Pure, safe water. Always.

ELIMINATING TYPICAL UV OUTPUT LOSS IN EXTREME LOW TEMPERATURES

INDEPENDENT LAB FINDS NO LOSS OF UV OUTPUT IN EXTREME LOW WATER AND AIR TEMPERATURS WITH HALLETT CROSSFIRE™ SYSTEMS

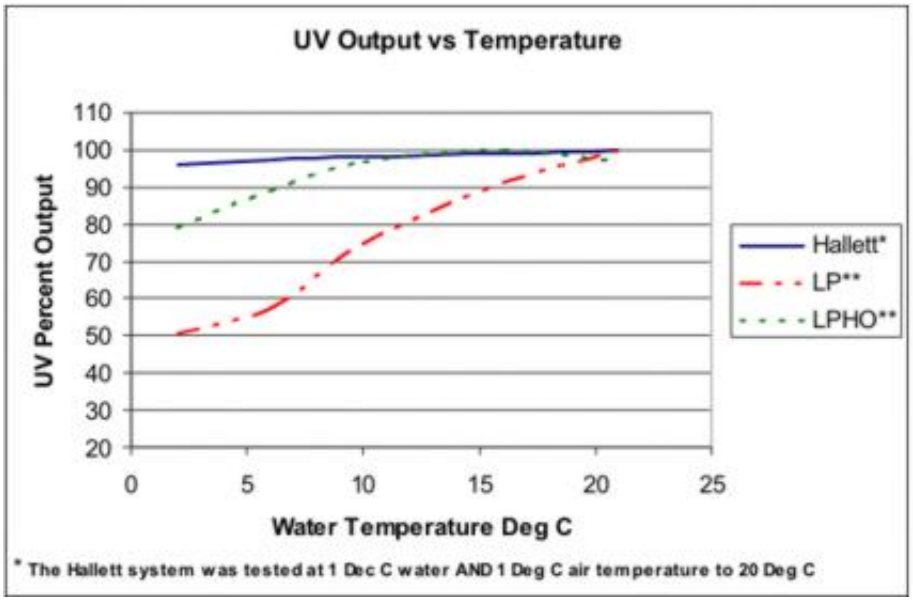
UV Pure Technologies Inc. has completed third party verification of the UV lamp output of its Hallett™ 13 and 30 systems. The systems were tested in ambient air temperatures ranging from 20° Celsius (70° Fahrenheit) to 1° Celsius (33° F.), and with water temperatures ranging from 20° C to 1° C. Hallett™ systems were stable throughout this temperature range. There was a maximum drop in UV output of only 4% at a combination of one degree air and one degree water. THIS IS A DRAMATIC PERFORMANCE ADVANTAGE VERSUS ALL OTHER CONVENTIONAL UV SYSTEMS. OTHER SYSTEMS MUST SUFFER A PENALTY IN TERMS OF RAISING MINIMUM UV TRANSMITTANCE TO SATISFY MINIMUM DOSE REQUIREMENTS.

Low pressure (LP), and Low Pressure High Output (LPHO) UV lamps (all small UV systems use either a LP or LPHO lamp design) are sensitive to ambient operating temperatures, and emit maximum dose at 41° C. When the lamp is subject to lower or higher operating temps, the UV output begins to drop dramatically.

All conventional UV systems are designed with the UV lamp inside a quartz tube which is inside a water column; Due to that design configuration, the lamp is highly influenced by the temperature of the water. For example, if there is low flow or no flow, the lamp quickly heats up the surrounding water and drops significantly in output. Similarly, if the water source is a cold water well, or seasonally cold source, the lamp cools quickly and loses significant output. The output losses are so dramatic that Canada's province of Quebec has required UV manufacturers, certified in Quebec by the Ministry of Environment, to provide system performance data for operation in extremely cold water temperatures.

Based on the performance of conventional UV systems, Quebec's CTTEP (The Drinking Water Treatment Technologies Committee) has imposed significant limitations on UV transmittance requirements. **Hallett™ systems are the only exception due to its stable UV output from 20° C to 1° C.**

Hallett™ systems' patented Crossfire Technology™ is designed with the water column inside a quartz tube, and two lamps which are in air surrounded by elliptical reflectors. As a result, the lamps are convection cooled and maintain stable operating temperatures in low air and water combinations even down to freezing. This makes the systems ideal in colder operating conditions like northern climates or in deep water well applications. A Cold Air Kit is available to allow Hallett™ units to operate in colder air & water conditions where minimum operating temperatures cannot be maintained.



Data Sources:

* GAP Microbial Services, London, Ontario; February 2005
** "Temperature effects on UV lamp output"; Water Quality Products; Volume 10, Number 2, February 2005

Laboratory tests proved that Hallett™ systems operate with no material decrease in UV output in low water and air temperatures, even down to nearly freezing. These tests were verified by an independent laboratory, GAP Microbial Services and accepted by the CTTEP, which conducted exhaustive studies of all Quebec certified UV systems.

These tests are an important addition to the data that NSF/ANSI derives from its tests to certify UV systems to NSF/ANSI 55 Class A which are based on water and air temperatures that are stable at 20° Celsius (70° F). It is important to consider the effect of ambient air and water temperatures, in addition to NSF/ANSI 55 Class A certification when specifying UV disinfection systems. Hallett™ systems with Crossfire Technology are the only systems which operate in low air and water temps with no material drop in UV output.

UV Pure Technologies has begun a series of exhaustive tests to track output in hot water and hot ambient air temperatures as well. The company expects to demonstrate stable UV output in air and water temperatures up to 45° Celsius (113° F). Of course, this is critical in many applications in lower latitudes. The company expects to complete this study and to publish the data within several months.

To find out everything, visit www.puresafewater.com or call 888-407-9997.

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