



# Sand Filter

## Owner's Manual and Installation Guide

5/05

Congratulations! You have purchased one of the most user-friendly pool filter systems available. Ideal for an above-ground pool or in-ground vinyl liner pool, it will provide you with many years of pool enjoyment. This step-by-step installation and maintenance guide will provide the necessary information for you to install your new pool system and easily maintain the equipment.

Before installation be sure to read all instructions and warnings carefully. Refer to product dataplate(s) for additional operation instruction and specifications.

**⚠ WARNING** This filter operates under pressure. If this unit is not assembled properly or is operated with air in the circulation system, serious bodily injury and/or property damage could occur.

**⚠ WARNING** Your filter is a pressure vessel and should never be serviced while under pressure. Always shut off pump to relieve the pressure in the filter prior to servicing the unit.

**⚠ WARNING** To reduce risk of injury, do not permit children to use this product unless they are closely supervised at all times.

**⚠ WARNING** Locate the system at least five feet (1.5M) from the pool to prevent it being used as a means of access to the pool by young children. (See ANSI/NSPI-8 1996 "Model Barrier Code For Residential Swimming Pools, Spas and Hot Tubs").

### INSPECTION

Examine the equipment when received. Notify your dealer or carrier of any damage or missing parts. Verify that equipment is of size and model specified.

### INSTALLATION LOCATION

Locate unit on a solid foundation as close to pool/spa as possible, but keep at a distance of at least five feet (1.5 M). (See previous warning). Give consideration to draining - away from equipment ventilation and access for future servicing and winterizing.

### PUMP SELECTION

A full line of pool/spa pumps are available for installation with these filters. For those installations where the equipment will be placed above the water level, a self-priming pump should be selected. Ask your dealer to determine the proper size and distance from pool or spa and friction losses (restrictions) of associated equipment.

### GENERAL PLUMBING FOR SOLVENT WELD CONNECTIONS

Rigid or flexible PVC pipe can be used. Pipe ends should be clean and free of any flash caused by the cutting operation. Be sure that the

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proper adhesive is used on the type of pipe specified. Recommended Adhesives - These are examples only and are not intended to restrict brands:

#### PVC - PVC Joint

Uni-Weld Pool-Tite 2000  
Suregard Flex 20  
IPS Weld-On 705

#### PVC - ABS Joint

Uni-Weld Pool-Tite 2000  
Suregard Weld-All No. 5  
IPS Weld-On 794

**Note:** A primer will assure that adhesive joints are superior. Suregard P-3000 has a purple tracer to qualify in areas where codes specify a primer must be used.

**Caution:** We recommend that you consider climatic conditions when applying adhesives. Certain atmospheric situations, such as high moisture content, make the adhesive action of certain glues less effective. Check the manufacturer's instructions.

### FOR THREADED CONNECTIONS

Use only Teflon tape or equivalent on threaded plumbing connections. Other pipe compounds may damage threads. We do not recommend the use of silicone or petroleum based compounds. DO NOT OVERTIGHTEN. HAND-TIGHTEN PLUS 1/2 TURN IS SUFFICIENT.

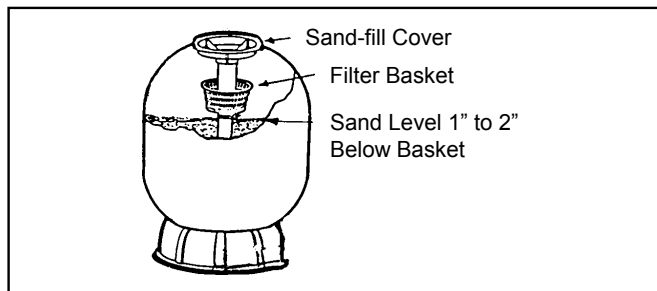
### SAND FILTER PREPARATION

**DO NOT PLACE SAND IN FILTER TANK BEFORE IT IS POSITIONED AS ITS WEIGHT WILL MAKE MOVING TANK MORE DIFFICULT AND MAY CAUSE DAMAGE.**

Remove bag of miscellaneous parts and proceed as follows:

1. Place standpipe cover on standpipe to prevent entrance of any sand. Standpipe cover is either a plastic cap or waxed corrugated assembly found in Misc. parts bag or separately in carton. Some filters may already have standpipe cover installed on standpipe and diverter removed located in Misc. parts bag.
2. Fill tank approximately 1/2 full of water.

3. Add sand (not provided) following recommendation for size and amount. Be sure that standpipe remains centered while pouring sand. Be sure sand is level.
4. Remove cover from standpipe.

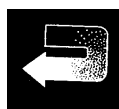


## DIAL VALVE INSTALLATION

Carefully remove all sand particles from the mounting location. Position the rubber O-ring on the dial valve body. Place valve on tank and rotate until the valve inlet is approximately in line with the pump outlet opening. Install the V-clamp. Install pressure gauge after wrapping threads with teflon tape.



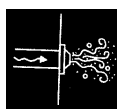
**Filter**



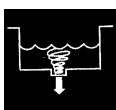
**Backwash**



**Rinse**



**Whirlpool**



**Drain**



**Test**



**Winterize**

## DIAL VALVE FUNCTIONS

**FILTER** - For normal filtering. This position also can be used for regular vacuuming.

**BACKWASHING** - Clean your filter with this position. Note instructions on Cleaning Filter.

**DRAIN** - This position allows you to pump water from the pool - the flow from the pump is permitted to bypass filter and go directly to the waste. Use this position to vacuum heavy concentration of debris.

**WHIRLPOOL** - By bypassing the filter, this position creates more pressure to obtain optimum performance from any hydro-therapy fittings. No filtration occurs while the valve is in this position.

**WINTERIZE** - This is a neutral position which is used only when pump is stopped. It allows air to leave - or enter the tank to help priming and draining.

**RINSE** - (6 and 7 position dial valve only, not available on 4 position dial valve.) For sitting filter bed after backwashing and for carrying any remaining loose dirt to waste. The rinse prevents any return of residual dirt to the pool that occurs momentarily when changing directly from BACKWASH TO FILTER.

**TEST** - (6 and 7 position dial valve only, not available on 4 position dial valve). This position prevents any backflow of water from pool during pump maintenance if filter is below water level.

## FILTER START-UP

1. Set dial valve to DRAIN position.
2. Perform pump start-up.
3. After good flow has been established, continue pumping for one minute or until wastewater is clear.
4. Stop the pump. Set dial valve to BACKWASH and restart pump.
5. Observe the waste water. When flow becomes clear (approximately 2 to 3 minutes). STOP pump.

6. If your dial valve does not have a RINSE cycle, proceed to STEP 7. If your dial valve does have a RINSE cycle, set it to that position, restart pump and allow it to run 20 seconds. STOP pump.
7. Set dial valve to FILTER and restart pump.

## WATER CHEMISTRY

Proper and consistent use of chemicals is necessary to maintain clean, sanitary water, prevent a spread of germ infection and control the growth of algae which can spoil the appearance and enjoyment of your pools or spa.

Chlorine is the most commonly used chemical to provide clean, sanitary water. Either dry or liquid chlorine can be used which should be added daily as it is dissipated by dirt and germs as well as by the sun and the wind.

It is also important that the correct level of acidity or alkalinity of the pool water be maintained. This is the pH of your pool with pH 7.0 being neutral. Readings above pH 7.0 are alkaline and readings below are acid. A desirable range is 7.2 to 7.4. Consult your local pool/spa dealer for complete information on the proper application and use of chemicals.

## FILTER MAINTENANCE

Filter tank and contents should not require attention other than backwashing provided water is kept in continuous chemical balance without heavy dosages of corrosive chemicals.

## CLEANING FILTER (Backwashing)

When the new filter is placed in service, note the reading on pressure gauge. As dirt builds up in filter, the pressure reading will increase. When it reads 6-8 PSI above the original reading, it is time to Backwash as described below.

1. STOP pump.
  2. Set dial valve to BACKWASH and start pump.
  3. Observe the waste water. STOP pump when flow becomes clear (approximately two to three minutes).
  4. If your dial valve does not have a RINSE cycle proceed to step 5. If your dial valve does have a RINSE cycle, set it to that position, restart pump and allow to run 20 seconds. STOP pump.
  5. Set dial to FILTER and start pump to resume filtering operation.
- Do not use pool vacuum cleaner when filter is backwashing.

## WINTERIZING

Consult your dealer for advice on wintering your equipment if freezing temperatures occur in your locality. Their knowledge of your equipment makes them the best qualified source of information. Follow their recommendations, and if these include draining the filter system, proceed as follows:

1. BACKWASH for 3 to 5 minutes and the set dial valve to WINTERIZE position.
2. Drain system by removing drain plugs and/or removing pipe caps from the filter, pumps, and disinfecting equipment. Store plugs in a dry place for safekeeping.

## TROUBLE SHOOTING



**Disconnect power to motor main circuit breaker to avoid electrical shock.**

## SAND BACK TO POOL

- Sand too small: *Recommend .40mm to .50 mm size, 20# silica. Inspect.*
- Flow rate too high. *Adjust discharge valve to reduce flow.*
- Sand bed calcified. *Change sand.*
- Cracked or loose laterals. *Inspect or replace.*
- Cracked manifold. *Inspect or replace.*
- Cracked or unseated standpipe in manifold. *Inspect or replace.*
- Too much sand; above basket on stand pipe. *Inspect.*

## ALGAE OR DEBRIS BACK TO POOL

- Upper standpipe disengaged from bottom of valve. *Lengthen upper standpipe.*
- Upper standpipe disengaged from top of basket on standpipe. *Inspect.*
- Heavy dirt load.
- Heavy bather load.
- Algae. *Shock and flock to remove from pool.*
- Dial valve isn't locked in position. *Inspect.*

## EXCESSIVE PRESSURE IN FILTER

- Dirty filter. *Backwash; recheck pressure.*
- Backwash adapter in the "return" outlet on the dial valve. *Inspect.*
- Calcified sand bed. *Inspect and change if necessary.*
- Using Soft Swim; Baquacil. *Use Baquacil's cleaners.*

## FILTER LEAKS WATER

- Split in tank. *Replace.*
- Split in tank due to freeze damage. *Replace.*
- Drain plug missing or not tight. *Inspect.*
- O-ring between tank and valve damaged, twisted or not lubed. *Inspect.*

## DIAL VALVE LEAKS

- Valve set in intermediate position. *Inspect.*
- Diverter O-ring damaged. *Replace diverter.*
- O-ring between body and housing damaged. *Inspect or replace.*
- O-ring between valve and tank damaged, twisted, not lubed. *Inspect.*

## FILTER WILL NOT KEEP WATER CLEAN

- Dirty filter. *Backwash or change sand; recheck pressure.*
- Algae growth in pool. *Shock and flock; then vacuum up waste.*
- Water started out dirty. *Continue to filter and clean as necessary.*
- Improper sand media. *Recommend .40mm to .50mm, 20# silica. Inspect.*
- Heavy swimmer load.
- Not enough sand in filter. *Inspect or fill to proper level.*
- Calcified sand bed. *Inspect and change sand if necessary.*
- Dial valve in intermediate position. *Inspect.*
- Flow rate too low.
- Backwash adapter in the "pump" inlet on the dial valve. *Inspect.*

## SAND COMING OUT OF BACKWASH IN BACKWASH MODE

- Valve missing backwash adapter. *Check valve.*
- Too much sand. *Just changed and overfilled?*
- Pump is over sized. *GPM of pump vs. GPM capacity of filter. Check this.*
- May need smaller backwash adapter . . . extreme case. PSI is important.

**NOTE: If these recommendations do not solve your particular problem(s), please contact your local dealer for service.**

## SERVICE & REPAIR PARTS

Refer all service to your local dealer as his knowledge of your equipment makes him the best qualified source of information. Order all repair parts through your dealer. Give the following information when ordering repair parts: Unit nameplate data and description of part.

## MANUFACTURER'S WARRANTY

Cantar Pool Products warrants its pool equipment to be free of defects in material and workmanship for a period of 12 months from the date of purchase or 36 months from the date of manufacture, whichever comes first.

This warranty extends only to the original retail purchaser and only

during the time in which the original retail purchaser occupies the site where the product was originally installed.

**THIS WARRANTY IS EFFECTIVE NOVEMBER 1, 2003. ANY IMPLIED WARRANTIES WHICH THE PURCHASER MAY HAVE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIOD. Some states or provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. IN NO EVENT SHALL CPP BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.**

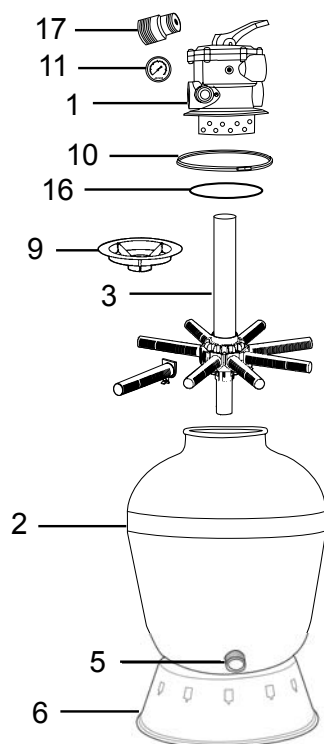
This warranty applies to products used in swimming pool, spa, & aquaculture applications only and does not apply to any product which has been subjected to negligence, alteration, accident, abuse, misuse, improper installation, abrasives, corrosion and/or electrolysis, improper voltage supply, vandalism, civil disturbances, or acts of God (including but not limited to freeze damage, lightning strikes, and other damage caused by catastrophic events). The only warranties authorized by CPP are those set forth herein. CPP does not authorize other persons to extend any warranties with respect to its products, nor will CPP assume liability for any unauthorized warranties made in connection with the sale of its products. The Company will not be responsible for any statements that are made or published, written or oral, which are misleading or inconsistent with the facts as published in the literature or specifications furnished by the Company.

## WARRANTY CLAIM PROCEDURE

Warranty claims shall be made by contacting the installing/selling, builder, dealer, or retailer (point of purchase). All equipment must be inspected by a local Company representative or at the factory before warranty is authorized. All charges or expenses for freight to and from the factory, removal and reinstallation of the products, or installation of a replacement product are the responsibility of the purchaser unless otherwise expressly authorized by Cantar Pool Products.

The Company, at its discretion, may repair or replace free of charge (F.O.B. factory in Toronto, Ontario) any product that proves defective within the warranty period, or it may issue credit in the amount of the invoice of the defective equipment in lieu of repair or replacement. The Company reserves the right to substitute new or improved equipment on any replacements.

The provisions of this additional written warranty are in addition to and not a modification of or subtraction from the statutory warranties and other rights and remedies provided by any state or provincial law.

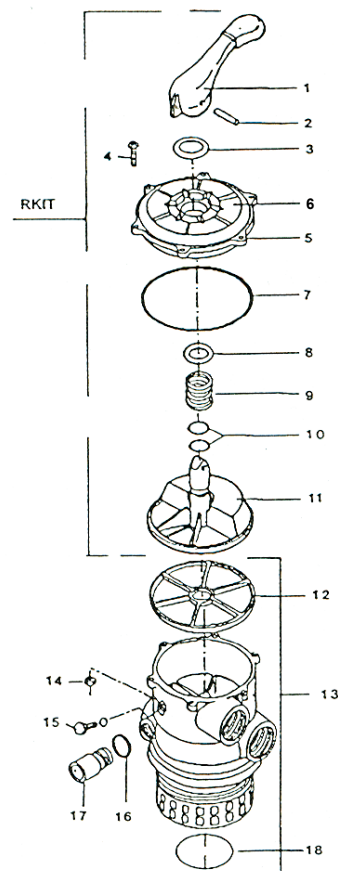


## 16", 18.5" & 24" SAND FILTER SYSTEM REPAIR PARTS

FIG NO.	PART NO.	DESCRIPTION
1	39-2585-09-R	Dial Valve 15 VK
2	9408-5745-R	Replacement filter tank SS160 w/#5
	9408-5623-R	Replacement filter tank SS185 w/#5
	9408-5172-R	Replacement filter tank SS240 w/#5
3	42-3882-07-R	Snap-Fit SS160SF Standpipe w/laterals
	42-3883-06-R	Snap-Fit SS185SF Standpipe w/laterals
	42-3884-05-R	Snap-Fit SS240SF Standpipe w/laterals
4	42-3532-01-R	Lateral Kit f/SS160-SS185 (incl. 8 lat. per kit) prior to 3/02
	42-3511-06-R	Lateral Kit f/SS240 (incl. 8 lat. per kit) prior to 3/02
	85-5311-02-K	Lateral Kit Snap-Fit f/SS160-SS185 (effective 3/02)
	85-5312-03-K	Lateral Kit Snap-Fit f/SS240 (effective 3/02)
5	85-8263-00-R	Drain Cap w/13-1023-06-R Gasket.
6	12-1121-08-R	Base filter tank support
9	22-3639-07-R	9869 Sand-Fill Cover
10	85-8139-02-R	Clamp V-Band
11	9193-4182-R	PG-60 Pressure Gauge 1/4" 0-60#
16	47-0364-05-R	O-Ring 6-3/4 x 7-1/8 x 3/16 BN
17	31-1650-04-R	Backwash Adapter f/SS160
	31-1652-02-R	Backwash Adapter f/SS185
	31-1653-01-R	Backwash Adapter f/SS240

## PARTS FOR 1-1/2" (39-2585-09) & 2" (39-2586-03) DIAL VALVES

FIG NO.	PART NO.	DESCRIPTION
1	39-2611-02-R	Handle
2	14-4263-08-R	Pin SS
3	14-4264-07-R	Washer NYL.
4	14-2563-09-R6	Screw SS (6 each req'd) (6 per bag)
5	39-2632-07-R	Cover (1-1/2" Dial Valve)
6	39-2612-01-R	Cover (2" Dial Valve)
7	47-0236-01-R	O-Ring Nitrile (1-1/2" Dial Valve)
	47-0364-47-R	O-Ring Nitrile (2" Dial Valve)
8	14-4266-05-R	Washer
9	16-1092-09-R	Spring SS
10	47-0212-09-R	O-Ring Nitrile
11	16-1108-01-R	Valve Diverter Noryl (1-1/2" Dial Valve)
	16-1093-08-R	Valve Diverter Noryl (2" Dial Valve)
12	13-1076-02-R	Spider Gasket Kraton (1-1/2" Dial Valve)
	13-1074-04-R	Spider Gasket Kraton (2" Dial Valve)
13	39-2636-03-R	Valve Body (1-1/2" Dial Valve)
	39-2613-00-R	Valve Body (2" Dial Valve)
14	14-4267-04-R	Nut SS
15	14-4268-03-R	1/4" Plug ABS
16	13-1075-03-R	Gasket Nitrile
17	23-4823-00-R	Sight Glass
18	47-0240-05-R	O-Ring Nitrile (1-1/2" Dial Valve)
	47-0229-00-R	O-Ring Nitrile (2" Dial Valve)
<b>REPAIR KITS</b>		
RKIT	39-2634-05-R	Handle/Cover Assembly (1-1/2" Dial Valve)
	39-2617-06-R	Handle/Cover Assembly (2" Dial Valve)



Les Équipements de Piscines Carvin Inc. ■

Carvin Pool Equipment Inc.

4000 Boul. Casavant O. St-Hyacinthe,  
(Québec) Canada J2S 9E3

Tél : 450-250-4500 : Fax : 450-250-4501  
Sans Frais ■ Toll Free : 1-866-979-4501

<http://www.carvinpool.com>

