

Electric platform tractor 2.0 t

Linde



W 20
TrActive

Introduction

The four wheel electric platform tractor model W20 TrActive, which complies with EC directives, is available with either a 2200 mm or 2600 mm long platform, and has been developed to suit a wide range of industrial and municipal applications including distribution, manufacturing, hospitals, postal services, airports and fruit and vegetable markets.

The design makes the tractor particularly adaptable by the use of a variety of specialist attachments. It has the dual capability of carrying 2 tonne on the platform and towing nominal loads of 4.5 tonne when optional towing attachment is fitted.

The overall design concept ensures excellent driver comfort contributing significantly to high work throughput with minimum fatigue.

Features

- Compact design for optimum manoeuvrability.
- Ergonomically designed driver's compartment for optimum comfort, safety and efficiency.
- Energy saving electronic AC control with regenerative braking for smooth operation and increased productivity.
- High performance AC drive motor for increased work throughput.

Driver's compartment and controls

A low step facilitates access. The tractor can be supplied with or without cab. The cab can be supplied with a number of options and is mounted to the chassis on hydraulically damped isolated mounts which reduce vibration and noise. The tractor is available with left or right hand drive steering position.

The automotive arrangement of the pedals, steering wheel and controls, plus full suspension driver's seat, contribute to comfort and operational efficiency. A non-suspension passenger seat is also fitted. The single pedal accelerator and direction lever, together with electronic AC control, ensures smooth operation. Comprehensive integrated display includes hour meter, battery discharge indicator, brake/hydraulic fluid level, lighting, indicators, motor temperature and speed.

Chassis

The chassis has been designed to achieve maximum strength and rigidity, and provides protection for all components, with ease of access for maintenance.

A low centre of gravity ensures safe road holding under all operating conditions.

A hinged door is provided to enable sideways removal/replacement of the battery by independent lifting equipment.

Transmission and suspension

A powerful 5 kW AC drive motor integrated with the drive axle transmits power to the rear wheels through reduction gearing. The front wheels have parabolic leaf spring suspension with hydraulic dampers and the rear axle is mounted via trailing links, coil springs and hydraulic dampers.

Electrical system

The tractor is fitted with an advanced 80 V, energy saving electronic AC control system which incorporates regenerative braking and provides smooth acceleration for safe, precise manoeuvring.

A high number of work cycles can be

obtained from each battery charge due to the efficiency of this system of energy control. Integrated diagnostics, via a CAN bus connection, enable rapid servicing and maximum uptime.

Steering

Energy saving, on demand hydrostatic power steering powered by an AC motor requires minimum steering effort, ensuring excellent manoeuvrability and operational efficiency.

Platform

The generously proportioned platform, available in two lengths, has a comfortable loading height and can be easily adapted to suit specific types of load.

Lighting

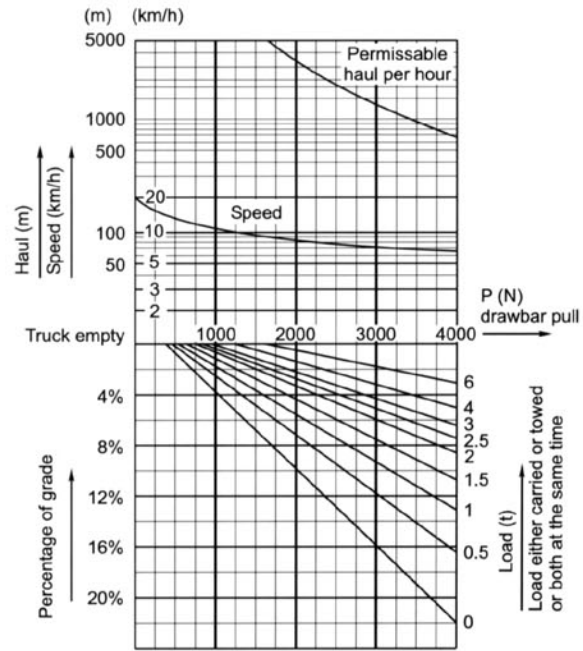
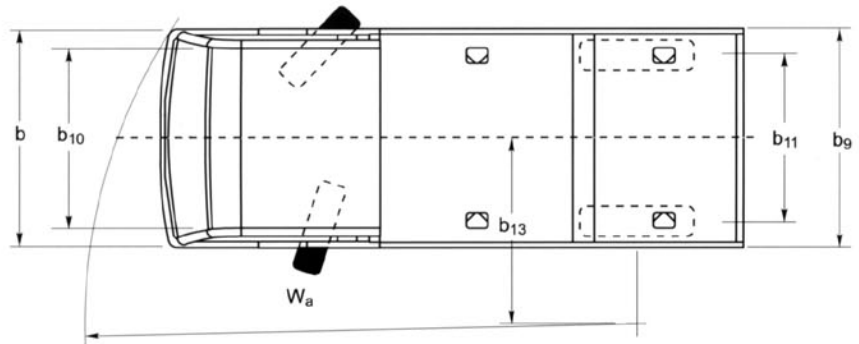
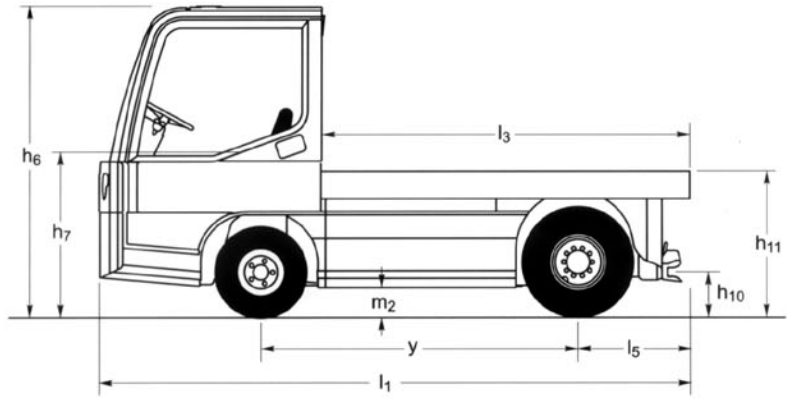
The 12 V, full road lighting circuit is powered by an isolated DC/DC converter. The two front, recessed dipping headlights are fitted with integral sidelights and separate direction indicators. The rear light clusters incorporate rear lights and reflectors, brake stop lights, direction indicators, reversing light and fog light. Hazard warning lights and a number plate light are also fitted. An external seven pin lighting socket is provided to give 12 V power for trailer lights.

Braking

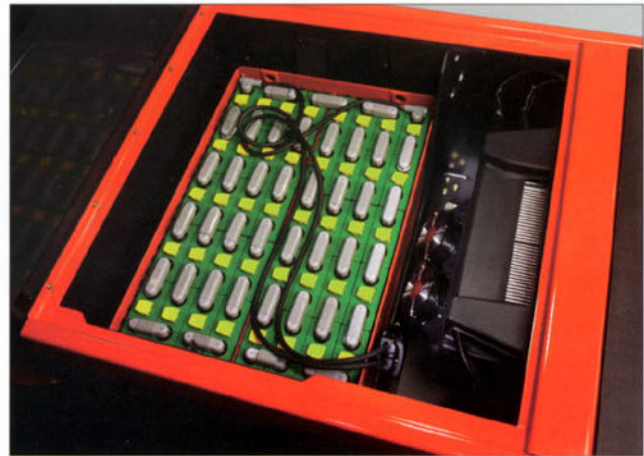
The tractor has three independent braking systems:

1. Dual circuit hydraulic disc brakes on all four wheels with hydraulic booster.
2. Hand lever operated parking brake mechanically connected to rear wheels.
3. Electrical regenerative braking occurs by progressive release of accelerator pedal.

LINDE		Platform tractor Designation		Data sheet for materials handling equipment to VDI 3586		EFW Abbreviation	
FEBRUARY 2000		Manufacturer's data and design characteristics				Model types	
Characteristics	1.1	Manufacturer		Linde	Linde		
	1.2	Model designation		W 20 (2 200)	W 20 (2 600)		
	1.3	Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery		
	1.4	Operation: manual, pedestrian, stand-on, seated, order picker		Seated	Seated		
	1.5	Carried load capacity	Q (t)	2	2		
	1.7	Rated drawbar pull, with/without carried load	F (N)	500/900 ¹⁾	500/900 ¹⁾		
1.9	Wheelbase	y (mm)	1 900	1 900			
Weights	2.1	Service weight	kg	3 100	3 200		
	2.2	Axle load with load, front/rear	kg	2 300/2 800	2 100/3 100		
	2.3	Axle load without load, front/rear	kg	1 800/1 300	1 800/1 400		
Wheels and tyres	3.1	Tyres, front/rear (SE = CS superelastic, P = pneumatic)		P/P ²⁾	P/P ²⁾		
	3.2	Tyre size, front		6.00 R 9	6.00 R 9		
	3.3	Tyre size, rear		7.00 R 12	7.00 R 12		
	3.5	Wheels, number front/rear (x = driven)		2/2x	2/2x		
	3.6	Track width, front	b ₁₀ (mm)	1 080	1 080		
	3.7	Track width, rear	b ₁₁ (mm)	1 020	1 020		
Dimensions	4.7	Height of overhead guard (cabin)	h ₆ (mm)	1 820	1 820		
	4.8	Height of seat/stand-on platform	h ₇ (mm)	745	745		
	4.12	Towing coupling height, minimum/maximum	h ₁₀ (mm)	240, 295, 350, 405	240, 295, 350, 405		
	4.13	Platform height, without load	h ₁₁ (mm)	840	840		
	4.16	Loading platform, length	l ₃ (mm)	2 200	2 600		
	4.17	Rear overhang	l ₅ (mm)	730	1 130		
	4.18	Loading platform, width	b ₉ (mm)	1 300	1 300		
	4.19	Overall length	l ₁ (mm)	3 520	3 920		
	4.21	Overall width	b ₁ (mm)	1 300	1 300		
	4.32	Ground clearance, centre of wheelbase	m ₂ (mm)	150	150		
4.35	Turning radius	W _a (mm)	3 275	3 275			
4.36	Minimum pivoting point distance	b ₁₃ (mm)	1 095	1 095			
Performance	5.1	Travel speed, with/without rated drawbar pull	km/h	15/20	15/20		
	5.5	Drawbar pull at 60 minute rating, with/without carried load	N	500/900	500/900		
	5.6	Maximum drawbar pull, with/without carried load	N	3 100/3 500	3 100/3 500		
	5.7	Climbing ability, with/without load, 30 minute rating	%	See graph	See graph		
	5.8	Maximum climbing ability, with/without load, 5 minute rating	%	See graph	See graph		
5.10	Service brake		Hydraulic/electric	Hydraulic/electric			
Drive	6.1	Drive motor, 60 minute rating	kW	5	5		
	6.3	Battery according to IEC		254-2	254-2		
	6.4	Battery voltage/rated capacity (5 h)	V/Ah	80/240 ⁴⁾	80/240 ⁴⁾		
	6.5	Battery weight (±5%)	kg	679	679		
	6.6	Power consumption according to VDI cycle	kWh/h	³⁾	³⁾		
	8.1	Type of drive control		AC - microprocessor	AC - microprocessor		
Other	8.4	Noise level at operator's ear	dB (A)	³⁾	³⁾		
	8.5	Towing coupling, design/type, DIN/no		³⁾	³⁾		
1) Based on level, dry surface with rolling resistance of 200 N/t. Refer to graph opposite for specific operating conditions. 2) Contoured solid (superelastic) tyres are available. 3) Refer to manufacturer for figures. 4) 72 V circuit is available. Traction speed is reduced by 10%.							



Features



Safety

- Three independent braking systems.
- Emergency circuit isolator.
- Keyswitch.
- Fail-to-safe circuitry.
- Traction isolated by seatswitch and/or hand-brake.
- Comprehensive warning lights.
- Electric horn.
- Full road lighting.
- Excellent all-round visibility.
- Electrical overload protection.

Standard equipment

All items as shown under safety.
 Four wheel configuration.
 80 V circuit.
 Left or right hand drive steering position.
 Tractor without cab.
 Single pedal accelerator and direction lever.
 Hydrostatic power steering.
 Full suspension PVC driver's seat.

Non-suspension PVC passenger seat.
 Pneumatic tyres.
 5 kW drive motor.
 AC controller with regenerative braking.
 Comprehensive integrated display.
 Trailer lighting socket.
 Dual circuit hydraulic disc brakes on all four wheels.
 Standard colour scheme – vermilion and charcoal grey.

Batteries and chargers

80 V, 210 to 320 Ah to IEC.
 72 V, 210 to 320 Ah.
 A range of chargers is available to suit application and main supply requirements.

Optional equipment

Cab with front and rear screens, wipers and washers, and two exterior mirrors:
 – without sides or
 – with flexible roll up sides or
 – hinged doors.

Electric or diesel heater.
 High torque (20 kW) drive motor.
 72 V circuit.
 Rear lights mounted high at rear of cab.
 Two exterior mirrors on cab.
 Flashing or rotating beacon on cab.
 Reverse warning bleeper.
 Contoured solid (superelastic) tyres.
 Towing couplings:
 – Automatic single position, front and/or rear.
 – Automatic single position, remote, rear.
 – Multi-position, front and/or rear.
 240 mm rear coupling extension.
 Remote inching control.
 Aluminium lift-out side panels.
 Hinged aluminium side panels with or without flexible cover and framework.
 Fabric covered seats.
 Heated seats.
 Full suspension passenger seat.
 Alternative colour schemes.
 Other options available on request.