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Winter pump failure could shut public buildings this winter, expert warns

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Across the UK, hundreds of organisations could face emergency call-outs or even closure if their pump systems aren't checked before winter.

The UK is set to face more extreme weather before the end of the year, with plummeting temperatures, storms and heavy rainfall – conditions that can cause pumps to freeze, blockages to form and energy efficiency to drop.

For public sector organisations, the risk of pump failures is heightened as many systems will have been sitting idle over summer, increasing the likelihood of sudden failure under the pressure of winter demand and freezing temperatures.

Drawing on 15-plus years of experience, John Calder, technical director at Dura Pump, has urged facilities teams to act now, with proactive maintenance tips to safeguard critical systems.

He said: "Every winter we see situations where a small fault has spiralled into a full system breakdown because it wasn't checked in time. Thinking ahead of time and proactively checking key infrastructure now can significantly minimise downtime and prevent any interruptions this winter."

Heating pumps under pressure

Pumps are central to the operation of heating and storm water systems, but they can seize or fail to start after periods of inactivity, while hard water deposits can build up, cause brittle seals and costly leaks once the system is under pressure.

“Start with a visual inspection, looking for signs of weeping or leaks around seals, flanges and gaskets”, said John. “Manually switch the system on and listen for unusual noises. Check for vibration and dry bearings.”

Even a minor leak or faulty sensor can escalate into full pump failure once demand spikes, so John advised, “Make sure your checks include monitoring the system’s pressure, testing thermostats and building management controls, and verifying antifreeze levels in external pipework”.

“Routine preventative maintenance for a site’s pump system might cost facilities teams in the region of £2,500 to £10,000 annually, depending on scale, whereas a single mid-winter pump failure could mean emergency call-out fees, replacement equipment, including labour bills coming to £15,000 to £30,000. Not to mention the additional cost of disruption.”

Keeping wastewater and storm water moving

Wastewater and storm water systems run constantly throughout the year, but winter weather (heavy rainfall, snow and freezing temperatures) adds extra strain and increases the risk of operational failure.

“Fats, oils and debris that build up over summer can cause float switches to stick and pumps to block,” said John. “Facilities teams should test the level control, run each pump manually and check that alternation between duty and standby pumps is working correctly to prevent system breakdowns.”

John added, “Additional steps such as checking valves, alarms and control panel heaters, alongside insulating any exposed pipework to prevent freezing, make a huge difference in ensuring reliability during peak demand.”

Pump damage or failure can be catastrophic in education settings, forcing schools, colleges and universities to face disruptive downtime or possible closures. Earlier this year, several schools in Boston had to shut due to a pump failure that reduced water pressure and created hygiene risks – showing how essential reliable water systems are to day-to-day educational operations.

“For universities, the financial impact can be even greater,” John added. “A maintenance programme costing around £5,000 a year may prevent failures that could otherwise spiral into tens of thousands of pounds in emergency repairs and temporary solutions if sites have to close unexpectedly.”

Hospitals and care facilities face additional pressure, as heating pumps must keep wards and clinical areas at specific ambient temperatures depending on their purpose. “A failed heating system in these environments is more than an inconvenience; it’s a compliance and patient safety issue,” John added.

“In hospitals, the indirect costs can overshadow the repair bill. While replacing a failed pump might run to £20,000, the knock-on effect of cancelled procedures, staff overtime and potential patient relocations could push the total cost into six figures.”

Organisations cannot afford to wait and see if their heating and water systems are able to survive winter – emergency callouts are expensive, downtime is disruptive, and the safety risks are high.

John said, “Taking action could save upwards of £50,000 in emergency repairs and downtime if a major failure hits in the middle of winter, but proactive maintenance isn’t just about avoiding repair costs – it’s

about ensuring continuity, protecting people and reducing energy waste.

“By investing just a few hours in proactive checks and maintenance, facilities teams can safeguard operations and ensure systems are ready to perform when they’re needed most.”