

# REVERSE OSMOSIS MANUAL



**Features Reliable, DOW™ FILMTEC™ Membrane  
4 - Stage Reverse Osmosis System - Part Number: 15-3000**

Waterlogic Commercial Products, LLC  
3175 Bass Pro Drive  
Grapevine, TX 76051  
(800) 288-1891 [www.waterlogicdealers.com](http://www.waterlogicdealers.com)  
Tech Portal Website: [techportal.waterlogic.com](http://techportal.waterlogic.com)

## **REVERSE OSMOSIS MANUAL**

Congratulations on your choice of the **Waterlogic RO System**. The **Waterlogic RO System** enhances point-of-use water treatment systems by reliably providing low impurity drinking water. This manual demonstrates the pre-installation procedure for the **Waterlogic RO System**.

By following this procedure, the effectiveness and longevity of the System is increased, and ensures that the DOW™ FILMTEC™ Polyamide TFC Membrane meets NSF/ANSI 58 Standard\*.

*\* It is recommended that systems using these elements rinse the elements for 24 hours, prior to first use, to meet NSF/ANSI 58 Standard.*

### **SAFETY PRECAUTIONS**

- ⚠ CAUTION! TEMPERATURE LIMITATIONS.** *Never expose to direct sunlight, heat sources, or ambient air temperature above 37°C (100°F) or below 2°C (35°F). Install indoors and never expose to freezing temperatures!*
- ⚠ CAUTION! USE A WATER PRESSURE REGULATOR.** *Waterlogic will not be responsible for injury or damage caused by excessive water pressure. Input or feed pressure must be 40 psi to 60 psi. Be aware of any potential pressure surges caused by building/municipal pumping stations.*
- ⚠ CAUTION! USE UV STABILIZED SUPPLY LINES.** *Feed with potable ambient or cold-water supply only. Feed water over 37°C (100°F) can damage the treatment components. Water block devices and external leak detectors are strongly recommended. Locate the unit as close to the water supply as possible. Immediately isolate or close water supply valve and contact service representative if leak is noticed.*



## DOW™ FILMTEC™ MEMBRANE SPECIFICATIONS

Waterlogic Part Number	15-3000
Dow Part Number	TW30-1812-50
Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	37.8°C (100°F)
Maximum Operating Pressure	40-60 psi
Maximum Feed Flow Rate	2.0 gpm (7.6 lpm)
pH Range, Continuous Operation*	2 – 11
Maximum Feed Silt Density Index	5
Free Chlorine tolerance	< 0.1 ppm

\*Dow Filmtec™ Membrane, Model TWO30-1812-50 is certified as a component to NSF/ANSI-58.

\*Maximum temperature for continuous operation above pH 10 is 95°F (35°C).

### FILTER PURPOSE

<b>P -</b> Waterlogic Sediment Filter P/N 15-3003	<b><u>SEDIMENT FILTER</u></b> Traps particles in the water.
<b>C -</b> Waterlogic Carbon Filter P/N 15-3002	<b><u>PRE FILTER</u></b> Traps organic chemicals and chlorine, which would attack and break down the Thin-Film Composite Membrane.
Reverse Osmosis Membrane P/N 15-3001	<b><u>MEMBRANE</u></b> 75 GPD - Synthetic semi-permeable membrane through which only molecules as small as water molecules can pass.
<b>AIC -</b> Waterlogic Carbon Block Filter P/N 15-3004	<b><u>POST FILTER</u></b> Polishes taste, equalizes pH.



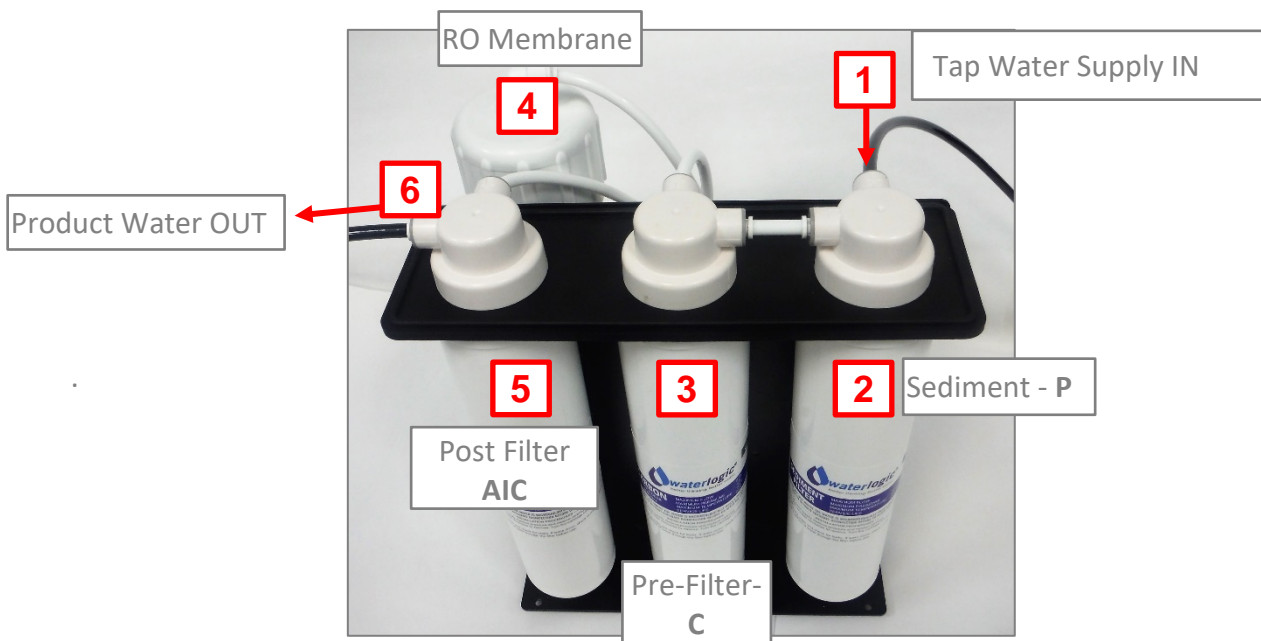
## REVERSE OSMOSIS SYSTEM PARTS LIST

No	WLCP Part No.	Description	
1	15-3000	Waterlogic 4-Stage Reverse Osmosis System	
2	15-3015	RO Fixing Plate	
3	15-3017	Mounting Bracket	
4	15-3016	4-Way Shut Off Valve	
5	15-3021	Check-Valve P/N 10-7270 as alternate	
6	15-3022	Flow Restrictor	
7	Purchase from John Guest	¼" Tube x 1/8" Male NPTF Elbow John Guest Fitting PI480821S	
8	15-3018	2.5 Inch Filter Clip	
9	15-3010	Filter Head	
10	15-3003	Waterlogic Sediment Filter – P	
11	15-3002	Waterlogic Pre-Carbon Filter - C PRE FILTER	
12	15-3020	RO Membrane Housing <i>*Membrane sold separately - P/N 15-3001</i>	
13	15-3001	DOW™ FILMTEC™ RO MEMBRANE – 75 GPD <i>*Housing sold separately - P/N 15-3020</i>	
14	15-3004	Waterlogic Carbon Block - AIC POST FILTER	

## RO WATER FLOW

The RO System works by forcing water through a DOW™ FILMTEC™ TFC Membrane, utilizing a process called reverse osmosis. The **Waterlogic RO System** provides high-quality pre- and post-membrane filters to ensure superior water quality.

Item	Description	
1	Tap Water Supply IN	Water Supply
2	Sediment – P	Waterlogic Sediment filter Part Number 15-3003
3	Pre-Carbon – C	Waterlogic Carbon filter Part Number 15-3002
4	RO Membrane	DOW™ FILMTEC™ Membrane Part Number 15-3001 – 75 GPD
5	Post Carbon Block– AIC	Waterlogic Carbon Block – Taste and Odor Reduction Part Number 15-3004
6	Product Water OUT	Removes Wastewater aka Brine



## PRE-INSTALLATION INSTRUCTIONS

### Materials Needed:

- ¼" food grade polyethylene tubing
- Tubing cutter
- Strap Wrench

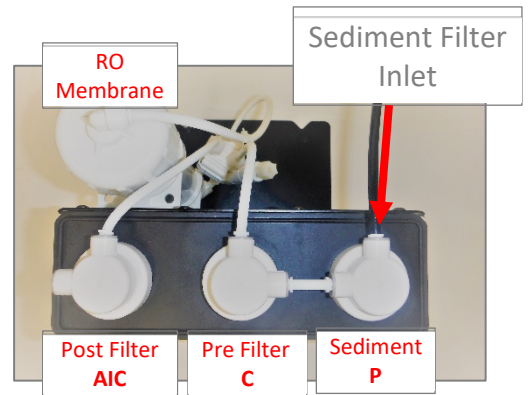


### RO Membrane Recommendations:

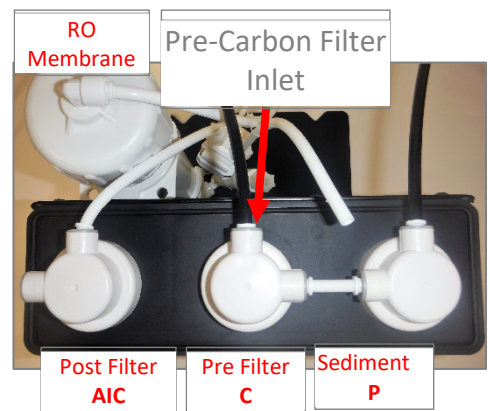
- RO Membrane Element to be rinsed for 24 hours, prior to first use, to meet NSF/ANSI 58 Standard flushing requirements.
- Permeate water obtained from the first hour of use should be discarded to the drain.
- To ease installation, it is recommended to use a lubricant safe for indirect water contact on all seals. Potential options include water, glycerin based lubricants, and Dow Corning<sup>™</sup> 111.
- Rotate the elements about a quarter turn to ease installation and removal of the element. Ensure good interference between the O-rings and brine seal with their connection surfaces
- Keep elements moist at all times after initial wetting
- To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservation solution. Rinse out the preservative before use.
- The membrane shows some resistance to short-term attack by chlorine (hypochlorite). Continuous exposure, however, may damage the membrane and should be avoided.



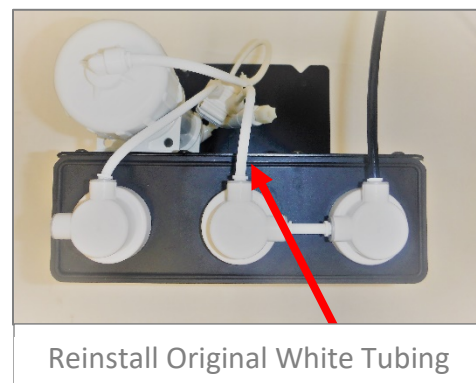
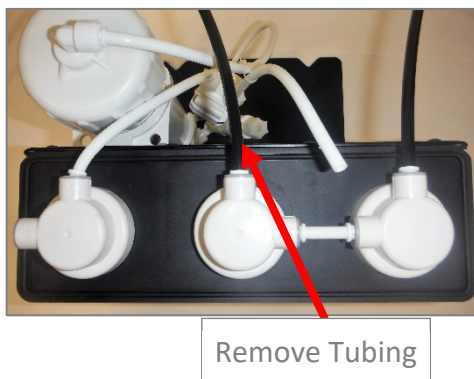
1. Locate the RO assembly System. Remove the RO assembly and RO membrane.
2. Connect a ¼" water supply to the inlet of the Sediment Filter (P).



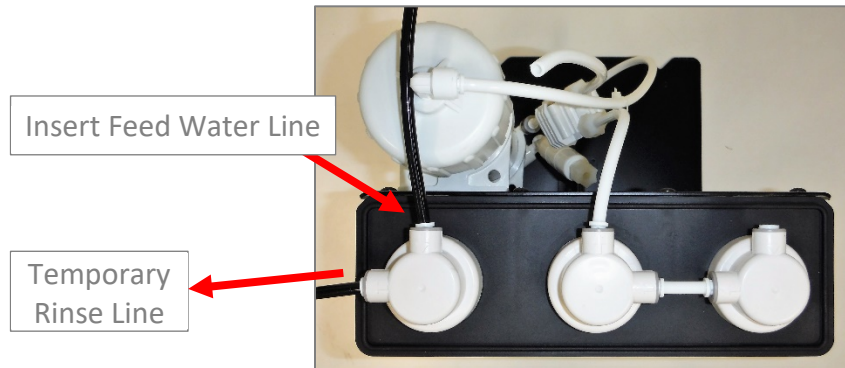
3. Disconnect the outlet of the Pre-Carbon Filter (C) and insert a section of ¼" tubing into that fitting.



4. Open the water supply and flush at least 4 gallons of water through the Sediment (P) and Pre-Carbon (C) filters.
5. Shut off the water supply.
6. Remove the section of tubing that was attached to the outlet of the Pre-Carbon (C) Filter. Reinstall the section of tubing that was originally removed from the Pre-Carbon (C) Filter.



7. Disconnect the inlet tube from the Post-Carbon Filter (AIC) and insert the feed water line.



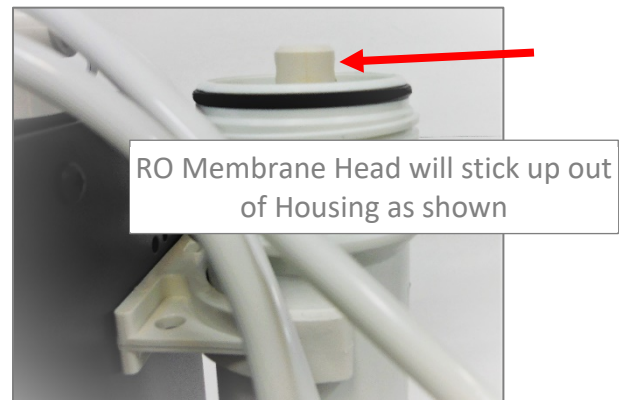
8. Open the water supply and rinse 5 gallons through the Post-Carbon (AIC) filter.
9. Reconnect the tubing in its original configuration.



10. Remove the RO Membrane from the wrapper.



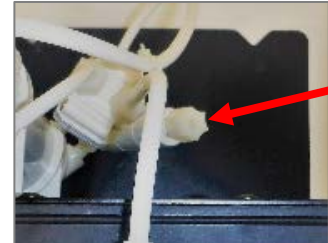
11. Open the RO Membrane Housing using a Strap Wrench or similar device if Housing Head cannot be removed by hand. Insert the RO Membrane, ensuring the Membrane is bottomed out in the Housing tightly.



**Note:** If the membrane does not seat in the housing, water will not be forced through the membrane.



12. Connect feed water line to the Sediment filter (P).
13. Insert a section of tubing into the outlet of the Post Carbon (AIC) filter. Run this line to a sink or floor drain.
14. Install drain tubing at Jaco fitting and route to a sink or floor drain.



15. Open the water supply and allow water to pass through the RO assembly for 24 hours (this is the amount of time recommended by the manufacturer to meet NSF/ANSI 58 Standard). A pressure regulator pre-set at 60 psi should be used on all RO assemblies in the shop and at the customer location.
16. Remove the rinse tubing. The RO System is now ready for use. When placing the System in a machine, follow the specific instructions for reconfiguring the inlet and drain lines and securing the System.

**Note:** Before installation, check TDS (Total Dissolved Solids) on the outlet water. If the RO System is functioning properly, a >90% reduction can be expected.

## TROUBLESHOOTING

**Symptom:** Reduction levels are not at 90% or better:

Possible Reason	Solution
RO System not set up as instructed	Check the configuration of the RO System. Make sure the System is set up identical to how it came out of the box.
RO Membrane not seated correctly	<p>The RO Membrane may not be seated correctly. Open the RO housing and make sure the membrane is bottomed out in the housing.</p> <p>If the membrane was not bottomed out, steps 12-16 must be repeated to flush the membrane correctly.</p>





## **WATERLOGIC MANUFACTURED WATER TREATMENT SYSTEM LIMITED WARRANTY** **UNITED STATES AND CANADA ONLY**

*Waterlogic water treatment systems are guaranteed to the original purchaser to be free of defects in materials and workmanship for a period of one (1) year from the date of purchase. Waterlogic Commercial Products, LLC (“Waterlogic”) based in the U.S.A. and its affiliated companies are not liable for any cost of removal, installation, transportation, or any other charges which may arise in connection with a warranty claim.*

*This warranty does not cover damage or wear to products caused by abnormal operating conditions, accident, abuse, misuse, unauthorized or improper alteration or repair, damage caused by or resulting from shipping or accident, damage caused by hot water, freezing, flood, fire, or acts of God. The effects from chlorine corrosion, scaling and normal wear are specifically excluded from this warranty. This warranty does not cover products used outside the countries where the unit was purchased, and does not cover products that were not installed in accordance with Waterlogic printed installation and operating instructions obtained in training or from [www.waterlogic.us](http://www.waterlogic.us). Failure to follow all instructions for operation and maintenance voids the warranty. This warranty is not transferable.*

*To obtain warranty repairs or replacement, you must obtain a Return Authorization from Waterlogic. To obtain a Return Authorization, you must submit a Return Authorization form with supporting documentation to Waterlogic for evaluation. The form is available at [www.waterlogic.us](http://www.waterlogic.us). Supporting documentation must include, but is not limited to; proof of purchase, installation date, failure date, and supporting installation and maintenance data. After you submit a Return Authorization form and supporting documentation, Waterlogic will determine whether a reasonably apparent defect in materials or workmanship covered by this limited warranty exists. If Waterlogic determines the claimed defect is covered by this warranty, Waterlogic will, at its sole discretion, determine whether to correct the defect or replace the unit, free of charge to you. If Waterlogic determines that the unit should be returned for warranty service, Waterlogic will approve of return in writing and will issue a Return Authorization which you must obtain prior to shipping the product. You are responsible for the cost of freight in to Waterlogic.*

*Waterlogic and its affiliated companies hereby limit the duration of any and all implied warranties to a maximum period one (1) year from the date of purchase. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Consequential and incidental damages are not recoverable under this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.*

*This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.*

**New Warranty Policy issued by Waterlogic Commercial Products LLC, USA - January 10, 2014**

**Waterlogic Commercials Products LLC**  
3175 Bass Pro Drive  
Grapevine, TX 76051

**Tel:** (800) 288-1891  
**Website:** [waterlogic.us](http://waterlogic.us)