

OxiMax

MM SERIES

On Site Hypochlorite Generators



Potable Water and Wastewater up to 6
ML/day



"Fresh Water" Swimming Pools, dams
and water features



Recycled Water for Golf Courses,
Parks and Public Grounds

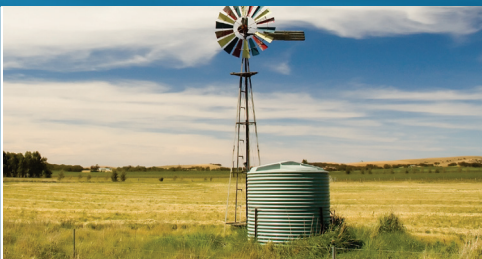


Potable and Wastewater treatment for
boats, yachts and offshore installations

WATER DISINFECTION SOLUTIONS



Recycled Water for Industry



Tanks, Dams and Cooling Towers



Military and Disaster Relief



Clean, safe water for Mining Camps
and remote communities

**WATER
ENGINEERS**
Water Disinfection Solutions

www.waterengineers.com.au

Water Engineers – The Company

Water Engineers is a global company focused on water treatment solutions for a range of applications. While we are primarily a Research and Development company, we manufacture a range of innovative products aimed at a specific market segments and we hold several Patents covering the unique features of our machines. We are certified to ISO 9001-2008.

Our Head Office and main factories are in Queensland, Australia and we also have factories in Nagpur, India. We have company offices in USA (OxiMax United), Singapore and Dubai, along with associated offices in China, Iran and key Australian States. In addition, we have a network of Agents and Distributors throughout the world.

Our team of 92 includes chemical, electrical and mechanical engineers, along with a skilled and experienced production team. Our initial work in the fields of Electrolysis and Electrochlorination goes back over 25 years and we are considered world leaders in several of our fields of operation. We hold a number of Patents covering our unique designs.

Our machines are designed for on-site generation of either Sodium Hypochlorite (liquid chlorine) or Chlorine Dioxide by the process of electrolysis. Our technology allows the production of these powerful water disinfectants at the point of use, requiring only power and low cost raw materials (common salt or Sodium Chlorite). This means low operating cost and high levels of safety, compared to the traditional methods of providing these disinfectants.

The range of applications for Hypochlorite and Chlorine Dioxide are enormous, as virtually all water that is consumed, or used in Industry, needs either (or both) of these disinfectants.

Our newest patented technology allows generation of both disinfectants from a single machine, this has the potential to revolutionize a vast range of water treatment applications.

The MM Series

The OxiMax MM Series is a range of patented, leading edge technology, continuous “Onsite Hypochlorite Generators” suitable for a wide range of water treatment applications. Models are available with outputs ranging from 10 - 500 g/hr and there are now over 2,000 machines in daily operation worldwide.

The heart of the MM Series is the patented MM Cells, which consist of computer optimised waterways and self-cleaning, high performance, long life SCRX electrodes. Each system consists of a Salt Saturator, a Brine Pump, a water supply system, an MM Cell, an Electronic Power Supply, a microprocessor based control system and a Hypochlorite Storage Tank.

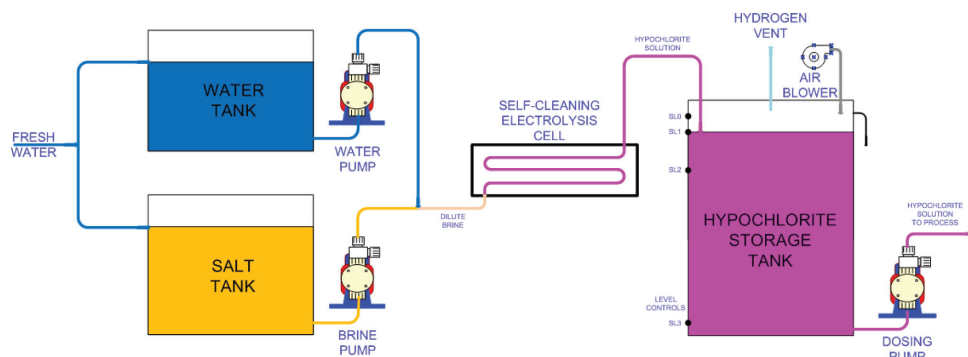
THE MM SERIES IS DESIGNED TO PRODUCE A POWERFUL OXIDIZING SOLUTION, SAFELY, EFFICIENTLY, RELIABLY AND ECONOMICALLY, USING ONLY COMMON SALT, WATER AND POWER AS THE RAW MATERIALS.

THE PROCESS

The raw materials are common salt, water and power and while the actual electrochlorination reactions are complex, the key Hypochlorite reaction can be represented as follows:



HOCl (Hypochlorous Acid) and NaOCl (Sodium Hypochlorite) are powerful oxidizing agents, which are generated at a level of 5 - 7 g/l. This level is ideal for water treatment and while the solution should be handled with care, it is not classified as hazardous.



The system is simple, reliable and is controlled by a microprocessor, which continuously monitors the performance of the machine, makes the appropriate decisions and displays the status via the LEDs on the Control Panel and on a LCD screen. Automatic Dosing Control and Remote Monitoring are available as options.

The key benefits of the MM Series Onsite Hypochlorite Generators are:

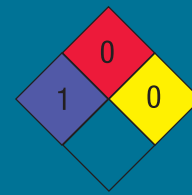
- ✓ Suitable for remote locations, where the machines can run for several weeks unattended.
- ✓ Constant strength, fresh Hypochlorite is produced on demand, with no decay, allowing simple, accurate dosing control.
- ✓ Greatly increased safety, as the produced Hypochlorite is low strength (5 – 9 g/l), meaning there are no Hazardous Chemical handling or storage requirements.
- ✓ Only common salt has to be transported to site and as salt does not degrade, up to 12 months supply can easily be stored.
- ✓ Low maintenance and operating cost, normally around 1/3rd bulk hypochlorite or Chlorine gas.
- ✓ Long life electrodes allow 3 - 6 years between cell exchanges
- ✓ With self cleaning electrode technology, there is no need for water softeners or acid cleaning.

The OxiMax MM Series are our smallest machines and they are well suited to the following applications:

- ✓ Disinfection of Potable Water and Wastewater up to 6 Ml/day.
- ✓ Disinfection of "Fresh Water" swimming pools and water features.
- ✓ Military and Disaster Relief.
- ✓ Disinfection of Process Water systems.
- ✓ On site production of bleach for a variety of disinfection applications.
- ✓ Disinfection of water in Tanks, Dams and Cooling Towers.
- ✓ Water treatment in remote locations.
- ✓ Disinfection of Recycled Water.



Reduce Carbon Foot
Print By 80%



Safe Chemistry

OxiMax MM Series machines have been developed as a result of over 4 years of intensive Research and Development by our technical team. They offer high efficiency in a compact, robust, reliable package and they are designed to run reliably for up to 2 months without attention. They can operate on virtually any quality salt, although common swimming pool salt is recommended.



MM10 - MM50 (5 - 50 g/hr)

The MM10 - MM50 models are ideal for remote areas, as they are compact, reliable, light weight, portable and may be operated by either mains, solar, wind or generator power. The Cells use self cleaning electrode technology to minimize maintenance and these machines are well suited to both domestic and smaller commercial and industrial water disinfection applications.



MM100 - MM500 (100 - 500 g/hr)

The MM100 - MM500 models have the same features as the smaller models but use larger Tanks, Cells and Power Modules to allow higher outputs.

OxiMax Model	MM10	MM25	MM50	MM100	MM150	MM250	MM500
Rated Hypo output (g/hr)	10	25	50	100	150	250	500
Hypo Strength Range (g/l)	4.5 - 7.5	4.5 - 7.5	4.5 - 7.5	4.5 - 7.5	4.5 - 7.5	4.5 - 7.5	4.5 - 7.5
Quantity of water treated to 2 ppm (litres/hr)	5,000	12,500	25,000	50,000	75,000	125,000	250,000
Control Module							
Brine Pump	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Metering Pump	Metering Pump
Water Pump / Flow Control	Peristaltic	Peristaltic	Peristaltic	Maric Valve	Maric Valve	Maric Valve	Maric Valve
Electrolyser Module							
Electrolyser Cell Type	Patented Self Cleaning	Patented Self Cleaning	Patented Self Cleaning	Patented Self Cleaning	Patented Self Cleaning	Patented Self Cleaning	Patented Self Cleaning
Supply AC Voltage / Frequency	110 - 268 / 50 - 60 Hz	110 - 268 / 50 - 60 Hz	110 - 268 / 50 - 60 Hz	110 - 268 / 50 - 60 Hz	110 - 268 / 50 - 60 Hz	110 - 268 / 50 - 60 Hz	110 - 268 / 50 - 60 Hz
Recommended Connected Amps	10	10	10	10	10	10	20
Power Consumption (kWh DC)	0.08	0.17	0.34	0.70	1.00	1.61	3.12
Power Consumption (AC kWh/kg Cl ₂)	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Salt Saturator							
Recommended Volume Salt Saturator (litres)	50	50	50	250	250	250	500
Salt capacity (kg)	38	38	38	188	188	188	375
Days operation at 50% duty cycle	84.5	33.8	16.9	42.2	28.2	16.9	16.9
Salt Consumption (kg salt/kg Cl ₂)	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Hypo Storage Tank							
Recommended Volume Storage Tank (litres)	60	60	60	250	250	250	500
Volume Hydrogen Produced (litres/hr)	6.97	17.42	34.85	69.70	104.55	174.24	348.5
Hydrogen Fan Fitted	Optional	Optional	Optional	Yes	Yes	Yes	Yes
Machine dimensions (l x w x h) (mm)	380 x 335 x 622	380 x 335 x 622	380 x 335 x 622	610 x 335 x 675	610 x 335 x 675	610 x 335 x 675	610 x 335 x 675
Machine weight (kg)	22	25	28	38	42	45	60

Our Product Range

Series	Disinfectant	Key Applications	Output Range
OxiMax CD Series	Chlorine Dioxide	Drinking water, waste water, recycled water, cooling towers, RO systems.	20 g/hr – 30 kg/hr
OxiMax MM Series	Hypochlorite	Disinfection of water for villages, communities, remote locations, particularly developing countries.	10 – 1,000 g/hr
OxiMax MA Series	Hypochlorite	Cooling towers, power stations, potable water for cities.	1 – 400 kg/hr
OxiMax MT Series	Hypochlorite	Resort swimming pools, water features.	80 – 2,000 g/hr
OxiMax MC Series	Hypochlorite	Power stations, refineries, large pools.	2 – 400 kg/hr
OxiMax MV Series	Hypochlorite	Offshore platforms, hazardous areas.	300 g/hr – 20 kg/hr
OxiMax HSH Series	Hypochlorite	Cooling towers, indoor swimming pools.	100 g/hr – 30 kg/hr
OxiMax MG Series	Hypochlorite + Chlorine Dioxide	All of the above + waste water.	100 g/hr – 30 kg/hr
OxiMax Clear	Contaminant removal	Removal of Fluorides, Arsenic, Iron, Nitrates from drinking water using resins and/or Electrocoagulation.	
Marine Electro-Clean	Copper Oxide	Prevents barnacle growth on yachts and boats in seawater.	

“eCHEM”
SUITABLE
FOR A WIDE
RANGE
OF WATER
TREATMENT
APPLICATIONS.



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