Linde Material Handling

Tow Tractor

P20

Capacity 2.0 t | Series 1193

PB

Slim tow tractor

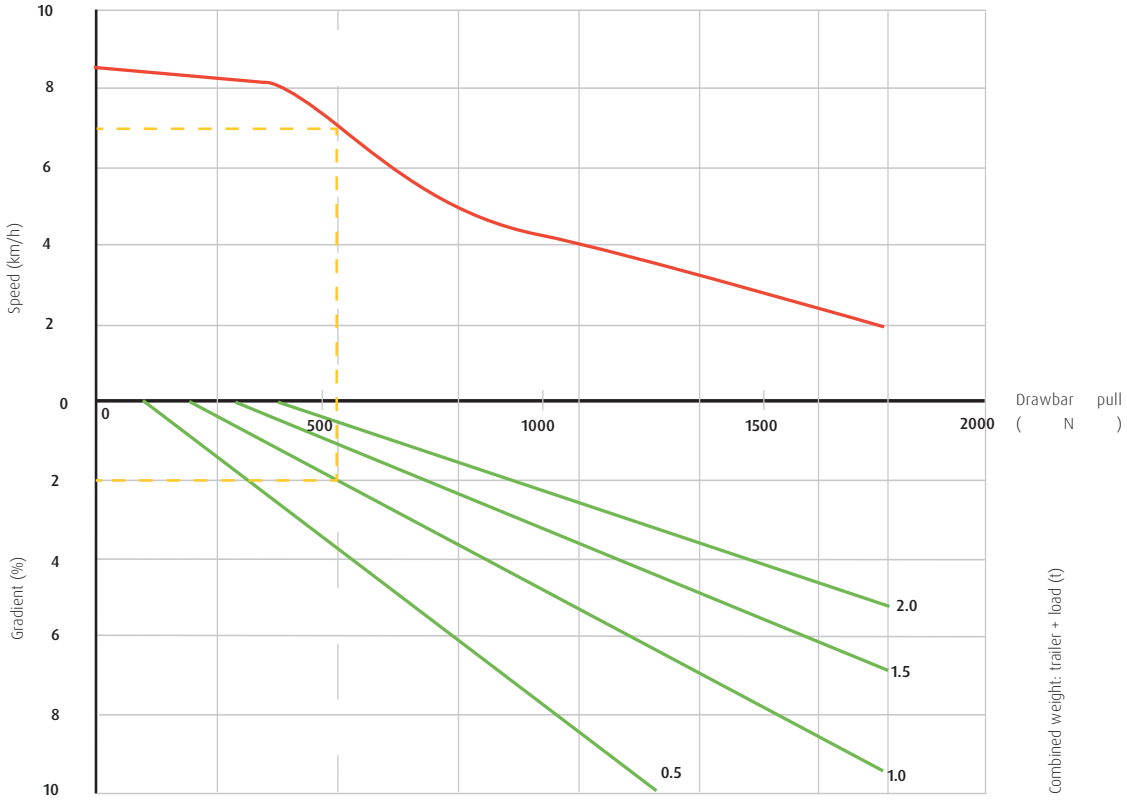
- → Compact construction for excellent handling performance even in tight spaces
- → Direct, responsive steering and a tight turning circle
- → Height-adjustable, folding operator's seat for ergonomic working conditions
- → Towing capacity for loads up to 2 tonnes for efficient goods transportation

STANDARD AND OPTIONAL EQUIPMENT

	Manufacturer's type designation/equipment	P20
Safety	Horn	●
	Key switch	●
	PIN code access	○
	Automatic parking brake	●
	Buzzer reverse	○
	Emergency stop button	●
Service	CAN bus architecture	●
Digitalisation	Data transmission online	○
	Data transmission Wi-Fi	○
Operation / load handling	Inching control forward/back	○
	Increased ground clearance	○
	Rearview mirrors	○
Enviro-ment	Protection -10°	●
Workplace	Multifunction display hour meter, maintenance indication, battery discharge indicator and internal fault code indication	●
	Knee protection	●
	Clipboard on battery cover	●
	Accessory bar	○
	Foldable and height adjustable seat	●
	Spacious storage compartments	●
Lighting	Front and rear LED lights	●
	Headlight, tail light, braking light and turning indicators	○
	Flashing beacon	○
Towing attachment	Traction pin 290/345/400	●
	Hitchless with screws	○
	Traction pin 300	○
	Traction pin 300 wire-guided	○
Axles and tyres	Drive wheel cushion rubber, non-marking	●
	Tandem load wheels cushion rubber, non-marking	●
	Drive wheel cushion rubber, polyurethane, polyurethane wet grip	○
Drive and brake system	Linde LAC controller	●
	1.5 kW AC motor (maintenance free)	●
	Electromagnetic brake	●
	Automatic parking brake	●
	Lateral battery change 2 Pz-B	●
	Vertical battery change 2 Pz-B	○
Energy	Built-in charger	○

● Standard equipment ○ Optional equipment

TOW DIAGRAM



speed (km/h)
load (t)
example

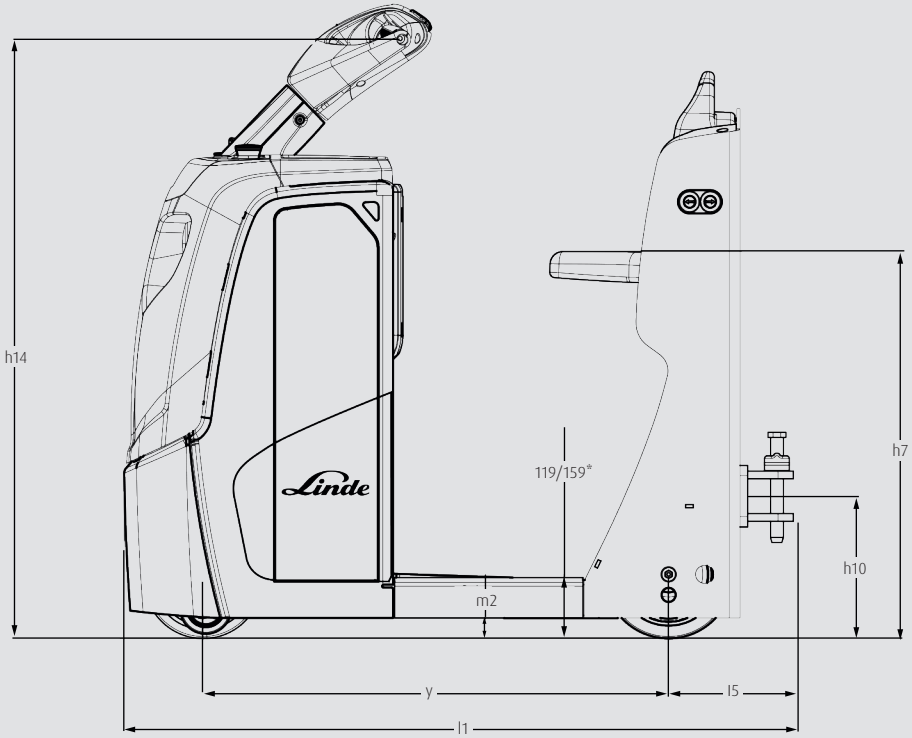
The example shown illustrates a tractor that is transporting 1 t, on a ramp of 2% gradient, with a maximum driving speed of 7 km/h.

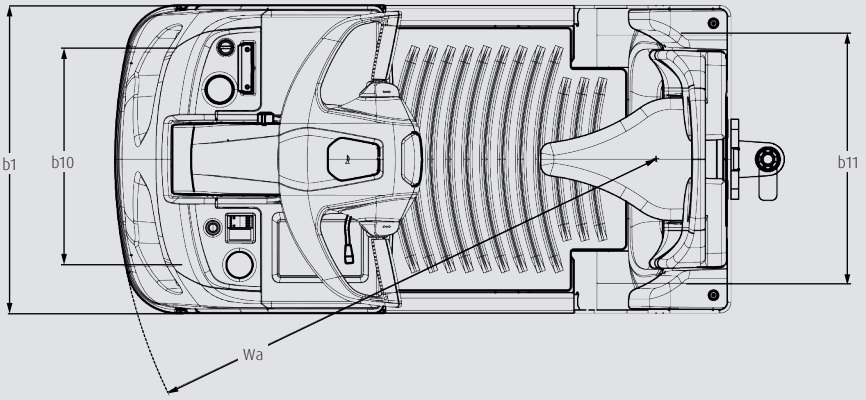
ⓘ For trailer loads exceeding 2.5 tons and for all trailer loads where a gradient is involved it is recommended that braked trailers are used.

TECHNICAL DATA (according to VDI 2198)

Characteristics	1.1	Manufacturer (abbreviation)		Linde MH
	1.2	**Manufacturer's type designation**		**P20**
	1.2.a	Series		1193-00
	1.3	Drive		Battery
	1.4	Operation		Seat
	1.5	Rated capacity/rated load	Q (t)	2.0
	1.7	Rated drawbar pull	F (N)	400
	1.9	Wheelbase	y (mm)	907[1]
Weight	2.1	Service weight	kg	630[2]
	2.3	Axle loading, unladen front/rear	kg	350/280
Tyres/chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		C+PU/C
	3.2	Tyre size, front		Ø 230 × 75
	3.3	Tyre size, rear		2 × Ø 250 × 80
	3.4	Auxiliary wheels (dimensions)		2 × Ø 100 × 40
	3.5	Wheels, number front/rear (x = driven wheels)		1x + 2/2
	3.6	Tread, front	b10 (mm)	414[1]
	3.7	Tread, rear	b11 (mm)	480
Dimensions	4.8	Seat height relating to SIP/stand height	h7 (mm)	800/985
	4.9	Height drawbar in driving position min./max.	h14 (mm)	1170/1270[1]
	4.12	Coupling height	h10 (mm)	276
	4.13	Loading height, unladen	h11 (mm)	-
	4.16	Length of loading surface	l3 (mm)	-
	4.17	Overhang	l5 (mm)	253[3]
	4.18	Width of loading surface	b9 (mm)	-
	4.19	Overall length	l1 (mm)	1315[1]
	4.21	Overall width	b1/b2 (mm)	600[1]
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	40/80[4]
	4.35	Turning radius	Wa (mm)	1080[4]
Performance data	5.1	Travel speed, laden/unladen	km/h	8/8[5]
	5.5	Drawbar pull, laden/unladen	N	400
	5.6	Max. drawbar pull, laden/unladen	N	1760
	5.7	Gradeability, laden/unladen	%	-
	5.8	Max. gradeability, laden/unladen	%	5.0/10.0[6]
	5.10	Service brake		Electro-magnetic
Electric-engine	6.1	Drive motor rating S2 60 min	kW	1.5
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		2PzS-B
	6.4	Battery voltage/nominal capacity K 5	(V)/(Ah) o. kWh	24/200
	6.5	Battery weight (±5%)	kg	185
	6.6	Power consumption according to VDI cycle	kWh/h	1.21[7]
Drive/lifting mechanism	8.1	Type of drive unit		LAC

1) (±5 mm)
2) Figures with battery, see line 6.4/6.5.
3) With single position hook
4) >=95%
5) (±5%)
6) >=100%
7) 62 cycles


h14
119/159*
h7
h10
m2
y
l5
l1


b1
b10
b11
Wa

CHARACTERISTICS

Two-handled steering unit

Safety

→ Compact chassis design protects the operator during operation
→ Ergonomic two-handled steering unit for easy and safe steering movements
→ Automatic parking brake for safe working on gradients
→ Optional variant with more ground clearance for safe driving on uneven surfaces and ramps

Height-adjustable and folding operator's seat

Ergonomics

→ Height-adjustable and folding operator's seat for increased operator comfort over long distances
→ Height-adjustable steering unit for easier operation
→ Large, easy-access storage compartments for work tools

Vehicle width of only 600 mm

Handling

→ Narrow outer dimensions with a width of just 600 millimetres for manoeuvring in the tightest of spaces
→ Large steering unit for easier control
→ Drive wheels with large steering angle for a tight turning radius
→ 1.5 kW three-phase motor for fast and continuous acceleration to top speed, even when towing trailers

Service-friendly construction

Service

→ Maintenance-free, delete- and water-resistant three-phase motor for high availability and reduced servicing requirements
→ Easy access to all important components thanks to service-friendly construction
→ Comprehensive truck data check via notebook keeps service costs to a minimum and allows for precise adjustment to the respective application

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

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ncnielsen
Nørregade 66, DK-7860 Balling | Tlf.: +45 99 83 83 83
nc-nielsen.dk | info@nc-nielsen.dk