AquaMist®

Advantages of the AquaMist ULF solution for industrial fryers

FM Approved and **EN 14972** compliant water mist protection for industrial oil cookers.

The power behind **your mission**

Johnson Controls

How does AquaMist compare to alternative solutions?

Carbon dioxide (CO_2) suppression vs water mist

- CO_2 can effectively extinguish a fire but does not provide the rapid cooling needed to prevent reignition
- The large volume of CO_2 can be undesirable to end-users due to personnel health and safety concerns
- Water mist provides both extinguishment and cooling without the EHS concerns
- A water mist system can be returned to service much faster than a CO_2 system, reducing operational downtime

Fire sprinkler system vs water mist

- Fire sprinklers can suppress a fire, but the much larger water droplets do not evaporate at the oil's surface, instead causing interaction with the hot oil and making oil spillage and reignition a risk
- Fire sprinklers uses significantly more water than a water mist system, resulting in more water usage and more clean-up before operations can resume
- The footprint of a fire sprinkler is greater compared to water mist systems due to their larger pump and tank capacity

Why work with Johnson Controls?

- Global company with over 135 years' expertise in fire protection
- Direct worldwide Technical Support dedicated to water mist
- Protection options from one to multiple oil cookers
- Used in 100-plus active applications globally
- FM Approved and EN 14972 conformity solution based on full-scale fire testing for multiple scenarios
- Can be supplied by potable water or storage tanks – no treated water or additives required
- Uses less water than alternative solutions

How Industrial Fryer Protection (IFP) works

Insurers consider manufacturing sites with industrial fryers installed, such as fried food factories, as high-risk premises due to the potential costs of business interruption. AquaMist IFP solutions are FM Approved and EN14972 compliant low-pressure water mist systems designed to effectively extinguish a fire while minimizing water usage—which translates to less business impact due to a fire event and the cleanup process.

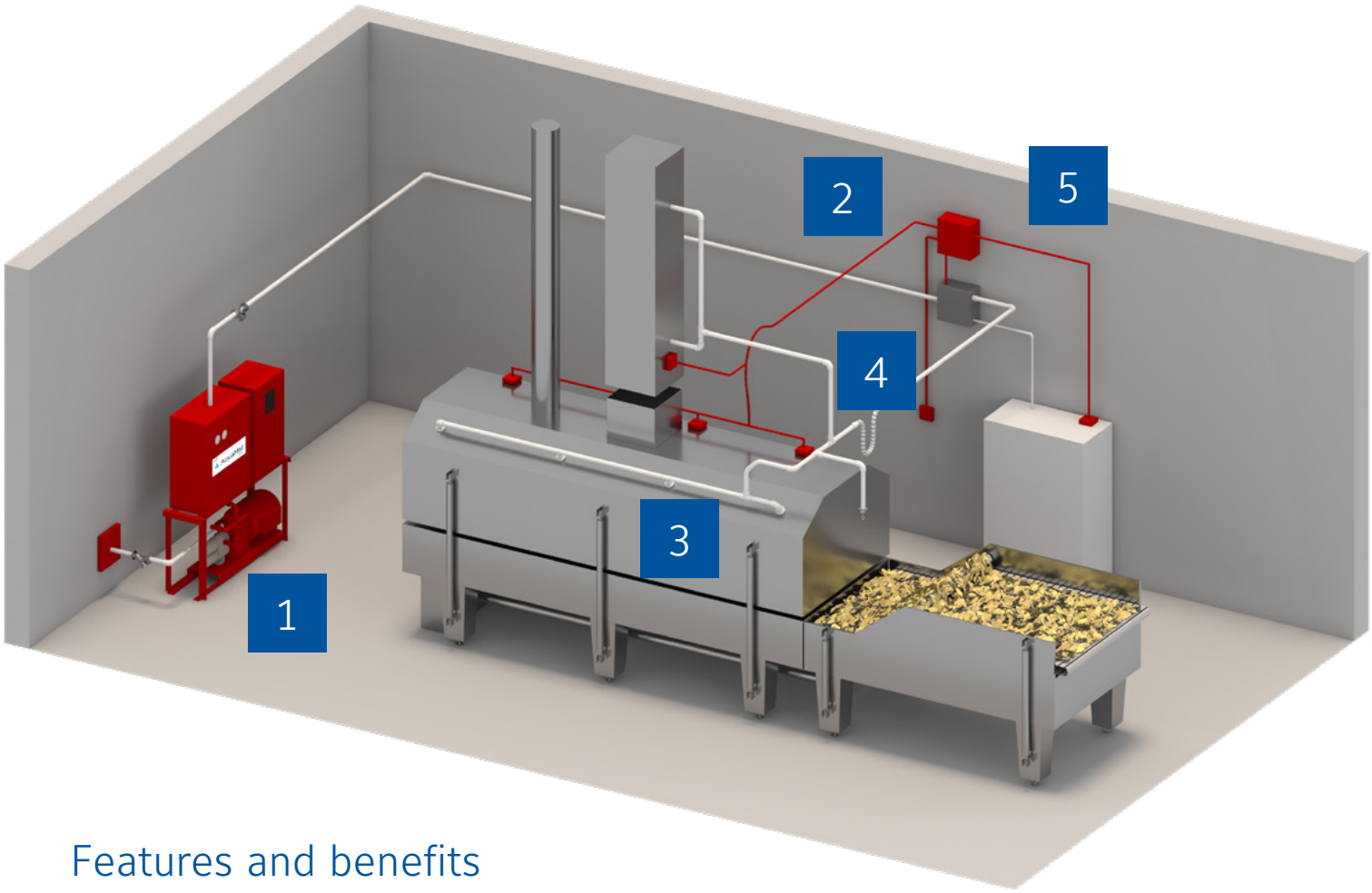
The system is designed to extinguish a fire and cool the oil to avoid reignition. When it discharges, fine mist droplets are suspended in the flame to absorb heat and extinguish the flame. At the same time, larger mist droplets penetrate through the flame and reach the oil surface. These droplets absorb heat from the oil and evaporate to effectively cool the oil below its ignition temperature.

Protecting oil with watermist

Very fine droplets penetrate the flame to absorb heat, providing extinguishment.

Larger droplets penetrate through the flame to the oil surface, providing rapid cooling and producing steam.

Oil surface



Features and benefits

A unique risk requires unique protection

Industrial fryers contain thousands of liters/gallons of cooking oil that maintain high temperatures (and fire risk) for extended periods. A fire event can cause significant business impact due to stringent food hygiene policies and the fryer's mission-critical role in the production process.

An FM Approved and EN 14972 compliant solution

The AquaMist IFP solution has been full-scale fire tested and is FM Approved and EN 14972 conform for the protection of both standalone and large-scale applications.

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Continuous protection

AquaMist IFP does not require treated water or additives, so the system can be supplied by potable water or water storage tanks.

Cost-effective and water-conscious

As a low-pressure water mist system, AquaMist IFP offers superior cooling and suppression using less water, which translates to reduced supply piping and water storage tanks – this helps save material and installation costs.

1. Pump Skid Unit simplifies your system

- Pre-assembled, -wired and -piped for easy installation and reduced time and labor
- Available in a variety of configurations with variable water flow rates and pressures
- AquaMist ULF MCC: FM Approved
- AquaMist ULF EMCC: CE marked, EN14972, NFPA20, EN12845, VdS CEA 4001

2. Open system DV-5A deluge valve with stainless steel option

- Utilizes electric actuation with open AquaMist nozzles and a supplemental detection system
- Deluge valve only fills the system with water in the event of fire detection
- Water discharges when the valve solenoid is activated by the detection release module
- Single moving part – diaphragm-style design reduces complexity and maintenance
- Stainless steel enclosed valve option allows installation in the production area
- Non-enclosed valve option (pump-room installation)
- FM Approved

3. Low-pressure discharge nozzles: AM31, AM4, AM10

- Short extinguishment times demonstrated by full-scale FM 5560 fire testing
- Utilize single fluid jet impacting on a patented diffuser to spray a range of water droplet sizes
- Stainless steel protection cap option
- FM Approved

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4. Flexible hose connections and G-Press piping

- Flexible hose connection is ideal for nozzle installation within movable hoods
- Stainless steel G-Press system is FM and VdS Approved
- G-Press system has a 10-year limited warranty

5. Detection integration

- AquaMist can seamlessly integrate with a full range of FM and VdS Approved detection solutions
- Detection equipment must be capable of releasing the valve solenoid
- Johnson Controls can work with you to recommend solutions for your application

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About Johnson Controls

At Johnson Controls (NYSE:JCI), we transform the environments where people live, work, learn and play. As the global leader in smart, healthy and sustainable buildings, our mission is to reimagine the performance of buildings to serve people, places and the planet.

Building on a proud history of more than 135 years of innovation, we deliver the blueprint of the future for industries such as healthcare, schools, data centers, airports, stadiums, manufacturing and beyond through OpenBlue, our comprehensive digital offering.

Today, with a global team of 100,000 experts in more than 150 countries, Johnson Controls offers the world`s largest portfolio of building technology and software as well as service solutions from some of the most trusted names in the industry.

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For more information, contact your regional Fire Suppression product representative, or visit www.tycoaquamist.com

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