

DROP

PROTECT WHAT MATTERS




Application Manual

Multiplexing Filters
and Softeners

 CHANDLER SYSTEMS

Available on the
 **App Store**

ANDROID APP ON
 **Google play**

 **amazon alexa**

INTRODUCTION

Thank You for Purchasing a DROP System!

We know you'll love your improved water quality, leak detection ability and water conservation benefits of your new DROP Water Management System from Chandler Systems.

Be sure to check out the dropconnect.com website periodically for more information about additional DROP products as they are released.



888.363.9434



dropconnect.com

To further help you operate your new DROP system, we have provided you with many other resources for you to learn more. Feel free to call Chandler Systems when you need additional help. We also have many resources located on our website including instructional videos, and images.

DROP Connect is also active on various social media pages! Feel free to follow us for the most up to date information and news!



@dropconnect



Privacy Statement

For more information about privacy, visit our [privacy policy](http://dropconnect.com/privacy-policy) online.

DROP Patents

For the most up-to-date list of patents, visit our patents on our website: dropconnect.com/patents.

FCC Compliance Statement:

https://dropconnect.com/sites/default/files/FCC_Compliance_Statement.pdf

Industry Canada Compliance Statement:

https://dropconnect.com/sites/default/files/Industry_Canada_Compliance_Statement.pdf

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CAUTION:

- Do not subject tank to any vacuum. If there is a possibility that a vacuum could occur, a vacuum breaker must be installed.
- Do not locate unit where the tank or any lines (including drain lines) will be subject to temperatures below freezing.
- If there is not at least 10' of line between the water heater inlet and the outlet of the closest softener/filter, an expansion tank should be installed.
- Do not use Vaseline or any petroleum-based lubricants on O-rings or rubber seals. Only use food-grade silicone lubricant.
- Do not use pipe dope or any sealant other than Teflon tape on threaded connections. Threads on the control valve and on the bypass nut connections do not require any tape because they use an O-ring seal. Tape is only required on the inlet/outlet adapter fittings and on the drain line fitting (if applicable).

HOW TO USE YOUR SYSTEM

DROP has been designed to make managing multiple water treatment tanks as simple as possible. No longer do you need to program each valve and keep them synchronized! All DROP valves are controlled wirelessly by the Hub so that you never have more than one unit regenerating or backwashing at a time. The time of day is system wide, so you never have to set the time on every unit. Time of day is automatically set via the internet or, if internet is not available, it is automatically set when connected to with a smart phone or tablet. There is only one regeneration time to set for the entire system. In addition to all these conveniences, DROP automatically knows how to set up the system for multiplexing. The Hub intelligently handles all the coordination between DROP products so that there are a minimum number of settings for a user to worry about.

DROP can manage up to four stages of water treatment, and each stage can contain up to 12 parallel tanks. Additional tanks can be added anytime to the system, so that a system can easily grow with the needs of a customer.

In order to multiplex the 1" (D15) DROP valve, the valve should be purchased with the motorized bypass option. The valves will use outlet water from the other parallel tanks as the source for regeneration water.

For 1.25" & 1.5" (CS125 & CS150) DROP valves, they can be purchased with a bypassing piston, or a non-bypassing piston. For a multiplex system the non-bypassing piston should be purchased. The valves will use the inlet water source for regeneration water.



Commercial Triplex Softener System using DROP 1.5" Valves

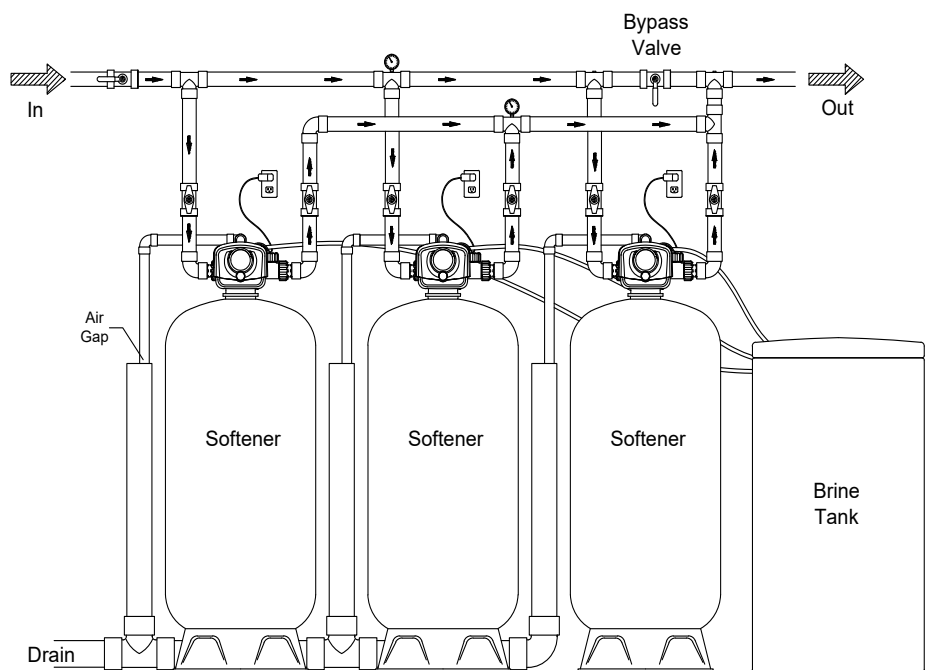
INSTALLATION INSTRUCTIONS



Multiplexing Hardware Setup:

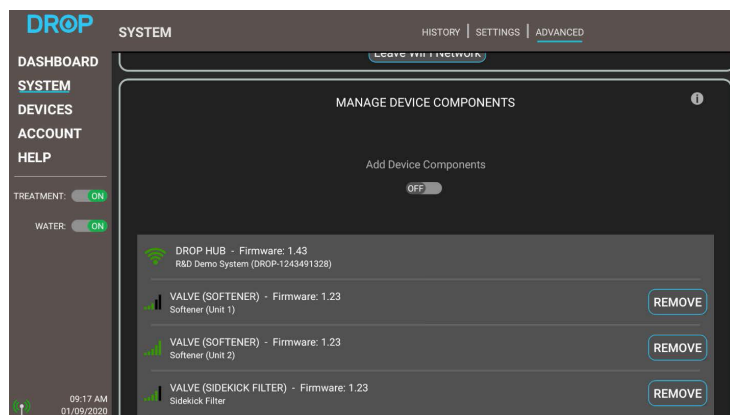
Step 1: Plumb the system

Plumb the water treatment tanks that are intended to be in the same stage of treatment in parallel. For example, plumb all the softener tanks in parallel.



Step 2: Add the devices to the DROP hub

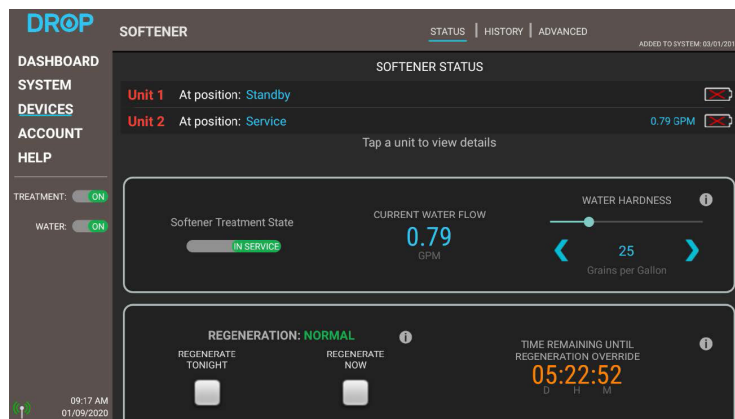
Just like all DROP devices, the new devices should get added to the Hub. To do this, go to the SYSTEM – ADVANCED page in the DROP app and turn on “Add Device Components”. Then power the new devices. They should connect and show up in the device table in just a few seconds. More detailed information on this can be found in the DROP Users Guide



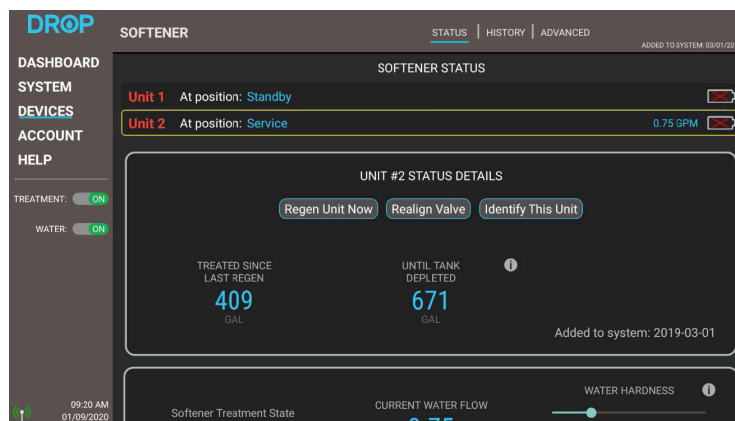
INSTALLATION INSTRUCTIONS

Multiplexing App Setup:

As discussed previously, by simply adding two or more softeners or filters of the same type the DROP Hub will know what to do with them. When going to the device settings, they will show up as one device. In the SYSTEM, ADVANCED page in the app they show up individually, but when you go to DEVICES you will only have one SOFTENER. Both units will show up at the top of the page when you go to that device status page.



By clicking on the individual units, more specific details can be seen about each individual unit.

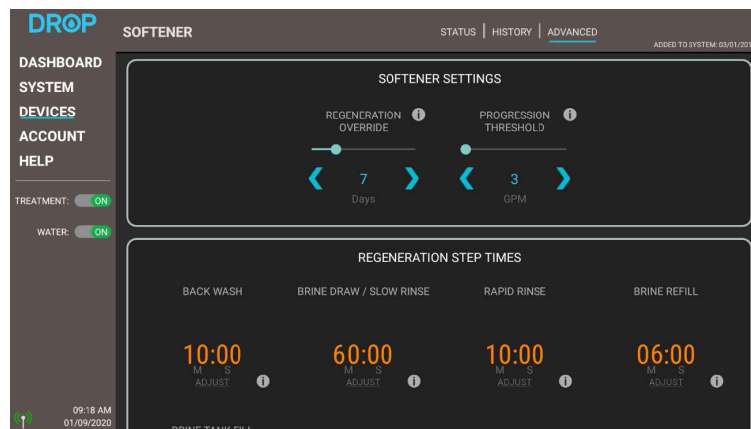


INSTALLATION INSTRUCTIONS

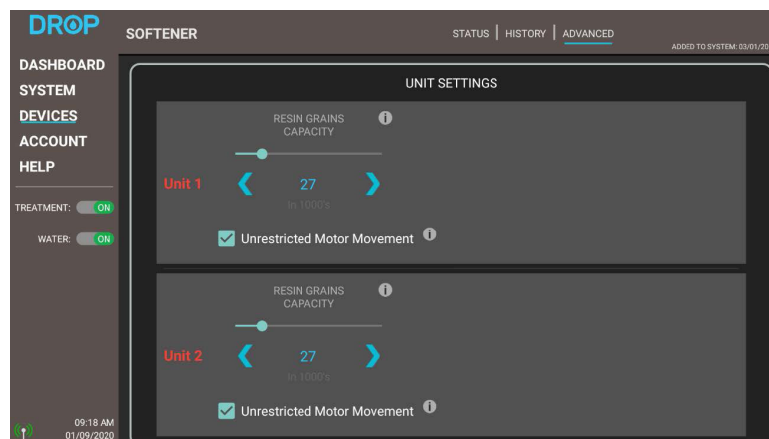


The following settings only apply to multiplexed softeners:

The only setting that needs paid special attention to for multiplexing is the PROGRESSION THRESHOLD setting, found on the SOFTENER, ADVANCED page of the app. This setting controls the flow rate at which the next tank is set to come out of standby and into service. If you have more than two tanks the subsequent tanks will enter service at multiples of this value. For example, if it is set to 4 gallons per minute (GPM) the second tank will enter service when the water flow reaches 4 GPM, a third tank would enter at 8 GPM, a fourth tank at 12 GPM and so on.



While most DROP systems will use resin tanks that are all identical in size, DROP does give the capability of having different sized tanks in parallel.



INSTALLATION INSTRUCTIONS

Regeneration Operation of DROP multiplex systems

Softener Systems:

When a softener tank resin capacity depletes from treating hard water, the tank needs to regenerate. With a multiplex system the regeneration occurs immediately. This allows maximum salt usage efficiency compared to a single tank softener system that can only regenerate during hours of the day where water is not being used in the building. When a regeneration is triggered, the next unit in standby will become the lead unit in service. The unit regenerating will then go into standby and begin a regeneration cycle. When it is regenerating the tank is not available to provide service water to the system, and thus the system capacity will be reduced during the regeneration cycle by one tank unit. It should also be noted that for 1" valves (based on the D15 valve body) the unit regenerating will use treated water from the other tanks that are in service to regenerate. 1.25" & 1.5" valves (based on the CS125 or CS150 valve body) will use raw water to regenerate. After the unit is done regenerating, it will return to stand-by, where if needed it can be called into service to meet water demand needs.

The DROP Hub will only allow one tank to regenerate at a time. If a second tank depletes it will go into stand-by (assuming another tank is available to be in service) and it will wait its turn to regenerate.

Filter Systems:

Filters typically work best with lower flow rates through the filter media in the tank. For this reason, multiplexing DROP filters will place all of the parallel tanks in service. When it is time to backwash the filters (based on the system regeneration time on the SYSTEM, SETTINGS page), the DROP Hub will backwash one filter at a time. Similar to a softener system, when it is regenerating the tank is not available to provide service water to the system, and thus the system capacity will be reduced during the regeneration cycle by one tank unit. It should also be noted that for 1" valves (based on the D15 valve body) the unit regenerating will use treated water from the other tanks that are in service to regenerate. 1.25" & 1.5" valves (based on the CS125 or CS150 valve body) will use raw water to regenerate. After each unit completes its backwash cycle, the Hub will cause the next unit to backwash until all paralleled filters have finished.





1.25" (CS125)



1.50" (CS150)



1" (D15) Valve

If at any time you feel your system is not operating properly, bypass the system and call your authorized DROP Water Management System representative.

This product may be covered by one or more patents. (<https://dropconnect.com/patents>)

Chandler Systems Inc.
710 Orange St.
Ashland, OH 44805

P. 1 833 BUY-DROP
www.dropconnect.com



WATER MANAGEMENT SYSTEMS

This warranty cannot be transferred - it is extended only to the original purchaser or first user of the product. By accepting and keeping this product, you agree to all of the warranty terms and limitations of liability described below.

Important Warning: Read carefully the DROP Water Management Systems Equipment Installation, Operating and Maintenance Instructions Manual to avoid serious personal injury and property HAZARDS and to ensure safe and proper care of this product.

*FOR AS LONG AS YOU OWN AND LIVE IN YOUR SINGLE FAMILY HOME, this warranty covers your water treatment equipment, if you are the first user of this DROP Water Treatment Systems equipment and purchased it for single family home use - subject to all of the conditions, limitations and exclusions listed below. Purchasers who buy the DROP equipment for other purposes, and other component parts are subject to more limited warranties and you should read all of the terms included in this form to make sure you understand your warranty.

What is covered by this warranty?

Chandler Systems, Inc. warrants that at the time of manufacture, the DROP equipment shall be free from defects in material and workmanship as follows:

Product	Warranty
Residential Mineral Tank	10 Years
DROP Control Valves	5 Years
DROP Pump Controllers	5 Years
DROP Home Protection Valve	5 Years
Brine Tank	5 Years
DROP Hub and Remote	1 Year
DROP Wireless Low Salt Alarm	1 Year
Other Accessories and Parts	1 Year
Brine Tank Components	1 Year

* This warranty does not include media and/or cartridge filter elements.

Additional Terms & Conditions

What Chandler Systems Inc will do if you have a covered warranty claim; Chandler Systems Inc will at its discretion either make repairs to correct any defect in material or workmanship or supply and ship either new or used replacement parts or products. Chandler Systems, Inc. will not accept any claims for labor or other costs.

Additional Exclusions and Limitations

This warranty is non-transferable and does not cover any failure or problem unless it was caused solely by a defect in material or workmanship. In addition, this warranty shall not apply:

- If the equipment is not correctly installed, operated, repaired and maintained as described in the Installation, Operating & Maintenance Instructions Manual provided with the product.
- Defects caused as a direct result of the incoming water quality
- If the DROP equipment is not sized appropriately for the intended job.

- To any failure or malfunction resulting from abuse (including freezing), improper or negligent; handling, shipping (by anyone other than DROP)
- If the unit has not always been operated within the factory recommended temperature limits, and at a water pressure not exceeding 125 psi, during storage, use, operation, accident; or alteration, lightning, flooding or other environmental conditions.
- To any failure or malfunction resulting from failure to operate the system with potable water, free to circulate at all times; and free of damaging water sediment or scale.
- This warranty does not cover labor costs, shipping charges, service charges, delivery expenses, property damage, administrative fees or any costs incurred by the purchaser in removing or reinstalling the water management equipment.
- The warranty does not cover any claims submitted more than 30 days after expiration of the applicable warranty, and does not apply unless prompt notice of any claim is given to an authorized DROP Dealer or to DROP or a designated contractor is provided access to the installation and to the water treatment equipment.

THESE WARRANTIES ARE GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. NO DROP REPRESENTATIVE OR ANY OTHER PARTY IS AUTHORIZED TO MAKE ANY WARRANTY OTHER THAN THOSE EXPRESSLY CONTAINED IN THIS WARRANTY AGREEMENT.

Additional Warranty Limitations

ANY IMPLIED WARRANTIES THE PURCHASER MAY HAVE, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE TIME PERIODS SPECIFIED ABOVE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Limitations of Remedies

The remedies contained in this warranty are the purchaser's exclusive remedies. In no circumstances will Chandler Systems, Inc. or the seller of the product be liable for more than, and purchaser-user's remedies shall not exceed, the price paid for the product. In no case shall Chandler Systems, Inc. or seller be liable for any special, incidental, contingent or consequential damages. Special, incidental, contingent and consequential damages for which Chandler Systems, Inc. is not liable include, but are not limited to, inconvenience, loss or damage to property, consequential mold damage, loss of profits, loss of savings or revenue, loss of use of the products or any associated equipment, facilities, buildings or services, downtime, and the claims of third parties including customers. Some states do not allow the exclusion or the limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you.

What to do if you have a problem covered by this warranty

Any warranty coverage must be authorized by Chandler Systems, Inc.. Contact the person from whom you purchased the product, who must receive authorization from a DROP Dealer.

If your product is new and not used and you wish to return it, contact your DROP Dealer.

