



DIGGING INTO BATTERY POWER

ELGO-PLUS partners with Briggs & Stratton to power high performance electric mini-digger with Vanguard™ fixed commercial battery packs

Located in Poland, ELGO-PLUS specializes in the eco-friendly and innovative development of construction machinery and multipurpose tracked undercarriages. The company focuses on integrating advanced technologies that meet modern ecological and industrial challenges with products like electric mini-diggers and demolition robots.

ELGO-PLUS was looking to develop a reliable, compact battery-powered digger capable of high performance in confined spaces. The machine needed to be fast charging and compliant with the increasing demand for low carbon and noise emission machinery for urban construction projects. It was also a priority for the company

that the selected power solution would provide clear communication on its state of charge (SOC) to maximize operational efficiencies.

Building on their trusted relationship, the ELGO-PLUS team selected a commercial battery pack from Vanguard, Briggs & Stratton's commercial power solutions brand. As part of the decision-making process, ELGO-PLUS established that Vanguard's high standards met with the performance and durability requirements of the mini-digger under development. In particular, the battery packs provided a compact solution with optimal power density for weight-to-stored energy ratio, fast-charging capabilities including support for third party chargers, and enhanced precision

SOC monitoring. In addition, the worldwide service support and short lead times made the decision to work with Briggs & Stratton's commercial brand Vanguard an easy one.

ELGO-PLUS chose to power its Springer Max-EB electric mini-digger with two Vanguard 48V 7.0kWh fixed battery packs (Fi7.0) to ensure a continuous runtime of up to 5 hours, reducing downtime and increasing productivity. Each battery pack features compact dimensions and a streamlined charging process achieving full charge in just 4 hours using standard 230V Vanguard chargers. Using a third party 400V charger, this charging speed can be increased. The Vanguard Fi7.0 battery packs also offer enhanced operator safety and comfort thanks to their quiet operation and zero emissions.

During development of the mini-digger, only minimal adjustments were needed to optimize the

hydraulic system for electric operation and ensure smooth power delivery across all components. Briggs & Stratton provided technical support during the prototype design stages and their Power Application Center (PAC) testing to identify the right batteries in terms of power and capacity. Tests simply confirmed the selection of the Vanguard 48V 7.0kWh fixed battery packs.

The resulting Springer Max-EB electric mini-digger is designed to maximize efficiency on construction sites and optimized for continuous operation. It enables efficient excavation, lifting, and digging tasks in both confined urban areas and open construction sites, and can even work remotely in areas unsafe for direct operator control. Thanks to its Vanguard battery powered operation, the Springer Max-EB ensures compliance with environmental regulations, making it suitable for emission-sensitive zones.



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**OUR VANGUARD 48V
7.0KWH COMMERCIAL FIXED
BATTERY PACKS PROVIDED
AN IDEAL SOLUTION THANKS
TO THE **COMPACT DESIGN,
POWER DENSITY AND
LENGTHY CONTINUOUS
RUNTIME.****

Tomas Mika
Manager Regional Sales
Briggs & Stratton

In terms of benefits, the battery-powered Springer Max-EB has seen five times fewer service intervals* compared to combustion engines, thereby reducing maintenance costs, downtime and running costs. The machine delivers enhanced mobility and performance in confined and emission-sensitive areas, reducing delays and improving task execution. It is suitable for indoor operation, as it produces no exhaust emissions and has improved safety through massive noise reduction and enabling operators to communicate more efficiently on-site. The Springer Max-EB's extended runtime, rapid recharging, and precise energy monitoring have increased project efficiency and operator effectiveness.

Tomas Mika, Manager Regional Sales for Central Eastern Europe & Balkans at Briggs & Stratton, says: "Given the requirements for the Springer



48V 7.0KWH* COMMERCIAL BATTERY FIXED BATTERY - F17.0

Powerful, efficient and safe: This fixed battery pack is designed to blend seamlessly into any equipment setup.

- **Expandable:** Packs can be combined in parallel for additional capacity.
- **Durable:** Multiple protective features tested to withstand harsh conditions, including extreme temperatures, impact, vibration, moisture and dirt.
- **Increased Uptime:** Up to 2000-cycle life to 80% initial capacity.

NOMINAL VOLTAGE (V):	51.7
NOMINAL CAPACITY** (Ah):	135.9
NOMINAL DISCHARGE CURRENT (A):	134
CHARGE TIME WITH 1050W / 1425W / 3000W CHARGER*** (H):	8 / 6 / 3
PACK WEIGHT (KG / LBS):	46.3 / 102

* Total energy measured using a 0,2C discharge per IEC 61960-3:2017.
** PER IEC61960
*** Based on nominal temperatures, charge will vary at the extremes.

* From 200 down to 1000 hours for hydraulic oil changes

Max-EB electric mini-digger, our Vanguard 48V 7.0kWh commercial fixed battery packs provided an ideal solution thanks to the compact design, power density and lengthy continuous runtime. As ELGO-PLUS continues to develop its range of sustainable construction machinery we look forward to an ongoing partnership powered by Vanguard battery system solutions.”

Andrzej Zielinski, CEO at ELGO PLUS says:
“Having already worked with Briggs & Stratton for more than three years, we had confidence in choosing their Vanguard batteries to power our electric mini-digger. The Vanguard Fi7.0 batteries answered every requirement and have delivered excellent results in terms of productivity and performance. Given that the extension of our sustainable product range is a key business focus, we see Briggs & Stratton and their commercial brand Vanguard as our trusted partner providing a reliable and versatile power solution that doesn’t compromise on performance.”

The fact that Vanguard lithium-ion batteries come with an 8-year warranty as standard adds an extra advantage, making the decision to use Vanguard power solutions an easy one—not just for ELGO-PLUS.

Alongside the Springer Max-EB, ELGO-PLUS has successfully integrated the Vanguard® 200 and Vanguard® 400 single-cylinder engines into the production of its mini-diggers. These petrol-powered machines remain a key part of the company’s portfolio, demonstrating the versatility and reliability of Vanguard engines. Moving forward the two companies plan to continue their successful partnership. Striving to meet the growing demand for sustainable and efficient solutions in construction, ELGO-PLUS is actively exploring opportunities to expand its range of equipment powered by Vanguard™ battery packs.

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**THE VANGUARD Fi7.0
BATTERIES ANSWERED
EVERY REQUIREMENT AND
HAVE DELIVERED EXCELLENT
RESULTS IN TERMS OF
PRODUCTIVITY AND
PERFORMANCE.**

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Andrzej Zielinski
CEO, ELGO PLUS



CONTACT US NOW

TO FIND OUT HOW VANGUARD CAN HELP YOU POWER YOUR EQUIPMENT



Find out more about Vanguard on: www.vanguardpower.com



For more news and updates, follow us on LinkedIn:

www.linkedin.com/company/vanguard-commercial-power/

ABOUT BRIGGS & STRATTON | VANGUARD

Briggs & Stratton, headquartered in Milwaukee, Wisconsin, provides innovative products and diverse power solutions to help people get work done. Briggs & Stratton is the world's largest producer of engines for lawn and garden, turf care and job site power equipment and is a leading designer, manufacturer and marketer of lithium-ion batteries, standby generators and energy storage systems through its Briggs & Stratton®, Vanguard®, Ferris®, Simplicity®, Snapper®, Billy Goat®, Allmand®, Branco® and Victa® brands. Briggs & Stratton products are designed, manufactured, marketed and serviced in over 100 countries on six continents.

Vanguard helps professionals to get their work done by applying power to their unique commercial applications. For more than 35 years, Vanguard has partnered with customers to conquer challenges and develop innovative products. As Vanguard doesn't simply provide components, it supports customers in applying commercial lithium-ion and petrol power throughout the entire integration process, from development to serial production to after sales and training support. www.vanguardpower.com

ABOUT ELGO-PLUS

ELGO-PLUS combines engineering excellence and sustainability, offering cutting-edge solutions like electric mini diggers and demolition robots to meet modern ecological and industrial challenges.

elgoplus.com

<https://elgoplus.pl/>

VANGUARD

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