DAVEY

Combined Domestic Water Filtration and Home Pressure System

Models:	AS20DD
	AS20RB

Installation and Operating Instructions

DAVEY
AquaShield™MAX2.0



IMPORTANT
Please read carefully

daveywater.com

Please pass these instructions on to the owner of this equipment once the product has been installed.

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1. WARNINGS



WARNING:
- **NEVER operate the UV-C emitter while removing from the appliance enclosure**
- **This appliance contains a UV-C emitter which gives off energy that is harmful to your eyes and skin**
- **Unintended use of the appliance or damage to the housing may result in the escape of dangerous UV-C radiation**
- **UV-C radiation may, even in small doses, cause harm to the eyes and skin**
- **The appliance must be disconnected from the supply before replacing the UV-C emitter**
- **The appliance is intended to be permanantly connected to the water mains and not connected by a hose-set**



WARNING: The power supply must be connected through a residual current device (RCD) type B with a rated residual current not exceeding 30mA, providing residual current protection in accordance with AS/NZS 3000 Wiring Rules or the applicable local standard. An electrical isolation switch with an appropriate IP rating must be installed in an easily accessible location to allow the unit to be switched off in an emergency. All electrical connections must be carried out by a qualified electrician in accordance with the relevant regulations and standards.



WARNING: Installation and service should only be performed by experienced persons, Davey recommend that a licenced plumber or certified technician carry out required works. Always read the installation and operating instructions prior to commencing any works on the unit.



ATTENTION: Do not use this system for any purpose other than the intended use, misuse of the system could potentially cause harm to the user or others.
Your system is intended to be installed in a dry location out of direct sunlight and environmental hazards. If installed outside Davey recommends the use of the RainBank PRO cover (sold seperately).
Only use genuine replacement parts for your system, use of aftermarket parts may void your warranty or cause premature failure of the system.



WARNING: This appliance is not intended for use by persons (including children) with reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

2. PRIOR TO USING THIS PRESSURE SYSTEM, YOU MUST ENSURE THAT

- 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 pipework is correctly sealed and supported
- The pump is primed correctly
- The power supply is correctly connected
- All steps have been taken for safe operation

Appropriate details for all these items are contained in the following Installation and Operating Instructions. Read these in their entirety before switching on this pump. If you are uncertain as to any of these Installation and Operating Instructions, please contact your Davey dealer, or the appropriate Davey office as listed on the back of this document.

3. YOUR NEW SYSTEM

Congratulations on the purchase of your new Davey AquaShield MAX 2.0.

The Davey AquaShield MAX 2.0 combines the best of Davey's innovation and technology to provide pressurised, filtered water for domestic or small industrial application.

Depending on the model of Davey AquaShield MAX 2.0 you have purchased your unit is designed as a plug and play solution and it is recommended that it is installed by a licensed plumber or certified technician.

4. APPLICATIONS AND FEATURES

As the AquaShield MAX 2.0 is a combination of Davey's best filtration and pressure products this Installation & Operating Instruction provides a summary of the generic installation requirements for the main unit and following is the specific Installation & Operating Instructions for the individual components that make up the complete unit.

Both versions of the AquaShield MAX 2.0 incorporate the Davey AquaShield AQS-XS 3 stage UV Disinfection System.

AS20DD – Incorporates the Davey DynaDrive home pressure system designed for application with access to stored water sources such as rain water also referred to as "off grid" application.

AS20RB – Designed for application where there is access to mains or "town" water allowing for stored water to act as the primary water source, reducing the reliance/cost on mains water. This incorporates the Davey HM60-08 Pressure pump and Davey RainBank to automatically identifies when tank water is not available and switches to mains supply until sufficient stored water is available again to switch back over.

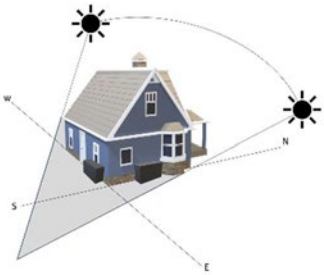
4.1 Positioning/Site Selection

Choose a clean and dry site with a firm base as close to the water source as possible with correct power supply. Make sure your AquaShield MAX 2.0 is always connected to an adequate, reliable source of clean water. To protect your AquaShield MAX 2.0 from the weather, make sure the enclosure is installed on the side of the house with protection from weather and sun, frost free and has adequate ventilation. The unit should be mounted on a firm base allowing for drainage, to avoid damage to flooring etc., that over time may occur from leaking pipe joints or pump seals. Do not mount the unit vertically. Never place flammable materials on, or near the unit.

The Davey AquaShield MAX 2.0 houses a UV chamber that uses UV light to sterilise bacteria that may exist in water, the UV light remains on at all times and generates heat when not in use.

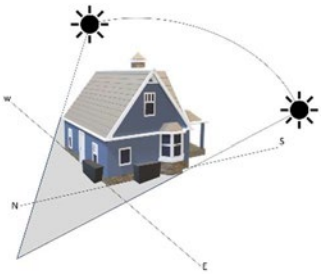
It is recommended that the AquaShield MAX 2.0 be positioned where it is least exposed to direct sunlight and the recommended position for the unit is:

Southern Hemisphere



- Preferred - South side of the house with minimal exposure to sunlight;
- Alternative – Eastern side of the house minimising exposure to morning sunlight.

Northern Hemisphere



- Preferred - North side of the house with minimal exposure to sunlight;
- Alternative – Eastern side of the house minimising exposure to morning sunlight.

4.2 Pipe Connections

For best performance use P.V.C, or polythene pipe with a diameter at least the same as the units inlet which is 32mm BSP. Larger diameter pipe may be used to minimise resistance to flow when pumping for distances longer than 5m (16'). Use unions at pipe connections to enable easy removal and servicing. Use enough "plumbers' tape" to ensure airtight seal and hand tighten only, do not screw connections all the way into suction port. To prevent strain on pump thread always support heavy inlet and outlet pipes.

RainBank Maximum Inlet Pressure: Ensure that maximum inlet pressure to the RainBank unit does not exceed 600kpa (87psi).

Lay suction pipe at a constant gradient to avoid air pockets which may reduce pump efficiency. Avoid installing 90° elbows before the suction inlet of the unit, within a distance equivalent to 5 x pipe diameter. For example: using 40mm (1½") suction pipe, avoid installing a 90° elbow within 200mm (7¾") of the pump inlet. This will assist laminar flow.

Connect outlet to house supply through standard plumbing installation, outlet thread is 25mm BSP.

4.3 Power Connection

AquaShield MAX 2.0 is designed to run off mains power. The standard plug is rated to fit a 240V mains outlet with a 10amp earth plug.



IMPORTANT: Long extension leads should be avoided as they often have insufficient current carrying capacity to run electric motors, hence they can cause substantial voltage drop and operating problems.

If the electrical fittings in your country make it necessary to remove the plug from the lead fixed to the motor care should be taken to ensure that the earth conductor green/yellow in the lead is properly connected to a good earth.



ATTENTION: Ensure that any and all electrical work is only undertaken by an authorized electrician. Before obtaining access to terminals, all supply circuits must be disconnected.

The electrical connections and checks must be made by a qualified electrician and comply with applicable local standards. Poor installation, or poor power supply may even result in electrical fires!



ATTENTION: Automatic reset thermal overloads will allow the pump to restart without warning. ALWAYS disconnect the pump motor from the electrical supply before maintenance or repairs.

NOTE:

- Ensure motor is connected to power supply specified on nameplate;
- Although the Davey electric motor is specifically engineered to perform on a range of power supply voltages, malfunctions or failure caused by adverse voltage supply conditions are not covered under guarantee.



ATTENTION: We are obliged to inform you that this pump is not to be used by children, or infirm persons and must not be used as a toy by children. Some insects such as small ants, find electrical devices attractive for various reasons. If your pump enclosure is susceptible to insect infestation you should implement a suitable pest control plan.

4.4 The pressure tank (AS20DD only)

If air charge adjustment is required, then follow these procedures:

- Remove the pressure tank completely from pump installation, ensuring to isolate the pressure tank and release the water pressure from the tank beforehand; or
- Release all water pressure from the pressure tank by switching off the pump at the power point and opening the closet tap. For above ground supply tanks, it is necessary to close the gate valve between the supply tank and the pump;



ATTENTION: To prevent personal injury, ensure all water pressure is released from the pressure system prior to work being performed.

- Leave tap open during air replenishment;
- When all water pressure has been released from the system, check air pressure at air valve on top of pressure tank. The pre-charge pressure reading should be 70% of set point pressure;
- If necessary, replenish air charge to the correct pressure indicated. Ensure that a tap in outlet piping of pump is open during replenishment of air pre-charge.

5. OPERATION

Davey AquaShield MAX 2.0 is deigned as a plug and play water pressure and treatment unit for domestic and light industrial application. Once installed the unit will operate automatically based on water demand providing pressure and flow based on the opening of a tap or value indicating the use of water.

For individual setting and usage of components housed within the AquaShield MAX 2.0 please refer to the installation and operating instructions for the specific component that for a part of the complete installation and operating instructions.

6. SERVICING AND MAINTENANCE

6.1 3 Stage Filtration

In order to ensure the optimal performance and quality of water being filtered by the AquaShield MAX 2.0 it is recommended that the following schedule be adhered to as part of a minimum standard for the health and safety of those consuming water provided by this unit.

Stage 1 Filter (Replacement 20PP20J)

- Wash if experiencing pressure drop or every 3 months
- Replace filter every 6 to 12 months

Stage 2 Filter (Replacement 1PS20J)

- Replace every 6 to 12 months

UV Lamp (Replacement MC-HOLP)

- Replace every 14 months

UV Quartz Sleeve (Replacement MC-HOSL)

- Clean a least every 14 months dependant on water quality



ATTENTION: Automatic resets may allow the pump to restart without warning. Always disconnect the pump motor from the electrical supply before maintenance or repairs. When servicing or attending pump and/or controllers, always ensure power is switched off and lead unplugged. Electrical connections should be serviced only by qualified persons.
If the electrical supply lead of this pressure system is damaged, it must be replaced by the manufacturer, or an appointed representative. Under no circumstances should the DynaDrive be disassembled by other than qualified tradespersons. Failure to observe this warning may expose persons to the possibility of personal injury and may also result in damage to other property. Do not dismantle spring under pressure.

IMPORTANT: Do not use hydrocarbon based or hydrocarbon propelled sprays around the electrical components of this pump. During servicing, use only approved, nonpetrochemical based o-ring and gasket lubrication. If unsure, consult your Davey representative for advice. For protection, DynaDrive monitors input current and will shut down the pump motor in the event of an over load.

6.2 7

Depending on the quality of the pumped water, from time to time your tank may require flushing to remove settled fines such as mud or sand. If sand, or mud can stay in the tank it will accelerate wear on the internal lining and shorten your tanks life. Safely disconnect the tank from the water supply, discharge all air from the tank and flush the tank several times with clean water. Once the flushing water is clean, reconnect the tank and recharge the air as described in the pressure tank section of the installation chapter.

A tank in good order will not leak, but over time due to damage through rough handling, impacts or grit and/or impurities in the water the tank shell may fail and/or leak. Should the tank leak or show signs of possible failure the tank should be immediately disconnected and replaced.

7. Davey Warranty

Davey Water Products Pty Ltd (Davey) warrants all products sold will be (under normal use and service) free of defects in material and workmanship for a minimum period of one (1) year from the date of original purchase by the customer as marked on the invoice, for specific warranty periods for all Davey products visit daveywater.com.

This warranty does not cover normal wear and tear or apply to a product that has:

- been subject to misuse, neglect, negligence, damage or accident
- been used, operated or maintained other than in accordance with Davey's instructions
- not been installed in accordance with the Installation Instructions or by suitably qualified personnel
- been modified or altered from original specifications or in any way not approved by Davey
- had repairs attempted or made by other than Davey or its authorised dealers
- been subject to abnormal conditions such as incorrect voltage supply, lightning or high voltage spikes, or damages from electrolytic action, cavitation, sand, corrosive, saline or abrasive liquids,

The Davey warranty does not cover replacement of any product consumables or defects in products and components that have been supplied to Davey by third parties (however Davey will provide reasonable assistance to obtain the benefit of any third-party warranty).

To make a warranty claim:

- If the product is suspected of being defective, stop using it and contact the original place of purchase. Alternatively, phone Davey Customer Service or send a letter to Davey as per the contact details below
- Provide evidence or proof of date of original purchase
- If requested, return the product and/or provide further information with respect to the claim. Returning the product to the place of purchase is at your cost and is your responsibility.
- The warranty claim will be assessed by Davey on the basis of their product knowledge and reasonable judgement and will be accepted if:
  - a relevant defect is found
  - the warranty claim is made during the relevant warranty period; and
  - none of the excluded conditions listed above apply
- The customer will be notified of the warranty decision in writing and if found to be invalid the customer must organise collection of the product at their expense or authorise its disposal.

If the claim is found to be valid Davey will, at its option, repair or replace the product free of charge.

The Davey warranty is in addition to rights provided by local 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.

For any internet connected products the consumer is responsible for ensuring a stable internet connection. In the event of a network failure the consumer will need to address the concern with the service provider. Use of an App is not a substitute for the User's own vigilance in ensuring the product is working to expectation.

Use of a Smart Product App is at the User's own risk. To the fullest extent permitted by law Davey disclaims any warranties regarding the accuracy, completeness or reliability of App data. Davey is not responsible for any direct or indirect loss, damage or costs to the User arising from its reliance on internet connectivity. The User indemnifies Davey against any claims or legal actions from them or others relying on internet connectivity or App data may bring in this regard.

Products presented for repair may be replaced by refurbished products of the same type rather than being repaired. Refurbished parts may be used to repair the products. The repair of your products may result in the loss of any user-generated data. Please ensure that you have made a copy of any data saved on your products.

To the fullest extent permitted by law or statute, Davey 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 Davey products. This limitation does not apply to any liability of Davey for failure to comply with a consumer guarantee applicable to your Davey product under local laws and does not affect any rights or remedies that may be available to you under local laws.

For a complete list of Davey Dealers visit our website (daveywater.com).

DAVEY

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