

# PURONIZER

## IONISING SYSTEM

### Introduction

The benefit of the PURONIZER is to reduce the free chlorine by up to 60% chlorine. Copper and silver ions are released into the water by electrolysis which provides an extremely efficient method of sterilising pool water.

**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 decide 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 (see Diagram A). In most circumstances, a Hi-rate Sand Filter is installed and the cell unit can be installed pre-filter after the pump outlet and before the filter inlet (see Diagram B). When you have installed the cell in the correct location, find a convenient place to mount the control box. 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 dealer can supply leads of up to 5 metres.

It is important that the flow rates are adhered to and do not exceed those shown in the chart, i.e. 50 gallons a minute (14cmh). Exceeding the flow rates will reduce the life of the probes and in some instances can cause damage to the cell. A bypass should be fitted if flow rates exceed those shown.

### 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 guarantee.

### Water preparation:

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 PURONIZER 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 oxidised and removed by the filter.

### 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 with silicone gel is required to the lid O'ring.

**Control box -** Check all leads are in place and have not been snagged which can cause 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:

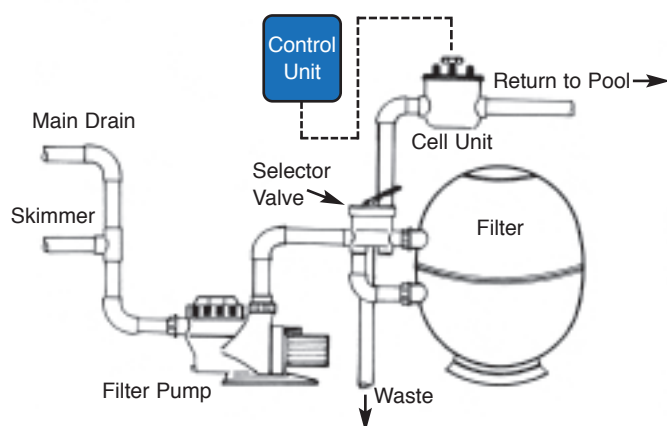
**It is important that the installer adheres to the flow rates of the cell unit as outlined in the specifications. A bypass may need to be installed to reduce pressure and flow through the cell unit. No liability whatsoever will be accepted by the manufacturer due to misuse of this product or misuse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

msi

Mineral  
Supplies  
International

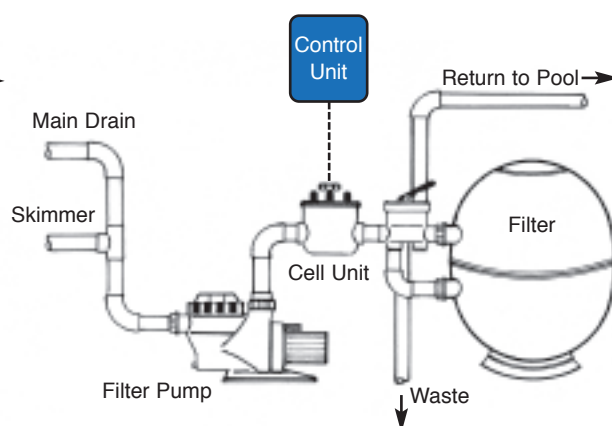
Typical Installation of unit for:  
**DE, CARTRIDGE or ZEOCLERE**  
 Cell Unit MUST be after the filter

Diagram A



Installation of unit for:  
**SAND FILTERS**  
 (Cell can be installed after filter on Sand Filters – if required)

Diagram B



**SPECIFICATIONS:**

| Electrical characteristics                                   | MSI PB2CS                 | MSI PB4CS                 | MSI PB6CS                 |
|--|---------------------------|---------------------------|---------------------------|
| Voltage Rating   | 110/240V<br>50/60Hz       | 110/240V<br>50/60Hz       | 110/240V<br>50/60Hz       |
| Power Consumption  |                           |                           |                           |
| Power Output   | 0/32V 1A                  | 0/32V 1A                  | 0/32V 1A                  |
| Fused: Input/Output  | 500mA/1A                  | 500mA/1A                  | 500mA/1A                  |
| Low Voltage Lead   | 0.75mm 2 core             | 0.75mm 4 core             | 0.75mm 6 core             |
| <b>Water Characteristics Under Normal Working Conditions</b> |                           |                           |                           |
| <b>Max Water Flow Through Cell</b>                           | <b>50 GPM @18PSI</b>      | <b>50 GPM @18PSI</b>      | <b>50 GPM @18PSI</b>      |
| Max Working Pressure   | 15PSI/1BAR                | 15PSI/1BAR                | 15PSI/1BAR                |
| Max Working Temperature                                      | 110°/45°C                 | 110°/45°C                 | 110°/45°C                 |
| Map Imp Galls for Treatment                                  | 20,000 Galls Imp          | 30,000 Galls Imp          | 40,000 Galls Imp          |
| Cell Inlet/Outlet Size                                       | 1.5" F/BSP                | 1.5" F/BSP                | 1.5" F/BSP                |
| <b>Water Chemistry With All Models</b>                       |                           |                           |                           |
| pH   | 7.2/7.6                   | 7.2/7.6                   | 7.2/7.6                   |
| Total Alkalinity   | 100/150 ppm(mg/l)         | 100/150 ppm(mg/l)         | 100/150 ppm(mg/l)         |
| Co/Ca Hardness   | 100/150ppm(mg/l)          | 100/150 ppm(mg/l)         | 100/150 ppm(mg/l)         |
| Copper Ions  | 0.3/0.5 ppm(mg/l)         | 0.3/0.5 ppm(mg/l)         | 0.3/0.5 ppm(mg/l)         |
| Oxidiser (Cl)  | 0.5/1.0 ppm(mg/l)         | 0.5/1.0 ppm(mg/l)         | 0.5/1.0 ppm(mg/l)         |
| Environmentally Friendly                                     | Non Toxic<br>Non Irritant | Non Toxic<br>Non Irritant | Non Toxic<br>Non Irritant |



Mineral Supplies International

Mineral Supplies International Ltd, Horsted Keynes, RH17 7AR, England

**Tel:** + 44 (0)1825 790524 **Fax:** + 44 (0)1825 790908 **Email:** sales@mineralsi.com

**www.mineralsi.com**