

PENTAIR RAINBOW™ DYNAMIC® SERIES II & III

COMBINATION POOL/SPA IN-LINE CARTRIDGE FILTER

MODEL RTL/RCF 1-1/2" & 2-1/2" HIGH FLOW

(FOR CHLORINE/BROMINE DISPENSER OPERATION SEE SEPARATE SHEET)

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

INSTALLER'S IMPORTANT SAFETY NOTE

When installed in conjunction with a gas heater, be sure to equip it with a fireman's switch or install a check valve between the heater and the filter. Make sure all pressure or flow switches are set properly.

SPRING ACTUATED BY-PASS

All models have a built-in spring actuated by-pass which allows 100% filtration of the water on low speed of two speed pumps. During high speed operation, the spring opens, permitting unrestricted flow and maximum hydrotherapy action. Before installation this by-pass can be easily removed and a plug inserted to disable by-pass allowing 100% filtration at all times. (See instructions on back).

WHERE TO INSTALL

The Dynamic Series II & III filters must be installed on the pressure side of the pump with flow arrow on bottom manifold pointing in direction of water flow. Filter can be installed directly to spa flange or deck using special bottom lock flange or in rigid PVC plumbing. (See drawing on back for installation options).

INSTALLATION INSTRUCTIONS WHEN INSTALLED AWAY FROM SPA OR DECK

Be sure to install a valve on both inlet and outlet of filter when filter TOP will be located BELOW water level. The valves will prevent out flow of water during filter maintenance. Filter should be as near to vertical as possible.

INSTALLATION DIRECTLY TO SPA FLANGE OR DECK

NOTE: When using the optional Rainbow Filter Niche, follow niche installation instructions.

1. It is important that the filter and bottom locking flange are seated on a flat surface when hanging filter from spa flange or deck. Determine location and cut a 6¾" diameter hole. For sealing between the filter and the spa we recommend Rainbow's optional O-ring #R170070. If a silicone sealant is used, it is recommended you check with the silicone manufacturer for compatibility with all sealing surfaces.
2. Remove bottom locking flange and slide filter through hole in flange or deck to retaining ring.
3. Align filter for easiest plumbing, making sure inlet and outlet ports are in the correct position.
4. Install bottom locking flange, hand-tightening securely. **DO NOT OVERTIGHTEN.** Overtightening may cause filter to leak around lid. This firmly attaches filter to spa flange or deck making filter ready for plumbing. **NOTE:** If spa is foamed on backside, avoid getting foam on filter, in case filter needs to be removed for any reason.

PLUMBING INSTRUCTIONS FOR SLIP SOLVENT WELD PORTS

For rigid PVC, choose I.P.S. Weldon Solvent Cement #710, #711 or equal. For flexible PVC, use #795 or equal. Follow standard solvent cement cutting, priming and plumbing procedures to install pipe to filter inlet and outlet ports. Be careful not to let excess solvent cement foul operation of by-pass assembly.

PLUMBING INSTRUCTIONS FOR FEMALE PIPE THREADED PORTS

Wrap male pipe threads of fitting to be installed with 3 full wraps of thread seal tape or utilize other suitable pipe joint sealing compound. Tighten fitting as much as possible by hand, then tighten another 1½ to 2 turns more using proper wrench. **DO NOT OVERTIGHTEN**

If any plumbing other than noted above is used to install the filter, i.e. additional filter-by-pass, it could affect the efficiency of the filter and/or the chemical dispenser.

The RTL was designed for bottom discharge using an elbow connection. This allows a full 360 degree choice of discharge plumbing direction. The side outlet port must be plugged. If necessary or desired the bottom outlet may be plugged and the side outlet can be utilized for straight line plumbing.

NOTE: Do not use both outlet ports as double discharge as this lowers the pressure and flow in each line possibly preventing the heater from operating.

NEVER USE ANY TYPE OF LUBRICANT ON LOCKING FLANGE OR MATCHING THREADS ON FILTER

FILTER OPERATION

1. Make sure lock ring is secure. Close air vent valve.
2. Make sure inlet and outlet valves are open (if used).
3. Start pump. The filter's design will automatically eliminate all air. Filter is now operational

MAINTENANCE

IT IS RECOMMENDED THAT YOUR CARTRIDGE BE CLEANED EVERY 3 TO 6 WEEKS OR AS NEEDED. REPLACE WHEN NECESSARY.

TO MAINTAIN WARRANTY PROTECTION, USE ONLY RAINBOW LIFEWARD CARTRIDGES.

CLEANING THE CARTRIDGE

1. Shut off pump and timers.
2. Close inlet and outlet valves (if used).
3. Open air vent valve.
4. Depress lock spring, disengaging lock tab from lock ring. Turning counter clockwise, unscrew lock ring. Lift off lid and/or dispenser and remove cartridge.
5. Remove cartridge gaskets (one each in bottom of cartridge housing and one on lid and/or dispenser).
6. Using a garden hose and nozzle or other high pressure device, hose cartridge clean with a jet stream of water. Work top to bottom on each pleat. **CAUTION:** Do not use a brush which can damage the material. To remove collected sun tan lotions and body oils that hosing will not remove . . . soak cartridge in warm water with detergent added. To remove calcium deposits (a white chalky material) soak cartridge in a one part Muriatic Acid to ten parts water solution. (Use caution and read warnings on Muriatic Acid container. Wear protective clothing, gloves and goggles for eye protection). **USE A PLASTIC CONTAINER ONLY.** Calcium deposits indicate a high spa/pool pH and should be corrected by adding acid to the spa/pool in very small amounts until the pH reads between 7.2 and 7.6 (7.4 is ideal). If condition persists consult a spa/pool dealer or service company familiar with local water condition problems.

NOTE: Commercially available cartridge cleaners may be used and can be obtained from your spa/pool dealer.

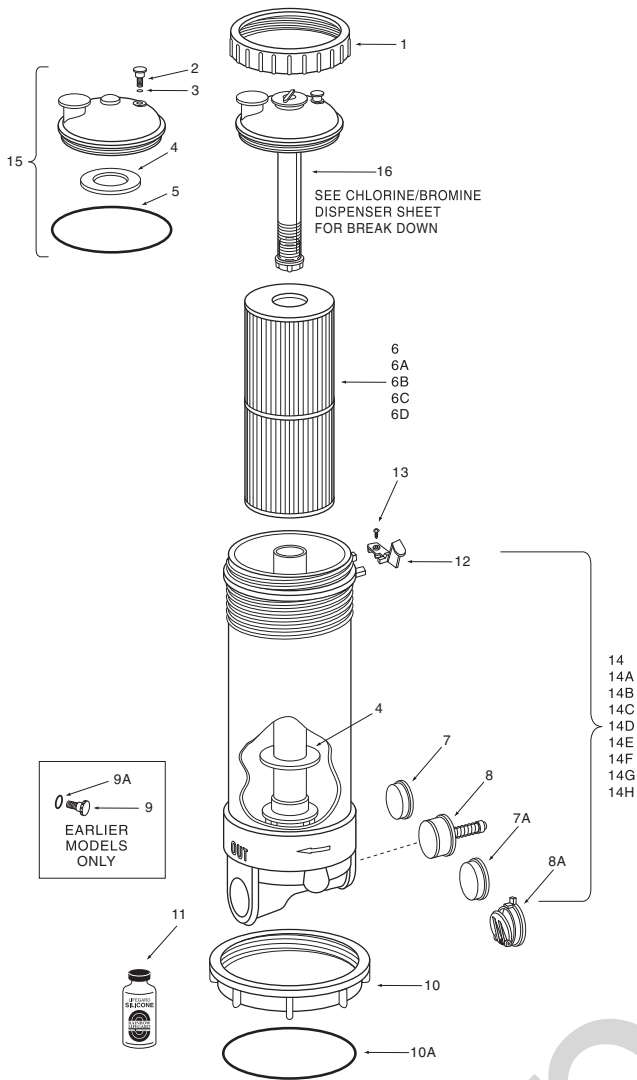
INSTALLING THE CARTRIDGE

1. Clean and install cartridge gaskets.
 2. Clean and lubricate lid O-ring with a Lifeguard Silicone only. Use of other lubricants may damage the filter.
 3. Place cartridge over cartridge support at bottom of housing.
 4. Push lid and/or dispenser's cartridge support firmly into center of cartridge.
 5. Thread on lock ring until lock tab snaps into place. **DO NOT FORCE LOCK RING PAST STOP.**
- CAUTION: NEVER USE ANY TYPE OF LUBRICANT ON LOCK RING OR MATCHING THREADS ON FILTER.**

6. Be sure air vent is closed.
7. Open inlet and outlet valves (if used).
8. Start pump. Filter is now operational. Remember, a good cleaning job and properly maintained water chemistry in your spa/pool ensures long and trouble free filter operation.

WINTERIZING YOUR FILTER

If freezing temperatures occur in your area, the filter must be drained when not in use. Drain cartridge housing, clean cartridge and store indoors in a dry place.



#7, 7A #8, 8A

By-pass plug for applications where 100% filtration is desired at all times. Remove **#8, 8A** by-pass assembly by inserting a rod or pipe through manifold outlet port and tap on by-pass assembly to remove. Insert **#7, 7A** by-pass plug through inlet port and into manifold until firmly seated.

WARRANTY

The DYNAMIC® SERIES V Filter is warranted to be free from defects in material and workmanship for 1 year from date of purchase.

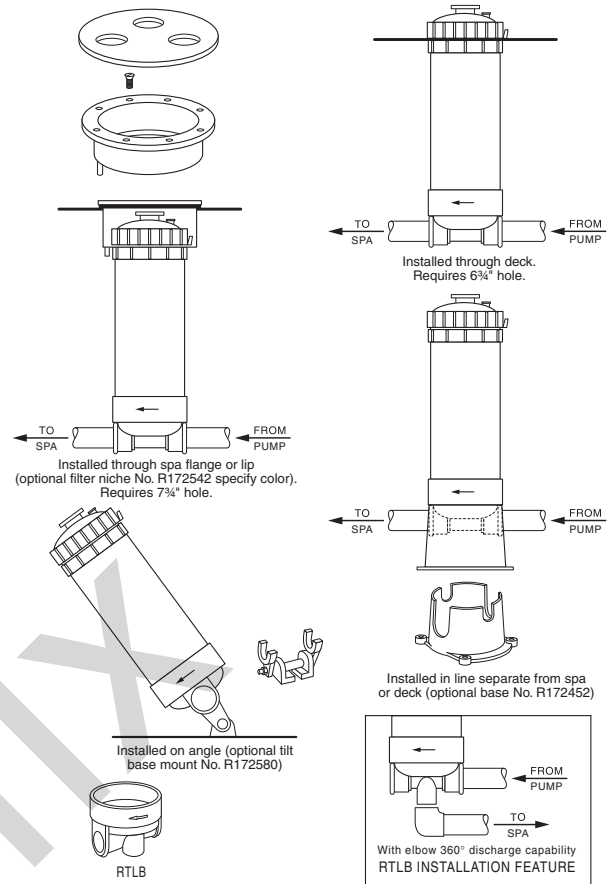
Pentair Water Pool and Spa, Inc. (Pentair) will not be liable for any labor cost of removing or replacing the filter or replacing filter parts and owner agrees to prepay all shipping charges to Pentair El Monte, California. Cartridges and replaceable parts are not guaranteed after the first year because of normal wear and expected service replacement. Use of other manufacturer's replacement parts voids warranty.

This warranty does not cover failure in service due to: improper or faulty installation; fire, freezing, abuse, neglect, damage incurred in shipping; or extend to any incidental, consequential or contingent damages whatsoever. **PLEASE NOTE:** Some states do not allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

The foregoing warranties are exclusive and all other express warranties are void. Implied warranties, including but not limited to the implied warranties of merchantability and fitness for particular purpose shall not extend beyond the duration of the express warranties provided herein. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

MODEL RTL & RCF
TYPICAL INSTALLATIONS



DYNAMIC® SERIES II & III

TOP LOAD CARTRIDGE FILTER MODEL RTL/RCF 1 1/2" & 2 HIGH FLOW PARTS BREAKDOWN DRAWING

| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|---|
| 1 | R172214 | 1 | Lock Ring |
| 2 | R172224X | 1 | Air Vent Valve |
| 3 | R172221 | 1 | O-ring, Air vent Valve |
| 4 | R172222 | 2 | Gasket, Cartridge |
| 5 | R172223 | 1* | O-ring, Lid to Housing |
| 6 | R173428 | 1* | 25 Sq. Ft. Cartridge, 6 oz. |
| 6A | R173429 | 1* | 25 Sq. Ft. Cartridge, 3 oz. |
| 6B | R173434 | 1 | 50 Sq. Ft. Cartridge |
| 6C | R173435 | 1 | 75 Sq. Ft. Cartridge |
| 6D | R173436 | 1 | 100 Sq. Ft. Cartridge |
| 7 | R172225X | 1 | 1 1/2" Plug to disable by-pass |
| 7A | R172679 | 1 | 2" Plug to disable by-pass |
| 8 | R172226X | 1 | 1 1/2" By-Pass Assembly |
| 8A | R172682 | 1 | 2" By-Pass Assembly |
| 9 | R172392 | 2 | 1/4" Access plug (earlier models) |
| 9A | R172393 | 2 | Access plug O-ring (earlier models) |
| 10 | R172370 | 1 | Bottom Locking Flange |
| 10A | R170070 | Opt. | O-ring Locking Flange |
| 11 | R172036 | Opt. | Silicone Lubricant |
| 12 | R172374 | 1 | Lock Spring |
| 13 | R172375 | 1 | Lock Screw |
| 14 | R172386 | 1** | RTL/RCF-25 housing assembly 1 1/2" slip |
| 14A | R172387 | 1** | RTL/RCF-25 housing assembly 1 1/2" FPT |
| 14B | R172388 | 1** | RTL/RCF-50 housing assembly 1 1/2" slip |
| 14C | R172389 | 1** | RTL/RCF-50 housing assembly 1 1/2" FPT |
| 14D | R172390B | 1** | RTL TB-25 housing assembly |
| 14E | R172421 | 1** | RTL/RCF-25 housing assembly 2" slip |
| 14F | R172428 | 1** | RTL/RCF-50 housing assembly 2" slip |
| 14G | R172638 | 1** | RTL/RCF-75 housing assembly 2" slip |
| 14H | R172639 | 1** | RTL/RCF-100 housing assembly 2" slip |
| 15 | R172385 | 1** | Lid Assembly complete for RTL only |
| 16 | R172540 | 1** | Chlorine/Bromine Dispenser complete-RCF |
| | R172452 | Opt. | Free standing base |
| | R172580 | Opt. | Tilt base mount |

*All three cartridges are interchangeable

**Only one applies to your filter; check model number when ordering

