

Case Study on Drum Drip

Alan Relyea, IB Board Member

On a cold night of early winter last year, the senior pastor of a large UCC church in the Northeast received a late-night call. It's never a good thing when a senior pastor receives a late-night call, but this was even worse—it was from the church's alarm company advising her that they detected sprinkler activation in her meeting house, and were dispatching the fire department. Thankfully, the church was not on fire, but a freeze in the dry sprinkler system had burst a pipe and the water had damaged two rooms on the floor below.

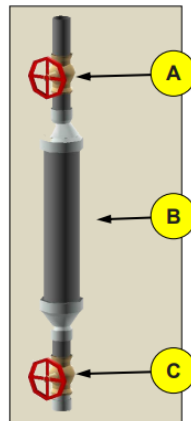
How is it possible that a dry pipe sprinkler system freezes?

All dry pipe sprinkler systems need to have a way of collecting moisture at low points. These low points (this particular church has five) are equipped with a means of discharging the collected moisture or condensation that builds up. These devices are typically called “drum drips” and look like a larger piece of pipe with valves on both sides and a discharge or plug on the end away from the sprinkler system. They should be marked “drum drip”. Other names you may hear/see are: auxiliary drain, drip leg or condensate drain.

The device collects the moisture that accumulates in the otherwise dry sprinkler system. However, unless it is drained, water will build up and extend upward into the

pipings. The National Fire Protection Association requires that these devices be labeled and drained periodically to prevent freezing. You also must have an informational sign at the system's control riser that includes the location of all drum drips.

When a drum drip is in “normal” position, the top valve (A) is open, allowing moisture to enter the (B) condensate nipple, while the bottom valve (C) is closed. To drain the condensate nipple, the top valve is closed then the bottom valve is opened to remove accumulated moisture.



In the incident of this church, the sprinkler pipe ran through a poorly insulated section of the ceiling, the freezing temperature caused a pipe to burst, and a high volume flow of water immediately ensued.

Nearly \$40,000 of damage was done, of which the church had to fund \$10,000.

What should your church do?

If your property has one or more dry pipe sprinkler systems, talk to your sprinkler system company or your fire marshal to determine the need for draining these de-

vices (it may need to be done monthly or even more often). If church personnel will be responsible to drain them, make sure they completely understand the process.

The basics steps to drain the drum are:

1. If the device is not piped outside, make sure there is a means of collecting water from below the plug (bucket)
2. Close the upper valve first
3. Remove the plug from the bottom (some drains may be piped directly outside)
4. Slowly open the lower valve and allow water to drain
5. Close lower valve
6. Open upper valve
7. Repeat steps 2-6 until no further water is discharged
8. Once water is no longer discharged, replace the plug

Important!!

It is essential that the two valves never be open at the same time. If this occurs, your sprinkler system may be tripped (activated). If this happens, your sprinkler company will need to drain and reset your system on an urgent basis.

We recommend you print these steps and place them at each drum drip. Remember that there may be numerous drains.