

VANGUARD



VANGUARD AND ARGO TEAM UP to create a battery-powered autonomous vehicle

When ARGO says their vehicles “**Go Anywhere**,” they mean *anywhere*. ARGO products can swim across water, power through the mud, drive over logs, and traverse the terrain in challenging environments where other four-wheel ATVs cannot go. That’s why ARGO vehicles have been the standard for recreational vehicles.

EXTREME POWER FOR AN EXTREME VEHICLE

ARGO’s autonomous vehicle is poised to change the future of work in many different off-road commercial applications.

“We’re taking the same competencies we’ve built up over time and applying those to unmanned robotic platforms. We can get an ARGO unit anywhere people need it to go, just without the people,” says Andy Buck, Director of Commercial and Robotics Sales, ARGO.

That means taking the dull, dirty and downright dangerous jobs out of people’s hands and passing them on to an autonomous vehicle. Buck says, “If we can provide a robot that can get anywhere someone might need it — whether that’s bringing supplies to military troops in challenging, hostile battlefields or resupplying equipment to people working in dangerous commercial applications — we’re taking people out of a treacherous situation.”

Until recently, every ARGO unit used gasoline engine power. During development of the new robotic product, the ARGO team saw an opportunity to increase safety by using battery power. When choosing a power solution,

ARGO placed an emphasis on reliable performance, customer value and the manufacturer’s reputation in the marketplace.

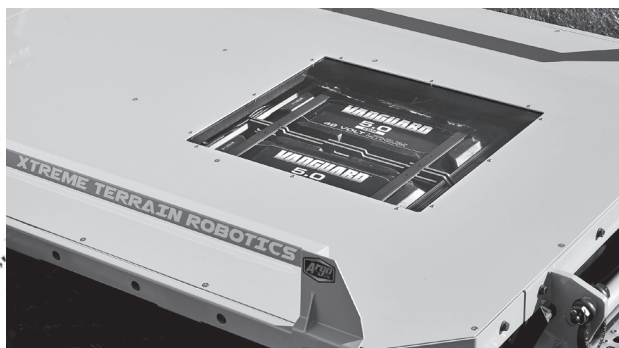
ARGO had a laundry list of power needs: durability under duress, serviceability for ease of maintenance, integrated components for seamless performance, and increased safety. And finally, whatever powers an ARGO unit has to go anywhere the vehicle can go — including water.

The ARGO team determined Vanguard was the most solid option for providing a [lithium-ion battery solution](#) that could stand up to the rigorous environments in which its vehicles operate. The fact that the team members enjoyed a great experience working with Vanguard to power ARGO units with Vanguard® commercial engines also influenced their decision.

VANGUARD GOES ABOVE AND BEYOND SO ARGO CAN GO ANYWHERE

A product breakthrough of this magnitude demanded a first-of-its-kind battery solution. Vanguard worked closely with the ARGO team to develop and integrate the [Vanguard Commercial Lithium-Ion Battery Pack](#) into the ARGO robotic vehicle.

It can provide scalable power from 5 kWh to 20 kWh (crucial in the limited space available on the ARGO J8 autonomous unit), can withstand the vibration and impact of rugged environments and is dust-, dirt- and water-resistant. Plus, the battery can be serviced and repaired under a singular part number instead of recycled and replaced, as is the current industry standard.



The battery also incorporates diagnostic tools that have proven handy for ARGO's global operations. "In the past, if we had a unit halfway around the world with a maintenance need, we couldn't do much," says Buck. "With the diagnostic capabilities on this battery, we can easily advise on a solution regardless of location — which is key."

The battery features internal contactors, which means that when the vehicle is off, the battery is off. "That's fairly unique on a battery, but it's a critical component for our customer's safety," says Buck. "When maintenance needs to be performed, having the ability to completely shut off all the power within the system is a crucial feature."



A UNIQUE SOLUTION

The Vanguard Commercial Lithium-Ion Battery Pack is the first total battery solution to be introduced to the market. "It's absolutely a unique power solution," says Dave Schulenberg, Product Manager, Alternative Power

at Briggs & Stratton. "The customized commercial lithium-ion battery pack and charger work seamlessly together to provide powerful performance, packaged in a sealed plastic enclosure and wrapped in a roll cage for extreme durability."

After it was put to the test on the ARGO J8, the Vanguard battery got a seal of approval from ARGO. "Our vehicles go into some pretty extreme environments, and everything needs to be built to the same rugged level. The Vanguard battery absolutely meets that standard while delivering the power our units need," says Buck. "There are a lot of companies in the world making lithium-ion batteries, but there aren't many that take it to the professional level of Vanguard."



THERE ARE A LOT OF COMPANIES IN THE WORLD MAKING LITHIUM-ION BATTERIES, BUT THERE AREN'T MANY THAT TAKE IT TO THE PROFESSIONAL LEVEL OF VANGUARD.

Andy Buck
Director of Commercial and Robotics Sales
ARGO



SUPPORT NOW, AND YEARS FROM NOW

The ARGO team cites Vanguard's level of service and support during the product application process as key to the success of their new vehicle. One huge differentiator — the vehicle's performance was tested to the limit, fine-tuned and customized at one of Vanguard's Power Application Centers. Over time, the team also finds value in having the weight of the Briggs & Stratton brand behind their product. The Vanguard Commercial Lithium-Ion Battery Pack will be supported wherever in the world the ARGO robotic vehicle works. This commitment to ARGO's end customer as well as to the team at ARGO is proof of how much Vanguard puts into every power solution — and every relationship.

VANGUARD®