

ALL FILTRATION PRODUCT PROUDLY MADE & ASSEMBLED IN THE USA



**EWS, INC.**

**ENVIRONMENTAL WATER SYSTEMS**

**EWS, Inc. and Environmental Water Systems supports all older models and systems**

## **Reverse Osmosis Product Booklet**

**3 Stage for Municipal Water  
Model #'s RO3 or RO3-UV**

**4 Stage for Common Well Water  
Model #'s RO4 or RO4-UV**

**ewswater.com**

**O:** 702.256.8182 (M-F 8:30am-4:30pm PST)

**F:** 702.256.3744

**E:** customerservice@ewswater.com

Complete Product Booklets and Service Guides for each system are available online and through customer service.

Information includes all schematics, technical information, removal capabilities, how to setup, install & startup each system as well as any troubleshooting and any other information we could think of in order to help you.

**Highest Quality Product & Award Winning Customer Service Since 1987**

# FIND THE RIGHT SINK FILTER FOR YOU

Whether your water is treated with chlorine or chloramine, whether you prefer reverse osmosis (RO) or not, Environmental Water Systems has the right drinking water system to protect you and your family. If you need help, please call EWS Customer Service at 702.256.8182 Monday-Friday 8.30 am - 4.30 pm Pacific Time, or visit us at [www.ewswater.com](http://www.ewswater.com).



MADE IN THE USA



## MY DRINKING WATER OPTIONS

Taste does not equal health or quality. If it did, then McDonalds fries and Oreos would be health foods. (We wish.) Our ESSENTIAL systems are the first and only drinking water systems built from the ground up to offer true protection from toxic contaminants like chlorine, chloramine, VOCs, THMs, pesticides, obesogens, pharmaceutical residues, and more.

The result is water that not only tastes good, but is good for you and your family. The ESSENTIAL filters the water at the point of use (usually a kitchen sink) and provides filtered water for cooking and drinking. The ESSENTIAL suits all budget or space concerns.

Due to its advanced filtration, no water tank, and crisp mineral water taste, about 80% of families choose the ESSENTIAL Drinking Water System over reverse osmosis.

### ESSENTIAL DRINKING WATER SYSTEM

The ESSENTIAL removes chlorine, chloramine, and thousands of other contaminants and offers the additional safeguard of reducing lead and removing 99.99% of cysts (cryptosporidium and giardia). **Model #: DWS.**

### ESSENTIAL DRINKING WATER SYSTEM WITH UV

Our most popular upgrade provides the same great benefits of the ESSENTIAL, with an upgrade to our patented 99.99% effective UV safeguard. Kills bacteria, viruses, E.coli and other microorganisms. Ideal for people with compromised immune systems. **Model #: DWS-UV.**

## MY REVERSE OSMOSIS OPTIONS

Reverse osmosis is ideal for those who are allergic to the fluoride in city tap water, are on water that does not meet EPA limits for heavy metals, or who prefer a more stripped down or "flatter" taste to their water.

In about 80% of homes, the ESSENTIAL Drinking Water System (see left) is the proper choice, due to its highly advanced filtration, conservation of minerals for a crisp mineral water taste, and no need for a water storage tank.

### ESSENTIAL THREE-STAGE REVERSE OSMOSIS

Our ESSENTIAL RO3 uses a high-performance, 50 gallon per day membrane which removes inorganics, heavy metals, fluoride, naturally found minerals, lead, and cysts (cryptosporidium and giardia). **Model #: RO3.**

### ESSENTIAL THREE-STAGE REVERSE OSMOSIS W/UV

Our ESSENTIAL RO3-UV uses a high-performance, 50 gallon per day membrane which removes inorganics, heavy metals, fluoride, naturally found minerals, lead, and cysts. Our patented UV upgrade kills 99.99% of bacteria, viruses, E.coli and other microorganisms. Ideal for people with compromised immune systems. **Model #: RO3-UV.**

Four-stage (RO4) and five-stage (RU500T35) reverse osmosis options (not shown) are available for particulate water and difficult well water applications.

## ARE YOU ON WELL WATER?

STOP

If you are on private or community well water, you need information to determine any water issues and their solutions. Well water requires complete and independent testing. Call EWS Customer Service at 702.256.8182 or visit [EWSWATER.COM](http://www.ewswater.com) for more information.

**FILTER ALL THE WATER IN YOUR HOME WITH ONE SYSTEM.** Every sink, shower, and bath in your home could provide you with chlorine-free & pollutant-free water. No hassle, no maintenance, no salts or chemicals, and trusted by hospitals, health care centers, military, and private homes worldwide. For more information on EWS Central Water Filtration, visit us online at [www.ewswater.com](http://www.ewswater.com) or call EWS customer service at 702.256.8182 (Mon.-Fri. 8.30 am - 4.30 pm Pacific Time).



A new breed of reverse osmosis that is actually effective on toxic contaminants

<b>Reverse Osmosis 3-Stage Filtration</b>			
Point of use for drinking, cooking, ice, coffee for common municipal water situations			
Model No.	Installed POU Supply Line Size	Service Flow Rate	Replacement Filter Set (Replace Annually*)
RO3	up to 1/2"	up to .9 gpm	F.SET.RO3
RO3-UV Additional safeguard with UV disinfection	up to 1/2"	up to .9 gpm	F.SET.RO3-UV



Model No. RO3

RO3 systems come complete with all filters, membrane, angle stop valve supply connection, drain connections, 3.2 gallon storage tank, 5 feet each of red, blue and yellow color-coded tubing, black drain tubing, mounting bracket with available clips for UV upgrade, chrome with white trim, swivel long reach water dispenser, matching air gap adaptor and a complete service manual.

No-Lead Compliant and Meets or Exceeds NSF Standard 42, 53 and 58

RO3-UV systems come with all items from RO3 system and additionally include the UV lamp, module and 55 volt transformer for the upgrade of UV Disinfection.

No-Lead Compliant and Meets or Exceeds NSF Standard 42, 53, 58 and 55

Optional dispenser finishes are available.

<b>Reverse Osmosis 4-Stage Filtration</b>			
Additional pre-sediment filtration based on particulate city water or basic well water			
Model No.	Installed POU Supply Line Size	Service Flow Rate	Replacement Filter Set (Replace Annually*)
RO4	up to 1/2"	up to .9 gpm	F.SET.RO4
RO4-UV Additional safeguard with UV disinfection	up to 1/2"	up to .9 gpm	F.SET.RO4-UV



Model No. RO4

RO4 systems come complete with all filters, membrane, angle stop valve supply connection, drain connections, 3.2 gallon storage tank, 5 feet each of red, blue and yellow color-coded tubing, black drain tubing, mounting bracket with available clips for UV upgrade, chrome with white trim, swivel long reach water dispenser, matching air gap adaptor and a complete service manual.

No-Lead Compliant and Meets or Exceeds NSF Standard 42, 53 and 58

RO4-UV systems come with all items from RO4 system and additionally include the UV lamp, module and 55 volt transformer for the upgrade of UV Disinfection.

No-Lead Compliant and Meets or Exceeds NSF Standard 42, 53, 58 and 55

Optional dispenser finishes are available.

Please Note: If applicable, Five (5)-Stage Reverse Osmosis Systems are available in the EWS Product Catalog - Well Water Section

**ALL FILTRATION PRODUCT PROUDLY MADE & ASSEMBLED IN THE USA**





**THREE  
STAGE**

## ESSENTIAL Reverse Osmosis

Introducing our new three-stage reverse osmosis system, offering true protection from toxic contaminants.

- World-class EWS quality and performance.
- Highest quality carbon pre- and post-filtration.
- High performance membrane – up to 50 gallons per day.
- Quick and easy installation.
- Made in the USA, meets or exceeds all compliances.
- Protects you from chloramine (chlorine and ammonia compound), chlorine, THMs, VOCs, pesticides, lead, cysts, rust, silt, sediment, bacteria and viruses<sup>1</sup>, and more.<sup>2</sup>
- Removes inorganics, heavy metals, minerals, and total dissolved solids.

*Chlorine (a common disinfectant used in USA tap water) and its byproducts are known carcinogens. Drinking them, or inhaling and absorbing them while showering or bathing, is not recommended.\* The New York State Dept. of Health and President's Cancer Panel recommend water filtration to reduce or eliminate our exposure to these substances.*



**NO MORE WASTED MONEY.  
NO MORE PLASTIC BOTTLES.**

With the **ESSENTIAL** at your sink, you will save at least \$500 every year in bottled water expenses and prevent plastic waste in our landfills and oceans. Simply fill up your reusable bottle at your sink and go!



**MEETS ALL YOUR NEEDS.**

Enjoy contaminant-free water that meets your preferences for taste (i.e. "flatter" taste) and removal of minerals, total dissolved solids, fluoride, and inorganics. Not sure if reverse osmosis is right for you? Call EWS customer service at 702.256.8182 for assistance.



**PROTECTION FOR YOU, YOUR HOME, AND OUR PLANET.**

The **ESSENTIAL** is designed for today's adverse water conditions and anticipated conditions in the future and is – without a doubt – the most advanced and highest quality filtration product available, capable of handling chloramine, chlorine, dyes, fuels, pharmaceutical residues, lead, cysts, bacteria<sup>1</sup> and more.<sup>2</sup> The result is truly clean water you can trust and enjoy.



**ADVANCED FILTRATION AND PERFORMANCE.**

The **ESSENTIAL** was designed from the ground up with our full bed depth, fully compliant, USA-made filters to handle difficult contaminants like chloramine (chlorine and ammonia compound). It is a new breed of reverse osmosis that effectively protects you from chloramine, chlorine, THMs, lead, cysts, bacteria<sup>1</sup> and much more.<sup>2</sup>

**\*FILTER ALL THE WATER IN YOUR HOME WITH ONE SYSTEM.** Every sink, shower, and bath in your home could provide you with chlorine-free & pollutant-free water. No hassle, no maintenance, no salts or chemicals, and trusted by hospitals, health care centers, military, and private homes worldwide. For more information on EWS Central Water Filtration, visit us online at [www.ewswater.com](http://www.ewswater.com) or call EWS customer service at 702.256.8182 (Mon.-Fri. 8.30 am - 4.30 pm Pacific Time).



# TECHNICAL INFORMATION

## ESSENTIAL RO REVERSE OSMOSIS FILTRATION SYSTEMS

### MODEL #: RO3 and RO3-UV

#### SYSTEM SPECIFICATIONS

**OPERATION TEMPERATURE:** Maximum 100° F (38° C) / Minimum 40° F (4° C)

**OPERATION PRESSURE:** Maximum 75 psi / Minimum 40 psi

**SYSTEM FLOW RATE:** <1.0 gallons per minute (gpm)

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Replace your filters and UV lamp annually or as needed (do not exceed 1 year). Install in cold water supply only. Install in compliance with local and state regulations.

All installation instructions, service manuals, technical and product information is available online at [www.EWSWATER.com](http://www.EWSWATER.com)

MODEL #	REPLACEMENT FILTER SET #
RO3	F.SET.RO3 (includes: F-GAC, F-MEM, F-GAC-B)
RO3-UV	F.SET.RO3-UV (includes: F-GAC, F-MEM, F-GAC-B, F-LAMP)

**SERVICE LIFE ON FILTERS:**  
UP TO 1 YEAR.\* REPLACE YOUR  
FILTERS ANNUALLY OR AS NEEDED.  
DO NOT EXCEED 1 YEAR.

#### FILTER SPECIFICATIONS

##### STAGE 1 EM #: F-GAC

**DESCRIPTION:** Pre-Filter Advanced Carbon

**PURPOSE:** Filters chlorine, chloramine, and VOCs for clear, clean water. Reduces and/or eliminates bad tastes and odors.

**FEATURES & BENEFITS:** Increased surface area, almost no fines release, enhanced adsorption, excellent performance.

**CONSTRUCTION:** Advanced carbon.

**SERVICE LIFE:** 1 year<sup>‡</sup>

**MAX. FLOW:** <1.0 GPM / 3.4 LPM

**MAX. PRESSURE:** 75 PSIG / 5.17 Bar

**TEMPERATURE RANGE:** 40-100° F / 4-38° C

##### STAGE 2 EM #: F-MEM

**DESCRIPTION:** Advanced RO Membrane

**PURPOSE:** Protection from inorganics, chloride, nitrates, nitrites, heavy metals, and more. Removes minerals and fluoride to meet your preferences.

**FEATURES & BENEFITS:** Completely "stripped" water for full protection and as a precaution against fluoride allergies.

**CONSTRUCTION:** Polyamide thin-film composite.

**SERVICE LIFE:** 1 year<sup>‡</sup>

**PERMEATE FLOW:** 50 GPD / 189 LPD

**MAX. PRESSURE:** 125 PSIG / 8.6 Bar

**TEMPERATURE RANGE:** 40-113° F / 4-45° C

##### STAGE 3 IM #: F-GAC-B

**DESCRIPTION:** Post-Filter Carbon Block (1 Micron)

**PURPOSE:** Advanced final stage filter for chlorine, chloramine (chlorine and ammonia compound), lead, cysts, VOCs, and more.

**FEATURES & BENEFITS:** Increased surface area, enhanced adsorption, excellent performance in a carbon block form.

**CONSTRUCTION:** Activated carbon block.

**SERVICE LIFE:** 1 year<sup>‡</sup>

**MAX. FLOW:** <1.0 GPM / 3.4 LPM

**MAX. PRESSURE:** 75 PSIG / 5.17 Bar

**TEMPERATURE RANGE:** 40-100° F / 4-38° C

##### ITEM #: F-LAMP\*\* (OPTIONAL, INCLUDED WITH MODEL #: RO3-UV)

**DESCRIPTION:** Ultraviolet (UV) Disinfection\*\*

**PURPOSE:** Kills bacteria, viruses, and other microorganisms.

**FEATURES & BENEFITS:** Independently tested to reduce E. coli by 99.99992% and micrococcus luteus by 99.93%.

**CONSTRUCTION:** UV lamp encased in glass and 316 bonded stainless steel interior housing.

**SERVICE LIFE:** 1 year<sup>‡</sup>

**MAX. FLOW:** <1.0 GPM / 3.4 LPM

**MAX. PRESSURE:** 75 PSIG / 5.17 Bar

**TEMPERATURE RANGE:** 40-100° F / 4-38° C

<sup>‡</sup>Filter service life is based on local water conditions and usage.

\*\*UV upgrade is available pre-assembled as model# RO3-UV. A UV upgrade kit can be added to any RO system at any time.

<sup>1</sup> UV upgraded systems only.

<sup>2</sup> These substances may or may not be in your water. Please ensure this is the correct system for your needs. Please see included instructions for proper installation and usage.

**SYSTEM SIZE:** 5" deep x 13" wide x 16" tall (allow 4" clearance at the bottom of the unit for filter replacement maintenance)

**TANK SIZE:** 11" x 11" x 16" (3.2 gal capacity, other tank sizes available)

**SHIPPING CARTON SIZE:** 12" x 12" x 30"

**SHIPPING CARTON WEIGHT:** 20 lbs.

Fully Compliant  
with California  
No-Lead Standards.



This filter element tested and certified under ANSI/NSF Standard 42 & 53 for materials only.

The **ESSENTIAL** comes fully assembled and complete with everything you need for a proper installation:

chrome faucet dispenser (finish options available), air gap, storage tank, angle stop valve connection, all fittings and tubings, mounting bracket, and all filters.

Pictured at Right:  
The **ESSENTIAL**.

Our **ESSENTIAL** drinking water filtration systems are available to suit specific water conditions or personal preferences. Please contact EWS Customer Service for more information.



CALL EWS CUSTOMER SERVICE: 702.256.8182 (MONDAY-FRIDAY 8.30 AM-4.30 PM PACIFIC TIME)

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WWW.EWSWATER.COM



**FOUR  
STAGE**

## ESSENTIAL Reverse Osmosis

Introducing our new four-stage reverse osmosis system, offering true protection from toxic contaminants.

- World-class EWS quality and performance.
- Highest quality carbon pre- and post-filtration.
- High performance membrane – up to 50 gallons per day.
- Pre-sediment stage for extra protection from particulates.
- Made in the USA, meets or exceeds all compliances.
- Protects you from chloramine (chlorine and ammonia compound), chlorine, THMs, VOCs, pesticides, lead, cysts, rust, silt, sediment, bacteria and viruses<sup>1</sup>, and more.<sup>2</sup>
- Removes inorganics, heavy metals, minerals, and total dissolved solids.

*Chlorine (a common disinfectant used in USA tap water) and its byproducts are known carcinogens. Drinking them, or inhaling and absorbing them while showering or bathing, is not recommended.\* The New York State Dept. of Health and President's Cancer Panel recommend water filtration to reduce or eliminate our exposure to these substances.*



**NO MORE WASTED MONEY.  
NO MORE PLASTIC BOTTLES.**

With the **ESSENTIAL** at your sink, you will save at least \$500 every year in bottled water expenses and prevent plastic waste in our landfills and oceans. Simply fill up your reusable bottle at your sink and go!



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The **ESSENTIAL** was designed from the ground up with our full bed depth, fully compliant, USA-made filters to handle difficult contaminants like chloramine (chlorine and ammonia compound). It is a new breed of reverse osmosis that effectively protects you from chloramine, chlorine, THMs, lead, cysts, bacteria<sup>1</sup> and much more.<sup>2</sup>

**\*FILTER ALL THE WATER IN YOUR HOME WITH ONE SYSTEM.** Every sink, shower, and bath in your home could provide you with chlorine-free & pollutant-free water. No hassle, no maintenance, no salts or chemicals, and trusted by hospitals, health care centers, military, and private homes worldwide. For more information on EWS Central Water Filtration, visit us online at [www.ewswater.com](http://www.ewswater.com) or call EWS customer service at 702.256.8182 (Mon.-Fri. 8.30 am - 4.30 pm Pacific Time).



# TECHNICAL INFORMATION

## ESSENTIAL RO REVERSE OSMOSIS FILTRATION SYSTEMS

### MODEL #: RO4 and RO4-UV

#### SYSTEM SPECIFICATIONS

**OPERATION TEMP.:** Max. 100° F (38° C) / Min. 40° F (4° C)    **OPERATION PRESSURE:** Max. 75 psi / Min. 40 psi    **SYSTEM FLOW RATE:** <1.0 GPM

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Replace your filters and UV lamp annually or as needed (do not exceed 1 year). Install in cold water supply only. Install in compliance with local and state regulations.

All installation instructions, service manuals, technical and product information is available online at [www.EWSWATER.com](http://www.EWSWATER.com)

MODEL #                      REPLACEMENT FILTER SET #

RO4                              F.SET.RO4 (includes: F-INLINE, F-GAC, F-MEM, F-GAC-B)

RO4-UV                      FSET.RO4-UV (includes: F-INLINE, F-GAC, F-MEM, F-GAC-B, F-LAMP)

SERVICE LIFE ON FILTERS:  
UP TO 1 YEAR.\* REPLACE YOUR  
FILTERS ANNUALLY OR AS NEEDED.  
DO NOT EXCEED 1 YEAR.

#### FILTER SPECIFICATIONS

**ITEM #: F-INLINE (5 MICRON PRE-SEDIMENT FILTER)**

**PURPOSE:** Protects you and the system from particulate matter, down to 5 micron.

**FEATURES & BENEFITS:** Removes tiny particles for enhanced performance and protection to the following filters.

**CONSTRUCTION:** Advanced carbon.

**MAX. FLOW:** <1.0 GPM / 3.4 LPM

**MAX. PRESSURE:** 75 PSIG / 5.17 Bar

**SERVICE LIFE:** 1 year<sup>‡</sup>

**TEMPERATURE RANGE:** 40-100° F / 4-38° C

Fully Compliant  
with California  
No-Lead Standards.



COMPONENT  
This filter element tested  
and certified under ANSI/  
NSF Standard 42 & 53 for  
materials only.

#### STAGE 1    EM #: F-GAC

**DESCRIPTION:** Pre-Filter Advanced Carbon

**PURPOSE:** Filters chlorine, chloramine, and VOCs for clear, clean water. Reduces and/or eliminates bad tastes and odors.

**FEATURES & BENEFITS:** Increased surface area, almost no fines release, enhanced adsorption, excellent performance.

**CONSTRUCTION:** Advanced carbon.

**MAX. FLOW:** <1.0 GPM / 3.4 LPM

**MAX. PRESSURE:** 75 PSIG / 5.17 Bar

**SERVICE LIFE:** 1 year<sup>‡</sup>

**TEMPERATURE RANGE:** 40-100° F / 4-38° C

#### STAGE 2    EM #: F-MEM

**DESCRIPTION:** Advanced RO Membrane

**PURPOSE:** Protection from inorganics, chloride, nitrates, nitrites, heavy metals, and more. Removes minerals and fluoride to meet your preferences.

**FEATURES & BENEFITS:** Completely "stripped" water for full protection and as a precaution against fluoride allergies.

**CONSTRUCTION:** Polyamide thin-film composite.

**PERMEATE FLOW:** 50 GPD / 189 LPD

**MAX. PRESSURE:** 125 PSIG / 8.6 Bar

**SERVICE LIFE:** 1 year<sup>‡</sup>

**TEMPERATURE RANGE:** 40-113° F / 4-45° C

#### STAGE 3    EM #: F-GAC-B

**DESCRIPTION:** Post-Filter Carbon Block (1 Micron)

**PURPOSE:** Advanced final stage filter for chlorine, chloramine (chlorine and ammonia compound), lead, cysts, VOCs, and more.

**FEATURES & BENEFITS:** Increased surface area, enhanced adsorption, excellent performance in a carbon block form.

**CONSTRUCTION:** Activated carbon block.

**MAX. FLOW:** <1.0 GPM / 3.4 LPM

**MAX. PRESSURE:** 75 PSIG / 5.17 Bar

**SERVICE LIFE:** 1 year<sup>‡</sup>

**TEMPERATURE RANGE:** 40-100° F / 4-38° C

**ITEM #: F-LAMP\*\* (OPTIONAL, INCLUDED WITH MODEL #: RO4-UV)**

**DESCRIPTION:** Ultraviolet (UV) Disinfection\*\*

**PURPOSE:** Kills bacteria, viruses, and other microorganisms.

**FEATURES & BENEFITS:** Independently tested to reduce E. coli by 99.99992% and micrococcus luteus by 99.93%.

**CONSTRUCTION:** UV lamp encased in glass and 316 bonded stainless steel interior housing.

**SERVICE LIFE:** 1 year<sup>‡</sup>

**MAX. FLOW:** <1.0 GPM / 3.4 LPM

**MAX. PRESSURE:** 75 PSIG / 5.17 Bar

**TEMPERATURE RANGE:** 40-100° F / 4-38° C

<sup>‡</sup>Filter service life is based on local water conditions and usage.

\*\*UV upgrade is available pre-assembled as model# RO4-UV. A UV upgrade kit can be added to any RO system at any time.

<sup>1</sup> UV upgraded systems only.

<sup>2</sup> These substances may or may not be in your water. Please ensure this is the correct system for your needs. Please see included instructions for proper installation and usage.

**SYSTEM SIZE:** 5" deep x 16" wide x 16" tall (allow 4" clearance at the bottom of the unit for filter replacement maintenance)

**TANK SIZE:** 11" x 11" x 16" (3.2 gal capacity, other tank sizes available)

**SHIPPING CARTON SIZE:** 12" x 12" x 30"

**SHIPPING CARTON WEIGHT:** 22 lbs.

The ESSENTIAL comes fully assembled and complete with everything you need for a proper installation:

chrome faucet dispenser (finish options available), air gap, storage tank, angle stop valve connection, all fittings and tubings, mounting bracket, and all filters.

Pictured at Right:  
The ESSENTIAL.

Our ESSENTIAL drinking water filtration systems are available to suit specific water conditions or personal preferences. Please contact EWS Customer Service for more information.



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WWW.EWSWATER.COM



### Complete Filter Replacement Sets for All Essential Reverse Osmosis Systems

Always order replacements correctly - Find the proper replacement filter set for each model number.

System Model No.	Filter Set Replacement: Item No.
RO3	F.SET.RO3
RO3-UV	F.SET.RO3-UV
RO4	F.SET.RO4
RO4-UV	F.SET.RO4-UV

\*Replace:

All filters and UV lamp up to one year. <sup>1</sup>

UV Housing every 3 years per mfg. recommendation.

Membranes up to every 18 months. <sup>1</sup>



F.SET.RO3



F.SET.RO4



F.SET.RO3-UV



F.SET.RO4-UV

Please note: Filter sets shown above for illustration purposes only

<sup>1</sup>All filter replacement is based on local water conditions and usage. Always replace as needed and not beyond recommended time limit. Applicable to most municipally-treated water. Well water needs to be properly and completely tested before any specification of any filtration and treatment system(s)

**Complete technical specifications for each filter, membrane and UV (if applicable) and what they do and how they perform can be found on the following pages**

**ALL FILTRATION PRODUCT PROUDLY MADE & ASSEMBLED IN THE USA**





**Optional Dispenser/Faucet Finishes**

Long-reach, swivel water dispensers, optional finishes with black trim

Finish Options*:	If Ordering with System	
Satin Nickel	add: - SN	to Model No.:
Polished Nickel	add: - PN	to Model No.:
Polished Brass	add: - PB	to Model No.:



Finish Options*:	Ordering Separately	
Satin Nickel	Item No.:	FD-SN
Polished Nickel	Item No.:	FD-PN
Polished Brass	Item No.:	FD-PB

\*Coordinated Black Air Gap Adaptor for RO Systems/Dispensers Item No.: FD-AG-BL


**Optional Pressure Limiting Valve**

Highly recommended to prevent pressure surging. Pressure should be limited to max. 75 psi

Item No.:	PLV-60-14	Install in-line on feed line to sink system with 1/4" lines
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Complete Service Manuals on all Essential DWS Systems and all Essential RO Systems are included with all systems and are available online at [ewswater.com](http://ewswater.com)

EWS provides complete information for the proper setup, installation, start-up and maintenance of all systems. Information is complete and should be compared to what other manufacturers offer their customers.

**ALL FILTRATION PRODUCT PROUDLY MADE & ASSEMBLED IN THE USA**


### Versatility of Process

Filters allow the bonding of single or multiple types of extremely small sized particles onto a single support structure. For example, fine powdered lead sorbents bonded onto larger carbon support structures. This unique feature enables EWS to produce complex composite filtration media that can meet the requirements of complicated water contamination problems.

### Increased Surface Area

The ability to bond extremely fine powdered media onto larger support particles results in increased surface area and improved kinetic efficiency. Instead of having one large particle available for filtration purposes, EWS technology makes possible the bonding of thousands of fine particles onto the surface of the larger support particles which greatly increases the surface area of the composite media.

### Enhanced Kinetics

The process of increasing the surface area of a media enhances the adsorption kinetics and catalytic effects of that media. Consequently, EWS technology allows us to use less media and still achieve similar or superior filtration results. As a result, with this technology, we are now able to design smaller, more aesthetically appealing filtration devices with excellent performance characteristics.

### Improved Performance

EWS carbon media for cartridge and block has improved catalytic and adsorption characteristics because of the increase in surface area and kinetic activity. Test results have proven that EWS composite adsorption products exceed the performance characteristics of simple, one component, granular based products.

### Standard 42 Aesthetic Effects/Standard 53 Health Effects

Parameter	US EPA MCL	Influent Challenge	Effluent Average	Effluent Maximum	Percent Reduction Average	Percent Reduction Minimum
Chlorine	-	2.0 mg/L	0.03 mg/L	0.06 mg/L	98.5	97
Cyst	99.95% Reduction	111,750 Particles/ml	1 particle/ml	2 particles/ml	99.99%	99.99
Lead pH 8.5	15 ug/L	135 ug/L	5.5 ug/L	13 ug/L	95.9%	90
Lead pH 6.5	15 ug/L	149 ppb	1 ug/L	1 ug/L	99%	99

### Notes Regarding NSF Compliant Testing

The F-GAC and F-GAB-B were challenged to remove 2 mg/L of chlorine where the average effluent in most tap water can be approximately .5 mg/L and a maximum up to 1.5 mg/L.

The challenge level of chlorine is much higher than found in treated tap water and makes the assumption for chloramine found as an alternative treatment method to disinfect tap water.\*

The challenge of each filter resulted in a minimum chlorine reduction of only 97% and an average of 98.5% over 1,500 gallons at .9 gpm with a lead and cyst removal of 90 to 99% based on variances in pH range.



### Note:

The lead and cyst testing was done where the amounts tested were 10 times the allowable limit set by the EPA.

### Why EWS Uses Multiple Filters?

In order for good taste to actually equate to good quality and health, EWS uses 3 filters. A 5 micron (human hair is up to 20 times larger) Pre-Sediment Filter is used to protect and allow the Advanced Carbon Filters to perform at peak efficiency. Two (2) Advanced Carbon Filters are used as separate stages. Filtration becomes more effective as water passes through the first Carbon Filter and then through the final 1 micron Carbon Block to complete the filtration process.

A second pass for the water to be filtered through an additional stage is more effective than one pass through one multi-media filter (a filter with multiple materials) based on total filter bed depth, surface area and contact time to effectively remove contaminants. (See Carbon Filter Removal Chart for All Essential Filtration Systems)

\*Chloramine is a compound comprised of chlorine and ammonia. For the removal of this compound to be effective, carbon must be able to have catalytic and kinetic capabilities of drawing the chlorine and attached ammonia onto the surface area of the carbon and drawing it into the interior surface area of the carbon granule. Greater surface area and contact time is necessary for adequate removal over the life of the filter cartridge.

### Warning:

Most filters may remove the chloramine for a short time (taste only) until they become incapable of removing the entire compound. Single stage filters, multi-media filters, refrigerator filters, pitcher, carafe and faucet filters simply reduce the chlorine and allow the ammonia portion of the chloramine compound to shear off and render the filter useless as a foul or bad taste becomes evident and are limited by their filtration capacities. Therefore, similar to bottled water, taste becomes the actual consumer standard and not the health of the water or actual contaminants removed.



F-GAC advanced carbon filter meets or complies with NSF Standard 42 for reduction of Chlorine and other Volatile Organic Compounds. The cartridge utilizes a high performance advanced kinetic and catalytic granular activated carbon which provides exceptional filtration capacity and effectively reduces by an average of 98.5% chlorine, voc's, bad taste and odor in drinking water.

### About Municipally-Treated Water

Municipal water is heavily regulated, monitored, tested, filtered and treated. Most taste, quality and health issues are directly related to the treatment or disinfection of the water and their by-products, as well as man-made pollutants common to most water (see reference #'s below generally between 3 to 5). Issues with heavy metals and primary contaminants (see reference #'s below generally between 0 to 2) are highly regulated and effectively treated by water utilities. These contaminants are rarely an issue with water quality.

### How to Use the (GAC) Carbon Filtration Reference Chart

Below is a simple reference chart to give some perspective as to GAC's capabilities with various substances. Some items are heavy metals and inorganics, while others are VOC's (volatile organic compounds), some of which are man-made pollutants. Still other items, such as hardness, are not even considered contaminants. In general, GAC is very economical and a great compliment to municipally-treated water without the disadvantages of more aggressive filtration. GAC is used in all filtration due to its removal capacities. Know your water to select the correct product for you, your family and your home.

Acetaldehyde	4	Emulsions	2	Lead	3	Precipitated Sulfur	2
Acetic Acid	3	Ethyl Acetate	5	Lime	0	Propionic Acid	4
Acetone	4	Ethyl Acrylate	5	Mercaptans	4	Propionaldehyde	3
Alcohols	4	Ethyl Alcohol	4	Metal Salts	1	Propyl Acetate	4
Alkalinity	1	Ethyl Amine	4	Methyl Acetate	4	Propyl Alcohol	4
Amines	3	Ethyl Chloride	4	Methyl Alcohol	4	Propyl Chloride	4
Ammonia	3	Ethyl Ether	4	Methyl Bromide	5	Radon	4
Amyl Acetate	5	Fertilizers	1	Methyl Chloride	4	Rubber Hose Taste	5
Amyl Alcohol	5	Fluorides	2	Methyl Ethyl Ketone	5	Seawater	1
Antifreeze	4	Formaldehyde	2	Naphtha	5	Sediment	2
Arsenic	1	Gasoline	5	Nitrates	0	Soap	3
Benzene	5	Glycols	5	Nitric Acid	3	Sodium Hypochlorite	5
Bleach	5	Hardness	0	Nitrobenzene	5	Soluble Iron	2
Boron	1	Heavy Metals	3	Nitrotoluene	5	Solvents	4
Butyl Alcohol	5	Herbicides	5	Odors (General)	5	Sulfuric Acid	1
Butyl Acetate	5	Hydrogen Bromide	2	Oil - Dissolved	5	Sulphonated Oils	4
Calcium Hypochlorite	5	Hydrogen Chloride	1	Oil - Suspended	2	Suspended Matter	2
Carbon Dioxide	0	Hydrogen Fluoride	1	Organic Acids	4	Tannins	4
Chloral	5	Hydrogen Iodide	2	Organic Esters	5	Tar Emulsion	4
Chloramine	4	Hydrogen Peroxide	5	Organic Salts	4	Tartaric Acid	4
Chloroform	5	Hydrogen Selenide	3	Oxalic Acid	5	Taste (DI Water)	4
Chlorine	5	Hydrogen Sulfide	3	Oxygen	5	Taste (From Organics)	4
Chlorobenzene	5	Hydrochlorous Acid	5	Ozone	4	THM's	5
Chlorophenol	5	Inorganic Acids	1	PCB's	5	Toluene	5
Chlorophyll	4	Inorganic Chemicals	1	Pesticides	5	Toluidine	5
Citric Acid	4	Insecticides	5	Phenol	5	Trichlorethylene	5
Cresol	5	Iodine	5	Phosphates	0	Turpentine	5
Defoliant	5	Isopropyl Acetate	5	Plastic Taste	5	Urine	2
Detergents	3	Isopropyl Alcohol	5	Plating Wastes	3	Vinegar	3
Diesel Fuel	5	Ketones	5	Potassium Permanganate	4	Xanthophyll	4
Dyes	5	Lactic Acid	4	Precipitated Iron	2	Xylene	5

#### KEY TO THE ABOVE LIST FOR CARBON FILTRATION:

**5 - EXCELLENT:** Proven Application      **4 - VERY GOOD:** Proven Application      **3 - GOOD:** Very Acceptable Result  
**2 - FAIR:** limited application      **1 - POOR:** not a recommended application (See RO)      **0 - Not applicable** (See RO)

- Carbon Block technology has additional filtration capabilities and is the last stage in all EWS Essential Drinking Water Systems. See additional information.
- UV Disinfection for greater safeguards (DWS-UV, optional with Reverse Osmosis). See additional information.
- To prevent the absorption and inhalation of chlorine, chloramine, VOCs, by-products and pollutants. See CWL or EWS Whole Home Systems for GAC filtration to the entire home for bathing, showering and all uses.

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F-GAC-B 1 micron carbon block filter meets or complies with NSF Standard 42 and 53 for reduction of Chlorine, other Volatile Organic Compounds, Lead and Cysts. The cartridge utilizes a high performance advanced kinetic and catalytic granular activated carbon as an extruded 1 micron carbon block which provides exceptional filtration capacity and effectively reduces by an average of 98.5% chlorine, VOCs, bad taste and odor in drinking water. This same filter also reduces lead by an average between 95.9% (@ pH 8.5) and 99% (@ pH 6.5) while eliminating Cysts by 99.99%. This is the last stage and final pass the water makes in all EWS Essential Drinking Water Systems.

Lead and Heavy Metal Reduction and Reduction of Soluble and Insoluble (Particulate) Lead

Particulate filtration is used to intercept insoluble lead-containing particles. F-GAC-B filters will reduce lead, a minimum of 95.9 (@ pH 8.5) and 99% (@ pH 6.5) over 1,500 gallons @ 0.9 gpm meeting NSF test protocol for Standard 53.



Chemical Adsorption

F-GAC-B 1 micron carbon block filters offer high levels of chemical reduction in potable drinking water, including the removal of chlorine and other compounds that contribute to taste and odor and reduces chlorine in a testing challenge by an average of 98.5% over 1,500 gallons @ 0.9 gpm meeting NSF test protocol for Standard 42.

Particulate, Cyst and Turbidity Reduction

F-GAC-B 1 micron carbon block filters provide >99.99% reduction of 3-4 µm particulate, and 99.99% reduction of 1-2 µm particulates.

Used in conjunction with high performance 5 micron sediment filters, F-GAC-B will have extended life. Pre-Sediment and Advanced Carbon Pre-Filtration in all EWS DWS Systems and Advanced Carbon Pre-Filtration and 50 GPD RO Membrane in all EWS RO Systems combined as separate full bed depth stages of filtration will provide several times greater life and filter capacities and capabilities than any single-pass multi-media filters.

**UV Disinfection Technical Specifications (RO3-UV, RO4-UV only)**

F-LAMP is the lamp within the UV module which provides for the safeguard against Bacteria, E-coli, Viral and other Microorganisms and meets or complies with NSF Standard 55. See specifications and testing below.

Lamp Information: Life specified up to 1 year of continuous operation based on testing protocol\*\*  
 Housing: 2"O.D. x 11.50" L Fittings: Compression x 1/4 in. MNPT  
 Bulb Wattage: 6 Watts UV Output: 30,000 micro-watts at maximum flow rate  
 Min/Max Water Temp: 40° to 85°F (4.4° to 29.5° C) Max Water Pressure: 60 PSI / 4.14 Bar  
 Flow Rate : <1.0 GPM / 3.78 LPM  
 Max Static Temp Rise: up to 16.1° F above ambient - Water will be warm when sitting. Run water until cool.

Lower Housing contains a 316 bonded stainless steel interior for better UV contact which maximizes killing power by reflecting UV light and the off-centered in/out, side ports allow water to spin through module to eliminate any shadowing or shading during UV contact. Sight port allows consumer to see whether UV lamp is on.

Upper Housing Cap seals module and contains opening and easy-to-clean quartz sleeve where UV lamp is inserted.

UV Lamp with snap-fit top, 4 pin red cord with electrical step-down transformer. Never open upper housing cap. Just simply pull lamp out for removal and snap back in for replacement. Electric connection is simple plug in.



UV Results: "The unit was effective in killing E-coli and significantly reducing the level of micrococcus luteus. Based on previous testing, the unit produces approximately 17,000 µwatt/seconds when operated at a low rate of 0.75 gallons per minute." TRUESDAIL LABORATORIES, INC., TUSTIN, CA, U.S.A. 1989 LABORATORY NO. 26995.

Organism Tested	Control Count	Exposed Count	Percent Reduction of Control
E-Coli	1,400,000	<1*	>99.99992
Micrococcus Luteus	500,000	1170	99.66
Micrococcus Luteus	500,000	850	99.83

The unit was tested by pumping bottled spring water seeded with E-coli (ATCC 8739) and Micrococcus luteus (ATCC 9341) through at a rate of 0.75 gallons per minute. The unit was allowed to warm up five minutes before testing. Samples of the exposed and non exposed water were taken and duplicate plate counts conducted (plate Count Agar, 35C, 48 hours). The results are given above.:

\*\*Warning: The UV lamp is effective through one year of continuous service and must be replaced annually to maintain a 99% effective rate.

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**APPROXIMATE RO REJECTION RATES OF VARIOUS IMPURITIES\***

Aluminum	up to 98%	Manganese	up to 98%	Barium	up to 92%	Mercury	up to 97%
Bicarbonate	up to 98%	Nitrate	up to 95%	Bromide	up to 96%	Organic Pesticides	up to 98%
Cadmium	up to 98%	Phosphate	up to 98%	Calcium	up to 98%	Polyphosphate	up to 98%
Chloride	up to 98%	Potassium	up to 98%	Lead	up to 98%	Copper	up to 98%
Radium	up to 98%	Cyanide	up to 96%	Silica	up to 98%	Detergents	up to 98%
Silicate	up to 98%	Fluoride	up to 98%	Sodium	up to 96%	Iron	up to 98%
Sulfate	up to 98%	Radioactivity	up to 97%	Boron	up to 70%	Magnesium	up to 97%
Ammonium	up to 90%	Nickel	up to 98%	Strontium	up to 97%	Silver	up to 96%
Chromium	up to 96%	Chromate	up to 95%	Sulphite	up to 96%	Thiosulfate	up to 98%
Ferrocyanide	up to 98%	Borate	up to 50%	Selenium	up to 95%		
Zinc	up to 98%	Arsenic	up to 95%	Orthophosphate	up to 98%		

\* Operational, maintenance, and replacement requirements are essential for the product to perform as tested and specified.

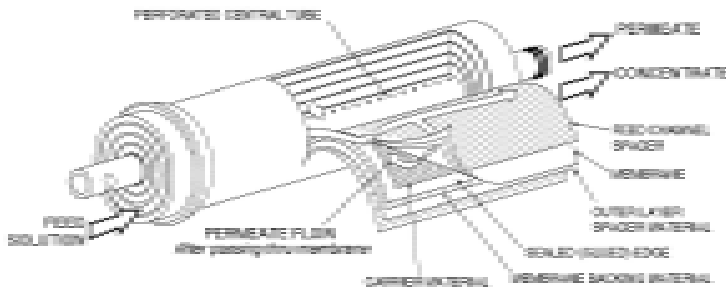
Rates based on the following test feed water:

Temperature: 77°F (25°C) TDS: 500 ppm. Pressure: 60 PSI.

Membranes meet or comply with NSF Standard 58.

*This is partial list or sample of impurities. New items are added based on developing protocols and standards.*

*Go to [www.EWSWATER.com](http://www.EWSWATER.com) for the most complete and updated information.*



**TFC (Thin Film Composite):** TFC membrane is a long-life membrane for non-chlorinated water supplies. A carbon filter must precede the RO element if used on chlorinated feedwater. Appropriate for well water of known quality.


**Performance Parameters**
**F-MEM**

Daily Production Rate (To Atmosphere at 4.25 Kg/Sq. cm: 60 PSI: 25° C/ 77° F: 500 mg/l. TDS)	up to 50 GPD
Average TDS Rejection	94-98%
Feed Water Chlorine Tolerance	No unless carbon prefilter
Feed Water Temperature	40° to 85°F (4.4° to 29.5° C)
Feed Water pH	3.0 - 11.0
Feed Water Pressure*	40-60 PSI
Maximum TDS	2000 mg./l
Maximum Hardness**	350 mg./l
Maximum Iron Feed Water	0.1 mg./l
Maximum Manganese Feed Water	0.05 mg./l
Free Chlorine Feed Water	< 1.5 mg./l
System Recovery Rate	20% @ 4.25 Kg./Sq. cm.

\*Contact EWS customer service for correct specification if you have low line pressure below 40 psi or high TDS (above 1,000) that affects pressure over membrane. Low pressure below 40 psi calculated over the RO membrane will lower rejection rates.

\*\*Maximum hardness is either 350 mg/l or the equivalent 20.5 grains per gallon. Contact EWS customer service for proper specification if water hardness exceeds the RO tolerance. Water hardness exceeding maximum limits will lower rejection rates.

The advanced F-MEM is a high-density TFC membrane with an integrated RO check valve and direct drain water rejection line. The replacement of the F-MEM ensures a long system life. All RO3 and RO4 systems also include a RO automatic shut-off valve for optimum performance. In all RO3 and RO4 systems, flow rate across the membrane is constant, enabling it to function at its optimum level. As a result, the life of the membrane will be extended as well. Better performance, less maintenance, less wasted water, and a product not subject to the typical leaking of the other manufacturers' units.

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Reverse Osmosis or “RO” has become a term that has slipped into our common language. When you need a tissue and ask for a “Kleenex”, its not the brand you need, it’s the tissue. It’s the same with RO. You may ask for the device or told that you need one, or be considering buying one without understanding what you’re asking for. Unlike the tissue, this decision can be impactful.

#### **How does an RO work?**

Water is forced by pressure through a semi-permeable membrane while dissolved solids and particulate matters are left behind. The residual contaminants are flushed to the drain. The resulting product water is a cleaner, safer water. These residential units are point of use or sink applications. Asking to do the whole house does not take into account; storing the production water and other drawbacks to the installation and operation of an RO system. Commercial or industrial RO systems can be very complicated, expensive and are designed for specific needs and applications.

#### **Drawbacks to an RO unit**

The drawbacks are why EWS provides the consumer a selection of product and why we include this information to help you decide what product is right for you. Here are only a few things to consider.

- WASTE:** RO can waste up to 20 gallons of water for one produced (our ratio is a low 3 gallons per 1).
- AGGRESSIVE & CORROSIVE:** RO produce very aggressive water. You can not plumb the filtered water in copper (the water will eat away or leach the copper) and, if cross-connected to other sources such as an ice-maker, it may provide warranty or service issues. When bottled water is produced, one of the methods to produce that water is reverse osmosis, however essential minerals are added back “for a pure, fresh taste” as quoted on any label of Dasani, a bottled water produced throughout the USA by Coca Cola. Please note - all spring waters, bottled at the source, have natural minerals and total dissolved solids of varying degrees, which provide the consumer a choice based on taste. (see Evian, Panna, Pellegrino, etc...)
- If an RO system is working correctly, the water can taste flat (like distilled) or metallic. The water produced may be wet, however your plants may not like it. The water is aggressive, it flushes, and does not allow for assimilation starving the plant which may be a drawback for you as well.

#### **When is an RO appropriate to use?**

See the following page on rejection rates and all those scary things. If you’re on municipal water, call your utility and request a recent report. Those items on that list are highly regulated. They are either not in your water or municipally treated, and therefore RO can be redundant and unnecessary. If you’re on well water, have your water completely and independently tested. Do not trust a local salesman. He’s the guy who’s usually pushing RO along with the softener, so the RO can take the salt out of the water that the softener put in!

#### **Are you looking for better tasting water? Reverse Osmosis or a Drinking Water Filtration System?**

This may be the best place to start and finish. The RO unit would **not** take out taste and odor, chlorine or any VOCs if not for the Carbon (GAC) filter. Maybe you simply need the advanced Essential Drinking Water System (DWS). To upgrade to lead and cysts removal, the RO is fine, but so is the DWS. Bacterial safeguard? Add our UV option to your RO unit or see the complete DWS-UV as an alternative.

#### **Frequent Question - Removal of fluoride?**

- Yes      Remove the fluoride, I’m allergic - Use RO as your sink water filtration system to remove fluoride from drinking or cooking
- No        Do not remove - I want the fluoride. Then use any of the drinking water system options (DWS or DWS-UV), as mentioned above which will not remove fluoride.

#### **The Bottom Line - Filtration at the Sink - Reverse Osmosis or a Drinking Water Filtration System.**

Drinking water systems take up less room (RO has a storage tank), make as much water as you like (RO have limited production) are easier to install and maintain, can be cross-connected without issues, have less hassles, and are less costly (RO have drain connections, need an air gap by some codes, and make noise during production). However, if an RO is required based on your taste, needs, concerns and/or local water conditions at least you made an informed decision and have been provided a complete selection of superior RO product by EWS for proper application.

#### **Last note: Why only a 3-stage RO System when there are so many systems with more stages?**

Most offer more poor filters for replacement and not more or better filtration. The Essential RO3 is a totally complete RO system for municipally treated water, properly specified with the highest capabilities and results. The 4-stage unit is offered (RO4) for municipal water that may be more particulate and simply needs a pre-sediment filter to enhance system longevity or for use on well water of known quality. EWS has 5-stage systems specifically for difficult well water applications only. Correct and truthful specification by EWS.



## Correct Application of Booster Pumps

Booster pumps are critical to the effective performance of reverse osmosis membranes in low water pressure situations where the feedwater or supply water to the system is below 40 PSI and/or high TDS where the pressure over the membrane is reduced below 40 PSI (see example below).

Booster pumps enhance RO systems in the following ways and are available in our 5 Stage Series, model #'s RU500T35w/BP or the RU500T35w/UV/BP (with our UV disinfection option):

- Improving membrane efficiency
- Conserving water
- Conserving power
- Shutting down the pump when continuous product water is not necessary

Booster pumps are recommended in reverse osmosis applications where feedwater pressure is less than 40 PSI. Feedwater high in Total Dissolved Solids (TDS) may need a boost, in order to perform within rejection parameters.

### **FACT:**

Over 500 mg/l or ppm TDS, the PSI will be reduced by 1 PSI for every 100 TDS.

### **Example:**

Feedwater that is 2,000 mg/l of TDS will reduce PSI by 15. A booster pump will compensate to allow for proper application. On well-water, know your water pressure (PSI) and your TDS (total dissolved solids).

A booster pump is standard equipment in the EWS 5-Stage Series of Reverse Osmosis Systems (Model #'s RU500T35w/BP or RU500T35w/UV/BP with UV Disinfection option).

### **PLEASE NOTE:**

Regarding the need for a pump on a reverse osmosis system:

A booster pump on a reverse osmosis system has only one purpose and that is provide the feed water over the membrane at the proper pressure (as described above) in order to filter properly. A booster pump does not provide faster flow rates out of the dispenser/faucet or make more water.

## Correct Application for 5 Stages in a Reverse Osmosis System

Five stages is a correct application where a booster pump is needed. Please see EWS model #'s RU500T35w/BP or RU500T35w/UV/BP (with UV Disinfection)

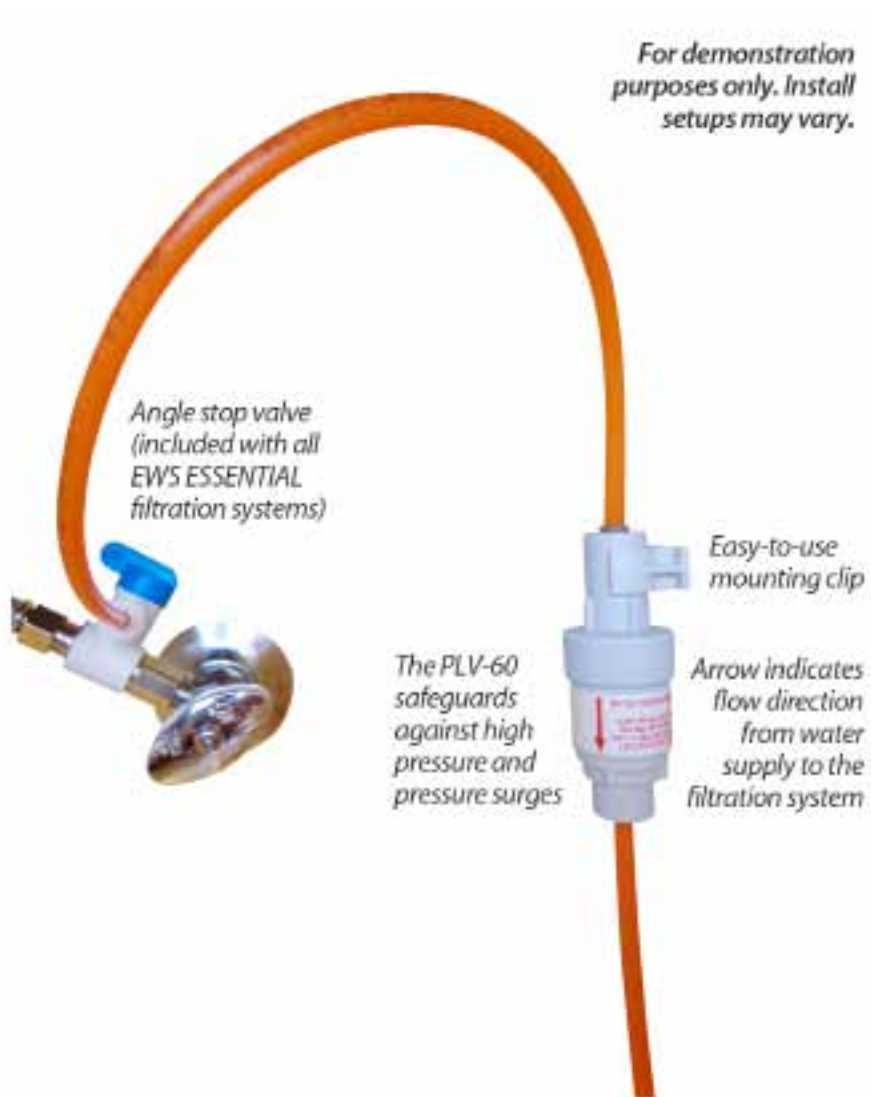
In common municipal or well water applications the typical 5-stage reverse osmosis systems marketed to consumers and contractors are simply more filters and not more filtration. The product is generally ineffective as a reverse osmosis system with weak filters and membranes incorporated to provide, in many cases, a very inexpensive system that does not work properly, while wasting lots of water along with your money.

See the EWS Essential Reverse Osmosis Series, model #'s RO3 (municipal) or RO4 (well), both available with UV Disinfection (-UV) options or EWS Essential Drinking Water Filtration Systems, model #'s DWS or DWS-UV for another type of sink filtration based on your needs, preferences or concerns.



## Highly Recommended

- This device is of vital importance to safeguard against high pressure or pressure surges above 60 psi.
- Many point of use product such as heaters and chillers have warranty issues with water supply pressure that may exceed 60 psi.
- All point of use (sink) filtration product function best above 40 psi but should be limited to 60 psi for optimum performance and product longevity. Warranty pressure should not exceed 75 psi.



**Item #: PLV-60-14**

**High pressure system to protect drink dispensers, water filters, ice makers, coffee machines, chillers (cold water systems), hot tanks (hot water systems) and other devices**

Easy to install at supply side (cold water only) before any device.

Simple connection with supplied quick connect fittings to 1/4" tubing.

- Integral Dual Check Valves
- Resists Water Hammer
- Stops backflow
- Supplied with mounting clip

Manufacturer strongly suggests that PLV-60-14 be replaced up to every 5 years based on usage and conditions.

### CAUTION:

**Installation of the PLV-60-14 is highly recommended on the 1/4" incoming supply or feed lines for all Point of Use or Sink Filtration Systems with 1/4" lines as a safeguard only. Constant high pressure, pressure surges or water hammer are problems that need to be addressed at the source or cause.**

For this part, please contact EWS Customer Service for a distributor near you or visit an authorized online distributor @ [www.waterontheweb.com](http://www.waterontheweb.com)

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**FDA\*, EPA and NSF\*\* Compliances**

Please be advised that all the materials and components utilized in producing all POU (Point of Use) drinking water filtration and reverse osmosis systems, and all POE (Point of Entry) filtration, conditioning and softening equipment, by EWS, Inc., comply with, but are not limited to, one or more of the following regulating standards:

NSF STANDARD 14	FDA 21 CFR 177.1520	FDA 21CFR 177.1640	FDA 21 CFR 177.1350
FDA 21 CFR 175.105	CAS # 7440-44-0	ANSI 304	CDA C360000
NSF STANDARD 60	NSF STANDARD 61	NSF STANDARD 58	ANSI 302
ANSI 316	FDA 21 CFR 177.2600	FDA 21 CFR 175.300	FDA 21 CFR 177.2550
NSF STANDARD 52	NSF STANDARD 42	NSF STANDARD 18	FDA 21 CFR 177.2550
FDA 21 CFR 177.1655	FDA 21 CFR 177.1630	FDA 21 CFR 177.2800	FDA 21 CFR 175.300
FDA 21 CFR 177.2260	FDA 21 CFR 181.32	FDA 21 CFR 177.2660	FDA 21 CFR 177.1950
FDA 21 CFR 177.2910	FDA 21 CFR 177.2250	FDA 21 CFR 177.1680	NSF STANDARD 53
NSF STANDARD 55	CAAB1953		

- \*The standards listed above relate to the Code of Federal Regulations of the United States of America, Title 21, Charter 1, Subchapter B set forth by the U.S. Food and Drug Administration.
- \*\*The NSF (National Sanitation Foundation) standards correlate to materials and potable water. The National Sanitation Foundation is not a government agency.

**Furthermore, and without, exception every component included in all POU and POE systems by EWS, Inc. are compliant for food and beverage contact and/or meet or comply with the most current, appropriate, and applicable standards without exception.**

All EWS product has been independently tested to NSF standards by an accredited third-party laboratory for all claims made regarding NSF/ANSI standards.

**Please take note of this helpful and enlightening information on this confusing subject:**

Contrary to common belief and less than truthful marketing, drinking water treatments units are NOT required to be "NSF Certified" (as tested by NSF itself), but they must be independently tested to applicable NSF standards by an accredited, independent laboratory. Though the test standards bear the NSF/ANSI name, NSF is just one of many accredited institutions.

- All EWS Product is No-Lead Compliant to California AB1953 and the No-Lead Standards which will take effect throughout the USA as of 2014.

**Factory Preparation:**

All systems are factory prepared and thoroughly checked to assure proper function and if applicable, quality tests of product water produced to assure that minimum standards of rejection have been met, and/or tests of specific components to assure correct function and flow rate measurements to assure efficiency specifications are met.

**Product Performance:**

- ◆ For all product capabilities, compliances and/or warranties to remain valid, all systems are dependent upon proper application, specification, and installation of any specific unit and/or combination of units.
- ◆ Please know your local or individual water condition(s), and plumbing application(s). Please review system(s) capabilities, applications, setup, installation, startup, maintenance, and related warranties.
- ◆ Detailed information is published in EWS Product Manuals and specific Product Service Guides (included with each specific unit) and made available upon request throughout US distribution and/or EWS corporate offices. All current information is available online @ [www.ewswater.com](http://www.ewswater.com)

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**Summary of Performance Guidelines, Factory Preparation, Product Performance, and Compliances**

Product performance may vary based on local water conditions, proper product specification and application, proper plumbing application, setup, installation, startup, maintenance and/or usage. To ensure proper operation, follow all setup, installation, start-up and maintenance procedures as detailed in all service guides. In addition, follow all applicable local plumbing codes.

The feed water must comply with the following conditions for all systems capabilities, compliances, and warranties to remain valid. All commercial POU and POE systems: Performance guidelines and feed water compliance dependent on specification and application, please consult with EWS, Inc. upon specification.

Water Temperature Range:	minimum 40°F, maximum 80°F		
Water Pressure:	Point of Use (POU):	minimum 40 psi, maximum 75 psi;	
	Point of Entry (POE):	minimum 40 psi, maximum 75 psi	
Water Flow Rates:			
Point of Use (POU):	water supplied to residential sink product:	at a minimum of 1 gpm	
Point of Entry (POE):	water supplied to tanks up to 1054:	at a minimum of 8 gpm	
	water supplied to 1354 tanks:	at a minimum of 12 gpm	

All product must be connected to main or cold water supplies. Product not intended to be connected to hot water supplies or allow heated water to flow through systems. Contact EWS, Inc. for product available for this purpose.

All product contain water. Do not allow any product to freeze.

Do not use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit(s).

Reverse Osmosis Systems Only: Never allow reject water to be hindered or stopped, without the reject water flow or improper drain connection, impurities may build up on membrane.

Point of Entry (POE) Units: Do not prevent backwash or brine lines to be stopped or restricted. Create and allow air gap to prevent any cross contamination.

**Compliances:**

Please be advised that all the materials and components utilized in producing all POU (Point of Use) drinking water filtration and reverse osmosis systems, and all POE (Point of Entry) filtration, conditioning and softening equipment, by EWS, Inc., comply with, but are not limited to, any one or more of the appropriate regulating standards. Furthermore, and without exception, every component included in all POU and POE systems by EWS, Inc. are compliant for food and beverage contact and/or meet or comply with the most current, appropriate, and applicable standards without exception.

**Factory Preparation:**

All systems are factory prepared and thoroughly checked to assure proper function and if applicable, quality tests of product water produced to assure that minimum standards of rejection have been met, and/or tests of specific components to assure correct function and flow rate measurements to assure efficiency specifications are met.

**Product Performance:**

- ◆ For all product capabilities, compliances and/or warranties to remain valid, all systems are dependent upon proper application, specification, and installation of any specific unit and/or combination of units.
- ◆ Please know your local or individual water condition(s), and plumbing application(s). Please review system(s) capabilities, applications, setup, installation, startup, maintenance, and related warranties.
- ◆ Detailed information is published in EWS Product Manuals and specific Product Service Guides (included with each specific unit) and made available upon request throughout US distribution and/or EWS corporate offices. All current information is available online @ [www.ewswater.com](http://www.ewswater.com)

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## Warranty Notification

**Notification:**

This warranty is referenced by EWS, Inc. in all literature, addressed in General Terms and Standard Conditions of Sale, and is published in its entirety in all EWS, Inc. product manuals, websites, and in all service guides supplied with all product.

**Limited Warranty:**

EWS, Inc., a Nevada corporation, hereby warrants all products to the original consumer purchaser to be free from defects in material and workmanship as stated in the following paragraphs:

- All residential point of use: countertop filtration, in-line filtration, undercounter drinking water filtration, shower filtration, residential reverse osmosis, and canister and filter cartridge point of entry pre-sediment and/or filtration units or systems for one year from date of purchase.
- All residential point of entry: pH decreasing and softener (resin and ion-exchange) systems, Environmental (EWS) Water Systems, Iron Removal units, CWL whole-home (filtration media) systems, pH increasing reagent (sacrificial media) units for 10 years on the tank and riser, 10 years on the ICN conditioner(s) (if applicable) and 5 years on the valve head from date of purchase.
- All commercial systems: Dependent on specification and application, please consult with EWS, Inc. upon specification.
- All filtration medias, resins, cartridges, uv lamps, and/or membranes are not covered by any warranty. Filter media, resin, cartridge, uv lamp, and/or membrane replacement or maintenance schedule will vary and must be replaced, as necessary, as determined by usage and local water conditions.

Product performance may vary based on local water conditions, proper product specification and application, proper plumbing application, setup, installation, startup, maintenance and/or usage. To ensure proper operation, follow all setup, installation, start-up and maintenance procedures as detailed in all service guides.

Not intended for use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after unit(s). The contaminants or other substances removed or reduced by these and any other water filtration or treatment devices are not necessarily in your water. To confirm the presence of any primary and secondary contaminants, have your water supply completely analyzed by an independent and approved facility or if applicable, contact your local water utility for information. Aesthetic, non-health related, or constituents without set federal standards may be part of water testing but are insufficient to determine proper application of any water filtration or treatment device.

EWS, Inc. will replace, free of charge, during the warranty period, any part which proves defective in material and/or workmanship under proper product and plumbing specification and application, normal and proper installation, use, service and proper care as published in detail in all service guides included with product. Labor charges are excluded from any warranty service or repair and are not the responsibility of EWS, Inc. Shipping charges may apply to delivered replacement parts or materials. Charges may also apply for the cost of any replacement media, resin, cartridges, uv lamp and/or membrane from any warranty service or repair. Information can be obtained at any time through a local dealer, distributor, representative or direct from EWS, Inc. and/or on-line at; [www.ewswater.com](http://www.ewswater.com). Replacement parts can be obtained from your local dealer, distributor, online or contractor.

This warranty is the exclusive warranty granted by EWS, Inc. and is in lieu of all other warranties of merchantability and fitness for a particular purpose and is further limited to defective parts replacement only. Labor charges and/or damage incurred in setup, installation, and startup, or repair, or replacement, as well as, incidental and consequential damages connected there with, are excluded, and are not the responsibility of, and will not be paid by EWS, Inc.

This warranty is void for any damages due to improper product and/or plumbing specification and/or application, misuse, abuse, neglect, accident, acts of nature, action of any military or civil authorities, improper handling and transportation, or improper setup, installation, and/or startup, or any violation of instructions furnished by EWS, Inc., or any replacement parts other than genuine parts or replacements supplied by EWS, Inc.

This warranty is not a warranty of merchantability, fitness, taste, aesthetics, and/or performance that may be subject to improper product and/or plumbing specification and/or application, misuse, abuse, neglect, accident, acts of nature, action of any military or civil authorities, improper handling and transportation, or improper setup, installation, and/or startup, or any violation of instructions furnished by EWS, Inc.

This warranty is not a warranty of merchantability, fitness, taste, aesthetics, and/or performance that may be personal and of subjective opinion and that does not relate to the performance of any system.

## Warranty Information and the Purchaser's Responsibility

Keep a record of the purchase receipt and/or installation receipt. Purchaser is required fill out warranty registration form(s) on applicable product(s) and register all product by either online @ [www.ewswater.com](http://www.ewswater.com), telephone, postal delivery, fax, e-mail (either [register@ewswater.com](mailto:register@ewswater.com) or information provided to [customerservice@ewswater.com](mailto:customerservice@ewswater.com)). **Failure to do so voids the warranty unless restricted by state regulations.**

EWS, Inc. does not sell, show or make available any information on any consumer in our database. This database is to ensure, if needed, proper warranty service, and good customer service for years to come. Please see our privacy policy published in our website at [www.ewswater.com](http://www.ewswater.com).

**Know Your Water:**

• If on a municipal system, large or small, it is your right as a consumer to have access to the most recent test results and to expect adherence to federal guidelines, as well as any state or local requirements. Any problems should be reported to the appropriate agencies. Please acquire those municipal test results to become an informed consumer.

• If on an individual well, have your water completely and independently tested. Local code may require a simple test for coliform bacteria to approve a well, however you may be unaware of potential problems for you and/or your home. A local water salesman is looking to close a sale and is going to test for hardness minerals and a few simple and obvious issues, which may or may not be contamination problems. Their solution is almost always the same and yet may provide no resolution to any true problems. Obtain our "Guide for the Private Well Owner" on our website; [www.ewswater.com](http://www.ewswater.com). Review our section on well water testing and applications in our complete catalog with your local distributor, dealer, or our representative or visit our website.

**• WARNING:**

Some restrictions apply to the use of softeners. Contact your local municipal water district or Gov't Agency. Brine discharge is already restricted on, or may be a problem for, septic applications and waste water treatment facilities. Since some states have already restricted softeners to metered valves to prevent excessive brine discharge, EWS, Inc. only provides metered valving in its line of softeners.

Restrictions on an outright ban may also apply to hot-side only, salt-exchange tanks or services. Local water dealers and other organizations do not inform consumers of these issues and believe these rules are unenforceable. The consumer is ultimately responsible.

Softeners may also provide warranty issues with pools and spas, certain other products and finishes. Softened water should not be used for drinking, cooking, pets or plants and is usually bypassed or "looped away" from the cold side of the kitchen sink. Reverse osmosis, which also has its drawbacks and issues with other products and materials, may be used to remove the salt from the water that the softener put in at the kitchen sink, yet may be misapplied for the actual local water conditions.

Any problems of water quality, or the fitness of any EWS, Inc. product that is associated with any mechanical, construction, application, installation, and/or environmental issue(s) (ie: flow rates, line pressure, piping materials, broken supply lines, changing water conditions; well or municipal water quality, et. al.), known or unknown, of the home or facility will not be considered by EWS, Inc. until such issue(s) have been resolved.

Responsibility for the proper product and/or plumbing specification, application and/or installation of any device manufactured by EWS, Inc. lies with the consumer, their builder contractor, plumbing sub-contractor and any other installer of choice. Items do not specify and/or install themselves. EWS, Inc. has provided many sources to acquire information on the proper application of systems and their installation prior to any purchase. EWS, Inc. manufactures a complete product line of point of use water filtration systems and point of entry filtration, softening and/or conditioning systems and/or appliances.

EWS, Inc. and the distributors of EWS, Inc. will stand behind the warranties of materials and workmanship. However, EWS, Inc. and the distributors of EWS, Inc. and the Environmental Water Systems Product Line do not bear any responsibility for improper applications of product and/or improper installation. It is for this reason that EWS, Inc. provides complete information on all product for your understanding, specification, application and selection, and proper plumbing application and installation.

To obtain warranty service support, contact your local dealer or contractor from whom you obtained the product or contact EWS, Inc., Customer Service, via phone, fax, or email.

**ALL FILTRATION PRODUCT PROUDLY MADE & ASSEMBLED IN THE USA**



**[www.ewswater.com](http://www.ewswater.com)   O: 702.256.8182; M-F 8:30am-4:30pm PST   E: [customerservice@ewswater.com](mailto:customerservice@ewswater.com)**

The EWS, Inc./Environmental Water System Product available through:



Authorized Kitchen & Bath Showrooms, Appliance Showrooms, Building & Plumbing Wholesale Supply Locations and their building, plumbing, HVAC and service contractors, and Authorized Online Distributors.



Contact Information:

## **EWS, INC.** **Environmental Water Systems**

**ewswater.com**

**O:** 702.256.8182 (M-F 8:30am-4:30pm PST)

**E:** customerservice@ewswater.com

**F:** 702.256.3744

**Got a Question..?**

Seriously.... Give us a call. We're here to help.

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**EWS is a Proud Contributor and Sponsor of Organizations Dedicated to Improving  
Health, Well-Being and the Environment**

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