

**RANGER®  
SERIES  
SAND FILTER**



**OWNERS  
MANUAL**

  
MADE IN CANADA



**WARNING**

PLEASE READ THIS OWNER'S MANUAL BEFORE INSTALLING THIS PRODUCT,  
FOLLOW ALL WARNINGS AND INSTRUCTIONS THAT ARE IN THIS MANUAL.  
FAILURE TO FOLLOW WARNINGS MAY RESULT IN PROPERTY DAMAGE  
PERSONAL INJURY



**READ SAFETY INSTRUCTIONS  
PRIOR TO ASSEMBLY OR  
OPERATION**

**W. COOPER INC.®**

[www.cooperpool.com](http://www.cooperpool.com)  
877-903-POOL

## 1. Introduction

This manual contains information for the proper installation, and operation of w.Cooper Inc. sand filters. Your w.Cooper Inc. sand filter is designed and manufactured to provide many years of trouble free operation, when installed, operated and maintained as outlined in this owner's manual.

## 2. How Your Sand Filter Works

Special filter sand removes dirt and debris particles from your pool water. Following instructions (as outlined in this manual) filter sand is loaded into the filter tank, the pool water is pumped through the piping system, then directed by the 6 position dial valve into the filter. As the water is pumped through the sand bed, the particles of dirt and debris are removed leaving clean water. The clean water is returned to the pool through the bottom of the filter, the 6 position valve, and through the return piping to your swimming pool.

After the filter has been in use for a period of time, the accumulation of dirt and debris particles in the sand bed will cause the pressure in the filter to rise. This indicates it is time to backwash (clean) the filter. With the 6 position valve in the backwash position, the flow will reverse direction in the filter. The water will enter the sand through the bottom of the filter, flow up through the sand bed removing the accumulated dirt and debris, through the 6 position valve, and out the waste line. Once the filter has been cleaned, the 6 position valve should be set to rinse and then back to filter. The system now resumes normal filtering.

## 3. Installation

Hand tools are all that is required to install your new filter. Screwdrivers, wrenches and Teflon tape (to seal threads).

3. A: Place the filter so that the piping, 6 position dial valve, and winterizing drain plug are readily accessible for service, operation and winterizing.

## 4. Loading the Filter Sand

Filter sand is loaded through the top of filter tank.

4. A: Cover the stand pipe in the filter with the clear plastic sand disc provided with the filter. Check the winter drain is tight.

4. B: Fill the filter tank 1/2 full with water. This helps prevent damage to the laterals when the sand is added.

4. C: Very slowly pour in the filter sand. Only add the recommended amount of sand as outlined in the specifications in this manual. Ensure standpipe does not move when adding sand. Remove the clear plastic sand disc, and level the sand bed after all the sand has been added.

## 5. Install 6 Position Dial Valve

5. A: Unpack dial valve, you should have 2 nuts, 2 bolts, one clamp ( 2 half sections ), one pressure gauge, one large o-ring, and the valve itself.

5. B: Place valve on top of filter tank with large o-ring in the groove on the underside of the valve flange. Push valve down on the stand pipe gently. Be sure the large o-ring is seated between tank flange and valve.

5. C: Once the dial valve is on top of filter tank, carefully rotate valve until the desired location for installing the plumbing is reached.

5. D: Place both halves of valve clamp around filter valve flange, press both halves as close together as you can. Place the nut in the recessed side of the clamp, and the screw in the other, and snug down. **DO NOT COMPLETELY TIGHTEN.**

5. E: Wrap pressure gauge with Teflon tape. One or two wraps is all you need. Carefully screw pressure gauge into 1/4" NPT opening (located at the front of the valve down from the filter label).

**!!!! DO NOT OVER-TIGHTEN PRESSURE GAUGE INTO VALVE BODY**

5. F: Make your pump connection to the port labeled "pump" on the dial valve. When making connections to valve ports, only wrap the threaded fitting once or twice with Teflon tape, hand tighten and then a quarter turn with a wrench. Hand tighten then a quarter turn with wrench

**!!!! DO NOT OVER-TIGHTEN ANY CONNECTION IN TO THE 6 POSITION DIAL VALVE**

5. G: After the dial valve has been plumbed in, tighten the valve clamp with your screwdriver until both sides are close together.

**6. Finish all other connections**, return to pool from return port on dial valve, suction line to the pump, and waste line from waste port on valve.

**7. Run electrical connections to pump and install as outlined in the pump owner's manual.**

## 8. Start Up Of The Filtration System.

To avoid any water losses check all connections to dial valve and pump. Make sure all connections are tight and secure

**!!!! ALWAYS DEPRESS VALVE HANDLE THEN ROTATE WHEN CHANGING VALVE POSITIONS**

**!!!! NEVER CHANGE DIAL VALVE POSITIONS WITH THE PUMP RUNNING**

**!!!! ALL SUCTION AND DISCHARGE VALVES MUST BE OPEN WHEN STARTING SYSTEM. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH**

8. A: Depress dial valve handle and turn to the "backwash" position of the dial valve, and release the handle.

8. B: Prime and start pump as per pump owners manual, filling the filter tank with water. Once the water flow is steady out of the waste line, run the pump for 2 to 3 minutes. Starting the filter system on "backwash" removes the impurities that may be in the filter sand.

8. C: After the system has run for 2 to 3 minutes, turn pump off. Set dial valve to "rinse" position. Start pump and run for 1 to 1 1/2 minutes, or until backwash sight glass runs clear.

8. D: After the rinse cycle, stop pump. Set dial valve to the "filter" position, start pump. The filtration system is now running in the normal operating mode, cleaning the swimming pool water.

8. E: Make a note of the running pressure of the filter. It will be different from pool to pool depending on plumbing systems and pumps. During the normal operating cycle the filter is cleaning the water, dirt and debris will accumulate in the sand bed and cause the pressure to rise. When the pressure reads 8 to 10 PSI above the first pressure reading, it is time to backwash the filter.

**NOTE:**

Upon first start up of system it may be necessary to repeat steps 8. B to 8. D. This may be due to a heavy dirt load in water used to fill the pool, or excessive dirt in the filter sand. Empty skimmer basket and pump strainer basket often to avoid damage to filter, valve and pump.

**9. 6 Position Dial Valve Functions**

**!!!! NEVER CHANGE DIAL VALVE POSITIONS WITH THE PUMP RUNNING**

9. A: FILTER - valve is set to "filter" normal filtering or 'cleaning the water'. Use this setting for regular vacuuming.

9. B: BACKWASH - valve is set to "backwash" to clean dirt and debris in the sand bed. Backwash should be started when the pressure gauge reads 8 to 10 PSI above the recorded start-up pressure.

Procedure for backwashing the filter;

-Stop the pump, set valve to "backwash" position.  
-Start pump.

-Run for about 2 minutes, or until water in backwash sight glass is clear.  
-Stop pump, proceed to rinse cycle.

9. C: RINSE - Set valve to "rinse" position.  
-Start pump, rinse for about 1 minute, or until backwash sight glass is clear.  
-Stop pump, set valve to "filter" position.  
-Start pump.

9. D: WASTE - for bypassing the filter, when draining pool, or vacuuming heavy debris.

9. E: RECIRCULATE - Water is circulated through the valve by-passing the filter.

9. F: CLOSED - Shuts off flow from pump to filter.

**!!!! NEVER RUN PUMP WHILE VALVE IS IN CLOSED POSITION**

**10. Vacuuming**

Vacuuming can be done directly into the filter unless it is a very heavy dirt load, then it should be performed with the valve in the waste position.

**11. Service And Repairs**

w.Cooper Inc. recommends having only qualified service technicians perform any work on your sand filter or pump. No return may be made directly to w.Cooper Inc. without authorized permission.

**12. Winterizing**

12. A: Turn off pump once pool is drained down.

12. B: Place valve to a position between settings to allow air to enter the filter.

12. C: Remove drain plugs from filter, refer to pump owner's manual for winterizing instructions, drain water from piping. Store all drain plugs for the winter.

12. D: Cover the filter with plastic or a tarpaulin to protect it from the elements.

**Please Be Aware...**

Crystal clear swimming pool water is a combination of proper water chemistry and adequate filtration. One without the other may not give the crystal clear water you are looking for. Your Sand Filter is designed to operate continuously, however this may not be needed. Be sure to run your filter long enough to clean the entire volume of your pool water once a day.

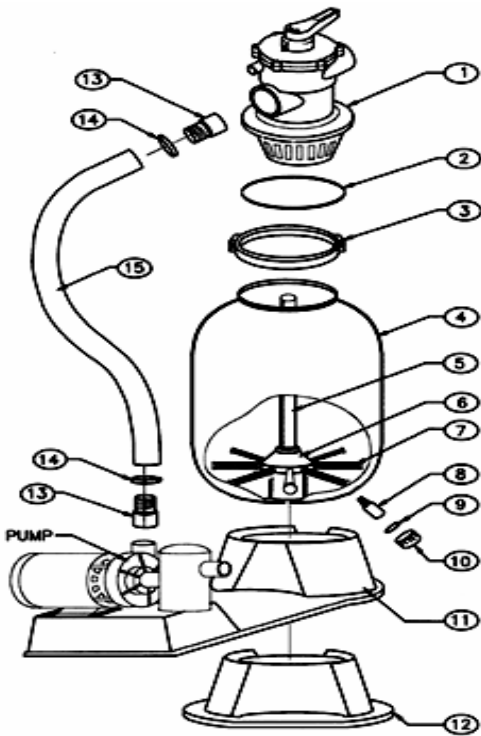
**Save these instructions for future reference**

# Pool Safety

Your swimming pool will no doubt be a source of fun, exercise and relaxation for you and your family. To further enjoy your pool the following is a list of Safety Tips to remind your family and friends.

1. Install a safety enclosure around your pool with a self-closing, self-locking gate.
2. Supervise children at all times when they are in or around the pool enclosure.
3. Rescue equipment such as life rings, life hooks and first aid kit are recommended.

4. Learn CPR procedures, it can save lives.
5. Teach children to swim, it will be a life long benefit.
6. Never swim alone, even good swimmers need help occasionally.
7. Do not swim in poor lighting conditions or if the pool is too cloudy to see the bottom.
8. Store chemicals safely and keep secured.
9. Keep electrical equipment and moving equipment away from children.



No.	Description	RS 1615	RS 1815	RS 2115	RS 2515	RS-2520
1	1 1/2" Six Position Valve	2080	2080	2080	2080	N/A
1	2" Six Position Valve	N/A	N/A	N/A	N/A	2280
2	Valve To Tank O-Ring	2006	2006	2006	2006	2006
3	V-Clamp With Hardware	2061-1	2061-1	2061-1	2061-1	2061-1
4	Filter Tank Only	1604	1800	2000	2400	2400
5	Hub With Stand Pipe	2016A	2018A	2040A	2150A	2520A
6	Hub Only	2043	2043	2043	2043	2043
7	Laterals (8 Required)	2045A	2045A	2045A	2145A	2145A
8	Drain Fitting	2023W	2023W	2023W	2023W	2023W
9	Drain Cap Washer	2123	2123	2122	2122	2122
10	Drain Cap	2022	2022	2021	2021	2021
11*	Platform Base With Hardware	2110	2110	2110	2110	N/A
12	Pedestal Base	2100	2100	2100	2100	2100
13*	Barbed Hose Adapter	1503	1503	1503	1503	N/A
14*	S.S. Hose Clamp	1505	1505	1505	1505	N/A
15*	Pump To Filter Hose	1502-23	1502-25	1502-26	1502-30	N/A
16	Filter Tank Parts 4 to 10 and 12	RS-16	RS-18	RS-18	RS-25	RS2-25

\* Used on T and TCN Series Systems only

**Save these instructions for future reference**

## LIMITED WARRANTY

To original purchasers of its Filter and pump equipment, W. Cooper Inc., warrants its product to be free from defect in material and workmanship for a period of one year from date of purchase. Filter tanks (tank only) carry a 10 year pro-rated warranty from date of purchase. Equipment which fails or is defective during warranty period, except as a result of freezing, accident, negligence, improper installation, or dry run, shall be repaired or replaced at our option without charge within 90 days of defective product.

In order to obtain warranty replacements or repair, defective products should be returned, transportation paid, to the place of purchase, or the nearest authorized W.Cooper service center.

No return may be made directly to the factory without express written authorization of W. Cooper Inc.

Some provinces or states do not allow a limitation on the duration of implied warranty, or the exclusion or limitation of incidental consequential damages, so the above limitation or exclusion may not apply.

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