

THREE LEVELS OF FIRE PROTECTION FOR ELECTRICAL CABINETS



FIRETRACE™
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A Halma company

Industrial and manufacturing electrical fires cause tens of millions of dollars in damage every year—yet many businesses simply accept the risk, knowing they could be next on the list.

Since fire protection for electrical cabinets is not a regulatory requirement in every industry, even safety-conscious companies have found it challenging to justify the expense of complex fire suppression installations in every electrical cabinet on the premises.

As a global leader in commercial fire prevention and suppression, Firetrace International™ wasn't satisfied with knowing that businesses and their employees are assuming serious safety risks because the market was void of low-cost, low-effort solutions.

That's why we'd like to introduce you to our latest innovation, FlexRope™—a fire protection product that can be installed in a matter of minutes, right inside the electrical cabinet. And, for those who need more advanced options, we'll explore systems that deliver clean agents and put out electrical fires without damaging equipment.

Level One Electrical Cabinet Fire Protection: FlexRope

FlexRope is a low-cost, easy-to-install fire protection solution for electrical cabinets, control panels, or relay panels. Designed to protect enclosures as large as 35 cubic feet (1m³), FlexRope is a simple solution to prevent electrical fires from spreading to adjacent assets or engulfing the entire building.

How Does FlexRope Work?

FlexRope's exterior is a fiberglass braid lined with a moisture-resistant vinyl sheath. This layer

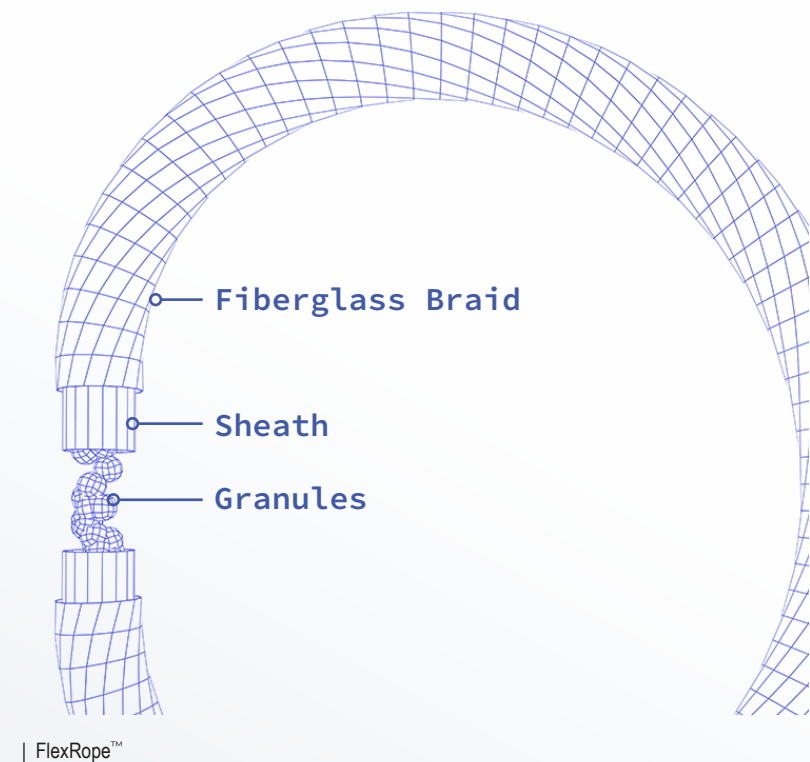
protects granules contained within the center of FlexRope. These granules are a proprietary formulation that react when the temperature within the electrical cabinet or panel reaches 660 degrees Fahrenheit (349°C), allowing users to avoid the nuisance of false activations. At that temperature, FlexRope reacts, and the granules are converted into a gaseous cloud, which suppresses the fire.

Some benefits of FlexRope include:

Easy Installation: FlexRope is mounted within 2 inches (51mm) of ignition points, using simple adhesive brackets and zip ties.

Immediate Fire Detection: The entire length of FlexRope is an active heat sensor for ignition.

Automatic Suppression: FlexRope automatically activates once the temperature threshold is reached and is capable of protecting enclosures against Class A, B, and C fires.



No Ongoing Maintenance: FlexRope is a one-time investment for guarding high-risk systems, and it can easily be removed and reinstalled if work needs to be done inside the enclosure.

FlexRope is emerging as an affordable, low-barrier solution for companies to protect their electrical enclosures from fire.

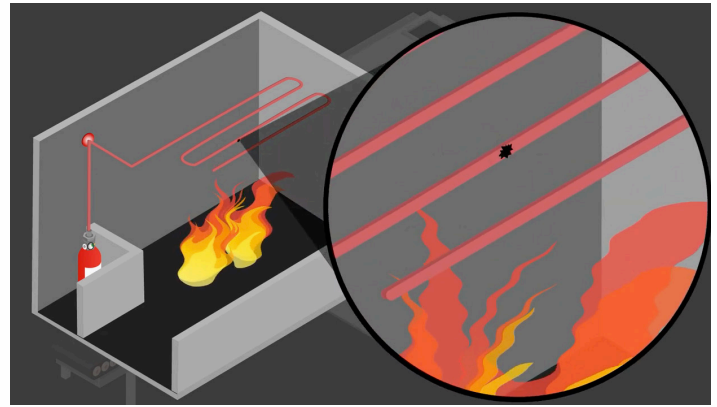
The FlexRope product is not a clean agent, meaning there is a higher likelihood that the electrical cabinet contents will need to be replaced after FlexRope activates.

Level Two Electrical Cabinet Fire Protection: Pre-Engineered Systems

Pre-engineered fire suppression systems are ideal for small enclosures like an electrical cabinet or engine compartment. These systems deliver a clean agent to suppress the fire without damaging the electrical components or machinery they are protecting.

How Does a Pre-Engineered Fire Suppression System Work?

Pre-engineered systems have been extensively tested and evaluated to suppress fires when the guidelines within the DIOM manuals are followed. For electrical panels specifically, we recommend a direct release system, where the suppressing agent comes directly out of the Fire Detection Tube into the enclosure, where the fire ruptured the tubing. This eliminates the need for metal components that could create an electrical arc within the cabinet.



| Firetrace™ Pre-engineered fire suppression systems

Some of the benefits of pre-engineered systems include:

Non-Electrical Detection Options:

Designed to react to heat using the pneumatic tubing, these systems can still fight fire even if the power goes out.

Minimize Downtime: Since the clean agent is contained in the electrical cabinet, employees may not have to vacate the facility even if the system goes off.

Pre-engineered fire suppression solutions help businesses protect their machinery, facilities, and people.

One downside to adoption is the expense of fitting multiple electrical cabinets with the pre-engineered infrastructure to suppress any fires.

If you have a room full of electrical cabinets and other assets to protect, the last option on our list may be your ideal solution.

Remember: Something as small as a malfunctioning safety light inside the electrical cabinet could be the start of a fire.

Level Three Electrical Cabinet Fire Protection: Engineered Systems

Engineered fire protection systems flood an entire room with fire suppressing clean agent when a fire is detected. These solutions are ideal for rooms with multiple electrical panels or other machinery that needs to be protected.

How Does an Engineered Fire Suppression System Work?

Engineered fire suppression systems work similarly to a traditional sprinkler system, but instead of using water to suppress the fire, they use a clean, non-conductive agent like Chemours FM-200™ or FK-5-1-12. This is especially important in cases of electrical fire, where water could conduct electricity or permanently damage equipment.



| Firetrace™ Engineered fire suppression systems

Some of the benefits of engineered systems include:

Suitable for Large Environments:

Engineered systems can protect the facility from all types of fire, including electrical cabinet fire, by flooding entire rooms with no real limit on size.

Active Detection Systems: Active detection systems give facility managers and employees peace of mind that smoke and heat are constantly being monitored for.

No Cleanup, Minimal Downtime: The clean agents released by the system do not require cleanup, and many facilities are back in operation within 30 minutes to an hour after fire suppression.

Engineered fire suppression systems protect companies on the largest, most-comprehensive scale.

- One downside to adoption is that these solutions cannot detect and suppress the fire within an electrical cabinet without flooding the entire room being protected.

If you need to make sure fire is suppressed before it spreads outside the electrical cabinet, let's review and compare the spectrum of options.

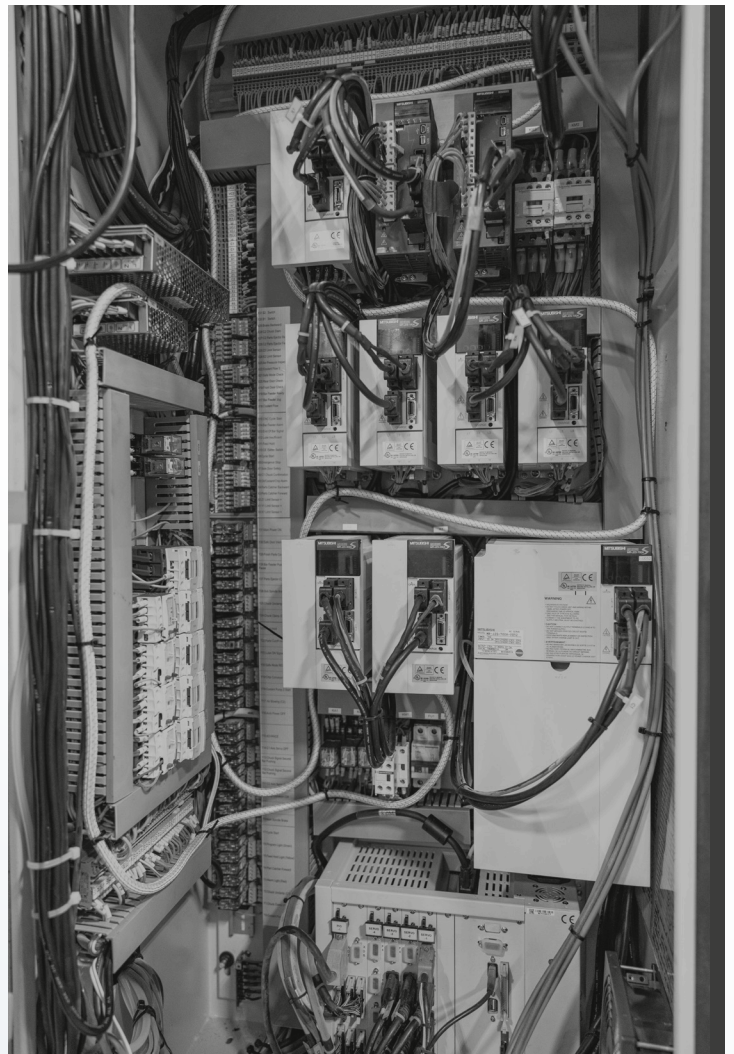
Through the introduction of our proprietary FlexRope, Firetrace International is happy to add a new option to the list of ways to protect an electrical cabinet from fire.

- FlexRope is a great low-cost option for those who want point-of-ignition fire suppression without a high price tag. But since the suppressant is not a clean agent, this option may not work for every facility.
- Pre-engineered fire suppression systems offer point-of-ignition suppression inside the electrical cabinet using a clean agent. However, expanding this solution facility-wide can come with a higher price point than many businesses want to invest.
- Engineered suppression systems protect the entire room or facility at once without introducing water that can make an electrical fire worse. One downside is, the fire must be detected to be suppressed, which means property could be damaged before the smoke or heat reaches a sensor.

You know your special hazard application, and we're sure you still have questions about how one or a combination of these systems could be configured to your exact specifications. Those are the kinds of conversations we love to have with current or prospective customers.

Firetrace manufactures reliable, cost-effective, automatic fire detection and suppression systems that can be installed in virtually any micro-environment or enclosed space. And we're always looking for the next challenge and opportunity to prove we are delivering on our mission.

If we can help you brainstorm about improving fire detection and suppression at your business, please don't wait to reach out. The risks of electrical fire are always present in a commercial environment—and with our partnership, so is the solution.



Firetrace: Fire Protection that Won't Let You Down

Products and systems with industry listings and approvals are a signal of quality, security, and peace of mind. If you're looking to protect your business, your people, and your equipment from fire damage, Firetrace has you protected. If you're looking to distribute or bundle fire suppression systems that work, Firetrace is the right company for the job. We're proud of the products we sell, and we stand behind the UL Listing and FM Approvals our products carry. To learn more about the third-party certifications of our products, visit our resources page at [firetrace.com/resources](https://www.firetrace.com/resources).

Our products automatically detect and suppress fires in high-risk equipment like CNC machines, wind turbines, container handling equipment, and electrical panels. And, we have one of the strongest distributor networks across the globe, which means you will get the assistance you need in a timely manner.

If you're ready to get started protecting your people and assets, reach out to us today.

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