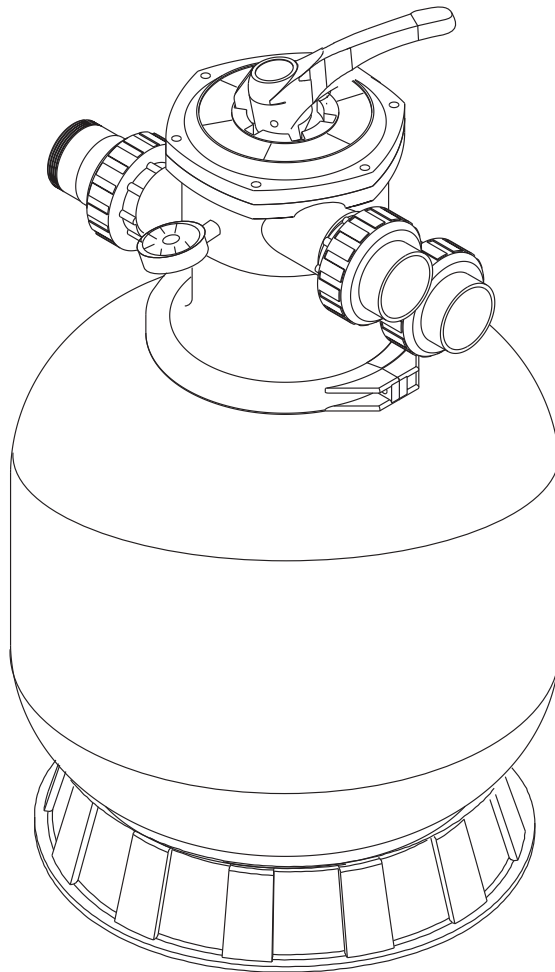




M-SERIES

FIBERGLASS SAND FILTERS



INSTALLATION & OPERATION MANUAL

HY-CLOR AUSTRALIA PTY LIMITED
ABN 81 000 655 381

178 Power Street
Glendenning NSW 2761 Australia

all enquiries:
AU 1800 625 123, NZ (09) 973 2477
or help@hyclor.com.au

visit us at hyclor.com.au

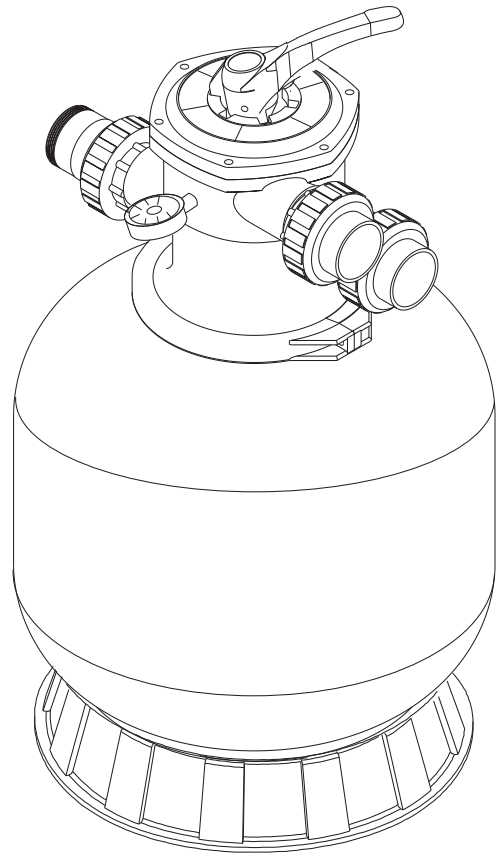
Suits:

HYCFGM21
HYCFGM25
HYCFGM28

Version 1.4

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Safety and Important Information

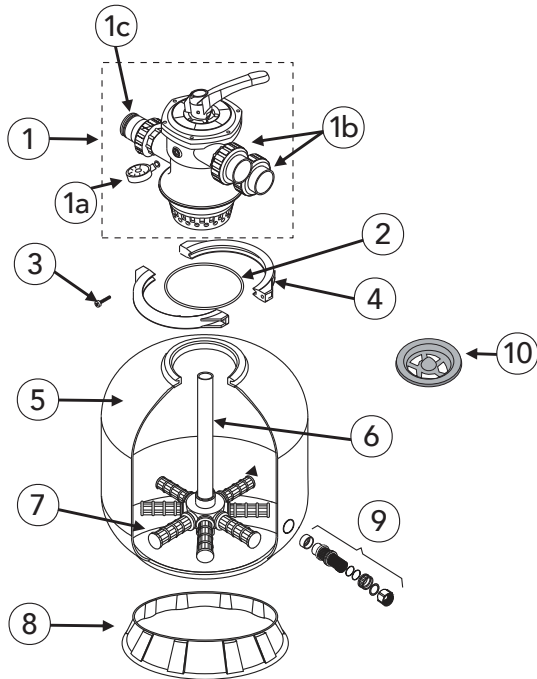
1. Ensure water temperature remains between 0°C and 43°C during operation to prevent damage to the filter.
2. Install the filter in accordance with local safety standards and regulations.
3. Obtain prior consent from Hy-Clor for any modifications to the filter. Only use original replacement parts and accessories approved by the manufacturer to maintain safety.
4. Qualified authorised persons should conduct the installation after thoroughly reading the provided instructions.
5. Follow the installation and operation instructions carefully to guarantee the filter's safe operation.
6. In case of malfunction or fault, contact Hy-Clor or its authorised service agent immediately.
7. Keep children away from the product to reduce the risk of injury.
8. Poorly installed equipment may lead to severe injury or property damage.
9. Avoid storing pool chemicals near the equipment to prevent chemical spills and fumes, which can weaken and corrode the filter and other equipment, potentially causing severe injury or property damage.
10. All images in this manual are for representation purposes only, the parts might differ slightly.
11. **Never move the Multiport handle while the system is running. Always ensure the pump is off.**

PRODUCT HELPLINE

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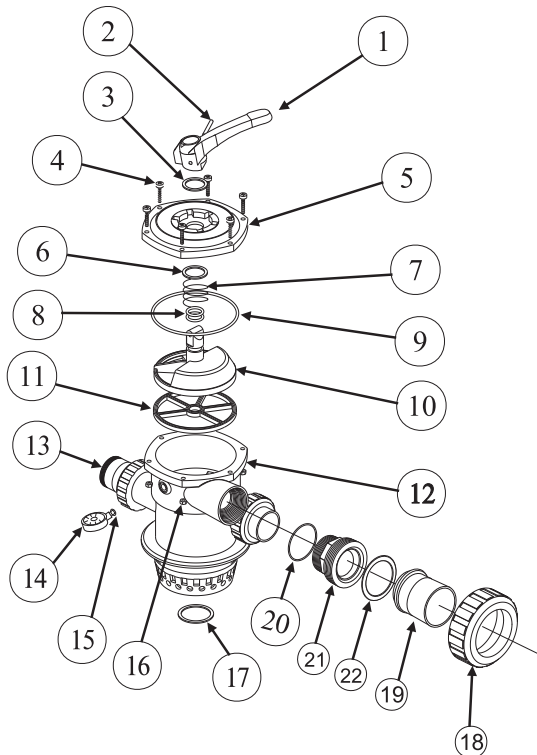
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Carton contents



Item	Description	Qty
1	Multi-Port Valve (MPV) KIT	1
1a	Pressure Gauge	1
1b	Angle adjustable Union Set	2
1c	Backwash union Set	1
2	MPV Tank O-ring	1
3	Clamp Screw + Bolt	2
4	Flange Clamp	1
5	Filter Tank	1
6	Lateral Assembly with Centre Pipe + Hub	1
7	Lateral	8
8	Filter Stand	1
9	Drain set	1
10	Sand Diverter	1

Multiport Valve (MPV) break down



Item	Description
1	Handle
2	Handle Locking Pin
3	Handle Washer
4	Top MPV Screw
5	MPV - Top Cover
6	Washer
7	Spring
8	O-ring
9	O-ring for Top MPV Cover
10	Rotor Head
11	Spider Gasket
12	MPV Body
13	Back Wash Sight Glass
14	Pressure Gauge
15	Pressure Gauge O-ring
16	Nut (for #4)
17	Lateral Pipe O-ring
18	Union Nut
19	Union Tail
20	MPV internal Union O-ring
21	MPV Internal Tail
22	Union O-ring

Note: Individual parts may not be available. This is for reference only.

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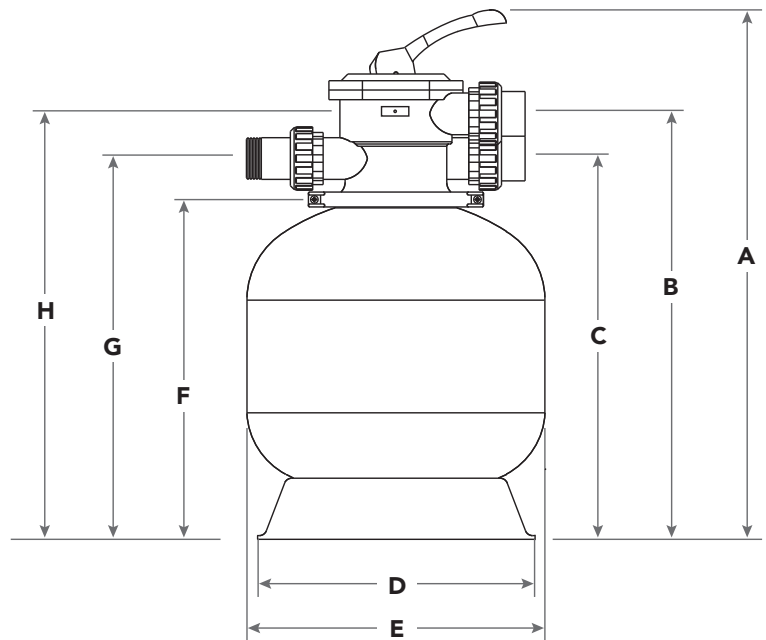
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Filter Specifications

MODEL	HYCFGM21	HYCFGM25	HYCFGM28
Filter Size	21-inch	25-inch	28-inch
Plumbing to Suit	40 mm PVC (1.5")	40 mm PVC (1.5")	40 mm PVC (1.5")
Sand Required (kg)	85	155	210
Zeo-Clor/ Zeolite Required (kg)	72.25 (5 Bags)	131.75 (9 Bags)	178.5 (12 Bags)
Max Flow Rate	192 LPM	270 LPM	320 LPM
Hy-Clor Pump Suitable	0.75hp	1hp	1.5hp / 2 Speed
6 hour turn over	69,120 Lt	97,200 Lt	115,200 Lt
8 Hour Turn over	92,160 Lt	129,600 Lt	153,600 Lt
Recommend Pool Size (two turn overs per day)	46,000 Lt	65,000 Lt	80,000 Lt
Max Pool Size	80,000 Lt	100,000 Lt	120,000 Lt
Filtration Area (m3)	0.24	0.33	0.38
Max Pressure (kpa)	370	370	370
Working Pressure (kpa)	250	250	250

Filter size



Sizes are indication for clearance.

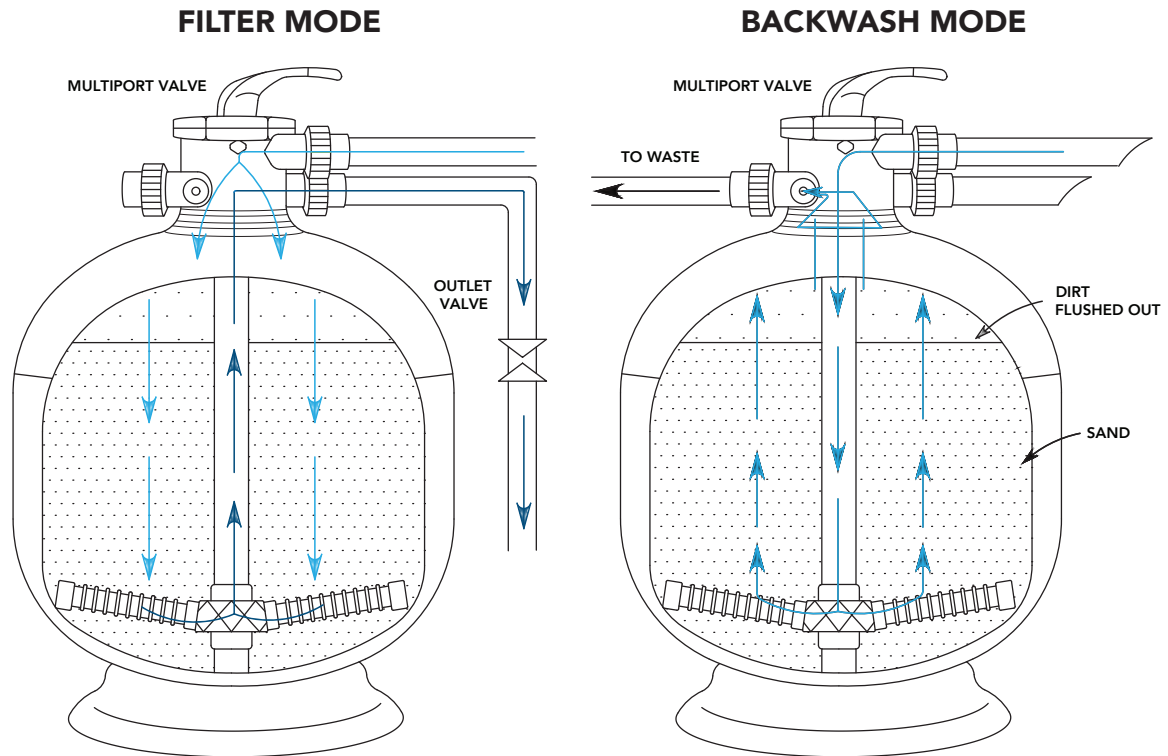
MODEL	Filter Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
HYCFGM21	21-inch	867	731	671	497	550	615	671	731
HYCFGM25	25-inch	967	831	771	497	630	715	771	831
HYCFGM28	28-inch	1025	863	787	497	700	775	831	891

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How a Sand Filter Works



The filter employs special filter media to eliminate dirt particles from the pool water. This media is loaded into the filter tank and acts as a permanent dirt removal system. When the control valve is set to the filter position, the pool water, which contains contaminated particles, is pumped through your piping system, and automatically directed through the filter's Multiport valve. As the water passes through the filter, dirt particles are trapped by the media and filtered out.

The now clean water is then returned through the filter to the pool. This entire process is continuous and automatic, ensuring a complete recirculation of pool water through your filter and piping system.

After about a month the dirt accumulation in the filter creates resistance to water flow, causing a decrease in flow and a buildup of pressure. When this happens, it's time to clean the filter.

First, turn off the system. Then, switch the handle to the "Backwash" position. Turn the system back on. The water will be automatically reversed through the filter, flushing out the debris and dirt. Once the sight

glass on the backwash filter returns clear, turn the system off again. Switch the handle to "Rinse" and restart the pump for 30-60 seconds until the sight glass clears once more. Turn off the system again and switch back to "Filter" to resume normal pump and filter system operation.

Warning/Precautions

Note: Before moving the filter handle to any position make sure the filter pump is turned OFF. This filter operates under high pressure. Do not service while the system is on.

When servicing the system air can enter the system and become pressurised. This can cause any part of the pool system to be blown off which can result in severe injury, death, or property damage. **TAKE EXTREME CARE WHEN SERVICING.**

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Installation

You'll only need basic tools like a Phillips head screwdriver and wrenches for this task. Use PVC Cement for Pressure Pipes (TYPE P). Do not use non pressure glue (Blue) and avoid using priming fluid on the included unions—only use it on the PVC pressure pipe. Position the filter on a level concrete slab, very firm ground, or an equivalent surface. Ensure the piping connections and multi-port valve are conveniently accessible for regular operation and maintenance.

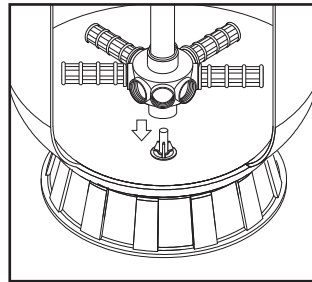
For above water installation: Ensure check valves are installed to prevent negative pressure (vacuum) in the filter which may damage the filter tank.

For below water installation: Ensure isolation valves are installed to reduce risk of flooding or water impact, when the system is off or being serviced.

Ensure pump is compatible with filter specification (with maximum designed flow rate). **Warranty is void if installed with an incompatible pump.**

Loading the Filter Media

- a) Use the sand diverter (included) to cap the internal pipe; this prevents sand from entering the filter's laterals. Make sure the internal laterals are seated on the hub and are inserted securely and tightly to the base holder.

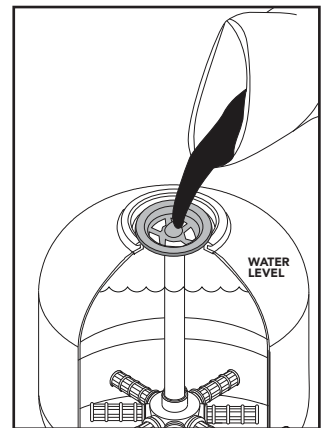


IMPORTANT: MAKE SURE EACH LATERAL IS NOT DAMAGED OR CRACKED. You will not be able to successfully install the filter if a lateral is cracked as any media in the filter will return to the pool. Contact Hy-Clor for assistance.

- b) Fill the filter tank with water, typically halfway up the tank. This helps cushion and prevent damage to the filter laterals.

Before putting sand inside the filter, make sure to check the drain plug for any leaks. If necessary, open it and reseal it securely. After checking, repeat this step to ensure there are no leaks before proceeding with adding media to the filter.

- c) Pour the media into the filter opening from the top (with the multiport off the filter). Make sure the Filter standpipe remains straight and in the centre of the opening. Remove the sand diverter from the standpipe once all media has been poured into the filter.



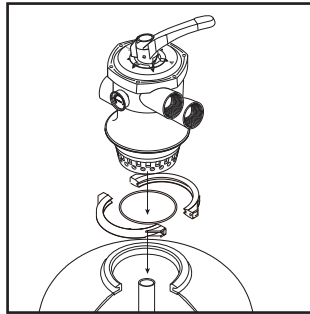
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Installing the Multiport Valve

d) Insert the Multiport valve onto the top of the standpipe and into the neck of the filter body. Ensure that the Multiport O-ring is properly in place and secured. Lubricate the o-ring with silicon-based lubricant.



e) Align the Multiport so that the pump/return and waste lines match their approximate positions needed for installation.

f) Place the clamp around the neck of the filter and the Multiport valve. Loosely secure both sides with the nut and bolt before tightening with a screwdriver. Avoid over-tightening. Don't use power tools for this.

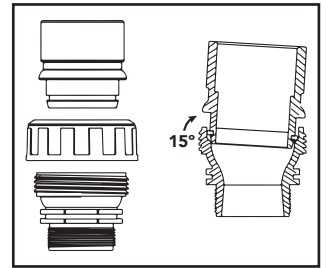
g) Carefully screw the pressure gauge into its designated spot. If necessary, use Teflon tape for a secure fit.

h) Screw the unions into the Multiport valve. Keep the clear union assembly reserved for the

backwash/waste line. Make sure all o-rings are in place and silicon-based lubricant used.

Note: Hy-Clor M-Series Filters come with angle adjustable unions. These allow up to a 15 degree angle allowance for UPVC pipe connection into the Multiport valve for the pump and return lines.

i) Connect the UPVC pipe coming from the Filter pump into the Multiport valve labelled pump. Use PVC Cement for Pressure Pipes (TYPE P), do not prime the union fittings, only the PVC pipe. Plumb the "return" pipe to pool/chlorinator etc into the union labelled return on the Multiport valve. Lastly, connect the waste line to the Sewage line pipe work (not Storm water).



Wait 24 hours before running the filter to allow the Glue to set correctly. (consult the PVC Glue directions for use)

First start-up + backwash and rinse procedure

1. Ensure all unions are hand-tight and the clamp is securely fastened.
 - 1a) Check that the pool has enough water, as this process will result in some water waste through the sewage line. If needed, add water to the pool, approximately 10-20mm higher than usual.
2. Depress the Multiport handle and rotate it to the BACKWASH position.
3. Prime and start the pump as per the pump's instructions.
4. Run the filter down the backwash line until the sight glass is clear, typically 1-3 minutes. Initial backwashing is recommended to help clean the media and fill the tank with water. Then, turn off the pump.
5. Turn the Multiport handle to RINSE and run the pump until the sight glass is clear again, typically 30 seconds to 1 minute. Then, turn off the pump.
6. Depress the handle and rotate to FILTER and run the pump. Monitor and note the filter pressure after cleaning. Run the system as usual.
7. It's normal to need to hand-tighten the clamp and unions after the initial startup. Do this while the system is turned off.
8. The filter is now operating as intended. When the filter pressure is 50 kpa above the normal level, backwash and rinse (steps 2-6). Backwashing should not be done too frequently – once a month is standard, unless the pool contains heavy contaminants, or the pressure rises rapidly.

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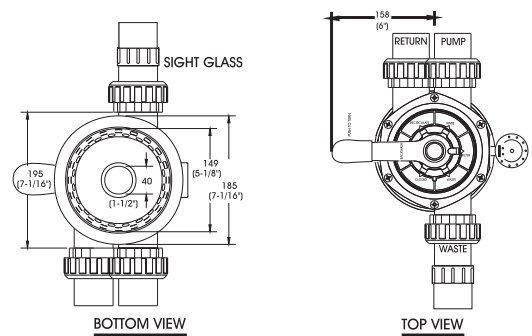
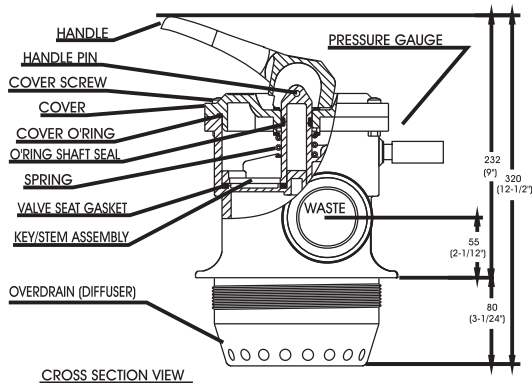
Maintenance

Hy-Clor sand filters are built to last for many years, but proper maintenance is crucial to keep them working well. The filter media, whether it's sand or Zeo-Clor, should only be replaced when it has reached the end of its lifespan. Typically, both types of media last at least five years.

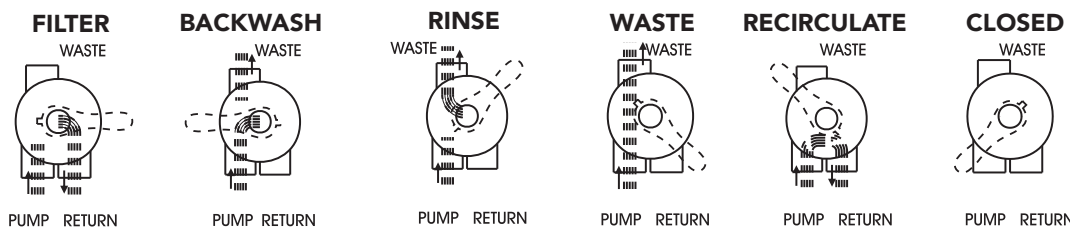
To extend the lifespan of your chosen filtration media:

1. Backwash the filter regularly based on the pressure gauge readings. (follow steps 1-8 in **First start-up + backwash and rinse procedure**)
2. Follow the regeneration procedures outlined in the media specifications, especially for Zeo-Clor.
3. Maintaining good water chemistry is essential for long filtration life and cost savings. Neglecting your pool during winter can lead to higher costs when restarting it for summer. Additionally, green pools significantly shorten the lifespan of filtration media.
4. Keep skimmer and pump baskets clear of leaves, hair, and other debris to prolong the life of the filtration system and pump.
5. Replace any faulty pressure gauges promptly.
6. Filter the water regularly, typically around 8 hours per day in Summer, depending on the size of your pool.

Multiport Operation



Position	Description
Filter	Incoming water from the piping system is automatically directed by the Multiport Valve to the top of the filter bed. As the water is pumped through the filter bed, dirt and debris are trapped by the filter bed. The filtered water is returned from the bottom of the filter vessel, through the Multiport Valve and back through the piping system.
Backwash	Water flow is reversed by the Multiport Valve through the filter bed so that water flow is directed to the bottom of the filter vessel and up through the filter bed, flushing the previously trapped dirt and debris out the waste line.
Rinse	The water flow is directed by the Multiport Valve through the filter bed and out. This process settles the filter media bed into place and ensures any dirt or debris is rinsed out of the filter, preventing dirt or debris returning to the Swimming Pool / Spa.
Waste	The water flow is directed by the Multiport Valve straight to the backwash outlet, bypassing the entire filter bed. This Multiport Valve position is used to lower the water level or for vacuuming water with high dirt loads.
Re-circulate	The Multiport valve recirculates water flow directly back to the Swimming Pool / Spa, bypassing the filter. – Useful for checking if the pump is working or if there is a problem with the filter media.
Closed	The Multiport Valve can be closed to enable servicing of the pump without draining the water from the filter. This position is not to be used with the pump operating.



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Troubleshooting

Problem	Possible Cause	Possible Solution
High pressure, low water flow at startup	<ul style="list-style-type: none"> • Valve closed at return line after MPV. • Lots of dirt in sand/media • Return line Restricted 	<ul style="list-style-type: none"> • Check and open return line valve after MPV. • Give filter a good backwash. • Follow Backwash instructions. <ul style="list-style-type: none"> ◦ Use a Filter degreaser to renew life of the filter. • Pump size too Large for filter • Check Return line for blockages, eyeballs and jets might be closed.
Low pressure, low water flow at startup	<ul style="list-style-type: none"> • Blockage in suction line before MPV or pump • Air leaks before MPV or unsealed pump strainer lid • Low pool water level • Pump impeller blocked 	<ul style="list-style-type: none"> • Check suction line for blockages. • Seal air leaks in suction line and pump lid. • Keep pool water level up. • Refer to pump manufacture
Pressure gauge not moving when system starts/ or is stuck	<ul style="list-style-type: none"> • Gauge is faulty/ worn out 	<ul style="list-style-type: none"> • Replace gauge
Pool insufficiently clean (Algae/ Murky)	<ul style="list-style-type: none"> • Filter way too dirty from not backwashing. • Old filter media • Algae in pool water 	<ul style="list-style-type: none"> • Backwash filter thoroughly. • Replace filter media if needed. • If algae, treat pool water carefully. Wrong chemicals can damage filter. • Use a Clarifier to help the filter. <ul style="list-style-type: none"> ◦ Floc the pool if required
Signs of the Filter tank shrinking	<ul style="list-style-type: none"> • Negative pressure happening which will cause tank to leak overtime and shrink 	<ul style="list-style-type: none"> • Install check valve before pump inlet. • Once leak or shrinking happens, replace filter tank.
Leaks from filter tank joints	<ul style="list-style-type: none"> • Dirt stuck in O-ring & gasket. • Mispositioned O-ring & gasket 	<ul style="list-style-type: none"> • Clean o-ring at joint (use silicone-based lubricant if required). • Position o-ring & gasket correctly
Difficult to turn handle	<ul style="list-style-type: none"> • Grease dried-out 	<ul style="list-style-type: none"> • Grease the 2 x o-rings on Rotor (part 3+6 on the Multiport Valve)

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Warranty Terms & Conditions

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or a refund for a major failure and for compensation for any other reasonably foreseeable loss or damage.

Please read these warranty terms and conditions carefully. A failure to comply with these terms and conditions may affect any claim on warranty you may have on a product.

Warranty is void if the Filter is installed with a Pump outside its designed flow rate. Refer to the Specifications Page for the filter size and max flow rate.

WARRANTY GENERAL CONDITIONS:

All products provided by HY-CLOR AUSTRALIA PTY LTD are warranted for defined periods of time (refer to the product table)

All mechanical swimming pool products supplied to consumers by Hy-Clor are to be installed or used in the manner they are manufactured for only.

Warranty may be voided if the product or products claimed by the consumer under warranty have been used for purposes other than their designed or manufactured purpose.

Where applicable, products supplied by Hy-Clor come with operation and installation manuals. All care must be taken to install and operate the products according to these instructions. Failure to install or operate these products in accordance with these instructions may void the warranty.

The chemical balance of the swimming pool water plays a significant part in the operational life of all swimming pool products, Hy-Clor recommends regular water testing using an approved swimming pool test kit.

Item	Fiberglass Tank	Multiport Valve	All other Parts
Warranty Period	10 Years	1 Year	1 Year

O-rings/Unions and Pressure Gauges are considered consumables and not covered under warranty. Only the construction is covered. Only use PVC Cement for Pressure Pipes (TYPE P) on applicable areas only.

Warranty applies to the items only. There is no warranty or reimbursement for labour or parts to install the filter.

This warranty is valid for the original purchase and is not transferable. Keep your purchase docket, tax invoice, or receipt as proof of purchase, and as proof of the date on which the purchase was made.

Modifications to any electrical product provided by Hy-Clor products are covered by a twelve-month warranty unless prior written approval has been granted by Hy-Clor and has been carried out by one of its authorized agents. All electrical installations must be carried out by a competent licensed professional.

All pool filtration equipment including filters, pumps, and salt chlorinators, must be kept in a dry well-ventilated area away from direct sunlight and in an area that is free from flooding or rain. This warranty does not cover normal wear and tear to the products or parts.

To make a claim please contact:

HY-CLOR AUSTRALIA PTY LTD
FREE CALL NUMBER 5 DAYS A WEEK 1800 625 123 (AU) or 09 973 2477 (NZ)

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www.hyclor.com.au



HY-CLOR AUSTRALIA PTY LIMITED
ABN 81 000 655 381

178 Power Street
Glendenning NSW 2761 Australia

AU 1800 625 123
NZ (09) 973 2477

help@hyclor.com.au
hyclor.com.au