

hoschung 



Proven performance
powered by ELECTRIC

Urban Sweeper S2.0



Urban-Sweeper

S2.0

Proven performance, Powered by ELECTRIC

A new era of electric is here. Meet the Urban-Sweeper S2.0, the first fully electric street sweeper releasing 0 (zero) emission and engineered by Boschung. A 2m³ sweeper combining ease and suction power with the most progressive technologies of today.

Street-smart, intuitive and compact, the Urban-Sweeper S2.0 was engineered and designed for maximum performance. The intelligent and innovative battery at the heart of the sweeper will grant you an entire work shift with just a 100 minutes of charging time. The Boschung engineered battery is entirely supervised by an intelligent management system, making the boundary between work and charging times hard to discern.

With today's possibilities and the advanced engineering of Boschung, the Urban-Sweeper S2.0 can now be equipped to be fully autonomous.

The 2m³ class sweeper you use every day now delivers so much more, it will redefine what is possible.

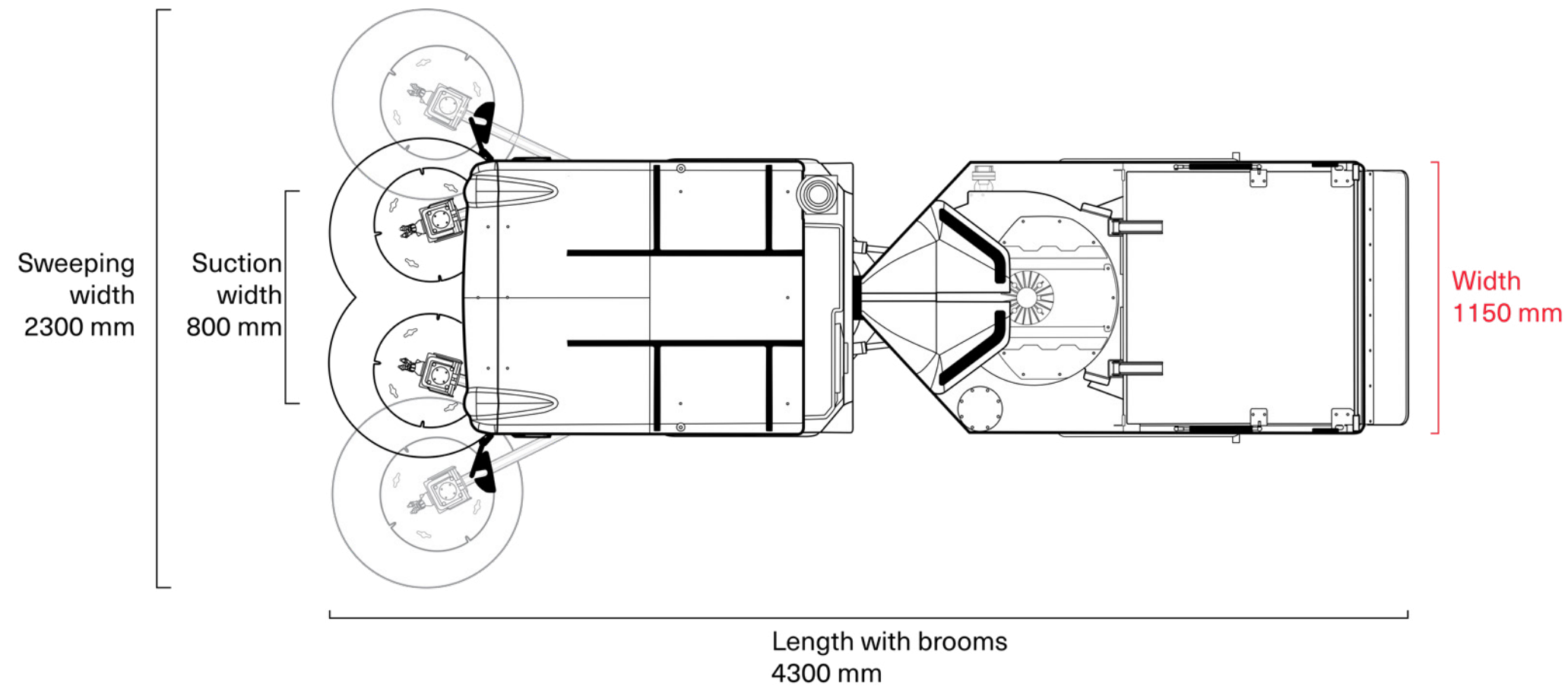
Weight
2.3 tons

Vehicle width
1,150 mm

Sweeping width
2,300 mm

Charging time
100 minutes

Working time
1 shift



Compact and Lightweight

Weight

2.3 tons

1 ton lighter than any ordinary 2m³ sweepers

Width

1.15 meter

15 cm narrower than any ordinary 2m³ sweepers

The Urban-Sweeper S2.0 was designed with efficiency in mind, providing an exceptionally light weight and narrow width for maximum reach and suction performance. The Urban-Sweeper S2.0 can fit into the narrowest streets while providing the highest suction performance. With a chassis made out of a high resistant metal, the sweeper can hold a total gross weight of 3,500 kg or 4,000 kg.



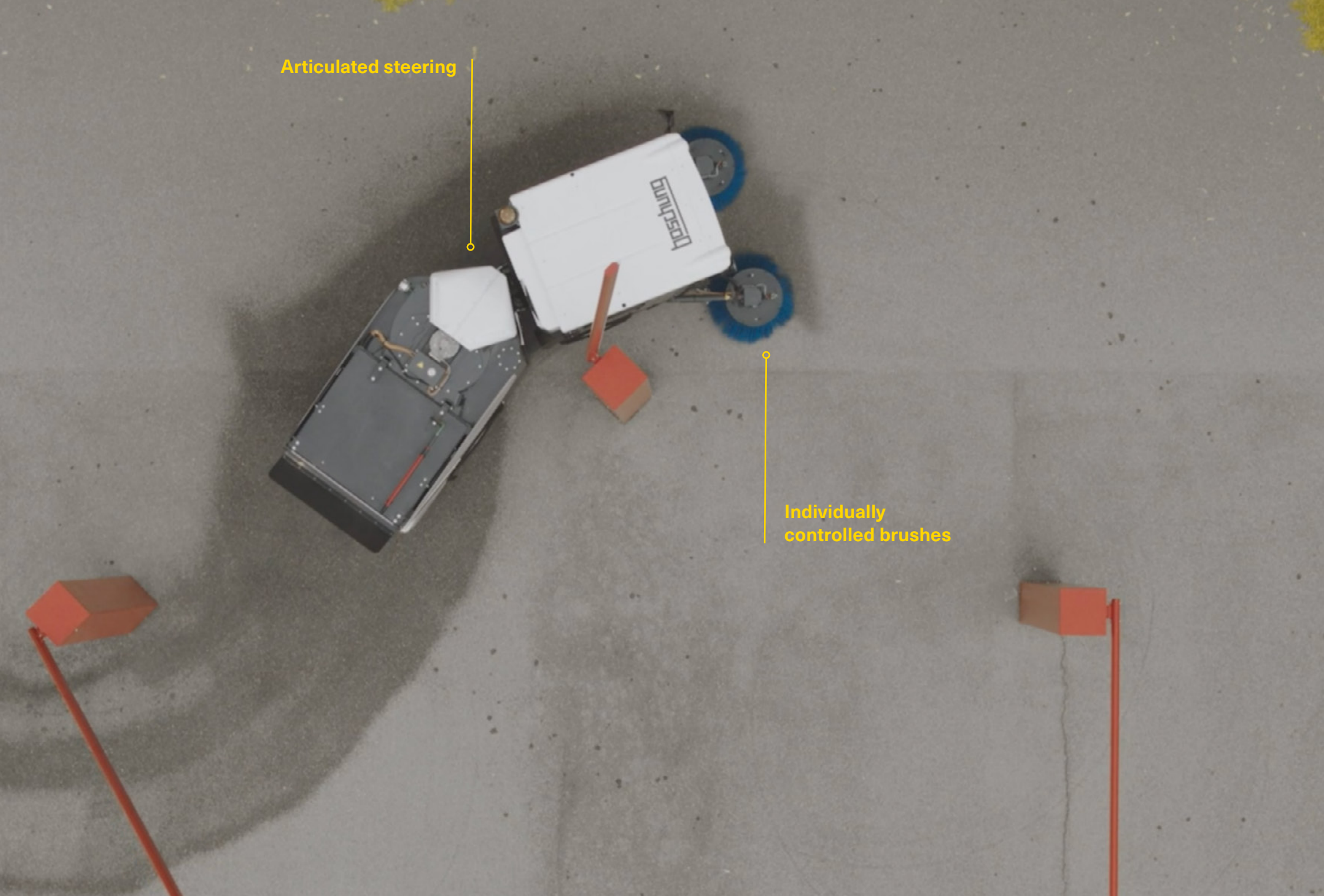
Engineered for agility, accuracy and maximum efficiency

The agility of the **articulated steering** dexterity gives the sweeper a maximum flexibility and a precise turning radius of just 3.3 m.

Street-smart and maximum sharpness with the **oscillating suspensions** between the front and back frame because clever skills are most important when it comes to safety. The oscillating suspensions of the Urban-Sweeper S2.0 give the 2-wheel drive the grip of an all-wheel drive. Going up and down curbs has never been as safe and easy.

To ensure the most precision, the Urban-Sweeper S2.0 is equipped with **hill holder** solution that will keep the vehicle steady going up or down-hill. The automatic full stop of the sweeper as soon as the gas pedal is released ensures rigor and carefulness when working in difficult places.

Equipped with a **cruise control** system enabling the possibility to maintain a constant speed when activated, the Urban-Sweeper S2.0 gives the driver the assistance needed to focus on precision.



Precision at your fingertips

Intuitive and effortless handle in just one hand.

Tailored to use with ease, the **double joystick control unit** fitted as an extension of the center armrest of the Urban-Sweeper S2.0 gives you the ability to handle all your work tools in just one hand.

Displaying your vehicle status, information and intelligent functionalities, the **touchscreen control unit** of the Urban-Sweeper S2.0 also gives you an overview of the battery management system.

Strategically attached onto the roof of the cabin, the camera screen will show you a direct image of your **rear-view camera** when backing up or **suction mouth camera** when working to guide the driver during his routine.



A panoramic cabin built around the driver

Designed to offer the driver the best display on the work area, the **two-seater panoramic cabin** was built for maximum comfort and flexibility.

The walk-through cabin offers the driver the safety to enter and exit the vehicle on either sides.

→ Transparent floor panel

Direct view on the suction mouth for a perfect control of your work-tool.

→ Adjustable steering

The column steering can be adjusted to fit the best work position and ensure the driver the most comfort and ease to deliver the best work.

→ Temperature-controlled filtered air ventilation

Comfort is ensured with a good quality of air during cold and hot weather with an electric heating and Air Conditioning system.

→ Cabin preconditioning system

Program how you would like your cabin to be preconditioned. The sweeper will heat up or cool off the cabin using the power from the outlet.



Exceptional power and maximum ease of use

The **electric turbine** enabling the most powerful suction force and strategically placed on top of the hopper delivers an airflow of 8,500 m³/h delivering exceptional sweeping performances, leaving no chance to dirt.

Made out of aluminum, the **ultra-light hopper** holds a net volume of 1.257m³ according to the DIN ISO EN 15429-2 norm.

The smart engineering of the hopper enables the most ease and comfortable care. Clean out the smallest particles by simply applying water pressure into the filtering grates without having to open any hatches or doors. No filter replacement is ever needed.



Connected for smart operations

Every Urban-Sweeper S2.0 is an extension of its driver, and now with the bVision platform that connection is even stronger. bVision unlocks a whole suite of surprising and integrated features for the ultimate connected work tool experience.

With the refined engineering of Boschung and the limitless possibilities of today's connectivity, bVision offers better ways to do simple workday activities.

Available from any computer and Android / iOS smartphone for an intelligent monitoring at anytime and from anywhere.

→ Course tracking

Follow the path of the Urban-Sweeper S2.0 live or analyze it later.

Time at the start of the routine, km traveled, current speed and average speed.

→ Work performance analyzing

Turbine rpm, brush rpm, total operating hours, battery state of charge, kW usage and more

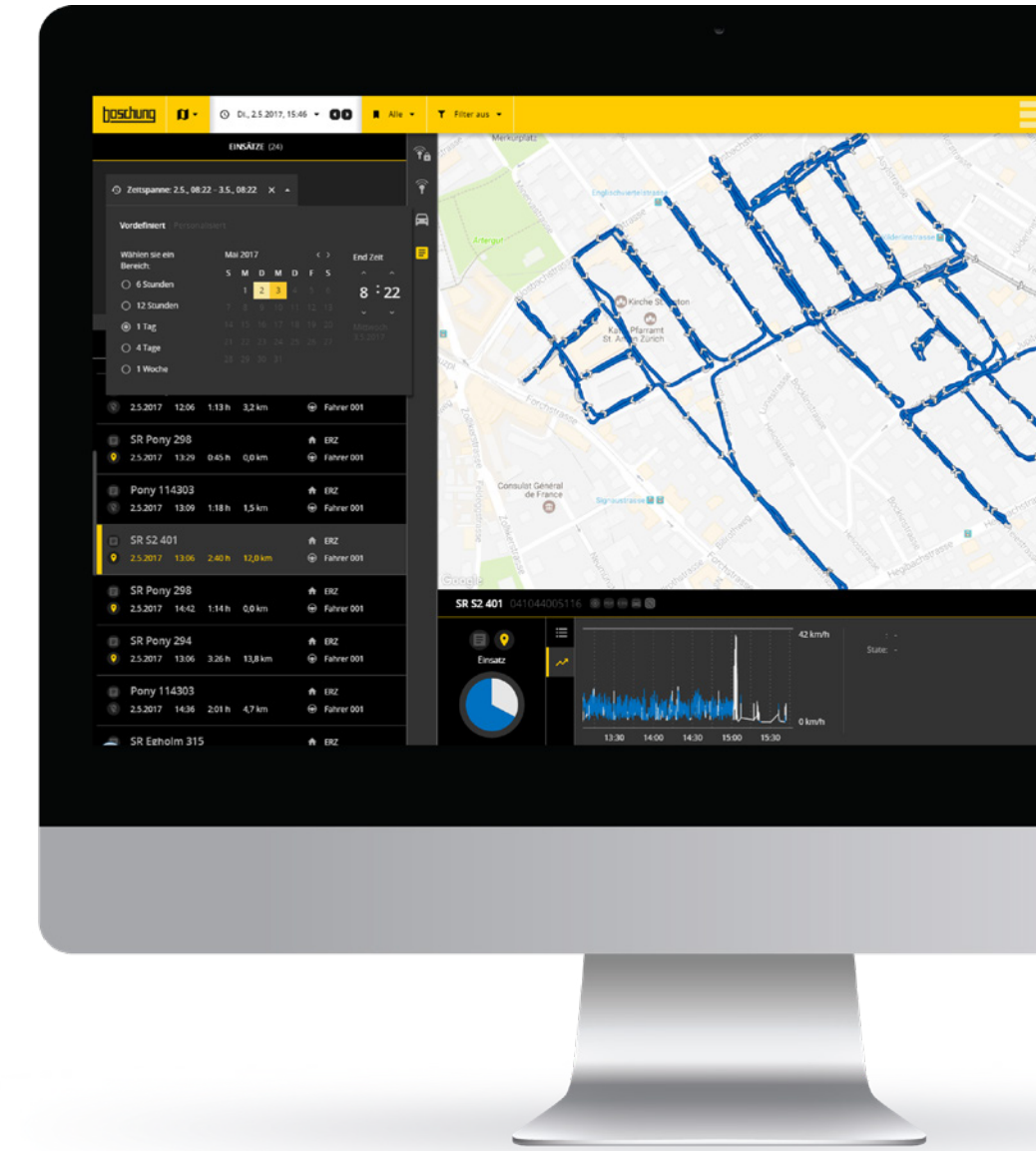
→ Keep track of the equipment

Analyze the equipment in use: is the turbine on, is the suction mouth in action, are the brushes on, is the hand suction hose in use, is the pressure washer in use or are there any other equipment in use.

→ Outside air temperature

→ Mission planning

Organize and schedule your missions easily and with efficiency. Trigger missions and send them directly to your operators and to your vehicle's control units.



Short charging time
100 minutes

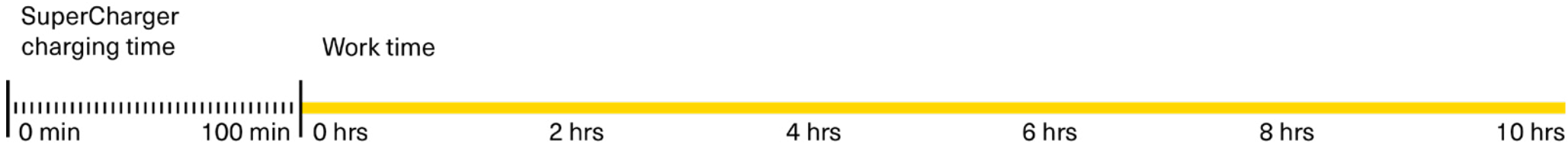
Long working time
1 entire shift

Small weight
2.3 tons

Skinny width
1,150 mm



Battery



Fast charging to get the work done

100 minutes charging
1 work-shift



SuperCharger for a fast charging time of 100 minutes



StandardCharger for an overnight charging time



On-board Charger to charge on the go

An extraordinary battery to power performance

Capacity
54.4 kWh

At the heart of the Urban-Sweeper S2.0 is the battery, a powerful muscle that keeps the vehicle moving, and whose performance determines how efficient the sweeper can be. Innovative materials and design help optimize the battery's capacity, durability and safety, making this one battery built to perform.

Design

The 54.4 kWh lithium-ion battery counting 12 modules and a total of 4320 cells is integrated directly under the waste hopper compartment providing energy to the power-train with its 2 all-electric front wheel motors, 2 all-electric broom motors and the all-electric turbine.

0 (zero) emission concept

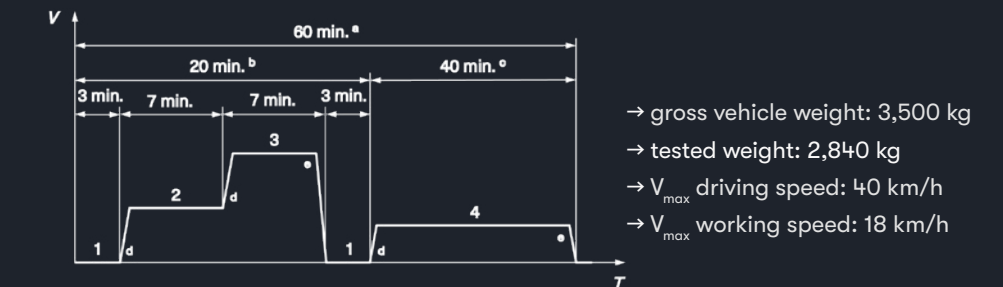
The battery powers all motors and systems of the sweeper such as:

- the power-train motors
- the turbine
- the brooms
- the heater and air conditioning system

The Boschung engineered all-electric front wheel drive is driven by 2-wheel motors allowing the 2m³ a driving speed of 40 km/h featuring an automatic differential lock when necessary.



4.17 kWh consumption
according to DIN EN 15429-2



Intelligent battery system

Safety

24 temperature sensors were engineered to guarantee the battery surveillance at all time for a maximum battery lifetime.

→ [Automatic battery heating and cooling system](#)

Preconditioning of the battery before charging in with low or high temperatures to ensure harmless use of the battery throughout the seasons.

→ [Overcharging protection circuit](#)

→ [Deep discharge protection](#)

All these intelligent features of the battery were engineered to optimize the battery's capacity, durability and safety.

Energy recuperation system

The battery recuperation system allows your battery to recover energy while on the move.

→ [Step 1 - releasing accelerator pedal](#)

→ [Step 2 - pre-braking](#)

→ [Step 3 - while braking](#)

→ [Step 4 - downhill driving](#)

→ [Step 5 - turbine switch off](#)



0 (zero) burning fuel

0 (zero) emission released

Specifications

Dimensions (approx.):

→ Length with standard broom	4,300 mm
→ Width	1,150 mm
→ Height	1,990 mm
→ Sweeping width with standard broom	2,300 mm
→ Turning circle	6,650 mm
→ Turning circle 'curb to curb'	6,050 mm

Weights:

→ Empty weight (incl. driver, without options)	~2,300 kg
→ Payload	1,200 kg / 1,500 kg
→ Gross vehicle weight	3,500 kg / 4,000 kg

Waste hopper (aluminum):

→ Volume	2.0 m³
→ Tipping height	1,450 mm
→ Emptying width	990 mm
→ Tipping angle	50°
→ The hopper has an integrated recirculating water-tank through special filter panels	

Water management system:

→ Clean water tank	190 l
→ Water recovery system in the waste hopper	400 l

Waste absorption:

- Suction mouth at full width between the brushes
- Impact protected with hydraulic activated large debris flap and heavy duty castor wheels
- High performance suction blower, tear resistant and self cleaning, with additional opening flap

Features:

- LED Lights
- Air Conditioning system
- Rear view and suction mouth cameras

Options:

- Articulated hand suction hose ø 125 mm
- 3rd front broom
- Automatic central lubrication system
- Spray gun with high pressure water pump

BATTERY	
Battery type	Li-ion
Capacity	54,4 kWh
Nominal voltage	96 V
Operating time	up to 10 h

CHARGING SYSTEM	
AC On-board	4.8 kW
Charging plug	Type 2
Optional fast charge DC	23.1 kW

PERFORMANCE	
Working speed	0 - 18 km/h
Driving speed	0 - 40 km/h
Electric drive with energy recovery	40 kW

ENVIRONMENTAL PERFORMANCE	
EUnited certification	PM2.5 /PM10 ****
Emission	0 (zero)
Noise level	Lwa 91 dB

Subject to technical modifications without prior notice. 01/2021



Equipment

A multi-functional work-tool, the Urban-Sweeper S2.0 offers a range of electrically driven summer and winter equipment.

Summer Equipment



3rd brush



Scrubber



Weed brush



High pressure water hand cleaner



Hand suction hose

Winter Equipment



Snowplow



Front broom



Roller spreader



Liquid de-icer

Care Plans

Lock in savings and peace of mind with prepaid scheduled maintenance. Our worldwide certified team is committed to providing the experience, equipment and care you expect. Let us care for you.

Warranty Plan	Maintenance Plan	Standard Plan	Premium Plan
	Extended wear-parts ²		Extended wear-parts ²
	Service & regular wear-parts	Service & regular wear-parts	Service & regular wear-parts
Spare-parts ¹		Spare-parts ¹	Spare-parts ¹
Helpline and remote support	Helpline and remote support	Helpline and remote support	Helpline and remote support

Included services:
→ Transportation of goods
→ Helpline & Remote support

Optional services³:
→ Vehicle inspection
→ Labor
→ 24/7 On call service

Care plan duration and pricing is offered individually based on vehicle, application and intensity. Roadside assistance is not included. Further clarifications: ¹ The Boschung guidelines regarding the product-handling and the General Terms & Conditions regarding warranty exclusion apply also for the care plans. ² Extended wear-parts include: All ground facing elements (i.e. wheels/tires, castors, plows, skids and brooms) and the suction hose. ³ Availability based on agreement with your local certified Boschung dealer.

Urban-Sweeper S2.0 trusted by



BSR, Berlin, Germany



Veolia and the City of London, United Kingdom



City of Graz, Austria



City of Chur, Switzerland

and many more!



Urban-Sweeper

Autonomous

A sweeper smarter than ever.
Proven performance, powered by Electric, the Urban-Sweeper S2.0 is now Autonomous.
Equipped with a combination of lidars, cameras, mm-waves radars and GNSS antennas, the Urban-Sweeper S2.0 Autonomous has a 360° coverage of its surrounding environment. The driver-less street sweeper can not only be used in closed areas, it can safely sweep the public streets with a level 5 certification. The low noise pollution of the electric sweepers enables a 24h use. The accurate and efficient recognition algorithm allows the sweeper to track all objects in sight simultaneously, leaving no chance to dirt.
Switch to manual mode and drive the Urban-Sweeper S2.0, at your own risks!

360° view

Rear, side and forward-facing cameras providing maximum visibility

Smart Sensors

Detects nearby objects, prevents potential collision, recognizes dirt

Easy modus switch

One simple switch from manual to autonomous and vice versa



Driver-less sweeping, the future of sweeping

Engineered to get the job done by itself, the Urban-Sweeper S2.0 Autonomous is a fully driver-less street sweeper designed to provide the sweeping experience of tomorrow.

- Autonomous wake-up
- Autonomous parking

The intelligent sweeper can be used in places and at times others can't.

Designed to provide enhanced safety

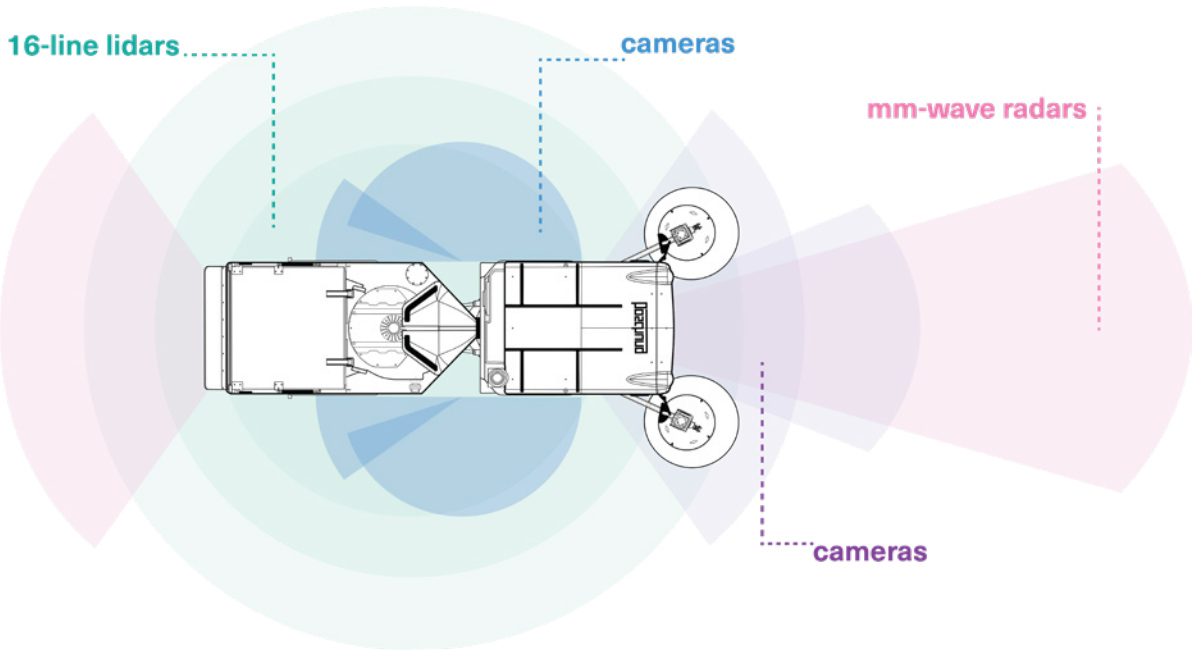
The intelligent sweeper is equipped with rear, side and front-facing multi-sensors providing a 360° view of the surroundings. Whether the sweeper is confronted to a human being, an animal or any moving and static object, the driver-less sweeper will detect and recognize the danger and act accordingly. Equipped with an emergency stop button on both sides, the sweeper can be switched off manually at any time.

The unmatched precision of artificial intelligence

Engineered to perform specific cleaning tasks, the autonomous street sweeper is programmed individually for each application. Its ingenuity allows it to follow the path with the utmost accuracy and cover the complete cleaning cycles before returning to its base.

An algorithm enabling the best cleaning

The accurate and efficient recognition algorithm engineered allows the sweeper to track all objects in sight simultaneously, leaving no chance to dirt.





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