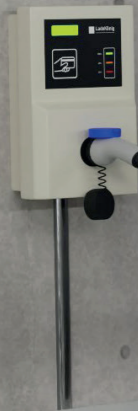


ecell-guard



**The world's first fire protection system
for your electric vehicle**

"In the event of a fire in an electric vehicle, there are serious consequences for people and the environment."



The key dangers for electric vehicle fires in enclosed and open spaces

Protecting people, buildings and the environment is the top priority in the event of a fire. Currently, there is no comprehensive or effective concept for extinguishing fires in electric vehicles that takes all these aspects equally into account.



Uncontrollable fire

Isolating the fire is particularly important for fire prevention in enclosed car parks, municipal and private buildings, quarantine areas and private car parks.



Smoke and extreme heat

Toxic smoke and heat pose a danger to human life. Smoke also contaminates the entire surrounding area, which makes firefighting more difficult and entails considerable clean-up costs.

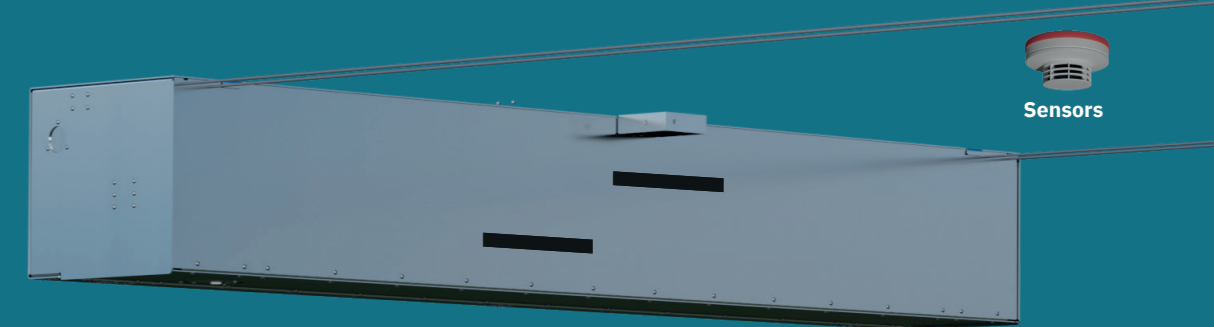


Water damage

The standard approach for firefighting in cars with combustion engines is still to use large amounts of water and possibly other additives to make tackling the fire even possible in the first place. The water used to extinguish the fire has to be disposed of subsequently at great expense.

A fire protection system for your electric vehicle

Central unit that coordinates operations and controls the automatic deployment of the fire blanket



Sensors

Fire blanket is stored in a protected location inside the wall cassette unit

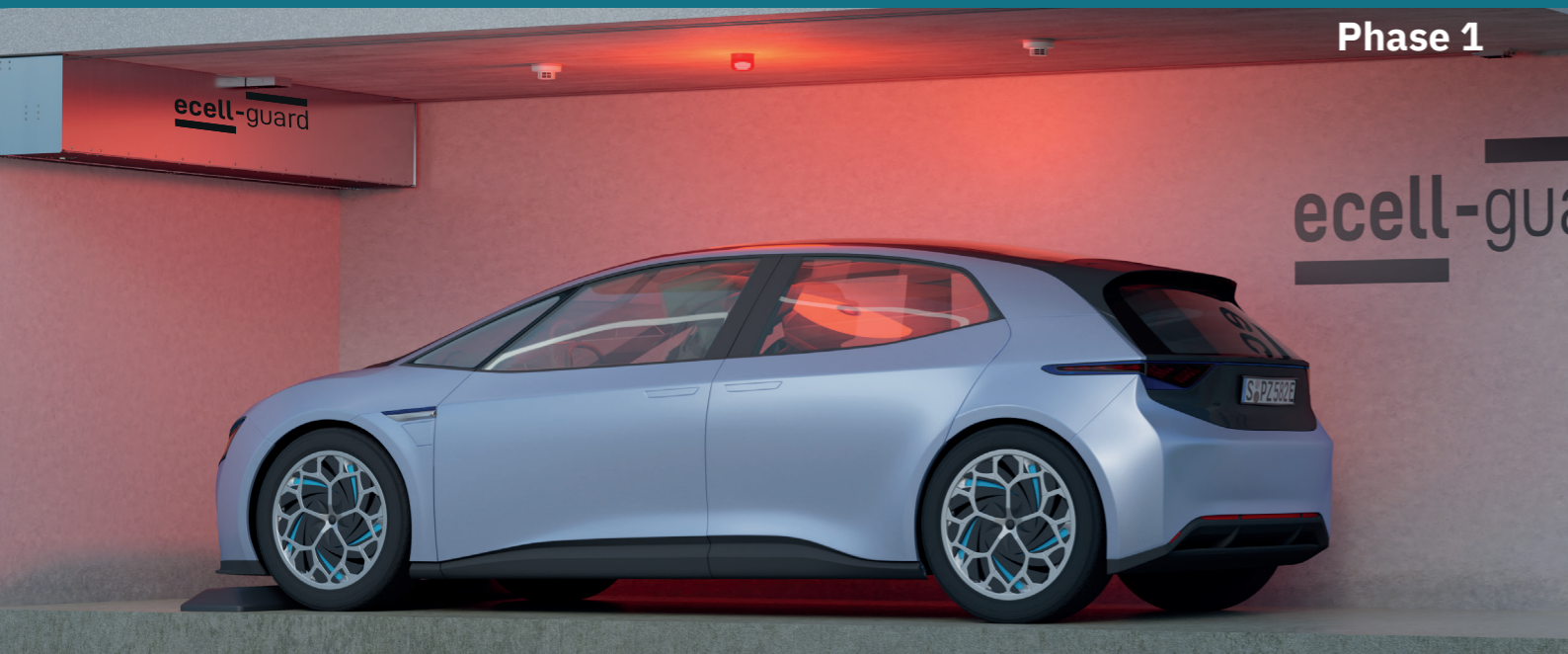


Fire alarm system (FAS)

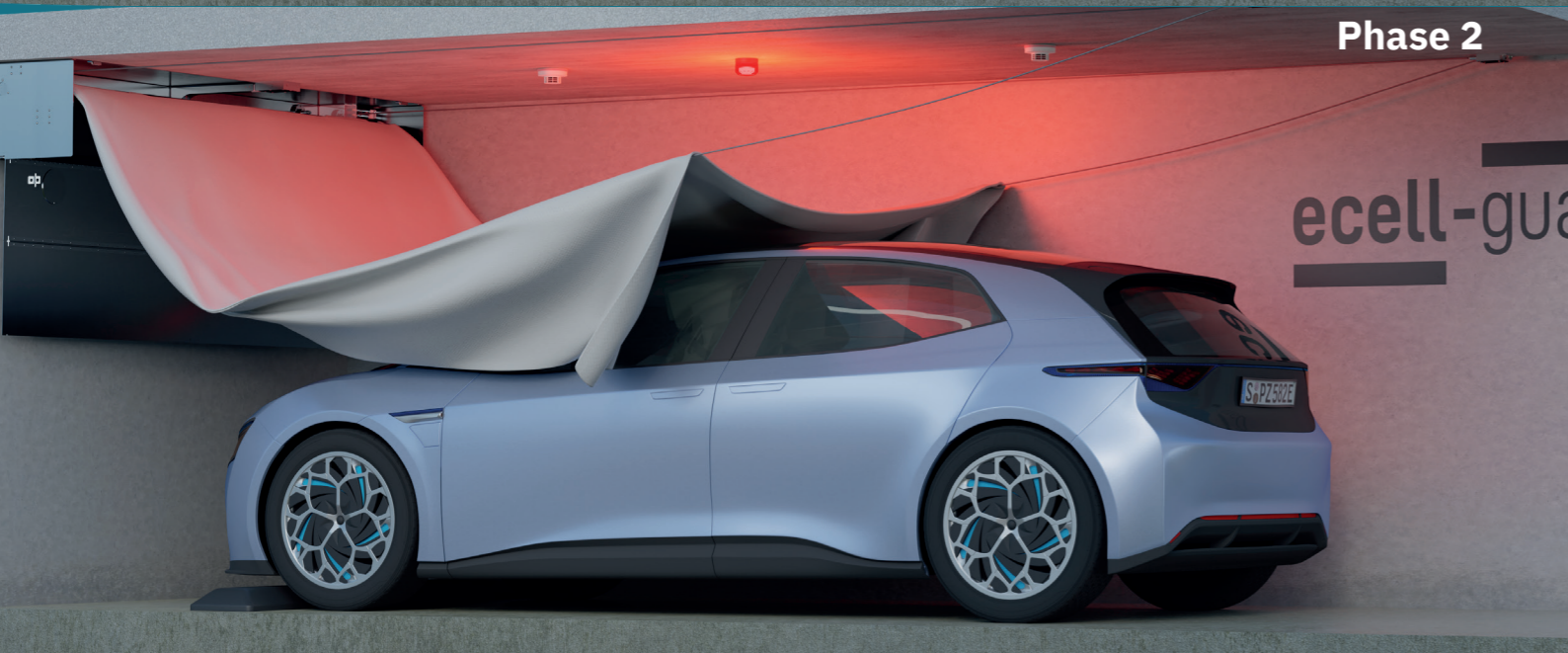
Considerations and solutions for protecting people and buildings

- Consistent protection must be ensured for people, the building infrastructure and the environment.
- A fully automated fire protection system is required which is power failure proof and triggered e.g. by detecting smoke or heat.
- Alternative fire detection methods, such as hydrogen, infrared or comparable technologies, provide additional options.
- A reliable mechanism that controls the automated fire control operations.
- Early use of a fire containment blanket isolates the fire and reduces the risk of costly remedial work after the fire.

The ecell-guard system. Automated fire protection.



Phase 1



Phase 2



Phase 3

Three components, three phases.

Phase 1

The warning system.

Very early detection by multiple sensors and FAS; optical and acoustic warning signals are activated before the system is triggered. This signal is passed on to the fire alarm system.



FAS (fire alarm system) and sensors

All components in the fire alarm system are certified by VdS (German safety and security specialists).

- Power-failure-proof fire protection system
- One FAS can handle up to 30 systems
- The system is low maintenance

Phase 2

Automatic deployment. The heart of the system.

A fire blanket — with a short-term maximum temperature rating of up to 1300 °C — is automatically deployed to cover the entire burning vehicle. The wall cassette is key to the system. This is the connecting element for all components and automatically coordinates the separate fire-control phases.



Wall cassette with redirection set and automatic trigger mechanism

- Storage location for the fire blanket
- Low maintenance & cost-effective
- The system can be reused after use

Phase 3

The containment blanket.

The fire containment blanket significantly limits the spread of the fire and any toxic smoke. Cutting off the oxygen supply smothers conventional fire and shields the battery, which usually continues to burn. The fire alarm system (FAS) can now be connected to the fire brigade emergency call.

The fire blanket

- Temperature resistant up to 1,000 °C, for short periods up to 1,300 °C
- Proven in testing by Magna Steyr (ACTS GmbH & Co. KG)
- Certified as suitable for battery fires (KIWA Institute)
- Complies with standard LVS 1071 (Latvian standardisation company)
- Tested in cooperation with ADAC (report in Motorwelt magazine 1/2022)

Data/size

Minimum dimension parking space

Height: 2.00 m
Width: 2.50 m
Length: 5.00 m

Stainless steel wall cassette assembled dimensions

Length: 2.48 m
Depth: 0.45 m
Height: 0.39 m

Cassette weight with fire blanket

approx. 146 kg

Possible connections to the FAS

For up to 30 parking spaces

Certificates

VdS certification for all fire alarm system components (fire alarm system (FAS), detectors, signalling equipment, etc.)

Electrical data

230 V connection, 16 A fuse
(For backup battery), power failure proof

Other features

- Automatic release of pull-out mechanism (deployment)
- Pre-programmed times for warning messages and trigger signal
- Multiple triggers can be freely configured for system parking spaces in underground garages and multi-storey car parks
- Spacer to ensure correct vehicle positioning

Scope of delivery

1x wall cassette with fire blanket and redirection set
1x fire alarm system (FAS: parking spaces 1-30) with backup battery
2x fire detection sensors
1x acoustic warning device
1x flashing optical indicator
1x connection set (relay & distributor box with small parts)
1x installation set

Contact

Distributed by



Video ecell-guard fire hall



Video ecell-guard animation underground garage

ecell-guard