

-DENIOS-

ENVIRONMENTAL PROTECTION
& WORK SAFETY



SAFETY CABINETS FOR LITHIUM BATTERIES



www.denios-us.com/lithium-ion-cabinets

FOR SAFE INDOOR STORAGE AND CHARGING

SAFETY CABINETS FOR LITHIUM BATTERIES WITH INTEGRATED SAFETY DESIGN



Lithium batteries are widely available today and are used in a variety of devices. However, they also harbour an increased risk potential that can have devastating consequences in an emergency. Fires and explosions involving lithium batteries can not only cause expensive damage to property, but in the worst case can also endanger human life. We offer a comprehensive range of professional safety cabinets that meet the latest technical standards for the safe storage and charging of lithium batteries.

THE INTEGRATED SAFETY DESIGN OF OUR CABINETS IS BASED ON THE FOLLOWING ELEMENTS:

Fire protection:

Thanks to a wide range of safety features, our cabinets guarantee a fire resistance of 90 minutes both from the outside and the inside.

Fire detection:

Integrated sensors and automatic alerts enable fires to be detected at an early stage and countermeasures to be initiated immediately.

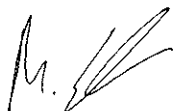
Fire suppression:

Our cabinets are designed to support fire suppression and enable rapid evacuation, for example.

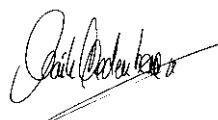
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Take responsibility for the environment and for work safety with a safety cabinet for lithium batteries from DENIOS. We provide you with a fully integrated solution.



Marcus Schmitt - Director Catalog Products



Maik Rodenberg - Head of Sales Catalogue Products

PRODUCT RANGE OVERVIEW

CABINETS FOR STORAGE



FEATURES	
Fire protection	
90 minutes fire resistance from inside and outside	
Fire-rated body	
Self-closing doors, air supply and extraction openings	
Pressure relief in the top section	
Integrated ventilation	
Fire detection	
Audible alarm	
Fire Suppression	
Easy to evacuate	
Convenient equipment	
Lockable doors	
Integrated protected power sockets	
Height adjustable shelves	

1 DOOR CABINET	2 DOOR CABINET	UNDERBENCH CABINET
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	
✓	✓	✓
✓	✓	✓
		✓
✓	✓	

P. 11

P. 12

P. 19

* optional



CABINETS FOR STORAGE AND CHARGING



1 DOOR CABINET	2 DOOR CABINET
✓	✓
✓	✓
✓	✓
✓	✓
	✓
✓	
✓	✓
✓	✓
✓	✓
✓*	✓

➞ P. 15

➞ P. 16

FEATURES

Depending on your requirements, our safety storage cabinets offer different safety features and equipment. Our product range overview on pages 4-5 and the icons on the following product pages show which features each cabinet model offers.

FIRE PROTECTION



90-minute fire resistance, from inside and out

The 90-minute fire resistance from the inside to the outside (based on the DIN EN 1363-1 standard) provides protection in the event of a fire caused by defective batteries inside the enclosure.

The type 90 fire resistance from the outside to the inside (in accordance with DIN EN 14470-1) ensures that a fire outside the cabinet does not spread to the lithium batteries inside.



GS certification

The fire resistance is tested and certified in accordance with GS principle EK5/AK4 22-01 for safety storage cabinets for the active and passive storage of lithium-ion batteries.

All tests carried out - e.g. fire resistance, smoke tightness, mechanical stability and interior temperature - comply with current European safety requirements and have been successfully passed.



Self-closing doors, air supply and extraction openings

The cabinet doors close automatically and completely from any position within a maximum of 20 seconds.

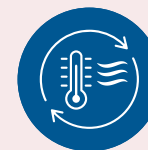
If the temperature rises due to a fire, the air supply and extraction openings in the top section close automatically, preventing hot air from flowing in.



Smoke and Gas Management

Burning batteries produce large quantities of smoke. A smoke-tight cabinet protects people, buildings and technical equipment from escaping smoke gases in the event of a fire.

In the event of an incident, these gases can only escape via the pressure release flap and, if an exhaust air system is connected, are discharged in a targeted manner.



Fire-rated body

The body and doors are made of special fire-resistant panels that release water vapour when exposed to heat, thus cooling the cabinet and its contents.

The special sealing tapes used on all enclosure openings foam up when exposed to heat and seal the safety enclosure.



Pressure relief in the top section

Even with closed air supply and extraction openings, a defined pressure reduction is still ensured via an integrated pressure release flap in the top section.

FIRE DETECTION



Smoke alarm

The smoke detector recognises incipient fires and emits an audible warning signal to indicate the development of smoke inside the cabinet.

FIRE SUPPRESSION



Easy to evacuate

Thanks to the integrated transport base, the cabinet can be evacuated immediately in the event of an incident to prevent consequential damage caused by extinguishing water.



Fire suppression unit

The fire suppression system triggers automatically in the event of a fire in the cabinet and suppresses secondary fires by coating the surrounding material.

CONVENIENT EQUIPMENT



Integrated protected power sockets

High-quality, ready-to-use protected power sockets enable safe charging of lithium batteries in the cabinet.



Height adjustable shelves

Thanks to height-adjustable shelves with a tried-and-tested load capacity, the interior of the cabinet can be organised in a flexible way.



Locker system

The locker system enables separate active and passive storage of lithium batteries, protected from unauthorised access.

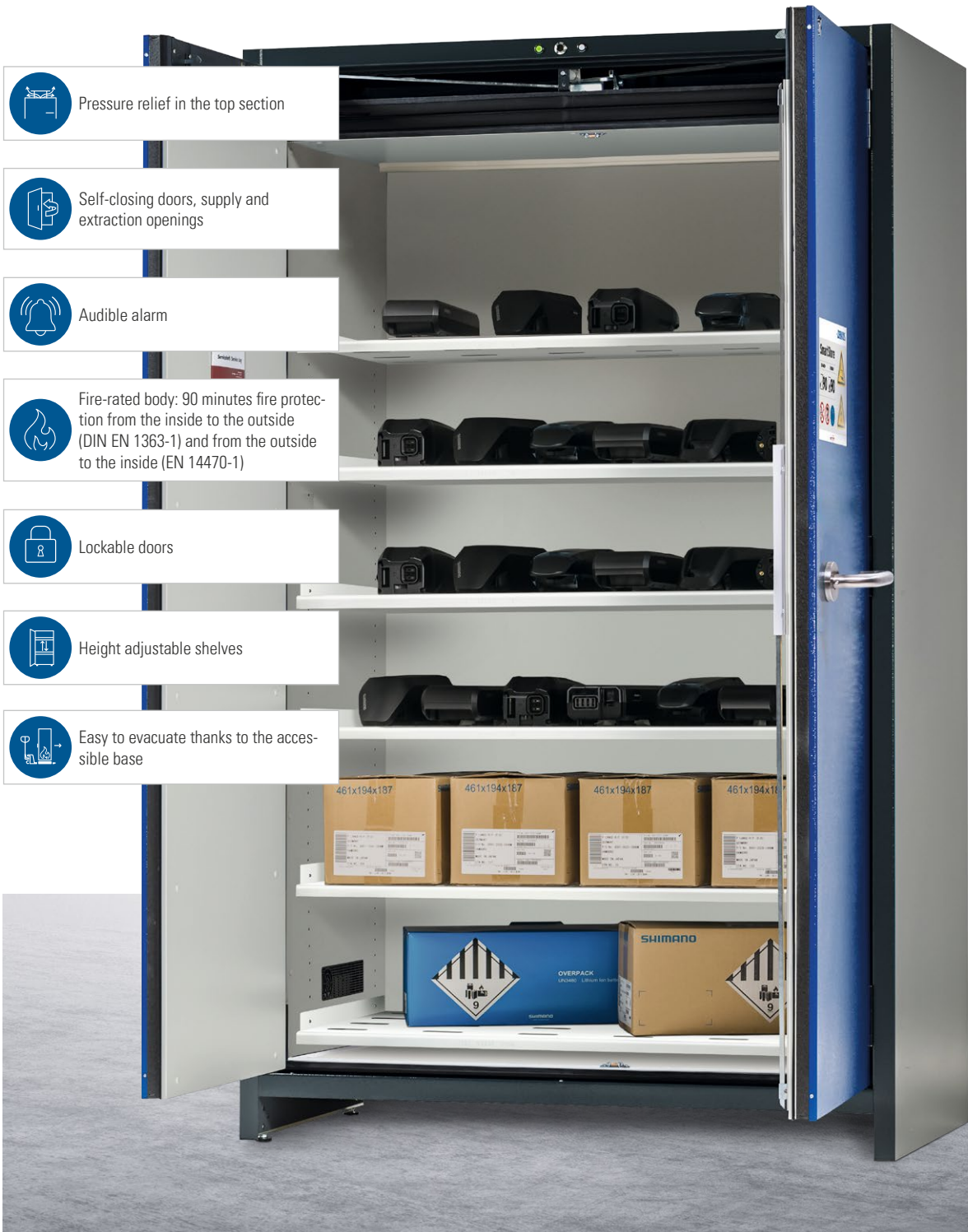


Lockable doors

The cabinet can be securely locked to prevent unauthorised use. An integrated red/green indicator shows the lock status.

CABINETS FOR STORAGE

THE FLEXIBLE AND SOLID STORAGE SOLUTION



COMPREHENSIVE FIRE PROTECTION WITH A PROVEN SAFETY DESIGN

EXTRAS:



Available as a wide or narrow version

OPTIONAL EXTRAS FOR YOUR ORDER

Additional shelf 2 Door

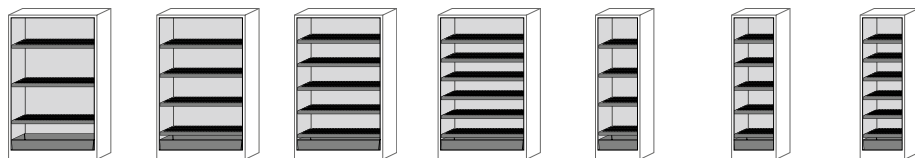
Item no: M31-8087

Additional shelf 1 Door

Item No: M31-8094



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SHELVES	3	4	5	6	4	5	6
External dimensions W x D x H [in]	47 x 24 x 77	47 x 24 x 77	47 x 24 x 77	47 x 24 x 77	24 x 24 x 77	24 x 24 x 77	24 x 24 x 77
Internal dimensions W x D x H [in]	41 x 20 x 64	41 x 20 x 64	41 x 20 x 64	41 x 20 x 64	17 x 20 x 64	17 x 20 x 64	17 x 20 x 64
Weight [lb]	1,034	1,056	1,079	1,102	655	667	705
Item Number	M31-8083	M31-8084	M31-8085	M31-8086	M31-8091	M31-8092	M31-8093

Further product information in the online shop [WWW.DENIOS-US.COM/LITHIUM-ION-CABINETS](http://www.denios-us.com/lithium-ion-cabinets)

INFORMATION ON LITHIUM BATTERIES

MEASURES TO PREVENT DAMAGE

It is generally recommended that lithium energy storage devices are treated as hazardous substances and handled accordingly. In our technical article you will find a range of information sources from which you can obtain information on the safe storage of lithium-ion batteries.

WWW.DENIOS-US.COM/BATTERY-ACID-BASICS



SAFETY RULES FOR LOADING LITHIUM BATTERIES

This free DENIOS poster shows you:

- The 4 most important safety rules for charging lithium batteries
- Which typical charging errors you should definitely avoid
- The right expert tips for your safety plan

WWW.DENIOS-US.COM/POSTER-4-SAFETY-RULES



CHARGING LITHIUM BATTERIES: DO YOU KNOW YOUR DUTY OF CARE?

Every year, lithium batteries cause around 6,000 fires in Germany, some of which cause considerable damage to property. Many of these incidents are due to errors during the charging process. Find out what lawyers consider to be negligent behaviour when charging lithium batteries and which general duties of care you should always observe.

WWW.DENIOS-US.COM/CHARGING-LITHIUM-BATTERIES



LITHIUM-ION BATTERIES - FUNCTION, HAZARDS, STORAGE AND TRANSPORT

Lithium-ion batteries are everywhere - they supply power for smartphones, PCs, cordless screwdrivers, robotic lawnmowers, e-bikes and cars. Lithium batteries sometimes store enormous amounts of energy in a small space. This article has everything you need to know about lithium-ion batteries.

WWW.DENIOS-US.COM/HOW-LITHIUM-BATTERY-WORKS



CABINETS FOR STORAGE AND LOADING



Pressure relief in the top section



Integrated protected power sockets



Audible alarm



Self-closing doors, air supply and extraction openings



Fire-rated body: 90 minutes fire protection from the inside to the outside (DIN EN 1363-1) and from the outside to the inside (EN 14470-1)



Lockable doors



Easy to evacuate thanks to the accessible base



LITHIUM BATTERY CABINETS

ADDITIONAL EQUIPMENT FOR EFFECTIVE FIRE DETECTION AND SUPPRESSION

EXTRAS:



Fire suppression unit

OPTIONAL EXTRAS FOR YOUR ORDER

Additional shelf 2 Door

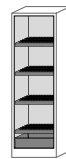
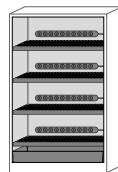
Item no: M31-8087

Additional shelf 1 Door

Item No: M31-8094



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SHELVES	4	4
Protected power sockets Number	20	20
External dimensions W x D x H [in]	47 x 24 x 77	24 x 24 x 77
Internal dimensions W x D x H [in]	41 x 20 x 64	17 x 20 x 64
Weight [lb]	1,035	655
Order number	M31-8996	M31-8098

UNDERBENCH STORAGE CABINET

COMPACT AND MOBILE THANKS TO OPTIONAL CASTORS IN THE CABINET BASE

EXTRAS:



Space-saving installation under work surfaces



Mobile thanks to castors



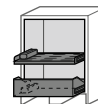
Pull-out shelves



Delivery incl. second pull-out shelf



Castor set for base



SHELVES	2
External dimensions W x D x H [in]	23 x 25 x 31
Internal dimensions W x D x H [in]	18 x 17 x 22
Weight [lb]	355
Order number	M31-8110

STAY IN TOUCH!

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