NEOTECH AQUA SOLUTIONS, INC

The World's Most Advanced UV Technology™

NeoTech D438

Ultrapure Water Disinfection & Ozone Destruction

• Life Sciences • Microelectronics • Food & Beverage • Cooling Towers • Oil & Gas
• Drinking/Wastewater •Recreational Water • Personal Care • Agri/Aquaculture

The NeoTech D438 is specially designed to disinfect water and is an essential component in advanced oxidation processes. Other applications include ozone and chlorine removal.

This high-efficiency UV system utilizes NeoTech Aqua's patented ReFleX chamber technology, reflecting 99.8% of the radiated light back into the water column. In conventional UV systems between 0 to 20% of the UV light is reflected by the stainless steel vessel. So while NeoTech Aqua uses that same low pressure mercury lamp technology as many other manufacturers, the chamber desgin uses the light generated much more efficiently.

The result is that the D438 has a smaller footprint (about a 1/3 of the size), uses fewer lamps (about 75% less), resulting in a general improvement in performance created by a uniform distribution of UV light.

VALIDATIONS

- NSF Standard 50 and 61
- NSF Public Drinking Water Equipment
- EPA-ETV
- CADPH Conditional Title-22
- TUV, Worldwide coverage

MINIMAL MAINTENANCE & SERVICE

The service and maintenance for the NeoTech D438 are limited to three basic requirements:

- Lamp replacement: No Tool Required
- UV Monitor: May be changed with a single screwdriver while the system is operating
- Cleaning: May be cleaned as needed in a CIP loop or manually brushed

STANDARD TREATMENT CHAMBER FEATURES

- Small footprint, typically 1/3 the size of conventional UV
- Only uses 308W
- Only uses 2 lamps
- Vertical or horizontal mounting for maximum installation flexibility
- 120V or 230V single phase power
- No flow, No Problem (Guaranteed 60 minutes)
- Wetted Parts: 316L SS (RA-15), synthetic quartz, Teflon and Viton gaskets
- Sanitization, steam or hot water can be run through the system
- Warranty one year parts and labor
- UV Monitor is NIST Traceable, can be displayed as mW/cm^2 or mJ/cm^2

STANDARD CONTROL BOX FEATURES

- Control box can operate up to four units
- Lamp outage and low output alarms, local and dry contact for remote communication
- On/Off control, local or remote
- 4-20mA for remote monitoring of system output
- Real Time Dosimetry, 100% Dosage Assurance (with constant flow)

D438 MAX FLOWS BY % UVT AND UV DOSE

% UVT \ UV Dose (mJ/cm^2)	30	40	60	90	186
99	1675	1260	830	560	265
98	1110	825	550	365	175
95	500	375	250	165	80
93	385	290	190	125	60
90	300	225	150	100	48
85	225	170	110	75	36
80	165	125	84	55	27
70	89	66	44	29	14

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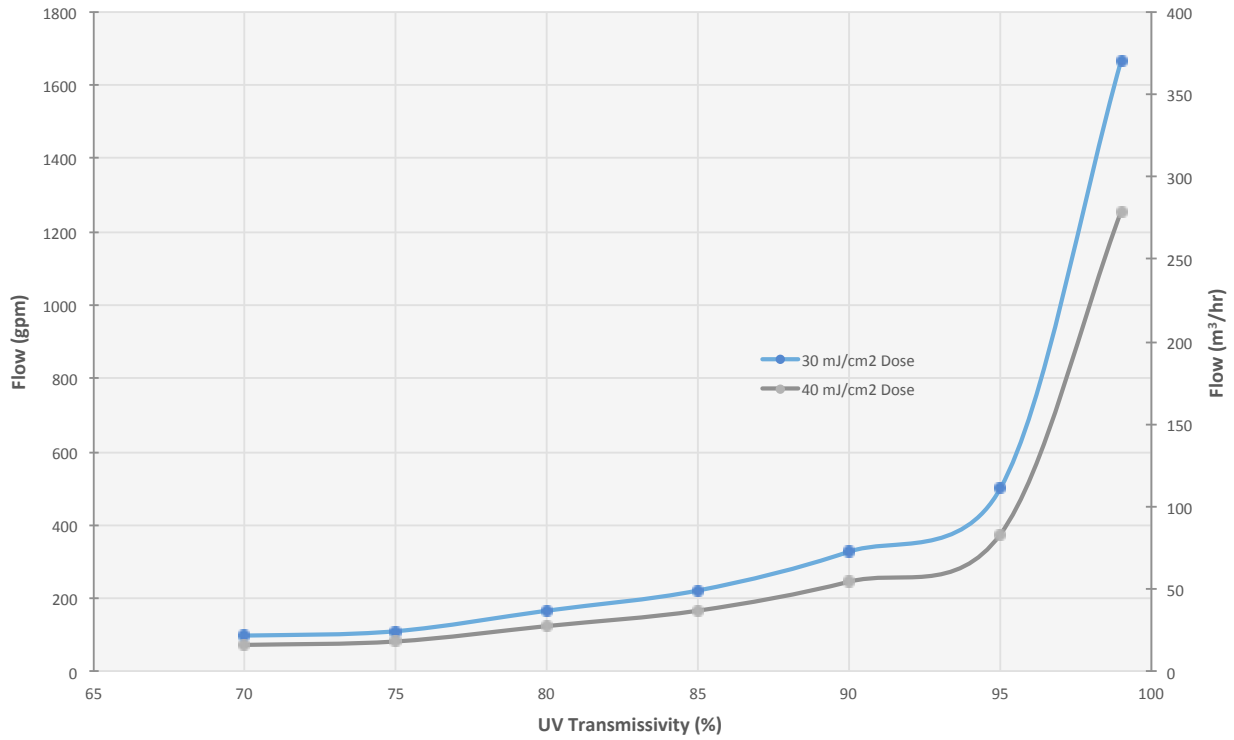
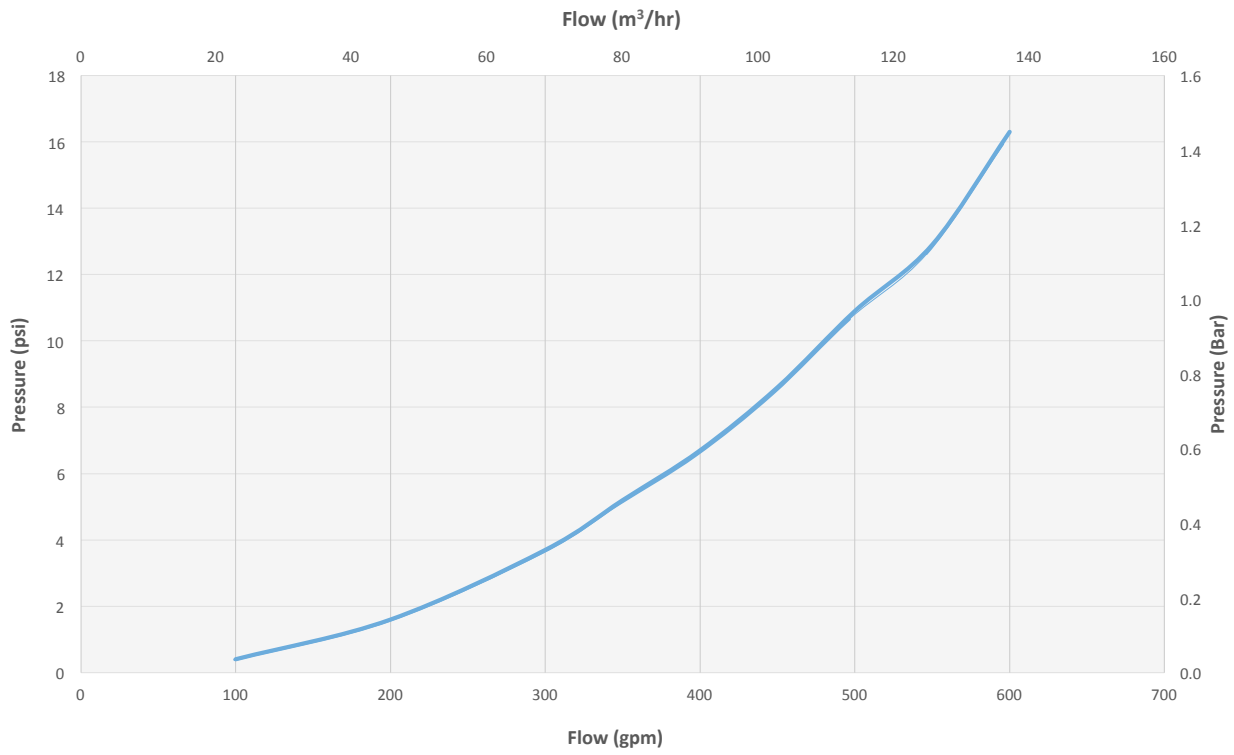
D438 FLOW VS. UVT



D438 HEAD LOSS



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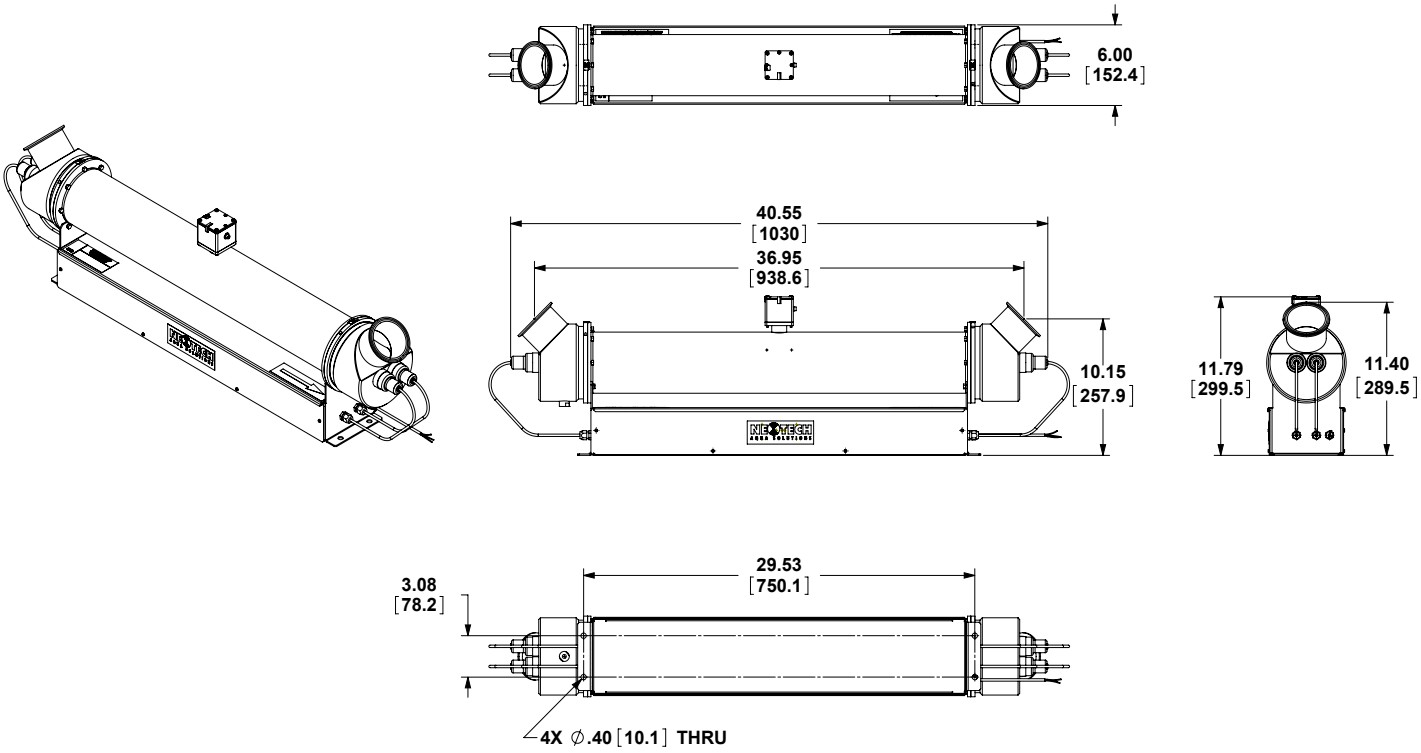

SPECIFICATIONS

Flow Rate - gpm (m^3/hr.) - 95% UVT @ 186 mJ/cm^2^	80 (18.2)
Flow Rate - gpm (m^3/hr.) - 95% UVT @ 90 mJ/cm^2^	165 (37.5)
Flow Rate - gpm (m^3/hr.) - 95% UVT @ 40 mJ/cm^2^	375 (85.1)
Flow Rate - gpm (m^3/hr.) - 95% UVT @ 30 mJ/cm^2^	500 (113.5)
Number of High Output Amalgam Lamps	2
Lamp Life - Hours*	9000
Operating Power - watts	303
Operating Pressure - psi (bar)	150 (13)
Operating Temperature - ºF (ºC)	36 - 140 (2 - 60)
Pressure Drop at rated flow - psi (bar)	10.9 (0.95)
Dry Weight - pounds (kg)	63 (28.6)
Dimensions (L x H x D) - inches	40.6 x 7.9 x 11.4
Dimensions (L x H x D) - millimeters	1030 x 201 x 290
Sanitary Fittings - Standard+	3 in.

^ At rated pressure drop.

** Lamp life is based on a maximum of one on-off cycle per day and room temperature water.*

+ All units come standard with sanitary trip-clamp fittings for improved reliability, sanitation, and ease of installation. Alternative connections are available upon request.

OPTIONS AND SPARES

Description	Part Number
Light Trap Kit*	UVLTK-4
Cleaning Kit	CK-4-1
Amalgan Lamp Kit	LK-38
Lamp Sleeve Kit	QSK-38
UV Monitor Calibration	UVIM-CAL
Ballast Kit, 120V	BK-120
Ballast Kit, 230V	BK-230

** Reflected UV light may be harmful to nonmetallic surfaces, such as PPL, PVC, and other plastics. Therefore, it is recommended that a light trap be installed on your unit.*

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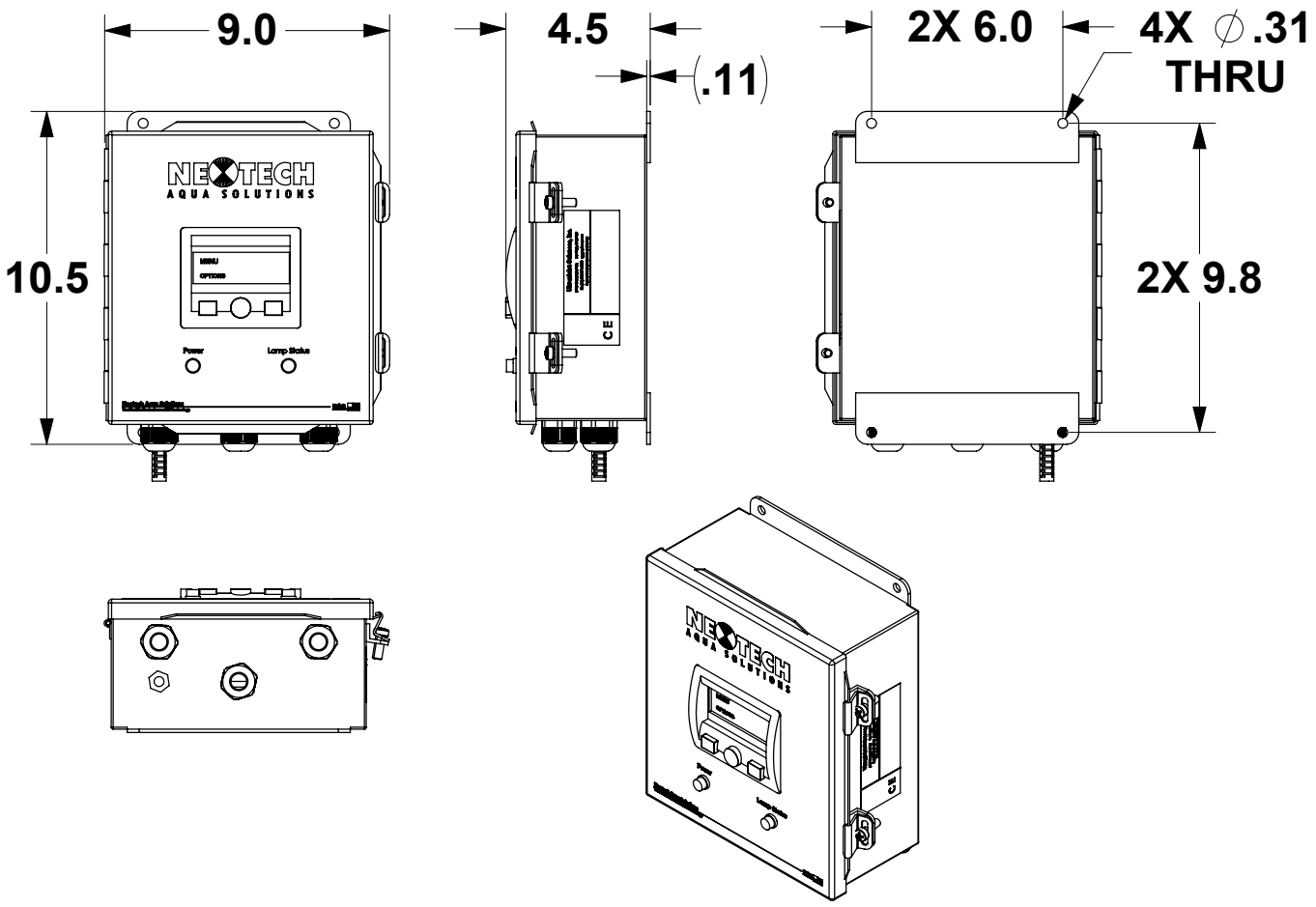
NeoTech CU-XX

UV Water Treatement Control Interface



SPECIFICATIONS

Functional Specification	Local	Remote
Number of Chambers Controlled	Up to 4	Up to 4
ON/OFF Control - Remote	Yes	Yes
UV Dosage - mJ/cm^2	Digital Read	Calculated
Lamp Out Alarm (EOL UV Dose)	LED	3-bit Code
Low Lamp Output	Flashing LED	3-bit Code
Peak Lamp UV Dose	Digital Read	-
Total Run Time	Digital Read	-
Lamp Time	Digital Read	-
Lamp Power Cycles	Digital Read	-
Electrical	120 or 230 VAC / 50-60 Hz	
Operating Power	5 Watts	
Weight lbs (kg)	8.8 (4.0)	
Cable Length - Power (controller to UV lamp)*	6 Feet (2 meters)	
Cable Length - 4-20 mA Signal	> 150 Feet (45 meters)	

**Up to 20 feet of cable is available upon request*

Please consult the user manual for control and signal interface connection details. -XX Indicates the number of treatment chambers controlled and the voltage of the unit. The number of treatment chambers must be identified at the time of order.

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