

INTEX® OWNER'S MANUAL

CHLORINE GENERATOR

Model 8220 220-230V~,50Hz

Model 8230 230 - 240 V~,50 Hz

220W,IPX5

CE



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IMPORTANT SAFETY RULE

READ, UNDERSTAND AND FOLLOW ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING AND USING THIS PRODUCT.

INTEX®

Made in China
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Intex Trading Ltd.
C/O Intex (HongKong) Ltd.

Intex Trading B.V.
P. O. Box nr. 1075-4700 BB Roosendaal

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IMPORTANT SAFETY RULE

Read, Understand and Follow All Instructions Carefully Before Installing and Using this Product.

This Electronic Chlorine Generator is intended to be used only for the purposes described in this manual. Failure to follow all product, package and package insert safety and installation instructions could result in property damage, electric shock, entanglement or other serious injury or death.

READ AND FOLLOW ALL INSTRUCTIONS

⚠ WARNING

- To reduce the risk of injury, do not permit children to use this product. Always supervise children and those with disabilities.
- Risk of electric shock. Connect this product only to a grounding type receptacle protected by a ground-fault circuit interrupter (GFCI) or residual current device (RCD). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI/RCD. Use a qualified electrician to install the GFCI/RCD, which has a maximum rate of 30mA. Do not use a portable residual current device (PRCD).
- Do not bury electrical cord. Locate cord where it will not be damaged by lawn mowers, hedge trimmers, and other equipment.
- The supply cord cannot be replaced. If the cord is damaged the appliance should be scrapped.
- To reduce the risk of electric shock, do not use extension cords, timers, plug adaptors or converter plugs to connect unit to electric supply; provide a properly located outlet.
- Installation by adults only.
- Do not attempt to plug in or unplug this product while standing in water or when your hands are wet.
- Children must stay away from this product and all electrical cords.
- Do not operate this product when pool is occupied.
- Always unplug this product from the electrical outlet before cleaning and servicing.
- Keep this product more than 2m away from the pool.

FAILURE TO FOLLOW THESE WARNINGS MAY RESULT IN PROPERTY DAMAGE, ELECTRIC SHOCK, ENTANGLEMENT OR OTHER SERIOUS INJURY OR DEATH.

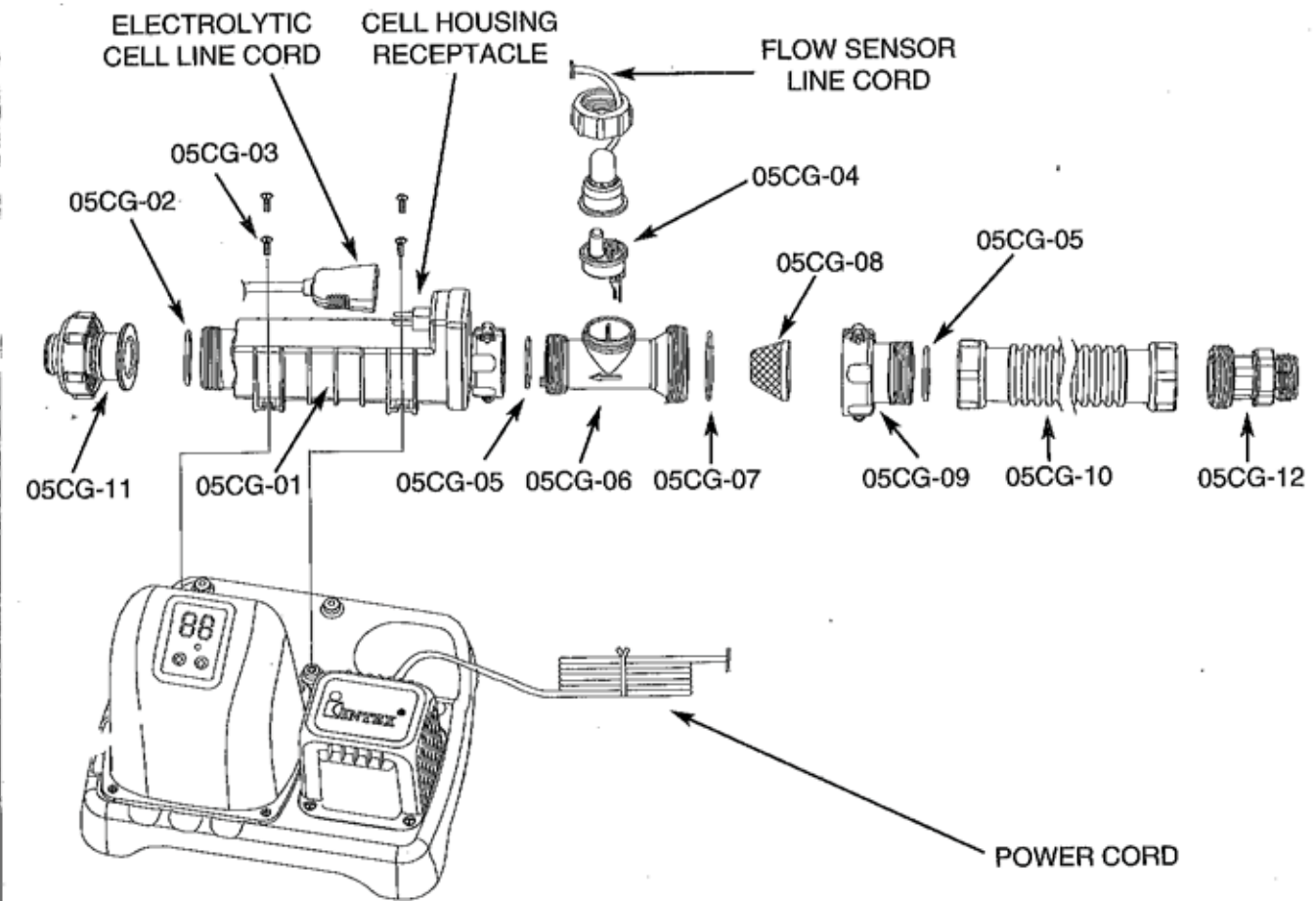
The product warnings, instructions and safety rules provided with this product represent some of the common risks associated with water recreation appliances and do not cover all instances of risk or danger. Please use common sense and good judgement when enjoying any water activity.

For Portable, Above-The-Ground Pools Only

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PARTS REFERENCE

Before assembling your product, please take a few minutes to check the contents and become familiar with all the parts.



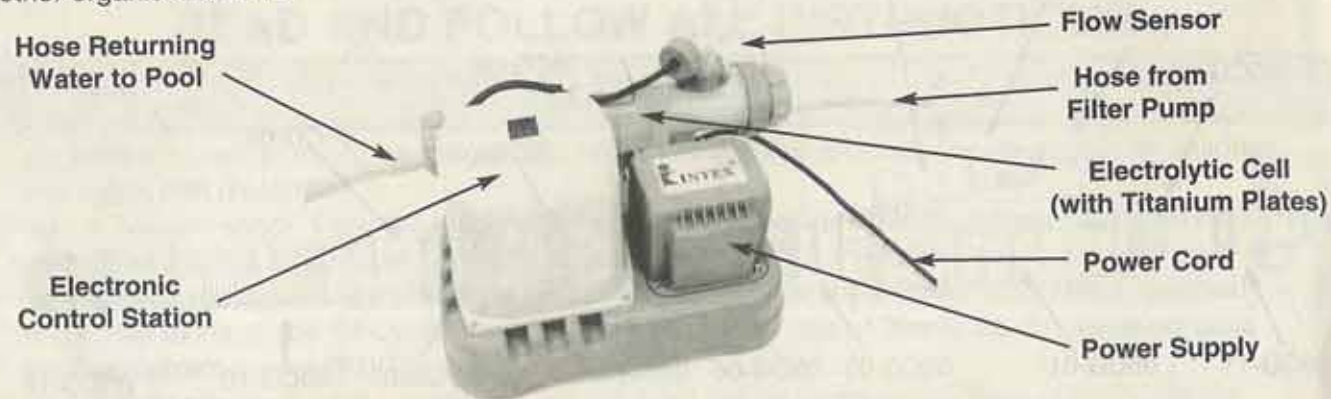
REF. NO.	DESCRIPTION	QTY.	REMARK
05CG-01	Electrolytic Cell (with Titanium Plates)	1	
05CG-02	O-Ring A (pre-installed in 05CG-01)	1	
05CG-03	Screw	4	
05CG-04	Flow Sensor (subassembly)	1	
05CG-05	O-Ring B (pre-installed in 05CG-06/05CG-09)	2	
05CG-06	Flow Sensor Conduit	1	
05CG-07	O-Ring C (pre-installed in 05CG-06)	1	
05CG-08	Debris Screen	1	
05CG-09	Screen Fitting with Threaded Collar	1	
05CG-10	Connector Hose with Threaded Fittings	1	1-1/2"(D) x 3-1/4"(L) (38mm(D) x 1m(L))
05CG-11	Adaptor A with Threaded Collar	1	For Filter Pump Model 12R & 22R
05CG-12	Threaded Adaptor B	1	For Filter Pump Model 12R & 22R

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Product Information and Specifications

How the Chlorine is Generated

Common salt (sodium chloride) is made up of two elements, sodium and chloride. During the installation of your Chlorine Generator, a measured quantity of salt is dissolved in the pool water to make it slightly salty. This pool water is passed through the chlorine generator's electrolytic cell to produce chlorine which is dissolved instantly in the water. The chlorine instantly starts to destroy bacteria, viruses, algae and oxidizes other organic materials.



Key Chlorine Generator Parts:

- Power Supply**
 The power supply converts AC electrical current to a low voltage DC current. This is required by the cell to perform the electrolysis that creates chlorine.
- Electrolytic Cell (with Titanium Plates)**
 The electrolytic cell contains bipolar titanium electrodes which perform the electrolysis and produce liquid chlorine when energized with DC electricity. Chlorine is generated when pool water containing salt passes through the cell. The chlorine production can be varied by changing the number of hours the chlorine generator is operating each day. The chlorine generator has a built-in self cleaning cycle that operates every two hours without interrupting chlorine production.
- Flow Sensor**
 The flow sensor protects the electrolytic cell and ensures there is adequate water flowing through the cell. When the water flow drops below minimum flow rate, the electrolytic cell will automatically shut down to protect the titanium plates. A safety buzzer will sound and the LED display panel will show a signal code (see "LED Code Chart") indicating the problem.
- Electronic Control Station**
 The electronic control station contains an LED display panel and a set of pushbuttons to program the chlorine generator operating hours. It also monitors the different parameters such as salt level, water flow and the electrolytic cell activity. If any deviation from the norm occurs then a buzzer will sound and the LED display panel will show a signal code (see "LED Code Chart") indicating the problem.

PRODUCT SPECIFICATIONS

Wattage:	220 W
Ideal Salt Level:	3000 ppm (parts per million)
Maximum Chlorine Output/hour:	24 grams/hour
Minimum Flow Rate:	1000 gallons/hour (3785 liters/hour)
Limited Warranty:	1 Year (see "Limited Warranty")

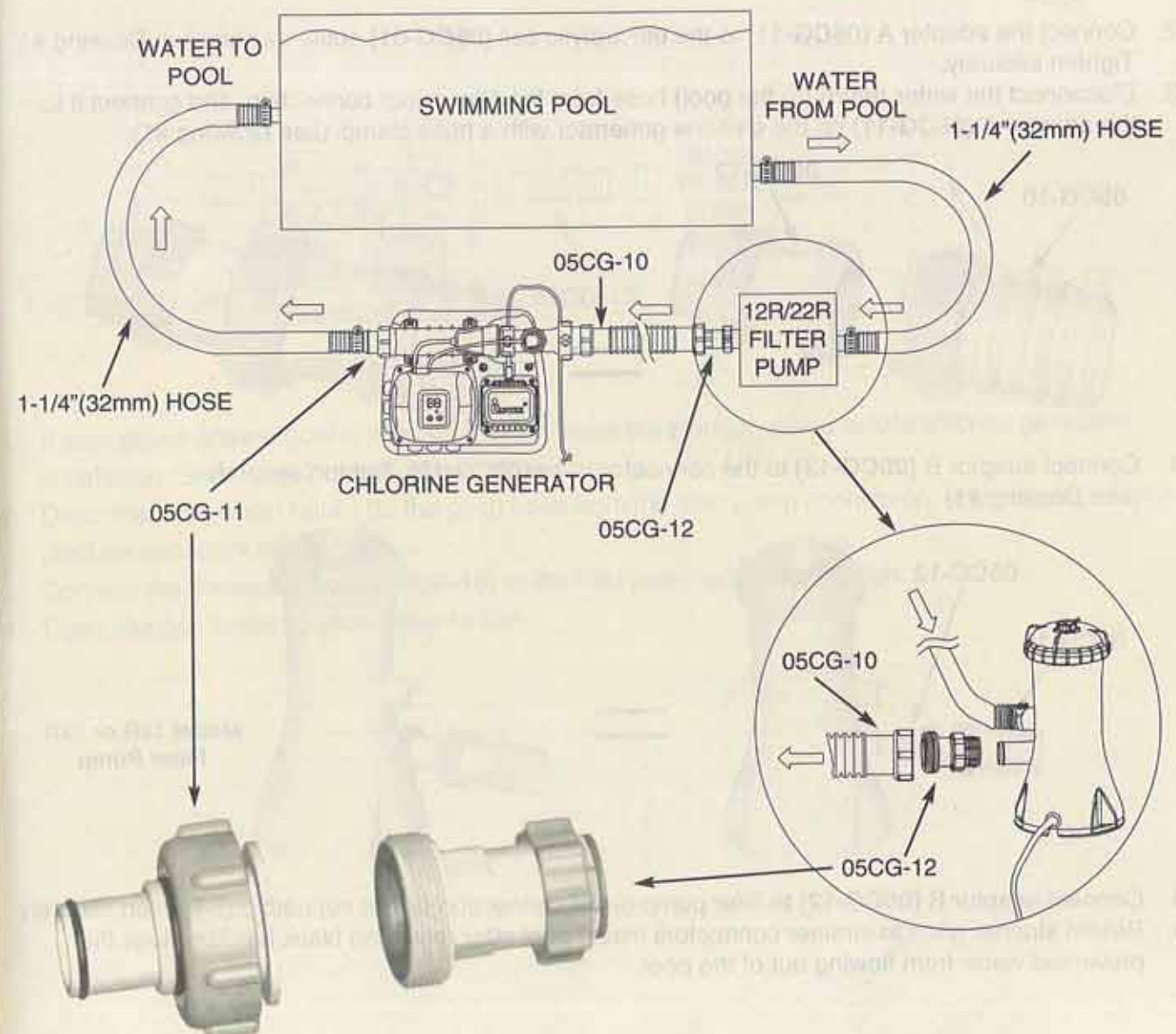
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Set Up Instructions

IMPORTANT: The saltwater chlorine generator must be installed as the last piece of pool equipment in the water return line to the pool as displayed in Drawing #1. This location extends the life of the titanium plates.

1. Assemble the above-ground-pool (AGP) and its filter pump per installation instructions.
2. Remove the chlorine generator and its accessories from the packaging.
3. Place the chlorine generator in line after the filter pump.
4. Connect the connector hose (05CG-10) to the chlorine generator inlet.

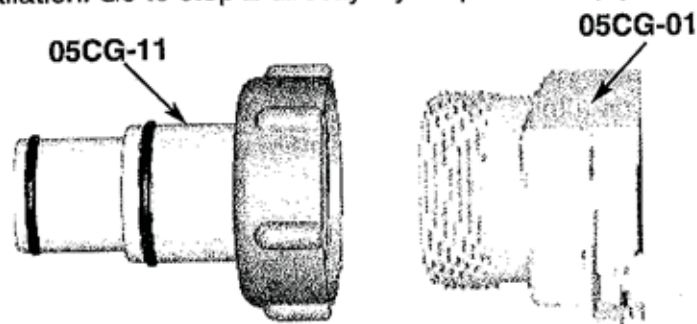
For connection to a Model 12R or 22R filter pump:
Drawing #1



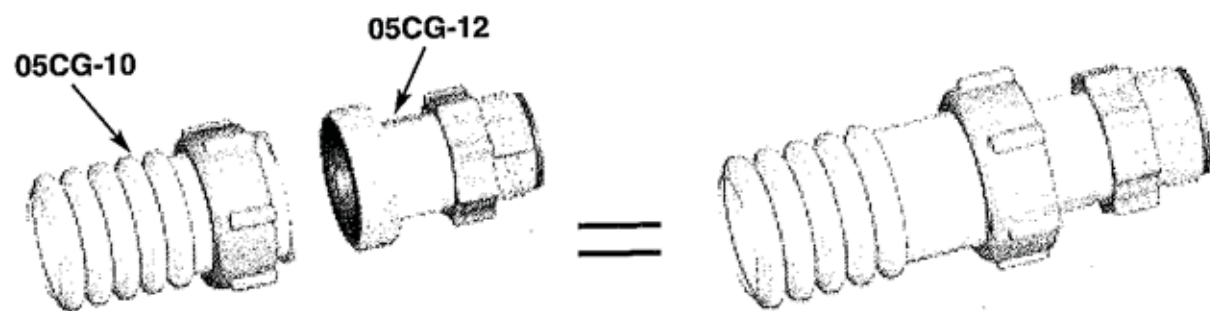
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Set Up Instructions (cont.)

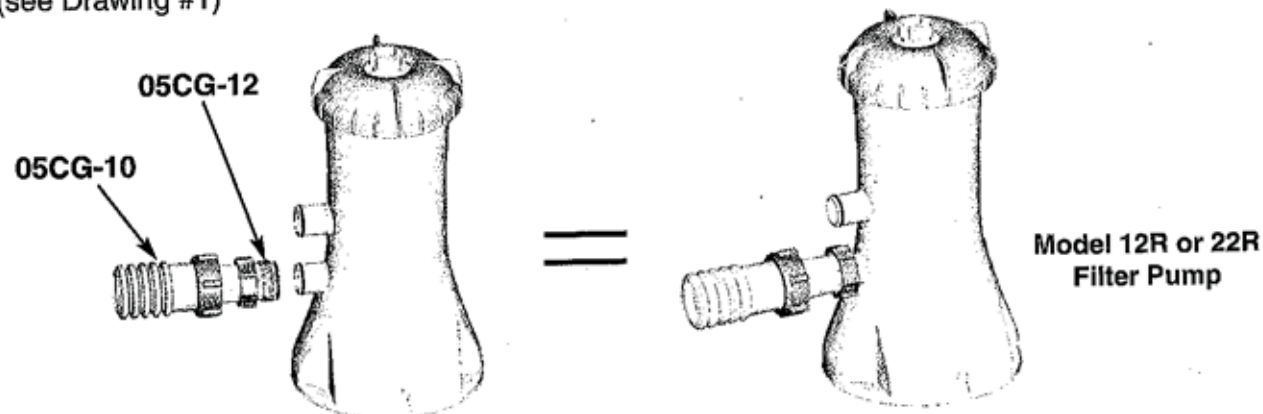
1. If your above-ground-pool is filled up with water, unscrew the strainer grids from the strainer connectors and insert the black hat-like plugs into the strainer connectors before chlorine generator installation. Go to step 2 directly if your pool is empty.



2. Connect the adaptor A (05CG-11) to the electrolytic cell (05CG-01) outlet as shown in Drawing #1. Tighten securely.
3. Disconnect the water return (to the pool) hose from the filter pump connection, and connect it to the adaptor A (05CG-11) on the chlorine generator with a hose clamp. (see Drawing #1)



4. Connect adaptor B (05CG-12) to the connector hose (05CG-10). Tighten securely. (see Drawing #1)



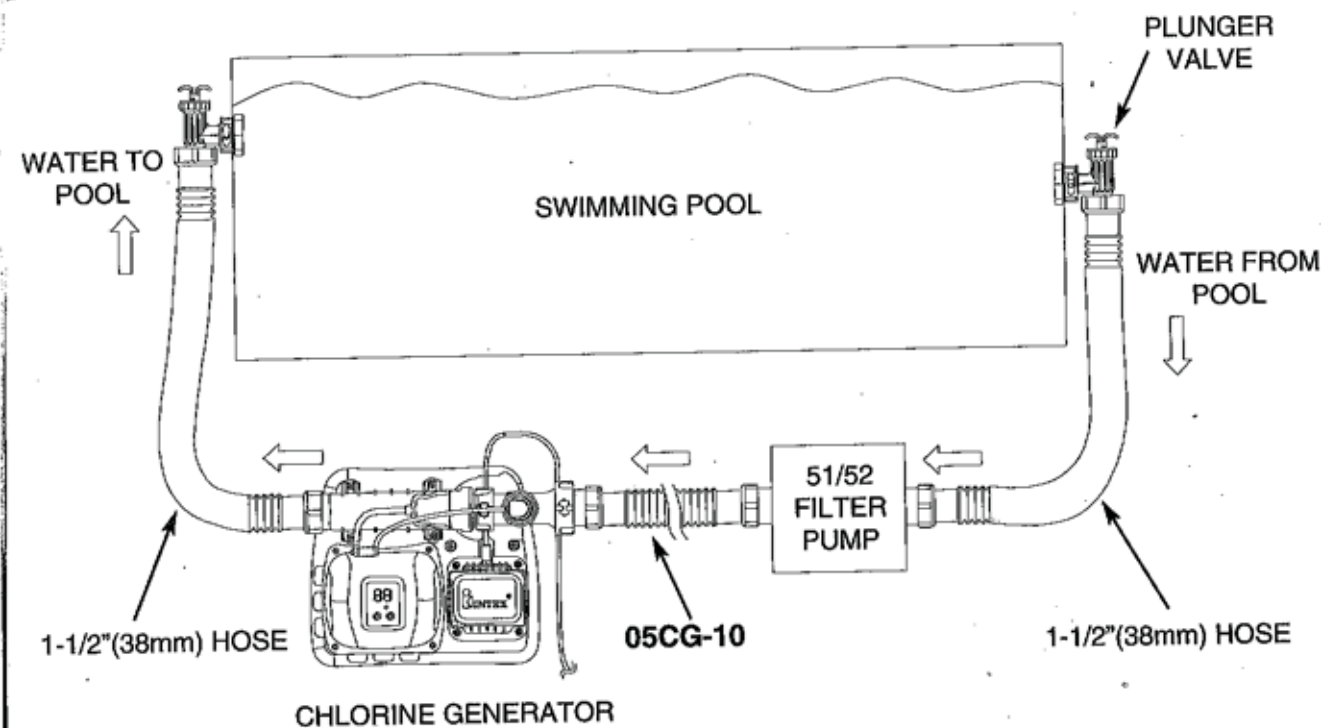
5. Connect adaptor B (05CG-12) to filter pump outlet connection (lower connection). Tighten securely.
6. Return strainer grids to strainer connectors inside pool after removing black hat-like plugs that prevented water from flowing out of the pool.

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Set Up Instructions (cont.)

For connection to a Model 51 or 52 filter pump:
(Do not use adapter A or B, 05CG-11 or 05CG-12)

Drawing #2



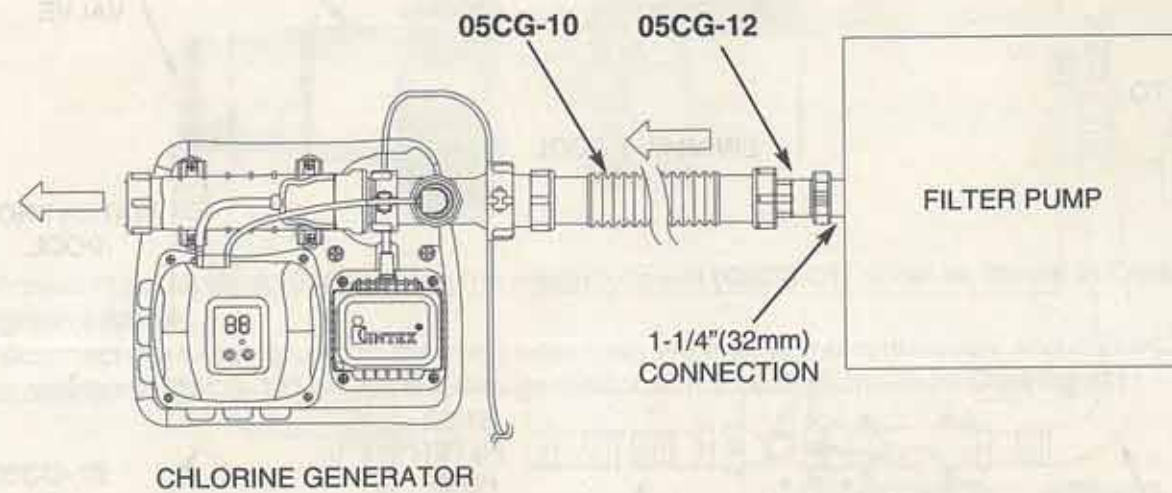
1. If your above-ground-pool is filled with water, close the plunger valves before chlorine generator installation. Go to step 2 directly if your pool is empty.
2. Disconnect the water return (to the pool) hose from the filter pump connection, and connect it to the chlorine generator outlet.
3. Connect the connector hose (05CG-10) to the filter pump outlet connection.
4. Open plunger valves to allow water to flow.

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Set Up Instructions (cont.)

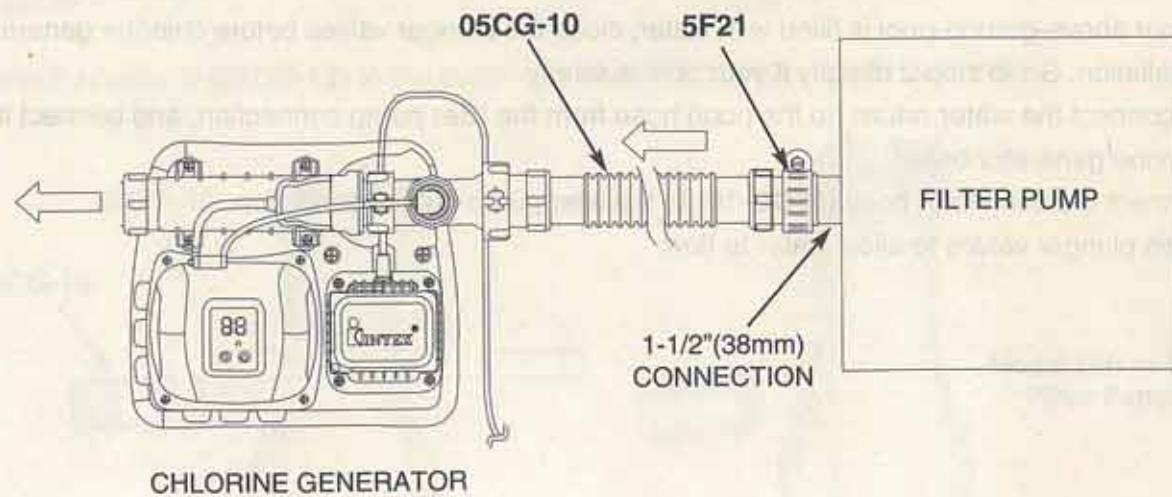
For connection to other filter pump (with different type of thread or no thread):
Chlorine generator can also adapt to other filter pumps for those with different thread or without thread on the connection.

- **Connect to 1-1/4" (32mm) filter pump outlet connection:**



1. Connect adaptor B (05CG-12) to the connector hose (05CG-10). Tighten securely.
2. Connect adaptor B (05CG-12) to filter pump outlet connection. Tighten securely.

- **Connect to 1-1/2" (38mm) filter pump outlet connection:**

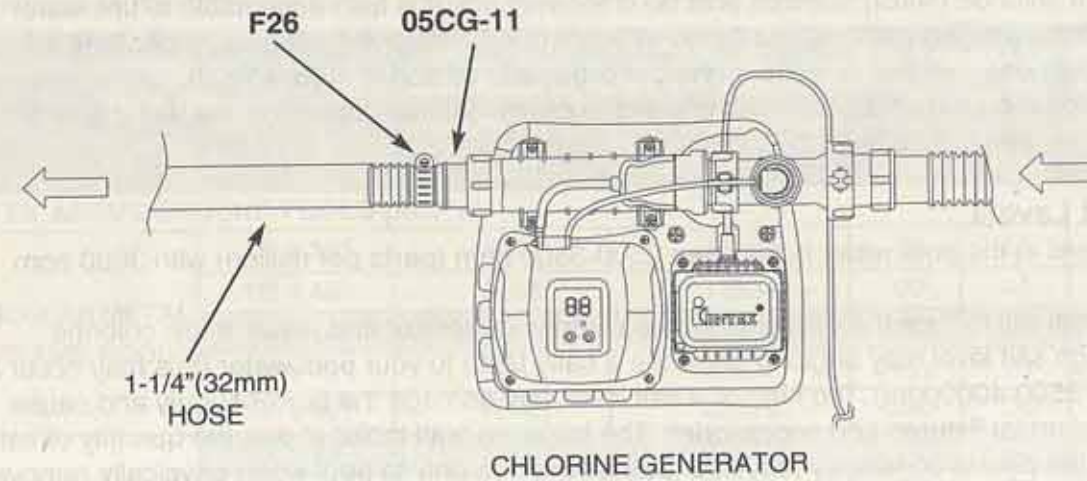


1. Connect the connector hose (05CG-10) to the filter pump outlet connection with a hose clamp. Tighten securely.

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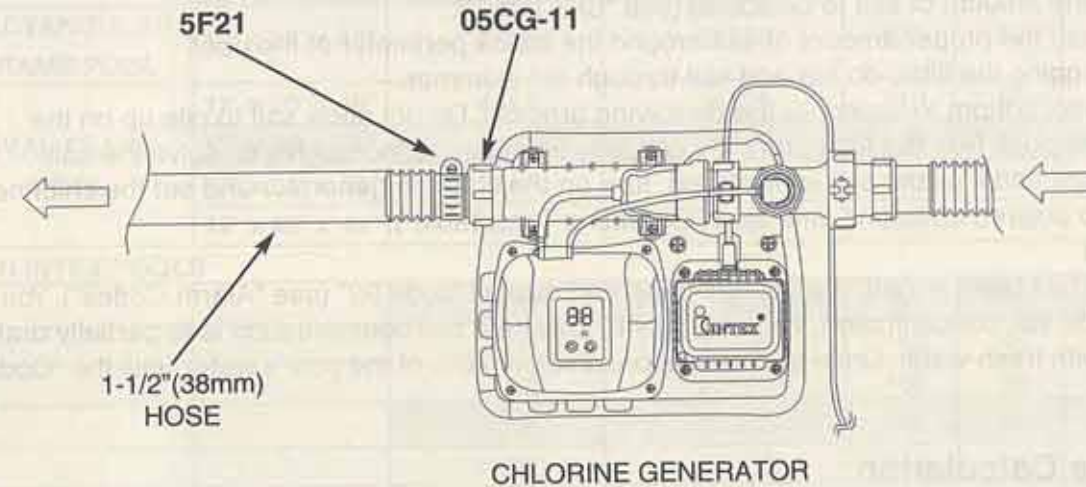
Set Up Instructions (cont.)

- **Connect to 1-1/4" (32mm) hose:**



1. Connect the adaptor A (05CG-11) to the electrolytic cell (05CG-01) outlet. Tighten securely.
2. Connect the water return (to the pool) hose to the adaptor A (05CG-11) on the chlorine generator with a hose clamp (F26).

- **Connect to 1-1/2" (38mm) hose:**



1. Connect the adaptor A (05CG-11) to the electrolytic cell (05CG-01) outlet. Tighten securely.
2. Connect the water return (to the pool) hose to the adaptor A (05CG-11) on the chlorine generator with a hose clamp (5F21).

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Salt & Pool Water Volumes

Use only Sodium Chloride Salts

Use only sodium chloride (NaCl) salt that is at least 99.8% pure. It is also acceptable to use water conditioning salt pellets (the compressed forms of evaporated salt), but it will take longer time for them to dissolve. **Do not use iodized or yellow (yellow prussiate of soda) colored salt.** Salt is added to the pool water and the electrolytic cell uses this salt to create chlorine, the purer the salt the better the performance of the electrolytic cell.

Optimum Salt Levels

The ideal salt level in the pool water is between 2500-3500 ppm (parts per million) with 3000 ppm being optimal.

A too low salt level will reduce the efficiency of the chlorine generator and result in low chlorine production. A high salt level may begin to generate a salty taste to your pool water (this may occur at a salt level above 3500-4000ppm). Too high of a salt level may damage the power supply and cause corrosion to pool metal fixtures and accessories. The following "salt table" shows the quantity of salt to use. The salt in the pool is constantly recycled. Salt loss is due only to pool water physically removed from the pool. Salt is not lost due to evaporation.

How to Add or Remove Salt

Adding Salt

1. Depress the ON button on the filter pump switch to circulate pool water.
2. Keep the chlorine generator "OFF".
3. Determine the amount of salt to be added (see "Salt Table").
4. Evenly spread the proper amount of salt around the inside perimeter of the pool.
5. To avoid clogging the filter, do not add salt through the skimmer.
6. Brush the pool bottom to speed up the dissolving process. Do not allow salt to pile up on the bottom of the pool. Run the filter pump 24 consecutive hours to thoroughly dissolve the salt.
7. After 24 hours and if all the salt is dissolved, turn on the chlorine generator and set the chlorine generator to desired operating time (see "Operating Time Table").

Removing Salt

If too much salt has been added, the unit will beep and display "code 92" (see "Alarm Codes"). You need to lower the salt concentration. The only way to lower the salt concentration is to partially drain the pool and refill with fresh water. Drain and refill approximately 20% of the pool's water until the "Code 92" disappears.

Pool Volume Calculation

Types of Pool	Gallons (pool size in feet)	Cubic Meters (pool size in meters)
Rectangular	Length x Width x Average Depth x 7.5	Length x Width x Average Depth
Circular	Length x Width x Average Depth x 5.9	Length x Width x Average Depth x 0.79
Oval	Length x Width x Average Depth x 6.0	Length x Width x Average Depth x 0.80

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Salt Table

This table shows how much salt to use to achieve the desired 3000 ppm salt level and how much will be needed to maintain this level if it drops below this desired level.

Pool Size	Water Capacity (Calculated at 90% for Frame Pool and 80% for Easy Set & Oval Pool)		Salt Needed for Startup		Salt Needed when Low Salt Detected (CODE "91")		
	(Gals)	(Liters)	(Lbs)	(Kgs)	(Lbs)	(Kgs)	
INTEX ABOVE GROUND POOLS (AGP's)							
CIRCULAR METAL FRAME POOL	15' x 36"	3107	11760	80	35	20	10
	15' x 42"	3655	13834	90	40	25	10
	15' x 48"	4203	15908	105	45	30	15
	18' x 48"	6280	23772	155	70	40	20
	24' x 48"	11195	42373	280	130	75	35
EASY SET POOL	15' x 36"	2561	9693	65	30	15	10
	15' x 42"	3110	11771	80	35	20	10
	15' x 48"	3795	14364	95	45	25	10
	16' x 42"	3693	13978	90	40	25	10
	16' x 48"	4128	15624	105	45	30	10
	18' x 42"	4814	18221	120	55	30	15
18' x 48"	5593	21170	140	65	35	15	
RECTANGULAR FRAME POOL	12' x 24' x 48"	7756	29356	195	90	50	25
OVAL FRAME POOL	12' x 20' x 48"	4313	16325	110	50	30	15
	12' x 24' x 48"	5414	20492	135	60	35	15
	12' x 32' x 48"	7617	28830	190	85	50	25
	12' x 40' x 48"	9819	37165	250	110	65	30
NON INTEX POOLS							
		2000	7500	50	20	15	5
		4000	15000	100	45	35	15
		6000	22500	150	65	50	20
		8000	30000	200	90	65	30
		10000	37500	250	110	85	35
		12000	45500	300	135	100	45
		14000	53000	350	160	115	55
		16000	60500	400	180	130	60
		18000	68000	450	205	150	70
		20000	75700	500	225	165	75

Salt Calculation for non-INTEX Pools

Salt Needed for Startup (Lbs)	Salt Needed for Startup (Kgs)	Salt Needed when Low Salt Detected (Lbs)	Salt Needed when Low Salt Detected (Kgs)
Water Capacity (Gals) x 0.025	Water Capacity (Liters) x 0.003	Water Capacity (Gals) x 0.0067	Water Capacity (Liters) x 0.0008

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Operating Time Table

This table shows the operating time required for normal use of the chlorine generator with AGP's INTEX POOLS

Pool Size	Water Capacity (Calculated at 90% for Frame Pool and 80% for Easy Set & Oval Pool)		Operating Time (hours) at different ambient/air temperatures			
	(Gals)	(Liters)	20-28 °C	29-36 °C	37-42 °C	
			(68 - 82 °F)	(84 - 97 °F)	(99 - 108 °F)	
CIRCULAR METAL FRAME POOL	15' x 36"	3107	11760	2	2	2
	15' x 42"	3655	13834	2	2	2
	15' x 48"	4203	15908	2	2	2
	18' x 48"	6280	23772	2	3	4
	24' x 48"	11195	42373	5	6	7
EASY SET POOL	15' x 36"	2561	9693	2	2	2
	15' x 42"	3110	11771	2	2	2
	15' x 48"	3795	14364	2	2	2
	16' x 42"	3693	13978	2	2	2
	16' x 48"	4128	15624	2	2	3
	18' x 42"	4814	18221	2	3	4
RECTANGULAR FRAME POOL	12' x 24' x 48"	7756	29356	3	4	5
	12' x 20' x 48"	4313	16325	2	3	4
OVAL FRAME POOL	12' x 24' x 48"	5414	20492	3	4	5
	12' x 32' x 48"	7617	28830	4	5	6
	12' x 40' x 48"	9819	37165	6	7	8

NON INTEX POOLS

Water Capacity		Operating Time (hours) at different ambient/air temperatures		
(Gals)	(Liters)	20-28 °C	29-36 °C	37-42 °C
		(68 - 82 °F)	(84 - 97 °F)	(99 - 108 °F)
2000	7500	1	1	1
4000	15000	2	2	2
6000	22500	2	3	4
8000	30000	3	4	5
10000	37500	4	5	6
12000	45500	5	6	7
14000	53000	6	7	8
16000	60500	6	8	10
18000	68000	7	9	11
20000	75700	8	10	12

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Operating Instructions

After the salt is dissolved, but before starting the chlorine generation be sure that:

- The entire filtering and chlorinating system is connected to a grounding type receptacle protected by a ground-fault circuit interrupter (GFCI) or residual current device (RCD).
- The filter pump operates several minutes before starting the chlorine generator (This removes air pockets and debris in the water hoses).
- No air is trapped in any of the hoses (Follow the Filter Pump Owner's manual to release any trapped air).

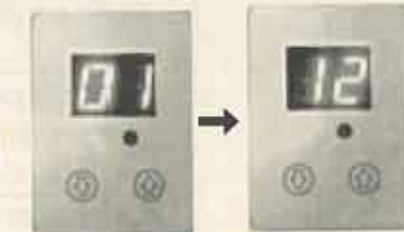
1. Plug the Model 8220 power cord into the electrical outlet. Code "88" appears on the electronic control station's LED indicating the unit is in a Stand-By Mode, this is normal.



2. Unlock keypad controls: Press and hold [power] button for 5 seconds until you hear a short "beep", then press and hold [power] button for another 5 seconds until you hear the second short "beep", LED flashes "00". This procedure unlocks the keypad control buttons.



3. Set chlorine generator operating hours: Increase the scheduled number of hours of operation by pressing [up] button, or reduce by pressing [down] button. See "Operating Time Table" for pool size and required operating hours. Press [up] button to select hours required, press [down] if too many hours were selected. The built-in timer will now operate for the number of hours selected at the same time each day.



NOTE: The chlorine generator will not operate if the filter pump is not operating.

(1 to 12 hours max per cycle)

4. Re-lock keypad controls: With the proper hour value showing, press and hold [power] button for 5 seconds until you hear a long "beep", then press and hold [power] button for another 5 seconds until you hear the second long "beep". A green LED light on the control panel will light up within few a minutes, which indicates the chlorine generator starting chlorine production. With locking the control buttons into this setting you will have prevented unauthorized changing of the operating cycle.



5. Operating hours can be re-adjusted if necessary. Follow steps 2 thru 4.
6. The scheduled operating hours displayed on the LED readout will decrease to zero as the unit operates. The LED shows "hours remaining" in the daily operating cycle.

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Operating Instructions (cont.)

7. The green LED light on the control panel will disappear when the cycle has ended. The system will go into a "Stand-By Mode" with the LED flashing "93". The system automatically goes into a "Power Saving Mode" and will automatically turn itself back on in 24 hours to continue its daily chlorine production.



8. The LED will become blank after 1 hour indicating the chlorine generator is dormant (Power Saving Mode) waiting for the next startup cycle to begin. Press any button (⏏ or ⏏) to view the last LED code.



SPECIAL NOTES

- Always use a test strip to test the chlorine level before entering or using the pool. If the chlorine level is too high, **wait until the chlorine level returns to 1 to 3 ppm before using the pool or operating the chlorine generator again.**
- **IMPORTANT: Never use the pool if chlorine level is more than 3 ppm. Do not operate chlorine generator while the pool is in use or occupied.**
- If a power outage occurs or the power cord is unplugged then the chlorine generator operating hours will have to be reset.

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Alarm Codes & LED Code Chart

Alarm Codes

No chlorine production will occur if "Low Water Flow", "Low Salt Level" or "High Salt Level" are detected. If any of these conditions occur then the chlorine generator will sound an alarm that indicates chlorine production has stopped. A buzzer will sound and a Code (see below) will keep flashing on the LED for 1 hour. The buzzer and flashing light will end after one hour and the chlorine generator will go to Power Saving Mode. If this occurs then press any button (⏏ or ⏏) to view the code of the original problem so that it can be corrected.

Turn off the power of the unit and follow the solutions below to solve the problem. Turn on the unit again by following the "Operating Instructions".

Code	Cause	Remedy	Flashing	Buzzer
90 Low Water Flow or No Flow	1. Circulation line blocked.	<ul style="list-style-type: none"> • Ensure the plunger valves are opened (if any). • Ensure your filter cartridge, cell and debris screen are clear from debris and dirt. See "Maintenance". • Release all trapped air in the circulation line. See Filter Pump Manual. 	Yes	Yes
	2. Incorrect inlet and outlet hose direction.	<ul style="list-style-type: none"> • Check for the direction of water inlet and water outlet hose. Reverse the hoses if necessary. See "Set Up Instructions". 		
	3. Scale on the flow sensor.	<ul style="list-style-type: none"> • Ensure the flow sensor (especially the hinge) is clean. See "Maintenance". 		
	4. Flow sensor cord is loose.	<ul style="list-style-type: none"> • Check for flow sensor loose or not connected properly. Plug the flow sensor firmly into the flow sensor receptacle. 		
	5. Flow sensor failure.	<ul style="list-style-type: none"> • Contact Intex Service Center for replacement. 		
91 Low Salt Level	1. Dirt or scale on titanium plates.	<ul style="list-style-type: none"> • Remove the electrolytic cell for inspection and clean it if necessary. See "Maintenance". 	Yes	Yes
	2. Low salt level.	<ul style="list-style-type: none"> • Add salt. See "Salt & Pool Water Volumes". 		
	3. Possible electrolytic cell failure.	<ul style="list-style-type: none"> • Contact Intex Service Center. Replace the cell if needed. 		
92 High Salt Level	1. High salt level.	<ul style="list-style-type: none"> • Partially drain the pool and refill with fresh water. See "Salt & Pool Water Volumes". 	Yes	Yes
	2. Possible electrolytic cell failure.	<ul style="list-style-type: none"> • Contact Intex Service Center. Replace the cell if needed. 		

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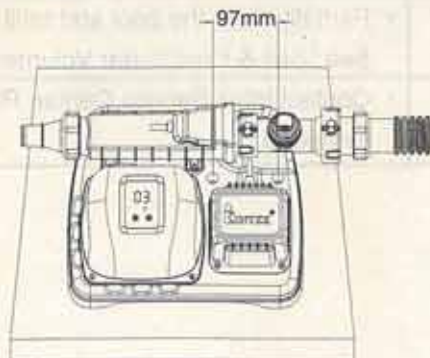
LED Code Chart

LED Reading	Definitions
88	Stand-By Mode (Start-up)
00	Zero Operating Hours
01	Minimum Operating Hour (1 hour remaining)
02	Operating Hours (2 hours remaining)
03	Operating Hours (3 hours remaining)
04	Operating Hours (4 hours remaining)
05	Operating Hours (5 hours remaining)
06	Operating Hours (6 hours remaining)
07	Operating Hours (7 hours remaining)
08	Operating Hours (8 hours remaining)
09	Operating Hours (9 hours remaining)
10	Operating Hours (10 hours remaining)
11	Operating Hours (11 hours remaining)
12	Maximum Operating Hours (12 hours remaining)
90	Alarm Code (Low Water Flow / No Flow)
91	Alarm Code (Low Salt Level)
92	Alarm Code (High Salt Level)
93	Stand-By Mode (Operating Process finished)
94	Stand-By Mode (no Operating Time input)
"BLANK"	No Power or "Power Saving Mode" waiting to start next chlorine generator cycle, or no salt.

Chlorine Generator Stationary Mounting Option

Some countries, especially in the European community, require the product to be secured to the ground or to a base in a permanent upright position. Check your local authorities to determine if there is a regulation in your area regarding above-the-ground swimming pool filter-pumps. If yes, then the product can be mounted to a platform using the two (2) holes located in the base. See drawing below.

The product can be mounted on a cement base or onto a wooden platform to prevent accidental falling over. Total assembly must exceed 18kg.



1. The mounting holes are 6.4mm in diameter and spaced 97mm apart.
2. Use two bolts and lock nuts with a maximum of 6.4mm in diameter.

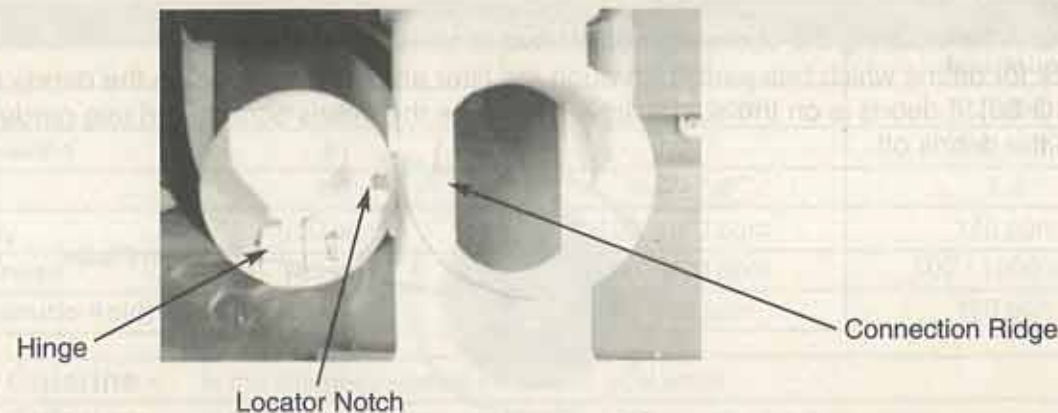
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Maintenance

IMPORTANT: Unplug power cord before cleaning and close plunger valves or insert black hat-like plugs in strainer opening to prevent water spillage. Plug in the power cord and open plunger valves or remove plugs when maintenance tasks are completed.

Flow Sensor Cleaning

1. In a counter-clockwise motion unscrew the collar of the flow sensor (05CG-04) and remove it from the flow sensor conduit (05CG-06). See "Part Reference".
2. If deposits and debris are seen on the surface of the flow sensor, then use a garden hose to wash it off.



3. If flushing does not remove the deposits, use plastic brush (do not use a metal brush) to clean the surface and the hinge if necessary.
4. After the electrolytic cell has been inspected and cleaned, align the locator notch on the flow sensor to the connection ridge in the conduit, turn the collar in a clockwise motion tightening the sensor back into its position. Do not over tighten.

Electrolytic Cell Cleaning

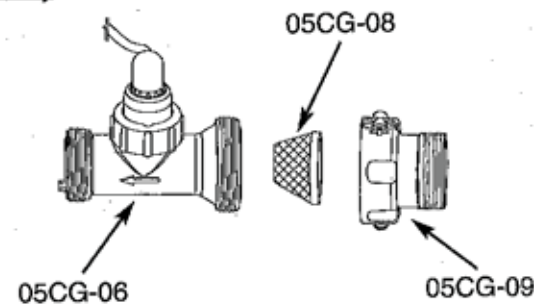
The electrolytic cell (05CG-01) has a self cleaning function incorporated into the electronic control's programming. In most cases this self cleaning action will keep the cell working at optimum efficiency. If the pool water is hard (high mineral content) the cell may require periodic manual cleaning. Follow the cleaning instructions below. To maintain maximum performance, it is recommended that you open and visually inspect the electrolytic cell (05CG-01) and debris screen (05CG-08) every 3 months.

Visual Inspection and Cleaning:

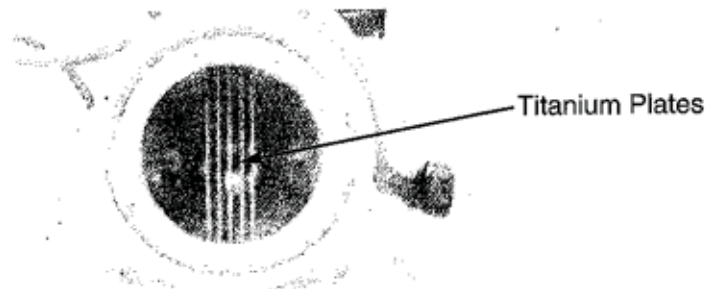
1. Switch off the unit, unplug the power cord from the electrical socket.
2. **For model 12R/22R filter pump user** - To prevent water from escaping the pool, unscrew the strainer grids from the strainer connectors and insert the hat-like plugs into the strainer connectors. **For model 51/52 filter pump user** - Grasp a plunger valve handle. Turn the handle counter-clockwise, push down until it stops and then turn it clockwise until the plastic protruding notch anchors in the "0/I" position. Repeat for the 2nd plunger valve. This prevents the water from flowing out of the pool.

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Maintenance (cont.)



3. Disconnect screen fitting (05CG-09) from the flow sensor conduit (05CG-06). See "Parts Reference".
NOTE: After cleaning the operating hours have to be reset.
4. Check for debris which has passed through the filter and been trapped on the debris screen (05CG-08). If debris is on the debris screen, remove the debris screen and use garden hose to flush the debris off.



5. Disconnect the adaptor A from the chlorine generator outlet. Look inside the electrolytic cell (05CG-01) inspect for scale formation (light colored crusty or flaky deposits) on the titanium plates. If no deposits and debris are visible reinstall the adaptor A (05CG-11), debris screen (05CG-08), and screen fitting (05CG-09).
6. If deposits and debris are seen on the titanium plates, use a high pressure garden hose and try to flush them off. Only flush from the **direction of water inlet** to avoid damaging the flow sensor. Do **not** use any metal tool as this will scratch the coating off the plates. Note that a buildup on the cell indicates that there is an unusually high calcium level in the pool. If this is not corrected, you have to frequently check and clean the cell. To avoid this, always keep your pool chemistry at the recommended levels. See "Pool Maintenance & Chemical Definitions" for reference.
7. If flushing does not remove the deposits on the plate then disconnect the cell from the base by removing the 4 mounting screws (05CG-03). Disconnect the flow sensor from the top of the cell and unplug the electrolytic cell cord. Soak the cell in a vinegar solution (condiment) for 2-3 hours and then flush with high pressure water from the garden hose.
8. Reconnect electrolytic cell reversing steps 3, 4, 5 and 7. (Reset the chlorine generator's operating hours)

Long Term Storage

1. Disconnect power cord from electrical outlet.
2. After pool is emptied of all water, disconnect the chlorine generator from the hoses reversing the installation instructions.
3. Air-dry the unit before storage (It may be prudent to visually inspect and clean the electrolytic cell at this time).
4. Store the unit and accessories in a dry, cool storage location.
5. The original packing carton can be used for storage.

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INTEX® 3-Way Test Strips (packed with the Chlorine Generator)

3-Way Test Strips can test the "Free Chlorine", "pH", and "Total Alkalinity" levels at the same time.
Directions and Use:

1. Dip entire strip into water and remove immediately.
2. Hold strip level for 15 seconds (do not shake excess water from strip).
3. Compare free chlorine, pH and total alkalinity strip pad to the color chart on packaging label. Adjust pool water as necessary. Proper technique is important for water testing. Be sure to read and follow the written strip instructions.



Pool Maintenance & Chemical Definitions

	Preferred Water Chemistry Reading		
	Minimum	Ideal	Maximum
Free Chlorine	1.0 ppm	1.0 - 3.0 ppm	3.0 ppm
Combined Chlorine	0	0	0.2 ppm
pH	7.2	7.4 - 7.6	7.8
Total Alkalinity	100 ppm	100 - 140 ppm	140 ppm
Calcium Hardness	150 ppm	200 - 400 ppm	500 - 1000 ppm
Stabilizer (Cyanuric Acid)	10 ppm	30 - 50 ppm	150 ppm

Free Chlorine -	Is the chlorine residual present in pool water.
Combined Chlorine -	Is formed by the reaction of free chlorine with ammonia wastes. Result if too high - Sharp chlorinous odor, eye irritation.
pH -	A value that indicates how acidic or basic a solution is. Result if too low - Corroded metals, eye & skin irritation, destruction of total alkalinity. Result if too high - Scale formation, cloudy water, shorter filter runs, eye & skin irritation, poor chlorine efficiency.
Total Alkalinity -	Indicates the degree of the water's resistance to change in pH. It determines the speed and ease of pH change, so always adjust total alkalinity before adjusting the pH level. Result if too low - Corroded metals, eye & skin irritation. Low alkalinity will cause the pH to be unstable. Any chemical added to the water will have an affect on pH. Result if too high - Scale formation, cloudy water, eye & skin irritation, poor chlorine efficiency.
Calcium Hardness -	Refers to the amount of calcium and magnesium dissolved in the water. Result if too high - Scale will form and will cause the water to become cloud.
Stabilizer - (Cyanuric Acid)	Stabilizers extend the life of chlorine in swimming pools.

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Trouble Shooting Guide

PROBLEM	CAUSE	REMEDY
INSUFFICIENT CHLORINE	<ul style="list-style-type: none"> Insufficient operating hours of the chlorine generator unit. Insufficient (Less than 2000ppm) salt level in pool water. Chlorine loss due to intense sunlight exposure. The bather load has increased. Clogged or dirty electrolytic cell. 	<ul style="list-style-type: none"> Increase the chlorine generator operating time per day. See "Operating Instructions". Test the Salt Level with Test Kit, and adjust as needed. See "Salt & Pool Water Volumes". Use Pool Cover when the pool is not use. Increase the chlorine generator operating time per day. See "Operating Instructions". Remove the cell for inspection, clean it if necessary. See "Maintenance".
WHITE FLAKES IN THE WATER	<ul style="list-style-type: none"> Excessive calcium hardness is present in pool water. 	<ul style="list-style-type: none"> Drain about 20 to 25% of the pool water and add fresh water to decrease the calcium hardness. Visually inspect the electrolytic cell for scale build-up and clean the electrolytic cell if necessary.
NO LED DISPLAY	<ul style="list-style-type: none"> Power Saving Mode. No Salt. No power supply. Electrolytic cell cord is loose. Power fuse blown. LED failure. 	<ul style="list-style-type: none"> Press any button ( or ) to view the last LED code. Add salt. See "Salt & Pool Water Volumes". Check to see if cell cord is loose or not connected properly. Ensure the cell cord is plugged firmly into the cell housing receptacle. Check for power cord loose or not connected properly. Contact Intex Service Center for replacement. Contact Intex Service Center for replacement.

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Trouble Shooting Guide (cont.)

LED PANEL CODE	PROBLEM	REMEDY
LED Panel Code Flash & Alarm On (NOTE: Always turn off the power before cleaning and servicing).		
CODE 90	1. Circulation line is blocked.	<ul style="list-style-type: none"> Ensure the plunger valves are opened (if any). Ensure your filter cartridge, cell and debris screen are clear from debris and dirt. See "Maintenance". Release all trapped air in the circulation line. See Filter Pump Manual.
	2. Incorrect inlet and outlet hose direction.	<ul style="list-style-type: none"> Check for the direction of water inlet and water outlet hose. Reverse the hoses if necessary. See "Set Up Instructions".
	3. Scale on the flow sensor.	<ul style="list-style-type: none"> Ensure the flow sensor (especially the hinge) is clean. See "Maintenance".
	4. Flow sensor cord is loose.	<ul style="list-style-type: none"> Check for flow sensor loose or not connected properly. Plug the flow sensor firmly into the flow sensor receptacle.
	5. Flow sensor failure.	<ul style="list-style-type: none"> Contact Intex Service Center for replacement.
CODE 91	1. Dirt or scale on titanium plates.	<ul style="list-style-type: none"> Remove the electrolytic cell for inspection and clean it if necessary. See "Maintenance".
	2. Low salt level.	<ul style="list-style-type: none"> Add salt. See "Salt & Pool Water Volumes".
	3. Possible electrolytic cell failure.	<ul style="list-style-type: none"> Contact Intex Service Center. Replace the cell if needed.
CODE 92	1. High salt level.	<ul style="list-style-type: none"> Partially drain the pool and refill with fresh water. See "Salt & Pool Water Volumes".
	2. Possible electrolytic cell failure.	<ul style="list-style-type: none"> Contact Intex Service Center. Replace the cell if needed.

GENERAL AQUATIC SAFETY GUIDELINES

Water recreation is both fun and therapeutic. However, it involves inherent risks of injury and death. To reduce your risk of injury, read and follow all product, package and package insert warnings and instructions. Remember, however, that product warnings, instructions and safety guidelines cover some common risks of water recreation, but do not cover all instances or risk and or danger.

For additional safeguards, also familiarize yourself with the following general guidelines as well as guidelines provided by nationally recognized Safety Organizations:

- Learn to swim.
- Take the time to learn CPR and first aid.
- Instruct anyone who is watching your children about potential pool hazards and about the use of protective devices such as locked doors, barriers, etc. Demand constant supervision.
- Teach children what to do in case of an emergency.
- Always use common sense and good judgement when enjoying any water activity.
- Supervise, Supervise, Supervise.

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LIMITED WARRANTY**Chlorine Generator**

Your Intex chlorine generator unit has been manufactured using the highest quality materials and workmanship. All Intex products have been inspected and found free of defects prior to leaving the factory. This Limited Warranty applies to the Chlorine Generator units Models 8220 and 8221 for one (1) year from the date of the initial retail purchase.

The provisions of this Limited Warranty apply only to the original purchaser. This Limited Warranty is not transferable. This Limited Warranty is valid for a period of one (1) year from the date of the initial retail purchase. Keep your original sales receipt with this manual, as proof of purchase will be required and must accompany warranty claims or the Limited Warranty is void.

If a manufacturing defect is found within the above specified period, please contact the appropriate Intex Service Center listed in this manual. The Service Center will determine the validity of the claim. If the item is returned to the Service Center as directed, the Intex Service Center will inspect the item and determine the validity of the claim. If the provisions of this warranty cover the item, the item will be repaired or replaced at no charge.

This Limited Warranty does not apply if the unit is subject to negligence, abnormal use or operation, improper installation, accident, failure to follow instructions, or to damage by circumstances beyond Intex's control, including but not limited to, ordinary wear and tear and damage caused by exposure to fire, flood, freezing, rain, or other external environmental forces. This Limited Warranty applies only to those parts and components sold by Intex. The Limited Warranty does not cover unauthorized alterations, repairs or disassembly by anyone other than Intex Service Center personnel.

THIS LIMITED WRITTEN WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES AND ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IT IS LIMITED IN ITS SCOPE AND DURATION TO THE TERMS SET FORTH HEREIN. SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IN NO EVENT SHALL INTEX, THEIR AUTHORIZED AGENTS OR EMPLOYEES BE LIABLE TO THE BUYER OR ANY OTHER PARTY FOR INDIRECT OR CONSEQUENTIAL DAMAGES OR LIABILITIES. SOME STATES, OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

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For service questions or to order replacement parts, please contact the appropriate office listed below or visit www.intexcorp.com.hk for answers to most frequently asked questions.

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• EUROPE	INTEX TRADING B.V. P. O. BOX NR. 1075 4700 BB ROOSENDAAL THE NETHERLANDS TEL: 31-(0)165-593939 FAX: 31-(0)165-593969 E-mail: service@intexcorp.nl	• CHILE / ARGENTINA / PERU / URUGUAY	COMEXA S.A. SAN IGNACIO 0201, BARRIO INDUSTRIAL, PORTEZUELO, QUILICURA, SANTIAGO, CHILE TEL: 56-2-4607500 FAX: 56-2-4607510
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