

# ELECTRIC TRACTORS



## BULL SX

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Latest-generation standing tractor with electric steering: combines excellent performance with a modern design that opts for innovative solutions and materials.

The technical project was studied to provide the maximum comfort and ergonomics.

Self-supporting bodywork with extruded steel mudguards and pressed steel front protect the machine against accidental collisions.

The high capacity battery can be removed both vertically and sideways, since it rests on bearings.

The dashboard features an interactive display that provides information about the battery charge, hours worked, instantaneous speed, service conditions and technical faults, give the possibility to choose the maximum speed for inside and outside, on request start with badge, Black Box, mirrors, position and working lights.

The machine is operated by an AC system so, besides driving it, the motor also functions as a regenerative brake when the operator releases the accelerator.



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**CHASSIS:** in very thick metal sheet forming a self-supporting box structure. Steering: a gear with an AC motor, controlled by a specific electronic system, move the front direction wheel.

The driver interact with the system through a cloche equipped with throttles for speed control and rotation for direction control.

**TRANSMISSION:** an asynchronous motor directly flanged on the motor reducer drives the vehicle. The asynchronous motor has an electric brake that acts as a parking brake.

It also has an Encoder that interfaces with an electronic control unit and allows the system to adjust the speed of the motor so that the tractor speed corresponds to the driver's requirements in all conditions of use.

**ELECTRIC SYSTEM:** an AC chopper monitors the performance of the AC motor; another electronic system controls the engine dedicated to move the direction wheel.

The entire choppers / motors / brake system can be programmed with the console to ensure optimum performance for the specific work required.

**BRAKE SYSTEM:** through the throttles it is possible to obtain whether the release braking or the counter current brake.

Two levers are installed on the cloche to have a stronger electric brake by motor respect the brake obtained by throttles : these system can work in strong way and become a security brake.

**INSTRUMENTATION:** complete motor car type instrumentation including low battery warning indicator, hours worked and fault indicators, hare / tortoise indicator, horn, light switch ( on demand)

**POWER SUPPLY:** a 24 V 240 A battery with considerable autonomy allows the tractor to operate for a long period of time and, thanks to its large capacity, will not normally be subjected to stress. This makes it extremely long-lasting.

**SAFETY DEVICES:** micro switch under driver platform , battery quick release device, battery safety retainer, AC system for speed control, automatic parking brake.

Compliance with the regulations in force and CE certification.

CHARACTERISTICS		dim.un.	
Manufacturer			
Model			Bull SX
Platform loading capacity	Nominal capacity	Kg	---
Pull capacity	Load nominal capacity	Kg	3000
Power type	Electric/Endothermic		Electric
Control type	Pedestrian/stand-on/Sealed		stand-on
Tyres	Pn - pneum. / se - superel.		Se
Wheels	Number front/rear X=drive	N°	3 - 1x/2
Platform dimensions	L x B ( length x width)	mm	---
<b>DIMENSIONS</b>			
	h = machine body hight	mm	55
	L = lenght	mm	1418
	B = width	mm	650
	h 3 = feet panel hight	mm	169
	h 4 = steering/handle hight	mm	1150
	h 2 = thiller hight		---
	h 5 = seat hight	mm	700(6step-150up)
	h 6 = turning light hight	mm	1800
	h 7 = cabin turning light hight	mm	---
	h 1 = cabin hight	mm	---
	h 9 = cabin width	mm	---
Turning radius	R1= front min. external	mm	1730
	R2=rear min. external	mm	1280
Aisle width	U-turn	mm	2330
Hook hight	s = hook center to ground	mm	180-250-320
<b>PERFORMANCE</b>			
Speed	Without / with load	Km./h	8-4
Tractive effort	Continuative work 60'	N.	750
	Max in plane x 5°	N.	2200
Gradeability	Without/width	%	6-2
Weight	With battery	Kg	720
Axles load	Front/rear with battery	Kg.	315-405
<b>TRACTION</b>			
Wheels	Front diam. / width	mm	300-100
	Rear diam. / width	mm	320-1100
Wheelbase	y = pitch	mm	900
Trach	C wheels center	mm	600
Ground clearance	clearence at half chassis	mm	55
Working brake	Mecc./hydraul./elettr.		Elettr.
	Brake axles number	N	1
Parking brake	Mecc./hydraul./elettr.		Elettr.
Suspensions			
Spring/laf spring/schock absorber			
<b>POWER SUPPLY</b>			
Battery	Type		Reinforced
	Capacity	V/Ah	24-240(C5)
	Weight	Kg	200
Electric motor	Translation,power S2=60°	kW.	2 AC
Electric system	electronic control		Inverter AC
Steering	Mecc./hydraul./elettr.		elettr.
Transmission	Mecc.		Mechanics
Towing hook	manual - automatic		Manual
Autonomy	working hours witm medium work	h.	6-8

