

# Electric platform truck

## PE20.1

Load capacity 2,000 kg

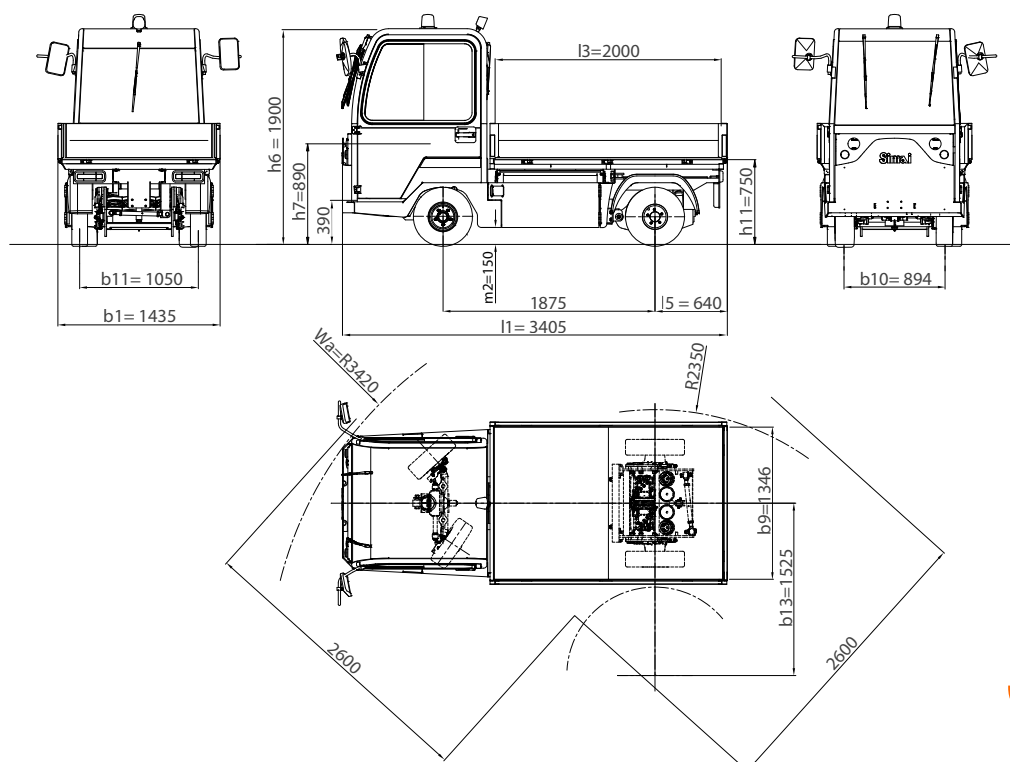


The PE20.1 is a small-sized sit-on 4-wheel platform truck. It is designed for applications where a “multitasking” vehicle is required, such as production site maintenance. Suitable for both outdoor and indoor applications, the PE20.1 is equipped with a loading platform that can be customised according to customer needs, allowing the assembling of equipment for production site or railway maintenance. The suspension ensures excellent stability of the load placed on the platform. With its 2 new motors positioned on the rear axle, the PE20.1 can tow trailers of up to 10 tonnes in total.

- **The chassis with side members** ensures maximum robustness, as well as a long service life of the truck.
- Phenolic resin coated plywood platform size 2,000x1,346 mm - Sheet metal loading platform available as a dedicated option, as well as set of aluminium or wooden sides.
- **Suspension:** front with wishbones and self-damping coil springs, rear with coil springs, hydraulic shock absorber and anti-roll bar.
- **Foot-operated service brakes**, acting on all 4 wheels - with a split circuit. Drum brakes at front. Multiple oil-immersed disc brakes at rear. Negative electromagnetic parking brake as standard. Electric pre-tensioned brake activates when accelerator pedal is released, with first stroke of brake pedal and reversing direction.
- Steer-by-wire electric steering, operated via steering wheel with adjustable inclination.
- **2 on-board operators.** Various seat options, with or without seat belt, with suspension and mechanical weight adjustment, ensure driving comfort.
- **“Man on board” device** under driver’s seat.
- **Digital dashboard with battery charge indicator**, fault detection, speedometer, steering angle indicator, speed profile selection, odometer and hour meter. 24 V DC/DC converter for auxiliary services.
- **2 x 6.6kW new generation AC electric motors** directly integrated in the gearboxes, one for each wheel. Electronic differential system.
- **Lighting system:** 2 front lights (dipped-beam/main-beam), 2 front and 2 rear turn indicators, 2 rear lights (position/brake/reverse) - Full LED lights. Optional beacon and blue safety light.
- **Electronic AC control** with energy recovery and deceleration braking.
- Several towing hitches available. Optional rear inching control to ease coupling operations.
- 2 DIN 43535A 48V 480 Ah battery - **side extraction.**

Standard paint finish: chassis dark grey RAL 7021/body light grey RAL 7035. Other colours available upon request.

All parts are easy to access for fast and effective maintenance. Reduced cost due to AC technology and modular design.



FEATURES	1.1	Manufacturer			SIMAI S.p.A.	
	1.2	Model			PE20.1	
	1.3	Drive			electric	
	1.4	Operator Type			sitting driver	
	1.5	Load Capacity	Q	t	2	
	1.5.1	Towing Capacity	Q	t	10	
	1.7	Rated Drawbar pull	F	N	2200	
	1.9	Wheelbase	Y	mm	1875	
	WEIGHT	2.1	Service weight (w/battery)		kg	2200
2.2		Axle loading laden front/rear (with operator 80 kg. each)		kg	1710 / 2650	
2.3		Axle loading unladen front/rear		kg	1200 / 1000	
TIRES- CHASSIS	3.1	Tyres:Cushion(Cu),Superelastic(SE), Pneus(Pn) Poliurethane (PE)			SE/Pn	
	3.2	Tyre size front			6.00-9	
	3.3	Tyre size rear			6.00-9	
	3.5	Wheels nr. Front/Rear (X=motive)			2 / 2X	
	3.6	Tread front	b <sub>10</sub>	mm	894	
	3.7	Tread rear	b <sub>11</sub>	mm	1050	
	DIMENSIONS	4.7	Height of roof/cabin	h <sub>6</sub>	mm	1900
4.8		Seat height	h <sub>7</sub>	mm	890	
4.8.1		Step on platform height		mm	390	
4.12		Coupling height	h <sub>10</sub>	mm	370	
4.13		Loading height (min / MAX)	h <sub>11</sub>	mm	750	
4.16		Platform length	l <sub>3</sub>	mm	2000	
4.17		Rear overhang	l <sub>5</sub>	mm	640	
4.18		Platform width	b <sub>9</sub>	mm	1346	
4.19		Overall length	l <sub>1</sub>	mm	3405	
4.21		Overall width	b <sub>1</sub>	mm	1435	
4.32		Ground clearance - centre of wheelbase	m <sub>2</sub>	mm	150	
4.35		Turning radius front	Wa	mm	3420	
4.35.1		Turning radius rear		mm	2350	
4.36		Turning radius inner	b <sub>13</sub>	mm	1525	
4.36.1		Aisle width when turning 90°		mm	2600	
PERFORMANCES	5.1	Travel speed laden/unladen		km/h	18 / 21	
	5.5	Drawbar pull laden		N	1600	
	5.5.1	Drawbar pull unladen		N	2200	
	5.6	Max. Drawbar pull laden/unladen		N	- / 8000	
	5.7	Gradeability laden/unladen		%	see chart	
	5.8	Max. Gradeability laden/unladen		%	see chart	
	5.10	Service / Parking brake (I=Hydraulic E=Electromagn. M=Mechanical)			I / E	
	5.10.1	Type of service brake front/rear			drum / mult. disks	
	MOTOR	6.1	Drive motor rating S2=60 min		kW	2 x 6,6
		6.1.1	Hydrauling steering motor rating S2=60 min		kW	0,6 (Ac)
6.3		Battery according to DIN 43531 / 35 / 36 A, B, C, no			no	
6.4		Battery voltage	U	V	48	
6.4.1		Battery rated capacity	K <sub>5</sub>	Ah	480	
6.5		Battery weighth		kg	760	
6.6		Energy consumption (EN 16796)		kWh/h	1,77	
OTHER DATA	8.1	Drive Control			inverter AC	
	8.4	Sound level at driver's ear according to DIN 12053		dB(A)	69	
	8.5	Towing coupling, type DIN			-	

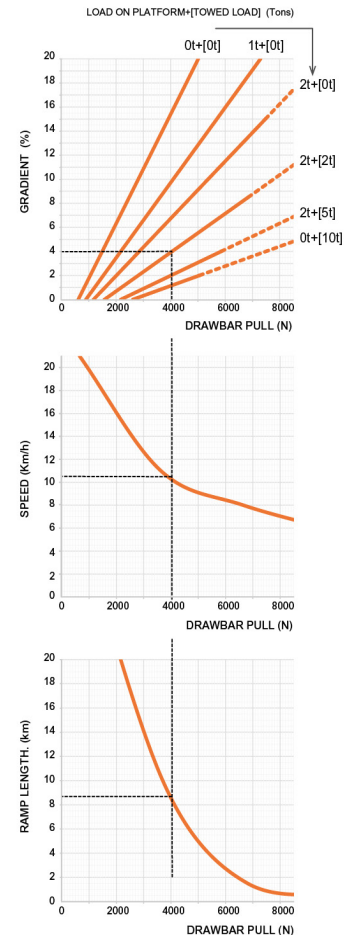
**GRAPH 1:**  
 I [%] = GRADIENT  
 X [ton + tV ton] = LOAD ON PLATFORM + TOWED LOAD  
 F [N] = TRACTION FORCE  
 SOLID CURVES: START & STOP ALLOWED

**GRAPH 2:**  
 VU [km/h] = SPEED  
 F [N] = TRACTION FORCE

TRAILERS WITH BRAKES ARE RECOMMENDED FOR LOADED DESCENTS. IF THIS IS NOT POSSIBLE, SPEED SHOULD BE LIMITED IN ACCORDANCE WITH OPERATING MANUAL.

**GRAPH 3:**  
 s [km] = RAMP LENGTH THAT CAN BE COVERED PER HOUR  
 F [N] = TRACTION FORCE

**EXAMPLE OF GRAPH READING:**  
 - LOAD ON PLATFORM + TOWED LOAD = 2t + [2t]  
 - GRADIENT (i) = 4 %  
 - TRACTION FORCE (F) = 4000 N  
 - SPEED (VU) = 11 km/h  
 - MAX. RAMP LENGTH THAT CAN BE COVERED PER HOUR (s) = 7,5 km



As per VDI guidelines 2198, this datasheet applies to standard electric tractor / platform truck only. Dimensions are not binding and can be changed in any moment. The performances must be intended for brand new machines, after having completed the running-in tested in San Donato Milanese Factory in normal climatic conditions. Performances and weight are to be intended with standard motors and battery (reported in bold) and with extra-elastic tires. Some data can vary according to different equipments.



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