

Hot Water
Legionella Protection



Hospitality



Israel

Hot Water Disinfection for International Hotel Chain, Israel

International Hotel Chain Implements Legionella Control for Hot Water System

Israel's Ministry of Health's regulations 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.

An international hotel chain with operations in Israel was focused on implementing innovative technologies to save energy and improve safety. In 2015, the hotel chain piloted and installed Atlantium's full-scale HOD™ (Hydro-Optic Disinfection) UV system to improve its water disinfection sustainability while adhering to a green energy consumption policy.



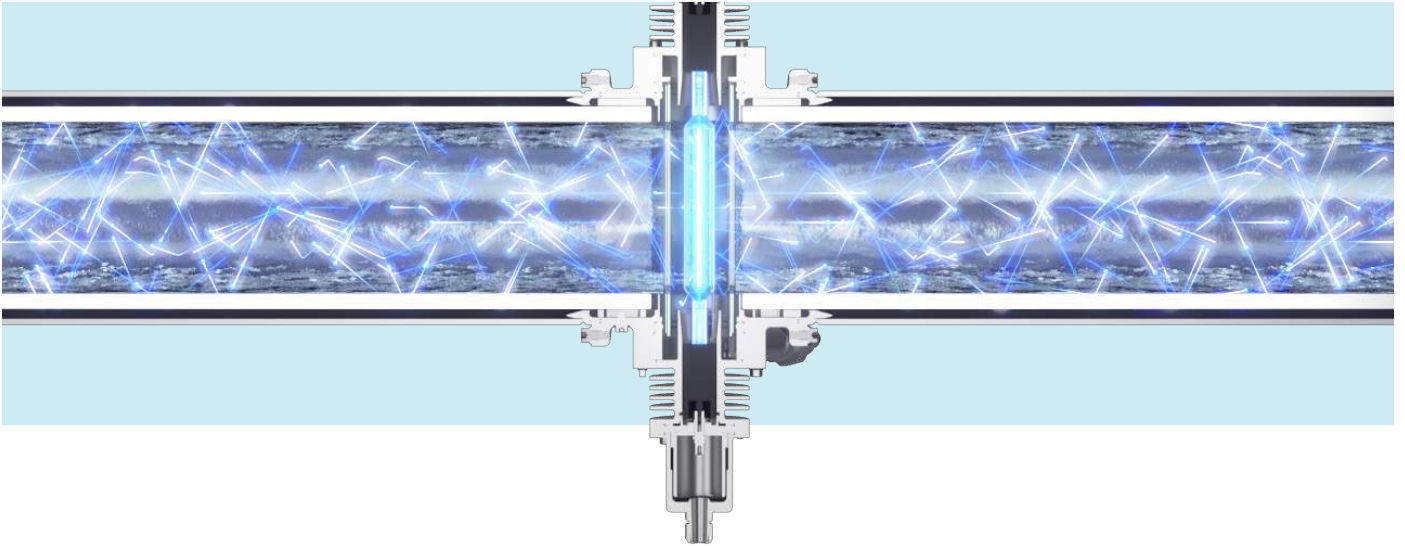
The Solution

Atlantium HOD systems effectively inactivate pathogens by combining ultraviolet water disinfection technology with hydraulic and optic principles. The HOD UV system features the unique Total Internal Reflection (TIR) technology that recycles UV light energy, ensures homogenous UV dose distribution, provides superior power (kW) efficiency compared to traditional UV, and achieves unprecedented micro-organism inactivation.

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 affecting heat exchanger performance.

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.



Results

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 \$27,000 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.

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 peace of mind not offered by other technologies.



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About us

For more than two decades, Atlantium Technologies has helped to ensure water safety with its innovative HOD™ (Hydro-Optic Disinfection) UV technology and novel approach to performance, monitoring, and control. Atlantium's superior, environmentally friendly water treatment solutions ensure stable, efficient, and dependable production.

With thousands of full-scale installations for leading brands in various industries globally, we're committed to consistently meeting our customers' water quality needs, ensuring pure results.

