

# NEPTUNE X-PRO SINGLE ELEMENT CARTRIDGE FILTER



## INSTALLATION & OPERATION MANUAL



THANK YOU FOR PURCHASING A NEPTUNE CARTRIDGE FILTER.  
Please read the manual thoroughly before installing or using the product.  
Only qualified technicians must install the product. Keep this manual for future reference.

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Thank you for purchasing the Neptune Single Element Cartridge Filter. These filters combine superior water filtration with ease of operation and corrosion-free construction. With filtration ratings of 22,710 – 27,250 litres (6,000 – 7,200 gallons) per hour, they are designed for continuous or intermittent operation, for installation above or below the pool waterline, for fresh or salt water swimming pools or spas. The Neptune X-Pro cartridge filters utilise reusable, reinforced polyester filter cartridge elements to provide a high degree of water clarity and long filter cycles with minimum maintenance.

Neptune Single Element Cartridge Filters have been specifically designed for the filtration of spa and swimming pool water. They should not be used for any other purpose without first consulting your Neptune X-Pro dealer or the manufacturer.

## **DISCLAIMER**

Information in this manual is intended to provide general information on a particular subject(s) in good faith and is not an exhaustive treatment of such subject(s). Its use is beyond the control of the author, contributor, publishers, and distributors and should not be relied upon without consulting your local Professional for comprehensive advice. This manual includes subject(s) that should only be performed by or under the direction and advice of your local Professional and under no circumstances should the manual be used as a substitute for such professionals. No representations or warranties are made that the content, advice, and recommendations in this manual are current, free from errors or omissions, or appropriate for the user's circumstances or abilities. No liability is accepted for any loss suffered as a result of any user's reliance on such content. All information in this document is subject to change at any time without notice.

## **SECTION 1: IMPORTANT WARNINGS AND SAFETY INFORMATION**



This manual contains important information about the installation, operation, and safe use of this product. This information should be given to the installer, owner and/or operator of the cartridge filter. When installing and using the cartridge filter, basic safety precautions should always be followed. Failure to follow safety warnings and instructions in this manual can result in serious injury and/or damage to your equipment. Read and follow all warning notices and instructions which are included in this manual.

### **GENERAL WARNINGS**

- Read the instructions before installing and using the cartridge filter.
- Failure to follow these instructions and comply with all applicable codes may cause serious bodily injury and/or property damage and will void the warranty.
- To reduce the risk of injury, do not permit children to use this product.
- **ELECTROCUTION HAZARD:** Direct water discharge from the cartridge filter's Air Release Valve away from electrical service. Do not locate pump control over or near the filter.
- Installers/operators must follow manufacturer's instructions and keep in compliance with national or local standards for installation. Under no circumstances will the manufacturer, reseller, dealer or wholesaler be held responsible for any outcome incurred by failure to comply with applicable standards or local regulations.
- Do not operate the cartridge filter until you have read and understand clearly all the operating instructions and warning messages for all equipment that is a part of the pool circulating system. The following instructions are intended as a guide for initially operating the filter in a general pool installation. Failure to follow all operating instructions and warning messages can result in property damage or severe personal injury or death.

### **THIS FILTER OPERATES UNDER HIGH PRESSURE**



When any part of the circulating system, (e.g., pump, filter, chlorinator, valve(s), etc.), is serviced, air can enter the system and become pressurised. Pressurised air can cause the cartridge filter's upper and lower bodies to separate, which can result in severe injury, death, or property damage. To avoid this potential hazard, follow these instructions:

1. If you are not familiar with your swimming pool's filtering system:
  - (1) Do NOT attempt to adjust or service without consulting your dealer, or a qualified pool technician.
  - (2) Read the entire Installation & Operation Manual before attempting to use, service, or adjust the pool filtering system.
2. Before repositioning valve(s) and before beginning the assembly, disassembly, or any other service of the circulating system:
  - (1) Turn the pump OFF and shut OFF any automatic controls to ensure the system is NOT inadvertently started during the servicing.
  - (2) Open the Air Release Valve on the cartridge filter.
  - (3) Wait until all pressure is relieved.
3. Due to the potential risk that can be involved, it is recommended that any pressure test being carried out be kept to the minimum time required by the local code. Do not allow people to work around the system when the circulation system is under the pressure test. Post appropriate warning signs and establish a barrier around the pressurised equipment. If the equipment is located in an equipment room, lock the door and post a warning sign.
4. Never attempt to adjust any lids, or attempt to remove or tighten bolts when the system is pressurised. These actions can cause the filter tank to separate and could cause severe personal injury or death if they were to strike a person.
5. Never exceed the maximum operating pressure of system components. Exceeding these limits could result in a component failing under pressure. This instantaneous release of energy can cause the filter tank to separate and could cause severe personal injury or death if they were to strike a person.

## **INSTALLATION, SERVICE AND MAINTENANCE WARNINGS**

- This cartridge filter must be installed by a qualified pool technician.
- Improper installation could result in death or serious injury to pool users, installers, or others and may also cause damage to property.
- Whenever installing the cartridge filter, follow the instructions and warnings exactly.
- Once installation is complete, follow initial start-up instructions exactly.
- Maintain circulation system properly. Replace worn or damaged parts immediately, (e.g., cartridge filter's upper & lower bodies, pressure gauge, valve(s), O-Rings, etc).
- Be sure that the filter is properly mounted and positioned according to the instructions provided.
- Always disconnect power to the pool circulating system at the circuit breaker before servicing the filter. Ensure that the disconnected circuit is locked out or properly tagged so that it cannot be switched on while you are working on the filter. Failure to do so could result in serious injury or death to a serviceman, pool user, or others due to electric shock.
- **HYPERTHERMIA:** Spa water temperature in excess of 38°C (104°F) may be injurious to health. Measure water temperature before entering the spa to avoid burns or injury. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 37°C (98.6°F). The symptoms of hyperthermia include drowsiness, lethargy, and an increase in the internal temperature of the body.
- Do not lift the cartridge filter by the pressure gauge.
- Use only genuine replacement parts supplied by the manufacturer for service and repair.

## **SECTION 2: WATER CHEMISTRY**

Consult your local Pool Pro Professional to correctly balance your pool water. Follow instructions on the packaging of each chemical. Always add chemicals to water, never add water to chemicals.

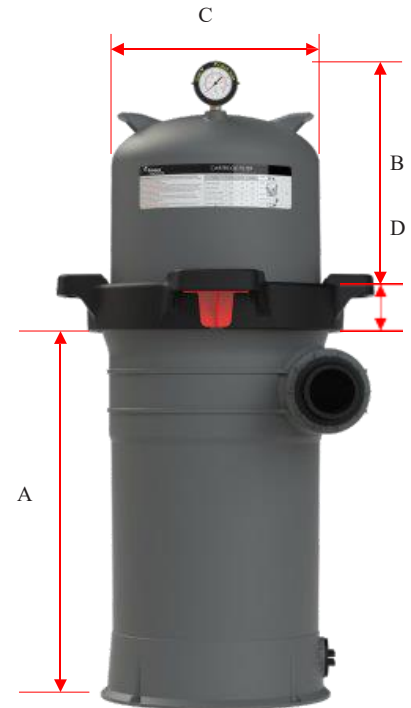
<b>RECOMMENDED WATER BALANCING</b>				
	Recommended Values	To Increase Value	To Decrease Value	Test Frequency
pH	Concrete: 7.2 – 7.6 Fibreglass/ Vinyl: 7.0 – 7.2	Add Pool Pro pH Increaser (Soda Ash)	Add Pool Pro Hydrochloric Acid	Weekly
Free Chlorine	1 – 3ppm	Increase the chlorine output on the chlorinator unit. If no chlorinator, shock dose the pool	Add Pool Pro Chlorine Out and decrease the chlorine output on the chlorinator unit. If no chlorinator, add Pool Pro Chlorine Out	Weekly
T.A. (Total Alkalinity)	Concrete: 80 – 150ppm Fibreglass/Vinyl: 80 – 120ppm	Add Pool Pro pH Buffer	Add Pool Pro Hydrochloric Acid	Fortnightly
Calcium Hardness	Concrete: 250 – 300ppm Fibreglass/Vinyl: 150 – 200ppm	Add Pool Pro Hardness Raiser	Add Pool Pro Calcium Remover	Fortnightly
Stabiliser	30 – 60ppm	Add Pool Pro Stabiliser or Pool Pro Rapid Stabiliser	Contact your Pool Pro Professional for advice	Fortnightly
Salt	3000 – 3500ppm	Add Pool Pro Ultrafine or Premium Pool Salt	Partially empty the pool and refill it	Fortnightly

This is a guide only, does not constitute and should not be used as an alternative to specific professional advice. Pool Pro and The POPS Group Pty Ltd accept no liability for any damage, loss or harm associated with the use of this guide.

## SECTION 3: PRODUCT SPECIFICATIONS

FILTRATION INFORMATION			
Model	Effective Filtration Area		Max. Flow Rate L/min
	Sq.ft	m <sup>2</sup>	
CF100X	100	9.29	379
CF150X	150	13.94	455
CF200X	200	18.58	455

PRODUCT DIMENSIONS								
Model	A		B		C		D	
	cm	inch	cm	inch	cm	inch	cm	inch
CF100X	53.05	20.90	23.00	9.05	46.40	18.30	8.20	3.20
CF150X	53.05	20.90	31.50	12.40	46.40	18.30	8.20	3.20
CF200X	53.06	20.90	43.80	17.24	46.40	18.30	8.20	3.20

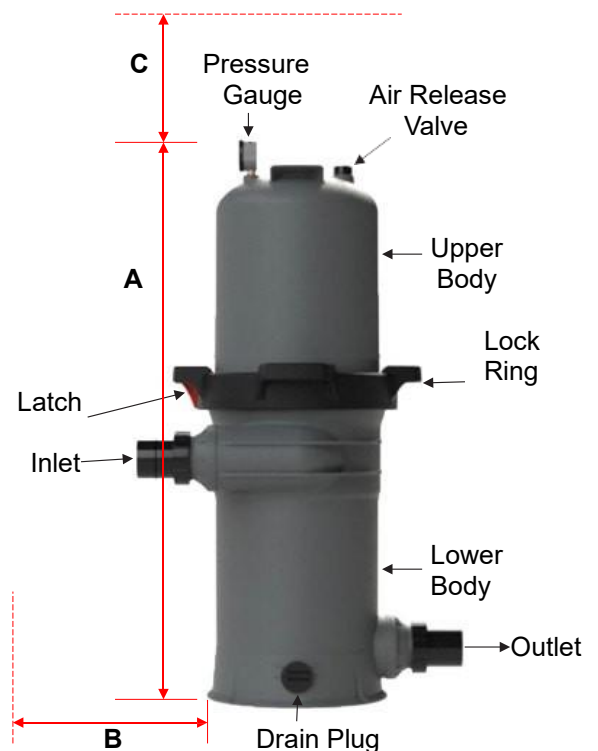


## SECTION 4: INSTALLATION

This product should be installed and serviced only by a qualified pool technician.

1. The filter system should be installed on a level concrete slab or another rigid base. Select a well-drained and vented area, that does not flood when it rains. Position the filter so that the piping connections and drain plug are convenient and accessible for operation, service, maintenance, and winterising.
2. Position filter body so all operation and safety labels are visible.
3. Position the filter so the filter will drain by gravity.
4. If practical, place the pump and filter in the shade to shield it from direct sunlight.
5. Connect the pool suction plumbing between the skimmer, the pool outlet (from the pool), and the pump.
6. Install the plumbing from the filter to the pool (return to the pool).
7. Do not locate pump controls over or near the filter.
8. Direct any water discharge from the cartridge filter's Air Release Valve away from electrical service.

REQUIRED CLEARANCE						
Model	A		B		C	
	cm	inch	Side/Horizontal	cm	Above/Vertical	inch
CF100X	82.70	32.60	46.40	18.30	45.00	18.00
CF150X	91.20	36.00	46.40	18.30	45.00	18.00
CF200X	103.40	40.70	46.40	18.30	45.00	18.00



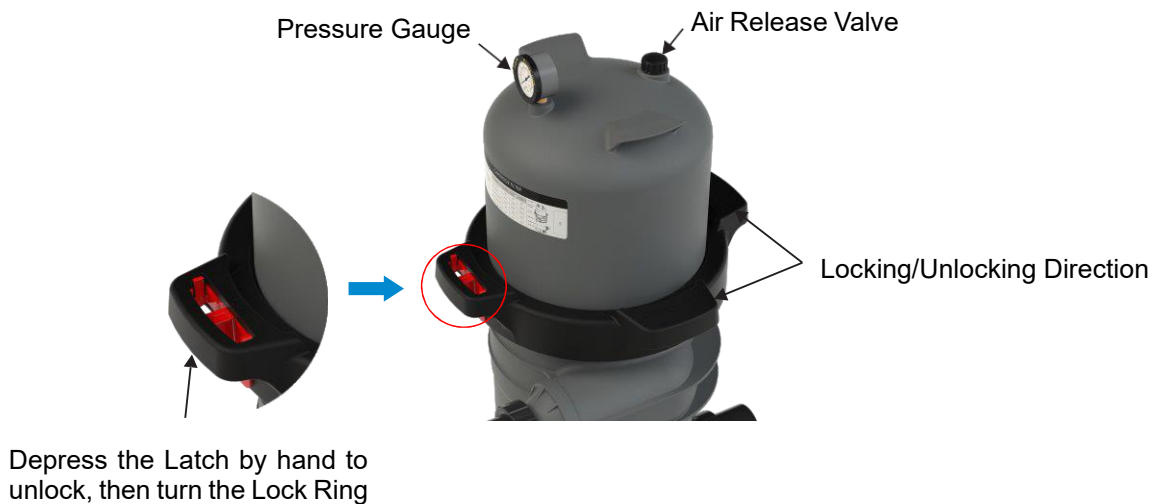
## **SECTION 5: INITIAL START-UP**

### **5.1: PRE-STARTUP INSPECTION**

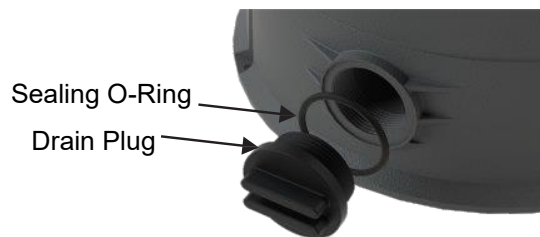
1. Check the cartridge filter and the pipe connections are installed and plumbed correctly.

### **5.2: BEFORE STARTING THE PUMP**

1. Use **ONLY** genuine Neptune X-Pro components. Non-genuine Lock Rings may fail in use and cause explosive component separation. Verify that upper and lower filter bodies are properly secured with the Lock Ring and that the Lock Ring is tightened until the latch is locked in position. Verify that the Air Release Valve is in the LOCK position, and no filter components are missing, damaged, or not genuine Neptune X-Pro filter components.



2. Close filter drain. Note: Drain plug requires an O-Ring seal.



3. Open all system valves to allow water from the pool to the filtration system and from the filter to return to the pool.
4. Place the Air Release Valve in an OPEN position.





### **5.3: STARTING THE PUMP**



Pool and spa circulation systems operate under high pressure. When any part of the circulating system (i.e. pump, filter, chlorinator, valves, etc.) is serviced, air can enter the system and become pressurised. Filter tank lid and pump lid must be secured to prevent explosive separation. Place the Air Release Valve in an open position and wait for all pressure in the system to be relieved.

1. Stand clear of the pool pump during startup.
2. Start the pool pump. When starting the pool pump, do not stand over or near the filter.
3. If water leakage appears at the Lock Ring, turn off all system circulation pumps and all electrical power immediately. Do not return to the filter until all water leakage has stopped.
4. Wait for water to come out of the Air Release Valve, then turn the Air Release Valve fully closed.

## **SECTION 6: OPERATION**

Filtration starts as soon as the water flow is steady through the filter. As the filter removes dirt from the pool water, the accumulated dirt causes a resistance to flow. As a result, the pressure will rise and the flow will decrease.

1. Record the initial starting pressure, which is the initial pressure reading when a new filter element is working under normal filtration conditions.
2. Every time after installing a new filter element, or after cleaning your existing filter element, make sure the system is under normal filtration conditions, then turn the START arrow to the pressure gauge pointer position, to indicate the Start pressure.
3. Monitor the pressure from time to time (ideally fortnightly). When the pressure reading is over the Clean Filter arrow, follow steps in Section 7 to clean the filter cartridge element.
4. You should replace a new filter cartridge element:
  - (1) After cleaning the filter element, if the pressure is:
    - (a) 25psi higher than the initial start reading, or
    - (b) The pressure reading is over 40psi.
  - (2) When the filter element is broken.
  - (3) When the pressure or flow rate is below the desired rate of the system.



## **SECTION 7: MAINTENANCE**

### **7.1: FILTER DISASSEMBLY**

1. Turn off all system circulation pumps and all electrical power on all pool/spa equipment.
2. Set all system valves in a position to prevent water from flowing to the filter.
3. Turn the Air Release Valve OPEN.
4. Remove the filter Drain Plug, and allow water to flow out from the filter.
5. Depress the latch and unscrew the Lock Ring (counterclockwise).
6. Lift off the filter's upper body by holding the attached Lock Ring. (DO NOT HOLD THE PRESSURE GAUGE TO LIFT THE UPPER BODY.)

### **7.2: REMOVING CARTRIDGE ELEMENT**

1. Remove the cartridge element by using a slight rocking motion and lifting.
2. Clean the filter cartridge element.

### **7.3: CLEANING CARTRIDGE ELEMENT**

1. The cartridge filter element can be washed inside and outside by a garden hose.
2. After hosing the cartridge, for best results, carefully brush the pleated surface to remove fine particles. Do not use high-pressure water to wash, as it can damage the filter element.
3. Note: you may find some debris on the cartridge pleats, which may not have been removed with hosing.
4. You can also use *Pool Pro Cleaner and Degreaser for Filters* to help clean and revitalise the cartridge element.

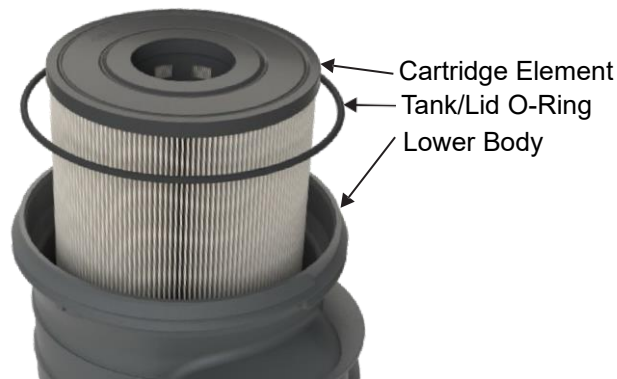


#### **7.4: REINSTALLING CARTRIDGE ELEMENT**

1. Flush and drain any dirt or debris from the bottom of the lower filter body.
2. Flush any dirt or debris from the upper filter body and from around the air release area.
3. Carefully replace the cartridge over the hubs on the bottom manifold.

#### **7.5: CHECK FILTER TANK/LID O-RING**

1. Remove tank/lid O-Ring.
2. Ensure there is no dirt and debris on the O-Ring.
3. Ensure the O-Ring is greased – **ONLY USE SILICONE BASED GREASE.**
4. Ensure the O-Ring is seated correctly on the tank's lower body.

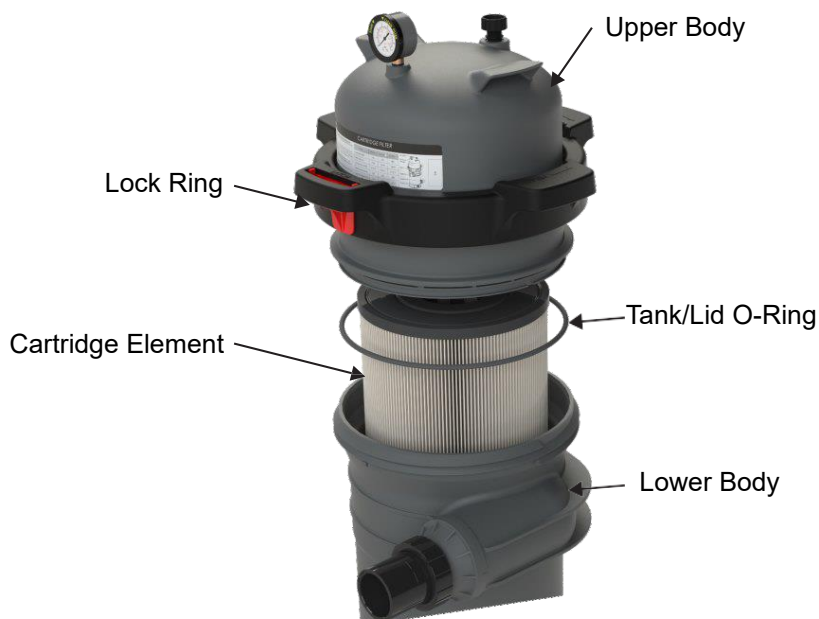


#### **7.6: BODY AND LOCK RING REASSEMBLY**

1. Place the upper body on the O-Ring and the lower body.
2. Use a Neptune X-Pro Lock Ring only. Tighten the Lock Ring (clockwise) until the latch is locked in position.
3. Ensure that upper and lower bodies are properly secured with the Lock Ring.

NOTE: DO NOT HIT OR STRIKE THE LOCK RING WITH A HAMMER OR METAL TOOLS.

4. Ensure that the Air Release Valve is in an OPEN position and no components are damaged or missing.
5. Ensure the Drain Plug is closed.
6. Open all system valves to allow water from the pool to the filtration system and from the filter to the pool.
7. Wait for water to come out from the Air Release Valve, then turn the Air Release Valve fully CLOSED.





## **7.7: VACUUMING THE POOL**

Vacuuming can be performed directly into the filter whenever needed. Clean cartridge after vacuuming if required.

## **7.8: REMOVING THE AIR RELEASE VALVE**

The filter comes with a preinstalled Air Release Valve. Servicing the Air Release Valve should be carried out by qualified pool technicians only. Follow instructions carefully:

1. Turn off all system circulation pumps and all electrical power on all pool/spa equipment.
2. Set all system valves in a position to prevent water from flowing to the filter.
3. The Air Release Valve must be placed in the OPEN position.
4. Wait until all water leakage has stopped.
5. Grasp the Air Release Valve Nut at the release position, and turn the Nut counterclockwise until the pressure gauge indicator is on the "0" position on the upper filter body.
6. Keep on turning the nut of the Air Release Valve until it leaves the upper filter body.

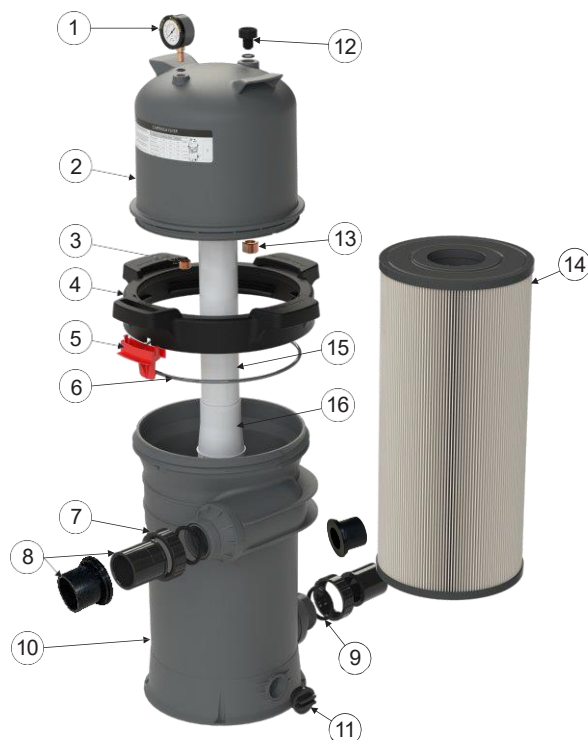
## **7.9: REINSTALLING THE AIR RELEASE VALVE**

1. Check the condition of the Air Release Valve's O-Ring, replace it if necessary. Grease the O-Ring if necessary – ONLY USE SILICONE BASED LUBRICANT.
2. With a clean cloth, wipe the Air Release Valve's threaded socket and O-Ring groove. Remove all dirt and debris.
3. Reinstall the Air Release Valve and turn until it's tightened on top of the filter's upper body.
4. Make sure the Nut of the air release valve is tight.
5. Direct any water discharge from the air release valve away from electrical service.

## **SECTION 8: TROUBLESHOOTING**

ISSUE	POSSIBLE SOLUTION
Low Water Flow	Check skimmer and pump baskets for debris.
	Check for restrictions in intake and discharge lines.
	Check for air leak in intake line, indicated by bubbles returning to pool.
	Clean filter cartridge.
Pool Water Remains Cloudy	Check chlorine, pH, and total alkalinity levels and adjust as required.
	Be sure the flow rate through the filter is sufficient.
	Operate filter for longer periods.
Short Filter Cycles	Check for algae in the pool and superchlorinate as required.
	Be sure chlorine and pH levels are in a proper range and adjust as required.

## SECTION 9: SCHEMATICS



Ref #	Code	Description	Qty
1	PGCFX	Pressure Gauge 60psi, Plastic Casing	1
2	N/A	Upper Body CF100X	1
2	N/A	Upper Body CF150X	1
2	N/A	Upper Body CF200X	1
3	CFX01	Nut for Pressure Gauge D22X5	1
4	CFX02	Lock Ring	1
5	CFX03	Lock Ring Latch	1
6	OR640	Filter Tank / Lid O-Ring D306Xd7.5	1
7 & 8	CFX04	Union Nut 2"	2
		Union Tail 2inch/2.5inch ANSI	2
		Union Tail 1.5inch/2inch	2
		Union Tail GB50	2
		Union Tail GB63	2
9	OR641	Union O-Ring D77Xd62X8	2
10	N/A	Lower Body	1
11	CFX05	Drain Plug with O-Ring	1
12	CFX06	Air Release Valve with O-Ring	1
13	CFX07	Nut for Air Release Valve D31X20 14G	1
14	RE175	CF100X Replacement Cartridge Element	1
14	RE176	CF150X Replacement Cartridge Element	1
14	RE177	CF200X Replacement Cartridge Element	1
15	CFX08	PVC Center Pipe 2.5" CF100X, 387mm	1
15	CFX09	PVC Center Pipe 2.5" CF150X, 440mm	1
15	CFX10	PVC Center Pipe 2.5" CF200X, 517mm	1
16	CFX11	Center Drain Connection	1

## **SECTION 10: WARRANTY & PRODUCT REGISTRATION**

Please register your product online at [www.poolpro.com.au/product-registration](http://www.poolpro.com.au/product-registration) within 30 days from date of purchase, or any warranty claim may be voided.

- The warranty for the Neptune X-Pro Single Element Cartridge Filter (models CF100X, CF150X and CF200X) covers manufacturer's defects in materials and workmanship under normal use during the warranty period for:

5 years on the filter tank

1 year on all other parts

The above warranty periods apply to both residential and commercial applications.

- The warranty is only valid for the original purchaser and is non-transferable.
- The warranty period begins on the day of original purchase.
- Defective equipment must be returned to the authorised dealer as soon as the purchaser becomes aware of the defect and all transport costs must be prepaid.
- Neither the manufacturer nor the authorised dealer shall be responsible for any goods damaged in transit.
- Any liability of the manufacturer pursuant to the Trade Practices Act 1974, as amended for a breach of a condition or warranty shall be limited to replacing or acquiring the equipment (or part thereof) where the same has been supplied.
- The maximum liability incurred by the manufacturer shall not in any case exceed the contract price for the equipment or the product parts or components thereof claimed to be defective. Further, the manufacturer shall not be liable for any loss, damage or delay directly or indirectly caused by any malfunction of or defect of or failure of the equipment other than as expressly provided in this warranty.
- The manufacturer and authorised dealer will not be held liable for damage caused to the pool and surrounding areas.
- Keep your original purchase invoice and serial number in a safe place.

Warranty is void under the following circumstances:

- Incorrect operation of the unit by not following correct instructions.
- Improper maintenance and balancing of pool water.
- Damage caused to the cartridge filter due to misuse or damage caused by any other means than manufacturer defect.
- Adverse operating conditions beyond the control of the manufacturer that affects the performance of the equipment, including natural disasters.
- If the cartridge filter is repaired or serviced by an unauthorised dealer or serviceman.
- If a fault occurs in the operation of the cartridge filter by using non-genuine parts/accessories.
- If the cartridge filter has been misused, neglected, damaged or altered in any way.
- General wear and tear of consumable products.

To submit a warranty request, visit [www.poolpro.com.au/serviceclaim](http://www.poolpro.com.au/serviceclaim)

