

henden™

Fibreglass Media Filters
HMF2140, HMF2540, HMF2550, HMF2850

INSTALLATION & OWNERS MANUAL



IMPORTANT
Please read carefully



WARNING:
Failure to follow these instructions and comply with all applicable codes may cause serious bodily injury and/or property damage.

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 operator of this equipment

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Henden Media Filters

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INSTALLATION

1. YOUR HENDEN MEDIA FILTER

Congratulations on your purchase of a quality product from the Henden range of pool and spa equipment. You are assured of many years of reliable and efficient performance from your Henden Media Filter backed by Henden's Ten Year Tank Guarantee and Three Year Valve Guarantee.*

*Refer to guarantee statement on page 9 for full details.

Henden Media Filters have been specifically designed for the filtration of swimming pool water in conditions set out in the Australian Standard for swimming pool water quality (AS 3633) or equivalent. They should not be used for any other purpose without first consulting Henden or your local Reece Irrigation & Pools branch.

2. THE WATER DIFFERENCE

Media filtration is nature's proven method of filtration. Pool water enters the filter and passes through graded media where the suspended particles are trapped and the water is returned to the pool. As the build up of dirt in the media increases, the flow decreases and the water pressure rises. When the pressure reaches an unacceptable level, the flow must be reversed to clean the filter media bed in a process called "backwashing". This process discharges the dirt to waste.

3. INSTALLATION LOCATION

The filter should be placed in its permanent location, preferably as close to the pool as possible. Position the filter tank and pump on a level concrete slab or similar base with minimum dimensions of 900mm x 600mm (3' x 2'). Do not use sand to level the concrete slab, as it may wash away and cause vibration and inefficient performance. Allow sufficient space around the filter for:

- routine maintenance
- adequate filter drainage
- pump ventilation

Place the pump in position on the slab and locate the filter tank alongside with the multiport valve "pump" port oriented towards the pump.

A minimum clearance of 400mm above the multiport valve is required to permit easy removal.

4. WEATHER PROTECTION

Henden Media Filter tanks are made from UV stabilised materials. However to ensure years of reliable service, it is recommended that every effort be made to ensure the filtration system is adequately protected from the weather. For proper care and maintenance of your filter, see the section on "Filter Care".

4.1 Assembly

1. Look inside the tank and ensure the laterals are secure inside the hub assembly and that the stand pipe has the o-ring inserted correctly.
2. Half fill the tank with water to provide a cushion for the media.
3. Make certain the under drain assembly is correctly located onto it's stand at the base of the tank.
4. Place the sand or media guide in the top of the filter opening.
5. Pour the correct amount of media into the tank (refer section 10 - Technical Data), evenly distributing it around the central pipe. Level out the top of the media bed.
6. Remove the sand or media guide and all traces of media from the tank flange.
7. Ensure the closure o-ring is clean and in the correct position. If necessary, apply a thin film of o-ring lubricant to the o-ring. Assemble the multiport valve to the tank aligning the ports to the appropriate plumbing.
8. Apply Teflon tape to the thread on the pressure gauge and barrel unions and screw into the multiport valve body. 7 turns of tape are required.



CAUTION

- A non return valve is required in between the pump and filter.
- On installations where the waste line is more than 3 metres below pool water level and more than 12 metres in length, a vacuum break valve must be fitted in the waste line close to the filter.
- If an auxiliary pump is installed in line downstream of the filter, it should be protected against causing negative pressure in the filter tank. A flow or pressure switch which only enables the auxiliary pump to run when the main filter pump is running will achieve this.
- 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 skimmer box and in the return pipe from the multiport valve to the pool. This prevents water draining from the pool during maintenance.

FAILURE TO COMPLY WITH THE ABOVE CAUTIONS MAY RESULT IN FILTER DAMAGE NOT COVERED BY THE GUARANTEE.

5 . PIPE CONNECTIONS

Use Teflon tape on all male threads. Piping should be independently supported and not impose heavy loads on the filter or pump. Using the multiport valve as a guide, use 40mm or 50mm (1 ½" or 2") pipe:

- from the pump to the skimmer box
- for the return pipe to the multiport valve
- from the multiport valve to the drain



DO NOT OVERTIGHTEN

The fittings and multiport valve on this product are constructed of ABS. Some PVC jointing compounds are incompatible with ABS. Check compound suitability before use.

50mm pipe must be used with the HMF2550 and HMF2850 or if the length of piping is over 15m. 50mm barrel unions are provided at the multiport valve for connection of PVC pipe to "pump," "pool return" and "waste".

6. COMMISSIONING FILTER

Refer to section 7 - Operating Instructions for **safety warning** and **multiport valve** control prior to the filter start-up.

The pool should be slightly overfilled, the filter backwashed and then run on rinse to prevent dust and fine particles in the media bed returning to the pool.

To do this:

1. Position multiport valve handle to backwash.
2. Backwash the filter, then stop the pump.
3. Position the valve handle to rinse.
4. Start the pump and run until the water in the valve sight glass becomes clear.
5. Stop the pump and position the valve handle to filter.
6. Start the pump. The filter is now in filtration mode.

To determine the correct operating conditions, check the pressure gauge reading is 80kPa or below. Record the clean operating pressure of your filter.



NOTE Always read these instructions in conjunction with your media bag instructions.

OWNERS MANUAL

7. OPERATING INSTRUCTIONS



WARNING - FILTER OPERATES UNDER HIGH PRESSURE

Ensure all lids / closures / clamps are correctly secured before operating the system.

Never adjust clamps or change valve settings with the system under pressure.

Relieve all pressure from system before working on filter.

7.1 Multiport Valve Control

The flow of water through the filter is controlled by the multiport valve on the top of the filter tank. The handle on top of the valve can be moved to any one of six positions, which have the following functions:

Valve Position	Function
FILTER	Normal filtration and vacuuming through filter.
BACKWASH	Clean the filter.
RINSE	Used on initial filter start-up and after backwash to prevent dirt in the sand returning to the pool.
WASTE	By-passes the filter; used for vacuuming to waste, or draining the pool.
RECIRCULATE	By-passes the filter to circulating water to the pool or to boost spa jets.
CLOSED	Shuts off all flow to the filter. Do not run pump.



CAUTION Never shift the valve handle position while the pump is running.



This filter tank must not be operated under vacuum. Should leaf baskets or suction lines become clogged, blocked or closed, filter damage not covered by guarantee may occur (particularly if an auxiliary pump is installed in line down stream of the filter). Never vacuum while backwashing.

8. NORMAL FILTER CYCLE

1. Set the valve to filter and start the pump.
2. With a clean filter, record the pressure gauge reading or mark the needle position on the pressure gauge.
3. Operate the filter each day for a sufficient time to turn over the water in the pool once every day. The filter should also be operated at all times the pool is in use and for about one hour afterwards. During the winter, the running time may be reduced.
4. When the pressure gauge reading is 40 - 50kPa higher than the clean filter gauge reading as in (2) above, it will be necessary to clean or backwash the filter (refer to section 9 - Backwashing the Filter).

9. BACKWASHING THE FILTER

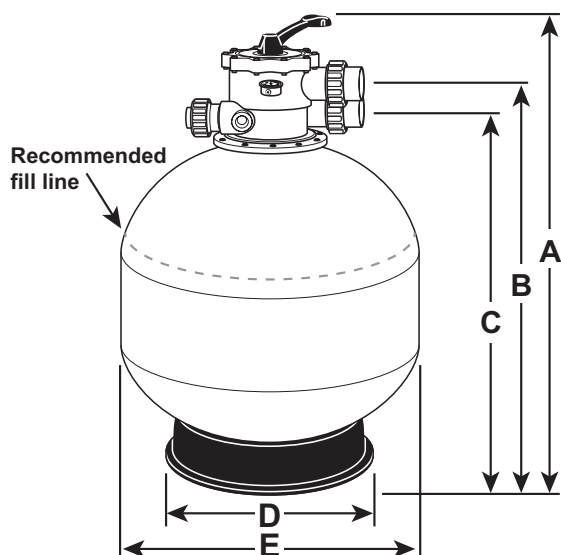
When the filter gauge reading is 40 - 50kPa above the clean filter gauge reading, cleaning or backwashing is required. To perform the backwash operation:

1. Shut off the pump. Be sure to disconnect any automatic vacuum cleaner.
2. Shift the valve handle to backwash.
3. Start the pump and run until the water appears clean through the sight glass (this will take two or three minutes).
4. Shut off the pump and turn the valve handle to rinse.
5. Start the pump and run for approximately one minute.
6. Shut off the pump and turn the valve handle to filter.
7. Start the pump; a new filter cycle has now begun.
8. If a backwash cycle does **not** reduce the operating pressure of the filter, the media will need to be changed.

10. TECHNICAL DATA

OPERATING PERFORMANCE & MEDIA REQUIRED									
Model	Sand Required	Zelbrite Required	Glass Required		Max. Flow Rate (lpm)	Min Backwash Flow Rate (lpm)	6 Hour Turnover (litres)	Filtration Area (m ²)	Max. Water Temp. (°C) / Operating Pressure (kPa)
			Fine /Medium	Medium /Course					
HMF2140	5 bags	5 bags	3 bags	2 bags	185	123	66,600	0.22	40/370
HMF2540	8 bags	8 bags	5 bags	2 bags	260	173	93,600	0.32	
HMF2550	8 bags	8 bags	5 bags	2 bags	305	173	109,800	0.32	
HMF2850	11 bags	11 bags	7 bags	3 bags	336	224	120,960	0.38	

DIMENSIONS (mm)								
Model	A	B	C	D	E	Inlet PVC	Outlet PVC	Waste PVC
HMF2140	867	731	671	497	524	40		
HMF2540	967	831	771		635	40		
HMF2550	1017	863	783		635	50		
HMF2850	1080	926	846		700	50		



NOTE At the time of filling the tank an adjustment to the media quantity may be required. It is recommended that the media does not exceed the imaginary dashed line as shown on the diagram.

Insufficient media will:

- affect filtration performance and require more frequent backwashing

Too much media will lead to:

- media returning to the pool after backwashing
- media stuck in the multiport valve causing the handle to jam
- increase in pressure which will reduce the lifespan of the filter
- noise in the multiport valve

If in doubt, less is better than more.

11. FILTER CARE

The Henden media filter is the heart of the pool equipment installation. Proper care and maintenance will add many years of service and enjoyment to your pool. Keep the exterior of the filter clean, using a mild detergent and water.

12. WATER QUALITY

Maintaining balanced water chemistry is important to the life of your pool equipment. This filter is designed to be used with pool & spa water, balanced in accordance with Langlier Saturation Index, with a pH level of between 7.2 and 7.6 and is regularly treated with a chlorine sanitising agent with the level not exceeding 3 parts per million of free chlorine.

Please consult your local Reece Irrigation & Pools branch regularly to have your water tested.

13. TROUBLE SHOOTING

Problem	Action
Reduced flow of water into pool.	Check filter pressure gauge. If 40-50kPa above clean filter reading, perform backwash (page 6).
Reduced flow after backwashing.	Check for blocked or plugged lines which could restrict flow.
Large quantities of media returning to the pool.	One of the lower laterals may be damaged. To correct this condition, the media must be removed and the lateral replaced.
Pump is operating noisily.	Investigate for a possible air leak in the suction line, blocked pipes or rubbish in the pump strainer basket. (Refer to pump manual)
Media Filter is operating noisily	Water flow through the media filter (and multiport valve) is too high The level of media in the filter may be too high. Refer to recommended fill line The media in the filter may not be level. Media in the filter needs to be level at the fill line.

In the event of installation or operation difficulties with your product, contact the installer of the product or your local Reece Irrigation & Pools branch.

For assistance in locating your nearest branch contact: reece.com.au/storefinder.

14. REMOVAL OF FILTER



WARNING Always relieve pressure from system before performing any service work.

Should it be necessary to remove the filter, the following procedure should be adopted:-

1. Switch off the pump and remove the plug from the power point.
2. Open all air bleeds in system.
3. Close isolating valves where fitted.
4. Remove: piping connection to the pump
 piping connection to the pool return
 piping connection to waste



NOTE When making any enquiries about your Henden filter, be certain to quote the model number from the nameplate on the equipment.



WARNING To avoid explosion and possible severe or fatal injury, filter pressure must not exceed 280kPa. Do not test filter with compressed air. Check that all clamps and fasteners are in good condition and are firmly secured before pressurising system. Never adjust clamps or fasteners while filter is pressurised.



DANGER Hazardous suction. Do not block water entry into filtration system with any part of your body as the pressure can trap hair or body parts, causing severe injury or death. Do not block suction. Turn off pump immediately if someone becomes trapped.



CAUTION Do not add chemicals directly to the pool skimmer. Adding undiluted chemicals may damage pump and filter and void warranty.



WARNING Small children using the pool or spa must ALWAYS have close adult supervision.

ROUTINE MAINTENANCE TASKS

To maximise the life of your pool equipment & personal safety, use this checklist once a week.

Turn pump off first.

- Make sure that any pressure gauges are in working condition and the operating pressure is within limits as specified on the product.
- Make sure that each suction inlet, and main drain has a cover that is securely attached and in safe working condition.
- Make sure that all skimmer covers are securely attached and in safe working condition. These should be replaced every 3 to 4 years.
- Remove any obstructions or debris from the main drain cover.
- Ensure the skimmer baskets and the pump hair and lint pots are free of leaves and debris at least once a week.
- Remove obstructions and combustibles from around the pump motor.
- Make sure all wiring connections are clean and that all wiring and electrical equipment is in good condition. Damaged wiring must be repaired or replaced by a qualified electrician as soon as damage is discovered.
- Check water balance and sanitiser levels at your local pool shop.



WARNING Pump suction is hazardous and can trap and drown or disembowel bathers. Do not block suction. Do not use or operate swimming pools, spas or spa baths if a suction cover is broken, missing or loose. Two suction covers and inlets must be provided into every pump to avoid suction entrapment.

15 . HENDEN™ REPAIR OR REPLACEMENT GUARANTEE

Henden Guarantee Period

Tank - Ten Years

Multiport Valve - Three Years

Labour and Other Components - One Year

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Should you experience any difficulties with your Henden product, we suggest in the first instance that you contact the installer of the product or your local Reece Irrigation & Pools branch.

Alternatively you can phone Henden. On receipt of your claim, Henden will seek to resolve your difficulties, if the product is faulty or defective, advise you on how to have your Henden product repaired, obtain a replacement or a refund.

Henden does not cover normal wear or tear, or damage resulting from misuse or negligent handling, improper use for which the product was not designed or advertised, failure to properly follow the provided installation and operating instructions, failure to carry out maintenance, corrosive or abrasive water or other liquid, lightning or high voltage spikes, or unauthorized persons attempting repairs. Where applicable, your Henden product must only be connected to the voltage shown on the nameplate.

Henden does not cover freight or any other costs incurred in making a claim. Please retain your receipt as proof of purchase; you MUST provide evidence of the date of original purchase when making a claim.

Henden shall not be liable for any loss of profits or any consequential, indirect or special loss, damage or injury of any kind whatsoever arising directly or indirectly from Henden products.

Should your Henden product require repair or service after the guarantee period; contact your nearest Reece Irrigation & Pools branch or phone the number below.

For a complete list of Reece Irrigation & Pools branches visit our website reece.com.au/storefinder or contact:

TECHNICAL AND AFTER SALES SUPPORT:

1300 HENDEN (1300 436 336)

MAILING/MANUFACTURER ADDRESS:

Davey Water Products
6 Lakeview Drive, Scoresby,
Victoria, 3179

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