

# OPAL & OPAL XL CARTRIDGE FILTERS

## Owners Manual



### WARNING

This equipment must be installed and serviced by a qualified technician. Improper installation can create electrical hazards which could result in property damage, serious injury or death. Improper installation will void the warranty.



### Notice to Installer

This manual contains important information about the installation, operation and safe use of this product. Once the product has been installed **this manual must be given to the owner/operator of this equipment.**

# **WATERCO**

Water, the Liquid of Life

[www.waterco.com](http://www.waterco.com)

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# THE WATERCO OPAL & OPAL XL CARTRIDGE FILTERS

The Waterco Opal & Opal XL Cartridge Filters do not require a media such as sand or D.E powder to operate, instead the filter contains a cartridge element which is easily removed to clean or replace.

All Opal Cartridge Filters are ideal for use in swimming pool and spas. The Waterco Opal & Opal XL Cartridge Filters is also ideal for use when backwashing is impractical.

## INSTALLATION

Remove the cartridge filter from the carton and install the pressure gauge into the threaded port on the filter lid provided. Using Teflon, wrap once around the brass pressure gauge thread in a clockwise direction and screw into the threaded lid port.

### CAUTION

*Hand tighten the pressure gauge into the lid only for sealing.*

Place the Waterco Opal or Opal XL Cartridge Filter into the required position. Ensure that it is on a flat level surface and is aligned with the pump.

The Opal & Opal XL Cartridge Filter has marked inlet and outlet ports.

Ensure that the pipe extending from the pump outlet is connected to the Waterco Opal or Opal XL Cartridge Filter marked inlet.

Screw the supplied half barrel unions and tails onto the inlet and outlet before gluing the UPVC piping onto the filter.

### CAUTION

*Use only the recommended glue for the connection pipes and fittings.*

Cut and fit the pipe and fittings onto and the pump the Waterco Opal or Opal XL Cartridge Filter. **REFER** to Pump Installation Manual for correct pump plumbing procedures.

It is **best practice** to fit all the cut pipe and fittings onto the filtration system **before** gluing; this will ensure that the system has **been aligned** correctly.

Glue the pipe and fittings onto the pump, filter and pool return lines and **allow** the glue to set **for 24 hours** before commissioning the system.

It is **advisable** to bolt the filter down to the floor where the filter is located. This will prevent the filtration plumbing from **working with dyna bolts loose** with the expansion and operation of the filter during regular cycles. It will also help to prevent unnecessary stress on the plumbing while unscrewing the filter lid lock ring.

# START UP PROCEDURE

The Waterco Opal & Opal XL Cartridge Filters are a simple and effective unit which will provide years of trouble free service if the following maintenance procedures are maintained.

To start up the filtration system either from new or after cleaning is exactly the same.

1. Ensure that all valves installed before or after the filter are open.
2. Ensure that the filter is plumbed correctly. Pipe from pump outlet must be attached to the filter inlet port.
3. Loosen the air bleed screw on top of the filter lid.
4. Prime the swimming pool pump.  
(Refer to the pump installation and operation manual).
5. Turn on the swimming pool pump and allow the pump to run until all the air has been expelled from the filter vessel. Water will run from the air bleed screw.
6. Tighten the air bleed screw.
7. The filter is primed and ready for operation.

In some cases this may be required to be done a few times before the unit will remain primed and be fully operational.

## CAUTION

***Do not stand over the lid whilst adjusting the air bleed to purge the system of air. Injury may occur if air bleed screw comes loose.***

## MAINTENANCE

To ensure that you get maximum life from your Opal or Opal XL Cartridge Filters you will need to maintain the filter regularly.

When the filter is first started and has been purged of air, note the pressure on the pressure gauge. This is what is known as the filter operation pressure and it is important that you be aware of this figure.

All filtration systems will operate at different pressures depending on the pool hydraulics.

You will need to clean the filter cartridge (element) once the pressure gauge has reached 50 kPa above the operating pressure.

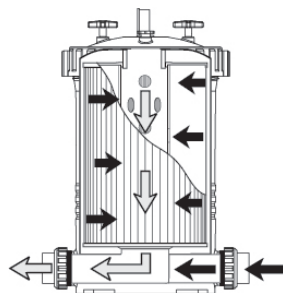
The Waterco Opal & Opal XL Cartridge Filters have a maximum operating pressure of 350 kPa.

***EXAMPLE: Filter operates normally at 60 kPa needs to be cleaned at 110 kPa.***

# CLEANING

## Opal Cartridge Filter

1. Remove the cartridge element from the filter tank.
2. Using a garden type hose clean the surface of the pleated elements. Make sure to clean between the pleats.
3. Place the cartridge back into the filter tank ensuring that it is seated correctly.
4. Ensure lid "O"-ring is correctly re-installed.
5. Place the lid onto the tank and screw the lock ring down.
6. Ensure to place the lid "O"-ring on the lid before you start up the filter.
7. Refer to the start up procedure to re-commence operation.

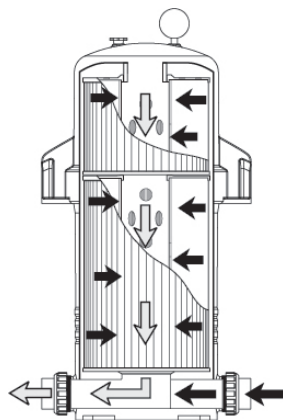


### CAUTION

*Do not over tighten the lid lock ring.*

## Opal XL Cartridge Filter

1. Firstly, via the air bleed screw located on top of the domed lid, release any built up pressure within the tank. Unscrew the domed filter lid using the two convenient moulded handles from the filter tank.
2. Remove the cartridge element from the filter tank.
3. Using a garden type hose clean the surface of the pleated elements, Making sure to clean between the pleats.
4. Place the cartridge back into the filter tank ensuring that it is seated.
5. Ensure lid "O"-ring is correctly re-installed.
6. Place domed lid onto tank and screw the tight using the two moulded handles.
7. Refer to the start up procedure to re-commence operation.



It is suggested that you should periodically remove the cartridge filter element and soak it over night in a suitable cartridge cleaning compound. This will remove any debris not removed by hosing down of the element.

Some swimming pool stores offer a cartridge cleaning service using the correct solutions otherwise you may wish to use Waterco Cartridge cleaning solution. Directions of use are on the product.

The cleaning time depends upon the swimming pool condition and use. Intervals between cleaning the element should not exceed a period of 12 months in any instance.

# TROUBLE SHOOTING GUIDE

SYMPTOMS	POSSIBLE PROBLEMS / SOLUTIONS
<b>Water is not clear</b>	Insufficient disinfectant level.
	Incorrect pool chemistry.
	Heavy bathing and/or dirt loads.
	Incorrect flow.
	Insufficient running times =. Increase pump run time.
	Filter is dirty. Clean per instructions.
	Hole in filter element.
<b>Low water flow</b>	Check strainer baskets for debris.
	Check for air leaks on suction side.
	Check for restrictions or blockage in either suction or return lines.
	Filter needs to be cleaned or replaced.
	Pool water level too low.
	Pump not primed.
	Pump impeller vanes blocked.
	Strainer baskets not being used and/ or not being cleaned regularly.
<b>Short filter cycles</b>	Pump operating under speed (low voltage).
	Presence of algae, check disinfectant content.
	Check pH and total alkalinity.
	Pump output exceeds design flow rate of filter, check pump performance.
<b>High pressure on start-up</b>	Ineffective cleaning, check conditions, replace filter cartridge.
	Small eyeball fitting in Pool/ Spa.
	Partially closed valve on return line.
<b>Dirt returns to pool</b>	Too large of pump, check selection.
	Hole in filter cartridge, replace filter cartridge.
	Worn "O"-ring seal inside filter, replace "O"-ring.

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