

UV Water Treatment  
Hydro-Optic™ Technology

## International Hotel Chain With Operations in Israel Uses Hydro-Optic™ UV to Disinfect Hot Water System

Ministry of Health's regulations in Israel require public facilities including hotels, hospitals and old-age homes to maintain hot water system temperature at a minimum of 55°C (131°F) throughout the facility to prevent the proliferation of Legionella. However, maintaining a high temperature translates into a drastic increase in energy costs and it also exacerbates deposit formation on the heat exchanger.

Atlantium Technology's Hydro-Optic™ (HOD) UV technology provides facilities with an energy efficient disinfection solution that eliminates the potential of corrosion and disinfection byproducts formation associated with chemical disinfection while also positively effecting heat exchanger performance.

An international hotel chain with operations in Israel that has a focus on implementing innovative technologies to save energy and improve safety across all areas, including water, piloted and installed a full-scale HOD UV system to improve its water disinfection sustainability while adhering to a "green" energy consumption policy.

In 2015, the HOD UV technology was installed in the hot water system and placed directly before the heat exchanger. Comprehensive microbial monitoring was undertaken from various points to determine the efficacy of the technology to disinfect the hot water system and provide non-chemical control of pathogenic organisms such as Legionella.

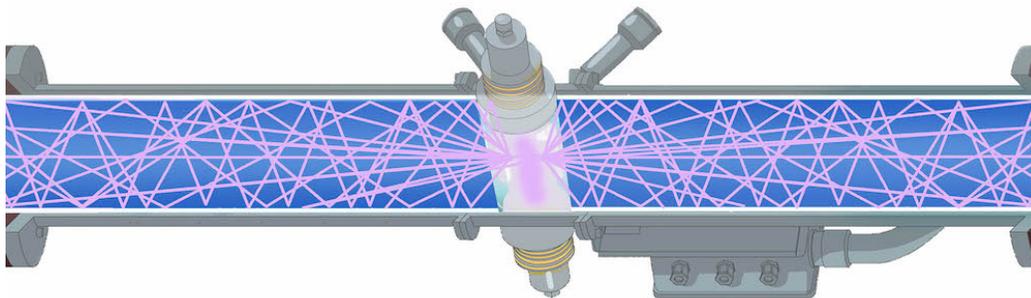
After months of monitoring the microbial content of the hot water system under continuous disinfection with the HOD UV system, the Ministry of Health authorized the hotel to lower the hot water system temperature from 55°C (131°F) to 50°C (122°F) for a trial period so that the disinfection efficacy and cost savings of the technology could be further validated.

The HOD UV technology provided superior disinfection control at the reduced temperature, resulting in the Ministry of Health authorizing the hotel to permanently reduce the temperature of the hot water system to 50°C (122°F). As a result, the hotel saves NIS100,000 or USD \$27,000.00 per annum in energy related expenses.

After nearly five years of operation, the HOD UV system continues to deliver a sustainable disinfection solution and ensures the hotel is providing safe water free of harmful pathogens.



**HOD™ UV delivers superior disinfection control for hot water system in international hotel chain with operations in Israel.**



**The HOD™ UV system's TIR technology recycles UV light within the chamber to ensure homogenous UV dose distribution while exhibiting superior power (kW) efficiency.**

### **Why Atlantium HOD UV?**

As an integral part of its unique design features, the HOD UV system automatically generates reports on real-time parameters including UV lamp strength, UVT (water UV transmittance), and actual UV dose. The system's automated compliance reports give project managers and decision makers a peace of mind not offered by other technologies.

### **The Atlantium system was chosen because:**

1. The principle of Total Internal Reflection (TIR) that recycles the UV photons and ensures uniform dose distribution so that no pathogens can escape. Each UV lamp provides the required dose according to real-time conditions, and the lamps work independently of each other, reducing maintenance expenses by enabling changing one lamp if needed, while the system still provides disinfection.
2. The innovative technology comes with professional customer service and support, quick reaction time and immediate spare parts availability.
3. The HOD UV technology is third-party validated to the highest regulatory standards for EPA, FDA and PMO with accredited validation for 4-log virus with the live target virus, and 5-log microbial inactivation.
4. Regulatory compliance reports available at the press of a button, customized integration with the client facility processes and remote monitoring and control.
5. An alarm is triggered if water is not getting the required dose or in the case of any functional anomalies based on customized user settings.



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