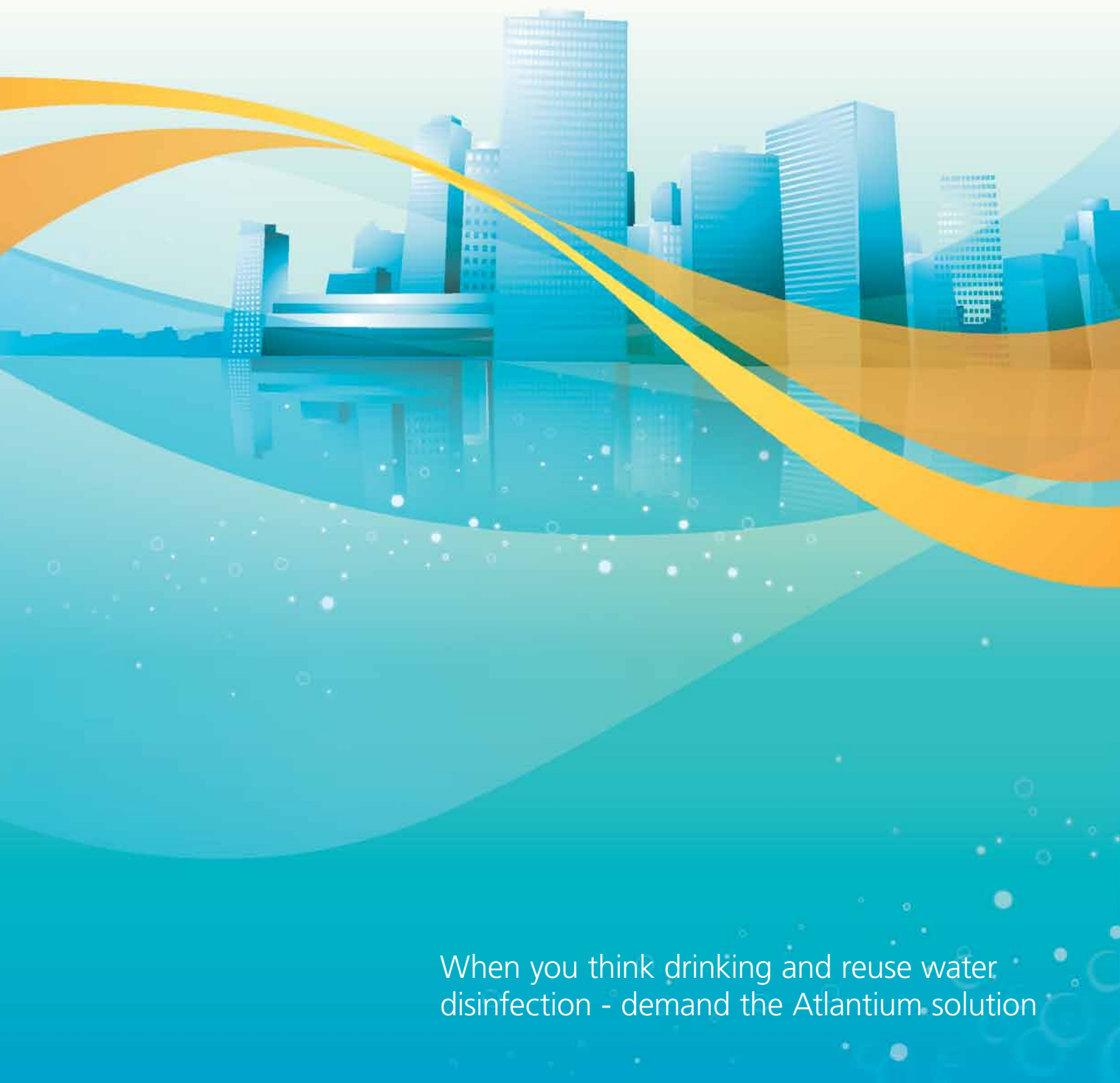


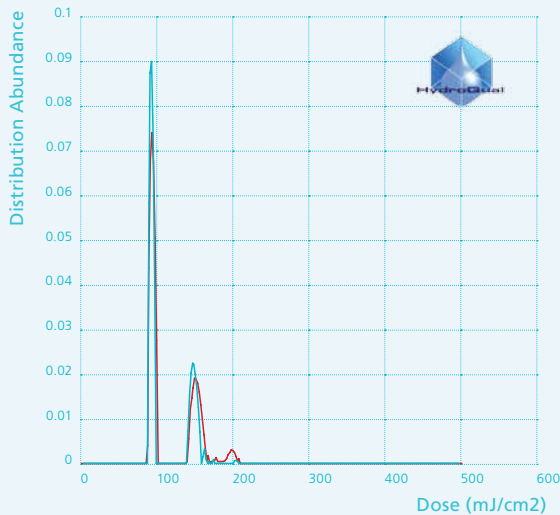
Hydro-Optic Disinfection™ Technology

Guaranteed safety for life



When you think drinking and reuse water,
disinfection - demand the Atlantium solution

Atlantium systems – Uniform UV dose distribution Uniform microbial inactivation



Validation tests conducted by HydroQual Inc. used dyed microspheres* to characterize UV systems' true UV dose distribution. The tests consistently demonstrated that - more than any other UV system in the market - the Hydro-Optic Disinfection system delivers a uniformly-distributed UV dose throughout the reactor with no low-dose tracks. This prevents waste of energy and ensures all target pathogens are inactivated.

*Microspheres mimic the behavior of microorganisms. Adding dye enables measurement of the UV dose delivered to each microsphere. This allows quantitative and accurate statements to be made about the dose distribution delivered by a UV reactor.

Atlantium's most advanced disinfection system – now in an Inline configuration

Guaranteed disinfection results – Safety for life

- Atlantium's innovative design, utilizes **Total Internal Reflection** to evenly distribute the light photons inside the quartz based disinfection chamber. This guarantees ultimate disinfection results, as all pathogens receive the same uniform dose.
- Pathogen specific dose is achieved by careful design, ensuring no low dose tracks in the reactor
- All Hydro –Optic disinfection systems are validated according to USEPA LT2 guidelines and UVDGM protocols for achieving up to 4 log inactivation of parasites and viruses.

Real time monitoring and control

- Required dose is automatically adjusted based on continuous, real time measurement of lamp intensity, water flow and UV transmissivity.

Sustainable performance mechanisms

- Each system comprises of **2 sensors per lamp**, insuring consistent dose regardless of changing water and lamp parameters.
- Non-immersed patented **ultrasonic cleaning mechanism** deters deposit formation and reduces CIP cycles.

- Atlantium's proprietary **Medium Pressure Lamp** is specifically designed to operate over a broad light spectrum with high density to target a vast range of pathogens and organic compounds.

Lowest life cycle cost

- Due to Atlantium's innovative proprietary total internal reflection characteristics, Atlantium is able to provide the highest energy utilization per gallon of water produced.
- Lowest life cycle cost is achieved using fewer lamps and ballasts; power is adjusted according to changes in water conditions.

Ease of installation, operation and maintenance

- Atlantium's RZ offers a modular design, horizontal or vertical installation and an open architecture controller design, enabling ease of integration into existing or new system design.
- All quartz glass disinfection chamber, 4 minute lamp replacement and an ultrasonic cleaning mechanism all result in low maintenance cost and reduced down time.



"We get all-around security with Atlantium disinfection technology: our water is safer, we enjoy ease of use, get tech support when needed, comply with all regs and produce the reports we need within minutes."

Water operator, NY

Atlantium's patented Hydro Optic Disinfection system is the world's most effective UV disinfection technology, with the lowest energy cost per gallon of water produced.

HOD provides the consistency, safety and reliability the municipal market demands today and tomorrow.

The RZ series

Easily integrated, modular systems enable Atlantium to provide municipalities with precisely the system they need to achieve maximum disinfection reliability.



Screen displays

The status of all the relevant system parameters are displayed in real-time and show the precise UV dose (RED) being delivered at any given moment.

PC software produces reports to meet municipal and regulatory requirements with the press of a button.



Sample selection of RZ163 and RZ300 models and specifications

(additional models to meet other flow rate requirements and specific applications available)

Type	Lamps	Power Consumption* (kW)	Flow** (m3 / gpm)	Flange	Power Requirements	↑→↗ *** (mm/in.)	Weight (with ultrasound) (kg/lbs)
RZ163-11	1 x 1.7 kW	1.7	170 / 749	DN150 ANSI 6"	230/400 Volt ¹ 50/60 Hz-3 Phase	463-822-435 18-32.4-17	60 / 132
RZ163-12	2 x 1.7 kW	3.4	340 / 1497	DN150 ANSI 6"	230/400 Volt ¹ 50/60 Hz-3 Phase	463-1174.5-435 18-46.2-17	90 / 198
RZ300-11	1 x 4.2 kW	4.2	400 / 1761	DN350 ANSI 14"	400/440/480 Volt ¹ 50/60 Hz-3 Phase	801-782-505 31.5-31-20	142 / 313
RZ300-12	2 x 4.2 kW	8.4	800 / 3522	DN350 ANSI 14"	400/440/480 Volt ¹ 50/60 Hz-3 Phase	801-1100-505 31.5-43-20	188 / 415
RZ300-14	4 x 4.2 kW	16.8	1600 / 7044	DN350 ANSI 14"	400/440/480 Volt ¹ 50/60 Hz-3 Phase	801-1736-505 31.5-68-20	283 / 624

* Lamps only: MPHI UV lamps; typical relative drive: 75%. Power consumption varies according to dose; control system automatically adjusts consumption from 40% to 100% based on real-time measurement of water's flow rate and UVT.

** Flow rate at UVT = 95%; RED = 40mJ/cm², end of lamp life

*** Measurements are flange to flange

¹ Europe-400 volts; Mexico-440 volts; USA-480 volts

HOD systems' all glass structure facilitates *Total Internal Reflection* / uniform dose distribution, reduces deposits and head loss



Applications

- Validated for surface water *Giardia* and *Cryptosporidium* inactivation
- Validated for ground water 4-log *Adenovirus* inactivation
- GAC filter protection
- UF/Membrane Biofouling pretreatment
- Micro-organic elements reduction

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