

E-Mobility

Overview brochure

Training systems for safe, practice-oriented work with high-voltage, hybrid and electric vehicle technology. From compact HV training models and complete hybrid drivetrains to didactically prepared training vehicles, real functions become visible, measurable and diagnosable.



High voltage

De-energize / Test / Secure

Hybrid

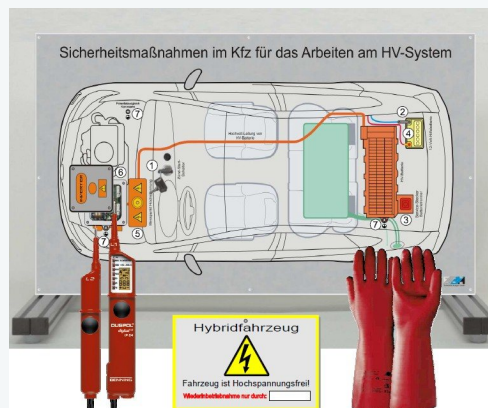
Combustion and electric drivetrain

Electric

HV system and power electronics

Diagnostics

CAN / Measurement / Fault simulation



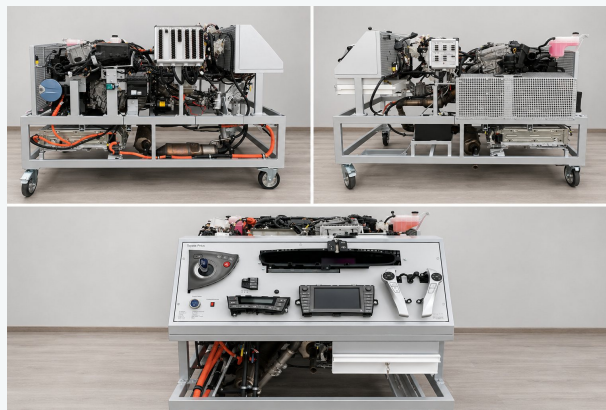
ITEM NO. SM009391 / WORKING ON HV SYSTEMS

Practice systematic de-energizing procedures

The training model includes typical switching elements used to de-energize hybrid and electric vehicles.

Important electrical tests such as equipotential bonding and insulation measurements can also be performed and evaluated.

- De-energize Practice the typical steps for de-energizing an HV system.
- Equipotential bonding Verify electrical protective measures through measurement.
- Insulation Perform insulation measurements on the training system.
- Practice-oriented Practice safe procedures repeatedly.



ITEM NO. SM009380 / EXAMPLE SETUP

Fully functional full-hybrid training rig

One example is a training system based on the drivetrain of a Toyota Prius III. In addition to the combustion engine, the complete drivetrain includes the transmission, electric drive components and high-voltage battery.

Original vehicle components, wiring harness, controls and diagnostic interface remain intact within the fully functional system network.

- Fully functional Real hybrid drivetrain in the complete system network.
- 30 faults Fault simulation for diagnostic tasks.
- Breakout box Direct access to electrical circuits.
- 4 mm measurement sockets Examine sensors and actuators directly.

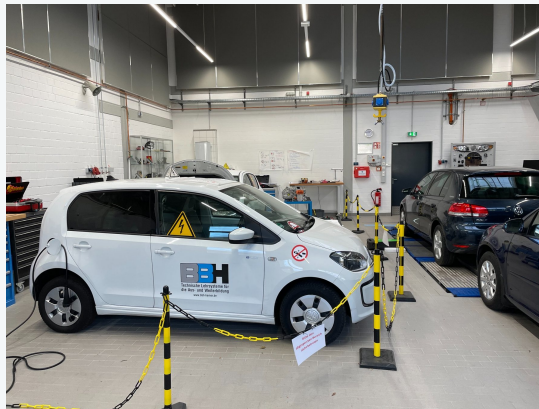


ITEM NO. SM009390 / HYBRID CUTAWAY MODEL

Examine mechanics and electric drive technology together

The example model is based on the hybrid technology of a Toyota Prius and makes key components of the gasoline / electric drivetrain directly visible.

- Combustion engine
- CVT transmission
- Inverter
- Generator
- Electric drive motor
- High-voltage battery



ITEM NO. 000F9390

Training Vehicle E-Up

VW E-Up!, used vehicle, fully functional and roadworthy with touch protection. The vehicle has been opened and exposed in the interior.

The charger and the HV battery are opened and fitted with Plexiglas covers for touch protection. A fault circuit and corresponding measurement points for the high-voltage system are installed via a break-out box and measurement sockets on components. Circuit diagrams and documentation of the fault effects are included in digital form and as a printed folder.

- Roadworthy Used vehicle, fully functional and prepared specifically for training purposes.
- Touch protection Charger and HV battery are opened and protected with Plexiglas covers.
- Fault simulation Integrated faults and documentation of their effects support diagnostic training.
- Exposed interior Components and wiring routes inside the vehicle are made visible for teaching.
- Measurement points Break-out box and measurement sockets provide direct access to the high-voltage system.
- Documentation Circuit diagrams and training documents are included digitally and as a paper folder.