



# 500ze

LIGHT  
QUIET  
POWERFUL  
DURABLE  
ELECTRIC

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**WELCOME TO THE WORLD OF GREEN MACHINES**

## **Where Innovation Beats Imitation**

Green Machines is among the oldest manufacturers of sweepers, dating back to 1965 and our first headquarters in Scotland. From the very first walk-behind sweepers with their exceptional maneuverability to state-of-the-art battery and hydrogen technology present in our sweepers, Green Machines has created a market which remains unrivaled to date. We currently operate from our offices in North Macedonia, the Netherlands, United Kingdom, Germany and USA, while we offer clients all around the world full support through our wide global dealership network. With our ambitious Green Machines vision, we plan to stay ahead of the game by bringing new product technologies to the highly demanding outdoor cleaning market.

For many years now, we have aimed to contribute decisively towards cleaner and tidier towns and cities by providing efficient and sophisticated sweeping machines. Our portfolio comprises 7 machine models and each one is unique in its own way. We offer you a wide range of choices by providing cleaning solutions that others have yet to catch up to. All of our machines are compact and swift enough to enable you to clean any urban area around the city with maximum efficiency, without worrying that they will disrupt your citizens. Our machines are purposefully designed in a way that does not impact the normal everyday functioning even of the busiest areas in your city.



## OUR MISSION: ZERO EMISSIONS

Green Machines realizes that the earth's environment is under severe stress from uncontrolled human activity, threatening the survival of our society and the performance of Green Machines' mission. We are dedicated to minimizing our own impact and maximizing the effective use of resources.

Green Machines strives to develop and produce sustainable sweeping machines combined with excellent performance for a better world. Our vision is often far from the traditional approach but we are proud to take leadership in paving the path to an emission-free world. Our vision focuses on minimizing global impact through the following guidelines:

- Help our customers reduce their carbon footprint through the use of our eco-friendly products.
- Maximize the "End of Life Environmental Value" of our products.
- Work with suppliers who promote sustainable practices.
- Participate in efforts to further improve sustainable protection and understanding among our staff and end-users across the globe.
- Listen to the voice of the customers.



KEEPS YOUR CITY **CLEAN AND GREEN**



## PORTFOLIO

We have over 55 years of manufacturing experience and we are constantly improving our products based on direct customer feedback and the ongoing changes and trends on the market. Our current product portfolio comprises some of the world's most technologically advanced sweepers, and each of our machines is so unique that it is basically impossible to compare them to one another. Every machine is designed in a way that meets specific needs and we are confident that we have a machine that will meet your specific needs.



### GM1ze

Fully electric, versatile, waste Vacuum Cleaner. Small manoeuvrable and Compact, ideal for any City Centre.



### GM200ze

100% electric two-wheel tool carrier with a universal attachment adaptor in the front. It can be anything you want; from sweeper to leaf blower, snow plough, etc. The list is endless. Use it all year round, no matter the weather.



### GM400ze/GM414

One of our latest environmental sweeper innovations, the 400ze is based on the world beating 400-series Sweeper. Compact, manoeuvrable, Operator friendly and now also Electric.



### GM500ze

This marathon machine is the world's first-ever fully electric sweeper and offers lasting performance with the latest generation of Li-ion batteries. It is small, swift, and eco-friendly with superb ergonomic design. The 500ze is one of the most popular zero emission sweepers in the world.



### GM500H2

The world's first-ever hydrogen fuel cell sweeper. It runs 100% on hydrogen with zero emissions, while providing the same comfort and cleaning efficiency the 500ze offers. It comes in two types: with replaceable H2 pods or with a fixed hydrogen tank system.



### GM636HS

Our dependable, hard working front line sweeper will remove debris from all surfaces and efficiently, it has a 1.5 m3 capacity, designed for maximum performance and minimum waste volume. With its sophisticated design details and ability to considerably reduce water consumption, the 636 cuts labor and maintenance costs.



### GM955

The 955 is a 6 m3 mechanical sweeper supported by vacuum. The powerful sweeping mechanism is able to collect even the largest debris, the powerful Vacuum will remove the smallest dust particles with the 955 you have the best of two worlds.



The Electric 500ze Green Machines Sweeper has already proved to be a invaluable asset to customers World Wide, Thanks to it's innovative design, Zero Emissions and Quiet Operation, the 500ze has been used to maximise the availability of clean electricity to carry out Cleaning in a variety of Applications in Cities and Towns. Along with Water saving Cloud Maker Technology and Unique Dust Control, the 500ze Continues to be a World Beater and best in class.

# 500ze Technical Specifications

## Dimensions

Length	3,330 mm
Width	1,200 mm
Height	1,980 mm
<b>500ze</b> GVW	2,325 kg
<b>500ze+</b> GVW	2,670 kg
Wheelbase	1,400 mm
Turning circle	
Curb to curb	2,750 mm
Wall to Wall	3,550 mm

## Sweeping system

Type	Sweeper
Working width: minimum (brushes retracted)	1,300 mm
Maximum (brushes extended completely)	1,900 mm

## Water system

Tank Capacity	121 L (31 US Gal)
Max system Pressure	8 bar (118 psi)
Cloudmaker Flow Rate	15 L/hr (3.95 US Gal)

## Pressure washer

Electro/Hydraulic driven high pressure piston pump	
Water Flow	9 L/min (2.32 US Gal)
Max Water Pressure	90 bar (1323 psi)

## Accessories and optional equipment



Air conditioning



Colour video camera for reversing



Radio/CD



Central lubrication



Pressure washer



Flexible hose

## Dust control system

Dust filtering	3 Stage Cyclonic Filtering
Stage 1:	Angled hopper swirl plates
Stage 2:	Stainless steel filter screen
Stage 3:	Twin cyclones
Dust control system	
CloudMaker®	Standard
Vacuum impeller	10 vanes made of steel alloy

## Drive system

Drive motor 12,5 kW (max.)	3 Phase AC traction motor
Rear wheel drive	
Suspension: front and rear	Automotive helical springs with shock absorber
Driving speed	up to 25 km/h
Sweeping speed	0 – 12 km/h

## Electrical drive system

Battery Type	Lithium Ion
Battery Charge time	Single Phase ; 3 Phase
Battery Endurance under normal working	
<b>500ze</b> single battery package	up to 8 h
<b>500ze+</b> double battery package	up to 16 h
Cell Capacity	400 Ah
Total Theoretical Storage <b>500ze</b>	29.5 kWh
Total Theoretical Storage <b>500ze+</b>	59 kWh

## Hopper

Capacity	1 m³
System Compaction Ratio	2:1
Clearance for tipping	1.4 m (55 in)





## SWEeper FEATURES



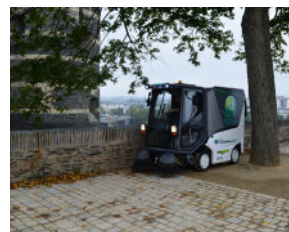
### Virtually silent in transit

Operate the 500ze with confidence in early morning or late at night and in noise sensitive areas such as parks, schools, hospitals, residential areas. In transit mode it is difficult to hear the 500ze over the gentle rustling of trees!



### Innovative power

The 500ze is powered by single or dual Lithium-ion battery packs. Its onboard management system intelligently monitors and balances energy levels to achieve maximum performance. Recharging can be completed in 4-8 hours, and the innovative design allows battery packs to be quickly exchanged if required.



### Reliable and low running costs

The power and efficiency of Lithium-ion technology make battery power supply as reliable as conventional fuel. The 500ze has real-time battery charge display, low battery alarm and intelligent charge monitoring.



### Versatile and compact

Innovative design providing a 0.75m<sup>3</sup> capacity hopper, a 1900mm sweeping path, a 2.05m turning circle, 2m clearance height, independent joystick-controlled brushes, no exhaust fumes and low vehicle weight means the 500ze can go almost anywhere.



# 100% ELECTRIC



## 500ze

The 500ze emits no carbon or exhaust emissions creating cleaner cities and cleaner air for pedestrians. The battery-powered street sweeper saves up to 78 tonnes of carbon dioxide over five years. This allows the 500ze to provide a vital step in assisting cities to meet their carbon emission targets.

# GM500ze

GREEN MACHINES



Enhanced safety thanks to panoramic view.

Improve productivity with one-touch intelligent switching between sweep and transit modes.

Two independently operated brushes enable efficient sweeping, even around obstacles. The brushes can be set to a cleaning track of 6,2ft/1.9 m for a maximum efficiency.

The advanced vehicle management system provides simplified operation and troubleshooting with built in monitoring, logging and diagnostics features. Ergonomic design cabin and control panel provide class-leading operator comfort.

Make routine maintenance and service quick and easy with complete access to all major systems.

The Maintenance free twin cyclones create a cyclonic action that filters out the smallest of dust particles, allowing the clean air to be discharged to atmosphere and the captured dust to be contained in the hopper.

Experience increased operator comfort and ride with 4 wheel automotive type suspension system.

Single or double Lithium-ion packs provide up to 9,6 hours of full sweeping performance.

EN 15329-2:2012

(500ze8.14hrs/500zePlus 16hrs)

Rely on the 500ze vacuum sweeper's durable, best-in-class construction to meet the toughest sweeping tasks.





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