

CFR 25™ ELEMENT FILTER

USER MANUAL AND INSTALLATION GUIDE

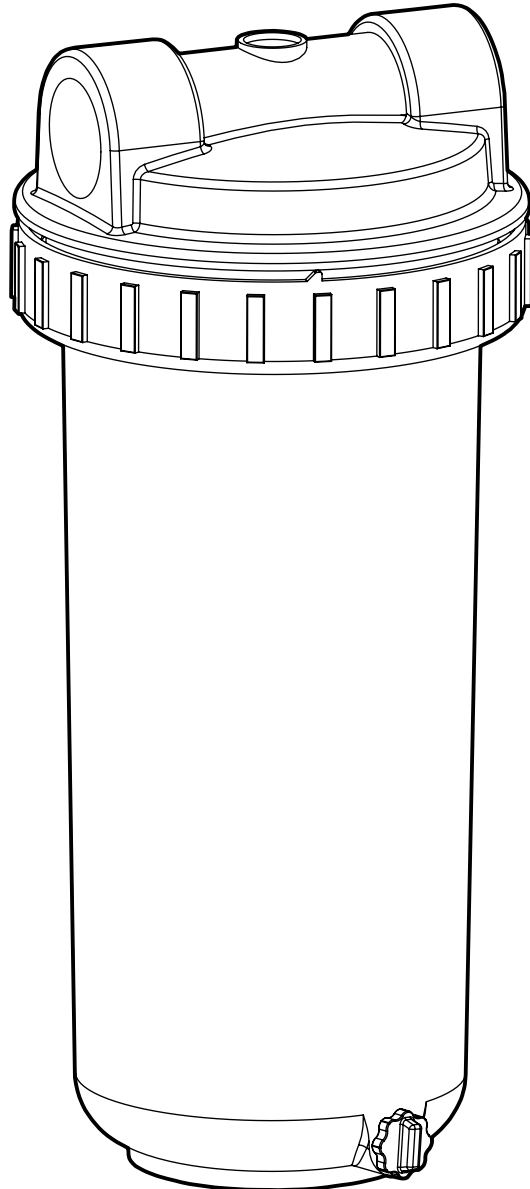
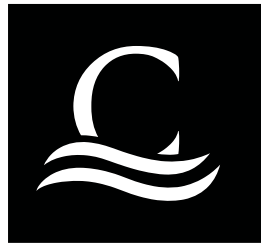


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INTRODUCTION

Thank you for purchasing the CFR 25™ FILTER by CARVIN®.

We want to help you get the best results from your new product and operate it safely. This manual contains information on how to do that; please read it carefully before installing and using the pool. If a problem should arise, or if you have any questions about your product, consult an authorized CARVIN® retailer or distributor.

All the information in this manual is based on the latest product information available at the time of publication. The manufacturer reserves the right to make changes at any time without notice and without incurring any obligation. No part of this publication may be reproduced without written permission.

READ AND FOLLOW ALL INSTRUCTIONS

Review all instructions provided with the product prior to its installation, startup, operation, shutdown, maintenance or winterizing.

Failure to follow warnings and safety messages may result in property damage or personal injury. The user assumes the bodily or material risks arising from any improper use of this product.

IMPORTANT SAFETY INSTRUCTIONS

Your safety and the safety of others are very important.

This manual provides important safety messages. A safety message alerts you to potential hazards that could hurt you or others. Each safety message is identified by a black box marked, WARNING.

 WARNING

This manual contains important safety information which must be furnished to the end user. Failure to read and follow instructions could result in serious personal injury and/or major property damage.

 WARNING

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

 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

Always make sure the filter Ring-Lok™ is tightened to “built-in stop” prior to operating pump. Do not remove or adjust the Ring-Lok while the pump is running; doing so may cause the filter cover to blow off, causing injury or property damage.

 WARNING

Install the system at least five feet (5 ft.) (1.5 m) from the pool to prevent it from being used as a means of access to the pool by young children. Consult the specific regulations and codes that apply to your location.

 WARNING

Always make sure the filter Ring-Lok™ is tightened to “built-in stop” prior to operating pump. Do not remove or adjust the Ring-Lok while the pump is running; doing so may cause the filter cover to blow off, causing injury or property damage.

INSPECTION

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

PUMP SELECTION

A full line of pool/spa pumps are available for installation with these filters. For 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 pump for your application. Consideration must be given to pipe size and distance from pool or spa and from friction losses 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 flask caused by the cutting operation. Be sure that the proper adhesive is used on the type of pipe specified.

PVC-PVC CONNECTION

OATLEY Uni-Weld Pool-Tite 2300
IPS Weld-On 705

PVC-ABS CONNECTION

OATLEY Uni-Weld Pool-Tite 2300
IPS Weld-On 705

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 OVER-TIGHTEN:** HAND TIGHTEN PLUS 1/2 TURIN IS SUFFICIENT.

FILTER PLUMBING

The CFR In-Line Filter is provided with 1 1/2” inlet and outlet connections. The CFR-25 has female threads and the CFR-25S has socket connections designed for solvent weld connections. When making solvent weld connections, be sure excess cement does not run into internal parts of filter head, body or element by disassembling filter before piping. When the filter is located below water level, a valve should be installed at both INLET and OUTLET. This will prevent backflow of water during maintenance. The unit is equipped with a built-in automatic bypass. When used in conjunction with 2-speed pumps, the bypass allows all water to flow through the filter element at low speeds affording 100% filtration. During high speed operation, the added velocity opens the bypass allowing unrestricted flow and maximum turbulence.

CFR 25

Maximum total flow rate	.60 GPM
Maximum flow through element	.25 GPM
Maximum flow through bypass	.35 GPM

FILTER START-UP

1. Check to be sure that the assembly nut on filter is tight, lock tabs engaged and drain valve closed.
2. Perform pump start-up.
3. The filter is designed to automatically evacuate any air in filter.

WINTERIZING

Consult your dealer for advice on winterizing your equipment if freezing temperatures occur in your locality. His knowledge of your equipment makes him the best qualified source of information.

Follow his recommendations, and if these include draining the filter, proceed as follows:

1. Clean the filter element and store in dry area.
2. Drain system by removing drain plug.

WATER CHEMISTRY

A proper and consistent use of chemicals is necessary to maintain clean, sanitary water, prevent the spread of germ infection and control the growth of algae which can spoil the appearance and enjoyment of your pool or spa. Chlorine is the most used chemical to provide clean, sanitary water.

Dry or liquid chlorine (calcium or sodium hypochlorite) can 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 proper application and use of chemicals.

FILTER MAINTENANCE

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

Note: The element support assembly on the CFR™ automatically purges any accumulated air to maintain the internal water level up to the top of the element. We, however, recommend periodic manual opening of the vent plug to purge any small amounts of air accumulated under the cover.

REMOVING AND CLEANING FILTER ELEMENT

The CFR In-line is equipped with a high quality single element polyester cartridge. As the filter removes dirt, it begins to accumulate on the element creating a resistance to water flow. As a result, the flow decreases. When flow decreases below desired rate, cleaning of the element or its replacement is necessary. Before proceeding, be sure that the electrical power to the pump is OFF and inlet and outlet valves are closed if unit is located below water level.

Open the air vent and drain plug to remove water from tank. Remove assembly nut by turning counter-clockwise. Hold tank body firmly, using a rocking motion to separate from filter top. Lift the filter element from tank body. Elements are usually cleaned by the use of the pressure nozzle on a garden hose. To remove dirt, direct the spray on the element at an angle. This is usually sufficient to clean your element. However, sometimes calcium deposits are so excessive that a cleaning agent is necessary. Also, algae, suntan oils and body oils can form a coating on the element which hosing cannot remove. In such cases, we recommend soaking the element in a solution of filter element cleaner which can be obtained from your spa and pool dealer. You should, of course, follow the manufacturer’s directions for the operation. Before reinstalling the filter element, hose it thoroughly.

INSTALLING FILTER ELEMENT

Remove any debris from tank, then install cartridge over center core. Be sure the O-Ring in tank groove is free of debris. Regularly apply a light film of petroleum jelly to O-Ring. Push the filter tank into the head being careful not to pinch the O-Ring, then thread assembly nut clockwise. Hand-tighten only. The filter is again operational. Start pump again as in start-up instructions. CFR Filters are designed to operate at peak performance with genuine replacement parts. A second cartridge element is recommended to be on hand for use in alternating with the original. This method generally results in longer element life.

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 name plate information and description of part.

TROUBLE SHOOTING

FILTER TANK LEAKS WATER

- **Split in tank due to freeze or other damage.** Replace.
- **Lid O-Ring damaged, twisted, or not lubricated.** Inspect.
- **Lock ring on lid not tight.** Inspect and tighten down to engage lock tabs.
- **Air bleed valve loose or O-Ring missing.** Inspect.
- **Inlet / Outlet fittings loose or not sealed.** Inspect.

DEBRIS BACK TO POOL

- **Dirty filter.** Clean element in filter cleaner or replace.
- **Cracked dirt catcher.** Inspect and replace if necessary.
- **Filter collapsing.** By-pass through top of dirt catcher. Inspect or replace.
- **Filter isn't seated in dirt catcher.** Inspect
- **Filter is installed upside down.** Install top side up. Inspect.

FILTER DOESN'T KEEP WATER CLEAN

- **Filter collapsing. Bypass through top of dirt catcher.** Inspect or replace.
- **Holes in filter.** Inspect or replace.
- **Filter installed upside down.** Inspect or install top side up.
- **Filter isn't seated in dirt catcher.** Inspect or install top side up.
- **Water started out dirty.** Continue to filter and clean as necessary.
- **Heavy swimmer load.** Clean filter as necessary.
- **Flow rate too low.** Increase flow to turn water more often.

PRESSURE DOESN'T DROP IN FILTER AFTER CLEANING

- **Dirty filter.** Clean element in filter cleaner or replace.
- **Gate valve closed in return line.** Inspect
- **Return line partially clogged.** Inspect.
- **Return fitting clogged.** Inspect.

TANK WILL NOT ALIGN WITH BASE MOUNTING HOSES

- **Check position of tank.** Rotate.
- **Loosen pump from base to allow filter to move and align.**

FILTER LID LEAKING

- **Inspect O-Ring, cracks, twisted.** Replace.
- **Lid cracked.** Replace.
- **Tank cracked.** Replace.

If the recommendations in the **TROUBLE SHOOTING** portion of this manual do not solve your particular problem, please contact your local dealer for service.

FILTER CARTRIDGE CLEANING INSTRUCTIONS

FOR BAQUACIL® USERS

Special care must be taken when cleaning filter cartridges used in a swimming pool or spa using Baquacil® as a sanitizer. Because of the way Baquacil® works, the filter element must be cleaned more thoroughly and more frequently than in a chlorine system. If extreme care is not taken to completely remove all residue from the filter media a buildup will occur. This buildup will significantly shorten the life of the filter element.

Unlike chlorine which oxidizes the bacteria in the water, polyhexamethylene biguanide (PHMB) based sanitizers destroy the bacterial cells. PHMB, the active ingredient in Baquacil®, locates and binds to bacterial surfaces. It then attacks and overcomes the outer bacterial cell wall. Once this wall has been compromised, the cytoplasmic membrane, the inner cell membrane, is destroyed. This destruction allows the cell contents to disperse into their surroundings where they are likely broken down into their elemental parts by the non-chlorine oxidizer Baqua Shock®.

In addition, Baquacil® is a mild coagulant which combines bacterial cells as well as other small particles contributed by the environment, bathers, etc. into particles large enough to be trapped by the filter. In comparison with all other trapped contaminants in a typical pool or spa the amount of bacterial cells that are deposited on the filter is minimal. The resulting deposit is a gray sticky film which can only be removed with Baqua Clean®. If TSP or any TSP type cleaner is used prior to stripping the film, the cleaner and the gray film will combine to form a gum-like substance. Once this occurs, the substance cannot be removed from the media and the filter cartridge must be replaced.

CAUTION:

Please heed all manufactures posted instructions, warnings and cautions when using Baquacil® or Baqua Clean®.

FILTER CARTRIDGE CLEANING

FOR CHLORINE USERS:

START UP PRESSURE: 6 to 8 lb/po2

STEP 1:

Clean the cartridge when the filter canister pressure reaches a maximum of 6-8 PSI above the initial system or new cartridge starting pressure.

STEP 2:

Remove the cartridge from the filter housing. (Please refer to manufacturer's instructions.)

STEP 3:

Rinse the cartridge with a garden hose to remove all loose debris.

STEP 4:

Use a commercially available cartridge cleaner to remove oils. As an alternative, soak the cartridge overnight in a solution of either one cup tri-sodium phosphate (T.S.P.) Or one cup of automatic dish washing detergent to five gallons of water.

STEP 5:

Rinse the cartridge thoroughly before putting it back in the filter housing.

NOTE:

To remove calcium or mineral buildup, soak the cartridge in a separate solution of one part muriatic acid to twenty parts water until the bubbling stops. Thoroughly rinse the element before putting it back the filter housing.

CAUTION:

All oils and cleaning solution must be removed from the cartridge before soaking it in the acid solution (See Step #4 above). Failure to remove all oils and cleaning solution before acid soaking will result in a permanent restriction of water flow and inability to reduce differential pressure, thus causing premature cartridge failure.

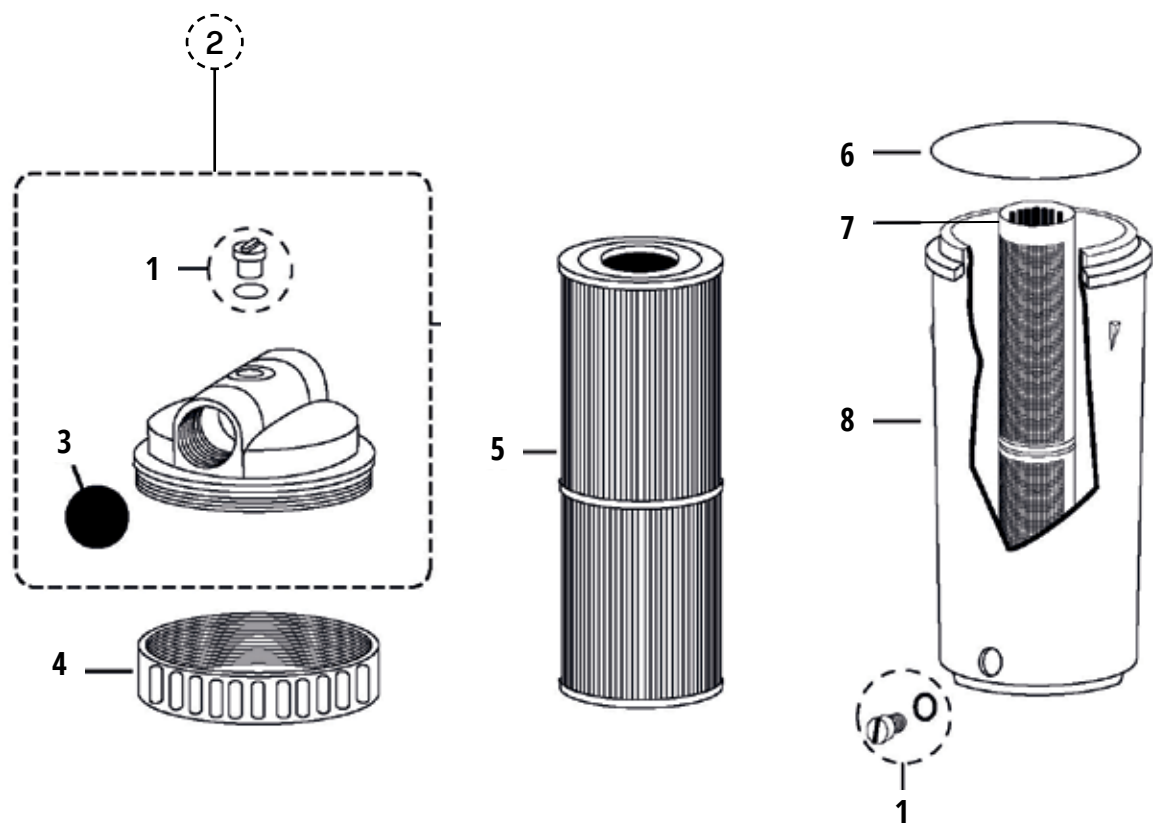


WARNING

Wear rubber gloves and safety glasses when using acid or chlorine. Do not mix chlorine or liquid bleach with acid. Always add acid to water.

REPLACEMENT PARTS

CFR 25™



#	PART NB.	DESCRIPTION
1	31160906R2	Plug ¼"O-Ring (2/bag)
	42275719R	Cover Threaded
2	42275620R	Cover For Systems With Reverse Valve CFR 25™
	42275818R	Cover Slip CFR25S
3	16028201R	By-Pass Valve
4	42282806R	Cover Ring-Lok
5	42289108R	CRF 25™ ft Cartridge
6	47036009R	O-Ring 5¼ x 6¼ x 3/16"
7	42276105R	Column Pipe
8	42278309R	Body

CONSUMER INFORMATION

Authorized CARVIN® retailer or distributor personnel are trained professionals. They should be able to answer any question you may have. If you encounter a problem that your retailer or distributor does not solve to your satisfaction, please discuss it with the retailer's or distributor's management. The Service Manager, General Manager, or Owner can help. Almost all problems are solved in this way.

If you are not satisfied with the decision made by the retailer's or distributor's management, contact the CARVIN® technical support.

When you write or call, please provide the following information:

- Product model, serial number and date code.
- Name of retailer or distributor who sold the Product to you.
- The original proof of purchase showing the date of purchase.
- Your name, address and telephone number.
- A detailed description of the problem.
- If sending an email, any relevant photos of the Product and its surroundings.

REPLACEMENT PARTS AVAILABILITY

Replacement parts are available through your CARVIN® retailer or distributor.

WARRANTY

A digital warranty is provided for your product.

https://carvinpool.com/link_waranty

TECHNICAL SUPPORT INFORMATION

After contacting your dealer or distributor, if you have any problems with your Product, contact CARVIN® Technical Support.

AMERICA

Web: carvinpool.com/support

Email: help@carvinpool.com

Phone: 1 (450) 250-4500 option 2

Fax: 1 (450) 250-4501

Toll Free: 1 866 979-4501

Mail: CARVIN® POOL EQUIPMENT

Technical Support

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