



High-pressure  
water mist fire protection



[www.ultrafog.com](http://www.ultrafog.com)

# Delivering fire protection solutions for rolling stock



Ultra Fog fire protection solutions are custom designed to meet worldwide fire safety regulations.

Ultra Fog is an international brand founded in Gothenburg, Sweden, in 1990. The company specializes in the development, design and application of high-pressure water mist systems. This high-performance product line results from a continuous research and development programme, quality-controlled manufacturing, extensive certification, and type approvals. Ultra Fog's global reach, aftersales service and maintenance guarantees customers benefit from lifelong product assurance and protection.

The protection of rolling stock presents specific challenges for fire fighting. The system must be sufficiently compact and light weight to fit within the confines of a high speed railway vehicle. It must also be capable of rapidly suppressing a fire to prevent its spread, and to enable safe evacuation of passengers and crew. The light weight design, and reduced water requirements of the Ultra Fog High Pressure watermist provides a safe, efficient and flexible solution for the protection of rolling stock assets and passengers.



## Ultra Fog high performance water mist fire suppression uses up to 90% less water than conventional sprinkler systems.

High pressure water mist is very effective in suppressing, controlling, and extinguishing fires. The Ultra Fog High Pressure water mist fire protection system produces a very fine mist of micro water droplets by forcing clean water through a specially designed, patented high pressure nozzle.

In a fire scenario the resulting mist reduces the heat in the enclosure very quickly. The expansion of the mist from water to steam aids the suppression process by reducing the amount of oxygen feeding the fire. Clean water used in Ultra Fog systems is non-toxic, environmentally friendly and people safe.

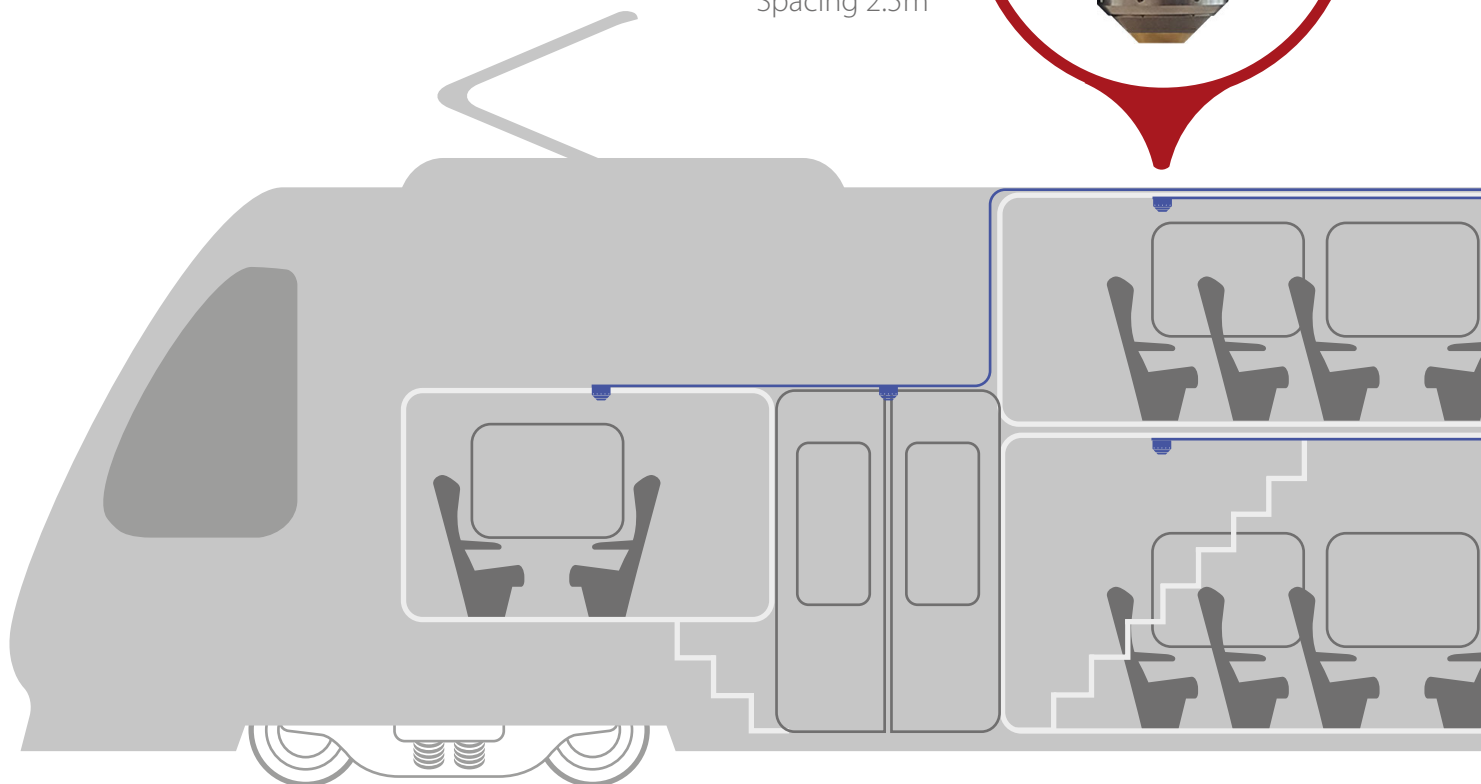
# High pressure water mist system

## Ultra Fog Nozzle

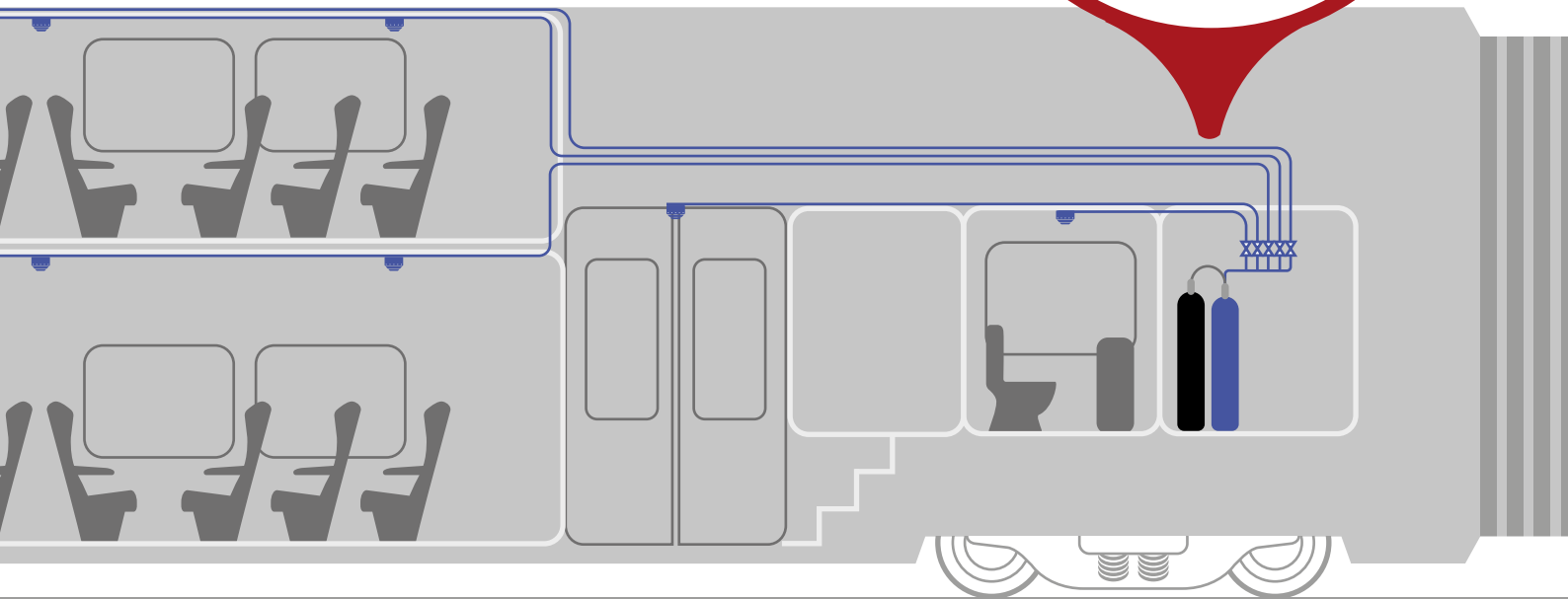
**Double Deck Train:**  
Flow 7 L/min at 60 Bar  
Spacing 4m

**Single Deck Train:**  
Flow 5,8 L/min at 40 Bar  
Spacing 2m - 4.25m

**Compartment:**  
Decaying pressure system  
Flow 2,7 L/min at 100 Bar  
Spacing 2.5m



### Accummulator Unit



An exemplary scheme of an installation compliant with the UNI 11565:2016 standard

## Features & Benefits

- Custom designed, efficiently engineered, high quality manufactured fire suppression solutions.
- Fast response Ultra Fog fire systems are highly effective, quick and easy to put back into service.
- Rapid expansion of water droplets displaces oxygen in the fire zone reducing the risk of flare up.
- Reliable, Environmentally friendly, and safe for people.
- Diminished risk of flashover.
- Aesthetically pleasing nozzles that can be painted in any color to suit the surrounding area.
- Uses up to 90% less water than conventional sprinklers which radically reduces storage space requirements: less space, less weight, smaller footprint.
- Narrow stainless steel pipe dimensions result in less weight, simple installation, and pipe networks that are easy to conceal.
- Reduced downtime and clean up costs following fire event.
- Fire extinguishing system is a requirement of EN50553 "Requirements for running capability in case of fire on board of rolling stock".
- Cylinders can be installed in vertical or horizontal position in order to optimize installation.



# A world leader in the development and application of custom quality fire protection solutions



Marine Applications



Off-shore Applications



Land Applications

Ultra Fog has a wide range of experience providing quality fire protection solutions for many complex projects in commercial, industrial, marine and offshore facilities.

The Ultra Fog system was originally designed and developed for marine use, where the demands for effective fire suppression are extremely high. Ultra Fog systems use safe, environmentally friendly clean water as the suppressant agent in marine, offshore and land. Ultra Fog fire protection solutions are custom designed to meet worldwide fire safety regulations.

The Ultra Fog system can be connected to various forms of detection equipment for early fire detection and immediate activation. Combined, fast response with low water consumption saves valuable structures, property and occupants.

# Ultra Fog Classification Testing and Approvals

Standard: UNI 11565:2016

Design, Installation, Validation And Maintenance Of Fire Detection And Extinguishing Systems To Be Utilized In Rail Vehicles – General Principles



## Ultra Fog | Sweden

Faktorvägen 17Q  
434 37 Kungsbacka  
**Telephone:** +46 (0)31 979 870

## Ultra Fog | Italy

Via Grecale 33  
55049 Viareggio  
**Telephone:** +39 05 84390609

## Ultra Fog | Italy

Via Vincenzo Monti 52  
20017 Rho (Milano)  
**Telephone:** +39 02 09943101

## Ultra Fog | United Kingdom

Office No. 113  
1010 Cambourne Business Centre  
Cambourne, Cambridgeshire CB23 6DP  
**Telephone:** +44 (0)1223 499180

## Ultra Fog | Monaco

57 rue Grimaldi Block C/D  
98000 Monte Carlo  
**Email:** service@ultrafog.com  
**Telephone:** +377 99901481

## Ultra Fog | United States

3380 SW 11th Avenue  
Fort Lauderdale FL 33315  
**Email:** salesusa@ultrafog.com  
**Telephone:** +1 (954) 581 6996



[info@ultrafog.com](mailto:info@ultrafog.com)



[www.ultrafog.com](http://www.ultrafog.com)



[www.linkedin.com/company/ultra-fog](http://www.linkedin.com/company/ultra-fog)



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