4-wheel electric tow tractor

TE301

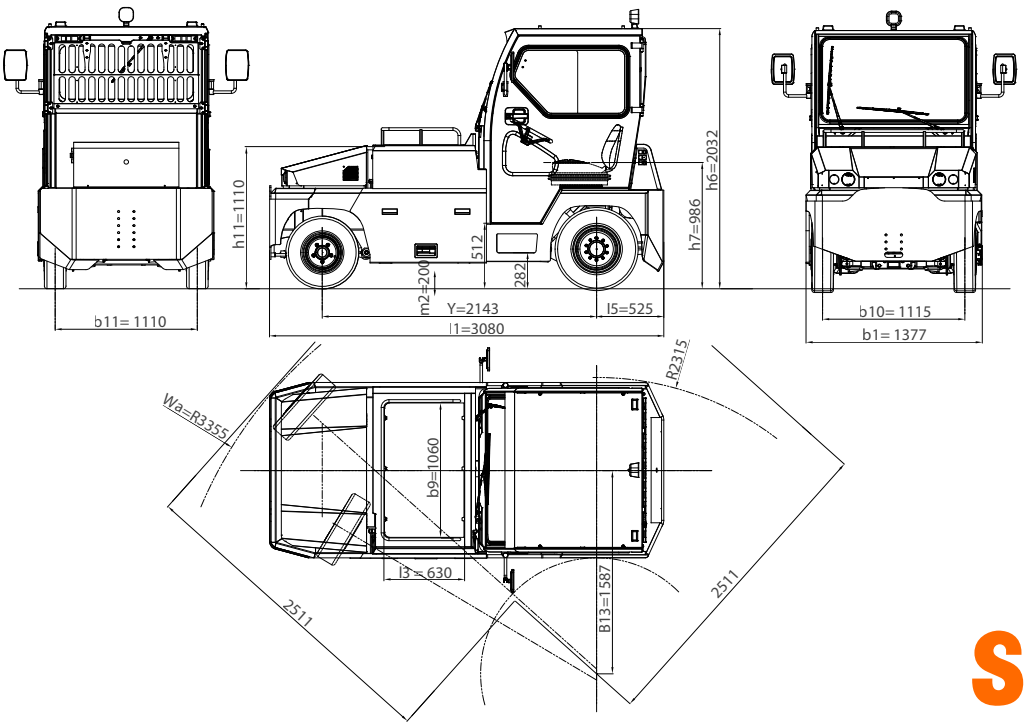
Towing capacity 30,000 kg

The TE301 is a heavy-duty sit-on 4-wheel tow tractor. It is designed for long-distance operations and ensures high performance as well as high visibility of the tow hitch and surroundings. This, combined with the high power of the 2 electric motors and excellent manoeuvrability, makes the new tractor suitable for various tasks in the airport environment, such as towing small aircraft or helicopters, but also in the industrial field. The driving position simplifies and speeds up hitching operations, thanks also to the inching control panel positioned at the rear of the cab, which is equipped with a 2-step entrance to make getting in and out of the tow tractor more ergonomic and comfortable.

- The "shock-resistant" perimeter frame chassis takes full advantage of the torque of the AC-motors and provides a long service life of the tow tractor. To this end, the outer covers are also made of metal.
- **Suspension:** steel coil springs, anti-roll bar and hydraulic shock absorbers on both the front and rear axles.
- **Foot-operated service brakes**, acting on all 4 wheels - with a split circuit. Disc brakes at front. Multiple oil-immersed disc brakes at rear. Negative hydraulic parking brake as standard. Electric pre-tensioned brake activates when accelerator pedal is released, with first stroke of brake pedal and reversing direction.
- Hydraulic steering as standard, operated via 3-spoke steering wheel and fixed on a height- and depth-adjustable steering column.
- **2 on-board operators.** Various seat options, available with hydraulic or air 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 10kW 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. Rear inching control to ease coupling operations.
- DIN 43536A 80 V 620 Ah battery - **side extraction.**

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

Easy access to all components for fast and effective maintenance. Reduced cost thanks to AC technology and modular construction.



Simai®
www.simai.it

FEATURES	1.1	Manufacturer			SIMAI S.p.A.
	1.2	Model			TE301
	1.3	Drive			electric
	1.4	Operator Type			sitting driver
	1.5	Load Capacity	Q	t	0,1
	1.5.1	Towing Capacity	Q	t	30
	1.7	Rated Drawbar pull	F	N	6000
	1.9	Wheelbase	Y	mm	2143
WEIGHT	2.1	Service weight (w/battery)		Kg	4200
	2.2	Axle loading laden front/rear (with operator 80 kg. each)		Kg	2070/2390
	2.3	Axle loading unladen front/rear		Kg	1980/2220
TIRES- CHASSIS	3.1	Tyres:Cushion(Cu),Superelastic(SE), Pneus(Pn) Poliurethane (PE)			SE/Pn
	3.2	Tyre size front			6.50-10
	3.3	Tyre size rear			7.00-12
	3.5	Wheels nr. Front/Rear (X=motive)			2 / 2X
	3.6	Tread front	b_{10}	mm	1115
	3.7	Tread rear	b_{11}	mm	1110
DIMENSIONS	4.7	Height of roof/cabin	h_6	mm	2032
	4.8	Seat height	h_7	mm	986
	4.8.1	Step on platform height		mm	512
	4.12	Coupling height	h_{10}	mm	355 - 410 - 465 - 520 - 575
	4.13	Loading height (min / MAX)	h_{11}	mm	1110
	4.16	Platform length	l_3	mm	630
	4.17	Rear overhang	l_5	mm	525
	4.18	Platform width	b_9	mm	1060
	4.19	Overall length	l_1	mm	3080
	4.21	Overall width	b_1	mm	1377
	4.32	Ground clearance - centre of wheelbase	m_2	mm	200
	4.35	Turning radius front	Wa	mm	3355
	4.35.1	Turning radius rear		mm	2315
	4.36	Turning radius inner	b_{13}	mm	1587
	4.36.1	Aisle width when turning 90°		mm	2511
PERFORMANCES	5.1	Travel speed laden/unladen		Km/h	12 / 25
	5.5.1	Drawbar pull laden		N	-
	5.5	Drawbar pull unladen		N	6000
	5.6	Max. Drawbar pull laden/unladen		N	- / 20000
	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 / I
	5.10.1	Type of service brake front/rear			disk / mult. disks
MOTOR	6.1	Drive motor rating S2=60 min		kW	2*10
	6.1.1	Hydrauling steering motor rating S2=60 min		kW	1
	6.3	Battery according to DIN 43531 / 35 / 36 A, B, C, no			43536A
	6.4	Battery voltage	U	V	80
	6.4.1	Battery rated capacity	K_5	Ah	620
	6.5	Battery weigth		Kg	1565
	6.6	Energy consumption (EN 16796)		kWh/h	9,39
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			-

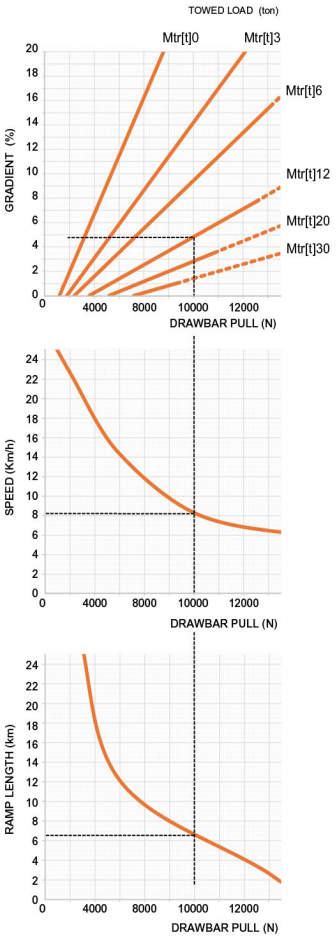
GRAPH 1:
I [%] = GRADIENT
MTR [TON] = TOWED LOAD
F [N] = TRACTION FORCE
SOLID CURVES: START & STOP ALLOWED

GRAPH 2:
V0 [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:
- TOWED LOAD (MTR) = 12 t
- GRADIENT (I) = 4 %
- TRACTION FORCE (F) = 10000 N
- SPEED (V0) = 8 km/h
- MAX. RAMP LENGTH THAT CAN BE COVERED PER HOUR (S) = 6 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 normaal 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..

21/10/2022

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