



# FREEFLO

## CARTRIDGE FILTERS

Installation  
& operation  
manual



FFCF75  
FFCF100  
FFCF150  
FFCF200

# PENTAIR FREEFLO CARTRIDGE FILTERS

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**!** The installation of this product should be carried out by a person knowledgeable in swimming pool plumbing requirements, following the installation instructions provided in this manual. Please pass these instructions on to the owner of this equipment.

## Foreword

Congratulations on your purchase of a quality product from the range of pool equipment available from Pentair Aquatic Systems. You are assured of many years of reliable and efficient performance from your Pentair filter backed by a 10-year tank warranty.

## YOUR PENTAIR FREEFLO CARTRIDGE FILTER

FREEFLO cartridge filters have been specifically designed for the filtration of spa and swimming pool water. They should not be used for any other purpose without first consulting your Pentair dealer.

FREEFLO cartridge filters provide economy, high performance and convenience in a well-designed pressure filter. The polyester element can be removed quickly for rinse cleaning without water loss.

FREEFLO cartridge filters feature large filter areas, which ensure even water distribution, peak filtration performance and longer filter cycles.

The corrosion-resistant construction of FREEFLO cartridge filters provides long life and durability. FREEFLO cartridge filters are capacity matched with the Pentair range of pool pumps, forming a total pool filtration system built to last. Take care to match the pump and filter capacities to gain maximum performance and efficiency.

## WARNING!



**THIS FILTER OPERATES UNDER HIGH PRESSURE. WHEN ANY PART OF THE CIRCULATING SYSTEM (e.g., CLAMP, PUMP, FILTER, VALVES, ETC.) IS SERVICED, AIR CAN ENTER THE SYSTEM AND BECOME PRESSURISED. PRESSURISED AIR CAN CAUSE THE LID OR VALVE TO BE BLOWN OFF WHICH CAN RESULT IN SEVERE INJURY, DEATH, OR PROPERTY DAMAGE. ALWAYS RELEASE AIR FROM FILTER AFTER SERVICING ANY PART OF THE CIRCULATING SYSTEM.**



**TURN PUMP OFF BEFORE CHANGING VALVE POSITION.**



**TO PREVENT DAMAGE TO THE PUMP AND FOR PROPER OPERATION OF THE SYSTEM, CLEAN PUMP STRAINER AND SKIMMER BASKETS REGULARLY.**



**DO NOT UNSCREW THE LID LOCKING RING WHILE PUMP IS RUNNING.**

\*Conditions apply. Refer to warranty schedule for full details.

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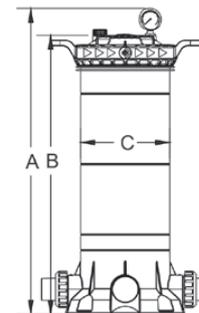
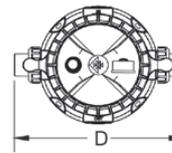
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# SPECIFICATIONS



MODEL	FFCF-075	FFCF-100	FFCF-150	FFCF-200
FILTER AREA	7.0m <sup>2</sup> / 75ft <sup>2</sup>	9.4m <sup>2</sup> / 100ft <sup>2</sup>	13.7m <sup>2</sup> / 150ft <sup>2</sup>	16.8m <sup>2</sup> / 200ft <sup>2</sup>
MAX FLOW	280 L/min	380 L/min	550 L/min	680 L/min
TANK DIAMETER (C)	225mm			
HEIGHT (A)	782mm	782mm	962mm	1142mm
PRECISION	≤15 (µm)			

## THE SPARKLING CLEAR WATER DIFFERENCE

Cartridge filtration is an effective trouble-free proven method of filtration. Pool water enters the filter and passes through a polyester single element cartridge. Suspended particles are trapped and the water is returned to the pool. As the build-up of dirt in the element increases, so the water pressure rises and the flow decreases. When the pressure reaches an unacceptable level, the element must be removed and cleaned (spray washing with a common garden hose is generally sufficient).

## INSTALLATION AND OPERATION INSTRUCTIONS

### LOCATION

The filter should be placed in its permanent location, preferably as close to the pool or spa as practical. Position the filter tank and pump on a level concrete slab or similar base. Allow sufficient space around the filter for routine maintenance and provide for adequate ventilation and drainage. Place the pump in position on the slab and locate the filter alongside with the appropriate pump inlet connection orientated towards the pump. Refer to the 'Specifications' section for the minimum clearance measurements required for each model.

### WEATHER PROTECTION

FREEFLO cartridge filters are constructed of corrosion resistant materials. However, to ensure years of reliable performance, it is recommended that the filtration system be adequately protected from the weather.

### ASSEMBLY

Assemble the pressure gauge to the filter lid using Teflon tape on the male thread.

**Do not over tighten!**

### PIPE CONNECTIONS

Piping should be supported independently and not impose heavy loads on the filter or pump.

Use 40mm or 50mm PVC pipe for pump and pool return lines. 50mm should always be used if length of piping is over 15mm. FREEFLO cartridge filters are supplied with quick connect barrel unions suitable for 40mm and 50mm PVC pipe. If the pump and filter are located below pool water level, it is necessary to fit isolating valves in the pipe between the pump and the pool, and in the return line from the filter to the pool.

#### 1. Pump to filter

FREEFLO cartridge filters are equipped with two inlet ports marked 'INLET'. Select the inlet port most suitable for the installation and plug the other inlet port with blanking cap provided. Using the supplied barrel unions, connect the pool pump delivery piping to the selected inlet port couplings, connect the pool pump delivery piping to the selected inlet port. Use only 'P' type plumbing glue. Tighten unions by hand only.

#### 2. Filter to pool Return

Using the supplied barrel unions, connect the pool return piping to the filter fitting marked 'OUTLET', the other outlet should be blocked with the blocking cap provided. Tighten the fitting by hand only. Ensure the o-ring on the fitting is clean, lubricated with o-ring lubricant and in the correct position.

*The filter base is provided with four mounting holes to enable it to be secured, if required.*

## INSTALLATION AND OPERATION INSTRUCTIONS

### FILTER OPERATION

1. Make sure the pump is primed according to manufacturer's directions.
2. Be sure all valves are open on suction and discharge lines. Ensure the air bleed valve on the filter lid is open and the lid lock ring is in place and secure.
3. Start the pump. Close the air bleed valve when water is expelled.
4. To determine the correct operating conditions with a clean filter, check that the pressure gauge reading is 80kpa or below.
5. Record the pressure gauge reading or mark the needle position on the face of the pressure gauge.
6. Operate the filter for a sufficient time to circulate the total pool water volume daily. The filter should also be operated at all times the pool is in use and for about one hour afterwards. During winter, the running time may be reduced. Filter operating requirements will vary for spa applications. Depending upon the system design, type and size of spa. Consult your builder or spa supplier.
7. When the pressure gauge reading is 50-70kpa higher than the 'clean filter' reading as in (5) above, it is time to clean the cartridge element (see 'Cartridge Cleaning Procedure' below).

### CARTRIDGE CLEANING PROCEDURE

When the filter gauge reading is 50-70kpa above the clean filter gauge reading cleaning the single element cartridge is required. To perform the cleaning procedures:

1. Switch off the pump.
2. Close isolating valves on suction and discharge lines where fitted.
3. Open the air bleed valve on the filter lid. unscrew the lock ring and remove the filter lid.
4. Lift out the cartridge element.
5. In most cases the element can be easily cleaned with a garden hose, using good velocity sprayed directly on the pleats.

**Note:** Algae, calcium, clay, suntan oil and body oils can form a coating on the element which may not be easily removed with normal hosing. These materials can be removed by soaking the element in a de-greaser and /or de-scaler.

Your local Pentair dealer will be able to recommend suitable products.

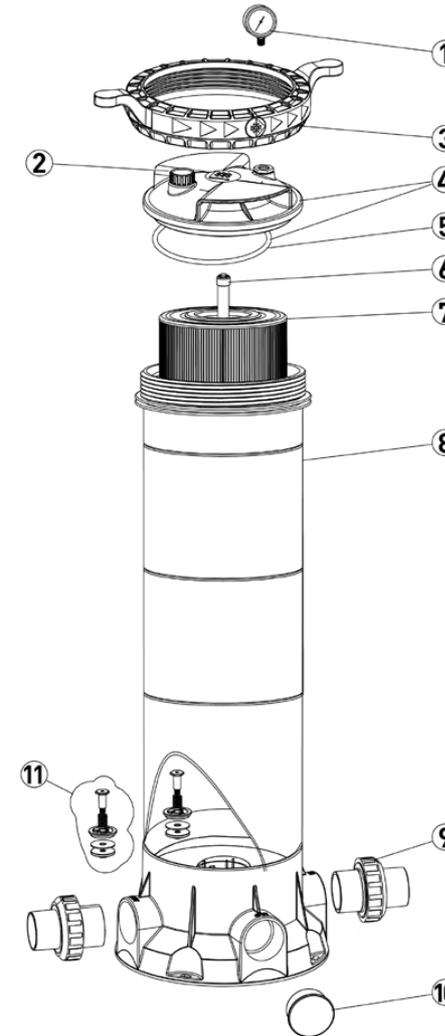
### CARTRIDGE RE-ASSEMBLY INSTRUCTION

1. Install the cartridge/s and center pipe so that it is located in the bottom spigot.
2. Ensure the filter lid o-ring is clean, lubricated with o-ring lubricant and located in the bottom groove.
3. Replace the lid and press firmly in place. Screw down the lock ring, hand tight is sufficient - **DO NOT OVER TIGHTEN!**
4. Make sure the pump is primed according to manufacturer's directions.
5. Ensure all valves are open on suction and discharge lines.
6. Start the pump.
7. Close the air bleed valve when all air has been expelled.

## TROUBLESHOOTING

SYMPTOM	CAUSE	REMEDY
No Water Discharge	Pool water level too low.	Fill pool to correct level.
	Air leaks in inlet fittings to pump.	Check and tighten all connections. Teflon tape fittings.
Short filter cycles	Filter Dirty.	Clean filter cartridge. Replace filter cartridge.
	Algae present in Pool water.	DON'T RUN FILTER WITH LIVE ALGAE IN POOL. Check the chemical condition of pool water and refer to Pool Water Chemical Treatment. <b>Note:</b> Incorrect chemical treatment will greatly shorten filter cycle.
Filter start-up pressure high and water flow low.	Filter requires cleaning.	Follow filter cleaning procedure in this manual.
	Return line restricted.	Check for flow at return.
Filter start-up pressure low and water flow high	Skimmer basket full of leaves or debris.	Clear Skimmer Basket of all foreign matter and debris.
	Pump strainer lid not sealed correctly.	Refer to pump owners manual for correct procedure for sealing strainer lid correctly.
	Pool water level too low.	Fill pool correct level.
	Pump impeller blocked.	Call an authorised service agent to service pump.
	Blockage in suction line.	
	Air leak in suction line.	
Leaking from filter tank joint	Tank O-ring dirty.	Call an authorised service agent to service pump.
	O-ring incorrectly fitted.	
	O-ring damaged (pinched).	

## REPLACEMENT PARTS



KEY NO.	PART NO.	DESCRIPTION	QTY.
1	800741	Pressure Gauge With O-ring (40psi) plus adapter	1
2	800742	Air Release Valve with o-ring	1
	811115	Air Release with Hose Barb	1
3	800743	Ring Lock for cartridge filter	1
4	800744	Cartridge filter Lid	1
5	800745	O-Ring for Lid	1
6	800746	CF75 PVC Air Vent Pipe With Cover	1
	800747	CF100 PVC Air Vent Pipe With Cover	1
	800748	CF150 PVC Air Vent Pipe With Cover	1
	800749	CF200 PVC Air Vent Pipe With Cover	1
7	800750	CF75 Element	1
	800760	CF100 Element	1
	800761	CF150 Element	1
	800762	CF200 Element	1
8		Cartridge filter body not available as spare part	
9	800754	1.5" Union for Cartridge filters	2
	800755	2.0" Union for Cartridge filters	2
10	800756	Plug	1
11	800757	Internal Pressure Release Valve	1

**IMPORTANT**

Please attach your sales invoice/docket here as proof of purchase should warranty service be required. Please do not return warranty form to Pentair Australia - Retain for your records.

<b>PURCHASED FROM:</b>
<b>PURCHASE DATE:</b>
<b>SERIAL NO:</b>
<b>MODEL NO:</b>



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