



**Clean,
Quiet,
Power.™**



VAN AIR®
MOBILE POWER SOLUTIONS®

The End-to-End Electrification Solution



What is **EPEQ**

Electrified Power Equipment.

EPEQ® is a comprehensive, end-to-end, patent pending system, of zero emission and quiet Electrified Power Equipment® products. Powered by Vanair's EPEQ® Smart Controller, which communicates with a specifically developed line of ELiMENT™ Lithium Iron Phosphate (LiFePO4) batteries, EPEQ® allows you to turn off the vehicle's engine and still run the equipment you need on the jobsite. EPEQ® is a fully self-contained and independent system that can be mounted on, or within, combustion engine vehicles, electric vehicles, or even on trailers.

Why Choose the EPEQ® Solution?

Clean, Quiet, Power™ • Reduced Emissions & Idling • Lowest Cost of Ownership Faster Resolutions • Data Driven Benefits • Operational Efficiency

Who Should Use EPEQ®?

The EPEQ® series for clean, quiet, Mobile Power Solutions® is perfect for: all fleet industries, road construction, heavy moving equipment; mining, municipalities, oil and gas, HVAC, fire/rescue, marine, RV/recreation, crane/lifting, and light commercial service vehicles. Ideal for applications such as air, electrical, fluid transfer, charging, and welding.

To make your fleet electrification journey easy, Vanair® is Powering Fleet Electrification™ by offering a complete green technology system with ready-to-go kits.

- **Light Duty/Service and Maintenance Kit** - (1) ELiMENT™ Battery, (1) EPEQ® AIR20, (1) EPEQ® INVERTER3000, and (1) EPEQ® Shore Power Charger with options for (1) EPEQ® DC-DC Converter and (1) 14 or 20-gallon reservoir tank
- **Medium Duty Service Vehicle Kit** - (2) ELiMENT™ Batteries, (1) EPEQ® AIR45, (1) EPEQ® Shore Power Charger, (1) EPEQ® INVERTER3000, and (1) EPEQ® WELDER140 with an option for (1) EPEQ® DC-DC Converter
- **Roadside Vehicle Assistance Kit** - (2) ELiMENT™ Batteries, (1) EPEQ® AIR20, (1) EPEQ® EV Charger, (1) EPEQ® INVERTER3000, (2) EPEQ® INVERTER5000, (1) EPEQ® DC-DC Converter, (1) EPEQ® Shore Power Charger, and (1) 5000A Start•All Jump•Pack®
- **Field Service and Crane Operation Kit** - (2) ELiMENT™ Batteries, (1) EPEQ® AIR45, (1) EPEQ® DC-DC Converter, (1) EPEQ® Shore Power Charger, (1) EPEQ® INVERTER3000, and (1) EPEQ® EPTO



ELiMENT™ LiFePO4 Battery – (Lithium Iron Phosphate)

The ELiMENT™ LiFePO4 Battery is the “heart” and power of the EPEQ® system. Why did we choose this type of battery?



STABLE TECHNOLOGY – Lithium Iron Phosphate (LiFePO4) batteries are chemically very stable making them amongst the safest battery technologies available on the market. They are inherently non-combustible and will not overheat. Even if punctured, they will not catch on fire. The ELiMENT™ batteries are nontoxic and don't give off dangerous or hazardous fumes making them safe to use and safe for the environment. Each ELiMENT™ Battery comes with its own Battery Management System (BMS) which protects against over current, over/under voltage, and over temperature by monitoring the state of the battery cells.

PERFORMANCE – ELiMENT™ Batteries have high energy density which means great improvement in capacity, weight, and shelf life over AGM and standard lithium-ion batteries. LiFePO4 batteries are long lasting and provide full amperage output even at 10% remaining battery life. The ELiMENT™ Battery can discharge all the necessary power while utilizing power from a charger simultaneously.

COST EFFECTIVE – The ELiMENT™ Battery can be fully cycled at least 5000 times, compared to lead acid which only has 300-400 cycles. The life cycle of the ELiMENT™ Battery is an impressive 5-7 years which is far more than lead acid. ELiMENT™ fully charges in 1.5 hours, far faster than other batteries, and requires zero maintenance. This combination of long life, fast charge, slow discharge, and maintenance free, means you'll experience minimal downtime and maximum productivity, saving you time and money.

CONVENIENCE – The ELiMENT™ Battery is designed to fit in compact spaces such as tool cabinets, van shelving units, and service body side-packs. They are easily mounted and include quick connect plugs for ease of installation and relocation. A free EPEQ® BMS App for Android® and iOS® devices is available to review state of battery condition and assist in diagnostics.

EPEQ® System Smart Controller

The EPEQ® system is controlled by a smart display which has proprietary software designed to intelligently monitor and control all EPEQ® system components. Each component can communicate to the display allowing the user to make priority decisions to manage the load applied to the battery. The loads allowed to draw on the battery can be adjusted based on various factors such as: temperature, heat build-up, duty cycle, assigned function priorities, and power remaining.



Air Compressors

EPEQ® Air Compressors are driven by highly tuned specialized permanent magnet AC (PMAC) electric motors for increased efficiency to prolong battery range. The EPEQ® AIR20 and AIR45 compressors communicate with the EPEQ® System Smart Controller and are designed to provide optimal performance.



EPEQ® AIR20

20 CFM @ 150 PSI

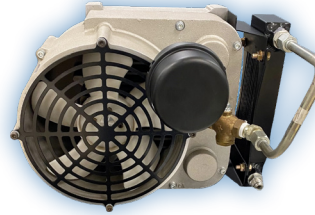
Reciprocating compressor
ideal for intermittent
air use



EPEQ® AIR45

20-45 CFM @ 150 PSI

Rotary screw compressor
ideal for air on demand
applications



EPEQ® AIR15 Scroll Compressor

15 CFM @ 100-120 PSI

Oil-free air compressor ideal for
EV or hybrid vehicle air brakes



EPEQ® AIR5

4-5 CFM @ 125 PSI

Cast iron, oil-free
compressor ideal for
intermittent air use with
small air tools

Underdeck Electric Driven Compressor



The Vanair® EPEQ® PTO underdeck system gives you all the features, benefits, and quality in the latest Vanair® underdeck compressors, but is now operated via the ELiMENT™ Battery pack. The self-contained 400V ELiMENT™ Battery allows you to operate the 185 CFM (dual pressure) underdeck compressor on any vehicle and can be mounted in any configuration. As with all EPEQ® components, the EPEQ® PTO underdeck system includes communications for ease of operation and installation. Additionally, patent and patent pending features of our standard underdecks, include: the FailSafe™ Dual Sensory Redundancy System, ThermalGuard® Weather Protection Kit, UltraLife® Air/Oil Separator Element, V-TEC® II Control System, and our Optical Oil Level Sensor. A patent-pending XERO™ receiver tank design provides zero blow down time, for immediate compressor disengagement/reengagement, and allows for complete out-of-level operation to conserve energy. Now you can take advantage of 185 CFM airflow on an electric vehicle, without losing crucial EV mileage range.

Abovedeck Electric Driven Compressor

The Abovedeck Electric Driven system has all the same features as our EPEQ® PTO underdeck system, that utilizes a 400V ELiMENT™ Battery, in a modular design for flexible mounting configurations. Vanair® didn't just simply mount a compressor to an electric motor – these compressor/permanent magnet AC (PMAC) electric motor configurations are tested for optimal performance with our ELiMENT™ Battery.



EPEQ® ABOVEDECK160

160 CFM @ 150 PSI Compressor

EPEQ® IM



EPEQ® IM automatically stops and starts your vehicle's engine while continually operating the vehicle's HVAC and accessories. The idle management system is the ideal economical solution for fleets with demanding electrical needs as well as for simple idle reduction for fuel and maintenance savings. EPEQ® IM allows the user to operate combustion engine vehicles, while reducing carbon emissions. A great option for those looking to save on fuel, cut engine maintenance, and reduce chassis workload.

AC Power Inverters

The EPEQ® 48V AC Power Inverter lineup includes four Pure Sine Wave inverters to fit any need. The EPEQ® INVERTER3000 provides both a high frequency 120V or a low frequency 120VAC/240VAC, while the high frequency INVERTER5000 provides 240VAC. Both inverters communicate with the EPEQ® System Smart Controller for simple, efficient use, and installation. The uniqueness of the EPEQ® 5kW inverter is that it is stackable to achieve 10kW, 240VAC power. The low frequency EPEQ® INVERTER6000 provides 120VAC/240VAC power with 300% surge output.



EPEQ® INVERTER6000
48V, 120VAC/240VAC, 6kW
Low Frequency



EPEQ® INVERTER3000
48V, 120VAC/240VAC, 3kW
Low Frequency



EPEQ® INVERTER3000
48V, 120VAC, 3kW



EPEQ® INVERTER5000
48V, 240VAC, 5kW
(stackable)

EPEQ® EPTO

Now, you can power your hydraulic crane, boom truck, and other hydraulic operated components using our EPEQ® EPTO power system and ELiMENT™ Batteries. This new way to operate hydraulic components is the best fit for electric vehicles and vehicles that do not have a traditional power take off (PTO) setup, or in instances when you want to power hydraulics with the vehicle off. The EPEQ® EPTO operates like a traditional PTO/pump setup, meaning there's no need for a full re-engineering of your hydraulic equipment.



EV Charging

The level 2, EPEQ® EV Charger is your gateway to unparalleled convenience and flexibility for electric vehicle charging. Whether you're at home, at work, or on the move, this charger is designed to elevate your charging abilities. Engineered with a NEMA 14-50P plug, our portable charger boasts high compatibility, ensuring it's the perfect fit for a wide array of electric vehicles and plug-in hybrids adhering to the J1772 standard. The charger's dual-purpose design and extra-long, 25' cable is also rated IP66 waterproof and dustproof, and is built to withstand extreme temperatures.



Level 2 Charging
Available

Welder

The Vanair® EPEQ® 140A Welder combines the flexibility of lithium-powered welding with Vanair's long history of providing top-level welding capabilities. The ability to carry the entire welder and cables (34 lbs. total weight) right next to the equipment being worked on, makes the EPEQ® Welder extremely user-friendly for those fast repair jobs.



EPEQ® WELDER140
CC Stick Welding,
140A Option

DC-DC Converters for Auxiliary Power

Provides power when the vehicle is off for emergency lighting.



EPEQ® DC-DC CONVERTER
48V to 12V, 60A

Charging Methods

The EPEQ® system operates at 48V rather than the standard 12V vehicle charge system, a 48V power source, or a converter, must be used to transform from 12V to 48V power or you can use shore power.

Shore Power



Shore Power
120VAC

DC-DC Converters (charging)

12V input to 48V output to charge the ELiMENT™ Battery, available in both 20A output. Recharges the battery back while driving.



EPEQ® DC-DC CONVERTER
12V to 48V, 20A

Alternator and Regulator

The EPEQ® Alternator and Regulator is the perfect addition to charge your ELiMENT™ Battery under hood within 1-2 hours. By adding the EPEQ® alternator, your EPEQ® system stays charged with no user interaction. The EPEQ® Alternator and Regulator communicates with the EPEQ® System Smart Controller and automatically adjusts power output based on needs. This ensures long battery life, safe operation, and optimal performance.



**Alternator and
Regulator**



Our Mobile Power Solutions® are Growing.



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PATENT PENDING