

BUNCKER®

Innovative safety packaging for lithium batteries

Lambert Dekkers – Roel van Veen

Born, 21 november 2024

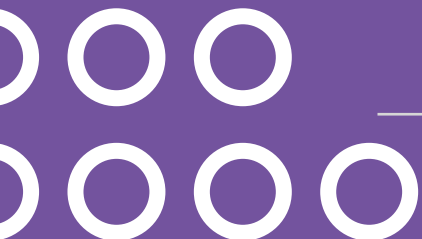


LITHIUM SAFETY SOLUTIONS



Powered by





“The power of co-operation”



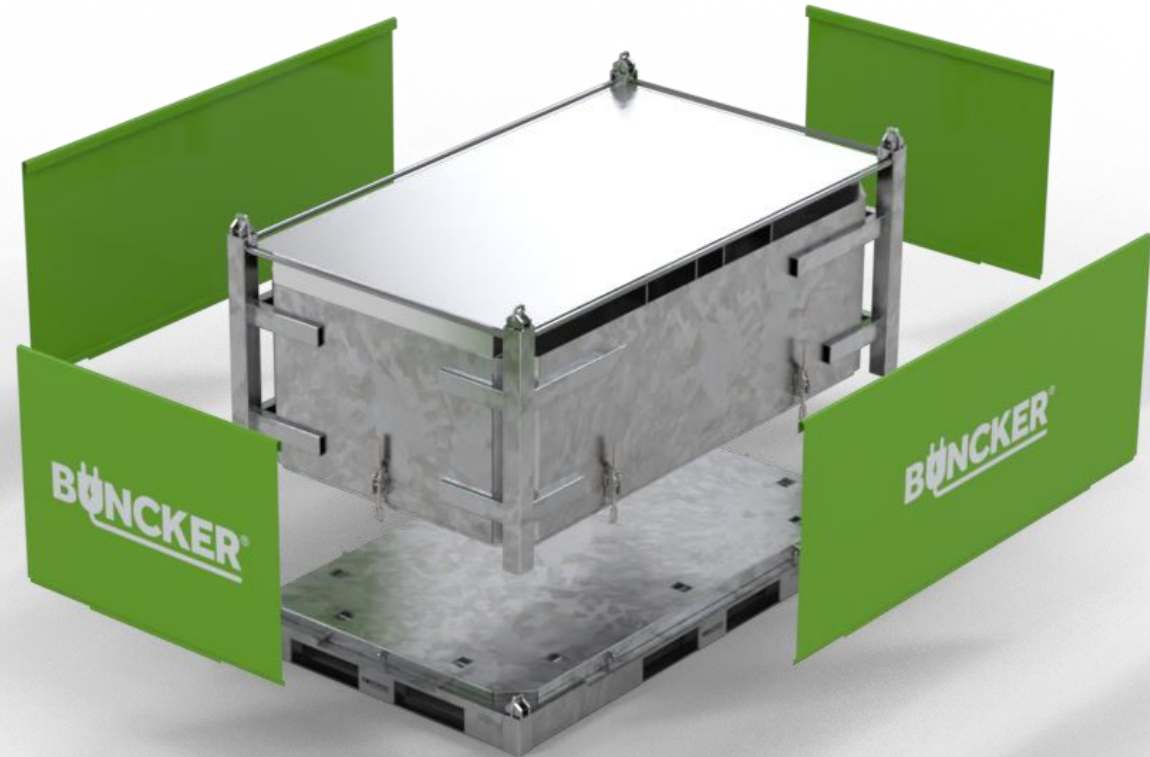
LITHIUM SAFETY SOLUTIONS



Powered by



“The power of a brand”



“Positioning”

- Brain of the prospect
- Being the first
- Simplify the message
- Strong brand name
- Create brandloyalty

Values

**THERMAL
RUNAWAY PROOF**

ROBUUST

USER FRIENDLY

EFFICIENT

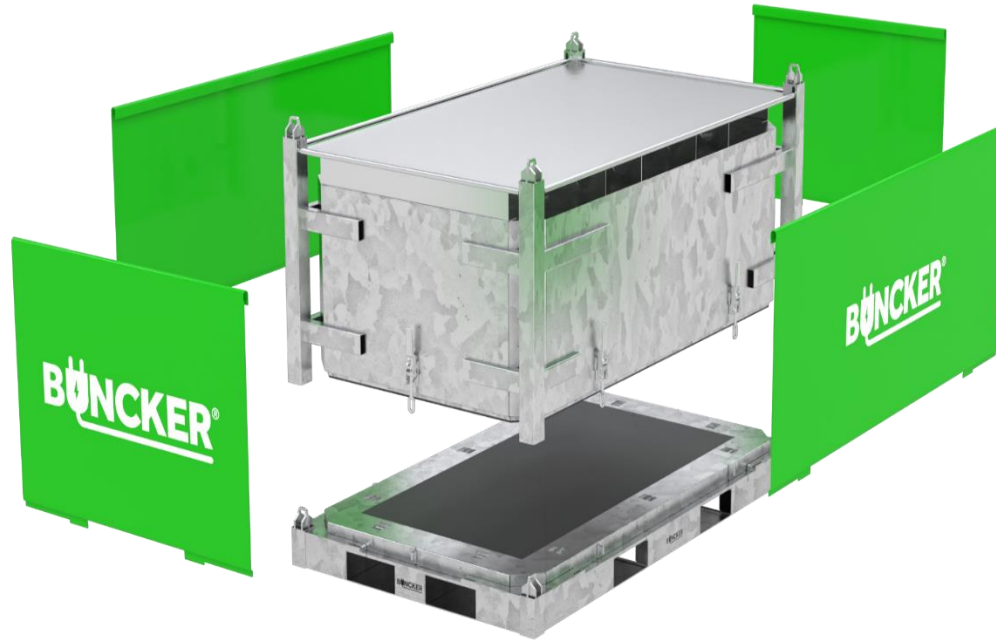
**NICE &
RECOGNIZABLE**

**CERTIFIED
Transport & Storage**



An independent organization assesses on behalf of the government whether the standard is met through predefined tests

- **Withstand a worst-case scenario fire test**
- **Heat resistance & No leakage**
- **Gas management system**



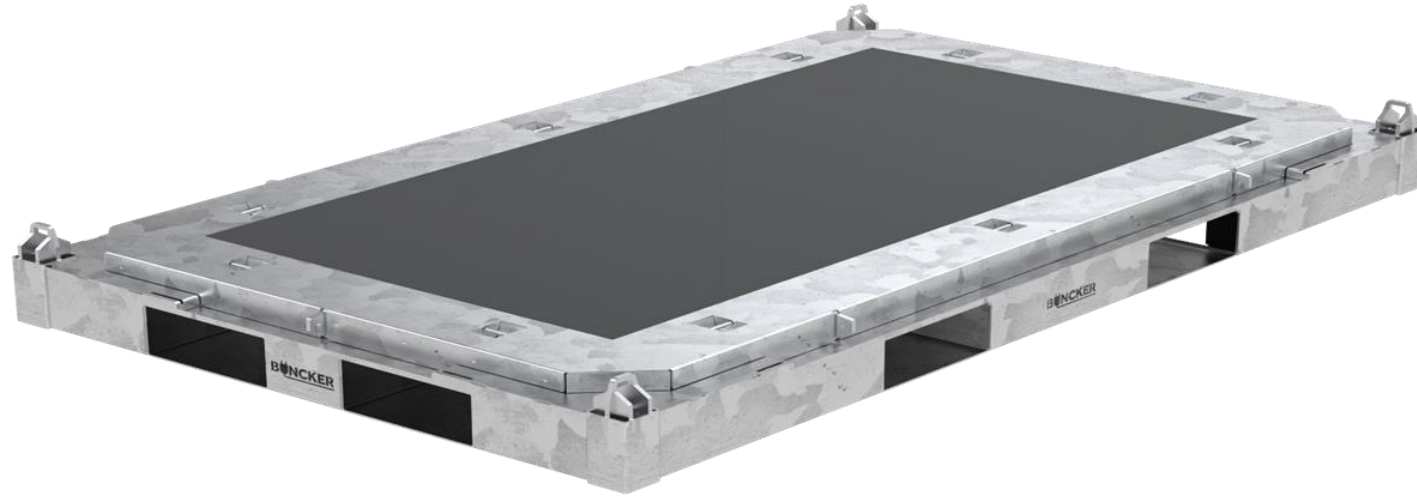
Made in Holland & Certified & Price winning

- **Conceived, designed and made in the Netherlands**
- **Certified: P911 – LP906**
- **IfDesign Awards, DOT Awards and Gouden Noot**





Buncker® Pro Line Heavy assortment	S	M	L	XL	XXL
Outer dimensions (mm)	1200 x 1000 x 1150	1500 x 1200 x 1250	2000 x 1200 x 950	2400 x 1200 x 950	2800 x 2000 x 950
Product space dimensions (mm)	920 x 720 x 750	1220 x 920 x 850	1720 x 920 x 550	2120 x 920 x 550	2520 x 1720 x 550
Empty weight per pallet box in kgs	365	508	536	621	1120
Number of closures	6	6	6	8	10
Max. capacity nett weight of batteries in kgs	435	700	700	800	1540
Max. capacity of lithium batteries in kWh	50	90	90	100	200

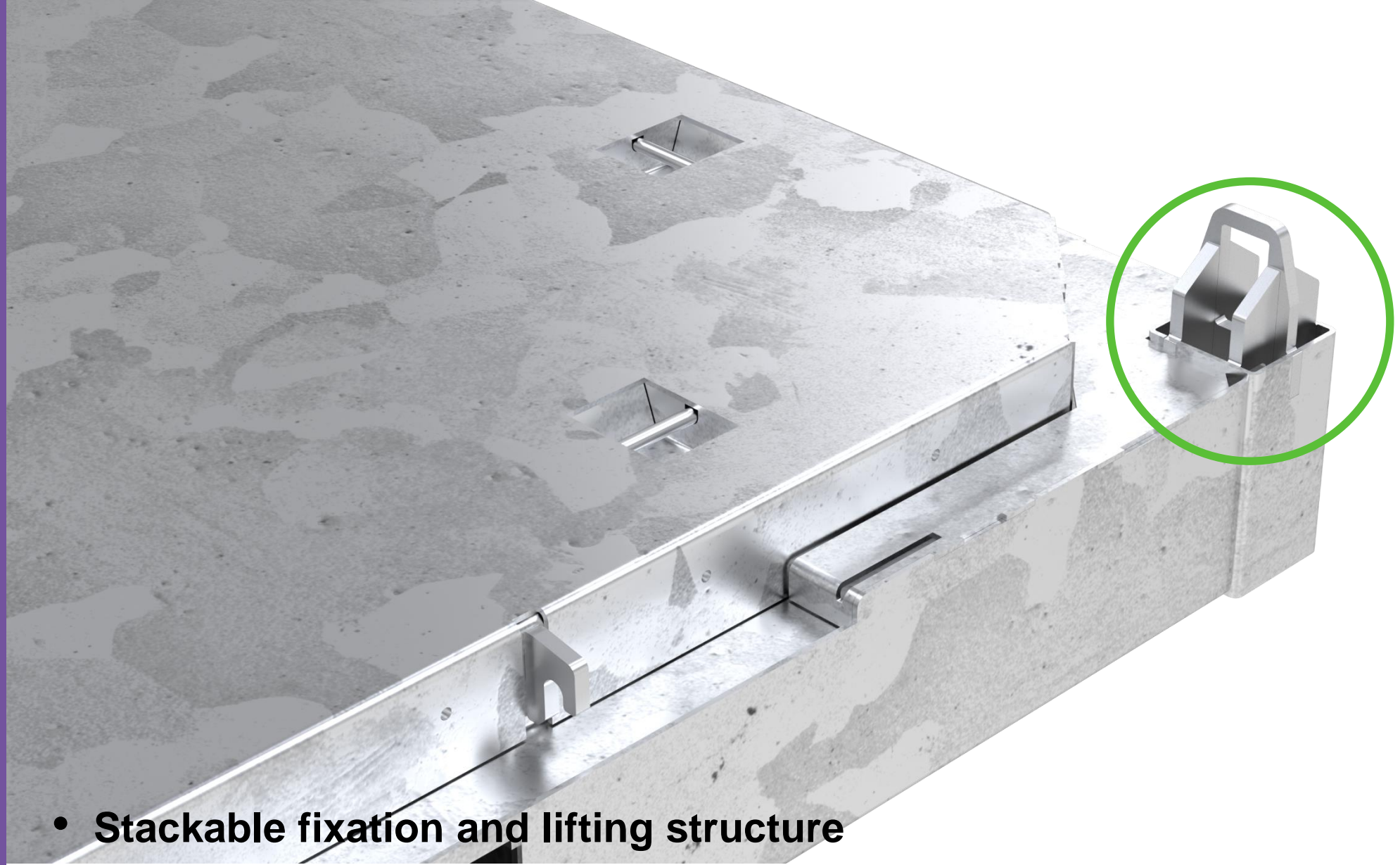


User friendly

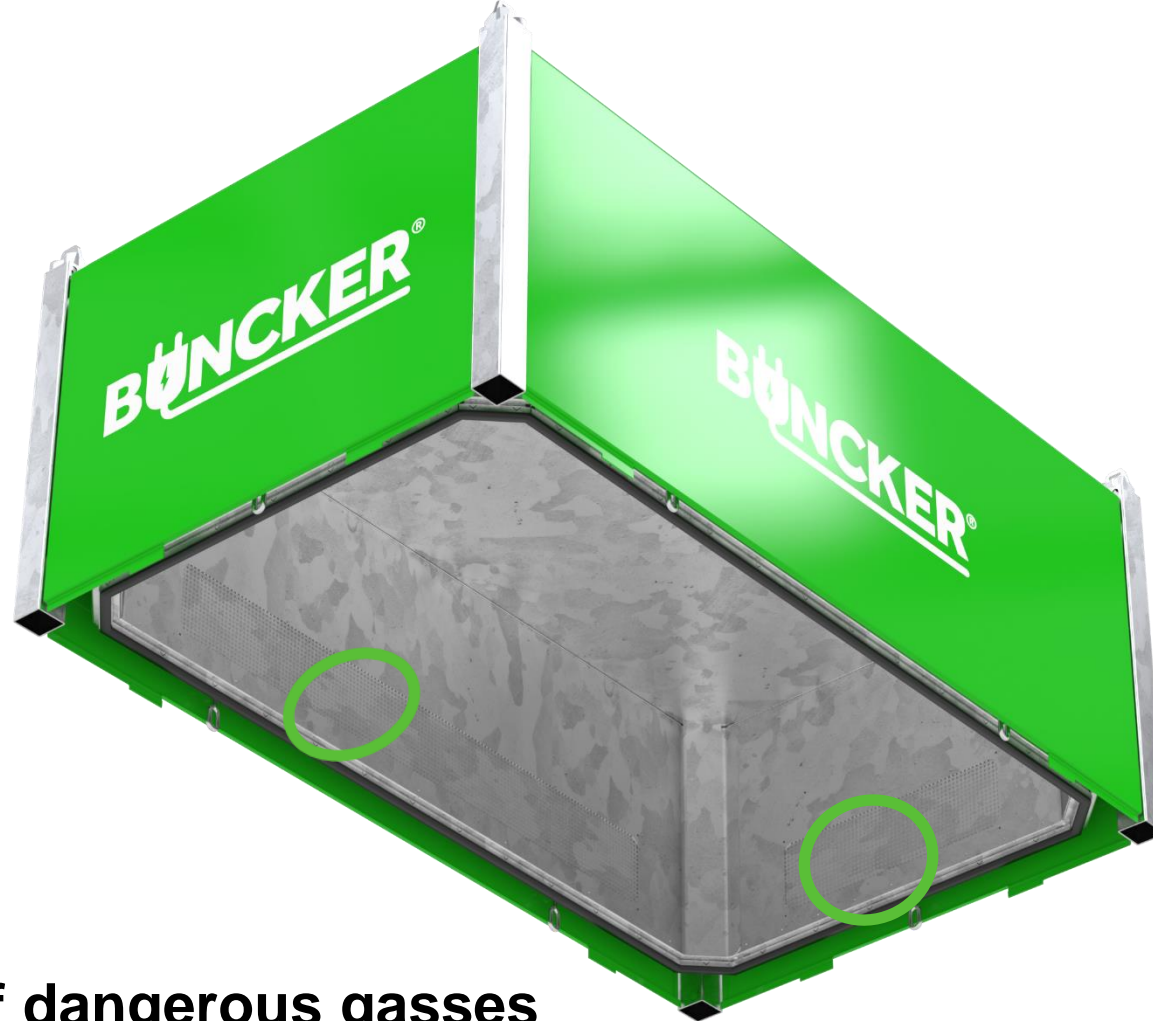
- Pallet based & bel jar
- Easy and safe closure
- Clean: no filling material and no inner packaging
- Stackable
- All lithium batteries
- One person-handling
- Multiple fixation points on pallet
- Fixation with straps
- Non-conductive mat
- Flexible for different sizes and models of batteries

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Pallet design



- **Stackable fixation and lifting structure**



- **Filtering of dangerous gasses**
- **Special insulated walls to prevent excessive heat on the outside**
- **Contain a thermal runaway during entire cycle**
- **Protect batteries for external fires**

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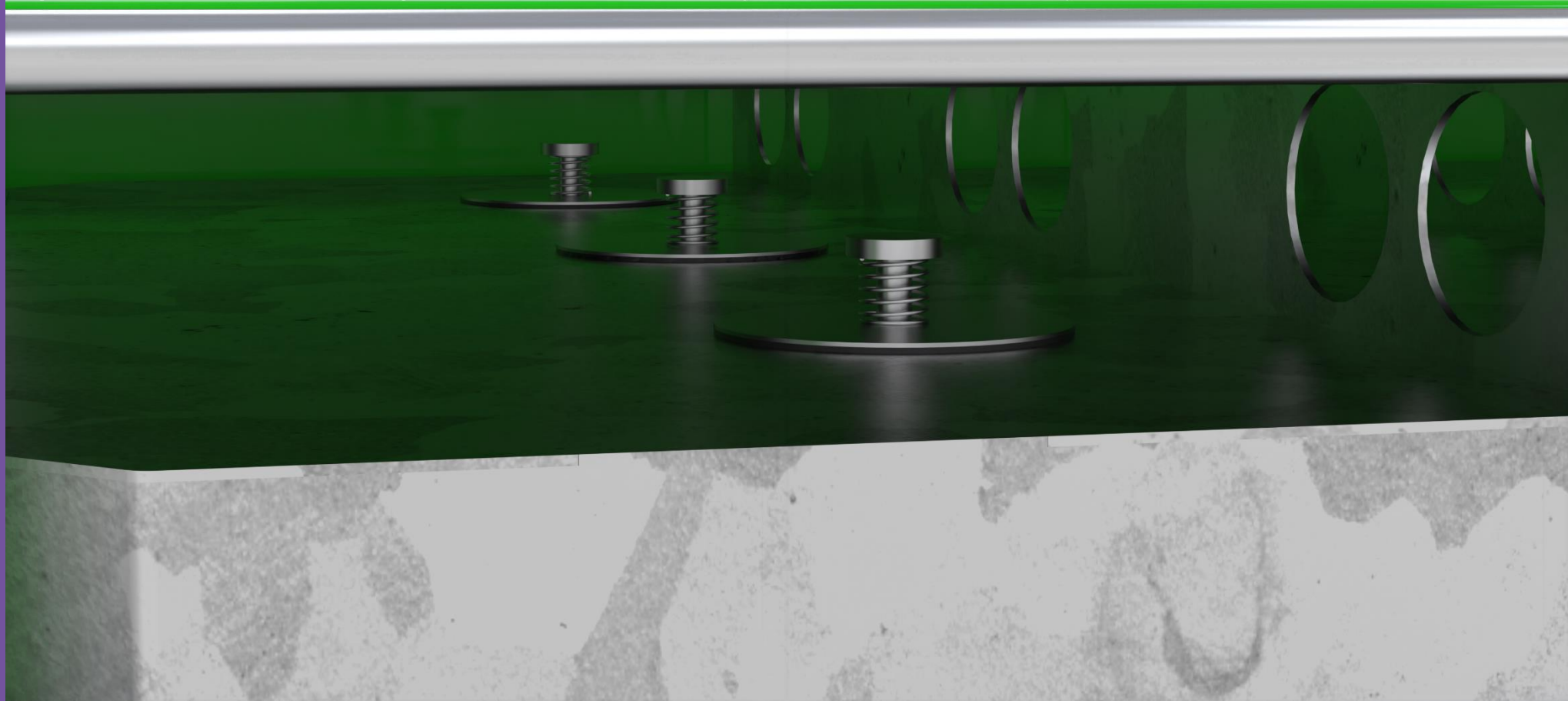
Gasket



- **Gasket between pallet and bell jar**

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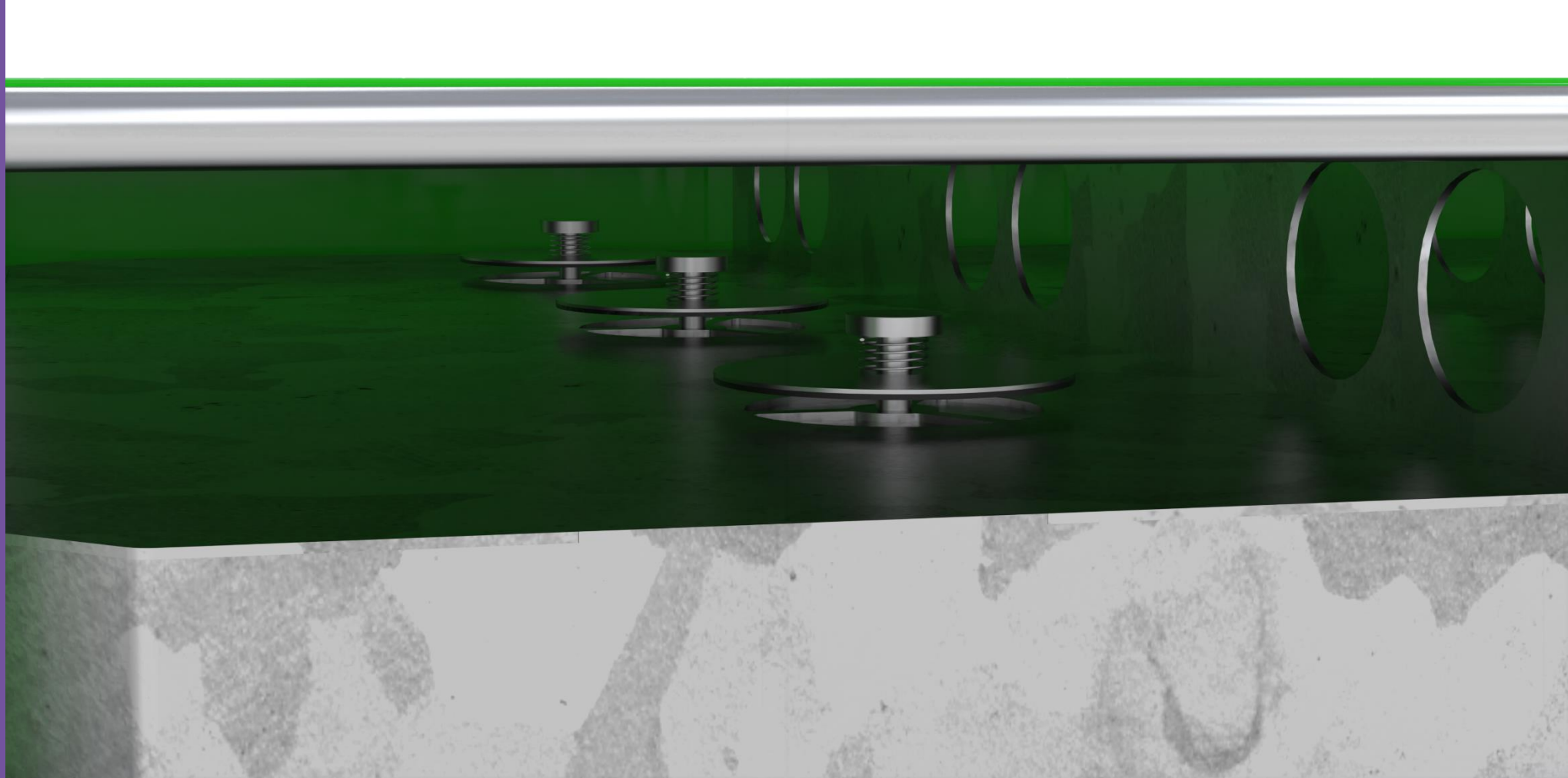
Overpressure



- **Air circulation openings**
- **Pressure relieve valves**

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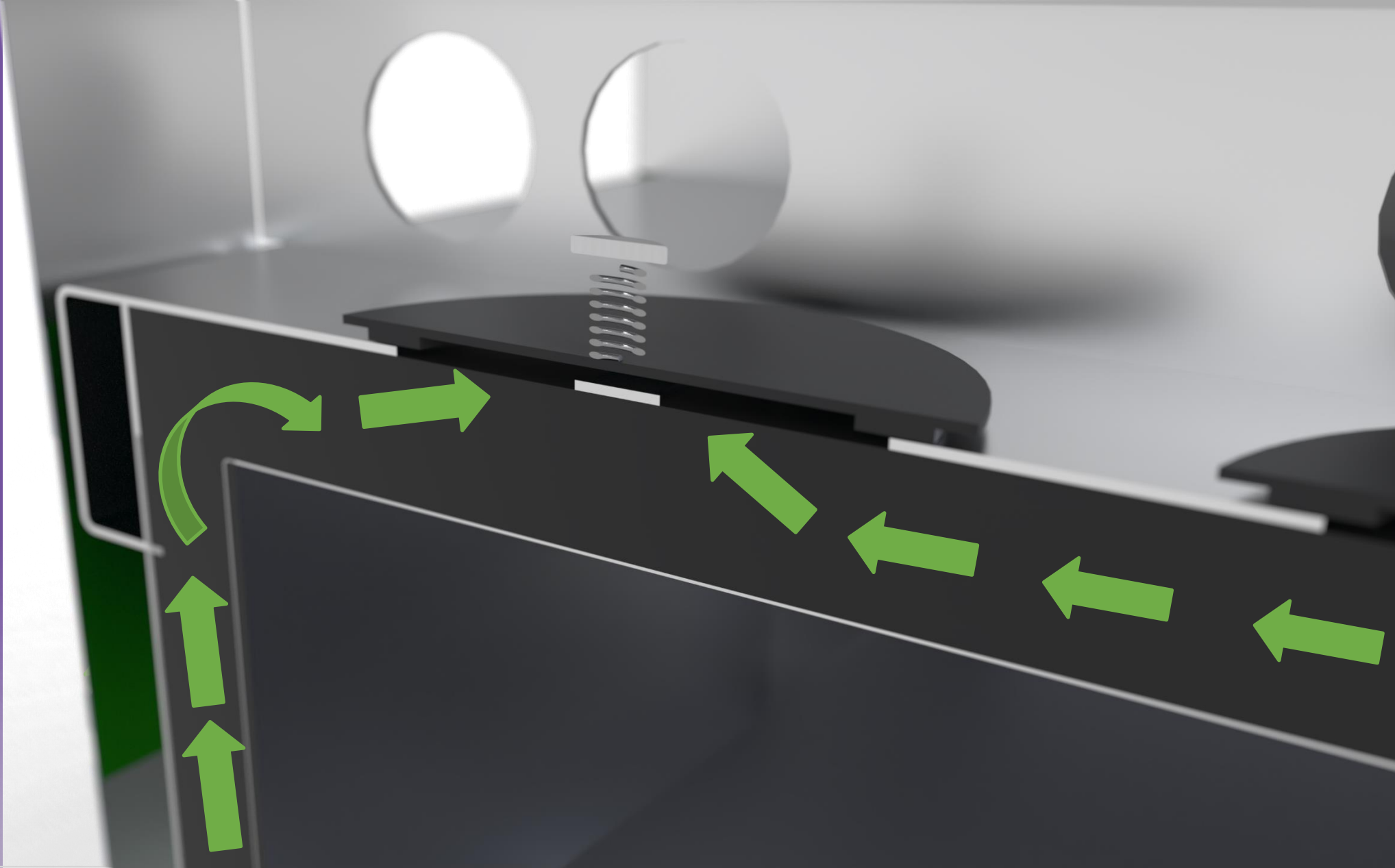
Overpressure



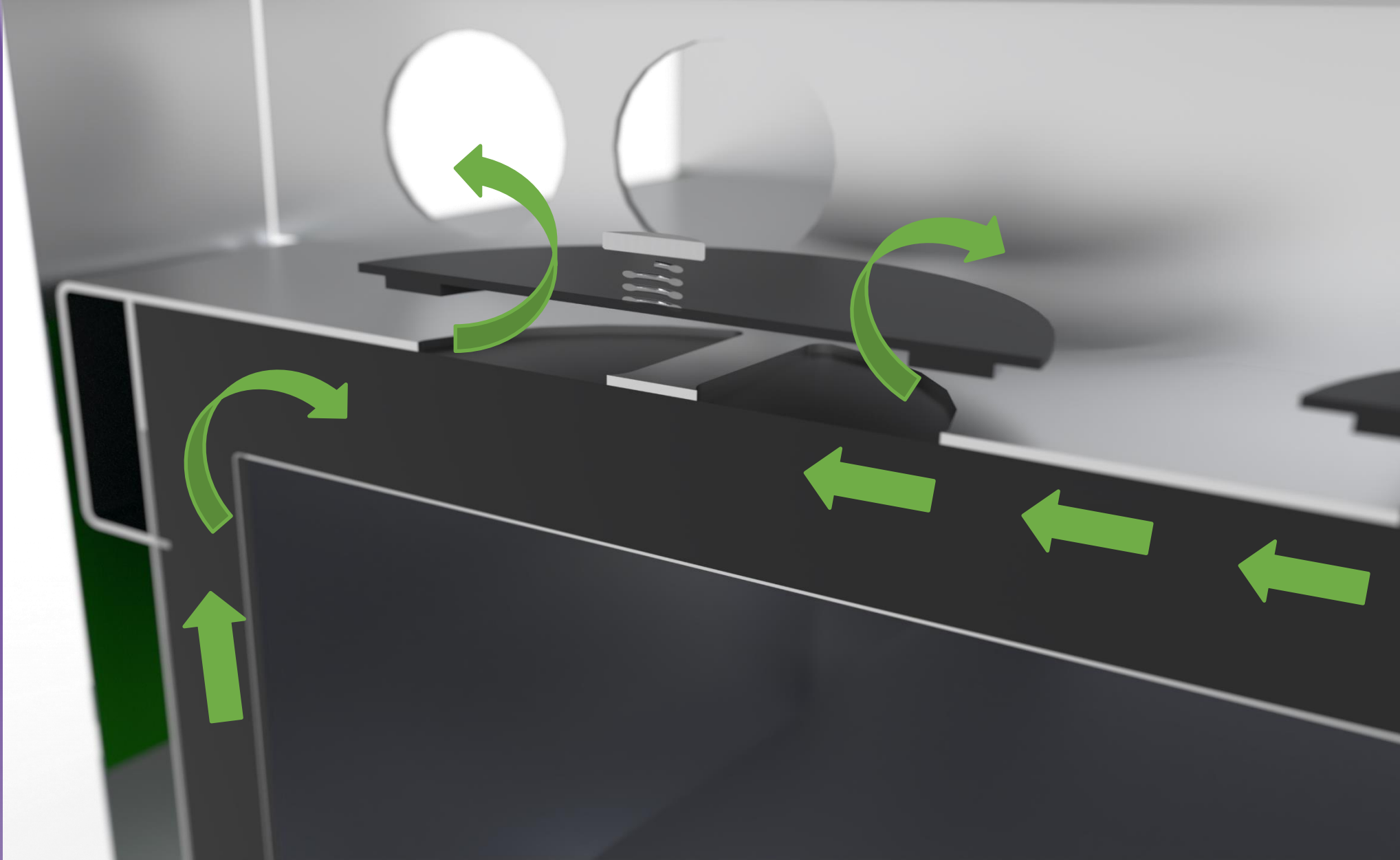
- Air circulation openings
- Pressure relieve valves

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Overpressure



BUNCKER® Overpressure



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Stackable



- All parts are stackable
- Less spacing, storage and transport

100°C

1200°C

- Protective outer covering
- Thermal bridge prevention

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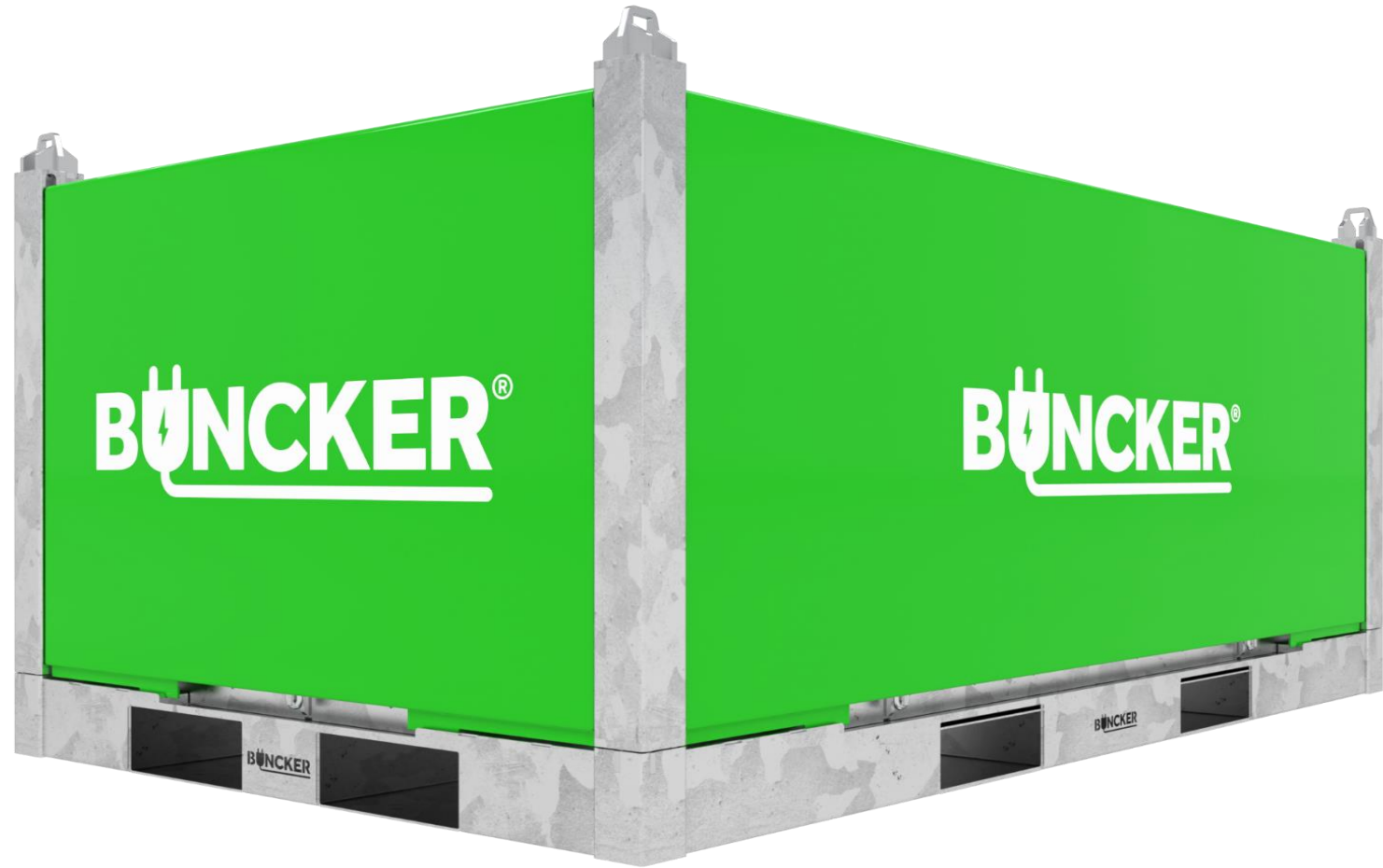
Easy closing



- **Clamps can be sealed and locked**
- **Forklift pockets all sides and lifting possibilities**

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Quarantine



In case of emergency BUNCKER® = quarantine

Classificatie binnen het ADR

Op basis van capaciteit & gewicht batterij

- Meer/minder dan 100 Wh
- Meer/minder dan 12 kg
- Meer/minder dan 30 kg

Elke batterij valt onder één van deze categorieën

- P903/LP903 : nieuw of goedwerkende batterij (BP 188)
- P911/LP906 : defecte of beschadigde batterij (BP 376)
- P908/LP904 : defecte of beschadigde batterij, maar door expert als stabiel verklaard (BP 376)
- P910/LP905 : prototype batterij, nog niet 38.3 gecertificeerd
- P909 : voor recycling, maar niet beschadigd/defect (BP 377 & 636)

ADR bijzondere bepaling 376

Classificatie van beschadigde of defecte batterijen moeten worden gedaan door de **fabrikant** of **technisch expert** op basis van de volgende zes criteria:

1. Acut gevaar, zoals gas, brand of lekkage elektrolyte;
2. Het gebruik of misbruik van de cel of batterij;
3. Tekenen van fysieke schade;
4. Externe en interne bescherming tegen kortsluiting;
5. De toestand van de veiligheidsvoorzieningen;
6. Schade aan interne veiligheidscomponenten, zoals het BMS

Bij vaststelling dat de batterijen defect maar stabiel zijn, worden ze verpakt in overeenstemming met verpakkingsinstructie P908 of LP904.

Met ander woorden, defecte batterijen worden verpakt in overeenstemming met P911 of LP906, tenzij een expert op zes punten heeft vastgesteld dat de batterij stabiel blijft gedurende normale transport condities

REMEMBER

STATUS BATTERY

RED	-	NOT GOOD
GREEN	-	GOOD

CLASSIFICATION BUNCKER®

TRANSPORT	-	GOOD
STORAGE	-	GOOD



Added value proposition

Subscription model

Sensors

- CO
- Heat & Smoke
- Shock
- Toxic gasses

Platform

- Warehousing
- Desktop & mobile application
- Certifications
- Instructions



Maintenance & Service

Subscription model

Maintenance

- 2 yearly
- Gasket replacement
- Total integrity check on damage

Service

- Repair
- Parts replacements



Bedankt voor uw aandacht

Get in contact
info@buncker.com
www.buncker.com

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Powered by

 **Green Transport Delta**
Elektrification

 **Battery**
Competence
Cluster - NL