



Reverse Osmosis Drinking Water System Owners Manual



Installation Date: _____ Service Tech: _____ Model # _____

Angel Water Conditioning
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Maintenance Information

Congratulations on your purchase of Angel Reverse Osmosis Drinking Water System. This system has been tested and validated for use in the home for the removal of most contaminants found in water. At a fraction of the retail cost of bottled water, your Reverse Osmosis System will produce quality water right at your sink, or connected to your refrigerator's icemaker. We hope you enjoy this product to its full potential, and see as we have the benefits of clean, clear, purified water!

This Angel Reverse Osmosis Drinking Water System requires very minimal maintenance, however the pointers listed below will greatly improve its overall effectiveness and longevity.

It is recommended that the Pre-Filter and Post-Filter be changed at least every twelve (12) months. This system is equipped with a horizontal Polishing Filter, it is recommended that it be changed at least every year. The Membrane Element should be changed every three (3) years depending on supply water conditions, and proper filter maintenance.

Contact Angel Water , Inc. (847) 382-7800 for further information about replacement parts.

Contact Angel Water, Inc. at 847-382-7800 for a service representative to maintain your system for you.

Model Design and Features

Your Angel Reverse Osmosis Drinking Water System is equipped with the following:

- Full sized 9 inch Pre and Post filter for sediment, taste, and odor removal
- Attractive countertop faucet
- Easy quick-connect plastic fittings for fast, simple, and reliable connections
- Self-piercing inlet saddle valve for quick access to raw water supply
- No energy required as the system operates using existing line water pressure
- Service and support offered from trained, competent personnel

Operating Parameters and Guidelines

• **Specifications and Parameters for Proper Operation**

Storage Tank Capacity ~ 2.1 Gallons (with RO Mate 4)

Feed Water Pressure 40psi minimum to 80psi maximum

Feed Water Temperature 40 F / 4.4 C minimum to 80 F / 26.7 C maximum

Feed Water pH 4.0 – 11.0

R.O. Membrane Cellulose Triacetate (CTA) – Chlorinated Water

Thin Film Composite (TFC) – Non-Chlorinated Water

Total Dissolved Solids CTA Systems 1,000 PPM

TFC Systems 1,800 PPM

Pre-Filter Turbidity 1 Micron Nominal Spun Polypropylene

Post Filter 0.5 Micron Activated Carbon Block

Faucet Height 6.5” with 1.5” reach

Parts Checklist



Saddle Valve



Long Reach
Faucet



Filter Housing
Wrench



Drain Clamp



Female Tank
Adaptor



Storage Tank

Filter Change Instructions

Before You Begin:

- Be sure that you have the proper replacements handy to speed the filter change process
- Identify the filter locations to be replaced on the system
- Have a dry cloth, towel, or drip pan handy to absorb any spillage which may occur
- Locate and place near the System, the Filter Housing Wrench

Shut the System Down:

- Turn the Saddle Valve stem completely inward or CLOSED to discontinue supply water into the System
- Close the Female Tank Adaptor valve such that it runs perpendicular to the incoming line in order to discontinue Storage Tank supply into the System
- Put the black handle on the Long Reach Faucet to the ON or up position to relieve any pressure in the System and make sure the water stops completely.

Replacing the Vertical Carbon and Sediment Filters:

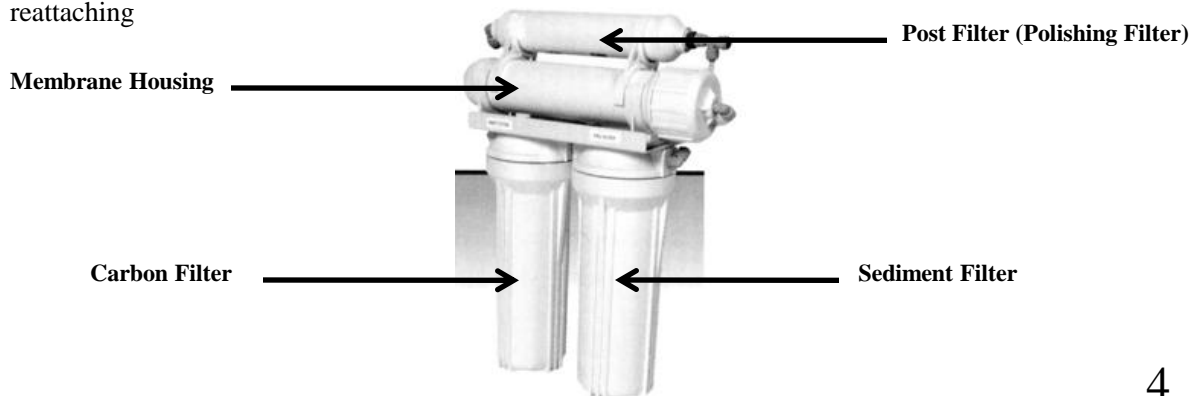
- Lift the black handle on the Long Reach Faucet to the OFF or horizontal position to prevent any water in the System from draining
- Slide the Filter Housing Wrench over the desired vertical Filter Housing and remove the bottom section by turning the handle in a CLOCKWISE direction (NOTE: previous system pressure may have tightly affixed the bottom section to the top of the Housing; a normal occurrence which may require some extra effort to remove the section at first)
- Once the bottom section is free from the System, remove the old filter and water from inside the section and replace with its respective replacement. Make sure O ring is in the groove on top portion of the housing.
- Hand screw the bottom section back to its initial position in a COUNTERCLOCKWISE direction, tightening it slightly with the Filter Housing Wrench
- Repeat this procedure as necessary until all vertical filters have been changed

Replacing the Horizontal Polishing Filter:

- Locate and remove the used Polishing
- Removing the plastic elbow fitting from each side of the Filter and set aside for re-use
- Apply Teflon® pipe tape to the threaded portion of each plastic elbow, and hand screw them securely into the replacement Polishing Filter
- Reattach the Polishing Filter to the system being careful not to stretch or kink any tubing when reattaching the Filter

Replacing the Membrane Element:

- Locate and disconnect the tubing from the end of the Membrane Housing with one line attached. Unscrew the cap and remove the used Membrane Element inside the housing. Replace with the new Membrane Element, being careful to avoid touching the Element itself. Re-screw the cap onto the Housing by hand and tighten securely. Reattach the tubing to the cap, being careful not to stretch or kink any tubing when reattaching



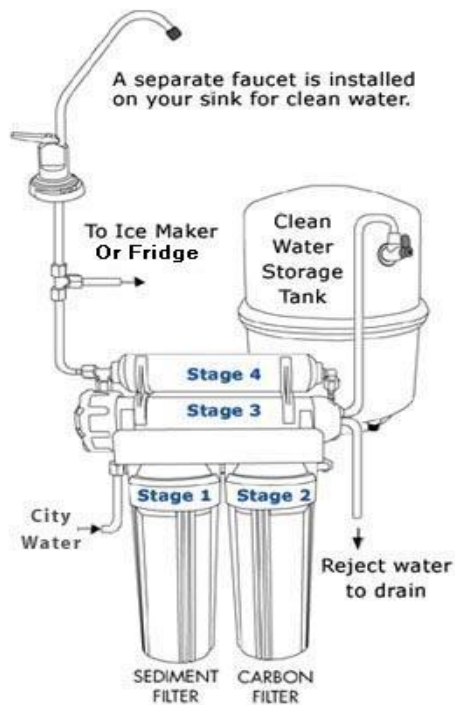
Troubleshooting Guide

Problem:	Probable Cause:	Solution:
High Product Water T.D.S. (Total Dissolved Solids)	Feed water pressure is too low	Feed water must be at least 50psi; a booster pump may be necessary
	The new Post-Filter may not be sufficiently flushed	Flush the Post-Filter by allowing the System to produce at least two tanks full of water
	Increase in inlet water supply T.D.S.	Proper pre-treatment of inlet water supply may be necessary to maximize the effectiveness of the System. Consult your dealer for advice
Bad Taste in Product Water	Increase in product water T.D.S.	See “High Product Water T.D.S.”
	Post-Filter exhausted	Replace Post-Filter
	Storage Tank and System contaminated	See Sanitizing Procedure for R.O. Systems included in this manual and replace all Filters and Membrane Element
	Storage Tank diaphragm slippage	Replace Storage Tank and Post-Filter
	The new Post-Filter may not be sufficiently flushed	Flush the Post-Filter by allowing the System to produce at least two tanks full of water
Cloudy Water	Dissolved air in the inlet water supply gets concentrated in the product water from the system	Letting water stand for a few minutes will allow the air to exit the water naturally; proper pre-treatment of inlet water supply may be necessary to maximize the effectiveness of the System. Consult Angel Water for advice
Cloudy Ice Cubes	Increase in product water T.D.S.	See “High Product Water T.D.S.”
	Dissolved air in inlet water supply	See “Cloudy Water”
	Shape of ice cube	Squared ice cubes allow for better dispersion of the air; round shapes tend to hold it in. If possible, allow the water to stand for a few minutes before freezing to allow air to exit

No Water or Not Enough Water	Little or no inlet water supply	Be sure inlet water supply is getting to the system and that the Inlet Saddle Assembly is clear
	Low inlet water supply pressure	Feed water must be at least 50psi; a booster pump may be necessary
	Pre-Filter clogged	Replace Pre-Filter
	Membrane Element fouled	Replace the Membrane Element
	Product Water Check Valve stuck	Replace the Product Water Check Valve; consult Angel Water for assistance
	Storage Tank over or under pressurized	Be sure that the Storage Tank is set between 7-10psi when empty. Relieve or add air as necessary via the spigot near the bottom of the tank (tank must be empty for accurate psi reading)
	Over-use	Allow the System to produce more water, or replace the system with a higher gallon per day membrane
	Female Tank Adaptor valve is in the OFF position	Open the Female Tank Adaptor valve such that it runs parallel to the incoming tubing
Low Flow From Long Reach Faucet or Icemaker	Low water production	See “No Water or Not Enough Water”
	Storage Tank has lost air pre-charge	Be sure that the Storage Tank is set between 7-10psi when empty. Relieve or add air as necessary via the spigot near the bottom of the tank (tank must be empty for accurate psi reading)
	Storage Tank diaphragm slippage	Replace Storage Tank and Post-Filter
	Post-Filter and/or Polishing Filter clogged	Replace Post-Filter and/or Polishing Filter
	Female Tank Adaptor valve is in the OFF position	Open the Female Tank Adaptor valve such that it runs parallel to the incoming tubing

Membrane Element Product Water is Bad	Exhausted Membrane Element	Replace Membrane Element
	Bacteria attacks the Membrane Element	Replace all filters and membrane
Pre or Post-Filter Leaks	Filter Housing not tight	Hand screw the bottom section back to its initial position in a COUNTERCLOCKWISE direction, tightening it slightly with the Filter Housing Spanner Wrench
	O-ring not properly seated or is broken	Replace the O-ring; consult your dealer for assistance. Be sure that the o-ring is properly seated in the Filter Housing before tightening to the System
Faucet Leaks Through Spout	Valve seat is defective	Replace Long Reach Faucet
Faucet Handle Breaks Off	Fatigue	
Faucet Spout Breaks Off	Fatigue	
Faucet Leaks at its Base	O-ring seals are broken in valve assembly	

Flow Diagram





Reverse Osmosis Drinking Water System

Angel Water Conditioning Inc. warrants material and workmanship to be free of defects to the original purchaser. Angel Water Conditioning Inc. will repair or replace with out cost for a period of one year after purchase, any part or portion, which our examination shall disclose to be defective. At the expiration of this service policy, a service fee will be charged.

Reverse Osmosis Drinking Water Systems:

- Angel Water warranties to the original owner all parts related to equipment for a period of 5 years.
- A charge will be made for service required because of misuse, alteration, freezing, neglect, used in rental property, accident, foreign matter, change in water content, customer error, customer imagination, or other causes beyond Angel's control.
- A charge will also be made if asked to perform work that is the customers' responsibility.
- Booster Pumps, Ultraviolet Lights, and Storage Tanks are subject to manufacturer's warranty.

*This warranty does not imply any responsibility for damage that may be caused by products.
This warranty does not cover any equipment that is relocated from the site of its original installation.*

Owners Obligation

The unit must be installed and operated within the design limitations according to the installation and maintenance manual provided.

The original owner should understand that the term "Manufacturing Defect" does not include damage to the unit or it's parts caused by abuse, negligence, freezing, fire, heat, direct exposure to weather or sunlight, water pressures exceeding 100 psi, flooding, other causes not considered normal operating conditions, or an act of God.

This warranty is only valid to the original owner when installed by an Angel representative or a contracted installer hired by Angel Water Conditioning. *(Warranty transfers may be purchased)*

Customer must properly maintain the unit per the manufactures service schedule.

Reverse Osmosis Drinking Water Systems

- Must have filters changed at least once a year
- Must have membrane changed every 3 years
- Customer is responsible for reporting leaks on the unit



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