

INSTALLATION INSTRUCTION & OWNER'S MANUAL





System Tested and Certified by NSF International against NSF/ANSI 42 for the reduction of Chlorine, Taste and Odor and 58 for the reduction of Total Dissolved Solids. Please refer to the Performance Data Sheet for complete reduction data.

Please retain this Owner's Manual for future reference. It includes information for operation and maintenance of your Olympia Water Systems Reverse Osmosis water filter system.

Table of Content

Intro	duction	
	About Your Reverse Osmosis System	2
	Filter Stages	2
Refo	ore Installation	
Dere	Inspect the System	2
	Recommended Tools List	د. د
	Operating Parameter	د د
	General Installation Requirements	د ۲
	How to Use Quick Connect Fittings	3
	Included Components	
	System Itemization	4
Inct	allation	
Insta		
	Filter Housing Assembly	5
	RO Membrane Installation	o
	Positioning the System Feed Water Connection	/
	Drain Saddle Connection	/ 8
	Mounting the Faucet	9
	Connecting the Tank	10
	Connecting the System	.11
	System Flow Diagram	.11
	System Start-Up	.12
Mair	Itenance	
man	Maintenance Schedule	10
	Filter Replacement	
	RO Membrane Replacement	. 14 15
	Post Filter Replacement	5 16
	System Service Record	.17
Taak		
Tecr	Inical Information	_
	Performance Data Sheet	18
War	ranty	
	Limited Product Warranty	19
	,	

Introduction

About Your Reverse Osmosis System

Thank you for your purchase of the Olympia Water Systems Reverse Osmosis System.

This 5-Stage Reverse Osmosis System was designed and tested to provide high quality drinking water. The following are brief descriptions of each of the 5 stages in this system.

Filter Stages

Cartridge Filters	Model	Filter Description	Service Life	
Stage 1 5 Micron Sediment Filter	OROS-PRESF	Polypropylene filter for removal of sand, silt, dirt and rust particles.	6 Months	
Stage 2 5 Micron Carbon Filter	OROS-PRECB	Coconut shell carbon block for removing volatile organic carbon compounds, insecticides/pesticides and chemicals.*	6 Months	
Stage 3 5 Micron Carbon Filter	OROS-PRECB	Coconut shell carbon block for removing volatile organic carbon compounds, insecticides/pesticides and chemicals.*	6 Months	
Stage 4 RO Membrane	OROS-ROM50 (50 GPD Membrane) OROS-ROM80 (80 GPD Membrane)	For removing the following contam- inants in your water: Arsenic, Barium, Cadmium, Chromium (Hexavelent), Chromium (Trivalent), Copper, Turbid- ity, Fluoride, Lead, Radium 226/228, Selenium [*] and TDS.	2-3 Years	
Stage 5 Post Carbon Filter	OROS-POST	Coconut shell post carbon filter for chlorine, taste and odor reduction.	2,500 Gallons (9,463 Liters)	

*These claims are based on manufacturer testing. These claims are not certified by NSF.

Replacement Filters

Olympia Water Systems offers replacement filters for both the OROS-50 and OROS-80 Reverse Osmosis water filtration systems. For purchasing information for replacement filters, please visit our website at www.olympiafiltration.com.

Caution

Do not use this system with water that is microbiologically unsafe or of unknown quality without adquete pretreatment. This system is for use on potable water only.

Inspect the System

Remove the system and all the included components from the box. Inspect the system and the connection fittings to ensure nothing has been damaged during shipment. If any part of the system has been cracked or broken, do NOT proceed with installation. Contact Olympia Water Systems for an exchange or further information.

Recommended Tools List

- Variable speed drill
- Carbide drill bits: 1/4" (for waste line), 1/2" (for faucet hole) and 1/8" (for pilot holes, not mandatory)
- 5/8", 9/16" open-end wrench or adjustable wrench (for faucet installation)
- · Phillips screwdriver (for saddle valve installation)
- Measuring tape

Operating Parameter

- Operating pressure: 50 PSI 100 PSI
- Feed water temperature: 40° 100°F (5° 38°C)

General Installation Requirements

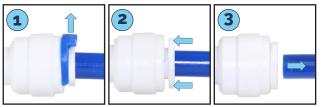
- System must be connected to COLD water source only.
- System must be installed in an indoor location; avoiding extreme temperatures and direct sunlight.
- Ensure installation location can support the weight of the system when it is full of water.

How to Use Quick Connect Fittings



To Attach Tubing

Remove BLUE tubing lock clip. Insert tubing until it hits the backstop. Pull on insterted tubing to ensure it is secured and re-attach BLUE tubing lock clip.



To Release Tubing Remove BLUE tubing lock clip. Use two fingers to push in collet to release tubing. While collet is being held, pull tubing straight out.

Included Components

Please ensure you have all of these parts before starting installation.



RO System Head



3 Filters and Housings



Storage Tank



Faucet Kit



3/8" Feed Water Angle Valve



Drain Saddle Valve



Tank Ball Valve



4 Colors of 1/4" Tubing



Housing Wrenches



Teflon Tape

System Itemization





- 1. Bracket
- 2. Membrane Housing
- 3. Post Carbon Filter
- 4. Sediment Filter Housing (1st Stage)
- 5. Carbon Filter Housing (2nd Stage)
- 6. Carbon Filter Housing (3rd Stage)
- 7. Automatic Shut-Off Valve
- 8. Flow Restrictor
- 9. T-Fitting
- 10. Feed Water Inlet
- 11. Filter Water Outlet
- 12. Storage Tank

Filter Housing Assembly

Remove main system bracket, 3 filters and housings from packaging and assemble the filter housings onto the main system bracket as follows:

I. Install Filters into Housings: See Fig. 1. Stand 3 housings upright. Check each housing to ensure the black O-ring is properly seated in its groove.

Remove the plastic from the Polypropylene Sediment Filter and place into the 1st Stage housing.

Remove the plastic from both Carbon Block Filters and place into the middle (2nd Stage) and left (3rd Stage) housings.

II. Install Housings onto System: See Fig. 2. Starting with the 1st Stage housing on the right, hand twist the housing onto the main bracket turning clockwise under the 1st Stage label. Using the provided large wrench, completely tighten the 1st Stage housing onto the main system bracket. One at a time, hand twist and then tighten with the provided large wrench, the 2nd Stage and 3rd Stage housings under their corrosponding labels on the main system bracket. See Fig. 3. Once all three housings are installed, stand system upright.



RO Membrane Installation

Remove the provided RO membrane from the plastic packaging and install into the RO housing on the main system bracket as follows:

- I. Open RO Housing: See Fig. 4. Remove BLUE tubing lock clip and remove the tubing from the cap of the RO housing on the main system bracket. Using the provided small wrench, remove the RO housing cap by turning counter-clockwise.
- II. Install RO Membrane in Housing: See Fig. 5. Insert the double banded end of the RO membrane into the RO housing first.
- III. Close RO Housing: Hand twist the RO housing cap back onto the RO housing by turning clockwise. Using the provided small wrench, completely tighten the cap onto the RO housing. See Fig. 6. Re-insert tubing into RO housing cap and re-attach BLUE tubing lock clip to secure tubing.





Fig. 5





Positioning the System

Note Mounting screws for the RO system are NOT included.

Space: Ensure there is sufficient space for installation (approximately **16**" L x **7**" W x **20**" H for the system, **12**" D x **18**" H for the tank).

The RO system is best installed under a kitchen sink. If there is not enough space under the kitchen sink, the RO system can be installed where there is a COLD water supply with sufficient water pressure and an outlet to drain waste water from the system.

Mounting: It is not neccessary to mount the RO system to the wall or inside of cabinet. The RO system can stand upright on the housings in the sink cabinet without being mounted. If you prefer to mount the system to the wall or inside of cabinet, ensure that the system can be easily removed for future maintenance.

Feed Water Connection

Important!

The system must be connected to the COLD water supply only. If the cold water supply valve cannot turn off the water at installation location, the main water supply to the house must be shut-off before installation.

Locate the COLD water supply valve and turn it to the OFF position.

I. Feed Water Angle Valve: See Fig. 7. Attach 3/8" angle valve to COLD water supply line.

Insert one end of the provided WHITE tubing to white quick connection on angle valve. See **Fig. 8**. Turning clockwise, tighten tubing connection until RED line on angle valve is no longer visible. Attach a provided BLUE tubing lock clip to secure tubing connection.

II. Feed Water Connection to System: Locate the WHITE cap insert at the front of the 1st Stage housing on the main system bracket. Remove BLUE tubing lock clip and WHITE cap insert from the main system bracket. See Fig. 9. Insert the remaining end of the WHITE tubing and re-attach the BLUE tubing lock clip to secure tubing connection.



Fig. 7









Drain Saddle Connection

Important!

To avoid possible system drainage noise, install drain saddle on the top of horizontal tailpiece or as low as possible on the vertical tailpiece. Do not install drain saddle close to a garbage disposal outlet as this may cause a blockage in the RO system drain line.

- I. Drain Saddle Location: See Fig. 10. The drain saddle should be installed above the drain trap on the horizontal or vertical drain tailpiece. If you are installing on the horizontal tailpiece, position the hole on the top side of the tailpiece to prevent waste water from flowing back into the RO system.
- II. Prepare the Drain Saddle: Remove nuts and screws from drain saddle to separate the plastic drain saddle pieces. Remove backing and pre-cut hole from the provided self-adhesive foam seal. Attach foam seal to drain saddle by lining up the hole on the foam with the tubing connection hole on the inside of the drain saddle piece.
- **III. Drill Drain Hole into Pipe:** Mark the position of the hole on the drain tailpiece. Drill a 1/4" hole through one side of the drain tailpiece at the marked location.
- IV. Align Drain Saddle: See Fig. 11. Position both halves of the drain saddle on the drain tailpiece so that the tubing connection is lined up with the hole in the drain tailpiece. Use the screws and nuts to clamp the two halves of the drain saddle onto the drain tailpiece. Ensure that there is equal spacing between each of the drain saddle halves. Do not overtighten.
- V. Connect Drain Line to the System: Locate the BLACK cap insert attached to the flow restrictor on the back of the main system bracket. Remove BLUE tubing lock clip and BLACK cap insert on the flow restrictor. Insert one end of the BLACK tubing and re-attach the BLUE tubing lock clip to secure tubing connection.
- VI. Connect Drain Line to Saddle Valve: Measure and mark 1 1/2" from the free end of the BLACK tubing. Insert remaining end of the BLACK tubing through the opening in the drain saddle until the marked location on the tubing is flush with the opening. Attach a provided BLUE tubing lock clip to secure tubing connection.

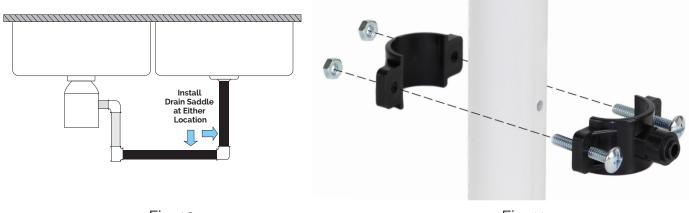


Fig. 10



Mounting the Faucet

Note

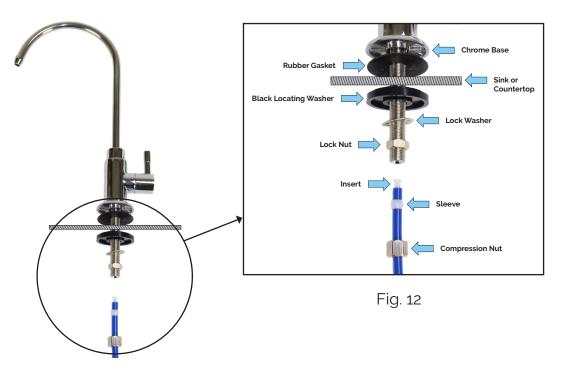
If an existing hole in the sink is available, there is no need to drill a hole for the system faucet. If drilling a hole is necessary, be sure to clean up all debris from drilling before installing the faucet.

If drilling a hole in the sink or counterop is required to install the faucet, professional installation by a plumber is highly recommended. Olympia Water Systems is not responsible for any damage resulting from faucet installation.

- I. Faucet Location: If drilling a hole is required to install the the faucet, be sure to choose a location in the sink or countertop that is convienent for dispening water and has a sufficient flat surface for the faucet to be installed properly. Ensure that the threaded shank of the faucet can be easily accessed from below.
- II. For Stainless Steel Sinks: Wear safety glasses to protect your eyes. Ensure location for hole is clean and dry. A pilot hole or indent with a center punch is recommended before using the 1/2" drill bit on a stainless steel sink.

For Porcelain Sinks: Wear safety glasses to protect your eyes. Before starting the drill, apply firm downward pressure on the drill bit until it breaks through the slick surface. Proceed with caution as porcelain sinks and tile countertops are easily chipped without applying proper pressure before starting the drill or if the drill bit gets hot.

- **III. Mount Faucet:** See Fig. 12. Using the provided washers, nuts, insert and sleeve; mount the faucet in the sink or countertop.
- IV. Connect Faucet to System: Locate the BLUE cap insert on the left side of the Stage 5 post carbon filter on the main system bracket. Remove BLUE tubing lock clip and BLUE cap insert from the post carbon filter. Insert the free end of the BLUE tubing and re-at-tach the BLUE tubing lock clip to secure tubing connection.



Connecting the Tank

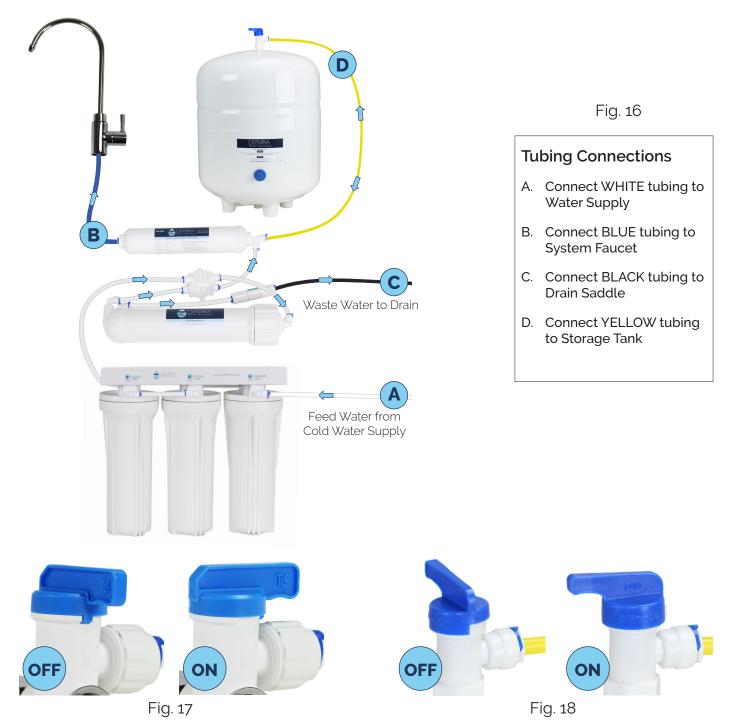
- I. Attach Tank Ball Valve: See Fig. 13. Apply 3-5 wraps of the provided Teflon tape to the threaded output stem on the top of the tank. Screw the provided tank ball valve onto the tank output stem.
- II. Connect Tank Line to Tank: See Fig. 14. Ensure that tank ball value is in the OFF position. Insert one end of the YELLOW tubing into the tank ball value and attach a provided BLUE tubing lock clip to secure tubing connection.
- III. Connect Tank Line to System: See Fig. 15. Locate the YELLOW cap insert attached to the right side of the Stage 5 post carbon filter on the main system bracket. Remove BLUE tubing lock clip and YELLOW cap insert on the post carbon filter. Insert one end of the YELLOW tubing and re-attach the BLUE tubing lock clip to secure tubing connection.



Connecting the System

- I. Check Tubing Connections: See Fig. 16. Ensure that both ends of all tubing connections are installed and secured with provided BLUE tubing lock clips.
- II. System Water Inlet Connection: See Fig. 17. Check that the feed water angle valve is in the OFF position.
- III. Tank Input & Output: See Fig. 18. Ensure that tank ball valve is in the OFF position.

System Flow Diagram



System Start-Up

- I. Turn on Feed Water: Turn cold water supply to ON position. See Fig. 17 on page 11. Turn feed water angle valve to ON position to allow water to enter the RO system.
- II. Open Tank Valve: See Fig. 18 on page 11. Turn tank ball valve to ON position.
- III. Check for Leaks: Check valves, fittings, tubing connections and housings to ensure there are no leaks.
- **IV. Wait for Tank to Fill:** Allow the RO system to run for approximately 3 hours to fill the tank. When the tank is filled, the RO system will automatically shut-off. The tank is full when you can no longer hear water running through the filters, or water flowing into the drain pipe.
- V. Clean-Up: While RO system is filling the tank for the first time, clean-up all of the used tools and work area. Be sure to keep all provided tools in a safe place so they can be used for future RO system maintenance.
- VI. Flushing the Tank: To flush the tank, turn the RO system faucet to the ON position and drain the water from the tank. The tank is empty when the pressure from the faucet drops from a steady stream to a slow trickle. Upon startup of the system, you may initially notice the water stream has a black tint. This is caused by the manufacturing of the carbon filters. You may also notice the smell of chlorine in the water from the sanitization of the rubber bladder in the water tank.

To flush out the carbon and chlorine, you may need to fill and empty the storage tank <u>up to 5 times</u>, where the water will be clear and you cannot taste the chlorine.

Congratulations, you have successfully completed the installation of your Olympia Water Systems Reverse Osmosis water filter system!

Maintenance Schedule

This RO system was designed to ensure ease of use and low maintenance. If the filters are changed regularly as suggested below and is run within the suggested ouput capacity, the RO system should work properly for many years.

To assist with maintaining proper care of the RO system, use the System Service Schedule on page 17 to keep track of completed maintenace on the RO system.

Important! It is important to change the filters for stages 1, 2 and 3 at least every 6-12 months. The first 3 filters protect the RO membrane. If the filters are not changed, the membrane will be damaged and the RO system will be contaminated.

Stage-1 Sediment Filter	Replace every 6-12 Months If water source is from a private well or water source with high levels of heavy sediments; filter may need to be changed sooner.
Stage-2 and Stage-3 Carbon Filter	Replace every 6-12 Months If water source is from a private well or water source with high levels of heavy sediments; filter may need to be changed sooner.
Stage-4 RO Membrane	Replace every 2-3 Years Dependent on proper maintenance of stages 1-3 and level of water usage.
Stage-5 Post Carbon Filter	Replace every 2,500 Gallons (9,500 Liters) Usually replaced at the same time as the RO membrane.

Replacement Filters

Olympia Water Systems offers replacement filters for both the OROS-50 and OROS-80 Reverse Osmosis water filtration systems. For purchasing information for replacement filters, please visit our website at www.olympiafiltration.com.

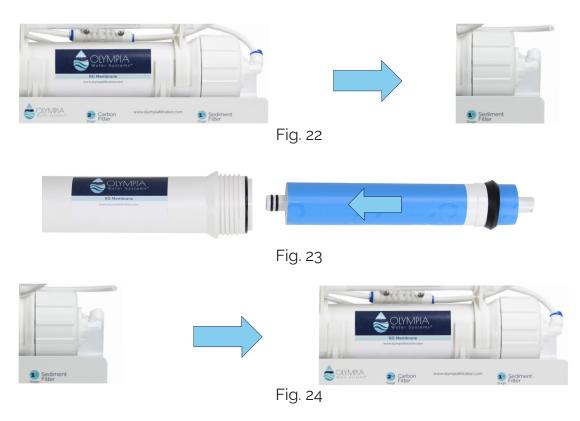
Filter Replacement

- I. Turn off Cold Water & Tank Valve: Turn cold water supply and tank ball valve to OFF positions. Turn system faucet to the ON position to release any built up pressure in the RO system. Once pressure has been released, turn system faucet to OFF position.
- II. Open Housings: See Fig. 19. Starting with the 1st stage, use the large provided wrench remove the filter housings one at a time by turning counter-clockwise.
- III. Replace Filters: Remove and discard the 3 used filters from the housings. Rinse out each housing to ensure there is no remaining dirt or particles still in the filter housings. If necessary, wash the housings by hand with a mild soap before rinsing. See Fig. 20. Insert the new 1st stage sediment filter and the 2nd and 3rd stage carbon block filters into the corrosponding filter housings.
- IV. Close Housings: Starting with the 1st Stage housing on the right, hand twist the housing onto the main bracket turning clockwise under the 1st Stage label. Using the provided large wrench, completely tighten the 1st Stage housing onto the main system bracket. One at a time, hand twist and then tighten with the provided large wrench, the 2nd Stage and 3rd Stage housings under their corrosponding labels on the main system bracket. See Fig. 21.
- V. Check for Leaks: Turn cold water supply and tank ball valve to ON positions. Check valves, fittings, tubing connections and housings to ensure there are no leaks.



RO Membrane Replacement

- I. Turn off Cold Water & Tank Valve: Turn cold water supply and tank ball valve to OFF positions. Turn system faucet to the ON position to release any built up pressure in the RO system. Once pressure has been released, turn system faucet to OFF position.
- II. Remove Tubing from Housing: See Fig. 22. Remove BLUE tubing lock clip and remove the tubing from the cap of the RO housing on the main system bracket. Using the provided small wrench, remove the RO housing cap by turning counter-clockwise.
- **III. Replace Membrane:** Remove and discard the used RO membrane. See **Fig. 23.** Remove and discard the plastic on the new RO membrane and insert the double banded end of the new RO membrane into the RO housing first.
- IV. Close Housing: Hand twist the RO housing cap back onto the RO housing by turning clockwise. Using the provided small wrench, completely tighten the cap onto the RO housing. See Fig. 24. Re-insert tubing into RO housing cap and re-attach BLUE tubing lock clip to secure tubing.
- V. Check for Leaks: Turn cold water supply and tank ball valve to ON positions. Check valves, fittings, tubing connections and housings to ensure there are no leaks.
- VI. Flush Membrane: Allow the RO system to run for approximately 3 hours to fill the tank. When the tank is filled, the RO system will automatically shut-off. The first tank of water must be drained to flush the new RO membrane. Do NOT use the first tank of water. Turn the RO system faucet to the ON position to drain the tank. The tank is empty when there is a noticable drop in water pressure from the RO system faucet.



Post Filter Replacement

It is recommended to replace the post carbon filter at the same time the RO membrane is replaced.

- I. Turn off Cold Water & Tank Valve: Turn cold water supply and tank ball valve to OFF positions. Turn system faucet to the ON position to release any built up pressure in the RO system. Once pressure has been released, turn system faucet to OFF position.
- II. Remove Tubing & Filter: See Fig. 25. Remove BLUE tubing lock clips and tubing from each of the 3 tubing connections attached to the 5th stage post carbon filter. Remove and discard the used filter.
- III. Connect Fittings to New Filter: When placing the new 5th stage post carbon filter on the main system bracket, ensure that the FLOW arrow on the filter is pointing towards the water output (BLUE tubing). See Fig. 25. Re-insert the 3 tubes into the new 5th stage filter and re-attach the 3 BLUE tubing lock clips to secure tubing connections.
- **IV. Check for Leaks:** Turn cold water supply and tank ball valve to ON positions. Check valves, fittings, tubing connections and housings to ensure there are no leaks.
- V. Flush Filter: Allow the RO system to run for approximately 3 hours to fill the tank. When the tank is filled, the RO system will automatically shut-off. The first tank of water must be drained to flush the new post carbon filter. Do NOT use the first tank of water. Turn the RO system faucet to the ON position to drain the tank. The tank is empty when there is a noticable drop in water pressure from the RO system faucet.



Fig. 19

System Service Record

Date of Purchase:_____ Date of Install:_____ Installed By:_____

Date	1st Stage Sediment	2nd Stage Carbon	3rd Stage Carbon	RO Membrane	Post-Filter Carbon

Notes:	

Technical Information

Performance Data Sheet

Olympia Water Systems Reverse Osomsis Water Filtration System Performance Data						
Model	Operating Pressure	Operating Temperature	Recovery Rating	Efficiency Rating	Daily Production	
OROS-50	50-100 PSI 344-689 kPa	40-100° F 5-38° C	28.41%	19.65%	16.79 GPD	
OROS-80	50-100 PSI 344-689 kPa	40-100° F 5-38° C	26.70%	17.37%	20.72 GPD	
Olympia Water Systems • 25 South 51st Avenue Phoenix, AZ 85043 • 1-800-516-2495						

Olympia Water Systems' OROS-50 and OROS-80 have been tested according to NSF/ANSI 42 and 58 for reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 42 and 58.

NSF/ANSI 42 Substance	Influent Challenge Concentration mg/L			Maximum Permissible Concentration mg/L			
Chlorine	2.0 mg/L ± 10%				≥50%		
NSF/ANSI 58 Substance	Avg. Inf. mg/L	Avg. Eff. mg/L	% Reduction	Max. Eff. mg/L	Inf. Challenge Concentration mg/L	Max. Permissible Concentration mg/L	
TDS (Model OROS-50)	770	53	93.0%	60	750 ±40 mg/L	187	
TDS (Model OROS-80)	770	40	94.8%	44	750 ±40 mg/L	187	

- Do not use this system with water that is microbiologically unsafe or of unknown quality without adquete disinfection before or after the system.
- Testing was performed under standard laboratory conditions, actual performance may vary.
- See owner's manual for general installation/operation/maintenance conditions and needs as well as manufacturer's limited product warranty.
- Efficiency rating means the percentage of the influent water to the system that is available to the user as reverse osmosis treated water under operating conditions that approximate typical daily usage.
- Recovery rating means the percentage of the influent water to the membrane portion of the system that is available to the user as reverse osmosis treated water when the system is operated without a storage tank or when the storage tank is bypassed.

Limited Product Warranty

Scope

Olympia Water Systems, LLC ("Olympia") expressly warrants to the original purchaser that it's Reverse Osmosis System and components (the "Product") will be free of defects in material and workmanship for use under normal care for a period of one (1) year from the date of purchase (the "Warranty Period"). During the Warranty Period and subject to the limitations and exclusions set forth below, Olympia will, at its option, replace the Product or refund the Product purchase price if the Product fails to satisfy this Limited Product Warranty. This warranty does not cover labor.

No warranty is given as to the service life of any filter cartridges or membrane as this will vary depending on local water conditions and water input.

Limitations and Exclusions

Except as otherwise expressly provided above, Olympia makes no warranties, express or implied, arising by law or otherwise, including without limitation the implied warranties of merchantability and fitness for a particular purpose, to any person. This Limited Product Warranty may not be altered, varied or extended except by written instrument executed by Olympia. The remedies of replacement or refund of the Product purchase price are exclusive and are the sole obligations of Olympia under this Limited Product Warranty. Olympia will not be liable for any loss or damage arising from installation and use of the Product, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including warranty, contract, negligence, or strict liability. Some states and countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

Conditions of Validity of this Limited Product Warranty

This Limited Product Warranty shall only be valid if:

- I. The replaceable filters and membrane are changed and maintained on a regular basis as directed in the Instruction and Owner's Manual. In some areas, the amount of impurities present in the local water supply may require that the filters and membrane be replaced on a more frequent basis.
- II. The Product is operated in compliance with the operating conditions specified in the Installation and Owner's Manual.
- III. The person seeking to invoke this Limited Product Warranty is the original purchaser of the Product.

Non-Covered Defects

This Limited Product Warranty does not cover defects caused by:

- I. Improper storage, installation, maintenance, handling, use and/or alterations of the Product, including but not limited to non-compliance with the installation, maintenance and standard operation conditions stated in the Instruction and Owner's Manual.
- II. Unreasonable use, unintended use, or misuse of the Product for something other than its intended use as a reverse osmosis system.
- III. Damage not resulting from manufacturing defects that occur while the Product is in the original purchaser's possession.
- IV. Installation of the Product with known or visible manufacturing defects at the time of installation.
- V. Damage caused by freezing, flood, fire or Act of God.



Olympia Water Systems 25 South 51st Avenue Phoenix, AZ 85043

For questions or comments please visit our website at:

OlympiaFiltration.com

For technical support contact us at: Support@OlympiaFiltration.com 1-800-516-2495