

## How Much Does It Cost?

Because the preaction system is going to rely on the installation of a complete fire detection system, the majority of your additional cost for a preaction system versus a standard wet or dry pipe system is probably already covered. In some circumstances, additional detectors may be required to insure that there is a detector in every room or area protected by the preaction system.

Existing facilities with wet or dry systems can be converted to preaction systems.

There will be the cost of the preaction valve, trim, air compressor, releasing control panel, and electric wiring for the control panel. There are also some special design criteria for piping and piping configurations that could add minimally to the cost of the system. The larger the facility the lower per square footage cost of the preaction system.

Reliable offers many valve and trim combinations to include complete prepackaged units, for your facility's requirements.

The actual answer for the cost of the preaction system is: How much will the accidental water damage loss cost? The preaction system will pay for itself in helping to eliminate damage claims, eliminating interruption of your business or institution, and providing piece of mind.

## How Can I Get the Benefits of a Preaction System?

Contact a Reliable Technical Services Manager at 1-800-55-RASCO (1-800-431-1588) or contact your fire sprinkler contractor and we will work with them to provide the proper fire protection package for your facility.

Our complete line of concealed sprinklers combined with our preaction systems will give you the best combination against accidental water damage losses.

Whether you are building a new facility or want to change your existing system to a preaction system, Reliable can provide the equipment and the expertise to protect lives while protecting your property from fire and water damage loss.

# Stop Water Damage

## From Vandalized Sprinklers in Your Institution

The Reliable Automatic Sprinkler Co., Inc. • Manufacturer & Distributor of Fire Protection Equipment



### The Problem:

Fire sprinklers have a long and successful history of saving lives and of saving properties from catastrophic losses. As sprinkler protection has evolved, we now are using fire sprinklers more and more as life saving devices and not just as property protection devices. This has been a significant step, but unfortunately not without its problems.

In order to provide better fire protection and life safety in institutions, we have changed from standard response sprinklers to quick response sprinklers and to sprinklers that are designed not to support the weight of an inmate. To achieve the quick response necessary for life safety, we are producing sprinklers with operating mechanisms that are much smaller in mass and therefore more susceptible to damage and to accidental operation.

To add to the potential damage problem, we are now installing sprinklers in institutions where sprinklers can be more easily damaged by acts of the occupants. Striking the sprinkler, setting the sprinklers off in an act of vandalism, or hanging objects from it can cause damage and false operation.

If the sprinkler system is a standard wet or dry pipe sprinkler system, damage to a sprinkler can cause accidental water flow. This water flow, that was designed to protect us in a fire situation from life or property loss, is now a source of property loss, insurance premium increases or loss of coverage, and a general interruption to your facility.

### The Solution:

For many years Reliable has been providing systems for water sensitive areas, such as computer rooms, libraries, etc. These single-interlock preaction systems are providing fire protection while helping to eliminate any accidental water damage claims. *Aren't all properties really water sensitive areas?*

The major benefits of the electric single-interlock preaction system, when compared with a wet or dry pipe system are:

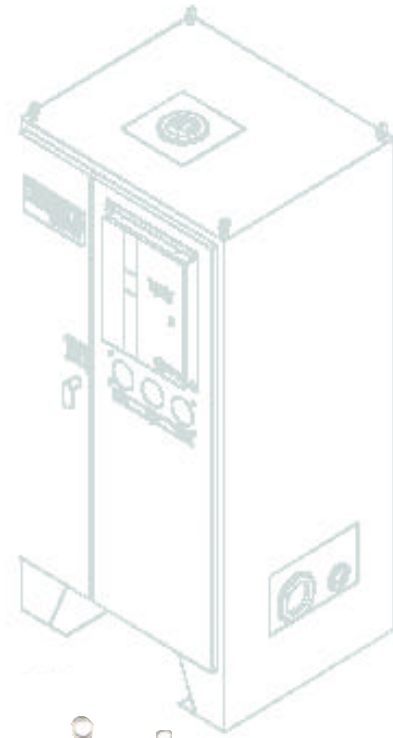
1. A trouble annunciator signals whenever damage occurs to the sprinkler or the sprinkler piping. **NO WATER WILL FLOW.**
2. A fire alarm sounds prior to the operation of a sprinkler, which may enable the fire to be extinguished by hand-held means before the sprinkler activates.
3. Can prevent piping from freeze damage because there is no water in the piping. Any residual water left in the piping that may freeze and damage the system will provide a supervisory trouble signal.

# How Does the Single-Interlock Preaction System Operate?

The sprinkler system is filled with compressed air to a low pressure of 2 -10 psi. There is no water in the piping system. The air pressure has no relationship with actual flow of water into the piping. The compressed air is there only to supervise the integrity of the system.

Any loss of this air pressure caused by a damaged sprinkler or damaged piping, will provide an alarm signal for a supervisory condition, not a fire condition. This alarm would not cause fire trucks to roll. It would provide supervisory personnel with an indication that there has been damage to their system and that it needs to be repaired. Water will not flow upon the loss of this air pressure.

Water is allowed to flow into the sprinkler system only upon the operation of the facility's fire detection system. The smoke detection/thermal detection system sends a signal to a releasing control panel that will operate the preaction valve and allow water to flow into the system. The water is in the piping waiting for the activation of the fire sprinkler to control the fire. A false detection will fill the piping with water, but if a sprinkler has not opened or the piping has not been damaged, there will be no discharge of water. The system will be drained down and placed back into service.



## Two Scenarios



### A prison with a standard wet or dry pipe sprinkler system:

At 10:00 PM a disgruntled inmate decides to break the fire sprinkler in his cell. The fire sprinkler operates and begins spraying water (black, oily water at first) at a rate of 30 to 100 or more gallons per minute. The fire alarm sounds. Based upon your facilities fire plan, the cellblock may be evacuated and the fire trucks are on the way.

Thirty to forty-five minutes later (if you are lucky), you will determine that this is a false alarm and shut off the sprinkler system. Any inmates removed during the false alarm process will need to be returned to their cells. Well, some will be returned to their cells. The cells below and sometimes beside the activated sprinkler cell may not be habitable and will have damaged property.

This is only a start. What about water damage to electrical equipment, mechanical equipment, furniture, bedding, potential mold, and of course general disruption of your facility for an indefinite period of time? If there is an insurance company involved, they will not be happy.

### A prison with a preaction sprinkler system:



At 10:00 PM a disgruntled inmate decides to break the fire sprinkler in his cell. The fire sprinkler operates and begins spitting air and maybe a few drops of water condensation. A supervisory alarm sounds at the control center indicating a problem with the sprinkler system. Guards determine the damaged sprinkler by checking for the sound of escaping air pressure. Your trained maintenance man is called to replace the sprinkler and reset the supervisory alarm. During this period, you still have not lost fire sprinkler protection for your facility.

No fire trucks roll, there is no water damage, no inmates need to be relocated, and basically no disruption of your facility. You will also know the identity of the prisoner that damaged the fire sprinkler.