



# SMART RO/DI FILTER SYSTEM INSTRUCTIONS

## - PLEASE READ CAREFULLY BEFORE INSTALLING THIS PRODUCT!



### STAGE 4

#### Deionization Cartridge

Provides the final polish of the water and will remove the vast majority of elements that passed through the RO membrane.

*When DI Out TDS reads 5ppm or more, you should consider changing your DI resin or cartridge. You will notice a dramatic rise in the TDS level once the resin is exhausted.\**

### STAGE 2

#### 5μ Carbon Block Pre-filter

Removes organics and chlorine from the feed water that can damage the membrane.

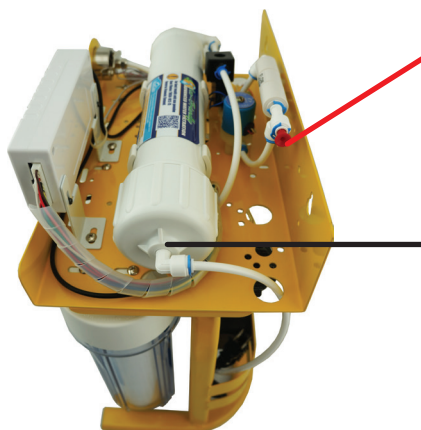
*Suggest changing at the same time as the sediment filter is changed (4-8 months\*)*

### STAGE 1

#### 1μ Sediment Pre-filter

Remove colloidal and particulate matters that may clog the TFC membrane.

*Change when visibly dirty (4-8 months\*)*



**RED Waste Water Output**  
Drain to sink or garden for disposal

### STAGE 3

#### 75 GPD DOW Filmtec RO Membrane

Removes over 98% of most inorganic salts, heavy metals, bacteria and almost all high molecular weight organics from the tap water.

*Should be changed every 2-3 years or when TDS reading is above 30-40μs.\**

*\*All listed service times are approximate. Actual service life may be longer or shorter depending on the water source quality and how often the unit is used.*



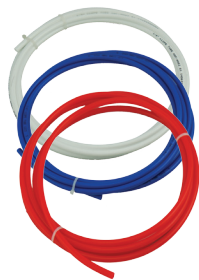
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PLEASE ENSURE ALL PARTS ARE INCLUDED AND UNDAMAGED

If parts are missing please contact support at <http://www.coralvue.com/support>

## PARTS BAG CONTENTS



1. 1/4" RO Tube(White) x 3M
2. 1/4" RO Tube(Blue) x 3M
3. 1/4" RO Tube(Red) x 3M



4. Garden Hose Adapter x 1



5. 1/4" Ball Valve x 2  
*Valve 1) Feed in (recommended)*  
*Valve 2) Product out (optional)*



6. 1/4" Drain Saddle x 1



7. Universal Filter Wrench x 1  
*- Left OPEN / Right CLOSE*



## ICECAP RO/DI SYSTEM REQUIREMENTS

- Feed Water Pressure of 40-100 PSI
- Optimal source water temp. 70-77 °F (21-25 °C)
- 120v Electrical power source

**NOTE:** It is recommended to have this unit installed by a licensed plumber to adhere to all local codes. It is the responsibility of the purchaser to insure that all fittings are tight and that all codes are met.

**WARNING:** Household water pressure can cause leaks and damage the surrounding building or fixtures if not properly installed. User must check all fittings for tightness. CoralVue assumes no responsibility for water damage due to leaks or improper installation of the unit.



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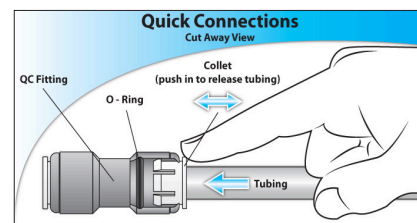


# WATER LINES

- **Feed Line (white)** – Connects to your cold water source
- **Product Water Line (blue)** – Purified water to collect
- **Waste Water Line (red)** – Drains to your sink or garden for disposal



## INSTALLATION OF TUBING



# PLACEMENT

The SMART RO/DI System can simply be assembled and placed on any stable surface or it can be mounted to any secure location using hardware screws (*not supplied*).

**Keep in mind** that the filter system will gain a substantial amount of weight when it is full of water. For this reason, it is necessary that the filter system be mounted to a strong backing. If needed, additional hardware and plumbing can be found at most hardware or plumbing supply stores.

# GETTING STARTED

## 1. Connect Water Supply

Shut off water supply. Attach the **WHITE FEED LINE** to a cold water supply using the included  $\frac{3}{4}$ " garden hose feed adapter (*part 4*). If the feed water (*faucet or sink*) does not have  $\frac{3}{4}$ " garden hose thread, you will need to purchase a feed water adapter, or a faucet coupler. Check with your hardware retailer for availability of these and other accessories. NEVER run hot water greater than 100 degree Fahrenheit (*38 degree Celsius*) through the system. Install the  $\frac{1}{4}$ " ball valve (*part 5*) in line between the RODI and the feed source.

## 2. Connect Waste Water

Connect the **RED WASTE WATER LINE** to the supplied drain saddle (*Part 6*) and attach to sink drain or direct towards drain. This line will produced a good amount of pressure and should be secured and directed into a drain at all times.

## 3. Install and Flush Pre-filters

To flush pre-filters, place the **BLUE PRODUCT WATER LINE** into your drain. Remove pre-filter packaging and install in their appropriate filter housing. DO NOT install the TFC membrane or DI cartridge at this point. Slowly open the cold water supply valve and allow the first two housings to fill. Double check the system to ensure that all fittings are tight and leak-free before leaving the system unattended.

Plug in the RO/DI power supply and allow the controller to warm up and begin flushing water through the system by running for 15 minutes to flush the sediment and carbon-block filter cartridges. Although not commonly done, flushing the pre-filters will help maximize the TFC membrane life.



### KEEP IN MIND

When flushing new pre-filters, it is recommended that you remove both RO Membrane and DI filter.

**Tip:** you can set the controller timer to run for 15min.

**CHLORAMINE WARNING:** If your city uses Chloramines as a water disinfectant, you must use a higher density carbon block capable of properly removing chloramines. If you are unsure if your water contains chloramines, contact your local water department or obtain a simple water test kit to determine if chloramines are present in your water.



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## 4. Install and Flush Membrane

Unplug RODI power and turn off the water supply. Do not install the DI cartridge at this point and leave the prefilters in place. Remove the TFC membrane from the protective bag and install it into the TFC housing at the top of the RO unit. You will be required to disconnect the tubing to be able to unscrew the cap. Securely seat the TFC membrane in to the housing. Once the TFC membrane is seated, screw on the top and reconnect the tubing.

Plug in the RO/DI power supply and allow the controller to warm up and begin flushing water through the system for 30 minutes.



### KEEP IN MIND

Each time the membrane is replaced it is recommended that you remove the DI and flush the newly installed membrane for a minimum of 30 min. Reverse osmosis membranes are commonly packed with an anti-bacterial agent to keep them sterile prior to use. This agent should be flushed for 30 minutes before you can install the DI cartridge and collect water for use.

*Tip: You can set the controller timer to run for 30 min.*

## 5. Fill and Install DI Cartridge

Filling a DI Cartridge is easy. The most important thing to remember is to tightly pack the DI resin into the cartridge. Loose DI will cause the water to channel through the DI greatly reducing its effectiveness.



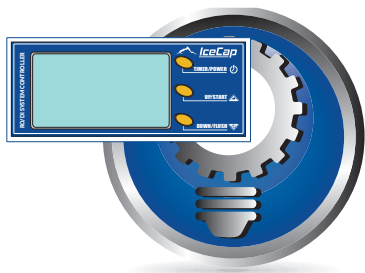
Unscrew the top cap from the DI cartridge and remove the foam ring. Pour in the DI resin and pack it down tightly as hard as you can. Tap on a counter to help settle the resin. At this point the resin should be tightly packed and flush to the rim. Put the foam ring back inside the screw cap and screw the cap on.

Unplug RODI power and turn off the water supply. Remove the DI canister on the left and place the newly filled cartridge into the DI canister. Make sure the cap of the cartridge faces up.

Plug in RODI power and the RODI is ready to begin making pure water, just direct the BLUE product water line to your collection source.

*Trapped air in the DI cartridge is a normal condition and will not affect the operation of the unit.*





## MODES OF OPERATION

The SMART RODI Controller is equipped with several different modes of operation and functions. Pressing the “**TIMER/POWER**” button allows the user to cycle between the MANUAL and TIMER mode as well as power **ON** and **OFF** the unit.

**Press and hold the  **TIMER MODE BUTTON** for 3 sec to turn ON/OFF the IceCap Smart System.**

MANUAL MODE  
TIMER SETTING  
**88:88**  
HOUR MINUTE

### MANUAL MODE (1)

User has to manually open and close the ball valve of DI water out to start the production of water.

### TIMER MODE (2)

User can select timer-setting to produce water in a setting period without people on the scene. Choose your preferred mode before starting the operation.

#### a) HOUR SETTING

To set the timer mode press “**UP**” or “**DOWN**” button to set the HOUR (*press and hold to progress the number*). The HOUR can be set for 1-99. During setting, both the HOUR and the word “**TIMER SETTING**” will be flashing. If the setting is idle for more than 5 sec, flashing will stop and automatically complete the setup (phase c).

#### b) MINUTE SETTING

The minute can be set from 0-59. This operation is the same as setting the hours. (phase a)

#### c) SETUP COMPLETE

Press “**TIMER/POWER**” button to switch back to mode 1. *\*Even after power outage the timer will retain record and resume.*

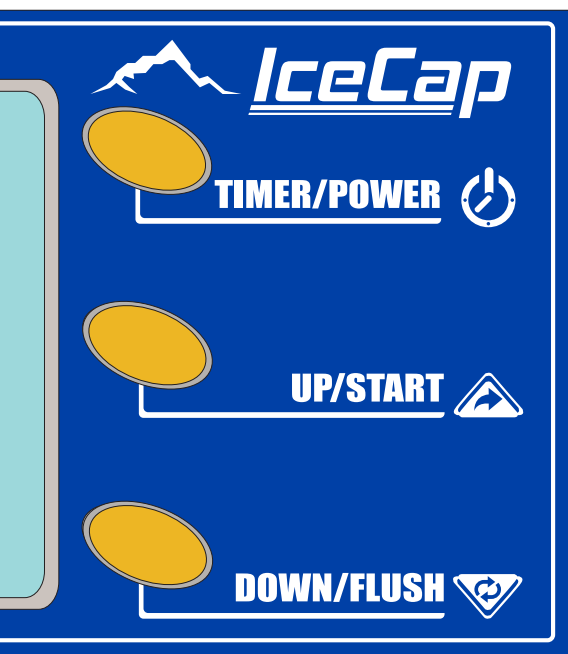
#### d) UP/START

##### - Function 1 (UP)

Use in phase a or b when selecting the timer.

##### - Function 2 (START)

After timer setup, press “**UP/START**” to start or stop the filtration of water via timer.



### MANUAL FLUSH FUNCTION (3)

- **Function 1 (DOWN):** use in mode 2 or 3 when selecting timer function.

- **Function 2 (FLUSH):** press and hold for 3 sec to administer strong 120 sec manual flush.



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# TRIPLE IN-LINE TDS READOUTS

The IceCap Smart Controller monitors the condition of the prefilters, TFC membrane and DI cartridge through three separate in-line TDS readouts. TDS (*Total Dissolved Solids*) is the reading of organic and inorganic dissolved substances that may be found in the source water such as minerals, metals and salts.



**TDS are measured in parts per million (ppm).** The lower the TDS number, the more pure the water is.

## FEED WATER (TDS 1)

Monitors TDS value from feed water. The value can vary from region to region.

## RO OUT (TDS 2)

Monitors TDS value from water that has passed through the TFC membrane. When the value is greater than or equal to 20, the word **“CARTRIDGE CHANGE”** will flash on the controller suggesting it's time to replace the TFC membrane.

## DI OUT (TDS 3)

Monitors TDS value from DI water. The normal value of TDS after DI stage is 0. When the value is greater or equal to 2, the word **“CARTRIDGE CHANGE”** will flash on the controller suggesting it is time to replace the DI cartridge.

\*The word **“CARTRIDGE CHANGE”** will flash on the controller when the cartridge needs to be replaced. After replacing, the word **“CARTRIDGE CHANGE”** will disappear.



### POWER

Displays when the power plug has been inserted into 120v wall outlet. Controller can be turned ON and OFF by pushing and holding the timer mode button for 3 sec.



### PUMP

Indicates the pressure pump is cycling and the RO/DI filter is producing water.



### FLUSH

This RODI system provides automatic flushing function for descaling and extending the life of the RO TFC membrane.

- The Smart Controller will flush 60 sec right after power is on
- The Smart Controller will flush 60 sec after every 1 hr of water production
- **MANUAL FLUSH: 120 sec strong flush**



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## TROUBLE SHOOTING

Your new IceCap SMART RO/DI filter should work trouble-free out of the box but if you have difficulties or questions, please contact our support center at [coralvue.com/support](http://coralvue.com/support).



### NO WATER

Audible and flashing icon displayed when no feed water source. System will return to normal operation when feed water is reintroduced.



### WATER LEAK

Audible and flashing icon displayed indicating water leak has been detected. Clean and dry the water leak and restore power to RODI system.



### TANK FULL

Displayed when ball valve on product DI water is closed or float valve switched.

a) Timer's colon **disappears**: This indicates that the system was operating in manual mode and a valve has been used to restrict the DI output. Open the valve off of DI water output to resume water production.

b) Timer's colon **appears**: The display of the timer's colon indicates that you were producing water in the Timer mode. Open valve off of DI water output and press the **START** button to resume water production.

**NOTE:** The water supply should be turned off and the water pressure should be bled off prior to working on the filter system itself.

**Problem:** The filter system does not produce any product water.

**Solution:** A missing, clogged or defective membrane is most likely the cause of this problem. Be sure the valve on the product water line is in the open position.

**Problem:** I'm not getting the rate capacity out of the unit. What could be wrong?

**Solution:** Output capacity of your RO/DI unit can be affected by many variables. Temperature of source water, low water pressure, clogged prefilter cartridge and exhausted membranes are some variables that can affect your water output. The production rates are rated at 80-90 PSI at 70° F feed water temperature. If the problem is caused by a filter cartridge or membrane, it will need to be replaced.

**Problem:** Too much product water, little waste or resin exhausts quickly.

**Solution:** This is usually the result of the TFC Membrane not seated properly or a ruptured membrane. Open the TFC Housing and firmly push the membrane in place. If the membrane is ruptured, it will need to be replaced.

**Problem:** Not enough product water with lots of waste water

**Solution:** Check the TDS, high TDS can lower the production of product water. Check the temperature of the feed water. Low water temperatures like 50° F (10° C) will restrict the output to half. Check the pressure as the ideal water pressure should be set to 50-90 psi.



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## WARRANTY REGISTRATION

Please Fill out the product registration form online at:  
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## 12 MONTH LIMITED WARRANTY

CoralVue warrants each new IceCap SMART Reverse Osmosis & Deionization system to the original owner only to be free from defects in material and workmanship under normal use and conditions for a period of 12 months from the date of original purchase. CoralVue liability under this warranty shall be limited to repairing or replacing on CoralVue's discretion, without charge. CoralVue will not be liable for any cost of removal, installation, transportation, or any other charges which may arise in a warranty claim.

**NOTE: This warranty is void if the product is: 1) Damaged through abnormal operating conditions, accident, abuse, misuse, unauthorized alteration or repair. This includes, but is not limited to, failure to regularly replace carbon and sediment filters. 2) Damaged by poor local tap water conditions. 3) Damaged due to connection of equipment other than supplied by CoralVue or modification by the user. 4) Damaged by hot water, freezing, flood, fire, or any act of God.**

**This warranty is valid only in the U.S. and is non-transferable.** No other warranties are expressed or implied and any other warranties required by law are limited in duration to 12 months from the day of purchase.

CoralVue will not be responsible for consequential damages arising from installation or use of the product, including any flooding which may occur due to malfunction or faulty installation including, but not limited to failure of installer to tighten all fittings.

**Total gallons per day are not warranted since it is dependent on the users water conditions (i.e., temperature, pressure and total dissolved solids).**



For more information and installation videos,  
visit [www.smartRODI.com](http://www.smartRODI.com).



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