PURONIZER

IONISING SYSTEM APSR7.

Introduction
The benefits of a PURONIZER SYSTEM are to reduce the free chlorine residual in a swimming pool by up to 60-80%. Copper and silver ions are released into the pool water by electrolysis which provides an extremely efficient method of killing algae and bacteria in swimming pools.

For your protection read all instructions carefully before installation and operation.

Installation:
Installation should be carried out by a qualified electrician and swimming pool engineer. The system is quick and simple to install, normally no extensive pipe-work alterations are required as the cell unit is very compact in size. Fittings are supplied for quick installation. First determine whether the filtration system has a Sand, DE, Cartridge or Zeoclere filter. This will determine where the cell unit will be installed. If you have a DE, Cartridge or Zeoclere filter, the cell unit must be installed after the filter in the return to pool line. In most circumstances, a Hi-rate Sand Filter is installed and the cell unit should be installed pre-filter after the pump outlet and before the filter inlet in a bypass with a control valve to regulate the flow through the cell (see schematic diagram V7). When you have installed the cell in the correct location, find a convenient place to mount the control box (mounting tape is already installed onto to the back of the control panel for mounting). Remove the film on the mounting tape, clean and degrease the area where the control box is to be sited and push firmly to fix the control panel to the wall. Do not try to use the mounting tape on loose or flaking material. A low voltage lead is supplied with the unit which in most cases is long enough to reach the cell unit. In the rare event that it is not long enough, your pool dealer can supply leads of up to 5 meters long.

It is important that the flow rates are adhered to and do not exceed those shown in the chart, i.e. 10m³/h. Exceeding the flow rates will reduce the life of the probes and in some instances can cause damage to the cell. A bypass should always be fitted to avoid damage to the probes and cell.

Electrical:
Wiring the PURONIZER SYSTEM must comply with local electrical wiring codes. The mains supply should come from the output of the motor starter or contactor which supplies the swimming pool filter pump. There is no internal wiring necessary and entering the control box will immediately void the warrantee.

Water preparation:
The unit comes pre-set from the factory. When you start the Puronizer for the first time, carry on using chlorine in the normal way for two – three weeks until the copper reading rises to the set point below. Only fine adjustments may be needed using the up and down keys to adjust the copper level.

Water chemistry: For any system to work properly, the unit itself must be properly installed and maintained. The water chemistry must be checked regularly. When ready to start the PURONZIER SYSTEM adjust the pH of the pool water to 7.2 - 7.6 and continue to maintain the free chlorine at normal levels until copper rises in the pool to between 0.3 - 0.5 mg/l. – use the PURONIZER test kit supplied. Once this is achieved you can allow the free chlorine level in the swimming pool to fall to 0.5 mg/l. During hot spells and high bathing load, you may need to raise the free chlorine to allow for organic matter to be oxidized and removed by the filter.

Boost Key:
Under normal operation this is not required, but if you cannot raise the copper level over a two – three week period or your pool engineer wants to commission the system sooner then it may be necessary to use the boost button.
When the boost button is depressed the unit will show real time boost from 0hr – 24hr. Depress the up – down key to raise or lower the boost time. Once boost is complete the unit will resume to the normal dosing level that you have set on the front display panel.

Icons and LED status:
When the unit is powered up it will perform an optimization cycle to check the system, checking output voltage, dosing level and probe status, this is also preformed after each probe cleaning session.
Normal running will show the dosing level and LED output. The LED's change polarity and the colour will change from green to orange indicating that the sequence is complete. The unit will then repeat the optimization cycle and the sequence will start all over again.

OWNER RESPONSIBILITY:

Probes - Require cleaning when they become coated in green verdigris, normally every 3 to 4 weeks.
Need changing when they become approximately the size of a man's little finger.

Cell unit - Periodic lubrication to the cell lid O'ring with silicone gel.

Control box - Check all leads are in place and have not been snagged causing bad connections.

Water chemistry - Test pool water for pH and free chlorine at least once a week. Maintain free chlorine between 0.5 - 1.0 mg/l.
During prolonged spells of hot weather and high bathing load, test water more regularly.
Maintain test results between pH 7.2 - 7.6 (important), free chlorine 0.5 - 1.0 mg/l and copper 0.3 - 0.5 mg/l.

Removing the cell lid and cleaning the probes every 4 weeks:

1 Switch off filtration system.

2 Remove low voltage leads from cell unit.

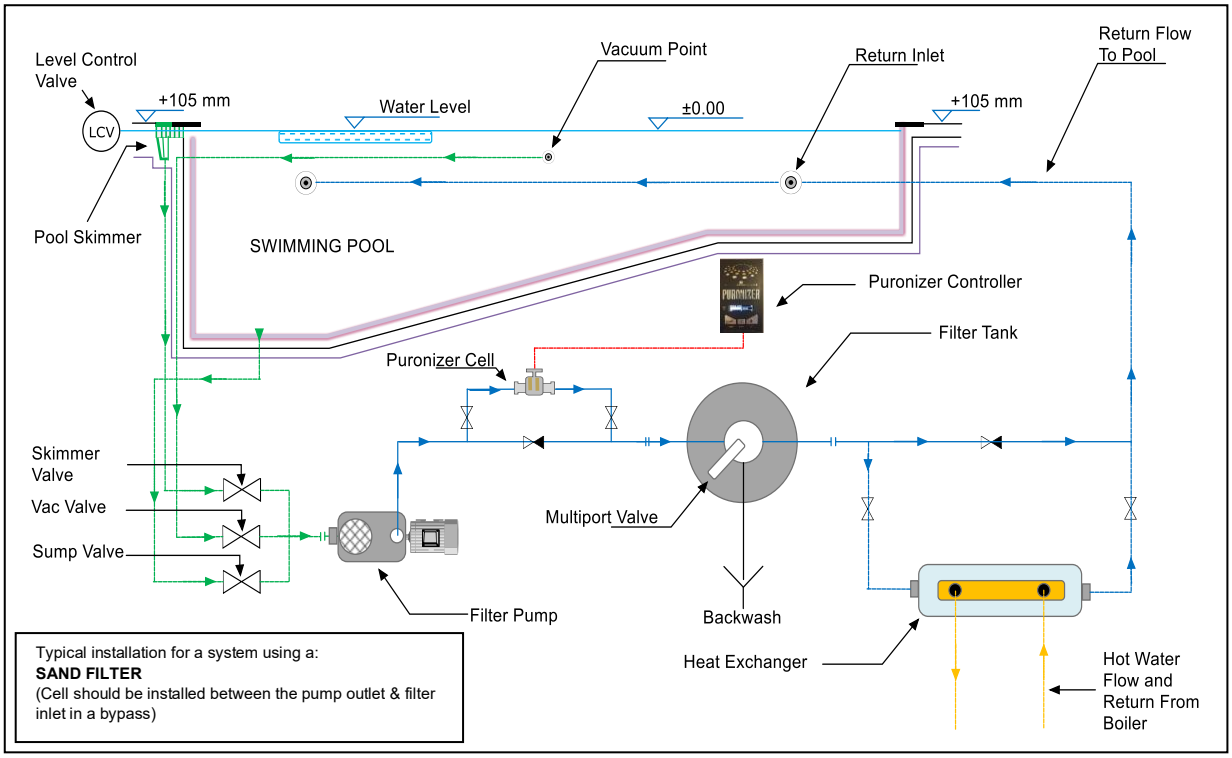
3 Unscrew black thumb knob.

4 Remove clear cell lid, the probes will be coated in green verdigris. Brushing the probes with a small brush under tap water will remove the coating. When clean, replace the lid and thumb knob and tighten down (do not over tighten). Replace the low voltage lead in the correct sequence, red to red, black to black. Switch on the filtration system. If you do not clean the probes the system will not function properly and probe life will be reduced.

LIABILITY:

It is important that the installer adheres to the flow rates of the cell unit as outlined in the specifications.
A bypass will need to be installed to reduce pressure and flow through the cell unit.
No liability whatsoever will be accepted by the manufacturer due to misuse of this product or misuse of chemicals used.

Schematic diagram V7



SPECIFICATIONS - THE MANUFACTURE RESERVES THE RIGHT TO CHANGE THE PRODUCT WITHOUT NOTICE

Electrical characteristics	**Puronizer 2 probe**	**Puronizer 4 probe**	**Puronizer 6 probe**
Voltage Rating	110/240V 50/60Hz	110/240V 50/60Hz	110/240V 50/60Hz
Power Consumption Power Output Fused: Input/Output Low Voltage Lead	0/12V 1A max 500mA/1A 0.75mm 2 core	0/12V 1A max 500mA/1A 0.75mm 4 core	0/12V 1A max 500mA/1A 0.75mm 6 core
Water Characteristics Under Normal Working Conditions			
Max Water Flow Through Cell Max Working Pressure Max Working Temperature Map Imp Galls for Treatment Cell Inlet/Outlet Size	10m³/h 1Bar 110˚/45˚C 20,000 Galls Imp 1.5” BSP – 50mm	10m³/h 1Bar 110˚/45˚C 30,000 Galls Imp 1.5” BSP – 50mm	10m³/h 1Bar 110˚/45˚C 40,000 Galls Imp 1.5” BSP – 50mm
Water Chemistry With All Models			
pH Total Alkalinity Co/Ca Hardness Copper Ions Oxidizer (Cl)	7.2/7.6 100/150 ppm(mg/l) 100/150ppm(mg/l) 0.3/0.5 ppm(mg/l) 0.5/1.0 ppm(mg/l)	7.2/7.6 100/150 ppm(mg/l) 100/150 ppm(mg/l) 0.3/0.5 ppm(mg/l) 0.5/1.0 ppm(mg/l)	7.2/7.6 100/150 ppm(mg/l) 100/150 ppm(mg/l) 0.3/0.5 ppm(mg/l) 0.5/1.0 ppm(mg/l)
Environmentally Friendly	Non Toxic Non Irritant	Non Toxic Non Irritant	Non Toxic Non Irritant