# Water Treatment



# Wyckomar Inc.

For more than 30 years, Wyckomar has been producing high quality water treatment systems. We are one of the early adopters of Ultra Violet technology



for purification of water and have gained



valuable experience over the years. Our plant is located in Guelph, Ontario, Canada (just 1 hour west of Toronto.) Flexible production schedules and a highly motivated and committed team of water treatment experts is our hallmark for timely production of off-the-shelf and

custom designed UV disinfection systems, while maintaining the high standard of quality that our customers expect from us. Rigorous testing of every unit ensures that these systems will



provide many years of trouble free operation. We are committed to prompt customer service and we guarantee a pleasant customer experience.







### **Corporate Profile**

I am pleased to introduce Wyckomar Inc., a Canadian manufacturing company with more than 30 years of experience as a leader in the small systems sector of the global water purification industry. Our company currently exports from our main facility in Guelph, Ontario Canada to more than 20 countries worldwide.

This information package is designed to introduce our company, our products, our markets, our experience and our strengths in the water purification and custom manufacturing sector.

Wyckomar Inc. was founded in 1978 in response to a need for non-chemical technologies to produce safe, clean and pathogen-free drinking water to consumers around the globe. Our company played a key role in the development of Ultra Violet (UV) drinking water systems for residential and commercial use. Many of Wyckomar's original UV system designs are still in use today.

In the early days, our market penetration was most pronounced in regions of Europe where UV has long enjoyed a well-deserved reputation as a safe and effective, non-chemical water disinfection technology. Our UV systems have long been at home in the shipping industry, on vessels plying European waterways. More recently, our company has opened new domestic and export markets as the popularity of UV technology increases around the world.

Today, Wyckomar manufacturers and sells a standard line of UV water purification systems for residential, commercial, industrial, small municipal and specialty applications. We also produce compact "All-In-One" skid mounted and wall mounted water systems for a wide variety of flow rates and applications. "All-In-One" systems are very popular with our customers as they offer a wide variety of filtration, water conditioning and UV disinfection options.

#### **Partial List of Customers**

Wyckomar has configured UV water purification systems for a wide variety of customers including Kellogg Brown & Root (international procurement and engineering firm), The Sable Island Offshore Energy Project (offshore oil/gas drilling platforms in eastern Canada), The US Armed Forces in Bosnia (transportable military grade systems), Canadian Coast Guard (ship-board waste water treatment systems), Cargill Inc., Exxon Mobile, National Beef, plus a wide variety of distributors, dealers and wholesalers in Canada, USA, Netherlands, New Zealand, Australia, China, UAE among others.

The use of UV light to sterilize and disinfect drinking water has a long history of success and is in fact being used in many municipal water treatment plants built in the last 20 years. The invisible rays of UV light are able to produce this very useful effect by mimicking nature. In nature, rays of the sun carry (among others) UV light in the germicidal wavelength of 254 nm. This particular wavelength of light is very damaging to living cells – hence the warnings to reduce human exposure to long periods of high-intensity sunlight – and it's lethal on the microscopic level to living pathogens in drinking water.

Our UV systems are able to provide safe water in regions where the water supply is suspect or in cases where the water supply is contaminated and otherwise unsafe to consume.

The technology is very effective against pathogens including bacterial, viral and protozoa contamination and in many cases can be outfitted to provide safe water even in regions where there is little or no access to electrical service. The use of solar panels to power UV systems has become popular in many parts of the developing world.

We Kill Harmful Bacteria and Other Pathogens Including			
E.coli	Cryptosporidium		
Coliform	Giardia		
Legionella	Staphylococcus		
Cholera	Mold		
Anthrax	Poliovirus		
Streptococcus	Hepatitis		
Tuberculosis	Influenza		
Coxsackie	Shigella		
Typhoid	Rotavirus		
Salmonella	Adenovirus		

The principals of Wyckomar have many decades of combined experience in the water purification industry. Our staff is skilled in all facets of design, fabrication, efficacy validation, sales, customer service and follow-up.

At Wyckomar, we pride ourselves on being a true low-cost, high-quality manufacturer in an industry that has become one of the fastest growing in the world. Proper water treatment can make an enormous difference in the quality of life, the quality of commercial and industrial goods and processes, and the quality of business for the distribution agents that we partner with in many regions of the world.

Please contact us with any enquiries.

sales@wyckomaruv.com

#### **Ultraviolet Sterilization Technology**

Ultraviolet disinfection systems are mysterious to many people – how can "light" kill bacteria? But the truth is it can. Ultraviolet (UV) technology has been around for 50 years, and its effectiveness has been well documented both scientifically and commercially. It is nature's own disinfection/purification method. With consumers becoming more concerned about chlorine and other chemical contamination of drinking water, more dealers are prescribing the ultraviolet solution suitable for both small flow residential applications as well as large flow commercial projects.

Ultraviolet is a means of killing or rendering harmless microorganisms in a dedicated environment. These microorganisms can range from bacteria and viruses to algae and protozoa. UV disinfections is used in air and water purification, sewage treatment protection of food and beverages, and many other disinfection and sterilization applications. A major advantage of UV treatment is that it is capable of disinfecting water faster than chlorine without cumbersome retention tanks and harmful chemicals. UV treatment systems are also extremely cost efficient!

#### What is UV and how does it work?

Ultraviolet is one energy region of the electromagnetic spectrum, which lies between the x-ray region and the visible region. UV itself lies in the ranges of 200 nanometers (nm) to 390 nanometers (nm). Optimum UV germicidal action occurs at 260 nm.

Since natural germicidal UV from the sun is screened out by the earth's atmosphere, we must look to alternative means of producing UV light. This is accomplished through the conversion of electrical energy in a low-pressure mercury vapor "hard glass" quartz lamp. Electrons flow through the ionized mercury vapor between the electrodes of the lamp, which then creates UV light.

As UV light penetrates through the cell wall and cytoplasmic membrane, it causes a molecular rearrangement of the microorganism's DNA, which prevents it from reproducing. If the cell cannot reproduce, it is considered dead.

#### Design and Dosage

The design of an ultraviolet sterilizer has an extremely important bearing on how the UV Dose is delivered and Dosage is the most critical function of UV disinfections. As individual UV lamps emit a set amount of ultraviolet energy, it is important that a system be sized correctly. Flow rates are the determining factor and must not be overstated. Contact time, which is the time the water is within the sterilization chamber, is directly proportional to Dosage, which is the amount of energy per unit area (calculated by dividing the output in watts by the surface area of the lamp), and thus the overall effectiveness of microbial destruction in the system. This product of intensity and time is known as the Dose and is expressed in microwatt seconds per centimeter squared (uWsec/cm<sup>2</sup>). **Divide by 1000 to express the dose in mJ/cm<sup>2</sup>, the preferred notation**.

**DOSE** =  $\underline{\text{time (sec) x output (watts)}}$ area (cm<sup>2</sup>)

For maximum UV transmission a "hard glass" quartz sleeve is recommended for two main reasons. It isolates the lamp from the water to offer more uniform operating temperatures and allows for higher UV output into the water.

A variety of optional features may be added on to the UV sterilizers. They include UV monitoring devices that measure the actual UV output, solenoid shutoff devices that will stop the water flow in the event of a system failure, flow control devices to properly limit the water flow in the units, audible and visual alarms (both local and remote) to warn of lamp failures, high temperature sensors to monitor excessive temperatures in the reactor chamber or control panel, and hour meters to monitor the running time of the UV lamps.

#### Advantages of UV Sterilization

Following are the advantages of UV sterilization:

- Environmentally friendly, no dangerous chemicals to handle or store, no problem of overdosing (it's impossible).
- Low initial capital cost as well as reduced operating expenses when compared with similar technologies such as ozone, chlorine, etc.
- Immediate treatment process, no need for holding tanks, long retention times, etc.
- Extremely economical, hundreds of gallons may be treated for each penny

of operating cost.

- No chemicals added to the water supply no by-products (i.e. chlorine + organics = trihalomethanes).
- No change in taste, odor, pH or conductivity or the general chemistry of the water.
- Automatic operation without special attention or measurement, operator friendly.
- Simplicity and ease of maintenance, periodic cleaning (if applicable) and annual lamp replacement, no moving parts to wear out.
- No handling of toxic chemicals, no need for specialized storage requirements, no WHMIS requirements.
- Easy installation, only two water connections and a power connection.
- Compatible with all other water processes (i.e., RO, filtration, ion exchange, etc.)

#### Factors Affecting UV

Because UV does not leave any measurable residual in the water it is recommended that the UV sterilizer be installed as the final step of treatment and located as close as possible to the final distribution system. Once the quality of your water source has been determined, you will need to look at things that will inhibit the UV from functioning properly (e.g., iron manganese, TDS, turbidity, and suspended solids).

**Iron and Manganese** will cause staining on the quartz sleeve and prevent the UV energy from transmitting into the water at levels as low as 0.03 ppm of iron and 0.05 ppm of manganese. Proper pretreatment is required to eliminate this staining problem.

**Total Dissolved Solids (TDS)** should not exceed approximately 500 ppm. There are many factors that make up this equation such as the particular makeup of the dissolved solids and how fast they absorb the sleeve, again impeding the UV energy from penetrating the water.

**Turbidity** is the inability of light to travel through water. Turbidity makes water cloudy and aesthetically unpleasant. In the case of UV, levels over 1 NTU can shield microorganisms from the UV energy, making the process ineffective.

**Suspended Solids** need to be reduced to a maximum of 5 microns in size. Larger solids have the potential of harboring or encompassing the microorganisms and preventing the necessary UV exposure. Pre-filtration is a must on all UV applications to effectively destroy microorganisms to a 99.9% kill rate.

**Additional Factors** affecting UV is temperature. The optimal operating temperature of a UV lamp must be near 40°C (104°F). UV levels fluctuate with temperature levels. Typically a quartz sleeve is installed to buffer direct lampwater contact thereby reducing any temperature fluctuations.

#### UV Applications

One of the most common uses of ultraviolet sterilization is the disinfection of domestic water supplies due to contaminated wells. Coupled with appropriate pre-treatment equipment, UV provides an economical, efficient and user-friendly means of producing potable water.

The following list shows a few more areas where ultraviolet technology is currently in use:

surface waterlaground watervcisternscbreweriesfhospitalshrestaurantssvendingccosmeticsfbakeriescschoolsfboiler feed watervand much more...

laboratories wineries dairies farms hydroponics spas canneries food products distilleries fish hatcheries water softeners bottled water plants pharmaceuticals mortgage approvals electronics aquaria boats and RV's printing butter processing petro chemicals photography swimming pools

#### Installation and Maintenance Guidelines

Once the application has been determined, you should find a location that offers easy access for service. You will need to have access to the pre-filters, to the UV chamber for annual lamp changes and regular maintenance on the quartz sleeve. You will want to locate near an electrical outlet. \*Note: Using a UV system and a pump on the same electrical line may cause problems with and shorten the life of the UV lamp and ballast. UV units should be installed on the cold water line before any branch lines and should be last point of treatment. All points of the distribution system after the sterilizer must be chemically "shocked" to ensure that the system is free from any downstream microbial contamination. Lamp changes should be done at least once every year. Filter changes are done according to the water soapy solution. If there is residue left, you may need to use a non-abrasive cleaner that does not scratch the surface and is formulated to remove iron and scale buildup. Do not leave fingerprints on the glass! It is imperative to follow the manufacturers guidelines on water quality and operational procedures.

#### Summary

The need for ultraviolet sterilization products can be found in virtually all areas in both residential and commercial applications alike. Its simplistic design, ease of maintenance and low capital and operating costs make UV the number one choice in contaminated water situations. Health professionals and water specialists are becoming aware of possible side effects of chemical sterilizers and their resultant chemical by-products. Because of its advantages, UV irradiation should become a very popular choice for the disinfection of water supplies in the 21<sup>st</sup> century.

Next time, purify water "natures way"...use ultraviolet light.

# UV Inactivation Chart<sup>1</sup> (in mJ/cm<sup>2</sup>)

### Typical Wyckomar UV systems produce UV doses of $38 - 60 \text{ mJ/cm}^2$

Organism	Туре	Affiliated Disease, Contamination, Toxin	Dose log 3
Agrobacterium tumefaciens	Bacterium	Crown Gall disease in Dicotyledons (Grapes, Berries, Fruits, Nuts)	8.5
Aeromonas hydrophila	Bacterium	Tissue damage in humans (opportunistic pathogen)	3.9
Aspergillus flavus (yellow green)	Fungus (Mold Spore)	Aspergillosis of the lungs, corneal infections	99.0
A. glaucus (blue green)	Fungus (Mold Spore)	Allergenic	88.0
<i>A. niger</i> (black)	Fungus (Mold Spore)	Otomycosis, Black mold on fruits and vegetables	330.0
Adenoviridae	Virus	Upper respiratory infections	90.0
Bacillus anthracis	Bacterium	Anthrax	8.7
B. anthracis (spores)	Bacterium	Anthrax	46.2
<i>B. megatherium</i> (vegetable)	Bacterium	Infections, food poisoning	2.5
B. megatherium (spores)	Bacterium	Infections, food poisoning	52.0
B paratyphosus	Bacterium	non pathogenic	6.1
B. subtilis (vegetable)	Bacterium	Ropiness in bread dough, food contamination	11.0
B. subtilis (spores)	Bacterium	Ropiness in bread dough, food contamination	61.0
Campylobacter jejuni	Bacterium	Food poisoning, gastroenteritis	4.0
Chlorella vulgaris	Protist (algae)	Plant pathogen	22.0
Clostridium Tetani	Bacterium	Tetanus	23.1
C. botulinum	Bacterium	Produces Botulin toxin	11.2
Coliphage	Virus	Bacteriophage that infects E. coli	6.6
Corynebacterium diphtheriae	Bacterium	Diphtheria	6.5
Coxsackie A	Virus	Hand, foot & mouth disease, conjunctivitis, herpangina	6.9
Coxsackie B	Virus	Pericarditis, myocarditis, gastrointestinal distress	20.6
Cryptosporidium parvum	Protist	Cryptospiridiosis	10.0
Eberthella typhosa	Bacterium	Typhoid fever	4.1
Escherichia coli	Bacterium	Food poisoning, gastroenteritis, meiningitis	8.6
Giardia lamblia	Protist	Giardiasis	(cyst) 100
Hepatitis virus	Virus	Hepatitis, jaundice	8.0
Influenza virus	Virus	Influenza, respiratory infections	6.6
Legionella bozemanii	Bacterium	Pneumonia	3.5
L. dumoffii	Bacterium	Pneumonia	5.5
L. gormanii	Bacterium	Pneumonia	4.9
L. longbeachae	Bacterium	Legionnaire's disease, pontiac fever	2.9
L. micdadei	Bacterium	Influenza, Pittsburgh pneumonia	3.1
L. pneumophila	Bacterium	Legionnaire's disease	3.8
Leptospira interrogans	Bacterium	Leptospirosis (Weil's disease, canicola fever, canefield fever, 7-day fever)	6.0
Micrococcus candidus	Bacterium		12.3
M. sphaeroides	Bacterium		15.4
Mycobacterium tuberculosis	Bacterium	Tuberculosis	10.0
Mucor racemosus A	Fungus (Mold Spore)	Fungal plant pathogen, zygomycosis and fungal sinusitis in humans	35.2
Neisseria (Moraxella) catarrhalis	Bacterium	Otitis media, sinusitis, laryngitis	8.5
Nematode eggs (Roundworm)	Parasite	Ascariasis, Appendicitis, Loeffler's Syndrome	92.0
Oospora lactis	Fungus (Mold Spore)	Fruit rot (rapid decay of ripe fruits, potatoes), mold in dairy products	02.0
Paramecium spp.	Protist		
Penicillum digitatum (olive)	Fungus (Mold Spore)	Fungal spoilage in fruits and vegetables	88.0
, omonium aigitatum (0∥v€)	· ungus (molu Spore)		00.0

P. roqueforti (green)	Fungus (Mold Spore)	Producing harmful secondary metabolites (alkaloids and other mycotoxins)	26.4
Phytomonas tumefaciens	Bacterium	Crown Gall disease in Dicotyledons (Grapes, Berries, Fruits, Nuts)	8.5
Polio virus	Virus	Poliomyelitis (Polio)	29.0
Proteus vulgaris	Bacterium	Infections (esp. sinus and respiratory, urinary tract)	6.6
Pseudomonas aeruginosa (lab)	Bacterium	Hospital acquired infections, ear infection and dermatitis in pools & tubs	3.9
Pseudomonas aeruginosa (env.)	Bacterium	Hospital acquired infections, ear infection and dermatitis in pools & tubs	10.5
Rhizopus nigricans (black)	Fungus (Mold Spore)	Infections, allergetic reactions (known as breadmold)	220.0
Rhodospirillum rubrum	Bacterium		6.2
Rotavirus	Virus	Infections, severe diahorrea, gastroenteritis	26.0
Saccharomyces sp.	Yeast		13.2
Salmonella enteritidis	Bacterium	Egg-associated Salmonellosis (fever, abdominal cramps, diarrhoea)	7.6
S. paratyphi	Bacterium	Enteric fever	6.1
S. typhi	Bacterium	Typhoid fever	6.4
S. typhimurium	Bacterium		
Sarcina lutea	Bacterium		26.4
Serratia marcescens	Bacterium	Nosocomial (Hospital acquire)d infections	6.2
Shigella dysenteriae	Bacterium	Epidemic dysentery	4.2
S. flexneri	Bacterium	Shigellosis, dysentery	3.4
S. sonnei	Bacterium	Shigellosis	7.0
Staphylococcus aureus	Bacterium	Staph and nosocomical infections, toxic shock syndrome	7.0
S. epidermidis	Bacterium	Infections in catheters and prostheses	5.8
S faecalis	Bacterium		10.0
Streptococcus hemolyticus	Bacterium	Strep throat	5.5
S. faecalis	Bacterium	Endocarditis, bladder and prostate infection	8.0
S. lactis	Bacterium		8.8
S.pyogenes	Bacterium	Scarlet fever, toxic shock syndrome, flesh eating disease	8.8
S. viridans	Bacterium	Mouth or gingivial infections, endocarditis	3.8
Tobacco mosaic virus	Virus	Mottling and discoloration in plants	440.0
Vibrio cholerae	Bacterium	Cholera	2.2
Yersinia enterocolitica	Bacterium	Yersiniosis (fever, abdominal pain, diarrhoea	3.7

<sup>1</sup> UV energy levels required at 254 nanometer wavelength for 99.9% destruction of organisms



# **Residential Water Purification Systems**

1, 4 & 8 GPM Basic Models for POU / POE Available with or without Pre-Filtration (20, 5, 1 Micron Sediment, 5 or 0.5 Micron Carbon Block) UV Disinfection For Bacteria / Virus Destruction





# WYCKOMAR 1 GPM POU System

#### **Rated Flow:**

Initial UV Dose at Rated Flow: Electrical:

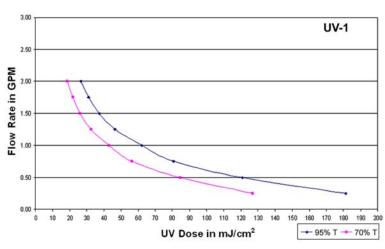
Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration: 4 litres per minute (1 GPM) 240 litres/hour, 5760 litres/day (60 gallons/hour, 1440 gallons/ day) 63 mJ/cm<sup>2</sup> (63,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 12 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 3/8" MNPT In/Out 304L Stainless Steel 5 Micron Sediment Filter 0.5 Micron Carbon Block Filter Mounting Bracket, Wrench, Faucet

Accessories:

This All-in-One Water Treatment System is sized for the needs of the average household to provide purified drinking water at the point of use. Typically installed under the sink, it is used for treating municipal water. It will purify the water from most contaminants such as sediments, rust and pesticides with filtration in 2 stages down to 0.5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### **Dose Chart**



### Alarm System

The UV-1 System comes equipped with an alarm system which sounds an audible alarm if the UV lamp is not functioning properly.

This residential water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# WYCKOMAR UV-250 System

#### **Rated Flow:**

Initial UV Dose at Rated Flow: Electrical:

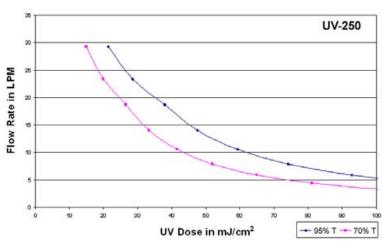
Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration: 15 litres per minute (4 GPM) 900 litres/hour, 21600 litres/day (240 gallons/hour, 5760 gallons/ day) 46 mJ/cm<sup>2</sup> (46,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 23.4 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 3/4" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron Sediment Filter 5 Micron Carbon Block Filter Mounting Bracket, Wrench, S-Pipe

Accessories:

This All-in-One Water Treatment System is sized for the needs of the average household to provide purified water for domestic use. Typically installed at the point of entry, it is used for treating municipal water. It will purify the water from most contaminants such as sediments, rust and pesticides with filtration down to 5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### **Dose Chart**



### Alarm System

The UV-250 System comes equipped with an alarm system which sounds an audible alarm if the UV lamp is not functioning properly.

This residential water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# WYCKOMAR UV-700 System

#### **Rated Flow:**

Initial UV Dose at Rated Flow: Electrical:

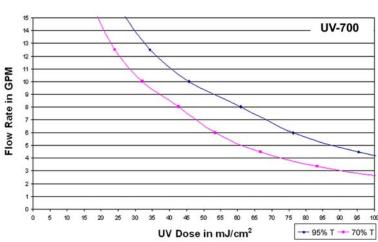
Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration: 30 litres per minute (8 GPM) 1800 litres/hour, 43200 litres/day (480 gallons/hour, 11520 gallons/ day) 62 mJ/cm<sup>2</sup> (62,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 40.8 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 3/4" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron Sediment Filter 5 Micron Carbon Block Filter Mounting Bracket, Wrench, S-Pipe

Accessories:

This All-in-One Water Treatment System is sized for the needs of the average to larger household to provide purified water for domestic use. Typically installed at the point of entry, it is used for treating municipal water. It will purify the water from most contaminants such as sediments, rust and pesticides with filtration down to 5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### Dose Chart



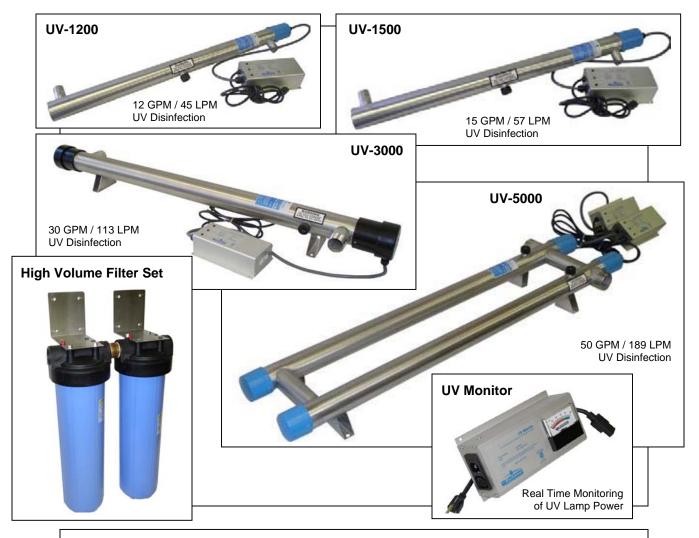
### Alarm System

The UV-700 System comes equipped with an alarm system which sounds an audible alarm if the UV lamp is not functioning properly.

This residential water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# **Residential/Commercial** Water Purification Systems

12, 15, 30 & 50 GPM Basic Models for POE Available with or without Pre-Filtration UV Disinfection For Bacteria / Virus Destruction





# WYCKOMAR UV-1200 System

Rated Flow:

Initial UV Dose at Rated Flow: Electrical:

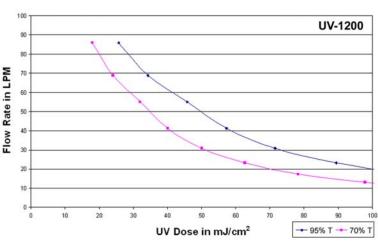
Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration:

Accessories: Additional Features (Optional): 45 litres per minute (12 GPM) 2700 litres/hour. 64800 litres/day (720 gallons/hour, 17280 gallons/ day) 54 mJ/cm<sup>2</sup> (54,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 84 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 1" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron Sediment Filter 5 Micron Carbon Block Filter Mounting Bracket, Wrench, S-Pipe Electronic Deposit Control, UV-Monitor, Solenoid Valve

This All-in-One Water Treatment System is sized for the needs of larger households and small to medium commercial applications to provide purified process or drinking water. Typically installed at the point of entry, it is used for treating municipal water. It will purify the water from most contaminants such as sediments, rust and pesticides with filtration down to 5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses. bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others)



#### **Dose Chart**



#### Alarm System

The UV-1200 System comes equipped with an alarm system which sounds an audible alarm if the UV lamp is not functioning properly.

This residential/commercial water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# WYCKOMAR UV-1500 System

Rated Flow:

Initial UV Dose at Rated Flow: Electrical:

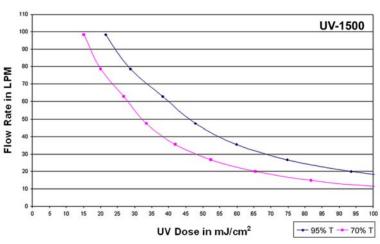
Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration:

Accessories: Additional Features (Optional): 57 litres per minute (15 GPM) 3420 litres/hour, 82,080 litres/dav (900 gallons/hour, 21,600 gallons/ day) 42 mJ/cm<sup>2</sup> (42,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 110 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 1" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron Sediment Filter 5 Micron Carbon Block Filter Mounting Bracket, Wrench, S-Pipe Electronic Deposit Control, UV-Monitor, Solenoid Valve

This All-in-One Water Treatment System is sized for the needs of larger households and small to medium commercial applications to provide purified process or drinking water. Typically installed at the point of entry, it is used for treating municipal water. It will purify the water from most contaminants such as sediments, rust and pesticides with filtration down to 5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses. bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others)



#### **Dose Chart**



#### Alarm System

The UV-1500 System comes equipped with an alarm system which sounds an audible alarm if the UV lamp is not functioning properly.

This residential/commercial water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# WYCKOMAR UV-3000 System

Rated Flow:

Initial UV Dose at Rated Flow: Electrical:

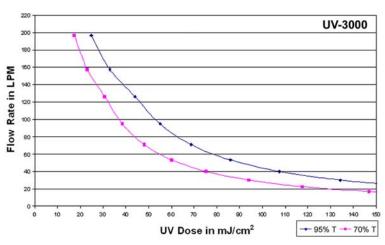
Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration:

Accessories: Additional Features (Optional): 113 litres per minute (30 GPM) 6780 litres/hour, 162,720 litres/day (1.800 gallons/hour, 43,200 gallons/ day) 49 mJ/cm<sup>2</sup> (49,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 100 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 1.5" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron BigBlue Sediment Filter 5 Micron BigBlue Pleated Carbon Filter Mounting Bracket, Wrench, S-Pipe Electronic Deposit Control, UV-Monitor, Solenoid Valve

This All-in-One Water Treatment System is sized for the needs of larger households and small to medium commercial applications to provide purified process or drinking water. Typically installed at the point of entry, it is used for treating municipal water. It will purify the water from most contaminants such as sediments, rust and pesticides with filtration down to 5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses. bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others)



#### **Dose Chart**



### Alarm System

The UV-3000 System comes equipped with an alarm system which sounds an audible alarm if the UV lamp is not functioning properly.

This residential/commercial water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# WYCKOMAR UV-5000 System

#### **Rated Flow:**

Initial UV Dose at Rated Flow: Electrical:

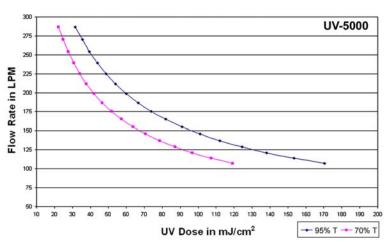
Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Additional Features (Optional): 189 litres per minute (50 GPM) 11,340 litres/hour, 272,160 litres/day (3,000 gallons/hour, 72,000 gallons/ day)

61 mJ/cm<sup>2</sup> (61,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 2 x 110 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 2" MNPT In/Out 304L Stainless Steel (316L available) Electronic Deposit Control, UV-Monitor, Solenoid Valve

This All-in-One Water Treatment System is sized for the needs of larger households and medium to larger commercial applications to provide purified process or drinking water. Typically installed at the point of entry, it is used for treating municipal water. It will purify the water from most contaminants such as sediments, rust and pesticides with filtration down to 5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses. bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others)



#### Dose Chart



### Alarm System

The UV-5000 System comes equipped with an alarm system which sounds an audible alarm if the UV lamp is not functioning properly.

This residential/commercial water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





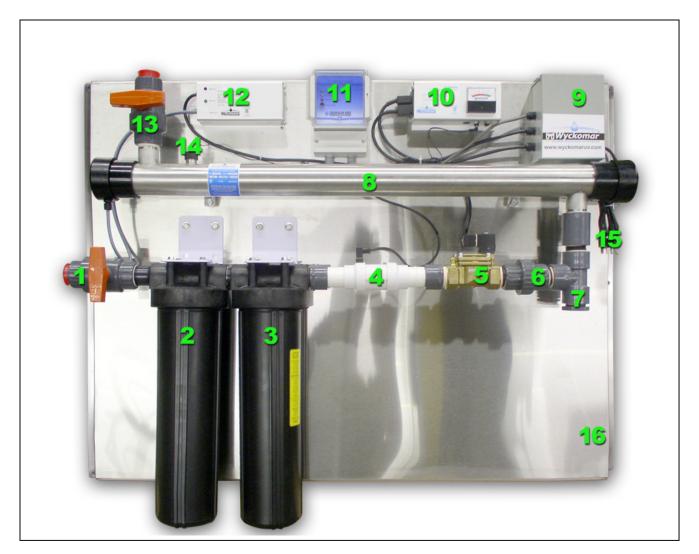
# Integrated Water Purification Systems 1 GPM to 30 GPM

All-in-One Treatment with Multiple Filtration Levels UV Disinfection For Bacteria / Virus Destruction Optional Monitor, Solenoid Valve, Electronic Fluid Conditioning Pre-Assembled Systems, Easy to Install



# Integrated Water Purification Systems Pre-Assembled Units for Plug-and-Play

The Wyckomar Integrated Water Treatment Systems are ideal for residential, commercial and industrial applications where an all-in-one solution to a complex treatment problem is needed. Preassembly and pressure testing at the factory ensure that the systems are optimized for the treatment of the particular feed water and will work right out of the box. These systems can be customized to remove almost any contamination that is in the water, from heavy metals (iron, manganese, arsenic among others) to VOC's, pesticides and, of course, all types of microorganisms. The rugged design of the systems will ensure many years of faithful service.



The picture shows some of the standard and optional features that can be installed with an integrated system: **Standard components:** 2 – Sediment Filter, usually down to 5 Micron. 3 – Carbon Block Filter for taste and odour. 8 – UV Sterilizer. 12 – Electronic Ballast. 14 – Viewport. 15 – Power Cord. 16 – Panel (SS) **Optional components:** 1 and 13 – Shutoff Valves (PVC or Stainless Steel). 4 – Electronic Deposit Control, Reaction Chamber. 5 – Solenoid Valve. 6 – Union. 7 – Drain. 9 – Surge Protector Power Pack. 10 – UV Monitor. 11 – Electronic Deposit Control, Control Panel.



# WYCKOMAR POU600 System

**Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

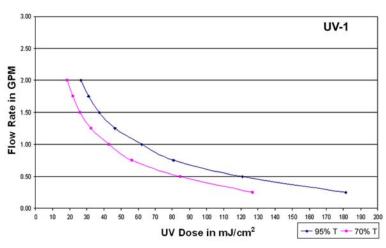
Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration (BigBlue 10" Housings): 4 litres per minute (1 GPM) Service flow can be up to 8 LPM / 2 GPM 63 mJ/cm<sup>2</sup> (63,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 12 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 1/2" MNPT In/Out 304L Stainless Steel Sediment Filter Granular Activated Carbon (GAC) Filter Carbon Block Filter Electronic Deposit Control, Flow Meter, Manual Isolation Valves

Accessories:

This All-in-One Water Treatment System is designed for the needs of laboratories, dental offices and other high-quality, low-flow requirement applications to provide purified drinking and process water at the point of use. It is used for treating municipal water. It will purify the water from most contaminants such as sediments, rust and pesticides with sediment filtration (available down to 0.35 micron). Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### Dose Chart



### Alarm System

The POU600 System comes equipped with an alarm system which sounds an audible alarm if the UV lamp is not functioning properly. The deposit control system prevents scale build-up and greatly enhances the functionality of the system.

This water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# WYCKOMAR POU250 System

Rated Flow: Initial UV Dose at Rated Flow: Electrical:

Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration (10" Housings):

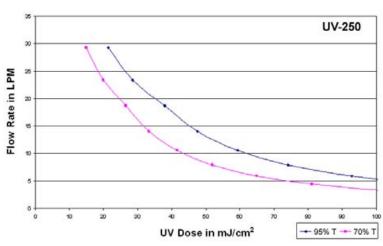
**Additional Features (Optional):** 

15 litres per minute (4 GPM) 46 mJ/cm<sup>2</sup> (46,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 23.4 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 3/4" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron Sediment Filter 5 Micron Carbon Block Filter UV Monitor, Solenoid Valve Electronic Deposit Control, Spin-Down Separator, Manual Valves

This All-in-One Water Treatment System is designed for the needs of households up to 3 people, cottages, laboratories and other lowflow requirement applications to provide purified drinking water at the point of use. It is used for treating municipal water. It will purify the water from most contaminants such as sediments, rust and pesticides with sediment filtration. Carbon filtration reduces taste and odor. including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### **Dose Chart**



#### **Alarm System**

The POU250 System comes equipped with an alarm system which sounds an audible alarm if the UV lamp is not functioning properly. An optional deposit control system prevents scale build-up and greatly enhances the functionality of the system.

This water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change



# WYCKOMAR MD1003 Integrated System

**Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

Size and Weight: Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration:

Additional Features (Optional):

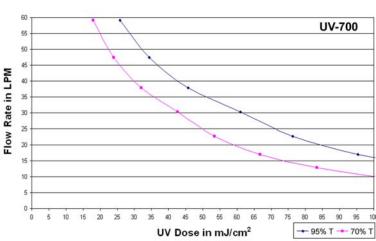
30 litres per minute (8 GPM) 1800 litres/hour, 43200 litres/day (480 gallons/hour, 11520 gallons/ day) 62 mJ/cm<sup>2</sup> (62,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 38 x 45 x 7.5 in., 95 lbs / 43 kg 40.8 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 3/4" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron Sediment Filter GAC Filter, 5 Micron Carbon Block Filter UV Monitor, Solenoid Valve, Electronic

Deposit Control, Spin-Down Separator

This All-in-One Water Treatment System is sized for the needs of the average to larger household to provide purified water for domestic use. Mounted on a stainless steel panel, it is easily installed at the point of entry for treatment of municipal water ("Plug-and-Play"). It will purify the water from most contaminants such as sediments, rust and pesticides with filtration down to 5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### **Dose Chart**



#### Fail-Safe Operation

The MD1003 System can be equipped with a UV Monitor to monitor the UV light intensity in real time. An optional solenoid valve shuts off the flow of water should the monitor detect inadequate UV power.

This residential water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change







# WYCKOMAR MD1004 Integrated System

**Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

Size and Weight: Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration:

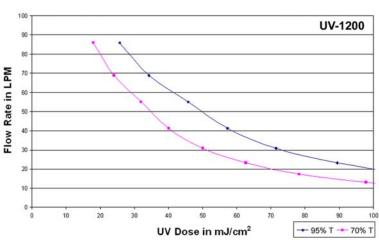
Additional Features (Optional):

45 litres per minute (12 GPM) 2700 litres/hour. 64800 litres/dav (720 gallons/hour, 17280 gallons/ day) 54 mJ/cm<sup>2</sup> (54,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 38 x 45 x 7.5 in., 95 lbs / 43 kg 100 W 37°C (98.6°F) 125 psi - 8.6 bar (tested to 500 psi) 1" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron Sediment Filter GAC Filter, 5 Micron Carbon Block Filter UV-Monitor, Solenoid Valve **Electronic Deposit Control** 

This All-in-One Water Treatment System is sized for the needs of the larger household or small to medium sized commercial application to provide purified drinking and process water. Mounted on a stainless steel panel, it is easily installed at the point of entry for treatment of municipal water ("Plugand-Play"). It will purify the water from most contaminants such as sediments, rust and pesticides with filtration down 5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### **Dose Chart**



### Fail-Safe Operation

The MD1004 System can be equipped with a UV Monitor to monitor the UV light intensity in real time. An optional solenoid valve shuts off the flow of water should the monitor detect inadequate UV power.

This residential water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# WYCKOMAR MD1005 Integrated System

**Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

Size and Weight: Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration:

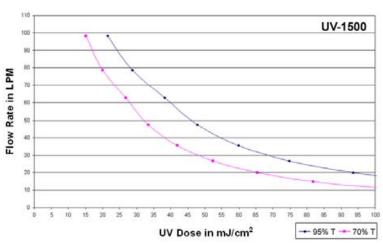
Additional Features (Optional):

57 litres per minute (15 GPM) 3420 litres/hour. 82.080 litres/day (900 gallons/hour, 21,600 gallons/ day) 42 mJ/cm<sup>2</sup> (42,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 40 x 48 x 7.5 in., 110 lbs / 50 kg 110 W 37°C (98.6°F) 125 psi - 8.6 bar (tested to 500 psi) 1" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron Sediment Filter GAC Filter . 5 Micron Carbon Block Filter UV-Monitor, Solenoid Valve, Electronic Deposit Control, Spin-Down Separator

This All-in-One Water Treatment System is sized for the needs of the larger household or small to medium sized commercial application to provide purified drinking and process water. Mounted on a stainless steel panel, it is easily installed at the point of entry for treatment of municipal water ("Plugand-Play"). It will purify the water from most contaminants such as sediments, rust and pesticides with filtration down 5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### Dose Chart

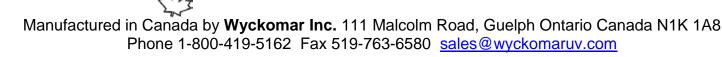


#### **Fail-Safe Operation**

The MD1004 System can be equipped with a UV Monitor to monitor the UV light intensity in real time. An optional solenoid valve shuts off the flow of water should the monitor detect inadequate UV power. A spin-down separator flushes out loose sediments and greatly increases the life-span of the filters

This residential water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# WYCKOMAR MD1006 Integrated System

**Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

Size and Weight: Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration:

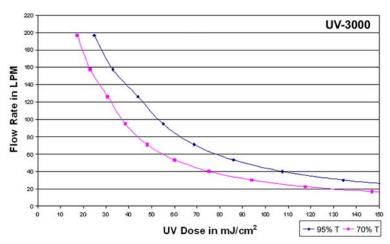
**Optional Features (Optional):** 

113 litres per minute (30 GPM) 6780 litres/hour. 162.720 litres/day (1,800 gallons/hour, 43,200 gallons/ day) 49 mJ/cm<sup>2</sup> (49,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 48 x 52 x 7.5 in., 122 lbs / 55.5 kg 120 W 37°C (98.6°F) 125 psi - 8.6 bar (tested to 500 psi) 1.5" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron Sediment Filter (BigBlue) GAC (BigBlue) UV-Monitor, Solenoid Valve, **Electronic Deposit Control** 

This All-in-One Water Treatment System is sized for large residential or small to medium sized commercial applications with a need for increased flow rates to provide purified drinking and process water. Mounted on a stainless steel panel, it is easily installed at the point of entry ("Plug-and-Play"). It will purify the water from most contaminants such as sediments, rust and pesticides with filtration down to 5 micron. Carbon filtration reduces taste and odor, including sulphur smell and chlorine residuals. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### **Dose Chart**



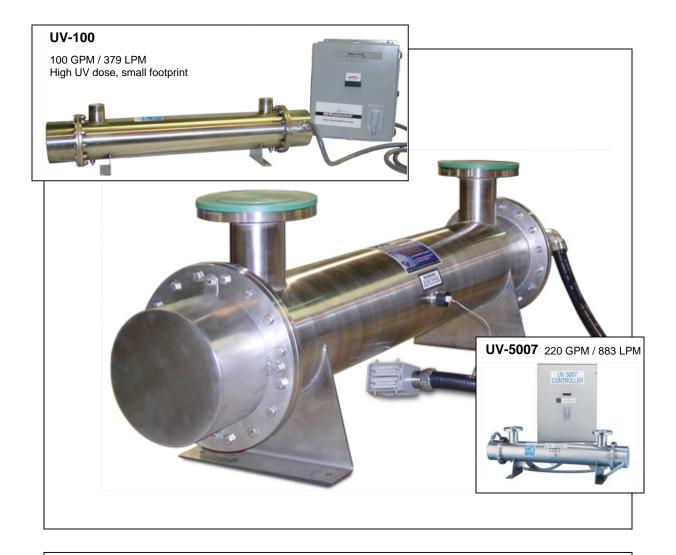
#### Fail-Safe Operation

The MD1006 System can be equipped with a UV Monitor to monitor the UV light intensity in real time. A solenoid valve shuts off the flow of water should the monitor detect inadequate UV power. Optionally, it can be equipped with a deposit control.

This residential water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# Industrial Water Purification Systems 100 & 220 GPM

Powerful UV Disinfection for High Volume Applications Optional Monitor, Solenoid Valve, Electronic Fluid Conditioning UV Disinfection For Bacteria / Virus Destruction





# WYCKOMAR UV-100 System

#### **Rated Flow:**

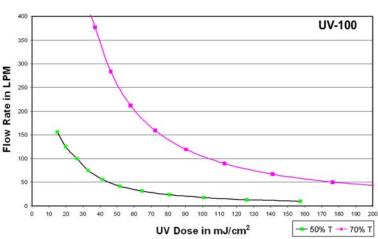
Initial UV Dose at Rated Flow: Electrical:

Number of Lamps: Size and Weight: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Control Panel: Additional Features (Optional): 379 litres per minute (100 GPM) 22,740 litres/hour, 545,760 litres/day (6,000 gallons/hour, 144,000 gallons/d.) 37 mJ/cm<sup>2</sup> (37,000 uwsec/cm<sup>2</sup>) @ 70% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 6 (at 84 Watts each) 46 x 8 x 10.5 in., 90 lbs / 41 kg 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 2" MNPT In/Out 316L Stainless Steel Integrated UV-Monitor Solenoid Valve, Electronic Deposit Control

The UV-100 System is a robust. efficient and cost-effective sterilizer unit for the disinfection of drinking and/or process water in industrial or institutional applications (e.g. food and beverage processing, agriculture, laboratories etc.) at up to 100 GPM (379 LPM). This unit may be configures with a variety of pre-filter configurations and/or electronic de-scaling. Due to it's small footprint and high volume capacity, it is extremely flexible across a wide range of applications. The UV-100 kills most harmful pathogens such as viruses, bacteria and protozoa with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others)



#### Dose Chart



#### Fail-Safe Operation

The UV-100 System is equipped with a control panel that has an integrated UV Monitor to monitor the UV light intensity in real time. A solenoid valve can be driven by the monitor to shut off the flow of water should an inadequate UV power be detected.

This industrial water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# WYCKOMAR UV-5007 System

#### **Rated Flow:**

Initial UV Dose at Rated Flow: Electrical:

Number of Lamps: Size and Weight: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Control Panel: Additional Features (Optional): 833 litres per minute (220 GPM) 49980 litres/hour, 1,200,000 litres/day (13,200 gallons/hour, 316,800 gallons/d.) 40 mJ/cm<sup>2</sup> (40,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 7 (at 110 Watts each) 56 x 20 x 12.5 in., 130 lbs / 59 kg  $37^{\circ}$ C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 3" Flange In/Out 316L Stainless Steel Integrated UV-Monitor Solenoid Valve, Electronic Deposit Control

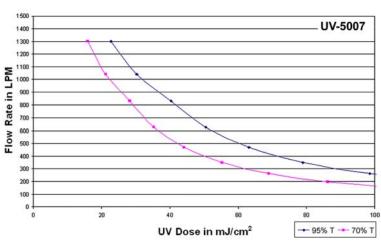
The UV-5007 System is a robust, efficient and cost-effective sterilizer unit for the disinfection of drinking and/or process water in industrial applications (e.g. food and beverage processing, cooling towers, swqimming pools etc.) at up to 220 GPM (833 LPM).

This unit may be connected in series or in parallel for high-dose or high-volume applications, and complete systems including highvolume pre-filtration can easily be realized.

The UV-5007 kills most harmful pathogens such as viruses, bacteria and protozoa with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (*Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus* and many others)



#### **Dose Chart**



#### Fail-Safe Operation

The UV-5007 System is equipped with a control panel that has an integrated UV Monitor to monitor the UV light intensity in real time. A solenoid valve can be driven by the monitor to shut off the flow of water should an inadequate UV power be detected.

This industrial water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# **Wastewater Purification Systems**

Powerful UV Disinfection for Effluent Wastewater Small Footprint – High UV Dose Equipped with Air-Drive Wiper System Ideal for Use on Board of Ships



# Effluent Wastewater Applications UV Disinfection – the Chemical Free Choice

The Quattra Wastewater Treatment Systems from Wyckomar are designed to provide the maximum UV disinfection based on flow rates and effluent quality.

The Quattra series offers reliability and a compact footprint so these units may be used in a wide variety of applications where space is at a premium, especially on board of ships.

The heart of the Quattra series of UV systems is the four lamp array of high intensity UV lamps to apply the required UV dose for significant bacterial load reduction.

The Quattra UV's incorporated and adjustable integrated wiper systems help provide optimum UV penetration by maintaining a clean quartz sleeve inside the UV reactor.

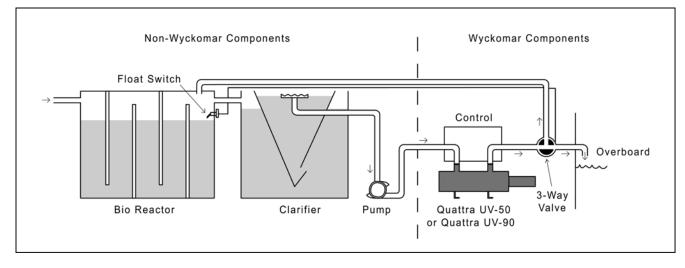
These systems can be installed as a single unit or as part of a modular array for higher flow rates. It is recommended that the Quattra series UV systems be installed as part of a recirculating waste water treatment system in order to achieve the maximum bacterial load reduction possible for the specific source effluent.



Small Footprint



Available in 2 models



Typical Schematic of On-Board Sewage System



# WYCKOMAR Quattra 50 UV System

**Clear Water Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

Number of Lamps: Size and Weight: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Control Panel: Additional Features (Optional): 189 litres per minute (50 GPM) 11,340 litres/hour, 272,160 litres/day (3,000 gallons/hour, 72,000 gallons/day) 40 mJ/cm<sup>2</sup> (40,000 uwsec/cm<sup>2</sup>) @ 95% T 110-130V / 50-60 Hz 220-240V/ 50-60 Hz 4 (at 44 Watts each) 32 x 8 x 11 in., 150 lbs / 68 kg 40°C ( $104^{\circ}F$ ) 125 psi – 8.6 bar (tested to 500 psi) 1 1/4" MNPT In/Out 304L Stainless Steel (316L available) Integrated UV-Monitor Solenoid Valve, Electronic Deposit Control

The Quattra 50 UV System is a small footprint, high dose disinfection sterilizer unit for the treatment of effluent wastewater. It is equipped with a pneumatic air-drive wiper system (on-site air required) for low-maintenance operation and is very well suited for use aboard ship and in other applications where space is at a premium.

The Quattra 50 UV is designed to significantly reduce bacterial load in effluent wastewater and is an integral part of a full wastewater treatment program





### Fail-Safe Operation

The Quattra 50 UV System is equipped with a control panel that has an integrated UV Monitor to monitor the UV light intensity in real time. A solenoid valve can be driven by the monitor to shut off the flow of water if an inadequate UV power is detected.

This industrial water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





# WYCKOMAR Quattra 90 UV System

**Clear Water Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

Number of Lamps: Size and Weight: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Control Panel: Additional Features (Optional): 350 litres per minute (93 GPM) 21.000 litres/hour, 504,000 litres/day (5580 gallons/hour, 133,000 gallons/day) 40 mJ/cm<sup>2</sup> (40,000 uwsec/cm<sup>2</sup>) @ 95% T 110-130V / 50-60 Hz 220-240V/ 50-60 Hz 4 (at 86 Watts each) 50 x 8 x 11 in., 286 lbs / 130 kg 40°C ( $104^{\circ}F$ ) 125 psi – 8.6 bar (tested to 500 psi) 1 1/2" MNPT In/Out 304L Stainless Steel (316L available) Integrated UV-Monitor Solenoid Valve, Electronic Deposit Control

The Quattra 90 UV System is a small footprint, high dose disinfection sterilizer unit for the treatment of effluent wastewater. It is equipped with a pneumatic airdrive wiper system (on-site air required) for low-maintenance operation and is very well suited for use aboard ship and in other applications where space is at a premium.

The Quattra 50 UV is designed to significantly reduce bacterial load in effluent wastewater and is an integral part of a full wastewater treatment program





### **Fail-Safe Operation**

The Quattra 90 UV System is equipped with a control panel that has an integrated UV Monitor to monitor the UV light intensity in real time. A solenoid valve can be driven by the monitor to shut off the flow of water if an inadequate UV power is detected.

This industrial water purification system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

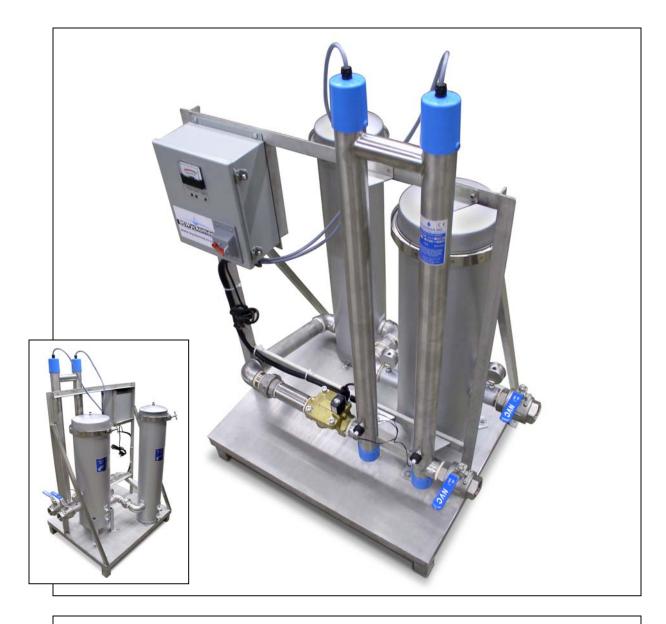
Specifications may be subject to change



# Ultra Violet Disinfection in Customized Commercial and Industrial Water Treatment Systems

The following pages feature some of the standard and customized systems available for a wide array of applications all over the world. These examples of commercial water treatment systems show how different applications are treated, and how variations in the source water make different system designs necessary. No two applications are the same, many parameters have to be taken into consideration with today's water treatment challenges. Systems are planned and designed to meet your application requirements. The production is done in a timely manner and subject to our quality assurance procedures.





# 50 GPM Skid Mounted Water Purification System

Dual Filtration for Sediment and Taste/Odour Fail-Safe Operation with UV Monitor & Solenoid Valve





# WYCKOMAR 50 GPM Skid Mount

#### **Rated Flow:**

Initial UV Dose at Rated Flow: Electrical:

Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration (in SS Housings):

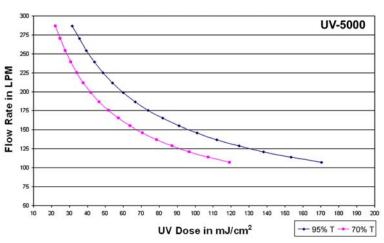
**Additional Features (Optional):** 

189 litres per minute (50 GPM)
11340 litres/hour, 272,160 litres/day
(3000 gallons/hour, 72000 gallons/ day)
61 mJ/cm<sup>2</sup> (61,000 uwsec/cm<sup>2</sup>) @ 95% T
100-130V / 50-60 Hz
220-240V/ 50-60 Hz
220 W
37°C (98.6°F)
125 psi – 8.6 bar (tested to 500 psi)
2" MNPT In/Out
304L Stainless Steel (316L available)
5 Micron Sediment Filter
5 Micron Carbon Filter
UV-Monitor, Solenoid Valve

This All-in-One Water Treatment System, installed at the point of entry, is ideal for multi-residential, commercial and industrial operations, such as campgrounds, large farms or bottling plants, where the drinking water is supplied from a well. It will purify the water of most contaminants found in groundwater, especially sediments, low to normal levels of iron and manganese and pesticides as well as taste and odor. including sulphur smell. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### **Dose Chart**



#### Fail-Safe Operation with UV-Monitor

The monitor is a safety device that monitors the UV systems' effectiveness in real time and displays the UV intensity on the meter face. The monitor will sound an alarm and trigger a solenoid volume to shut off the water flow in case the UV lamp burns out or the dose is inadequate for proper disinfection.

This skid mounted system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change



# Skid Mounted Water Treatment System for General Applications – 50 GPM

Multiple Levels Of Filtration Including Sediment / Taste & Odour / VOC's UV Disinfection and Fail-Safe Operation With Solenoid Valve and Built In Alarm System. Electronic De-Scaling System Optional Simple To Install and Operate Anywhere





# WYCKOMAR 50 GPM Skid Mount II

#### **Rated Flow:**

Initial UV Dose at Rated Flow: Electrical:

Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration (in SS Housings):

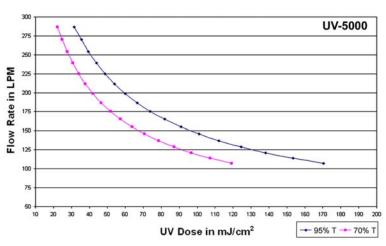
Additional Features (Optional):

189 litres per minute (50 GPM) 11340 litres/hour, 272,160 litres/day (3000 gallons/hour, 72000 gallons/ day) 61 mJ/cm<sup>2</sup> (61,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 220 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 2" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron and 1 Micron Sediment Filter 5 Micron Carbon Block Filter UV-Monitor with Solenoid Valve Electronic De-Scaling System

This All-in-One Water Treatment System, installed at the point of entry, is ideal for general multiresidential, commercial and industrial applications, such as campgrounds, large farms or bottling plants, where the drinking water is drawn from a well. It will purify the water of most contaminants found in groundwater, especially sediments, low to normal levels of iron and manganese and pesticides as well as taste and odor, including sulphur smell. Harmful microorganisms such as viruses. bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### **Dose Chart**



#### Fail-Safe Operation with UV-Monitor

The (optional) monitor is a safety device that monitors the UV systems' effectiveness in real time and displays the UV intensity on the meter face. The monitor will sound an alarm and trigger a solenoid valve to shut off the water flow in case the UV lamp burns out or the dose is inadequate for proper disinfection.

This skid mounted system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change



# 100 GPM Rack Mounted Water Purification System

Economical Chemical Free UV Disinfection at High Volume





# WYCKOMAR SYS5100F Rack Mount

#### **Rated Flow:**

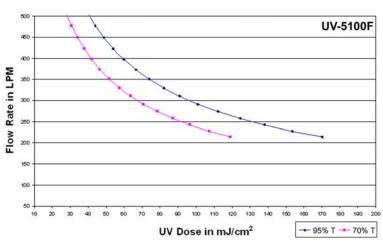
Initial UV Dose at Rated Flow: Electrical:

Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Additional Features (Optional): 378 litres per minute  $(100 \text{ GPM})^{\square}$ 22710 litres/hour, 545,040 litres/day (6000 gallons/hour, 144000 gallons/ day) 61 mJ/cm<sup>2</sup> (61,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz Includes Surge Protector Power Pack 440 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 3" MNPT In/Out (Flanges Optional) 304L Stainless Steel (316L available) Sanitary Fittings UV-Monitor, Solenoid Valve

This All-in-One Water Treatment System, installed at the point of entry, is ideal for industrial and agricultural operations, such as dairy farms or bottling plants, where high flow rates are needed. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% or better (*Giardia*, *E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella*, *Shigella, Streptococcus* and many others).



#### **Dose Chart**

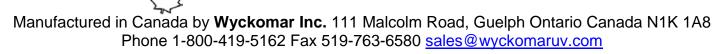


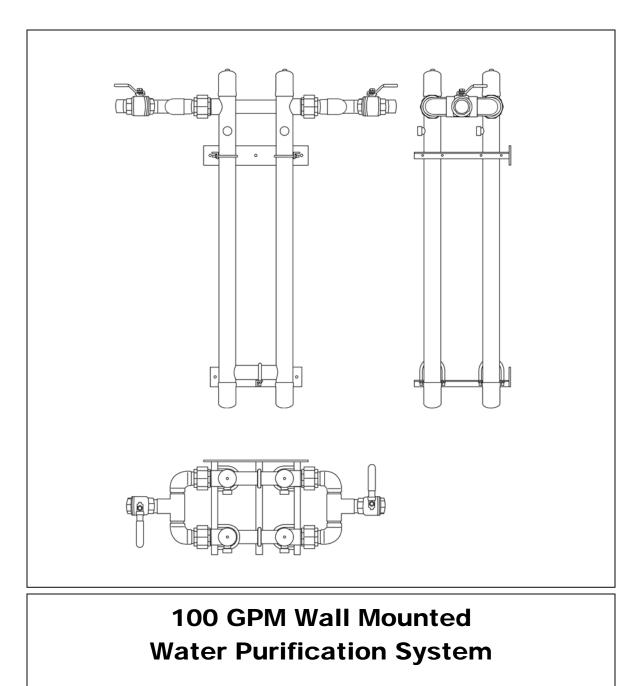
#### **Various Pre-Filtration Options**

This powerful, high-volume sterilizer can be combined with different pre-filtration solutions, such as multi-cartridge filtration in stainless steel filter housings, or high-volume filtration in Polypropylene Jumbo housing.

This rack mounted system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change





Economical Chemical Free UV Disinfection at High Volume



# WYCKOMAR SYS5100W Wall Mount

#### **Rated Flow:**

Initial UV Dose at Rated Flow: Electrical:

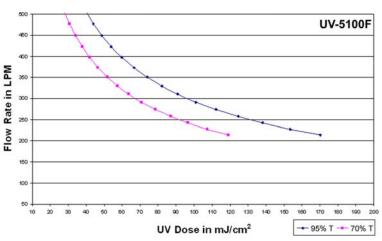
Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing:

Chamber Material: Additional Features (Optional): 378 litres per minute (100 GPM) 22710 litres/hour, 545,040 litres/day (6000 gallons/hour, 144000 gallons/ day) 61 mJ/cm<sup>2</sup> (61,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 440 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 2" NPT In/Out (Flanges Optional) Stainless Steel Shutoff Valves 304L Stainless Steel (316L available) Sanitary Fittings UV-Monitor, Solenoid Valve

This All-in-One Water Treatment System, installed at the point of entry, is ideal for industrial and agricultural operations, such as dairy farms or bottling plants, where high flow rates are needed. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% or better (*Giardia*, *E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella*, *Shigella, Streptococcus* and many others).



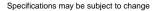
#### **Dose Chart**



#### **Various Pre-Filtration Options**

This powerful, high-volume sterilizer can be combined with different pre-filtration solutions, such as multi-cartridge filtration in stainless steel filter housings, or high-volume filtration in Polypropylene Jumbo housing.

This wall mounted system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.





# 100 GPM Skid Mounted Water Purification System

Manual Valves and Dual Filtration Configuration Fail-Safe Operation with UV Monitor and Solenoid Valve





# WYCKOMAR 100 GPM Skid Mount

#### **Rated Flow:**

Initial UV Dose at Rated Flow: Electrical:

Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration (in SS Housings):

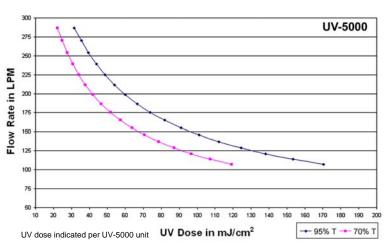
Additional Features (Optional):

378 litres per minute  $(100 \text{ GPM})^{\lfloor}$ 22,680 litres/hour, 544,320 litres/day (6000 gallons/hour, 144,000 g/ day) 46 mJ/cm<sup>2</sup> (46,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 460 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 2" MNPT In/Out 304L Stainless Steel (316L available) 5 Micron Sediment Filter 5 Micron Carbon Filter UV-Monitor, Solenoid Valve

This All-in-One Water Treatment System, installed at the point of entry, is ideal for commercial and industrial operations where the drinking water is supplied by a well. The system consists of 2 units that are manifolded, for a high flow rate. It will purify the water of most contaminants found in groundwater, especially sediments, low to normal levels of iron and manganese and pesticides as well as taste and odor. including sulphur smell. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### Dose Chart



#### Fail-Safe Operation with UV-Monitor

The monitor is a safety device that monitors the UV systems' effectiveness in real time and displays the UV intensity on the meter face. The monitor will sound an alarm in case the UV lamp burns out or the dose is inadequate for proper disinfection. Additionally, it provides manual shut off valves.

This skid mounted system offers very efficient water treatment at a low cost per unit volume. It has a small footprint, is designed for ease of installation and fully tested prior to shipment.

Specifications may be subject to change



## **High-Volume Water Treatment System**

Multiple Levels of Sediment Filtration to 1 Micron UV Disinfection Easy Change Filter Cartridges Compact Foot Print – Various Flow Rates Available Shown 250 GPM (~ 1000 LPM) Model SM5007-BBB250





# WYCKOMAR High Volume Skid Mount

**Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

Approx. Power Usage:800 WMaximum Operating Temp: $37^{\circ}C (98.6^{\circ}F)$ Maximum Operating Pressure:125 psi – 8.6 bar (tested to 500Plumbing:3" Flange In/OutChamber Material:304L Stainless SteelFiltration (in BigBubba Housings):20 and 1 Micron Sediment Filter

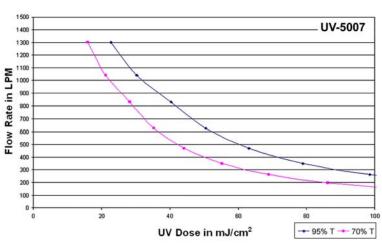
946 litres per minute (250 GPM) 56,760 litres/hour, 1,36 mio litres/day (15,000 gallons/hour, 360,000 g/ day) 35mJ/cm<sup>2</sup> (35,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 800 W  $37^{\circ}$ C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 3" Flange In/Out 304L Stainless Steel 20 and 1 Micron Sediment Filter Custom Filter Configurations Available UV-Monitor

Additional Features (Optional):

This All-in-One Water Treatment System, installed at the point of entry, is ideal for commercial and industrial operations where a high volume output is required, e.g. for process water disinfection. The system is based on a UV-5007 sterilizer and offers multiple leves of sediment filtration down to 1 micron, using high volume, non-metallic filter housings that make the change of cartridges very easy. It will purify the water of most contaminants found in water from municipal sources. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others). The design of the system allows

The design of the system allows manifolding of multiple units and individual filter configuration for many different applications up to flow rate requirements of 1000 LPM.

#### Dose Chart

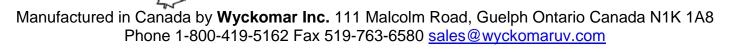


#### Fail-Safe Operation with UV-Monitor

The monitor is a safety device that monitors the UV systems' effectiveness in real time and displays the UV intensity on the meter face. The monitor will sound an alarm in case the UV lamp burns out or the dose is inadequate for proper disinfection. Additionally, it provides manual shut off valves.

This skid mounted system offers very efficient water treatment at a low cost per unit volume. It has a small footprint, is designed for ease of installation and fully tested prior to shipment.

Specifications may be subject to change





# Transportable 250 GPM (~1000 LPM) Water Treatment System

Multiple Filtration Levels to 1 Micron UV Disinfection Chlorine Residual For Downstream Protection Turbidity – ORP – Real Time UV Monitoring Built In Pressure Gauges – Test Ports – Alarm Functions Built In





# WYCKOMAR 250 GPM Skid Mount

**Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration (in SS Housings):

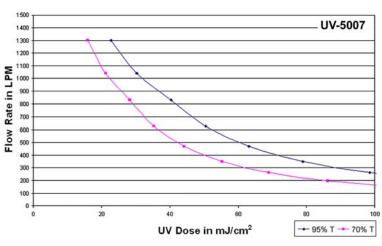
**Additional Features (Optional):** 

946 litres per minute (250 GPM) 56,760 litres/hour, 1,36 mio litres/day (15,000 gallons/hour, 360,000 g/ day) 35mJ/cm<sup>2</sup> (35,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 700 W 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 3" Flange In/Out 304L Stainless Steel 50, 20, 1A Micron Sediment Filter **Custom Filter Configurations Available** Real Time Monitoring of UV, TDS, ORP Pressure Gauges, Test Ports, Solenoid Valve

This All-in-One Water Treatment System, installed at the point of entry, is ideal for commercial and industrial operations where a high volume output is required. The system offers multiple levels of sediment and carbon filtration down to 1 micron, using high volume, stainless steel filter housings and is ideal for the treatment of ground or surface water. It will purify the source water of most harmful microorganisms such as viruses. bacteria and protozoa with a powerful UV disinfection dose that will inactivate pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others). The water is enriched with chlorine in its last stage for downstream protection.

This skid mounted system offers very efficient water treatment and failsafe operation. It is transportable, designed for ease of installation and fully tested prior to shipment.

#### **Dose Chart**



#### Fail-Safe Operation with UV-Monitor

The monitor is a safety device that monitors the UV systems' effectiveness in real time and displays the UV ntensity. Turbidity and ORP levels may also be monitored based on configuration chosen. The monitor will sound an alarm and trigger a solenoid shut-off valve in case the UV lamp burns out or the dose is inadequate for proper disinfection. Pressure gauges on the filter housings ensure easy monitoring of the filter status.

Specifications may be subject to change





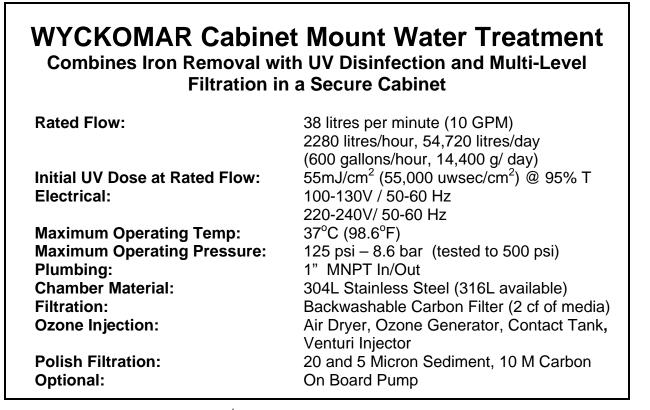
## Cabinet Mounted Water Treatment System

#### Ozone

Backwashable Filtration UV Disinfection Final Polish Filtration To Sub-Micron Level

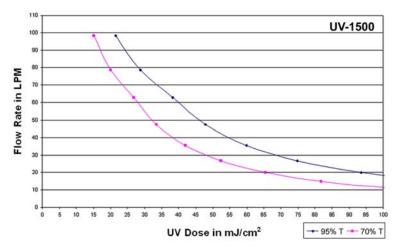
Various Configurations and Flow Rates Available





This portable All-in-One Water Treatment System, installed at the point of entry, is designed for the treatment of well water to a potable purity level. It combines ozone injection technology with efficient high-volume carbon filtration, optimized especially for the removal of higher than normal levels of iron and manganese. It is ideal for commercial, industrial and outdoor applications. The integrated UV-1500 sterilizer kills pathogens (harmful microorganisms such as viruses, bacteria and protozoa) with a powerful UV disinfection dose at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others). The system includes manual shutoff valves and an optional glycol flushing tank for trouble-free standby mode under freezing outdoor conditions.

#### **Dose Chart**



#### Water Treatment in Secure Cabinet

This cabinet mounted system offers very efficient water treatment. It can easily be upgraded for higher flow rates. The lockable cabinet safeguards the equipment against tampering and manipulation, for peace of mind when used in critical environments.

Specifications may be subject to change



Skid Mounted Hard Water Treatment System Water Softening – Iron Removal – UV Disinfection Simple To Install and Operate Anywhere – Custom Systems Available Various Flow Rates Available





# WYCKOMAR Hard Water Treatment System

Softening – Iron Removal – UV-Disinfection

#### **Rated Flow:**

Initial UV Dose at Rated Flow: Electrical:

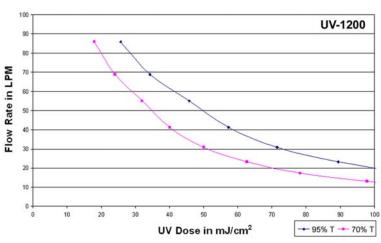
Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration: 38 litres per minute (10 GPM) 22800 litres/hour, 54,720 litres/day (600 gallons/hour, 14,400 g/ day) 54mJ/cm<sup>2</sup> (54,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz 220-240V/ 50-60 Hz 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 1" MNPT In/Out 304L Stainless Steel (316L available) Backwashable Birm Filter (2 c/f of media) Includes Air Injection, Off Gas Valve 70,000 Grain 5 Micron Sediment

Water Softener: Polish Filtration:

This portable All-in-One Water Treatment System, installed at the point of entry, is designed for the treatment of well water to a high purity level. It is ideal for commercial and industrial applications in hard water regions. The system combines high volume air birm filtration and water softening for removal of high iron and manganese levels. The integrated UV-1200 sterilizer kills pathogens (harmful microorganisms such as viruses, bacteria and protozoa) with a powerful UV disinfection dose at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others). The system includes manual shutoff valves.



#### Dose Chart



# Treat Multiple Water Quality Issues With One System

The system as pictured is designed for a flow rate of 12 GPM, but can easily be upgraded for higher flow requirements.

This skid mounted system offers very efficient water treatment at a low cost per unit volume. The system is designed for ease of installation and is fully tested prior to shipment.

Specifications may be subject to change



#### Water Purification Systems For Use In Hazardous Areas And Extreme Environments

Class I Division II Certified Heat Tracing Available For Use In Sub-Zero Environments Multiple Filtration Levels to 1 Micron Plus UV Disinfection Various Flow Rates Available – Custom Systems Available





# WYCKOMAR 60 GPM Class I Division II

for use in Hazardous Areas - Skid Mount

**Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

Maximum Operating Temp: Maximum Operating Pressure: Plumbing: Chamber Material: Filtration (in SS Housings):

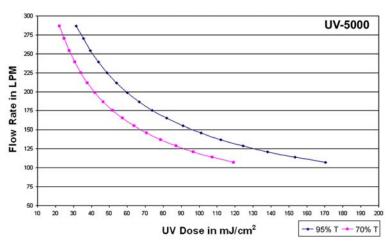
Additional Features:

226 litres per minute (60 GPM) 13560 litres/hour, 325440 litres/day (3600 gallons/hour, 86400 gallons/ day) 25 mJ/cm<sup>2</sup> (25,000 uwsec/cm<sup>2</sup>) @ 95% T 100-130V / 50-60 Hz / 192 VA 220-240V/ 50-60 Hz / 154 VA 37°C (98.6°F) 125 psi – 8.6 bar (tested to 500 psi) 3" Flange In/Out 304L Stainless Steel (316L available) Sediment 50, 20 and 1 Micron Absolute Carbon Block 5 Micron CIDII Rated Enclosure

This All-in-One Water Treatment System, installed at the point of entry, is ideal for heavy-duty industrial applications in extreme environments. The enclosure is Class I Division II Certified explosion-proof. The system will purify the source water (drawn from a well or a lake) of most contaminants such as sediments. heavy metals and pesticides with filtration in 3 stages down to 1 micron. Carbon filtration reduces taste and odor, including sulphur smell. Harmful microorganisms such as viruses, bacteria and protozoa are killed with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



#### Dose Chart



#### Hazardous Areas Are No Problem

This Skid Mounted system offers very efficient water treatment for use extreme environments at a low cost per unit volume. The system is designed for ease of installation and is fully tested and certified prior to shipment.



Specifications may be subject to change



## Solar-Powered UV Drinking Water Purification System

Off-Grid Water Treatment for Use Anywhere Mounted on Cart Pump, Dual Filter Set, UV Disinfection 12 Volt Power Pack, 55 Watt Solar Panel



16 litres per minute (4 GPM)

12 Volt Battery Power Pack

55 W Solar Panel

37°C (98.6°F)

45 psi – 3 bar

23.4 W

960 litres/hour. 23040 litres/day

3/8" Outlet (Compression Fitting) 304L Stainless Steel (316L available)

5 Micron 10" Sediment Filter 5 Micron 10" Carbon Block Filter

L 31" x W 27" x H 49"

(240 gallons/hour, 5760 gallons/ day) 46mJ/cm<sup>2</sup> (46,000 uwsec/cm<sup>2</sup>) @ 95% T



# WYCKOMAR Solar Powered UV-250

**Rated Flow:** 

Initial UV Dose at Rated Flow: Electrical:

Approx. Power Usage: Maximum Operating Temp: Maximum Operating Pressure: Plumbing: UV Chamber Material: Filtration:

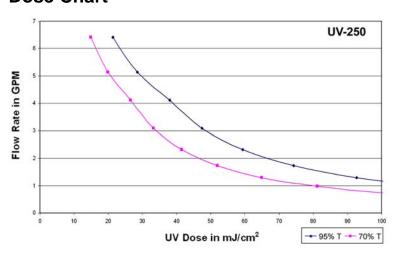
Approx. Size: Approx. Weight:

The Solar Powered UV-250 System combines high quality pre-filtration with our proven ultraviolet purification technology to produce a complete water quality system for use in "off-grid" applications, where no power outlet is available. The filter system removes sediment, rust, dirt, taste and odours that may be present in the source water, and can easily be customized for the removal of other contaminants. The integrated UV-250 sterilizer kills pathogens (harmful microorganisms such as viruses, bacteria and protozoa) with a powerful UV disinfection dose at a kill rate of >99.9% (Giardia, E.coli, Cryptosporidium, Vibria cholera, Legionella, Salmonella, Shigella, Streptococcus and many others).



### Dose Chart

200 lbs



#### Drinking Water Where it is Needed

This system collects sunlight to charge the on-board battery pack. It then uses the generated power to pump and process local source water to produce high-quality clean water safe for human consumption.

This cart mounted system offers very efficient water treatment at a low cost per unit volume. The system is fully tested prior to shipment and is designed for a quick set up right out of the box.

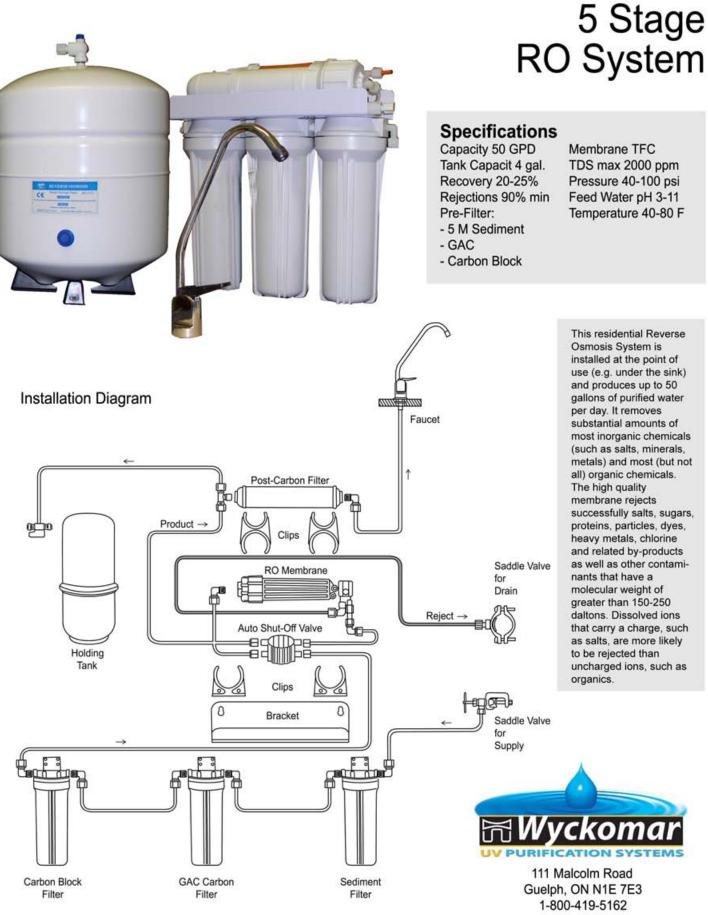
Specifications may be subject to change



## **Reverse Osmosis Systems**

Residential and Commercial Applications Models with and without Booster Pump High Quality TFC Membranes Complete Systems for Residential and Commercial Desalination Applications





www.wyckomaruv.com



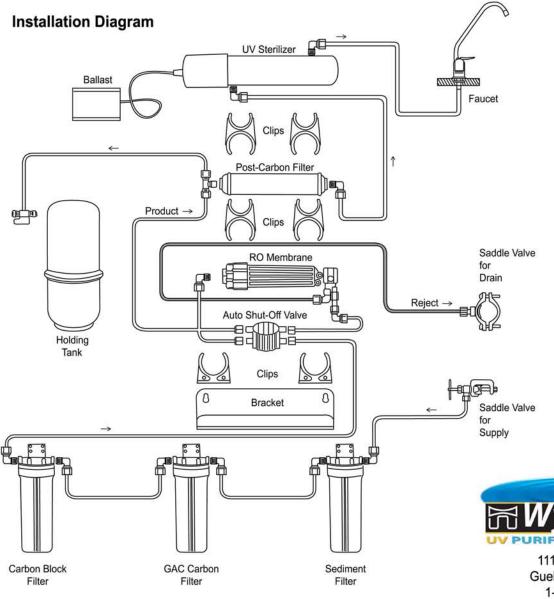
# 5 Stage RO System with UV Disinfection

#### Specifications

Capacity 50 GPD Tank Capacit 4 gal. Recovery 20-25% Rejections 90% min Pre-Filter: - 5 M Sediment

- GAC
- Carbon Block

Membrane TFC TDS max 2000 ppm Pressure 40-100 psi Feed Water pH 3-11 Temperature 40-80 F Electrical 130 V 60 Hz UV Chamber 304 SS



This residential Reverse Osmosis System is installed at the point of use (e.g. under the sink) and produces up to 50 gallons of purified water per day. It removes substantial amounts of most inorganic chemicals (such as salts, minerals, metals) and most (but not all) organic chemicals. The high quality membrane rejects successfully salts, sugars, proteins, particles, dyes, heavy metals, chlorine and related by-products as well as other contaminants that have a molecular weight of greater than 150-250 daltons. Dissolved ions that carry a charge, such as salts, are more likely to be rejected than uncharged ions, such as organics. Bacteria and viruses and other microorganisms are killed by a powerful UV disinfection dose that will inactivate the pathogens at 99.9% inactivation rate.

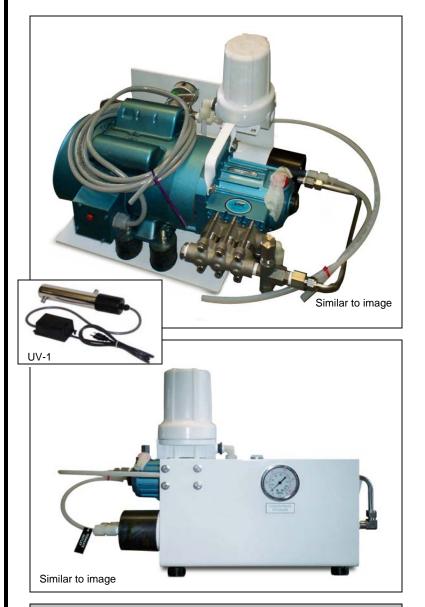


111 Malcolm Road Guelph, ON N1E 7E3 1-800-419-5162 www.wyckomaruv.com

# Drinking Water from Sea Water



# Sea Water RO Systems from Wyckomar



Lead time varies with order volume Volume discounts available Some conditions may apply. O.A.C. – PO required **Contact us for info and pricing**  sales@wyckomaruv.com www.wyckomaruv.com Tel 519-822-1886 Fax 519-763-6580

The Wyckomar SWRO-100 is ideal for use on board yachts and vessels of all types. Compact and dependable, this sea water desalination system is able to provide up to 100 GPD (400 LPD) of drinking water from sea water source.

This unit may be used stand alone or in combination with the Wyckomar UV-1 disinfection unit to provide an extra measure of protection by killing all potentially harmful bacterial and viral pathogens that may be present in the water.

Rugged and well constructed, the SWRO-100 will give many years of dependable service.

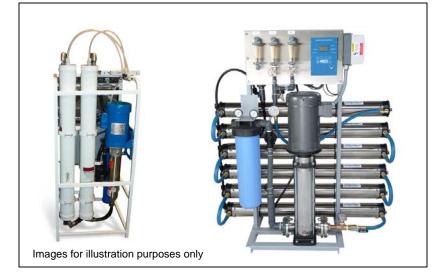
#### **Specifications**

- Output max. 100 GPD
- For Feed Water Containing up to 36,000 mg/L TDS (36,000 ppm)
- at 25 C, SDI < 3
- 316L Stainless Steel Pump
- 24 Volt DC Motor (1 HP), Running at 1800 RPM
- High Rejection Sea Water Membrane
- Flow Meter Installed on the
- Permeate Line
- 5 Micron Sediment Pre-Filter

# Sea Water Desalination Systems



# **Commercial Applications**



Part #	Production GPD	Production m <sup>3</sup> /D	Recovery %	Number, Size of Elements	Motor (HP)	Approx. Dimensions (L x W x H) inches	Approx. Weight Ibs	
WYCK- SW-1	1,600	6	20	1 (4")	3	26x20x127	110	
WYCK- SW-2	3,200	12	20	5 (4")	9.5	81x51x127	175	
WYCK- SW-3	4,800	18	30	7 (4")	11	274x66x152	1000	
WYCK- SW-4	6,400	24	35	10 (4")	11	274x66x152	1200	
WYCK- SW-5	7,200	30	20	2 (8")	10.5	366x122x152	1500	
WYCK- SW-10	14,400	50	20	4 (8")	12.5	366x122x152	1800	
WYCK- SW-15	21,600	80	27	6 (8")	14.5	427x122x152	2200	
WYCK- SW-20	28,800	110	33	8 (8")	19.5	549x122x152	2700	
WYCK- SW-25	36,000	130	38	10 (8")	24	671x122x152	3200	
WYCK- SW-30	43,200	170	36	12 (8")	34	549x122x152	3650	
WYCK- SW-45	64,800	250	42	18 (8")	50	732x122x152	4300	
WYCK- SW-60	86,400	330	40	24 (8")	60.5	732x152x152	4950	
WYCK- SW-75	108,000	410	40	30 (8")	67.5	732x152x183	5650	
WYCK- SW-90	129,600	490	42	36 (8")	77.5	732x183x183	6450	
WYCK- SW-110	158,400	600	40	42 (8")	92.5	732x183x183	7250	

Specifications are subject to change without notice

Lead times vary with model Some conditions may apply. Purchase Order required

Please contact us for information and pricing

sales@wyckomaruv.com www.wyckomaruv.com Tel 519-822-1886 Fax 519-763-6580

Sea Water Reverse Osmosis Systems are designed to produce potable permeate water from sea water of up to 36,000 ppm of TDS. Equipped with energy recovery systems, these are capable of energy efficiencies below 3.0 kWh/m3 (depending on model).

#### **Design Assumptions**

- Feed Water of <36,000 mg/L
- TDS at 25 C , SDI < 3, Turbidity < 1
- Negligible permeate backpressure
- Flux, Minimum Brine Flow, and Recovery in accordance with manufacturer's recommendations

#### **Standard Features**

High-Rejection Sea Water Membranes 316L Stainless Steel Valves, Pressure Gauges Automatic High and Low Feed Pressure Shut –Off Automatic Feed Water Shut-Off Valve 5 micron Sediment Pre-Filter Fibreglass Pressure Vessels Pre-Filter pressure Gauges Stainless Steel Frame

#### **Optional Features**

904L Stainless Steel High-Pressure Piping 200V-460V 60 Hz 3-phase motor Permeate and Concentrate Flowmeters 904L Stainless Steel Centrifugal Pump Automatic Permeate Flush Energy Recovery System Chemical Dosing System Clean-in-Place System TDS, pH, Temperature, Turbidity Meters PLC Control Special Colour 50 Hz Motor



## **Electronic Ballasts and Monitors**

Power Supplies for Germicidal UV Lamps Real-Time Monitoring of UV Light Intensity Optional Outputs - Wet + Dry Contacts, 0-1 V, 4-20 mA



### Wyckomar Electronic Ballasts

Part #	Lamp Type	Power Consumption	Input Voltage	Lamp Current	Lamp/Power LED	Lamp Out Alarm	Solenoid Output	Volt Free Contacts	4-20mA Remote Output	Timer
BE-425W-U	RL-12/254T5 RL-23/436T5 RL-40/867T5	18 VA @ 120 V 23 VA @ 240 V 29 VA @ 120 V 35 VA @ 240 V 53 VA @ 120 V 66 VA @ 240 V	110-240 VAC 50-60 Hz	425 - 500 mA	Lamp LED	Yes	Opt.	Opt.	No	Opt. Hour Meter
BE-800WL-1	RL-44/436T5 RL-84/893T5 RL-100/1197T6 RL-110/1197T5	57 VA @ 120 V 70 VA @ 120 V 85 VA @ 120 V 102 VA @ 120 V	120 VAC 60 Hz	800 mA	Power LED Lamp LED	Yes	Yes	Opt.	No	Opt. Hour Meter
BE-800WL-2	RL-44/436T5 RL-84/893T5 RL-100/1197T6 RL-110/1197T5	72 VA @ 120 V 84 VA @ 120 V 89 VA @ 120 V 107 VA @ 120 V	230 VAC 50/60 Hz	800 mA	Power LED Lamp LED	Yes	Yes	Opt.	No	Opt. Hour Meter
BE-425BT-U	RL-23/436T5 RL-40/867T5	29 VA @ 120 V 35 VA @ 240 V 53 VA @ 120 V 66 VA @ 240 V	120/ 230 VAC 50-60 Hz	425 - 500 mA	Power LED	Yes	Opt.	Opt.	No	365 Days Count Down
BL28W-12V	RL-23/436T5	24 VA @ 12 V	12 V DC	425 mA	Yes	Yes	No	No	No	No

### Wyckomar UV Monitoring Systems

Part #	System	Input Voltage	Power	Low UV- Dose Alarm	Display Type/ Display Value	Trip Point	Wet Contacts	Dry Contacts	4-20 mA Output	0-1 Volt Output	Overtemp Relay	UV Relay
UV/MS-1 UV/MS-2	UV-1 UV-250 UV-700 UV-1200 UV-1500 UV-3000 UV-5000	120 VAC 60 Hz 230 VAC 50-60 Hz	2.6 VA 2.3 VA	Yes	Analog/ 0-100% UVT	Set at 70 %	Yes N/O switch w/ jumper to N/C	No	Opt.	No	No	No
UV/RC-1	Quattra-50 Quattra-90 UV-100 UV-5007	120 or 230 VAC 50/60 Hz	4 VA	Yes (also Temp Relay DPDT Dry)	Digital/ Irradiance Or 0-100% UVT	ad- just- able	Yes	Yes DPDT	Yes	Yes	Yes Dry ad- just- able	Yes Dry

Specifications may be subject to change





#### **Residential/Commercial Filtration Systems**

High Quality Plastic Filter Housings in Heavy Duty Construction FDA Grade Polypropylene, Pressure Rated to 125 psi Temperature Rated to 52° C, NSF 42 Certified Filter Cartridges for Sediment, Iron, H<sub>2</sub>S, Chlorine, Pesticides, Taste, Odour and Colouration Reduction Low Pressure Drop, Increased Surface Area



## **SPECIFICATIONS - Filter Housings**

#### Plastic Filter Housings

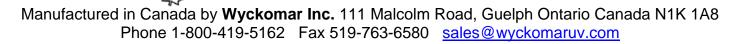
Material Bowl and Cap: Material O-Ring: Max. Operating Temp: Min. Operating Temp: Max. Operating Pressure: Threads available: Pressure Relief Button: Polypropylene EPDM 52°C (125°F) 4.4°C (40°F) 125 psi – 8.6 bar ¾", 1", 1 ½" Yes These heavy-duty housings are made entirely of the highest quality FDA grade NSF listed polypropylene. The buttress thread design provides superior sealing and great security. Thick side walls with heavy-duty ribs provide extra strength. Available in SlimLine and BigBlue, in sizes of 10" and 20".

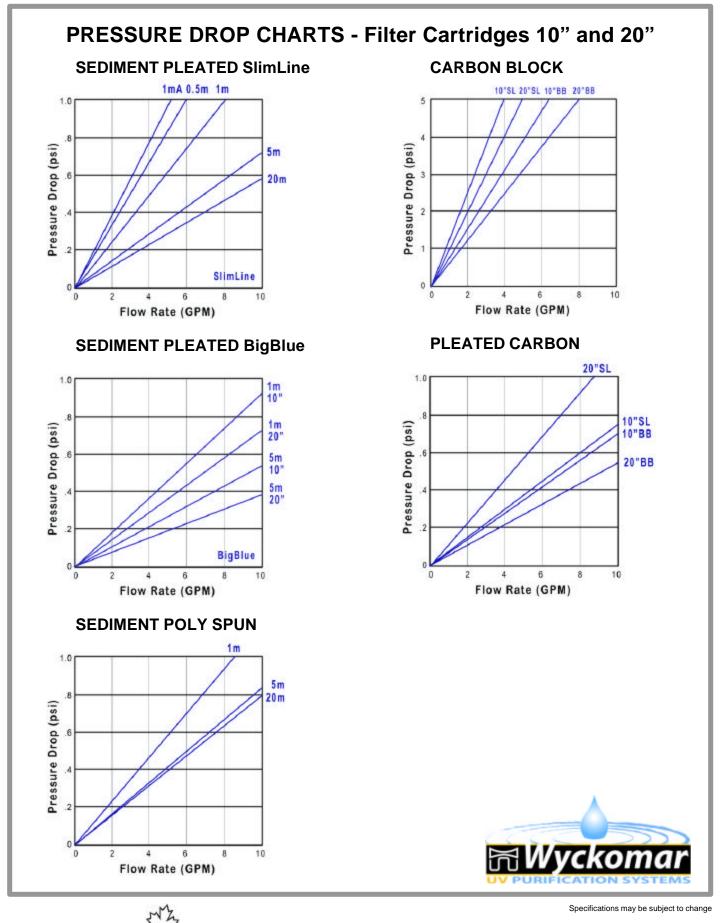
NSF Standard 42 certified.

## **SPECIFICATIONS - Filter Cartridges**

Carbon Block Media: Max. Operating Temp: Min. Operating Temp: Max. Operating Pressure:	Coconut shell 52° C (125° F) 10° C (50° F) 125 psi	Top-of-the-line filter cartridges for chlorine, taste odour and sediment reduction. Long life, low pressure drop. 10 micron nominal rating. NSF Standard 42 certified. Available Sizes: 10", 20", 30", 40"					
Granular Activated Ca Media: Max. Operating Temp: Min. Operating Temp: Max. Operating Pressure:	rbon (GAC) Coconut shell activated 40° C (100° F) 4° C (38° F) 125 psi	Low cost filter cartridges for taste and odour reduction. Containing activated carbon resin. For various flow rates. Available Sizes: 10", 20"					
Pleated Carbon NCP S Media: Max. Operating Temp: Min. Operating Temp: Max. Operating Pressure:	Series Impregnated Polyester 65° C (150° F) 4.4° C (40° F) 40 PSID	This combination of a pleated polyester media and carbon filtration produces an outstanding filter cartridge with extended service life. 10 micron nominal rating. Available Sizes: 10", 20"					
Pleated SedimentMedia:Polypropylene/PolyesterMax. Operating Temp: $60^{\circ}$ C ( $140^{\circ}$ F)Min. Operating Temp: $4.4^{\circ}$ C ( $40^{\circ}$ F)Max. Operating Pressure: $40$ PSID		Increased surface area due to pleated design, for longer life, less pressure drop and higher flow rates. Cartridges are washable and reusable. 0.5, 1, 5, 20 and 50 micron nominal rating Available Sizes: 10", 20", 30", 40"					
Poly Spun Sediment Media: Max. Operating Temp: Min. Operating Temp: Max. Operating Pressure:	Polypropylene (melt blown) 60° C (140° F) 4.4° C (40° F) 40 PSID	Low cost, high dirt holding capacity. This is the standard sediment filter for removal of dirt, rust and other sediments from city water. NSF standard 42 certified. Available Sizes: 10", 20", 30", 40"					
light commercial applications	Wyckomar offers a full line of filter cartridges for residential and light commercial applications. These media reduce sediments as well as taste, odour and colouration from the treated water.						

Specifications may be subject to change





# Self Cleaning Sediment Filter Ideal for Lake Water Applications

A self-cleaning sediment filter (spin-down separator) at 15, 30, 60 or 104 micron will help to significantly reduce the number of sediment filters used to filter surface-water sources.

This unit has a built-in manual flush which is used to purge built-up sediments in the bottom of the filter. This type of filter will especially be appreciated by those who are using a large number of sediment filter cartridges to clean up their drinking water (typically when the feed water comes from a lake)



The Self-Cleaning Sediment Filter is available in <sup>3</sup>/<sub>4</sub>" or 2" in/out PVC construction. Stainless steel filter screens, cleanable and reusable. Flow rates up to 50 GPM.

Simple installation. Easy to use.

Also available for high temperature applications

Mesh Sizes: 1000 = 15 Micron 500 = 30 Micron 140 = 60 Micron 60 = 104 Micron

This unit is an ideal companion to a cottagesized UV disinfection system to provide clean and sterilized drinking water all year long.

> Part Numbers: 14-WFS-15SC 13-SDF-3/4-1000F Screen Insert: 13-1-5000F

Phone 1-800-419-5162 519-822-1886 Fax 519-763-6580 sales@wyckomaruv.com

Wyckomar Inc. 111 Malcolm Road Guelph Ontario N1K 1A8 Canada





#### **Commercial and Industrial Filtration Systems**

High Throughput Treatment for Most Water Quality Problems Backwashable Iron and Arsenic Removal High Quality Water Softeners Stainless Steel Commercial Quality Filter Housings Non-Metallic Filter Housings for High Flow Rates



#### Backwashable Air-Birm Iron Removal System

Air Injector: Contact Tank: Media Tank: Off-Gas Valve: Backwash Valve: Media: Additional Features: Micronizer 1" 8" x 35" (larger tanks available) 10" x 40" (larger tanks available) Braukmann Clack 1 cu.ft Birm Bypass and sweat kit included





Air Injector: Mineral Tank / Flow Rate / Media:

Media: Additional Features: Micronizer 1" 10" x 54" / 3.75 GPM /1.5 cu.ft 12" x 52" / 5 GPM / 2 cu.ft 14" x 65" / 7.5 GPM / 3 cu.ft G2R (Adsorbs Arsenic III and IV) Electronic control valve with saturation alarm for failsafe operation



#### **Clack Water Softener**

Air Injector: Media Tank: Brine Tank: Valve: Media: Additional Features: Micronizer 1" 10" x 42" (other sizes available) 16" x 16" x 36" (other sizes available) Clack Brine Bypass and tail kit included



#### Flow-Max Stainless Steel Jumbo Filter Housings

Material: Pressure Rating: Temperature: Gaskets and Seals: Finish: Pressure Drop: Cartridge Types: 304L stainless steel (316L available) Up to 150 psi (10 bar) Up to 250° F (121° C) Buna-N Poly-coat over stainless Initial Pressure drop < 1 psi Standard DOE cartridges

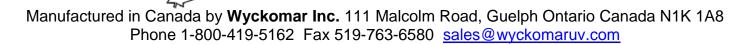


#### **BigBubba Non-Metallic High Volume Filter Housings**

Material: Pressure Rating: Temperature: Gaskets and Seals: Maximum Flow Rate: Pressure Drop: Cartridge Types: Glass Reinforced PP Up to 125 psi (8.75 bar) Up to 175° F (80° C) EPDM 150 GPM Initial Pressure drop < 5 psi Pleated (1A, 1, 5, 20, 50, 150 Micron)



Specifications may be subject to change



# Wyckomar Inc.

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