VID FIREKILL
LOW PRESSURE WATERMIST

VID FIREKILL
Low Pressure Water Mist Fire Protection

VID FIREKILL LOW PRESSURE WATER MIST

VID FIREKILL is a world leading innovative developer and manufacturer of water based firefighting products, specializing in fixed water based systems utilizing environmentally friendly firefighting methods.

We offer the industry's widest range of rigorously tested and approved products that ensure we meet our customer's unique requirements. Our unwavering commitment is to deliver the utmost quality and support in everything we offer. With the advances in watermist fire protection technology and the continued addition of VID FIREKILL products, approvals and covered applications, we form the spearhead of the fire protection industry.

We offer protection of the most commonly found applications onshore and offshore:

- Land commercial
- Land industrial
- Heritage
- Offshore/maritime
- Aircraft hangars
- Infrastructure and transportation

COMMITTED TO PROTECTING THE WORLD

At VID FIREKILL, we feel obligated to do our utmost to protect the world which is why our products combine high firefighting performance and robust and reliable designs with environmentally sound methods.

Water mist systems offer many benefits. One of the key benefits is water usage. Compared to traditional sprinkler systems, watermist systems use approximately 85% less water. The reduced water consumption makes the systems more sustainable. In addition, watermist 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.

We strive for quality

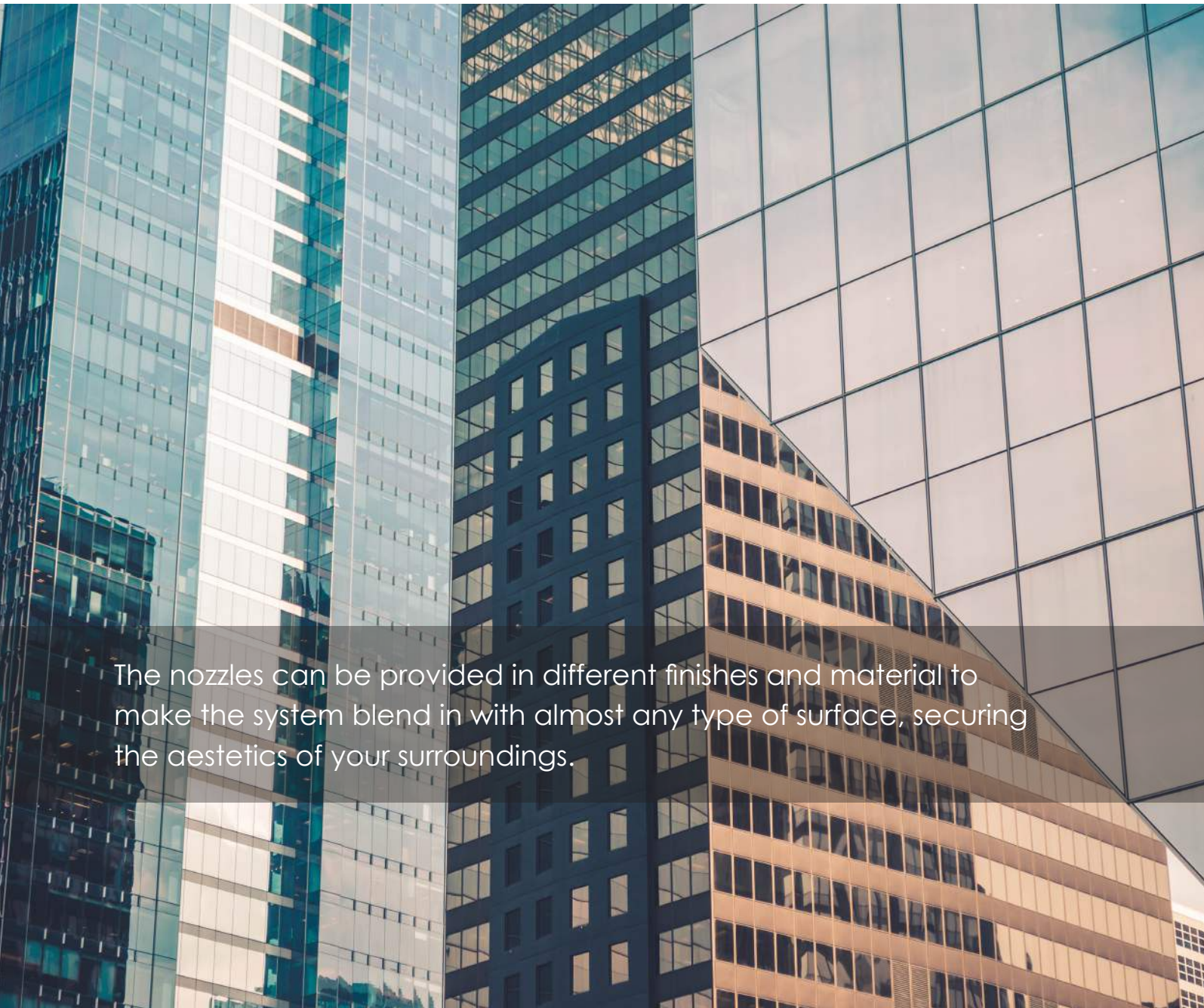
All our products are successfully tested by ISO 17025 accredited fire test laboratories and third-party approved to comply with the latest updates on international approval standards for watermist system components for fire protection.

- FM approved product range
- Our product range is third-party witnessed in accordance with CEN
- We offer a full range of IMO approvals
- We offer the largest product range with the most covered variety of applications
- We specialize 100% in low pressure watermist solutions
- Our production is ISO 9001 accredited, FM approved and DNV/GL MED-D and Lloyds Register MED-B approved
- We care about aesthetics! That is why we offer innovative fire protection that you almost cannot see

LAND COMMERCIAL

The **FIREKILL™** OH system for commercial land applications is an automatic, concealed low pressure water mist system ideal for a wide range of domestic and public areas and applications such as:

- Offices
- Hotels
- Data centers
- Hospitals
- Institutions
- Nursing homes
- Meeting rooms
- Museums
- Kitchens
- Shopping areas
- Schools and educational facilities
- Atriums
- Restaurant seating areas
- Indoor carparks



The nozzles can be provided in different finishes and material to make the system blend in with almost any type of surface, securing the aestetics of your surroundings.

The patented **FIREKILL™** OH nozzles are tested and approved for various applications.

FIREKILL™ OH-VSO is s an automatic, pendent low pressure water mist nozzle tested and approved for HC1/OH1 in accordance with FM 5560, Appendix G.

FIREKILL™ OH-DR1 is an automatic, pendent low pressure water mist nozzle tested in accordance with CEN/LPCB for domestic and residential applications with DnVGL third party witness.

FIREKILL™ OH-UPR is an automatic, upright low pressure water mist nozzle tested in accordance with CEN/VdS for non-automatic, fully enclosed garages, underground garages and such applications with DnVGL third party witness.

FIREKILL™ OH-PX2 is an automatic, pendent low pressure water mist nozzle tested in accordance with CEN/VdS for selected OH-3 sales, storage and technology areas anclosed by OH-1 areas with smooth ceilings and walls with DnVGL third party witness.

FIREKILL™ OH-DC1 is an automatic pendent low pressure water mist nozzle tested and approved for data processing equipment rooms/halls above raised floor in accordance with FM 5560:2016, Appendix M Water mist Systems.

FIREKILL™ OH-DC2 is an automatic pendent low pressure water mist nozzle tested and approved for data processing equipment rooms/halls below raised floor in accordance with FM 5560:2016, Appendix N Water mist Systems.

FIREKILL™ OH-SW2 is an automatic horizontal low pressure water mist nozzle tested and approved in accordance with VdS test guidelines for horizontally installed sidewall water mist nozzles as implemented in 14972:2020, part 1, Annex A.

FIREKILL™ OH-SW is an automatic sidewall low pressure water mist nozzle tested in accordance with Danish Fire Laboratories test method 80728-SW "fire test scenario for horizontally installed sidewall water mist nozzles" as implemented in the CEN/prEN 14972:2016, part 1, Annex A.

The OH nozzles are combined with the WAC alarm valve. The valves, which are made in bronze, are characterized by being able to detect small flows which are common in water mist systems and also by having an integrated Anti False Alarm feature which reduces the risk of false alarms due to pressure shocks.

LAND INDUSTRIAL

The **FIREKILL™** protection systems ensure maximum fire protection of industrial facilities and high hazard machinery spaces. We offer solutions for the protection of applications such as:

- Internal combustion engines
- Oil pumps
- Oil tanks
- Combustion turbines
- Fuel filters
- Generators
- Transformer vaults
- Diesel engine driven generators
- Exposed combustion turbines
- Insulated combustion turbine areas
- Biomass storage areas
- Conveyor belts
- Lubrication skids
- Drive shafts
- Gear boxes
- Cable tunnels

FIREKILL™ K6 is an open low pressure water mist nozzle for total flooding protection of machinery spaces, special hazard machinery spaces, combustion turbines and insulated combustion turbines with volumes up to 4610 m3 (162800 ft3) and ceiling heights up to 12 m (39.37 ft ceiling height). The system has been succesfully tested and approved according to FM5560:2016 Appendix E and F.

FIREKILL™ LAK7 system is successfully tested to FM5560:2016 appendix I for protection of various industrial applications with local protection design.

FIREKILL™ Model N-pipe is a low pressure fine water spray deluge system, which was created for the protection of many different applications. The N-Pipe is manufactured in different shapes suiting different applications, typically biomass storage, conveyors, wooden industry machines etc.

FIREKILL™ Model SAS system is a modular standalone low pressure water mist system for total flooding protection of small enclosures or local application objects with no or limited water or power supply. The SAS system operates at a pressure between 2 – 16 bar and consists of water cylinders and a nitrogen cylinder that are interconnected by stainless steel hoses.

- Various options for individually fitted systems in order to meet your exact needs and create the best solution.

The **FIREKILL™** systems can be designed with different parameters depending on enclosure size, making it possible to optimize the system for its use. The single open nozzles and the N-pipe system have been tested to a long list of different protocols. To proof its use as a protection system, the N-pipes have been successfully tested to various DFL test methods with amendments, all designed accordingly to CEN/EN 14972. The systems are to be fitted with our C-EL FM approved zone valve for either manual or automatic activation by flame and/or heat detectors.

HERITAGE

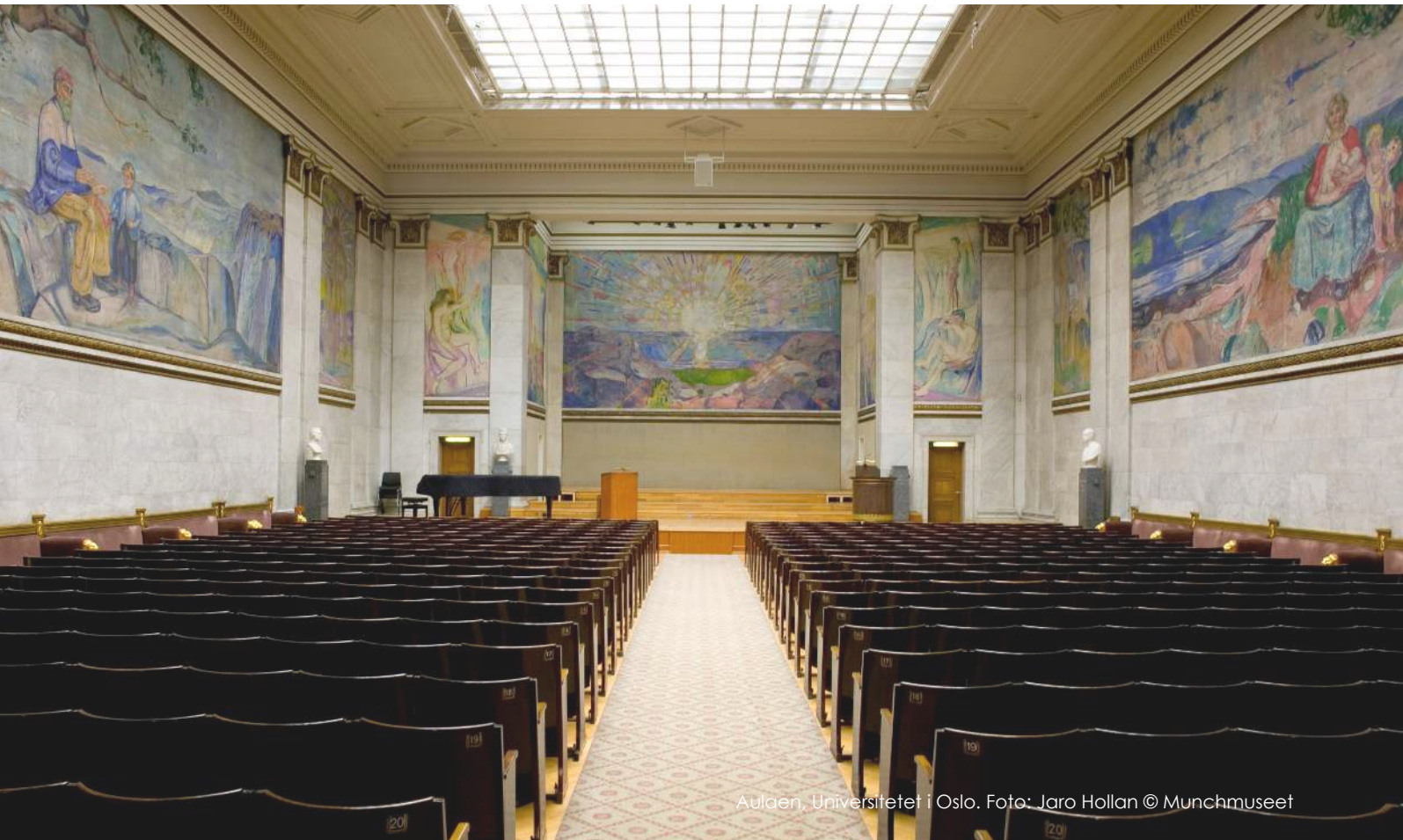
LIFE SAFETY AND STRUCTURE PROTECTION

The **FIREKILL™** system for protection of heritage buildings, for example, old churches, museums, theaters etc. is a combination of different **FIREKILL™** products such as OH nozzles, an APS system, a KIP system for attics, and a facade system for outdoor protection.
This combination offers complete protecting of historic buildings and irreplaceable values.

FIREKILL™ Model AU7 nozzles have been designed specifically for the protection of large indoor spaces with high ceiling heights, which contains moderate fire loads and spaces in which the fire load concentration does not exceed an average of 1MW/m2.

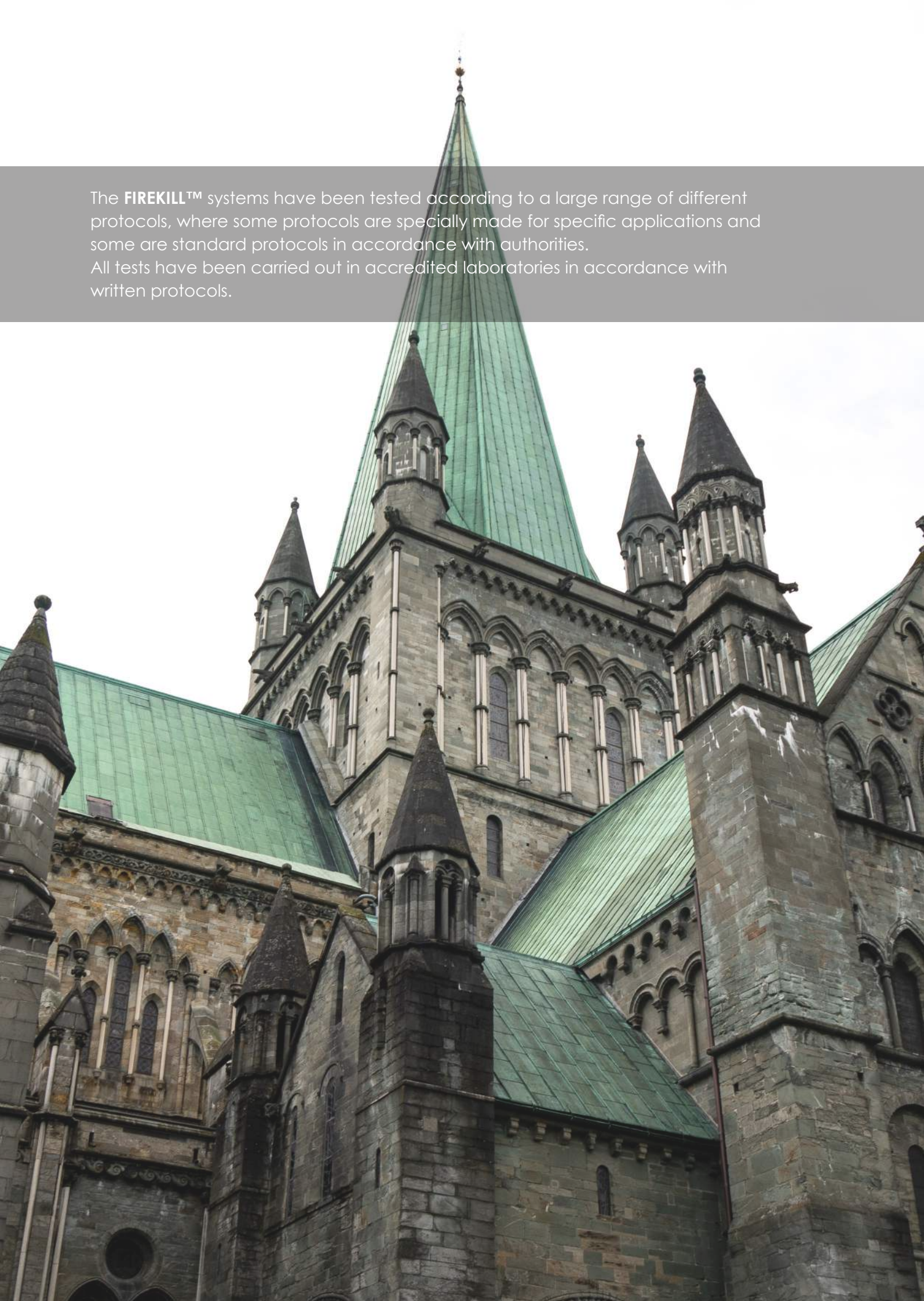
FIREKILL™ low pressure water mist atrium system **Model APS** is a system utilizing very small open watermist nozzles integrated in stainless steel pipes, designed specifically for the protection of atriums and other such large rooms.

The AU7 nozzles have been tested in accordance with the DFL fire test standard No. 90805-01 Full Scale Fire Test Method of Active Fire Protection Systems for Fire Protection of Large Indoor Spaces with Large Multiple Seating Areas by the Danish Fire Laboratories.
The APS System has been tested in accordance with the Danish Fire Laboratories test method TM 70111-04 for horizontally installed systems designed to protect atriums and other such applications.



Aulaen, Universitetet i Oslo. Foto: Jaro Hollan © Munchmuseet

The **FIREKILL™** systems have been tested according to a large range of different protocols, where some protocols are specially made for specific applications and some are standard protocols in accordance with authorities.
All tests have been carried out in accredited laboratories in accordance with written protocols.



SAFETY AT SEA

OFFSHORE AND MARITIME FIRE PROTECTION

FIREKILL™ Model OH-OPX1 is a patented open, low pressure water mist nozzle for fire protection of car deck and RO-RO space.

FIREKILL™ Model K6 is a patented open low pressure water mist nozzle for fire protection of machinery space category A and pump rooms.

FIREKILL™ Model B1 is a patented open low pressure water mist nozzle for fire protection of the bilge area (space between floor plates and tank top) in machinery space category A and pump rooms.

FIREKILL™ Model K6-North Sea, Pacific, **Mediterranean** and **B1-Bengal** for machinery space cat Aaccording to MSC Circ. 1165 with DnVGL MED-B approval.

FIREKILL™ Model K7-Kattegat for local application according to MSC Circ. 1387 with DnVGL approval.

FIREKILL™ Model OH-Neptun for accommodation areas according to MSC Res 265(84) with DnVGL MED-B approval.

FIREKILL™ Model OH-OPX1 Skagerak and Suez for RO-RO deck in accordance with IMO Circ. 1430 with DnVGL MED-B approval.

FIREKILL™ Model OH-PX2 Balcony for cabin balconies according to MSC 1/Circ. 1268 with DnVGL MED-B approval.

FIREKILL™ Model HS and MS for deluge systems, outdoor and indoor protecting process areas etc. holding FM approval.

FIREKILL™ OH-Neptun is a patented range of automatic, pendent low pressure water mist nozzles. They provide a highly reliable and enhanced firefighting performance along with low water requirements, which is typical for the **FIREKILL™** water mist nozzles. The nozzles are available in custom finishes and optional colored finishes, thus making the **FIREKILL™** OH-Neptun blend in with almost every type of surface.

INFRASTRUCTURE AND TRANSPORTATION

TUNPROTEC® is a reliable and robust fast-response fixed fire protection system specially designed for the protection of infrastructure applications such as tunnels and sub surface complexes.
The patented TUNPROTEC® system includes a double-knock detection system for fast detection of fires with minimal risk of false activations, a low pressure water mist system for controlling and suppressing the fire and an application-tailored control system for ensuring that the system is operational 24/7 and can be easily integrated into tunnel control systems such as SCADA.
A full automatic system designed to minimize installation and running costs, while ensuring fast and reliable fire protection of people and tunnel structures.

The TUNPROTEC® system has been successfully tested and has received various approvals including:

- MSC circ. 1165 watermist nozzle component test approval
- SIL 2 Section Valve Approval (available upon request)
- EN54 approval on detection and control system
- UPTUN 251, NFPA 750 & NFPA 502 compliant
- San Pedro de Anes full scale fire testing 250 MW
- Runehamar full scale fire testing 30 MW - 100 MW

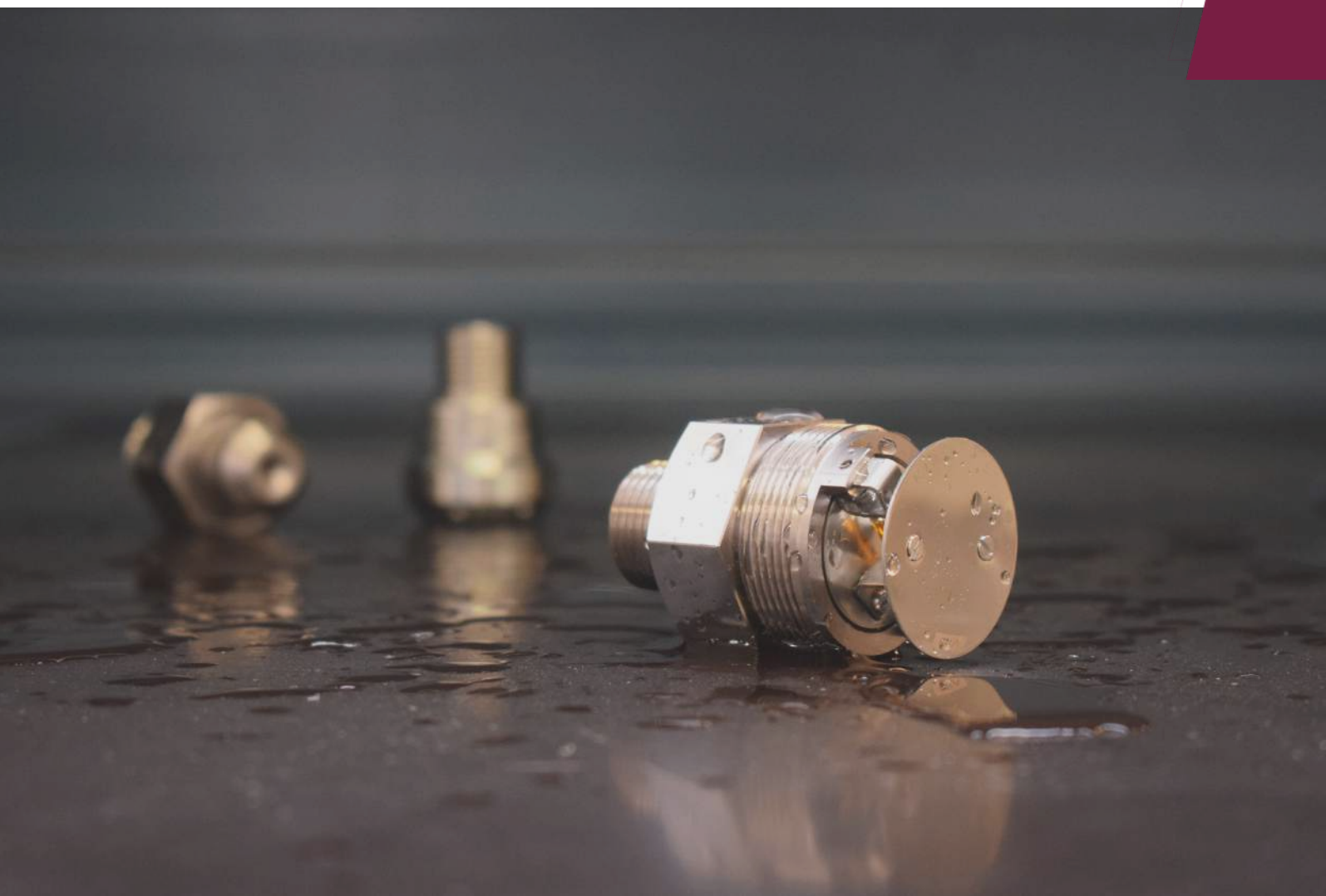
TUNPROTEC® has the capability to prevent and control temperature buildup and its ability to minimize back layering in tunnel fires is impressive. The TUNPROTEC® system effectively returns the thermal expansion of the smoke and temperature buildup to minimal values within the first minute after activation, reducing temperatures from 1200 °C (2192 °F) to < 60 °C (140 °F) and completely stopping the development of back layer.
By preventing these two devastating factors, the TUNPROTEC® system prevents potential catastrophic fires from developing and allows firefighters to enter the site and actively fight the fire almost immediately after system activation.

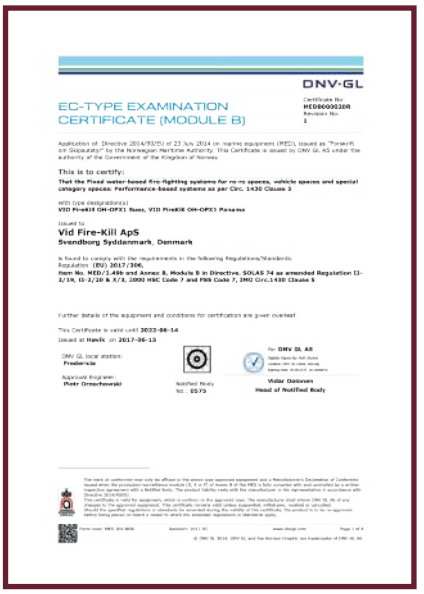
The TUNPROTEC® system ensures environmentally friendly and safe fire protection of your tunnel complexes with low water and power consumptions. By utilizing readily available standard components in combination with expertly designed essential components, the TUNPROTEC® system allows for an easy to install fire protection system at competitive low prices and system requirements without lowering the system's fire protective capabilities.

APPROVALS

All **FIREKILL™** products are developed and manufactured in our ISO 9001 accredited production facility in Denmark. We hold the EC Directive Module D certificate from the Marine Equipment Directive (MED), and our production and management system is verified by Factory Mutual, DNV and Lloyds Register. In other words, **FIREKILL™** equals state of the art and internationally recognized fire protection holding several approvals.

Water mist, still being a commercially young technology, needs "good" documentation to get accepted by the AHJs. Since water mist needs fire testing to determine the system specific data, it is often the test data which is required. However, the problem with this is that it can be difficult for non-related water mist people to read and understand test data. For the same reason most AHJs require approvals because it becomes easier to accept the result.





A notifying body approval from FM, VDS, UL, DNV, etc. will consist of a listing which is fully controlled. This means that they list the system on a public webpage where everybody can verify that the approval exists and is valid. To get such a water mist approval the system has to undertake four approval parts:

- Fire testing of the system
- Component testing of the system components
- Approval of the system DIOM, drawings, technical literature
- Approval of the production facilities

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