henden™

Henden 400 Variable SPeed Pump with Bluetooth

INSTALLATION & OWNERS MANUAL

⚠ 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.

Contents

Henden Bluetooth® Enabled Variable Speed Pumps

1. INSTALLATION OF THE HENDEN VARIABLE SPEED PUMP

1.1 Location of the Pump

The pump should be located as close to the water as practicable and mounted on a firm base in a well drained position, high enough to prevent any flooding. The pump position should also allow easy access for servicing and so that the product nameplate can be easily read.

1.2 Weather Protection

It is recommended that the pump is protected from the weather. Enclosures should be ventilated to prevent condensation build-up.

1.3 Power Connection

Important Information Your Henden pump is double insulated to water circuit. If equipotential bonding structure is required, then an Equipotential Bonding Point is provided. (Please refer to your local statutes and regulations for AS/NZ 3000 wiring standards).

The Henden Variable Speed Pump is suitable for connection to a nominal 220-240 volt 50Hz power supply and is equipped with a flex cord and 3 pin plug. If a power outlet is not available within 3 metres of the pump, a 3 pin power point in a safe, dry place may need to be provided by an electrician. Extension cords are unsafe around pools and should be avoided. If the supply cord of this product is damaged it must be replaced by Henden or the manufacturer, with genuine Henden spares.

This Henden pool pump incorporates motor overload detection designed to protect the motor from overheating. If the motor gets too hot during operation, its operating speed will reduce to bring it within an acceptable operating temperature and then will speed up to the originally set speed.

To reset the motor, switch the power off for 30 seconds, and then return the power from the mains switch.

Henden recommends that all installations are fitted with earth leakage or residual current protection devices.

CAUTION! In the interest of safety, we advise that all brands and types of pool pumps must be installed in accordance with AS3000 wiring rules or equivalent.

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 skimmer box and in return pipe from the filter to the pool.

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

Warning! Ensure that an electrical isolation switch is located with easy access so that the pump can be switched off in an emergency.

Power supply to this pump needs to be through an RCD, having a rated leakage current not exceeding 30mA.

2. PIPE CONNECTION

Barrel unions are provided for connecting to the piping from the pool. The pumps are designed to accept 40mm/50mm PVC fittings.

When plumbing the discharge pipe, ensure that the pipework does not interfere with the pumps speed dial.

The use of any pipe smaller than those specified above is not recommended. Suction piping should be free from all air leaks and any humps and hollows which cause suction difficulties.

The discharge piping from the pump outlet should be connected to the inlet connection on the swimming pool filter (usually at the filter control valve).

Barrel unions need to be hand tightened. No sealant, glues or silicones are required.

3. TYPICAL INSTALLATION DIAGRAM

Vacuum hose   Vacuum head

Pool pump   Media Filter
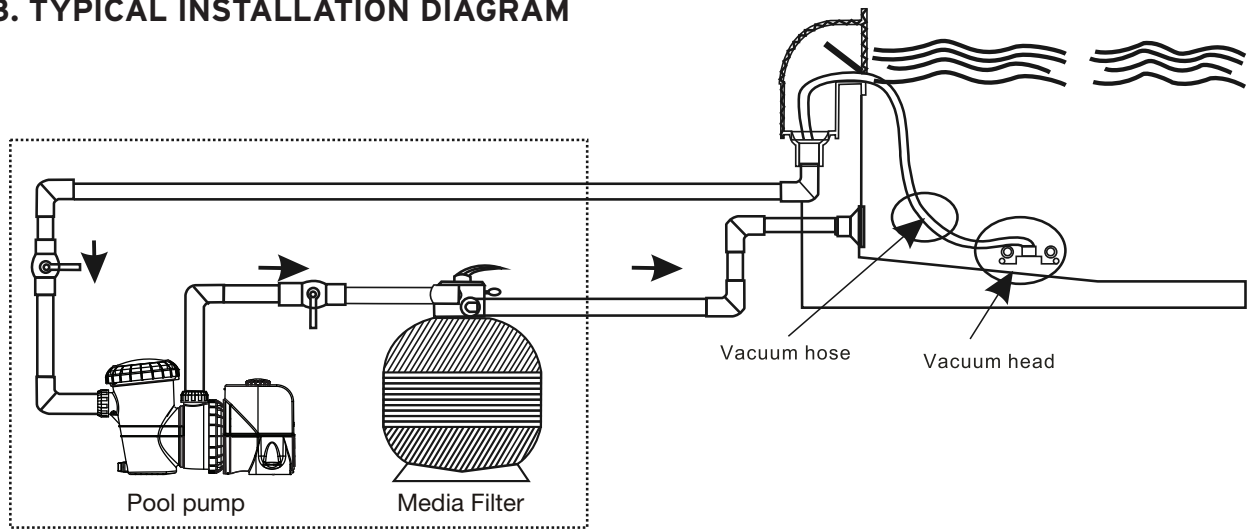
4. ADVANCED SETUP

4.1 External AUX Connections Overview

Your Henden Variable Speed Pump has an RJ45 style waterproof socket to allow for external control of motor speed and other functionality. A standard RJ45 network cable (without boot) can be used.
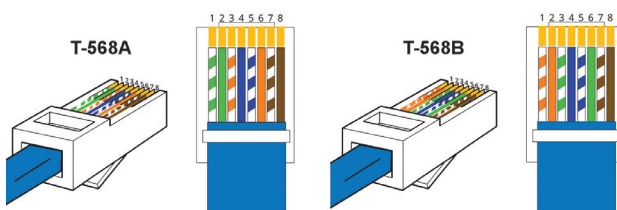

Figure 1: RJ45 Plug installed in housing (from rear)

It is recommended to keep the cable length between the pump and external pool controller or heater as short as possible.

There are two major pin configurations as shown below:

RJ45 PINOUT

Figure 2: RJ45 pin connections

Pin	Function	T-568A	T-568B
1	RS485 +ve	Green/white	Orange/white
2	RS485 -ve	Green	Orange
3	Digital Input 3	Orange/white	Green/white
4	Analogue Input	Blue	Blue
5	0V DC Ground	Blue/white	Blue/White
6	Digital Input 2	Orange	Green
7	Digital Input 1	Brown/white	Brown/white
8	24V	Brown	Brown

Check that the cable you use has the above colour coding pins 1 through to 8. If an alternative colour coding has been used make sure to record the colour which corresponds to each pin to avoid misconnection at the pool controller or heater. If an alternative cable is used make sure the analogue input and ground are a twisted pair.

The 24V connection is only to be used as a reference for the digital inputs – DO NOT power external equipment from this supply rail.

4.2 Digital Control Inputs

The 3 digital inputs allow for overriding the dial speed setting. To set one of these inputs either:

1. Connect an isolated 24V supply between DC ground and the digital input pin

2. Connect the switched contacts of a relay between the 24V pin and the digital input

The fixed speeds (as a proportion of full speed) are:

Input 1 (Pin 7)	Input 2 (Pin 6)	Input 3 (Pin 3)	Output Speed
0	0	0	Dial
0	0	24V	33%
0	24V	0	50%
0	24V	24V	Backwash
24V	0	0	100%
24V	0	24V	67%
24V	24V	0	83%

4.3 Interfacing equipment to the Henden Variable Speed Pump

⚠ **Warning** A qualified electrician is required to carry out the work shown below.

The Henden Variable Speed Pump can be controlled by other equipment to turn it on to high speed (or any other preset speeds, see chapter 8 for details). This is to achieve maximum efficiency, for example, when using a gas heater, or a heat pump.

If the equipment has an isolated 18- 24V DC signal output, simply connect pin 7 to 24V DC positive and pin 5 to DC ground as shown in the following diagram:

Controlling Equipment

Pin7 (Brown/White)

← To RJ45 Socket of VSD Pump

+ 18 ~ 24V DC

Pin5 (Blue/White)

DC Ground

If the controlling equipment does not have 18-24VDC voltage output as above, and it has 24VAC, 230VAC, 12AC or 12 DC etc. signal output, a suitab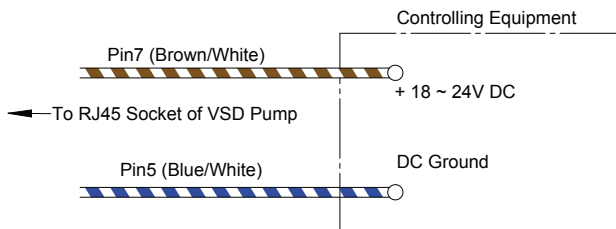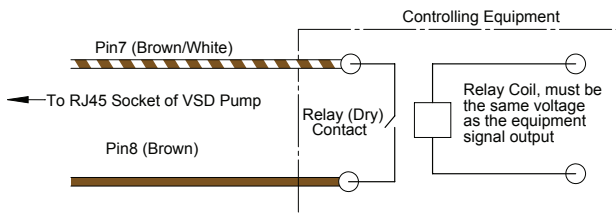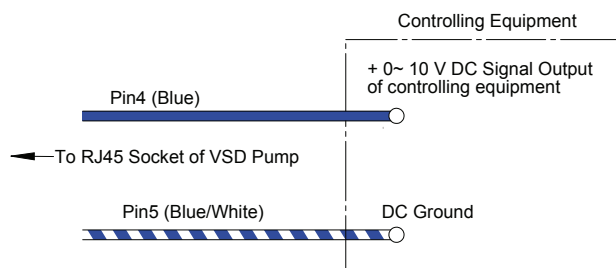le relay (the coil voltage must be the same as the signal output voltage of the controlling equipment) can be used to do this job as mentioned above, and shown in the following diagram:

Controlling Equipment

Pin7 (Brown/White)

← To RJ45 Socket of VSD Pump

Relay (Dry) Contact

Relay Coil, must be the same voltage as the equipment signal output

Pin8 (Brown)

If the controlling equipment already has the relay output (dry contact) for controlling purpose, an extra relay is not necessary, simply connect Pin 7 (Brown/White) and Pin 8 (Brown) to the dry contacts as shown in the left part of the diagram above.

4.4 Analogue Control Input

Speed control can also be achieved by connecting a 0-10V DC signal at the input on pin 4 (ground at pin 5). As soon as a signal above 0V is registered, this input will take priority over dial settings. For example, 10V DC will change pump speed pump to 100%, 5V DC will change pump speed to 50% etc.

Controlling Equipment

Pin4 (Blue)

+ 0~ 10 V DC Signal Output of controlling equipment

← To RJ45 Socket of VSD Pump

Pin5 (Blue/White)

DC Ground

TECHNICAL SPECIFICATIONS

Model	H400VSPBT
Head (m)	26
RPM	Speed 1 to 10 From – 1,050 to 3,100
	Backwash Speed – Variable
Enclosure Class (IP)	45
Insulation Class	F
Voltage (V)	220-240 AC
Supply Frequency (Hz)	50/60
Motor Input Power (W / hp)	Speed Setting 1 - 126W / 0.17 hp
	Speed Setting 5 - 728W / 0.97 hp
	Speed Setting 10 – 1639W / 2.19hp
	Backwash Setting – Variable

Operating Limits:

Max Water temperature	40°C
Max Ambient temperature	50°C

Dimensions:
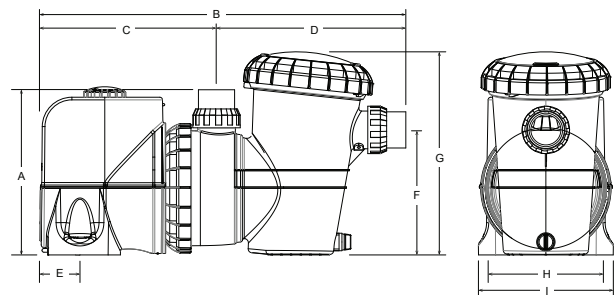
A	B	C	D	E	F	G	H	I	Mounting Holes Diameter	Inlet/ Outlet PVC	Net Weight (kg)
305	670	320	350	65	230	380	200	250	10	40/50	14

Henden - H400VSPBT
Performance
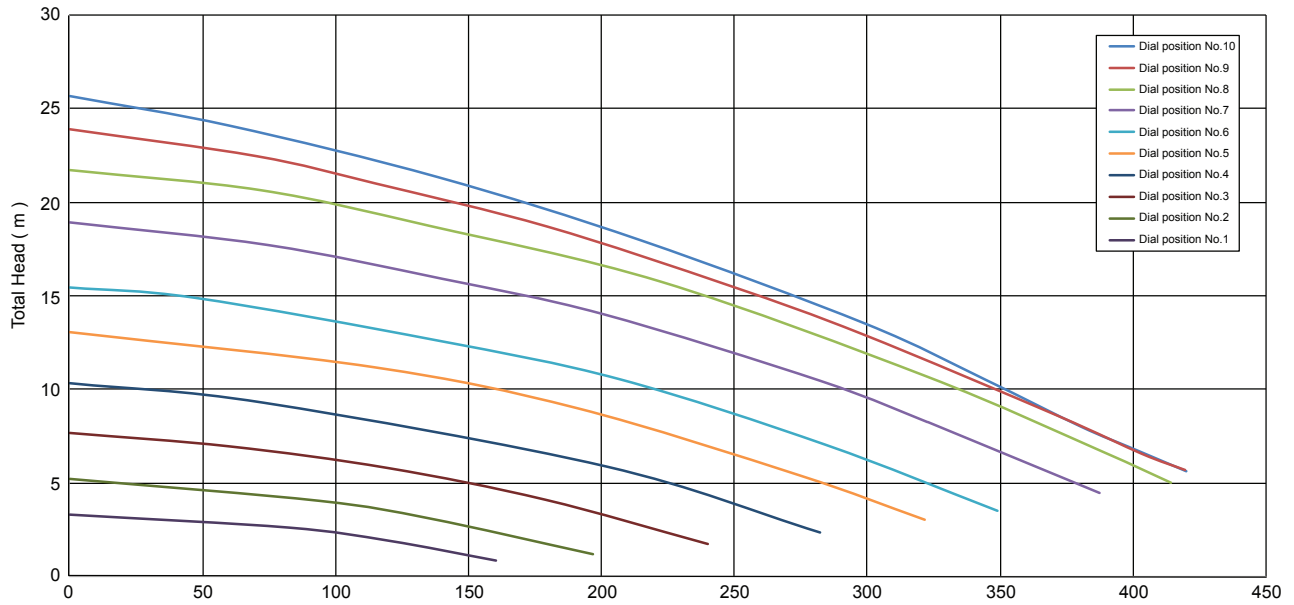
Speed Setting	Input		Output	
	hp	W	hp	W
Dial 1	0.17	126	0.12	89
Dial 2	0.28	210	0.20	147
Dial 3	0.46	347	0.32	243
Dial 4	0.70	522	0.49	366
Dial 5	0.97	728	0.68	510
Dial 6	1.22	913	0.85	639
Dial 7	1.61	1211	1.13	848
Dial 8	1.97	1478	1.38	1034
Dial 9	2.18	1635	1.59	1191
Dial 10	2.19	1639	1.62	1212

OWNERS MANUAL

Congratulations on the purchase of a quality product from the Henden range of pool and spa equipment. You are assured of many years of reliable and super-efficient performance from your Henden Variable Speed Pump with Bluetooth.

This pump is Bluetooth enabled, so you will be able to set and control the pump functions from your smart device. Bluetooth is a wireless communication protocol that enables communication between devices. This function is supported by any device that can download an app from IOS or Android App Store.

Read these instructions in their entirety before switching on this pump. If you are uncertain as to any of these installation and operating instructions please contact Henden as listed on the back of this document.

The Henden Variable Speed Pump has been designed to circulate swimming pool and spa 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 your local Reece Irrigation & Pools branch or the Henden Customer Service Centre.

Every Henden Variable Speed Pump is thoroughly water tested against a number of flow, pressure, voltage, current and mechanical performance parameters. Henden's advanced pump manufacturing technology provides reliable and efficient pumping performance that lasts and lasts.

Saving Energy with your Henden Variable Speed Pump

The Henden Variable Speed Pool & Spa Pump is a super-efficient pump utilising a very clever, state of the art infinitely variable AC motor that provides lower levels of noise, lower operating costs and lower greenhouse emissions than traditional pool pumps.

Due to its ability to run at lower speeds than conventional pumps, your pump will also experience less mechanical wear and tear due to less stress on the internal mechanical components.

To achieve energy efficient pumping is easy. Simply run the filtration pump at a lower speed, but run it for longer than a conventional fixed speed pump to "turn over" your pool water for adequate filtration and sanitisation. The result is lower energy use and up to 70% lower operational costs.

The Henden Variable Speed Pump with Bluetooth have adjustable speed settings from 1,050 to 3,100rpm, so you can circulate your pool or spa water at any speed in between if required. Speeds can be adjusted to power a suction pool cleaner, in-floor cleaning system & pool heaters. A backwash setting on the pump can be selected to backwash a media filter.

What to expect with the Henden Variable Speed Pump (energy efficient operation) on your pool:

If your Henden pump is replacing a traditional AC motor pump, you will need to run it longer than your old fixed speed pump. This is NORMAL and you will save energy when using lower speed settings.

You may also notice that the pressure gauge on your filter is indicating a much lower pressure than you are used to. This is also NORMAL. The lower system pressure is simply a result of the lower speed and flow rate produced by the pump.

While running at the lower speed settings you will also notice a significant reduction in pump noise. This is a major benefit for you as it allows you to run your pump during off peak electricity tariffs, which will also assist in the reduction of your operating costs. Plus you will also have much happier neighbours.

Many pool products rely on particular minimum flow rates for best operation and/or efficiency. If you are using low flow settings on the Henden Variable Speed Pump (e.g. speed 1 to 4) Henden recommends that you check the compatibility of the speed or minimum flow rate required to run specific pool equipment such as:

- Suction pool cleaners
- Ozone generators
- Heating systems
- Chlorinator cells
- In-floor pool cleaning systems

5. START UP

5.1 Pre-start up checklist

Speed setting chosen is a compatible
setting with other pool equipment ☐

The pump is installed in a safe and dry environment ☐

The pump enclosure has adequate drainage
in the event of leakage ☐

Any transport plugs are removed ☐

The pipe-work is correctly sealed and supported ☐

The pump is primed correctly ☐

The power supply is correctly connected ☐

All steps have been taken for safe operation ☐

The filter has been plumbed with 40/50mm pipe ☐

6. LOW ENERGY OPERATION

Your Henden Variable Speed Pump has speed settings from 1,050 to 3,100rpm:

- 1,050 – Lowest Speed, 1

- 3,100 – Highest Speed, 10

- Variable – Backwash Speed

Speed 1 provides the lowest speed and therefore the greatest energy efficiency and savings.

Operation	Recommended Speed Setting
Backwashing your media filter	Backwash Speed
Pool Filtration	Speed 1 to 4
Suction pool cleaner operation	Speed 5 to 8
Manually cleaning your pool	Speed 9 to 10
Water Feature operation	
Spa Jet operation	
In-floor cleaning systems	
Solar pool heating	

Guidelines for Recommended Pump Operating Hours:

Australian Standards AS3633: "Private swimming pools - water quality" states that "The minimum turnover rate shall be a single turnover of the full volume of the pool water, within the period that the pump would normally be operating…."

The table below provides a guide only to the running times of your pump while in filtration mode in order to achieve the minimum turn over rate:

Pool Size (Litres)	Speed Setting (hours)		
	Speed 1	Speed 5	Speed 10
20,000	2.4	1.3	0.9
30,000	3.7	2.0	1.4
40,000	4.9	2.7	1.9
50,000	6.1	3.3	2.3
60,000	7.4	4.0	2.8
80,000	9.8	5.3	3.8
100,000	12.3	6.7	4.7

7. FEATURES & FUNCTIONALITY

Your Henden Variable Speed Pump has several operational features. The following explain each of these.

7.1 Multi-Coloured LED indicator light

- Used for identifying required settings for programming time for full speed (Boost) cycling and warnings:
  > Solid green = Normal dial operation
  > Slow flashing green = In backwash mode
  > Fast Flashing green = Boost cycling & AUX external control
  > Solid White = Time to Backwash
  > Fast Flashing White = Fault detected - reset pump
  > Slow Flashing blue = Operated by Bluetooth
  > Solid blue = Bluetooth mode

7.2 Constant Flow/Speed Compensation

As the pool filter becomes dirty, pressure builds up. With a typical pool pump, this would naturally slow the flow coming through the system. The Henden Variable Pump has the intelligence to automatically detect the resistance applied by a filter and slowly compensates for the reduction in flow by increasing the speed of the motor. The result is the flow remains constant between filter cleans.

The Henden Variable Speed Pump LED indicator will show a solid white display when the resistance is too high and it is time to backwash your filter.

7.3 Patented water cooled design for smooth and super quiet operation

- The pump has a water cooled membrane and jacket around the motor which helps to keep the pump cool during operation
- Waste heat from the motor is transferred into the pool water, helping to reduce pool heating energy costs

7.4 Weatherproof RJ45 Communication Port (See page 5 for connection details)

- For communication and connection to external pool control systems
- For receiving a signal from a heat pump or gas heater to ramp the VSD pump speed to the required speed during the heating process
- Service diagnostics and software updates (For Henden use only)

7.5 Backwash Speed Cycling Technology

- When in backwash mode the pump will cycle between a low and high speed to help agitate the filter media for a more effective clean
- Reduces wasted water and chemicals during the backwash cycling process

7.6 Full variable frequency drive with user friendly selectable speed dial

- Provides for easy selection of desired filtration speed
- No complicated digital push button controls

7.7 Large 4.5 litre lint pot

- Provides for longer intervals between cleaning

# 8. BLUETOOTH FUNCTIONALITY

8.1 Bluetooth App Set Up

1. Open the "App Store" app that is available on your device.
2. Search "Henden Pool Pump"
3. Install the app on your device

The app can be installed on to as many devices as desired, however, only one device can control the pump at any given time. The language and time of the app is the same as your device setting. The measuring units are automatically defaulted to your device's region units, however, you can choose between Litres, Gallons or m^3/hr.

8.2 Pairing a device to the pump

1. Open app on your smart device.
2. Turn dial on the pump from "off" to "Bluetooth", you will see the LED flash white for a second.
3. On your device, press the connect button.
4. When setting up for the first time ONLY, select "YES" to allowing location.
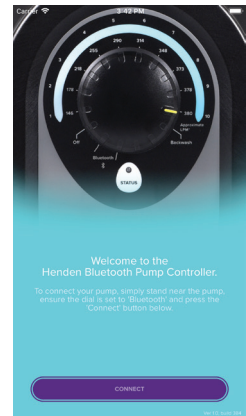
Please note that the first time the devices are paired, there is a 2 minute time limit to do so before the procedure will have to be repeated.

8.3 External Timer / Chlorinator

When using a chlorinator to power your pool pump (External Timer Present)

If you are using a chlorinator to power your pool pump you should not schedule your pump operating times at different times to your chlorinator timer.

If you do schedule your pump to operate when your chlorinator is not scheduled to be on, the pump will not operate.

You can still use the app to set the pump speed settings if you have matched the app scheduled run time with your chlorinator run time.

When using an external power supply to power your pool pump (separate power point) (External timer not present)

If you use your chlorinator to power your pool pump you can schedule your pump operating times at different times to your chlorinator timer.

Simply click "No" when you pair your pool pump to the app.

A pop-up will appear asking if you are using an external timer or chlorinator to control your pump. Please Select "YES" or "NO"

Note: App screenshots are for demonstration purposes only. Actual screens may vary.

This pop-up will appear
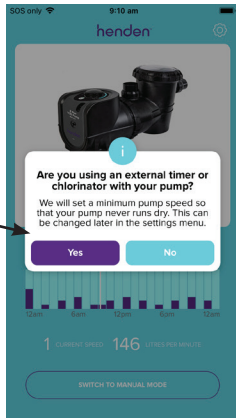
** This is a safety function and will not allow the chlorinator to run without the pump working.

8.4 Programming

Two modes are available, depending on whether you wish to manually operate the pump or alternatively you can create a schedule of operation.

8.5 Manual Mode

> If in schedule mode, press "switch to manual mode"

> The app will now be in manual mode and you can manually adjust the speed by pressing the (+/-) buttons.

> In manual mode, the pump will run at the set speed, even if the phone is not in range.

> Anytime the dial is switched to the Bluetooth position, it will run at the previous set speed after the priming cycle.

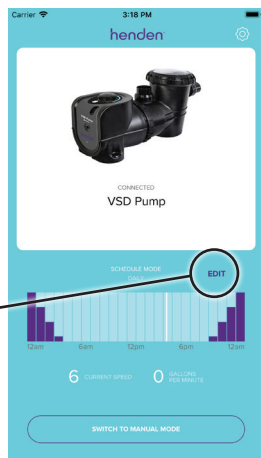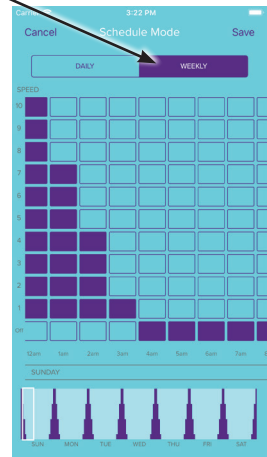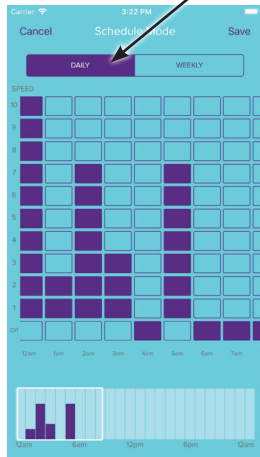**To switch between manual or schedule mode you can press this button.**

8.6 Schedule Mode

Schedule mode allows you to set the pump speed by day and time.

> There are two options (set a daily cycle or a weekly cycle) by pressing the desired box. This option allows you to either create a standard **"daily schedule"** which will consistently operate the set levels every day.

Select to edit the schedule settings

The "Weekly cycle" option can be set for the entire week, giving you the ability to alter daily pump cycles depending on weather, bather load etc.

Select if you would like the daily cycle or the weekly cycle.

8.7 Setting a Schedule

> Select the box which relates to the time that you require the pump to operate.

> Select the speed setting you would like the pump to run at any time.

Note: Settings of the pump 1-10 refers to "slowest to fastest" operating speed of the pump.

> Once you are happy with your schedule, select "Save". Communications between the device and the pump can take up to 20 seconds depending on the schedule selected.

Note: The row at the bottom of the screen indicates a summary of where the schedule is by day and by hour. This summary screen can easily be altered by swiping up or down the columns above.
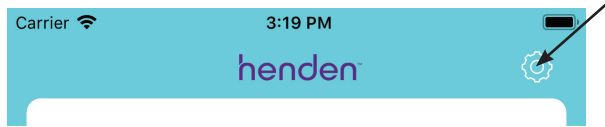
*Please note: If using an external timer or chlorinator to power your pump the minimum speed for pump operation will be speed 1.

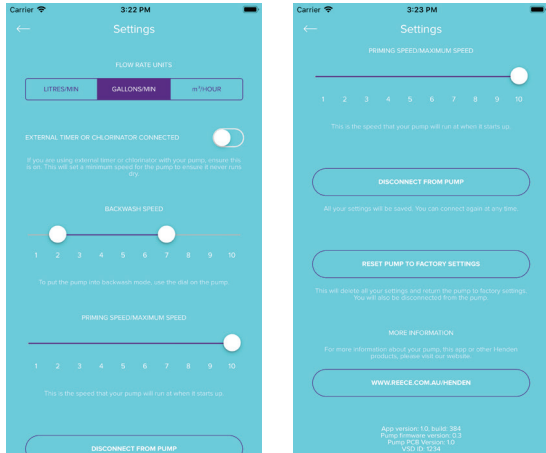> The pump will remain in the last used mode, whether that be manual mode or schedule mode.

Note: App screenshots are for demonstration purposes only. Actual screens may vary.

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8.8 Settings

> To alter/set up settings, click on the settings icon:

> This will display the following screens (scroll down screen for full information)

- **External Timer Present**

  Swipe this on or off, depending on whether you are using an external timer/chlorinator.

- **Backwash**

  Can be set as a single speed or alternatively set two speeds and the pump speed will "pulse" between the two settings. Minimum speed can be set between 1-10, maximum speed can only be set between 5-10.

- **Priming Speed / Max Speed**

  Each time your pump starts it will go through 2 minutes of priming to ensure there is water in the system. You can adjust the speed in which it does this between 5 & 10. The speed you set will limit the maximum speed the pump will run in manual or schedule mode.

- **Disconnect Function**

  The "disconnect from pump" function can be used to:

  1. Allow another device to control the pump

  2. Disconnect so that you will not automatically connect to the pump.

  Please note that the Bluetooth connection will automatically disconnect after a minute of no communication

- **Factory Reset**

  This will reset the pump back to factory configurations and allows you to start the set up process again.

  Select "reset pump"

  Turn dial to "off" position, then turn dial to "Bluetooth"

  You can then repair with your phone. This procedure is in place so that the pump cannot accidentally be reset.

8.9 Pump Fault Finding

In the instance that there is a fault, the following screen will appear, with text description below the fault indicating how to remedy.

Note: App screenshots are for demonstration purposes only. Actual screens may vary.

Fault title	Fault description
Pump Fault – Overcurrent	Check that the motor is able to rotate freely. Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Over Voltage	Over voltage fault. Unplug for 1 minute and plug back in to reset.
Pump Fault – Earth Fault	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – System Fault	Unplug for 1 minute and plug back in to reset.
Pump Fault – Under Voltage	Supply voltage issue. When power is back to normal, unplug for 1 minute and plug back in to reset.
Pump Fault – Output Phase Fault	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Over Temperature	Pump is too hot. Check the ambient temperature. Set lowest speed possible if ambient temperature is too high.
Pump Fault – Motor Stalled	Check that the motor is able to rotate freely. Unplug for 1 minute and plug back in to reset.
Pump Fault – Motor Over Temperature	Unplug for 1 minute and plug back in to reset and turn down pump speed, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Underload / Loss of Prime	Check if there is is enough water inside pump. Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Power Overload	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – EEPROM Checksum	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Watchdog Error	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Back EMF Protection	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Thermistor Fault	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Safe Torque Off	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Internal Bus Communication	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Application Error	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – IGBT Temperature High	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – 4 mA Analogue Input Fault	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – External Fault	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Keypad Communication Error	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Fieldbus Communication Error	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.
Pump Fault – Fieldbus Interface Error	Unplug for 1 minute and plug back in to reset, if problem persists call 1300 HENDEN, or contact your nearest Reece Irrigation & Pools branch.

9. USING YOUR PUMP WITH A SALT WATER CHLORINATOR

Chlorinators require a minimum flow rate through the chlorinator cell for best efficiency and cell life. If you are using this pump with a Henden Chlorinator please ensure flow rate is sufficient to cover your cell plates completely at all times of operation. For other chlorinators please refer to the relevant installation and operating instructions.

10. OPERATING YOUR SUCTION POOL CLEANER

Before installing or purchasing a pool cleaner for use with your Henden pool pump, it is important to know the minimum flow rates required for it to operate effectively.

To operate a suction pool cleaner with your Henden Variable Speed Pump:

1. Activate the High Flow setting (10) and allow the pump to fully prime by running for around 2 minutes. You will know the pump is primed when you can see a strong flow of water through the clear leaf basket lid.

2. When all air is expelled from the leaf basket, connect the pool cleaner hose firmly into the skimmer plate or dedicated wall suction.

3. Select the speed setting that enables best performance from your suction pool cleaner. Speed 3 to 7 should be ample for most cleaners, however if the cleaner requires better performance, select speeds 7 to 10.

4. The cleaner should only be connected for as long as is required to clean the surface of your pool. When cleaning is complete, disconnect the cleaner and remove the skimmer plate from the skimmer box.

5. Reactivate the most efficient speed setting for daily filtration. Speeds 1 to 4 is recommended.

> ⚠ **NOTE** To get optimum energy efficiency from your Henden Variable Speed Pump DO NOT keep the suction pool cleaner connected when cleaning is not required.

11. MAINTENANCE: EMPTYING THE STRAINER BASKET

The strainer basket should be inspected frequently through the transparent lid and emptied when a build up of rubbish is evident. The directions below should be followed.

1. Switch off pump.

2. Unscrew the strainer basket lid anti-clockwise and remove.

3. Remove the strainer basket by lifting upwards from its housing.

4. Empty the trapped refuse from the basket. Hose out with water if necessary.

> ⚠ **NOTE** NEVER knock the plastic basket on a hard surface as it will cause damage.

5. Check the strainer basket for cracks, replace the strainer basket in the pump if OK.

6. Replace the lid and ensure that it seals on the large rubber o-ring. Firm hand tightness only is required. The o-ring & thread can be lubricated with Hydra Slip or equivalent products.

> ⚠ Failure to undertake regular maintenance may cause damage not covered by warranty.

12. TROUBLE SHOOTING

If the pump runs but there is no water flow or water flow is reduced, the following condition may apply:

1. The filter requires backwashing or it is blocked. Refer to the relevant section in the Filter Manual.

2. The pump is not primed. Re-prime as per instruction in 'Starting the pump'

3. There are air leaks in the suction piping. Check all piping and eliminate leaks, also check for a loose strainer basket lid. Air bubbles in the water flowing back to the pool would indicate a leak in the suction to the pump allowing air to enter the pipework.

4. A leaking pump shaft seal may also prevent operation. Evidence of this would be water on the ground under the pump.

5. The pump is not able to get water from the pool. Check that the valves to the pump are fully open and that the pool water level is up to the skimmer box. Typically half way up the face of the skimmer box is sufficient.

6. Blockage in the piping or pump. Remove the strainer basket and check for any blockage to the pump impeller entry. Check the skimmer box for blockage.

If the pump does not operate, the following conditions may apply:

1. The power is not connected. For 220-240 volt only, check the power point by plugging in a portable appliance to ensure power is available. Also check fuses and the main power supply switch

2. Automatic overload is tripped. The pump has an in-built thermal overload which will reset automatically after the motor has cooled following an overheating period. Determine the cause of the overload tripping and rectify. Reset the pump by switching the power OFF for 30 seconds.

3. Blockage is preventing the pump from rotating.

13. REMOVAL OF THE PUMP FROM PIPEWORK

Should it be necessary to remove the pump, follow these instructions:

1. Switch off the power and remove the plug from the power source.

> ⚠ **NOTE:** If the pump is hard-wired into a time clock or another automatic control, the wiring should be removed by a qualified technician.

2. Close the water valves on the pool return and the pump inlet pipework.

3. Remove the discharge & suction barrel unions taking care not to lose the o-rings.

4. Move the pipework with the barrel unions attached until the pump can be pulled clear.

> ⚠ **NOTE** When making any enquiries about your Henden Variable Speed Pump be certain to quote the model number from the nameplate located on the motor.

14. WATER QUALITY

Maintaining balanced water chemistry is important to the life of your pool pump. This pump 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 regularly exceeding 3.0 parts per million of free chlorine.

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

POWER CONNECTIONS AND WIRING MUST BE CARRIED OUT BY AN AUTHORISED ELECTRICIAN.

In accordance with AS/NZS60335.2.41 we are obliged to inform you that this device is not to be used by children or infirm persons and must not be used as a toy by children.

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.

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.

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

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.

15. HENDEN™ REPAIR OR REPLACEMENT GUARANTEE

Henden Guarantee Period
Four Years

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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