



# GROWONIX GX400 High Flow Reverse Osmosis System Owner's Manual

[Home](#) » [GROWONIX](#) » GROWONIX GX400 High Flow Reverse Osmosis System Owner's Manual

## Contents [ [hide](#) ]

- 1 GROWONIX GX400 High Flow Reverse Osmosis System
- 2 GrowoniX GX300/GX400 Water Purification System
- 3 Features
- 4 Product Usage Instructions
- 5 INTRODUCTION
- 6 FEATURES
- 7 HF FLOW RATES
- 8 ACCESSORIES
- 9 REPLACEMENT FILTERS
- 10 PRECAUTIONS
- 11 COMPONENT DIAGRAM
- 12 SETUP INSTRUCTIONS
- 13 FLUSHING THE KDF85 CARBON FILTER
- 14 FLUSHING THE MEMBRANE ELEMENT
- 15 REPLACING SEDIMENT AND CARBON PRE-FILTERS
- 16 REPLACING THE MEMBRANE ELEMENT
- 17 SPECIFICATIONS CHARTS
- 18 REVERSE OSMOSIS SYSTEM WARRANTY
- 19 Documents / Resources
  - 19.1 References
- 20 Related Posts



**GROWONIX GX400 High Flow Reverse Osmosis System**



## GrowoniX GX300/GX400 Water Purification System

The GrowoniX GX300/GX400 water purification system is designed and manufactured in the USA to meet the needs of hydroponics hobbyists, serious enthusiasts, and large-scale gardeners. It uses reverse osmosis (RO) technology to remove impurities from water and produce clean, high-quality water for your plants.

### Features

- 300 gallons per day (GX300) or 400 gallons per day (GX400) flow rate
- High flow cold water membrane elements with a 2:1 waste ratio
- High flow washable sediment filter
- Carbon filter rated for 7500 total gallons or 2500 gallons of purified water
- Patented metal housing
- Auto shutoff valve
- EZ hookup kit
- Wall mountable
- Uses 50% less water than traditional RO systems
- No additional pre-filters needed (except for chloramine removal, which requires KDF Carbon option)
- Membrane flush kit
- No assembly required

### Product Usage Instructions

1. Connect the GX300/GX400 system to a cold water source using the EZ hookup kit.
2. Turn on the water source and allow the water to run through the system for at least 10 minutes to flush out any air or debris.
3. Adjust the membrane pressure using the membrane pressure gauge to ensure optimal performance. The recommended pressure range is 40-80 PSI.

4. Turn on the system and allow it to run until the storage tank is full. The system will automatically shut off when the tank is full.
5. Use the purified water for your plants. The system produces a 2:1 waste ratio, which means that for every 1 gallon of purified water produced, 2 gallons of waste water are generated. The waste water can be collected and used for other purposes such as cleaning or flushing toilets.
6. Replace the sediment filter and carbon filter as needed based on the manufacturer's recommendations to maintain optimal performance.

For chloramine removal, you will need to purchase the KDF Carbon option and replace the existing carbon filter with it.

## **INTRODUCTION**

### **OUR MISSION**

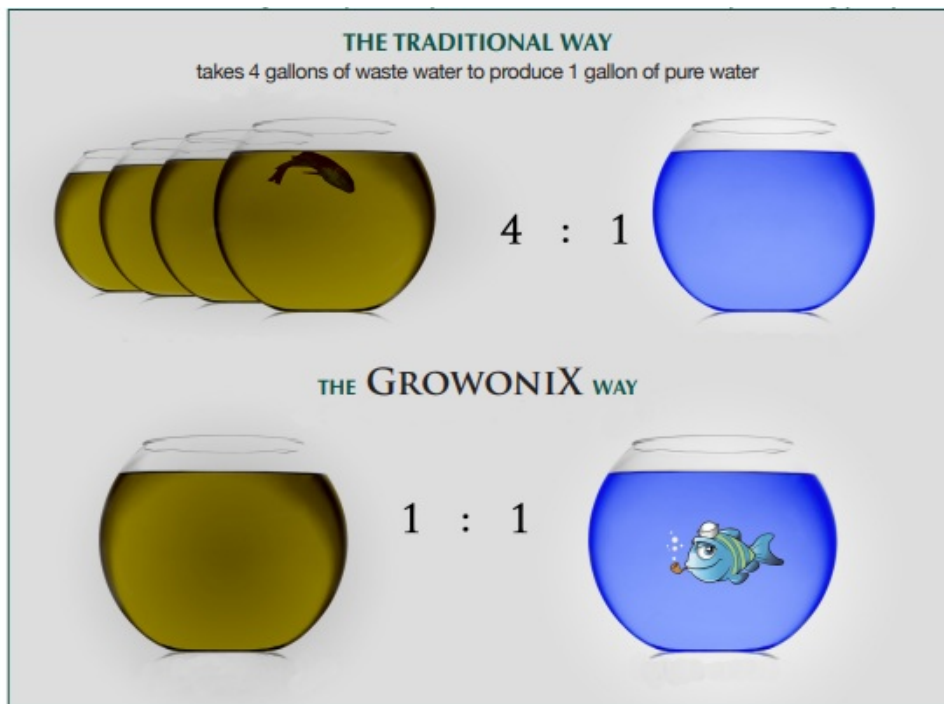
Durability, Reliability, Efficiency, Purity, and Conservation form the foundation on which we design and build all of our products. Consistent and superior quality sets us apart from other manufacturers and increases our value to you – our customer. Whether you are a hydroponics hobbyist, serious enthusiast, or large-scale gardener, GrowoniX is committed to bringing you the best solution for water purification systems.

### **WHAT IS REVERSE OSMOSIS?**

Reverse osmosis (RO) is a filtration method that removes many types of large molecules and ions from solutions by applying pressure to the solution when it is on one side of a selective membrane. This filtering process ensures that the solute (waste water) is contained within the pressurized chamber while the pure solvent (RO water) is allowed to pass freely through the membrane.

### **TUNED FOR GROWING – IN TUNE WITH OUR CUSTOMERS**

- Traditional RO systems have waste ratios of approximately 4:1, which means there are 4 gallons of waste water produced for every 1 gallon of purified water.
- GrowoniX line of water filters achieve waste ratios of 2:1 with all 200-400 GPD systems, and an astounding 1:1 ratio with the 600-1000 GPD systems.
- GrowoniX has created a complete product line that will address the needs of hydroponic operations of all sizes. Our filters will significantly reduce your water use while dramatically increasing your yields.



## FEATURES



 No Assembly Required

- 300 GALLONS PER DAY / 400 GALLONS PER DAY
- 17 GALLONS PER HOUR
- HIGH FLOW COLD WATER MEMBRANE ELEMENTS.
- 2:1 WASTE RATIO
- HIGH FLOW WASHABLE SEDIMENT FILTER
- CARBON FILTER RATED FOR 7500 TOTAL GALS, OR 2500 GALS OF PURIFIED WATER.
- PATENTED METAL HOUSING AUTO SHUTOFF VALVE

- EZ HOOKUP KIT
- WALL MOUNTABLE
- USES 50% LESS WATER THAN TRADITIONAL RO SYSTEMS

NO ADDITIONAL PRE-FILTERS NEEDED

CHLORAMINE REMOVAL REQUIRES KDF CARBON OPTION

MEMBRANE FLUSH KIT

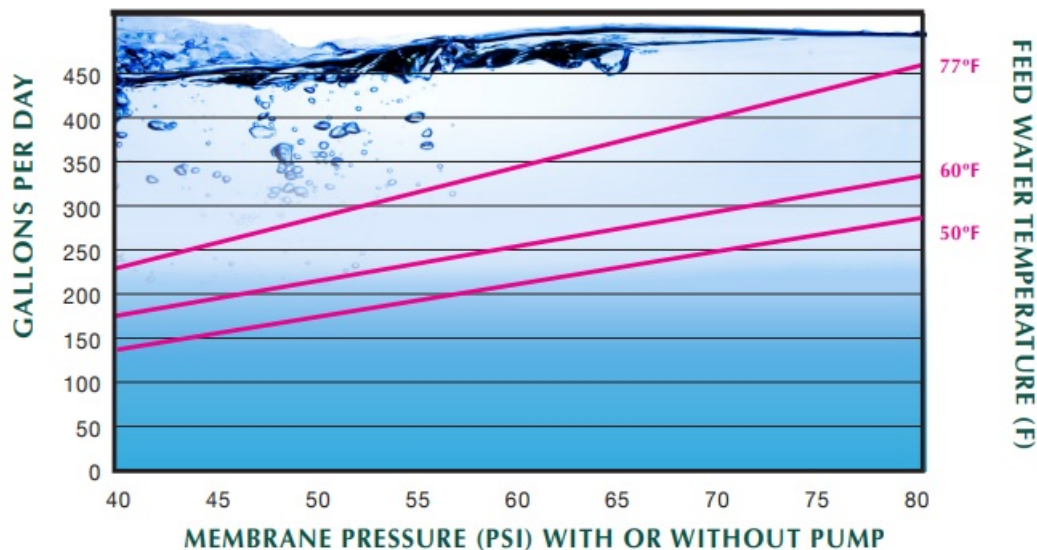
### WHY USE A GROWONIX GX400?

When we developed the GX400, we decided to pack all the high end features into a tight efficient RO unit. We engineered a 50% increase in water production over traditional ROs, lowered the waste ratio to 2:1, and still offered it to you for the same price point of an entry level RO filter. But we didn't stop there. We topped it all off with a 2" stainless steel liquid-filled pressure gauge, never before seen in a filter this size, and integrated it into our patented GX Series bracketing system. A manual flush valve allows you to clean the membrane, purging out pollutants that could otherwise add buildup to the system. Flushing adds considerable life to the membrane. With flow rates at 17 GPH (Gallons Per Hour), the GX400HF delivers the same excellent filtration as our larger models.



PART #	FLOW RATE	CARBON CAPACITY TOTAL GAL LONS	BOOSTER PUMP
GX300	300 GPD	8,000	BP-1530-38
GX400	400 GPD	8,000	BP-1530-38

### HF FLOW RATES



Test Conditions: Permeate flow and salt rejection based on 550 ppm, 80 psi, 77°F (25°C), pH 7, and 50%

recovery.

SYSTEM SPECIFICATIONS	
Recovery (System Ratio)	33% (2:1)
Nominal Salt Rejection %	97%
Permeate Flow GPD	400
Permeate Flow GPH	17
Min Feed Flow GPM	0.83
Max Feed Water TDS	<2000
Max Feed Temp °F (°C)	90 (32.2)
Min Feed Temp °F (°C)	40 (4.44)
Max Ambient Temp °F (°C)	115 (46.11)
Min Ambient Temp °F (°C)	40 (4.44)
Max Feed Pressure psi	80
Min Feed Pressure psi	40
Max SDI Rating SDI	<3
Max TDS ppm	2000
Max Hardness gpg	0
Max pH (Continuous)	10
Min pH (Continuous)	3
Max Turbidity NTU	1
Feed inch	3/8" Tube
Permeate inch	1/4" Tube
Concentrate inch	1/4" Tube
Dimensions L x W x H inch	14" x 7" x 16"
Weight lbs	13

## ACCESSORIES

### BP-1530 Booster Pump.



- DOUBLES pure water production for all systems 600 GPD and under.
- Can siphon from a rain barrel or tank and produce full pump pressure.
- ZERO psi of incoming water pressure to produce the full flow rate.
- High pressure cutoff, automatically shuts off when used with a solenoid valve, ball valve, float valve, or watering wand etc...
- Adjustable output pressure.
- 1 GPM flow rate

#### **UV-1530 Ultraviolet Filtration**



- Stainless Steel Ultraviolet Filter
- Destroys 99.9% of Micro-Organisms in your water supply.
- A must for well water treatment, whole house filter systems, or any time water will be stored.

#### **ESOK-34 Electric Shut Off Kit**



- An essential add-on to any water filter.
- Shuts down feed water BEFORE the water filter.
- Controls on/off cycling of high pressure booster pumps.
- 120VAC piggyback cable, 20ft.
- Solenoid valve with manual override for failsafe water-making.

#### **EP-2 Delivery Pump**



- 7 GPM delivery pump.
- High pressure cutoff, automatically shuts off when used with a solenoid valve, ball valve, float valve, or watering wand etc...
- water from storage tanks to batch tanks.

- Siphons water up to 12' in elevation.
- Able to run dry intermittently and slurp.

**VA-FLV-1438 Float Valve**



- 1 GPM flow rate max.
- Adjustable positioning via thumb screw.
- Can be mounted vertically or horizontally.
- 1/4" or 3/8" tubing port sizes.
- Bulkhead mounting style with sealing washer.

**REPLACEMENT FILTERS**

Product	Sediment	Carbon	Membrane	Ultraviolet	
GX300	SF-2510-PL	CF-2510-CC	GXM-150-HR	UV-1530	
		CF-2510-GB	GXM-200-HF		
	SF-2510-SP	CF-2510-KDF			
Product	Sediment	Carbon	Membrane	Ultraviolet	
GX400	SF-2520-PL	CF-2520-CC	GXM-150-HR	UV-1530	
		CF-2520-GB	GXM-200-HF		
	SF-2520-SP	CF-2520-KDF			

- Blue color indicates filters installed in unit.
- Green color indicates optional filters.
- Chloramine removal requires the KDF85 carbon filter.

**\*GX200-EX400 CARBON FILTER RATED AT 7,500 GALS TOTAL CAPACITY, OR 2,500 GALS OF FILTERD WATER AT 2:1 RATIO.**

**FILTER INDEX**





- **GXM HIGH FLOW COLD WATER MEMBRANES**

Highest flowing ultra-low-energy membranes on the planet—with the lowest waste ratio.

- **KDF85/CATALYTIC ACTIVATED CARBON FILTER**

Premium carbon filter using the best catalytic activated carbon with a bed of KDF85 media. There's no better carbon filter available.

- **COCONUT CARBON FILTER— “GREEN BLOCK”**

Premium coco carbon, produced using eco-friendly low emissions processes

- **COCONUT CARBON FILTER—”WHITE BLOCK”**

Economy coco carbon, same performance as Green Block, for a little less money.

- **PLEATED SEDIMENT FILTER**

High flow washable sediment filters with ultra low pressure drop.



- **SPUN SEDIMENT FILTER**

Spun poly sediment filters with huge dirt holding capacity and a little more pressure drop.

- **UV STERILIZATION**

Kills 99.9% bacteria and viruses.

- **ALKALINE INLINE**

Inline filter adds calcium & magnesium to filtered water, and raises the Ph.

- **REMINERALIZING INLINE**

Inline filter adds calcium & magnesium to filtered water.

- **DI INLINE**

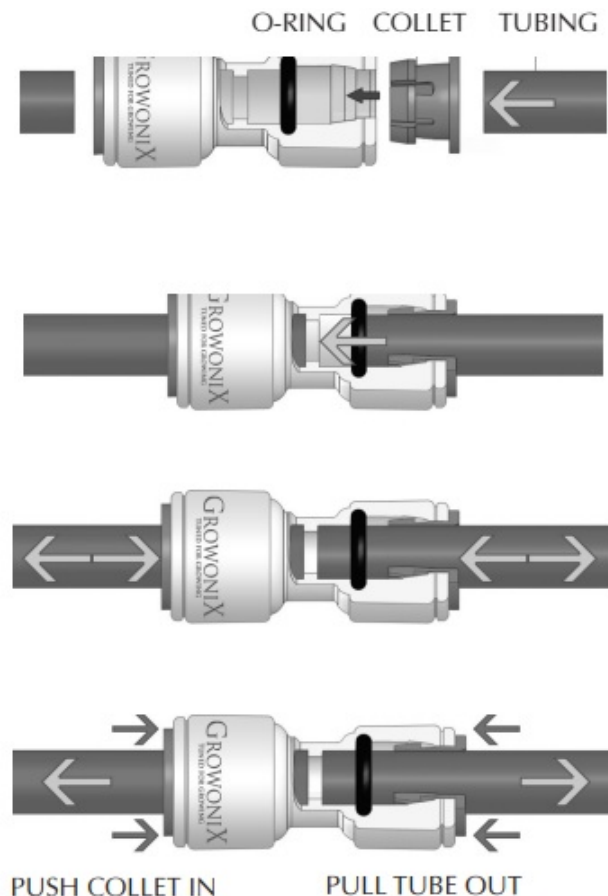
De-Ionization filter removes last bit of PPM.

## PRECAUTIONS

- Do not use unit with inlet water pressure exceeding 80 psi. If inlet water pressure is too high, install water pressure regulator before the unit. Pressure regulators are available at [GrowoniX.com](http://GrowoniX.com) or your local plumbing supply.
- A minimum of 40psi is recommended to operate GrowoniX water filters. If your inlet water pressure is too low, a booster pump can be used to increase pressure.
- Slower performance may be noted in areas with colder temperatures, higher water salinity, or lower inlet water pressure.
- Keep unit away from direct light. Direct light can cause algae and other biologicals to grow inside of the filter housings.
- Do not install unit near electrical outlets or electrical devices.
- Do not install in places where a leak can cause damage.
- Do not use a flow restrictor other than the one included with your unit.

## INFORMATION ON QUICK CONNECT FITTINGS

GROWONIX WATER FILTERS USE QUICK CONNECT FITTINGS THAT ALLOW FOR EASY MAINTENANCE.



## MAKE A CLEAN TUBE CUT

Cut the tube squarely and if using plastic tubing, ensure that the cut has not made the tube out of round.

Also ensure that the tube has a smooth outside diameter without any burrs or score marks prior to inserting it into the fitting.

### INSERT TUBE INTO FITTING

Push the tubing through the collet and dual o-rings until it bottoms out against the tube stop. The collet holds the tube in place and the dual o-rings provide a leak resistant seal.

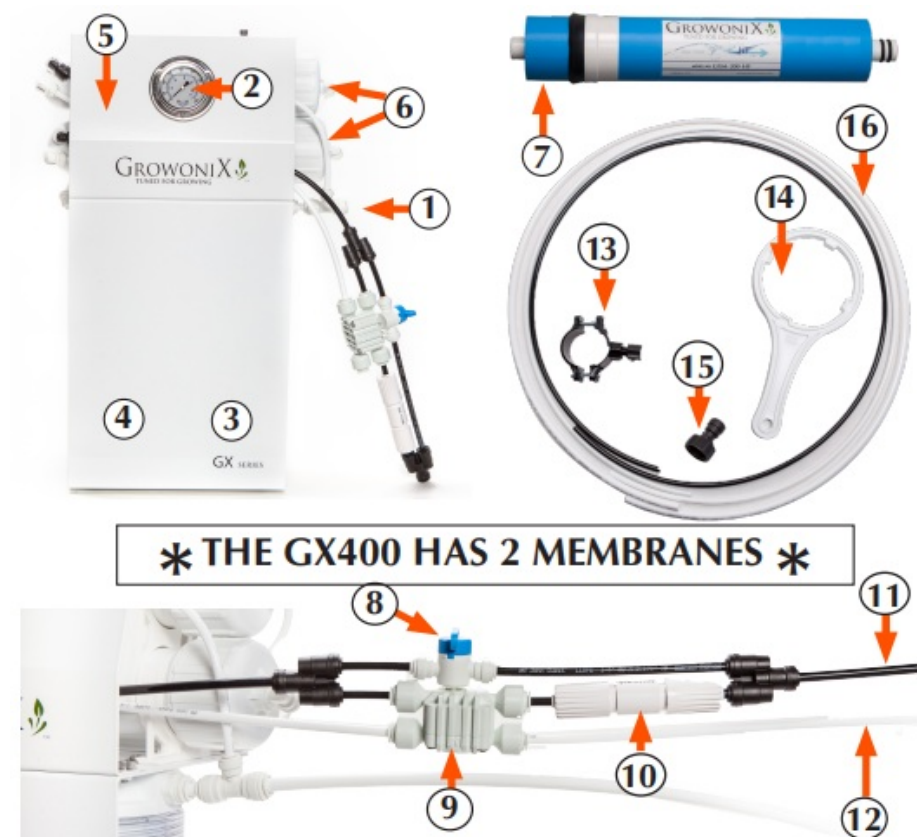
### TEST AND INSPECT

Push and pull the tubing toward and away from the fitting to ensure that it has been installed properly. Test and inspect the installation for any leaks.

### TUBE REMOVAL

Relieve pressure from the tubing and fitting. Push uniformly around the collet flange against the fitting body while pulling the tubing away from the fitting to release it.

### COMPONENT DIAGRAM



1. SUPPLY WATER IN
2. PRESSURE GAUGE
3. SEDIMENT FILTER
4. CARBON FILTER
5. PATENTED GX MOUNTING BRACKET
6. MEMBRANE HOUSINGS
7. RO MEMBRANES
8. MEMBRANE FLUSH VALVE
9. AUTO SHUT OFF VALVE
10. FLOW RESTRICTOR
11. WASTE/DRAIN TUBING
12. RO WATER OUT

13. DRAIN SADDLE CLAMP
14. FILTER WRENCH
15. GARDEN HOSE ADAPTER
16. SUPPLY, RO, AND DRAIN TUBING

A “FLUSHKIT” IS COMPRISED OF PARTS 8-12 AND IS MENTIONED THROUGHOUT THIS MANUAL.

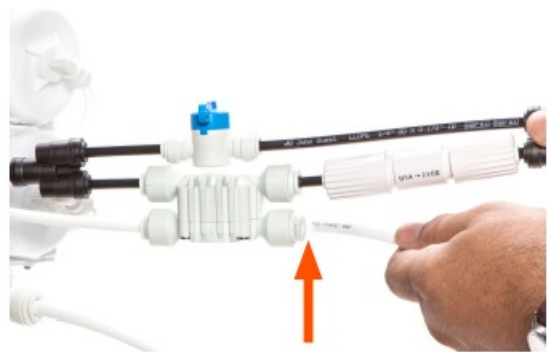


## SETUP INSTRUCTIONS

- Always turn incoming water pressure off before servicing the unit.
- Always turn incoming water pressure on slowly, allowing all air to be discharged from the system before full water pressure is restored.
- GrowoniX GX300 – GX400 water filters are designed to be used with between 40-80 psi of incoming water pressure. Do not exceed 80 psi of incoming water pressure.
- If incoming water pressure is too high, install pressure regulator before unit.
- It is recommended to flush the carbon filter and membrane upon initial startup. (see following instructions



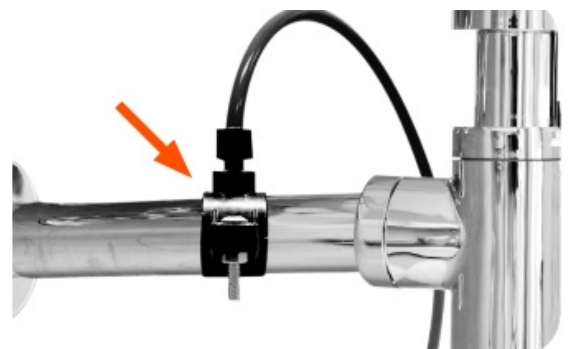
2



1. Connect the 3/8" white supply tubing to the inlet fitting, making sure the inlet seats all the way into the quick-connect fitting. This is the supply water line.
2. Connect the 1/4" white RO tubing to the auto shut-off valve, making sure the RO tubing seats all the way into the quick-connect fitting. This is the filtered RO water out line.



4



3. Connect the 1/4" black drain tubing to the tee fitting just after the flow restrictor.
4. Mount the drain clamp to an available drain pipe. Only insert the tubing halfway into the drain pipe—do not bottom out. Connect other end of drain tubing to the included drain clamp.

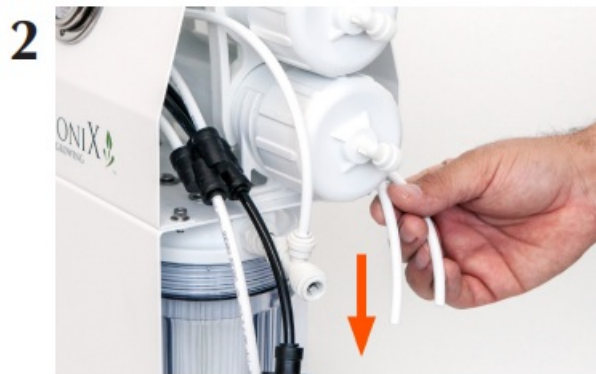
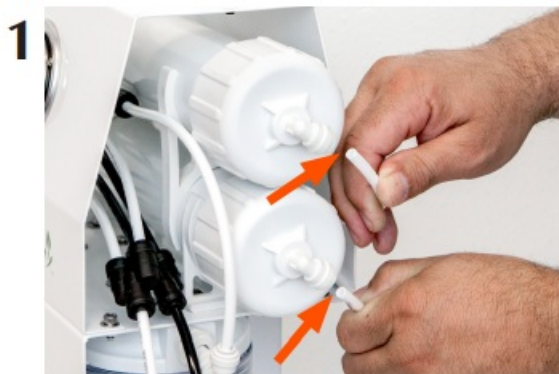
BEFORE TURNING INCOMING WATER SUPPLY ON, REFER TO NEXT STEP “FLUSHING THE KDF85

CARBON FILTER” ON THE NEXT PAGE.

## FLUSHING THE KDF85 CARBON FILTER

Growonix GX300 and GX400 water filters come with a manual flush valve. Flushing the membrane element after each use for approximately 3-5 minutes will remove standing salts from the membrane, significantly extending membrane life. Even weekly flushes will improve membrane life and system performance.

The flush valve is located on the waste line of the RO membrane. To flush the membrane simply turn the flush valve to the FLUSH position as seen in picture 1. High-pressure water will bypass the flow restrictor and shutoff valve and be sent down the drain, carrying membrane pollutants with it. If using a float valve and the system happens to be OFF due to valve engagement, opening the flush valve will start the system again in flush mode, and the membrane will be cleaned.



1. Make sure the incoming feed water is shut off, ensuring the RO filter is depressurized. Disconnect the 1/4" white tubing that feeds the membrane input from the carbon filter.
2. Position the fitting over a drain or bucket and slowly turn on incoming water pressure. Allow ten gallons of water to flush through carbon before reconnecting to membrane input.



3. Reconnect the tubing to the membrane inputs and resume normal filter operation.



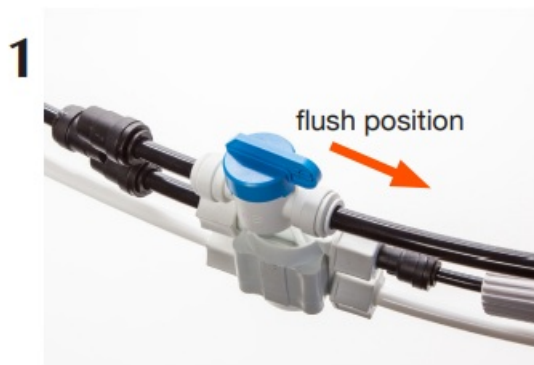
**MAKE SURE WATER IS FREE  
FROM CARBON FINES & DEBRIS  
BEFORE RECONNECTION  
TO MEMBRANE INPUT**

\*GX300-GX400 CARBON FILTER RATED AT 7,500 GALS TOTAL CAPACITY, OR 2,500 GALS OF FILTERED WATER AT 2:1 RATIO.

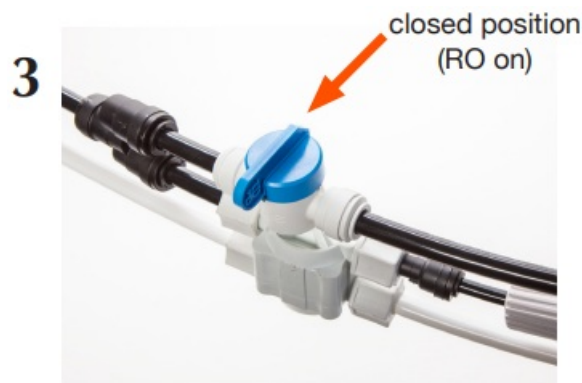
## FLUSHING THE MEMBRANE ELEMENT

GrowoniX water filters come with a manual flush valve. Flushing the membrane element after each use for approximately 3-5 minutes will remove standing salts from the membrane, significantly extending membrane life. Even weekly flushes will improve membrane life and system performance.

The flush valve is located in the waste line of the RO membrane. To flush the membrane simply turn the flush valve to the FLUSH position as seen in picture 1. High pressure water will bypass the flow restrictor and shutoff valve and be sent down the drain, carrying membrane pollutants with it. If using a float valve, and the system happens to be OFF due to valve engagement, opening the flush valve will start the system again in flush mode.



1. Make sure the flush valve is open (in the FLUSH position).
2. Let system run for 3-5 minutes.



3. flushing is complete, simply turn flush valve to CLOSED position. Membrane has been flushed.

## REPLACING SEDIMENT AND CARBON PRE-FILTERS

- Sediment filters should be changed when either brown discoloration occurs, or system flow rates have significantly declined.
- Carbon filters have a gallon count: 7,500 gals total capacity, or 2,500 gals of filtered water at 2:1 ratio for the GX300 – GX400.
- Always turn incoming water pressure off before servicing the unit.
- Always turn incoming water pressure on slowly, allowing all air to be discharged before full water pressure is restored.





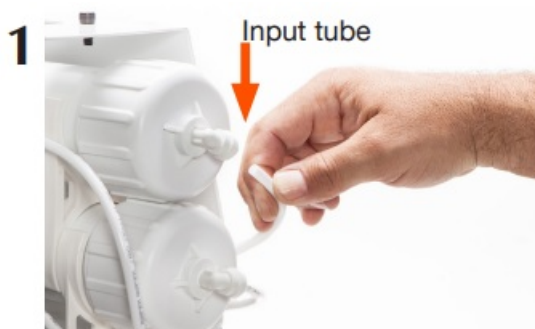
1. Unscrew the sediment and carbon filter housings using the supplied filter wrench. Wash inside of the filter housings to remove debris.
2. Install the new sediment and carbon filter, making sure they go into the correct filter housings.



3. When replacing the filter housings, make sure the housing O-rings are seated properly. Grease the O-rings with food grade silicone grease.
4. Tighten the filter housings by hand, do not use the filter wrench. Do not over tighten.

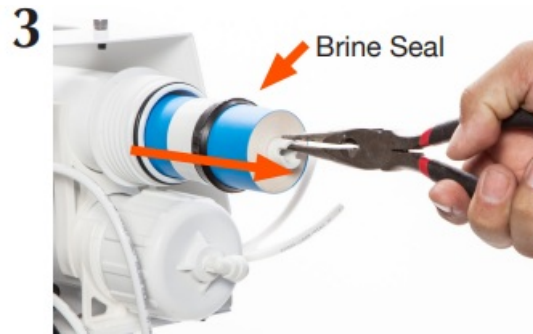
## REPLACING THE MEMBRANE ELEMENT

- Before servicing membrane element system must be de-pressurized. To de-pressurize the GX300 – GX400, turn incoming water supply completely OFF and open the flush valve.
- It is suggested that you replace sediment and carbon pre-filters as well when replacing membrane element.
- After replacing membrane turn incoming water pressure on slowly, allowing all air to be discharged before full water pressure is restored.
- End-caps can be difficult to re-install. To aid in installation, apply continuous pressure to end cap. Do not strike the end cap.



1. Disconnect the input tubes from the RO membrane housings.
2. Unscrew the membrane housing end-caps. Caps can be difficult to remove. Be sure to have a firm grip on the

opposite side of the housing. Do not lose the O-rings on insides of the caps. Each cap has two O-rings.



3. Pull out the membranes using needle nose pliers or other similar tool.



4. Insert the new membranes into the housings, making sure the ends with the brine seals go in last. Make sure the membranes are completely seated into the housings.

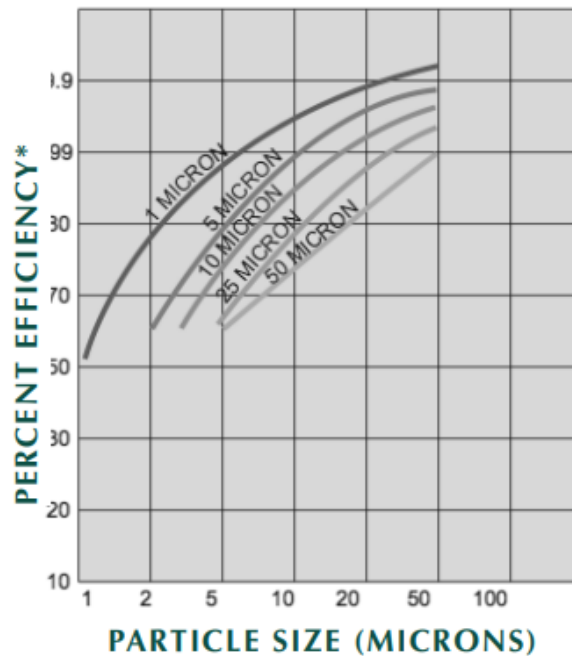


5. Replace the end caps and tighten by hand. If the O-rings are dry, lubricate them with food grade silicone lubricant. Allow the system to run for ½ hour before using the RO water.

## **SPECIFICATIONS CHARTS**

### **PLEATED SEDIMENT FILTER 2.5 " DIAMETER**





#### Materials of Construction:

- Filter Media
- End Caps
- Core
- Temperature Rating
- Non-woven Polyester
- Vinyl Plastisol
- Polypropylene
- 40°F to 125°F (4.4°C to 51.7°C)

#### Size Description:

- 2 1/2" X 9 7/8"

#### Initial AP(psi) @ flow rate (gpm):

- 1 psi @ 10 gpm(.01 bar @ 38 L/min)

#### ECO COCONUT CARBON BLOCK FILTER

##### Materials of Construction:

- **Carbon:** NSF listed 61, Coconut Shell PAC
- **End Caps:** Polypropylene
- **Inner/Outer Wraps:** Polypropylene
- **Nettings:** Polypropylene
- **Gaskets:** NBR
- **Temperature Ring:** 40°F to 180°F

#### OD X Length:

- 2-3/4" X 9-3/4"

## **Nominal UM Rating**

- 10

## **Initial AP(psi) @ flow rate (gpm):**

- 1 PSI @ 30 GPM Chlorine, Taste, Odor Reduction Capacity Flow
- >8,000 gallons @ 1 GPM

## **RO MEMBRANE ELEMENT**

### **Operating Limits:**

- **Membrane Type:**  
Thin film composite
- **Maximum Operating Temperature:** 110°F (45°C)
- **Maximum Operating Pressure:** 125 PSI
- **Maximum Feed Flow Rate:**  
1 GPM
- **Maximum Concentrate Flow Rate:** 4 x Permeate
- **pH Range, Continuous Operation:** 3-10
- **Maximum Feed Water Turbidity:**  
1 NTU
- **Maximum Feed Silt Density Index (SDI):** 5 SDI
- **Chlorine Tolerance:**  
0 PPM
- **Applied Pressure PSI (BAR):**  
65 (4.48)
- **Permeate Flow Rate GPD:**  
150
- **Nominal Salt Rejection(%):**  
97%

## **REVERSE OSMOSIS SYSTEM WARRANTY**

For a period of one year from the date of original purchase, we will replace or repair any part of the GrowoniX reverse osmosis water system that we find to be defective in operation due to faulty materials or workmanship with the exception of the replaceable filters and membranes.

## **GENERAL CONDITIONS**

Damage to any part of this reverse osmosis system because of misuse; misapplication; negligence; alteration; accident; installation; or operation contrary to our instructions, incompatibility with accessories not installed by GrowoniX, or damage caused by freezing, flood, fire, or Act of God, is not covered by this warranty. In all such cases, regular charges will apply. This limited warranty does not include service to diagnose a claimed malfunction in this unit. This warranty is void if the claimer is not the original purchaser of the unit or if the unit is not operated under normal municipal water or well water conditions. GrowoniX assumes no liability in connection

with this reverse osmosis system. GrowoniX assumes no liability for any damages incurred through the use of this product. It is the responsibility of the end user to gauge the safe use of this product in the environment where it is applied. We do not authorize any person or representative to assume for us any other obligations on the sale of this reverse osmosis system. The information given out in the manual we believe to be true, but are offered to you in good faith without guarantee because each application of this product is different and beyond our control. THE FOLLOWING STANDARD OPERATING CONDITIONS FOR RESIDENTIAL/COMMERCIAL REVERSE OSMOSIS SYSTEMS MUST BE MET FOR WARRANTY TO BE VALID.

	Water Pressure	pH Range	Maximum TDS	Water Temp
Standard System	40-80 psi	3-10	2000 ppm	40-110 F

## GROGROWWONIX RETURN POLICYONIX RETURN POLICY MERCHANDISE RETURN DETAILS AND PROCEDURE:

If any merchandise was defective —we will refund the full purchase price upon receiving and reviewing the merchandise returned in undamaged condition.

### RMA NUMBER:

You must first obtain a Return Merchandise Authorization (RMA) number from GrowoniX.com. Any products sent to GrowoniX without an RMA number will not receive a refund and may be returned to the sender at their expense.

All refund amounts will be based on the manufacturer's warranty and GrowoniX return policy. Refunds will be issued back using the payment method you used when you placed your order. Refunds take up to 3-5 business days to process once we receive the return.

### PACKAGING:


Please kindly re-pack the product in its original box, or a box of equivalent strength. The unit should be packed in the same manner as it came to prevent damage in shipping. Please return everything that was in the original box, including any free items if applicable. Be sure to drain out all water from wet systems and parts and wrap them in plastic bags before packing.

### RETURN TO:



We will provide you with an GrowoniX warehouse address for return merchandise when we issue the RMA number

[www.growonix.com](http://www.growonix.com)

## Documents / Resources

	<p><a href="#">GROWONIX GX400 High Flow Reverse Osmosis System</a> [pdf] Owner's Manual GX300, GX400, GX400 High Flow Reverse Osmosis System, High Flow Reverse Osmosis System, Reverse Osmosis System, Osmosis System</p>
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## References

-  [Home - Growonix](#)
-  [Home - Growonix](#)