

Dreamliner

Disinfection

As recently as last October, the U.S. Environmental Protection Agency published updated Final Drinking Water Rules for water safety standards on commercial aircraft to help ensure that safe and reliable drinking water is provided to aircraft passengers and crew.

By Rick Van Sant

Protecting Passengers

The rule requires multiple barrier protection through standards for coliform sampling, best management practices, corrective action, public notification, monitoring and operator training. It will better protect the public from illnesses caused by microbiological contamination.

“This rule is a significant step forward in protecting people’s health

when they travel,” said Peter S. Silva, assistant administrator for EPA’s Office of Water.

Dreamliner Solution

Following a global search for the most advanced ultraviolet water purification technology available, Zodiac Aerospace’s Monogram Systems division, a supplier of cabin systems and equipment to the aerospace industry, has developed an innovative water treatment system for purification of aircraft water. The company has been successfully managing large and complex water and waste systems for aircraft such as the A380, B787 and Embraer 170/190.

Monogram has signed a technology licensing agreement with UV Pure Technologies of Toronto for exclusive use of UV Pure’s patented Crossfire Technology in aerospace applications. The device will debut on the Boeing 787 Dreamliner.

“We are honored that Monogram has chosen our advanced UV technology to provide safe water on board the Dreamliner—the new 21st century standard for airliners,” said Rick VanSant, CEO of UV Pure Technologies. “The same Crossfire Technology that will purify the water on board Boeing’s 787 is incorporated in all of our UV systems, in over 9,000 applications globally. It represents significant engineering and performance advances for UV-based water purification systems. We think it’s a perfect fit for Monogram and Boeing.”

Engineering Partnership

Monogram engineers worked with UV Pure’s engineers to adapt the land-based technology to an aerospace platform and certify it to Federal Aviation Administration standards.

The systems are smart with multiple sensors that enable a display on the airplane’s “glass cockpit” so that the pilots can tell that the plane’s water is effectively disinfected.

In addition to adapting communications protocols so that the system’s smart technology and multiple sensors can tie into aircraft displays, Monogram had to adapt it for high-gravity forces and vibration in three dimensions.

System Specifications

UV Pure’s systems use low-pressure, high-output lamps and the new aircraft ballast that powers those lamps was adapted to work with “Wild” frequency power typically found on all new commercial aircraft.

The product is completely self-contained, requiring only electrical power and standard water connections. Utilizing high-intensity UV light, the treatment device kills over 99.99% of all bacteria and viruses found in common water sources.

The device can be used to clean water as it enters the aircraft or to continuously clean water as it is circulating throughout the cabin of the aircraft, providing safe drinking water to the passengers and crew. The product has several unique proprietary innovations that allow the airplane operator to remotely monitor performance. *wqp*

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Land-based technology adapted for the air



Crossfire Technology will make its aerospace debut on the Boeing 787 Dreamliner.

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