

Standard Equipment/Optional Equipment

Standard Equipment

New standard features

Wide product range: P 60+P 80 tractors, W 08 load transporter
Superb ergonomics and spacious drivers compartment

Power setting Efficiency

Two stage travel speed selection

Generous storage compartments

Auxiliary power supply socket (12 V) in dashboard

Key switch, or alternatively PIN Code access

Resilient cushioning and swinging arm suspension on all three wheels

General

Three wheel configuration for optimum manoeuvrability

Excellent stability

Side battery exchange, 48V circuit

Single pedal accelerator and direction lever

Adjustable PVC covered seat

Pneumatic tyres

4,5 kW sealed AC drive motor

Rear multi-position towing coupling

Standard colour scheme – vermilion and charcoal grey

Electronics

Linde high frequency AC traction controller is sealed against the ingress of dust and water

Sealed and reverse polarity protected connectors ensure excellent vibration proof contact

Digital interactive display indicating battery discharge status, working hours, travel speed (km/h), Power setting adjustment, driving direction, indicators, and further information for optional equipment

Safety

Four independent braking systems:

Regenerative electric braking as accelerator released

Automatic electro-magnetic parking brake

Gradient hold control & start assist without roll-back

Self adjusting hydraulic drum brakes on all three wheels

Constant speed on gradients

Emergency circuit isolator

Duplicated fail-to-safe-circuitry

Electric horn

Electrical overload protection for motor/controller temp.

Optional Equipment

Linde Curve Speed Assist

Lighting systems (bulb or LED)

Deluxe seat with mechanical suspension

Deluxe Super Comfort with air suspension and heating

Dead man footswitch

Variable energy saving/performance parameter modes

(Economy, Efficiency, Performance) for individual applications

Various towing couplings for the rear and front (incl. extension and electrical remote)

Metal front protection shield

Load backrest (load transporter)

Rail for tractor platform

Eyelets for load fixation (optional for tractor, standard for load transporter)

Individual travel speed reduction

Audible warning in reverse

Inching control (forward & backwards) on both sides at the rear chassis

Pedestrian traction buttons (forward traction only) on both sides of the chassis for order picking applications

Front tubular mounting for optional equipment such as mirrors, pad holder, data terminals etc.

Vertical pole at the rear for optional equipment such as beacon, bin etc.

Several modular cabin versions (sun protection, roof+screens, plus flexi doors, plus full metal doors, plus cabin heating)

Batteries and chargers

48V DIN batteries up to 375 Ah capacity

Efficient and safe side changing design

Various optional changing methods including battery on rollers

Range of chargers to suit the battery and application

Battery roll-off adapter



Tractor P 60 + P 80
Capacity 6000 kg + 8000 kg
Load transporter W 08
Capacity 800 kg

Series 1191

Linde Material Handling

Linde

Safety

Heavy-duty steel chassis and rugged upper structure with rounded profiles protects driver. Four independent braking systems provide effective braking in all situations. Emergency isolator. Electric horn. Duplicated fail-to-safe electronic circuits and excellent all-round visibility. Automatic, electro-magnetic parking brake.

Performance

A powerful 4.5 kW sealed AC drive motor for impressive pulling power and up to 20 km/h unladen speed. Latest energy efficient Linde electronic control delivers seamless travelling and manoeuvrability.

Comfort

Easy access and exit is ensured with ergonomic, non-slip steps and wide access openings on either side with smoothly curved profiles. The spacious angled foot well and generous legroom, adjustable seat, intuitive automotive control levers, adjustable steering wheel and ergonomic pedal layout provide an optimum working environment for every individual operator. Resilient mountings and swinging arm suspension on all three wheels.

Reliability

A rugged, profiled steel chassis and impact resistant upper structures for maximum structural integrity and durability. Industrial standard mechanical and electrical components together with a heavy-duty drive axle and differential deliver continuous, reliable performance.

Service

These outstanding ergonomic and performance design features result in a unique, intuitive interface between the driver and the tractor, to deliver consistently high efficiency and productivity ratios in a wide range of material handling applications.

Features

Chassis

- Heavy duty, profiled chassis
- Rugged, impact resistant top section
- Steel cased carrying platform
- Ergonomic rounded profile design
- Resilient cushioning and swinging arm suspension system front & rear

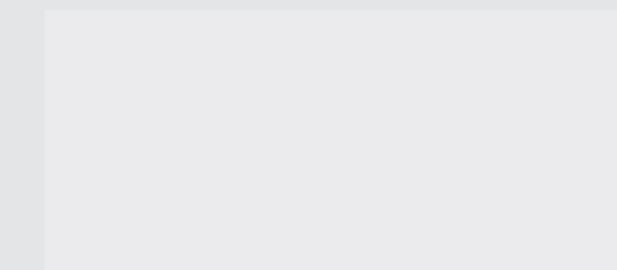
Braking

- Four independent braking systems:
- Regenerative electric braking
- Self-adjusting hydraulic drum brakes on all wheels
- Automatic electromagnetic parking brake
- Automatic gradient assist start (No roll-back)



Controller

- Exceptionally energy efficient Linde digital controller
- Smooth, precision control of travel and manoeuvring
- Programmable performance parameters
- Delivers optimum versatility and efficiency to the 4.5 kW sealed AC drive motor



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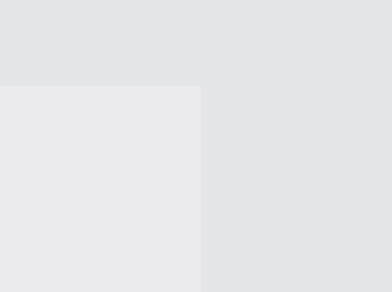
Operator's compartment

- Superbly spacious and ergonomic drivers compartment
- Non-slip step and wide access on both sides
- Spacious foot well and leg room
- Ergonomic, automotive pedal layout
- Automotive style intuitive control levers
- Adjustable seat



Batteries and chargers

- 48V DIN batteries up to 375 Ah capacity
- Efficient and safe side changing design
- Various optional changing methods including battery on rollers
- Range of chargers to suit the battery and application



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Steering

- Precise responsive steering
- Large lock to lock angle
- Unique adjustable steering column to suit every size of driver
- Precision travelling and manoeuvring

Towing couplings

- Rear multi-position towing coupling as standard
- Optional types of front and rear towing couplings
- Optional automatic couplings



Serviceability

- Easy service access to all key components
- Extended operational uptime between scheduled services
- Low maintenance design
- Digital display assists charging and maintenance planning
- Diagnostic computer port (CAN bus system)



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Subject to modification in the interest of progress. Illustrations and technical details could include options and not binding for actual constructions. All dimensions subject to usual tolerances.

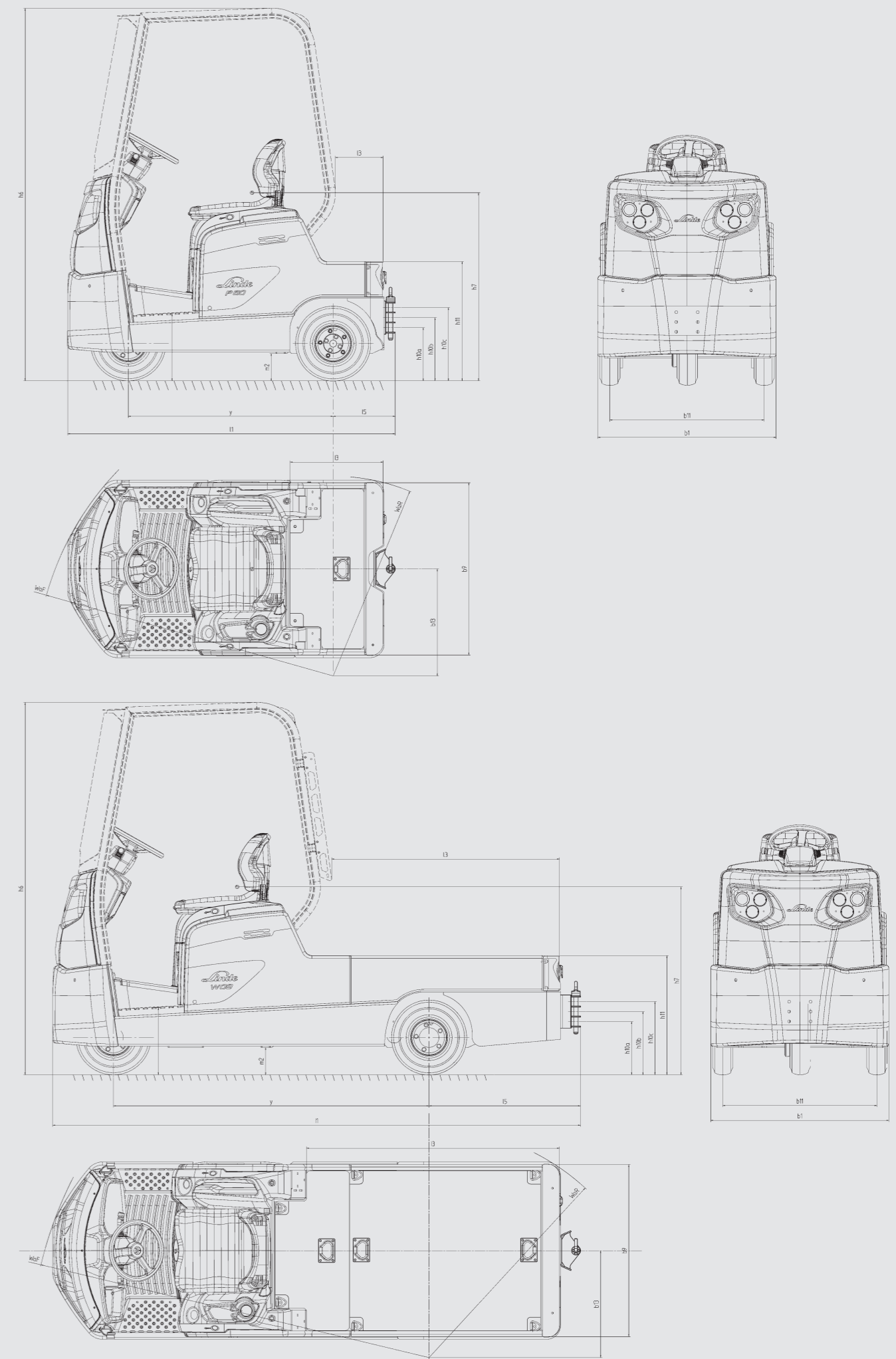
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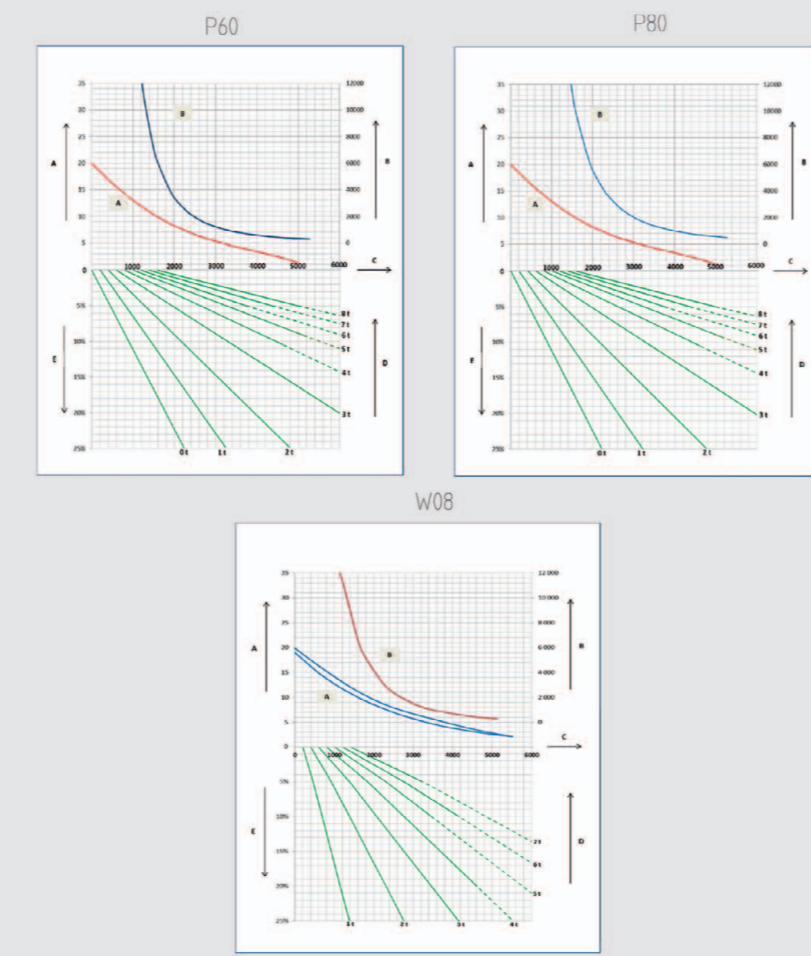
Technical Data according to VDI 2198

		Characteristics		
		P60	P80	W08
1.1	Manufacturer	LINDE	LINDE	LINDE
1.2	Model designation	P60	P80	W08
1.2a	Series	1191-00	1191-00	1191-00
1.3	Power unit	Battery	Battery	Battery
1.4	Operation	Seat	Seat	Seat
1.5	Load capacity/Load	Q (t)	0.15 / 6.0 ¹⁾	0.8 / 7.0
1.7	Rated tractive force	F (N)	1200	1600
1.9	Wheelbase	y (mm)	1190 ²⁾	1190 ²⁾
2.1	Service weight	(kg)	1260 (1515) ³⁾⁴⁾	1280 (1535) ³⁾⁴⁾
2.3	Axle load without load, front/rear	(kg)	550 / 710 (662 / 853) ⁴⁾	590 / 640 (750 / 735) ⁴⁾
3.1	Tyres rubber, SE, pneumatic, polyurethane		Pneumatic	SE
3.2	Tyre size, front		4.00-8 / 6PR	125/75-8
3.3	Tyre size, rear		4.00-8 / 6PR	125/75-8
3.5	Wheels, number front/rear (x = driven)		1 / 2x	1 / 2x
3.6	Track width, front	b10 (mm)	0 ²⁾	0 ²⁾
3.7	Track width, rear	b11 (mm)	860 ²⁾	860 ²⁾
4.7	Height of overhead guard (cabin)	h6 (mm)	2070 ²⁾	2070 ²⁾
4.8	Height of seat/stand on platform	h7 (mm)	1020	1055
4.12	Towing coupling height	h10 (mm)	270, 325, 380 ²⁾	270, 325, 380 ²⁾
4.13	Platform height, unladen	h11 (mm)	645	680
4.16	Loading platform, length	l3 (mm)	520	1595
4.17	Rear overhang	l5 (mm)	350	840
4.18	Loading platform, width	b9 (mm)	900 ²⁾	900 ²⁾
4.19	Overall length	l1 (mm)	1830 ²⁾	2955 ²⁾
4.21	Overall width	b1/b2 (mm)	996 ²⁾	996 ²⁾
4.32	Ground clearance, centre of wheelbase	m2 (mm)	135 ³⁾	135 ³⁾
4.35	Turning radius	Wa (mm)	1650 ⁴⁾	2230 ⁴⁾
4.36	Minimum pivoting point distance	b13 (mm)	600	600
5.1	Travel speed, with/without load	(km/h)	12 / 20	11 / 20
5.5	Tractive force, with/without load	(N)	-	-
5.6	Maximum tractive force, with/without load	(N)	-	-
5.7	Climbing ability, with/without load	(%)	see performance graph	see performance graph
5.8	Maximum climbing ability, with/without load	(%)	see performance graph	see performance graph
5.10	Service brake		Electric/hydraulic	Electric/hydraulic
6.1	Drive motor, 60 minute rating	(kW)	4.5 (AC)	4.5 (AC)
6.3	Battery according to DIN 43531/35/36 A,B,C,no		43 531 / A	43 531 / A
6.4	Battery voltage/rated capacity (5h)	(V/Ah)	48 / 375	48 / 375
6.5	Battery weight (± 5%)	(kg)	560	394
8.1	Type of drive control		Electronic/stepless	Electronic/stepless
8.4	Noise level at operator's ear	(dB(A))	60	60
8.5	Towing coupling, design/type, DIN 15 170		see option list	see option list

1) 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.
 2) (± 5 mm)
 3) (± 10 kg)
 4) Values in parenthesis with cabin
 5) (± 2 mm)
 6) (± 20 mm)
 7) With 48/375 Ah reduced travel speed



Performance charts



- A Speed (km/h)
- B Permissible haul per hour (m)
- C Drawbar pull (N)
- D Combined weight: trailer + load (t)
- E Gradient (%)

Information
 Load / gradient combinations shown by full line can be restarted 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 2.5 tonne and for all trailer loads where a gradient is involved.