

- Code Compliant Testing ✓
- Water Savings ✓
- Simplicity of Testing ✓
- Less System Corrosion ✓
- Energy and Cost Saving ✓
- Efficient Installation Service ✓

Significantly reduces water wastage when undertaking obligatory tests on alarm valves





Bellcheck is the sustainable solution for executing the weekly alarm-valve test.

A sprinkler system's alarm-valve is designed to activate an alarm when a sprinkler head discharges water. This feature is tested weekly and forms part of the mandatory routine. For a successful test, sufficient water needs to be drawn off to simulate at least one sprinkler head in operation. Carried out weekly; this test results in over 32 tonnes of water being poured down the drain every year for each valve-set.

Project Fire has developed Bellcheck designed to target this inefficient testing routine; saving water, time and money. Bellcheck is compliant to international code standards and can simulate just one sprinkler head in operation. With Bellcheck you can be sure that in the event of accidental sprinkler activation, there will be an immediate alarm.



Automated Testing

Using the Bellcheck *Addressable* system the weekly test can be fully automated. This is achieved by monitoring each valve-set with its own intelligent monitoring module (I.M.M.). Each I.M.M. is connected as part of a loop to one central controller which initiates testing, monitors faults, transmits alarms and provides warnings if any part of the test cannot be completed successfully.

Benefits

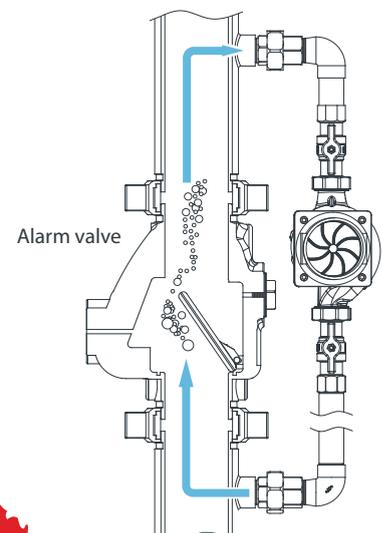
- Code compliant testing
- Sustainable (96-100% water saving)
- No activation of fire pumps or alarms
- Fully automated testing
- Accurate to code criteria
- Reduces corrosion
- No specialist contractor required
- Energy saving
- Eliminate false alarms
- Approved System

Functional Principle

An alarm-valve is designed to activate an alarm when a sprinkler head in the system discharges water.

This function is tested weekly by manually opening a ½" valve to drain off around 630 litres from the system to simulate one sprinkler head in operation. As the water escapes, the clack in the alarm valve is no longer forced down and lifts. This allows water to flow and operate the alarm gong. The flow and pressure switches act as a further means of sounding the alarm and provide an electric signal to an alarm panel as they detect increases in water flow and pressure respectively.

The Bellcheck® system tests all three of the above systems by simulating the flow of one sprinkler head in operation. It works by pumping water from the chamber above the alarm-valve to the chamber below causing the clack to lift. This simple and easy test can be activated locally by turning a key-switch or remotely and automatically using an addressable system.



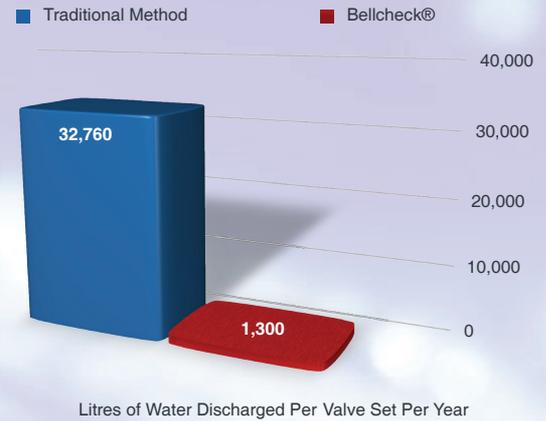
Bellcheck® has been designed to include the additional optional alarm functionality of detecting both a change in pressure and a flow equal to one sprinkler head in operation. When connected this gives the end user the assurance that there will only be an alarm condition activated either when there is an accidental head operation, planned routine testing or in the event of a fire; effectively excluding any potential false alarms associated with the fire sprinkler alarm valve-stations.

Bellcheck® comes pre-wired as a factory assembled unit, fully tested and approved. For quick and easy on-site installation Bellcheck® can also be retrofitted 'live' with no drain down required using Livetap® under pressure drilling technology.

Water Savings

Without Bellcheck®, undertaking mandatory testing involves the discharge of large quantities of water - approximately 630 litres per valve set for each test carried out. With Bellcheck® only 25 litres is discharged to waste (when using a water motor alarm-gong), resulting in an annual saving of approximately 31,460 litres of water per valve set each year.

Globally the water consumption in traditional testing of sprinkler systems accounts for billions of litres of water used per year. With water becoming an increasingly important resource in itself, let alone considering the energy consumed in purifying and transporting the water used, Bellcheck® provides major environmental savings in water and energy.



SUSTAINABILITY

in Fire Protection

Less water usage

Bellcheck® saves huge amounts of water. As significantly less water is introduced into the system, there is also less corrosion.

Increased energy efficiency and lower cost

All water discharged using traditional methods has to be replaced. By significantly reducing water consumption Bellcheck® saves energy not only in water supply but also directly reduces water and energy costs for the building operator.

Reduced life cycle carbon footprint

Bellcheck® radically reduces the life cycle carbon footprint of sprinkler systems and makes a real contribution to the environment.

To learn more about Bellcheck®, view case studies and obtain technical information please visit

www.projectfire.co.uk/bellcheck

Product Solutions

Bellcheck® is a factory assembled unit, in a range of three solutions

Bellcheck®

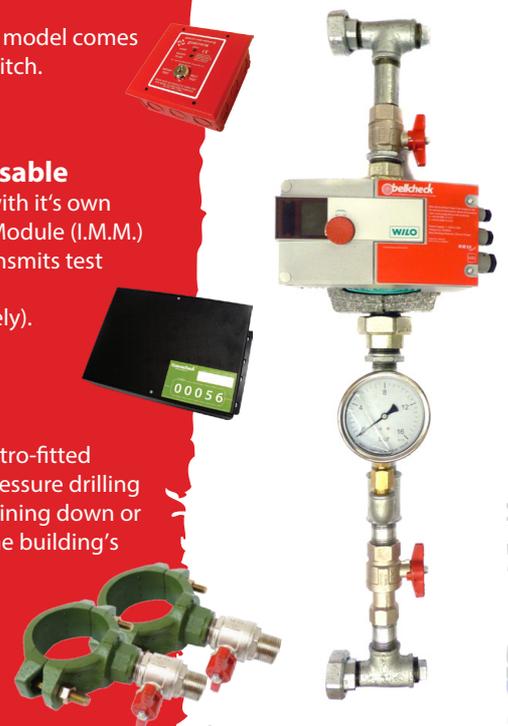
The 'standard' Bellcheck model comes pre-wired with a key-switch.

Bellcheck® Addressable

Each Bellcheck comes with it's own Intelligent Monitoring Module (I.M.M.) which monitors and transmits test results back to a central controller (sold separately).

Bellcheck® Live

Bellcheck Live can be retro-fitted using Livetap® under pressure drilling technology without draining down or causing disruption to the building's sprinkler protection.



Approvals



Bellcheck® is VdS and Water Regulations Advisory Scheme (WRAS) approved. LPCB approval pending.

Electronic Alarm

In accordance with the latest LPCB directives, Bellcheck has also been designed to test valve-sets which use an electronic alarm (strobe/sounder) rather than the traditional water motor alarm gong. This means that the weekly test can be achieved without wasting a drop of water using Bellcheck. Further more, using Bellcheck *Addressable* would enable an entire bank of alarm-valves to be automatically tested simultaneously, on a weekly basis, without triggering the fire pumps or fire alarm and without wasting a drop of water.

- ✓ Code Compliant Test
- ✓ 100% Water Savings
- ✓ Fully Automated
- ✓ LPCB approved Strobe/Sounder
- ✓ Test *without* Fire Alarms operating
- ✓ Test Results Auto-Recorded



Standards

Bellcheck® should be installed on valve-sets that comply with BS EN-12259-2 (Wet alarm valve assemblies).

Technical Detail

Specification

Working Pressure Rating	Water, 15 Bar (218 psi)
Operating Temperature Rating	0°C - 49°C (32°F - 120°F)
Distance (centre-centre)	880mm
Valve-set diameters	80-200mm (3" - 8")
Connections	1" BSP

Circulation Pump

Make	Wilo
Pump type	Single head pump
Max. Fluid temperature	110°C
Rated voltage	230v, 50 Hz
Permitted voltage tolerance	± 10%
Degree of protection	IP 44

Key-switch

Supply Voltage	230v 50 Hz
Weight (approx.)	0.5 Kg
Ambient Temperature	0° - 40°C

Intelligent Monitoring Module (IMM)

Main Power Supply	110-230v AC 50/60 Hz- 250w max
PCB Voltage rating	110-230v AC 50/60 Hz- 250w max
Number of outputs	2
Type	Relay, volt free, single pole, changeover/switched mains for Zonecheck pump
Max Switching Current	3A resistive
Max Switching Voltage	230v AC, 30v DC
Switched Mains for Pump	250v AC-3A

Printed on paper from a
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FSC



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