BROOKS EQUIPMENT

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Helping You Protect Lives And Property

Inside

ANSUL

Retrofit Gas Stations and Repair Garages with High Flow Dry Chemical Fire Extinguishers

Many gas stations and repair garages have been retrofitted with high flow fire extinguishers to improve safety. These facilities have replaced standard dry chemical extinguishers with more effective high flow extinguishers, which can quickly and effectively extinguish spill fires under or around vehicles. All gas stations and repair garages should now have high flow dry chemical extinguishers installed. Here is information that you can use to explain the retrofits to your customers and the local AHJ.

High flow extinguishers are more effective for many flammable liquid fires because they discharge dry chemical at least one pound per second, often double the discharge rate of standard dry chemical extinguishers. The need for these extinguishers is based on NFPA 10, *Standard for Portable Fire Extinguishers*, which requires high flow extinguishers where there is a potential for obstacle fires. The obstacles for these facilities are the vehicles being fueled or repaired. This rate of discharge has been shown through testing to effect extinguishment better when compared to standard extinguishers for flammable liquid fires under and around obstacles.

By using the 2024 edition of 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*, you will replace the existing extinguishers with high flow dry chemical extinguishers, thereby improving safety. This most recent edition of the code mandates the installation of high-flow extinguishers for both fuel dispensing islands and repair garages.

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Retrofit Gas Stations and Repair Garages with High Flow Dry Chemical Fire Extinguishers Continued.

Requirements with NFPA 30A References:

• **High-Flow Extinguishers -** All portable fire extinguishers installed to achieve compliance with NFPA 30A shall be a minimum of 10 lb (4.54 kg) ABC dry chemical and have an agent discharge rate of 1 lb/sec (0.45 kg/sec) or greater. (9.2.5.3.2)

• **Fuel Dispensing Islands -** At least one portable fire extinguisher shall be provided at all fuel dispensing islands or groups of islands so as not to exceed a maximum travel distance of 75 ft (23 m) to any portable fire extinguisher. (9.2.5.3.7)

• **Vehicle Repair Garages -** At least one portable fire extinguisher shall be provided in any repair garage, and the maximum travel distance from any point in the vehicle service area to a portable fire extinguisher shall not exceed 50 ft (15 m). (9.2.5.3.5.1 and 9.2.5.3.5.2)

• **Gaseous Fuel Dispensing Areas -** At least one extinguisher installed between 15 and 50 ft (4.6 and15 m) from each gaseous fuel dispenser or group of dispensers (9.2.5.3.8)

• **Installing Larger Extinguishers -** The maximum travel distance from a hazard area to 20 lb ABC for a high-flow dry chemical extinguisher is allowed to be 100 ft (30.5 m). (9.2.5.3.3)

• **NFPA 10 Reference -** Portable fire extinguishers shall be selected, installed, inspected, and maintained in accordance with NFPA 10. (9.2.5.3.1)

• **Replacement is Retroactive -** Installed fire extinguishers, including replacements or exchanges, shall meet the new requirements. (9.2.5.3.4)

Compliance with NFPA 30A, 2024

States update their fire codes every few years by adopting model codes produced by NFPA and ICC. The adoption process takes months or even years. That is why the latest NFPA codes and standards are never the law of the land. Although the recent editions of NFPA 30A (2021 and 2024 editions) require high-flow extinguishers for gas stations and repair garages, many state codes reference the earlier 2018 edition (or an even older edition). Although your state may have adopted an earlier edition of NFPA 30A, it does not mean that the most recent 2024 edition cannot be used instead of the adopted edition. Typically, a newer standard contains state-of-the-art information and a higher level of safety, which is the case with extinguishers necessary for protection of gas stations and repair garages.

Since the most recent 2024 edition of NFPA 30A contains the latest developments of products, clarifications of concepts, and the most up-to-date thinking, it should be reviewed, considered, and implemented in place of the outdated and less safe criteria of the previous editions. The 2024 edition (and the 2021 edition) requires replacing the less effective extinguishers (currently installed) with extremely effective high-flow dry chemical extinguishers. Compliance with the latest NFPA 30A is an improvement in safety and, therefore, permissible by the local AHJ, even though these recent editions of NFPA 30A are not adopted locally.

Conclusion

Always remember that NFPA standards are minimums, and using the most recent edition of a standard will most often exceed the minimum of earlier editions. Minimum is the least acceptable level of safety, meaning the smallest extinguishers, lowest ratings, and lowest permissible flow rates. Exceeding a minimum standard is almost always preferable and allowed by the adoption process. And an increase in the minimum acceptable level of safety should always be paramount. Using the most recent NFPA 30A criteria for extinguishers means improving safety since high-flow extinguishers provide the best protection for gas stations and repair garages.✦

"Exceeding a minimum standard is almost always preferable..."

BROOKS APP Did You Know?

The Brooks App is a powerful tool allowing technicians and purchasers to streamline their workflows and improve efficiency. The App is designed to provide users with powerful features and tools to help them find the parts they need, reference images and spec sheets, and coordinate with purchasing decision-makers in the office. One of the App's key features that makes this possible is the User Permissions System that is contained in Account Administration which allows administrators to set specific permissions for each user.

User Permission System

The User Permissions System is an essential feature for businesses that need to manage multiple users and ensure that each user only has access to the information and functionality that they need. With the User Permissions System, administrators can set specific permissions to the information and functionality relevant to each user's role.

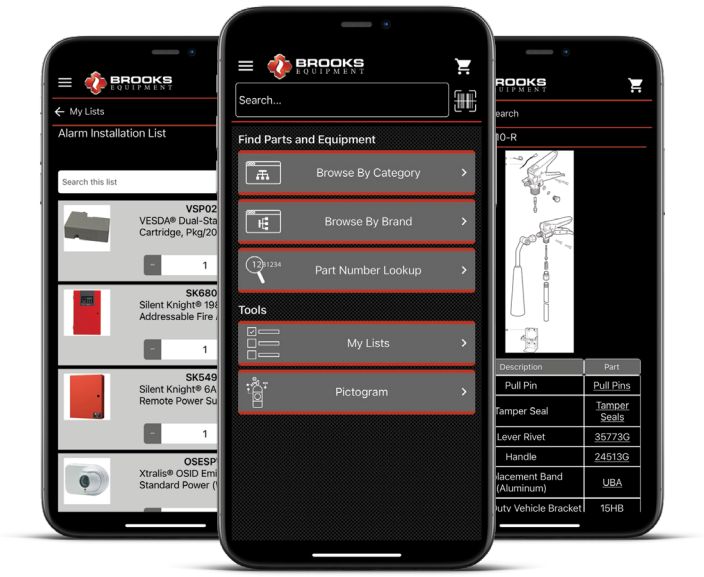
For example, a technician might need access to technical specifications or the Fire Extinguisher Parts Pictogram Tool, while a purchaser might need access to pricing and live inventory. By setting specific permissions for each user, the Brooks App ensures that users can access the necessary information and functionality without being overwhelmed by unnecessary features.

Product Lists

The New Product Lists are an essential feature of the Brooks App that links technicians to purchasers. Product Lists allow App users to add products to a list that they can use for future or repetitive orders. It also allows an App user to share the product list with other users under their Brooks Account or email them to a Purchasing Agent. This feature can save significant time by allowing technicians or field employees to share accurate and up-to-date product lists with anyone.

In summary, the Brooks App is an essential tool for businesses that manage multiple users and order a wide variety of products. With its powerful User Permissions System and detailed Product Lists, the App provides users with the information and functionality needed to complete their work more efficiently and effectively. Whether you are a technician or a purchaser, the Brooks App is the perfect tool to help you streamline your workflow and improve your productivity.

To learn more about the Brooks App, visit our App Resource page at https://www.brooksequipment.com/BrooksApp/.



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Correctly Classify Impairments and Deficiencies that are Discovered During ITM

NFPA 25, *Standard for Inspection Testing and Maintenance of Water-Based Fire Protection Systems*, has had requirements addressing deficiencies and impairments since their introduction in the 2011 edition. It was not until the 2024 edition of **NFPA 17A,** *Standard for Wet Chemical Extinguishing Systems*, that NFPA followed suit and added requirements on this topic to help users of the standard categorize and prioritize work needed to correct problems with systems protecting restaurant cooking areas. Previously, only impairments were addressed, but there was nothing addressing deficiencies. Since adding this material, service companies, restaurant owners and managers, and the authority having jurisdiction (AHJ) now have specific criteria that can be relied upon for critical decisions impacting the performance of systems protecting commercial cooking area fire protection systems. Here is an overview of the information in NFPA 17A that will help you, your customers, and the AHJ understand the difference between system deficiencies and impairments. The information in this article is based on the most recent 2024 edition of NFPA 17A.

An impairment is any condition where a system, component of a system, or function of a system will not perform as intended [17A, 3.3.7]. Parts that are found during maintenance that could cause impairment or failure of operation of the system are required to be replaced by listed components in accordance with the manufacturer's instructions [17A, 8.3.3.5]. Until such repairs are accomplished, the systems must be tagged as impaired. The owner or owner's representative responsible for the system and the authority having jurisdiction must be notified of the impairment by the end of the following business day [17A, 8.3.3.5.1]. Only when all repairs have been accomplished and the system has been restored to full operation are the AHJ and the owner or owner's representative (responsible for the system) informed [17A, 8.3.3.5.2].

For the purposes of inspection, testing, and maintenance of a restaurant system, a deficiency is a condition that will affect the performance of a system or portion thereof or has the potential to adversely affect performance but does not rise to the level of an impairment [17A, 3.3.2]. Some deficiencies, if not corrected, can or will affect the ability of the fire protection system to function as intended during a fire. Those deficiencies do not prevent a system from functioning properly when discovered, but if not corrected, could lead to an impairment. Despite the new definition, some deficiencies will likely not affect the ability of the system to function during a fire, but correction is needed for safety to meet the requirements of NFPA 17A or the system manufacturer's manual. An example is damaged of missing labeling. In any case, whenever a deficiency is found, appropriate corrective action is required to be taken immediately. If the corrective action necessitates maintenance, it must be conducted by a service technician.

Definitions of deficiency and impairment were added to the 2024 edition of the standard to help categorize problems found during ITM. A new Annex C was also added that provides examples of common deficiencies and impairments found during system inspection, testing, and maintenance (ITM).

Tables were developed based on Annex C of NFPA 17A and are provided to assist technicians in the field in identifying and properly classifying impairments and deficiencies found during routine ITM of restaurant systems. Click here for a writeable PDF.

Safety is enhanced when the classification system outlined in NFPA 17A is used. When impairments and deficiencies are discovered and correctly classified during ITM of restaurant systems, appropriate corrective actions can be taken to restore system conditions to normal. This ensures that employees and customers of commercial cooking establishments will receive the best protection offered by these fire protection systems and that a reasonable level of safety is maintained.✦

"When impairments and deficiencies are discovered and correctly classified during ITM of restaurant systems, appropriate corrective actions can be taken to restore system conditions to normal."

Consider the Pros and Cons to Determine the Right FACU

Simply put, a fire alarm control unit (FACU) receives signals from initiating devices (e.g., smoke detectors or pull stations) and processes the signals to determine the necessary response. FACUs are either conventional type (zone protection) or addressable (each device sends a signal). Just because your technicians mostly service and are familiar with conventional FACUs does not mean they are the right choice for new construction and major retrofits. The pros and cons should be analyzed before deciding on the most appropriate FACU for each new installation. Here is information to help you make the best decisions for your customers.

Conventional FACU

The most common type in commercial settings is a conventional FACU. This type divides a structure into zones. For example, each floor could be its own zone in a multi-story building. A series of initiating devices work together within a zone. The zones are all connected to the conventional FACU panel. When an alarm is triggered, the panel can recognize each zone but cannot determine which specific device activated the alarm.

Addressable FACU

On the other hand, an addressable FACU utilizes a signaling line circuit (SLC) for input devices. Its advantage is that it can report which detector, device, or other component in a building triggered the alarm. These fire alarm system components have discrete identification and can individually identify their status. Since an addressable FACU has digital signaling, it has more advanced functionality than a conventional FACU and can perform functions that are impossible with a conventional FACU.

While they have a higher upfront cost per unit, an addressable FACU is more technologically advanced than a conventional one. Addressable systems can increase the speed of first responders to fire because point identification of an addressable FACU means that the precise location of a fire within a building can be pinpointed. Therefore, emergency responders can quickly be directed to an area of fire origin and begin an attack. That means an upgrade to an addressable FACU can save lives and reduce business interruptions, reducing revenue losses.

Another advantage of an addressable FACU is that it is more reliable and more straightforward to maintain. The devices can report faults so that a problem device can be quickly identified and serviced or replaced.

Conventional FACU for Small Buildings

A conventional FACU is generally the most appropriate choice for small businesses, small buildings, single-story buildings, and buildings with simple layouts where just a couple of zones will protect the entire building. The main advantage is the low cost of installation. Fewer devices and appliances are needed in these smaller buildings, and the installation is not overly complex. Troubleshooting is usually more straightforward, too, and maintenance costs are often very reasonable.

Addressable FACU for Medium and Large Buildings

Medium and large buildings should have addressable FACUs, but most owners are unwilling to spend money to replace an existing conventional FACU. Your best bet is to install a fire alarm system for a new building or if you are involved in a major retrofit of an existing building. The logical choice is an addressable FACU for medium and large buildings. It is less expensive in the long run, but addressable FACU allows more flexibility for changes and expansions. A major advantage when a fire occurs is quicker response times, reduced losses, and often continued business operations. Business continuity and revenue generation are extremely important to your customers. Moreover, these systems have more programming options and can address complex safety needs, which are also important to customers.

Conclusion

Although a conventional FACU might be right for a small building, an addressable FACU is almost always the way to go with larger buildings. Addressable FACUs provide first responders with pinpoint accuracy prior to arrival for effective initial extinguishment. Safety is enhanced, losses are reduced, and business interruptions are minimized. The result is a win-win for your bottom line and your customer's revenue generation.✦

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