2 kW traction and 15 kW lift motors deliver high-torque performance. The truck is fitted with the advanced Linde digital control system, which governs the powerful drive and hydraulic pump motors for smooth, seamless acceleration, lift, reach and rotate movements ensuring safe and extremely efficient load handling. This system of energy control optimises the number of work cycles obtained from each battery charge.

### Comfort

The spacious operator's compartment has a sideways seating position with a specially designed full suspension seat, which offers lateral, lumbar, weight, and height adjustments so that every operator is able to find the perfect driving position for optimum comfort. This, combined with the highly functional and ergonomic layout of the operating controls, provides a superb, fatigue-free working environment enabling the operator to achieve excellent productivity ratios.

### Reliability

The key components of the truck are easily accessible for maintenance and integrated diagnostics ensure reduced servicing intervals. The energy saving Linde digital control system, together with the low-maintenance design of the truck results in maximum uptime and reduced operating costs.

### Productivity

A clear view of the turret head and load during storage and retrieval operations as well as good all-round visibility within the very narrow aisles are important prerequisites for cost-effective efficiency and high throughput ratios. Performance is also enhanced by the smooth, responsive hydrostatic steering and the Linde twin accelerator pedal system. Linde very narrow aisle system trucks are designed to achieve maximum utilisation of the available storage space.

Linde Material Handling

*Linde*

**STACKING AISLE VARIATIONS for specification with L-head (in mm).**

**Only for trucks with mechanical side guidance up to h<sub>3</sub> ca. 7500 mm lift height.**

Load type	Load dimensions		Aisle width (between load faces) Ast	Operating clearance		Head centre A	Reach carriage width B	Head width F	Width over forks b <sub>5</sub>	Truck dimensions		End aisle width** Au
	Length* l <sub>6</sub>	Width b <sub>12</sub>		a <sub>1</sub>	a <sub>3</sub>					Overall width b <sub>2</sub>	Overall length l <sub>1</sub>	
Euro pallet	1000	1200	1470	90	90	700	1290	290	620	1290	3300	4000
	1200	800	1670	90	90	600	1490	290	540	1490	3200	3700
	1200	1000	1670	90	90	600	1490	290	620	1490	3200	3800
	1200	1200	1670	90	90	700	1490	290	620	1490	3300	4000
	800	1200	1420	90	240	700	1240	290	620	1240	3300	4000
	800	1200	1520	90	340	700	1340	290	620	1340	3300	4000
Post pallet	1240	835	1720	90	100	600	1540	290	540	1540	3200	3700
	835	1240	1420	90	205	700	1240	290	620	1240	3300	4000

**Only for trucks with mechanical guidance up to h<sub>3</sub> ca. 10500 mm lift height.**

Load type	Load dimensions		Aisle width (between load faces) Ast	Operating clearance		Head centre A	Reach carriage width B	Head width F	Width over forks b <sub>5</sub>	Truck dimensions		End aisle width** Au
	Length* l <sub>6</sub>	Width b <sub>12</sub>		a <sub>1</sub>	a <sub>3</sub>					Overall width b <sub>2</sub>	Overall length l <sub>1</sub>	
Euro pallet	1000	1200	1550	105	120	700	1340	325	620	1340	3300	4000
	1200	800	1750	105	120	600	1540	325	540	1540	3200	3700
	1200	1000	1750	105	120	600	1540	325	620	1540	3200	3800
	1200	1200	1750	105	120	700	1540	325	620	1540	3300	4000
	800	1200	1400	105	170	700	1190	325	620	1230	3300	4000
	800	1200	1450	105	220	700	1240	325	620	1240	3300	4000
Post pallet	800	1200	1500	105	270	700	1290	325	620	1290	3300	4000
	1240	835	1800	105	130	600	1590	325	540	1590	3200	3700
	835	1240	1400	105	135	700	1190	325	620	1230	3300	4000
	835	1240	1450	105	185	700	1240	325	540	1240	3300	4000
Post pallet	835	1240	1500	105	235	700	1290	325	620	1290	3300	4000

\* Length = parallel to forks.

\*\* Including 200 mm (min.) operating aisle clearance.

**MAST UNIT VARIATIONS (in mm)**

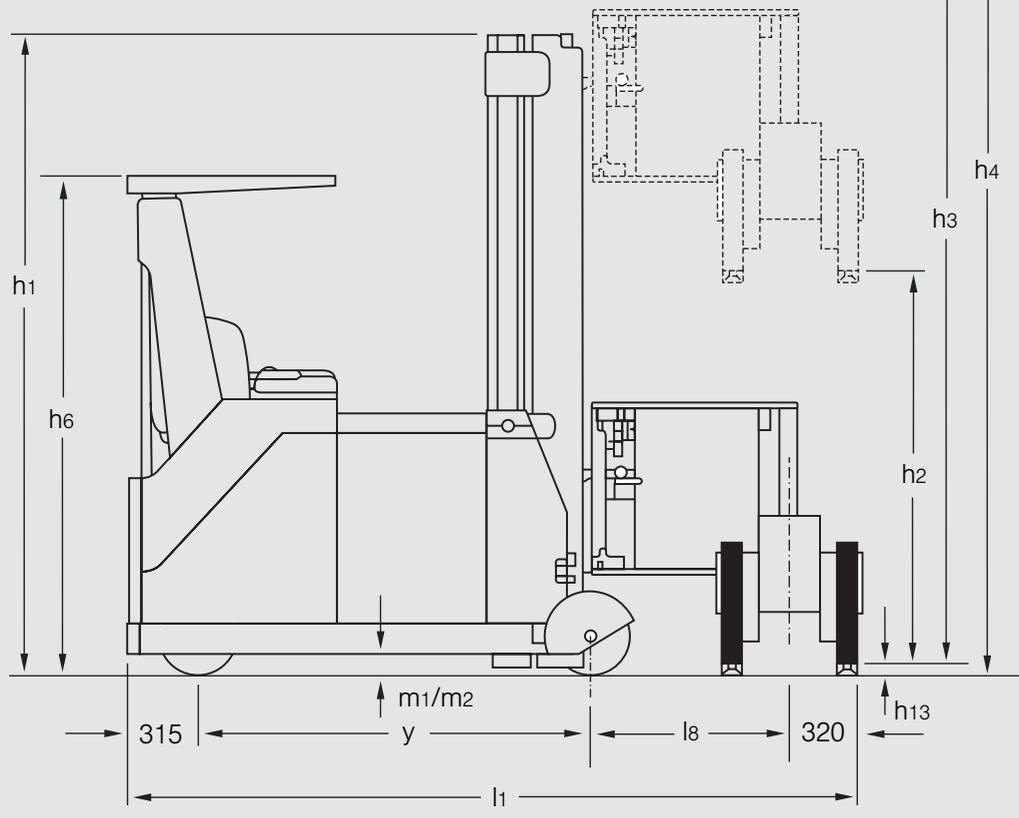
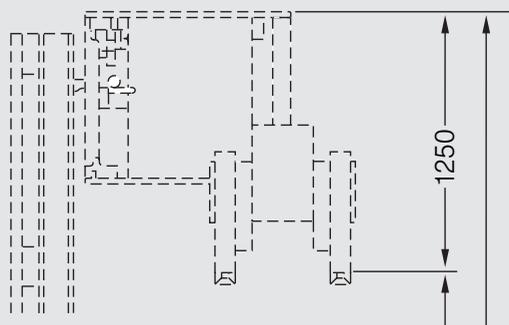
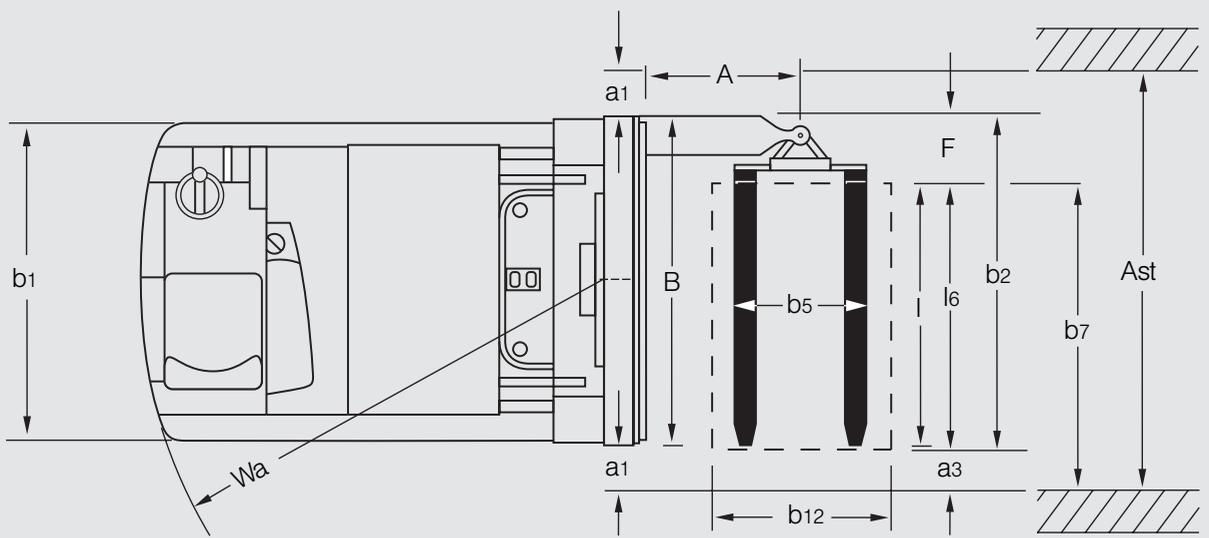
**Standard Lift Mast – 'L' Head**

Lift	h <sub>3</sub>	3060	3960	4960	5960	6960	7960	8960	9960
Lift height	h <sub>3</sub> + h <sub>13</sub>	3115	4015	5015	6015	7015	8015	9015	10015
Height of mast, lowered	h <sub>1</sub>	2450	2900	3400	3900	4400	4900*	5400*	5900*
Height of mast, raised	h <sub>4</sub>	4315	5215	6215	7215	8215	9215	10215	11215

**Triplex Lift Mast – 'L' Head**

Lift	h <sub>3</sub>	4495	5845	7345	8845	10345
Lift height	h <sub>3</sub> + h <sub>13</sub>	4550	5900	7400	8900	10400
Free lift	h <sub>2</sub>	1195	1645	2145	2645	3145
Height of mast, lowered	h <sub>1</sub>	2450	2900	3400	3900*	4400*
Height of mast, raised	h <sub>4</sub>	5750	7100	8600	10100	11600

\* fitted with mast tie-rods as standard.



# Technical data (according to VDI 2198)

Characteristics	1.1	Manufacturer		LINDE
	1.2	Model designation		A13 <sup>1)</sup>
	1.3	Power unit: battery, diesel, petrol, LP gas, mains power		Battery
	1.4	Operation: manual, pedestrian, stand-on, seated, order picker		Rider seated
	1.5	Load capacity	Q (kg)	1350
	1.6	Load centre	c (mm)	600
	1.9	Wheelbase	y (mm)	1765
Weight	2.1	Service weight	kg	7083
	2.2	Axle load with load, drive side/load side	kg	1755/6678
	2.3	Axle load without load, drive side/load side	kg	2379/4704
Chassis	3.1	Tyres: solid rubber, contoured solid, polyurethane		Polyurethane
	3.2	Tyre size, driver side		343 x 135
	3.3	Tyre size, load side		360 x 152
	3.5	Wheels, number drive side/load side (x = driven)		1x/2
	3.6	Track width, drive side	b10 (mm)	0
	3.7	Track width, load side	b11 (mm)	1040 - 1440
Dimensions	4.2	Height of mast, lowered	h1 (mm)	5900 <sup>2)</sup>
	4.3	Free lift	h2 (mm)	-
	4.4	Lift	h3 (mm)	9960 <sup>2)</sup>
	4.5	Height of mast, extended	h4 (mm)	11215
	4.7	Height of overhead guard (cabin)	h6 (mm)	2280
	4.8	Height of seat/stand-on platform	h7 (mm)	1175
	4.15	Fork height, lowered	h13 (mm)	55
	4.19	Overall length	l1 (mm)	3200 <sup>3)</sup>
	4.20	Head centre	A (mm)	600 <sup>3)</sup>
	4.21	Overall width	b1/b2 (mm)	1230/1230 - 1630
	4.22	Fork dimensions	s/e/l (mm)	50 x 100 x 1200
	4.23	Fork carriage to DIN 15 173, class/form A, B		2B
	4.24	Width of fork carriage	b3 (mm)	640
	4.27	Width over side guide rollers	b6 (mm)	1590 - 1690
	4.29	Lateral reach travel	b7 (mm)	1290 - 1390 <sup>3)</sup>
	4.31	Ground clearance, mast	m1 (mm)	40
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	95
	4.34	Aisle width with pallet 800 x 1200 lengthwise	Ast (mm)	1700 - 1850 <sup>3)</sup>
	4.35	Turning radius	Wa (mm)	2080
	4.38	Centre of axle to fork pivot	l8 (mm)	800 <sup>3)</sup>
	4.39	Head width	F (mm)	290 - 320 <sup>3)</sup>
4.40	Width of reach carriage	B (mm)	1490 - 1540 <sup>3)</sup>	
4.41	End aisle width, with / without load	Au (mm)	3700/3600 <sup>3) 4)</sup>	
Performance	5.1	Travel speed, with / without load	km/h	9.0/9.0
	5.2	Lifting speed, with / without load	m/s	0.33/0.35 <sup>5)</sup>
	5.3	Lowering speed, with / without load	m/s	0.40
	5.4	Reach speed, with / without load	m/s	0.20
	5.7	Climbing ability, with / without load, 30 minute rating	%	0.30/0.70
	5.10	Service brake		Electric/hydraulic
Drive	6.1	Drive motor, 60 minute rating	kW	4.2
	6.2	Lift motor, 15 % rating	kW	15.0
	6.3	Battery according to IEC		254-2
	6.4	Battery voltage / rated capacity (5h)	V/Ah	48/840L
	6.5	Battery weight (± 5 %)	kg	1330
Div.	8.1	Type of drive control		Electronic
	8.4	Noise level at operator's ear	dB(A)	< 71

<sup>1)</sup> Specification with Standard Lift Mast and L-Head.

<sup>2)</sup> For alternative lift heights, refer to table mast.

<sup>3)</sup> With pallet 800 x 1200 mm along forks.

<sup>4)</sup> Including 200 mm (min.) operating aisle clearance.

<sup>5)</sup> On minimum lowered mast height.

# Equipment

## Standard equipment

Fully adjustable comfort-class suspension seat  
Electric power steering (Switched off in guided aisles)  
Instrument display (operating hours, battery status, brake fluid level, motor temperature)  
Steering position indicator  
Linde twin accelerator pedals  
Linde proportional control system  
Central control lever  
Mast and turret head according to application

Simultaneous lift and traction  
Three independent braking systems  
Emergency circuit isolator  
Safety interlocks on lift, reach and rotate  
Traction isolated by seat switch  
Side guidance for standard or low profile rails  
Electric horn  
Polycarbonate screen protection for operator on console  
4.2 kW drive motor  
15 kW lift motor

## Optional equipment

Polycarbonate or mesh covers for overhead guard  
Heated pvc seat  
Rear-view mirror  
Alternative battery capacities to 930 Ah  
Battery cable with plug for additional battery  
Battery change via rollers in truck  
Clearview standard and triplex masts up to 10,400 mm lift height lift

Telescopic forks  
Alternative fork lengths  
Range of lighting equipment  
Interlocks to suit application

Other options available on request

# Features

## Operator's compartment

- Comfort-class seat with excellent side support adjustable for body weight, height, seat position, backrest angle
- All-round view of load and environment
- Linde twin accelerator pedal system
- Effortless, on-demand hydrostatic power steering
- Spacious foot well for easy access and generous leg room



## Storage/retrieval

- The telescopic fork unit can transfer open based pallets from one side of the aisle to the other without rotation and therefore offers the narrowest aisle possibilities
- The 'L' head has hydraulically operated reach and rotate functions and can handle both closed and open based pallets. It is also able to pick up or place pallets directly on the floor

## Chassis and mast

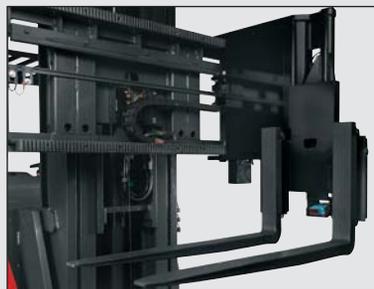
- Excellent visibility due to the slim profile mast channels
- Chassis designed for maximum structural integrity, durability and stability
- Overhead guard protects operator's compartment and enhances stability

## Brakes

- Three independent braking systems for optimum safety at all times
  1. Hydraulic service brake, which actuates disc brake on drive motor shaft
  2. Regenerative electric braking
  3. Parking brake, activated by releasing deadman foot switch

## Drive and lift motors

- 4.2 kW high-torque drive motor
- Powerful 15 kW high-torque hydraulic pump motor
- A potent combination for quiet running, high performance and versatility



## Linde central control lever

- Effortless coordinated load handling with millimeter precision
- Traction and lift functions are completely separate from each other
- Ergonomic central control lever, with adjacent cushioned armrest for fatigue-free working

## Hydraulics

- Precise and seamless control of all hydraulic movements using advanced proportional control technology
- Automatic soft landing of forks during mast lowering to the ground position

## Steering

- Responsive, energy-efficient electric power steering
- Effortless actuation for fatigue-free operator efficiency
- Superb manoeuvrability for rapid aisle changing

