SYSTEM IN PRACTICE: Sahlgrenska Hospital

IWMA University of Lund

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High pressure water fog sprinkler systems for fighting fires

www.ultrafog.com
Ultra Fog High Pressure Watermist Fire Suppression

- **ULTRAFOG®** is a HIGH PRESSURE watermist system
  - 100-120 bar (at the nozzle)
  - only water is used (normal tap water, passing salt water in marine applications)
  - Tested and Type approved systems for a range of applications
  - Patented nozzle
  - System designed for ease of installation and ease of maintenance.
Sahlgrenska Hospital Low Rise Building Project

- Customer: Västfastigheter
- 2-Phase project
  - Phase 1: Eye Clinic
  - Phase 2: Intensive Care, Admin & Reception
- Each building is composed of some 10,000 m2 across 7 floors
- Design Criteria: OH1 / EN12845:2004
Delivering fire protection solutions for industry, buildings, occupants and property
Reasons for Specifying Watermist:

- Reduced water supply availability
- Building Space was at a premium: No space for large water tanks
- Specialised use of internal space (intensive care, eye clinic) = sensitive high value equipment to be protected.
- Tight building schedule: ease of installation
- Low lifetime maintenance costs
Sahlgrenska Hospital: Ultrafog System Design Facts

- Fully Redundant System
  - 2x 4-pump units
  - PAH 80 pumps capable of delivering 222 Lt/min
  - The same sets of pump units are used for each building – the one backing up the other.
Sahlgrenska Hospital: Most Demanding Area

- The area shown in the submitted drawing is placed on level 2 in the building.
- 72 m²
- Max 6 pcs nozzles, 36 l/min each
Delivering fire protection solutions for industry, buildings, occupants and property
Sahlgrenska Hospital: Ultrafog System Design

- Nozzles used in this project:
  - 603-260-061 – B - an automatic ‘Hi-Flow’ bulb nozzle approved for 2.5 mt height, 5.3 mt spacing, no coverage limit
  - 603-300-061 – B - an automatic ‘Hi-Flow’ bulb nozzle approved for 12 mt height, 4.5 mt spacing, no coverage limit
  - 603-08- B - a standard automatic bulb nozzle approved for 2.5 mt height, coverage 12.25m², to be centrally located, this nozzle is used for small areas (eg. Bathrooms etc).
Sahlgrenska Hospital: Ultrafog Easy Maintenance Nozzles

- Easy bulb change
Ultra Fog Test tool

Tool comes with a hose to collect water to a bucket/bottle for measuring of flow and k-factor
Sahlgrenska Hospital: Installation

- Ultra Fog Test tool

Connect Ultra Fog test tool to sprinkler head.
Then push rod to open the sprinkler head.
After finished test, release rod and remove test tool.
Sahlgrenska Hospital: Ultrafog Easy Maintenance Nozzles

- Ultra Fog Test tool
  - Unique features for a sprinkler head
  - Simple procedure for testing
  - Direct response for measuring k-factor
  - Works on pilot pressure mode
  - Drains out air efficiently
  - Verifies function of water release
Delivering fire protection solutions for industry, buildings, occupants and property
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