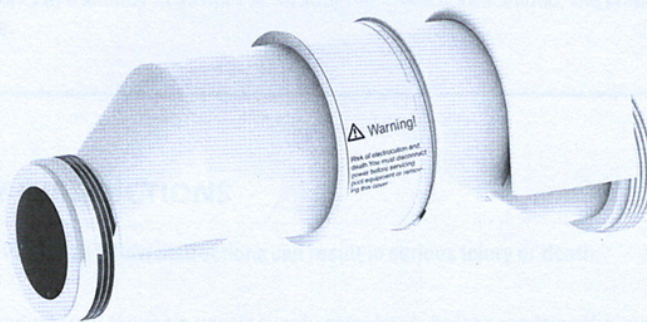
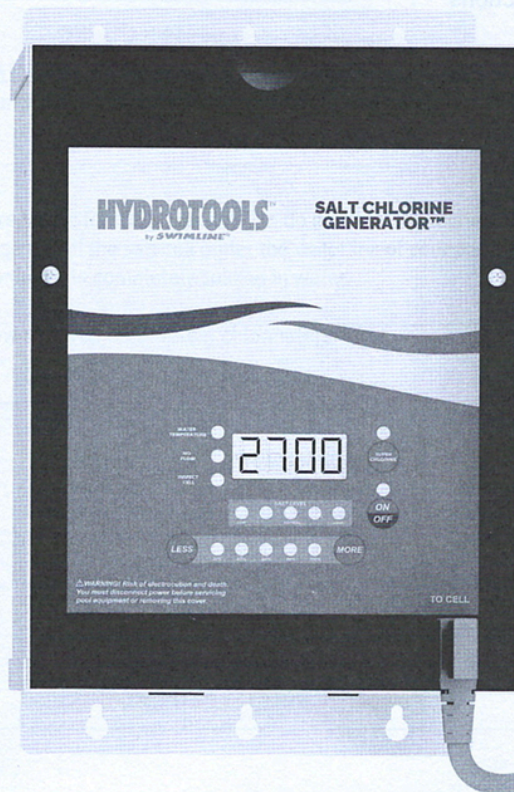


# HYDROTOOLS™

By **SWIMLINE®**



87615/87625/87640

## SALT WATER SYSTEM CHLORINATOR INSTRUCTION MANUAL

Please read all the instructions before assembling and use.  
Save for future reference.



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## GENERAL INSTRUCTION

The chlorine generator is an automatic chlorine generation system for pool sanitation. The operation requires a low concentration of salt (sodium chloride) in the pool water. The chlorine generator automatically sanitizes your pool by converting the salt into free chlorine which kills bacteria and algae in the water. Chlorine will revert back to sodium chloride after killing bacteria. These reactions will continuously recycle virtually eliminating the need to add sanitizing chemicals to your pool.

To extend the service life, please ensure that the equipment operates in the following status:

### 1. Temperature Range:

The chlorine generator normally works in the pool temperature range of 11°C - 45°C. Once it's exceeded, the chlorine generator will alarm and stop until the water temperature returns to the normal range (see TROUBLESHOOTING description for details).

### 2. Water Flow Range:

Different salt chlorinators have different requests for the water flow, so do different installation ways. Please refer to Installation Instructions on how to install chlorine generator. Please install the salt cell under the waterline of your pool, and to vertically install the pipe on the back of chlorine generator, to ensure that the titanium kits completely soaked in water.

Please read the following table for the flow required for different chlorinators.

Types	Installation Direction	Min.water flow to start (m3/h)	Water flow will stop the machine (m3/h)
External flow switch	Horizontal	2	1.2
	Vertical	2	1.2

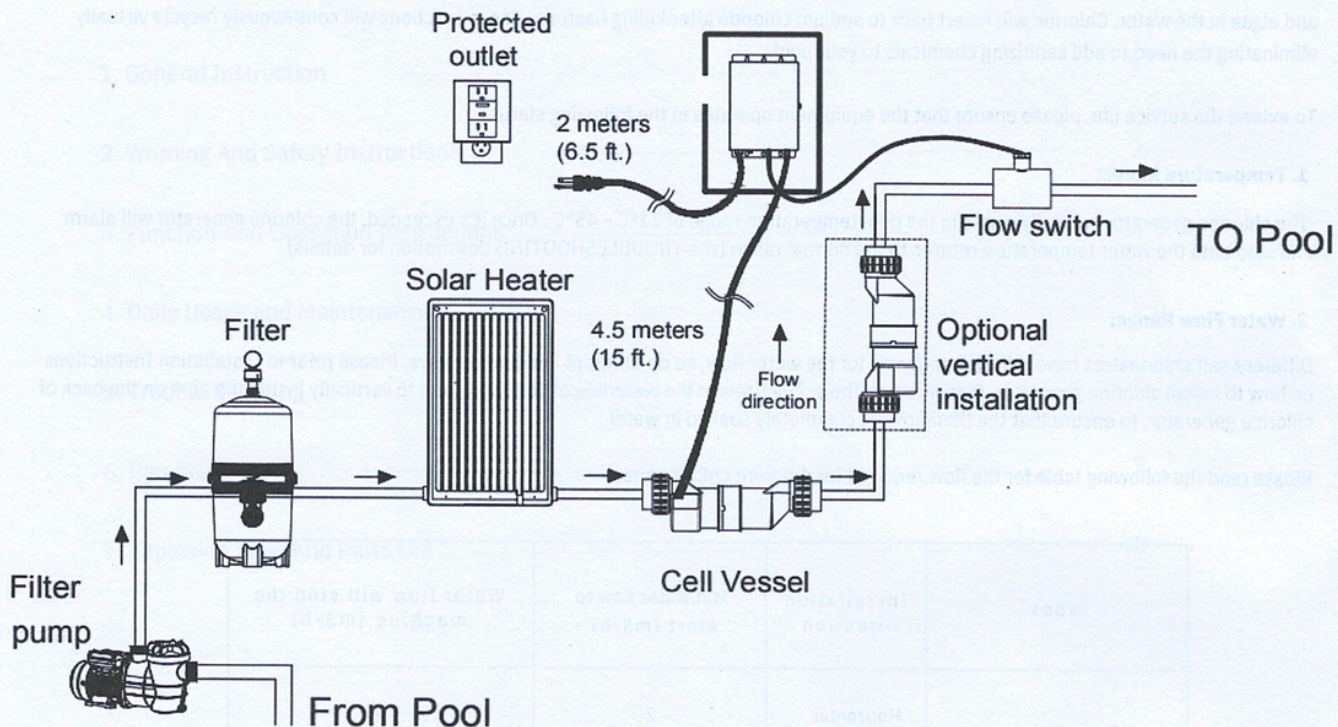
### 3.Salinity Range:

The chlorine generator normally works at a salinity of 1700PPM - 4500PPM. Once it's exceeded, the chlorine generator will stop until the pool water is back within this range.

## WARNING AND SAFETY INSTRUCTIONS

- **WARNING** Electrical Hazard. Failure to follow instructions can result in serious injury or death.
- **WARNING** Disconnect this product from the main power supply completely before servicing the swimming pool equipment.
- **WARNING** Be certain the product is only plugged into a protected outlet that is protected from short-circuits.
- **WARNING** To reduce the risk of electric shock, do not use extension cord to connect unit to electric supply; provide a properly located outlet.
- **WARNING** Children should be supervised to ensure that they do not play with the appliance. Keep fingers and foreign objects away from openings and moving parts.
- **WARNING** Use Only Genuine Replacement Parts.
- **WARNING** Do not operate the product if the power cord is damaged. This can cause an electric shock. A damaged power cord must be replaced by a service agent or a similarly qualified person immediately in order to avoid a hazard.





## FUNCTION AND OPERATION INSTRUCTIONS

### Operation Mode

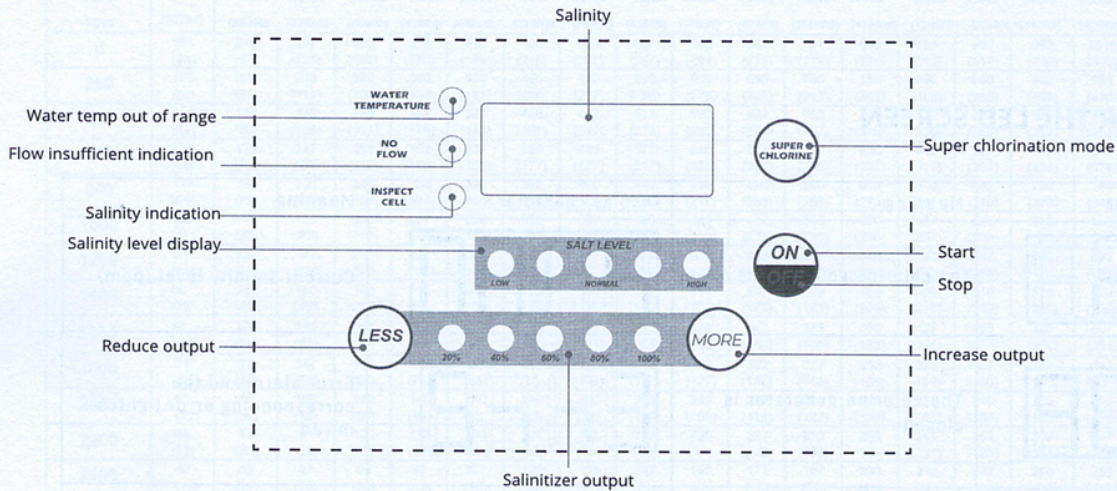
**1. Super chlorination mode:** In any mode, press "SUPER CHLORING" button to enter, the super chlorination mode will automatically return to the original chlorination mode after running for 24 hours, and press "SUPER CHLORING" button again to exit the super chlorination mode.

**2. The original chlorination mode:** There are 5 power levels of cell work, from 20% to 100%. In standby mode, press the "MORE" button to enter the chlorination mode. And adjust to the "MORE" button to enter the chlorination mode. And adjust to a certain amount of chlorination by pressing "MORE" button, the indication light of chlorination output will change accordingly. According to the setting of chlorination intensity, the chlorine generator alternates between chlorination on producing and suspension, and take three hours as a cycle. For example, when it is 60%, there are 108 minutes in chlorination producing status, and the rest 72 minutes are in suspension.

**3. Automatic cleaning mode:** The automatic cleaning cycle is set as every 3 hours. Note: The cell salt value may increase. During the automatic cleaning process, this is caused by the increase of dipole current, which will return to normal after about 10 minutes.

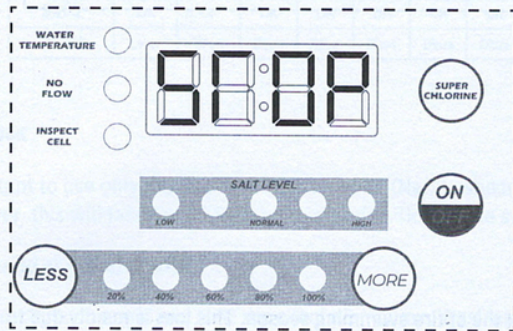


## THE CONTROL PANEL



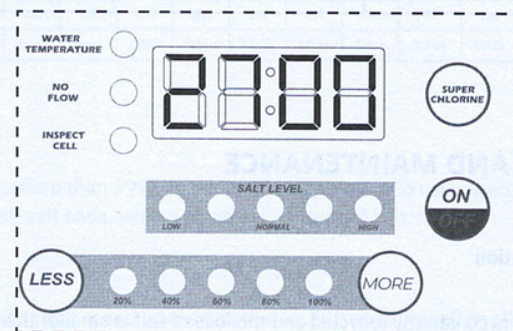
### Button Instruction:

#### Power on/off



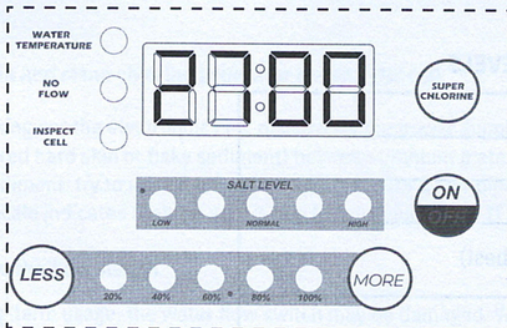
In standby status, press "ON/OFF" to turn on the generator, and it will show as "ON". Press "ON/OFF" generator, and it will show as "STOP".

#### Function selecting



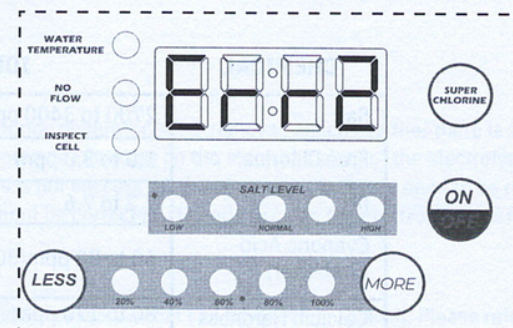
Producing time reduce: press "LESS" Button.  
Producing time increase: press "MORE" Button.

#### Super chlorination mode



Whenever in any mode, press 'SUPER CHLORINE' to enter Super chlorination mode. In super chlorination mode, cells will work continuously for 24 hours.

#### One-click recovery mode



When an error alarm occurs, long press the "ON/OFF key" to recover song errors.



## CONTENTS FOR THE LED SCREEN

Display character	Meaning	Display character	Meaning
	The chlorine generator is open		Current salinity level (ppm)
	The chlorine generator is closed		Error alarm and the corresponding error light is in red
	The chlorine generator is in suspension The chlorine generator alternates between chlorination producing and suspension, and takes one hour as a cycle. For example, when it is 60%, there are 36 minutes in chlorination producing status, and the rest 24 minutes are in suspension.		

## DAILY USAGE AND MAINTENANCE

### 1. Salinity regulation

The salt in the pool is constantly recycled and the loss of salt is smaller than during the entire swimming season. This loss is mainly due to splashing, backwashing, or drainage (due to rain). Salt will not be lost in evaporation. Ideal salt levels range from 2.7 g/L (2700 PPM) to 3.4 g/L (3400 PPM). High salt will probably give you a salty taste of pool (normally, at a level of 3.5g/ (3500 PPM) -4 g/L (4000 PPM) you will taste salty) when the salinity of chlorine generator is higher than 4800PPM, the chlorine generator will stop (see ERR4 fault), please replace part of the pool water. Low salt level will reduce the chlorine producing efficiency. When the salinity is lower than 1.7g/L (1700 PPM), the chlorine generator will stop (refer to ERR2 fault). At this time, add salt according to the recommended volume given in the table below.

### CHEMICAL IDEAL LEVELS

Salt	2700 to 3400 ppm
Free Chlorine	1.0 to 3.0 ppm
pH	7.2 to 7.6
Cyanuric Acid (Stabilizer)	60 to 80 ppm(80 ppm best)
Calcium Hardness	80 to 120 ppm
Calcium Hardness	200 to 400 ppm
Metals	0 ppm
Saturation Index	-0.2 to 0.2 (0 best)



POUNDS and (Kg) OF SALT NEEDED FOR 3200 PPM																			
Current salt Level ppm	6000 (22700)	Gallons and liters of Pool/Spa water																	
		8000 (30000)	10000 (37500)	12000 (45000)	14000 (52500)	16000 (60000)	18000 (67500)	20000 (75000)	22000 (82500)	24000 (90000)	26000 (97500)	28000 (105000)	30000 (112500)	32000 (120000)	34000 (127500)	36000 (135000)	38000 (142500)	40000 (150000)	
0	161 (73)	213 (97)	267 (121)	320 (145)	373 (170)	427 (194)	480 (218)	533 (242)	587 (267)	640 (291)	693 (315)	747 (339)	800 (364)	854 (388)	907 (412)	960 (436)	1013 (460)	1067 (484)	
200	150 (68)	200 (91)	250 (114)	300 (136)	350 (159)	400 (182)	450 (205)	500 (227)	550 (250)	600 (273)	650 (295)	700 (318)	750 (341)	800 (363)	850 (385)	900 (408)	950 (430)	1000 (453)	
400	141 (64)	187 (85)	233 (106)	280 (127)	327 (148)	373 (170)	420 (191)	467 (212)	513 (233)	560 (255)	607 (276)	653 (297)	700 (318)	747 (339)	793 (360)	840 (382)	887 (403)	933 (424)	
600	173 (59)	173 (79)	217 (98)	260 (118)	303 (138)	347 (158)	390 (177)	433 (197)	477 (217)	520 (236)	563 (256)	607 (276)	650 (297)	693 (317)	737 (337)	780 (358)	823 (378)	867 (398)	
800	119 (54)	160 (73)	200 (91)	240 (109)	280 (127)	320 (145)	360 (164)	400 (182)	440 (200)	480 (218)	520 (236)	560 (255)	600 (273)	640 (291)	680 (310)	720 (328)	760 (348)	800 (364)	
1000	108 (49)	147 (67)	183 (83)	220 (100)	257 (117)	293 (133)	330 (150)	367 (167)	403 (183)	440 (200)	477 (217)	513 (233)	550 (250)	587 (267)	623 (283)	660 (300)	697 (317)	733 (333)	
1200	97 (44)	133 (61)	167 (76)	200 (81)	233 (106)	267 (121)	300 (136)	333 (152)	367 (167)	400 (182)	433 (197)	467 (212)	500 (227)	533 (243)	567 (258)	600 (274)	633 (289)	667 (304)	
1400	86 (39)	120 (55)	150 (68)	180 (82)	210 (95)	240 (109)	270 (123)	300 (136)	330 (150)	360 (164)	390 (177)	420 (191)	450 (205)	480 (218)	510 (232)	540 (246)	570 (259)	600 (263)	
1600	75 (34)	107 (48)	133 (61)	160 (73)	187 (85)	213 (97)	240 (109)	267 (121)	293 (133)	320 (145)	347 (158)	373 (170)	400 (182)	427 (195)	453 (207)	480 (219)	507 (231)	533 (243)	
1800	71 (32)	93 (42)	117 (53)	140 (64)	163 (74)	187 (85)	210 (95)	233 (106)	257 (117)	280 (127)	303 (138)	327 (148)	350 (159)	373 (169)	397 (180)	420 (190)	443 (201)	467 (211)	
2000	60 (27)	80 (36)	100 (45)	120 (55)	140 (64)	160 (73)	180 (82)	200 (91)	220 (100)	240 (109)	260 (118)	280 (127)	300 (136)	320 (145)	340 (154)	360 (163)	380 (172)	400 (181)	
2200	49 (22)	67 (30)	83 (38)	100 (45)	117 (53)	133 (61)	150 (68)	167 (76)	183 (83)	200 (91)	217 (98)	233 (106)	250 (114)	267 (121)	283 (129)	300 (137)	317 (144)	333 (152)	
2400	40 (18)	53 (24)	67 (30)	80 (36)	93 (42)	107 (48)	120 (55)	133 (61)	147 (67)	160 (73)	173 (79)	187 (85)	200 (91)	213 (98)	227 (104)	240 (110)	253 (117)	267 (123)	
2600	31 (14)	40 (18)	50 (23)	60 (27)	70 (32)	80 (36)	90 (41)	100 (45)	110 (50)	120 (55)	130 (59)	140 (64)	150 (68)	160 (73)	170 (77)	180 (81)	190 (86)	200 (90)	
2800	20 (9)	27 (12)	33 (15)	40 (18)	47 (21)	53 (24)	60 (27)	67 (30)	73 (33)	80 (36)	87 (39)	93 (42)	100 (45)	107 (48)	113 (51)	120 (54)	127 (57)	133 (60)	
3000	9 (4)	13 (6)	17 (8)	20 (9)	23 (11)	27 (12)	30 (14)	33 (15)	37 (17)	40 (18)	43 (20)	47 (21)	50 (23)	53 (24)	57 (26)	60 (27)	63 (29)	67 (30)	
3200	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	
3400	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	
3600+	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	Dilue	

## 2. Salt types

It is important to use only the salt of sodium chloride (NaCl), whose pure is more than 99%. In addition, it is possible to use a water-toning pill, however, this will take longer for pool to dissolve. Do not use stone salt, salt soda, yellow blood salt or iodized salt.

## 3. How to add or dissolve salt

Add salt directly to the pool and start the circulation pump. Wash around the salt to speed up the dissolution. Do not allow salt to pile up at the bottom of the pool. Run the filter pump for 24 hours to distribute salt evenly throughout the pool (For the new cement pool, please ensure that the wall of the pool is completely solidified before adding salt).

## 4. Antifreeze

The replaceable parts in the chlorine generator can be damaged by water freezing, just as your swimming pool hose can be damaged. In countries or regions experiencing severe or prolonged freezing, ensure that all water is drained via drainage pumps, filters, and pipes to prevent freezing. The control box and the pipe connecting the electrolytic vessel shall be able to bear any freezing weather and shall not be removed.

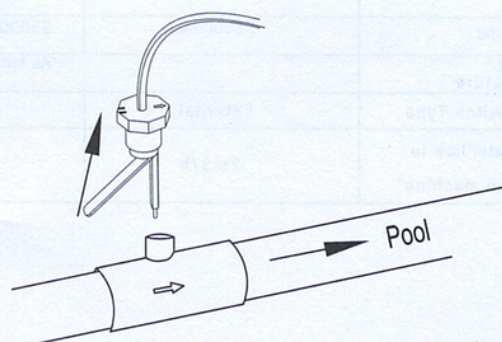
## 5. Maintain and clean chlorine generator electrolytic cell

Before taking out the electrolytic cell, disconnect the power supply of chlorine generator. After removal, check whether there is scaling (light-colored hard skin or flaky sediment) between titanium plates and some debris stuck on the electrode plate of the electrolytic cell. If there is sediment, try to rinse it off with a high-pressure water pipe. If this is not successful, the electrolytic cell may need to be replaced. Titanium scale indicates that the pool is at a high calcium level. If this cannot be corrected, it needs to clean the electrolytic cell regularly.

## 6. Replace the flow switch

After long-term usage, the water flow switch may be damaged. We provide accessories that can be directly replaced. Please refer to the following figures for replacement.

Unscrew the external flow switch, reinstall and connect it to the controller. Please pay attention to the direction of flow switch installation when replacing.





## TROUBLE SHOOTING

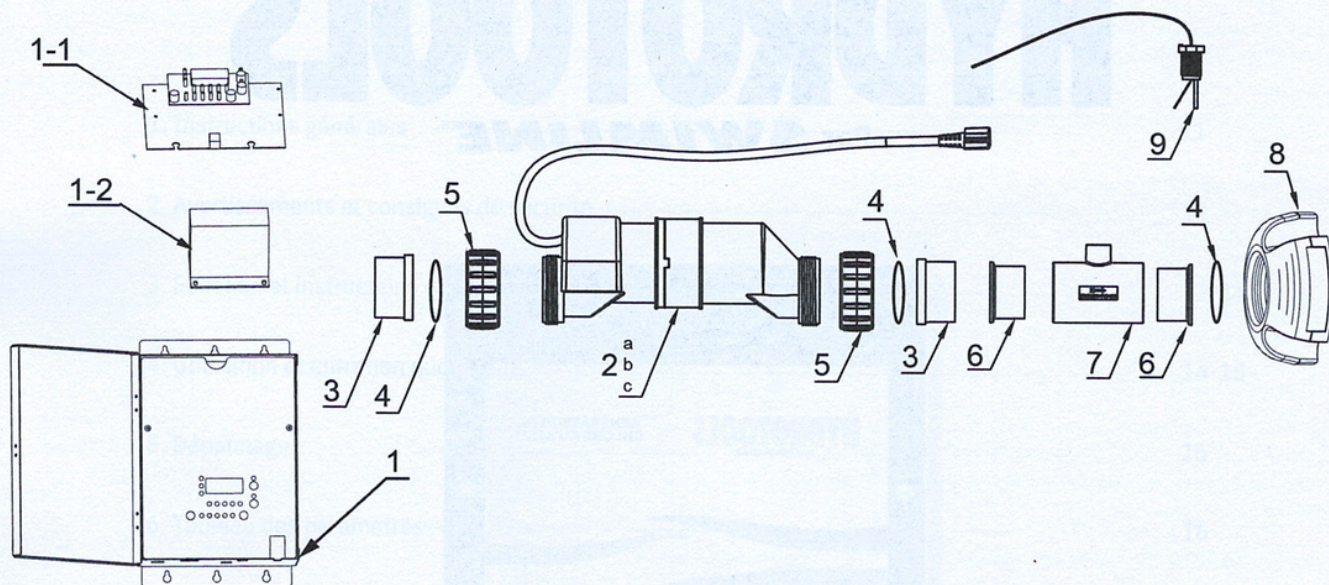
Error Code	Possible Reasons	Troubleshooting
E-CH Load short circuit	A conductive metal is embedded in the titanium plates	Cut off the power supply, remove the chlorine generator and rinse the titanium plate
	There is a short circuit of water inlet at the connection of titanium plates	Check whether the wiring position of titanium plate is flooded or burnt out. If not drain out of water, re-install and start the equipment
E-CL Load break	Very low salinity, no current or very little current	Add a small amount of salt water to the cells and restart the chlorine generator
	The wire connecting the titanium plate fall off	Cut out the power supply, remove the chlorine generator, and check whether the titanium plate wiring is off
	The titanium plate is very old	Change electrolytic cell
High led light	Salinity is higher than the maximum limit specified	Change part of the pool water to reduce salinity
Low led light	Salinity is lower than the maximum limit specified	<ul style="list-style-type: none"> <li>- Expel air from the cells, ensuring that the water surface exceeds 2/3 of the cells</li> <li>- Add salt to the pool</li> </ul>
NO FLOW	Insufficient water flow, the cavity is filled with air, and the flow switch is not turned on	<ul style="list-style-type: none"> <li>- Ensure the filter pump is operating and that there are no obstructions or restrictions in the piping</li> <li>- Increase the flow of filter pump</li> <li>- Expel air from the cells, ensuring that the water surface exceeds 2/3 of the cells</li> </ul>
	The filter is in backwash status	Adjust filter operation status
	Disconnection of the flow switch circuit or other fault	Replace the flow switch
LED display screen does not display	Display screen damaged	<ul style="list-style-type: none"> <li>- Check that the power cord of the control box is plugged into a protected socket - make sure that the chlorine generator is working properly</li> <li>- Replace the chlorine generator controller box</li> </ul>

## PARAMETER TABLE

Model	70188	701 89	70190
Input Power	115 /230V	115/230V	115 /230V
Output Power	24V		
Max. Electricity Current	8.5A		
Chlorine Generation In 24Hours	288g	576g	864g
Pool Volume	1 5000GAL	25000GAL	40000GAL
Working Temperature	Air temperature 0-50 , water temperature 11 -45		
Flow Switch Type	External	External	External
Min. water flow to start the machine	2m3/h	2m3/h	2m3/h



## Explosion View And Parts List



Item	Part.No.	Description	QTY
1 / 1-1 / 1-2	87640CP	ELECTRIC CONTROL BOX ASSEMBLY	1
2A	87615CELL	CELL COMPONENTS FOR 87615 (7 PLATE)	1
2B	87625CELL	CELL COMPONENTS FOR 87625 (13 PLATE)	1
2C	87640CELL	CELL COMPONENTS FOR 87640 (13 XL PLATE)	1
3/4/5	87640CONADAPT	CONNECTION ADAPTER WITH O RING (SET OF 2)	2
4	87640ORING	O-RING ONLY	1
6/7	87640ADAPTS	ADAPTER 2" TO 1.5" / 3 WAY DIVERSION 2" (60MM)	2 / 1
8	87640BASE	CLEANING BASE	1
9	87640SENSOR	WATER FLOW SENSOR SWITCH	1



**This unit has a one year-limited warranty from manufacturer defects.**

Cet appareil bénéficie d'une garantie limitée d'un an contre les défauts de fabrication.

Este dispositivo está respaldado por una garantía limitada de un año contra defectos de fabricación.

# HYDROTOOLS™

By **SWIMLINE®**

**HYDROTOOLS by Swimline/International Leisure Products, Inc**

191 Rodeo Drive, Edgewood, NY 11717

Tel (631) 254-2155 • [www.swimline.com](http://www.swimline.com)