



Trusted above all.



Water Mist Systems for Commercial and Industrial Applications

Efficient low pressure technology
to protect people, assets and the
environment





Viking's low pressure water mist technology combines the benefits of sprinkler protection with those of the water- and space-saving aspects of low pressure water mist systems.

Low pressure water mist systems produce much smaller droplets of water than a traditional sprinkler system. These smaller droplets are still able to cool down the fire and control its growth. Low pressure water mist can bring financial, environmental and operational benefits to building owners and fire protection specifiers.

Water mist technology utilizes the physical properties of water more efficiently than classic water fire suppression systems. The water is emitted through special nozzles and sprinklers as a very fine spray under increased operating pressures. The result is a larger total surface of the water, allowing it to absorb heat and to evaporate more quickly. The cooling and smothering effect allows for particularly effective firefighting using a minimum amount of water.

Viking provides two types of low pressure water mist systems: EconAqua for commercial buildings and ProCon for industrial risks.

The **EconAqua** series uses innovative low pressure water mist technology to offer a very efficient way of firefighting in office buildings, hotels, underground car parks and in buildings with similar fire hazard profiles. People, assets and the environment are protected 24/7.

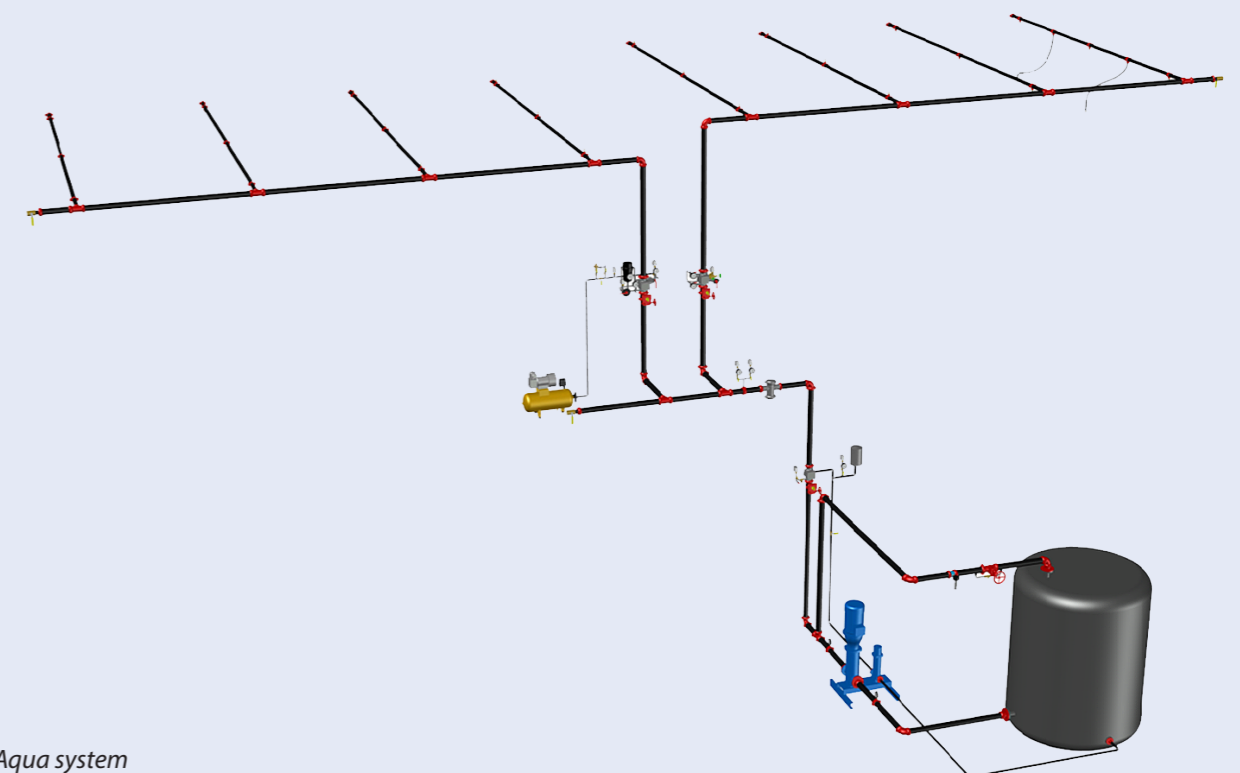
The **ProCon** series also adopts low pressure technology. The systems are flexible enough to tackle many severe fire risks, including conveyor belts, diesel emergency power generators, machinery spaces, non enclosed equipment such as steam turbines and generators, cable trays, ducts and cable distribution rooms.

Tested and approved

The outstanding suitability of EconAqua and ProCon has been documented through extensive fire tests and research. For commercial and industrial risks, approvals are obtained through 3rd party laboratories in accordance with recognised international standards and specifications. For example, VdS. EconAqua has been tested in accordance with EN 14972.

Benefits of EconAqua low pressure water mist

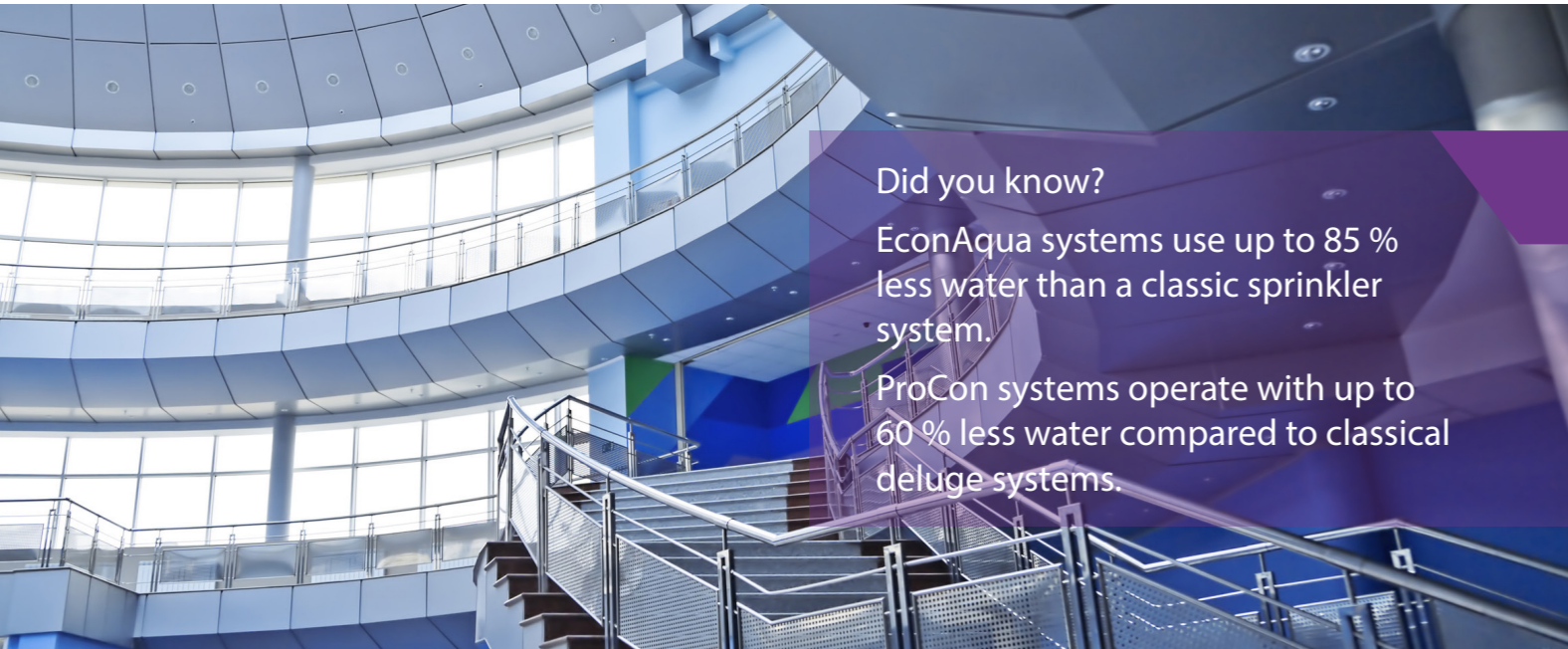
- Lower cost than high pressure alternatives
- Smaller tanks for stored water mean lower metering costs
- Because of the lower water flow during system activation, smaller pumps optimize energy performance
- Smaller pipe diameters mean less material usage
- In the case of a fire, the lower water consumption of water mist systems means less water damage and reduced downtime, reducing the risk of business interruption significantly



EconAqua system



EconAqua and ProCon water mist - the ideal solution to your fire protection needs



Did you know?
 EconAqua systems use up to 85 % less water than a classic sprinkler system.
 ProCon systems operate with up to 60 % less water compared to classical deluge systems.

For 100 years the name Viking has represented global leadership in fire protection. We lead the industry in quality and innovation because fire protection is all we do, and our single focus is to support and enhance the efforts of independent fire sprinkler contractors. We believe that protecting people and property from fire transcends the bottom line, and we never stop asking "what do our customers need to be successful?" Our water mist EconAqua and ProCon series keep within that company ethos.

Low pressure water mist systems can be used in various applications and cover several fire hazard classes.

These systems are most beneficial when limited water is available, either through lack of available supply or where the end-user is concerned about the environmental impact of water usage. Low pressure water mist systems are also beneficial for areas where the user is concerned about any potential water damage in sensitive or high-value areas.

Commercial applications



Offices

Offices need to be equipped to properly contain a fire situation. High rise buildings pose unique problems for fire fighters. EconAqua systems control fire growth to assist with occupant exit and the safety of the rescue services attending the fire. EconAqua concealed nozzles offer architects aesthetically pleasing solutions to the more conventional exposed water mist nozzles. Smaller pipe diameters ensure space in ceiling voids is kept to a minimum.



Car Parks

More and more car parks are being built under sleeping areas, An EconAqua system tested to the latest car park protocol offers the best security needed to ensure these high risk areas are protected. EconAqua dry systems ensure that freezing pipe in unheated areas is never a problem.

Commercial applications

Industrial applications

Note regarding applications: Always consult the technical documentation and approvals for your project-specific usage requirements.



Hotels

Owners and operators of hotels need to ensure that the safety of their guests is paramount at all times. EconAqua sidewall sprinklers are specially designed with hotel rooms in mind, they offer discreet protection to sleeping areas. Pendant sprinklers ensure corridors and other public areas are protected to ensure a safe escape in the event of a fire.



Data Centers

With the growing reliance on processing data, reliability and operational continuity has taken center stage. Water mist is an essential element of risk mitigation. Viking EconAqua is available as a preaction system or preaction sprinkler for added safety in the unlikely event of a system release. Dry pipework and closed nozzles result in only the activated heads discharging over the fire.

Industrial applications



Conveyor systems

Conveyor fires can cause huge amounts of disruption to any manufacturing process. Downtime costs business and subsequently there is always a knock on effect in the supply chain. Conveyor protection with open nozzles along with flame detectors and deluge valves, reduce the risk of a fire growing out of control and limit the risk associated with a complete conveyor loss.



Cable trays

Slow burning, smoldering fires can be a challenge to protect with conventional systems. ProCon PC-C nozzles offer the perfect solution to protect cable trays and electrical rooms.



Local applications

Generator and turbine fires can cause untold damage to the environment and infrastructure they feed. Loss of power can effect manufacturing processes and power generation. ProCon deluge protection, locally or in a machinery space, can reduce the risk.



Hazard class System Nozzle type Image	Commercial Applications											Industrial Applications				
	Light Hazard (LH)					Ordinary Hazard (OH1)					Ordinary Hazard (OH2)		ProCon PC-C	ProCon PC-M		
	EconAqua					EconAqua					EconAqua		MXZD	MXID	MXID	
	Pendent	Concealed	Preaction	Sidewall	EC ⁵ Sidewall	Pendent	Concealed	Preaction	Sidewall	EC ⁵ Sidewall	Upright	Dry				
K-factor	14	14	14	40	57	14	14	14	40	57	14	14	20	6.0	9.0	
Nozzle pressure (bar)	5.0	5.0	5.0	5.0	5.0/6.0	5.0	5.0	5.0	5.0	5.0/6.0	5.0	5.0	4.0	4.0	4.0	
Maximum working pressure (MWP) (bar)	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	
Nozzle coverage (m ²)	16	12	12	15	21	16	12	12	15	21	16	16	-	-	-	
Maximum spacing (m)	4.6	4.0	4.0	5.0	6.5	4.6	4.0	4.0	5.0	6.5	4.6	4.0	2.5	1.6	1.6	
Maximum ceiling height (m)	5.0	5.0	5.0	2.8	2.8/4.1	5.0	5.0	5.0	2.8	2.8/4.1	2.7	2.7	5.0	-	-	
System types	Wet / Dry / Preaction					Wet / Dry / Preaction					Wet / Dry / Preaction		Deluge			
Connect to town main/existing system	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Pipework	CPVC ^{1,2} / Fendium+ / Stainless Steel											Fendium+ / Stainless Steel				
Approval	VdS					VdS					VdS		VdS			
Applications																
Apartments																
Archives (>50 m ² +30 min FR ⁴)																
Banks																
Offices																
Cable trays / ducts																
Car park areas (enclosed)																
Compressors																
Conveyor belts																
Cycle storage (above and below ground)																
Data processing & data centers																
Exhibition areas																
Generators																
Hospitals & care homes																
Hotels & churches																
Libraries (reading rooms & similar)																
Libraries (storage <50 m ²)																
Machinery																
Motor test benches																
Multi-storey car parks																
Penal institutions / prisons																
Presses																
Railway stations (excl. shops)																
Restaurants																
Schools / universities																
Stamping machines																
Structural cooling																
Suspended ceilings																
Technical areas (<50 m ² + 30 min FR ⁴)																
Transformers																
Turbines																
Underground car parks																

Notes: ¹ CPVC for wet systems only; ² CPVC maximum working pressure (MWP) 12 bar; ³ Meeting the EN12845/CEA4001 requirements for Light Hazard (LH); ⁴ FR = Fire Resistant; ⁵ EC = Extended Coverage. Remark: The use of galvanised pipes is being explicitly discouraged by VdS & FM Global with the exception of press fit systems. Note regarding applications: Always consult the technical documentation and approvals for your project-specific usage requirements.

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For further information, please contact your local Viking sales office or refer to the technical documentation.

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