

QUBE[®] - SAFETY CASE FOR BATTERIES

To store and charge undamaged batteries



Benefit: permanent cooling in the critical state to prevent from a thermal runaway



Brandschutzsysteme GmbH



QUBE®

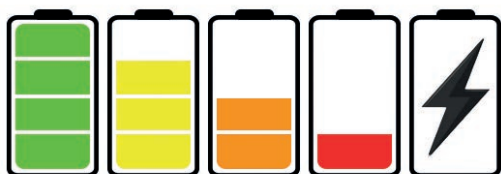
Series

QUBE®

Safety case

Fire resistance: 90 minutes

Fire from inside and outside: 90 minutes



Areas of application - escape routes and corridors in:

Residential and office buildings
Industrial buildings
Shops/salesrooms
Schools and childcare centres
Nursing homes and hospitals
Public meeting places
Restaurants and hotels
Leisure and tourism event organisers

Scope of application



Fire load insulation

- Protection against a fire caused by a battery with a plastic housing burning from the inside outwards



Fire resistance

- Protection against a fire from the outside

- **Thermal runaway protection**
(Tested on rechargeable batteries in a plastic housing, up to 625 Wh)

The QUBE® series of enclosures is available in **2 different designs**:

- BASIC PLUS
- PREMIUM

As an option, the system can also be upgraded or adapted with the following components:

- Doorstop
- Choice of positioning of the cable bushing
- EN 54-7 smoke detector
- Electro-mechanical door opener
- Potential-free signal contact (for BMZ, etc.)
- Tablet holder incl. 2 x 10-port USB charger



European basis of development/
scope of testing compliant with:

- EN 1363-1
- Directive 2014/35/EU
- VdS 3103:2019-06



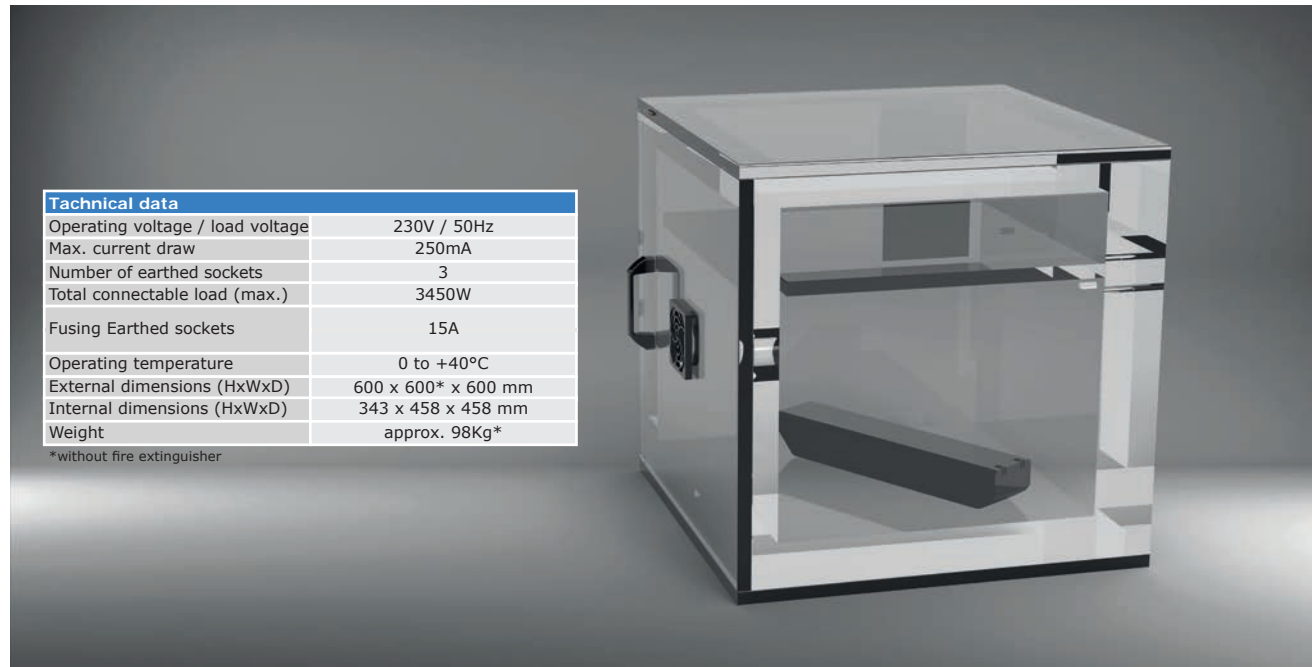
QUBE® safety case

The safety enclosure of type **QUBE®** is suitable for safe storage and charging of undamaged batteries, in particular lithium-ion rechargeable batteries for e.g. e-bikes and e-scooters, but also for other small batteries with plastic housings.

In the event of a fault in the battery, which can rapidly develop into a thermal runaway, the battery is cooled using the innovative extinguishing system, reducing fires and other destructive effects.

QUBE® offers a modular design, so you can set up multiple **QUBE®** units either in a row or stacked on top of each other, or in other ways: free-standing in the room, tucked away in a recess, and many more.

The **QUBE®** series of enclosures is available in **2 different designs: BASIC PLUS** and **PREMIUM**.



Important information about working on used electrical devices containing critical lithium-ion rechargeable batteries:

If the received used lithium-ion rechargeable battery meets at least one of the following criteria then the battery must be classified as **critical** and **may no longer be used or loaded**: Deformation or swelling of the outer housing of the battery; damage to individual or multiple cells that is visible to the eye; (abnormally) increased surface temperature of the battery/ outer housing; signs of electrolyte leakage; signs of degassing.

In this case, do **NOT** continue using the battery, but keep it in the **QUBE®** with the door closed. Do **NOT** connect or charge the battery. Contact the battery manufacturer to clarify the safe and proper recycling. In the event of fire – call the fire brigade!

Versions

BASIC PLUS

(based on F90 and I90 respectively based on EI₁90 / EW90)

1. 3-way power socket for charging the batteries
 2. Automated fire extinguishing system
 3. Base trough with 5 cm upstand for fire-extinguishing agents (to prevent the release of toxic battery components in the event of an alarm/fire and to ensure proper subsequent disposal of the fire extinguishing agents)
 4. Extinguishing medium tank with wall mounting
 5. Temperature monitoring system in the battery charging area
 6. Optional: Temperature monitoring system in the battery charging area plus ambient temperature monitoring
 7. Optional doorstop (self-closing latch)
 8. Choice of positioning of the cable bushing
 9. Possible installation variants: wall mounting/ corner installation/ recessed installation/ free standing in the room
 10. Ventilation system in the battery charging area
 11. Automatic interruption of charging in the event of an alarm
 12. Water-based fire extinguishing agents
 13. Continuous cooling for prevention of thermal runaway in the battery in the event of an alarm or fire and to prevent thermal runaway of further cells and modules. Optional: Potential-free signal contact for transmission of alarms to a higher-level system (BMZ etc.)
 14. Lockable housing fastening for secure access and permanent locking
- Optional:** Potential-free signal contact for transmission of alarms to a higher-level system (BMZ, etc.), which can be connected by a specialist company.

PREMIUM

(based on F90 and I90 respectively based on EI₁90 / EW90)

15. Emergency release
 16. Status indication for the 3-stage monitoring system via LED indicator lights
 17. Automatic door locking in the event of an alarm (opening via the emergency release is possible at any time)
 18. Automatic access/opening via RFID card (up to 2000 users possible) or via PIN code
- Optional:** Potential-free signal contact for transmission of alarms to a higher-level system (BMZ, etc.), which can be connected by a specialist company.

As of September 2023

Please refer also to:

Current MLAR (German Fire Protection Building Code) and MVVTB (German Technical Building Rules)

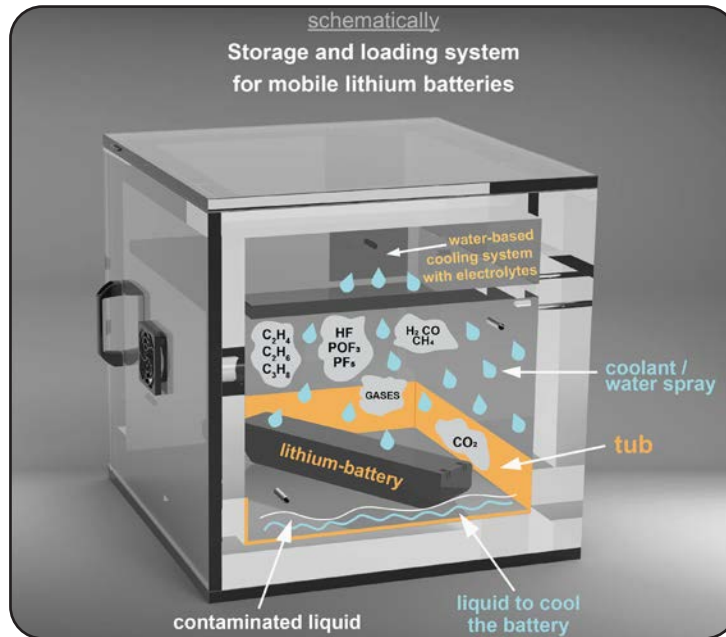
**Information sheet MVB-035-2021-05 on
fire protection measures when handling lithium-ion batteries**

VdS Recommendation 3103:2019-06

**Plus the federal state ordinances and directives, administrative regulations
and technical building regulations that apply in individual German federal
states**

as well as the EU-Battery-Regulation (BattVO).

For more information, please refer to the main catalogue and to the operating and installation instructions.



< special equipment: tablet >



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