

**WARNING: For correct operation & installation, it is essential to observe these instructions.**

AQUACO INDUSTRIAL REVERSE OSMOSIS WATER FILTRATION SYSTEM



**Important Notice:** Please remember to document your service schedule on page 15 of this booklet for easy reference and maintenance tracking. Your diligent record-keeping ensures timely and efficient maintenance, guaranteeing the longevity and optimal performance of your filtration system.

Product Code: RO-IND9500

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## INSTALLATION AND OPERATION MANUAL

### AQUACO CUSTOMER SERVICE

Thank you for purchasing an AquaCo Industrial Reverse Osmosis Water Filtration System. Your system is a proven performer manufactured from only quality materials and components and will give years of 'spring fresh' water free of impurities if maintained properly.

Caution: Do not use with water that is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the system.

The system is designed for metropolitan supply water but can be used in other situations. For other types of water supply please contact your local AquaCo stockist or call our AquaCo Customer Service Helpline.

The AquaCo filter systems cartridges need replacing regularly to maintain optimum performance. This is a simple procedure when following instructions. For cartridge replacements contact your nearest AquaCo stockist.

Customer Service Helpline 1300 70 1300 (Australia).

### MINIMUM AND MAXIMUM OPERATING CONDITIONS

Source Water Supply - TFC

Condition	Minimum	Maximum
Inlet Pressure	20 psi (135 kPa)	140 psi (950 kPa)
Inlet Temperature	0°C	40°C
pH Range	3	11
Inlet TDS	400 mg/L (low waste)	2,500 mg/L (normal waste model)
Turbidity	<1.0 Net Turbidity (NTU)	

**CAUTION:** Do not use this system where the water is microbiologically unsafe or of unknown quality without first checking with your distributor. This system is designed for use on potable water within the above conditions for operation.

### USE GUIDELINES

- This system must be installed according to local plumbing codes on the cold-water line.
- Replacement Cartridges: See Cartridge replacement section (See Page 7).
- This system requires regular replacement of the filter cartridge to maintain proper operation. Varying chlorine, sediment, or organic substance levels may affect replacement frequency.
- Be sure to change the filter cartridges at least every 12 months; or whenever you detect a change in taste, odour, or decrease in flow.

**Caution:** Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

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## OPERATION

The AquaCo reverse osmosis systems are designed to run economically for many years, dependent on the initial installation and periodical maintenance.

Flush systems for 10 minutes after any period of non-use more than 2 days. For a period of non-use of 2 weeks or more, it may be necessary to replace cartridges.

This product must be installed in accordance with local plumbing regulations by a licensed plumber.

**Installation Note:** A water filter system/tap, like any product, has a limited life and may eventually fail. Also, sometimes failure happens early due to unforeseen circumstances. To avoid possible property damage, this product should be regularly examined for leakage and/or deterioration and replaced when necessary. A drain pan, plumbed to an appropriate drain or outfitted with a leak detector, should be used in those applications where any leakage could cause property damage, and/or the water supply should be turned off if no one is home/present.

**INSTALLATION MUST BE COMPLETED BY A LICENCED PLUMBER. FAULTY OPERATION DUE TO UNQUALIFIED PERSONS WILL RESULT IN VOIDED WARRANTY COVERAGE.**

*Note: Chlorine (free chlorine) tolerance is 1ppm - high chlorine levels permanently damage the reverse osmosis membrane & is not covered under warranty. The maintenance of the pre-filtration system is always recommended to protect the performance of the reverse osmosis membrane.*

## INSTALLATION

### CONNECTION

Alternative fittings may be required if being connected to anything other than (1" or ¾" copper pipe).

Colour Tubing	Description	Terminating Thread
White 3/8"	Pure Water	½" BSP Female
Yellow 3/8"	Pressure Tank Feed Line (Auto Only)	¼" BSP Female
Black 3/8"	Waste Water to Drain	½" BSP Female
Infeed Water Supply	¾" BSP Female	¾" BSP Male

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SYSTEM DIMENSIONS

System Dimensions: 700 W x 800 H x 500 D (mm)



Figure 1

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## INSTALLATION PROCEDURE

**STEP 1** - Plumb your mains water supply up to the ¾" solenoid. The solenoid will be marked - Untreated water in. Please ensure that you have a minimum mains pressure of 20 psi for the solenoid to operate effectively.

**STEP 2** - Select a means of disposing of the waste/concentrate water. Commonly this will be plumbed to the storm water. This connection to the RO system will be marked - Waste water, on the bulkhead manifold.

**STEP 3** - Connect the pressurized RO storage tank. This connection to the RO system will be marked- RO storage tank on the bulkhead manifold.

**Step 4** - Depending on what you are feeding the product (pure water) will dictate this step. Typically, the product water will feed to a Rainwater tank or in some cases directly to an apparatus. The connection to the RO system will be marked- - Pure Water, on the bulkhead manifold.

**Step 5 - REJECT RATIO (waste)** - Slowly turn Feed Water Valve until fully open, allow air to bleed from the system before turning on the booster pump. Check plumbing kit assembly for leakage.

Make sure all water supply/drain lines are secure and free from leakage.

**It is tempting to lower the reject ratio to be extremely low but if you go too low the membrane will become calcified and destroyed as a result. You are in control of this and destroying the membrane by going too low is not a warranty issue.**

Start the unit with the waste valve fully open, at this stage take note of the pump pressure, the pressure from the pump should not ever exceed 140 psi (980kpa) and with the reject (waste) water control valve fully open the pressure should be below this level but if it isn't the pump will need to be turned down To adjust the pump down you undo an acorn type nut off the pump head (Brass pump attached to electric motor) and turn the adjuster anti-clockwise in small amounts until the target pressure is achieved. These adjustments are usually done with the pump and water turned off as the water leaks when the acorn nut is undone.

The in-feed TDS meter will give a reading and the starting point of the reject ratio is 50% on water at 400 ppm or less, 66% on water at 401 to 1000 ppm and 75% on water at 1000 to 2500 ppm TDS, 50% means reject at 1 litre to 1 litre product, 66% means reject at 2 litres and product at 1 litre and 75% means reject at 3 litres and product at 1 litre.

After the starting point great care needs to be taken when dropping the reject ratios. Drop them slowly observing both the product production and product TDS readings as a climb in TDS reading or slowing production will indicate you have dropped the ratio too low, re-adjust if this happens. The absolute lowest you could hope for with soft water would be a reject ratio of 20%. Please phone AquaCo Filters to confirm.

**When the unit is first started, allow it all to run to waste for 1 hour before drawing water. There is a food grade preservative in the membrane that needs to be flushed.**

## MAINTENANCE FOR PERIODS OF TIME WITHOUT OPERATION

The unit cannot be stored for more than 2 weeks without use, or damage to the membrane may occur. Please enquire if this is the case. For a period of non-use greater than 2 days, flush for 10 minutes before use. For non-use periods of more than 2 weeks, the cartridges may need replacing. The sediment and chemical removal filters should be replaced every 6-12 months. The membrane should be replaced when water quality deteriorates or every 2 - 4 years, depending on incoming water quality. Use only genuine AquaCo replacement cartridges and cartridges that are suitable for this appliance.

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**CARTRIDGE INSTALLATION/MAINTENANCE**

To change the filter cartridge(s) please adhere to the following procedure:

- **1<sup>st</sup> Stage: Sediment Pre-Filter: PP-2045-5-WAWF (Up to 12 months)**
- **2<sup>nd</sup> Stage Carbon Pre-Filter: CB-2045-5-WAWF (Up to 12 months)**
- **3<sup>rd</sup> Stage: RO Membrane: MEM-4021-1025 (2-4 years)**

Note: It is important to maintain the pre-filters in clean state. Dirty (blocking or blocked) pre-filters can damage the pump. Dirty pre-filters can cause the pump to suck on the housings and open the air bleed valves (red knobs on top of pre-filter housings) and cause the pump to cavitate which will damage the pump head.

**TROUBLE SHOOTING**

PROBLEM	POSSIBLE REASON	REMEDY
Water has a taste and/or odour	Sediment/Pre-Carbon Filters	Replace Filters
Water has an offensive taste and/or odour	Membrane depleted or fouled	Replace Membrane & Filters
Not enough product water-slow	Pre-filters blocked	Replace Pre-Filters
Not enough water	Membrane is blocked	Replace Membrane
Not enough water	Low water pressure	If line pressure is below 20 psi
Not enough water	Water supply is blocked	Clear restriction, rotate valve on feed water valve
No drain water	Clogged flow restrictor	Clean or replace
No water	Water supply is turned off	Turn water on

**GUIDE TO USE PUSH-IN TUBE CONNECTORS**

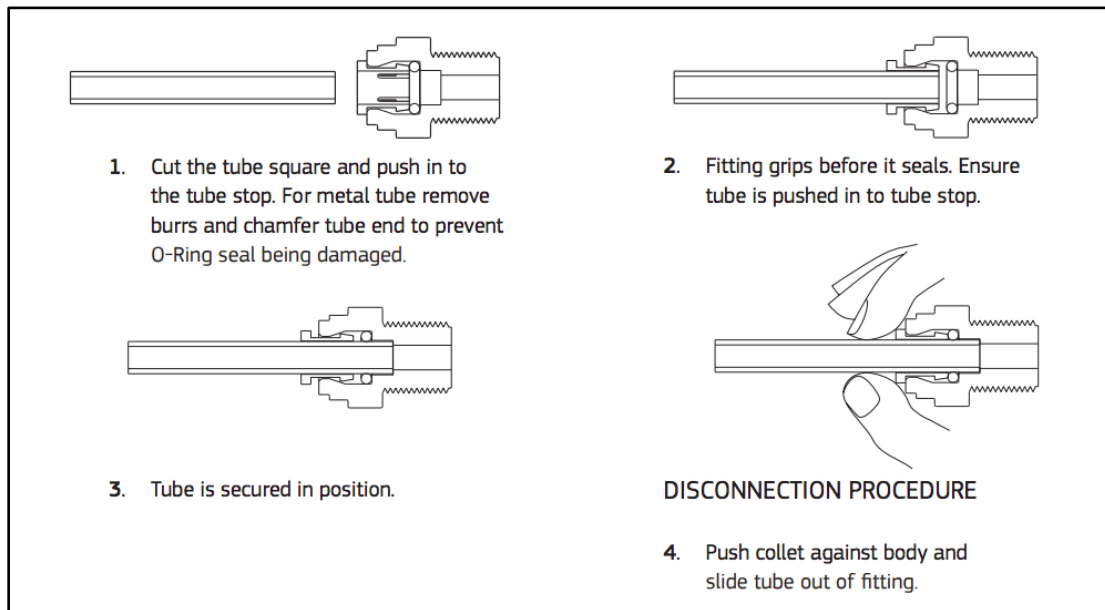


Figure 2

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FILTRATION STAGES

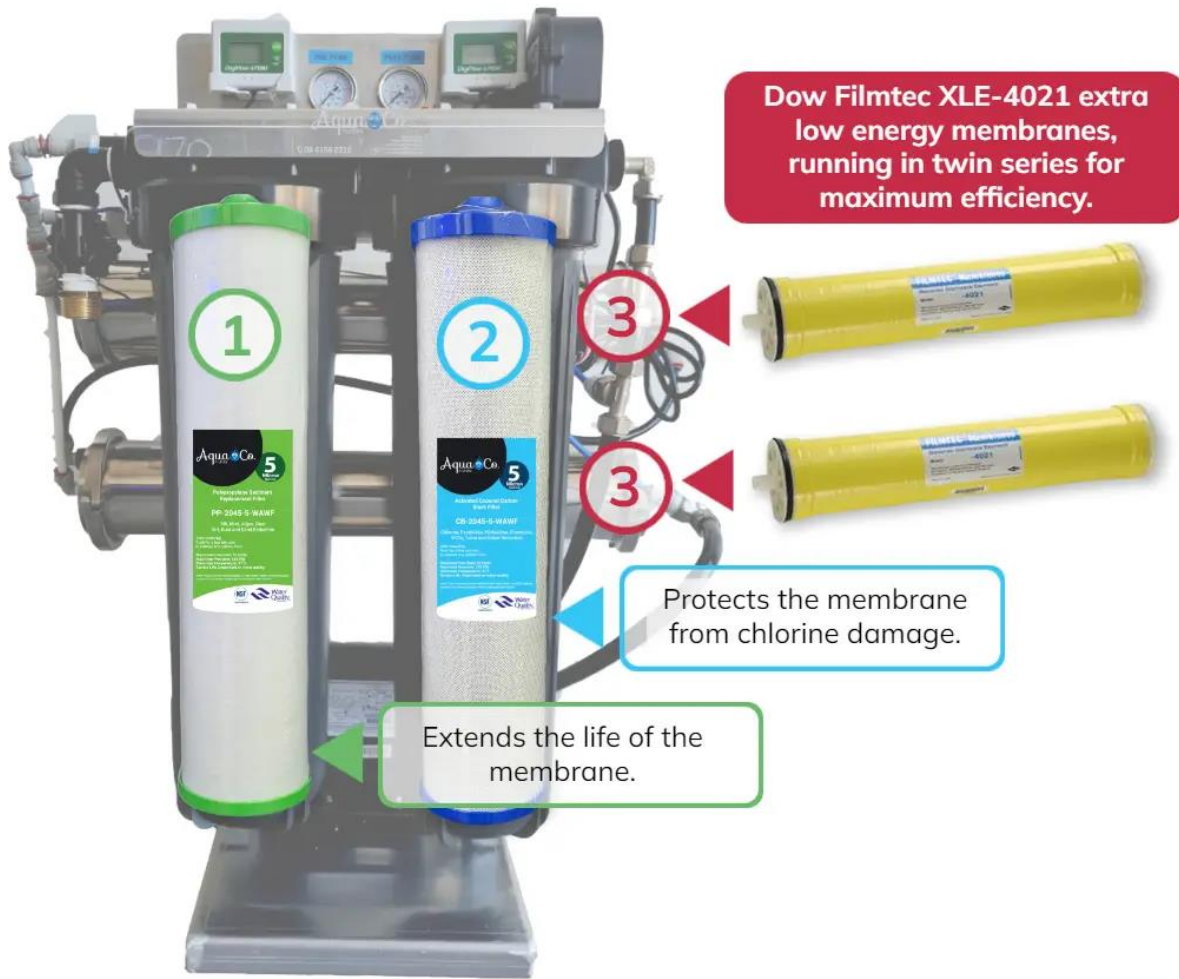


Figure 3

REPLACEMENT FILTERS GUIDE

To maintain the high quality of the purified water the cartridge(s) need changing every 12 (this is dependent on water quality and usage). You can obtain replacement cartridges from your local AquaCo stockist. To maintain performance and warranty use genuine AquaCo replacements.

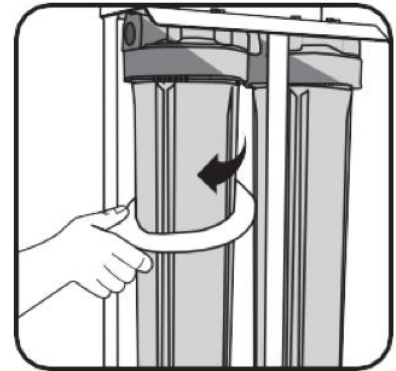


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## FILTERS PROCEDURE

1. Turn water supply off and relieve pressure by opening a downstream tap or pressing the red pressure relief button on the second stage housing (if fitted).
2. Unscrew the filter housing sump(s). If difficult to undo, use the wrench provided. Remove old cartridge(s). We recommend replacing O-rings every 3 - 5 years to ensure a water tight seal, preventing any leaks.
3. Clean housing sump(s) with soap and warm water and rinse thoroughly. Check O-Ring(s) for damage and if there is any, replace.
4. Check O-ring(s) lubrication and if necessary, apply a light coating of food grade silicone lubricant (or similar).
5. Remove all packaging from new filter cartridge(s) and insert into housing sump(s) making sure cartridge(s) is properly seated over spigot in base of housing sump(s). Remember to record the model no. of the cartridge(s) you use.
6. Hold housing sump(s) upright while screwing onto head. Make certain that the spigot in the housing head(s) is located centrally to the cartridge(s) to make a good seal. Hand tighten bowl until firm. **DO NOT OVER TIGHTEN.**
7. Open downstream valve/tap to allow air to be released and gently open water supply allowing all air to be purged.
8. Allow water to run for 2 minutes to flush the system.
9. Close down stream valve/tap and check for leaks. Flush system for 10 minutes after any period of non-use more than 2 days. For a period of non-use of 2 weeks or more, it may be necessary to replace the cartridge.

Figure 4



## MEMBRANE MAINTENANCE

**This step is only to be done as required. Disregard at other service intervals.**

1. The membrane is housed within the horizontal tube, which is clipped to the mounting bracket and has three tubes attached to it.
2. To begin, remove the tube from the end that has only one tube attached and then undo the end clamp. You'll notice that the membrane rubber flange is located on this end of the membrane.
3. Carefully pry the membrane out of its housing without causing any damage to the membrane or the housing. Avoid using tools on the membrane extension if you plan to reuse the membrane.
4. Insert the new membrane into the housing and reassemble the components. Ensure that the membrane is pushed firmly into its housing to create a secure fit.
5. Before using the system, flush 50 liters of water through it if you are using the same membrane. This helps remove any debris or impurities that may be present.
6. If you are using a brand-new membrane, run the system for at least 1 hour before using any of the water. This allows the membrane to settle and ensures optimal performance.
7. By following these steps, you can safely remove and replace the membrane in your system while maintaining its functionality and longevity.

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PERFORMANCE DATA SHEET

PRODUCT CODE: PP-2045-5-WAWF

SEDIMENT FILTER

<b>Micron Rating</b>	<b>Triple Gradient: 20 µm (outer), 10 µm (middle), 5 µm (inner)</b>
<b>Filter Dimensions</b>	20" x 4.5"
<b>Media Type</b>	100% Polypropylene

NOTES: THIS CARTRIDGE IS TESTED AND CERTIFIED BY NSF INTERNATIONAL UNDER NSF/ANSI STANDARD 42 FOR MATERIAL REQUIREMENTS ONLY.

PRODUCT CODE: CB-2045-5-WAWF

CARBON FILTER

<b>Micron Rating</b>	<b>&gt;98% @ 5</b>
<b>Filter Dimensions</b>	20" x 4.5"
<b>Chlorine Reduction &gt;95%</b>	100,000 gallons @ 15 gpm
<b>Initial _P</b>	>5.0 psid @15 gpm
<b>Carbon Type</b>	Activated Carbon

NOTES: CHLORINE REDUCTION CAPACITY BASED ON LABORATORY TESTING CONDUCTED USING TEST PROTOCOL CONTAINED IN NSF STANDARD 42 .

PRODUCT CODE: MEM-4021-1025

REVERSE OSMOSIS MEMBRANE

Reverse Osmosis Element	Applied Pressure		Permeate Flow Rate		Typical Stabilized Salt Rejection (%)
	(psig)	(bar)	(GPD)	(m3/d)	
<b>XLE-4021</b>	100	6.9	1025	3.9	99%

1. PERMEATE FLOW AND SALT REJECTION BASED ON THE FOLLOWING TEST CONDITIONS: 500 PPM NA CL FEEDSTREAM, 77°F (25°C), AND THE FOLLOWING RECOVERY RATES: XLE -4021-8%.
2. PERMEATE FLOWS FOR INDIVIDUAL ELEMENTS MAY VARY +/-20%.
3. FOR THE PURPOSE OF IMPROVEMENT, SPECIFICATIONS MAY BE UPDATED PERIODICALLY.

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## NOTES

AquaCo water care products are designed, manufactured and supported by Water Filters Pty Ltd the name you can trust for viable and proven water solutions. The complete range of AquaCo products are developed, refined, made to meet and exceed stringent specifications for the worldwide market.

Important: Sales of products are subject to our Terms and Conditions which are available upon request. All specifications, information and photos are a guide only and are subject to change without notice. Please ring to confirm details. Warning: For correct operation of this appliance, it is essential to observe manufacturer's instructions.

## WARRANTY

Any contract of sale, order, or quotation made or accepted by or on behalf of Water Filters Pty Ltd (trading as AquaCo Filters) is subject to these terms and conditions of sale.

- AquaCo Filters warrants AquaCo Filtration Systems to the original purchaser for a period of 5 years for Retail customers, and 2 years for Wholesale and Trade customers from the date of sale established by the date of the original invoice issued by an authorized distributor.
- AquaCo Filters warrants each new Product to be free from defects in the product for a period of 2 year from the date of retail sale established by the date of the original invoice issued by AquaCo Filters.
- AquaCo Filters reserves the right in instalment sales to grant credit for the value of any Product found to be defective under this Warranty.
- AquaCo Filters will not cover any labour charge incurred by the Buyer for the replacement or repair of any Product.
- The Buyer is responsible for freight and local labour charges for Products the subject of this Warranty.
- This Warranty applies only to the original purchaser of the Product.
- AquaCo Filters' obligation under this Warranty is limited to AquaCo Filters' own option, to either repair or replace the Product, once AquaCo Filters has deemed that the Product is defective or AquaCo Filters may, at its own discretion, refund to the Buyer the purchase price paid for the defective goods.
- This Warranty does not cover any Product that is relocated from the site of its original installation.
- All replaced or exchanged parts taken out under this warranty become the property of AquaCo Filters.
- This Warranty is subject to the Product being properly installed, maintained, being used for its intended purpose and operated strictly in accordance with AquaCo Filters' recommendations and installation guide.
- This Warranty does not extend to a Product that has been modified in any way unless with AquaCo Filters' express consent.
- This Warranty does not cover the normal wear and tear of the Product, or damage caused by misuse, abuse or vandalism. The Warranty does not cover any malfunction or failure resulting from neglect, use of unauthorised parts and accessories or use with higher water pressure than indicated on the Product.
- The Warranty does not extend to damage caused by rain, fire, earthquake or other natural causes or acts of nature.
- It is expressly agreed that this shall be the sole and exclusive remedy of the Buyer stated herein, and under no circumstances shall AquaCo Filters be liable for any costs, loss, expense, damages, special damages, incidental damages or consequential damages arising directly or indirectly from the design, manufacture, sale, use or repair of the Product whether based upon warranty, contract, tort or strict liability.
- All Conditions and Warranties implied by law or statute are hereby expressly negated so far as they lawfully can be.

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## ACCEPTANCE AND CLAIMS

- Acceptance of the Products shall be deemed for all purposes to have taken place at the expiration from the date of each delivery.
- Any damage caused during or as a result of transit will not be the responsibility of AquaCo Filters.
- Any faulty systems must be returned with the Pressure Limiting Valve.
- In the event of a Warranty Claim, the Product must be forwarded at the Buyer's own risk and expense to AquaCo Filters, together with proof of purchase.
- This limited Warranty is void if the Product under Warranty is presented without the said original invoice.
- AquaCo Filters may request that a Statement accompany the Original Invoice, signed by the Buyer, setting out the following terms:
  - The name and address of the Buyer.
  - The date and by whom the Product was purchased.
  - The date and by whom the Product was installed.
  - The location where the Product was installed.
  - The date and time the Product first appeared to malfunction.
  - The nature of the problem with the Product.
  - The date and time of any and all loss event/s.
  - The date and time AquaCo Filters was first notified of the Product malfunction.
- A failure by the Buyer to submit the said Statement within 28 days, after such request is made by AquaCo Filters, will automatically void the Warranty.
- A failure to answer truthfully or to answer in a way that is misleading, entitles AquaCo Filters to void the Warranty and to notify the police in the event of suspected fraudulent conduct.

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## RISK

- The risk in the Product will pass to the Buyer immediately upon the Product leaving AquaCo Filters' premises for delivery to the place designated by the Buyer.

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## RETENTION OF TITLE

- AquaCo Filters will retain title to (but not risk in) a Product delivered to the Buyer until AquaCo Filters has received payment in full for such Product from the Buyer.
- The Buyer will store the goods in such a way as to enable them to be separately identified and will keep them insured at its own expense with AquaCo Filters' interest noted on any such insurance cover.
- If the Buyer fails to make any payment when due or becomes bankrupt or becomes insolvent, or has a judgement entered against it in any Court or enters into any scheme of arrangement, composition, or assignment or is in receivership or voluntary administration or liquidation, the Buyer grants AquaCo Filters the license to enter any of the Buyer's premises where the Product is stored, and without notice, to re -take possession of and remove, at the Buyer's cost and expense, the Product in respect of which title has not passed to the Buyer.

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## RIGHTS FORFEITED

The Buyer forfeits any right or claim against AquaCo Filters warrantee if:

1. The System is operated with a water temperature higher than 38° Celsius.
2. The System is not serviced every 12 months. i.e. replacement of filters, PLV check and assessment of general condition of the system. If the drinking water quality is poor, the System should be serviced before 12 months.
3. The System damage results from water hammer, freezing, neglect or is not installed by a licensed plumber in accordance with the AS3500 plumbing code and installation plan.
4. The System is subject to water pressure that exceeds the maximum recommended pressure.
5. The System is not installed with an Australian Standards approved Pressure Limiting and Dual Check Valve.
6. The System has been found to be tampered with or if the goods have not been operated or maintained strictly in accordance with AquaCo Filters' recommendations.
7. The System is not turned off when the residents are away for over 24 hours.

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## PRICE

- The price charged shall be AquaCo Filters' price ruling at the date of delivery unless otherwise agree in writing. Any price indications or price lists are subject to alterations to AquaCo Filters' price ruling at the date service or goods are supplied.
- Prices are as per AquaCo Filters' wholesale unless otherwise agreed in writing.
- The Buyer is responsible to effect and meet the costs of any insurance cover that is deemed necessary.
- Clerical errors in computations, typing or otherwise of "catalogue, quotation, acceptance, invoice, delivery docket or other document" shall be subject to correction.
- Any goods returned through no fault of AquaCo Filters will be subject to a 15% restocking fee.

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## DEFAULT

On the happening of any one or more of the following events, namely:

- The Buyer fails to make payment to AquaCo Filters on the due date;
- An administrator or liquidator is appointed over any or all of the assets of the Buyer or a scheme of arrangements is proposed to approve with respect to the Buyer;
- In the case of the Buyer being a natural person, the Buyer commits an act of bankruptcy; then AquaCo Filters may at its option exercise all or any of the following rights (notwithstanding any prior failure to exercise such rights):
  - a. demand payment of the whole of the monies owing from the Buyer to AquaCo Filters and the Buyer agrees to pay the same immediately.
  - B. the Buyer shall pay to AquaCo Filters interest on such amount outstanding at the rate of 2% per month and any costs with respect to solicitors, legal advisors, mercantile agents and other agents acting on behalf of AquaCo Filters in respect of any enforcement hereof or recovery or attempted recovery of monies owing by the Buyer to AquaCo Filters.

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## SEVERENCE

If any of these terms or conditions become for any reason wholly or partly invalid, that term or condition shall to the extent of the invalidity be severed without prejudice to the to the continuing force and validity of the remaining terms and conditions.

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#### JURISDICTION

AquaCo Filters and the buyer agree that this agreement and its provisions shall be construed in accordance with the laws of the State of Western Australia and be resolved by a Western Australian Court.

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#### WARRANTY/AUSTRALIA

This warranty is given by Water Filters Pty Ltd, ABN 68618671677, telephone no. 1300 70 1300 and email at [sales@waterfilter.com.au](mailto:sales@waterfilter.com.au).

This warranty is provided in addition to other rights and remedies you have under law: Our goods come with guarantees which cannot be excluded under the Australian Consumer Law. You are entitled to replacement or refund for a major failure and to compensation for 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.







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ABOUT US



Welcome to AquaCo, your trusted partner in water filtration solutions. With over 13 years of dedicated service and a combined experience exceeding 30 years in the water filtration industry, we are proud to have been at the forefront of purifying Australia's water supply. Our mission is simple: to ensure that every Australian has access to the purest water possible.

As a nation-wide leader in water filtration, our reach extends across the entire country. From bustling cities to remote communities, we seamlessly supply and install state-of-the-art filters wherever needed, guaranteeing clean and safe drinking water for all.

At AquaCo, quality is our unwavering commitment. That's why we import premium components from around the globe and assemble our filtration systems in two of Australia's iconic cities: Perth and Sydney. This dual-location operation allows us to cater to diverse needs while maintaining the high standards our customers expect.

We understand the importance of safety and reliability, which is why we only collaborate with licensed plumbers and utilize certified and world-wide tested components in every installation. With our cutting-edge technology, you're not just investing in a filtration system; you're investing in years of research, innovation, and absolute excellence.

Thank you for choosing AquaCo for your water filtration needs. Together, let's ensure a healthier, happier future with clean, pure water for all Australians.

Regards,

**AquaCo Filters Team**

For the latest information, updates, and to stay informed about water filtration news and cutting-edge technologies, be sure to follow us on:

