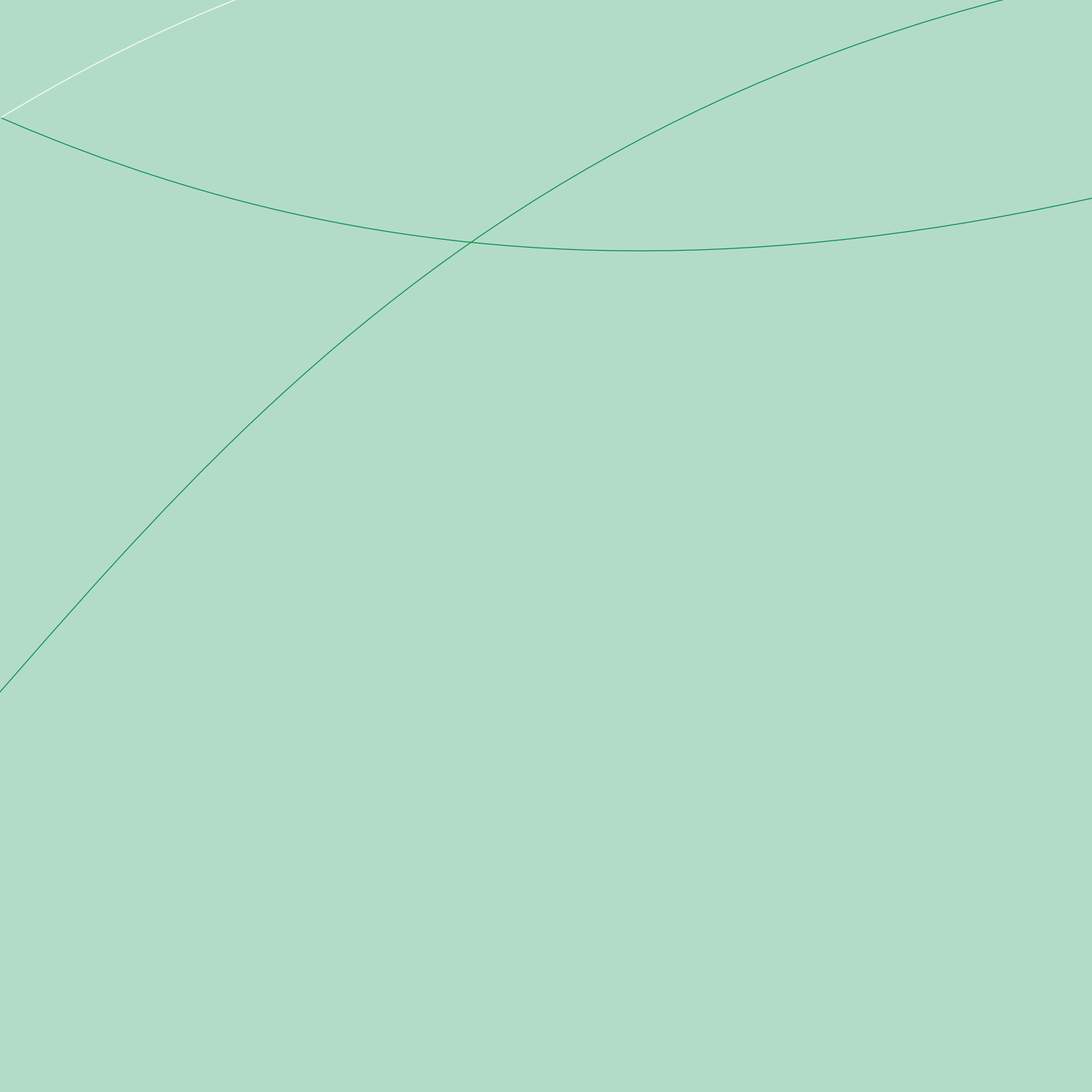




LILY

Reverse Osmosis User Manual
Ters Osmoz Kullanma Kılavuzu

Innovation has a name.



Dear customer,

Thank you for purchasing a "A.O. Smith" branded water purifier!

You are now the owner of water treatment equipment produced by the world's leading manufacturer of water treatment systems. This equipment produces pure water that can be consumed directly, providing you with a cleaner and healthier source of drinking water.

Please read this user manual carefully before you install and operate your "A.O. Smith branded" water purifier. To achieve maximum efficiency this user manual provides detailed instructions regarding the installation of your water purifier as well as information related to the proper operation and maintenance of your water purifier.

The installation should only be handled by professionals authorized by A.O. Smith Su Teknolojileri A.Ş.

Spare parts used for maintenance and replacement filter should be approved by A.O. Smith Su Teknolojileri A.Ş. before they are installed.

Any degradation of performance caused by the use of spare parts or filters that have not been approved by A.O. Smith Su Teknolojileri A.Ş. will not be covered by our warranty.

If you experience any difficulties during installation or operation, please contact your local distributor to have them carry out repairs or maintenance on your equipment.

CONTENTS

İÇİNDEKİLER

ENG

SAFETY CONSIDERATIONS	4
PRODUCT DESCRIPTION	7
Brief Introduction	7
Description of Components	7
Electrical Diagram	8
Water Route Map	8
Technical Specifications	9
Functions of Main Components	9
Functions of Accessories	10
Water Puriter Features	10
TRANSPORTATION	10
INSTALLATION METHODS	11
Pre-Installation Preparations	11
Instructions for Proper Installation	11
ADJUSTMENT METHODS	14
LED DISPLAY FUNCTIONS	15
SIDE STREAM R.O. MEMBRANE	17
OPERATION WARNINGS	18
MAINTENANCE AND REPAIR	19
Flushing the RO Membrane	19
Filter Replacement Intervals	19
PACKING LIST	21
AFTER-SALES SERVICE	21
TROUBLESHOOTING GUIDE	22

TR

GÜVENLİK UYARILARI	26
ÜRÜN TANITIMI	29
Kısa Tanıtım	29
Su Arıtma Cihazının Ayrıntılı Profili	29
Elektrik Şeması	30
Su Akış Şeması	30
Teknik Bilgiler	31
Ana Bileşenlerin İşlevleri	31
Aksesuarların İşlevleri	32
Su Arıtma Cihazının Özellikleri	32
NAKLİYE	32
KURULUM TALİMATLARI	33
Kurulum için Ön Hazırlık	33
Doğru Kurulum için Uyulması Gereken Talimatlar	33
AYARLAMA YÖNTEMLERİ	36
LED EKРАНIN İŞLEVLERİ	37
SIDE STREAM R.O. MEMBRAN	39
KULLANIM UYARILARI	40
BAKIM VE ONARIM	41
RO Membranın Yıkınması	41
Filtre Değişim Aralıkları	41
Filtre Değişim Yöntemleri	42
Genel Bilgiler	42
ÜRÜN KONTROL LİSTESİ	43
SATIŞ SONRASI SERVİS	43
ARIZA GİDERME KILAVUZU	44
YETKİLİ SERVİSLER	46
MONTAJ KONTROL KARTI	48
BAKIM KARTI	49
GARANTİ BELGESİ	50

Safety Considerations

(Be sure to read and remember these safety considerations)

Make note of the following safety precautions In order to avoid property damage and harm to you and others.

• **Ignoring the following safety precautions could result in risky situations for you, your water purifier and your environment.**

Warnings

If you ignore contents in this section, it may cause permanent damage to the water purifier or cause serious property damage.



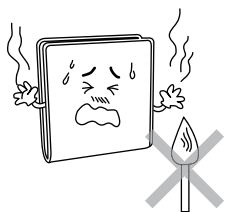
Do not disassemble or modify this water purifier on your own!

Unauthorized disassembly or modification of the machine could lead to machine malfunctions or leakage accidents. Please check with the store where you purchased this product for product consultation in order to arrange for repairs.



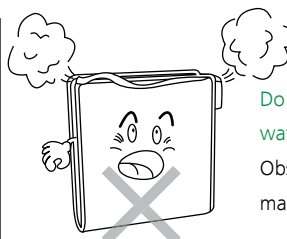
Do not put heavy objects on the water purifier!

Placing heavy objects on the water purifier may cause damage to the water purifier's external cover or internal components, which in turn could lead to leakage, equipment malfunctions or even serious property damage.



Do not put the water purifier close to a source of flames!

Do not put the water purifier near a source of flames or a place where the temperature is too high as this may cause deformation or melting of the machine, causing damage or leakage, which could lead to serious bodily injury and property damage.



Do not place any objects on top of your water purifier!

Obstructing the heat dissipation may lead to machine damage or fires.



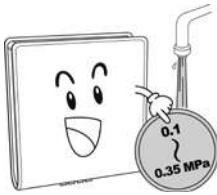
This appliance can be used by 8 years and older children and persons with reduced physical and sensory capabilities only when they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety and they have fully comprehend the possible risks of the appliance.



Children should not be allowed to play with the unit.

Cleaning and maintenance of the unit should not be made by children without supervision.

As this appliance functions with electricity and water, using the device by mentally handicapped people is not advised.



Do not use this water purifier under high pressure conditions!

Operating under high pressure conditions may cause the water purifier pipes to rupture, resulting in leakage, the machine working improperly, or even serious property damage. Recommended inlet pressure is 0.1-0.35 MPa (1 Bar to 3,5 Bars)

In places where inlet water pressure is more than 0.35 MPa (3,5 Bars), it is recommended to use a pressure reducer before the unit.



Use only power supply unit (the supply cord and the plug) that was provided with the unit! Using the non-original power supply unit may affect the performance of the unit negatively and using unqualified parts may damage to the unit.



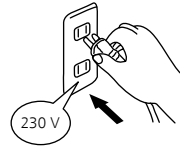
If the supply cord is damaged, supply an original cord from your A.O.Smith Sales Agent or A.O.Smith Authorized Service!

Using the non-original supply cord unit may affect the performance of the unit negatively and using unqualified parts may damage to the unit.



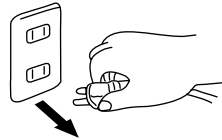
Do not damage the power cord or the outlet!

Doing so may lead to electric shock, short circuiting or fire.



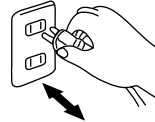
Do not use a power source exceeding the equipment's specified value. Use only 230V AC power!

The electrical current supplied to your equipment by the outlet must not be greater than the specified value; otherwise it may lead to the overheating of your equipment or fire.



The equipment must be disconnected from the power supply during installation and repairs!

Otherwise it may lead to electric shock.



Do not touch the power plug with wet hands! It may lead to electric shock.



Unit should be installed and connected to the water mains by new hose-set that was included in the product package. Old hose-sets should not be reused with the unit.

Otherwise water leakages may occur or the unit's performance may be affected negatively.

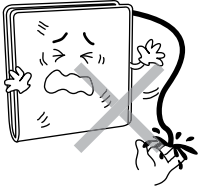


Do not use the water purifier when the sewer is blocked up!

If the purifier is used while the sewer is blocked, it may cause waste water to back up into the purifier and pollute the water and parts inside.

The waste water discharge pipe and waste water rationing device cannot be blocked!

When the waste water discharge pipes and waste water rationing devices are obstructed or clogged, it may lead to high levels of TDS effluent, the RO membrane may get blocked or the water purifier may not work.



Water purifier inlet water temperature should not exceed 38°C!

If the inlet water temperature is over 38°C, it will damage the reverse osmosis membrane leading to membrane failure.



Do not use in conditions under 5°C!

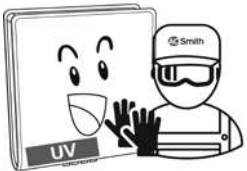
If the ambient temperature falls below 5°C, please be sure to take measures to prevent freezing, such as turning on a heater or air conditioner to prevent leakage or cracked pipes caused by water freezing inside the equipment.



Do not remove the UV Protector unauthorized!

- Wear protective goggles and gloves while maintaining UV disinfection unit.
- Do not look directly to UV lamps while they are on.
- During maintenance and repair, be sure that UV unit is not active.

Otherwise UV light might lead damage to the eyes and skin.



Do not let the machine come in contact with corrosive materials!

These materials could corrode the outer cover and adversely affect various parts of the equipment. Toxic and hazardous compounds could penetrate the water purifier pipes, causing contamination of the water or leakage, which in turn may cause personal damage or property damage.



Do not use this water purifier outdoors!

If this water purifier is used outdoors, it can lead to accelerated aging of the water purifier pipes and parts, which can cause leaking or machine failure.



Do not place the water purifier under direct sunlight!

Placing the water purifier under direct sunlight for a certain period of time may create a breeding ground for microorganisms; decreasing the output water quality and potentially causing the internal components of the water purifier to become contaminated.



Do not use force on the glass panel and place the water purifier flatly!

The reinforced glass panel needs to be put lightly and flatly. Otherwise it may lead to the glass panel damage.

Product Description

Brief Introduction

This equipment utilizes the current, most advanced international RO technology. RO technology relies on the artificial reversing of the naturally occurring osmosis phenomena. The RO membranes have pores with a diameter of 0.0001 micron (0.1 nm), so they can effectively remove bacteria, viruses, heavy metals, pesticide residue, and other harmful substances from the water. Produced water is fresh, pure and suitable for direct use.

Description of Components



Lily

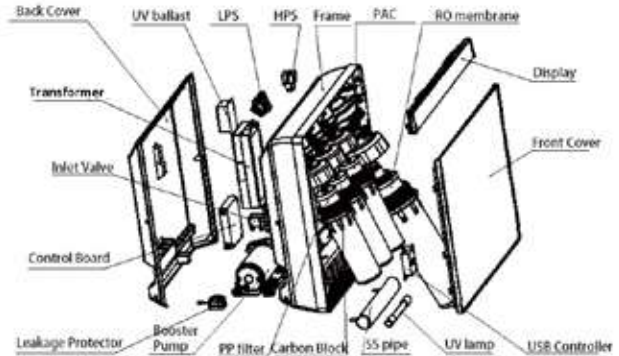


Diagram 1

Electrical Diagram

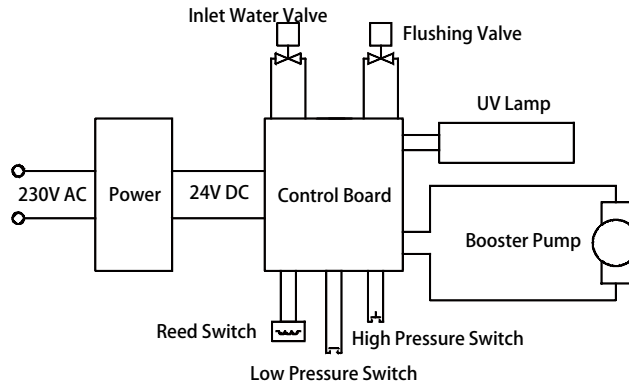


Diagram 2

Water Route Map

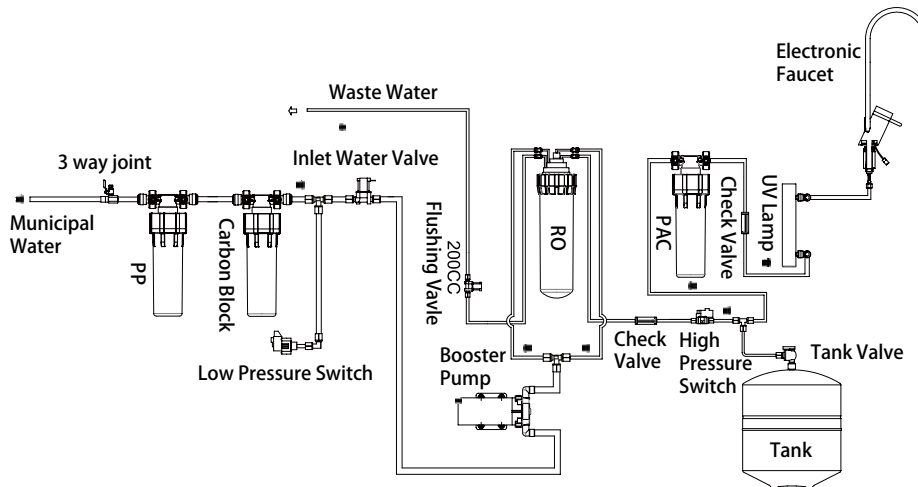


Diagram 3

Technical Specifications

Model No.	LILY
Voltage	230V AC
Frequency	50 Hz
Power Rating	38 W
Suitable Water Pressure	0.1-0.35 MPa (1 Bar to 3,5 Bars)
Inlet Temperature	5 ~38 °C
Maximum Daily Water TDS Value	≤1000 PPM
Daily Water Production Volume	75 Gallons, approximately 284 Liters
Tank Volume	3.2 Gallons, approximately 12.1 Liters
Flushing Method	Auto Flushing
Electric Shock Protection Type	Class II
Suitable Water Quality	Municipal tap water meeting the TS-266 standarts
Product Dimensions	460x488x161 mm
Tank Dimensions	335x280 mm
Weight	14 kg

Note: the parameters above may change due to product improvements, but the product name plate shall remain the same. TDS refers to influent total dissolved solids.

Note:

$0.1 \text{ MPa} = 1.02 \text{ Kg/cm}^2 = 14.5 \text{ Psi}$

$1 \text{ Psi} = 0.07 \text{ Kg/cm}^2$

$1 \text{ Gallon} = 3.785 \text{ Liters}$

$75 \text{ GPD} = 75 \text{ Gallons/Day} = 284 \text{ Liters/Day} = 197 \text{ Milliliters/Minute}$

Functions of the Main Components

The standard configuration of the water purifier that utilizes the current, most advanced international RO technology is as follows:

- **The first stage is a 5-micron PP (Sediment) Filter:**

The pores on the aperture within the PP filter is 5 microns wide so it can effectively filter rust, sand, other larger particles and solid impurities suspended in the water.

- **The second stage is a Carbon Block Filter:**

The filter effectively absorbs chlorine, mould, disinfection by-products, odors, discolorations and other materials suspended in the water.

- **The third stage is the RO membrane:**

The RO membrane with a pore size of 0.0001 micron (0.1 nm), it can effectively remove bacteria, viruses, heavy metals, pesticide residue, and other harmful substances. Produced water is fresh, pure and suitable for direct use.

- **The fourth-stage is a Post Active Carbon (PAC) Filter:**

This filter regulates the taste of water, keeps the water fresh.

- **The fifth-stage is a UV Disinfection:**

This unit effectively restrains the water pipe and tank etc to breed the bacteria after long time without use.

Functions of Accessories

- **Storage Tank:** Used to store water filtered by the water purifier.
- **High Pressure Pump:** Boosts pressure to create a stable environment for the RO membrane.
- **Flushing (Solenoid) Valve:** Control the waste water flow and automatically flush the RO membrane.
- **Low Pressure Switch:** Prevents pump idling. When the inlet water pressure is less than 1 Bars or when the inlet water stops, the low-voltage switch automatically shuts off the power source so the machine comes to a halt.
- **High Pressure Switch:** Prevents pump from overdrive. When the pressure tank is full or has reached the set pressure level, power supply is automatically cut off to stop the operation of the machine.
- **Inlet Water (Solenoid) Valve:** Connects or cuts off incoming water.
- **Check Valve:** Also known as a one-way valve, controls the direction of water flow.
- **Transformer:** Converts 230V AC to 24V DC (the machine's safe operating voltage).
- **Power Control Board:** Control the whole process of water production.
- **Leakage Alarm:** Detect malfunction of water leakage timely to protect user's safety and avoid the loss of user's property.
- **E-Faucet:** Controls the water output status of drinking water. Electronic faucet indicates the filter life while it is on by changing the logo color.
- **UV Disinfection Unit:** Sterilizes the outlet of pure water.

Water Purifier Features

- **Side Stream Membrane:** The Side Stream R.O. membrane increases the recovery rate to around 50%, compared to 25% for the regular residential R.O. membrane, and waste water volume is reduced by 56%.
- **Automatic Control System:** The system controls the whole water production process, such as stopping automatically when there is no inlet water or when the tank is full;
- **Auto Flush Function:** The system can automatically control the water auto flush process for the RO membrane to ensure more reliable and safe operation.
- **Remind on Filter Replacement:** While the filters are close to the service life, system can remind the customers with sound and red colors to replace the filters.
- **Leakage Protection:** While inspect there has water leakage, it will automatically stop working, and power off the booster pump, inlet valve to avoid risk on water leakage. And "Leakage" light flashing on the display with buzzer warning. Only can be recovered after defect solved and re-power on.
- **UV Lamp Protection:** Use the powerful radiation of short-wave ultraviolet ray to effect on microorganism in water, so as to achieve the bacteriostatic action of water

Transportation

Please take into consideration the following points while transporting the device.

- Stock up on top of each other more than 6 pieces.
- Before lifting the packages be sure that fixing tapes below the package are intact.
- Lift the packages holding from bottom.
- Persons, who are vulnerable to heavy lifting should not carry the packages to prevent any health issues.

Installation Methods

Our company recommends that your water purifier is installed by trained professionals as the installation process is somewhat complex and requires the use of various tools. However, if you decide to install the purifier yourself, please refer to the following steps and diagrams:

Pre-Installation Preparations

- Choose the location where the water purifier will be installed
- Confirm the availability of the various tools required for installation
- Confirm that you have all the connectors required for installation
- Make sure to turn off the water supply and electricity before commencing installation

Adjustable Spanner	1
Drill	1
6.2 mm Drilling Bit	1 (Waste water hole)
Hole Saw ϕ 16-35 mm	1
T10 Cross and Flathead Screwdrivers	1 of each
Scissors	1 pair
14 - 16 mm Wrench	1
19 - 21 mm Wrench	1
Needle Nose Pliers	1

Warning: In places where inlet water pressure is more than 0.35 MPa(3,5 Bars), it is recommended to use a pressure reducer before the unit.

Instructions for Proper Installation

• Installation of the inlet water metal hose and 3-way inlet water joint:

(If the metal hose diameter is equal or less than 9 mm, the 3 - way inlet water joint should be connected to the unit) First, close the inlet water valve. Screw off the metal hose. Remove the 3-way inlet water joint from the water purifier accessories box, screw one end of the inlet water 3-way joint onto the inlet water valve outlet. One end of the unscrewed metal hose should be screwed into the 3-way inlet water joint using the screw nut (See Diagram 4)

• Installation of the 3-way inlet water joint and inlet water ball valve:

Take out the inlet water ball valve from the water purifier accessories box, wrap one end of the external threads on the ball valve with appropriate teflon tape (See Diagram 5). If you have silica gel, spread a little over the thread and then screw the ball valve into the corresponding hole of the 3-way inlet water joint (See Diagram 5). Take out the ϕ 9mm water pipe from the accessories box. Using a pair of scissors, cut a suitable length of pipe and connect one end of the pipe to the inlet water ball valve (See Diagram 6). Finally screw the nut in place.

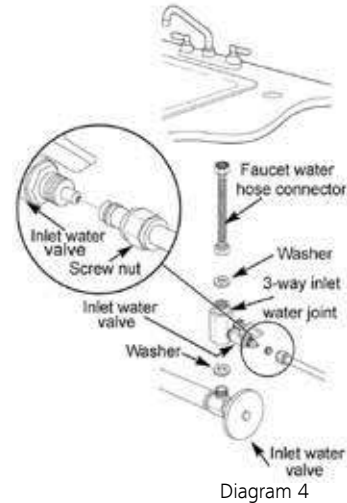


Diagram 4

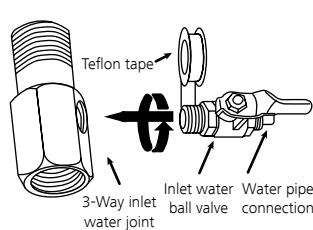


Diagram 5

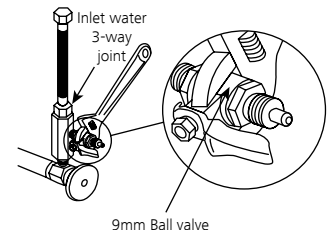


Diagram 6

- **Installation of inlet tube:**

Take out the 1/4" tube from the accessory box, and cut to suitable length with scissors, connect one end of the inlet tube to the inlet end of the 3-way joint (See Diagram 4), then screw the nut tightly. The other end of inlet tube connect to the "Source" of the unit connector.

Note to fix the tube and quick connector to avoid water leakage issues.

- **Installation of the electronic faucet:**

Drill a $\phi 20-35$ mm hole in an appropriate position on the counter where the faucet is to be installed. Then take out the faucet from the water purifier accessory bag. Begin the installation of the faucet. In the counter where the faucet is to be installed, drill a 20-35mm hole in an appropriate position, then take out the faucet from the water purifier accessory bag, start the faucet installation (See Diagram 7):

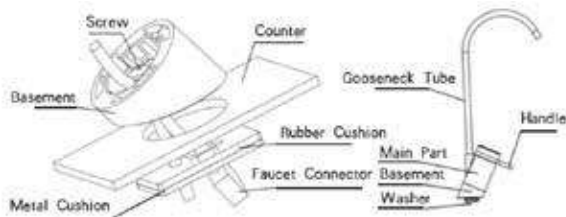


Diagram 7

A) Basement Installation: install the rubber cushion into the metal cushion, take out 2 pieces M4mm screw, and fix the screw on the metal cushion through the basement hole, then pull the connectors of faucet through the basement. Pull the faucet cable through the plastic basement, rubber cushion and the metal cushion in series, and combine the rubber cushion and metal cushion together, then take out the M4mm screws and fix one screw to metal cushion started from plastic basement. Then put the plastic basement through the sink hole and insert the cushions, then install another screw and fix tight 2 screws.

NOTE: don't fix the screw to tight once, it should be fixed in steps, and don't use strong force.

- **B) Main Part Installation:**

Cut a suitable length 1/4" tube and insert one end into the bottom quick snap of main part, and connect another end to the "Source" connector of the unit, then press down the main part on the basement.

- **C) Gooseneck Installation**

Make sure all 3 O rings are in the O ring slot of gooseneck tube, then dip some water on the end with O rings, then insert into the output nozzle of main part.

- **Installation of the Second Faucet Outlet Converter**

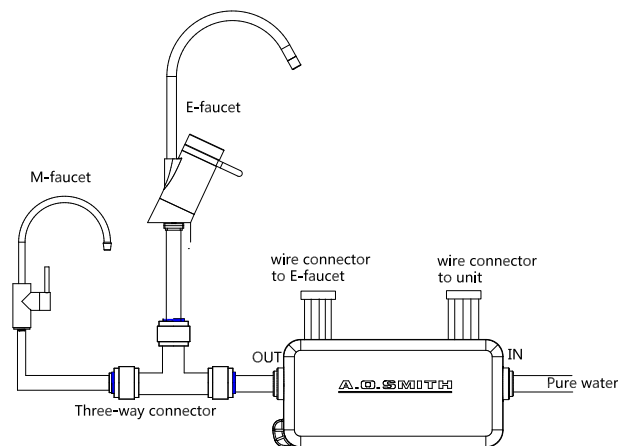
Lily water treatment system can be connected to outlet connection with the converter that comes as standard feature inside the package. With this converter, it possible to connect the system to your refrigerator or to a second faucet.

- **Water System Connection:**

Connect the pure water pipe to the converter IN end then connect the OUT end to the one end of three-way connector, after that connect other two ends of the three-way connector to the E-faucet and M-faucet.

- **Electrical System Connection:**

Connect the one wire connector on the converter to the E-faucet and the other one connect to the wire from the units. These wire are apply to apple connection.



- **Installation of the waste water pipe:**

Drill a small hole into the sink drain pipe using a ϕ 6mm drill. Take a suitable length of the 6mm water pipe and lay one end just inside the drilled hole (See Diagram 8), put some silica gel where the 6mm pipe and the drain pipe connect to prevent leakage. Use a cable tie to fix the waste water pipe to the drain pipe (for large flow water purifiers; you will need to insert a waste water clip into the drilled drain pipe hole). The other end connect to the "Waste" at the back of the machine.

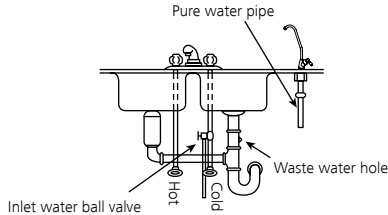


Diagram 8

- **Installation of the Side-Stream RO Membrane:**

Open the front cover, pull up and out the RO filter assembly about 15°, then rotate anticlockwise to take out, then use wrench to remove the shell cover; then take out the RO membrane from the vacuum bag, keep all O ring installed (See Diagram 9), put the flat end of RO membrane into the shell and fixed, then rotate the shell cover and tighten with wrench, after that install the RO filter assembly into the front cover in clockwise, and push inside until in originally vertical.



Diagram 9

- **Membrane Installation Warnings:**

- The package of the reverse osmosis membrane contains a small amount of protective solution in order to prevent microbiological contamination of membrane components during storage and transportation.
- You should pay attention to the direction of the RO membrane during installation.

- When installing the RO membrane, first make sure that one end of the membrane has 2 large O-rings and the other end has two large and four small O-rings.
- When installing, be sure to put the end with 2 O-rings into the membrane shell RO outlet water connection. Be sure when installing to only use a little force to put the RO membrane into the membrane shell. If you encounter too much resistance, please do not force the reverse osmosis membrane into the membrane shell, doing so may cause permanent damage to the membrane shell or membrane components. A.O. Smith does not assume responsibility for returned components due to damage during installation.
- Check the grey rubber bracket whether under the RO membrane assembly, can not missing.
- Do not cut or try to disassemble the replaced membrane. RO membrane can filter microorganisms and cutting or harming RO membrane may risk on you and your environments health

- **Installation of the Pre-Filters:**

Open the front cover, pull up and out the RO filter cartridge assembly about 15°, then rotate anticlockwise to take out, then use wrench to remove the shell cover; Then take out the filters from package, keep 2 o rings installed (See Diagram 10), put the end without O ring of filters into the cartridge shell and fixed, then rotate the shell cover and tighten with wrench, after that install the RO filter cartridge assembly into the front cover in clockwise, and push inside until in originally vertical. The 1st stage filter is PP filter, 2nd stage is carbon block filter, and 4th stage is PAC filter.

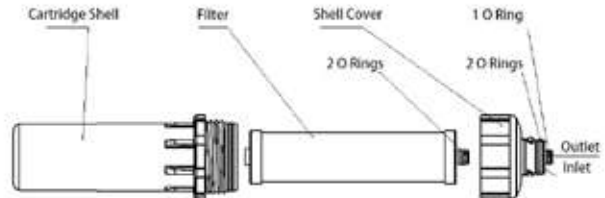


Diagram 10

- **Installation of UV Lamp:**

First be sure that the water inlet and electricity connections are cut off from the unit. Open the front cover, remove the UV lamp protector, and take out the UV lamp and 2 pin cables from package, put one end 2 pins of UV lamp into the hole end of cable connector, then put another end 2 pins of UV lamp and 2 pins plug of cable together into the 4 holes end connector and tight. Then install the cables and UV lamp into the stain steel tube assembly, and make sure the 4 holes connector also inside, then cover the end with cap and fix the cover (See Diagram 11).

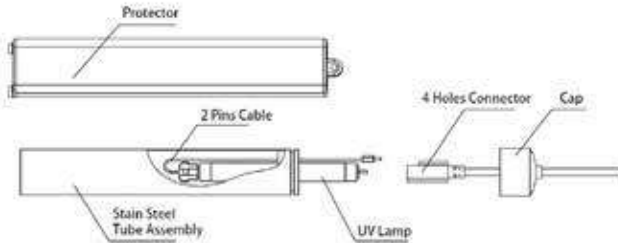


Diagram 11

- **RO Unit Placement:**

Lily RO unit is not wall hung type, and need put on the ground or solid flat surface directly. If choice to hung on the wall, need to purchase additional expand bolts and screws for fixation.

- **Installation of the Storage Tank:**

Wrap 4-5 rounds thread seal tape on the tank nozzle, then fix the tank valve into the tank nozzle, then cut out a suitable length 1/4" tube, put one end of tube on the tank valve, and another end connected to the "Tank" joint of the unit (See Diagram 12). After that, find a suitable place to locate the tank in the cabinet.

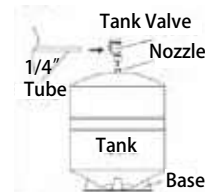


Diagram 12

Adjustment Methods

Make sure that the water route connections are correct, proper power supply is used and water supply is suitable. Then, follow these steps to adjust the purifier:

- Open the tap water inlet valve and the water purifier inlet water ball valve (See Diagram 13) and plug the unit in the power outlet. Close the storage tank ball valve, then automatically start a 120 second flushing process, water will start to drain through the discharge outlet.

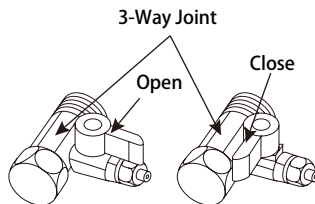


Diagram 13

- Wait for the water purifier to operate stably (for about 5-10 minutes). Check each connection to make sure they are secure. Check to see if there is any leakage from the membrane shell, filters, etc.
- Close the pure water osmosis faucet and storage tank ball valve. Wait approximately 30 seconds. Check to see whether or not the water purifier waste water and high pressure pump have stopped working.
- Open the osmosis faucet. Check to see if the water is flowing through the faucet. If not, check to see whether the tap water pressure is too low or whether or not the high pressure switch can be reset automatically.
- Wait until the machine is operating properly, then close the inlet water ball valve. After a short period of time, check to see if the machine stops working, if it does not stop working, check to see whether or not the low-pressure switch can be reset.
- Perform a second check to make sure everything is ok. Now your water purifier is ready for use.

LED Display Functions



Work: When the machine is producing water, this icon will lit up.

Source: When the machine has no inlet water or the inlet water is not enough, this icon will lit up and the alarm will buzz.

Flush: When the unit is flushing the membrane, this icon will lit up.

Leakage: When there is a water leakage, this icon will lit up and the alarm will buzz.

UV: This icon indicates the remaining life of UV Lamp.

Replace: These icons will be lit when one of the filters need to be replaced.

1st PP: This icon indicates the remaining life of 1st stage Sediment Filter.

2nd CB: This icon indicates the remaining life of 2nd stage Carbon Block Filter.

3rd RO: This icon indicates the remaining life of 3rd stage RO Membrane Filter.

4th PAC: This icon indicates the remaining life of 4th stage Post Active Carbon Filter.



Work

- This icon will lit up only when the unit is producing water.
- When the unit is in standby mode, this icon will be off.



Flush

- This icon will lit up only when the unit is flushing the RO membrane.
- When the unit is in standby mode, this icon will be off.



Source

- When the machine has no inlet water or the inlet water is not enough, this icon will lit up in red color and the alarm will buzz..
- Alarm will buzz 7 times, after the buzzing, alarm will be off and this icon will blink on the display.
- Alarm will buzz 7 times only once but everytime when the water cut, the alarm will buzz again.
- This function and alarm will be activated when water is cut no matter the unit is treating water or in standby.



Leakage Sensor and Alarm

- When there is a water leakage inside the unit, solenoid valve will cut the water and leakage alarm will be activated. .
- When Leakage Alarm is activated this icon will be blinking in red color and alarm will buzz in each 2 seconds continuously.
- Alarm can be off only when the power source is the unit is cut and reconnected to power again.
- Leakage alarm will be activated and the inlet water will be automatically cut off no matter the unit is treating water or in standby.



1/2/3/4 Filter Life Status and Replace:

• These numbers indicate the remaining life of four different filters. When the remaining of filter life changes, the color of these icons will change.



• Number 1 indicates 5 µm Sediment Filter, Number 2 indicates Carbon Block Filter, Number 3 indicates RO Membrane Filter and Number 4 indicates Post Active Carbon Filter.

• When the related icon is **Green**, the filter can be used normally.

• When the related icon turns to **Orange** and alarm is buzzing 4 times, it means the filter should be replaced soon.



After the icon turns **orange** on the display, the alarm will buzz 4 times everytime the unit is treating water, this icon will remain until the related filter is replaced.

• When the icon turns **Red** and Replace icon is blinking in **Red** color with alarm is buzzing 8 times, it means the related filter can not be used and needs replacing immediately. The unit should be stopped functioning and call the After Sales Service for filter replacement

After the icon starts blinking on the display, the alarm will buzz 8 times everytime the unit is treating water. This icon will remain blinking until the filter is replaced.

• This function and alarm will be activated no matter the unit is treating water or in standby.



UV Lamp Status:

• This icon indicates the remaining life UV lamp. When the remaining of UV lamp changes, the color of this icon will change.

• When the icon is **Green**, UV lamp can be used normally

• When the icon turns to **Orange**, it means UV lamp should be replaced soon.

• When the icon turns **Red**, it means UV lamp can not be used and needs replacing immediately. The unit should be stopped functioning and call the After Sales Service for replacement

• When the icon turns **Red** and the alarm is buzzing, it means the unit should be stopped functioning and UV unit should be checked and UV lamp should be replaced. In this case, call the After Sales Service for replacement

• This function and alarm will be activated no matter the unit is treating water or in standby.

• Select and Reset Buttons:

When the filters' life up to its rated service life, customer should contact the after-sale staff to change the filter. After changing the filter should reset the filter life through Select and Reset buttons.

Select and Reset Buttons are located next to UV unit. Take off the USB cover to control the "Select" and "Reset" manually (See Diagram 14).

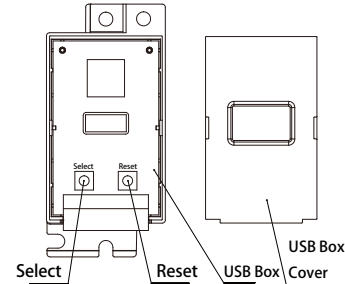


Diagram 14

Press the "Select" button to select the corresponding filter icon, the corresponding filter icon will be blinking, then press the "Reset" button 3 seconds to reset the corresponding filter life, the color of the filter icon will change from red to green. If reset any filter life, the related filter icon will extinguish. If you want to reset all the five stages of filter, press the select and reset button at the same time about 5 seconds. It will exit if no operation in 10 seconds.

CAUTION: "Reset" button can be operated only after replacing the filter, otherwise not allowed to press the "Reset" button.

THESE RESET/SELECT BUTTONS SHOULD BE OPERATED BY ONLY AFTER SALES SERVICES.c

• **Faucet display function:**


While the unit power on, open the faucet, the logo “AO SMITH” and symbol “” will be lighted up, the logo shows in white, and symbols color depends on the service life of filters. During the usage interval, while the symbol shows in orange or red, please check the unit display and notice which stage filter, then contact the authorized professionals to remind and preparation for the maintenance. While close the faucet, both logo and symbol are also lighted off (See Diagram 15).



Diagram 15

Side Stream R.O. Membrane

Side Stream R.O. Membrane Technology is a special innovation by A.O.Smith. Side Stream R.O. Membrane use patented MLSB Screw-type Technology.

MLSB (multi-leaves single-bag) membrane has vertical inflow and concentrate water direction; longer and narrower inflow passage thus app. 2,8 times higher surface flow rate. Higher flow rate can reinforce the effect of surface flush, of R.O. membrane, reduce the rate of concentration polarization, blockage, scale formation, waste water discharge, and increase the salt rejection rate.

The Side Stream R.O. membrane increases the recovery rate to around 50%, compared to 25% for the regular residential R.O. membrane, and waste water volume is reduced by 56%.

Combined with MLSB Screw-type Technology, Side Stream R.O. Membrane creates the world’s highest utilization rate for residential membranes, reaching 85-90% compared to only 70% for traditional membranes.

With patented full flush function, it completely solves the traditional water purifier problem of having no way for the concentrate water to flush out of the membrane when the tank is full, leading to membrane scale and pollution problems. The optimal flushing design reduces flushing discharge by 50% and extends the service life of the membrane by 1,5 times.

Advantages

- **Less Waste Water:** It can reduce 56% waste water, energy saving, en vironmental protection, enjoy low carbon living;
- **More Pure Water:** It can increase 66% pure water, more efficient and highest utilization;
- **High Salt Rejection:** Its salt rejection can be more than 95%, which is the top level of residential membrane;
- **Long Life:** By less concentration polarization, it has a low risk contamination and long life span app. ;
- **Reliable Structure:** It has water hammer and attack protection, mistake-proof design to prevent wrong installation;
- **Better Sealing:** Two o-ring design, completely leak tight, insure pure water quality;
- **Compact Size:** 10% smaller, more compact, lighter design.



More	66%	pure water
Less	56%	waste water
Prolong	1.5 times	of RO filter

Operation Warnings

- During the first operation of the unit, before activating RO membrane, pre-filters should be flushed. Follow the below steps to flush the pre-filters:
 - Turn off the inlet water solenoid valve.
 - Take out third stage RO membrane housing.
 - Place a storage cup to next to the Second Stage Carbon Block housing to drain the dark color water coming from the Second Stage Filter.
 - Turn on the inlet water solenoid valve and wait until the color of the water returns to normal.
 - Turn off the inlet water solenoid valve and reassemble third stage RO membrane housing.
 - Before using Fourth Stage PAC, flush the cartridge for 1-2 minutes also.
- The major components of this product are manufactured using plastic. When using the water purifier, always observe the integrity of the equipment in order to ensure safe operation.
- The package of the reverse osmosis membrane contains a small amount of protective solution in order to prevent microbiological contamination of membrane components during storage and transportation. The PAC filter may emit activated carbon powder the first time it is used. So do not open the water storage tank during the first hour when the water purifier is put into operation. It is recommended that the water produced during this period is disposed of. Otherwise, the taste of the pure water may be unusual.
- When you first use the storage tank it is recommended that you discard the first tank of water; otherwise it may result in abnormal tasting pure water.
- When you first operate the water purifier, the pure water TDS value may be a little high. After operating for some time, the TDS value of the pure water produced will gradually decrease until it is stable.
- When you are using the water purifier, the inlet water ball valve should be opened and the pure water faucet needs to be turned on. When you are not using water turn off the water faucet, the high pressure switch will automatically cut off the water supply.
- When the unit is not operated for long periods of time, occurrence of microbiological contamination is possible. To prevent any microbiological contamination, it is recommended to operate the unit at least twice a week. Otherwise, the water can have a smell.
- When any of the following situations occur, immediately disconnect the water purifier water source (close the inlet water ball valve) and/or the power source and carry out repairs.
 - If the water purifier pipes or related components are leaking.
 - If the water purifier and/or components stop working.
 - If any components leak electricity.
 - If there are any other anomalies or failures.
- When you go out or do not use the machine, disconnect the water purifier's water source (close the inlet water ball valve) and/or power source.
- If the water purifier parts are damaged, it is recommended that the water purifier be entrusted to the manufacturer or distributor, service center, or specialized technical personnel for replacement to prevent loss caused by improperly performed maintenance, the manufacturer assumes no liability for losses incurred as a result of operation or use that does not conform with the instructions and reminders specified herein.

Maintenance and Repair

Flushing the RO Membrane

As water passes through the RO membrane, impurities and bacteria are retained on the membrane surface, so you should regularly flush the machine to ensure that the RO membrane performance is optimized.

- **Flushing Method:** Automatic flushing.
- **Flushing Conditions:** The membrane will be automatically flushed in three conditions:

1. When the product is on
2. When the tank is full
3. When the product stays in stand-by mode in three consecutive days

- **Flushing Model:** 18 second flushing, 15 seconds working, 18 seconds flushing again. Total duration 51 seconds.

Filter Replacement Intervals

- The filter replacement cycles for the various filters used in this purifier is derived from statistical indicators on the estimates of average tap water usage. If there are considerable discrepancies between the users supply water quality, utilization rates and average indicators, there will be more obvious differences between the filters actual replacement intervals and estimated life-cycles and users may experience premature filter clogging, premature failure, etc. If this occurs, filter replacement intervals should be based on actual usage conditions. You should also contact your local after-sales service department immediately to inform them of the situation.
- This machine's estimated filter replacement cycle is based on average household water consumption and is suitable only for residential use, do not install this machine in places that require large volumes of water. If the water volume requirements are large, our company offers appropriate equipment tailored for commercial applications.
- According to economic statistics on municipal tap water, a three person family on average uses 10L of water a day. According to the water volume and inlet water quality conditions, approximate filtering volumes are as follows:

PROGRESSION	USAGE PERIOD
First: 5-micron PP filter	6-12 Months
Second: Carbon Block filter	6-12 Months
Third: Reverse Osmosis Membrane	24-36 Months
Forth: PAC filter	6-12 Months
Fifth: UV Lamp	12Months

Important Note:

Water quality has a great influence on the life-cycle of the filters. The lifespan of the RO membrane is affected by many factors.

The table above represents the lifespan of filters under standard conditions. In actual usage, due to the fact that water quality may be different, the lifespan of the filters may exceed or may be lower than the abovementioned estimates.

The above data is provided for reference only. Under normal circumstances, if you witness the following indications, you should consider replacing your filters:

- Poor water quality, taste declines, TDS value of water rises TDS value of water;
- Water flow is significantly reduced. Check to see if the filter or membrane is blocked (determine that it was not caused by a temperature drop);
- If the filter's outer surface is covered in mud or the filter has significantly changed color;
- If serious filter clogging leads to no pure water flow from the unit.

Filter Replacement Methods

This product is equipped with disposable filter housing and filter. This means that when the filter life is over, filter and filter housing will be changed. Follow the same steps in the installation of pre-filters section.

Open the front cover, pull up and out the RO filter cartridge assembly about 15°, then rotate anticlockwise to take out, then use wrench to remove the shell cover; Then take out the filters from package, keep 2 O rings installed (See Diagram 9-10), put the end without O ring of filters into the cartridge shell and fixed, then rotate the shell cover and tighten with wrench, after that install the RO filter cartridge assembly into the front cover in clockwise, and push inside until in originally vertical.

IMPORTANT:

It is recommended that filter replacement is carried out by qualified after-sales staff.

Always use gloves when replacing the filters. Replaced filters should be disposed in a tightly closed garbage bag.

Filter Replacement Warning

During the first use, Carbon Cartridges will leave a carbon dust into the water. To prevent carbon dust flowing into RO Membrane cartridge, Carbon Filters should be flushed before the activation of the unit. If this flushing will not be done, Carbon Dust will shorten RO membrane, While changing the pre-filter, Second Stage Carbon Block and Fourth Stage PAC filters should also be flushed.

Follow the steps on page 18 to flush the pre-filters.

General Information

• RO membrane water production volume

The water output volume of the RO membrane component is influenced by inlet water pressure and water temperature. Your equipment's declared volume of 75GPD is tested under a net pressure of 0.5MPa and inlet water temperature of 25C. If net pressure is less than 0.5MPa or if the inlet water temperature is less than 25C, water output volume of the RO membrane component will be less than 75GPD.

• Storage tank capacity

The storage tank on your equipment has a stated capacity of 3.2G. However this figure is its theoretical capacity and its actual storage capacity is about 70%-80% of the stated value, which is app. 2.0-2.5G

• Disposal of old filters

After replacing old filters, they cannot be cleaned and reused; it is recommended that you dispose of them with solid waste garbage.

Packing List

Main Machine	1 Unit
3 Stage Filters and RO Membrane Water Pipe	1 Set
Storage Tank	1
UV Lamp and 2 Pins Cable	1
Electronic Faucet	1
5 pins Faucet Cable	1
¼" Pipe	5 m
Converter for Second Faucet Outlet	1
User Manual	1
Standard Installation Kit	
-Inlet water ball valve	1
-Waste water tube clamp	1
-O-ring	2
-Tank valve	2
-Thread seal tape	1 Roll
-Nylon cable ties	5

After-Sales Service

- If your water purifier exhibits abnormal behavior, please turn off the water source immediately, cut off the power source and contact your local vendor.

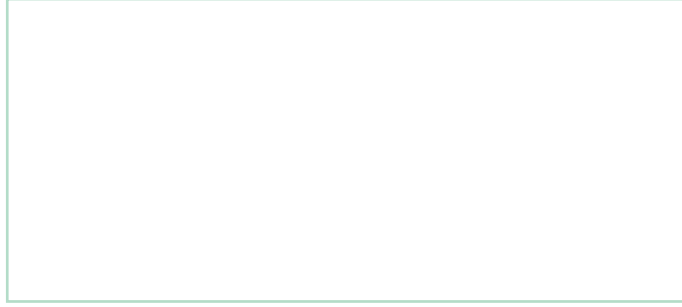
Notes

- Our company reserves the right to change product design, configuration, and specifications without prior notice.
- Our company assumes no liability for problems that may occur as a result of technical or editorial errors, omissions or printing problems contained herein.

Troubleshooting Guide

FAILURE EXPERIENCED	REASON	SOLUTION METHOD
The machine will not start	<ul style="list-style-type: none"> • The power source is not connected. • Low inlet water pressure or no water. • Low-pressure switch failure, cannot connect the power source. • High-pressure switch cannot be restored. • Switch Mode Power Supply is burned out. • High-pressure pump burned out. • Transformer burned out. • No output voltage from control PCB 	<ul style="list-style-type: none"> • Check the power source or the power source plug. • Check the inlet water pressure. • After connecting the inlet water, measure the resistance, replace. • After letting off the pressure, measure the resistance, replace. • Measure the output voltage, replace. • Replace the high-pressure pump. • Check the transformer input voltage/overload. • Measure the output voltage, replace.
The high pressure pump is working properly, but no water is being produced	<ul style="list-style-type: none"> • High-pressure pump has lost pressure. • A pre-filter is blocked. • Check valve is blocked. (waste water, no pure water) • The RO Membrane is plugged. • Inlet water valve is faulty, no water can get in. • Control PCB cannot shut off flushing valve. 	<ul style="list-style-type: none"> • Measure the water pump pressure, replace. • Observe the pure water and waste water, replace the pre-filter. • Replace the check valve. • Clean or replace the RO membrane. • Replace the inlet water valve. • Measure input voltage for flushing valve, replace control PCB
The storage tank is full but no pure water is flowing out	<ul style="list-style-type: none"> • Storage tank doesn't have enough pressure. • PAC filter is plugged. • High-pressure pump pressure is not reaching 0.3MPa, the storage tank internal pressure cannot reach the set high pressure. 	<ul style="list-style-type: none"> • Inflate the storage bucket, empty tank pressure should be between 0.05 and 0.07MPa. • Replace the PAC filter. • Measure the pressure from the water pressure pump, replace.
The machine produces continuous pure water	<ul style="list-style-type: none"> • High-pressure problem. • High-pressure pump has lost pressure. • Inlet water solenoid valve is faulty. 	<ul style="list-style-type: none"> • Measure the pressure. • Measure the water pump pressure, replace. • Replace the Inlet water solenoid valve.
The machine is turned off but waste water has not stopped	<ul style="list-style-type: none"> • Flush solenoid valve failed, cannot effectively cut off the water supply. • Check valve has lost pressure. (small W.W. flow rate) 	<ul style="list-style-type: none"> • Observe the waste water, replace the Flush solenoid valve. • Observe the waste water, replace the check valve.
After the machine is filled with water, the machine starts repeatedly	<ul style="list-style-type: none"> • Check valve has lost pressure. • High-pressure switch failure. • System is exhibiting a loss of pressure. 	<ul style="list-style-type: none"> • Replace the check valve. • Replace the high pressure switch. • After checking the check valve, check whether there is water leakage in the pipelines.
The pure water flow is small or not flowing	<ul style="list-style-type: none"> • Pre-filter is plugged. • RO membrane is plugged. • Inlet water solenoid valve failure. • Check valve is plugged. • PAC filter is plugged. • High pressure pump pressure is not enough. 	<ul style="list-style-type: none"> • Replace the pre-filter. • Wash or replace the RO membrane. • Replace the Inlet water solenoid valve. • Replace the check valve. • Replace the PAC filter. • Measure the high pressure pump water pressure, replace.

FAILURE EXPERIENCED	REASON	SOLUTION METHOD
No or little decrease in TDS value in product water	<ul style="list-style-type: none"> • RO membrane connector o-ring deformed. • RO membrane ruptured/aperture enlarged. 	<ul style="list-style-type: none"> • Replace o-ring. • Replace RO membrane.
Machine not treating water after replacing filter cartridge	<ul style="list-style-type: none"> • Air in the tubing. 	<ul style="list-style-type: none"> • Vent the air in the tubing.
Pressurized motor continues to restart frequently	<ul style="list-style-type: none"> • Outlet check valve not blocking water completely. • Leakage in the tubing. 	<ul style="list-style-type: none"> • Replace check valve. • Lock tightly/replace tubing.
Booster pump motor burned out	<ul style="list-style-type: none"> • Abnormal frequent start up and overheat. 	<ul style="list-style-type: none"> • Replace booster pump.
Motor does not pump up the pressure	<ul style="list-style-type: none"> • Air in the motor. • Pre-filter is blocked. 	<ul style="list-style-type: none"> • Vent the air. • Replace pre-filter.
Transformer smell	<ul style="list-style-type: none"> • Power input specification error. • Power source is burned/failed. 	<ul style="list-style-type: none"> • Check if power input complies with standard specs. • Check the power source, replace if necessary.
RO water smells or tastes strange	<ul style="list-style-type: none"> • PAC filter is saturated. • Intermittent usage, water ceases flowing. 	<ul style="list-style-type: none"> • Replace PAC filter. • Drain tank water/replace PAC filter cartridge.
Filter cartridge junction leakage	<ul style="list-style-type: none"> • Filter housing not locking tightly. • Filter housing o-ring deformed. 	<ul style="list-style-type: none"> • Lock housing tightly. • Replace housing o-ring.
UV Lamp can't light up	<ul style="list-style-type: none"> • UV Lamp damaged. • UV Lamp ballast damaged. • UV Lamp life due. 	<ul style="list-style-type: none"> • Replace the UV Lamp. • Replace the UV Lamp ballast. • Replace the UV Lamp.



**Your Installer
Montaj Yetkilisi**

A.O. Smith Su Teknolojileri A.Ş.
Küçükçekmece İkitelli Osb Mahallesi Marmara D Blok Sokak No:2
34303 Küçükçekmece - İstanbul - Türkiye
Tel: +90 212 444 1 646 - Fax: +90 212 494 47 95
www.aosmith.com.tr

