



***Crystal Clear***  
***Purification Systems Pty Ltd***

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***REVERSE OSMOSIS***  
***INSTALLATION BOOKLET***

# ***INSTALLATION INSTRUCTIONS***

## ***WARNING:***

***For correct operation of this appliance it is essential to observe the manufacturer's instructions.***

***This system is not UV resistant. Install only out of direct sunlight.***



- ***This system must be mounted in a vertical position and must be positioned to allow access for service and filter cartridge changing.***

## ***Installation of Water Supply Connector***

***NB. Any connection put into a mains supply should be done by a licensed plumber.***

- 1. Turn off the main water supply. Make sure you are connecting up to the cold water.***
- 2. Assemble the Mains Connector by screwing the 1/4" male x 1/4" compression Ball Valve into the side of the Water Supply Connector using 3 to 4 wraps of teflon tape.***
- 3. To install the Mains Connector, 1/2" male x 1/2" female, simply disconnect cold water line from angle stop or from faucet stud. Complete with cone-washer and seal.***
- 4. Disconnect the water supply line from the cold water faucet underneath the sink or from the washing machine. Attach and tighten Mains Connector assembly being careful not to pinch or crimp any tubing or water supply line while tightening.***

## ***Mounting the Purification System***

- 1. Mark screw locations at the desired positions. Use the two holes on back of purification assembly mounting bracket for marker guides.***
- 2. Drill a suitable sized hole to insert the Wall Plugs supplied with unit.***
- 3. Insert Wall plugs and screws. Leave screw heads out a little.***
- 4. Mount Purification System onto screws.***

# Connecting the Tubing

Blue



A. Connect tubing from the Mains Connector to the Housing inlet.

Yellow



B. Product water

Black



C. Reject water

**NB:** When using Jaco style fittings, place nut over the tube, put insert into the tube, then tighten nut to fitting.

## Start Up Procedure

1. Flush Carbon Fines from Chemical Filter. See Appendix (i)
2. Flush preserving agent from Membrane. See Appendix (ii)
3. Check for leaks.

### Appendix (i)

Make sure Mains Connector is off. Remove Tube from elbow of chemical removal sump, connect elbow to spare Tube. Turn Mains Connector on and allow water to flow through the sumps (Dirt & Sediment and Chemical) to drain for 5 to 10 minutes. This process will flush any carbon fines from the Carbon filter. Turn Mains Connector off and connect Tube from the membrane to the Chemical Removal Sump.

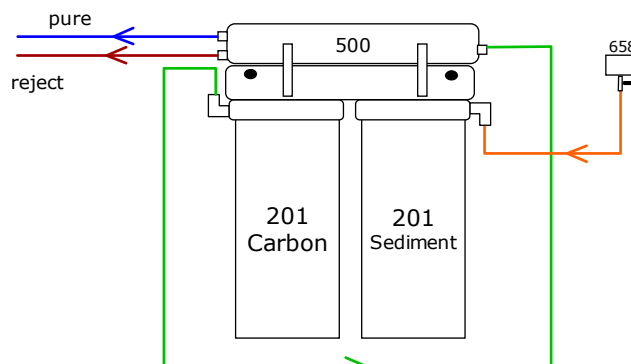
### Appendix (ii)

Make sure Mains Connector is off. Insert new Membrane. The end with the two small "O" rings goes in first. The end with the large rubber ring goes in last, next to the end cap. Push firmly.

Remove the Payne type flow restrictor from the Membrane housing, turn Mains Connector on and allow Membrane to flush directly to drain for 20 to 30 minutes. This process will flush the preserving agent from the Membrane. Turn Mains Connector off and reconnect the Payne type flow restrictor to the waste water elbow on the Membrane Housing.

## SET UP DIAGRAM

# 954



658: Mains supply ball valve  
201: Filter housing  
500: Membrane housing

# ***FILTER AND MEMBRANE CHANGING PROCEDURES***

*Both prefilters should be changed every 12 months or 8 000 Litres. The Membrane should be changed every 3–5 years (dependant on TDS). Not changing your Filters regularly can cause bacteria to grow and contaminate the water.*

## ***Sediment and Carbon***

*See Appendix (i) of Start Up Procedure*

## ***R.O. Membrane***

*Make sure Mains Connector is off. Isolate Tank by turning Tank Valve off. Depressurise system by opening the Faucet and allowing water to drain out. Remove tubing from Membrane Housing inlet (cap end). Unscrew cap and allow water to drain from Housing. Remove the old Membrane and if necessary sanitise the Housing (follow Sanitising Procedure). Replace with new Membrane and follow Start Up Procedure Appendix (ii).*

## ***Caution For Your Safety***

- Change Filters regularly every 6 to 12 months and have the Membrane and System checked annually by a Licensed Plumber.*
- Use only cartridges suitable for this appliance.*
- Membranes should be refrigerated if not used for longer periods of time.*

## ***Recommended Sanitising Procedure***

*The best time to sanitise is when changing all the Filters and/or when changing the Membrane. It is recommended to sanitise the whole R.O. systems a minimum of once a year.*

- 1. Shut off Mains Connector valve. Remove Prefilters and Membrane even if not replacing. Reassemble Membrane Housing without Membrane inside. We recommend you use Micropur to disinfect your system. Add Micropur into each of the empty pre filter Housings. Recommended dosage is 1g per 10L. Reassemble pre-filter Housings without Filters.*
- 2. Turn Mains Connector back on to about 30% of maximum flow rate. Until water comes out of the product and waste tubes.*
- 3. Shut off Mains Connector. Let entire system sit for about 2 hours to thoroughly sanitise.*
- 4. Turn on Mains Connector. Flush the system thoroughly. With the Mains Connector off, install the new Filters and/or Membrane. Then follow normal system start up procedures.*

# PERFORMANCE SHEET

*Production rate 50 GPD under the following conditions:*

*100psi*

*Water temperature 21°C*

*500ppm TDS*

*Nominal rejection rate over 96%*

*TFC Membrane*

## Contaminant

### Inorganic

<i>Aluminium</i>	<i>98%</i>
<i>Arsenic</i>	<i>98%</i>
<i>Barium</i>	<i>95%</i>
<i>Cadmium</i>	<i>95%</i>
<i>Calcium</i>	<i>98%</i>
<i>Chloride</i>	<i>95%</i>
<i>Chromium III</i>	<i>98%</i>
<i>Copper</i>	<i>98%</i>
<i>Fluoride</i>	<i>95%</i>
<i>Iron</i>	<i>98%</i>
<i>Lead</i>	<i>98%</i>
<i>Magnesium</i>	<i>98%</i>
<i>Manganese</i>	<i>98%</i>
<i>Mercury II</i>	<i>85%</i>
<i>Nitrate</i>	<i>90%</i>
<i>Potassium</i>	<i>95%</i>
<i>Selenium IV</i>	<i>95%</i>
<i>Silver</i>	<i>98%</i>
<i>Sodium</i>	<i>95%</i>
<i>Strontium</i>	<i>98%</i>
<i>Sulfate</i>	<i>98%</i>
<i>Zinc</i>	<i>98%</i>
<i>Total Dissolved Solids</i>	<i>95%</i>
<i>Asbestos</i>	<i>99%</i>

### Organic

<i>Chlorine</i>	<i>Over</i>	<i>98%</i>
<i>Herbicides</i>	<i>Over</i>	<i>98%</i>
<i>Pesticides</i>	<i>Over</i>	<i>98%</i>
<i>DDT</i>	<i>Over</i>	<i>98%</i>
<i>Endrin</i>	<i>Over</i>	<i>98%</i>
<i>Lindane</i>	<i>Over</i>	<i>98%</i>
<i>Aldrin</i>	<i>Over</i>	<i>98%</i>
<i>Benzene</i>	<i>Over</i>	<i>98%</i>
<i>VOCs</i>	<i>Over</i>	<i>98%</i>
<i>Adrazin</i>	<i>Over</i>	<i>98%</i>
<i>Fluorathene</i>	<i>Over</i>	<i>98%</i>
<i>Phenol</i>	<i>Over</i>	<i>98%</i>
<i>Trihalomethanes</i>	<i>Over</i>	<i>98%</i>
<i>Toxaphene</i>	<i>Over</i>	<i>98%</i>
<i>Dichloromethane</i>	<i>Over</i>	<i>98%</i>
<i>Chloroform</i>	<i>Over</i>	<i>98%</i>
<i>Trichlorethylene</i>	<i>Over</i>	<i>98%</i>
<i>Perchlorethylene</i>	<i>Over</i>	<i>98%</i>
<i>Tannic Acids</i>	<i>Over</i>	<i>98%</i>
<i>Methoxychlor</i>	<i>Over</i>	<i>98%</i>
<i>PCB</i>	<i>Over</i>	<i>98%</i>

### CAUTION

*Do not use with water that is Microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.*

### WARNING

*This system must be installed in conjunction with a dual check and pressure limiting valve which complies with Australian Standards. No warranty will apply to a system installed without such a valve.*

## TROUBLE SHOOTING

<i>PROBLEM</i>	<i>CAUSE</i>	<i>SOLUTION</i>
<i>Cloudy ice cubes or milky coloured water.</i>	<i>Bad membrane.</i>	<i>Replace Membrane and sanitise when below 75% rejection</i>
	<i>Water supply.</i>	<i>High oxygen content</i>
		<i>Some refrigerators freeze differently, leaving the ice cube looking cloudy. Let cube dissolve in glass of water. If just air, will float to surface and dissipate.</i>
	<i>System is still new.</i>	<i>This is normal and should clear up in two weeks</i>
<i>Filter Housing Leak</i>	<i>O-ring not sealed properly.</i>	<i>If damaged, replace. If dirty, clean, lubricate and re-tighten filter housing. Hand tighten firmly.</i>
<i>Water does not taste or smell right.</i>	<i>Bad membrane.</i>	<i>Replace membrane when below 75% rejection and sanitise.</i>
	<i>Filters have expired.</i>	<i>Replace filters. Should be replaced every 6 to 12 months.</i>
	<i>Little water use.</i>	<i>Drain entire tank. Should be done every 2 weeks.</i>
	<i>System needs sanitising.</i>	<i>Sanitise (see Sanitising Instructions) and replace filters.</i>
<i>Little water outlet</i>	<i>Over pressurised tank.</i>	<i>When empty, tank pressure should be between 5 - 12 psi.</i>
	<i>Incoming water pressure is below 40 psi.</i>	<i>Increase pressure to 40 psi.</i>
	<i>Filters clogged.</i>	<i>Replace filters.</i>
	<i>Kinked tube.</i>	<i>Un-kink tube. If damaged, replace tube.</i>
<i>Produces water slowly.</i>	<i>Normal R.O. process.</i>	<i>Your R.O. system makes water a drop at a time. 3 gallons storage tank should be full in 6 - 10 hours.</i>
	<i>Low water pressure.</i>	<i>Increase to 50 psi. Check for kinked tubes.</i>
	<i>Filters plugged</i>	<i>Replace filters.</i>
	<i>Fouled membrane.</i>	<i>Replace membrane.</i>

### System Limitations

Pressure: 100psi max 40psi min      Temperature: 38°C max 5°C min  
 Total Dissolved Solids: 500ppm max

# WARRANTY

## CRYSTAL CLEAR PURIFICATION SYSTEMS TERMS AND CONDITIONS

Any contract of sale, order, or quotation made or accepted by or on behalf of Crystal Clear Purification Systems Pty Ltd ("Crystal Clear") is subject to these terms and conditions of sale.

### WARRANTY

Crystal Clear warrants each new Product to be free from defects in material and workmanship for a period of 1 year from the date of retail sale established by the date of the original invoice issued by Crystal Clear.

Crystal Clear's obligation under this Warranty is limited to Crystal Clear's own option, to either repair or replace the Product, once Crystal Clear has deemed that the Product is defective or Crystal Clear may, at its own discretion, refund to the Buyer the purchase price paid for the defective goods.

Crystal Clear reserves the right in instalment sales to grant credit for the value of any Product found to be defective under this Warranty.

Crystal Clear 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 retail purchaser of the Product.

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 Crystal Clear.

This Warranty is subject to the Product being properly installed, maintained, being used for its intended purpose and operated strictly in accordance with Crystal Clear's recommendations.

The Warranty will be void if the Products have found to be tampered with or if the goods have not been operated or maintained strictly in accordance with Crystal Clear's recommendations.

This Warranty does not cover the normal wear and tear of the Product, or damage caused by misuse, abuse or vandalism.

This Warranty does not extend to a Product that has been modified in any way unless with Crystal Clear's express consent.

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 Crystal Clear be liable for any costs, loss, expense, damages, special damages, incidental damages or consequential damages arising directly or indirectly from the design, manufacture, sale, or 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.

### ACCEPTANCE AND CLAIMS

Acceptance of the Products shall be deemed for all purposes to have taken place at the expiration of seven (7) from the date of each delivery

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 Crystal Clear, together with proof of purchase. Any damage caused during or as a result of transit will not be the responsibility of Crystal Clear.

This limited Warranty is void if the Product under Warranty is presented without the said original invoice.

Crystal Clear may request that a Statement accompany the original invoice, signed by the Buyer, setting out the following terms:

1. The name and address of the Buyer.
2. The date and by whom the Product was purchased.
3. The date and by whom the Product was installed.
4. The location where the Product was installed.
5. The date and time the Product first appeared to malfunction.
6. The nature of the problem with the Product.
7. The date and time of any and all loss event/s.
8. The date and time Crystal Clear 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 Crystal Clear, will automatically void the Warranty.

A failure to answer truthfully or to answer in a way that is misleading, entitles Crystal Clear to void the Warranty and to notify the police in the event of suspected fraudulent conduct.

### RISK

The risk in the Product will pass to the Buyer immediately upon the Product leaving Crystal Clear's premises for delivery to the place designated by the Buyer.

### RETENTION OF TITLE

Crystal Clear will retain title to (but not risk in) a Product delivered to the Buyer until Crystal Clear has received payment in full for such Product from the Buyer.

Until such payment, the Buyer holds the Product as bailee for Crystal Clear and may not sell or otherwise dispose of the Product unless authorised by Crystal Clear. If the Product is sold, the proceeds of sale will be placed in a separate trust account pending payment to Crystal Clear. 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 Crystal Clear's 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 Crystal Clear licence 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.

### RIGHTS FORFEITED

The buyer forfeits any right or claim against Crystal Clear if:

1. The system is not turned off when the residents are away for over 24 hours
2. The system is not serviced by a Licensed Plumber every 12 months. i.e. replacement of filters, PLV check and assessment of general condition of system.
3. Product damage results from water hammer, freezing, neglect or is not installed by a licensed plumber in accordance with the installation plan
4. The product is operated with a water temperature higher than 38° Celsius.
5. The product is subject to water pressure that exceeds 700kpa
6. The system is not installed with an Australian Standards approved Pressure Limiting and Dual Check Valve

### SEVERENCE

If any of these terms or conditions or becomes 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

### JURISDICTION

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

# ***SERVICE RECORD***

***Installation Date:***      \_\_\_\_/\_\_\_\_/\_\_\_\_

***Next Service Due:***      \_\_\_\_/\_\_\_\_/\_\_\_\_

***1<sup>st</sup> Service:***              \_\_\_\_/\_\_\_\_/\_\_\_\_

***Serviced By:***              \_\_\_\_\_

***Next Service Due:***      \_\_\_\_/\_\_\_\_/\_\_\_\_

***2<sup>nd</sup> Service:***              \_\_\_\_/\_\_\_\_/\_\_\_\_

***Serviced By:***              \_\_\_\_\_

***Next Service Due:***      \_\_\_\_/\_\_\_\_/\_\_\_\_

***3<sup>rd</sup> Service:***              \_\_\_\_/\_\_\_\_/\_\_\_\_

***Serviced By:***              \_\_\_\_\_

***Next Service Due:***      \_\_\_\_/\_\_\_\_/\_\_\_\_

***4<sup>th</sup> Service:***              \_\_\_\_/\_\_\_\_/\_\_\_\_

***Serviced By:***              \_\_\_\_\_

***Next Service Due:***      \_\_\_\_/\_\_\_\_/\_\_\_\_

***5<sup>th</sup> Service:***              \_\_\_\_/\_\_\_\_/\_\_\_\_

***Serviced By:***              \_\_\_\_\_

***Next Service Due:***      \_\_\_\_/\_\_\_\_/\_\_\_\_

***6<sup>th</sup> Service:***              \_\_\_\_/\_\_\_\_/\_\_\_\_

***Serviced By:***              \_\_\_\_\_

***Next Service Due:***      \_\_\_\_/\_\_\_\_/\_\_\_\_

***7<sup>th</sup> Service:***              \_\_\_\_/\_\_\_\_/\_\_\_\_

***Serviced By:***              \_\_\_\_\_

***Next Service Due:***      \_\_\_\_/\_\_\_\_/\_\_\_\_

***8<sup>th</sup> Service:***              \_\_\_\_/\_\_\_\_/\_\_\_\_