

HYDROPAKXTRA

OWNERS MANUAL



For correct operation & installation, it is essential to observe these instructions



The Hydropak is covered by the **Argon 3-Year Warranty** for your piece of mind. Register online for extended warranty. argondistributors.co.nz/warranty-registration

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Proven solutions through experience

Ever Since the first satisfied customer in 1931, Davies Pumps have become a trusted leader in the pump manufacturing industry.

From making deep-well pump cylinders in a North Shore Basement to the wide range available today, Davies Pumps focuses on providing the right solution for you and your family.

Argon Customer Service

Congratulations on your purchase of a Davies Pump Hydropak®-Xtra, the all-in-one Pump, Multistage Filtration & UV Sterilisation Water Supply System. You are about to enjoy the experience of pressurised and healthy water throughout your entire home.

Like all Davies Pumps products, quality and reliability are first and foremost for this proven brand name, chosen to deliver years of service.

Please check your Hydropak®-Xtra(HPX) for any physical damage during transit and advise your supplier if there are any issues.

Please check the nameplate to make sure the correct model has been supplied.

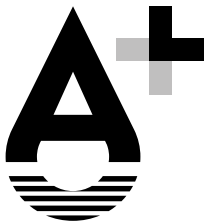
Please carefully read the following instruction and installation guide to ensure this is set up correctly to give a long and trouble-free service life.

Product Information	
Dealer	
Installer	
Installer phone	
Date Installed	
Serial Number	



Warranty Registration

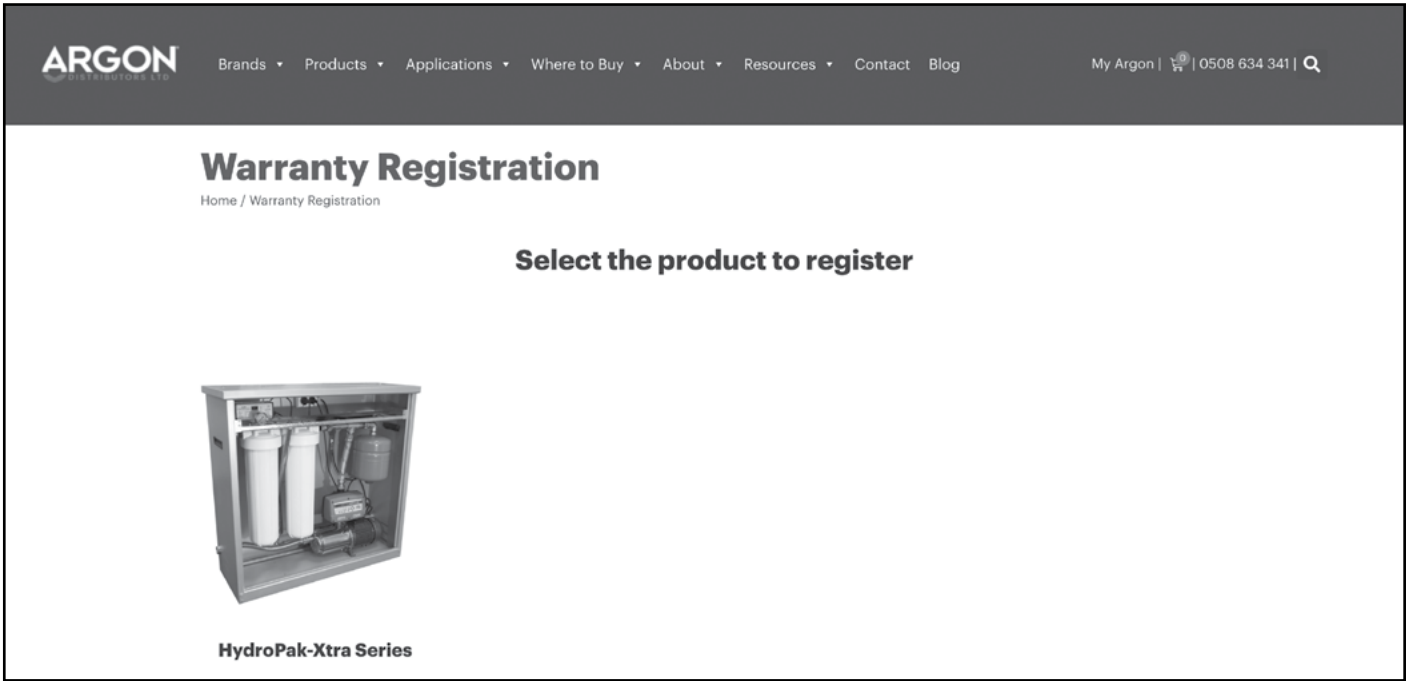
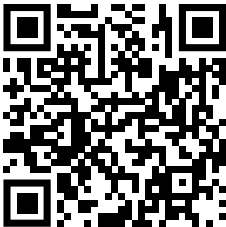
The Argon 3 Year Warranty covers the Hydropak®-Xtra for your peace of mind



ARGON PLUS+ Warranty Extension

Register your Hydropak®-Xtra online for an additional
1- Year Warranty free of charge

<https://argondistributors.co.nz/warranty-registration/>



Overview

The HPX system combines a high-quality self-priming pump, advanced pump control with dual-stage sediment filtration and ultraviolet water treatment to provide clean, safe pressurised water for your home. The housing is designed and manufactured in NZ to meet our harshest conditions yet blend into the landscape and protect your equipment.

Cartridge pre-filtration removes sediment that could reduce ultraviolet (UV) effectiveness and water clarity.

The incorporated Greenway® UV Advance Series™ ultraviolet technology system is a natural purification process that’s completely eco-friendly, chemical-free and kills 99.9% of bacteria, including E. Coli, Giardia, and Cryptosporidium. This process is critical for untreated water supplies such as rain tanks, bores or other back up water supplies.

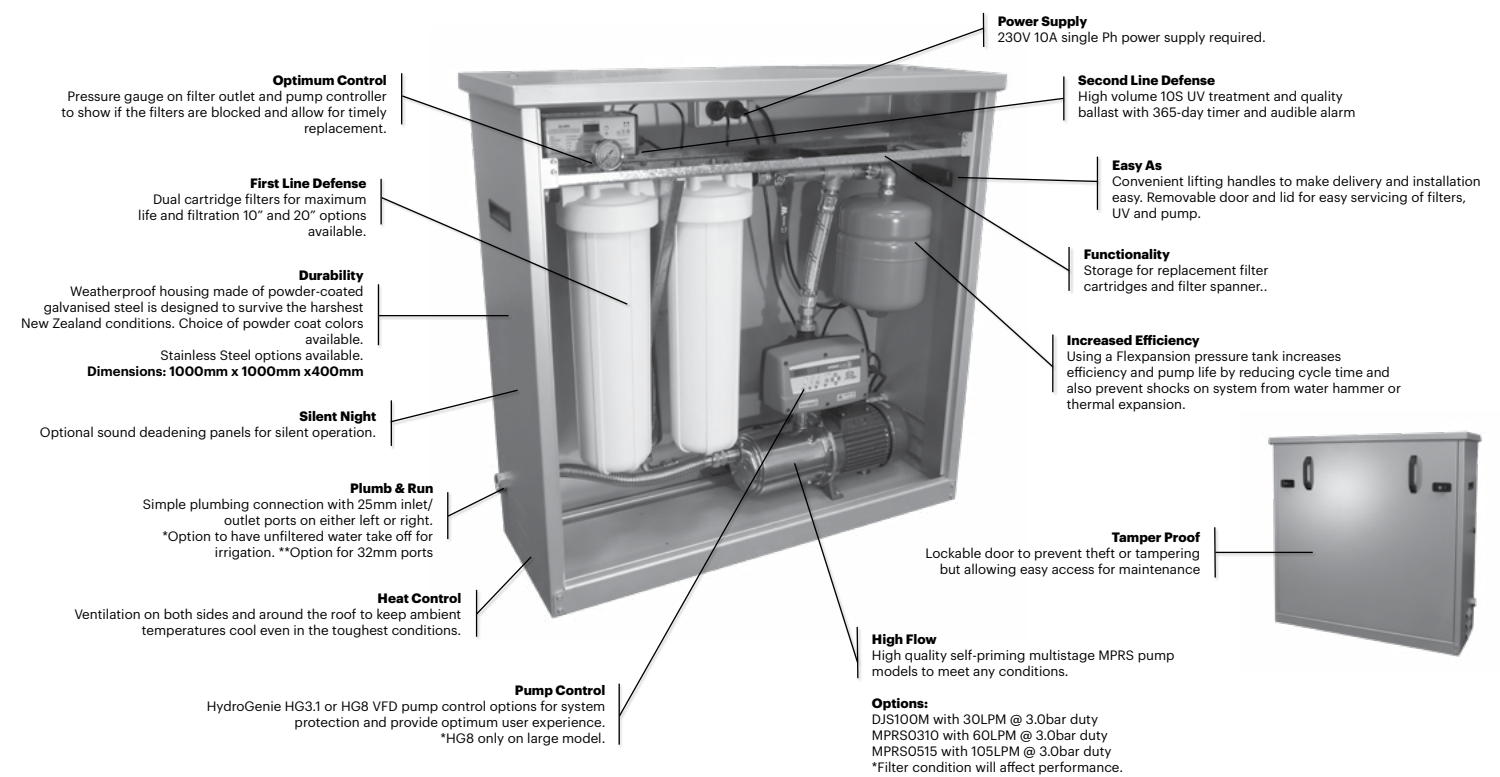
Note: water quality will adversely affect the performance of your UV disinfection system, and the following levels should be utilised as a guideline for pre-treatment requirements of the influent water supply before UV treatment:

- Iron Total iron count must be less than 0.3 ppm (0.3 mg/L)
- Turbidity Count must be less than 1 NTU
- Tannins Count must be less than 0.1 ppm (0.1 mg/L)
- Manganese Count must be less than 0.05 ppm (0.05mg/L)
- Hardness Count must be less than 120 ppm (7 grains per gallon)
- %UVT (transmittance) Must be greater than 75%

The HPX system cartridges and lamp need regularly replacing to maintain optimum performance. This is a simple procedure when following instructions. For replacements, contact your nearest Davies Pumps Filtration stockist.

Your new HPX system incorporates a failure warning feature that warns you of a lamp failure by a LED warning light and an audible alarm. The alarm sounds when the lamp is due to be changed to ensure effective treatment is maintained. A green LED indicates that the system is operating correctly.

Your HPX will arrive thoroughly tested from the factory and require minimal installation to save you time and money.



MODEL NUMBER	HP150	HP160	HP165	HP166
Pump Model:	DJS 100M	MPRS 0310M	MPRS 0515M	MPRS 0515T
Pump Type	Self Priming pump	Self Priming Multi-Stage		
Pump Sound	Medium	Quiet		
Rated Power:	1Hp	1Hp	1.5Hp	
Maximum Current Consumption	4.5A	4.4A	6.5A	
Pump Flow Rate	30 LPM @ 30M	60 LPM @ 30M	105 LPM @ 30M	
Pressure Controller:	HG 3.1			HG 8 VFD
Power Supply:	230V 1 Ph			
Energy Saving Tank	NA	YES		
Water Temperature Range	0-60°C (Protect from freezing)			
Connection	1" BSP (25mm)			
Warranty	3 Years (extension via registration)			

Scope of Delivery

The HPX system is designed for many years of use but does require correct installation and periodic maintenance.

Please read all instructions carefully as failures caused by incorrect installation or operation will not be covered by warranty.

The HPX system is supplied as a complete unit. The UV lamp, sleeve, o-ring & spring are provided separately in cardboard packaging and must be fitted before use. There is also a bag with the owners manual, keys & filter spanner.



Hydropak®-Xtra



UV Lamp



Keys



Spanner



Owners Manual

Spring

Choose Your Location

The HPX must be installed on a level, frost-free pad with adequate ventilation.

Ensure your location has sufficient drainage in case of spillage when servicing.

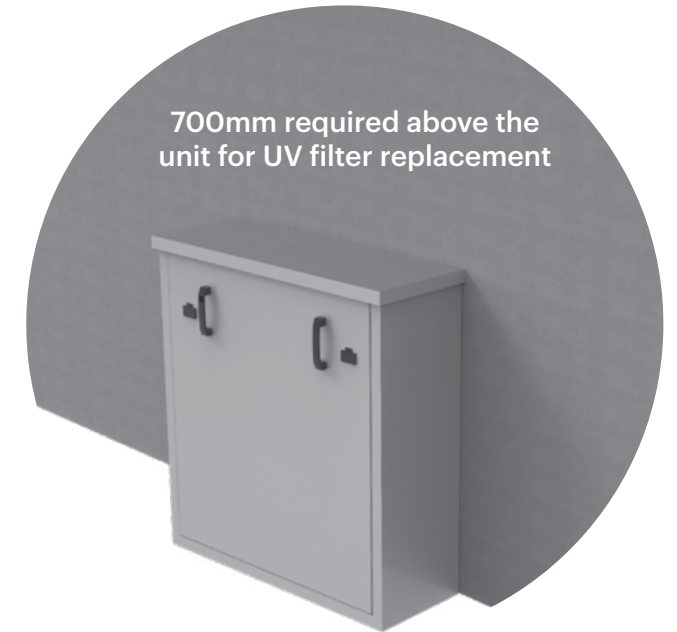
There must be sufficient free space above the unit to allow for servicing of the UV lamp and sleeve.

Installation Clearances

- Width: 1200mm total
- Front: 1000mm
- Height: 1800mm (700mm required above the unit for UV filter replacement)

Surge Protection

The UV ballast is supplied with a single-use surge protector to prevent damage from electrical spikes (not lightning). It is the responsibility of the user/owner to check and replace the protector if it has activated.



700mm required above the unit for UV filter replacement

Installation Requirements

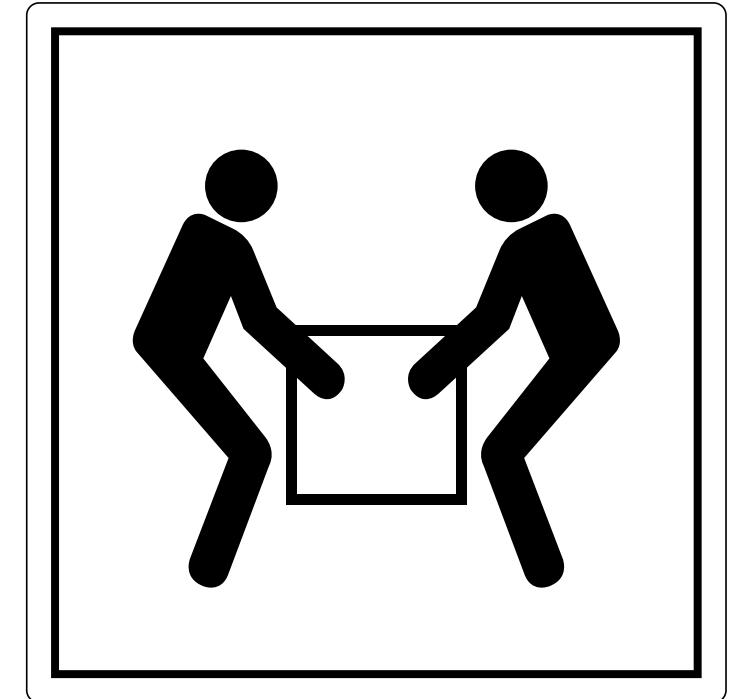
- Water supply: Coldwater line only 0 - 52 °C (protect from freezing)
- Supply pressure: Maximum of 5bar static pressure (install pressure limiting valve if pressure exceeds maximum pressure of 10bar.)
- The water supply must be no more than six meters lower than the HPX, and the suction line must be no less than 25mm diameter (recommend 32mm for more than 10m lengths)
- Foot valve installation recommended if the water source is lower than the HPX.
- Power supply: 10A 230V 50Hz RCD protected power supply for the three-pin AS/NZ plug. The power supply must be sufficient to operate the pump and UV system and be protected from the weather or a suitable outdoor-rated socket (end-user to supply).
- Standard ports are 25mm BSP. A qualified person must connect the ports to ensure there are no leaks. HPX units are supplied with the suction port on the left and the discharge port on the right. This configuration can be changed if required. Please contact your supplier.
- Use sufficient thread seal tape to ensure an watertight seal and do not overtighten.

Note: Only use thread seal tape. Do not use liquid sealant.

- Use unions at pipe connections to enable easy removal and servicing.
- Always support heavy inlet and outlet pipes to prevent strain on the unit.

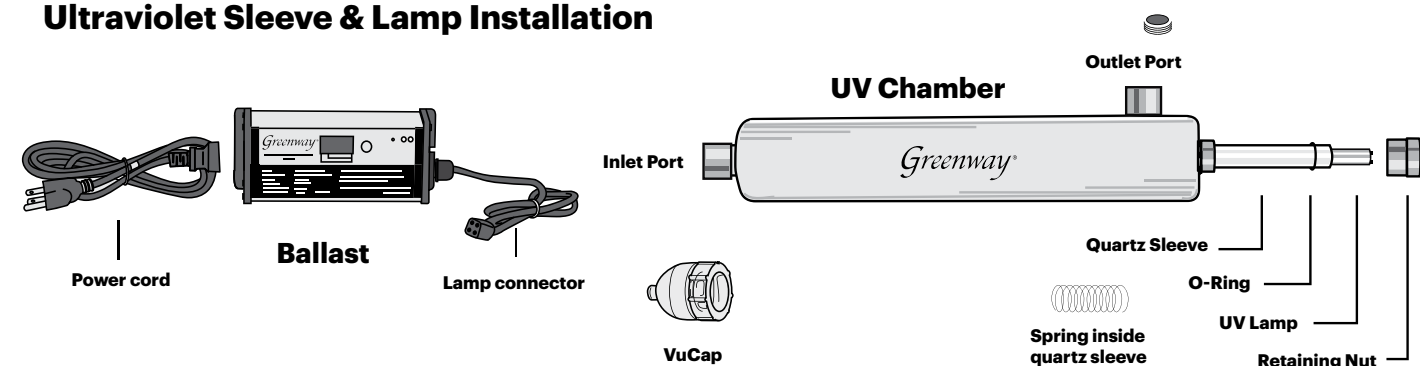
Installation Procedure

- Position the HPX unit on chosen location using a hand cart or a second person.
- Note: Do not attempt to lift single-handed.



- Open the main door by unlocking and releasing the two catches. Raise the door till the bottom is clear of the base, tilt and lower the door to remove—the reverse procedure to install.
- Remove the lid by undoing the two wing nuts under the top and lift off.
- Fix the HPX unit by bolting down to the pad with suitable concrete fixings. Remove the filter housings to allow more room and drill through the main base to provide fixing locations.

Ultraviolet Sleeve & Lamp Installation



Specifications		Standard Output
		GAUV-105
Flow Rate GPM US (LPM) (1)	16 mJ/cm² (2)	29.5 (111)
	30 mJ/cm² (2)	15.5 (58)
	40 mJ/cm² (2)	11.5 (43)
Dimensions	Ballast	8" x 3" x 2"
	Chamber Diameter	3.5"
	Chamber Length	27.88"
I / O Port Size		3/4" FNTP - 1.0" MNPT
System Maximum Operating Pressure		125psi
Pressure Drop at 30 mJ/cm² Rated Flow (psi)		0.5
Electrical	Voltage	100 - 240, 50/60 Hz
	Power Consumption (W)	35
	Lamp Watts (W)	30
Chamber Material		304SS

Always use soft gloves or a clean cloth when handling the UV lamps and quartz sleeves to prevent oil deposits on the surface. Oil deposits from your hands can create hot spots on the surface, leading to premature bulb failure.

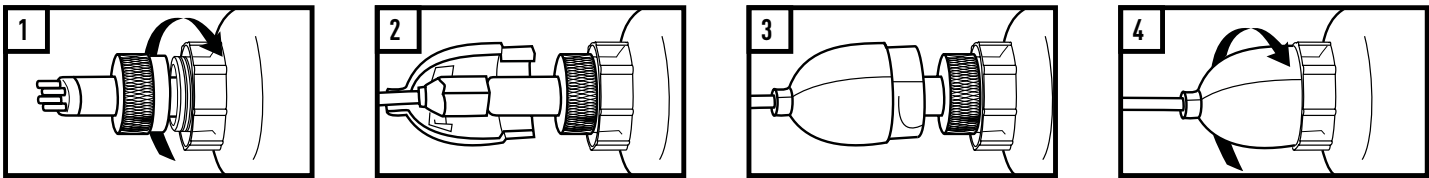
Fit the UV sleeve

- Unscrew the VuCap.
- Remove the UV chamber retaining nut.
- Remove UV sleeve from packaging using a lint-free cloth, slip the O-ring approximately 10mm down over the open end. Ensuring the sleeve is centrally located, carefully insert the closed end into the chamber and slide into the central locator at the far end.
- Insert the spring into the sleeve.
- Fit the lower half of the VuCap to the chamber
- Refit and tighten the retainer nut, ensuring the O-ring and sleeve are firmly in place for a complete seal.

Ultraviolet Sleeve & Lamp Installation

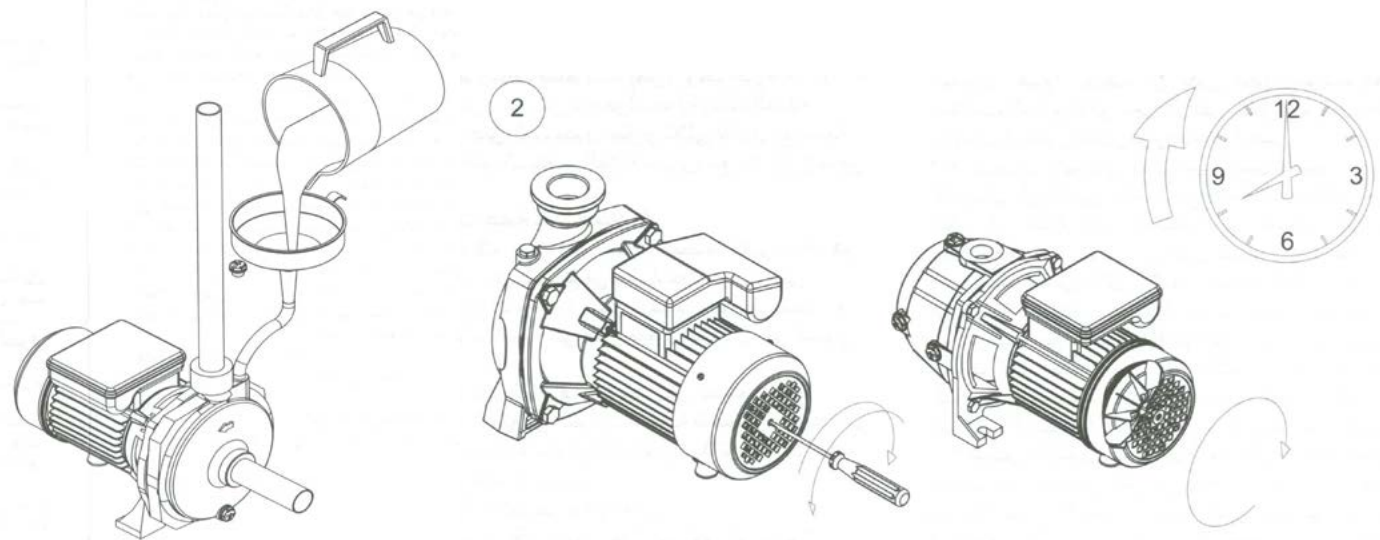
Fit the UV Lamp

- Remove the UV lamp from the packaging with a lint-free cloth.
- Connect the UV lamp plug to the bulb.
- Insert the UV lamp into the sleeve until it rests on the spring.
- Connect the top part of the VuCap over the lamp lead and connect to the lower VuCap part on the chamber.
- For systems that have not had any prior treatment, flushing the pipework with a suitable sanitiser is recommended. The sanitiser can be added to the water source or the filter housings and allowed to sit overnight before thorough flushing of pipework.



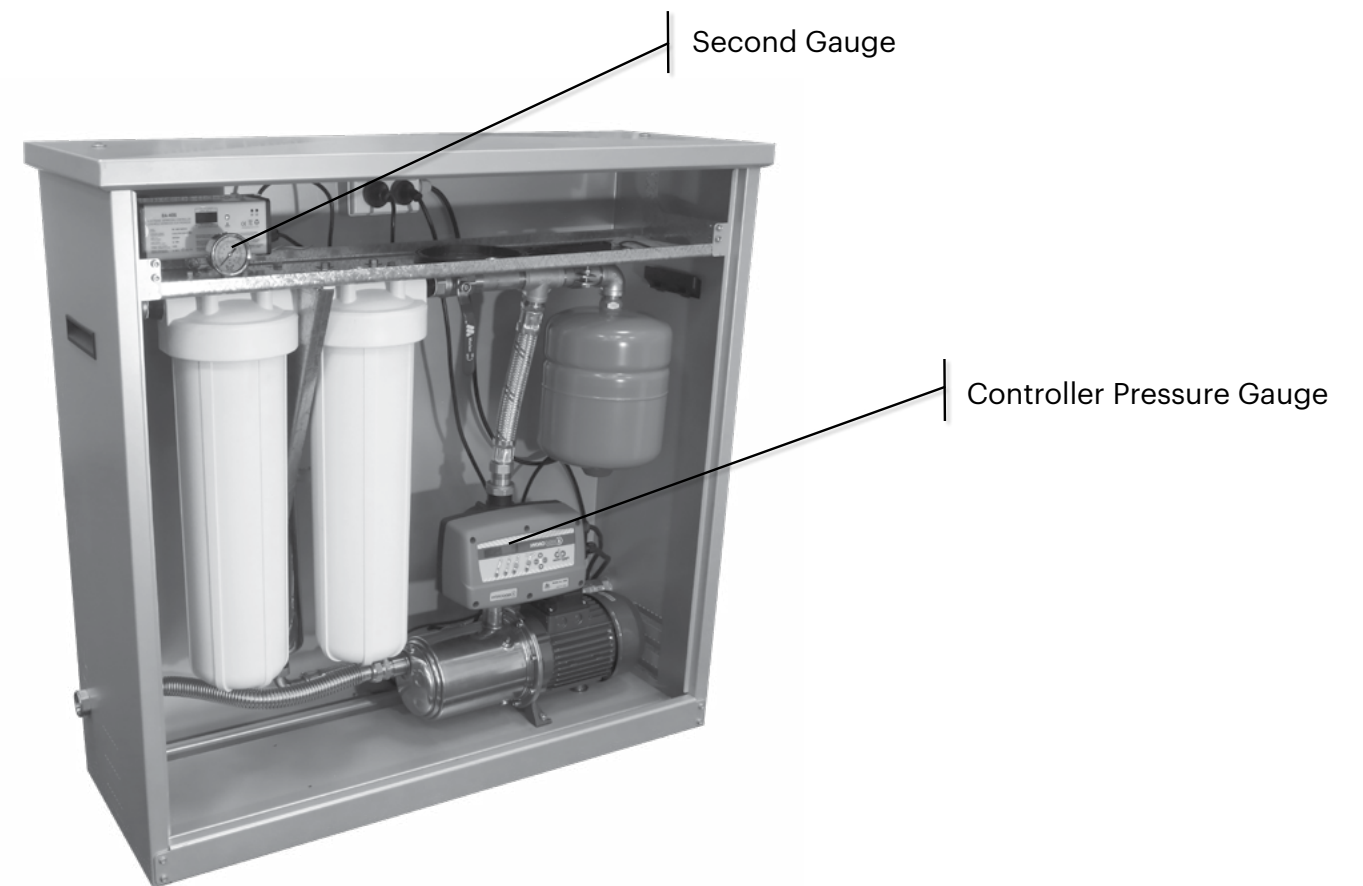
Initial Setup

- Now all plumbing connections are complete, check the filter housings are tight, the UV lamp is fitted, and the taps are open.
- Prime the pump through the filler port in the pump casing until full.
- Switch the power on at the supply and switch on the pump socket. The pump will run and leave the discharge open until all the air has purged out and the system is primed.
- Switch on the UV and wait 2-3 minutes to allow the bulb to heat up.
- Close the discharge valve, and the pressure gauges will rise, and the pump will turn off.
- The system is now ready for normal operation. Open the discharge valve and check the taps in the house are all working.



Final System Operation

- The recommendation is to leave the UV on at all times to ensure all water is being treated. Leaving the UV unit on can mean the water in the chamber will heat up when not in use, and condensation may appear on the UV chamber; this is normal.
- The HPX system is supplied with either the HG3.1 auto controller or the HG8 variable speed/constant pressure controller. For specific instructions on adjusting the controllers, please see pages 30 or 34
- The controller has a digital pressure gauge. There is a second gauge after the filtration units – this is to show the pressure differential over the filters and indicate if they are blocked (the more significant the differential, the more blocked they are).
- If the system is not going to be used for some time, we recommend switching the power and taps off to prevent property damage in case of a component failure.
- If there are freezing conditions, the pump, filters, and UV chamber must be drained of water to prevent damage.

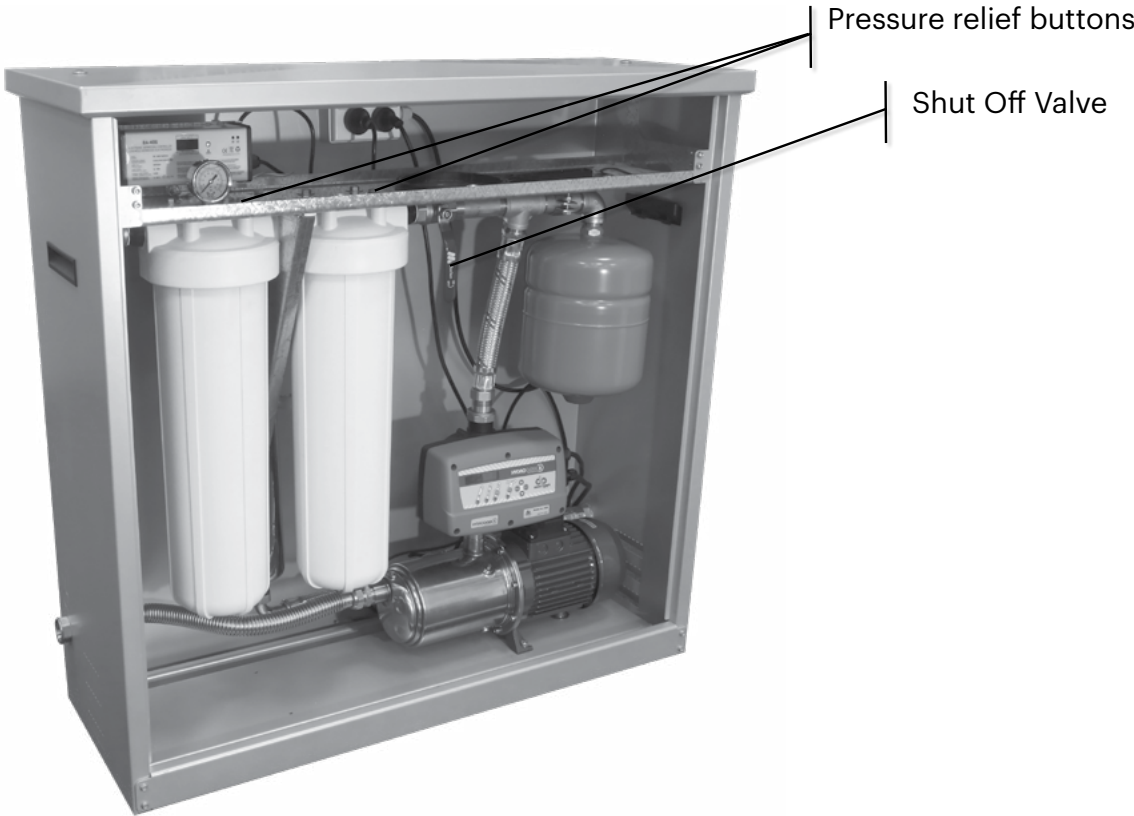


Replacement Parts Guide

- Regularly changing the filter cartridges will maintain a high quality of purified water.
- Replace them every 3-6 months or when there is a noticeable pressure drop. (dependent on water quality and usage)
- You can order replacement cartridges via the Argon Distributors website (www.argondistributors.co.nz) as 'Click'n'Collect' from your local Davies Pumps dealer.

Replacement Parts	Stage 1 Filtration	Stage 2 Filtration	UV Lamp	UV Quartz Sleeve
Suits All Models	BB20L20	BB20PS01	BBUVLAMP10S	BBUVSLEEVE10S

Replace cartridges every 3-6 months. UV Lamps must be replaced annually to ensure optimum water quality.



Cartridge Replacement Procedure

The HPX is fitted with a dual 20" cartridge filter system. The first filter (right side) is a 20-micron polyspun cartridge and the second (left side) is a 5-micron polyspun cartridge. The first cartridge is to remove large particles, and the second cartridge is to remove smaller particles which would reduce the UV effectiveness.

The filter cartridges will require regular replacement to maintain optimum effectiveness. Replace them 3-6 monthly or when there is a noticeable pressure drop. The cartridges may also require flushing or replacement if the system has not been used for a long time.

Caution: Only use genuine replacement cartridges, or potential damage may not be covered by warranty.

To change the filter cartridges, please adhere to the following procedure:

- Turn the water supply off using the shut-off valve located inside the HPX unit. Relieve the pressure by opening a downstream tap or pressing the red pressure-relief button on the filter housings.
- Unscrew the filter bowls. Use the spanner to assist if they are tight. Remove the cartridges and dispose of them according to local guidelines.
- Clean the bowls with warm water and soap. Check O-rings and replace if damaged. Lightly lubricate with food-grade lubricant or similar.
- Remove all packaging from new cartridges and install them into the bowls, ensuring they center on the base location.
- Hold bowls upright while screwing back into the housings. Ensure that the fixture in the housing heads is located centrally to the cartridges to make a good seal. Tighten the bowls until firm. **HAND TIGHTEN ONLY. DO NOT OVERTIGHTEN.**
- Open a downstream tap to allow air to be released and slowly open the water supply allowing all air to be purged. Let the pump run for 2-3 minutes to purge air and flush the system.
- Close the downstream tap and check for leaks.
- Refit the door

UV Lamp Replacement Procedure

During normal operation of the system, the green power LED light will be illuminated, and the display will indicate the number of days remaining until lamp replacement is required. The following instructions for general maintenance of the system and UV lamp replacement/quartz sleeve cleaning or replacement. An accredited service technician must complete all other system repairs.

Caution: Only use genuine replacement lamps, or potential damage may not be covered by warranty.

WARNING

- The lamp heats up after continuous use and can burn your skin if touched, allow the lamp to cool for at least 5 minutes before removing.
- Do not operate the UV lamp outside of the reactor as it emits powerful ultraviolet light that can cause permanent damage to the skin and eyes. Never look at the lamp when the unit is turned on.
- Handle the UV lamp by the ends only, do not touch the bulb of the lamp with your fingers.
- If the lamp's surface becomes dirty, use a clean lint-free cloth and isopropyl alcohol to remove the dirt or oil. Dirt or oil deposits on the surface may lead to premature failure of the bulb.

Your UV system includes a visible/audible lamp failure indicator. In the event of a failure of the UV lamp, the red LED light will flash, and a loud beeping will be audible from the electronic ballast of the unit. The lamp life countdown timer will stop counting.

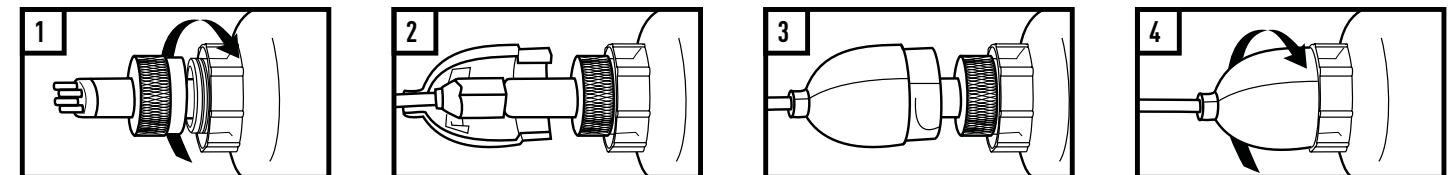
Please note that if these conditions occur and you are on an untreated water source, you should immediately stop using the water for potable applications until the lamp is replaced and disinfection of the distribution lines is completed.

The ultraviolet lamp has an approximate life of one year (9000 Hours). The built-in 365-day countdown timer displays the number of days remaining until lamp replacement is required. When the countdown timer reaches 0-days, an intermittent audible alarm will be activated, and the display will indicate alarm A3.

To allow time to obtain a replacement UV lamp, the audible alarm can be silenced for seven days by pressing and holding the button on the ballast for 2-5 seconds. After seven days, the alarm will sound again if the lamp has not been replaced. This can be done a maximum of four times which allows a total of 28 days to obtain a replacement UV lamp. After four times, the alarm can no longer be silenced until a replacement lamp is installed. Then the lamp life alarm is reset to 365 days by pressing and holding the button for 10 seconds.

UV Lamp Replacement Procedure

- Remove the door and lid from your HPX system.
- Turn the water supply off using the shut-off valve located inside the HPX unit. Relieve the pressure by opening a downstream tap or pressing the red pressure-relief button on the filter housings.
- Unplug the ballast from the electrical outlet. Allow at least five minutes for the UV lamp to cool.
- Unwind the VuCap and release it from the chamber.



- Carefully lift the lamp out of the chamber quartz sleeve by gently rotating/lifting the lamp free.
- Disconnect the plug from the lamp and discard the lamp in an approved manner.
- Remove the new lamp from the packaging using a lint-free cloth and reconnect the plug. Lower the new lamp into the sleeve and reconnect the VuCap.
- Open a downstream tap to allow air to be released and slowly open the water supply allowing all air to be purged. Let the pump run for 2-3 minutes to purge air and flush the system.
- Close the downstream tap and check for leaks.
- Plug the ballast into the electrical outlet.
- Ensure that the UV lamp is operating by checking that the green power LED light is illuminated. The red lamp failure LED light should be off, and no audible alarm should be active.
- The ballast display will show the number of days until lamp replacement is required. If a new lamp was installed, press and hold the button on the ballast for 10 seconds to reset the countdown timer.
- Refit the lid and door.

UV Sleeve Maintenance/ Replacement Procedure

Mineral deposits and sediment build-up on the quartz sleeve will affect the system performance by decreasing the UV light transmitted through the quartz sleeve into the water column.

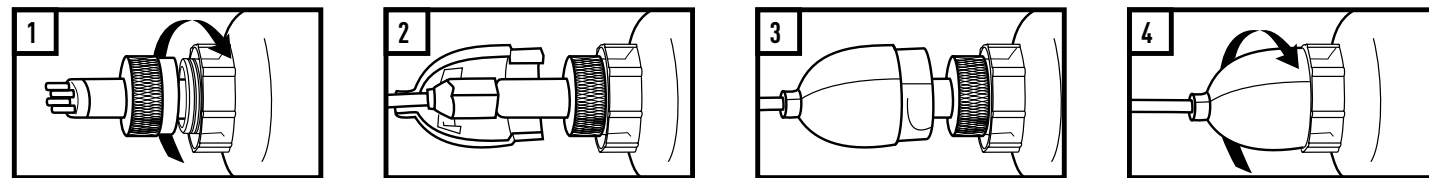
The proper maintenance and replacement of the pre-filtration required for the UV system will reduce the accumulation of mineral and sediment residue on the quartz sleeve.

The quartz sleeve can be cleaned with a commercially available, non-abrasive, scale remover (acidic) and a lint-free cloth. Cleaning of the quartz sleeve should be done regularly to ensure maximum system performance. The amount of cleaning required will vary depending upon local water conditions.

All traces of the cleaning solution must be fully removed from the sleeve before it is reinstalled in the system. Take care to prevent any cleaning fluid from coming into contact with the inside surface of the quartz sleeve.

Caution: Only use genuine replacement UV sleeves or potential damage may not be covered by warranty.

- Remove the door and lid from your HPX system.
- Turn the water supply off using the shut-off valve located inside the HPX unit. Relieve the pressure by opening a downstream tap or pressing the red pressure-relief button on the filter housings.
- Unplug the ballast from the electrical outlet. Allow at least five minutes for the UV lamp to cool.
- Unwind the VuCap and release it from the chamber.



- Carefully lift the lamp out of the chamber quartz sleeve by gently rotating/lifting the lamp free. Store it in a safe place for refitting.

UV Sleeve Maintenance/ Replacement Procedure

- Remove the sleeve retainer nut and the sealing o-ring.
- Using a lint-free cloth, carefully lift the sleeve out of the chamber.
- Remove the spring and put it in a safe place for refitting.
- Carefully clean the sleeve using an alcohol-based cleaner – see details above. (UV sleeves should be replaced every three years to maintain optimum performance)
- Refit the sealing o-ring to the sleeve's open end, insert it into the chamber, and secure it with the retainer nut.
- Insert the lamp and fit the VuCap.
- Open a downstream tap to allow air to be released and slowly open the water supply allowing all air to be purged. Let the pump run for 2-3 minutes to purge air and flush the system.
- Close the downstream tap and check for leaks.
- Plug the ballast into the electrical outlet.
- Ensure that the UV lamp is operating by checking that the green power LED light is illuminated. The red lamp failure LED light should be off, and no audible alarm should be active.
- Refit the lid and door.

Pump & Controller Maintenance

The pump and controller do not require any special maintenance and should operate for many years before requiring service.

A periodic visual check is sufficient to detect any problems before they cause failure. Look for leaks or unusual noises as this may indicate seal or motor bearing failure.

It is recommended that any pump or controller servicing is done by a service agent.

Always ensure power and water is disconnected before doing any servicing.

See details on the pump setup and maintenance on page 26

See details on the controller setup and maintenance for HG3.1 on page 30 and the HG8 on page 34

Troubleshooting Guide

Symptoms	Possible Cause	Possible Solution
No power	<ul style="list-style-type: none">Power cord has been disconnected.Ballast and/or RCD breaker tripped.Ballast damaged.	<ul style="list-style-type: none">Check power connections.Reset ballast and/or breaker.Replace ballast.Check switchboard
Ballast or breaker repeatedly trips.	<ul style="list-style-type: none">Connection between lamp and lamp plug is wet.Short-circuit in the electrical assembly.	<ul style="list-style-type: none">Clean and dry lamp pins and lamp plug, check unit for leaks or condensation.Replace ballast.
Leak at inlet or outlet.	<ul style="list-style-type: none">Threaded pipe fittings are leaking.Cracked heads.	<ul style="list-style-type: none">Clean threads, reseal with Teflon tape and retighten.Replace heads.
Leak detected from area of UV chamber.	<ul style="list-style-type: none">Condensation of moist air on cold chamber (slow accumulation).O-ring damaged, deteriorated or incorrectly installed.Lamp/sleeve assembly not properly installed (too tight or not tight enough)	<ul style="list-style-type: none">Control humidity or relocate unit.Inspect and replace if deteriorated.Check O-rings are in place.Tighten assembly hand tight.
System is operating but water tests reveal bacterial contamination.	<ul style="list-style-type: none">Equipment downstream of UV system is acting as a breeding ground for pathogens.Pathogens are residing in the distribution lines post-UV.Lamp reached the maximum lamp life.	<ul style="list-style-type: none">Ensure UV is the last piece of treatment equipment. Ensure all distribution lines have been disinfected - see page 10.Remove any pipe deadends and flush with chlorine.Replace lamp on or before lamp counter reached 0.
Lamp timer does not read anything.	<ul style="list-style-type: none">Unit is unplugged.No power at AC power outlet.Power cord is damaged.Power surge caused damage to electrical assembly.	<ul style="list-style-type: none">Plug unit into AC power outlet.Replace fuse or reset breaker.Replace power cord.Replace ballast.

Troubleshooting Guide

Symptoms	Possible Cause	Possible Solution
Leak detected at filters	<ul style="list-style-type: none">O-ring damaged, deteriorated or incorrectly installed.O-rings dry.Filter cartridge not centered.	<ul style="list-style-type: none">Remove the sump, wipe the O-ring and threads clean. Ensure the O-ring is fitted properly, then reinstall.Lubricate O-rings with suitable sealant.Remove sump, check for cartridge damage, reassemble ensuring cartridge is centered.
Red lamp blinks and buzzer sounds.	<ul style="list-style-type: none">Lamp has reached or nearing the maximum lamp life.Lamp is disconnected or faulty.	<ul style="list-style-type: none">Replace lamp on or before lamp counter reached 0.Check lamp connection, replace if needed.
Display flashing.	<ul style="list-style-type: none">Power interruption.	<ul style="list-style-type: none">Reset ballast.
No water.	<ul style="list-style-type: none">Water is not reaching the pump.Water source low, pump run dry failure.	<ul style="list-style-type: none">Check source and prime pump system.Siphon the water line ahead of the pump.
Low pressure	<ul style="list-style-type: none">Filters blocked	<ul style="list-style-type: none">Replace filters
Pump continuously running	<ul style="list-style-type: none">Leak in plumbing system.	<ul style="list-style-type: none">Close discharge valve - if pump stops then leak may be in house plumbing.

Surface Pump installation and Operating Instructions

Installation

Your Davies pump should be mounted on a firm level foundation in an area that is not susceptible to flooding or is exposed to the weather or wet areas.

Make sure your pump is situated in an area that is well ventilated; the maximum ambient temperature must not exceed 40°C. (FIG C)

Connections

Piping

The piping must be fixed or anchored so as not to transmit any thrust, tension or vibration to the pump.

The inlet pipe must be as short as possible, not smaller than the inlet of your pump and must be correctly sized for the distance covered. All connections on the suction side must be perfectly sealed and be able to withstand the suction created by the pump. Ensure that it does not rise higher than the pump to prevent air locks.

If your pump is sucking from below itself a foot valve or check valve must be installed. If the pump is being used with a pressure tank, a check valve must also be installed. Other applications may also require a check valve. (FIG D)

A gate valve and pressure gauge should be fitted to the discharge of the pump to maintain optimum operating pressure.

The pressure in the pump must not fall below the minimum rated head of the pump during normal operation.

Electrical

Before connecting your pump to the mains power supply, check that it is sufficient to cope with the motor consumption – see details on the pump. All single phase pumps under 10A are supplied with cord and plug for New Zealand electrical outlets. Make sure the power supply is the same as the details on the specifications label.

Single phase pumps have an internal overload but must also be installed with a Residual Current Device (RCD).

Three phase pumps must be installed with overload protection supplied by the user and be set around 5-10% higher than the full load amps shown on the specification plate.

Electrical connections must be carried out by a qualified electrician.

Starting

Before starting your pump, check the motor shaft turns freely, the electrical connections are tight and secure, pipe connections are tight and thread seal tape or thread sealant has been applied.

Priming

Fill the pump body and the inlet pipe through the priming port with the liquid that is going to be pumped (be sure the liquid is compatible with the pump, e.g. viscosity, suspended solids, corrosive) (FIG A)

Put the priming plug back in and tighten.

Switch on the pump, if it is 3 phase observe the rotation -is it according to the rotation arrow (FIG B), if not it will need to be changed. Now check the pressure gauge, if it reads zero after 10-20 seconds the pump will need to be primed again.

Operation Instructions

Operation

Now that your pump has pressure, check that it is running within its operating parameters, if the pressure is below the minimum head the gate valve on the discharge will need to be closed slightly to allow the pump to run at a higher pressure. If the pressure is below the minimum head stated on the name plate it will damage the pump.

Pressure systems

If the pump is being used as a pressure system (pressure switch and pressure tanks system) the air pressure in the pressure tanks needs to be set correctly to allow the system to work properly and protect your pump.

To set the air pressure in the tank, first allow the pump to build up pressure to the turn off point, with the pump now off open a tap to allow the pressure to drop slowly, observe the pressure gauge on the system and note the pressure when the pump turns on. The air pressure in the tank will need to be set at 2-5 psi below this point.

To check the air pressure in the pressure tank, switch off the pump, turn on the tap and allow the pressure to drop to zero.

With a tyre air pressure gauge check the pressure in the tank and set it accordingly i.e. let some air out of the tank or put some in with a tyre pump or air compressor to achieve the desired pressure.

Check the pressure in the tank every 6 months.

If your pump is being used with an Auto controller there are no adjustments that need to be carried out, the controller will automatically switch the pump on and off according to the demand and protect the pump in the event of dry-run.

Maintenance

Surface pumps do not require any special maintenance apart from periodic visual checks for any leaks or unusual noises.

Any leaking or unusual noises must be reported immediately as long term damage can occur. If there is risk of freezing, the pump and pipe work must be completely emptied. (FIG E)

Always turn off the power to the pump before any maintenance or repair work is carried out.

Correct and incorrect use.

Correct use

These pumps have been designed to pump clean water. Please make sure that the following conditions are observed when using the pump.

- Max Water Temp
- Max Ambient Temp
- Max Operating Pressure

Incorrect use

These pumps should not be used for pumping dirty water or water with suspended solids, sea water, sand, abrasive or corrosive substances.

- Pumping of explosive or flammable liquids.
- Pumping of water at a higher temp than the max stated in the specification of the pump.

Warnings

The manufacturer and wholesaler decline all liability for accidents to persons, animals, damage to property to the pump if the warnings are not complied with or if the pump has been tampered with. The above will also render the guarantee invalid.

Preventative measures.

All electric pumps must be protected by the user from lightning strikes, flooding or external water damage, chemicals, dust, vermin, insects, overheating, dry running, dead head running, operating below minimum operating pressure.

Never start your pump with wet hands, bare feet or your feet in the water.

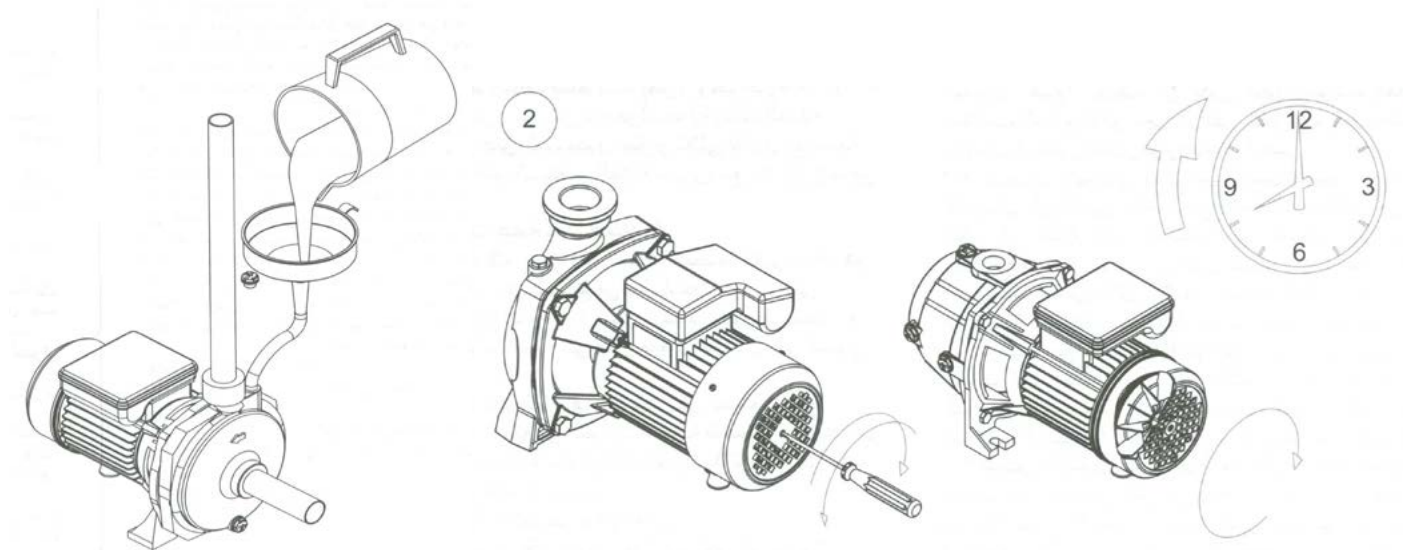
Always disconnect the power supply before carrying out any operation on your pump.

All working / moving parts of the pump have protection covers. Do not remove any of these while your pump is working.

If in doubt – ask
Happy Pumping

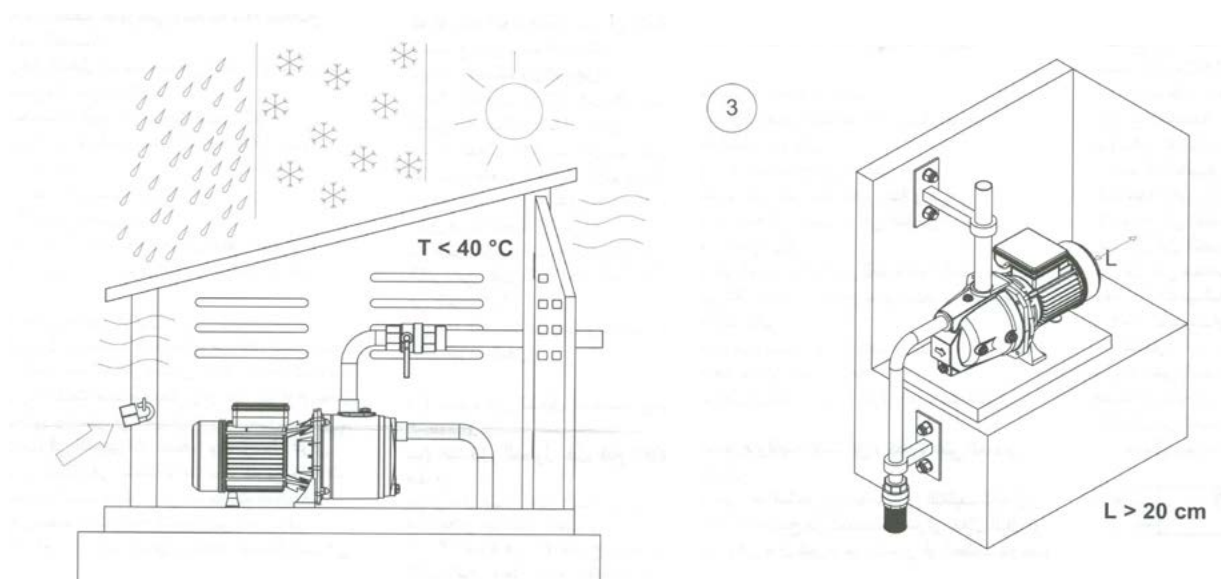
Before starting your pump check that the pump turns freely by inserting a screw driver into the groove of the main shaft at the fan end of the motor.

Remove all tools and quickly turn power on and off, checking the cooling fan rotates the correct way.



Always make sure that your pump is well protected from the elements and sufficient ventilation is provided.

Hold pipe work in place securely so that there is no strain or misalignment which could cause damage.





Introduction

The **HydroGenie 3.1** is an electronic pump controller with pressure and flow sensors to manage a single phase pump up to 2.2Kw (3.0Hp) and protect from run dry failure. The pump start pressure is adjustable to provide accurate operation.

The LCD screen shows the pump operating pressure in either bar or PSI. The Alarm LED shows if pump is in failure and flow LED shows flow switch is active.

The controller has ART (Auto Reset Test) function which will attempt to restore operation in case of a run dry failure. This function can be turned off or adjusted to set the number and duration of attempts. The screen can also be set to standby mode to save power.

Technical Features:

- Rated motor power: 0.37-2.2Kw
- Voltage: 1~ 110-230V
- Frequency: 50-60Hz
- Max. Current: 16A*
- Cosfi > 0.6
- Protection: IP65
- Max Water Temperature/Ambient: 50 °C /60 °C
- Start pressure range: 0.5-4 Bar
- Factory set start pressure: 1.5 Bar
- Max Operating pressure: 8 Bar
- Hydraulic Connection: 1" Male
- New Weight: 1.3kg (without cables)
- *Controller is supplied with leads and plugs rated up to 10A. Leads must be replaced and direct wired to power supply by qualified personal if motor current is more than 10A

Hydraulic Installation

The pump must be correctly primed before completing hydraulic installation.

The controller must be installed in a vertical position with the direction arrows upward and the inlet opening connected to the pump pressure port and the outlet opening connected to the network.

It is recommended to install a union between the pump and controller and an isolating ball valve after the controller.

Electrical Installation

The controller is supplied with leads and plugs to rated for 10A so it can be connected to power supply and pump lead without special requirements. If the pump draws more than 10A, then leads must be upgraded and connected directly to power supply as below.

WARNING: All connections must be done by qualified personal in accordance with all National electrical codes. Ensure all wiring is disconnected from mains supply before installation. Earth connections must be done first.

Verify the power supply is between 110 and 230V. Use cables with enough section to power requirements.

Remove the main cover from controller.

Fit gland cap and seal to motor supply lead and feed lead through the cable gland and do connections: Earth - U - V. Tighten the gland cap firmly to prevent water ingress.

Fit gland cap and seal to mains supply lead and feed lead through cable gland and do connections: Earth – L1 – N. Tighten the gland cap firmly to prevent water ingress.

Refit the main cover and ensure screws are firmly tightened to maintain IP rating.

Warranty may be voided by damage caused by incorrect connections.

Control Panel Status

The Hydrogenie HG3.1 uses an LCD screen, LED indicator lights and push buttons to display operation and set up data.

Mode	Screen Display
Operation	Shows current operating pressure value.
Adjustment	Shows set pump start pressure.
Alarm	Shows alarm code. (see alarm menu)
Standby	Shows 3 blinking dots.
Basic Configuration	Shows the sequence of basic configuration values.
Advanced Configuration	Shows the sequence of advanced configuration values.

- 0 - indicates lit LED
- (0) – indicates slow flashing
- ((0)) – indicates fast flashing

LED	State	Meaning
Bar	0	Indicates the current pressure reading is in Bar and pump not running.
	(0)	Indicates the current pressure reading is in Bar and that pump is operating.
PSI	0	Indicates the current pressure reading is in PSI and pump not running.
	(0)	Indicates the current pressure reading is in PSI and that pump is operating.
Start	0	Indicates the set start pressure.
	(0)	Screen shows pressure value when adjusting the start pressure.
Flow	0	Indicates positive flow.
Ⓐ Alarm	0	Dry run failure. (ART function off)
	(0)	Dry Run Failure and ART active to attempt restore.

BUTTON	PUSH	Meaning
Power	Touch	When switch is on: Turns switch off. When switch is off: Pump starts and runs until stop pressure is reached. In configuration menu: Sets value and moves to next setting.
⏻	Hold	When switch is on: Turns switch off. When switch is off: Pump starts and runs until button is released.
Up ▲	Touch	Start pressure setting is displayed on screen for 3 seconds.
	3s Hold	Opens start pressure configuration menu.
Down ▼	Touch	In configuration menu, increases set start pressure.
	Touch	In configuration menu, decreases set start pressure.

Start-up Configurations

- Before starting switch and pump system, ensure all hydraulic and electrical connections are done correctly then follow steps for basic start up.
1. Connect to power supply and screen will show ‘OFF’.
 2. Start the controller by pressing power button.
 3. Press Up ▲ and hold for 3s and start pressure value will flash on the screen and start LED will be on.
 4. Adjust required start pressure to between 0.5 and 4 Bar using the ▲ or ▼ buttons
 5. Press power ⏻ button to set value.
 6. The controller is ready to operate.
 7. For further settings see Basic and Advanced configuration menus.

Pressure Sensor Calibration

If the pressure readings displayed on the screen are incorrect to actual operating pressure, the sensor can be re calibrated by following the steps below. This step requires a manual gauge in the system.

Set zero pressure:

1. Open all taps so there is no pressure on the system.
2. Simultaneously press the +▲ buttons until the display shows ‘0.0’ flashing.
3. Press power button to set.

Set maximum pressure:

1. Start the pump and run until the switch cuts out at stop pressure.
2. Simultaneously press the +▼ buttons until the display shows a value and is flashing.
3. Adjust this value to what the pressure gauge is showing using the▲+▼ buttons.
4. Press power button to set.

Note this should not be a regular occurrence, if it happens frequently please contact your supplier.

Basic Menu Configurations

Basic menu configurations can be set by simultaneously holding the ▲ and ▼ buttons for 5s, then using the ▲ or ▼ buttons to change each configuration value and the power button ⏻ to set and move to the next item. Configuration sequence is:

Item	Value	Action	Factory Setting
1	Bar PSI	Select pressure display in Bar or PSI.	Bar

Advanced Menu Configurations

Advanced menu configurations can be set by simultaneously holding the ▲+▼+⏻ buttons for 5s, then using the ▲ or ▼ buttons to change each configuration value and the power button ⏻ to set and move to the next item.

Item	Value	Action	Factory Setting
1	Ar0 Ar1	Disables the ART system (Ar0) or activates (Ar1)	Ar1
2	n0 n48	Sets the number of ART restore attempts between 1 and 48	48
3	T1 t40	Sets a time span for the restore attempt run time of 10 – 40 seconds	40
4	Sb0 Sb1	Standby disabled (Sb0) or enabled (Sb1)	Sb0
5	rs0 rs1	Restores factory settings (rs1)	rs0

Warnings and Alarms

Warning	Alarm 📢	Description	Action
A01	0	Dry run detection	When a dry run is detected, the pump will stop and can be restarted by pressing the power ⏻ button.
	(0)		If the ART system is active it will attempt to restart the pump for the set number of attempts and time span. The first attempt is after 5 min and then every 30min for up to 24H before final failure. Pump can be restarted at any point by checking water supply and pressing the power ⏻ button to restart.
A05	0	Damaged Pressure Transducer	Contact your supplier.



Introduction

The **HydroGenie 8** is an electronic pump controller with a variable frequency inverter, pressure transducer and flow sensor to manage a single or three phase pump up to 10A 2.2Kw (3.0Hp) and maintain constant pressure as well as protect from run dry failure and overload. The inverter also provides soft start/stop of the motor to prevent water hammer and increase motor life and provides energy savings by operating the pump only at the required speed necessary to maintain set pressure.

The **HG8** can also be configured as a pair with master/slave operation to control two pumps with alternate starting and operation. It can also be installed in a group of up to four units with communication via a central communication device.

The **HG8** has a simple and intuitive set up and operation menu which can be easily accessed via the control panel with push buttons, LED indication lights and LCD screen.

The LCD screen shows the pump operating data including line pressure, set pressure, the instantaneous current consumption and speed of the motor and flow activation. It also shows alarms when they occur.

The overload can be adjusted and set to protect the pump motor.

The controller has ART (Auto Reset Test) function which will automatically attempt to restore operation after a run dry or over current failure. Parameters will remain set even if power supply is interrupted.

The AIS function will periodically start the pump if temperatures drop below 5 degrees to reduce pump freezing. If temperatures drop below 0 degrees, then separate protection measures must be taken.

Alarm register records system failures, connection attempts and run hours, an optional volt free contact for monitoring alarms can be fitted.

These is a separate contact for a low-level float switch cut out.

CLASSIFICATION AND TYPE

According to IEC 60730-1 and EN 60730-1 this unit is a control electronic device for pressure systems of independent

assembly, action type 1Y (transistor output). Operating value: flow 2.5 l/min. Degree of contamination 2 (clean environment).

Impulse rating voltage: cat II / 2500V. Applied temperature for the ball pressure test: enclosure (75°C) and PCB (125°C).

According to EN 61800-3 the unit is class C2

Technical Features:

Rated motor power: 0.37-2.2Kw

Supply Voltage: 1 ~ 230V

Output Voltage: 1 ~ 230V/3 ~ 230V

Frequency: 50-60Hz

Max. Current per Phase: 10 A (~3 230 V) / 9A (~1 230 V)

Max. Peak Current: 20% for 10s

Fuses: 20A for inverter and 10A for main supply.

Protection: IP55*

Max. Water Temp/Ambient: 40 °C /50 °C

Max. Set pressure: 12 Bar

Max. Operating pressure: 15 Bar

Max. Flow: 15,000 L/H

Hydraulic Connection: 1.25" Male Net Weight: 3.3kg

* Dependent on cable glands being installed correctly.



Hydraulic Installation

The pump must have a non-return valve on the suction port and be correctly primed before completing hydraulic installation.

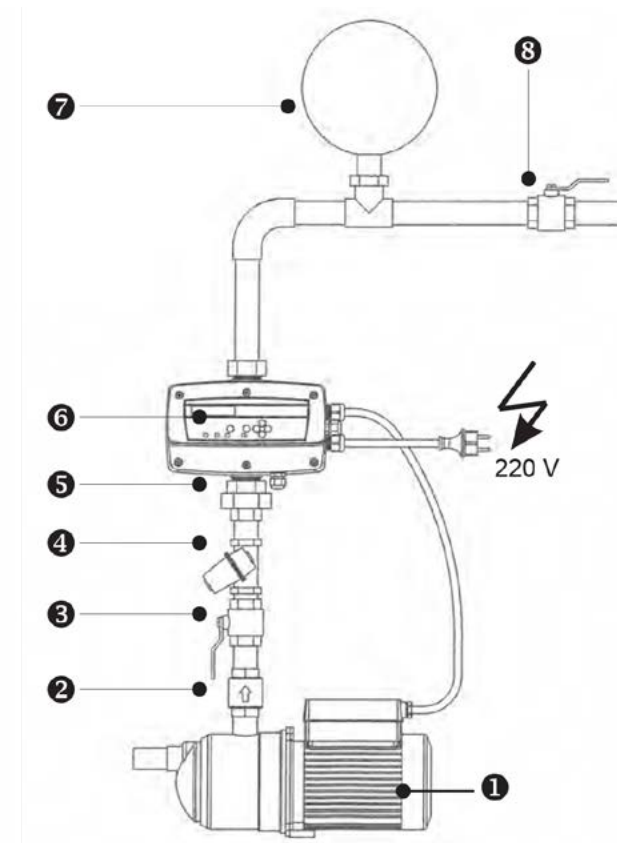
The internal flow sensor will protect pump from dry running but not loss of prime. It is recommended to install the external level cut out switch to prevent loss of prime especially if the pump has a suction lift. - see configuration menu.

The controller must be installed in a vertical position and the 1 1/4" inlet opening connected to the pump pressure port and the 1 1/4" outlet opening connected to the hydraulic network.

It is recommended to install a union between the pump and controller and an isolating ball valve after the controller to assist with future maintenance.

For pumps installed as a pair, the outlets must be manifolded together to ensure each unit is monitoring the same line pressure.

1. Pump.
2. Check Valve
3. Ball Valve
4. Filter
5. Union
6. HG8 Controller
7. Pressure Tank
8. Ball valve

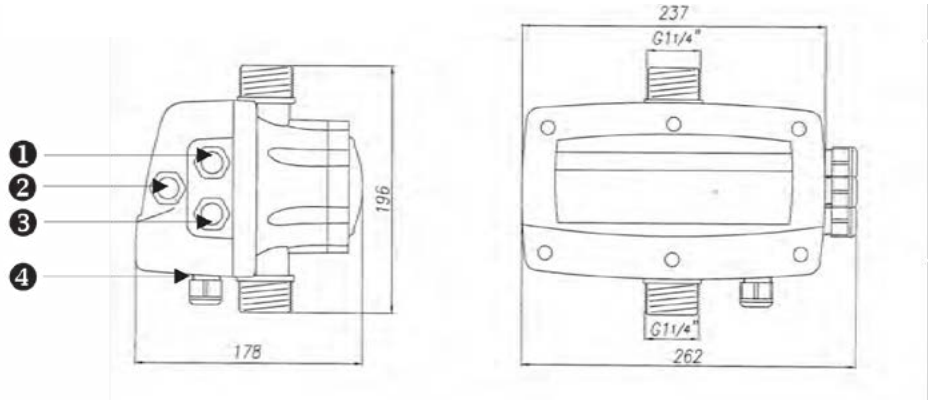


Electrical Installation

WARNING: All connections must be done by qualified personal in accordance with all National electrical codes. Ensure all wiring is disconnected from mains supply before installation. Earth connections must be done first.
Please wait at least 2 minutes before doing any connections inside the controller to avoid electrical discharges.

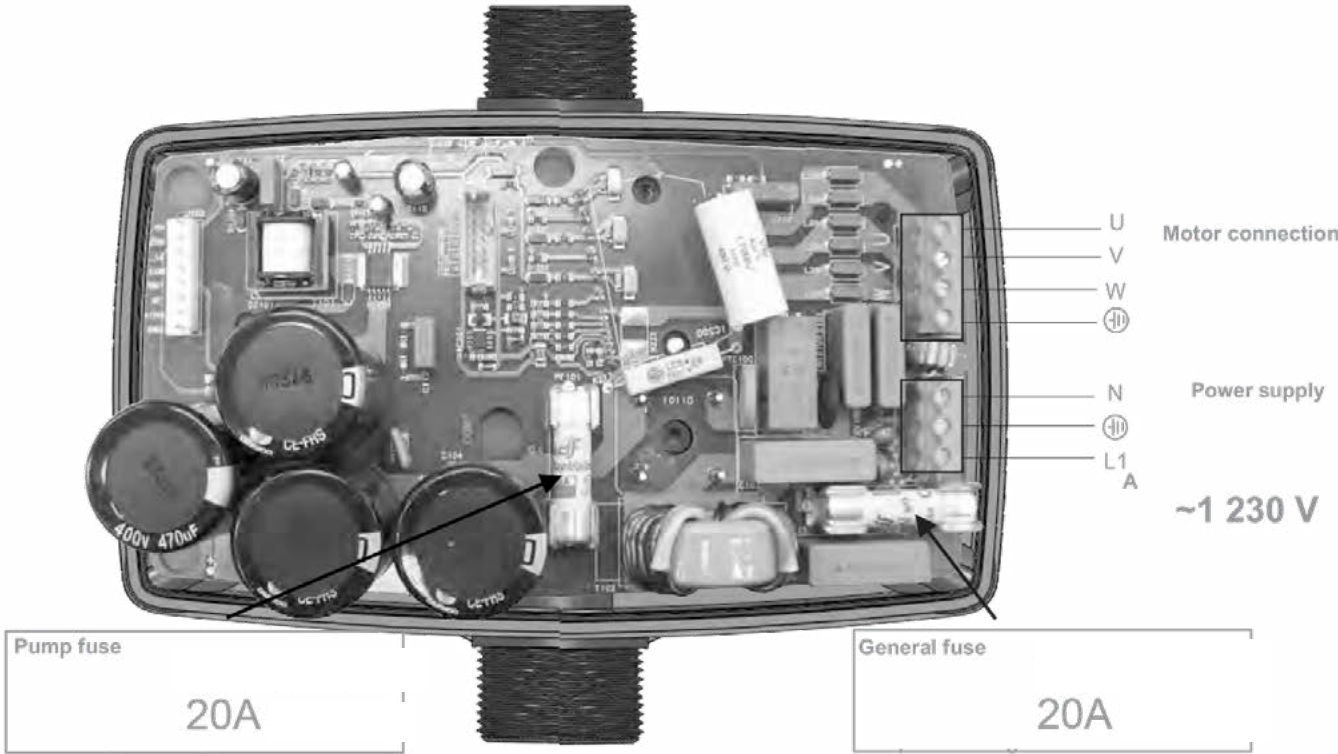
The controller is not supplied with cables or plugs. Use cables with enough section to power requirements. Minimum of 3G1.5 for 230V mains supply and 3G1.0 for 230V motor supply (depending on cable length)
Ensure power is switched off and isolated before removing covers and doing any connections.
Ensure three phase motors are in low voltage connection (230V Delta).
Remove the main cover from controller and follow the indications on strip connectors.
Fit gland cap and seal to motor supply lead and feed lead through the upper cable gland and do connections: Single phase – Earth, U, V / Three phase – Earth, U, V, W. Tighten the gland cap firmly to prevent water ingress.
Fit gland cap and seal to mains supply lead and feed lead through lower cable gland and do connections: Single phase – Earth, L1, L2. Tighten the gland cap firmly to prevent water ingress.

The HG8 has the option to add a volt free contact with 1A max current to transmit a signal to an alarm box for audio or visual reference in case of a failure as detected by the controller. Please contact your supplier if you require this.
It also has a low-level input for a float switch to switch the pump off when supply is low to prevent loss of prime.
For master/slave connection, use the 4GX0.25 communication cable inserted through the lower gland.
Follow connection diagram including crossing over of (Tx/Rx) between units.
Refit the main cover, ensure the seal is fitted, cables are not pinched and screws are firmly tightened to maintain IP rating. Warranty may be voided by damage caused by incorrect connections.



- 1. Pump Motor Supply
- 2. Minimum Level
- 3. Power Supply
- 4. Master/Slave Communication

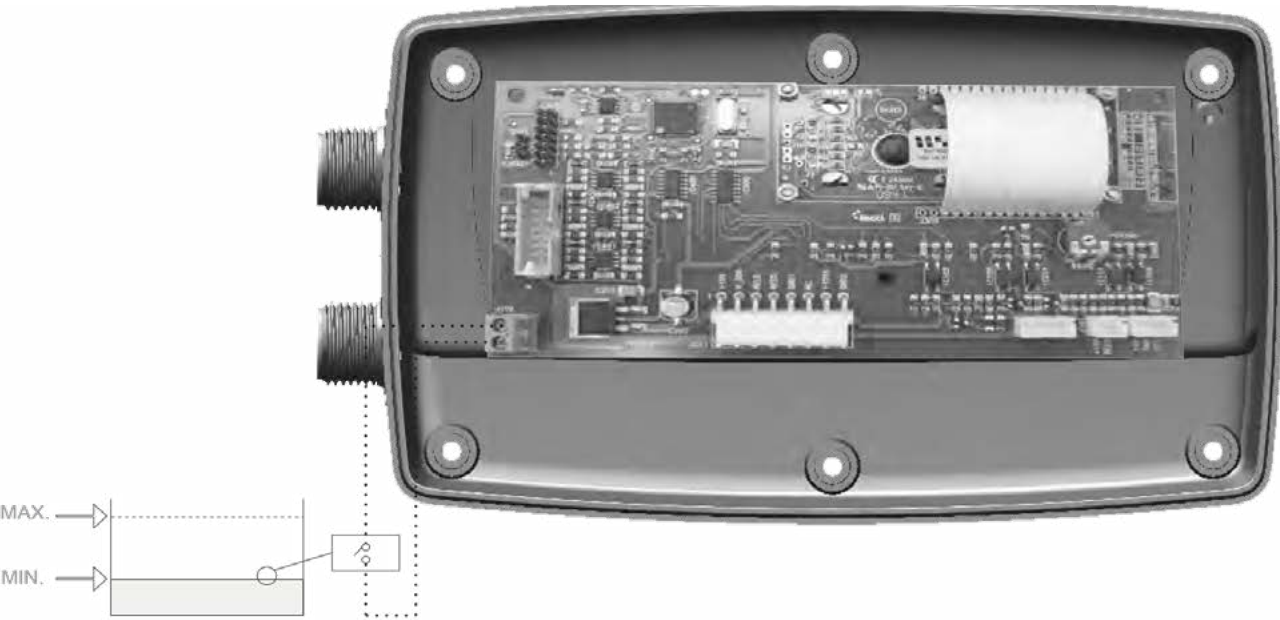
Main Connection Diagram:



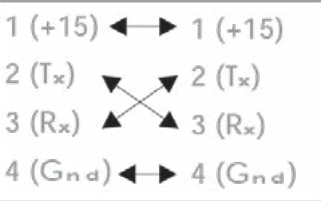
Motor Lead Connections:



Master/Slave Connection: Low Level cut out

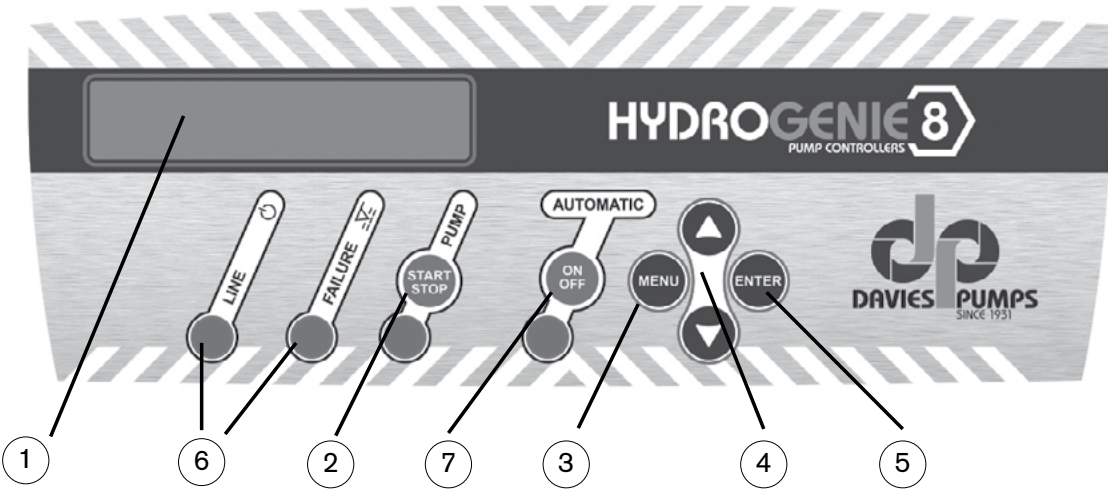


Unit 1	Unit 2
1 – Blue (+15V)	1 – Blue (+15V)
2 – Brown (Tx)	2 – Grey (Tx)
3 – Grey (Rx)	3 – Brown (Rx)
4 – Black (Gnd)	4 – Black (Gnd)



Note. Tx/Rx Connections must be swapped over between units.

Control Panel Layout:



- 1 **LCD** screen. Shows the pressure in working mode.
- 2 **MANUAL START-STOP** push button.
- 3 Push button for **ENTER** or **EXIT** menu.
- 4 With these push buttons we can change programming values showed in the LCD screen (1).
- 5 **ENTER** for saving programmed values. Every press will go to the next field of the **CONFIGURATION MENU**. Whenever we want to quit the configuration sequence press **MENU** (3).
- 6 • **Led lights:**
 - **LINE** green: Electric supply. **ON** when it is connected.
 - **FAILURE** red: Bright or intermittent depending on type of failure.
 - **PUMP** yellow: When it is bright means pump working. It is lit with the pump stopped or when the device is not connected.
 - **AUTOMATIC** green: it is bright in **AUTOMATIC** mode . When it is intermittent in MASTER&SLAVE mode it means that this device will be auxiliary in the following cycle .
- 7 **ON/ OFF**: It allows to change from **AUTOMATIC** to MANUAL mode or vice versa.

START UP:

Connect the **HG8** to the electric supply with the mains switch. Wait for 10 seconds while the HG8 is running auto test.

The **HG8** is supplied for connection to a three-phase motor as default. If it is running a single-phase motor, please follow motor configuration menu:

1. Press and hold 'Menu + Enter' buttons for 3s to open the expert menu. This menu allows the integration/acceleration/deceleration and motor supply to be set. It is not recommended to change these parameters.
2. Press 'Enter' three times to confirm initial values, then use the buttons to select 'single-phase' or 'three-phase' and push enter to confirm.



3. Disconnect from the power supply until the screen goes blank, re-connect to power supply.
 - If the unit is started for the first time, it will directly open the configuration menu. The LCD screen will display a message for language selection. Choose your language and start the configuration procedure see CONFIGURATION.
 - Once the unit is configured, switch to manual mode by pressing the AUTO On/Off push-button (green LED off). Verify if the pump is correctly primed using the Start/Stop push-button.
 - Press AUTO On/off. The unit is ready to operate.
 - Set up and configuration is the same for master/slave operation – each unit must be set up with identical parameters and the type of operation is selected during set up.



CONFIGURATION:

Press and hold the 'Menu' button to enter configuration menu and use $\uparrow\downarrow$ buttons to change the values and press ENTER for validation. After every ENTER, the next screen setting for the configuration sequence appears. Whenever we want to quit the configuration sequence, press MENU.

No.	Screen	Description	Push
0	PLINE PON 03,0 bar 02,0 bar	Push MENU for 3 seconds to start configuration sequence.	3s
1	SET UP MENU	This temporary message gives information about the software version.	3s
2	LANGUAGE ENGLISH	By mean of keys $\uparrow\downarrow$ we can choose the languages: "LANGUAGE ENGLISH", "LANGUE FRANÇAISE", "LINGUA ITALIANA" and "IDIOMA ESPAÑOL"	
3	INT. MAX. OFF 0.0	The rated current intensity of pump motor - from 0 to 10 A - is entered by means of the $\uparrow\downarrow$ keys to enable thermal protection of the motor. This value is given on the name plate of the motor. Press ENTER to confirm.	
4	ROTATION SENSE 0 Hz	Using the START/STOP pushbutton verify the rotation sense of three-phase motor. By mean of keys $\uparrow\downarrow$ (0/1) we can change it. Press ENTER for validation.	

No.	Screen	Description	Push
5	MIN. SPEED 15 Hz	Using $\uparrow\downarrow$ we can increase the lower limit of the speed of rotation of the pump's motor.	
6	LEVEL PROBE NO	If there is no external device for detecting the minimum water level, press ENTER to confirm. Otherwise, change NO for YES using the $\uparrow\downarrow$ keys	
7	PROGRAMMING	Being inside configuration menu we are having access to the main program section.	
8	SET POINT 2,0 bar	This will be the system operating pressure. Use keys $\uparrow\downarrow$ to modify the initial value (2 bar). WARNING ! The set pressure must be at least 1 bar lower than the maximum pressure of the pump. NOTE: In case of group assembly, the system operates at the pressure set in the MASTER device so that the configuration of set pressure in the slave device is superfluous.	
9	DIF. START 0,3 bar	The default value is 0,3 bar. This value of pressure is the one that the system will subtract from the set pressure before the system starts when the hydraulic network has a demand. Using keys $\uparrow\downarrow$ to modify the initial value. It is recommended to maintain this value between 0,3 and 0,6 bar. Example: - Input pressure: 2 bar. - Differential start: 0,3 bar. - Final start pressure: 2 - 0,3 = 1,7 bar.	
10	TIMER STOP 5	TIMER STOP default value is 5". This will be the time the system will run for after the usage in the whole installation has stopped. Using keys $\uparrow\downarrow$ we can modify the initial value.	
11	VIEW MODE NORMAL	There are 2 view modes to choose: - NORMAL: it is visualized "P LINE" (real pressure of the installation) and "INPUT P" (configured pressure). - SERVICE: it is visualized "Hz" (working frequency of the inverter), "REF" (configured pressure), "PRESS" (real pressure of the installation) and "FL" (flow sensor state).	
12	SERIAL CONTROL SLAVE	The HG8 is configured by default as "SLAVE", with individual assembly just confirm "SLAVE" by pushing ENTER. In case of a pair with master/slave, change one unit to "MASTER" by pushing \downarrow and leave the other as 'slave'. It does not matter which unit is master. In case of assembly of more than 2 devices, we will change all units from "SLAVE" to "SWITCHER" by pushing twice - see instructions for communication centre.	
13	DIRECTION CH 1	It allows to set the communication channel for a group assembly. Push ENTER.	
14	P LINE INPUT P 00,0 bar 00,0	After pressing ENTER pushbutton, the system is configured showing the type of view chosen in the previous section, Press AUTOMATIC in order to start automatic operation. In case of group assembly press AUTOMATIC only in the device configured as MASTER. In case of group assembly, after pressing AUTOMATIC in the MASTER device, the AUTOMATIC LED LIGHT of the SLAVE device will start to flash intermittently, indicating that communication between both devices is ready. If this does not happen verify the connections are correct.	

ALARMS:

In case of simultaneous alarms, quit the automatic mode by pressing the pushbutton 'AUTOMATIC ON/OFF' (led light PUMP will turn off). The successive alarms will be displayed by using the   buttons to scroll. Once viewed, leave the menu by pressing ENTER and returning to MANUAL mode.

Failure – LED Indication ● or ★	Description	System Reaction	Solution
A1 DRY RUNNING ★Failure verification ● Final failure	If the system detects dry running for more than 10 seconds, it will stop the pump and the ART (Automatic Reset Test) will be activated	After 5 minutes ART system will start the pump for 30 seconds, trying to restore the system. If prime is not restored, it will try it again every 30 minutes for 24 hours. If after all these cycles the system still detects lack of water, the pumps will remain permanently out of order until the damage will be repaired.	Check the water supply, suction pipe and pump prime. The pumps can be primed manually using the push-button START/STOP (the led light AUTOMATIC should be off, if it is not, press the push-button to disable it). Special case: If the pump cannot provide the programmed pressure (configuration mistake) the HG8 reacts as it was dry-running.
A2 OVER-INTENSITY ★Failure verification ● Final failure	The motor is protected against over currents by means of the intensity values established in the installation menu. These over currents are produced generally by malfunctions in the pump or in the electric supply.	When overcurrent is detected, the pump will automatically stop. The system will try to restart the pump when demand requires it. The control system will carry out 4 attempts to restore in this circumstance. After the 4th attempt, the pump will remain definitively out of order.	Check the state of the pump, for example the impeller could be blocked. Check intensity values set in the configuration menu.
A3 DISCONNECTED P. ● Final failure	The HG8 has an electronic safety system to protect against short circuits as well as a 20 A fuse.	The device is disconnected.	The insulation of the motor and the pump consumption should be checked. Check the 20 A fuse – if it has blown contact your supplier.
A5 TRANSDUCER ● Final failure	The transducer damages are showed in the HG8's LCD screen.	The device operation is interrupted.	Contact your supplier.
A6 EXCESSIVE TEMP. ● Final failure	The system has a cooling device to keep the INVERTER in optimum working condition.	If an excessive temperature is reached the system shuts down.	Check the temperature of the water, it should be under 40 °C and the temperature environment should be under 50 °C.

Failure – LED Indication ● or ★	Description	System Reaction	Solution
A7 SHORTCIRCUIT ● Final failure	The HG8 has an electronic safety system to protect against short circuits as well as a 20 A fuse.	The pump remains stopped for 10". Then it starts again with 4 attempts. If the problem is not solved, the pump will remain definitively out of order.	Check the pump and wiring connections, if the problem persists, contact your supplier.
A8 OVERVOLTAGE ● Failure verification	The HG8 has an electronic safety system against over voltages.	In case of overvoltage the system remains stopped until an adequate value of voltage is reached. In this case, the system is automatically restored.	Check the electric supply.
A9 UNDERVOLTAGE ● Failure verification	The HG8 has an electronic safety system against too low supply voltages.	In case of undervoltage the system remains stopped until an adequate value of voltage is reached. In this case, the system is automatically restored.	Check the electric supply.
BLANK SCREEN	BLANK SCREEN		Check the electric supply 230 V. If this is correct, check the general fuse (20 A), located in the main plate.

ALARMS FOR GROUP ASSEMBLY:

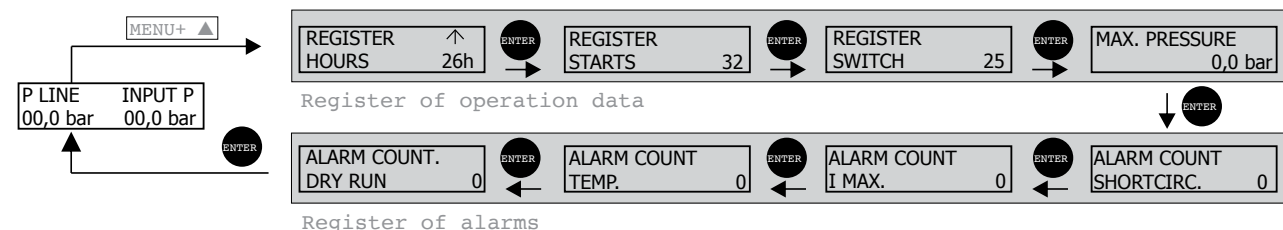
The alarms for assembled devices, are similar to those of the individual one with the specific particularities of operation with two communicated devices. Depending on the system's reaction there are 4 types of alarm:

- 1 **COMMUNICATION FAILURE:** no alarm is activated. Both devices continue operating independently as single units.
- 2 **LACK OF WATER:** if there is a lack of water alarm in a single pump, the other one assumes the role of "main device", if there is an over-demand during next working cycles, the system will try to restore the device in failure. If the device is restored in these conditions then it will be also restored the alternated working mode. If there is lack of water on both devices, the system will activate the **ART** system in the **MASTER** unit.
- 3 **MINIMAL LEVEL IN THE TANK:** the alarm "**LACK OF WATER**" is activated and the device remains in failure. It will be automatically restored when the level sensor detects water again.
- 4 **REST OF ALARMS:** If the alarm has occurred in a single device, the other will act as "main device". The system will try to restore the disabled device only in case of over demand, after 4 successive attempts without success the device is turned off, it should be restored manually. In case of alarms in both devices the system performs 4 restore attempts, if it does not succeed the system is disabled.
To restore manually a device disabled by an alarm push **AUTOMATIC ON / OFF** in **MASTER** device and then **ENTER** in the device with the alarm.

REGISTER OF OPERATION DATA AND ALARMS.

By simultaneously pressing MENU + for 3", the REGISTER OF OPERATION DATA AND ALARMS is opened, by mean of ENTER we can advance through the sequence, once finished the sequence we come back to the main display. This is all the sequence:

Register of alarms



REGISTER HOURS. Counter of total time that the pump has been operating.

REGISTER STARTS. Number of cycles of operation, a cycle is a start and a stop.

REGISTER SWITCH. Number of connections to the electric supply.

MAX PRESSURE. Maximum pressure reached by the installation. It allows the detection of water hammer.

ALARM COUNT. SHORTCIRC. Number of short circuit alarms.

ALARM COUNT I MAX. Number of overcurrent alarms.

ALARM COUNT. TEMP. Number of alarms by excessive temperature.

ALARM COUNT DRY RUN. Number of dry-running alarms.

All the records are saved even if the device has been disconnected from the electric supply.

"CE" STATEMENT OF COMPLIANCE.

COELBO CONTROL SYSTEM. We state, on our's own responsibility, that all materials here-with related comply with the following

European standards:

2006/95/EC Low Voltage Directive on Electrical Safety

2004/108/CE Electromagnetic Compatibility.

2002/95/CE RoHS Directive

Product's name/Type: **HYDROGENIE 8**

As per the European Standards:

UNE EN 60730-1:1998+A11:1998+A2:1998+A14:1998+A15:1998+A16:1998+A17:2001

UNE EN 60730-2-6:1997+A1:1998+A2:1999+CORR A1:2001+CORR A2:01

UNE EN 61000-6-2:2002

UNE-EN 61000-6-4:2002

UNE-EN 61000-3-2:2001

Warranty Policy for Davies Pump Controllers

Your Davies Pump Controller, when used for its designed purpose should give you years of trouble free service. Please take the time to read and understand the operator's manual for this product before installing and operating. Failure to install and operate as per the operation instructions will render warranty on this unit void.

Davies Pump Controllers are warranted to be free of material and manufacturing defects at the time of purchase. Warranty Period: 2 Years from date of purchase.

This warranty is limited to the cost of the product and does not cover travel charges, removal and re-installation charges, consumables, Electrician or Plumbers charges or any other third party costs unless authorized by Argon Distributors prior to being carried out.

Argon distributors will repair or replace for the consumer any portion of the failed item which has proved to be defective within the warranty period. Replacement product or parts may include refurbished parts or components.

Argon Distributors Warranty Policy for Davies Pumps

Your Davies Pump, when used for its designed purpose, correctly installed in an area that is well ventilated, out of the weather and dirt etc. ... should give you trouble free service. Please take the time to read and understand the operator's manual for this pump before installing and running your pump.

Failure to install and operate as per the operation instructions will render warranty on this unit void. Warranty Period: 2 Years from date of purchase.

Davies Pumps are warranted to be free of material and manufacturing defects at the time of purchase.

This warranty is limited to the cost of the product and does not cover travel charges, removal and reinstallation charges, consumables, electrician or plumbers' charges or any other third-party costs unless authorized by Argon Distributors prior to being carried out.

Argon distributors will repair or replace for the consumer any portion of the failed item which has proved to be defective within the warranty period. Replacement product or parts may include refurbished parts or components.

The warranty does not cover Damage or malfunction resulting from:

- Misuse, accident, fire, water, lightning, negligence, abuse, product modifications.
- Repairs or attempted repairs by unauthorized persons
- Damages to product caused by transit
- Removal or installation of the product
- Normal wear and tear.
- Water and Insect ingress
- Exposure to corrosive conditions
- Foreign objects in the liquid being pumped
- Electrical power fluctuations
- Freight

Argon Distributors liability is limited to the cost of the product and shall not be liable for:

- Damage to other property caused by defects in the product.
- Loss of use of the product.
- Loss of time, loss of profits, loss of business opportunity, loss of goodwill
- Any other damages incidental, consequential or otherwise.
- Claims under this warranty must give evidence of the Date of purchase, Invoice Copy, Model, Serial Number, photos and information of the installation as soon as the failure has occurred. Owner's detail must be noted.

If any of the above is unclear please contact your supplier or warranty manager at ARGON DISTRIBUTORS.

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