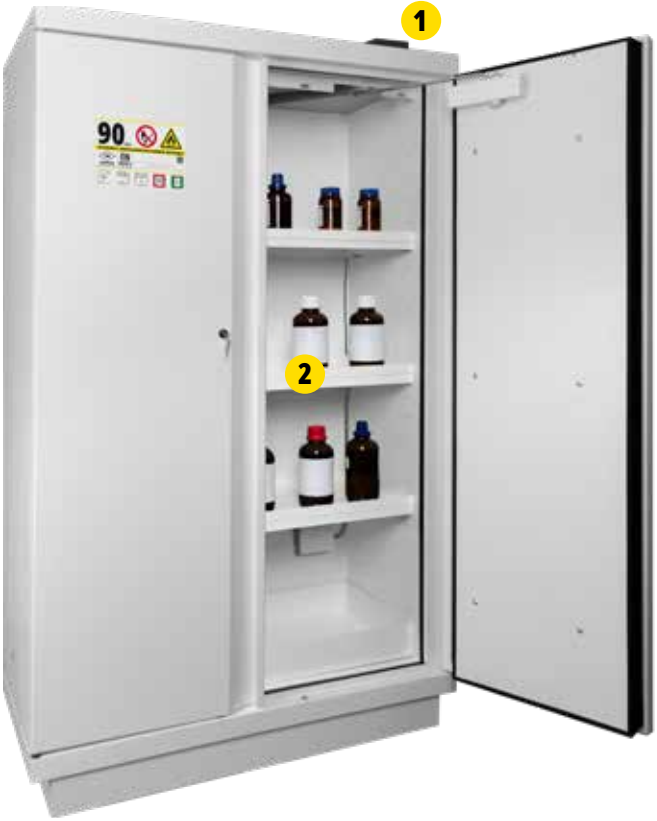
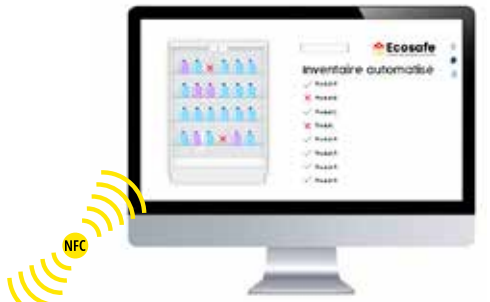
EN 14470-1 | EN 1363-1 | EN 16121 | FM 6050 | 90 APPROVED EN14470-1 EN1363-1 | 105 TESTED EN14470-1 | NFC TECHNOLOGY | MADE IN EUROPE

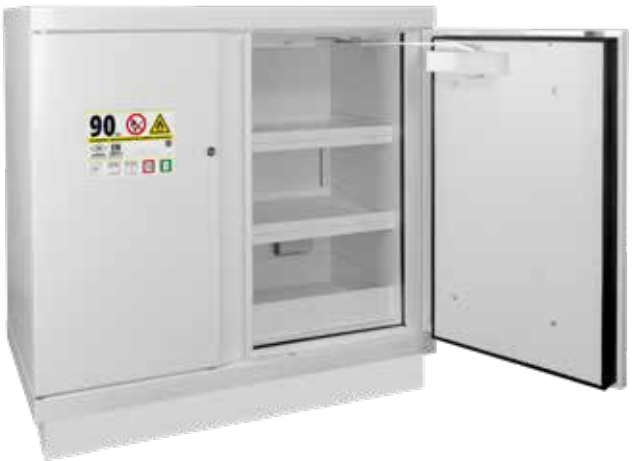
EN 14470-1 SAFETY CABINETS WITH AUTOMATIC INVENTORY MANAGEMENT (NFC GEOLOCALIZATION)



▲ 795+E + 3x(*SC35IA + SE35 + ABOSCIA + ABOLOIA*) + PEXTBAIA + CABIA + CAPRIA10 + E4GIA



▲ Automatic inventory management



▲ 793+E + 2x(*SC35IA + SE35 + ABOSCIA + ABOLOIA*) + PEXTBAIA + CABIA

1 E4GIA

2 CAPRIA10

WHY AUTOMATE YOUR INVENTORY?

In most cases, an inventory management is time consuming, with one person often dedicated to this task either on daily basis or too regularly for it to be cost effective. Based on our experience and know-how of fire resistant storage cabinets that comply with the European standard EN 14470-1 and are resistant to 105 minutes, we propose to add an automated inventory management of the products stored in your cabinet.

We have also found that up to 30% of products exceed their expiry date before they are used. This is a net loss that we propose to avoid at maximum.

To cope with the complexity of managing your inventory, we offer you a new range of intelligent cabinets. This range is equipped with NFC technology. Near Field Communication is a wireless communication technology that allows the transfer of information between several devices, in particular between your connected dock and your inventory management software. Thanks to this technology, you can track your inventory levels in real-time, in a simple and visible way. Inventory management is fully automated.

HOW DOES IT WORK?

Our connected bases (ref. **SC35IA**) equipped with NFC technology are positioned in the shelves (ref. **E35**) of your fireproof cabinet. Your containers are equipped with RFID sensors (ref. **CAPRIA10**). An RFID(2) sensor is placed under each product. Each sensor has a unique identifier to ensure perfect traceability.

In order to maintain the necessary retention volume and in compliance with the EN 14470-1 standard, your containers must be stored on a PVC containment shelf (ref. **SE35**) compatible with NFC technology. The containers placed on each connected set (shelf + base + rack) are identified and tracked. The data is transmitted electronically to the inventory management software.

Real-time data extraction (ref. **ABOSCIA**) is provided via an annual subscription. Then, to make use of the data of your inventory, we offer you, via the integration solution of our partner, a digital interface (ref. **ABOLOIA**). This software allows the geolocalization and automated management of your inventory during their life cycle. In addition, this subscription also allows the implementation of computer reports that can be configured according to your needs.

A double cable (ref. **CABIA**) comes out of the cabinet: an RJ45 cable for connection to the building's network and a power cable for the electrical connection. If it is not possible to connect to the building network, we offer a 4G transmitter for a wireless connection between the connected shelves and the software management (ref. **E4GIA**). This solution comes in the form of a connected box.

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COMPLIANCE

- Tested and approved to EN 14470-1 and EN 1363-1.
- Tested and approved for 10 minutes to FM 6050 (Factory Mutual International).
- Complies with level 2 of standard EN 16121+A1 (opening/closing 80000 cycles and placing the load defined by the manufacturer on the shelves).
- Standardized warning labels in accordance to ISO 3864, ISO 7010 and Directive 92/58/EEC and EN 14470-1.

ADVANTAGES OF FIREPROOF STORAGE

- Fire resistance of 105 minutes according to the ISO 834 standard curve.
- Fire tested by a French test laboratory accredited to EN 17025 by COFRAC, according to the ISO 834 standard curve.
- Full height handle for better ergonomics and ease of opening.
- Legs for easy movement by pallet truck: avoids heavy handling and allows the cabinet to be moved easily in the event of a new layout.
- Aesthetic and easy to use skirting board cover without the need for fixing tools.

ADVANTAGES OF CONNECTED STORAGE

- Automatic and reliable inventory management without manual intervention.
- Location of bottles, flasks and containers on each level.
- Real-time visualization of the movement of containers, stocks, their position via the interface and their history.
- Saves time in managing your stocks.
- Management of expiry dates to avoid waste, for a more environmentally friendly consumption.
- Minimise the risk of product handling and accidents.

PASSIVE SAFETY

- Double wall construction:
  - Outer walls in 12/10th steel, coated with white epoxy paint RAL 9010.
  - Inner walls in white RAL 9010 melamine.
- Thermal insulation panels between the walls to limit thermal bridges.
- Removable containment sump in the lower part. The containment sump must be positioned at the bottom of your cabinet. If you wish
- to use it as storage space, you must first place a perforated cover plate (see options) corresponding to your containment sump.
- Signage with Standardized labeling.
- Adjustable retention shelves (at 6.4 cm intervals).
- Fixing point for earthing.

ACTIVE SAFETY

- Ventilation holes with Ø 100 mm ventilation outlet for possible connection.
- Ventilation ducts with hot-melt system to isolate the contents of the enclosure in the event of fire.
- Thermo-expanding door seals.
- Self-closing door(s) with key lock.
- Door(s) hold-open system with automatic closing system thermoregulated at 47°C.

OPTIONS

- Connected base equipped with NFC(1) technology for E35 shelf (ref.**SC35IA**)
- White PVC containment shelf, thickness 3/10th (ref. **SE35**).
- Set of 10 standard RFID(2) sensors for automatic inventory (ref. **CAPRIA10**)
- Annual subscription for real time data extraction for 1 connected base (ref. **ABOSCIA**)
- Annual subscription for a management software allowing the exploitation and the reading of the data for the automatic inventory (ref. **ABOLOIA**).
- 4G transmitter for a wireless connection between the connected shelves and the software management (ref. **E4GIA**).
- Hole for cable passage with fireproof cable passage in the lower part (max. 4 cables) (ref. **PEXTBAIA**).

P/N	Description	Ext. dimensions H x W x D (mm)	Int. dimensions H x W x D (mm)	Containment sump	Weight (kg)
793+E	Safety cabinet type 90 min equipped with 2 shelves and 1 containment sump	1100 x 1137 x 670 (3)	820 x 1000 x 410	1	297
795+E	Safety cabinet type 90 min equipped with 3 shelves and 1 containment sump	1950 x 1137 x 620 (4)	1620 x 1000 x 410	1	453
SC35IA	Connected base with NFC(1) technology for E35 shelf	30 x 1000 x 400	-	-	7
SE35	Retention shelf in white PVC, 3/10ths thick for E35 shelf	30 x 980 x 405	-	-	5
E35	Retention shelf for 2 doors cabinet	30 x 992 x 410	-	-	4
ABOSCIA	Annual subscription for real time data extraction for 1 connected base	-	-	-	-
ABOLOIA	Annual subscription for a software management allowing the exploitation and data reading for the automatic inventory for 1 connected base	-	-	-	-
CABIA	Cable for double connection: RJ45 cable for connection to the building network + power cable for electrical connection for 1 cabinet	-	-	-	-
CAPRIA10	Pack of 10 standard RFID(2) sensors for automatic inventory for single use only	18 Ø	-	-	-
E4GIA	4G transmitter for wireless connection between the connected shelves and the software management	30 x 100 x 100	-	-	0,2
PEXTBAIA	Cable entry hole with fire-resistant at the bottom (max. 4 cables)	-	-	-	-

(1) ***Near Field Communication*** is a wireless communication technology that allows the transfer of information between multiple devices.
(2) ***Radio Frequency Identification*** is a method of storing and retrieving data remotely.
(3) Depth with connecting sleeve at the rear. Depth without sleeve: 620 mm
(4) Height with connecting sleeve on top. Height without sleeve: 1900 mm

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QUESTIONS AND ANSWERS ON FIRE RESISTANT CABINETS EN 14470-1 WITH AUTOMATIC INVENTORY MANAGEMENT

How does the technology check the inventory level? Does it check the weight of the containers or the liquid height level inside the containers?

This technology does not check the weight yet (this feature is still under development). It allows you to check your inventory in real-time. For example, if you have 5 bottles each containing a different chemical (Methanol, Acetone, Nitric Acid, etc...). Each NFC tag will have been previously identified by the user to assign it to a type of product/bottle

On each bottle, there will be an NFC tag which contains the information such as: name of chemical product, production date, expiry date, whether the bottle is on the shelf on in transit (taken by a lab operator)

Very soon, there will be the possibility to check the level inside the chemical bottles and the software will give you what is the % of liquids inside the bottle. This is through a special NFC tag which is a bit more expensive than the normal one.

Do the users need a standard bottle as their container to store the chemical? Does it affect the technology if the sizes of the bottles are different?

Any container/bottle can be used no matter the size even if the bottles are of different sizes. The tag (placed under the container/bottle) is where the information is stored. Be careful, the container/bottle doesn't have to be a steel one. If the container is made of steel, the tag will not function properly and your client will need a special one that is not quoted in our basic offer.

How to set up SC35IA? just place it on top of E35?

No set up is needed. The connected base SC35IA equipped with NFC technology is already installed in a containment shelf E35. Please view the video

Does the Tag have to be placed on the bottom of the bottle to efficiently work with the SC35IA? If yes what if the bottom of the bottle is not flat?

Yes, tags have to be placed at the bottom of the container/bottle in order for the data to pass through. No problem if the bottle is not flat. The tag is read till 3cms from top of the reader shelf.

Can the Tag be bent? (.i.e. for a bottle that is curved) Up to how many tags can be used per SC35IA?

The tag is soft and can be bent to a certain extent without jeopardizing its function. However, it is prefearable to avoid bending it. Several tagged bottles may be used on the SC35IA as long as the total weight of the bottles do not exceed the maximum loading on the shelf (50 kg).

Will the hole for inserting cables affect the fire-proof performance of the cabinet + the certification?

No. The cabinet is fire resistant and certified.

Why the RFID is single use only? Can the user just remove the RFID from one container and just re-stick the RFID to another container?

Note: RFID and Sensor tags are same. They can be single or multiple use. The user can remove it from one container and re-stick it to another one. However, the operation is time consuming (removing the tag, adding glue, clean the surface of the new bottle, then place the tag on it)., Moreover, there are risks of breakage/deterioration during the re-sticking. In addition, the tag has to be re-initialized with new data such as batch number, new name of the product, etc...

Will the RFID get expired? Is it something they need to replace from time to time?

Data such as description, expiry date of the product, etc have to be entered by the user in order for the information to be visible in real-time. The RFID or sensor tag does not have any expiry date.

If there is a spill from the chemical, will the spill affect the sensor or is it water tight?

There could be some problems and this is why, if the customer stores chemicals, we propose the option SE35 (a retention shelf in PVC) in order not to alter the reading from the tag (the connection or reading between the connected shelf and the tag is little compatible with steel).

Could you clarify the difference between ABOSCIA / ABOLOIA?

ABOSCIA is the software that extracts data from the tag and a mandatory feature in order for the entire technology to work. It is an annual subscription per connected shelf. Meaning if your cabinet has 2 connected shelves, then the user has to purchase two subscriptions.

ABOLOIA is the software that manages and process the data extracted.

It is an annual subscription per connected shelf. If your cabinet has 2 connected shelves, then the user has to purchase two subscriptions. It is NOT mandatory. If the user already has a software that is compatible with our technology, then he can use his own.

In the case of ABOSCIA it says "Annual subscription for real time data extraction for 1 connected base" so if there are 4 different cabinets they will have 4 different annual subscription?

It is not per cabinet but per connected shelves.

For example, if you have 4 cabinets. Each cabinet has two connected shelves and two normal shelves. Then you will need a total of 8 ABOSCIA.

If the end-user subscribes to ABOSCIA / ABOLOIA, is it renewed automatically every year?

The annual subscription of ABOSCIA and/or ABOLOIA is a contract between the user and us. It is renewed automatically every year and can be stopped by both parties before expiry date of the annual subscription. Ecosafe will be in charge of invoicing directly to the end user the annual subscription.

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If there is an error in the system, who can fix this?
The software company will be in charge of fixing any bugs. This can be done remotely.

Do E4GIA need any power system? How does it work? what is the duration?
E4GIA is an electrical wireless transmitter box using 4G technology. It will require electrical power. Its function is to transmit the data from the tags to the inventory software management. It is an optional item. User can use their own transmitter (wifi or other) to do so.

How to connect E4GIA to the 4G network?
It is the same as a Wifi connection, you need a network to send the information and the E4GIA is connected on the network by wifi.

Who is the provider of the 4G network? Is there a seperate subscription for that?
4G network will be your local provider. Subscription is done with your local provider (not with Ecosafe).

Can End-user have more detailed information about this Technology?
Refer to the video for further explanation.

How does ABOSCIA / ABOLOIA work? Can we view the software or have additional information ?
We will soon show you how the software and all its features function.

How many devices can be connected to one subscription? Will this technology function on any operating system (iOs, Windows, Android, etc) ?
Real-time data is accessible on any device as the information is stored on the provider's website.

Any specific safety feature in the automatic inventory management app? For example is there any alarm that informs if some bootle/tag has not been placed back in the cabinet after a certain time?
Additional safety features may be customized as each end user has his own requirements. When we first presented this technology during Forum Lab in Paris, it was able to detect in real-time if a bottle was wrongly placed (for example an acid bottle next to flammable products). An alarm was sent to a mobile phone and/or to an email.

What are the features of the automatic inventory management?
- Quick and Reliable inventory
- Gain of time
- Real time visualization of your products
- Real-time localization of your products
- Minimize accidents
- Reduce waste
- Environmental consumption

Any other features of the automatic inventory management for example linking specific bottles to specific users?
We are constantly developping new and additional features to complement our main items..

FORUM LABO PARIS

Our connected cabinet is the winner of the 2023 innovation trophy!