Zonecheck Automatic Flow Switch Tester
Frequently Asked Questions/Answers

What is Zonecheck? Why is it being offered?
Zonecheck is a mechanism that simplifies testing waterflow switches. It is intended to assist in compliance with the quarterly test requirements for waterflow alarms, per NFPA 25.

How does Zonecheck work?
Zonecheck uses a re-circulating pump to flow the existing water within the sprinkler system riser around the paddle of the flow switch, which simulates the flow of one sprinkler head in operation. In doing so, the flow switch is tested without discharging water from or re-introducing fresh water into the sprinkler system.

What benefits does Zonecheck offer over traditional flow switch testing methods?
Zonecheck offers a number of benefits over the traditional method of flow switch testing, which involves opening the inspector’s test connection and flowing water through the sprinkler system.

For example, since Zonecheck does not require opening the inspector’s test connection, no water is wasted. Conservatively, as much as 100 gallons of water can be saved per flow switch, per test, using Zonecheck.

When testing flow switches using the inspector’s test connection, the building’s fire pump may become activated. Though NFPA 25 specifically prohibits an inspector from turning off a fire pump, this may often occur. Should this occur, the integrity of the fire sprinkler system is at risk, and represents a significant life safety hazard. Since Zonecheck avoids the test connection completely, a fire pump is not activated, and hence not turned off by the inspector. The integrity of the fire sprinkler system is maintained.

Another added benefit from Zonecheck is the potential for mitigating Microbiologically Influenced Corrosion (MIC). MIC has been proven to be accelerated by the introduction of fresh water into a fire sprinkler system. Since Zonecheck does not discharge water, it therefore doesn’t re-introduce fresh water, thereby slowing down the oxidation process.

Finally, Zonecheck offers a faster method for testing flow switches. Rather than taking several minutes to test each switch, Zonecheck can test a flow switch in seconds.

How is Zonecheck activated?
Zonecheck is activated via a key switch, included with all Zonecheck models. Since the key switch is wired to the pump, by turning the key in the key switch, the pump is activated.

Can multiple Zonecheck units be interconnected? How?
Multiple Zonecheck units may be interconnected by wiring the key switches together. This may be desirable if testing multiple flow switches from one location is desired. Note that when interconnecting Zonecheck models, a pump and key switch are still required for each flow switch. In other words, one pump is dedicated to only one flow switch. Interconnection simply allows any key switch to become a master key switch for the others connected to it.

What testing capabilities does Zonecheck’s key switch offer?
The Zonecheck key switch offers two test capabilities. The first is referred to as “self-test", which as its name implies, activates the pump connected directly to the key switch. The other capability is referred to as “group test", which activates all key switches that are interconnected to that key switch. In doing so, all of the associated pumps are activated, and their flow switches are tested.

How is Zonecheck wired into the fire alarm system?
Zonecheck is technically not connected to the fire alarm system. The Zonecheck pump is wired to the key switch, which is then wired to either 110V or 220V AC power. As mentioned earlier, the key switches may be interconnected, if desired. Only the flow switch is connected to the fire alarm system.

What sizes and configurations are available?
Zonecheck is available in a number of configurations for retrofit and new construction applications. Retrofit models are available for 2", 2½, 3", 4", 6", and 8" sized risers, and are offered in 110V domestic, 110V Canadian, or 220V International configurations. For new construction applications, manifold assembly models are offered in 2", 2½, 3", 4" sizes, and are offered in domestic and Canadian configurations.
What's included with each Zonecheck?

The retrofit models include the Zonecheck pump, valves, 2 sets of elbows, key switch, flow switch, mounting template, and assembly/installation instructions. Note that mechanical tees (not included with Zonecheck) will also be required to secure the elbows to the riser.

The manifold models include an assembled manifold assembly consisting of the Zonecheck pump, valves, elbows, and flow switch. The key switch and installation instructions are also included. Note that grooved couplings (not included with Zonecheck) will also be required to secure the manifold to the riser.

What thread types are used on the components?

The valves are 25mm British Standard Thread. On retrofit models, two sets of elbows are included to account for the possibility of non-standard threads. For most North American installations, the installer would use the two elbows that convert 25mm British Standard Thread to 1” NPT. Where metric threads are required, the second pair of elbows offer 25mm British Standard threads on both ends. For manifold models, the elbows installed are always the 25mm/1” NPT type.

What purpose do the two valves serve?

The valves are provided for two reasons. First, the green valve contains a check valve, to prevent backflow when running the Zonecheck pump. Second, the valves are provided in the unlikely event that the pump requires servicing. In such an instance, close the valves, and disconnect the pump from the valves. There is no need to drain the sprinkler system.

How often does the pump require servicing?

The pump is designed to withstand normal quarterly use. Under these circumstances, the pump should not require servicing. **NOTE: Never run the pump with the valves in the closed position, or while the sprinkler system is drained.**

What function does the aluminum angle piece (included with the retrofit kit) serve?

The aluminum angle is provided as a guide to assist in drilling the holes for the elbow connection points. By using this angle as a template, the holes will be spaced apart and aligned properly.

What is the pressure rating for Zonecheck?

Zonecheck is pressure rated up to 175 PSI. Per NFPA 13, section 3-1.2, Zonecheck meets the minimum requirements for system component working pressure.

With which pipe sizes is Zonecheck compatible?

Zonecheck retrofit kits are compatible with schedule 10 through 40 steel pipe. Zonecheck manifold models are compatible with schedule 10 steel pipe.

At what flow rate does the Zonecheck pump operate?

The Zonecheck pump flow rate varies with the size of the manifold or riser to which it is secured. However, it pumps at a rate that simulates the flow of one sprinkler head in operation, just as opening an inspector’s test connection would simulate.

Is Zonecheck CSFM approved?

According to CSFM, Zonecheck is not considered a fire alarm device, and therefore does not require CSFM approval.

Is the Zonecheck proven technology?

Absolutely. Zonecheck was first introduced into the United Kingdom in 1998 and over 2,000 units have been successfully installed throughout the U.K.