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Hydrostorm ECO-V 100 “5 Star Energy Rated” Variable Speed Pump Operating Guide

Hydrostorm ECO-V 100 is equipped with the very latest variable 3 speed permanent magnet brushless DC motor; Hydrostorm ECO-V 100 is capable of lowering its energy usage & reducing its operating noise levels.

Energy Saving

A pool filtration system does not require to be operated at a pump’s maximum water flow rate. In fact, your pool’s filtration efficiency improves at lower flow rates. As a pool’s filtration cycle occupies 99% of the run time of a pool pump, you can operate the Hydrostorm ECO-V 100 on its low (ECO) speed setting for a majority of its running time, leading to 80% savings in energy.

Hydrostorm ECO-V 100’s Variable 3 speed options

Hydrostorm ECO-V 100 has 3 factory set speed options ECO (Low), MED & HIGH but with the additional advantage of fine adjustment in operating speed with 25 RPM increments, allowing fine tuning of the pump’s motor speed to perfectly match the flow requirements of the swimming pool, maximising energy savings and minimising pump noise. The Hydrostorm ECO-V 100 operates most economically and with the lowest noise level using the ECO (Low) speed option.
The Hydrostorm ECO-V 100 has a variable speed control, ranging from 1000 to 2850 RPM (revolutions per minute). The pump’s RPM can be viewed on the control panel display.

ECO (Low 1475 RPM): Filtration – 99% of the time
Most economical speed for the purpose of operating the pool’s filtration system without any ancillary pool equipment attached to the re-circulation system. E.g. suction cleaners.

Medium (2400 RPM): Automatic pool cleaners
This speed will enable the operation additional pool equipment for pool cleaning functions that require the use of suction cleaners and low pressure spa jets.

High (2850 RPM): Vacuuming and backwash – 1% of the time
Power speed selection for use with backwashing granular media filters (e.g. sand filters), manual pool vacuuming and operating pool equipment with high water pressure requirements. E.g. water features and spa jets.

Stop: This will cancel any variable adjustments made outside of the above three factory settings.

Power: This will be lit whenever the pump is operating.

Error: If this is lit you will be required to contact your pool equipment supplier/store for maintenance advise.

Note: The ECO (Low) speed option is specifically designed to operate a standard pool filtration and recirculation system, but can be fine tuned with 25 RPM increments to suit an individual pool’s flow requirement.

Adjusting Low (ECO), MED and HIGH Speed Settings

1. While the Hydrostorm ECO-V 100 is operating press and hold the required speed setting button for 3 seconds or until the indicator light is flashing. This will allow the factory setting to be adjusted either down or up in RPM’s.
2. To decrease the speed of a factory speed setting select and press the speed button, the indicator light will begin to flash. Press the ECO with down arrow button, to decrease the RPM by 25 RPM each time you press the button, until you reach the desired operating RPM.
   Note: The minimum operating RPM limit is 1000 RPM.

3. To increase the speed of a factory speed setting select and press the speed button , this will then have the flashing indicator light. Press the HIGH with up arrow button as this will increase the RPM by 25 RPM each time you press until you reach the desired operating RPM.
   Note: The maximum operating RPM limit is 25 RPM less than the next factory speed setting.
   Example: Low (ECO 1900 RPM) upper RPM limit is 2375 RPM, 25 RPM below MED factory setting of 2400 RPM.

4. To save this variable speed adjustment hold MED/OK button for 5 seconds to return to normal operating mode.

Please ensure that the correct pump speed is selected in accordance to the pool equipment and adequately meets the pool’s requirements.

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Benefits of Slow Flow

Lowering a pumps flow rate not only significantly decreases the pump's energy requirements, but also reduces water flow resistance in your pool equipment and plumbing. Even though you may need to operate the Hydrostorm ECO-V 100 longer, it is far more efficient pumping low water flow compared to high water flow.

A slow flow rate also has the added benefit of improving your pool's filtration efficiency, enhancing the clarity of your swimming pool water. Plus your automatic chemical dosers and salt chlorinators are also more effective when the pool water is circulated longer.

Ultra Quiet

Hydrostorm ECO-V 100 operates most economically and with the lowest noise level at its low speed setting. Its low speed setting significantly reduces the pump's vibration, motor noise and water turbulence to an ultra low 55.5 decibels (dBA).

Off-Peak Operation

Its low noise levels enable it to be operated at times that are not allowable for conventional pool pumps. A Hydrostorm ECO-V 100 allows you to take advantage of off-peak electrical tariff periods, without upsetting your neighbours.

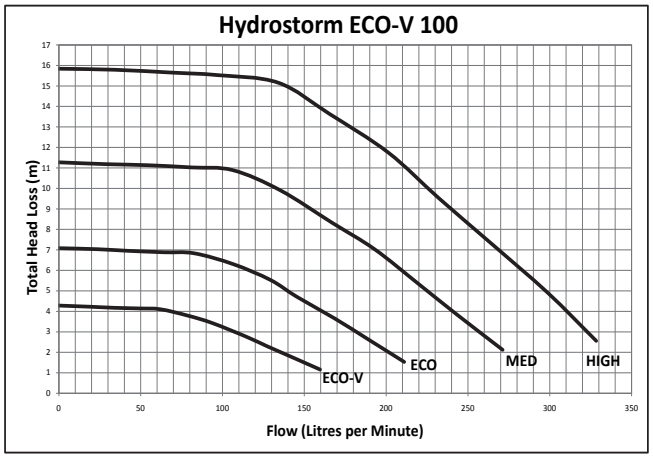
Pump Start Up

The Hydrostorm ECO-V 100 Variable Speed Pump is designed to operate on speed setting High when the pump is first turned on. This ensures the pump is properly primed and adequate flow through the pool's filtration and re-circulation system. The high speed start up will operate for 3 minutes then switch to the pre-selected speed setting.

During the initial start up period the light on the pre-selected speed setting button will start flashing. If the pump had a pre-selected speed setting less than 1900 RPM the ECO (Low) light will be flashing.

Note: The above instructions are only a guide; each pool has individual water pressure and flow requirements. Hydrostorm ECO-V 100 Variable Speed Pump has to be sized appropriately by a pool professional to ensure efficient operation of your pool.

The following charts provide the water flow characteristics of the Hydrostorm ECO-V 100 Variable Speed Pump at 4, 6, 8 & 10 metre of head loss with minimum pump operating hours.



Minimum Pump Operating Hours								
Pump Speed	ECO-V 1475 RPM	ECO	Medium			High		
Head Loss (m)	4m	6m	6m	8m	10m	6m	8m	10m
Litre Per Hour	3,300	6,900	12,600	10,500	8,100	17,100	15,300	13,500
Pool Size (litres)								
25,000	7.6	3.8	2.0	2.4	3.1	1.5	1.6	1.9
30,000	9.1	4.3	2.4	2.9	3.7	1.8	2.0	2.2
40,000	12.1	5.8	3.2	3.8	4.9	2.3	2.6	3.0
50,000	15.2	7.2	4.0	4.8	6.2	2.9	3.3	3.7
60,000	18.2	8.7	4.8	5.7	7.4	3.5	3.9	4.4
70,000	21.2	10.1	5.6	6.7	9.9	4.1	4.6	5.2
80,000	24.2	11.6	6.3	7.6	9.9	4.7	5.2	5.9
90,000	27.3	13.0	7.1	8.6	11.1	5.3	5.9	6.7
100,000	30.3	14.5	7.9	9.5	12.3	5.8	6.5	7.4

Note: This chart is calculated using turnover of pool size (litres) once per day.

Note: During normal operation ensure your pool has sufficient circulation of water to ensure effective turnover of the pool. If there is insufficient flow of water from the pool's returns, increase the pump's operating speed till there is sufficient water flow.

Note: The Hydrostorm ECO-V 100 variable speed pump has been tested against Australian Standard AS5102.1-2019 and achieved a "5 Star Energy Rating".

WARNING

The Hydrostorm ECO-V 100 Variable Speed Pump is equipped with the latest motor that utilises electronic PCB's & microchips for pump control & protection.

When the pump is turned off, it will be necessary to delay restarting the pump for a minimum of 30 seconds. This will ensure the pump electronics has totally reset.

However, in some situations electronically controlled Chlorinators may provide a small residual of power to the Hydrostorm ECO-V 100 Variable Speed Pump preventing the resetting of the pumps electronics. In this case the power to the Chlorinator and pump must be totally disconnected to enable the electronics to reset.

It is recommended that you contact the supplier or manufacturer of your chlorinator to gain any further assistance or advice with this issue.