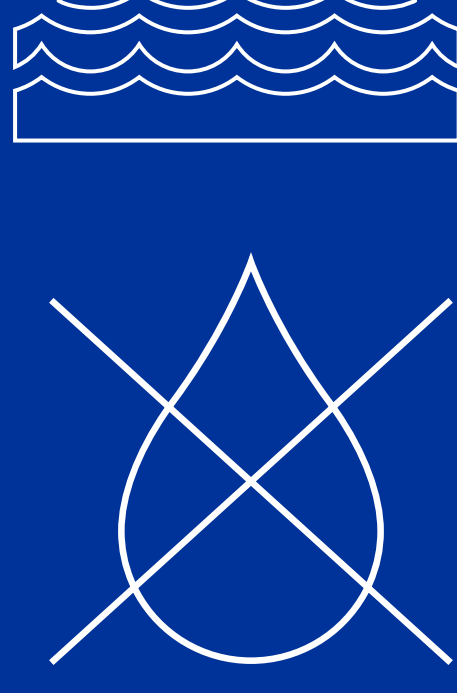
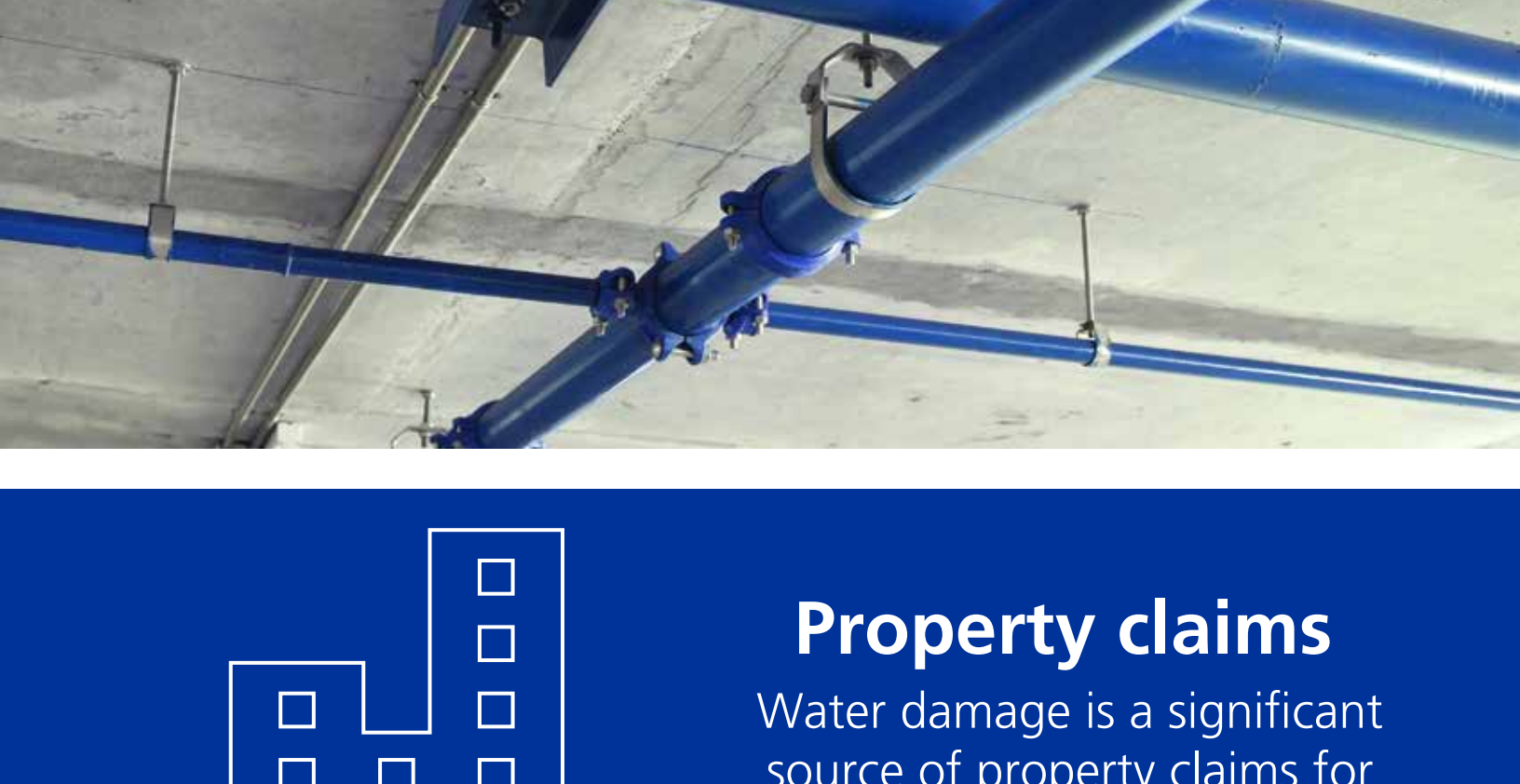
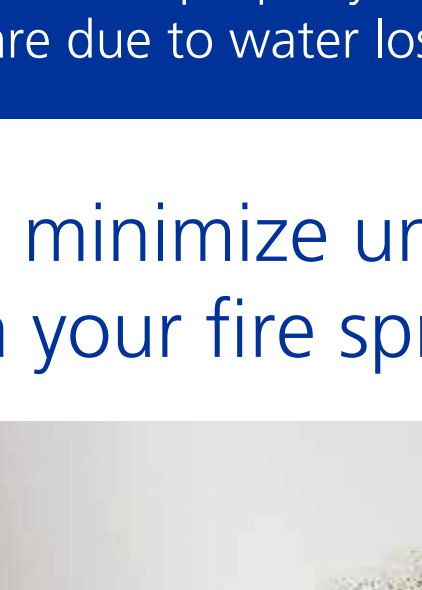


# Fire sprinkler systems: Reduce the risk of unexpected water damage

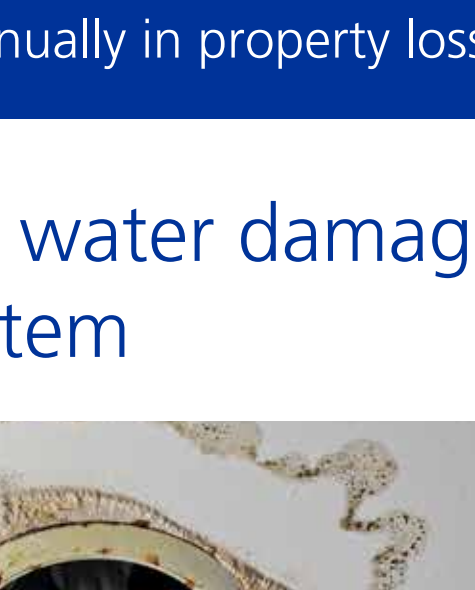


## Property claims

Water damage is a significant source of property claims for commercial properties such as hotels, office buildings, shopping malls and retail structures.



25% of all property claims are due to water loss<sup>1</sup>



Water causes over \$5B annually in property losses<sup>2</sup>

## Help minimize unexpected water damage from your fire sprinkler system



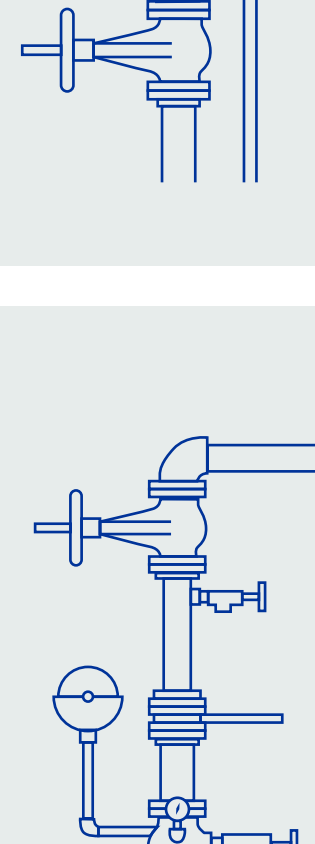
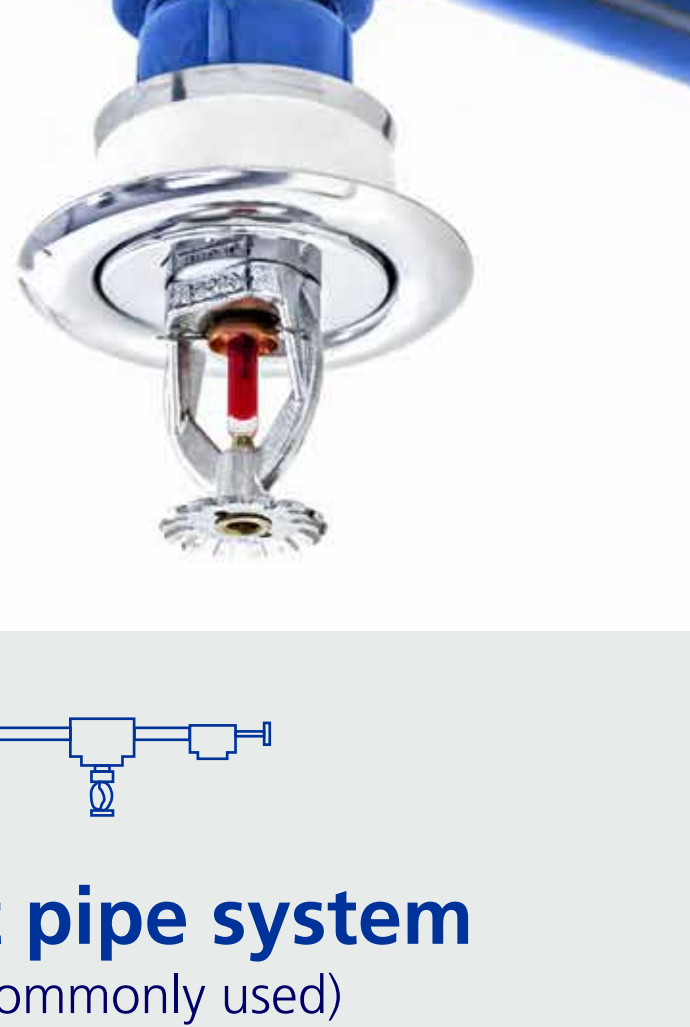
### Reduce risks

Inspection, testing and maintenance of fire sprinkler systems — along with adequate building heat — can help reduce the risk of future water damage.



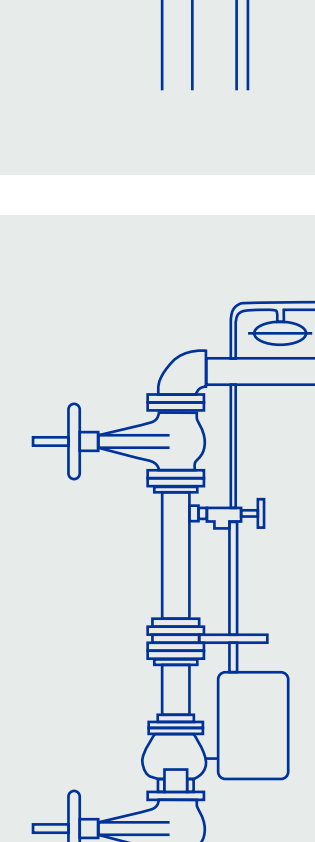
## What fire sprinkler best meets your needs?

Fire sprinkler systems are designed to push out water until they are manually shut off. Installing the appropriate fire sprinkler system for your building and usage can help alleviate potential water damage.



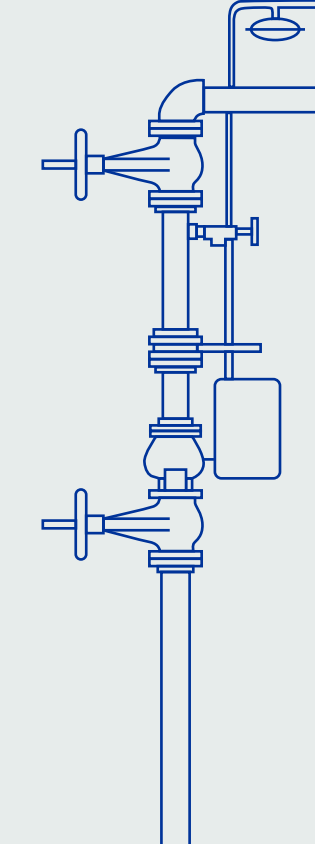
### The wet pipe system (most commonly used)

- Pipes are filled with water. Heat from a fire opens the sprinklers closest to the fire.
- Usually only one or two sprinklers open.<sup>3</sup>



### The dry pipe system (for areas subject to freezing temperatures)

- Pipes are filled with pressurized air or gas used to hold water back in a heated space. Heat from a fire opens the sprinklers closest to the fire, air escapes and the dry pipe valve opens to allow water flow.
- Usually more sprinklers open than with a wet pipe system.<sup>3</sup>



### The deluge system (for high-hazard environments that could have fast-spreading fires)

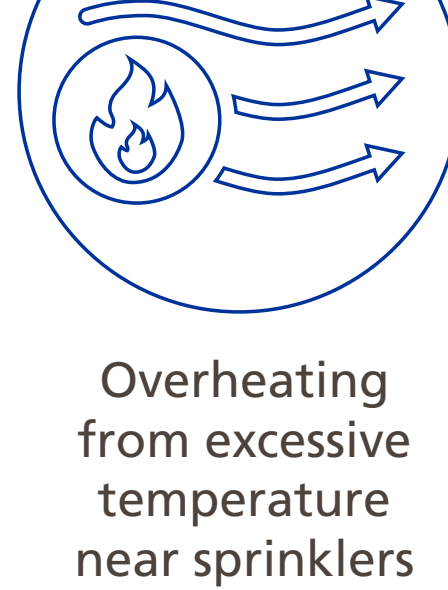
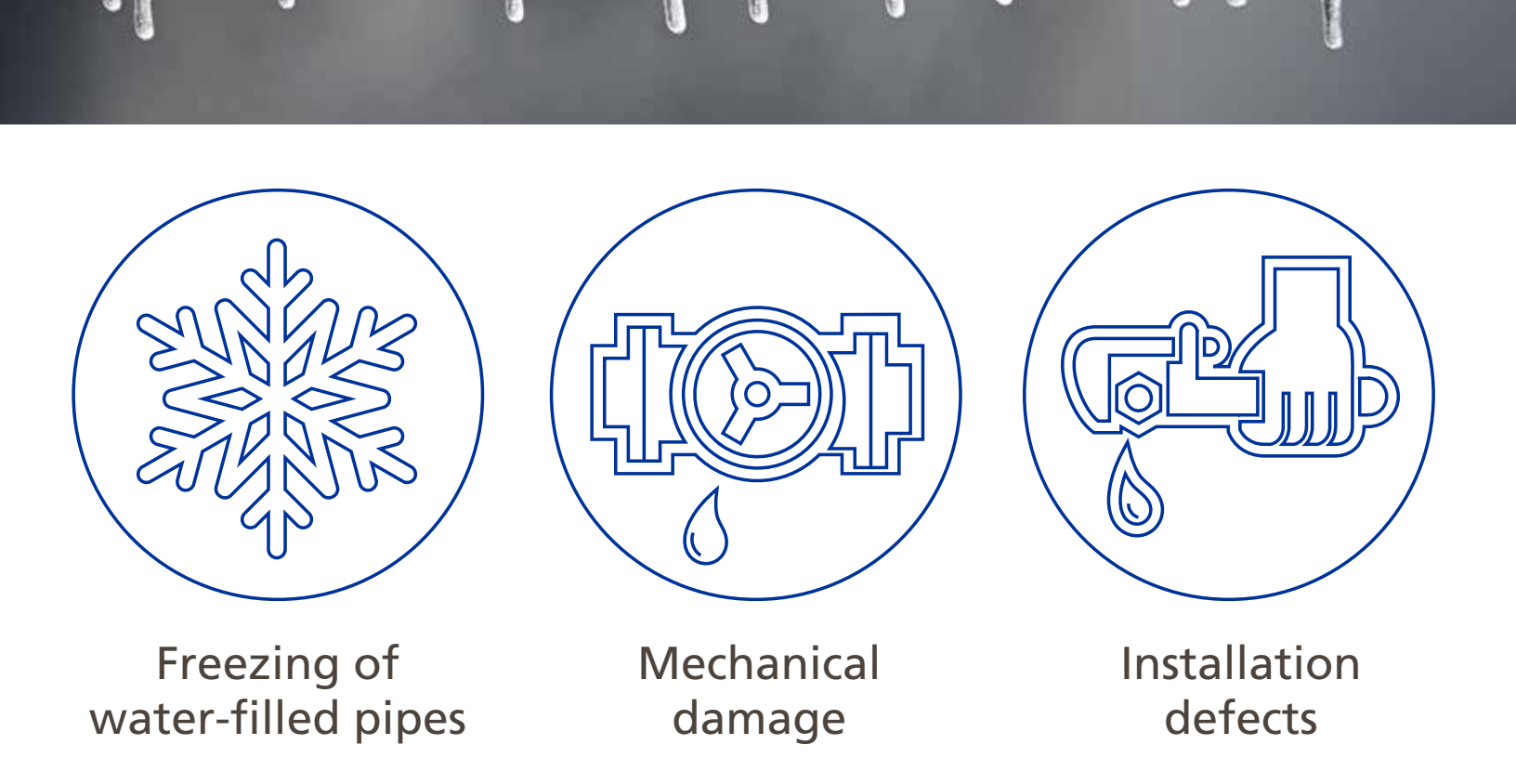
- Pipes are not filled with water or gas as all sprinklers are open. A signal from a fire detection device opens the deluge valve.
- Water will flow from all sprinklers.<sup>3</sup>



### The pre-action system (for areas where concerns of water damage to property or equipment are high)

- Pipes are filled with pressurized air or gas. Loss of air or gas pressure summons maintenance. A signal from a fire detection device opens the pre-action valve, filling the pipes with water. Because sprinkler heads are closed, heat from a fire opens the sprinklers closest to the fire.
- Usually only one or two sprinklers open (similar to the wet pipe system). However, “double interlock” pre-action systems use more air or gas pressure in the pipes, delaying the water delivery and allowing more sprinklers to open at a time (similar to dry pipe systems).<sup>3</sup>

## What causes water to escape?



Freezing of water-filled pipes



Mechanical damage



Installation defects



Overheating from excessive temperature near sprinklers



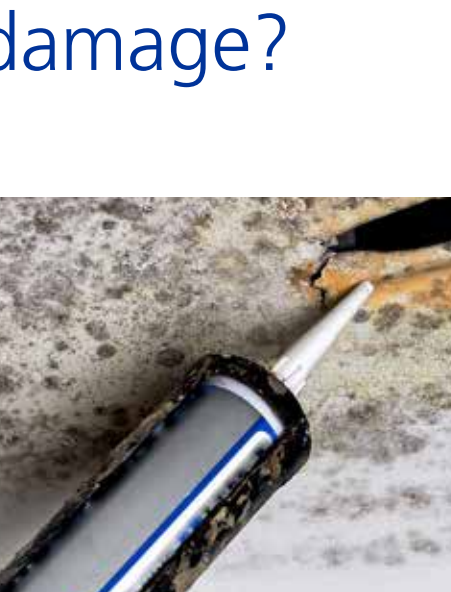
Corrosion of sprinklers, fittings, pipes, hangers and other components



Deliberate sabotage



Vehicle impacts. Damage to sprinkler pipes and hydrants by forklifts etc.

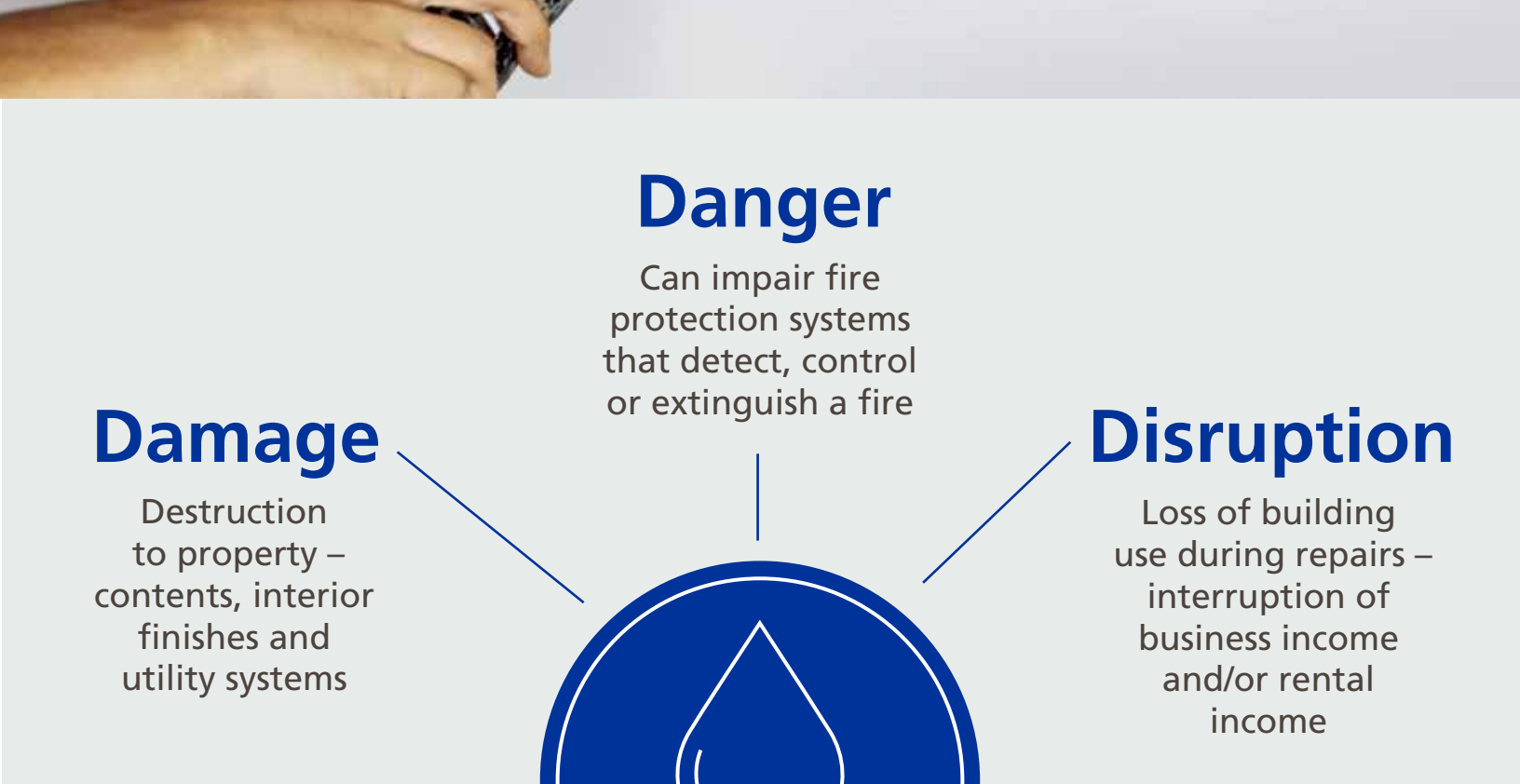


Manufacturing defects, including recalled sprinklers



Environmental stress cracking of CPVC plastic sprinkler pipe and fittings

## What are the potential risks of water damage?



### Danger

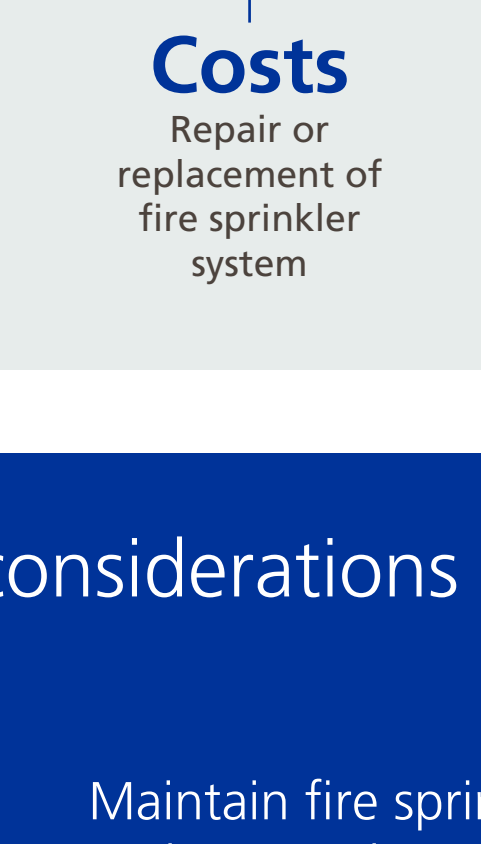
Can impair fire protection systems that detect, control or extinguish a fire

### Damage

Destruction to property – contents, interior finishes and utility systems

### Disruption

Loss of building use during repairs – interruption of business income and/or rental income



### Health effects

Possible development of mold

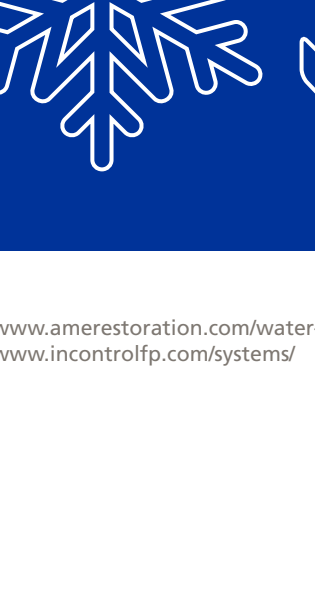
### Reputation

Lost customers or tenants due to the interruption

### Costs

Repair or replacement of fire sprinkler system

## Fire Sprinkler considerations



Maintain fire sprinkler systems in accordance with recognized standards

Ensure installations are completed by experienced and licensed contractors



Take action to reduce the chance of fire sprinkler system freeze-ups

Source:  
1, 2 <http://www.amerestoration.com/water-damage/>  
3 <http://www.incontrolfp.com/systems/>