

MAGNA-CHEM

AUTOMATIC CHLORINATOR -

MODEL: CSA-2P MAGNA ORP Chlorine Pump

Assembly & Operating Instructions

A. PARTS

Parts for liquid chlorine pump head

1pc. 1/4" poly delivery tubing, 4 meters
1pc. drum weight and retainer
1pc. 1/4" poly tube connector
1pc. 1/4" poly non-return valve

Parts for water line connection

1pc. 40mm x 1/2 x 6mm poly pipe tee
1pc 1/4" tube x 1/2 bsp - connector
injection fitting.
1pc. chlorine / ORP probe and lead

B. DESCRIPTION

MAGNA-CHEM CSA-2 MAGNA pool and spa chlorinator is an economical liquid chlorine feeder unit designed to automatically inject liquid into pools and spas to maintain sparkling clear water all year round. The amount of liquid chlorine being delivered into the pool or spa is measured constantly via the chlorine / ORP probe to be installed on the return to the pool water line. Chlorine ppm can be adjusted with the push button setting on the front panel. The unit is equipped with a pump head sufficient for all standard sized domestic pools. Chlorine levels are measured through the oxygen reduction potential - ORP.

A second MAGNA-CHEM semi automatic unit can be installed for the delivery of set amounts of pool acids, to help maintain the correct pH levels in the pool.

C. INSTALLATION

1. CONTROL CABINET

Mount the control cabinet on a shelf or wall not more than two meters from the liquid container. Make sure other equipment is not directly below the chlorinator. Do not mount in an exposed area or pool zone.

2. TUBE CONNECTIONS (Refer to the drawings under Section K)

Decide where in the 'return to pool line' the poly tee is to be installed. Cut the required lengths of tubing for the suction and discharge lines. Push the poly-barbed connector in the suction side of the pump and the NON-RETURN valve into the discharge side. Push the cut lengths of the poly tubes onto these fittings.

Fit the end of the SUCTION TUBE through the ceramic weight; fit the assembly into the chlorine container.

Fit the end of the DISCHARGE TUBE into the injection fitting in the poly tee. Be sure to push the tubing right through the tee fitting and into the opposite internal wall, then pull back 10mm and tighten the nut.

Note: Pump direction is shown on the faceplate and is in a clockwise direction. The non-return valve must be installed on the discharge side. Be sure to mount the non-return valve in the direction of flow - an arrow is shown on the side of the valve. Refer to the drawing in section K.



3. POLY TEE PIECE

The tee piece may now be installed into the 'return to pool' line in the position already chosen. This is accomplished by cutting a piece out of the line and gluing the tee into place.

IMPORTANT - If the 'return to pool' line is below the water level of the pool, be sure to isolate this line before cutting it to avoid loss of water.

4. CHLORINE / ORP PROBE

The probe is supplied with an oring and may be screwed straight into the side of the poly tee piece now installed. Plug the BNC connector into the probe socket on the base of the MAGNA CHEM CSA-2. Push and turn clockwise - 1/4 turn.

5. ELECTRICAL CONNECTION

Plug into a 240v ac power outlet with the water filter pump. The lead supplied with the MAGNA-CHEM is fitted with a 'piggy' back plug for ease of installation. Chlorine dosing operations are controlled automatically by the MAGNA-CHEM while the water filter pump is on. Alternatively the MAGNA-CHEM may be used with a separate timer, set to operate only when the filter pump is running.

D. OPERATION

Ensure that the chlorine container has sufficient liquid chlorine.

I ADJUSTMENTS

1. Switch on the power to the MAGNA-CHEM and filter pump.
2. Press mode button until the adjust mode LED is selected and set the indicator display panel to the centre, by pushing the increase or decrease buttons.
3. The MAGNA-CHEM pump will start immediately. The MAGNA-CHEM will inject chlorine for a maximum of 45 seconds in each minute and takes measurements the remaining 15 seconds. The MAGNA-CHEM will cut back injection to a suitable proportion of one minute when the desired chlorine level is reached in the pool or spa. Select the ADJUST mode and press increase or decrease to adjust your desired set point or chlorine level.
4. Allow a few hours for the MAGNA-CHEM to stabilise.
5. Test the pool for the next 7 days. Adjust to the correct chlorine level (7.4 - 7.6). During heavy bathing periods or excessive rain, the MAGNA-CHEM will dose the correct amount of chlorine to keep your pool at the required adjusted level.

NOTE - A delay of a couple of seconds may occur when changing between setting.

Remember also that during winter and low pool usage periods your chlorine usage will decrease.

IMPORTANT: The pool pH level must be kept at correct level (7.2 to 7.6) for effective chlorinating.

II SUPER CHLORINATING

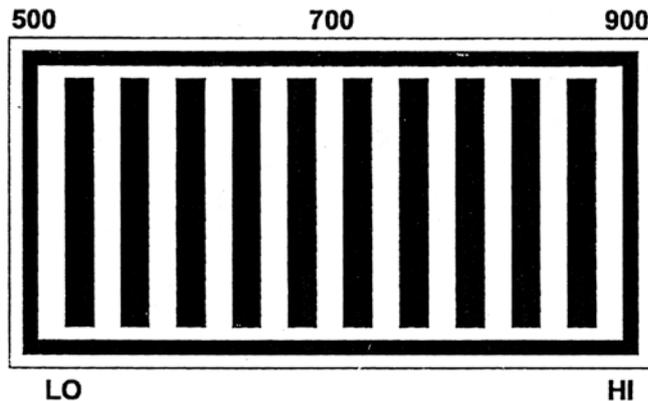


To super chlorinate your pool, simply push the 'super chlor' button located on the right side of the front panel. This overrides the probe information and runs the pumps on a duty cycle of 75% (running / on for 45 seconds and off for 15 seconds) for a present time of approximately 60 minutes. Once this time has elapsed, the chlorinator automatically switches back to its normal control mode.

NOTE: To cancel this mode, press the SUPERCHLOR or MODE buttons.

E. MAGNA-CHEM CSA-2P INDICATOR RANGE - APPROXIMATE VALUES

(Variances of plus or minus 5 to 10% may occur in the below figure due to pc card component tolerances)



F. SERVICING

1. Clean the injection point periodically.
2. Lubricate the squeeze tube regularly with an approved lubricant, every three months.
3. Replace the squeeze tube periodically. Every twelve months.
4. Check the chlorine probe periodically. Clean with a MILD acid solution.
5. The chlorine probe should be checked every twelve months.

G. TROUBLE SHOOTING

FEEDER NOT PUMPING

1. Check for power to MAGNA-CHEM
2. Check that suction tube is in the bottom of the chlorine container.
3. Check squeeze tube for leaks and not squashed.
4. Check suction and delivery tubes for leaks.
5. Check that the control dial is not set too low.
6. Check for empty chlorine drum.
7. Check for blockage at injector point.

POOR CHLORINE LEVEL / POOL CONDITION

1. Check pool water condition / quality. (Test Kit)
2. Check chlorine container.
3. Secure probe connection.
4. Is the probe clean.

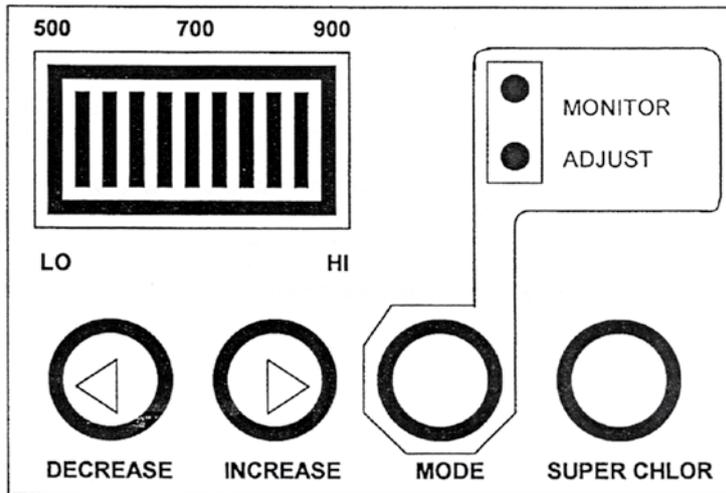
III. ELECTRICAL FAULT FINDING - To be carried out by an electrician.

1. Check for power to the unit.
2. Is the MONITOR on? If not, check fuse connections.
3. If the MONITOR light is on and motor / pump is not running, check for power at motor terminals on the pc card.

NOTE: Pump will run for 45 seconds immediately when power is switched on.

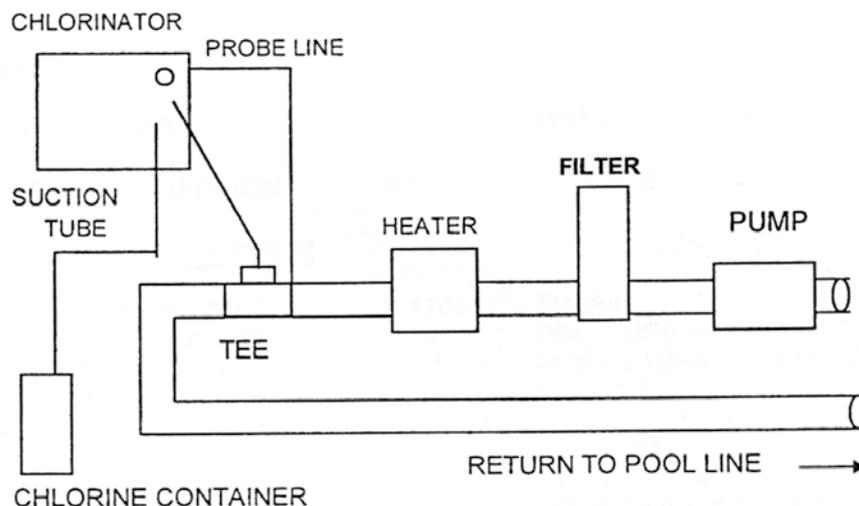
4. If power is available at motor, and the motor does not work, the motor may need replacing.
5. Check chlorine strength with DPD tablet. (Test Kit)
6. Check all terminals and plugs for tight connection.

H. MAGNA-CHEM CSA-2P DISPLAY



1. Display is normal with MONITOR indicator on.
2. Mode button will change between the MONITOR and ADJUST.
3. While in ADJUST mode, DECREASE and INCREASE buttons may be used to adjust desired set point or chlorine level.
4. SUPER CHLOR button will invoke "Super Chlorinate" mode which will continue for approximately one hour or until SUPER CHLOR or MODE button is pressed to cancel. Flashing indicator display and MONITOR LED show super chlorinate mode is on.

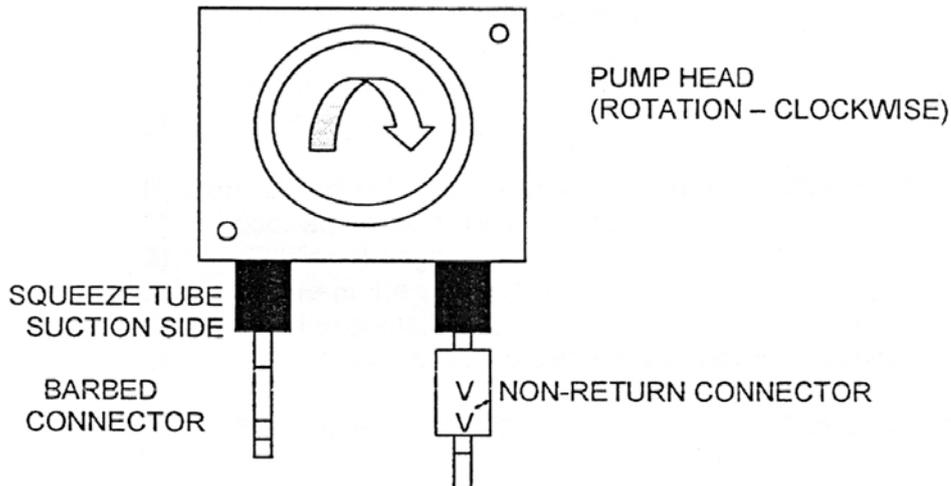
I. STANDARD MAGNA CHEM CSA-2 SET UP - ASSEMBLY



J. NOTES

1. It is strongly advised that a stabiliser be used when using liquid chlorine.
2. The use of copper-based algaecides is not recommended as this will cause scaling/coating of the probe.
3. The use of powdered chlorine will cause scaling/coating of the probe - not recommended.
4. Very hard water may cause probe scaling/coating.
5. Operate the controller at the same time every day.

K. PUMP HEAD TUBE CONNECTIONS



L. MAGNA-CHEM CS1 SEMI-AUTOMATIC CHLORINATOR PARTS LIST

PART NO.	UNIT PARTS	PART NO.	ACCESSORIES
5050012	MOTOR 5RPM AC	5050011	TUBE LUBE 50g
5050016	PUMP HEAD SIZE 2	5050010h	POLY TUBE 1/4" PER METER
5050017	PUMP FACE PLATE SIZE 2	5050010g	CHLORINE INJECTOR
5050018	TRI ROLLER BLOCK SIZE 2	5050023	POLY TEE 40mm X 1/2" X 6
5050010a	SQUEEZE TUBE SIZE 2	5050021	RETAINER
5050030	POWER LEAD C/W ADAPTER	5050022	DRUM WEIGHT
		5050010c	POLY BARBED CONNECTOR
		5050010	CHLORINE / ORP PROBE
		5050010i	PROBE ORING

WARRANTY

All POOL RANGER PTY LTD products are warranted against defects in material and workmanship for a period of twelve (12) months from the date of purchase. Warranty applies only to the repair or replacement, repairing or adjusting such parts when the unit is returned to the factory (complete with probes and serial number intact), freight prepaid, and found to be defective upon factory inspection. The warranty period on probes is three (3) months. Rubber and synthetic products such as o'rings, diaphragms and tubing are not covered by this warranty. Warranty does not cover liability resulting from performance of this equipment nor the labour to replace this equipment. Modifications and repairs by unauthorised persons, product misuse and abuse voids this warranty. Shipping damage is not covered by warranty.

Please complete and return this registration form to the address shown below:

Name: _____

Address: _____

Suburb: _____ State: _____ Postcode: _____

Date of Purchase: _____ Purchased From: _____

Unit Purchased: _____ Serial Number: _____

RETURN TO:

Pool Ranger Pty Ltd

PO Box 1611,

Mona Vale NSW 1660

