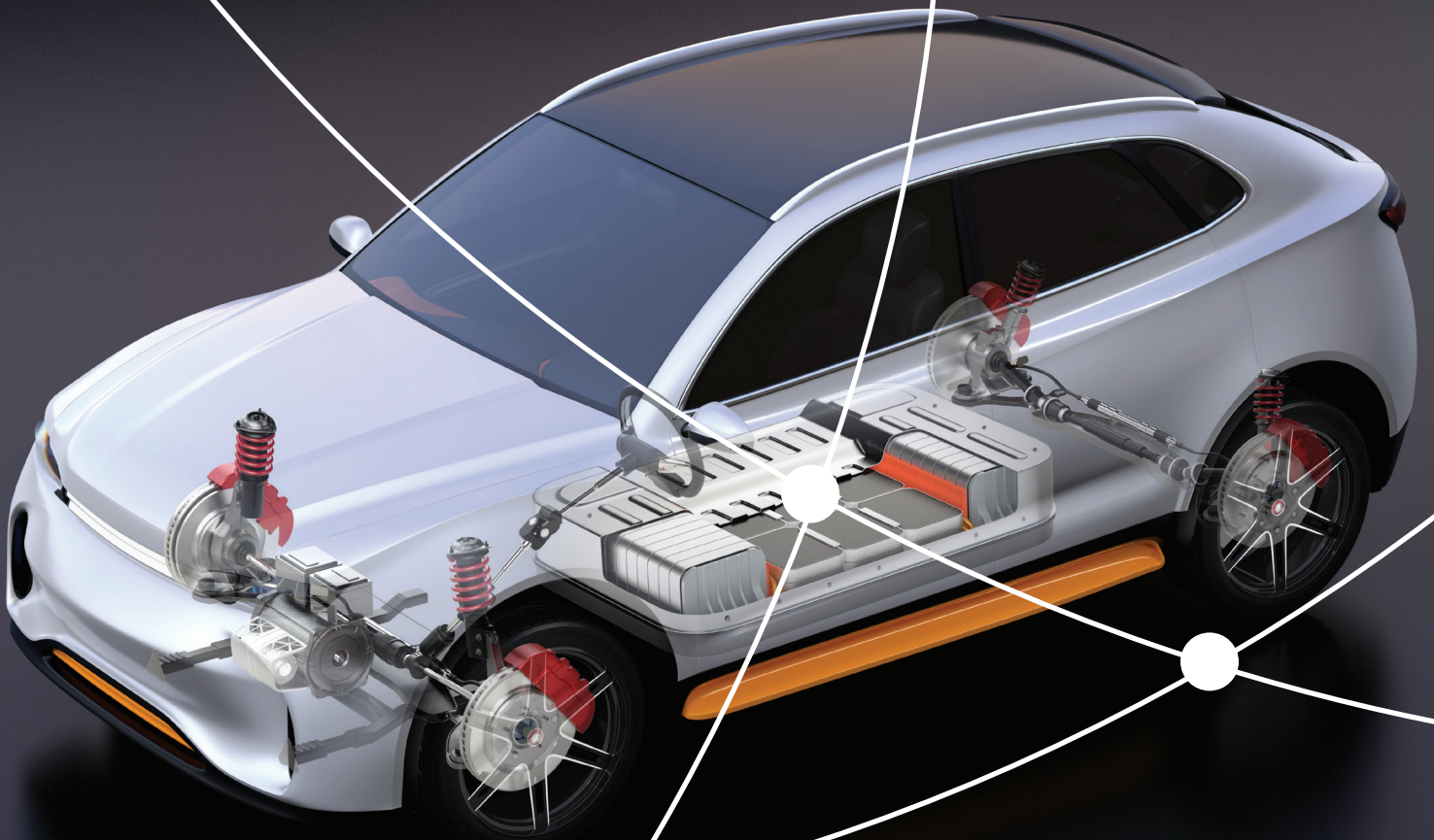
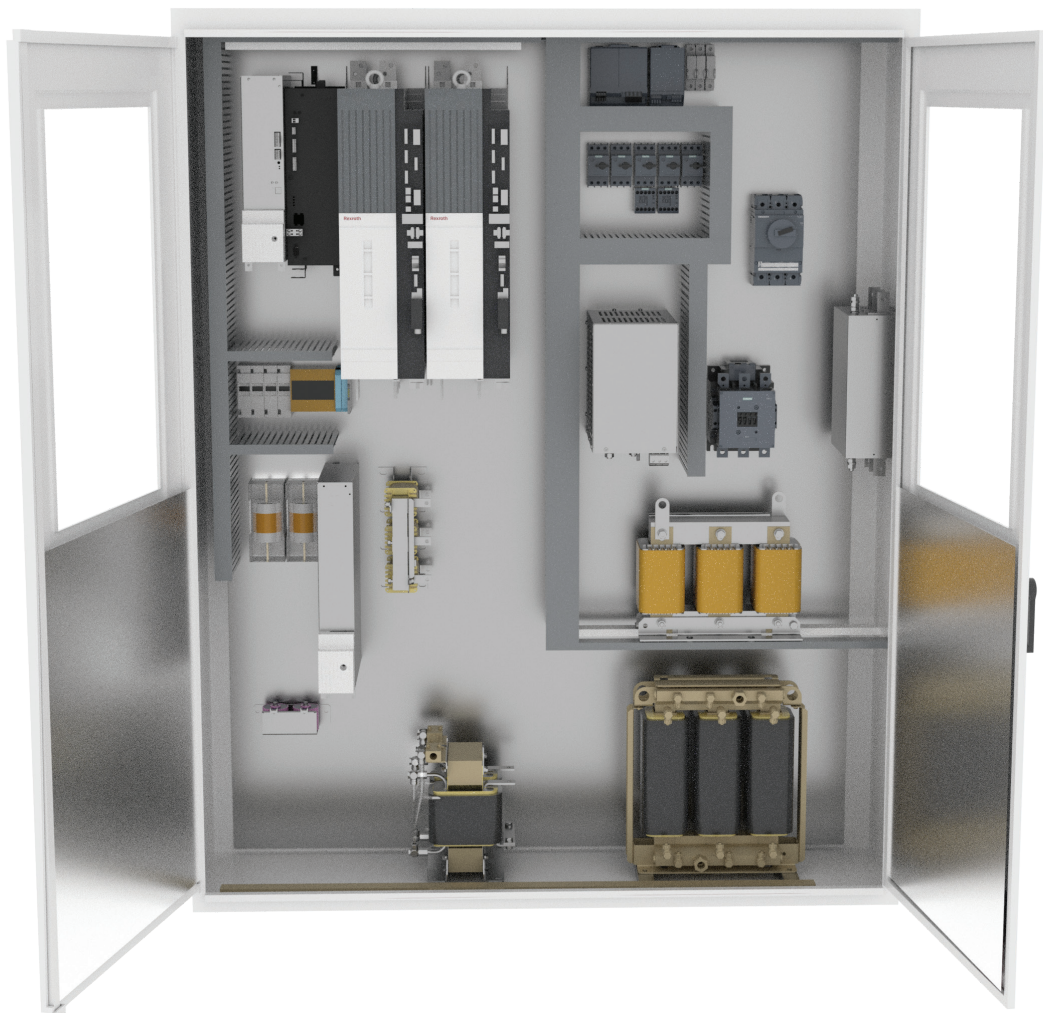


Battery Cycling DC Testing Solution



Battery Cycling—DC Testing Solution

As the electric vehicle industry grows, so does the demand for a more efficient and reliable production process. Manufacturers desire production-ready, end-of-line testing equipment, and research and development test equipment. The Battery Cycling—DC Testing Solution provides clean DC voltage and highly dynamic current with a modular, future-proof design for your evolving testing needs. This custom solution utilizes industry-leading components from Bosch Rexroth to provide accurate DC voltage and current.



Modular Platform and Open Core Engineering

The modular platform and open-core engineering enable quick adaptation to changing application requirements, providing future cost savings. The Battery Cycling—DC Testing Solution is flexible in its configuration, allowing communication to any testing equipment. It can also supply multiple battery cyclers, simulators, and motor inverters by simply changing the power supply and adding inverters, which provides maximum flexibility while reducing spare parts and the power required overall, all leading to additional cost savings.

SERCOS
the automation bus

Ether**CAT**

Ether**Net/IP**

i4.0
CONNECTED
INDUSTRY

**OPEN CORE
ENGINEERING**

CANopen

**PROFI
NET**

**PROFI
BUS**

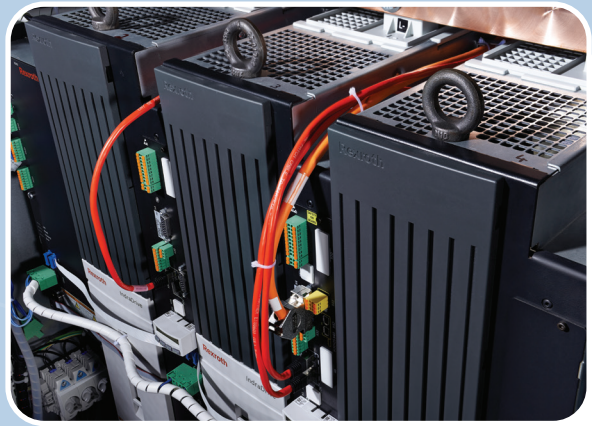
**SAFETY
ON
BOARD**

**PLCopen
motion
control**

Turnkey Solution from Evolution Motion Solutions

Evolution's turnkey solution includes an intelligent cooling system and an isolation transformer. We offer several approved models according to CE and UL/CSA standards. Our panels undergo a hot test before shipment to ensure they meet our high quality and performance standards. We also provide expert startup assistance and communications testing to ensure a smooth integration process.





Key Features and Benefits

Best-in-Class DC Converter Voltage and Current Accuracy

Superior DC voltage control and DC regulation is made possible by Bosch Rexroth's innovative ML drive technology in a custom package to fit your application. The Battery Cycling—DC Testing Solution is a high-power density solution thanks to efficient cooling and high-quality filter components. High PWM frequency is standard in all standard sizes.

- Laminated bus bar technology keeps inductance extremely low
- Wide Voltage Range: 380-500 V AC = 780V DC; 501-690 V AC = 1100V DC
- Voltage ripple $< \pm 0.03\%$
- Control Accuracy: Voltage - $< \pm 0.05\%$; Current - $< \pm 0.44\%$
- Current ripple $< \pm 0.32$ Arms

High-Quality Components and Construction Provide Exceptional Performance

The Battery Cycling—DC Testing Solution is an economical solution for simple, maximized performance for high-end servo applications. The innovative Bosch Rexroth components provide clean incoming power and superior DC bus voltage for common bussing of all axis. Choosing between basic and advanced control units enables scalable performance and interface options.



- Reduced electrical noise thanks to high-quality windings
- Incredibly low EMC noise throughout the system
- Compact and thoughtful layout to optimize space and further reduce EMC noise
- Intelligent drive functions

Compact and Powerful Solution

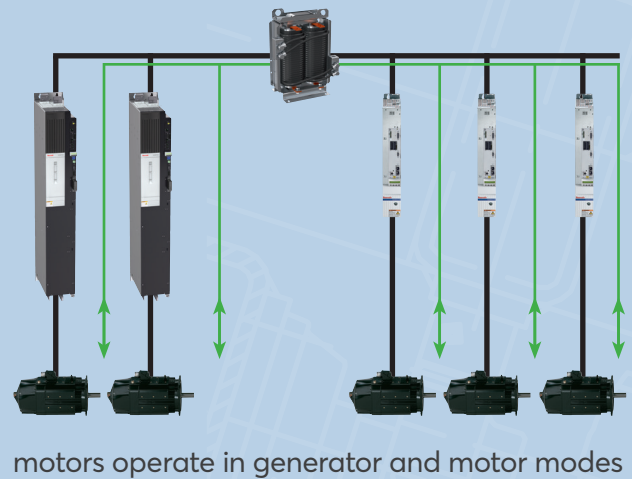
The Battery Cycling—DC Testing Solution is the smallest high-power drive package on the market, yet it is flexible and powerful enough to support an individual or multiple stations. The intelligently designed components are naturally smaller, and users can further decrease their size with our innovative cooling concepts. This testing solution can also support parallel power stacks, reducing components required on the production floor.

- Supports a wide voltage range: 380 - 500 V AC and 501 - 690 V AC
- Cover a broad range of power supply needs up to 4 MW with standard components
- Easily configurable for any application using standard industrial components
- Decreased size with optional liquid cooling for drives and chokes (air cooling also available)
- Universal inverter type used as a motor inverter, power supply, or DC converter

System Designed for Energy Savings

DC-Bus Coupling

- Common DC bus for multiple axis coupling or the coupling of automation axis around a test system
- Energy exchange of drives, which operates in generator and motor modes
- Decreased size of the mains connection components, saving critical factory floor space
- Reduce energy consumption
- Connection with smaller drives possible

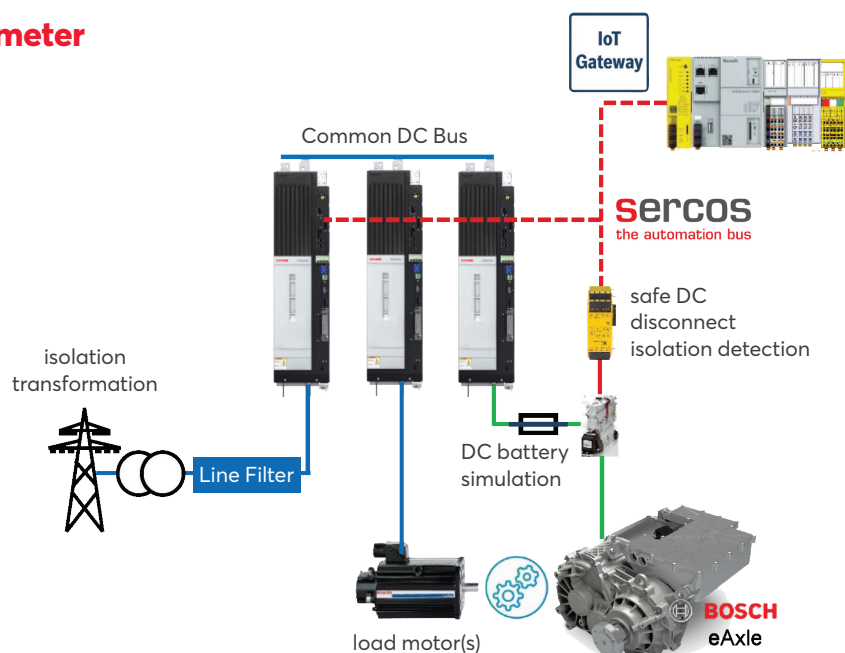


4EE
ENERGY
EFFICIENCY

System Topology

EV Powertrain Tester and Dynamometer

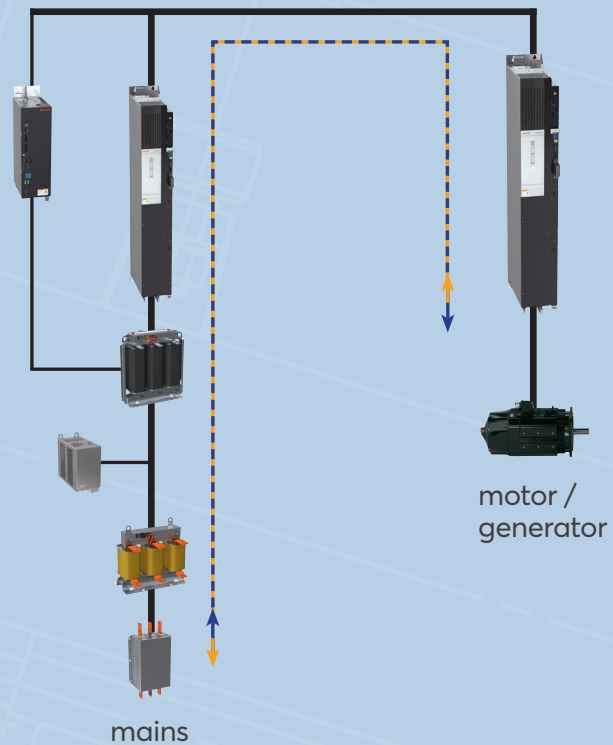
- Green power supply
- High dynamic drive
- Clean DC supply
- Modular power conversion
- Global AC grid supply
- High-performance load and battery simulation
- Open standard control
- Safe operation



Energy Recovery Back to the Mains

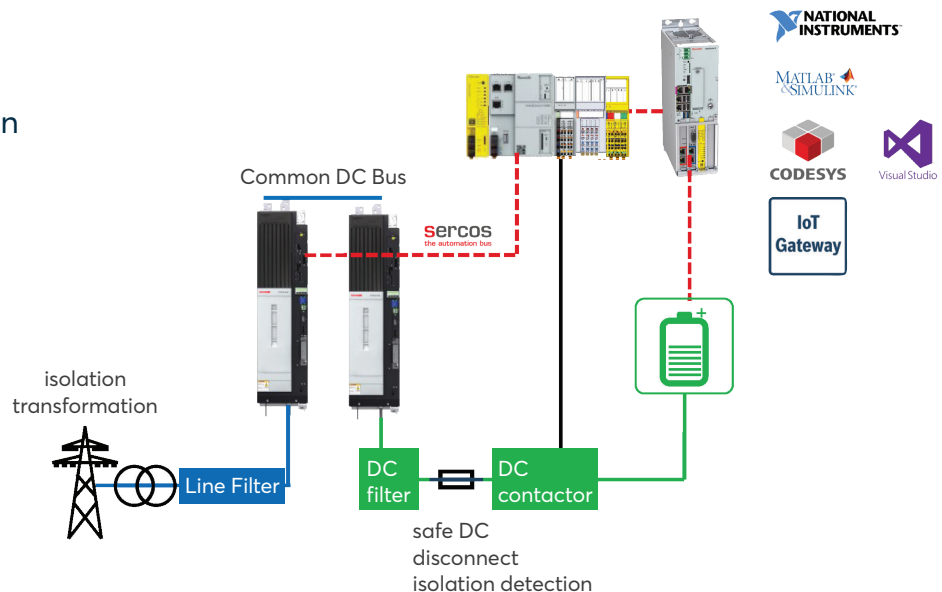
- Regeneration of excessive energy in the mains supply
- High mains supply quality with the least amount of harmonic distortion
- Decrease in energy consumption, especially in cases of long regenerating periods
- Energy savings from reduced consumption and reduced number of components

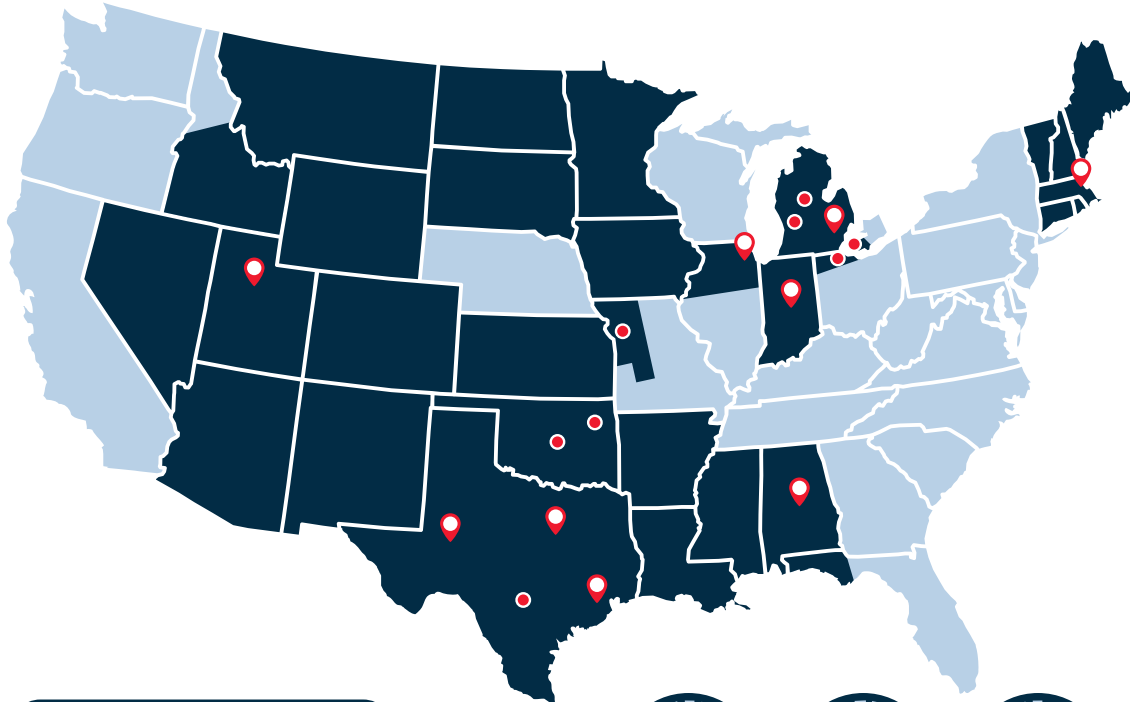
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Battery Testing Unit

- Identical power units
- Modular power conversion
- Global AC grid supply
- Open standard control
- Safe operation
- Industrial PC battery interface





-  **Warehouse & Sales**
-  **Sales Offices**



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