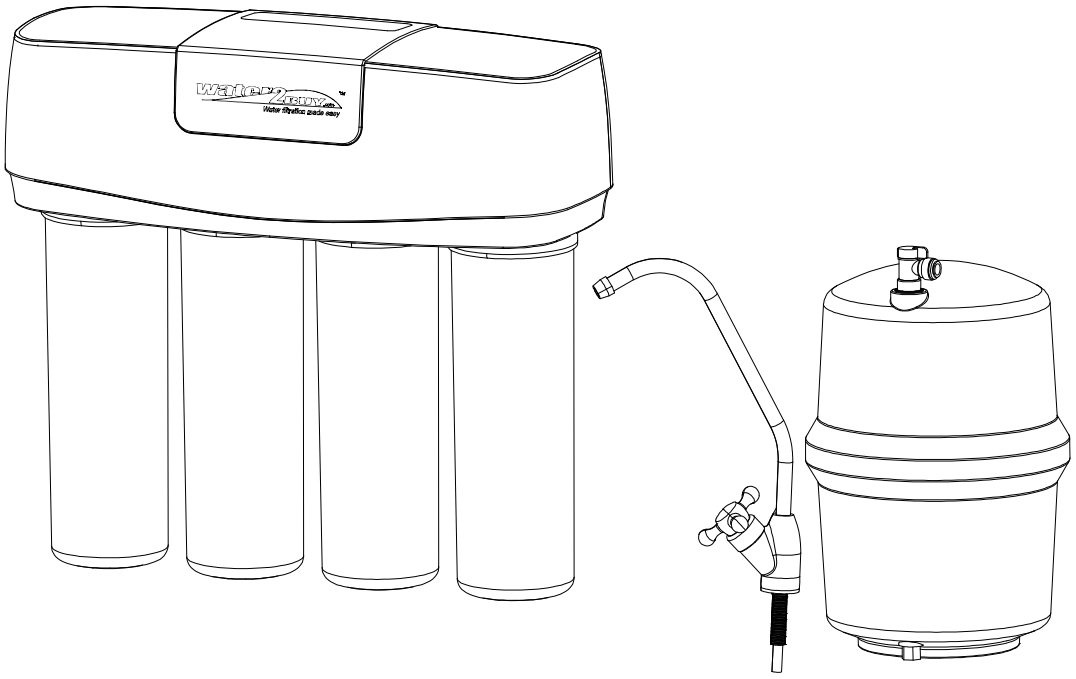
Owners Manual

water2BUY.com™

Water filtration made easy

RO Drinking Water System

W2B easy RO



- For video demonstration and instructions in all languages visit the website. Please turn off your water before installing.
- Las instrucciones y el vídeo en este idioma están disponibles en línea. Corte el agua antes de la instalación.
- Les instructions et la vidéo dans cette langue sont disponibles en ligne. Veuillez s'il vous plaît couper l'eau avant l'installation.
- Die Anleitung und ein Video in dieser Sprache sind online verfügbar. Bitte stellen Sie Ihr Wasser vor dem Einbau ab.
- Istruzioni e video in questa lingua sono disponibili online. Chiudere l'acqua prima dell'installazione.

Website: www.water2buy.com/easyro

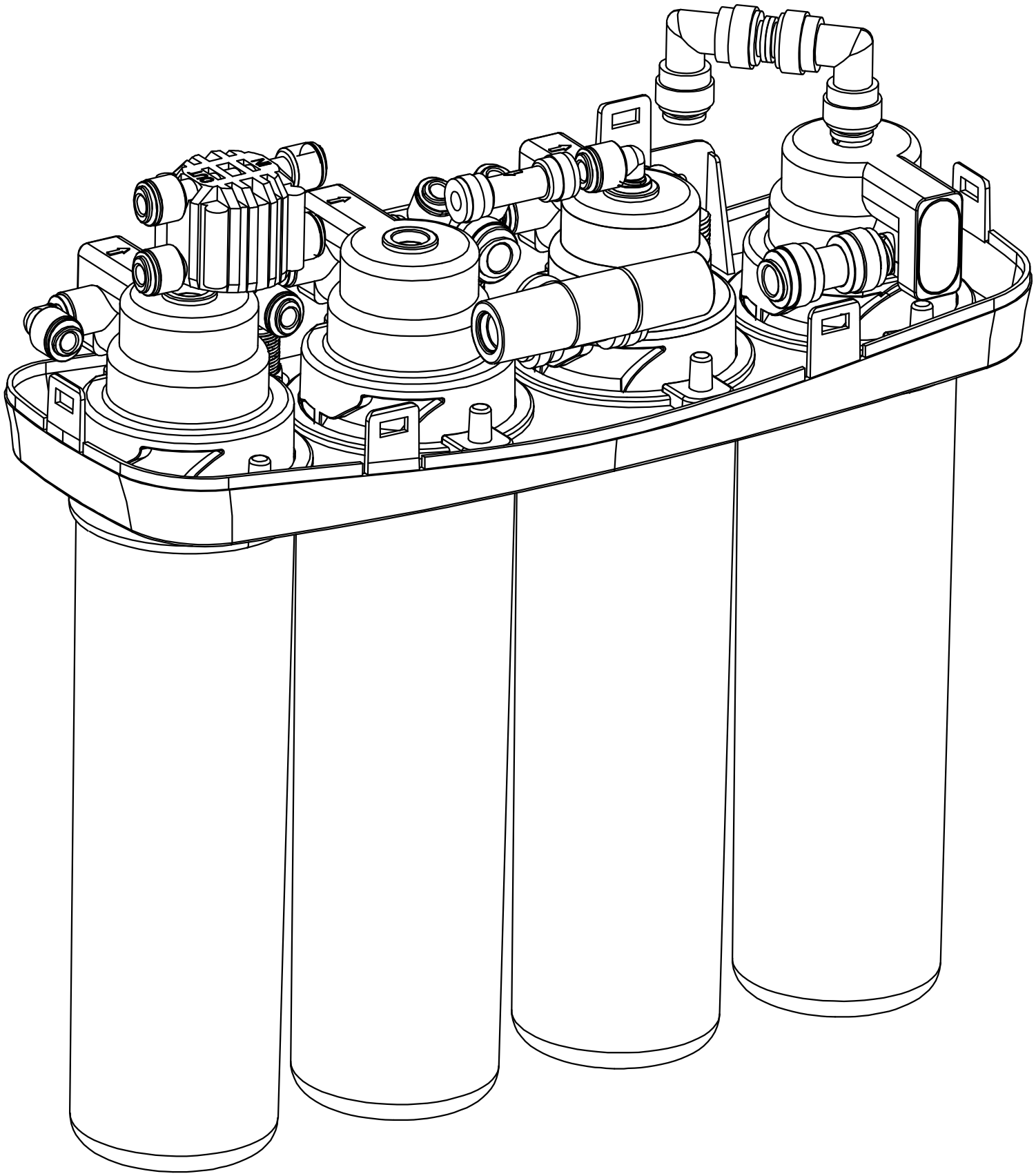


TABLE OF CONTENTS

READ THIS PAGE FIRST
BEFORE STARTING INSTALLATION

►You must read and understand the contents of this manual before installing or operating your RO system.

Personal injury or property damage could result if you fail to follow instructions in this manual.

►This system and its installation must comply with state and local regulations. Check with your local public works department for plumbing and sanitation codes. Local codes should be followed in the event the codes conflict with any content in this manual.

►This RO system must be operated on pressures between 0.4MPa to 0.8MPa. If the water pressure is higher than 0.8MPa , use a pressure reducing valve in the water supply line to the RO system.

►This unit must be operated at temperatures between 5°C - 38°C （41°F and 110°F)

►Do not use this RO system on hot water supplies.

► Do not install this unit where it may be exposed to wet weather, direct sunlight, or temperatures outside of the range specified above.

►Do not use water that is microbiologically unsafe and without adequate disinfection before or after this system.

►This publication is based on information available when approved for printing. Continuing design refinement could cause changes that may not be included in this publication.

► This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

► Children shall not play with the appliance.

► Cleaning and user maintenance shall not be made by children without supervision.

INSTALL NOTES & SAFETY MESSAGES

Watch for the following messages in this manual:

EXAMPLE:

NOTE

Check and comply with your state and local codes. You must follow these guidelines.

EXAMPLE:

⚠ CAUTION

Disassembly while under pressure can result in flooding.

RO SYSTEM SPECIFICATIONS

W2B EASY RO

Specifications and Performance Data Sheet		
Water Supply		Municipal Water
Feed Line Pressure		0.4MPa~0.8MPa
Permeate Flow		0.19 L/min @0.4MPa
Salt Rejection		≥94%
Recovery		≥36%
Water Temperature		5~38 ℃
Membrane	Type	Thin Film Composite Membrane
	Rating	75 GPD
	Model	1809-75-NPD
Connection	Inlet	1/4" Quick Connect
	Tank	3/8" Quick Connect
	Faucet	3/8" Quick Connect
	Drain	1/4" Quick Connect

- Salt rejection and product flow are variable and can be effected by temperature and feed water conditions.

Model	Stage 1	Stage 2	Stage 3	Stage 4	Faucet
W2B easy RO	Sediment Filter	Activated Carbon Filter	Reverse Osmosis Membrane	Activated Carbon Filter	SS Steel
	5 Micron	CTO	75 GPD	CTO	

PERFORMANCE & TECHNICAL INFORMATION

The performance of the W2B easy RO system can be characterized and judged by the quality of the water produced by the system.
By measuring the contaminant removal performance and flow rates of the system, its operating status can be easily evaluated.

Factors Which Affect Performance

Performance of the reverse osmosis membrane is affected by several factors which must be considered when judging the condition of the system. The main factors which affect system performance are pressure, temperature, total dissolved solids level, recovery and PH.

Pressure

Water pressure affects both the quantity and quality of the water produced by the RO membrane. Generally, the more water pressure, the better the performance of the system.

Temperature

The reverse osmosis process slows with decreasing temperature. To compensate, a temperature correction factor is used to adjust the actual performance of the RO membrane filter to the standard temperature of 77°F (25°C). This allows the performance of the unit to be accurately gauged against published standards. Temperature does not affect the concentrate flow rate.

Total Dissolved Solids

The minimum driving force which is necessary to stop or reverse the natural osmosis process is termed osmotic pressure. As the total dissolved solids level of the feed water increases, the amount of osmotic pressure increases and acts as back pressure against the reverse osmosis process. Osmotic pressure becomes significant at TDS levels above 500 mg/L(ppm).

Hardness

Hardness is the most common membrane foulant. If ignored, this relatively harmless component of feed water will scale a membrane over time. Use of a softener will reduce the fouling effect on a membrane. One way to detect too much hardness in the feed water is the weight of a membrane installed for a period of time. A fouled membrane(dried) will weigh significantly more than a new membrane. The increase in weight is a result of precipitated hardness inside the membrane.

Iron

Iron is another common membrane foulant. There are a variety of types of iron, some of which cannot be removed by an iron filter. Clear water iron can be removed more effectively by a softener. Particulate iron can be removed more effectively by a 1 micron filter. Organic-bound iron can be removed only by activated carbon or macroporous anion resin. If there is enough iron to exceed the EPA secondary drinking water standard and softening the water is not an option and the iron is soluble, then an iron filter is appropriate. If none of these are an option, then regular replacement of membranes will have to be accepted.

Product Water Recovery

Product water recovery plays an important role in determining membrane and system performance. Recovery refers to the amount of water produced in relation to the amount of water sent to drain. The standard calculation is:

$$\%\text{Recovery} = \text{Prodcut Water} \div (\text{Product Water} + \text{Waste Water}) \times 100$$

The system uses a flow control assembly to restrict the flow of waste water to the drain. This restriction helps maintain pressure against the membrane. The sizing of the flow control assembly determines the recovery rating of the system. The system is manufactured with a recovery rating designed to be more than 36%. Depending on temperature, pressure and tolerances the actual recovery value may be slightly different for each system.

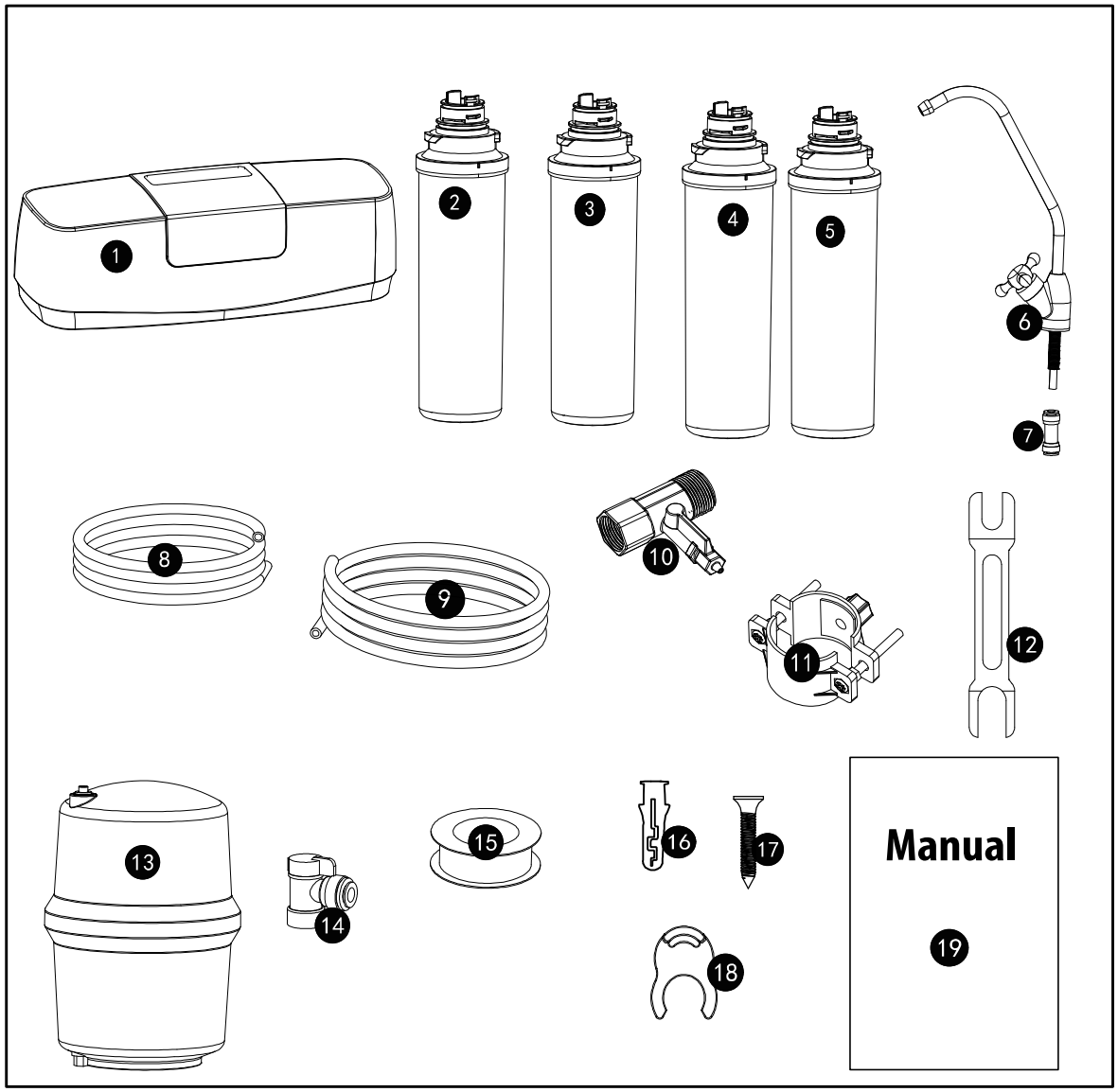
UNPACK & INSPECT YOUR RO SYSTEM

Inspect the RO system for any shipping damage. If damage is found, notify the transportation company and request a damage inspection. Damage to cartons should also be noted.

Handle all components of the system with care. Do not drop, drag or turn components upside down.

The manufacture is not responsible for damages in transit. Small parts, needed to install the RO system, are in a parts box. To avoid loss the small parts, keep them in the parts bag unitl you are ready to install.

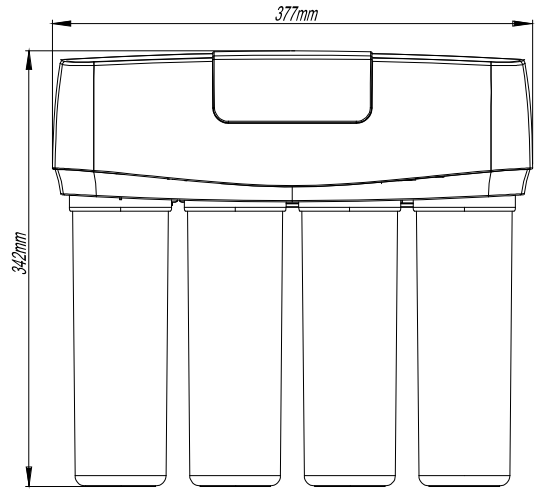
PACKAGE CONTENTS:



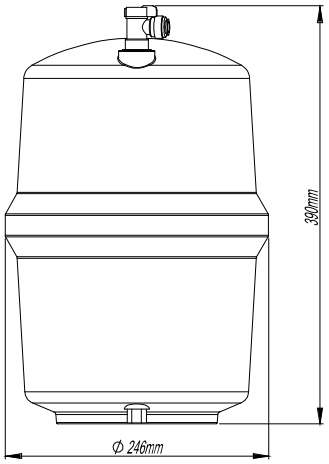
1. RO Module Assembly × 1
2. Sediment Filter Cartridge × 1
3. CTO Filter Cartridge × 1
4. RO Filter Cartridge × 1
5. CTO Filter Cartridge × 1
6. SS Faucet × 1
7. Faucet QC Connector(3/8" to 3/8") × 1
8. Tubing (1/4")× 1
9. Tubing (3/8")× 1
10. T-Adapter Valve× 1
11. Drain Saddle × 1
12. Tubing Tool × 1
13. Storage Tank × 1
14. Tank Ball Valve × 1
15. Thread Sealing Tape × 1
16. Plastic Screw × some
17. SS Screw × some
18. Secure Clip × some
19. Manual × 1

SYSTEM DIMENSIONS

RO MACHINE



STORAGE TANK

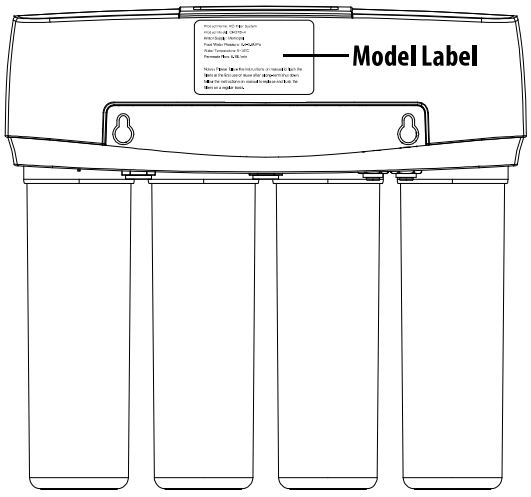


CHECK MODEL LABEL AND SERIAL NUMBER

The model label and serial number is located on the rear of the RO system bracket. Check to make sure this RO system matches what you ordered. Serial numbers are important for troubleshooting.

The Model Label shows product model, product flow rate, power supply requirement, feed water temperature etc.

The Series Number Label shows part number and manufacturing date.

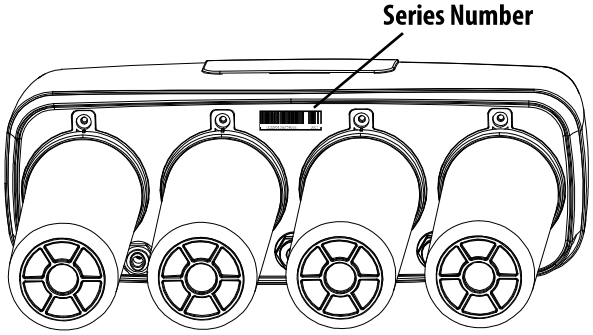


How to Read Series Number?

W20000339Q340001 0005

Product Part # | Year | Month | Date | Batch code | Sequence #

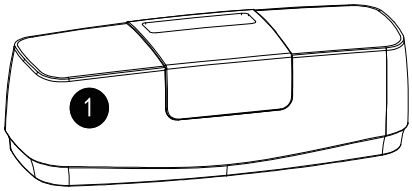
(W20000339): Product part #
(Q)YEAR: "Q" stand for year 2020,"P" stand for year 2019, "O" stand for year 2018, "N" stand for year 2017, "M" stand for year 2016...
(3)MONTH: 1(JAN), 2(FEB), 3(MAR), 4(APRIL), 5(MAY), 6(JUNE), 7(JULY), 8(AUG), 9(SEP), A(OCT), B(NOV), C(DEC)
(4)DATE: 1 2 3 4 5 6 7 8 9 (A)10 (B)11 (C)12 (D)13 (E)14 (F)15 (G)16 (H)17 (I)18 (J)19 (K)20 (L)21 (M)22 (N)23 (O)24 (P)25 (Q)26 (R)27 (S)28 (T)29 (U)30 (V)31
(0001): Batch code
(0005): Sequence #



OVERVIEW OF THE RO SYSTEM'S COMPONENTS

1 RO Manifold Assembly

The manifold assembly serves as the functional hub of the RO system by directing the flow through each of the system's main components.

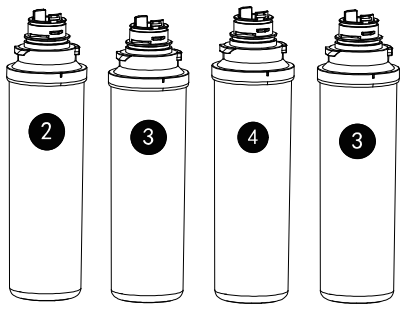


2 Sediment Filter(PP)

The sediment filter screens out particulate material, such as dirt, sand, or rust, which may clog the other filters in the system.

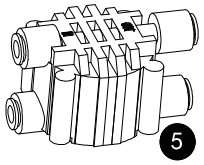
3 Activated Carbon Filter(CTO)

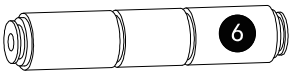
The activated carbon prefilter reduces chlorine which may damage the RO membrane filter. It must be regularly checked and/or replaced to prevent premature membrane failure and poor water quality.



4 Reverse Osmosis Membrane

The RO membrane reduces dissolved substances and other microscopic impurities. It consists of a membrane envelope wound around a perforated tube. Product water diffuses through the membrane to the inside of the envelope where it flows to and is collected by the tube. Impurities are flushed away in the drain stream. The RO membrane featured in the W2B easy RO system offers exceptional contaminant rejection, application versatility and long life. The membrane material is sensitive to an attack by chlorine.
The activated carbon filter must be maintained properly to prevent premature failure of the RO membrane.





5 Automatic Shutoff Valve

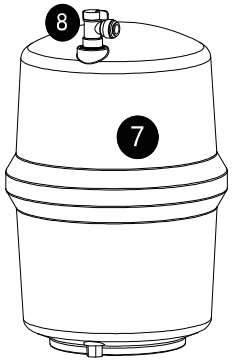
The automatic shutoff automatically stops the flow of water through the RO system when the storage tank is full. This is located inside the manifold assembly.

6 Drain Line Flow Control

The flow control assembly or concentrate flow control regulates the flow rate of the flushing (drain) stream and to maintain pressure in the RO membrane filter. This is located inside the manifold assembly.

7 Storage Tank

The storage tank collects and stores the water produced by the RO system. A compressed air diaphragm drives the water to the post carbon filter and faucet.

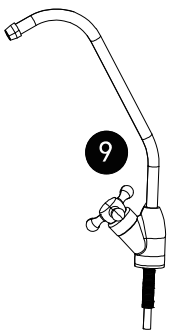


8 Ball Valve

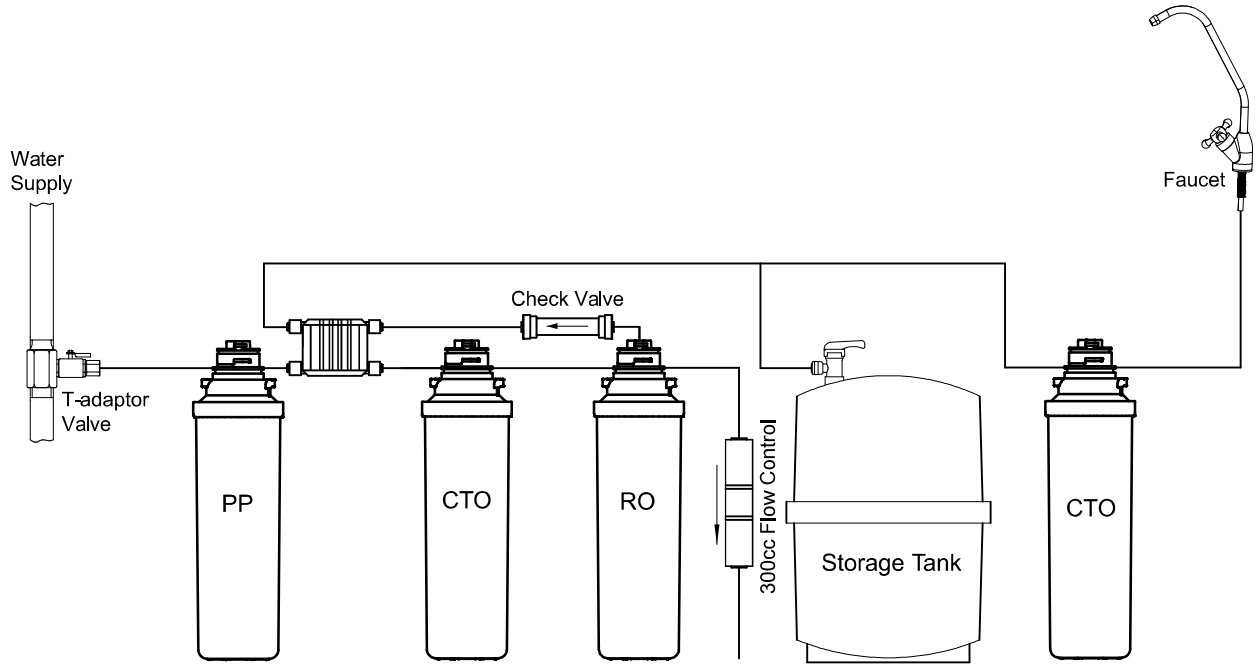
The ball valve provides a convenient way to lock water in the tank during transport and filter changes.

9 Faucet

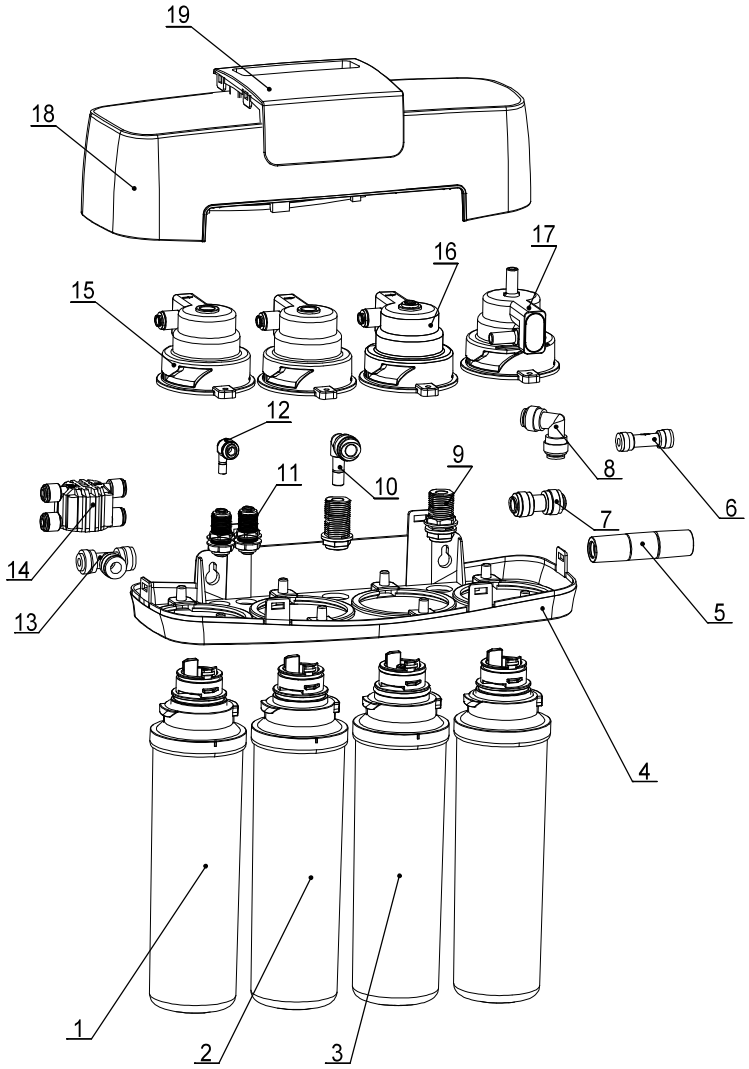
The faucet allows the product water to be drawn from the system with a simple rotation of the handle.



FLOW SEQUENCE



PARTS BREAKDOWN



No.	Description	Qty
1	PP Filter	1
2	CTO Filter	2
3	RO Filter	1
4	Base Plate	1
5	Flow Control(300cc)	1
6	Check Valve	1
7	I-Connector 3/8"×3/8"	1
8	L-Connector 3/8"×3/8"	2
9	Fixing Connector 3/8"×3/8"	2
10	L-Connector 3/8"×3/8"stem	1
11	Fixing Connector 1/4"×1/4"	2
12	L-Connector 1/4"×1/4"stem	10
13	T-Connector 3/8"×3/8"×3/8"	1
14	Shut Off Valve	1
15	Filter Base(1st&2nd stage)	2
16	Filter Base(3rd stage)	1
17	Filter Base(4th stage)	1
18	Cover	1
19	Decoration Cover	1

INSTALLATION RO UNIT

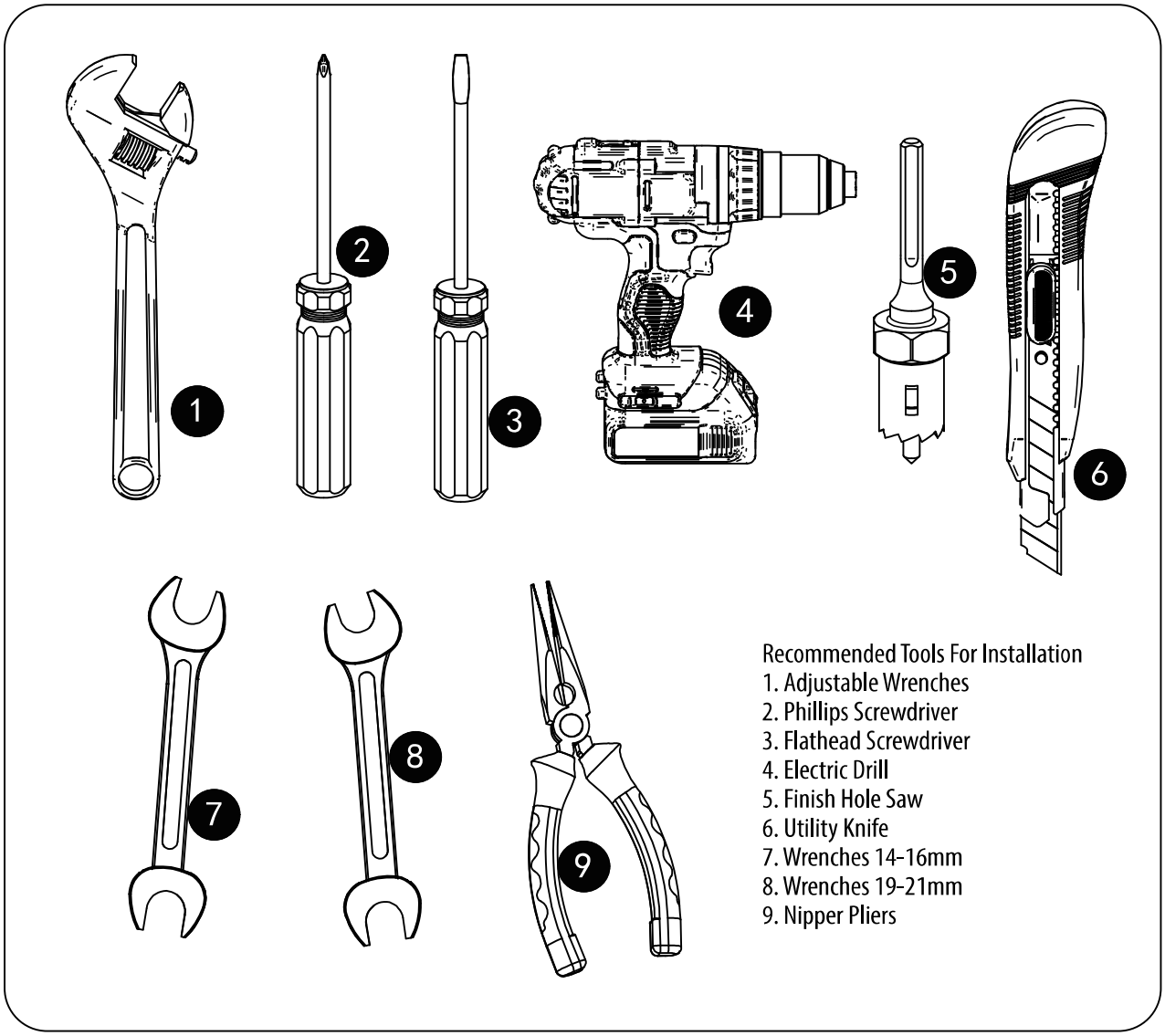
Before Installation

1. Check the accessories in the packing box and confirm if they are complete.

2. Shut off the water supply before installation.

3. Prepare some tools or equipments required for installation.

Suggested Installation Equipment

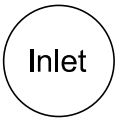


Recommended Tools For Installation
1. Adjustable Wrenches
2. Phillips Screwdriver
3. Flathead Screwdriver
4. Electric Drill
5. Finish Hole Saw
6. Utility Knife
7. Wrenches 14-16mm
8. Wrenches 19-21mm
9. Nipper Pliers

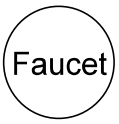
NOTE As installations may vary, some extra plumbing connection fittings may be required.

Symbols for Tubing Connection

Please familiarize yourself with symbols on the manifold of RO system:

1. Connect to the feed water 

2. Connect to the storage tank 

3. Connect to the faucet 

4. Connect the drain water 

The following steps will enable you to install the system quickly and orderly. Some variation may be necessary depending on the installation.

Typical installations follow this sequence:

1. Select System Installation Locations
2. Install T-Adapter Valve on Water Supply
3. Flush the CTO & Sediment filters
4. Install Filters
5. Faucet Installation
6. Connect System Drain
7. Install Storage Tank
8. Start Up the System

Step-1 Select System Installation Locations

Important Considerations:

- Access to the bottom (undersink) of the faucet is required for attachment of product water line.
- There should be no undersink obstructions which would prevent smooth tubing runs to the inlet, faucet, drain connection, storage tank or RO module assembly.
- The RO system assembly is designed to be installed on counter top or under sink. It should be positioned such that there is access to an inlet water source and drain. The installation should also allow convenient access for servicing.
- Be sure the floor under the RO system is clean, level and strong enough to support the unit.

Step-2 Install T-Adaptor Valve

1. Turn off the water supply, disconnect the hose pipe. Take the T-adaptor valve out from the accessory bag, install it on the pipe line as the Fig 1.

2. Take out the 1/4" tubing from the accessory bag, cut it to proper length, attach one end to the T-adaptor valve(Fig 1).

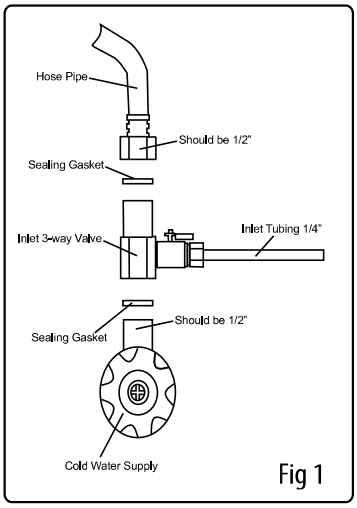


Fig 1

Step-3 Flush the CTO & Sediment Filters

1. Take out one CTO filter from carton box, remove the plastic wraping on CTO filter, attach the CTO filter to the filter base(Fig 2) .

2. Use the 1/4“ tubing connect to T-adaptor valve.(Fig 2)

3. Open the T-adaptor valve to flush the CTO filter until the outlet water is clean.

4. Use the same way to flush the other CTO filter and sediment filter.

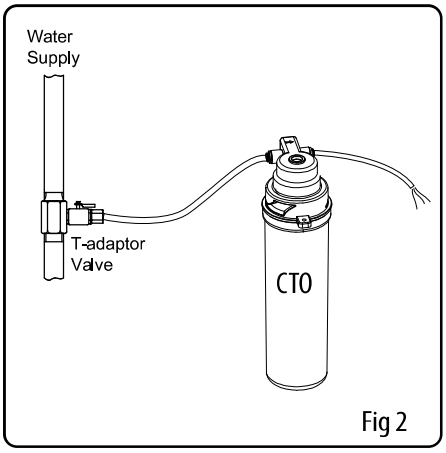


Fig 2

Step-4 Install Filters

1. Install the PP filter onto the manifold as Fig 3, at the end of rotation, make sure the filter pass over a limit step and situated in the middle(Fig 4).
2. Install the other 3 filters same as the installation of PP filter.(Fig 5)

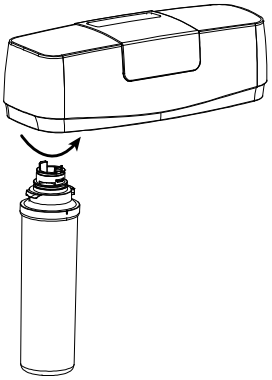


Fig 3

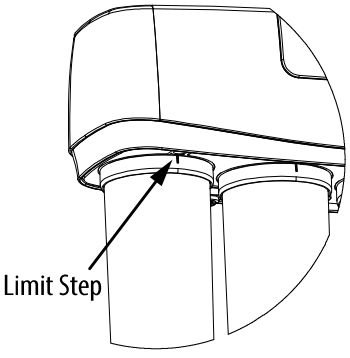


Fig 4

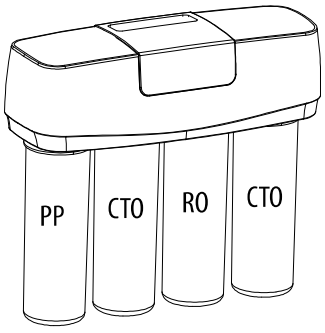


Fig 5

CAUTION Ensure the every filter was installed properly(pass over a limit step), otherwise it may cause filter get loose in long time use.

Step-5 Faucet Installation

Dispenser Faucet–The faucet is designed to be mounted on the rear lip of the sink. It may be installed in an existing sprayer attachment hole or in a hole drilled at the time of installation. It may also be mounted to an adjacent counter top. It should be positioned so that water is dispensed over the sink. A 12mm diameter hole is required.

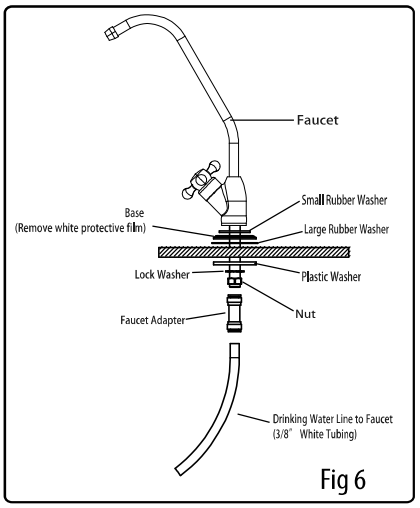


Fig 6

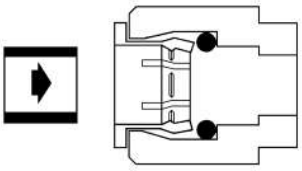
1. Drill a φ12mm hole at a proper location on the mounting surface, then take out the faucet from the accessory bag, install the faucet as the Fig 6.

2. Tighten the SS screw and be sure to properly align the faucet.

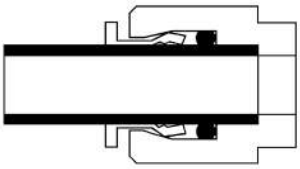
3. Insert the faucet adaptor to the bottom of faucet.

4. Take out the 3/8" tubing from the accessory bag, cut it to proper length, attached one end to the faucet adaptor(3/8"), attach the another end to the faucet port on RO module assembly, make sure the tubings are fully seated.

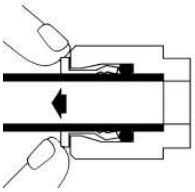
The RO system features reliable and convenient push-to-connect tubing connectors. Tubing is easily connected and disconnected from these fittings as follows.



1. Simply push in tube to attach.



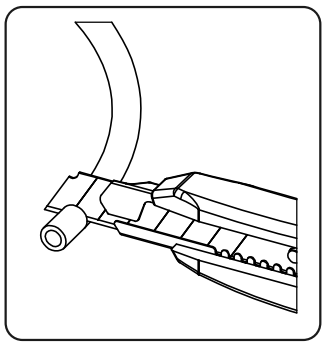
2. Tube is securely in position.



3. Push in collet from both sides to release tubing.

NOTE Do not miss the blue secure clip for all tubing connection.

Connect:
Cut the tubing squarely with a sharp knife. Be careful not to crush the tubing. To avoid leaks, make sure the tubing end is smooth and free of burrs and abrasions. Lubricate the end of the tube with water or a light coat of silicone and push the tube end firmly into the fitting. You should feel it push past the O-ring. Avoid bending the tubing sharply away from the fitting.



Disconnect:
Hold the collar against the fitting body and pull the tube from the fitting. In the unlikely event that the connection leaks, remove and recut the tubing. Check the inside of the fitting for debris or O-ring damage. Reconnect. Push-to-connect tubing connectors grip the outside diameter of the tube. To help assure a reliable connection, it is important to use high quality tubing with a consistent outside diameter.

Step-6 Connect System Drain

1. Take out the 1/4" tubing from the accessory bag, cut it to proper length, attach one end to the "drain port" on RO module assembly and attach the another end to the drain pipe line(Fig 7). Make sure the tubings are fully seated.

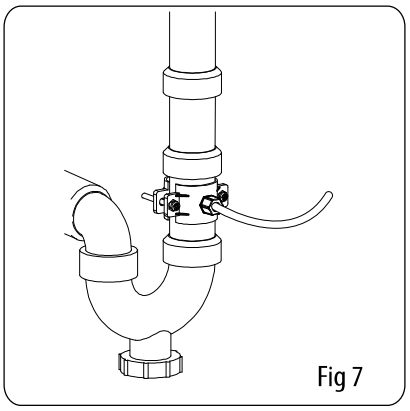


Fig 7

NOTE The installation figures above are only for reference, it may vary from different installation sites and conditions.

Step-7 Storage Tank Installation

1. Apply teflon (PTFE) tape to threaded fitting at top of tank. Wrap tape around clockwise 10 to 13 times for a good seal(Fig 8).

2. Attach ball valve and tighten it(Fig 8).

3.Take out the 3/8" tubing from the accessory bag, cut it to proper length, attach one end to the storage tank port on RO module assembly and attach another end to the ball valve. Make sure the tubings are fully seated(Fig 9).

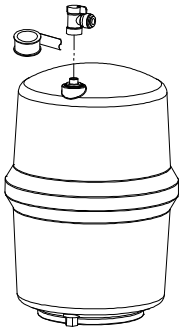


Fig 8

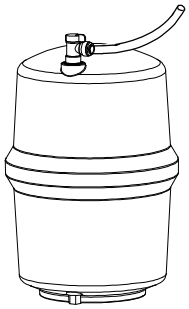


Fig 9

⚠ WARNING ! Do not use the tank ball valve to lift or carry the tank.

NOTE Changing the air pressure will alter the amount of water stored in the tank. Increasing the pressure will decrease capacity while decreasing pressure will increase capacity.

START-UP INSTRUCTIONS

1. Check system to verify all components are correctly installed.
2. Open inlet valve and storage tank ball valve..
3. Check system thoroughly for leaks. If any are found, shut off both inlet and tank ball valve and correct the issue.
4. Allow system to run & fill tank for 1-2 hours. You will hear the water running to drain while the unit is running. Once the water stops running to drain the tank is full.
5. Open faucet to flush the RO system. Once the flow begins to slow down, turn off the faucet.
6. Allow the tank to fill completely again.
7. Once full, open the faucet and allow the water to run for 24 hours to break-in the RO membrane and completely flush the system. This will allow your system to run at optimal efficiency.
8. Close faucet and allow tank to fill.
9. System is ready to use.

⚠ CAUTION Do not drink water produced by the system until the Start-Up procedure has been followed completely!

SERVICE AND MAINTENANCE

Service Schedule
To keep the RO system operating properly, it is necessary to change the filter elements periodically. Typically, this should be done on an annual basis. Service frequency may vary depending on local water conditions. High sediment, chlorine, turbidity, or hardness levels may require more frequent service.

Use the Following as a Guide:

Filter Elements	Service Schedule
Stage 1 Sediment Filter	6 months
Stage 2 Pre Carbon Filter	6 months
Stage 3 RO Membrane Filter	24 months
Stage 4 Post Carbon Filter	6 months

Note: Filter life may vary greatly depend on different water quality, RO filter life will be affected by other factors. The service schedule above is only for reference.

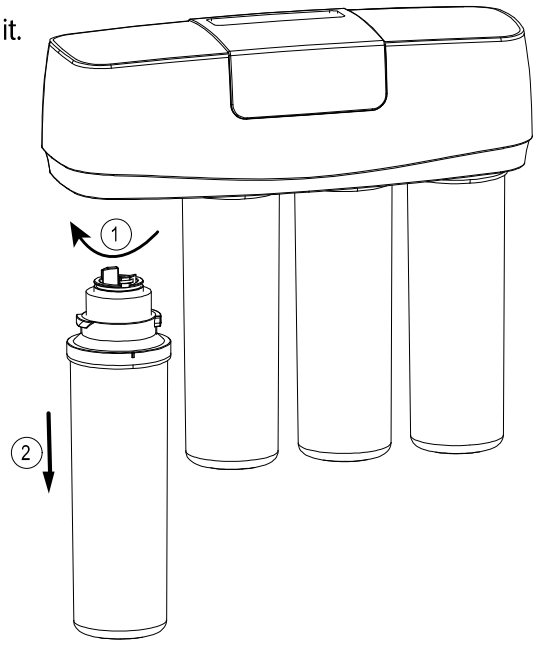
NOTE	W2B easy RO is designed only for household use, do not install the system where the water usage demand is high.

Filter Element Should Be Replaced If Following Situations Occur:

1. Produced water quality is poor, taste bad.
2. TDS of produced water quality is high.
3. Product water rate decrease dramatically, PP filter or RO membrane may clog.(Make sure it is not caused by cold water temperature)
4. Filters are heavily clogged, almost no produced water.

How to Replace Filter Elements?

1. Close the T-adaptor valve to shut off water supply.
2. Close the ball valve on storage tank.
3. Open the faucet to release pressure.
4. Rotate the old filter for 90° anti-clockwise and remove it.
5. For stage 1,2&4, follow the typical installation(Step 3) to flush it.
6. Install the new filter and tighten it.
7. Open the ball valve on storage tank.
7.Open the T-adaptor valve to turn on water supply.
8. Flush the new installed filters for 5~10 minutes.
9. For RO stage replacement, fill the tank for 2 times and then empty it.
10. Filter replacement complete.



CAUTION Always follow the steps below prior to replace the filters.

1. Shut off water supply. → **2. Close the ball valve on storage tank.** → **3. Open the faucet.**

Application Notes:

1.Product Water Rate: Product flow are variable and can be effected by water temperature and pressure. The permeate flow rate of 0.19L/min stated in the performance data sheet is tested at standard conditions.

2.Disposal of Replaced Filter Element: The replaced filters can not be recycling and reusing, it is recommended to discard it as household garbage and let professional garbage recycler to treat it.

3.When you are on vocation or not using the system for a long time, please close the T-adaptor valve and turn off power supply.

4.Any of the following occurs, please shut off the water supply immediately and fix the issue.

4.1 Leakage is found somewhere.

4.2 System's componet is malfunctioning.

4.3 Any other abnormal situation or faulty.

TROUBLE SHOOTING GUIDE

Problem	Possible Solutions
1. Insufficient Quantity of Product Water Available to Service.	
A. Service greater than unit's specified output.	**A.** Use optional large tank for more storage capacity.
B. Insufficient feed water flow.	**B1.** Clogged feed tubing, clean out or replace. **B2.** Clogged prefilter, replace. **B3.** Clogged manifold, clean or replace.
C. Insufficient feed water pressure.	**C1.** Same as (b) above. **C2.** Feed line pressure is too low, increase feed line pressure.
D. Increase in feed water TDS.	**D.** Same as (a) above.
E. Reduced feed water temperature.	**E.** Same as (a) above.
F. Plugged filter element.	**F.** Replace filter element.
G. RO Membrane is fouled.	**G.** Replace RO membrane.
2. Poor Product Water Quality.	
A. All of (1) above except (A) and (E).	**A.** All of (1) above except (A), (E).
3. Bad Tasting Product Water.	
A. Polishing filter exhausted.	**A.** Replace polishing filter.
B. RO Membrane is fouled.	**B.** Replace RO membrane.
C. Foreign matter in storage tank.	**C.** Clean, sanitize or replace storage tank.
D. Leakage happens somewhere in system.	**D.** Find the leakage and fix it.
4. Bad Smell Product Water.	
A. Polishing filter exhausted.	**A.** Replace polishing filter.
B. Filter element worn out.	**B.** Replace Filter element.
C. Unit needs disinfection.	**C.** Sanitize unit.
5. External Leakage.	
A. Tubing not fully seated in fitting.	**A.** Check all fittings for tightness.
B. Tubing abraded in seal area.	**B.** Recut tubing and redo connection.
6. Foaming at Faucet Tip.	
A. Storage tank is positioned on side. (Dissolved air cannot escape.)	**A.** Place tank in vertical position.
7. Fast Flow to Drain.	
A. Defective flow control assembly.	**A.** Replace flow control assembly.
8. Black Specks in Product Water.	
A. Carbon fines.	**A.** Flush polishing filter.
9. Low Faucet Pressure.	
A. Inadequate pre-charge pressure in storage tank.	**A.** Adjust the air pressure in storage tank.
B. Polishing filter plugged.	**B.** Replace polishing filter.