

Top Tips

5 Keys to Future-Ready Fire Suppression Systems



Fire suppression system failure can potentially cause significant risk to property and loss of life. Manufacturers and installation technicians know people depend upon their expertise to ensure fire suppression systems operate properly, when needed. The cost to build reliability into systems and provide ongoing maintenance to customers can be significant. But the ability to offer quality products and service is also an opportunity for fire suppression system providers.

The selection of fluid-system components, including valves, is a critical step in the product and system design process. OEMs and installers should carefully consider their options to increase reliability, reduce costs and differentiate their products or services from competitors. Read these five tips on how to select fluid-system components that meet the needs of modern fire suppression systems.

1

Look for Lab-Tested Reliability

Don't rely on the manufacturer's warranty. By that time, it's too late. While responsibility for proper valve selection and system operation/maintenance ultimately falls to the customer, rigorous lab testing is a good indication of component durability, and can provide OEMs and installers with confidence. This includes in-house testing and third-party validation. For example, Emerson performs life cycle testing to ensure component durability, which is particularly important for fire suppression systems. Remember, the hope is that fire suppression systems are never or rarely activated. For them to work properly when needed, make sure your fire protection systems are certified to the correct NFPA standards and also verify that solenoid valves have undergone relevant third-party testing, including:

- FM 7400: Liquid and Gas Safety Shutoff Valves
- CSA 22.2: General Requirements for the Canadian Electrical Code
- ANSI Z21.21: Automatic Valves for Gas Appliances
- UL 429a: Electrically Operated Valves for Fire Protection Service

2

Validate the System is Ready to Go

Another important reliability consideration is the use of devices that verify the system is ready for operation. Proximity sensors can alert installers or customers when a particular component is out of position. This means proper operation after system maintenance, servicing, upgrades or system use. The sensor utilizes magnetics and most ferrous metals as a component to determine whether something is in a particular position. For example, if a tank is empty after extinguishing a fire, a counterweight can move the tank out of position. At this point, the sensor no longer receives a signal from the receiver. This signal can tell the customer or installer that it's time to replace the inert gas tank.

3

Don't Overlook Customization Capabilities

Facility requirements are changing. Demand for high-efficiency systems and modern building designs can create challenges for fire suppression installers. For example, installers may need to fit castings into tight spaces or will need a valve that can handle a specific voltage or frequency. Identify suppliers who have the engineering expertise and flexibility to meet non-standard designs. Ask suppliers if they can provide different sizes and types of system components that might not be listed in their catalogue. Sites each have their own unique requirements and challenges. Vendors should be able to design, test and deliver a valve assembly tailored to specific needs.

4

Prioritize Parts Availability

Many OEMs and installers provide ongoing maintenance and upgrades to existing systems. The safety-critical nature of fire suppression technologies means parts must be available when needed. Confirm that suppliers have an extensive selection of parts in a wide range of pressure ratings, sizes and materials for different facility environments. Also consider vendors that offer short-term or just-in-time delivery. This will help reduce on-site inventory and help cut lead times for installations or replacements.

5

Take the Easy Route to Installation

Ask suppliers if they have parts and connections that can fit multiple system configurations to decrease installation times. For example, does the vendor have valves that are flexible enough to fit on several fire suppression systems? Valves should have robust but flexible operating parameters, so they can be installed in systems with different media, pressures and operating conditions. Also, ask whether fluid control products have multiple mechanical and electrical connection options that help products be installed in various applications. Electrical connections for components, such as valves, are particularly useful because they help electricians quickly and confidently install traditionally nonelectrical components.