

# Manual for fire safety in your building

THE MOST IMPORTANT GUIDELINES



2025

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01

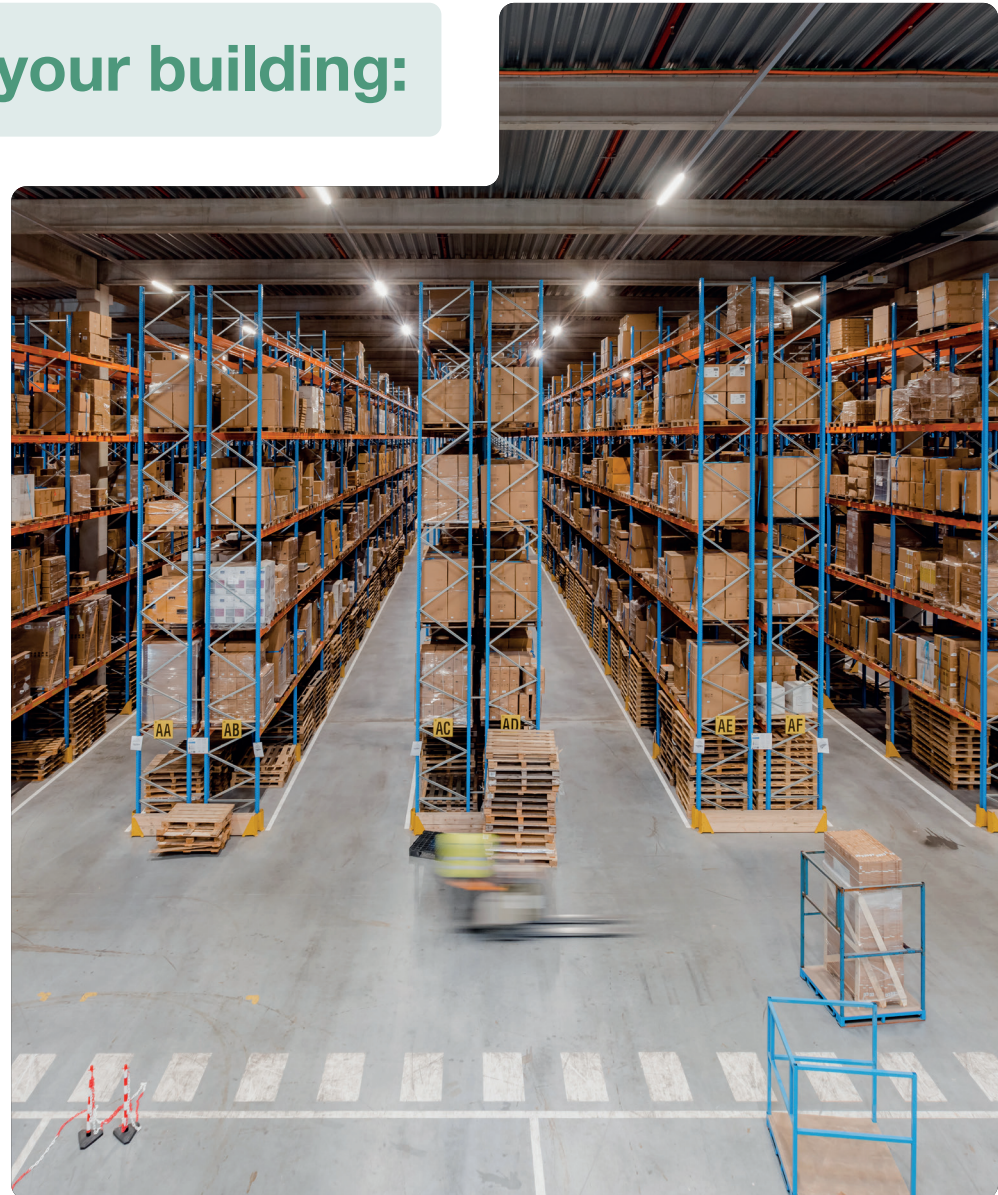
## Fire safety in and around your building: *a hassle?*

Keeping your storage area fireproof: it's a hassle. There's a laundry list of rules and guidelines to adhere to and you need to keep them in mind continuously. And that focus and concentration require some serious effort.

And yet, anybody can help, even without having special training. But only when you start from a simple principle: **care for order and tidiness**. If those are respected, you can rule out tons of issues and dangers already.

The only thing you have to do is remove all the things an arsonist could use, or at least limit the access to them.

- don't stack packaging, pallets or cardboard boxes around the building
- place waste containers and bins at a distance of at least 10m from the buildings, preferably in a separate and secure building
- sort waste and leftover materials, stock them properly and dispose of them regularly
- store your stock of flammable products such as paper and cardboard in a safe place







- keep flammable products or easily combustible products in secure cabinets or rooms
- store all igniting materials such as matches and lighters
- keep passageways clear, especially those designated for evacuation
- turn off the electrical equipment you aren't using
- Do not use (old) household appliances at the workplace (radios, refrigerator, microwave, etc.)
- keep the shop floor and its environment clean and tidy
- stock everything you don't use often in a separate room

In this manual, we've compiled the most important pointers for a building with good fire safety. For instance, we explain how to stock goods, or how to install and maintain your sprinkler system - the beating heart of your fire safety.

And thanks to the handy checklists, you'll know when to check which part (or when to have it checked).

Keep it fire safe!

Team WDP



## 02

## What's going wrong?

A fireproof building: everybody knows that it's vital, but in reality, it's always difficult to meet all the conditions and regulations. In collaboration with the insurers, the National Fire and Intrusion Protection Association (ANPI), which is responsible for the certification and inspection of buildings and their sprinkler systems, made an overview of the most important pointers.



### THESE RULES ARE OVERLOOKED MOST OFTEN:

- ✗ not respecting the flue spaces (i.e. transverse and longitudinal clear space between the stacked goods)
- ✗ not respecting the permitted stacking heights
- ✗ not respecting the clearances (more info on p.8)
- ✗ corridors in which (stacked) goods are stocked
- ✗ sprinklers that are missing, hindered or installed wrong due to renovations, expansions and client changes
- ✗ not respecting the nature (classification) of the stacked products and the way they are packaged
- ✗ not respecting compartmentalisation: opened fire doors, missing attestations of fireproofing, unfinished penetrations through walls
- ✗ hanging objects from sprinkler pipes
- ✗ Reels, end-of-line test pipes, checkpoints, fire extinguishers and other pesticides and equipment not freely positioned
- ✗ not safeguarding the free distance without fire load surrounding the buildings



### Make more time for fire safety.

And put this manual somewhere you can check it at a moment's notice.



### THIS IS WHAT THE OWNER TAKES CARE OF\*:

- ✓ biyearly inspection of the sprinkler system by ANPI
- ✓ internal checks of the sprinkler system every ten to fifteen years
- ✓ quality checks every year and foam concentration measurements every three years
- ✓ get rid of technical defects to pumps (batteries, leaks, missing identification cards...) or lubricating oil and/or fuel leaks
- ✓ report technical or sprinkler alarms, process fault messages on fire alarm control units
- ✓ repair malfunctioning alarms
- ✓ fix general defects in the pump room: malfunctioning flow meter
- ✓ ensure that control panels are manned or sealed with chain and padlock
- ✓ execute additional reliability research into systems older than 25 years (wet systems) or 15 years (dry systems)
- ✓ new classification in the event of expansions or renovations
- ✓ act on the comments in the reports of the periodical inspections by ANPI
- ✓ staff training
- ✓ a biannual inspection

\*Sometimes, the responsibility lies with the customers. Contact your property manager at WDP for more details.



03

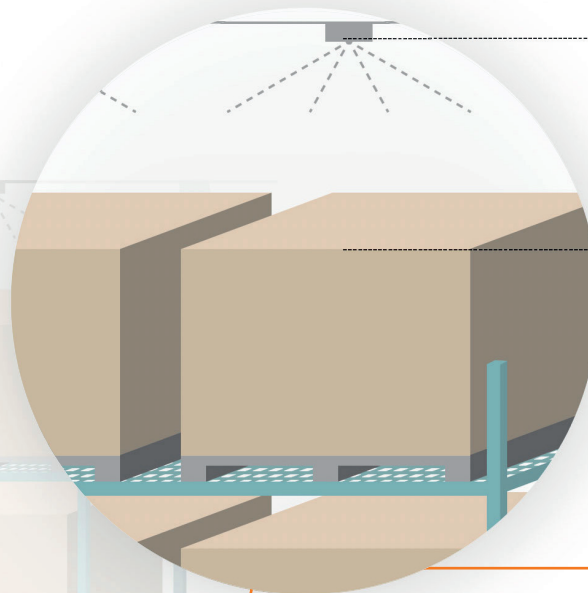
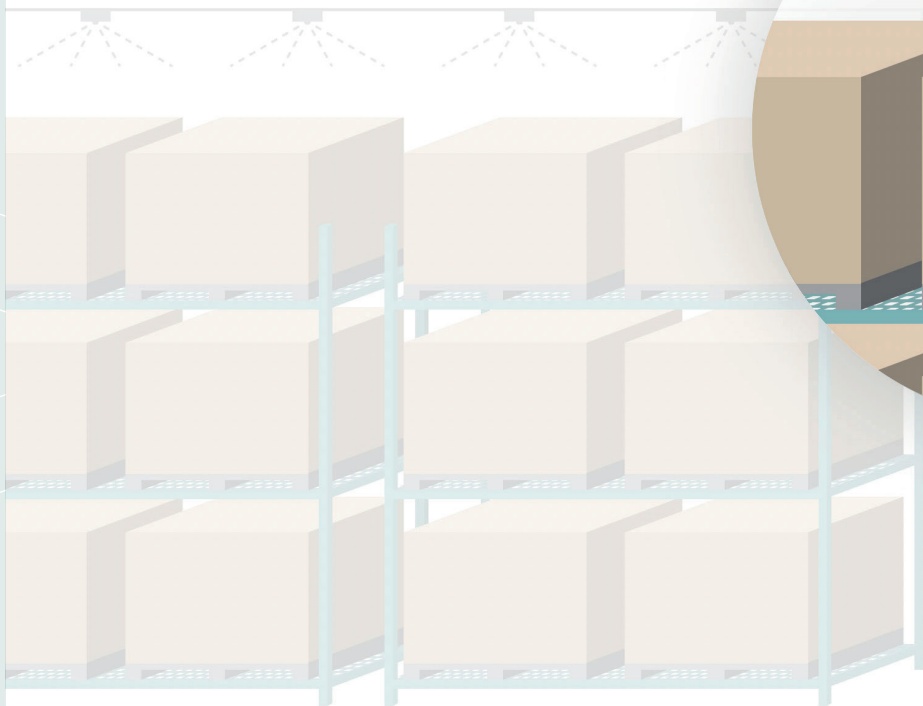
## What to take into account





## 3.1 Storage space

### DISTANCE



### CLEARANCES

Definitely respect the clearances (the distance between sprinkler deflector plates and the top of the stack). If you stack the goods too high, the functioning of the system could be in danger.

The distances between the racks are strictly regulated.

**For longitudinal flue spaces, a distance of 15 cm is safe in any case.**

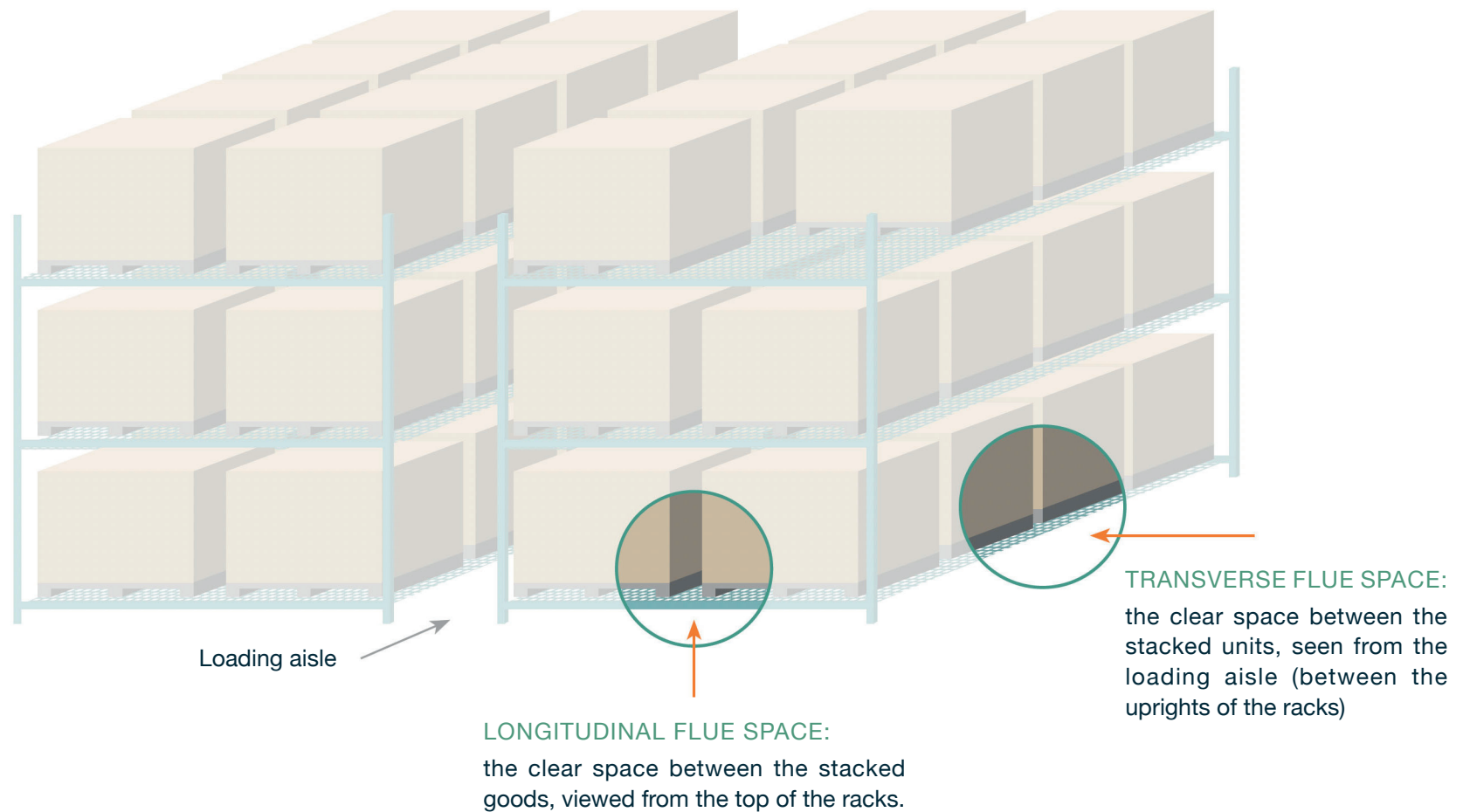
Contact your property manager at WDP for more details.



### FLUE SPACES (TRANSVERSE AND LONGITUDINAL)

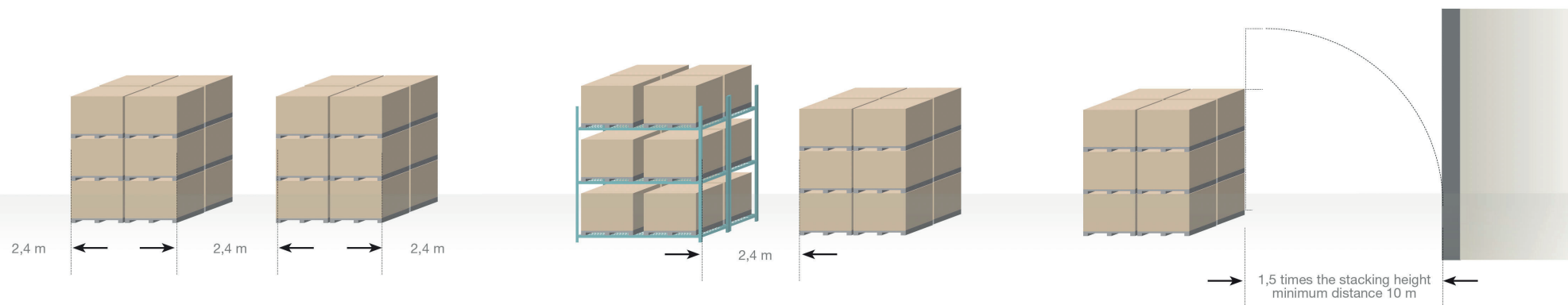
The flue spaces (clear distances between stacked goods) in the Open Frame Rack Storage (ST4) are essential for the functioning of a sprinkler system.

There are 2 types:



## STACKING

### BLOCK STACKING (ST1)



#### In general

The stacking of goods is limited to 150 square meters by the CEA 4001. Provide **2,4 meters of free space** on all ends before you start block stacking. That means you will have to provide clear passageways of at least 2,4 meters in some places.

#### Near racks

**Between racks or on the tops of racks**, there can be **no goods** stacked in blocks, because this could cause a horizontal spread of the fire (and a skipping effect).

Always provide a distance of 2,4 meters between the rack stacks and the block stacks.

#### Outside stacks

Don't place flammable goods (empty pallets, open waste containers, loose waste flows...) directly against the exterior walls of the secure buildings or the walls of the pump room.

Provide a minimal distance of **10 meters or 1,5 times the stacking height** of the goods (keep the largest distance between these two).



#### Tip

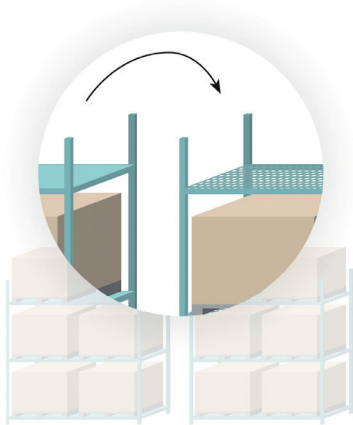
place signs indicating, for example, the maximum height, permitted products, minimum flue spaces or the distance between sprinkler and stack.



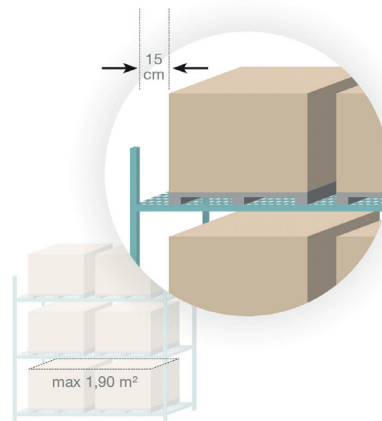
## RACK STACKING

### Full shelves

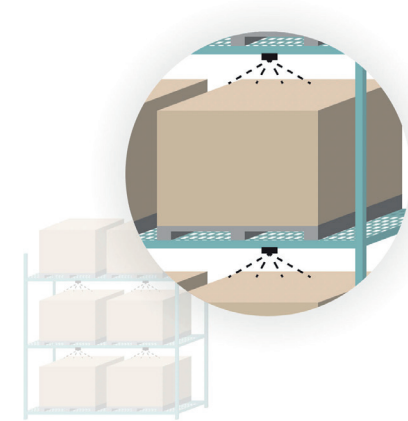
Full shelves (> 1,90 square meters) in racks obstruct the sprinklers, but this is how you fix it:



Replace the full shelves with **open grid metal shelves** (at least 70% open).



Limit the surface of the shelves to **1,90 square meters** and provide a **clear zone of 15 cm** on each side.

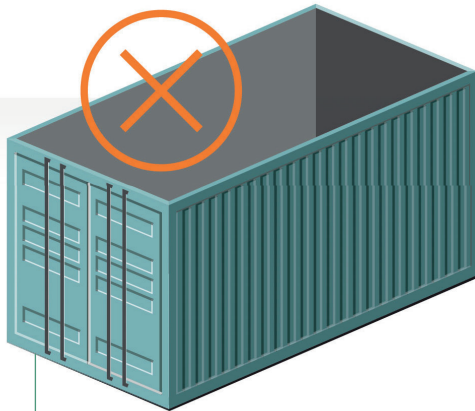


Install **additional IRAS** (In Rack Sprinklers) according to the applied standard.

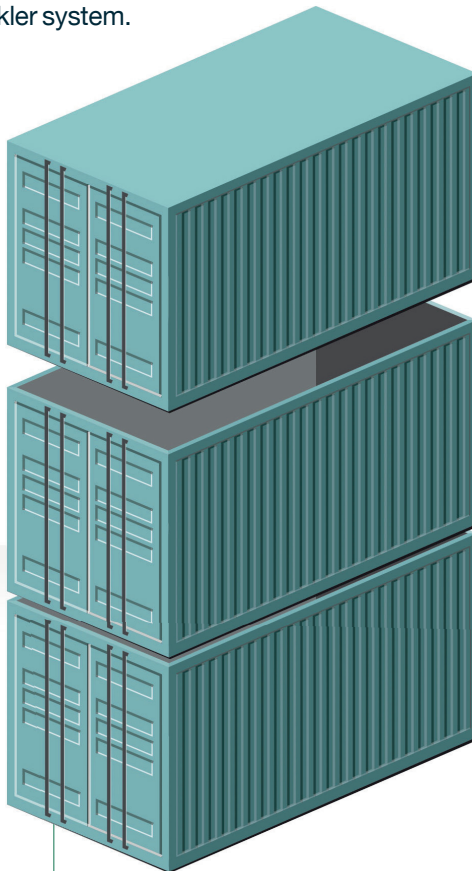
### OPEN TOP COMBUSTIBLE CONTAINERS

Block or rack stacking of so-called 'open-top combustible containers' is not permitted in combination with a sprinkler system.

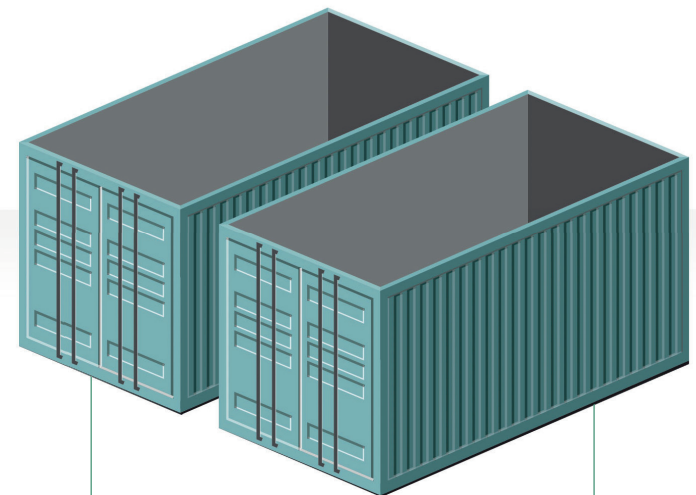
#### THIS IS HOW YOU FIX IT



**Remove the open-top** combustible containers.



**Close the top container** (only on the condition that all containers are the same size and that you can stack them on top of each other exactly)



Only put these containers **on the bottom (ground) level.**



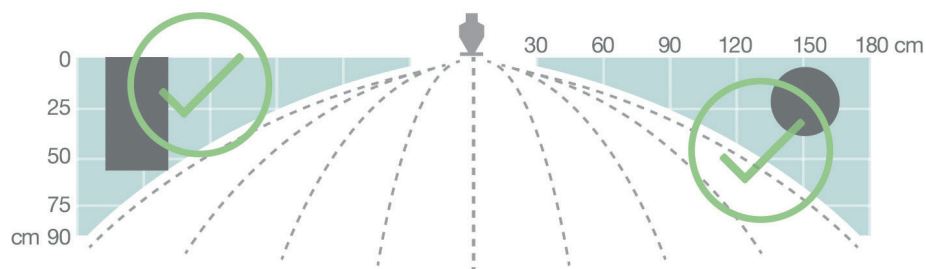
## OBSTRUCTIONS

The rules for an ESFR sprinkler system (Early Suppression Fast Response) are particularly strict. Apply them meticulously or the efficiency of the system will be compromised.

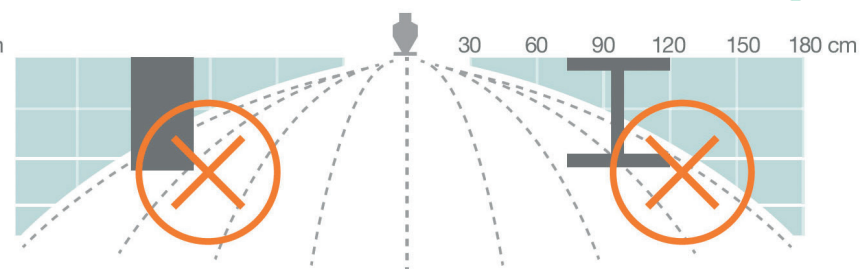
Ensure that the **sprinkler pattern isn't obstructed in any way** by, for example, banners, commercial signs, light fixtures or technical installations. With obstructions that surpass 1 square meter, you need to sprinkle more.

Bring all banners, commercial signage and fixtures together **between sprinkler branches**: that way, the sprinkler system will stay operational at all times.

If you install additional modular or fixed walls or change the stacking method, category or height, you need to have the sprinkler system adapted by a specialist installation company. The modification needs to be approved by the ANPI afterwards.



Correct sprinkler pattern



Hindered sprinkler pattern

## 3.2 The sprinkler system

### ACCESSIBILITY

All parts of the sprinkler system need to be positioned so that there are no obstructions and that it is accessible, in particular:

- The control panels
- The end-of-line test pipes
- The pump room
- The reels connected to the network

If necessary, use metal fences or yellow lines near these parts.

### ZONING PLANS

Draft zoning plans in collaboration with the installer.

Hang them in the pump room or near the control panels.

### CONTROL PANELS

Block the control panels (even if they are manned) in the open position with a chain and matching padlock. Make sure you can open all the padlocks with the same key.

Have you noticed that the pressure at a checkpoint is too high (+ 12,1 bar)? Report this to the installer and your WDP Property Manager immediately.







### SPRINKLER PIPES

You cannot hang objects from the sprinkler pipes. Are there cables, banners, signs, light fixtures or something else hanging from them anyway? Remove them immediately.



### REELS

Because reels are connected to the sprinkler network, they are also under pressure (around 12 bar). Take that into account when you activate or use a reel. Ensure that this message is clearly visible on the reel:

“Use only in case of fire, never for cleaning! This reel is under a pressure of 12 bar.”

Sprinkler network reels need to be part of the maintenance contract with the installer.

### PUMP ROOM

#### IN GENERAL

The pump room is **meant only for the sprinkler system and its parts** (pump sets with matching fuel supply, controllers, flow meter, jockey pump, heating elements, forwarding centre, backup sprinklers, control panels...) All other objects are to be removed immediately.

Don't stack flammable goods in a zone of 10 meters around the pump room and the water tank.





### CHECK THESE REGULARLY:

- ☐ Is the roof/ceiling still in good condition? (have any leaks repaired immediately!)
- ☐ Are there any leaks (water, oil) in the pump systems?
- ☐ Are there unwanted visitors in the pump room (vermin, birds...)?
- ☐ Is the logbook present?
- ☐ Are there enough backup sprinklers?
- ☐ Are the zoning plans hung on the walls?
- ☐ Are there (clearly legible) identification cards on the pumps, engines and controllers?
- ☐ Does the forwarding centre work properly? (Check if there aren't any malfunctions mentioned)
- ☐ Are the heating elements in good shape and running? (if you detect traces of soot at the level of electrical heating elements, replace them immediately)
- ☐ Is there enough fuel (at least 70%) in the tank?
- ☐ Are the batteries in good condition?

REGULARLY

### THESE ARE THE REQUIRED WEEKLY CHECKS:

- ☐ Check all the pressure levels
- ☐ Check the position of all valves and all fluid levels
- ☐ Turn the water motor gong
- ☐ Allow the pump to start automatically and run for at least 20 minutes, while you check the RPM, pressures and gauges
- ☐ Check the tracing

WEEKLY





### PRIVATE SECURITY

If there are private security rounds on the premises (at night and during weekends and leave periods), there must also be a checkpoint at the pump house.

### EXHAUSTS DIESEL ENGINES

The exhausts of the diesel engines must be insulated with non-combustible material up to a level that cannot be reached by a normal person (to avoid burns when touching these exhausts). The ends of the exhausts must be closed by a grid (to prevent animals from making nests in them).

### HEATING

The temperature in the pump room must always be at least 10°C. With heating elements that are controlled by an (outdoor) sensor, you can ensure that. In the event of failure or malfunction of the sensor, a technical alarm must always be sent to the authorised persons (minimum 4 persons in cascade).





## WATER TANK

MONTHLY

### THIS SHOULD BE CHECKED EVERY MONTH:

- ☐ Is the tank in good condition? (e.g. are there damages from a collision or from a hail storm...)
- ☐ Are there any leaks?
- ☐ Are there any visible signs of corrosion? (If so: apply a coating)
- ☐ Is the tracing in good condition?
- ☐ Is there vegetation on and around the tank? (If so: remove it immediately)
- ☐ Is there any fire load (flammable material) around the tank? (If so: remove)
- ☐ Does the level measurement work perfectly?
- ☐ Is the identification card still on the tank?





### IMPAIRMENT PROCEDURE

Do you have to switch off (a part of) the sprinkler system temporarily (for a period of over 24 hours)? Then you need to pass on this data to the WDP Property Manager in advance:

- Date and time of the impairment procedure
- Does it concern the entire system or a specific part of it?
- The reason for the impairment procedure and the nature of the work/repairs
- The estimated duration
- Date and time of the moment when the system will be fully operational again





## IS YOUR SPRINKLER SYSTEM TEMPORARILY OUT OF SERVICE DUE TO WORK?

### DON'T FORGET TO DO THIS:

- ☐ Notify the authorised fire brigade
- ☐ Notify managers, line managers, department heads, technical service, members of the first response team, external dispatching, reporting office, external/private security service and other authorised people.
- ☐ Notify the insurance company
- ☐ Be extra alert. This applies in particular to the first response team
- ☐ Put critical and risky processes on hold (if possible)
- ☐ Remove fire loads in the decommissioned areas (if possible)
- ☐ Don't carry out any work that would constitute a fire hazard (work requiring a fire permit)
- ☐ Strictly observing the smoking ban
- ☐ Executing regular surveillance rounds
- ☐ Have surveillance rounds carried out by a private security company outside of office hours
- ☐ Keep all fire equipment connected to the city network (such as extinguishers and reels) accessible and in perfect working order
- ☐ Provide additional fire equipment in critical or risky zones
- ☐ Check if other safety equipment, such as fire detection systems (including alarm reporting) are functioning properly
- ☐ Ensure that the existing compartmentalisation is guaranteed
- ☐ Keeping all evacuation routes and emergency exits clear

## WHAT IF YOU CHANGE SOMETHING TO THE BUILDING?

- If you **renovate**, expand and/or make internal changes to the building, you always have to notify the owner or lessor first. In addition, you have to have a new sprinkler study made by a recognised body such as ANPI or Vinçotte. Also, notify the insurance company of the changes.
- If you place **additional walls or move existing walls**, this may affect the positioning of the sprinklers (for example, they could be too close to the wall). In this case, move the sprinklers so that the sprinkler pattern is not obstructed.
- Did you install **extra office units or containers**? Then you need to add extra safety measures.
- Did you build **extra mezzanines, platforms, conveyor belts, walkways** or something like that? Then you need to install additional sprinklers.
- Are you planning to **stack other goods** than originally planned? Or do you want to change the purpose of a room or zone? Then you must request a new sprinkler study and change the sprinkler network (and possibly also the pump(s) and water supply).



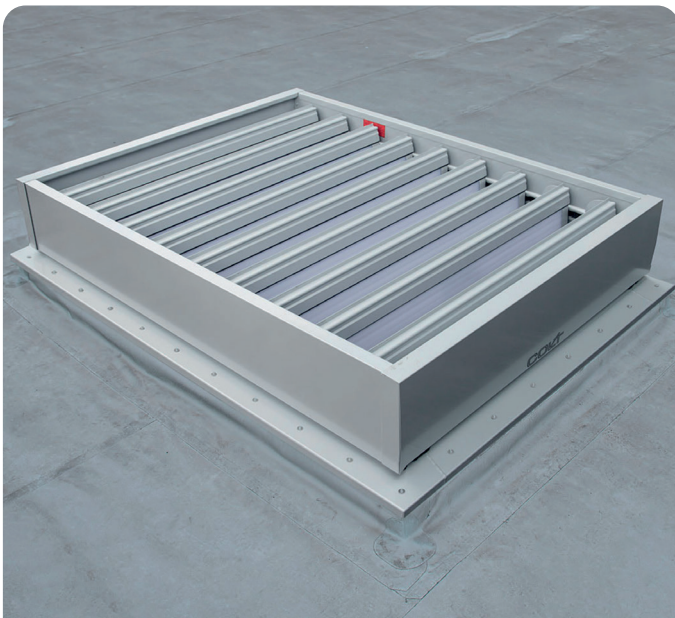


### SMOKE AND HEAT VENT

Smoke and heat vents are often equipped with an automatic control that activates them at 68°C (red bulb) or when smoke is detected.

Because most sprinkler systems are activated at 68°C, we advise you to:

- Only provide manual controls for the smoke and heat vents or
- Increase the activation temperature of the smoke and heat vents to 181°C or
- Only allow smoke and heat vents to open after the sprinkler alarm has been triggered
- May only be used in case of fire by the fire brigade.



## 04

## Checklist for customers

### ALWAYS REPORT THESE CHANGES

The changes to the building that are mentioned below could have an impact on the sprinkler system (adjusting, adding, increasing densities). Always report it to the owner and lessor of your property when you:



- ☐ Install additional rooms, both in the secure and in the adjacent buildings. Think for example of indoor offices, box-in-the-box systems (such as cooling cells), canopies, outdoor installations...
- ☐ Install additional mezzanines, walls, landings, walkways
- ☐ Install obstructions on ceiling level. For instance: cooling units, heating appliances, light fixtures...
- ☐ Want to install additional skylights, domes, smoke and heat vents or smoke curtains
- ☐ Place full shelves in the racks
- ☐ Want to stack goods higher than originally planned. Pay close attention to this when you sublet the building
- ☐ Stock other goods than originally planned/communicated. Think in particular of gases, combustible liquids, oxidisers, chemicals, aerosols, expanded plastics (e.g. foam plastics, waxes...), empty pallets, open-top combustible containers, rubber tyres, 'hanging garments', products that react violently with water, fireworks and explosives
- ☐ Store changed packaging formats
  - Example 1: refrigerators used to be delivered in cardboard boxes, whereas they are now delivered in shrink-wrap and styrofoam
  - Example 2: products in metal drums now often come packaged in plastic bottles
- ☐ Change your set stacking method. For instance: blockstacking instead of rack stacking
- ☐ Remove existing compartmentalisation (e.g. removing a fire door or fire gate, placing regular glass in an existing compartment wall, making penetrations in these walls without sealing them, demolishing a firewall, etc)
- ☐ Switching off or removing heating in the buildings. After all, you have to be able to guarantee a temperature of 4°C at all times (at ceiling level). If not, you'll have to switch to a dry (deluge) sprinkler system or a system with antifreeze





Disclaimer: these guidelines and advice are non-exhaustive and if other risks appear in reality, the tenant is responsible for analysing these risks and taking the necessary preventive measures to manage them. In any case, he will always inform the lessor about the risks that have occurred.

In cooperation with



Questions?

Notes?

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