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## Тягачи W 20 LINDE МН. Техническое описание

## Standard Equipment/Optional Equipment

### Standard Equipment

#### General

Four wheel configuration  
 Pneumatic tyres  
 Platform length 2,200 mm  
 Tractor without cab  
 Left or right hand drive steering position  
 Adjustable steering column  
 Comprehensive integrated display  
 Single pedal accelerator and direction lever  
 Full suspension PVC driver's seat  
 Non-suspension PVC passenger seat  
 Hydrostatic power steering  
 Two exterior mirrors  
 Remote inching control  
 Automatic single position, rear towing coupling  
 Trailer lighting socket  
 Dual circuit hydraulic disc brakes on all four wheels  
 Standard colour scheme - vermilion and charcoal grey  
 Full road lighting  
 Heated rear screen (with full cabin)

#### Electronics

80 V circuit/Highly efficient energy saving system  
 2 x 2.5 kW maintenance free AC drive motor  
 Advanced Linde AC digital controller  
 Precise control of speed and acceleration  
 Programmable performance parameters

#### Batteries and chargers

80V, 210 to 320 Ah to IEC  
 Easy battery change  
 A range of chargers is available to suit application

#### Safety

Keyswitch  
 Emergency circuit isolator  
 Fail-to-safe circuitry  
 Traction isolated by seatswitch and/or parking brake  
 Electrical overload protection  
 Comprehensive warning lights  
 Electric horn

### Optional Equipment

Platform length 2,600 mm  
 Cab with front and rear screens, wipers and washers, and two exterior mirrors:  
 - without sides or  
 - with flexible roll up sides or  
 - hinged doors  
 Optional cab with front and rear screen wipers/washers  
 Electric or diesel heater  
 High torque (2 x 10 kW) drive motor - only with 320 Ah battery  
 Rear lights mounted high at rear of cab  
 Reverse warning beeper  
 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



## Electric Platform Tractor Capacity 2000 kg W 20

Series 127-04

Linde Material Handling



## Features

#### Chassis

- Long and short platform versions
- Robot welded heavy gauge steel plate
- Maximum torsional resistance and rigidity
- High impact protection for operator and components
- Low profile chassis for all-round visibility

#### Ergonomics

- Ergonomic automotive pedal and control layout
- Spacious leg and headroom
- Storage space for documents, pens and beverage holder
- Excellent all-round visibility



#### Operator's compartment

- Low step access to spacious cabin
- Hinged cabin doors
- Fully adjustable comfort-class operator's seat
- Cabin isolated from chassis by hydraulic dampers
- Ergonomic automotive pedal and control layout
- Multi-function instrument display

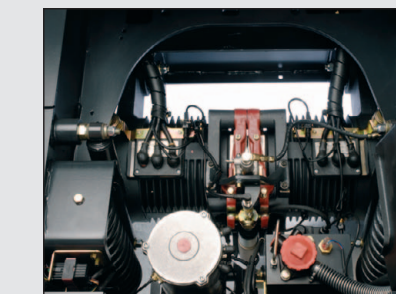


#### Platform

- Generously proportioned platform
- 2,200 mm or 2600 mm platform length
- Easily adapted to suit specific applications
- Optional side panels and rigid covers

#### Steering

- Hydrostatic power steering
- Effortless manoeuvrability
- Adjustable steering column
- Large lock-to-lock angle



#### Drive units

- Two 2,5 kW maintenance-free AC drive motors
- Integrated in drive axle with no differential required
- Superb traction with anti-slip control
- Reduced power to inner wheel during cornering
- High-torque flexibility and performance

#### Braking

- Three independent braking systems
- Electric push-button parking brake
- Hydraulic disc brakes (front) external disc brakes (rear)
- Regenerative electric braking as accelerator pedal is released
- Superb regenerative braking control on gradients



#### Serviceability

- Easy access for maintenance and battery
- CAN bus diagnostic facility for reduced service intervals
- Multi-function instrument display assists scheduled maintenance planning
- Maintenance-free AC drive technology

### Safety

The heavy duty chassis and cab module provide assured protection for the operator while three independent braking systems deliver responsive stopping power for all situations including automatic speed control descending gradients. A low centre of gravity ensures outstanding stability.

### Performance

With the dual capability carrying 2 tonne on the platform and towing nominal loads of 4.5 tonne, the W 20 offers flexible high performance which is optimised by the Linde digital AC control system that provides precise, energy saving control of acceleration and speed for high productivity.

### Comfort

A low step facilitates access to spacious operator's cabin where the automotive layout of the pedals, direction lever, steering wheel and controls, together with a fully adjustable suspension seat provides a comfortable and fatigue-free working environment. Cab suspension dampers and a spring damped suspension system front and rear ensures superb levels of driving comfort.

### Reliability

Designed for intensive heavy duty applications the rugged, robot-welded chassis is constructed from heavy section steel plate for optimum torsional stiffness and rounded corners for high resistance to impacts. All key components are protected within the chassis while electronic components are housed in sealed aluminium enclosures for assured reliability & long life.

### Service

Two powerful, high torque 2.5 kW AC drive motors provide impressive pulling and carrying power for a variety of applications. The energy saving Linde AC digital controller combined with excellent manoeuvrability and an intuitive interface between the operator and tractor, translates that power into versatile, seamless performance and high productivity.



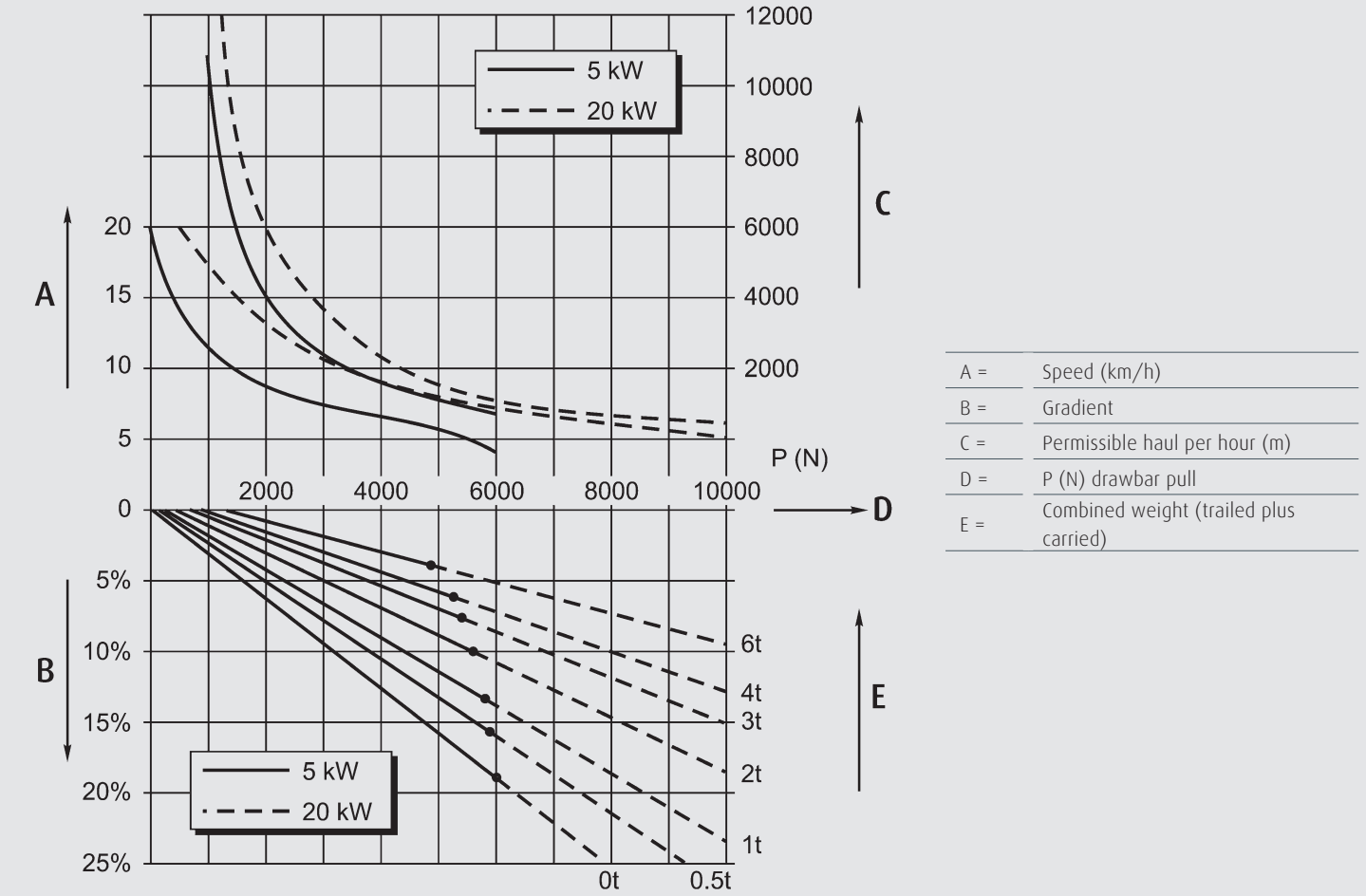
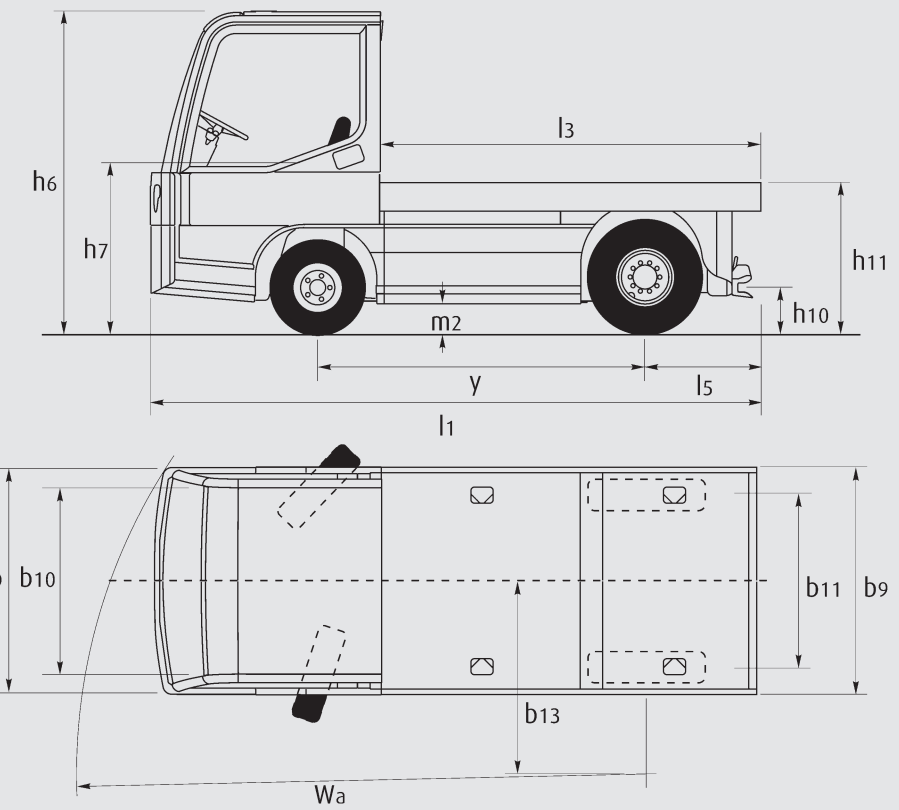


# Technical Data according to VDI 2198

		W20 (2200)	W20 (2600)	
Characteristics	1.1 Manufacturer	LINDE	LINDE	
	1.2 Model designation	<b>W20 (2200)</b>	<b>W20 (2600)</b>	
	1.3 Power unit	Battery	Battery	
	1.4 Operation	Seat	Seat	
	1.5 Load capacity	Q (t)	2.0 <sup>1)</sup>	2.0 <sup>1)</sup>
1.7 Rated tractive force	F (N)	500 / 900 - 800 / 1200 <sup>2)</sup>	500 / 900 - 800 / 1200 <sup>2)</sup>	
1.9 Wheelbase	y (mm)	1900	1900	
Weights	2.1 Service weight	(kg)	3100	3200
	2.2 Axle load with load, front/rear	(kg)	2300 / 2800	2100 / 3100
	2.3 Axle load without load, front/rear	(kg)	1800 / 1300	1800 / 1400
Wheels/Tyres	3.1 Tyres rubber, SE, pneumatic, polyurethane		Pneumatic	Pneumatic
	3.2 Tyre size, front		6.00 R9	6.00 R9
	3.3 Tyre size, rear		7.00 R12	7.00 R12
	3.5 Wheels, number front/rear (x = driven)		2 / 2x	2 / 2x
	3.6 Track width, front	b10 (mm)	1080	1080
	3.7 Track width, rear	b11 (mm)	1020	1020
	4.7 Height of overhead guard (cabin)	h6 (mm)	1820	1820
4.8 Height of seat/stand-on platform	h7 (mm)	745	745	
Dimensions	4.12 Towing coupling height	h10 (mm)	240, 295, 350, 405	240, 295, 350, 405
	4.13 Platform height, unladen	h11 (mm)	840	840
	4.16 Loading platform, length	l3 (mm)	2200	2600
	4.17 Rear overhang	l5 (mm)	730	1130
	4.18 Loading platform, width	b9 (mm)	1300	1300
	4.19 Overall length	l1 (mm)	3530	3930
	4.21 Overall width	b1/b2 (mm)	1300	1300
	4.32 Ground clearance, centre of wheelbase	m2 (mm)	150	150
	4.35 Turning radius	Wa (mm)	3280	3280
	4.36 Minimum pivoting point distance	b13 (mm)	1095	1095
	5.1 Travel speed, with/without load	(km/h)	15 / 20 - 20 / 25	15 / 20 - 20 / 25
	5.5 Tractive force, with/without load	(N)	500 / 900 - 800 / 1200	500 / 900 - 800 / 1200
	5.6 Maximum tractive force, with/without load	(N)	5600 / 6000 - 9600 / 10000	5600 / 6000 - 9600 / 10000
5.7 Climbing ability, with/without load	(%)	see performance graph	see performance graph	
5.10 Service brake		Electric/hydraulic	Electric/hydraulic	
Drive	6.1 Drive motor, 60 minute rating	(kW)	2x 2.5 - 2x 10 <sup>3)</sup>	2x 2.5 - 2x 10 <sup>3)</sup>
	6.3 Battery according to DIN 43531/35/36 A,B,C,no		43 536 / A	43 536 / A
	6.4 Battery voltage/rated capacity (5h)	(V/Ah)	80 / 320	80 / 320
	6.5 Battery weight (± 5%)	(kg)	858	858
	6.6 Power consumption according to VDI cycle	(kWh/h)	upon request	upon request
	Others	8.1 Type of drive control		AC - microprocessor
8.4 Noise level at operator's ear		(dB(A))	upon request	upon request
8.5 Towing coupling, design/type, DIN 15 170			upon request	upon request

1) Based on level, dry surface with rolling resistance of 200 N/t. Refer to towing.  
 2) Based on level, dry surface with rolling resistance of 200N/t. Refer to graph for specific operating conditions and when the application

involves inclines or ramps.  
 3) High torque 2x10kW motor is available in conjunction with 320Ah battery only!



A = Speed (km/h)  
 B = Gradient  
 C = Permissible haul per hour (m)  
 D = P (N) drawbar pull  
 E = Combined weight (trailed plus carried)

Comment on diagram

Load/gradient combination by full line can be raised from stationary on the gradient. The permissible haul per hour is the total distance travelled, including the return journey and any downhill gradients. It is recommended that braked trailers are used for trailer loads exceeding 9 tons and for all trailer loads where a gradient is involved.



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