

Standard and optional equipment

Standard equipment

Multi-function back lit display	Electromagnetic emergency brake acting proportionally to the towed load
Key switch	Cushion rubber drive wheel
Dual tiller head controls	Single position towing coupling (300 mm high)
Generous storage compartments	Horn
Power assisted, progressive electric steering	Suitable for operation down to -10°C
Automatic speed reduction when cornering	Standard colour scheme vermilion and charcoal grey
AC maintenance-free drive motor	
Automatic electric braking	

Options

Drive wheel: polyurethane or non-marking or wet grip cushion rubber	Fixed battery stand for side battery change
Alternative towing coupling systems (mechanical and electrical)	Cold store protection to -35°C
Data terminal or barcode reader	Alternative colour schemes
	Other options available on request



Electric Pedestrian Tow Tractor Capacity 5000 kg P 50

SERIES 131

Linde Material Handling

Linde

Introduction

The compact P 50 pedestrian operated tow tractor is designed to undertake versatile and highly efficient multiple load transfer duties in a wide variety of applications where space is at a premium. It is also effective as an integral link in busy manufacturing and distribution supply chains.

Performance

A 1.5 kW AC maintenance-free motor provides seamless acceleration to 6 km/h and, with a nominal towing capacity of 5000 kg combined with highly effective braking, the P 50 is ideal for continuous operation in intensive applications.

Comfort

All the thumb operated controls are duplicated and grouped for ease of use by either hand on a profiled tiller head.

Electric power assisted steering ensures effortless manoeuvrability in all situations.

Reliability

The rugged chassis design, together with advanced industrial quality electronics, robust tiller controls and heavy duty towing coupling, ensures consistent reliability and an extended working life.

Service

Operating costs are reduced and maximum uptime and efficiency is achieved by a combination of quality components and easy service access. In addition, CAN bus diagnostic technology provides an instant read out of the truck status. A maintenance-free drive system also contributes to lower costs. The P 50 is able to operate for up to 1000 hours between services for maximum productivity ratios.

Features

Safety

- Profiled hand guards on tiller head
- Electrical and hydraulic overload protection
- Emergency circuit isolator
- Electromagnetic braking when tiller arm is released
- Reverse electrical braking
- Emergency stop button actuates electromagnetic braking on drive motor shaft

Batteries and battery changing

- Vertical battery change as standard
- Choice of capacities from 270 Ah to 500 Ah
- Optional battery changing from the side with locking system



Towing coupling

- Standard single position towing coupling
- Optional three position mechanical coupling

Linde twin-grip steerin

- Unique ergonomic steering system
- Minimum steering effort for excellent manoeuvrability
- Dual traction controls for use by either hand
- Optional twin-grip height adjustment
- Profiled hand protectors

CAN bus technology

- Intelligent CAN bus electronic management system enables rapid diagnosis and provides instant read out of truck status.
- All performance parameters can easily be configured to match individual applications



Intuitive work station

- Digital multi-function display
- All controls grouped for ease of use.
- Remote inching controls on either side simplify trailer coupling
- Generous storage compartments



Powerful AC maintenance-free drive

- Powerful 1.5 kW AC drive motor
- Sealed from moisture and dust ingress
- No roll-back on hill start
- Seamless acceleration to 6 km/h, laden or unladen
- Maximum drawbar pull 305 daN



Electric power steering

- Effortless power assisted steering
- Adjustable steering torque feedback
- Automatic speed reduction when cornering
- Steering torque adjusts according to turning angle

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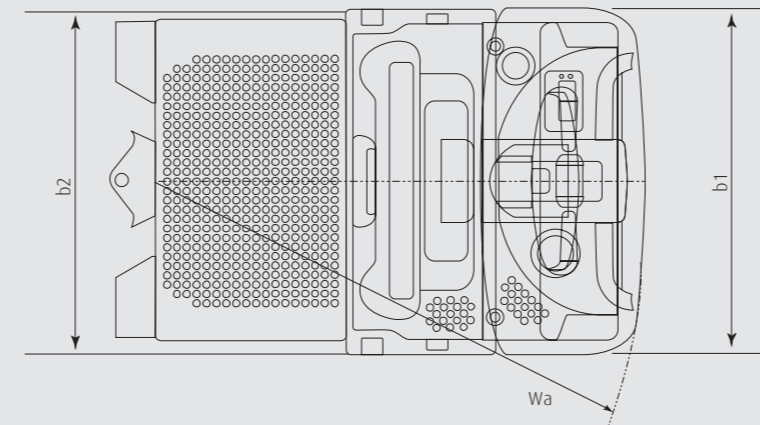
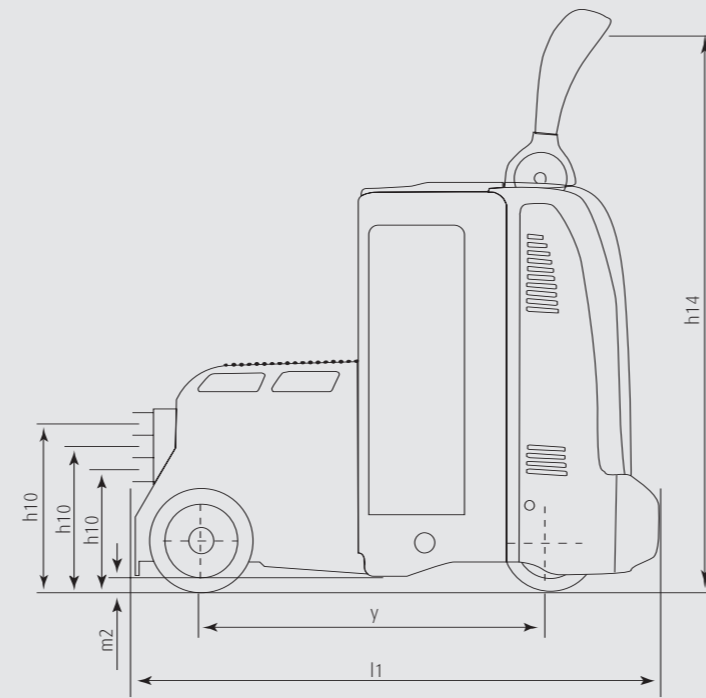
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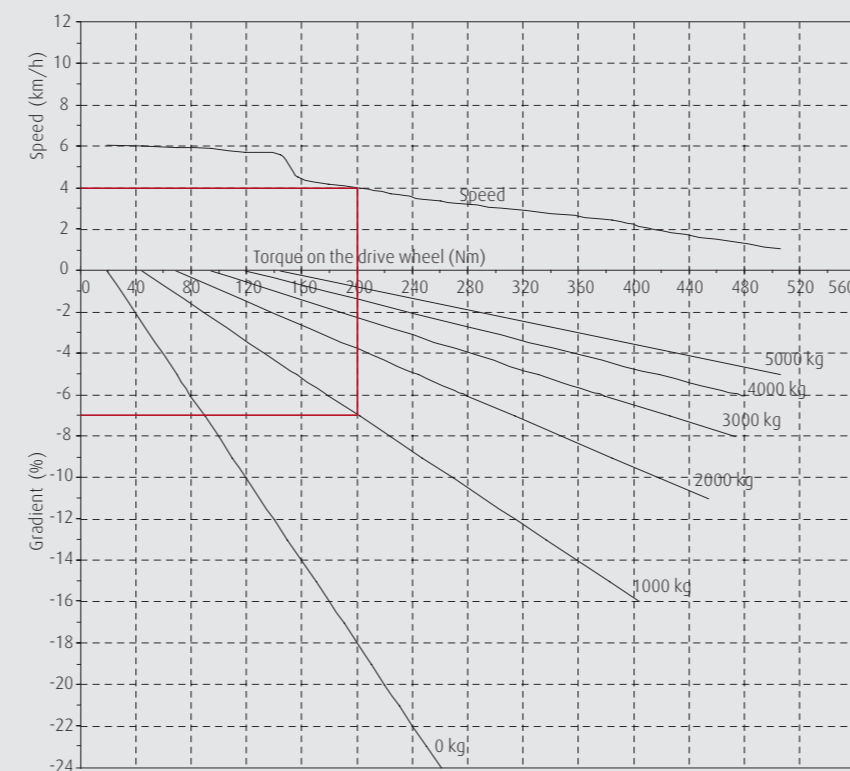
Technical data

Characteristics	1.1	Manufacturer	LINDE	
	1.2	Model designation	P50	
	1.3	Power unit: battery, diesel, petrol, LP gas, mains power	Battery	
	1.4	Operation: manual, pedestrian, stand-on, seated, order picker	Pedestrian	
	1.5	Load capacity	Q (kg)	5000
Weights	1.7	Rated drawbar pull	F (N)	850
	1.9	Wheelbase	y (mm)	810 ¹⁾
Wheels/Tyres	2.1	Service weight	kg	810 ¹⁾
	2.3	Axle load without load, front (drive)/rear (load)	kg	495/315 ¹⁾
	3.1	Tyres, front (drive)/rear (load) C=cushion rubber, P=polyurethane		C+P/P
	3.2	Tyre size, front (drive)	mm	Ø 254 x 102
	3.3	Tyre size, rear (load)	mm	Ø 250 x 80
	3.4	Auxiliary wheels (dimensions)	mm	Ø 100 x 40
	3.5	Wheels, number front (drive)/rear (load) (x = driven)		1x+2/2
Dimensions	3.6	Track width, front (drive)	b10 (mm)	544
	3.7	Track width, rear (load)	b11 (mm)	650
	4.9	Control handle height, travel position, minimum/maximum	h14 (mm)	1140/1350
	4.12	Towing coupling height; single position, three position	h10 (mm)	300, 290/345/400
	4.19	Overall length	l1 (mm)	1165 ¹⁾
	4.21	Overall width	b1/b2 (mm)	790/736
Performance	4.32	Ground clearance, centre of wheelbase	m2 (mm)	30
	4.35	Turning radius	Wa (mm)	1045 ¹⁾
	4.36	Minimum pivot point distance	b13 (mm)	1160 ¹⁾
	5.1	Travel speed, with/without load rated drawbar pull	km/h	6/6
	5.5	Drawbar pull, 60 minute rating	N	850
	5.6	Maximum drawbar pull, 5 minute rating	N	3100
Drive	5.7	Climbing ability, with/without load, 30 minute rating	%	See graph
	5.8	Maximum climbing ability, with/without load, 5 minute rating	%	See graph
	5.9	Acceleration, with/without load (first 10 m)	s	9,3 / 7
	5.10	Service brake		Electromagnetic/electric
	6.1	Drive motor, 60 minute rating	kW	1.5
Other	6.3	Battery to DIN		435358
	6.4	Battery voltage/rated capacity (5 h)	V/Ah	24/375
	6.5	Battery weight (±5%)	kg	295
	6.6	Power consumption to VDI cycle	kWh	-
8.1	Type of drive control		LAC controller	
8.4	Noise level at operator's ear	dB (A)	< 70	
8.5	Towing coupling, design/type		-	

1) With 3 PzS lateral battery (+100 mm for 3 PzS vertical and 4 PzS lateral; +150 mm for 4 PzS vertical)



Example of application



The example shown above illustrates

A tractor towing	1 t load
Operating on a ramp of	7 %
Maximum travel speed	4 km/h