

EN

EP.V.35874.02 | 11/2025

asecos®



ION
LINE

PRO

USER MANUAL

Safety storage cabinets for storage
and charging of lithium ion batteries

ION^{LINE}

ION-PRO-90



IO90.195.120.PC.WDC



IO90.195.120.PS.WDC

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YOUR PERSONAL DOCUMENTATION TO THE asecos SAFETY CABINET

Dear Customer,

you have made a decisive investment in safety for your company by purchasing this asecos safety storage cabinet. You now own an innovative product made of top-quality materials guaranteeing the highest quality standards.

asecos safety storage cabinets have complete authorisation documents. We archive the authorisation documents for every individual cabinet, keeping them ready for you should you ever need them (e.g. for a works inspection or similar). Simply request them using this form.

Tear of or copy that page and return to us by fax with your address and serial number of the cabinet on it.

Yours sincerely
asecos GmbH

Contact

Company		
<input type="text"/>		
Street	Postal code	Town
<input type="text"/>	<input type="text"/>	<input type="text"/>
Name of contact person		
<input type="text"/>		
email	Phone No.	
<input type="text"/>	<input type="text"/>	
Serial numbers of safety storage cabinets		
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OPERATING INSTRUCTIONS

Dear customer,

Thank you very much for purchasing a safety storage cabinet from our company, with which you have made a decisive investment in the safety within your company. Our safety storage cabinets make the storage of lithium-ion batteries at the workplace safe and convenient for you.

Please read these operating instructions very carefully. Get to know the advantages and simple operability of our safety storage cabinets in detail. This simplifies the daily handling of lithium-ion batteries for you.

Many thanks
Your asecos team

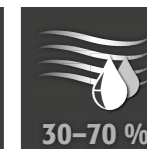
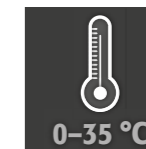
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1. NOTES • GUIDELINES • GUARANTEE

1.1. GENERAL SAFETY NOTES

- When handling lithium-ion batteries, observe the applicable regulations and the information in these operating instructions
- Work on the electrical system is to be carried out only with the power turned off and only by qualified electricians – refer here to the regulations of the local electricity supply company.
- General damage to electronic components is to be repaired without delay by an asecos employee.
- Use only intact and undamaged mains cables for the battery charger
- Electrical protection in accordance with local standards must be provided by the customer (cabinets do not have their own RCD circuit breaker or circuit breaker)
- The on-site installation conditions are to be observed.
- The instructions of the supervisory engineering department must be followed.
- Observe accident prevention regulations and workplace ordinance
- **Ensure that the necessary safety checks are only carried out by authorised staff using original spare parts**
- Only use the cabinet after having been properly instructed; access is to be forbidden to unauthorised persons.
- The doors must be locked when not in use. See point “Locking”
- The doors are permanently self-closing and must not be pushed shut manually
- The pivoting area of the doors is to be kept free at all times; doors are to be kept closed
- By assigning trained/authorised technical personnel you can prevent the malfunctions, damage and corrosion damage that result from inappropriate transport.
- Observe the upper limits for stored quantities, loading etc.
- The following substances may not be stored in the cabinets with a fire suppression system: acids, alkalis, magnesium, other metals (in powder form)
- **Observe the notes on maximum size and general storage of the batteries in these instructions**
- If cable openings are no longer required due to new usage circumstances, they must be closed in accordance with the manufacturer’s specifications.

Set-up requirements



CAUTION
Do not install the cabinet near fire hazards!

1.2. SAFETY INSTRUCTIONS FOR THE STORAGE OF LITHIUM-ION BATTERIES

- Any charger included will switch off in the event of fire or overheating
- Follow the instructions for storing your batteries in accordance with the battery manufacturer’s operating instructions
- Batteries can produce toxic gases, therefore connection to an exhaust air system is recommended.
- Alternatively, a risk analysis must be carried out. The result determines whether additional safety measures are necessary to minimize the risk of toxic, flammable gases in the work area.

1.3. GUARANTEE

The guarantee for this product is agreed between you (the customer) and your dealer (the seller). As the manufacturer, asecos guarantees the products listed in the operating instructions for a period of 24 months from the date of delivery. All model safety equipment are subject to a compulsory annual inspection by specialised staff authorised by the manufacturer. Otherwise the customer’s guarantee claim against the manufacturer expires. Please note that the warranty is also void if holes are drilled or modifications are made without consulting the manufacturer asecos.

1.4. CABINET DETAILS

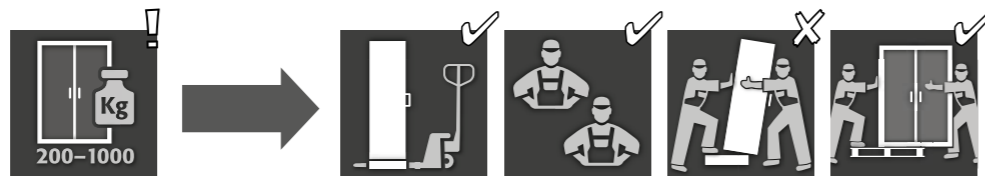
Cabinet data: logbook (included with the cabinet)
Technical drawing: see appendix
Technical data: table in appendix

ION-PRO-90

Safety storage cabinets for lithium-ion batteries
Extended protection for professional handling of lithium-ion batteries including 3-stage alarm and active fire suppression system. During active storage, lithium-ion batteries or battery packs are charged or partially discharged (60-70%) in the cabinet using a charger.

Model	Lithium ion batteries		Integrated technical ventilation	Fire suppression unit	Alarm system
	Storing	Charging			
IO90.195.120.PC.WDC	✓	✓	✓	Optional accessories	✓
IO90.195.120.PS.WDC	✓			Optional accessories	✓

2. TRANSPORT



CAUTION:
Transport the cabinet in an upright position on a pallet truck, tied and secured against slipping, until the final place of installation is reached. The transport locks in the door joints may only be removed directly at the place of installation! Inappropriate transport can lead to concealed damage to the fire protection insulation! We can only guarantee the necessary quality if the cabinet is transported to the place of its use by our specially trained staff.



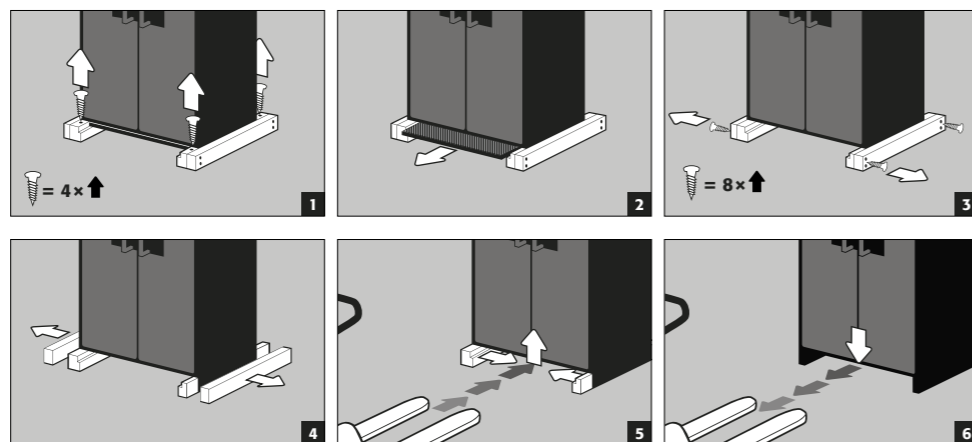
ATTENTION with cabinets including extraction unit:
The doors must be locked prior to transport! The extraction unit is inside the cabinet and is only mounted after the in-plant transport to the place of use.

2.1. TILTING THE CABINET



CAUTION:
Tilting the cabinet may only be done without jolts! When using a stair robot, observe the maximum load capacity of the device according to the manufacturer's instructions!

2.2. DISMANTLING OF THE TRANSPORT PACKAGING

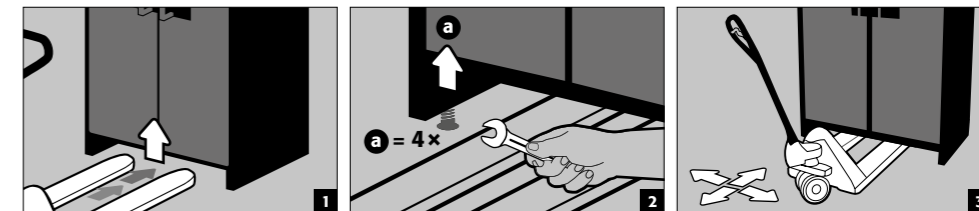


2.3. IN-PLANT TRANSPORT

- Can also be used without transport locks (inserted in the door joints as standard)
- The cabinets are equipped with a transport base for internal transportation or for tactical measures following a battery fire.
- The cabinets are automatically disconnected from the power supply during transportation.
- After a battery fire, this must only be carried out by qualified personnel (e.g. fire department) wearing personal protective equipment.
- Transportation by at least 2 persons is recommended!

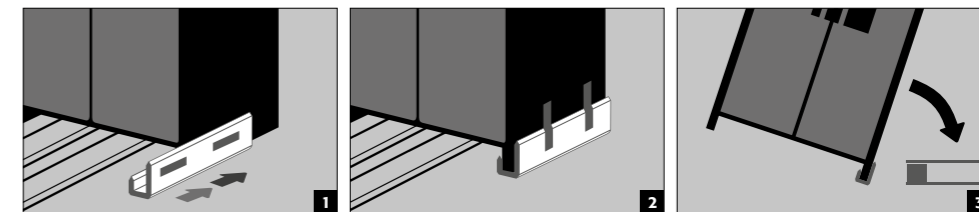


ATTENTION with cabinets including extraction unit:
The doors must be locked prior to transport! The extraction unit is inside the cabinet and is only mounted after the in-plant transport to the place of use.



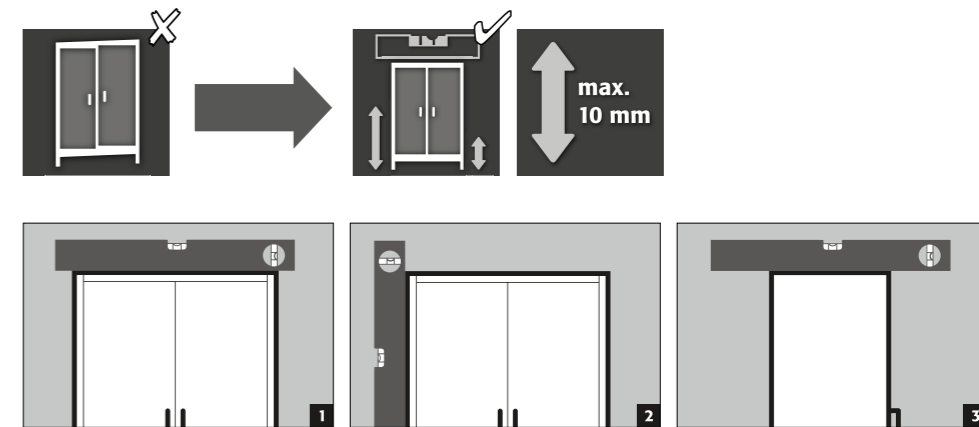
2.4. TITLING ONTO THE SIDE WALL

- Tilting onto the side wall is only possible with the optionally available tilting bracket (order no. 29556).

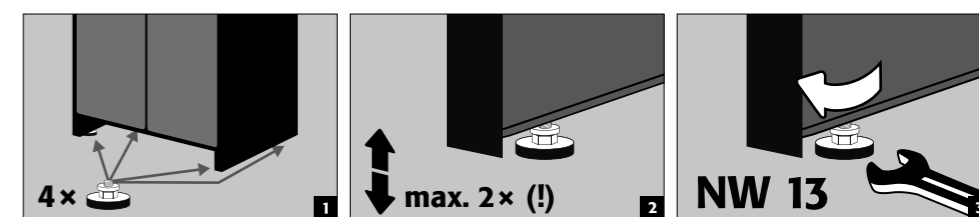


3. INSTALLATION

3.1. ALIGNMENT OF THE CABINETS



CAUTION:
Door elements must not scrape against the fire prevention seals in the fold of the door when opening and closing! Doors with an automatic closing mechanism must close automatically from every position and the lock must be able to lock!

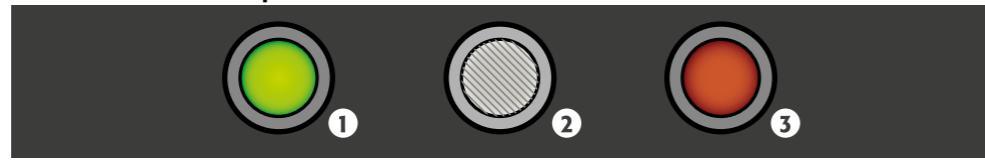


4. COMMISSIONING

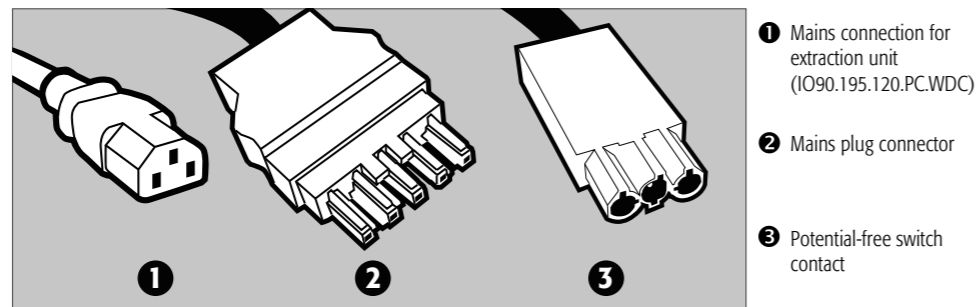
- Before putting into operation for the first time, the user must carry out an examination of the safety storage cabinet for possible damage, such as defective or loose sealing elements, correct alignment and perfect functioning of the door elements.
Use the cabinet and accessories only if they are in an orderly condition.

4.1. CONNECTION TO THE POWER SUPPLY

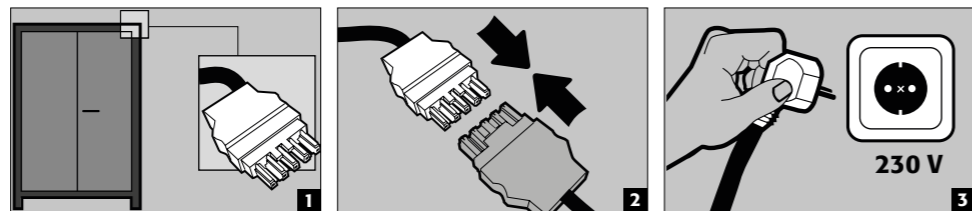
Connections on the headpiece:



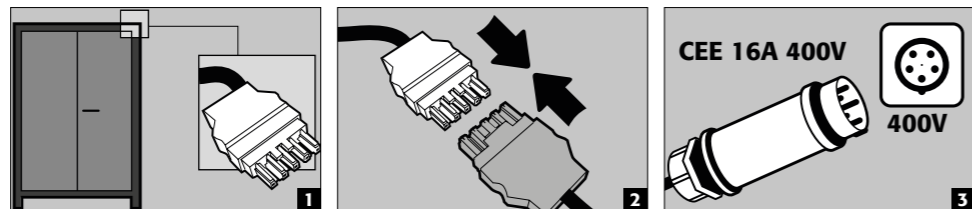
1 LED: Operating (green) 2 RESET BUTTON 3 LED: Error (red)



Connection to the power supply

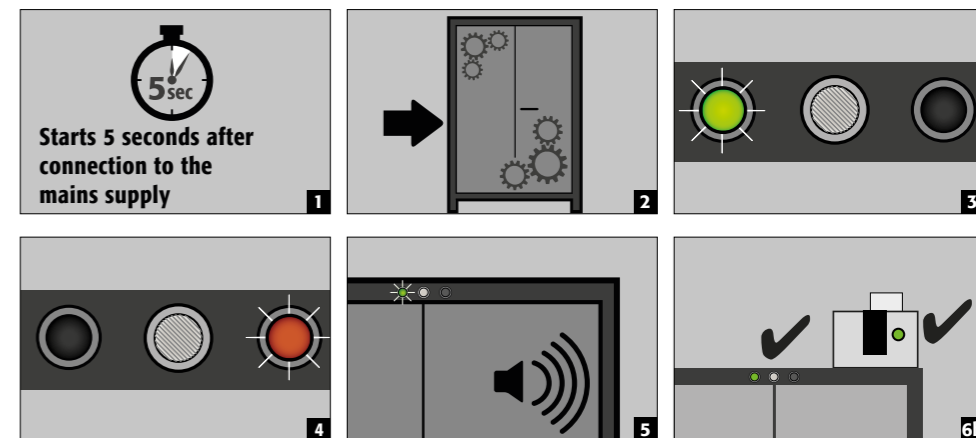


Connection to the power supply with 400 V (optional with item 38038)

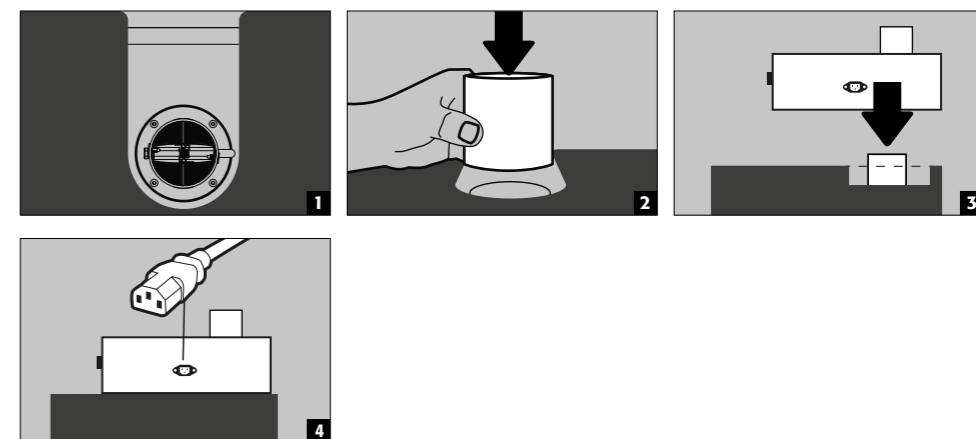


NOTE:
Retrofitting is easy due to the plug-in connection, so that no intervention in the electrical components is necessary. The power supply must be fused on site with a maximum of 16A. Electrical protection in accordance with local standards must be provided on site. The cabinets do not have their own RCD circuit breaker or circuit breaker.

4.2. SELF-TEST



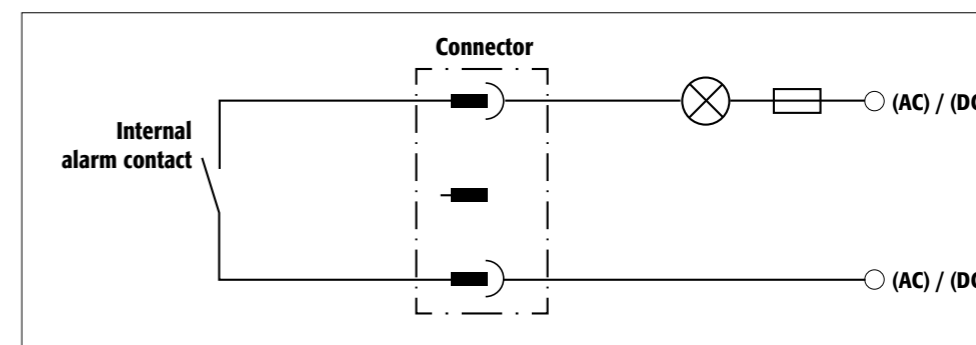
4.3. INSTALLATION OF THE EXTRACTION UNIT



4.4. POTENTIAL-FREE ALARM CONTACT



NOTE:
The potential-free alarm contact is used to connect a signal to a control centre/control room. Direct integration into a fire alarm control panel (FACP) is not recommended or may only be carried out in consultation with the person responsible for the system.
However, it is always recommended to connect the signal to a manned control centre/control room!
The potential-free switching contact must always be connected by the customer (not a service).



Connection instructions

- Use only the supplied mating part to the plug for the connection
- The connection must be done by a qualified electrician
- The contact is designed for a max. DC voltage of 30 V or a max. AC voltage of 230 V
- The maximum current load is 10 A
- The switch contact is normally closed!
- The switch contact opens as soon as mains voltage is present and no error is pending (device is „ready to operate“)

5. CLOSING

5.1. IN GENERAL

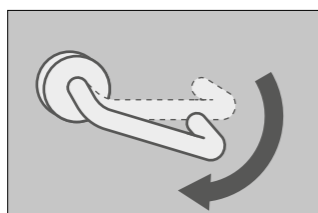
- The cabinets can be opened by operating the door handle (see 5.2)
- They are also equipped with an automatic door closing system.
- The doors are locked as soon as they have closed automatically
- The open doors are permanently self-closing



ATTENTION:

The owner/user must ensure that all doors are kept closed whenever the contents of the cabinet are not being accessed. In general, it must be noted that the cabinets do not possess an emergency unlocking facility. This means that persons trapped inside the cabinet cannot free themselves!

5.2. DOOR OPENING AND CLOSING



- To open the doors, the door handle must be pressed down and the door pulled open
- Both doors are always opened simultaneously
- Otherwise, they are permanently self-closing and fall into the lock automatically when released

5.3. AUTOMATIC DOOR CLOSING SYSTEM



CAUTION:

The doors close and lock automatically and permanently. Do not push the doors closed by hand, as this can damage the mechanism!

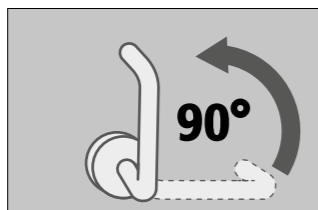
5.4. BLOCKING THE DOORS DURING THE CLOSING PROCESS



CAUTION:

If the doors are blocked during the closing process and cannot close completely, the cabinet signals a fault after 60 seconds. The LED flashes green and an intermittent tone sounds. If you remove the blockage, the doors close automatically and the fault signal goes out.

5.5. THREE-POINT LOCKING SYSTEM



- The closed doors can be additionally locked by means of a 3-point lock.
- To do this, the door handle must be turned 90° upwards



CAUTION:

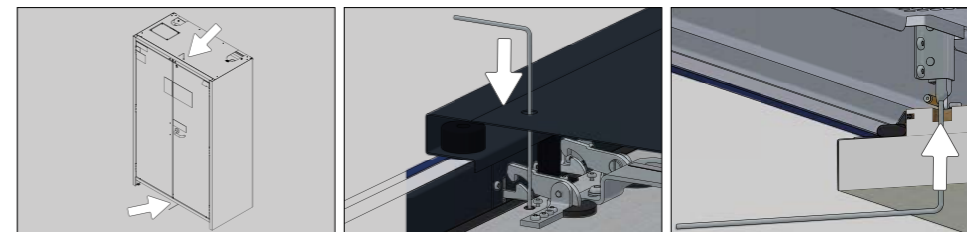
If the door handle is in the 3-point locking position when the doors are open, the doors can no longer close completely on their own.

5.6. LOCK DESIGN



- The lockers have a profile cylinder lock with locking status indicator.
- They can be integrated into a locking system.
- A profile half cylinder (30/10) with adjustable locking lug must be used.

5.7. MECHANICAL EMERGENCY UNLOCKING



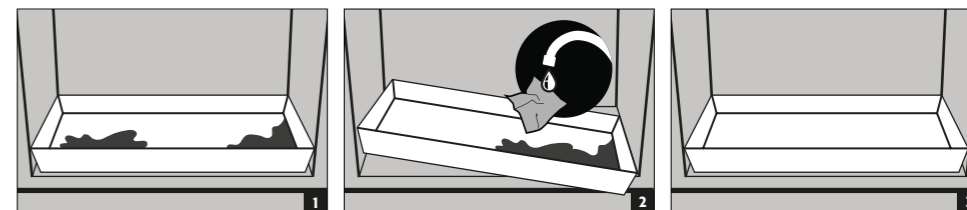
- If the fuse in the front head section has tripped, the door is locked.
- The following process is recommended to be performed twice!
- Attach the two emergency release hooks supplied to the top and bottom of the cabinet (see illustration).
- Press both hooks into the designated holes and overcome the resistance. This will lift the drop bolt against the existing spring tension.
- Once the drop bolt is raised, the door can be opened manually.

6. INTERIOR FITTINGS

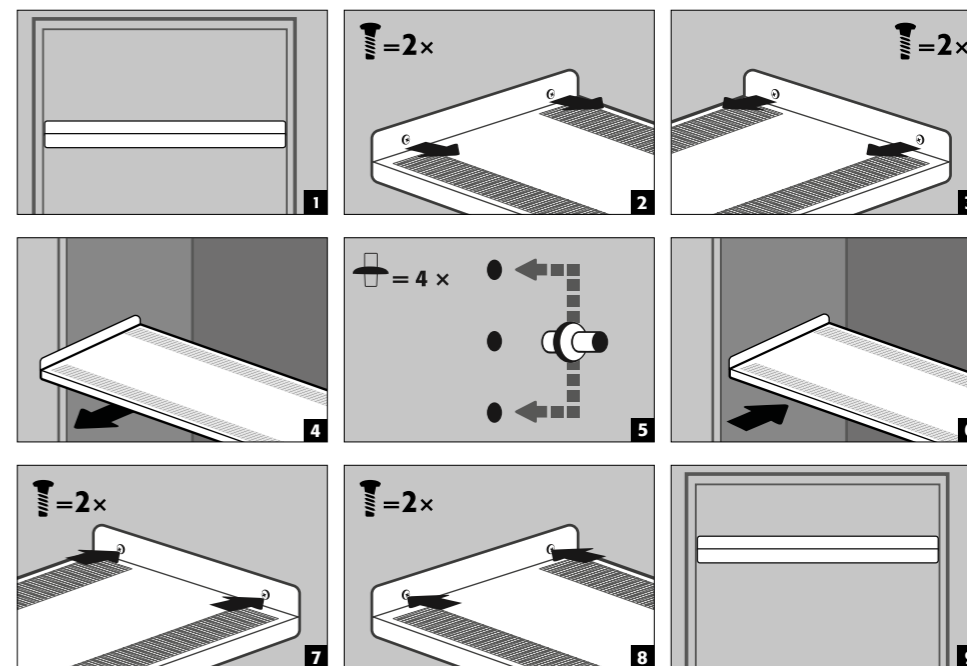
6.1. BOTTOM COLLECTING SUMP

Leaks:

- Liquid in the sump is to be collected using suitable means.
- The choice of means is your own responsibility.



6.2. INSOLATED SHELVES (HEIGHT-ADJUSTABLE)



Load capacity (kg/drum platform)





CAUTION:
Please note that dynamic forces act when loading the cabinets. Always place batteries carefully in the cabinet!



CAUTION:
The position of the socket strips cannot be changed.

6.3. TOTAL POWER RATING OF THE POWER SOCKET STRIPS

Standard: single-phase, 230 V

Version	EU	CH	UK	FR	other regions:
fusing	16 A	10 A	13 A	16 A	Please get in touch with your asecos contact person. The maximum power and protection may differ here.
max. total power	3,68 kW	2,3 kW	2,99 kW	3,68 kW	

Optional: 3-phase, 400 V (accessories article 38038)

Version	EU	CH	UK	FR	other regions:
fusing	3 x 16 A	3 x 10 A	3 x 13 A	3 x 16 A	Please get in touch with your asecos contact person. The maximum power and protection may differ here.
max. total power	11,04 kW	6,9 kW	8,97 kW	11,04 kW	



ATTENTION:
The load on the system is to be distributed as evenly as possible over the power socket strips! The individual power strip must not be loaded with more than the specified power max. (see table)!
The necessary fuse protection is to be provided by the customer!

7. STORAGE

7.1. GENERAL INFORMATION ON BATTERIES



ATTENTION:
Never store obviously damaged lithium-ion batteries inside buildings. Dispose of them without delay in disposal containers that are provided outside the building and approved for transport.



CAUTION
Only batteries with a maximum weight of 15 kg may be stored in the cabinets.

7.2. NOTES ON STORAGE AND CHARGING

Storage

- It is recommended to store new and used lithium-ion batteries separately (each on a different storage level) in the safety storage cabinet.

Occupation of the storage levels

- The batteries inside the cabinet should be distributed as evenly as possible and inserted at a suitable distance from each other. Further information > see Chapter 14. Technical data



CAUTION:
The following substances must not be stored in cabinets with a fire suppression system:
Acids, bases, magnesium, other metals (in powder form).
Heat is generated during the charging of a lithium-ion battery!
Please note: The technical ventilation (to prevent heat build-up in the interior) must be kept permanently in operation.



CAUTION:
A distance of min. 150 mm must be maintained in the area in front of the fire suppression unit.

8. VENTILATION - PRESSURE RELIEF

8.1. EXTRACTION UNIT (IO90.195.120.PC.WDC)

- See point 4.4 for the installation.
The green indicator lamp signals that the fan is switched on.



ATTENTION:
Heat is generated during the charging of a lithium-ion battery!
Please note:
The technical ventilation (for the avoidance of heat accumulation in the interior) must run continuously. Repairs to the extraction unit are only to be carried out by specialists specifically trained for this. Given damage the appliance is to be repaired or replaced by the manufacturer.

8.2. SMOKE DETECTOR



ATTENTION:
The complete warning/fire suppression system is active only with mains operation. The integrated smoke detector is part of the entire fire suppression system (direct power supply).

8.3. PRESSURE RELIEF

In addition to the exhaust air system (dissipation of waste heat during normal operation), all PRO models have a pressure relief (ventilation opening) built into the head section. In the event of a brief, extreme increase in pressure inside the cabinet, this opens briefly to ensure that the safety cabinet is sealed off (doors remain closed).

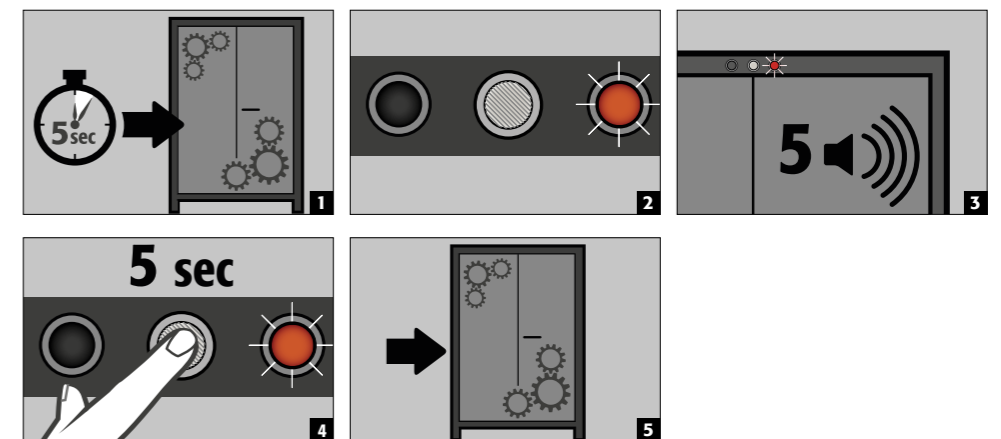
A DN100 adapter is included in the scope of delivery for discharging toxic fumes to the outside via a customer-side exhaust air system to a safe location. In the case of connection on the customer side, this must be attached to the cabinet (PS version) or ventilation attachment (if available, PC version) using the enclosed self-tapping screws.



HINWEIS:
The connection must not be made to an existing exhaust air system. A separate flue gas extractor is required

9. ERROR - FALSE ALARMS

9.1. ERROR DURING SELF-TEST





ATTENTION:
After pressing the reset button, the self-test begins again. If the error persists, please contact the asecos Service department.

9.2. FALSE ALARM OF THE SMOKE DETECTOR

- By interrupting the power supply for a few seconds, the smoke detector is reset and the system returns to normal operation.

10. ALARM OVERVIEW

10.1. ERROR AND ALARM OVERVIEW

EVENT	LED GREEN	LED RED	ACOUSTIC ALARM	ACTIONS
Error during self-test	off	turned on	5 signal tones	1.) Restart with RESET button if error persists: 2.) Contact Service
Service interval reached	flashing	off	off	Contact Service
Power failure	off	Flashes every 20 seconds	3 short signal tones every 60 seconds	Check power supply
Warning message: Temperature in the cabinet >50 °C	off	turned on	Tone interval (every 2 seconds for 250 ms)	see 11.1
Alarm stage 1: Smoke detector detects smoke in the cabinet	off	turned on	medium tone interval (every 0.5 seconds for 250 ms)	see 11.2
Alarm stage 2: Smoke detector detects smoke in the cabinet, Temperature in the cabinet >70 °C	off	flashing	fast tone interval (every 0.25 seconds for 125 ms)	see 11.3
Door cannot close within 60 seconds	flashing	off	medium tone interval (every 0.5 seconds for 250 ms)	remove blockage

11. OPTIONAL WARNING/FIRE SUPPRESSION SYSTEM

- The warning system can be connected to a permanently manned building management system or fire alarm control panel.
- Use this option so that trained emergency services are alerted quickly and can be on site within a short time and can immediately initiate further measures after an initial assessment of the situation (e.g. transporting the cabinet out of the building)
- This prevents further damage to buildings and people.

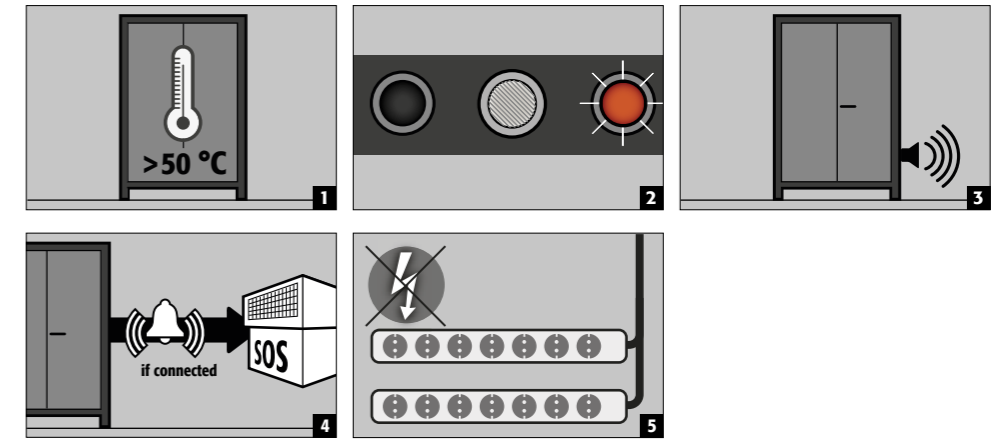
With optionally equipped fire suppression system

- The potassium carbonate-based extinguishing agent is harmless in the required extinguishing agent concentration and has no harmful effects on the human organism.
- When triggered, the aerosol is emitted at a high temperature and temperatures of more than 300°C are briefly generated directly in front of and on the housing of the fire suppression cartridge.
- According to the manufacturer's instructions, a minimum distance to combustible materials is not required, but a distance of at least 150 mm from the fire suppression cartridge should generally be maintained.
- After the fire suppression cartridge has been triggered, ventilate the room and the cabinet well, observing the instructions in point 12.



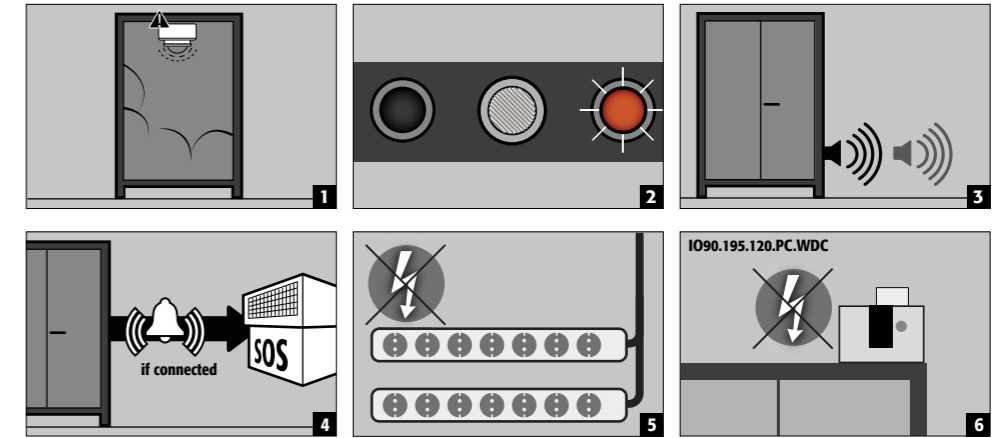
ATTENTION:
The complete warning/fire suppression system is active only with mains operation. The integrated smoke detector is part of the entire fire suppression system (direct power supply).

11.1. WARNING MESSAGE



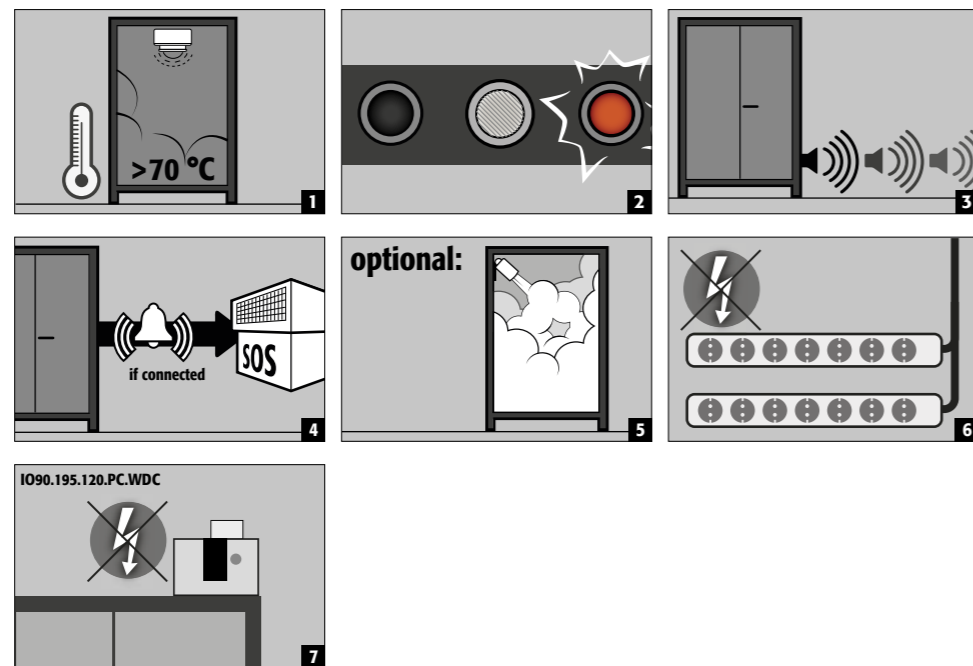
- Actions**
Immediate visual inspection of the system by the company's own qualified personnel. Initiation of necessary actions.
If the interior temperature falls below 45 °C, the system returns to normal operation and the visual and acoustic signals are switched off, the sockets are powered again

11.2. ALARM STAGE 1



- Actions**
Immediate visual inspection of the system **by technical personnel (e.g. fire brigade)**. Subsequently, initiation of necessary actions.
If the smoke detector does not detect any further smoke development in the cabinet, the system can be reset to normal operation by briefly disconnecting the mains voltage.

11.3. ALARM STAGE 2



- **Actions**
Immediate visual inspection of the system by **technical personnel (e.g. fire brigade)**.
Subsequently, initiation of necessary actions.
See 2.3 for the transport of the cabinets out of the building.



PLEASE NOTE:
After alarm level 2 is triggered, the electronics are disabled for safety reasons. Independent recommissioning by the user is not possible in this state. Unlocking may only be carried out by asecos Service.

12. BATTERY FIRE - EVENT OF FIRE - DISPOSAL



NOTE:
After the fire suppression device has been triggered, the safety cabinet must be subjected to a thorough inspection so that both fire protection and CE conformity are maintained. For this purpose, the cabinet must be handed over to the main factory of asecos GmbH in Gründau, where the specialist department - depending on the degree of damage - will make an assessment of the economic efficiency and technical possibilities of a repair. The customer then receives an offer of either a repair or a replacement, which can be handed over to the responsible property insurer.

12.1. OPENING THE CABINET AFTER THE FIRE



CAUTION:
Do not open the cabinet until it has cooled down. This is 6 times the fire duration!
The cabinet may only be opened by authorised personnel (e.g. fire brigade)!
Depending on the duration of the fire, an ignitable vapour-air mixture may have formed, therefore remove all ignition sources within a 10-metre radius around the cabinets before opening.
Use only non-sparking tools! Open the cabinets with extreme caution!

12.2. DISPOSAL



The models can be disposed of once they have been dismantled and the materials sorted.

13. SAFETY CHECKS

As safety equipment the cabinets have to be checked for safety at least once per year. The next checking date can be taken from the service sticker on the outside of the door. This annual check can be carried out with the necessary care, and for securing your warranty claims in the case of fire, only by an authorised asecos employee (refer also to our service brochure regarding this).
A necessary service is automatically indicated by the cabinet by a flashing green LED.
Within the context of the annual check, the fire suppression system, smoke detector and sensors will be checked in addition to the check of all safety-related parts.

13.1. CLEANING

The cabinets can be cleaned with a mild household cleaner and a soft cloth.
In case of damage please contact your dealer in order to have the cabinet repaired using original spare parts.

13.2. CONTACT



CONTACT:
In the case of defects or complaints about our products (within and also after the warranty period), and for requesting safety checks or taking out a service contract, please contact our service hotline on:
Tel: +44 1785 22 70-90 | info@asecos.co.uk (for great Britain and Ireland)
Tel: +49 1805 92 20 92 | service@asecos.com (international)

14. TECHNICAL DATA

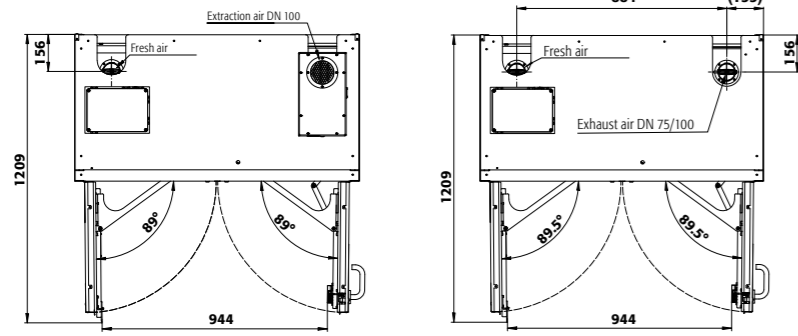
ION-PRO-90		IO90.195.120.PC.WDC	IO90.195.120.PS.WDC
Type		90	90
External dimensions W x D x H	mm	1193 x 615 x 2114	1193 x 615 x 1953
Internal dimensions W x D x H	mm	1050 x 503 x 1647	1050 x 503 x 1647
Weight without interior equipment	kg	490	485
Distributed load	kg/m ²	566.00	563.00
Entry width transport base	mm	1120	1120
Entry height transport base	mm	90	90
Volumetric flow rate (recommended)	m ³ /h	30	
Max. shelf load (evenly distributed)	kg	75	75

Power consumption of control electronics			
Power consumption in operation	W	47,5	11,5
Nominal voltage	V	230/400	230
Frequency	Hz	50/60	50/60

Total power rating of the power socket strips					
		EU	CH	UK	FR/BE
Fuse (1-phase)	A	16	10	13	16
Power max. (1-phase)	kW	3,68	2,3	2,99	3,68
Fuse (3-phase)	A	3 x 16	3 x 10	3 x 13	3 x 16
Power max. (3-phase)	kW	11,04	6,9	8,97	11,04

Battery energy according to VDMA standard sheet 24994		
Number of storage levels	kWh/storage level	kWh/cabinet
3	2.085	6.255
4	2.085	8.34
5	2.085	10.425
6	2.085	10.425

15. TECHNICAL DRAWING



IO90.195.120.PC.WDC

IO90.195.120.PS.WDC

