



Moblering av offentlig rom

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Although the **BatteryChargingLocker/LaadLocker** was developed as a Charging and Storage locker, and not as FireSafetyLocker, we were curious to know how the **BatteryChargingLocker/LaadLocker** should cope with a battery fire. To this end, we conducted a test with a **BatteryChargingLocker/LMS4**, in which - seen from above - fully charged bicycle batteries were placed in compartment 1, 2 and 3. We forced the bicycle battery in compartment 2 to ignite, see video link: <https://www.youtube.com/watch?v=1gXYRQcCURs>

One bicycle battery consists of appr. 40 load cells, which explode individually. A fully ignited bicycle battery therefore results in appr. 40 explosions. As the video shows, the explosions can be quite violent, especially if a number of load cells explode at the same time.

After about 25 minutes a chain reaction started with the battery in compartment 3, of which the load cells started to explode after 30 minutes. After 58 minutes the batteries stopped smoking/exploding; at that time, the temperature of the load cells was still > 400 degrees Celsius. The battery in compartment 1

Based on the test, it can be concluded with some certainty that a battery fire in the **BatteryChargingLocker** is limited to the relevant module (with 4 compartments). The chance that a chain reaction will occur with a stacked module or a module/locker that is set up next to the relevant ignited module is very small/negligible.

In short: the **BatteryChargingLocker** offers, in addition to shielded battery storage/shielded charging also considerable fire prevention; during the test, the ignition (and the exploding load cells) was confined to the module, preventing a fire from spreading quickly. As shown in the video, the battery cells produce a lot of gas/smoke, which is explosive and toxic (including hydrogen). Placing a (coupled) smoke detector above a **BatteryChargingLocker** will signal a battery fire starting at an early stage.

Med vennlig hilsen

Thomas M. Tølfsen  
Daglig leder

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