VID FIREKILL
LOW PRESSURE WATERMIST

Aircraft Hangar Fire Protection

with Low Pressure Water Mist

Keeping people and facilities safe with environmentally friendly solutions

VID FIREKILL is a pioneer in the water mist industry, and today a world leading manufacturer of watermist solutions utilizing low pressure watermist technology. VID FIREKILL offers fire protection solutions for various projects in industrial, commercial, data centers, marine, and other specialized areas.
All products are developed and manufactured in ISO 9001 accredited facilities.

FIRE PROTECTING AIRCRAFT HANGARS

Aircraft hangars are specialized structures designed to house and maintain aircraft. They are unique as they store equipment of very high value compared to most other types of facilities, and the damage caused by a fire can be catastrophic. Due to the contents and purpose of aircraft hangars, they pose unique challenges in terms of fire protection. To ensure the safety of expensive assets, the hangar structure, and human life, maximum fire suppression measures are necessary.

The risk of fire in a hangar is highest when an aircraft is being repaired or maintained. These activities can create various potential ignition sources, which, when combined with highly flammable aviation fuels, pose a significant fire hazard. Although aircraft are usually not fueled while parked in hangars, the presence of flammable fuel always poses a danger.

Safe fire protection without harmful chemicals

The VID FIREKILL low pressure water mist system for aircraft hangar fire protection provides fast and efficient fire suppression to combat various hazards present in aircraft hangars and the valuable contents they hold.
The FIREKILL system is highly customizable and can be designed to provide protection for aircraft hangars of different sizes, purposes, and configurations, including retrofit installations.

The FIREKILL low pressure water mist hangar system features nozzles that are specifically designed to suppress and mitigate fires and prevent damage to aircraft surfaces that are directly above or adjacent to a fuel fire. Unlike other hangar firefighting systems using foams, the FIREKILL system only uses potable water, which effectively suppresses fires without filling the hangar with foam or causing damage to high-value aircraft.

The use of firefighting foams to extinguish fires in hangars has proven to be hazardous to both the environment and human health due to the chemicals they contain. Moreover, a foam discharge can cause significant damage to the aircraft and other valuable assets.
Utilizing only water eliminates the risk of firefighting agents causing environmental contamination if released, damaging valuable assets, and making it a safe solution for people working in the hangar.

The VID FIREKILL low pressure water mist hangar nozzles

The **FIREKILL™** Model F102-1and F102-2 are telescopic one or two way spray nozzles utilizing low pressure water mist to provide fire protection in hangar areas below aircraft. The nozzles are installed embedded into the hangar floor, with the nozzle top plate flush with the floor surface. This protects the nozzles in standby position but enables them to perform as needed if a fire occurs. From this position, the nozzles automatically distribute sprays of water mist in the areas below the aircraft. Once pressure is added to the nozzle pipes, the nozzles will elevate from the floor and spray water mist into a 2 by 4-meter area.

Elevated FIREKILL
Model F102-1 nozzle

The **FIREKILL™** Model F202 is a telescopic nozzle utilizing low pressure water mist to provide fire protection in hangar areas below aircraft. The Model F202 is specially developed for installation in existing hangars. The nozzles are installed on top of the hangar floor with an aluminum ramp for protection. Once pressure is applied to the nozzle pipes, the nozzle will elevate from the ramp and spray water mist into a 2 by 4-meter area.

Elevated FIREKILL
Model F202 nozzle

The FIREKILL Model F102 nozzles have been installed in NATO hangars to provide fire protection for F16, F35, helicopter hangars, and Boeing AWAC airplanes.

FIREKILL Model F102-1 nozzles

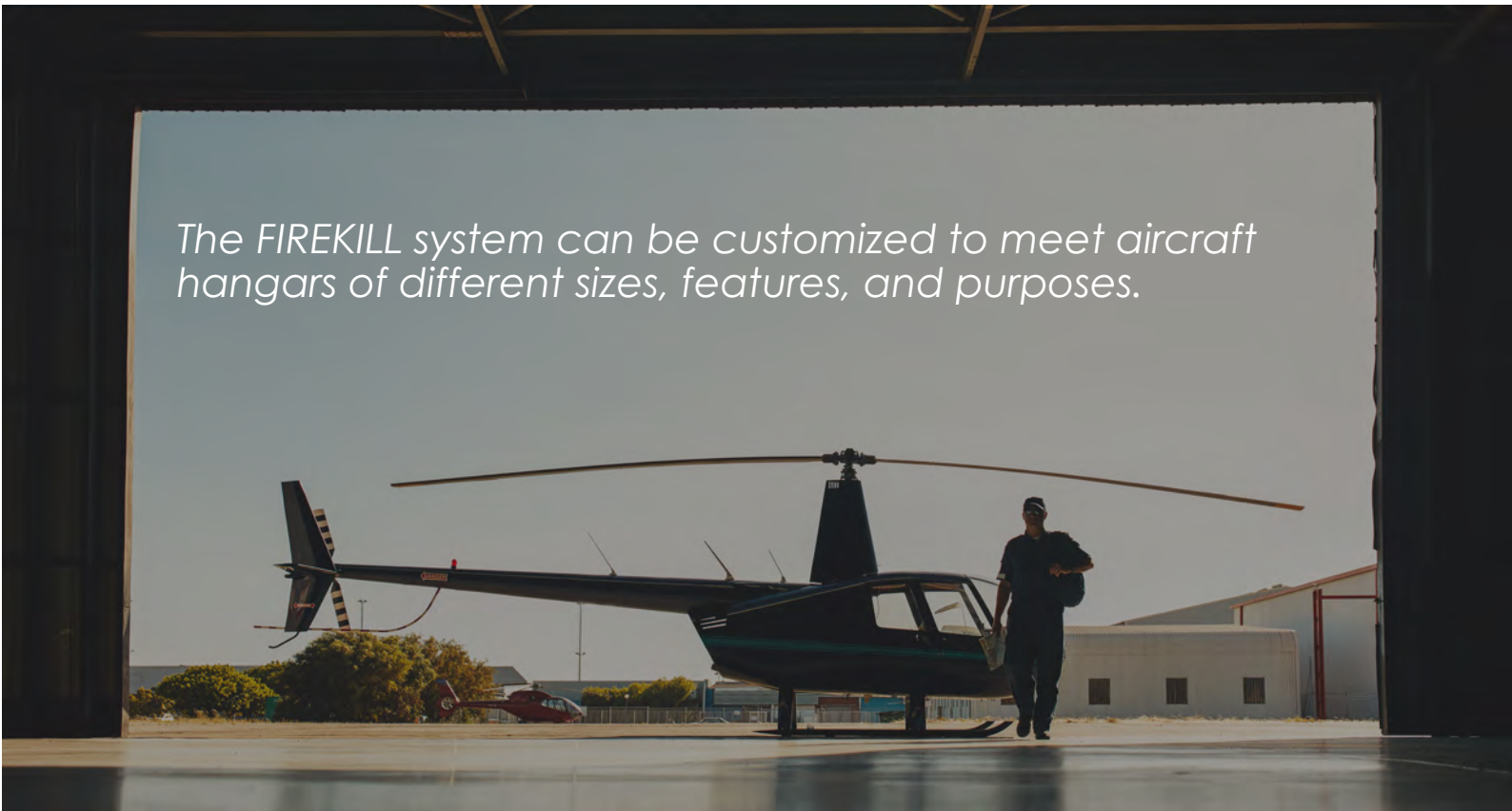
How it works

The FIREKILL hangar system operates at water pressures of 10 – 15 bar (146 – 218 psi), producing a fine water spray that absorbs heat, reduces radiant heat, and causes oxygen depletion in the vicinity of the fire, which in turn controls and suppresses the fire.
The system uses a combination of droplet sizes, including larger droplets which overcome the velocity of the fire and penetrate its plume immediately. These larger droplets drag the smaller droplets into the fire, where they quickly evaporate and cool it down. Low pressure water mist is more effective for large volume or height hangars, as the larger water droplets can reach the oil before evaporating.

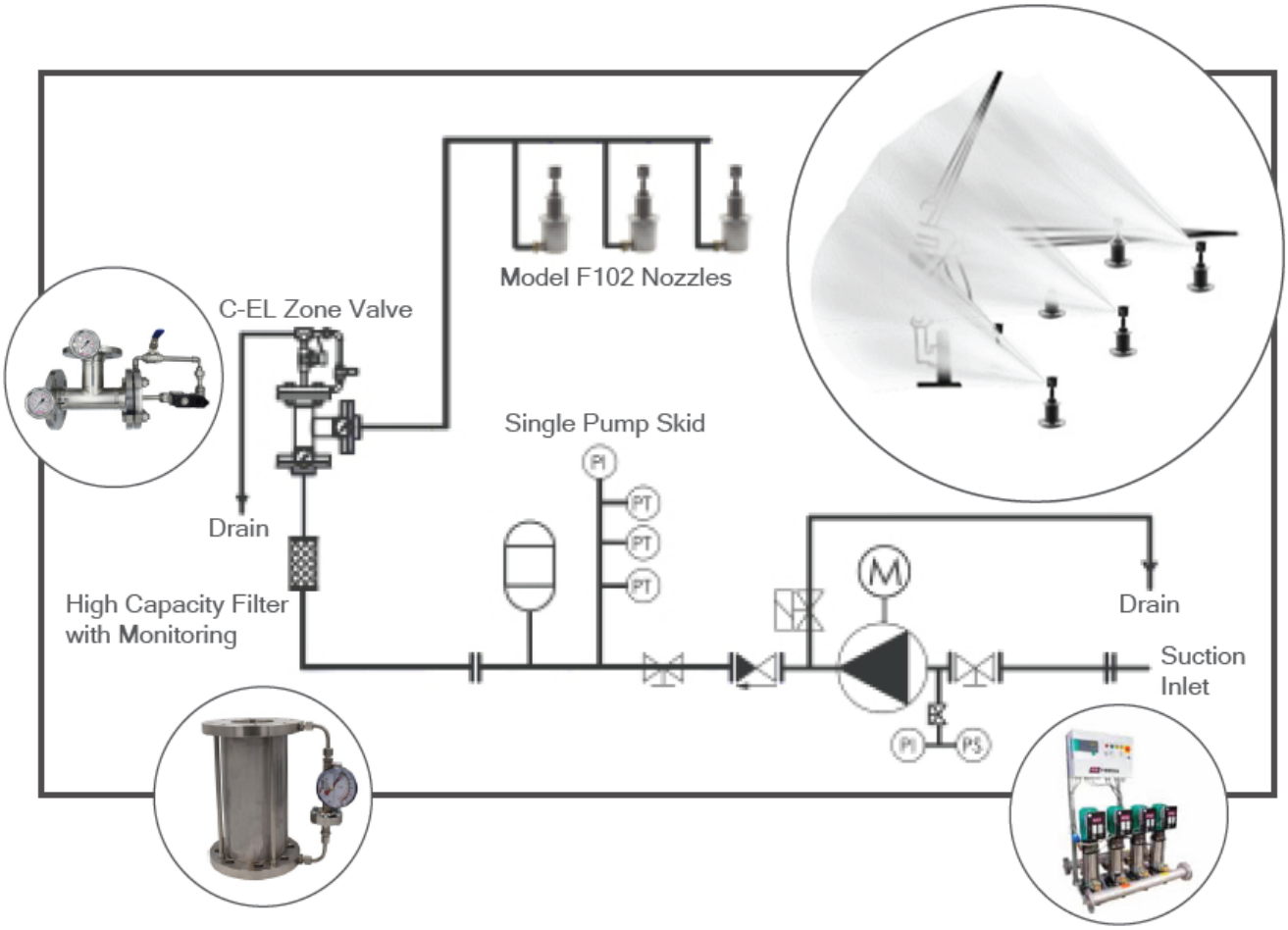
The FIREKILL Model F102-1, F102-2, and F202 nozzles have been full-scale fire tested at an ISO 17025 accredited test laboratory with various types of fuels such as Jet Fuel, Heptane, and Diesel.

Advantages of the FIREKILL hangar system

- Effective fire protection without toxic chemicals
- The system only uses potable water as a firefighting agent
- It is safe for people and the environment
- Prevents damage to high-value aircraft and equipment
- Ideal for large volume or height hangars due to the combination of droplet sizes
- Can be installed during retrofit works in old hangars
- The systems are cost-effective
- The system can be combined with sprinklers using the same pump and water tank



The VID FIREKILL low pressure water mist system



Water mist

Water in the form of mist is more effective in suppressing fire compared to just water. The water mist droplets are smaller and finer, which gives them a larger surface area and thus a larger heat absorption surface. This enables the mist to suppress a larger area of the fire without using more water.

The goal of a water mist system in an aircraft hangar is to prevent damage to aircraft surfaces that are directly above and/or adjacent to the fuel spill fire.

Water mist systems fight fire by removing the heat and oxygen elements. The benefits over more traditional fire protection options include greater effectiveness on hydrocarbon fire extinguishment, quick response time and activation, and reduced water usage, resulting in faster and easier clean up.

The benefits of water mist

Water mist systems offer many benefits. One of the key benefits is water usage. Compared to traditional sprinkler and foam systems, water mist systems use approximately 85% less water. The reduced water consumption makes the systems more sustainable. In addition, water mist systems only use potable water as a suppression agent and are therefore harmless to people. By using less water, the water mist systems ensure minimal water damage to buildings and the interior and minimize interruptions and downtime as well as the financial cost of a fire.

Water mist systems are cost-effective. The systems are easier and cheaper to install and maintain than traditional sprinkler and foam systems. This is due to water mist systems can be designed with smaller components and smaller diameter pipes. The water storage tanks for water mist systems are smaller than those required for traditional sprinklers, and therefore, require less storage space. In case of facility expansion, the water mist systems can be easily retrofitted and extended.

For more information on the VID FIREKILL aircraft hangar fire protection solution

Scan the QR code or visit www.vidfirekill.com

VID FIREKILL
LOW PRESSURE WATERMIST

This publication, or parts thereof, may not be reproduced in any form, by any method, for any purpose. VID FIREKILL ApS and its subsidiaries assume no responsibility for any errors that may appear in the publication, or for damages arising from the information in it. No information in this publication should be regarded as a warranty made by VID FIREKILL ApS. The information in this publication may be updated without notice. Product names mentioned in this publication may be trademarks. They are used for identification purposes only. 01. 2024.

VID FIREKILL
Svalbardvej 13
5700 Svendborg, DK
Phone: +45 6262 1024
www.vidfirekill.com
sales@vidfirekill.dk