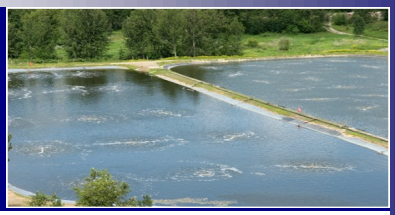
ASMP-1200

Ultrasonic water treatment systems



ASMP Series

ASMP sonic wave technology kills algae, most bacteria and other uni-cellular organisms and significantly reduces nitrates in the water in a cost effective and environmentally friendly way thereby offering the possibility for dramatic gains in the process of treating waste water.

The treatment of waste–water is one of the biggest environmental problems facing the world today.

The presence of an overabundance of algae in lagoons and settlement ponds can be is an extensive and expensive problem in many waste water treatment systems in use today.

The environmentally friendly removal or even better, prevention of algae in WWTP systems represents an opportunity for significant cost savings.

ASM has devoted considerable effort and research to the challenges faced by the WWTP industries in an effort to find more cost-effective and permanent preventative solutions to the problems posed by algae, other fouling species, undesirable bacteria and excess nitrates. Recent technological advances have been successfully applied in a number of cases.

Introducing the ASMP series of ultrasonic anti-fouling, algae and cyanobacteria control systems...

ASMP systems work by transmitting inaudible directed pulses of ultrasound at precise levels for set durations into the water. These ultrasonic waves create microscopic bubbles that implode (cavitation) producing an intense cleaning effect on any surface they affect. The results are:

1. Reduction or elimination of algae and other fouling organisms. Soft species such as algae are broken down as their cells shatter. Hard species such as barnacles and molluscs are killed, but not removed. Even string algae and floating pond scum and bio film can be measurably effected by ultrasound in fresh and salt water.
2. Reduction or elimination of cyanobacteria including those such as *Microcystis aeruginosa* responsible for algal blooms, along with the associated reduction or elimination of geosmin.
3. The substrate/environment is made unsuitable for the larval form of the fouling species which are killed or repelled.
4. The ultrasound stimulates any existing beneficial bacteria that is in the pond and by increasing the vitality of this element of the pond lagoons, it thereby helps in the cleansing and balancing of the pond water.

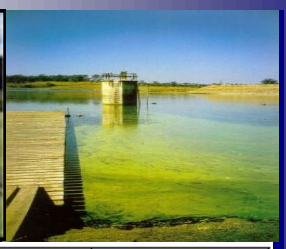
ASM offers a range of ASMP systems designed to suit various pond sizes. Please ask us for details for a system to suit your needs. Presented overleaf are the specifications of the ASMP-1200 system which is suitable for ponds of up to 15,000m^2.

Benefits:

1. Reduces or eliminates the need for the use of copper or other toxic chemicals and, particularly when used in conjunction with ASMR-Reactor series UV/Ozone injection/ultrasonic reactors or similar during the treatment, the resulting aeration and disinfection will provide a much better result prior to release of the treated water.
2. Provides permanent continuous reduction in biofilm, algae and their by-products (e.g. ±90% reduction in chlorophyll-A).
3. Reduction in TSS, turbidity, BOD, Cod levels etc— the water looks cleaner and has little or no odour.
4. Reduction in free bacterial counts (e.g. *E. Coli, Enterococci* etc.).
5. ASMP systems are very cost effective—offering an attractive ROI over a relatively short time span.
6. Environmentally safe, ASMP systems use no chemicals.
7. Low power use and maintenance

ASMP-Series

Ultrasonic water treatment system



ASMP Series Technical Specifications May 2014	ASMP-200	ASMP-400	ASMP-600	ASMP-800	ASMP-1000	ASMP-1200
Applications						
• Cooling towers	✓	✓	✓	✓	✓	✓
• Lakes, pools and ponds	✓	✓	✓	✓	✓	✓
• Waste &water treatment plants intakes	✓	✓	✓	✓	✓	✓
• Water storage tanks & reservoirs	✓	✓	✓	✓	✓	✓
• Horticulture	✓	✓	✓	✓	✓	✓
• WWTP lagoons & lakes, medium flow,	X	✓	✓	up to 15,000m²	up to 19,000m²	up to 21,000m²
• Offshore-onshore aquaculture fish pens, high flow , max. net diameter	X	✓	✓	up to 10-20m	up to 20-40m	up to 20-60m
Operating Temperature range	-30 ~ +50° Celsius					
Operating Humidity Range	0 ~ 80%					
Conformed & Approved to	CE US E224558					
Control Box	Polyester-fibreglass ventilated enclosure fitted with locks ip 65					
Output Power—high speed sonic pulsing up to: Ultrasonic waves watts	200	400	600	800	1000	1200
Dual input. Voltage maximum use per hour						
• 230 VAC ± 4% 50/60 Hz (regulated/low noise)	1.0 Amp	1.4 Amps	1.6 Amps	1.9 Amps	2.4 Amps	3.4 Amps
• 120 VAC ± 4% 50/60 Hz (regulated/low noise)	2.0 Amp	2.8 Amps	3.2 Amps	3.8 Amps	4.8 Amps	6.8 Amps
Rolling Drive Frequency	Up to 120KHz	Up to 120KHz	Up to 120KHz	Up to 120KHz	Up to 120KHz	Up to 120KHz
Frequencies (kHz)	Programmable	Programmable	Programmable	Programmable	Programmable	Programmable
LED Status Indicators	Frequency & power output	Frequency & power output	Frequency & power output	Frequency & power output	Frequency & power output	Frequency & power output
Circuit Protection	Built-in protection against overheating lightening strikes voltage safety earth leak switch, voltage protector and overloading					
Transducers (stainless steel sonic pulse amplifiers)						
Maximum power Ultrasonic waves	1 x 200W	2 x 200W	3 x 200W	4 x 200W	5 x 200W	6 x 200W
• Transducer Housing	Grade 316 stainless steel measuring 120 x 130mm, weight 3.2kg each					
• Sonic face plate - stainless steel	Up to 200W	Up to 200W	Up to 200W	Up to 200W	Up to 200W	Up to 200W
• Transducer shielded flexible, cable waterproof	1 x 20m	2 x 20m	3 x 20m	4 x 20m	5 x 20m	6 x 20m

Notes:

1. All systems are supplied complete with an Instillation Manual, the Control Box, the requisite number of transducers and the corresponding number of transducer cables.
2. The standard transducer cable length as supplied is 20m.cable. Custom length cables can be supplied upon request up to the maximum useable length of 150m.cable.
3. We reserve the right to modify or change the specifications to improve or up-grade our products at any time without prior notification .
4. The systems are supplied and shipped in purpose built packaging cartons. The number, size and weight of the cartons varies depending on the model. See individual product brochures for details.

Hardware Guarantees
- 1 year on electronics
- 1years on PCB engine board
- 1years on transducers

Optional Items:
- ASM-Continuous custom transducer cable up to 150m
- Asm-S1500 complete solar panel system 1500W/wind turbine generating over 36Kwh per day
- Customised brackets and floats

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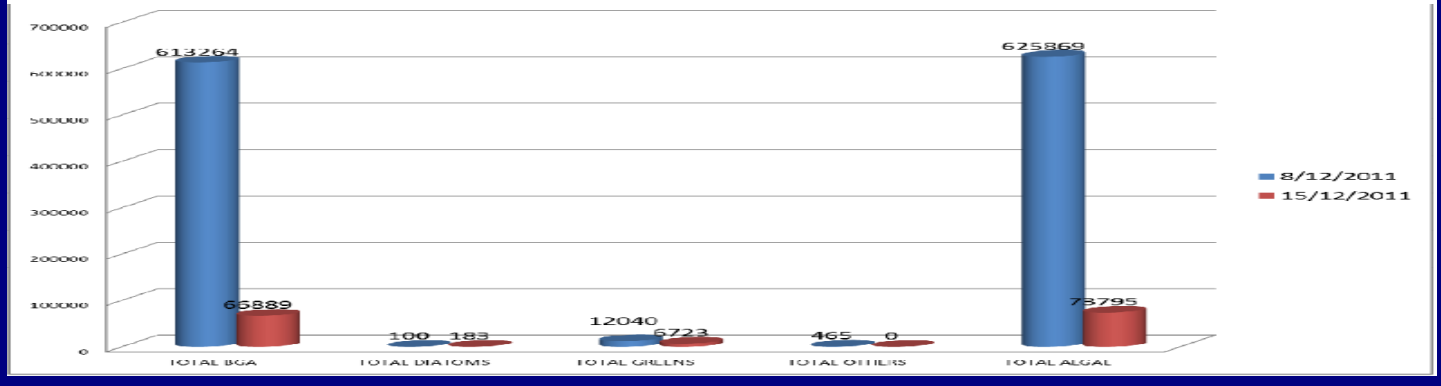

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