GROWONIX

TUNED FOR GROWING

GX600/1000
OWNERS MANUAL

WWW.GROWONIX.COM

1:1

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.

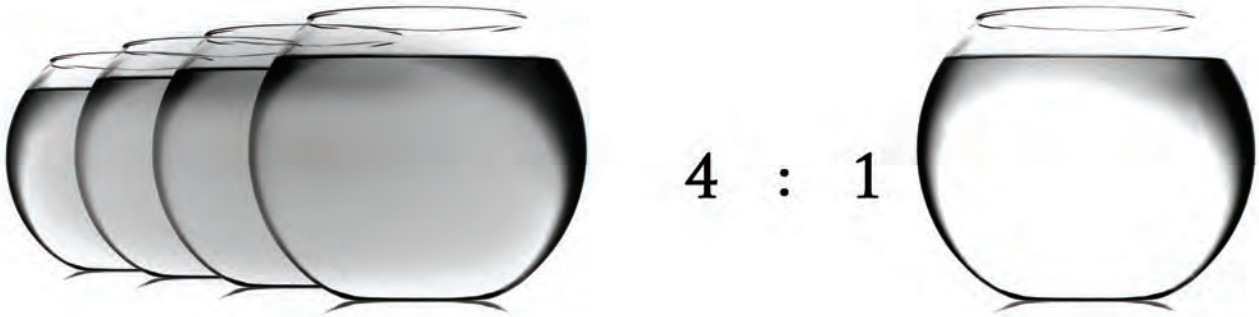
TUNED FOR GROWING - IN TUNE WITH OUR CUSTOMERS

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 the EX100 through GX400 and an astounding 1:1 ratio with the GX600 and GX1000.

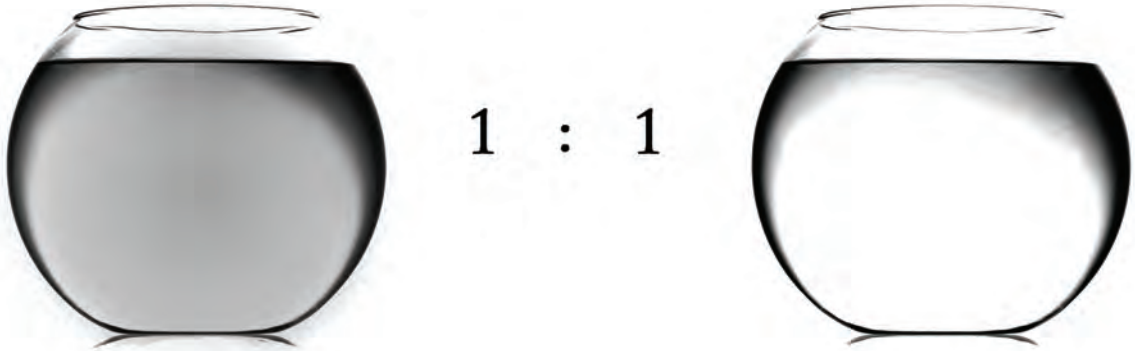
GrowoniX has created a complete product line that will address the needs of hydroponic operations of all sizes. Our filters will significantly reduce your water use while dramatically increasing your yields.

THE TRADITIONAL WAY

takes 4 gallons of waste water to produce 1 gallon of pure water



THE GROWONIX WAY

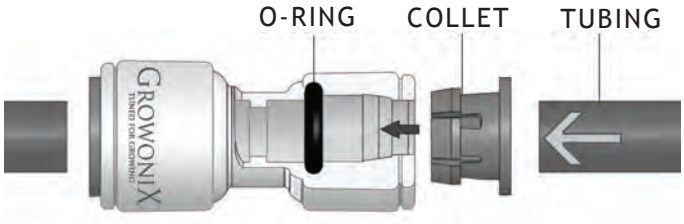


INFORMATION ON QUICK CONNECT FITTINGS

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

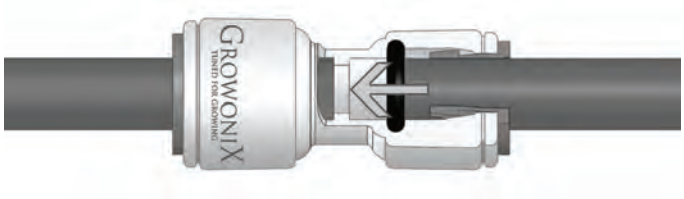
MAKE A CLEAN TUBE CUT

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.



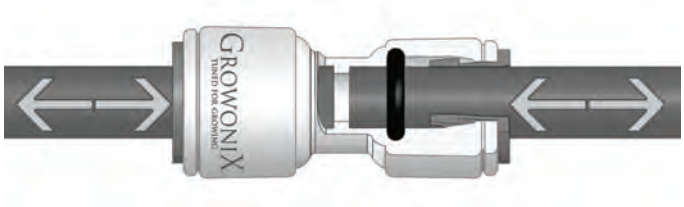
INSERT TUBE INTO FITTING

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.

GX600

GX1000

GX SERIES

The strategy behind the GX Series is simply to make the highest quality, most efficient water filter, tuned specifically to meet the rigors of the industry.

Each filter system is designed, hand built, and tested right here in the United States, using American made, top-of-the-line fittings and tubing. All components are housed in steel powder-coated brackets fabricated in sunny Los Angeles, California.

The crown jewel of the GX Line is the Dow Membrane element, delivering a consistent rejection of 98.5% at a 1:1 ratio. No matter how big or small your water production needs are, the GX Line has a solution for you.

NO ADDITIONAL PRE-FILTERS NEEDED

FEATURES:

- **HIGH FLOW COLD WATER MEMBRANE ELEMENTS.**
- **1:1 OR 2:1 SYSTEM RATIOS— THE MOST EFFICIENT IN THE INDUSTRY.**
- **ELECTROGALVANIZED POWDER COATED STEEL BRACKETS.**
- **MEMBRANE FLUSH KIT.**
- **2.5" STAINLESS STEEL LIQUID FILLED GAUGES.**
- **ONE ECO GREEN COCONUT CARBON FILTER RATED FOR 16,000 GALLONS**
- **CHLORINE/CHLORAMINE REDUCTION.**
- **HIGH FLOW PLEATED SEDIMENT FILTER, COMPLETELY WASHABLE AND REUSABLE.**
- **AUTO SHUTOFF VALVE: FOR POSITIVE AUTOMATIC SHUTOFF WHEN USING A FLOAT VALVE.**

GX600/GX1000

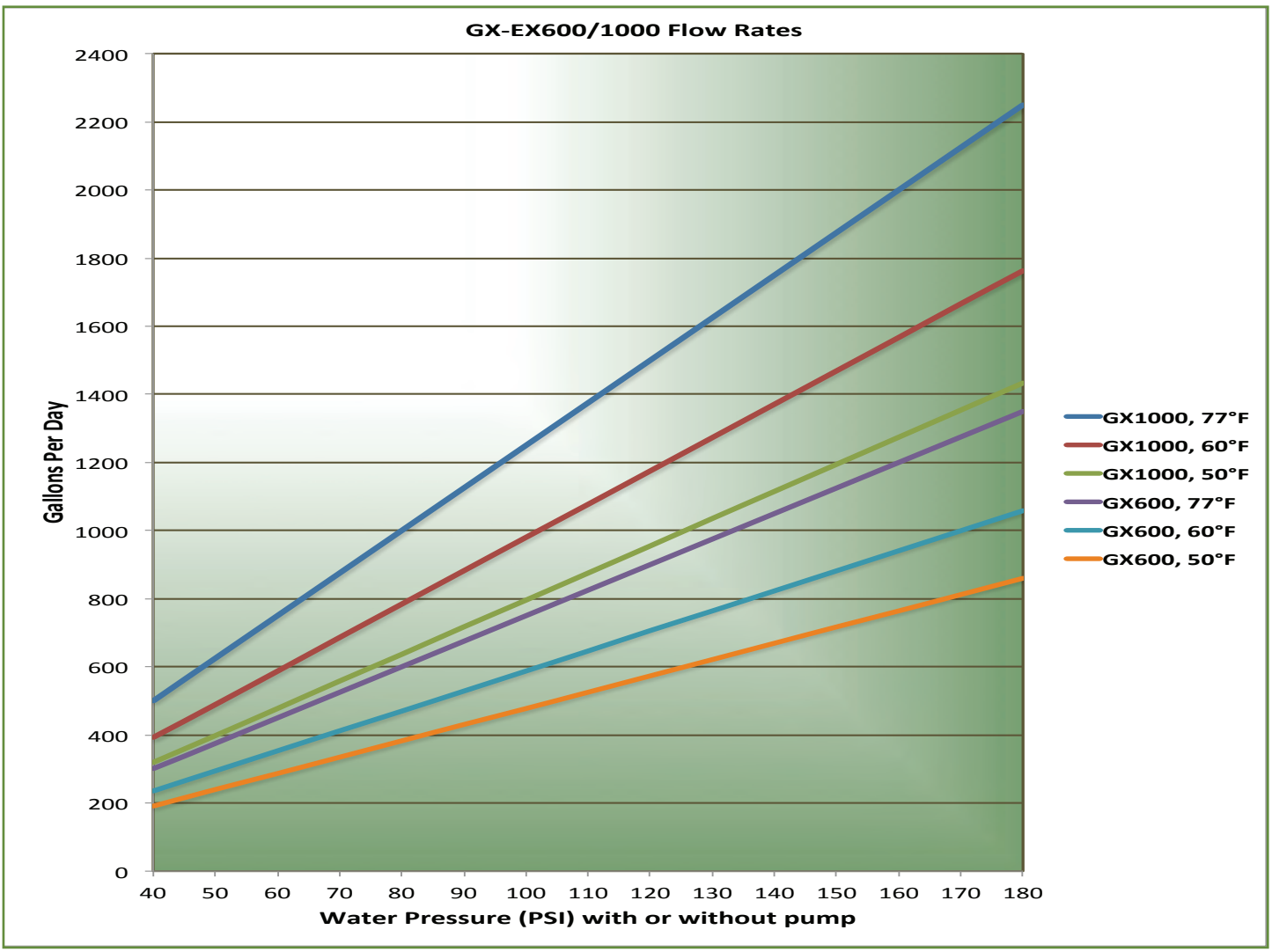
Designed to flow 42 gallons per hour for the GX1000 and 25 gallons per hour for the GX600 of pure RO water with an astounding 1:1 ratio - High flow rates and water savings never before seen in a package so affordable and durable. Utilizing the best membrane technology in the world, mounted on locking casters, and wrapped in our GX Series patented bracketing system, our premier flagship is a mobile powerhouse.

A pair of liquid-filled stainless steel pressure gauges informs when it's time to change the pre-filters. 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 as well. For those who demand even more performance, the GX1000 and GX600 can be used with a booster pump, raising the system pressure to 150psi, doubling the gallon per day output.

SYSTEM SPECIFICATIONS:

Flow Rate: GX1000 =1000 GPD
GX600 = 600 GPD
Max Flow Rate w/Booster Pump:
2000 GPD(1800 GPD average)
Minimum Feed Pressure 40 psi
Recommended Feed Pressure 60 psi—80 psi
Recovery (system ratio 1:1) 50%
Operating Temperature: 40°F—105°F
Operating pH: 3-11
Dimensions LxWxH (in) 21x9x28
Weight: 50 lbs.
Nominal % Rejection: 98.5%
Maximum TS: 2000 ppm
Minimum NACL Rejection 96%
Maximum Hardness:15 gpg

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



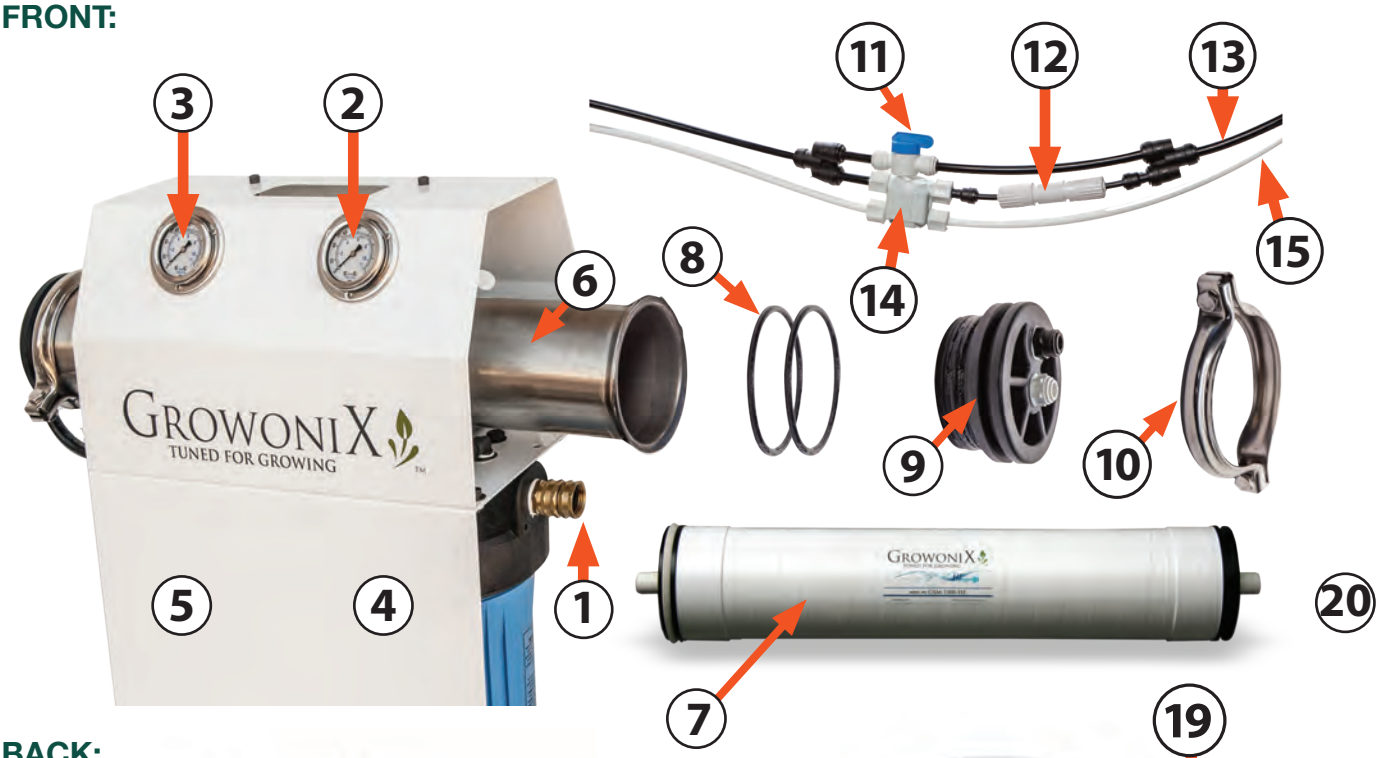
PRECAUTIONS

- 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. Regulators and pressure limiters are available at www.Growonix.com or your local plumbing supply.
- 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.

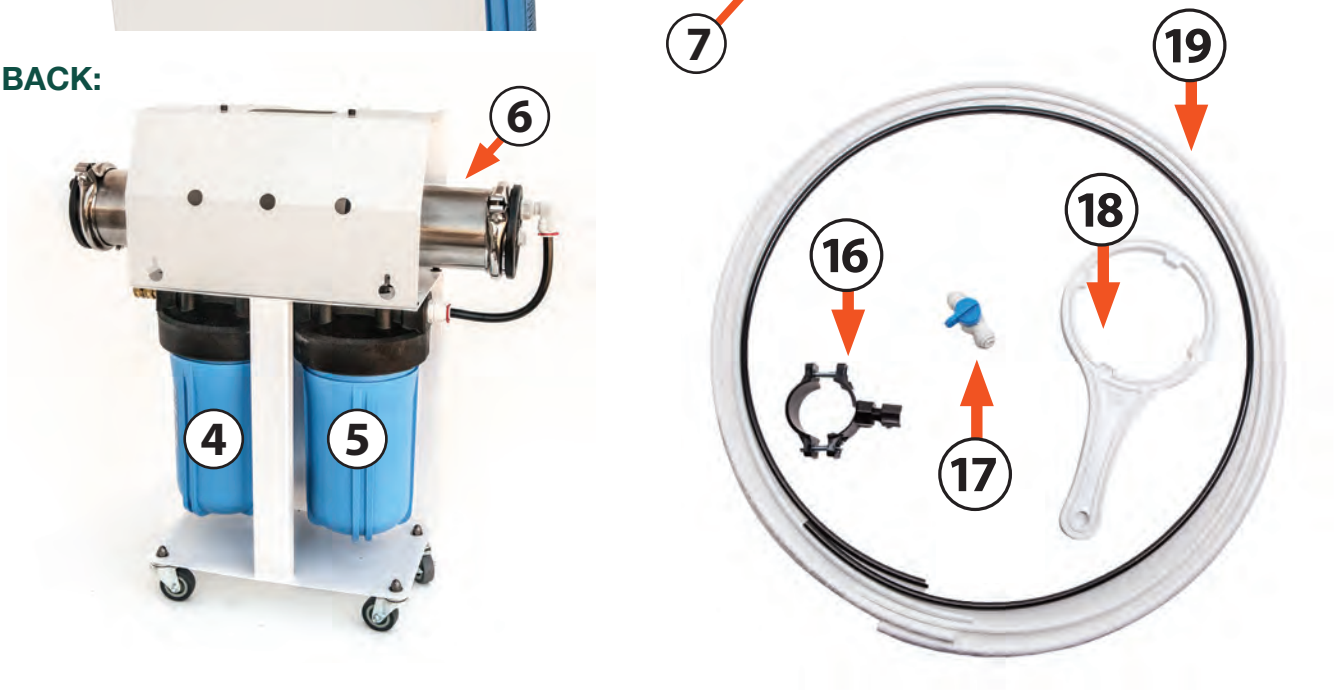
- GrowoniX EX Series RO water filters are rated using supply water that is 77°F, 475ppm, at 70psi. Slower performance may be noted in areas with colder temperatures, higher water salinity, or lower inlet water pressure.
- A minimum of 40psi is recommended to operate GrowoniX water filters. If your inlet water pressure is too low, booster pumps can be used to increase pressure.
  Pumps are available at www.Growonix.com.
- Do not use a flow restrictor other than the one included with your unit.
- Flow restrictors help tune the unit for proper waste ratio.
- Using bigger flow restrictors, or using the unit in areas with exceptionally dirty water, will decrease membrane performance and longevity.

COMPONENT DIAGRAM

FRONT:



BACK:



1. SUPPLY WATER IN
2. INPUT SIDE PRESSURE GAUGE
3. OUTPUT SIDE PRESSURE GAUGE
4. SEDIMENT FILTER
5. CARBON FILTER
6. RO MEMBRANE HOUSING
7. RO MEMBRANE
8. O-RING
9. END CAP
10. SNAP RING
11. FLUSH VALVE
12. FLOW RESTRICTOR
13. DRAIN/WASTE WATER OUT
14. AUTO-SHUTOFF VALVE
15. RO WATER OUT
16. DRAIN SADDLE CLAMP
17. IN-LINE SHUTOFF VALVE
18. FILTER WRENCH
19. RO AND DRAIN TUBING

SETUP INSTRUCTIONS

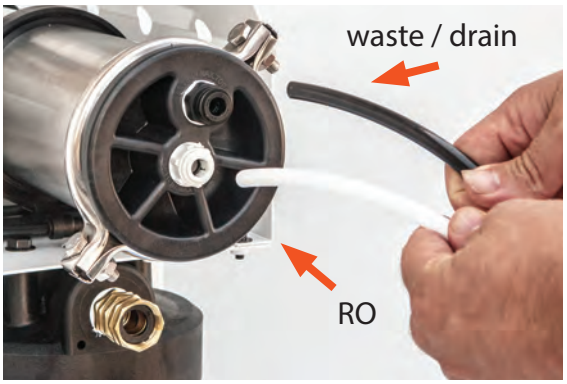
Important Tips:

- 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 GX600 and GX1000 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 membrane upon initial startup. (see: Flushing Membrane Element)

1

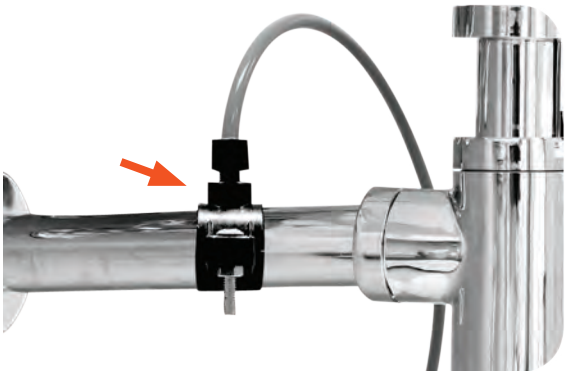
Connect inlet water supply.
This example shows 3/4" garden hose connected to supplied hose union. Hose fittings can be removed to allow for 3/4" NPT pipe connections.

2



Connect RO and waste / drain assembly to membrane housing as shown. Make sure tubing is seated completely into O-rings of quick connect fittings.

3



Mount drain clamp to available drain pipe. Connect other end of drain tubing to included drain clamp.

4

Make sure flush valve is in open position as shown above. This position is for flushing the RO membrane.

5

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 GX600 and GX1000 water filters can be upgraded with a KDF85 Catalytic Carbon Pre-Filter. The "KDF" carbon filter is a superior blend of highly reactive catalytic carbon and KDF85 process media used to remove/reduce iron, hydrogen sulfide, chlorine, chloramine, bacteria, scale, and algae.

The catalytic carbon in these filters is in a loose form, and thus will discharge a small amount of carbon dust upon initial startup. It is recommended to unhook the membrane input side and flush ten gallons of water through the carbon filter before re-connecting to the RO membrane. This will ensure no dust gets into the membrane causing premature fouling.

1

With system OFF and depressurized, disconnect fitting from membrane input.

2

Position fitting over drain or bucket and slowly turn on incoming water pressure. Allow ten gallons of water to flush through carbon before reconnecting to membrane input.

WARNING

DISCONNECT TUBING FROM PUMP INPUT OR MEMBRANE INPUT AND FLUSH 10 GALLONS THROUGH KDF CARBON FILTER

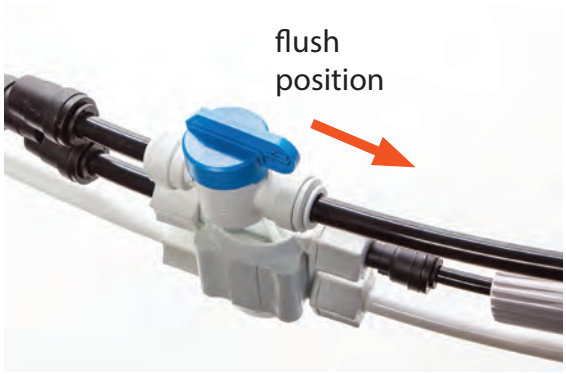
MAKE SURE WATER IS FREE FROM CARBON FINES & DEBRIS BEFORE RECONNECTION TO MEMBRANE INPUT

FLUSHING THE MEMBRANE ELEMENT

Growonix GX600 and GX1000 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

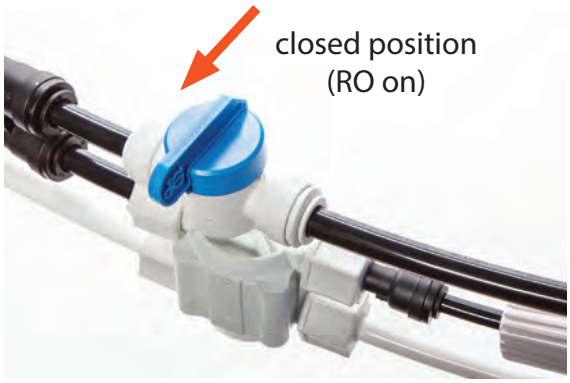


While the system is running, turn the flush valve to the OPEN position.

2

Let system run for 3-5 minutes.

3



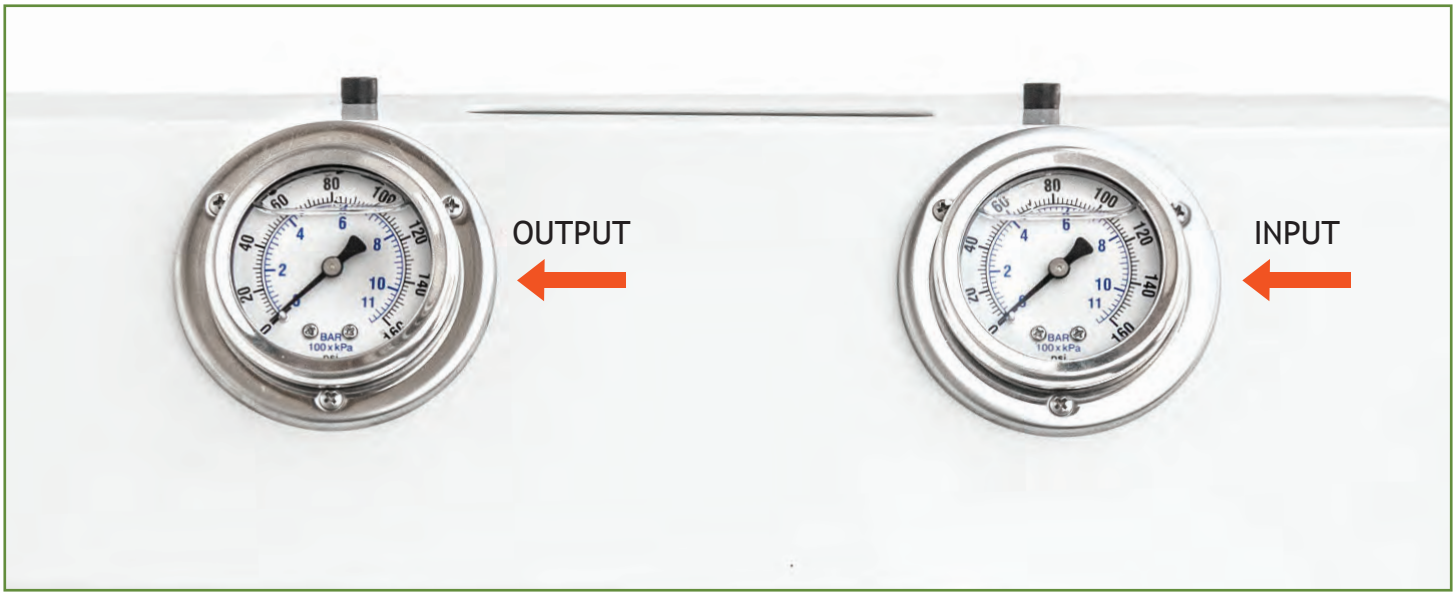
After flushing is complete, simply turn flush valve to CLOSED position. Membrane has been flushed.

REPLACING SEDIMENT AND CARBON PRE-FILTERS

GrowoniX GX600 and GX1000 pre-filters should be changed regularly to ensure maximum membrane element life and system performance. When a 30% — 40% differential between the gauges is reached and output water pressure gauges is reached, pre-filters should be changed (i.e., when input gauge reads 80 psi and output gauge reads approximately 50 psi, you have a 30% differential—time to change pre-filters).
The pressure differential is really “pressure drop” caused by dirty pre-filters.

IMPORTANT TIPS

- After changing filters, always turn incoming water pressure on slowly, allowing air to be discharged before full water pressure is restored.
- Be careful not to lose the O-ring when removing each filter housing bottom.

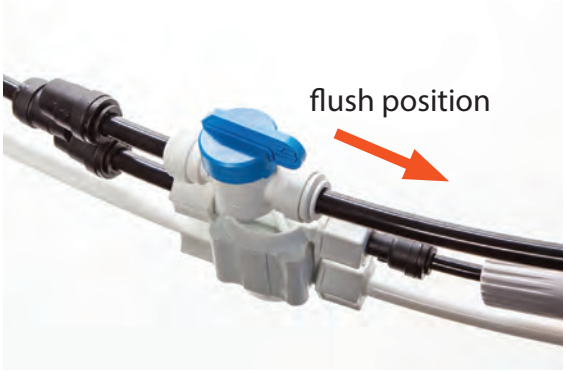


The table below displays pressure gauge readings that will assist you in knowing when to change GX Series pre-filters. Pre filters should be changed when the output pressure gauge reads 30% lower than input pressure gauge (30% pressure differential).

Input Pressure Gauge	Output Pressure Gauge	Pressure Differential
80	56	30%
75	53	30%
70	49	30%
65	45	30%
60	42	30%
55	54	30%
50	35	30%
45	31	30%
40	28	30%

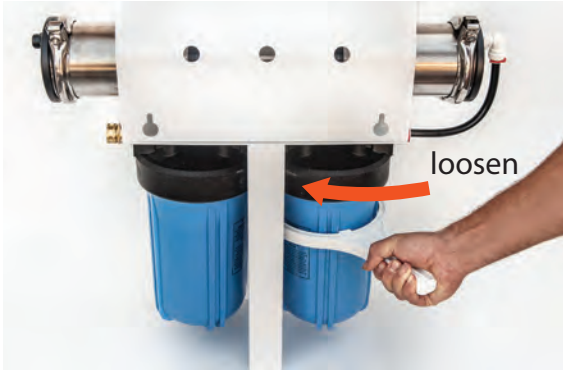
REPLACING SEDIMENT AND CARBON PRE-FILTERS

1



Turn off incoming water supply. Open flush valve to relieve system pressure.

2



Loosen pre-filter housings using supplied filter wrench. Empty standing water and remove old pre-filters. Clean interior of housings to remove standing sediment and debris.

3

Install new sediment and carbon cartridges, making sure sediment cartridge is installed in the housing closest to the input side of the unit.

4

Grease O-rings with food grade silicone grease

5

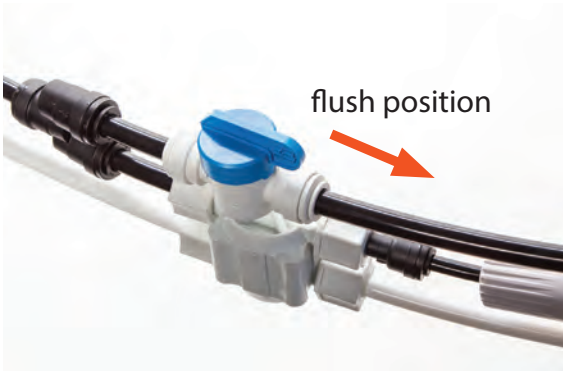
Tighten housings with supplied filter wrench. Close flush valve and begin normal usage. If KDF85 carbon filter is being used, make sure to flush carbon filter before connection to membrane input (see section : Flushing The KDF85 Carbon FIlter)

REPLACING MEMBRANE ELEMENT

IMPORTANT TIPS

- Before servicing membrane element system must be de-pressurized. To de-pressurize the GX600 and GX1000, 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



Turn incoming water supply OFF and open flush valve to depressurize the system.

2

Make sure to depress collet while pulling stem outward.

3

Remove stem elbow from input side of membrane housing. Make sure to depress collet while pulling stem outward.

4

Using 13mm socket or wrench, remove end clamp retaining bolts.

REPLACING MEMBRANE ELEMENT
INPUT SIDE

5

Remove end clamp.

6

Remove the end-cap
Each end-cap has a two O-rings, be careful not to lose them.

7

Pull used membrane element out towards the input side of membrane housing.

8

Clean inside of membrane housing to remove buildup or debris.

9

Prepare new membrane element by applying food grade silicone grease to the membrane brine seal and both ends of the center tube.

10

Insert membrane element into membrane housing making sure that the brine seal goes in last.

REPLACING MEMBRANE ELEMENT
INPUT SIDE

11

Newly seated membrane element.

12

Grease brine seal with ample amount of food grade silicone grease.

13

Seat end-cap back into input side of membrane housing.

14

Replace end-clamp on input side of membrane housing.

15

16

Tighten end-clamp retaining bolts evenly.

17 Turn incoming water supply ON slowly, allowing air to be discharged, before full water pressure is restored. Let system run in “Flush Mode” for 30 minutes to clear new membrane element. After 30 minutes, close flush valve and begin normal usage. Enjoy.

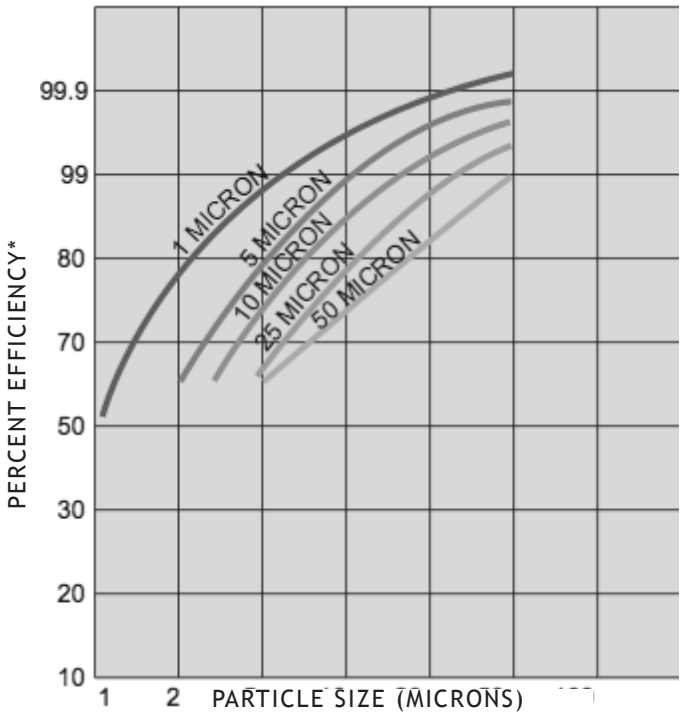
ADDITIONAL SPECIFICATIONS CHARTS

Pleated Sediment Filter 4.5 “ 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:
- 4.5” X 10”

Initial AP (PSI) @ Flow Rate (GPM):
- 1 PSI @ 10 GPM (.01 bar @ 38 L/min)

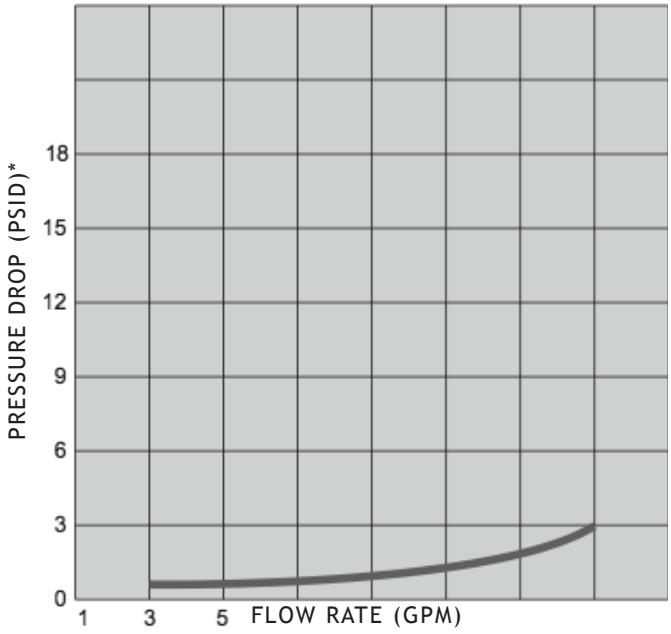


Filter Housings

Materials of Construction:
- Housing: Polypropylene
- Cap: Polypropylene
- Button Assembly: Stainless Steel, EPDM & Polypropylene
- O-Ring: Buna-N

Maximum Dimensions:
- 13-1/2” X 7-1/4”

Initial AP (PSI) @ Flow Rate (GPM):
- 1 PSI @ 30 GPM



MEMBRANE HOUSINGS

Materials:
- NSF Approved PVC Material
- NSF Approved GTX Material
- NSF Approved EPR O-Rings
- Available with 3/8”, 1/2”, 3/4”, & 1” Port Sizes

Specifications:
- Maximum Operating Pressure: 225 PSI
- Maximum Operating Temperature: 110˚F
- Minimum Operating Temperature: 35˚F

ADDITIONAL SPECIFICATIONS CHARTS

MEMBRANE ELEMENT

Operating Limits:
- Membrane Type: Thin film composite
- Maximum Operating Temperature: 110˚F (43˚C)
- Minimum Concentrate Flow Rate: 5:1
- pH Range, Continuous Operation: 3-11
- pH Range, Short term cleaning (30 min): 1-12
- Maximum Feed Water Turbidity: 1 NTU
- Maximum Feed Silt Density Index (SDI): 5 SDI
- Chlorine Tolerance: 0 PPM

Features:
- High Flow (HF) Ultra Low Pressure Membrane Material
- Tape Over Wrap
- Available Wet Tested
- Made in the U.S.A

Applied Pressure PSI (BAR)
- 600 GPD: 8.0 (5.52)
- 1000 GPD: 8.0 (5.52)

Maximum Pressure PSI (BAR)
- 600 GPD: 400 (27.58)
- 1000 GPD: 400 (27.58)

Permeate Flow rate GPD
- 600 GPD: 600
- 1000 GPD: 1000

Nominal Salt Rejection
- 600 GPD: 600
- 1000 GPD: 1000

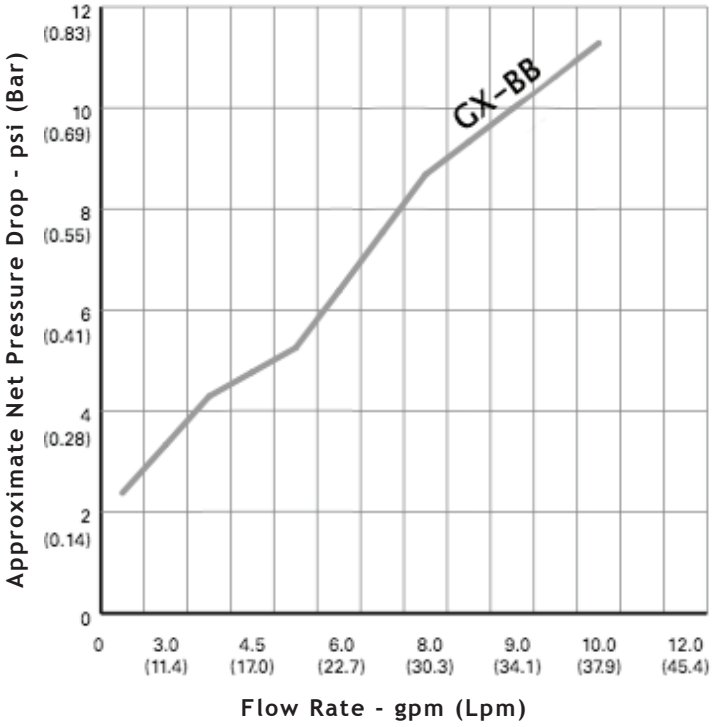
Carbon Filter Cartridge

Materials:
- Filter Media: Granular activated carbon
- Outer Shell: Polyethylene
- End Caps: Polypropylene
- Gasket: Buna-N
- Inner Wraps/Core: Polypropylene
- Temperature Rating: 40 - 125˚F (4.4 - 51.7˚C)

Maximum Dimensions:
- 4 1/2” X 9 1/4”

Initial AP (PSI) @ Flow Rate (GPM):
- 0.90 PSI @ 4 GPM (.06 bar @ 15.1 L/m)

Chlorine, Taste, Odor Reduction Capacity Flow
- >70,000 gallons @ 4 GPM (265,000L @ 15.1 LPM)



GROWONIX 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 du e 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	2-11	2000 ppm	40-100 F

GROWONIX 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.