



DuraQuench™ **Watermist Systems**



**Versatile, Affordable Water
Mist Fire Suppression**

your TRUSTED partner in fire safety

A New Era in Water-Based Fire Protection

Water is the safe, natural way to extinguish a fire. But, it can cause significant collateral damage to buildings and their contents. High pressure water mist systems limit the damage, but they do so at great financial cost, often at higher cost than even chemical or inert gas systems.

The DuraQuench pumped water mist system brings the benefits of water mist fire suppression within reach of most budgets and over the widest possible range of applications.

Simple, Solid, Economical Design

The heart of the DuraQuench system is a skid-mounted pump, electric motor and pump controller that can be directly connected to a building's water supply or to a tank or reservoir. When connected to a building's water supply, DuraQuench can provide an unlimited discharge duration – something not possible with “containerized” water mist systems. Used with the appropriate machinery space or light hazard nozzle, the DuraQuench pump can protect nearly unlimited volumes with 75% less water than a conventional sprinkler system, and at much lower cost than other water mist systems.

DuraQuench provides maximum freedom when it comes to pipe, fittings, valves and other accessories. With DuraQuench, there's no such thing as proprietary pipe, fittings, tools and software. You source your own stainless, copper or CPVC pipe and tubing from your existing local suppliers. System design is simple too. You can design your system using standard off-the-shelf hydraulic calculation software – no black boxes, and no waiting on someone else to lay out your system.

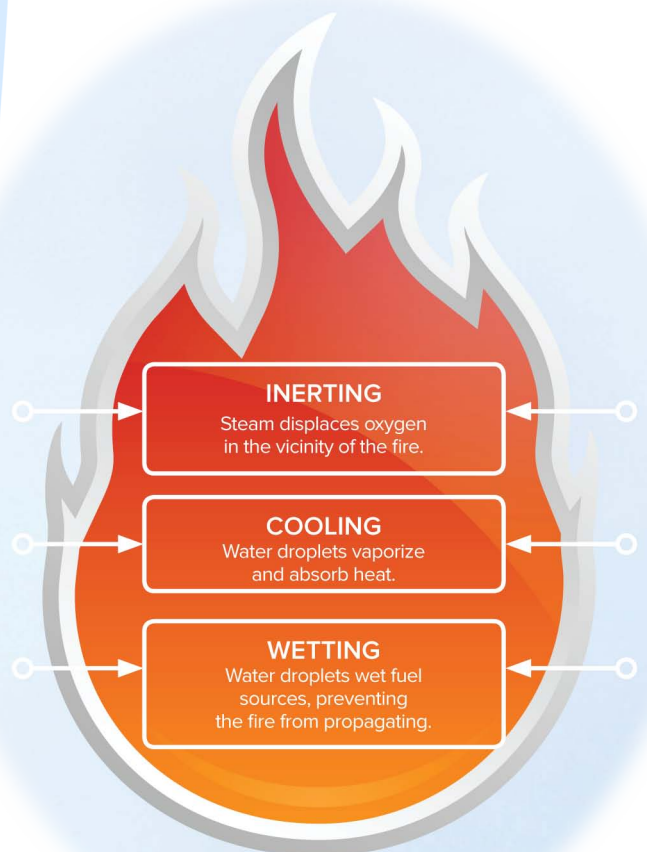


DuraQuench™

Fighting Fire with Water

Water has been used in automatic sprinkler systems since the mid-1800s, and even today, sprinklers are the first line of defense in protecting life and property in most modern buildings. In the mid-1990s, water mist systems became commercially available as another form of water-based fire suppression, primarily for use in special hazard applications where collateral damage was a concern.

Today, water is the most widely used fire suppressant, not only for reasons of ecology and economics, but for its excellent fire-extinguishing characteristics, which are derived from water's ability to work simultaneously on three levels to extinguish a fire:



The DuraQuench System

DuraQuench is highly configurable for both dry and wet-pipe applications, and can be designed and installed by any qualified Fike distributor using locally sourced pipe, fittings and the following components:

Pump Skid

The pump assembly is the heart of the **DuraQuench** system. **DuraQuench** operates at lower pressures than other water mist systems (175 psi vs. 2,000 psi) and is therefore able to use a centrifugal stainless steel fire pump rather than the very expensive positive displacement pumps used in high-pressure systems. The pump is typically connected directly to the building's water supply, but can be used with a reservoir when desired.

PUMPS/MOTORS

Rated Flow (gpm/lpm)	53/202	53/202	111/420	75/284	133/503
Power	3-Phase, 60 Hz			3-Phase, 50 Hz	
Motor HP	10	15	25	15	25



The DuraQuench pump skid comes pre-plumbed and pre-wired for easy installation.

Nozzles

The K6 machinery space nozzle is an open-head, deluge nozzle, and is used for protecting generators, turbines, pump and lube rooms and other machinery spaces. The K6 is suitable for use in volumes up to 162,800 ft³.

The OH-VSO light hazard nozzle is used to protect spaces such as offices, schools, hotels, libraries and museums – especially when collateral water damage is a concern. The OH-VSO nozzle uses 75% or less water than a conventional sprinkler, greatly reducing the potential for collateral damage.



Both the OH-VSO nozzle (left and center) and K6 nozzle (right) provide maximum protection with minimal water usage.

	K6 MACHINERY SPACE NOZZLE	OH-VSO LIGHT HAZARD NOZZLE
Min Working Pressure	112 psi (7.7 bar)	116 psi (8 bar)
Max Working Pressure	232 psi (16 bar)	232 psi (16 bar)
K-Factor	0.387 g/min/√psi (5.6 l min/√bar)	1.2 g/min/√psi (16.7 l/min/√bar)
Droplet Size	DV ₉₀ < 300 μm	DV ₉₀ < 300 μm
Max Nozzle Spacing	9.8' x 9.8' (3 m x 3 m)	14.7' x 14.7' (4.5 m x 4.5 m)
Max Distance to Wall	4.9' (1.5 m)	7.3' (2.25 m)
Max Height	39.3' (12 m)	16.4' (5 m)

Control Valves

Control valves are an integral part of any pumped water mist system. They are used primarily to prevent water from entering the water mist pipe network until triggered to open by a fire event. Control valves are also used in zoned systems where a single pump protects multiple hazards.

	DELUGE CONTROL VALVE	PRE-ACTION CONTROL VALVE	WET ALARM CHECK VALVE
Working Pressure	232 psi (16 bar)		
Valve Material	Stainless Steel 316L		Bronze & Brass
Gasket Material	EPDM		
Pressure Gauge Locations	Valve Inlet, Primary Valve Outlet	Valve Inlet, Primary Valve Outlet, Hydraulic Trim, Pre-Action Trim	Valve Inlet & Outlet
Activation Options	Manual		N/A
	Electrical (12-24 V DC NC/Impulse)		N/A
Size (Inlet and Outlet)	2", 3", DN50, DN80		1 1/2" (DN 40), 2" (DN 50)



DuraQuench control valves are made entirely of stainless steel, making them the ideal option for harsh, corrosive environments.

Pipe and Fittings

Other systems require the use of expensive, specialized tools, fittings and pipe. With DuraQuench, pipe and fittings are procured locally by distributors and contractors, adding the potential for significant cost savings. Lower operating pressure means stainless, copper and CPVC – with standard off-the-shelf fittings – are all options.



Applications

DuraQuench is an extremely versatile water mist system. With the ability to protect both machinery spaces and light hazards, and with proper zoning, the system can even be configured to protect multiple hazard types within a single facility.



Light Hazard Occupancies

The **DuraQuench** system is designed for the protection of light hazard occupancies such as offices, classrooms, churches, libraries, hotels and museums. **DuraQuench** is the ideal solution when the prospect of collateral water damage is a primary concern, or when existing water supplies are not adequate for a conventional sprinkler system.



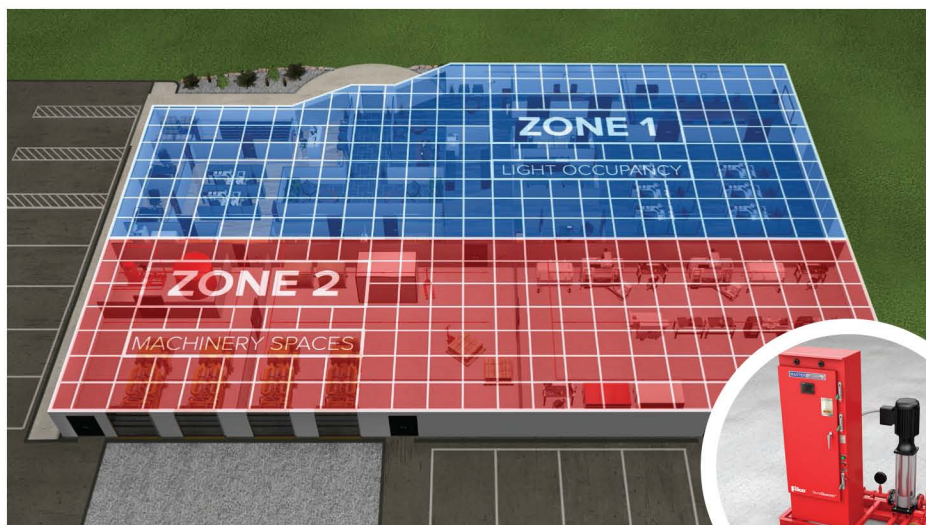
Manufacturing and Processing

DuraQuench is an ideal system for protecting the wide array of hazards found in a manufacturing or processing plant – everything from transformer rooms and the production floor, to office spaces and common areas. Using the K6 machinery space nozzle, the OH-VSO light hazard nozzle, and selector valves, multiple hazard types can be protected with one **DuraQuench** pump.



Energy Industry

Utilities, municipalities and independent power producers cannot afford unplanned generator downtime. **DuraQuench** provides fast-acting, environmentally sound fire-suppression for generators, turbines and pump and lubrication rooms.



A single DuraQuench system can protect an entire facility, including both machinery and light hazard spaces.



TRUST

Phoenix Fire Systems is the trusted, dynamic partner for companies across Canada, providing complete coverage in fire safety.

KNOWLEDGE

For decades we have been bringing together the most knowledgeable staff, best quality equipment and timely solutions to our clients' fire protection needs across every field. We are factory authorized and trained for the world's leading manufacturers of fire suppression equipment.

PEACE OF MIND

We design, supply, install and maintain systems in accordance with the local Fire Code and manufacturer's specifications including;

- ✓ High Pressure Carbon Dioxide (CO₂) Systems
- ✓ Clean Agent (FM-200®, Novec 1230™) Systems
- ✓ Dry Chemical Industrial Systems
- ✓ Wet Chemical Kitchen Systems
- ✓ Foam Systems
- ✓ Water Mist Systems

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