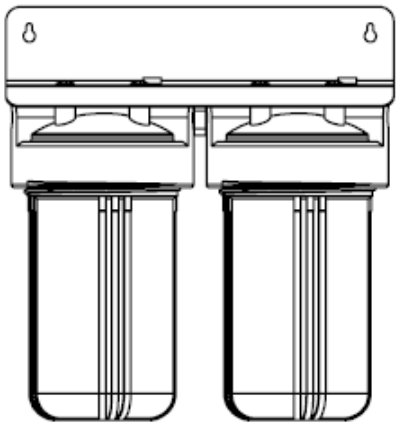
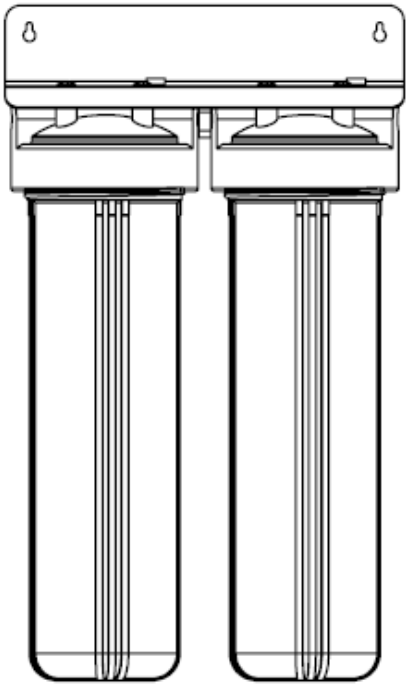
HYDROGUARD®

WATTS®





HG210

HG220

Installation and Operating Instructions

For correct operation of this product, it is essential to observe these instructions

Contents

Introduction

Please read the entire manual before installing or operating this product. Failure to follow any instructions or operating parameters may lead to injury, untreated water or product damage.

General Warnings and Safety Information

General

- Do not use with water that is microbiologically unsafe or with water of unknown quality without adequate disinfection.
- The product must be installed in an upright position, it cannot be installed in any other orientation.
- Do not allow this product or the water system to freeze. Damage from freezing will void the warranty.
- Whilst all care is taken to provide a robust system, like any plumbing product, failure can occur which can result in water damage or flooding. The location of the installed product should consider the risk of flooding and measures put in place to minimize the impact should a flood occur.
- Regularly inspect the product for signs of wear or damage. If any abnormality is found then immediately discontinue the use of the product.

Mechanical

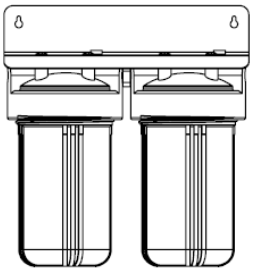
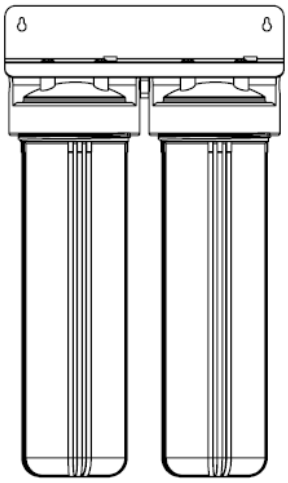
- Installation and plumbing of the product should be done by a certified installer and follow all local standards and regulations.
- Backflow prevention, if required, should be installed prior to the water inlet on the product
- Supply pressure to the unit must not exceed 500kPa. A certified pressure limited device should be installed by a licensed plumber upstream of the product if the supply pressure can exceed 500kPa.
- Protect the product from water hammer.
- Filter housings should only be hand tightened. A spanner is included to assist when loosening the filter housings during service, but it is not recommended to use to tighten the housing.
- Thread sealant tape should be used on all plumbing connections, do not use any other type of thread sealant.
- Only 100% silicone food grade lubricants should be used on O-rings. Do not use petroleum based lubricants such as Vaseline, oils, or hydrocarbon based lubricants.

Product Information

Features

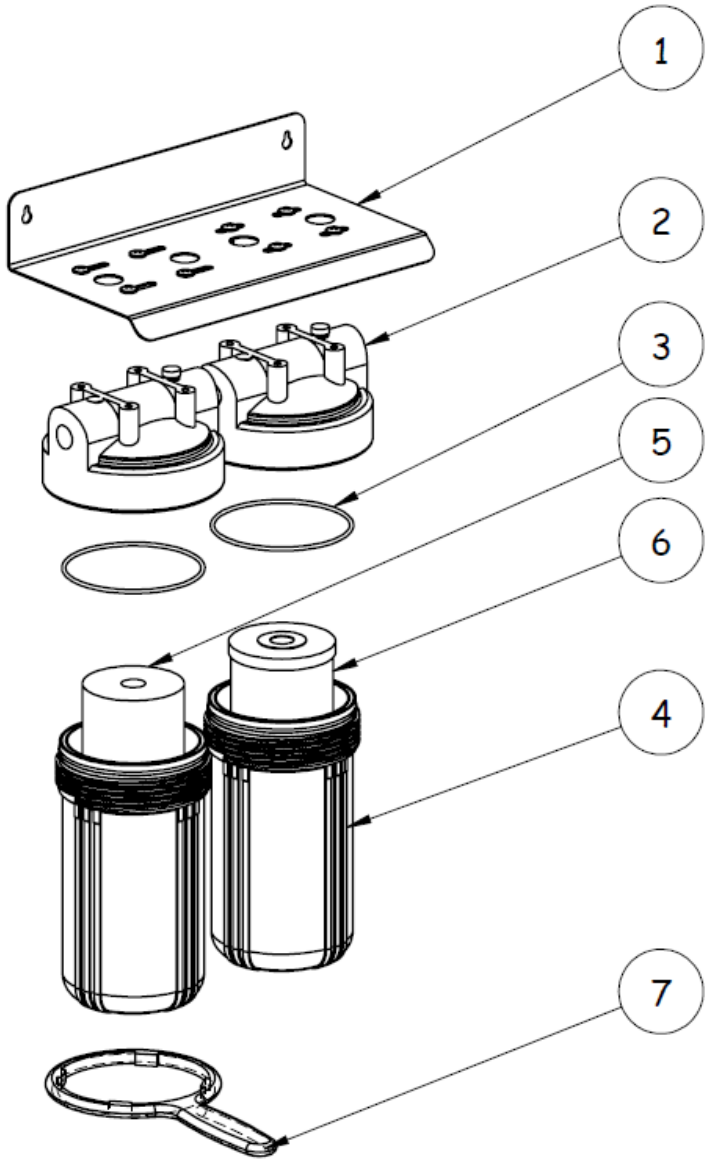
- Pre-assembled for easy assembly
- 2-stage filtration for excellent water quality:
  - 5-micron sediment filtration
  - Chlorine, taste and odour treatment (CTO)
- Brass fittings for extra strength
- No power required

Product Specifications

	HG210	HG220
		
Water Supply	1-40°C water only from tank, bore or mains supply	
Ambient Temperature	1-40°C	
Inlet/Outlet Connections	25mm (1”) BSP	
Working Pressure	≤500kPa	
Maximum Pressure	800kPa	
Max Flow Rate (500kPa supply pressure)	110 L/min	
Product Weight (No Water)	6.5 kg	12.5 kg
Product Weight (With Water)	12.5 kg	23.5 kg
Product Size (height x width x depth)	520x405x220 mm	670x405x220 mm

Parts Included

For quick and easy installation, the product components come assembled. Before installing the product, please check all contents are present and undamaged. All connections must be checked for leaks before operating the product.



Item	Description	Product Code HG210	Product Code HG220
1	Mounting Plate	-	
2	Filter Housing Cap (x2)	-	
3	Housing O-ring (x2)	-	
4	Filter Housing (x2)	HGFH10	HGFH20
5	Sediment Filter Cartridge	HG10SFC	HG20SFC
6	CTO Filter Cartridge	HG10CTOFC	HG20CTOFC
7	Spanner	-	

Installation Instructions

Water supply Requirements

- Cold water inlet only, working water temperature 1-40 °C. Protect from freezing at all times.
- Supply pressure ≤500kPa. An approved pressure limiting valve must be installed by a licensed person in situations where supply pressure could exceed 500kPa.
- Contamination could be present in the water system before the product is installed. Flush the water system after installation and consult an expert if water treatment is required at the source.

Environment Requirements

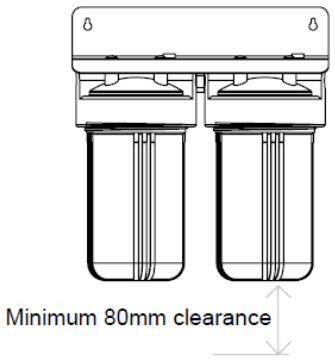
- The Hydroguard can be installed indoors or outdoors, but should be protected from harsh chemical or salt air environments to prevent premature corrosion.
- The mounting fixture must be solid and capable of supporting the weight of the product when filled with water.
- Minimise exposure of the filter housings to direct sunlight and protect the system from freezing at all times. Ambient temperature 1-40 °C.

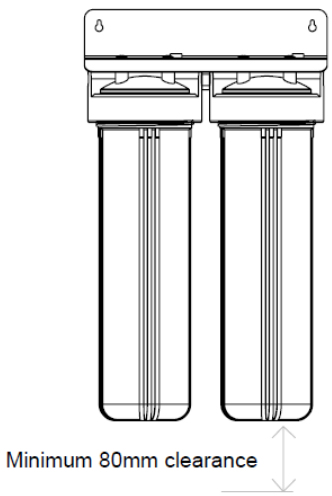
Product and Position Preparation

Remove all packaging and dispose of it responsibly. Check all components are present and undamaged.

Select a suitable location to install:

- The wall fitting needs to be sufficiently strong to support the weight of the product when filled with water.
- Avoid locations where the unit is in direct sunlight or at risk of freezing.
- Check the location has suitable access to the supply and building plumbing, and be within x m of a suitable power outlet. A licensed plumber or electrician may be required if appropriate fixtures are not available.
- At least 80 mm of clearance below the filter housings is required for the replacement of filter cartridges. Refer to diagram below.

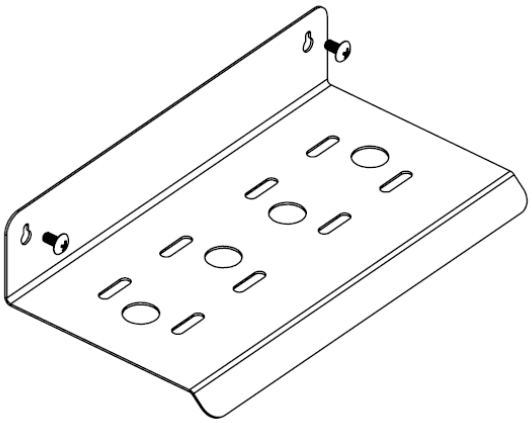




Mounting Installation

Installation steps:

1. Mark the desired location for the mounting fixings. See **Product and Position Preparation**
2. Drill the holes and install the anchors (not included).
3. Align the mounting plate with the anchors and lower into place.
4. Tighten the fixings to hold the system securely in place.



Plumbing Installation

> If installing on a mains water supply, an approved backflow prevention valve must be installed by a licensed plumber according to local regulations.

1. Ensure the water supply is off. Connect the inlet and outlet plumbing to the product 1" (25mm) connections. Unions (not supplied) are recommended at the inlet and outlet for easy disconnection and maintenance. An isolation valve should be installed upstream and downstream of the product to allow easy maintenance of the product.
2. Check that filter cartridges are installed in both housings. The 5 micron sediment filter should be in the first housing, and the CTO filter should be in the second housing (next to the UV sterilizer).
3. Check that 2 sealing O-rings are clean, undamaged and assembled correctly to the filter housing. If the O-rings are not lubricated, use 100% silicone food grade lubricant to assist with assembly.
4. Screw the filter housings into the housing caps. Do not overtighten the housings.
5. Slowly turn on the water supply and check for leaks at all connections in and around the product.
6. If there are no leaks, increase the supply pressure up to the maximum of 500kPa. Check for leaks again and then open an outlet downstream to flush water through the line for 3-5 minutes. Check again for leaks and then close the downstream outlet.

Maintenance Instructions

Before any maintenance turn off the water supply to the product and open a downstream fixture for a few minutes or until the water flow stops. Close the downstream fixture, and then press the red buttons on top of the filter housing caps to release the pressure in the system. You may now begin maintenance. Place a tray underneath, if required, to catch any water that splashes.

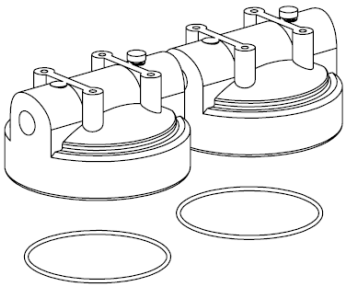
To resume flow after maintenance, slowly turn on the water supply to the product and check for leaks. Open a fixture downstream of the product for 3 minutes to flush water through the system and remove any air pockets. Close the fixture downstream and then check for leaks again. You may now resume water usage.

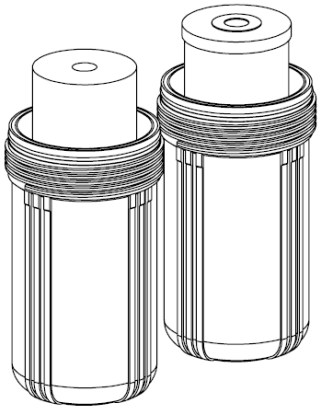
Filter Cartridge Replacement

Replacement of the filter cartridges is recommended at least every 1 year, or as required due to the supply water quality.

Steps to replace the filter cartridge (recommended at least every 1 year or as required):

1. Read the general maintenance instructions before starting the filter cartridge replacement.
2. After isolating and release the system pressure. Loosen the filter housing from the cap using the spanner to assist (turn clockwise when looking from above).
3. Carefully unscrew the filter housing, taking care as the weight of the filter housing with water can be heavy.
4. Empty excess water from the housing and remove the filter cartridge. Please dispose of the filter cartridge responsibly.
5. If necessary, clean the housing with dish soap and warm water and then rinse thoroughly.
6. Remove all packaging from the replacement filter cartridge. Record the model number of the cartridges you use & install date in the maintenance log at the back of this manual.
7. Insert the filter cartridge into the filter housing. For CTO filters, ensure that the rubber seal on the top and bottom are firmly in place before inserting into the housing. Ensure the filter cartridge is correctly seated on the spigot at the base of the filter housing.
8. Check O-rings are clean, undamaged and assembled correctly to the filter housing. Replace if necessary and lubricate using only 100% silicone food grade lubricant.
9. Hold the filter housing vertically whilst screwing the filter housing back into the cap. Ensure the top spigot is aligned with the center of the filter housing. Hand tighten the housing until firm, being careful not to overtighten. Do not overtighten the housings.
10. Read the general maintenance instructions on how to restart flow after replacing the cartridges.





Spare Parts List

Product	Sediment Filter (1st Stage)	CTO Filter (2nd Stage)	UV Lamp	Quartz Sleeve	UV Controller Ballast	Filter Housing
HG210	HG10SFC	HG10CTOFC	-	-	-	HGFH10
HG220	HG20SFC	HG20CTOFC	-	-	-	HGFH20
HG210UV	HG10SFC	HG10CTOFC	HGUVL	HGUVQSS	HGBPC	HGFH10
HG220UV	HG20SFC	HG20CTOFC	HGUVL	HGUVQSS	HGBPC	HGFH20

Troubleshooting

Symptom	Possible Cause(s)	Solutions
Low water flow	Filter cartridge(s) are blocked	Replace the cartridge(s), see **Filter Cartridge Replacement.** Cartridges should be replaced every 6-12 months depending on water quality.
	Low supply pressure	Investigate cause of low pressure at the source.
	Isolation valves are restricting flow	Check all isolation valves before and after the filter product are fully open.
Water leak at inlet or outlet	Plumbing connection is leaking	Remove any fittings, clean all threads thoroughly and reseal with thread sealant tape and tighten.
	Filter cap is damaged, causing a leak	Contact Watts for a replacement if the part has been overtightened, exposed to freezing, high pressure or other damage.
Water leak at filter housing	Seal is leaking due to missing, damaged, or unlubricated O-ring.	Unscrew the filter housing. Check that 2 sealing O-rings are present, clean, undamaged and assembled correctly to the filter housing. Use 100% silicone food grade lubricant on O-rings to assist with assembly and prevent pinching. See **Filter Cartridge Replacement.**
	Filter housing is damaged, causing a leak	Replace filter housing if the part has been overtightened, exposed to freezing, high pressure or other damage. See **Spare Parts List.**
Inconsistent or bubbly water flow	Trapped air in the system	Shut off water supply and release pressure in the system by pressing the red buttons on top of the filter housing caps. Slowly turn on the water supply and open a fixture downstream of the product for 3 minutes to flush water through the system and remove any air pockets.
Filters are becoming blocked very quickly	High sediment from water source	Consider adding pre-filtration before the product with a larger nominal micron size (e.g. 20 micron) to remove large sediment before reaching the filter.

Table continues on next page

Contaminants in the outlet water	Filter cartridges are at capacity	Cartridges should be replaced every 6-12 months depending on water quality. See **Filter Cartridge Replacement.**
	Contamination in the filter housings	Remove the filter housings, clean the housing with dish soap and warm water, rinse thoroughly and then reassemble. See **Filter Cartridge Replacement.**
	Insufficient flushing of the filter cartridge	Shut off water supply and release pressure in the system by pressing the red buttons on top of the filter housing caps. Slowly turn on the water supply and open a fixture downstream of the product for 3 minutes to flush water through the system. See **Filter Cartridge Replacement.**
	Source of contamination after the filter	Flush the system for at least 3 minutes. Investigate possible sources of contamination after the product.
	System bypass is open	If the filter product has a bypass, check that the valve is fully closed.
	Poor water quality at the source	Consult an expert to test if additional water treatment is required at the source.

Limited Warranty

Watts warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of purchase. In the event of such defects within the warranty period, Watts will, at its option, replace or recondition the product without charge.

Watts shall in no way be liable for any loss, damage (direct, indirect or consequential), cost or expense incurred other then those rights a consumer has under the Consumer Guarantees Act 1993. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product including the following:

1. Faulty operation due to foreign matter in the water supply
2. Installation of the product in water supplies that contain excessive dissolved salt or chemicals.
3. Installation that does not comply with NZ Building Code G12, NZS 4607:1989, any other relevant approved Standard or manufacturers instructions and recommendations.
4. Abuse or mutilation of a valve during installation or in an attempt to repair or replace the product.
5. Installation of a product in an application where its intended use is not that for which the valve was designed without the prior written consent of Apex Valves Limited.
6. Failure due to a lack of maintenance.

Watts reserves the right at any time to modify any product design, features or specifications.

Maintenance Log

Date	Serviced By	Stage 1 Filter *Replace at least every 1 year or as required*	Stage 2 Filter *Replace at least every 1 year or as required*