



# ROM AND VANGUARD DEVELOP THE WORLD'S FIRST ALL-ELECTRIC TOILET SERVICING MACHINE

## ABOUT THE CUSTOMER

For over 40 years, ROM bv has been the global leader in high-pressure and vacuum technology and a specialist in toilet servicing and sewer cleaning equipment. Part of the KOKS Group, ROM works with a network of more than 50 specialized partners in over 40 countries. Resistant to dirt and mud, and tough enough to work in the most demanding environments, ROM's machines include sewer cleaning trailers, toilet service installations for cleaning mobile toilets, high-pressure sewer machines built into vans, and inspection systems.

With a focus on new and innovative solutions, the development of the **ROM e-FLEXI 1100/750** was a natural step for ROM.

## THE CHALLENGE

Along with finding the right electrification partner, a societal drive towards corporate social responsibility and sustainable procurement meant the demand for the world's first all-electric toilet servicing machine would come into play. ROM wanted to offer its customers an eco-friendly solution that would reduce carbon footprints and support the positive move towards zero-emission zones.

The battery used to power the ROM e-FLEXI needed to meet the demands of extreme environments without compromising on power or run times. With all of this in mind, ROM identified Vanguard Commercial Power solutions as the right partner. Working together, the two companies selected the fixed 3.5kWh\* (Fi3.5) lithium-ion battery pack as standard, with integrated battery management and a safe charging system. For longer runtime requirements, the fixed 5kWh\* (Fi5.0) and 7kWh\* (Fi7.0) were chosen.

Erik van Walsum, R&D Manager at ROM bv comments, "Cities are increasingly establishing emission-free zones, where petrol, diesel and gas equipment is no longer permitted, and noise levels are constantly monitored. We wanted to develop a toilet-servicing machine that could answer all these considerations without compromising on performance or reliability. Thanks to the Vanguard™ lithium-ion batteries, the ROM e-FLEXI allows our customers to work as they always have, but quieter and without harmful emissions."

\* Total energy measured using a 0.2C discharge per IEC 61960-3:2017.



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Erik van Walsum  
R&D Manager at ROM



### DEVELOPMENT & TESTING

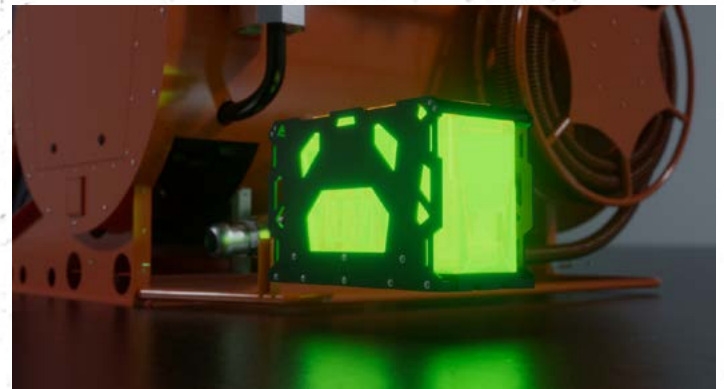
As part of the development process, ROM carried out extensive field tests with Boels Rental, one of Europe's largest equipment rental companies. As Nick Vaasen, Manager of Sanitation Services explains: "The all-electric solution for our toilet servicing machines fits seamlessly into our corporate sustainable strategy". Testing demonstrated that the ROM e-FLEXI is lighter and easier to use over traditional toilet servicing machines, with significantly lower energy consumption. Erik van Walsum, explains, "The Vanguard battery packs deliver a higher energy density, faster charging, and maintenance-free power, plus they can be charged through any normal 230V / 115V socket which makes them very user-friendly for our customers. Practical testing has proven that even after cleaning more than 40

cabins, the battery packs were still 25% full, offering excellent efficiencies and minimal downtime for users."

### THE POWER SOURCE SOLUTION

With rising fuel costs, electric cleaning offers ROM's customers a more cost-effective solution. Vanguard battery packs are designed for machinery where performance is key. They're able to operate in extreme conditions, are dust and water-resistant, can withstand being pressure-washed, and are easily serviceable. Featuring standard CANbus J1939 communication for easy integration with application networks (optionally CAN Open for potential integration with legacy systems), and independent paralleling that provides the ability to connect multiple battery packs effortlessly.

All battery packs contain an onboard Battery Management System (BMS) that protects the battery and adds safety for users. The pack's design supports passive propagation resistance – including wire bonding (individually fused cells), engineered air gaps between cells, and maintained distances between the top and bottom of modules.





Paul Bramhall, Director of Electrification/Rental at Briggs & Stratton said, “The ROM e-FLEXI 1100/750 is an excellent example of a powerful all-electric product that delivers important future-proofing benefits without compromising on delivery. Vanguard battery packs offer flexibility to customers in line with their power needs, with 3.5, 5 and 7 kWh battery pack options available. Machine users can maximize productivity while reducing total cost of ownership thanks to the lower maintenance costs.”

### **THE EQUIPMENT SOLUTION**

The ROM e-FLEXI machine is packed with advanced techniques. A strong 1100-liter vacuum tank and a spacious 750-liter clean water tank are onboard the truck while maintaining lightweight compactness. Controls are located at an ergonomic working height with everything immediately in reach. The unit also features space on each side for safe storage of machine components.

André van Brummen, International Sales Manager at ROM bv, concludes, “Since launching the ROM e-FLEXI during the EUROTOI trade fair, we have seen enormous interest, as many companies are actively seeking more sustainable solutions to future-proof their operations. As more locations and municipalities impose regulations around harmful

emissions, those cleaning companies who invest in electric machinery will be safeguarding their operations and the work area available to them. We are delighted to bring the first all-electric toilet servicing machine to market and to be supporting our customers with this solution.”

**For more information on the ROM e-FLEXI, visit**

**<https://rombv.com/en/product/rom-e-flexi-1100-750>**

**For more information on Vanguard power solutions visit**

**<https://www.vanguardpower.com>**

# CONTACT US NOW

**TO FIND OUT HOW VANGUARD CAN HELP  
YOU POWER YOUR EQUIPMENT**



Find out more about Vanguard on: [www.vanguardpower.com](http://www.vanguardpower.com)



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# VANGUARD

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