EVTRAINER®

The trainer for everyone who works with electric vehicles

The number of hybrid and electric vehicles on the road is steadily increasing worldwide. This development brings new challenges, especially in the area of safety. Electric vehicles involved in accidents or undergoing maintenance require specific knowledge and skills to prevent life-threatening situations.

THE TRAINER FOR EVERYONE WHO WORKS WITH ELECTRIC VEHICLES

The first contact with an electric vehicle after an accident is often made by emergency services such as the police, fire brigade, ambulance and recovery companies. It is vital for these professionals to know how to act safely. However, mechanics in workshops and damage repair companies are also increasingly coming into contact with electric vehicles. Although they are less likely to work in acute emergency situations, knowledge of the risks and correct procedures is indispensable.

The EV Trainer® has been specially developed to provide targeted training for these professional groups. With our practical hardware and digital learning environment, participants can increase their knowledge and learn to work on electric and hybrid vehicles in a certified manner.

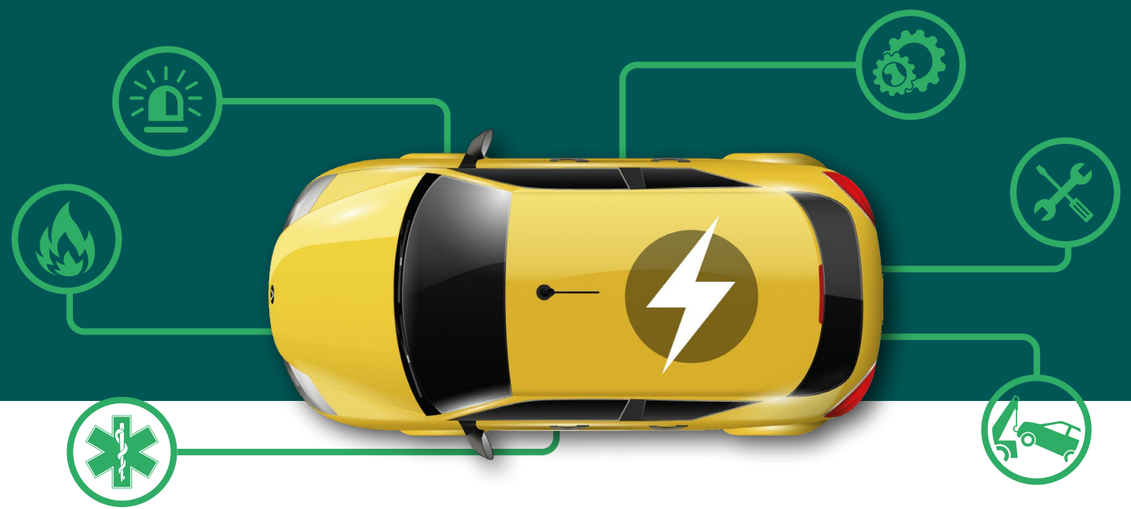
The EV Trainer® makes it possible to safely simulate a variety of scenarios. This allows participants to repeatedly practise procedures, making actions automatic. This is essential for working flawlessly and efficiently under time pressure.

In addition to practical training courses, TSS Learning offers various online modules. These modules optimally prepare participants for practical work and increase their theoretical knowledge.

Why choose the EV Trainer®?

- Realistic simulations of electric vehicles and safety systems.
- Perfectly compatible with digital learning environments for theory and preparation.
- Safe practical training with a scale model at 50 VDC and 12 VDC.
- Scenario exercises for accidents and emergencies.

Safety starts with knowledge – and knowledge starts here!



PRACTICAL SKILLS THROUGH TRAINING WITH THE EV TRAINER®

The following practical skills are acquired with the EV Trainer®:

- Identify hybrid and electric vehicles upon arrival at the scene of an accident.
- Identification of HV components in the electric vehicle involved in the accident.
- Understanding the real danger potential of electric vehicles.
- Assess hazards before starting rescue operations.
- Immobilise the vehicle.
- Understand voltage levels; learn the difference between high and low voltage systems.
- Apply correct procedures for rescuing victims from electric vehicles.
- Application of personal protective measures against electrical hazards.
- Identification of the vehicle's READY mode.
- Safe and rapid deactivation of the high-voltage system.
- Use of rescue cards for maximum safety.
- Securing the accident site.
- First aid measures.
- Procedures for damaged electric vehicles.
- Correct transport of damaged electric vehicles.
- Understanding the use of thermal fuses in HV batteries.

KNOWLEDGE TRANSFER WITH THE LEARNING ENVIRONMENT

Total Safety Solutions' digital learning environment offers comprehensive theoretical knowledge, supported by numerous videos, animations and images. This allows participants to prepare themselves optimally for practical situations and increase their understanding of the risks and procedures surrounding electric vehicles:

- Identification of and distinction between hybrid and electric vehicles.
- Identify HV components in an electric vehicle and understand their function and location.
- Understanding the real danger potential of electric vehicles and HV systems.
- Risk analysis; hazard assessment of damaged HV vehicles.
- Immobilisation of HV vehicles.
- Procedures for rescuing victims from high-voltage vehicles.
- Application of protective measures against electrical hazards.
- Hazards when handling HV batteries and evaluation of their hazard potential.
- Use of HV and LV disconnecting devices and safe shutdown of the high-voltage system.
- Evaluation of the hazard potential of an HV battery.
- Securing the accident site and first aid for electrocution.
- Procedure for damaged high-voltage vehicles.
- Safe transport and storage of damaged electric vehicles.
- Use of rescue cards, smartphones as digital car keys and thermal fuses in HV batteries.

Practical work with the EV Trainer®

The EV Trainer® offers participants the opportunity to practise realistic actions and procedures in a safe environment. The following activities can be performed directly on the hardware:

- Switching READY mode on/off.
- Switching off the high-voltage system:
  - Via an HV component
  - Via an LV component
  - Using a special fuse
  - Using a cut-off solution
- Working and securing with the Emergency Plug®.
- Visual inspection of the presence of HV voltages in components of the HV system.
- Manufacturer-independent discharge characteristics of HV capacitors.

Practical accident scenarios

The EV Trainer® offers the possibility to simulate various accident scenarios. This allows participants to plan, practise and perfect the correct procedures in a safe environment. This ensures automatic responses, which is crucial under high time pressure and stressful conditions.

Available scenarios:

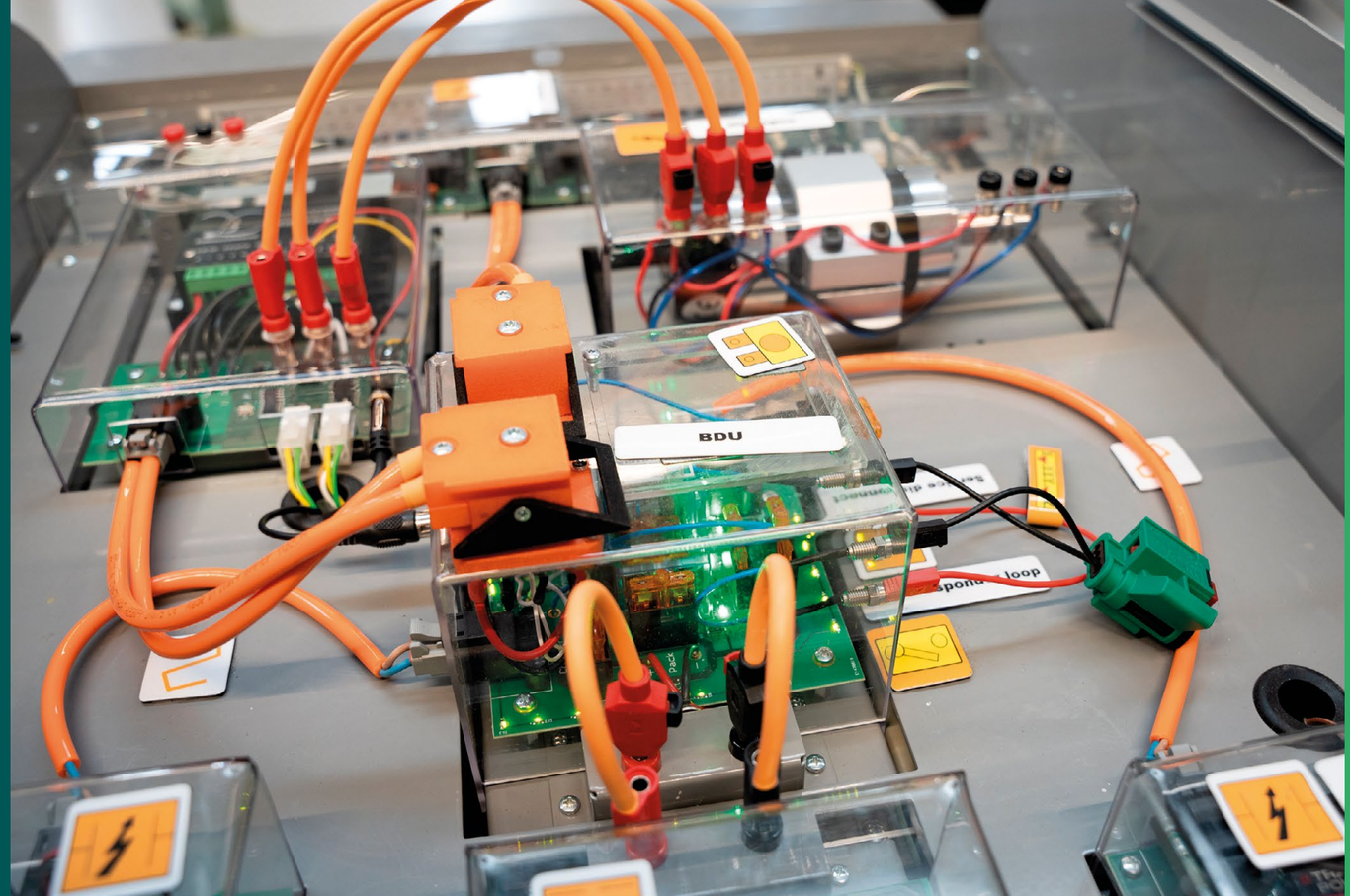
- Scenario 1: The READY mode of the HV vehicle cannot be switched off.
- Scenario 2: Severe damage to the rear, including the HV battery.
- Scenario 3: Submerged high-voltage vehicle.
- Scenario 4: Burning HV vehicle.
- Scenario 5: Trapped driver.

_TRAINING FOR PRACTICE

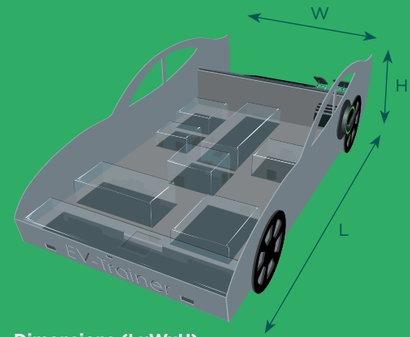
_CONSTRUCTION OF THE TRAINING HARDWARE

The EV Trainer® operates exclusively with a safe high voltage of 50VDC and the standard 12VDC, allowing practical exercises to be carried out without risk. All components are also protected against incorrect connection, so that even incorrect use will not have serious consequences. The hardware is designed to be as practical as possible and offers the following unique features:

- Flexible design; can be converted to any desired vehicle model for realistic simulations.
- International recognisability through the use of symbols in accordance with ISO 17840.
- Real vehicle components:
  - High-voltage disconnect device (HV)
  - Low-voltage disconnect device (LV)
  - High-voltage fuse (HV)
  - READY mode indicator
  - Service disconnect
  - First Responder Loop
  - Emergency responder fuse
- Display of HV voltages.
- Display of HV battery temperature.
- Integrated 12V battery.
- Option for PE measurement.
- Option for measuring insulation faults.
- Insulation fault indication.



_DIMENSIONS



Dimensions (LxWxH)

EV Trainer®: 1097 x 556 x 321,5 mm
43,19 x 21,89 x 12,66 inch
Flight case: 1158 x 608 x 503 mm
45,59 x 23,94 x 19,8 inch

Weight

EV Trainer®: approx. 21,4 kg / 47,18 lbs
Flight case: approx. 32,2 kg / 70,99 lbs
Total weight: approx. 55,8 kg / 123 lbs

EV TRAINER®

If you want to know more about the EV Trainer® or are interested in a demonstration, please contact us on **+31(0)13-822 14 80** or email us: info@totalsafetysolutions.nl