

Case story | SEM-SAFE® high-pressure water mist system

# AB6 - Office block in Denmark

A unique building in the middle of Copenhagen,  
protected with SEM-SAFE® high-pressure water mist

Danfoss Fire Safety A/S



## Building description

Situated in the heart of Copenhagen, Denmark, the building consists of six levels with offices of different sizes, two atrium areas, an underground car park and a service area, and covers a total area of approx. 30,000 m<sup>2</sup>. The building came into service in October 2008 and was finalised February 2009.

The office block is fully protected with a SEM-SAFE® high-pressure water mist system from Danfoss, developed for office buildings.

## The turn-key contractor, KPC byg, states:

*"KPC entered the water mist sprinkling project with concerns about economy and compliance. These worries soon turned out to be groundless, and water mist sprinkling turned out to be more advantageous than standard sprinkling with regards to implementation. Comparatively small pipe dimensions, connection flexibility and less area required for sprinkler rooms have contributed to an extremely positive experience. The only minor disadvantage over traditional systems is the need for a redundant electrical connection, but that is insignificant compared to the many advantages offered by the water mist system".*

Raymond Frauenfelder  
KPC-BYG A/S



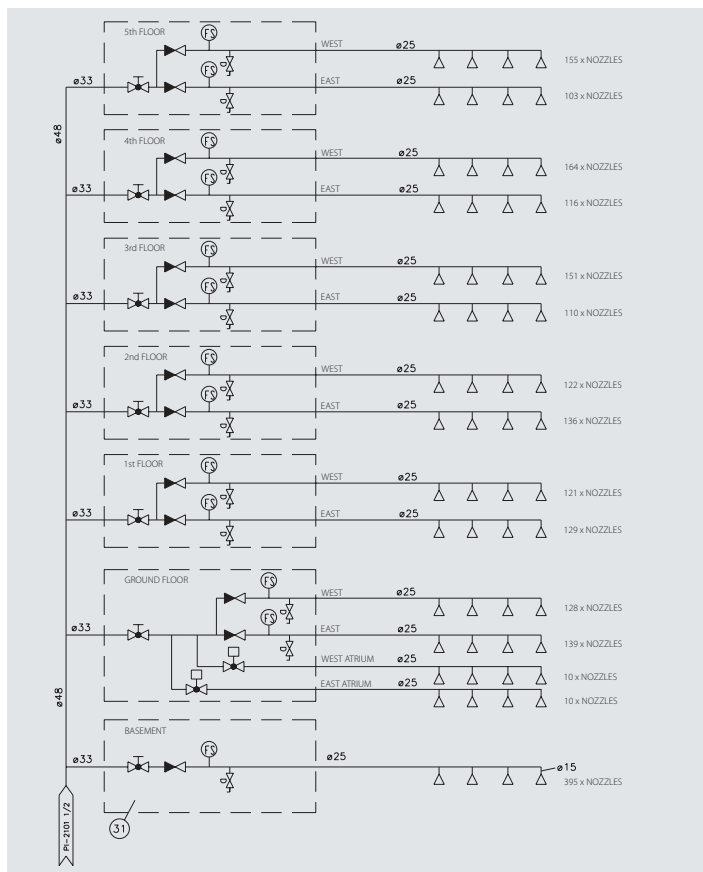
### SEM-SAFE® high-pressure water mist system

The high-pressure water mist system installed in the new building covers all 30,000 m<sup>2</sup>; including the offices, the atrium and service areas, as well as providing water mist protection for the glazed sections of the emergency escape routes.

### The benefits of SEM-SAFE®

The properties of high-pressure water mist technology for fire fighting presents several advantages, which made SEM-SAFE® the perfect choice for this unique office block:

- Easy and flexible installation with narrow-bore tubes.
- Blends sensitively with the architectural design scheme.
- High-tech, efficient fire fighting capabilities with very low water consumption.
- Flexible pipe routing and planning.
- With high-pressure water mist it is possible to cover multiple applications with the same system, i.e. server rooms, emergency generators, glazing etc.



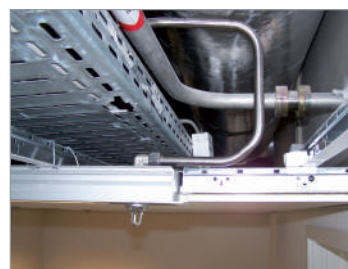
Seven section valves, with flow indicators.



The water mist system consists of approx. 1,900 nozzles with different surface finishes – including satin, white and chrome – to help them blend into the architectural design scheme.



The system runs off one high-pressure pump unit with controls and a pilot pump to maintain a pilot pressure of approx. 12 bar. The minimum pressure when nozzles are activated is 100 bar.



All water-side pipes, valves and fittings are stainless steel.

Advisor for SEM-SAFE®

