



FIRETRACE[®]

AUTOMATIC FIRE SUPPRESSION SYSTEMS

CNC AND EDM MACHINING CENTERS

Fire Protection Solutions



Red Firetrace Detection Tubing runs unobtrusively through the working area



Mounted Firetrace system including pressure switches



Optional manual release

THE PROBLEM

A fire in a CNC or EDM machine can occur instantly and without warning. A hot metal chip, a tool crash, or even a spark of static electricity can ignite the petroleum-based cutting oils used in many of these machines. Oil-based machine fires produce high heat and dense black smoke and can be difficult or impossible to fight with handheld fire extinguishers.

A machine fire has the potential to quickly spread through mist collectors and along electrical lines and ducting to the building's structure with catastrophic results. Even when an automatic sprinkler system activates, the cost of water damage often far exceeds the cost of the fire damage; and indirect expenses, such as business interruption, missed deadlines, and lost customers can be many times again as costly.

FIRETRACE ADVANTAGES:

- ✦ Fast, reliable and cost-effective system activates automatically in the event of a fire
- ✦ Suppresses a fire in seconds, reducing or eliminating equipment damage and downtime
- ✦ Pre-engineered system is easy to install in any new or existing machine
- ✦ No power required, activates automatically
- ✦ Does not interfere with machine operation or maintenance
- ✦ Responds only to a fire's radiant heat so there are no costly false discharges

THE FIRETRACE SOLUTION

A Firetrace system can be fitted to virtually any CNC or EDM machine and will automatically detect and extinguish a fire inside the machine before it can cause appreciable damage. Upon detection of a fire, the Firetrace system discharges either CO₂ (carbon dioxide) or a "clean" extinguishing agents such as Dupont™ FM-200® or 3M™ Novec™ 1230 fire protection fluid. These gaseous extinguishing agents are non-conductive, non-corrosive, leave no residue on the machine or workpiece, and will not contaminate expensive metalworking oils or fluids.

At the heart of every Firetrace system is the unique, pressurized red Firetrace Detection Tubing. This proprietary polymer tubing is actually a linear pneumatic heat sensor that ruptures when exposed to a fire's radiant heat. The flexible detection tubing can be easily routed in and around the hazard areas of a CNC or EDM machine, providing fast and reliable fire detection in areas that other detection methods cannot reach.

Because Firetrace detects and suppresses a fire at its source – inside the machine – the system reacts far faster than traditional fire suppression methods, and reduces or eliminates the collateral damages that they cause. In many cases a machine can be returned to service just minutes after a fire.

- ✦ Manual release option allows operator to activate system at first sign of trouble
- ✦ Pressure switch option can be configured to sound alarms and e-stop machines, oil pumps, and mist collectors
- ✦ Extinguishing agents are safe for people, leave no residue and will not contaminate expensive metalworking fluids or lubricants
- ✦ Stops overhead sprinkler system from activating which can lead to extensive collateral damage
- ✦ Reduced downtime, not damage to machine or work piece, no clean up, no loss of customer/account, reduced risk to shop personnel

HOW IT WORKS

Firetrace has a system that is right for you

Firetrace offers a variety of pre-engineered systems designed to protect virtually any CNC or EDM machine.

Die Sinking EDM (Electrical Discharge Machines)

For EDM applications a Firetrace Indirect High Pressure (IHP) CO₂ system is usually recommended.

The red Firetrace Detection Tubing is routed around the base of the ram just above the typical operating oil level, providing 360 degrees of fire detection and suppression.

The detection tubing can also be run to the front the machine when an optional manual release is required.

Large nozzles installed well above the oil surface on both sides of the ram deliver a high volume of CO₂ to extinguish the fire. The CO₂ is delivered as a gentle mist to keep the burning oil from splashing, which would spread rather than suppress the fire.

CNC Cutting, Milling, Turning and Grinding Machines

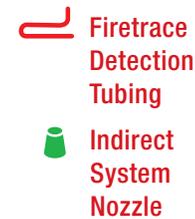
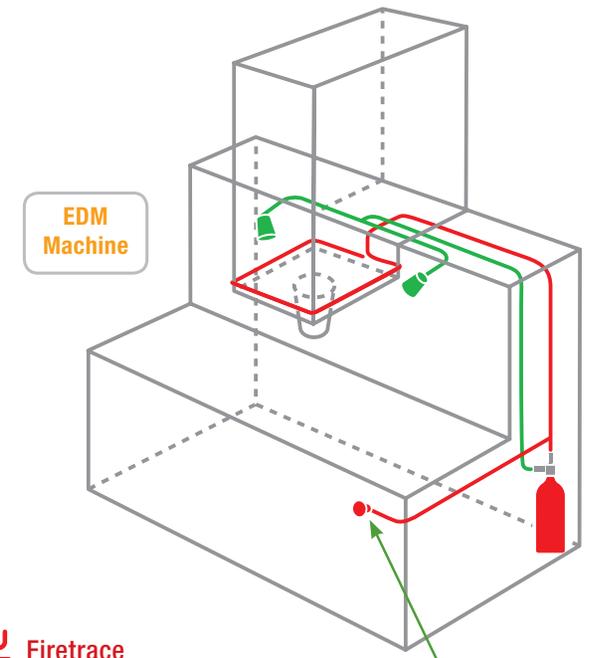
For CNC applications a Firetrace Indirect Low Pressure (ILP) FM-200 system is usually recommended.

The red detection tubing is routed throughout the work zone which improves reaction time and reduces the potential for machine damage.

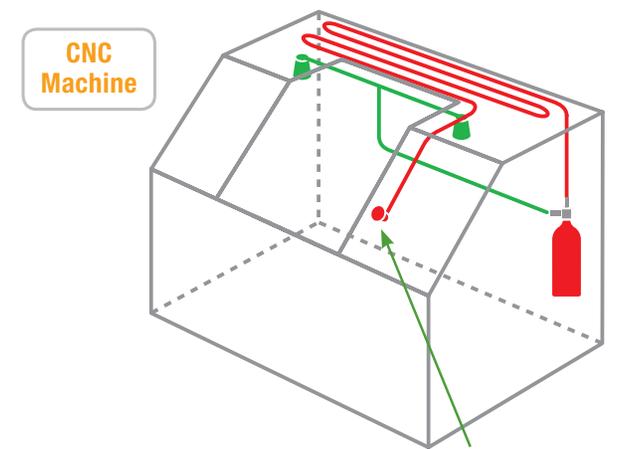
The detection tubing can also be run to the front the machine when an optional manual release is required.

Large nozzles deliver a high volume of FM-200 to quickly suppress the fire.

Firetrace indirect systems are available with a manual release, enabling an operator to activate the system at the first sign of trouble.



Manual Release



Manual Release



Firetrace CNC and EDM Machine Applications

Firetrace has more than 150,000 systems installed protecting business critical equipment worldwide. Firetrace has its origins in the late 1980's in the United Kingdom as a special hazard fire suppression system. Through the 1990's applications expanded to include enclosures such as machines, fume hoods, data centers and electrical cabinets as distribution increased in Europe.

In 2001, the worldwide rights to Firetrace were purchased by Firetrace USA, a group of fire suppression industry veterans who saw the value in creating fire suppression systems for "micro-environments". This concept is simply providing supplemental protection that suppresses fire quickly within the protected space before larger room or building systems would activate. As a result of this supplemental protection, fire damage, both direct and collateral, and costs associated with cleanup and downtime are significantly reduced or eliminated. Available in multiple system sizes (ranging from one pound systems to 50 pound systems) utilizing a variety of fire suppressing agent options, Firetrace is the fire suppressing system of choice for virtually any CNC or EDM machining center.



Firetrace currently has more than 20 international approvals and listings, including:
UL, CE, FM, ULC & ISO9001. Approvals and listings vary by system type and agent.

Firetrace is available exclusively through our worldwide distributors, each of which has been properly trained in the installation and maintenance of Firetrace systems. To locate the Firetrace distributor nearest you please contact us at:

World Headquarters Firetrace International

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