

REDRHINOTM
PRODUCTS



5

Stage Reverse Osmosis System



PLEASE READ USER MANUAL CAREFULLY
BEFORE USE, STORE IN A SAFE PLACE

NOTE: This product's warranty is applicable only if the product has a valid proof of purchase document

Warrantee: 12 Months

www.redrhino.co.za

Waterfall
Filtration

Contents

| | |
|--|----|
| 1. Important Safety Instructions | 1 |
| 2. Parts Included | 2 |
| 3. A Brief Introduction to Reverse Osmosis | 6 |
| 4. How the Reverse osmosis System Works | 6 |
| 5. Preparation for Installation | 7 |
| 6. Installing the Filter Cartridges | 8 |
| 7. Water Inlet and Outlet Diagram | 11 |
| 8. Installing the Tap Faucet | 12 |
| 9. Installing the Waste Water Pipe | 14 |
| 10. Installing the Storage Tank | 14 |
| 11. Installing Inlet Water Pipe | 15 |
| 12. Installing the Reverse Osmosis system | 16 |
| 13. Initial Start - Up | 17 |
| 14. Specifications | 18 |
| 15. Troubleshooting | 19 |

1. Important Safety Instructions

When using electrical appliances, basic safety precautions should be followed to prevent the risk of fire, electric shock, and injury to persons or property. Read all instructions before using any appliance.

- DO NOT operate this or any other appliance that has a damaged cord. Connect to properly polarised outlets only. No other appliance should be plugged into the same outlet. Ensure that the plug is fully inserted into the receptacle
- DO NOT run cord over carpeting or other heat insulators. DO NOT cover the cord. keep cord away from high traffic areas, and do not submerge in water. DO NOT pull on the power cable
- We DO NOT recommend the use of an extension cord, as it may overheat and become a fire hazard.
- Ensure the Water Well Reverse Osmosis System is positioned in such away that the power plug is always accessible.
- Exercise caution and use reasonable supervision when appliance is used near children.
- Ensure the Water Well Reverse Osmosis System Housing Bracket is fitted securely to the wall and the water tank is on a level surface.
- Unplug the Water Well Reverse Osmosis System from the wall socket and drain all the water from the water tank if not in use for a long time.
- Clean all plastic housing components before use. Wipe the Housing Bracket and all the connections with a damp cloth
- It is recommended that a qualified plumber install the Reverse Osmosis System.
- ALWAYS CONNECT THE WATER WELL REVERSE OSMOSIS SYSTEM TO YOUR COLD WATER INLET

CAUTION: Plastic bags can be dangerous. To avoid danger of suffocation, keep this bag away from babies and children.

1. Parts Included

1 x Housing Bracket (consists of)

A - Reverse Osmosis Membrane Casing

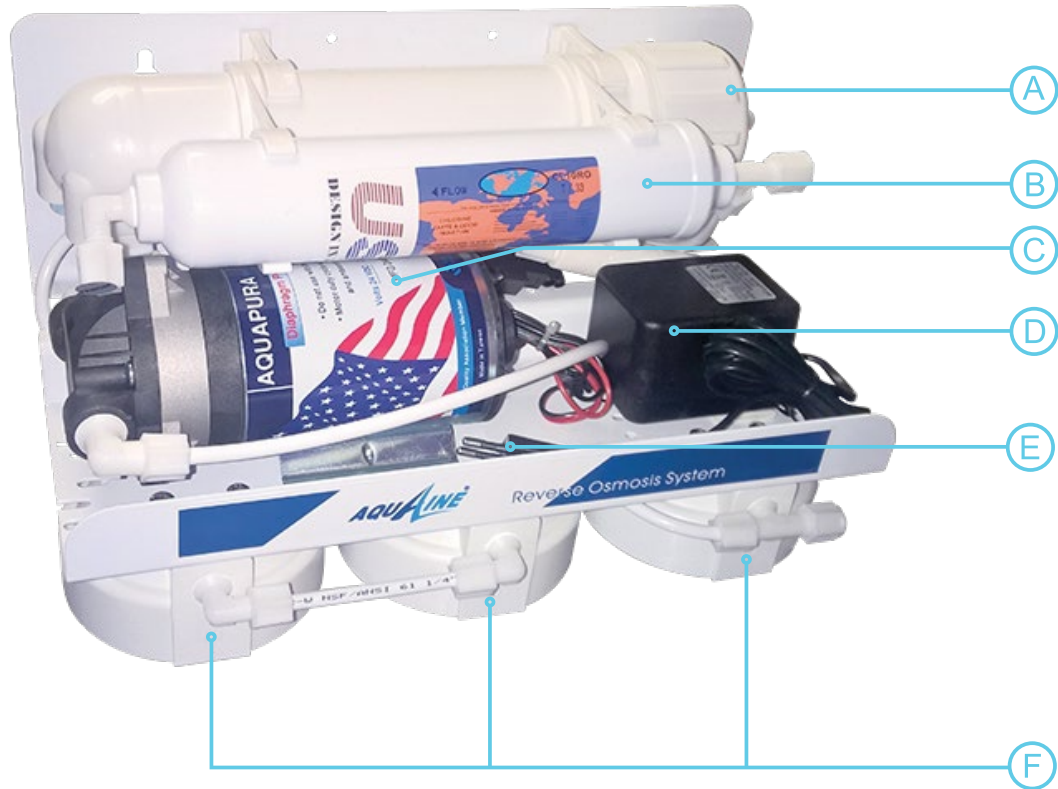
B - Taste & Odour Reduction Filter Cartridge

C - Water Pump

D - Transformer

E - Two Pronged Plug

F - 3 x Vertical Housing Upper Casings (includes O-Rings inserted)



1 x Reverse Osmosis Membrane



1 x Polypropylene Filter Cartridge



1 x CTO Carbon Block Filter Cartridge



1 x GAC Granular Activated Carbon Filter Cartridge



1 x T33 Carbon Filter Cartridge



3 x Vertical Housings (inclusive of O-Ring)



1 x Roll Piping



1 x Ball Valve for Water Tank



1 x 12lt Pressure Tank & Stand

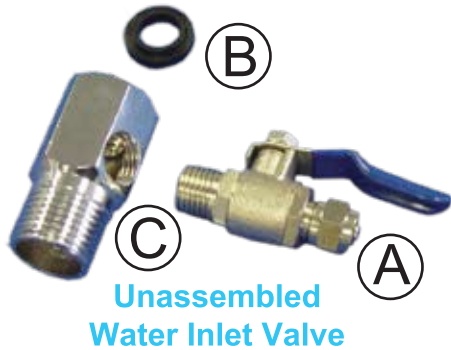


1 x Feed Water Valve (comprised of the below parts)

A - Water Inlet Valve Shut off

B - O-Ring

C - Feed Water Adaptor



Unassembled Water Inlet Valve



Assembled Water Inlet Valve

1 x Faucet Tap Set (not to scale)



1 x Wall Mounting



1 x Spanner for Reverse Osmosis Membrane Casing & Vertical housings



3 x Wall Plugs and Screws



3. A Brief Introduction to Reverse Osmosis

Reverse Osmosis is a very fine filtration process, which occurs at a molecular level. The process involves forcing water through a semi-permeable membrane, which allows only a given size of molecule to pass, and rejects the rest. In effect, the pores or holes in the membrane are so small that most of the harmful minerals and chemicals cannot pass, while water molecules pass through. The rejected water carrying the minerals in a high concentration is drained off through the waste water pipe, and the pure water is diverted to the storage tank for drinking. The Water Well Reverse Osmosis Filtration System removes up to 95% of harmful minerals and chemicals, the system also removes suspended impurities such as dirt, sand and rust, it improves the odour and taste of your municipal water and leaves good, clean and health water for your consumption.

4. How the Reverse Osmosis System Works

Incoming water, passes through 3 types of filters before it reached your Reverse Osmosis Membrane.

The first filter is the Polypropylene Filter, this filter removes the large suspended particles, such as dirt, sand and rust.

The second filter is a GAC (Granular Activated Carbon) Filter, this filter improves the taste and odour of your water as well as reducing the amount of chlorine, radon, heavy metals and hydrogen sulfide as well as reducing finer particles of sediment in your water, by absorbing these elements from the water.

The third filter is a CTO Carbon Block Filter, this filter consists of activated carbon particles fused into a uniform block with enhanced absorptive capacity and efficiency. This means it further reduces the amount of chlorine, radon, heavy metals and hydrogen sulfide as well as reducing finer particles of sediment in your water.

Water then passes to the Reverse Osmosis Membrane where very fine particles are extruded from the water and dispensed through the waste water pipe.

The filtered water then passes through one last T33 (In-Line Carbon) Filter, to further reduce by absorption any remaining amounts of chlorine, radon, heavy metals and hydrogen sulfide, that may have been missed by the Reverse Osmosis Membrane as well as reducing finer particles of sediment in your water.

Water then flows to your Storage Tank, when you dispense water, it flows through your Mineral Ball Filter which replenishes your water with a variety of beneficial minerals, that improve the taste of and quality of your water.

NOTE: It is required that an authorised plumber or installer is used when installing the Reverse Osmosis Filtration System. Please contact us on 0860 099355 for any assistance

NOTE: It is recommended that a water pressure regulator be installed at the inlet to avoid leaking due to excessive water pressure (Above 4.5 Bars) and fluctuations in water pressure.

5. Preparation for Installation

- This system must be mounted in such a way to allow access to service the system or change the filter cartridges, it is recommended that the unit be mounted vertically. At the same time the Water Well Reverse Osmosis Filtration System be relatively near the dispensing tap to maximise the flow rate.
- Please ensure that there is sufficient space surrounding the storage tank. If there is insufficient room under the sink to place the storage tank, the tank may be relocated into an adjacent cupboard.
- ALWAYS ENSURE THAT YOU CONNECT THE WATER WELL REVERSE OSMOSIS FILTRATION SYSTEM TO THE COLD WATER INLET.
- The Water Well Reverse Osmosis Filtration System has a transformer that transforms 220V from your house mains to 24V to run the pump, please ensure you have a plug available
- The pump helps keep a constant pressure to promote a continuous flow of water through the Water Well Reverse Osmosis Filtration System and out of the Tap Faucet.
- Always ensure that your waste water pipe is connected to your waste water drain.

6. Installing the Filter Cartridges

1. Remove all the various parts from their packaging.

NOTE: The Reverse Osmosis Membrane has an oily coating, this is to protect the membrane during transport, and this will wash away after the first few flushes of the system

2. Wipe the various casing and canisters on the Water Well Reverse Osmosis Filtration System, with a damp cloth to remove any dirt and dust.

NOTE: DO NOT install the Reverse Osmosis Filtration System into your kitchen cabinet as yet. Do you initial connections first, before securing to your cabinet.

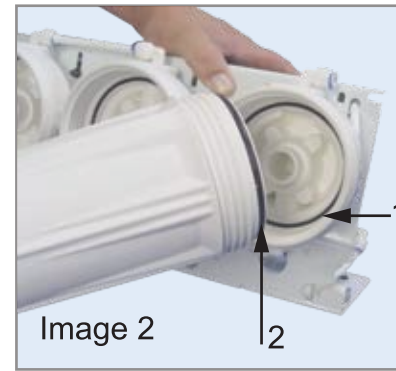
3. Remove the piping from the packaging and set to one side.

NOTE: Always ensure that your length of pipe connecting your Reverse Osmosis Filtration System to your water mains, storage tank and Tap Faucet are of a sufficient length to allow you to remove the unit from the cabinet to do routine maintenance and to to change your filters



4. Insert the various Filter Cartridges into the Vertical Housings See Image 1 for which filter to place in which hanging casing. From Left to Right

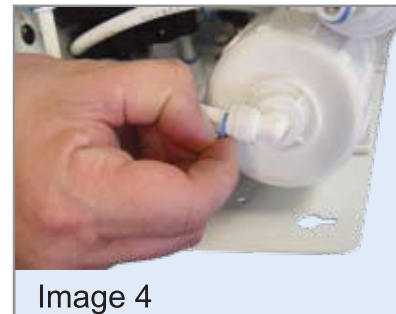
1. Right - Polypropylene Filter
2. Middle - Carbon Filter
3. Left - Carbon Block Filter



5. Once you have placed a the filter into the Vertical Housing, ensure that the upper O-Ring (1) is secure within the recess and that the O-Ring on the hanging casing is not bulging in any way (2). Screw in the hanging casing into the bracket housing. See Image 2



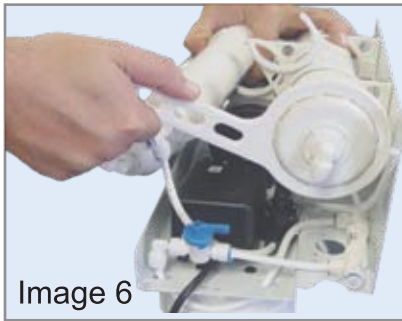
6. Tighten the hanging casing by twisting to the right with the large spanner See Image 3



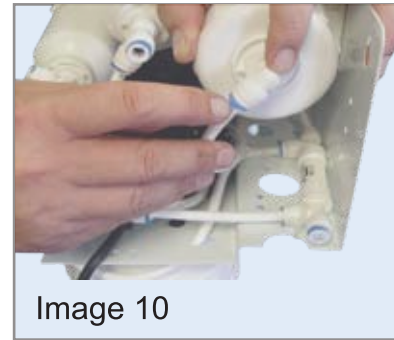
7. To remove the connecting piping from the Reverse Osmosis Casing and other filters. Remove the Blue Stabiliser Clip See Image 4



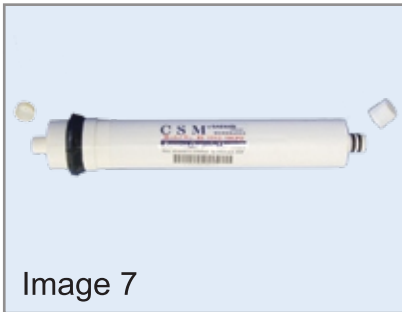
8. Pull back on the white collar on the Adaptor and pull gently on the pipe to release it from the Adaptor. See Image 5



9. Using the Small Spanner, place over the lid of the Reverse Osmosis Casing and pull down to loosen the lid, once loose twist and remove the lid from the casing
See image 6



13. Re-insert the piping leading to the cap of the Reverse Osmosis Membrane Casing and secure with the Blue Stabiliser Clip.



10. Remove the Reverse Osmosis Membrane from its plastic wrapping, (if you have not done so already), remove the caps from the ends of the Reverse Osmosis Membrane
See image 9

14. Place the Housing Bracket to one side

7. Water Inlet and Outlet Diagram



11. Insert the Reverse Osmosis Membrane into the casing, with the black ring facing towards the Reverse Osmosis Membrane Casing Cap
See Image 8



12. Tighten the cap back onto the Reverse Osmosis Membrane Casing and tighten using the Small Spanner.
See Image 6 & 9

A - Water Inlet (Water coming in from the mains into the Water Well Reverse Osmosis Filtration System)

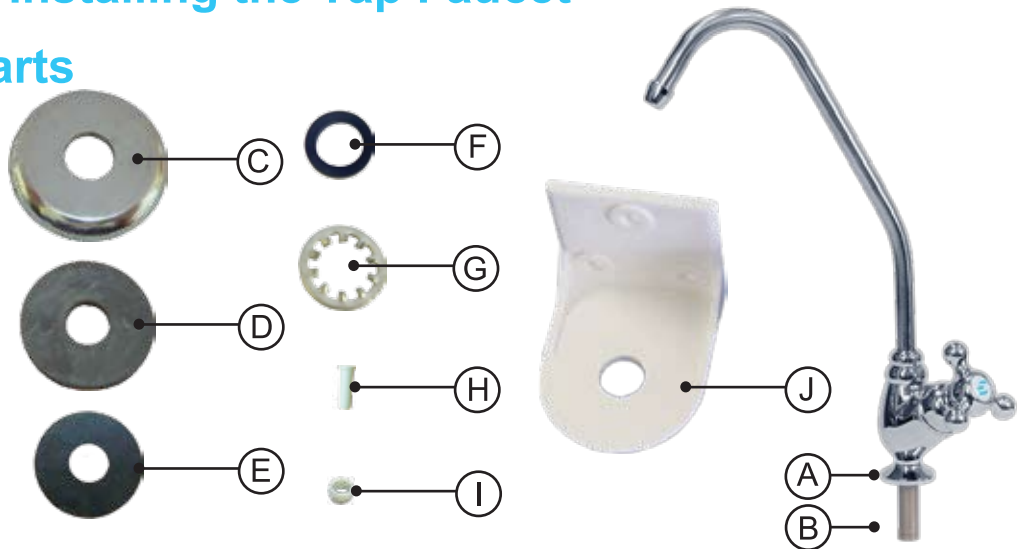
B - Water Outlet to Storage Tank

C - Waste Water Outlet (Needs to be connected to your drain)

D - Water Outlet to Tap Faucet

8. Installing the Tap Faucet

Parts



NOTE: It is recommended that you do the installation of the Tap Faucet only once you have secured the Housing Bracket in its final position.

1. Remove the brass nut (A & B) from the threaded neck of the Tap Faucet place the Silver Protection Cover (C) onto the threaded neck of the Tap Faucet, then the largest Black Washer (D) and then the smaller Black Washer (E). Insert the threaded neck into the hole you have drilled near your sink, alternatively insert the threaded neck into the wall mounting (J) provided (attach the wall mounting securely to your wall above your sink with wall screws) Refer to Parts Diagram above



Image 11

2. Place the Smallest Black Washer (F) under the counter (or wall mounting) and then the Silver Washer (G) and secure with the Brass Nut (A) See Image 11



Image 12

3. Measure out the correct length of piping that will allow you at a later stage remove the Water Well Reverse Osmosis Filtration System from the cabinet for maintenance and to replacing the filter cartridges.

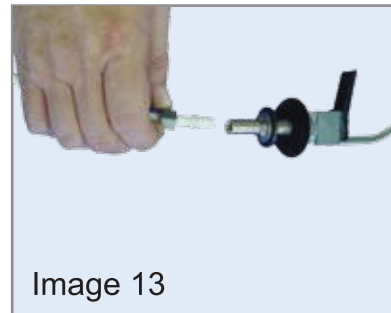


Image 13

4. Place the brass nut (B) (open side toward the end of the piping) onto the piping. Slide the Piping Collar (H) onto the end of the pipe and insert the Pipe Insert Seal (I) into the open end of the piping.



Image 14

5. Insert the open end of the piping into the end of the Threaded Neck secure with the brass nut (B) See Image 12,13 & 14



Image 12

6. Remove the Blue Circlip from the outlet valve of the Mineral Ball Filter. Push the open end, of the piping from the Tap Faucet, firmly into the outlet and secure the Blue Circlip once again. See Image 15

9. Installation of the Waste Water Pipe

1. Measure out the correct length of piping that will allow you, at a later stage, remove the Reverse Osmosis Filtration System from the cabinet for maintenance and to replace the filter cartridges.



Image 13

2. Remove the Blue Circlip from the Waste Water Outlet on the Housing Bracket. Insert the end of the length of piping into the Waste Water Outlet secure with the Blue Circlip. See Image 13

3. Attach the other end of the Waste Water Pipe to your sewage outlet or drain.

10. Installation of the Storage Tank

1. Measure out the correct length of piping that will allow you at a later stage remove the Reverse Osmosis Filtration System from the cabinet for maintenance and when replacing the filter cartridges.

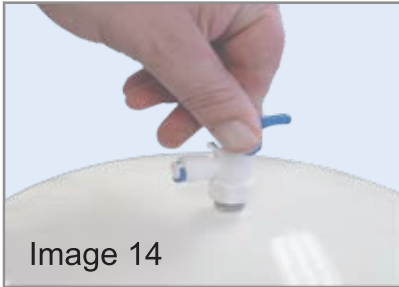


Image 14

2. Screw the Ball Valve onto the Storage Tank (NOTE: Some models may come with a metal Ball Valve) See Image 14



Image 15

3. Remove the Blue Circlip from the I Ball Valve and insert the end of the piping firmly into the opening. Replace the Blue Circlip to secure the piping. See Image 15

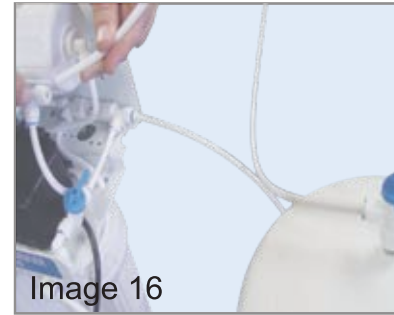


Image 16

4. Run the piping to the T-Piece Adaptor on the T33 Taste and Odour Filter. Remove the Blue Circlip and insert the end of the piping into the Adaptor. Replace the Blue Circlip to secure the Piping. See Image 16

11. Installation of the Inlet Water Valve

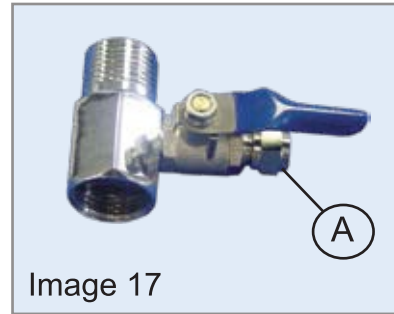


Image 17

1. Measure out the correct length of piping that will allow you, at a later stage, remove the Reverse Osmosis Filtration System from the cabinet for maintenance and to replace the filter cartridges.



Image 18

2. Unscrew Nut (A) (see image 17) from the assembled Water Inlet Valve, and thread the nut (threaded opening facing towards open end of piping) onto the piping.

3. Push the open end of the piping onto the nozzle that has become exposed after you removed the Nut (A) and then tighten the nut back onto the Water Inlet Valve See Image 18

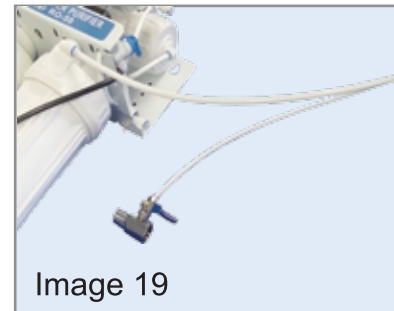


Image 19

4. Take the opposite end of your piping attach this to the Water Inlet on the Housing Bracket (remove the blue clip and insert the piping, insert blue circlip to secure) See Image 19

12. Installation of Reverse Osmosis System

Once you have put your Water Well Reverse Osmosis Filtration System together you are ready to install the system into your cabinet and connect the system up to your water mains.



1. Turn off the water supply and install the Water Inlet Valve onto the cold water pipe (ensure the Water Inlet Valve is in the "Closed" position)
2. Drill pilot holes inside your cabinet that correspond with the guide holes on the Housing Bracket (ensure that you are easily able to remove the Housing Bracket for routine maintenance and to replace the filters), Insert your wall plugs provided and secure the Housing Bracket into your cabinet with the screws provided.
3. Drill a hole beside your sink or where you would like to position Tap Faucet. See Section 7 on how to assemble the Tap Faucet.

4. Ensure that the Waste Water Pipe is connected to your waste water system
5. Plug the Transformer into a three pronged grounded wall socket.
6. Ensure that all fitting and fixtures are secure before you turn your water mains on.

13. Initial Start-Up



1. Ensure that the Ball Valve on the Storage Tank is in the closed position. See Image 20
2. Open the Water Inlet Valve and allow water to flow into the system.
3. Turn on the Transformer at the wall socket.
4. Open the Tap Faucet and allow the water to flow for 3 minutes. Flow will reduce to a drip.

5. Close the Tap Faucet and wait for 3 minutes.
6. Repeat step 4

NOTE: If you have not closed your Ball Valve on the Storage Tank the protective coating on the Reverse Osmosis Mebrane will enter the tank and there may be an after taste to your water. Please ensure you close the Ball Valve to prevent this from happening.

7. Open the Ball valve on the Storage Tank and leave the system to allow the tank to fill up. See Image 20
8. Drain the Storage Tank by opening the Tap Faucet and then allow the Storage Tank to fill up again.
9. Your Reverse Osmosis Filtration System is now ready to use.

14. Specifications

- Six Stage Filtration System
- Automatic Flush System for easy cleaning and prolonging the life of the system
- Dispenses 150lts of filtered water per 24 hour period
- Requires a water pressure range of 2 - 4 bar
- A Pressure reducing valve is recommended for high pressure systems
- Optimum Temperature Range 5 - 45°C

| | | |
|---------------------------------|---|-------------------------------|
| Voltage | : | 220V |
| Dimensions (Housing Bracket) | : | W: 356 x D : 184 x H : 445 mm |
| Dimensions (Storage Tank) | : | Dia : 260 x H : 360 mm |
| Tap Faucet Height above counter | : | 220 mm |
| Tank Capacity | : | 12lts |
| G.W. (Packaging, When Empty) | : | 16kgs |
| N.W. (When Empty) | : | 14kgs |

NOTE: Please ensure that you keep the Users Manual, Small and Large Spanner in a safe place. The Small and Large Spanners are required to change your filters

15. Troubleshooting

| Problem | Cause | Solution |
|---|---|---|
| Milky Coloured Water | There is air in the system | Air in the system is a normal occurrence with initial startup of the RO System. This Milky look will disappear during normal use in 1 to 2 weeks |
| Noise from Faucet | - Location of the Drain Saddle - Restriction in Drain Line | - Reposition the Saddle - Clear the blockage (Sometimes caused by debris from the garbage disposal or dishwasher) |
| Small amount of water in the storage tank | - System is just starting up - Air Pressure in storage tank is low | - Normally it takes 2-4 hours fill the storage tank. Low water pressure and/or temperature can reduce production rate. - Add pressure to the storage tank, the pressure should be 5 to 6 psi when the tank is empty. |
| Slow Water Production | - Low Water Pressure - Crimps in the Piping - Clogged Filters - Fouled Membranes | - This system requires a minimum of 40 psi (2-4 bar) incoming water pressure. A booster pump may be needed in low water pressure areas. - Check tubing straighten or repair as necessary - Re-place the filters - Replace reverse osmosis membrane |
| Water Tastes or Smells Offensive | - Carbon Filter (T33) is depleted - RO Membrane is dirty - The system is not flushing the RO membrane | - Replace the Filter Cartridges - Replace the Reverse Osmosis Membrane - Drain the Storage Tank, ensure the RO Membrane is flushed clean and refill the Storage Tank overnight |
| No Drain Water | Clogged Flow Restrictor | Replace Flow Restrictor / Flow limit valve |
| Leaks | - Fittings are not tightened - Missing O-Rings - Mis-alignment of hole in divertor valve | - Tighten fittings - Contact Local Dealer - Re-align the divertor valve |



5 | Stage Reverse Osmosis System