



WHY AUTOMIST?

Product Information for Architects & Building Control

Automist is the most comprehensively tested domestic watermist system in the UK. We take pride in the independent third party validation of our Exova Warrington test reports (BS8458/BS9252 Fire Performance for Smartscan). We are the only UK watermist company to have an LABC Registered Detail (EW534/EW171) and a BSi Verification Certificate (VC 656504) - two independent assessments of our fire and product performance against BS 8458:2015. Our systems have also saved multiple lives!

Aware of the need to demonstrate that Automist is suitable and sufficient for the task, we have pushed our system limits beyond the bare minimum, challenging it in many additional tests to suppress or extinguish fires in any position including difficult fires directly under the nozzle, chip pan fires or those hidden by furniture, and in a variety of free and forced draught conditions. Demonstration tests have convincingly proved its worth time and time again. It has even travelled to the USA, where the UL 2167 listing process has begun and where it favourably impressed fire and insurance authorities in live testing.

[Fire Test Video Footage is available publicly at youtube.com/user/PlumisAutomist](https://www.youtube.com/user/PlumisAutomist)

Third Party Certification by BRE Global has also established Plumis have complied with the requirements of ISO 9001:2008 for design, manufacture and supply of water mist fire suppression systems. We are members of The Fire Industry Association, the largest fire protection trade association in the UK, and members of the International Water Mist Association.

In recognition of its innovative design Automist has won numerous International Design Awards, for example, in 2010 the British Library named Automist one of the top 15 inventions of the last decade. In 2016 Plumis Ltd was awarded a Queen's Award for Enterprise in Innovation - the UK's highest accolade for business success.



reddot award 2016
best of the best



Assessed to ISO 9001:2008
Cert/Ref No. 1376

www.plumis.co.uk

We are happy to answer any further questions you may have

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THE SCIENCE BEHIND THE TECHNOLOGY

WHY ARE THE NOZZLES WALL MOUNTED AT A LOWER LEVEL?

Traditional sprinklers mount on the ceiling, as a result, the water droplets have to flow (with gravity & momentum down) against the fire & smoke to reach the fuel, which flow upward. This also means when they activate they can also drag down the smoke layer on the ceiling reducing visibility.

In contrast, Automist through its side wall delivery is able to utilise the buoyancy of the fire plume to suck the mist in and suppress fires. Its lower position and early activation means it **only needs 5.6 litres** per minute to suppress fires which would require ten times as much with a traditional sprinkler solution. This means installation is easy and it does not require a large tank or water main upgrade, which can be a significant cost barrier.

A water droplet should ideally evaporate inside the fire plume, instead of in the hot layer above it, to be most effective in cooling and inerting the flames. If a droplet is entrained and flows upwards together with the gases inside the plume, it will evaporate quickly whilst in contact with the hottest part. Upon losing its upwards momentum inside the fire plume, it will fall back driven by gravity. It is then possible to utilise the unevaporated droplet twice!

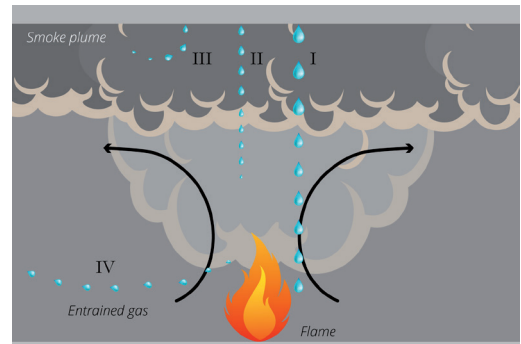


Fig.1 Relatively large droplets are denoted I, medium sized droplets are denoted II, very small droplets are denoted III. The situation denoted IV is when medium sized droplets are following entrained air and combustion products into the fire plume.

WHY DO YOU TRIGGER OFF HEAT ALARMS?

Because as every Fire Engineer will tell you the earlier you detect and start to address a fire the easier it will be to suppress it and bring it under control. Testing has shown Automist Smartscan can extinguish a standard domestic fire two minutes before a traditional sprinkler activates. This is due to the difference in thermal inertia required to activate a glass bulb in comparison to triggering a thermocouple. By triggering early Automist minimises the build-up of heat and toxic gases, helping to maintain tenability and visibility in the protected volume. Automist is triggered by third party alarms certified to the relevant British or European standard.

CHAIN OF ACCOUNTABILITY

Plumis is installed, specified and commissioned by an Accredited Installer only. These partners are audited and regularly install Automist in a wide variety of projects nationally, and each is fully trained to ensure that high standards are maintained. The details and layout of each installation is verified and logged on the Plumis central database.

Plumis was formed off the back of talking to fire fighters, individuals who put their lives on the line for our families. They highlighted the need for more ways to protect vulnerable people in their homes. We started Plumis because we were inspired by their passion and their commitment, and developed Automist to tackle fires more efficiently, in more homes, and leaving less damage than was possible before.

