

# Clean & Clear™ Plus Cartridge Filters Owner's Manual

## IMPORTANT SAFETY INSTRUCTIONS READ AND FOLLOW ALL INSTRUCTIONS SAVE THESE INSTRUCTIONS

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### WARNING

Before installing this product, read and follow all warning notices and instructions accompanying this filter. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage. Call 1800 664 266 for additional free copies of this manual.

### Important Notice



Attention Installer.

This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner/operator of this equipment.

#### SECTION I. FILTER INSTALLATION

##### A. GENERAL INFORMATION

1. The filter should be mounted on a level concrete slab. Position the filter so that instructions, warnings and the pressure gauge are visible to the operator. It also should be positioned so that the piping connections, control valve and drain port are convenient and accessible for servicing and winterizing.

2. Be certain to install electrical controls (e.g., on/off switches, timers, control systems, etc.) at least five (5) feet from the filter. This permits one to stand clear of the filter during system start up.
3. Allow sufficient clearance around the filter to permit visual verification that the clamp is properly installed around the tank flanges, see Figure A.
  - a. Tap the clamp with a mallet or similar tool to ensure uniform loading during clamp tightening.
4. Allow sufficient space above the filter to remove the filter lid for cleaning and servicing. This distance will vary with the model of filter you are using. See Table 1 for the required vertical clearance.
5. Position the filter to safely direct water drainage. Rotate the High Flow™ manual air relief valve to safely direct purged air or water. Water discharged from an improperly positioned filter or valve can create an electrical hazard as well as damage property.

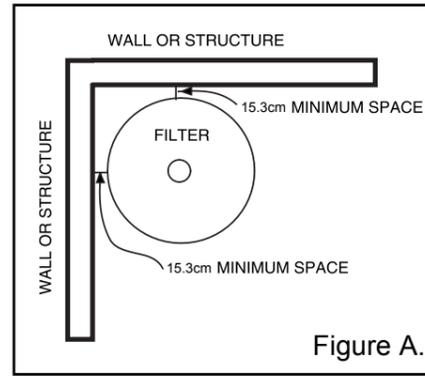


Figure A.

Model No.	Size	Vert. Clearance Req.
CCP240	22m <sup>2</sup>	142 cm.
CCP320	30m <sup>2</sup>	157 cm.
CCP420	39m <sup>2</sup>	173 cm.
CCP520	48m <sup>2</sup>	188 cm.

## ⚠ WARNING



Risk of electrical shock or electrocution. Position the filter and High Flow™ manual air relief valve to safely direct water drainage and purged air or water. Water discharged from an improperly positioned filter or valve can create an electrical hazard that can cause severe personal injury as well as damage property.

6. Make all plumbing connections in accordance with local plumbing and building codes. Filter plumbing connections are provided with an O-ring seal. If needed, use only a silicone base lubricant on the O-rings. Do not use pipe joint compound, glue or solvent on the bulkhead connections.

## NOTE

On threaded valve connections use only Teflon tape, 100% Teflon tape, 100% Teflon paste, or Permatex #2 to seal the threads.

7. The maximum working pressure of this filter is 50 p.s.i./344kpa. Never subject this filter to pressure in excess of this amount, even when conducting hydrostatic pressure tests. Pressures above 50 p.s.i./344kpa can cause the lid to be blown off, which can result in severe injury, death or property damage.

## SECTION II. FILTER OPERATION AND CLEANING

### ⚠ WARNING



THIS FILTER OPERATES UNDER HIGH PRESSURE. WHEN ANY PART OF THE CIRCULATING SYSTEM (e.g., FILTER LID, PUMP, FILTER, VALVES, ETC.) IS SERVICED, AIR CAN ENTER THE SYSTEM AND BECOME PRESSURIZED. PRESSURIZED AIR CAN CAUSE THE LID TO BLOW OFF WHICH CAN RESULT IN SEVERE INJURY, DEATH, OR PROPERTY DAMAGE. TO AVOID THIS POTENTIAL HAZARD, FOLLOW THESE INSTRUCTIONS.

1. BEFORE REPOSITIONING VALVES AND BEFORE BEGINNING THE ASSEMBLY, DISASSEMBLY, OR ADJUSTMENT OF THE LID OR ANY OTHER SERVICE OF THE CIRCULATING SYSTEM: (A) TURN THE PUMP OFF AND SHUT OFF ANY AUTOMATIC CONTROLS TO ASSURE THE SYSTEM IS NOT INADVERTENTLY STARTED DURING THE SERVICING. (B) OPEN AIR RELIEF VALVE, AND (C) WAIT UNTIL ALL PRESSURE IS RELIEVED - PRESSURE GAUGE MUST READ ZERO.
2. WHENEVER INSTALLING THE FILTER LID, FOLLOW THE FILTER LID INSTALLATION INSTRUCTIONS EXACTLY .
3. ONCE SERVICE ON THE CIRCULATING SYSTEM IS COMPLETE, FOLLOW SYSTEM RESTART INSTRUCTIONS EXACTLY.
4. MAINTAIN CIRCULATION SYSTEM PROPERLY. REPLACE WORN OR DAMAGED PARTS IMMEDIATELY (e.g., lid, knob, pressure gauge, relief valve, O-rings, etc.)
5. BE SURE THAT THE FILTER IS PROPERLY MOUNTED AND POSITIONED ACCORDING TO INSTRUCTIONS PROVIDED.

### A. GENERAL INFORMATION

1. This filter operates under pressure. When clamped properly and operated without air in the circulating system, this filter will operate in a safe manner.
2. The maximum working pressure of this filter is 50 p.s.i./344kpa. Never subject this filter to pressure in excess of this amount - even when conducting hydrostatic pressure tests. Pressures above 50 p.s.i./344kpa can cause the lid to be blown off, which can result in severe injury, death or property damage.

When performing hydrostatic pressure tests or when testing for external leaks of the completed filtration and plumbing system, insure that the MAXIMUM PRESSURE that the filtration system will be subjected to DOES NOT EXCEED THE MAXIMUM WORKING PRESSURE OF ANY OF THE COMPONENTS CONTAINED WITHIN THE SYSTEM. In most cases, the maximum pressure will be stated on each component of the system.

3. The pressure gauge is the primary indicator of how the filter is operating. Maintain your pressure gauge in good working order.

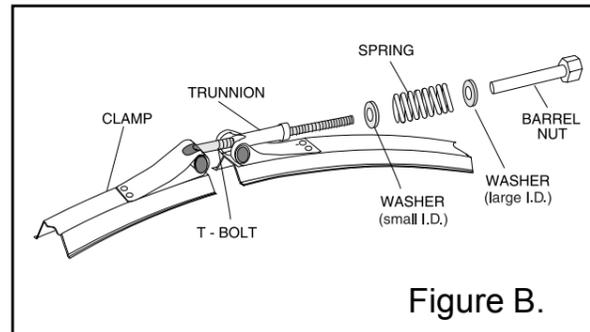
<b>⚠ WARNING</b>	
	<p>Your filter is a piece of machinery, do not tamper with it, attempt to disassemble it or otherwise adjust it unless you fully understand it's operation. Serious injury or death can occur if the equipment is improperly handled. Consult a pool service professional for maintenance and service assistance.</p>

4. Clean your filter when pressure reads between 8-10 p.s.i./55-69 kpa higher than the original starting pressure. Your filter pressure reading will increase as it removes dirt from your pool. However, this buildup of pressure will vary due to different bathing loads, temperature, weather conditions, etc.
  - a. MY ORIGINAL STARTING PRESSURE IS \_\_\_\_\_ psi/kpa.  
I SHOULD CLEAN THE FILTER CARTRIDGE ELEMENT AT \_\_\_\_\_ psi/kpa.

#### B. CLAMP INSTALLATION INSTRUCTIONS

These instructions **MUST BE FOLLOWED EXACTLY** to prevent the lid from blowing off during system restart or later operation:

1. Perform the following procedures before working on any part of the circulating system (e.g., clamp, pump, filter, valves, etc.).
  - a. Turn the pump off and shut off any automatic controls to ensure that the system is not inadvertently started during servicing.
  - b. Open the High Flow™ manual air relief valve.
  - c. Wait until all pressure is relieved. Never attempt to assemble, disassemble or adjust the filter clamp while there is any pressure in the filter.
2. Be certain the O-ring is in position in the lower tank half. Place the filter lid over the lower tank half sandwiching the O-ring in between.
3. Holding the ends of the filter clamp apart, position the center segment of the filter clamp over both upper and lower tank flanges. Bring the ends of the filter clamp together and insert the T-Bolt into the trunnion; see Figure B.
4. Using Figure B as a guide, place washer (large I.D.) and tension-indicating spring on the barrel nut. Place the second washer (small I.D.) on T-Bolt. Hand-tighten nut. Recheck filter clamp for proper seating on tank flanges.



5. Begin to tighten nut using a 7/8"/22mm wrench. Then tap around the outside of the filter clamp with a mallet (or similar tool) to insure uniform loading and proper seating of the clamp. Continue tapping and tightening until the spring coils touch each other. Do not tighten beyond this point.
6. Follow the procedures in Section C, System Restart Instructions.
7. The spring coils should be checked at least once per month to ensure that they continue to touch each other, indicating that the clamp is under sufficient tension. If coils fail to touch repeat Step B.5 in this section, above.

#### C. SYSTEM RESTART INSTRUCTIONS

<b>⚠ WARNING</b>	
	<p>THIS FILTER OPERATES UNDER HIGH PRESSURE. WHEN ANY PART OF THE CIRCULATING SYSTEM (e.g., CLAMP, PUMP, FILTER, VALVES, ETC.) IS SERVICED, AIR CAN ENTER THE SYSTEM AND BECOME PRESSURIZED. PRESSURIZED AIR CAN CAUSE THE LID TO BE BLOWN OFF WHICH CAN RESULT IN SEVERE INJURY, DEATH, OR PROPERTY DAMAGE. TO AVOID THIS POTENTIAL HAZARD, FOLLOW THESE INSTRUCTIONS.</p>

1. Open the High Flow™ manual air relief valve until it snaps into the full open position (this only requires a quarter turn counter-clockwise). Opening this valve rapidly releases air trapped in the filter.
2. Stand clear of the filter tank, then start the pump.
3. Close the High Flow™ manual air relief valve after a steady stream of water appears.
4. The system is not working properly if either of the following conditions occur.
  - a. A solid stream of water does not appear within 30 seconds after the pump's inlet basket fills with water.
  - b. The pressure gauge indicates pressure before water outflow appears.

If either condition exists, shut off the pump immediately, open valves in the water return line to relieve pressure, and clean the air relief valve, see Section F, Cleaning the High Flow™ manual air relief valve. If the problem persists, call 1800 664 266 for assistance.

#### D. CLEANING FILTER MANUALLY

<b>⚠ WARNING</b>	
	<p>Operating the filter system without filter internal components installed can allow air to accumulate within the filter. Pressurized air can cause the lid to blow off which can result in severe injury, death or property damage. Always operate filter system with filter internal components installed.</p>

<b>⚠ CAUTION</b>	
<p>The following information should be read carefully since it outlines the proper manner of care and operation for your filter system. As a result of following these instructions and taking the necessary preventative care, you can expect maximum efficiency and life from your filtration system.</p>	

1. Turn the pump off, shut off any automatic controls to ensure that the system is not inadvertently started during servicing.
2. Open the filter High Flow™ manual air relief valve (and the waste drain valve or plug, if your system has one).
3. Remove hair and lint strainer pot lid and clean basket. Replace basket and secure lid.
4. Disconnect air relief valve drain hose if installed.
5. Release tank clamp assembly and remove tank lid.
6. Remove top manifold and cartridge element separately.
7. Using a garden hose without a nozzle, direct water spray at cartridge element to dislodge and wash away accumulated foreign matter. Flush each cartridge inside and out.
8. Lift bottom manifold out of the tank and flush off any debris.
9. Direct water spray to wash out the inside of the tank body. Water and debris will drain out through the open drain port.
10. Check gasket around outer lip of bottom plate. Gasket must be firmly and evenly set in place. Do not use petroleum base lubricants to avoid damage to the gasket.
11. Place bottom manifold, 4 cartridges, top manifold and air relief tube in place. Make sure the spring and standpipe assembly are retained on the top manifold. Ensure the air relief tube stays in an upright position. This is essential for the maximum air removal from inside the tank.
12. Be certain the O-ring is in position in the lower tank half. Press the filter lid over the lower tank half and sandwich the O-ring in between.
13. Replace tank top and carefully follow instructions in Section B, Clamp Installation Instructions.
14. Replace drain plug and reinstall air relief valve drain hose if used.

#### E. REPLACING FILTER CARTRIDGES

Filter cartridge element life will vary with pool conditions such as bather load, wind, dust, etc. You can expect an average cartridge life of 3 years under normal conditions.

1. To replace cartridge element follow steps in Section D, Cleaning Filter, eliminating step D.7.

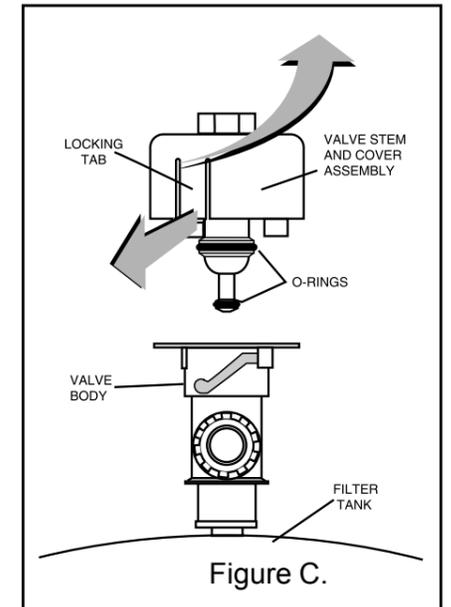
#### F. CLEANING THE HIGH FLOW™ MANUAL AIR RELIEF VALVE

1. Turn the pump off and shut off any automatic controls to ensure that the system is not inadvertently started during servicing.
2. OPEN THE HIGH FLOW™ MANUAL AIR RELIEF VALVE UNTIL IT SNAPS INTO THE FULL OPEN POSITION, THEN WAIT UNTIL ALL PRESSURE IS RELIEVED.
3. With the relief valve attached to the filter tank, pull out the locking tabs and remove the valve stem and cover assembly with a counter-clockwise and lifting motion, see Figure C.
4. Clean debris from the valve stem and body. Verify that the filter tank's air passage is open by inserting a 5/16" / 8 mm drill bit through the valve body. Verify that the O-rings are in good condition, properly positioned, and lubricated with a silicone base lubricant.
5. Reinstall the valve stem and cover assembly with a downward and clockwise motion until it snaps into position.

### SECTION III. TROUBLE SHOOTING

- A. Air entering your filter is dangerous and can cause the lid to blow off. Correct any conditions in your filtration system that allow air to enter the system.

1. Some common ways to identify air entering the system:
  - a. Low water level in pool or spa - skimmer is starving for water with pump running. Add water to pool or spa.
  - b. Air bubbles or low water level in pump hair and lint pot are caused by; low water level, clogged skimmer basket, split suction cleaner hose, leak in pump hair and lint pot lid, or leak in pump suction line.
  - c. Air bubbles coming out of water return lines into pool or spa with pump running, see items 1.a and 1.b of this section.
  - d. Air is discharged from the air relief valve on top of the filter when the valve is opened with the pump running, see items 1.a and 1.b of this section, above.



- B. Until the water initially put into the pool has been completely filtered, short filter cycles in between cleanings are normal. In most cases pool owners are dismayed by the undesirable color and appearance of water in a newly filled pool. Plaster dust can be responsible for short filter cycles, requiring frequent cleaning.
- C. If pressure drops on gauge, check skimmer basket and pump basket first for debris. If the baskets are clean, shut off power to pump and turn off any automatic controls. Then turn motor shaft with your fingers. If it turns freely then the pump must be disassembled and the impeller checked to see if it is clogged. If it is not frozen or clogged then there is an obstruction in the line between the pool and the pump.
- D. The pressure gauge is an important part of the filter system. It is your primary indicator of how the system is operating. Maintain your pressure gauge in good working order. Check the operation of your pressure gauge in the following manner:
  - 1. The pressure gauge should go to zero (0) when the system is turned off and pressure is relieved.
  - 2. The pressure gauge should indicate pressure when the system is operating.
  - 3. The pressure gauge should be readable and not damaged in any way.
  - 4. Replace the pressure gauge if it is not meeting the requirements of items D.1 through D.2 of this section.

## Pentair Water Product Warranty

Pentair Water warrants that, when this product is used for the purpose it was designed, is correctly housed and vented against weather, vermin, dust etc., that it will be free of material and manufacturing defects at the time of the original purchase. **This warranty is limited to the cost of the product and does not cover third party costs including the costs of electricians, plumbers, etc. unless authorised by Pentair Water.**

### TERMS AND CONDITIONS APPLICABLE INTERNATIONALLY

#### How long the warranty is effective Internationally

1) This Pentair Water product is warranted for 12 months for all parts from the date of the first consumer purchase. Should any parts fail as a result of such defects within the specified period, the part will be replaced free of charge. (This does not include travel charges, removal and reinstallation charges.)

### TERMS AND CONDITIONS APPLICABLE IN AUSTRALIA AND NEW ZEALAND

- 1) YOU SHOULD CAREFULLY READ THE INSTRUCTIONS SUPPLIED PRIOR TO USING THIS PENTAIR WATER PRODUCT. **This product is to be installed and operated in accordance with the instructions provided. This warranty will not apply if it is used in a manner other than in accordance with the instructions.**

What the warranty covers:

Pentair Water warrants its products to be free of defects in material and workmanship during the warranty period. If a product proves to be defective in material or workmanship during the warranty period, then Pentair Water will, at its sole option repair or replace the product with a like product. Replacement product or parts may include re-manufactured or refurbished parts or components.

How long the warranty is effective:

- 1) This Pentair Water product is warranted for 36 months for all parts from the date of the first consumer purchase.
- 2) Authorised workshop labour will be free of charge for the first 12 month period from date of the first consumer purchase when unit is found to have failed due to defective workmanship or material supplied by Pentair Water Australia. Infield service by an authorised Pentair Water Service Agent will incur a travel, removal & reinstallation fee payable by customer.
- 3) Where this Pentair Water product is sold for commercial application as defined in the relevant Trade Practices and Consumer Protection legislation the warranty shall be for a period of six months from the date of purchase by the end user.

Who the warranty protects: This warranty is valid only for the consumer purchaser.

What the warranty does not cover:

- 1) Damage, deterioration or malfunction resulting from:
  - a) accident, misuse, negligence, fire, water, lightning, or other acts of nature, unauthorised product modification or failure to follow instructions supplied with the product;
  - b) repair or attempted repair by anyone not authorised by Pentair Water;
  - c) any damage to the product due to shipment;
  - d) removal or installation of the product;
  - e) causes external to the product such as electric power fluctuations or failure;
  - f) use of supplies or parts not meeting Pentair Water specifications;
  - g) normal wear and tear;
  - h) water ingress or exposure to abnormal corrosive conditions or "run dry" conditions;
  - i) any other cause which does not relate to a product defect.
- 2) Damage caused to the product as a consequence of use of another manufacturer's product used in conjunction with Pentair Water and affiliate companies.
- 3) Ingress of insects into the unit causing electrical malfunction is not warranted, care should be taken to avoid this occurrence.

Pentair Water Australia  
2 Redwood Drive Notting Hill  
Victoria 3168 Australia  
Ph: +613 9574 4000



## Pentair Water Product Warranty

Spare Parts:

Spare parts are usually stocked for a reasonable period of time following last production.

Pentair Water does not warrant that spare parts will be made available for the whole of the reasonable period and reserves its right to cease supplying spare parts or providing facilities for repair of spare parts in circumstances which are beyond its control including the requirement to remove spare parts from sale as a consequence of changes in the law or otherwise as it deems fit.

How to get service:

In Australia please contact 1800 664 266 In New Zealand please contact 0800 664 269

Claims under this warranty must give evidence of date of purchase, model and serial number of the product and the claimants name, address and telephone number.

- 1) To obtain warranted service, you will be required to provide to either Pentair Water state office or recommended service agent:-
  - a) the product;
  - b) confirmation in writing specifying the nature of your claim;
  - c) proof providing date of original purchase;
  - d) full contact details including name and address;
  - e) the serial number of the product if any.
- 2) The product is to be forwarded by the customer freight paid to an Authorised Pentair Water service agent.
- 3) Warranty service work will be denied or suspended, on equipment not readily accessible to service personnel, that is products that are behind barriers, tiled or bricked in, installed in roofs or second story external walls including inaccessible power points.
- 4) Any service of any product which is found to be faulty due to abuse, fair wear & tear, misuse or improper installation will be charged to the owner at the service agents current servicing hourly rate.

#### Limitation of implied warranties:

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION CONTAINED HEREIN INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Exclusion of damages: PENTAIR WATER'S LIABILITY IS LIMITED TO THE COST OF REPAIR OR REPLACEMENT OF THE PRODUCT. ONGA SHALL NOT BE LIABLE FOR:

- 1) DAMAGE TO OTHER PROPERTY CAUSED BY ANY DEFECTS IN THE PRODUCT, DAMAGES BASED UPON INCONVENIENCE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, LOSS OF PROFITS, LOSS OF BUSINESS OPPORTUNITY, LOSS OF GOODWILL, INTERFERENCE OF BUSINESS RELATIONSHIPS, OR OTHER COMMERCIAL LOSS, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
- 2) ANY OTHER DAMAGES, WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE.
- 3) ANY CLAIM AGAINST THE CUSTOMER BY ANY OTHER PARTY.

Effective law:

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Nothing in this warranty limits or restricts, or is intended to derogate from, any right or remedy which the purchaser or ultimate user of the product may have pursuant to Australian state and/or Australian federal consumer protection legislation, New Zealand Sale of Goods Act, Consumer Guarantees Act, Fair Trading Act or any other relevant and applicable New Zealand legislation or authority and where necessary shall so be read and construed.

Pentair Water Australia  
2 Redwood Drive Notting Hill  
Victoria 3168 Australia  
Ph: +613 9574 4000



**IMPORTANT**

Please attach your sales invoice/docket here as proof of purchase should warranty service be required.

Please do not return Warranty – Retain for your records.

Purchased From .....  
Purchase Date..... Serial No..... Model No.....



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Water**

**Pacific  
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