



500H2



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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.



500H2

**The world's first
hydrogen fuel
cell sweeper**

The world's first hydrogen fuel cell sweeper, 100% powered by hydrogen. The fuel cell converts oxygen and hydrogen into electricity that powers the sweeper and the only by-product of its usage is clean water. The unique feature of this sweeper is that it enables you to switch to hydrogen even if you lack the hydrogen refueling infrastructure. It's got everything its predecessor 500ze has to offer, only with one big difference it runs on hydrogen! The best part? You can request an offer to swap the batteries in your 500ze with one of the two hydrogen options!

500H2 Technical Specifications

Dimensions - Work Mode (Brushes in)

Max Width-Work Mode (over brush plates)	1.1 m (44 in)
Width over Body	1.2 m (47 in)
Max Length (including brushes)	3.33 m (131 in)
Length over Body	2.76 m (109 in)
Max Height (excluding folding beacon)	1.98 m (78 in)
Wheel Base	1.38 m (54.3 in)
Minimum swept width	1.20 m (47.2 in)
Max swept width	1.80 m (72 in)
Brush Diameter	650 mm (25.5 in)

Dimensions - Work Mode (Brushes out)

Max Width (Brush tip to Brush tip)	1.9 m (74.8 in)
Max Length (including brushes)	3.33 m (131 in)
Max Height (excluding folding beacon)	1.98 m (78 in)
Wheel Base	1.38 m (54.3 in)
Max Hopper Dump (Unload) Height	1.4 m (55.1 in)

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

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



Suspension seat



Flexible hose

H2 Tanks

H2 capacity cartdridge	2 x 0,55 kg = 1,1 kg
H2 capacity fixed tank	2 x 2kg = 4 kg
Pressure cartridge	300 Bar
Pressure fixed tank	700 Bar

Endurance under normal working situation

Cartridge	3 hours
Fixed tank	11 hours

Hydraulics

Oil Specification	Bio-degradable OECD 70% HFDU68
Hydraulic Tank Operating Capacity	16 L (4.2 US Gal)

Capacity

Brush Motor – max speed	105 rpm
Auxiliary System Max Pressures	210 bar

Power Source

Power system	Fuel Cell
Fuel cell Type	PEM (Proton Exchange membrane)
Power	15 kW

Suction Fan Performance

Suction Fan – max RPM	2800 rpm
Maximum Flow	3600 m3/h (1m3/sec)
Pressure	33 bar

Hopper

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



SWEeper FEATURES



Environmentally Friendly

The GM 500H2 is our most environmentally friendly sweeper yet, using Hydrogen, the 500H2 is the ultimate in clean air sweeping!



Re-fuelling Options

The first option is a cartridge system with H2-PODS, this allows an exchangeable cylinder to be used, if there is not a Hydrogen filling station available. Second option using a fixed Hydrogen tank, this will allow the use of standard Hydrogen refueling stations.



Why Hydrogen

Hydrogen is the most abundant element on earth, Hydrogen is an alternative fuel that has very high energy content by weight, its clean and extremely environmentally friendly, the only by-product is clean water !



Commitment

The 500H2 gives even more options and flexibility to the customer, which will allow them to meet their environmental commitments locally and nationally.

100%

Eco Green



500H2

One of the unique aspects of the GM 500H2 is that it runs on Hydrogen, an energy carrier that is regarded as one of the most environmentally friendly fuels on Earth often referred to as Eco-friendly, Hydrogen will play a role in the de-carbonisation of our planet when produced from renewable resources such as wind and solar.

500H2

GREEN MACHINES



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.



Cartridge system
H2 Pod

Hydrogen Fixed Tank

Enhanced safety
thanks to panoramic view

Two independently operated
brushes enable efficient
sweeping, even around
obstacles.

The 500H2 comes with two re-fuelling options,
Option 1: Cartridge system with H2-PODS, this allows an exchangeable cylinder to be used, if there is no fixed Hydrogen tank refuelling available.
Option 2: A fixed Hydrogen tank, this allows the sweeper to be refilled from a standard refuelling source.





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