

POWERLINE™ PRO SERIES WATER SOFTENER

Powerline PRO Timered and Metered Softeners

Owner's Manual



Model/Product Numbers:

PRO 0840ST (17214)	PRO 0840S (17218)
PRO 1040ST (17215)	PRO 1040S (17219)
PRO 1054ST (17216)	PRO 1054S (17220)
PRO 1354ST (17217)	PRO 1354S (17221)

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Congratulations!

We know you'll love your soft water and your new Kinetico Powerline PRO Softener. You'll soon wonder how you ever lived without it.

Improving your water with a Kinetico Powerline PRO Softener is just one way to enjoy better water. Contact your Kinetico Dealer for more information about additional products that can further improve the quality of the water in your home.



Product Overview

The Powerline PRO Softener system is designed for applications with levels of hardness <100 gpg and levels of iron <10 ppm. For applications with greater levels of hardness or iron, a duplex unit is recommended.

The Powerline PRO Softener is available in four (4) tank sizes and two regeneration control options; timered or metered. These options allow the ideal configuration to be used for your application.

- Mechanical Timered Valve:** This system control will regenerate your softener on a given day of the week. Each PowerLine Softener is designed with a 12 day timer. Set-up is simple, with each day independently selected to start regeneration. If the skipper wheel (day of the week wheel) is programmed to regenerate, then the unit will start a regeneration at 2:00 am on that day.
- Electrical Metered Valve:** The metered systems provide improved efficiency over timer configurations, as these units regenerate based on the actual water used. The integrated system meter tracks the volume of water processed, and after the setpoint has been achieved and the unit's regeneration time is met (2:00 am), regeneration will start.

System Cycles

The water softener provides a **Regeneration** process whereby brine solution enters the mineral tank, driving-off the collected hardness ions and replenishes the surface of the resin beads with more sodium ions. This process is automatically initiated by the control valve on the mineral tank. The regeneration process has five basic cycles as follows:

Backwash

The control valve directs the water flow in a reverse direction through the mineral tank, separating the resin beads and flushing any accumulated particles to a waste drain.

Brine & Rinse

In the first part of this cycle, the control valve directs brine solution downward through the mineral tank, driving-off collected hardness ions and replenishing the resin beads with sodium ions. The second part of the cycle rinses hardness ions and excess brine from the mineral tank to the waste drain.

Rapid Rinse (*Does NOT apply to Mechanical Timered Valve*)

The control valve directs water flow downward, settling and recompacting the resin bed.

Brine Refill

The control valve directs fresh water into the salt compartment to create new brine solution for the next scheduled regeneration.

Service

This is the normal "operating" cycle where hard water enters the mineral tank, comes into contact with the resin beads and exchanges hardness ions for sodium ions - the water then becomes "soft" and ready for use.

System Maintenance and Install Guidelines

Adding Salt

Ensure that the salt level in the brine tank is always above the water line. **DO NOT USE ROCK SALT.**

Water Pressure

Inlet water pressure range of 20-125 psi is required for regeneration valve to operate effectively.

Electrical Facilities

An uninterrupted alternating current (A/C) supply is required. Please make sure voltage supply is compatible with unit before installation. **A backup 9-Volt battery should be installed and properly maintained (replace yearly).**

Existing Plumbing

Condition of existing plumbing should be free from lime and iron buildup. Replace piping that has heavy lime and/or iron buildup. If piping is clogged with iron, install a separate iron filter unit ahead of the water softener.

By-pass Valves

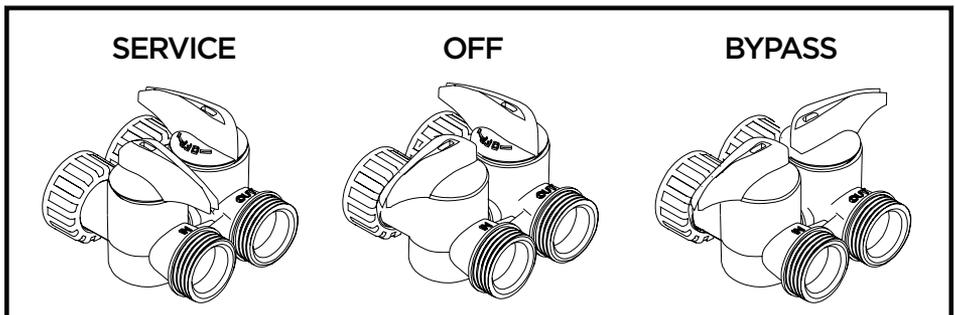
Always install a by-pass valve if unit is not equipped with one. If valve is leaking, turn by-pass from Service to the By-pass position.

NOTE: A check valve (included in extension pipe feeding by-pass valve) must be installed on the inlet to the unit.

NOTE: If the valve continues to leak after turning the by-pass to By-pass position, shut off the main water line and call your local service technician (preferably the one who installed the system) IMMEDIATELY.

CAUTION

- Do not exceed water pressure of 125 psi.
- Do not exceed water temperature of 110°F.
- Do not subject unit to freezing conditions.



Electrical Metered Valve Setting

Set-up Procedures

System Adjustments Using Push Button/Display Interface

NOTE: Changing any setting could affect the operation of your system. Consult your local Dealer before making any adjustments

Main Menu



1. To enter Main Menu, press the **Menu/Enter** button. (Time of Day will flash.)
2. To set the **Time of Day**, press the **Set/Change** button. (First digit will flash.)
Example [12:00]
 - To change digit value, press the **Set/Change** button.
 - To accept the digit value, press the **Menu/Enter** button.
 - Next digit will flash to begin setting.
 - Once the last digit display is accepted, all digits will flash.
3. To set **A.M.** or **P.M.**, press the **Menu/Enter** button.
 - To change digit value, press the **Set/Change** button. Example [A]
 - To accept the digit value, press the **Menu/Enter** button.
 - Once **A.M.** or **P.M.** is accepted, the next menu item will flash.
4. To set **Hardness** an H will appear to enter compensated hardness in grains per gallon (gpg). Default setting is 25 gpg. **Example** [H-25]

NOTE: Note: If the water contains iron and / or manganese, multiply the total parts per million (ppm) by “four” (4) and then add to the grains per gallon (gpg) of hardness. Use this COMPENSATED HARDNESS level when programming the regeneration frequency.

5. To Exit Main Menu, press the **Menu/Enter** button.

NOTE: If no buttons are pressed for 60 seconds, the Main Menu will be exited automatically.

System Adjustments Using Smart Phone/Tablet Interface

NOTE: Changing any setting could affect the operation of your system. Consult your local Dealer before making any adjustments

To take advantage of the bluetooth interface, this feature must be set up on compatible Bluetooth-enabled smart phones or tablets.

Normal Operation

Battery Backup (Uses a standard 9-Volt alkaline battery.)

Features of Battery Backup:

- During power failures, the battery will maintain the time of day as long as the battery has power. The display is turned off to conserve battery power during this time. To confirm that the battery is working, press either button, and the display will turn on for five (5) seconds.
- If power failure occurs while system is regenerating, the Kinetico Powerline PRO Softener will motor to a shut off position to prevent constant flow to drain. After power is restored, the Powerline PRO Softener will return and finish the cycle where it left off prior to the power interruption.
- When used without battery back-up, during a power failure, the unit stops at its current point in the regeneration position and then restarts at that point when the power is restored. The time will be offset by the increment of time the unit was without power, so it is necessary to reset the time of day on the unit. No other system settings will be affected.

Starting Extra Regeneration Cycle

1. To Start **Delayed Extra Cycle** Example [1]

- If Days Remaining Until Next Regeneration does not read '000,' press and hold the **Set/Change** button for 3 seconds until the display reads '0000.'
- Regeneration cycle will initiate at the next designated regeneration time.

2. To start Immediate Extra Cycle ➡ First complete above step.

- With Gallons Remaining Until Next Regeneration at '0000'.
- Press and hold the **Set/Change** button.
- After 3 seconds, the regeneration cycle will begin.

3. To **Fast Cycle** thru regeneration ➡ First complete above 2 steps.

- Press and hold the **Set/Change** button for 3 seconds to advance to the next cycle step.

NOTE: Fast Cycle is not necessary unless you want to manually step through each cycle step.

(Repeat until valve returns to the home display - time of day.)

Regeneration Cycle

(**NOTE:** These may need to be adjusted based on application.)

Step	Common Cycle Step Times	Minutes
Step 1	Backwash	10
Step 2	Brine Draw	60
Step 3	Rapid Rinse	10
Step 4	Brine Refill	Varies by Model

NOTE: Salt settings are pre-set at the factory for the maximum efficiency. Do not reduce salt settings below 9 lbs. per cu. ft. as the water level in the brine tank will not reach the grid plate.

Troubleshooting Guides

Symptom	Probable Cause	Correction
1. Softener Fails to Regenerate Automatically	Power supply plugged into intermittent or dead power source	Connect to constant power source
	Disconnected meter cable	Reconnect cable
	Improper control valve programming	Reset program settings
	Defective power supply	Replace power supply
	Meter is dirty or defective	Clean or replace assembly
2. Regeneration at Wrong Time	Defective drive motor	Replace motor (contact Dealer)
	Time of day improperly set, due to power failure	Reset time of day programming and install 9-volt battery
3. Loss of Capacity	Regeneration time set improperly	Reset regeneration time programming
	Increased raw water hardness	Increased hardness setting or decreased days between regeneration
	Brine concentration and or / quality	Keep brine tank full at all times. Clean it yearly. Salt may be bridged. If using a salt grid plate, ensure refill water is over it.
	Resin Fouling	Call Dealer. Find out how to confirm it. Clean the resin and prevent future fouling.
	Poor distribution, channeling (uneven bed surface)	Call Dealer. Check backwash flow. Regenerate more frequently.
	Internal valve leak	Call Dealer. Replace spacers, seals and/or piston.
	Resin age	Call Dealer. Check for resin oxidation caused by chlorine. Mushy resin.
4. Poor Water Quality	Resin loss	Call Dealer. Check for correct bed depth. Broken distributor tube. Air or gas in bed: well gas eliminator. Loose brine line.
	Check items listed in #1, #2 and #3	
	By-pass valve open	Close by-pass valve
5. High Salt Usage	Channeling	Check for too slow or high service flow. Check for media fouling.
	High salt setting	Lower brine tank refill time
	Excessive water in brine tank	See symptom #7
	Constant flow through the unit	Indicates plumbing leak (e.g. toilet tank)
6. Loss of Water Pressure	Regenerating too frequently	Lower hardness setting or increase days between regeneration.
	Scaling / fouling of inlet pipe	Clean or replace pipeline. Pretreat to prevent.
	Fouled media	Clean media. Pretreat to prevent.
	Improper backwash setting	Backwash more frequently.

Symptom	Probable Cause	Correction
7. Excessive Water in Brine Tank and/ or Salty Water to Service	Plugged drain line or drain line control	Check flow to drain. Clean drain line flow control screen.
	Dirty or damaged brine valve	Clean or replace brine valve.
	Plugged injector or screen	Clean or replace injector screen.
	Low inlet pressure	Increase pressure to allow injector to perform properly. (20 psig minimum)
	Excessive brine refill cycle time	Lower brine refill time.
8. Softener Fails to Use Salt	Check items listed in #1	
	Improper control valve programming	Check and reset programming
	Plugged/restricted drain line	Clean drain line and/or flow control button
	Injector and/or screen is plugged	Clean or replace injector and screen
	No water in brine tank	Check for restriction in BLFC. Ensure safety float is not stuck. Check brine tank for leaks.
	Water pressure is too low	Line pressure must be at least 20 psi.
	Brine line injects air during brine draw	Check brine line connections for air leaks
Internal control leak	Call Dealer. Check piston, seals and spacers for scratches and dents	
9. Continuous Flow To Drain	Foreign material or media in control	Call Dealer. Clean valve and replace pistons and seals.
	Internal control leak	Same as above.
	Valve jammed in backwash or rapid rinse position	Same as above.
	Motor stopped or jammed	Check for jammed piston. Replace piston and seals. Replace motor if motor is unresponsive.

Error Codes

There are five (5) error codes that could indicate a possible problem with the control valve:

Error 2 - Homing slot expected. Valve will start looking for home. (Normal operation continues)

The following error messages indicate the valve requires service to continue:

Error 3 - Encoder is not sending a signal

Error 4 - Unable to find homing slot

Error 5 - Motor overload (stalled position or shorted motor)

Error 6 - No motor current

Notes: _____

Kinetico makes an entire line of water treatment products designed to handle almost any water problem. For more information, contact your authorized Kinetico Dealer or visit our website at www.kinetico.com.

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