NSF / ANSI 55 Class “A” Certified Units

Drinking Water

NSF/ANSI 55
Class “A”
file #247580

System tested and certified by CSA against NSF/ANSI Standard 55 for disinfection performance class “A”

This Class A system conforms to NSF/ANSI 55 for the disinfection of microbiologically contaminated water that meets all other public health standards. The system is not intended to convert wastewater or raw sewage to drinking water. The system is intended to be installed on visually clear water.

NSF/ANSI 55 defines wastewater to include human and / or animal body waste, toilet paper, and any other material intended to be deposited in a receptacle designed to receive urine and / or feces (blackwaste); and other waste materials deposited in plumbing fixtures (grey waste).

If this system is used for treatment of untreated surface waters or ground water under the direct influence of surface water, a device found to be in conformance for cyst reduction under the appropriate NSF/ANSI standard shall be installed upstream of the system.

Product Specification	8.40C	11.40C	14.40C	20.40C
Maximum rated Flow Rate @ 40mj/cm² - note 1	8.7 gpm (32.9lpm) (1.97m³/hr)	11.0 gpm (41.6lpm) (2.49m³/hr)	14.5 gpm (54.8lpm) (3.28m³/hr)	20.2 gpm (76.4lpm) (4.58m³/hr)
Dynamic Flow Regulator	yes	yes	yes	yes
Isolated Solenoid Drive	yes	yes	yes	yes
Cold Spot Fan™	yes	yes	yes	yes
Lamp watts	49watts	64watts	84watts	112watts
Total watts	63watts	81watts	103watts	136watts
AC Supply Voltage	120V 47-63Hz (240V 47-63Hz)	120V 47-63Hz (240V 47-63Hz)	120V 47-63Hz. (240V 47-63Hz)	120V 47-63Hz (240V 47-63Hz)
Annual Lamp Change Timer	yes	yes	yes	yes
Lamp Change Grace Period	28 days maximum	28 days maximum	28 days maximum	28 days maximum
Grace Period Audio Alarm Disable	yes (7day increments)	yes (7day increments)	yes (7day increments)	yes (7day increments)
Reactor Chamber Material	304 SS	304SS	304SS	304SS
Maximum Operating Pressure	100psi (6.9bar)	100psi (6.9bar)	100psi (6.9bar)	100psi (6.9bar)
Maximum Ambient Temperature	40C (104F)	40C (104F)	40C (104F)	40C (104F)
Water Temperature Range	4 – 25C (40 – 77F)	4 – 25C (40 – 77F)	4 – 25C (40 – 77F)	4 – 25C (40 – 77F)
Lamp Service Life	9000hrs	9000hrs	9000hrs	9000hrs
Chamber Dimensions (L x D x W)	24.25” x 4” x 6.5” (61.6 x 10.2 x 16.5cm)	32.5” x 4” x 6.5” (82.5 x 10.2 x 16.5cm)	39.75” x 4” x 6.5” (101 x 10.2 x 16.5cm)	50.5” x 4” x 6.5” (128.3 x 10.2 x 16.5cm)
Chamber diameter	3.5” (8.9cm)	3.5” (8.9cm)	3.5” (8.9cm)	3.5” (8.9cm)
Controller Dimensions (L x D x W)	10” x 1.7” x 2.3” (25.4 x 4.3 x 5.8cm)	10” x 1.7” x 2.3” (25.4 x 4.3x5.8cm)	10” x 1.7” x 2.3” (25.4 x 4.3 x 5.8cm)	10” x 1.7” x 2.3” (25.4 x 4.3 x 5.8cm)
Shipping Weight	11lbs (5kg)	13lbs (6kg)	15lbs (6.8kg)	19lbs (8.6kg)
Inlet/Outlet Port Size	¾” FNPT inlet ¾”MNPT outlet	¾” FNPT inlet ¾”MNPT outlet	¾” FNPT inlet ¾”MNPT outlet	1” FNPT / 1.25” MNPT Inlet & Outlet
Replacement Components				
Lamp Part Number – note 2	400269	400270	400158	400271
Quartz Sleeve Part Number – note 3	400273	400274	400323	400275

Note 1 – actual flow rate may be up to 12% less due to flow regulator variability
Note 2 – lamp should be ch
Note 3 – quartz sle

UV Dynamics

WWW.UVDYNAMICS.COM

UVDynamics Inc.
315 Neptune Crescent
London, Ontario
Canada, N6M 1A9
t 800.667.4629 f 519.452.1701
email sales@uvdynamics.com

NSF / ANSI 55 Class "A" Certified Units

Product Specification	8.40C	11.40C	14.40C	20.40C
Maximum rated Flow Rate @ 40mj/cm^2 - note 1	8.7 gpm (32.9lpm) (1.97m^3/hr)	11.0 gpm (41.6lpm) (2.49m^3/hr)	14.5 gpm (54.8lpm) (3.28m^3/hr)	20.2 gpm (76.4lpm) (4.58m^3/hr)
Dynamic Flow Regulator	yes	yes	yes	yes
Isolated Solenoid Drive	yes	yes	yes	yes
Cold Spot Fan™	yes	yes	yes	yes
Lamp watts	49watts	64watts	84watts	112watts
Total watts	63watts	81watts	103watts	136watts
AC Supply Voltage	120V 47-63Hz (240V 47-63Hz)	120V 47-63Hz (240V 47-63Hz)	120V 47-63Hz. (240V 47-63Hz)	120V 47-63Hz (240V 47-63Hz)
Annual Lamp Change Timer	yes	yes	yes	yes
Lamp Change Grace Period	28 days maximum	28 days maximum	28 days maximum	28 days maximum
Grace Period Audio Alarm Disable	yes (7day increments)	yes (7day increments)	yes (7day increments)	yes (7day increments)
Reactor Chamber Material	304 SS	304SS	304SS	304SS
Maximum Operating Pressure	100psi (6.9bar)	100psi (6.9bar)	100psi (6.9bar)	100psi (6.9bar)
Maximum Ambient Temperature	40C (104F)	40C (104F)	40C (104F)	40C (104F)
Water Temperature Range	4 – 25C (40 – 77F)	4 – 25C (40 – 77F)	4 – 25C (40 – 77F)	4 – 25C (40 – 77F)
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Shipping Weight	11lbs (5kg)	13lbs (6kg)	15lbs (6.8kg)	19lbs (8.6kg)
Inlet/Outlet Port Size	¾" FNPT inlet ¾"MNPT outlet	¾" FNPT inlet ¾"MNPT outlet	¾" FNPT inlet ¾"MNPT outlet	1" FNPT / 1.25" MNPT Inlet & Outlet
Replacement Components				
Lamp Part Number – note 2	400269	400270	400158	400271
Quartz Sleeve Part Number – note 3	400273	400274	400323	400275

Note 1 – actual flow rate may be up to 12% less due to flow regulator variability
Note 2 – lamp should be changed annually
Note 3 – quartz sleeves should be replaced at three year intervals

Drinking Water

NSF/ANSI 55
Class "A"
file #247580

System tested and certified by CSA against NSF/ANSI Standard 55 for disinfection performance class "A"

This Class A system conforms to NSF/ANSI 55 for the disinfection of microbiologically contaminated water that meets all other public health standards. The system is not intended to convert wastewater or raw sewage to drinking water. The system is intended to be installed on visually clear water.

NSF/ANSI 55 defines wastewater to include human and / or animal body waste, toilet paper, and any other material intended to be deposited in a receptacle designed to receive urine and / or feces (blackwaste); and other waste materials deposited in plumbing fixtures (grey waste).

If this system is used for treatment of untreated surface waters or ground water under the direct influence of surface water, a device found to be in conformance for cyst reduction under the appropriate NSF/ANSI standard shall be installed upstream of the system.

APPLICATION GUIDELINES

- ➔ A Minimum 5 micron pre-filter required.
- ➔ Indoor use only – Select a mounting location for UV power source to protect it from condensation from the disinfection chamber and system piping.
- ➔ Clean the quartz sleeve regularly
- ➔ Water must meet the following minimum requirements for trouble free operation

Turbidity	**< 1 NTU**
Suspended Solids	**< 10mg/L**
Colour	**None**
Total Iron	**< 0.3 mg/L**
Manganese	**< 0.05 mg/L**
Hardness	**<7 gpg**
UVT%	**> 80%**

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UVDynamics Inc.
315 Neptune Crescent
London, Ontario
Canada, N6M 1A9
t 800.667.4629 f 519.452.1701
email sales@uvdynamics.com

Model 8.40 Advanced Ultraviolet Water Disinfection

The *UVDynamics model 8.40* is applicable to point of entry applications in today's larger homes and cottages. The specified 40mj/cm^2 dose of the *model 8.40* is equivalent to a 30mj/cm^2 at 10gpm, which is ideal when used as a final polish in de-chlorination of municipal water supplies with activated carbon filtration. The compact mounting footprint of the *UVDynamics model 8.40* facilitates simplified installation. The *UVDynamics model 8.40* was designed using sophisticated computer modeling software and then verified by independent third party testing using accepted biodosimetry methods by GAP EnviroMicrobial Services.

GAP EnviroMicrobial Services
a division of Canestoga-Rovers & Associates Ltd.

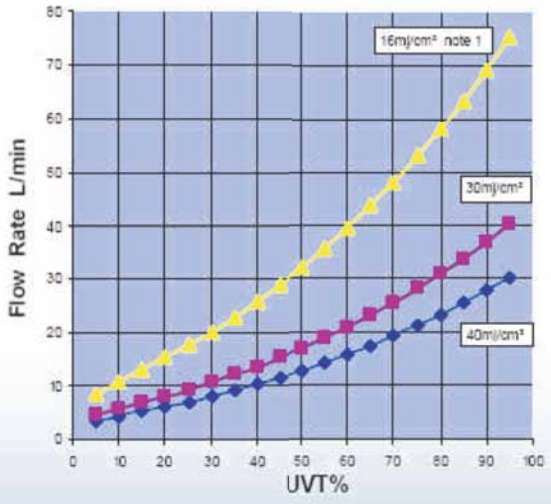
www.gapenviromic.com

The microprocessor controlled UV power source is designed for long life and includes both visual and audio lamp failure alarms as well as an annual lamp change timer. Our proprietary UV power source and modern manufacturing methods allow us to make this product available at a very competitive price.
We include as a standard feature an isolated low voltage solenoid drive output. Our optional solenoid valves simply plug into the unit and require no additional interface cables or transformers to complete the solenoid safety shut off feature.

PRODUCT FEATURES

- Flow rate of 30L/min (8gpm) delivers UV dose of 40mj/cm^2
- Flow rate of 40L/min (10gpm) delivers UV dose of 30mj/cm^2
- Passivated and polished 304 stainless steel reactor 3.5" x 18"
- 9000hr long life coated UV lamp
- Microprocessor controlled UV power source with audible and visible lamp failure alarms
- ***True Lamp Current*** closed loop current control
- Annual lamp change timer
- Lamp life remaining feature
- ¾" MNPT fittings
- Domed quartz sleeve to simplify servicing
- ***No Tools*** required for regular servicing
- ***Easy-service*** lamp connector
- ***Optional*** Solenoid valve
- ***Optional*** UV monitor system

Model 8.40 Performance Curves note 2



Note 1 - 16mj/cm^2 Dose is suitable for reducing nonpathogenic nuisance organisms only. Disinfection chamber hydraulic performance may limit maximum flow rate.

Note 2 – Performance curves developed with multi-point summation methods from 40mj/cm^2 @ 30 litre flow performance data

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UVDynamics Inc.
315 Neptune Crescent
London, Ontario
Canada, N6M 1A9
t 800.667.4629 f 519.452.1701
email sales@uvdynamics.com

wttr.ca
"The Water Softener Purification Specialists"

Showroom: 283 Broadway, Orangeville
519-941-9120 email: sales@wttr.ca

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Manufactures of: "Iron Max" "Soft & Pure" & "Zebra Guard Systems"
Distributors of Quality Water & Air Treatment Systems & Accessories

WTTR.ca is one of the VERY FEW water treatment companies with the knowledge and technology to measure your waters UVT! (UV Transmittance is the measure of UV energy).

If you have E-coli or chloroforms in your water… no one should be offering to sell you a UV system without checking that it's going to even work on your waters QUALITY!

UV systems work by exposing pathogens in water to a minimum dose of energy, in a known volume of water, flowing at a maximum flow rate; to be effective the water must have a minimum UVT, below which too little energy will reach pathogens.

Why is UVT critical?

UVT or UV Transmittance is the measure of UV energy at a particular wavelength or frequency which is actually transmitted through water from the UV lamp; The higher the UVT, usually expressed as a percentage (%), the more energy is transmitted through the water, and therefore the more effective the deactivation of pathogens. Put another way, if there is low UVT, the amount of UV energy that reaches pathogens in the water may be too low to deactivate them, making the UV system ineffective.

UV light effectiveness as a sterilizer is determined primarily by the combined effects of UV light intensity, the exposure time of the system (defined by the flow rate of the system) and the UVT of the water. The first two variables, flow rate and lamp dosage, are determined by the selection of the correct UV treatment system. The third, UVT, is dependent on the specific water source being treated and it can significantly challenge the effectiveness of the UV disinfection system.

UVT is impacted by the quantity of organics, colloidal solids and other material in the water. The less clear the water is, the lower the UVT and the more these water borne materials absorb and scatter the UV light as the water passes by the UV lamp. Since UV disinfects water using a very precise 254 nm wavelength of light, these water borne materials impede the "transmittance" of that light to the water and its microbes, thereby reducing the effective UV dose delivered by the system.

You can't estimate UVT levels simply by looking at the water. It is often thought that if the water appears clear to the naked eye, or if the turbidity is low, then this means the UVT will be high. However, this is not correct. Turbidity is a measure of the quantity of suspended solids in the water and is not related to the organics or fine particles that tend to affect UVT. It is true that color usually does indicate the presence of organics such as tannins and humic material. However, it does not follow that just because the water doesn't appear colored that it will have a high UVT. This is because some organics and other matter that cause low UVT can be present in water but do not add any visible color to the water.

Due to the critical effect that UVT has on the performance of all UV disinfection systems, it is vital the UVT of a water sample be known for every UV disinfection system application to ensure proper treatment.

NSF (www.nsf.com - the global authority and certification body for UV systems) certifies UV systems' effectiveness at 70% UVT. To pass NSF/ANSI 55 Class A standards, a UV system must deliver a safe dose of energy at a maximum flow rate of water that has 70% UVT. Many conventional UV system manufacturers make performance claims for non-NSF certified systems at 95% UVT. To put these UVT values in more real-life terms – 95% UVT water would be much like distilled water; a deep drilled well might be between 75% and 85% UVT; lake water in Spring might be as high as 70% UVT and in fall could be as low as 55% UVT. A conventional system which claims effectiveness at 95% UVT levels could be ineffective in real-life situations.

Buyer Beware - Don't be Fooled by UV Performance Claims.

UVD600

Advanced Ultraviolet Water Disinfection

formerly UVD15.40 & UVD20.30

The *UVDynamics model UVD600* is applicable for higher flow whole house, point of entry applications in today's larger homes or smaller commercial / industrial applications. Ultraviolet (UV) water disinfection protects against waterborne micro-organisms and is effective against Giardia and Cryptosporidium without the use of chemicals.
The *UVDynamics model UVD600* was designed using sophisticated computer modeling software and then verified by independent third party testing using accepted biodosimetry methods by GAP EnviroMicrobial Services.

GAP EnviroMicrobial Services
a division of Conestoga-Rovers & Associates Ltd.

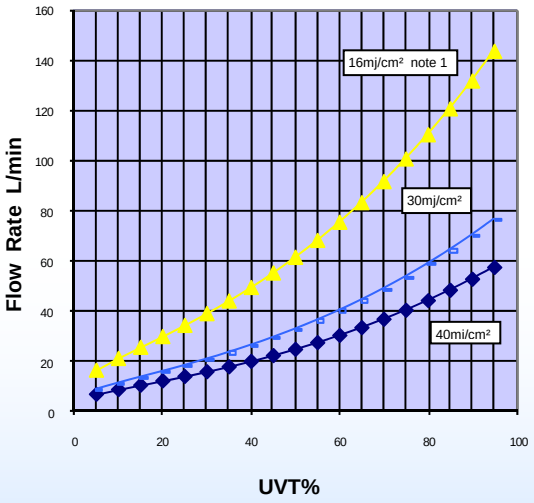
www.gapenviromic.com

The microprocessor controlled UV power source is designed for long life and includes both visual and audio lamp failure alarms as well as an annual lamp change timer. Our proprietary UV power source and modern manufacturing methods allow us to make this product available at a very competitive price.
We include as a standard feature an isolated low voltage solenoid drive output. Our optional solenoid valves simply plug into the unit and require no additional interface cables or transformers to complete the solenoid safety shut off feature.

PRODUCT FEATURES

- Flow rate of 20gpm (75L/min) delivers UV dose of 30mj/cm^2
- Flow rate of 15gpm (57L/min) delivers UV dose of 40mj/cm^2
- Passivated and polished 304 stainless steel reactor 3.5" x 37"
- 9000hr long life coated UV lamp
- Microprocessor controlled UV power source with audible and visible lamp failure alarms
- ***True Lamp Current*** closed loop current control
- Annual lamp change timer
- Lamp life remaining feature
- 1" MNPT fittings
- ***No Tools*** required for regular servicing
- ***Easy-service*** lamp connector
- ***Optional*** Solenoid valve
- ***Optional*** UV monitor system

UVD600 Performance Curves note 2



Note 1 - 16mj/cm^2 Dose is suitable for reducing nonpathogenic nuisance organisms only. Disinfection chamber hydraulic performance may limit maximum flow rate.

Note 2 – Performance curves developed with multi-point summation methods from 40mj/cm² @ 57 litre flow performance data

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Canada, N6M 1A9
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