LITHIUM BATTERIES

SAFE STORAGE AND CHARGING

asecos®

»» **7 models in 4 sizes:** Solutions for every application

»» **All-round protection:** ION-LINE safety storage cabinets for your safety

Lithium-ion batteries

LITHIUM-ION BATTERIES –
HOW PROFESSIONALS AND INSURERS
RECOMMEND HANDLING BATTERIES

Ever more fequently, private individuals, tradespeople, and companies are using lithium-ion batteries classified as being in the moderate performance class according to VdS 3103. It is important to keep safety in mind when doing so. If you do not store and/or charge these batteries properly, they can pose hazards and safety risks.

Insurers, associations, and professionals have drawn attention to this issue.

Property insurers recommend using available protective equipment (such as type 90 safety storage cabinets) to minimise risks and avoid damage.

Property insurers recommend the use of safety storage cabinets for the following reasons:

"If lithium ion batteries are required at production facilities, then measures and safety precautions such as (...) storing them in fire-resistant cabinets should be considered".

IMK Ber. No. 192
Dipl.-Ing. Jürgen Kunkelmann
Section 2.2, last updated 10/2017

"Lithium batteries should generally be treated as a hazardous material."

Publication VdS 3103 : 2019-06 (03)
General Association of the German Insurance Industry
published by VdS Schadenverhütung GmbH

"Areas with medium power batteries should be spatially (at least 5 m) or structurally separated from other areas with fire-resistant structures."

Publication VdS 3103 : 2019-06 (03)
General Association of the German Insurance Industry
published by VdS Schadenverhütung GmbH

"Fire-resistant safety storage cabinets (type 90) with smoke detector monitoring offer particular protection, as batteries can be both stored and charged there in a protected manner. "

Provinzial Flyer – E-Bikes handling lithium safely, last updated 06/2020

"Past damage we have seen has shown that damaged or defective batteries, in particular, can cause a fire. We have also seen fires caused by lithium-ion batteries in bicycle stores".

Provinzial - Handling lithium-ion batteries safely in bicycle sales, www.provinzial.de last updated May 2020

"Larger quantities, or more powerful LIB must be stored at a safe distance from flammable materials. If they are stored inside buildings, then a clearance of 2.5m from other goods must be maintained, or the LIB must be stored in a separate area secured by fire protection technology (like a safety storage cabinet or container)!"

LIB= Lithium-ion batteries
DGUV Information 205-041
Fire protection when handling lithium-ion batteries
Last updated 02/2024

"Use of a charging cabinet or a separate room with fire protection, if more than 5 batteries are present."

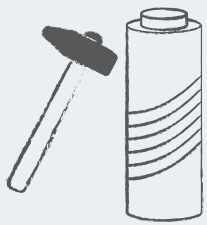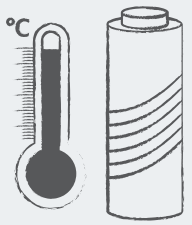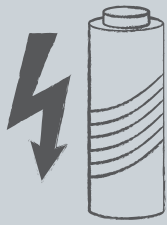GDV - Brief information on loss prevention Status 09/2024

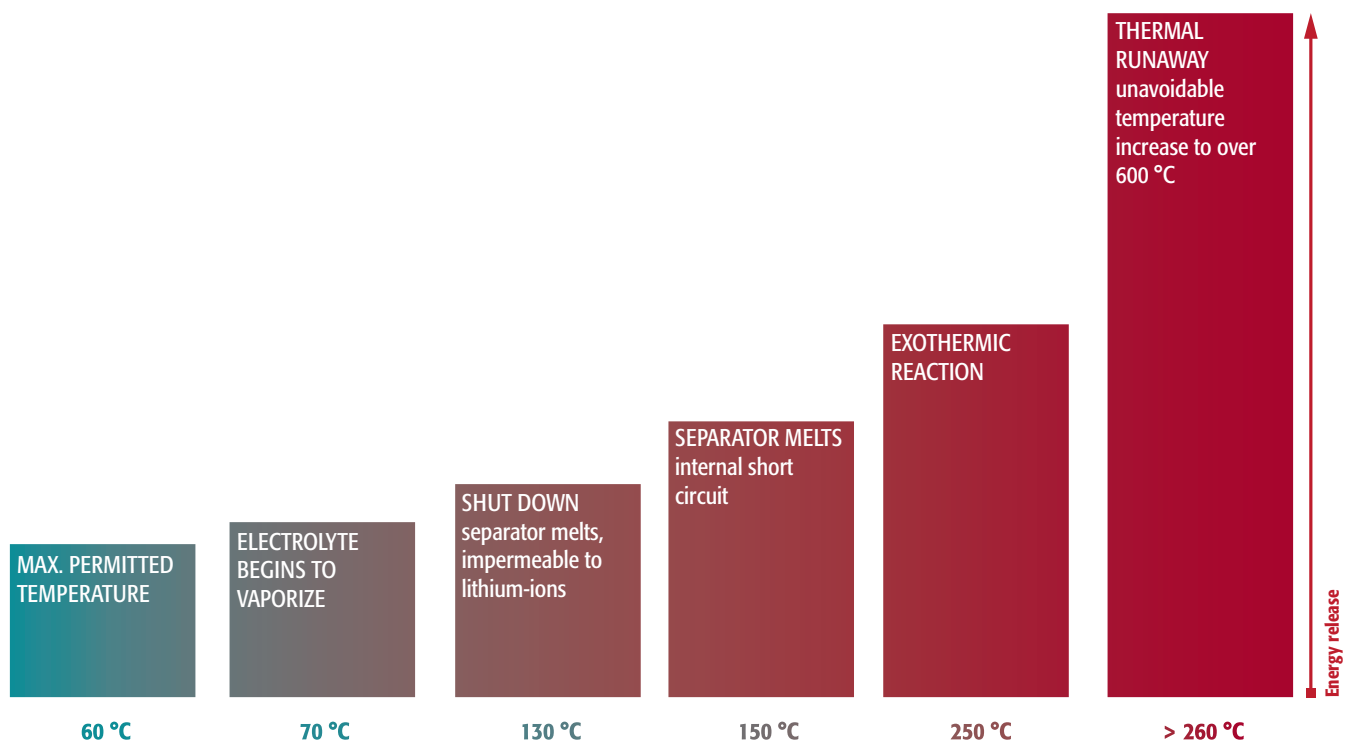ION-
LINE

Lithium-ion batteries

IMPROVED SAFETY THROUGH FIRE PROTECTION – CHARGING AND STORING BATTERIES CORRECTLY

Lithium-ion batteries can cause a fire. Causes include:

| Mechanical damage	Deep discharge	Thermal overload	Electrical overload
In combination with the high energy density of the battery	Unstable cell	Caused by external heat or energy sources	During charging and discharging

Always store and charge lithium-ion batteries in a safety storage cabinet. Handle batteries properly and appropriately to reduce hazards such as the risk of fire. Lithium-ion batteries offer many advantages. They are long-lasting, offer high energy density, have a low level of self-discharge, and can be used in a wide range of different applications. Using lithium-ion batteries is safe. However, according to the VDE they are safe only when handled properly. Technical defects or improper handling can cause a fire. If a lithium-ion battery discharges its energy in an uncontrolled manner, the heat released may exceed the melting point of the lithium. This will result in a chain reaction. Professionals call this "thermal runaway". The battery can explode as it burns. Because of this, it is important to understand and comply with the safety regulations for moderate performance batteries. It is best to store and charge lithium-ion batteries in an asecos safety storage cabinet.

MAX. PERMITTED TEMPERATURE

ELECTROLYTE BEGINS TO VAPORIZE

SHUT DOWN separator melts, impermeable to lithium-ions

SEPARATOR MELTS internal short circuit

EXOTHERMIC REACTION

THERMAL RUNAWAY unavoidable temperature increase to over 600 °C

Energy release

| 60 °C | 70 °C | 130 °C | 150 °C | 250 °C | > 260 °C |

SAFETY REGULATIONS FOR MEDIUM POWER CLASS BATTERIES

(Based on VdS 3103, Provincial flyer 06/2020, GDV – Brief information on loss prevention Status 09/2024)
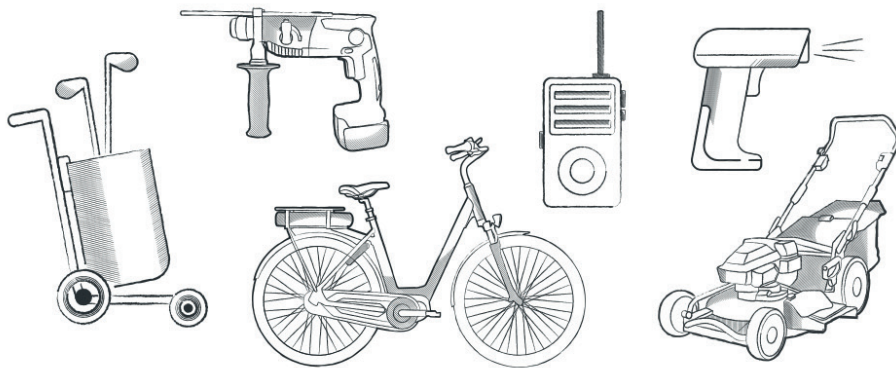
SAFETY REGULATIONS

▸ Comply with the manufacturer's specifications, and follow the information provided on technical product sheets.

▸ Protect the poles of the batteries from short circuiting.

▸ Protect the batteries from mechanical damage.

▸ Do not expose the batteries directly or continuously to high temperatures or heat sources, such as direct sunlight

▸ Store the batteries in a location structurally or spatially separate from other flammable materials if there is no automatic extinguishing system available: minimum distance 2.5 m

▸ **Use of a charging cabinet or a separate room with fire protection, if more than 5 batteries are present**

▸ Remove damaged or defective batteries from your warehouse and production areas immediately; store them temporarily until their disposal at a safe distance away, or in an area separated using fire protection technology.

▸ Only store batteries that have a testing certificate in accordance with UN 38.3; store prototypes only in exceptional cases and with a risk assessment.

▸ Only store batteries in separate, fire-resistant areas or at a safe distance of 5 m

▸ Do not store batteries with other products that can act as accelerants to a fire

▸ **Monitor the storage areas where your batteries are located using suitable sensors with connection to a permanently staffed alarm receiving office**

▸ With fire extinguishing systems, observe the information in the product data sheets for the batteries on suitable extinguishing agents.

Conclusion

Store and charge lithium-ion batteries in a safety storage cabinet!

ION-LINE

CORE, PRO AND ULTRA –
CUSTOMISED AND SAFE

The asecos ION-LINE offers three different safety levels for secure active and passive storage of lithium ion batteries.

CORE: Comprehensive fire protection with the proven asecos evacuation and alarm forwarding concept.
PRO: Expanded protection when handling lithium-ion batteries with improved monitoring.
ULTRA: Improved fire protection, active smoke gas management, and expanded monitoring are useful even in sensitive areas with the highest safety requirements.

	FEATURES\PRODUCT	ULTRA	PRO
TESTS AND CERTIFICATIONS	*Fire resistance from the outside*	✓	✓
	Fire resistance from the inside	✓	✓
	Certified real fire test	✓	✓
	GS certified	✓**	
DETECTION AND ALARMING	*Fire detection and alarm forwarding*	✓	✓
	3-stage monitoring system with smoke detector and temperature sensor	✓	✓
	Fire suppression	✓*	✓*
	Alarm differentiation	✓	✓*
FEATURES AND SPECIALITIES	*Evacuable from site*	✓	✓
	Thermally separated storage levels	✓	✓
	Pressure relief opening in the head section	✓	✓
	Smoke-tight	✓	

*optional
**GS certification applied for

No matter what safety level you choose, all cabinets offer these key safety features:
- Fire protection from the inside-out and from the outside-in for 90 minutes
- Smoke detection
- Alarm forwarding

In addition, for the CORE and PRO models, you have these options:
If you only want to **store** batteries in the cabinet, choose the **STORE version**. If you intend to **charge (active storage)** batteries directly in the cabinet, then choose the **CHARGE version**.

CORE	CHARGE LOCKER	CHARGE UB
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	
✓		
from page 20	**from page 24**	**from page 24**

ION-LINE

ION-LINE

OUR asecos ION-LINE **SAFETY CONCEPT**

ION-LINE safety storage cabinets offer you the safety you need for storing and charging lithium-ion batteries. The CORE, PRO and ULTRA models immediately detect any fires that occur in the cabinet. This allows employees to evacuate the building quickly if an alarm sounds.

Resulting from the connection to a permanently manned building control system, rescue services can:
- **to receive an alarm and be on site quickly.**
- **to immediately take further measures, for instance evacuating the building, to minimise subsequent damage caused by smoke or extinguishing water.**

ION-LINE cabinets are equipped with a transport base and quick-release power supply for safe evacuation. When the cabinet is removed from the setup location, this plug connection disconnects independently.

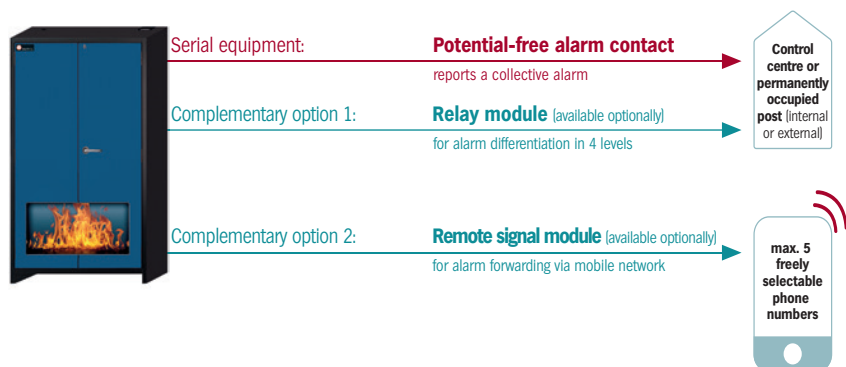|		Warning MESSAGE 1	ALARM LEVEL 1	ALARM LEVEL 2
INCIDENTS		• Interior temperature >50 °C Possible causes: • Temperature build-up due to battery charging processes • Ventilation system failure	• Smoke detector detects incipient smoke development Possible reasons: • Smoke detection without simultaneous temperature rise	• Alarm level 1 has been triggered • Interior temperature >70 °C Possible reasons: • Fire development
SYSTEM REACTIONS	**CORE**		• Acoustic signalling with medium tone interval • The potential-free switching contact forwards an alarm	
	PRO	• The warning light (red LED) is activated and lights up permanently, the function indicator (green LED) goes out. • Alarm triggers with slow sound interval • The socket strips switch off • The potential-free alarm contact forwards an alarm	• The warning light (red LED) is activated and lights up permanently, the function indicator (green LED) goes out. • Alarm triggers with medium sound interval • The potential-free alarm contact forwards an alarm In the PRO CHARGE model • Switching off the technical ventilation and power strips	• The warning light (red LED) switches from steady light to flashing light • The alarm switches to a fast sound interval • The fire suppression system trips In the PRO CHARGE model • Switching off the technical ventilation and power strips
	ULTRA	• Function indicator changes from green to flashing yellow • Alarm triggers with slow sound interval • The fan increases its speed for a short time • The socket strips switch off • The potential-free alarm contact forwards an alarm	• The function indicator flashes red • Alarm triggers with rapid sound interval • The ventilation flaps close • The fan and the socket strips switch off. • The potential-free alarm contact forwards an alarm	• The function indicator flashes red • Alarm triggers with rapid sound interval • The ventilation flaps close • The fan and the socket strips switch off • The potential-free alarm contact forwards an alarm • The optional fire suppression system trips
SUBSEQUENT MEASURES		• Immediate inspection caused by qualified in-house personnel • At an internal temperature below 50 °C, return to normal operation, the visual and acoustic signalling is switched off	Immediate inspection caused by qualified personnel (e.g. fire brigade) to initiate further measures if necessary If the smoke detector does not detect any further smoke inside the cabinet, the system can be reset to normal operation caused by briefly disconnecting it from the mains voltage	The overall system can then only be assessed by an authorised asecos service technician and reset to normal operation if possible. At least the fire suppression unit and smoke detector must be exchanged before doing so.

ALARM FORWARDING
AS **KEY COMPONENT**

Whenever the cabinet is unattended, especially at night or on weekends, alarm forwarding is indispensable in an emergency. It is the only way to quickly detect the damage and initiate countermeasures.

Manufacturer recommendation & series equipment:

POTENTIAL-FREE SWITCHING CONTACT

All ION-LINE cabinets are equipped at the factory with a potential-free switch contact for forwarding the alarm on site within the building. The most reliable way to transmit the alarm is to connect this contact to a continuously staffed control centre (internal or external). Optional modules can be purchased as an alternative or extension to this system.

Alarm forwarding – These are your options:

Serial equipment:	**Potential-free alarm contact**	Control centre or permanently occupied post (internal or external)
	reports a collective alarm	
Complementary option 1:	**Relay module** (available optionally)	
	for alarm differentiation in 4 levels	
Complementary option 2:	**Remote signal module** (available optionally)	max. 5 freely selectable phone numbers
	for alarm forwarding via mobile network	

ION-LINE

Complementary option 1:

RELAY MODULE

By choosing this option, you are opting for alarm differentiation instead of a collective alarm.

The factory-installed module differentiates between four different warning and alarm levels:

▪ **warning message at a temperature above 50 °C inside the cabinet**
▪ **alarm level 1**
▪ **alarm level 2**
▪ **power failure**

Via potential-free alarm contacts, these signals are passed on to a central control centre. With the clear differentiation of the alarm conditions, you can initiate optimally coordinated measures.

The relay module is suited for the PRO models of the ION-LINE.

Order No. 38766
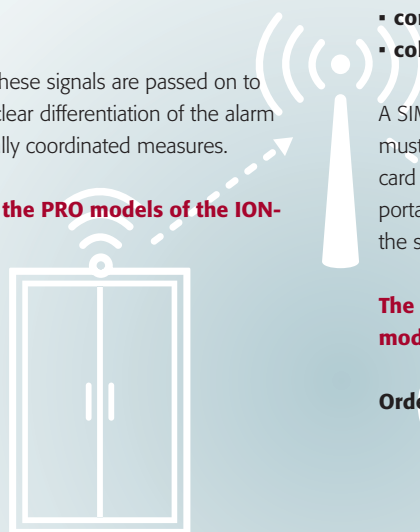
Complementary option 2:

MODULE FOR REMOTE SIGNALLING

The module offers an alarm forwarding via the mobile phone network (SMS/call) and is therefore especially suitable for companies and facilities without a central building management system. In an emergency, the immediate alerting of one or several defined persons is triggered.

The module is easily installed on-site by the customer via plug (also suitable for retrofitting) and offers the following functions:

▪ **five programmable telephone numbers**
▪ **configurable message texts**
▪ **collective alarm in case of an emergency or power failure**

A SIM card is required for the initial operation of the module, which must be provided by the customer. Alternatively, the included SIM card (for European and UK use only) can be activated via an online portal. A good mobile phone connection is necessary to ensure that the signal can be transmitted.

The remote signalling module is suited for all ION-LINE models.

Order No. EU-Version 38765
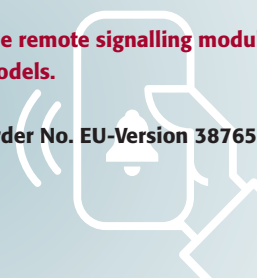
ION-LINE ULTRA

Tests have already been successfully completed for the ION-LINE ULTRA, as part of the requested GS certification for safety storage cabinets for the active and passive storage of lithium-ion batteries.

The GS test principles serve to verify the special performance of products in the selected area of application by an external test centre.

If you have any questions, please get in touch with your contact person!

ION-LINE ULTRA: Tested in Germany – safe throughout Europe.

ION-LINE | ION-ULTRA-90

Safe and approved passive and active storage of lithium-ion batteries in working areas Premium models for the highest safety requirements – how you can benefit from the advantages of the ION-ULTRA-90:

1 The safest of all worlds - fire tests with origins in the storage of hazardous substances, component testing specifications, real fire tests and European requirements

2 The insulated shelf – Propagation tested for safety at every storage level. In the event of a battery fire, spread to other batteries is prevented.

3 An LED indicator and visual/acoustic alarms quickly inform you of fires when they begin, without having to open the doors of the cabinet.

4 Optionally equipped with fire suppression system, which automatically triggers in the event of a fire.

5 Smoke detectors and two temperature sensors detect even incipient fires and can transmit alarms to the building control system quickly.

6 The built-in, temperature-controlled ventilation system prevents heat build-up when charging the batteries.

7 If your work area is not staffed, the standard potential-free switching contacts forward differentiated alarms immediately to a connected control centre. Optional remote signalling module available.

8 The additional 3-point locking system combines convenient operation with successfully tested safety of closed doors in a real fire.

9 Freedom in everyday life and emergencies – With the integrated transport base, the cabinet can be transported within the company or evacuated in the event of a fire.

90 EN 14470-1

· **Fire resistance of 90 minutes** (type 90), type-tested in accordance with EN 14470-1

VDMA 24994

· **Fire resistance in the event of a thermal runaway by means of a real fire test**, in accordance with VDMA 24994

90 EN 1363-1

· **Fire resistance of 90 minutes from inside to outside** in accordance with EN 1363-1

CE

· **CE compliant**

10 Years *Warranty*

· Extended **manufacturer warranty of up to 10 years** in combination with an asecos service tariff

ION-LINE

ULTRA

Model IO90.195.120.065.WDEL
Order No. 40559-047-41105

Image shows optional accessories

Model IO90.195.120.065.WDEL
Order No. 40559-047-41112

Image shows optional accessories

Model IO90.195.120.065.WDEL
Order No. 40559-047-40888

Image shows optional accessories

Technical data		EU version	UK version
External dimensions W x D x H	mm	1193 x 650 x 1953	1193 x 650 x 1953
Internal dimensions W x D x H	mm	1050 x 565 x 1643	1050 x 565 x 1643
Weight without interior equipment	kg	550	550
Maximum load	kg	600	600
Entry width transport base	mm	1120	1120
Entry height transport base	mm	90	90
Total power rating of the power socket strips			
Fuse (1-phase)	A	16	13
Power max. (1-phase)	kW	3,68	2,99
Fuse (3-phase)	A	3 x 16	3 x 13
Power max. (3-phase)	kW	11,04	8,97
Number of socket outlets per strip	piece	8	8

Main features

- Safe storage and charging of batteries
- Integrated warning system incl. LED display
- 3-point locking
- Insulated shelves

The additional 3-point locking system combines convenient operation with successfully tested safety of closed doors in a real fire.

Model	Body colour	Door colour	Order No.
IO90.195.120.065.WDEL	anthracite grey RAL 7016	gentian blue RAL 5010	40559-047
	anthracite grey RAL 7016	anthracite grey RAL 7016	40559-053

Interior equipment packages (can only be ordered in combination with the cabinet)	Material	Order No.	
		EU version	UK version
3x insulated shelf incl. outlet strips, 1x bottom collecting sump (V=2.85L)	powder-coated sheet steel	40878	40888
4x insulated shelf incl. outlet strips, 1x bottom collecting sump (V=2.85L)	powder-coated sheet steel	41102	41105
5x insulated shelf incl. outlet strips, 1x bottom collecting sump (V=2.85L)	powder-coated sheet steel	41106	41109
6x insulated shelf incl. outlet strips, 1x bottom collecting sump (V=2.85L)	powder-coated sheet steel	40921	41112

Accessories		Order No.	
		EU version	UK version
Power supply cable 400 V (can only be ordered in combination with the cabinet)	3-phase, for further properties see technical data table	38038	38038
Fire suppression unit with hoop guard		40941	40941

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ION-LINE | ION-PRO-90

Safe and approved passive and active storage of lithium-ion batteries in working areas Cabinet models for expanded safety requirements – how you benefit from the advantages of the ION-LINE PRO:

1 Hazards reliably identified – with the LED display and visual/audible alarms, you can quickly recognise developing fires without having to open the cabinet doors.

2 The insulated shelf – Propagation tested for safety at every storage level. In the event of a battery fire, spread to other batteries is prevented.

3 Smoke detectors and a temperature sensor detect even incipient fires and can transmit alarms to the building control system quickly.

4 Optionally equipped with fire suppression system, which automatically triggers in the event of a fire.

5 The ventilation attachment prevents heat build-up when charging the batteries.

6 Convenient cabinet entry – open both doors at the same time with just one hand.

7 Your battery charging process is safe – thanks to high-quality protective contact outlets in the fire safe interior of the cabinet.

8 The additional 3-point locking system combines convenient operation with successfully tested safety of closed doors in a real fire.

9 Freedom in everyday life and emergencies – With the integrated transport base, the cabinet can be transported within the company or evacuated in the event of a fire.

- **Fire resistance of 90 minutes** (type 90), type-tested in accordance with EN 14470-1

- **Fire resistance in the event of a thermal runaway by means of a real fire test**, in accordance with VDMA 24994

- **Fire resistance of 90 minutes from inside to outside** in accordance with EN 1363-1

- **CE compliant**

- Extended **manufacturer warranty of up to 10 years** in combination with an asecos service tariff

Model IO90.195.120.PC.WDC
Order No. 41269-047-41401

Image shows optional accessories

Model IO90.195.120.PC.WDC
Order No. 41269-047-41400

Image shows optional accessories

Technical data		EU version	UK version
External dimensions W x D x H	mm	1193 x 615 x 2224	1193 x 615 x 2224
Internal dimensions W x D x H	mm	1050 x 522 x 1647	1050 x 522 x 1647
Weight without interior equipment	kg	424	424
Maximum load	kg	600	600
Entry width transport base	mm	1120	1120
Entry height transport base	mm	90	90
Total power rating of the power socket strips			
Fuse (1-phase)	A	16	13
Power max. (1-phase)	kW	3,68	2,99
Fuse (3-phase)	A	3 x 16	3 x 13
Power max. (3-phase)	kW	11,04	8,97
Number of socket outlets per strip	piece	8	8

Main features

Safe storage and charging of batteries

Extraction unit and LED display included

3-point locking

Insulated shelves

PRO model – equipped with **LED function display** for visual detection of emergencies, and optional **fire suppression system**.

Model	Body colour	Door colour	Order No.
IO90.195.120.PC.WDC	anthracite grey RAL 7016	gentian blue RAL 5010	41269-047

Interior equipment packages (can only be ordered in combination with the cabinet)	Material	Order No.	
		EU version	UK version
3x insulated shelf incl. outlet strips, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel	41391	41399
4x insulated shelf incl. outlet strips, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel	41392	41400
5x insulated shelf incl. outlet strips, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel	41393	41401
6x insulated shelf incl. outlet strips, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel	41394	41402

Accessories		Order No.	
		EU version	UK version
Power supply cable 400 V (can only be ordered in combination with the cabinet)	3-phase, for further properties see technical data table	38038	38038
Module for remote signalling	alarm transmission to a mobile of your choice	38765	39221
Relay module	potential-free forwarding of 4 different alarm states	38766	38766
Fire suppression unit			42212

Service	Order No.
Service (UK only)	SER90018

Model IO90.195.120.PS.WDC
Order No. 41429-047-41388

Image shows optional accessories

Model IO90.195.120.PS.WDC
Order No. 41429-047-41389

Image shows optional accessories

Technical data		IO90.195.120.PS.WDC
External dimensions W x D x H	mm	1193 x 615 x 1953
Internal dimensions W x D x H	mm	1050 x 522 x 1647
Weight without interior equipment	kg	424
Maximum load	kg	600
Entry width transport base	mm	1120
Entry height transport base	mm	90

Main features

Store batteries safely

LED display included

3-point locking

Insulated shelves

Improper or irregular inspection of safety-related equipment, not only risks the **loss of insurance cover** but also threatens your **personal liability** - you can be held personally responsible for damage or injury.

Increase the **service life** and improve the operational safety of your ION-LINE cabinets with the **asecos original service**.

Model	Body colour	Door colour	Order No.
IO90.195.120.PS.WDC	anthracite grey RAL 7016	gentian blue RAL 5010	41429-047

Interior equipment packages (can only be ordered in combination with the cabinet)	Material	Order No.	
		EU version	UK version
3x insulated shelf, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel RAL 7035	41386	41386
4x insulated shelf, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel RAL 7035	41387	41387
5x insulated shelf, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel RAL 7035	41388	41388
6x insulated shelf, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel RAL 7035	41389	41389

Accessories		Order No.	
		EU version	UK version
Module for remote signalling	alarm transmission to a mobile of your choice	38765	39221
Relay module	potential-free forwarding of 4 different alarm states	38766	38766
Fire suppression unit			42212

Service	Order No.
Service (UK only)	SER90017

ION-LINE

ION-LINE | ION-CORE-90

Safe and approved passive and active storage of lithium-ion batteries in working areas Cabinet models for comprehensive safety requirements – how you can benefit from the advantages of the ION-CORE-90:

1 Storing lithium-ion batteries safely in cabinets with 90 minutes fire resistance.

2 The insulated shelf – Propagation tested for safety at every storage level. In the event of a battery fire, spread to other batteries is prevented.

3 Convenient cabinet entry – open both doors at the same time with just one hand.

4 Smoke detectors detect even incipient fires and can transmit alarms to the building control system quickly.

5 If your work area is not staffed, the standard potential-free switching contact forwards alarms immediately to a connected control centre. Optional remote signalling module available.

6 Your battery charging process is safe – thanks to high-quality protective contact outlets in the fire safe interior of the cabinet.

7 The two-point locking system allows you to lock the cabinet doors automatically and securely.

8 Freedom in everyday life and emergencies – With the integrated transport base, the cabinet can be transported within the company or evacuated in the event of a fire.

- **Fire resistance of 90 minutes** (type 90), type-tested in accordance with EN 14470-1

- **Fire resistance of 90 minutes from inside to outside** in accordance with EN 1363-1

- **CE compliant**

- Extended **manufacturer warranty of up to 10 years** in combination with an asecos service tariff

Model IO90.195.060.CC.WDC
Order No. 41302-047-41370

Model IO90.195.060.CC.WDC
Order No. 41302-047-41375

Technical data		IO90.195.060.CC.WDC
External dimensions W x D x H	mm	599 x 615 x 1953
Internal dimensions W x D x H	mm	450 x 522 x 1647
Weight without interior equipment	kg	265
Maximum load	kg	600
Entry width transport base	mm	526
Entry height transport base	mm	90
Total power rating of the power socket strips		
Fuse (1-phase)	A	13
Power max. (1-phase)	kW	2,99
Fuse (2-phase)	A	2 x 13
Power max. (2-phase)	kW	5,98
Number of socket outlets per strip	piece	8 *

Main features

- Safe storage and charging of batteries
- Integrated smoke detector for fire detection
- 2-point locking
- Insulated shelves

* A minimum of 3 power sockets available per shelf.
Each locker has access to a minimum of 1 power socket.

EXPERT TIP

Lithium-ion batteries with **obvious damage** should generally **not be stored inside buildings**:

Dispose of them **promptly in appropriatedisposal containers** suitable fortransportation, **outside of buildings**.

Model	Body colour	Door colour	Order No.
IO90.195.060.CC.WDC	anthracite grey RAL 7016	gentian blue RAL 5010	41302-047

Interior equipment packages (can only be ordered in combination with the cabinet)	Material	Order No. EU version	UK version
		EU version	UK version
7x metal locker with insulated shelf incl. outlet strips, 1x bottom collecting sump (V=1.0L)	powder-coated sheet steel	41373	41375
4x insulated shelf incl. outlet strips, 1x bottom collecting sump (V=1.0L)	powder-coated sheet steel	41366	41370

Accessories		Order No.	
		EU version	UK version
Power supply cable 400 V (can only be ordered in combination with the cabinet)	3-phase, for further properties see technical data table	38038	38038
Module for remote signalling	alarm transmission to a mobile of your choice	38765	39221

Service	Order No.
Service (UK only)	SER90019

Model IO90.195.120.CS.WDC
Order No. 41426-047-41387

Model IO90.195.120.CS.WDC
Order No. 41426-047-41389

Model IO90.195.060.CS.WDC
Order No. 41419-047-41363

ION-LINE

Technical data

Technical data		IO90.195.120.CS.WDC	IO90.195.060.CS.WDC
External dimensions W x D x H	mm	1193 x 615 x 1953	599 x 615 x 1953
Internal dimensions W x D x H	mm	1050 x 522 x 1647	450 x 522 x 1647
Weight without interior equip.	kg	424	265
Maximum load	kg	600	600
Entry width transport base	mm	1120	526
Entry height transport base	mm	90	90

Main features

Store batteries safely

Integrated smoke detector for fire detection

2-point locking

Insulated shelves

Model	Body colour	Door colour	Order No.
IO90.195.120.CS.WDC	anthracite grey RAL 7016	gentian blue RAL 5010	41426-047
IO90.195.060.CS.WDC	anthracite grey RAL 7016	gentian blue RAL 5010	41419-047

Interior equipment packages (can only be ordered in combination with the cabinet)	Material	Order No.	
IO90.195.120.CS.WDC		**EU version**	**UK version**
3x insulated shelf, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel RAL 7035	41386	41386
4x insulated shelf, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel RAL 7035	41387	41387
5x insulated shelf, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel RAL 7035	41388	41388
6x insulated shelf, 1x bottom collecting sump (V=2.6L)	powder-coated sheet steel RAL 7035	41389	41389
IO90.195.060.CS.WDC		**EU version**	**UK version**
3x insulated shelf, 1x bottom collecting sump (V=1.0L)	powder-coated sheet steel RAL 7035	41362	41362
4x insulated shelf, 1x bottom collecting sump (V=1.0L)	powder-coated sheet steel RAL 7035	41363	41363
5x insulated shelf, 1x bottom collecting sump (V=1.0L)	powder-coated sheet steel RAL 7035	41364	41364
6x insulated shelf, 1x bottom collecting sump (V=1.0L)	powder-coated sheet steel RAL 7035	41365	41365

Accessories	For cabinet width	Order No.	
		EU version	**UK version**
Insulated shelf	1200	42201	
Insulated shelf	600	42202	
Module for remote signalling — alarm transmission to a mobile of your choice		38765	39221

Service	Order No.
Service (UK only)	SER90016

ION-LINE | ION-CHARGE-90

Safe and approved passive and active storage of lithium-ion batteries in working areas
Cabinet models for customer-specific safety requirements – how you can benefit from the advantages of the ION-CHARGE-90:

1 Your battery charging process is safe – thanks to high-quality protective contact outlets in the fire safe interior of the cabinet.

2 Smoke detectors detect even incipient fires and can transmit alarms to the building control system quickly.

3 If your work area is not staffed, the standard potential-free switching contact forwards alarms immediately to a connected control centre. Optional remote signalling module available.

4 The under bench cabinet can be flexibly integrated under worktops due to a height of 78 cm.

5 Fire-safe locked compartments reduce the spread of fires inside the cabinet. You can remove the locked compartments individually in case of a fire.

6 Protect yourself from unauthorised access and theft with the lockable drawer.

7 The temperature sensor detects fires in each locked compartment. This allows alarms to be indicated and forwarded immediately via LED and acoustic/visual alarms.

8 The integrated transport base and optional rollers allow for easy transport and immediate evacuation to a safe location outdoors in case of damage.

- **Fire resistance of 90 minutes** (type 90), type-tested in accordance with EN 14470-1

- **Fire resistance of 90 minutes from inside to outside** in accordance with EN 1363-1

- **CE compliant**

- **Excellent products with special manufacturer warranty**
- Extended **manufacturer warranty of up to 10 years** in combination with an asecos service tariff

ION-LINE | ION-CHARGE-90

Model IO90.078.059.057.U9.S
Order No. 39354-247-39489

Picture shows optionally available castors.

Technical data		EU version	UK version
External dimensions W x D x H	mm	593 x 574 x 780	593 x 574 x 780
Internal dimensions W x D x H	mm	470 x 452 x 582	470 x 452 x 582
Weight without interior equip.	kg	130	130
Maximum load	kg	300	300
Entry width transport base	mm	526	526
Entry height transport base	mm	90	90
Total power rating of the power socket strips			
Fuse	A	16	13
Power max.	kW	3,68	2,99
Number of socket outlets per strip	piece	4 *	4 *

*   4 power sockets available per drawer.

Main features

- Safe storage and charging of batteries
- Perfect for installation under work surfaces
- Optionally available with castor set for the transport base

MOBILE

Optionally available castors with integrated locking mechanism, easy moving of the cabinet

Model	Body colour	Door colour	Order No.
IO90.078.059.057.U9.S	anthracite grey RAL 7016	gentian blue RAL 5010	39354-247

Interior equipment packages (can only be ordered in combination with the cabinet)	Material	Order No.	
		EU version	UK version
1x drawer (load capacity = 50 kg) incl. socket strip, 1x second level drawer (load capacity = 25 kg) incl. socket strip	powder-coated sheet steel	39368	39489

Accessories		Order No.	
		EU version	UK version
Castor set for plinth	can only be ordered in combination with cabinet	39374	39374
Module for remote signalling	alarm transmission to a mobile of your choice	38765	39221

Service		Order No.
Service (UK only)		SER90019

Model IO90.195.060.L8.WDC
Order No. 39409-047

Technical data		EU version	UK version
External dimensions W x D x H	mm	599 x 615 x 1953	599 x 615 x 1953
Internal dimensions W x D x H	mm	450 x 522 x 1647	450 x 522 x 1647
Weight without interior equip.	kg	265	265
Maximum load	kg	600	600
Entry width transport base	mm	526	526
Entry height transport base	mm	90	90
Total power rating of the power socket strips			
Fuse	A	16	13
Power max.	kW	3,68	2,99
Number of socket outlets per strip	piece	2 *	2 *

* Each locker has access to a minimum of 2 power sockets.

Main features

Safe storage and charging of batteries

Fire-protected lockers

Temperature sensor for fire detection

ION-LINE

FIRE RESISTANT LOCKERS

prevent the spread of fire throughout the entire interior of the cabinet by removing them individually and protect stored batteries from flame spread.

Model	Body colour	Door colour	Order No.
IO90.195.060.L8.WDC	anthracite grey RAL 7016	gentian blue RAL 5010	39409-047

| Interior equipment packages (can only be ordered in combination with the cabinet)	Material	Order No.	
		EU version	UK version
5x fire-protected lockers incl. outlet strips 1x bottom collecting sump (V = 2.0 l)	powder-coated sheet steel	39413	41119

Accessories		Order No.	
		EU version	UK version
Module for remote signalling	alarm transmission to a mobile of your choice	38765	39221

Service	Order No.
Service (UK only)	SER90018

Storage heights

IO90.195.120.065.WDEL

Shelves/number			6	5	4	3
Distance	❻	(mm)	250			
Distance	❺	(mm)	245	300		
Distance	❹	(mm)	245	295	380	
Distance	❸	(mm)	245	295	375	515
Distance	❷	(mm)	245	295	375	510
Distance	❶	(mm)	245	295	375	510
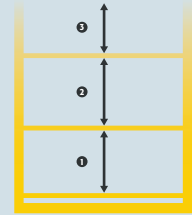
IO90.195.120.XX.WDC

Shelves/number			6	5	4	3
Distance	❻	(mm)	240			
Distance	❺	(mm)	235	305		
Distance	❹	(mm)	235	300	435	
Distance	❸	(mm)	235	300	360	500
Distance	❷	(mm)	235	300	360	520
Distance	❶	(mm)	235	300	360	520
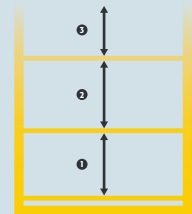
IO90.195.60.XX.WDC

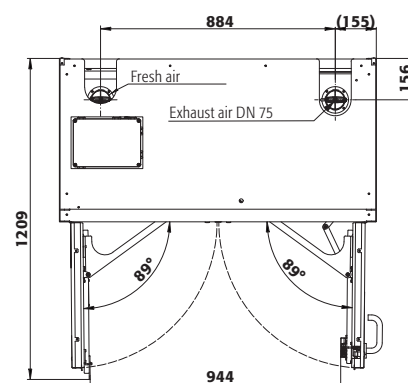| Shelves/number			6	5	4	3
Distance	❻	(mm)	240			
Distance	❺	(mm)	235	305		
Distance	❹	(mm)	235	300	435	
Distance	❸	(mm)	235	300	360	500
Distance	❷	(mm)	235	300	360	520
Distance	❶	(mm)	235	300	360	520
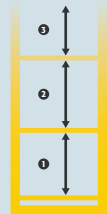
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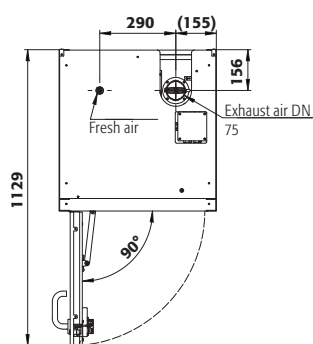
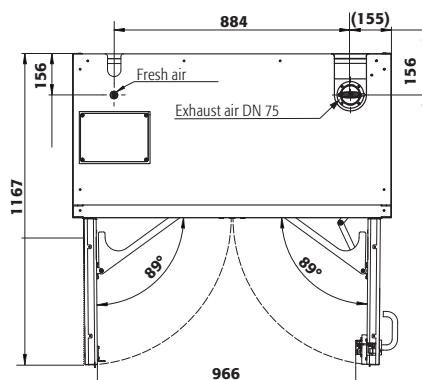Connection for flue gas discharge DN160

259

228

1263

Inspection flap, including release device for pressure relief

89° 89°

1009

IO90.195.120.065.WDEL

Extraction air DN 99

156

Fresh air

1209

89° 89°

944

IO90.195.120.PC.WDC

884 (155)

Fresh air

156

Exhaust air DN 75

1209

89° 89°

944

IO90.195.120.PS.WDC

290 (155)

156

Fresh air

Exhaust air DN 75

1129

90°
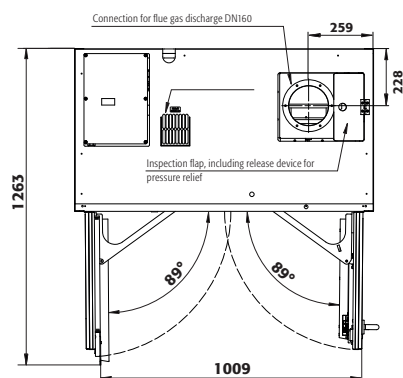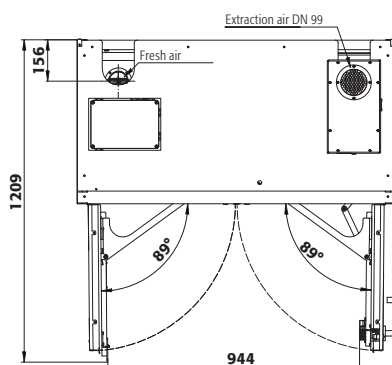
IO90.195.060.CC.WDC
IO90.195.060.CS.WDC

884 (155)

156

Fresh air

Exhaust air DN 75

156

1167

89° 89°

966

IO90.195.120.CS.WDC

290 (155)

156

Fresh air

Exhaust air DN 75

1129

90°

IO90.195.060.L8.WDC

ION-
LINE

Fresh air

Earthing link

290 151

Active exhaust air fan

IO90.078.059.057.U9.S

29
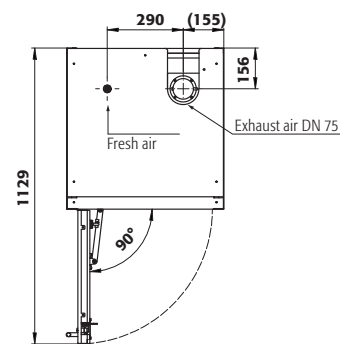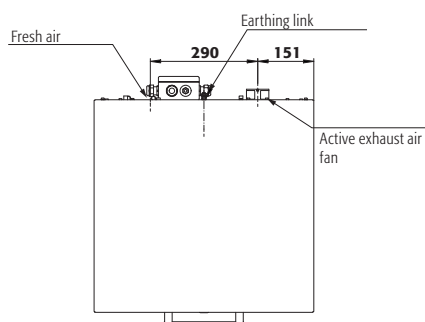
Service and maintenance

DO NOT **COMPROMISE** WHEN IT COMES TO **SAFETY**

Make yourself secure - safety for employees, work equipment and buildings

Have your safety systems, such as safety cabinets, serviced regularly, properly and in accordance with manufacturer's guidelines from the asecos experts. This will ensure greater safety in your workrooms or workshop. If you do not maintain and service your safety equipment, or do so improperly or inadequately, you may lose your insurance cover as the operator in the event of damage. This is often associated with costs, e.g. caused by a plant shutdown or closure.

Therefore, focus on safety. More security for your staff or employees, your buildings and everything inside them. Our ION-LINE safety storage cabinets are categorised as fire protection and therefore safety systems.

According to "Health and Safety at Work Act 1974 section 2 (d)", these must be properly maintained and checked for functionality at regular intervals by a competent person. We support you in this!

Benefit from our asecos original service to maintain the full functionality of your safety storage cabinets and your insurance cover. Our service technicians are qualified persons as defined by TRBS 1203 and offer you
legal security. Contact us now!

Our proposal (for UK only) - tailored to your individual needs:

BASIC*Plus*

1 Year warranty for the services provided

The regular inspection according to EC-directives 89/391/EEC

Inspection
- Visual inspection including ventilation test
- Error analysis

Legal Certainty Inspectorate
- Control of stored goods, legal marking, checking the documentation, installation conditions

Immediate maintenance
- Measures to delay wear and tear
- Functional test
- Feedback of maintenance work

Immediate repair
- Replacement of parts to a value of £5 are included in the service.
- Immediate repair in 98% of cases for manufactured products

Signed entry in the asecos service booklet / inspection sticker / inspection record

www.asecos.co.uk

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TERMS AND CONDITIONS

Dimensions, weights and illustrations
Technical data such as dimensions and weights shown in the catalogue are approximate values.
Illustrations may contain special equipment. Products will be delivered without any decoration material.

Price and delivery information
To obtain binding price information and delivery times, please contact your respective dealer/retail partner.

Customs duty / documents dispatch
In case any country-specific extra costs occur for an order (like for example customs confirmation, express shipping of documents, chamber of commerce (IHK) confirmations, etc.), the charges will be passed on accordingly.

Other information
Furthermore we refer to the general terms and conditions of the asecos GmbH on *www.asecos.global* and the terms and conditions of your specialised dealer.

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