



HAYWARD®

Sense and Dispense

CO₂ Dispense Kit for Aqua Rite Pro and Pro Logic

Owner's Manual



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AQL-CHEM2
AQL-CHEM2-240

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Description

The AQL-CHEM2 is a 120 VAC CO₂ dispense kit designed for use with a Hayward Aqua Rite Pro chlorinator or Pro Logic pool control. The AQL-CHEM2-240 is identical to the AQL-CHEM2, but uses 240 VAC. When used with the AQL-CHEM sensing kit, the AQL-CHEM2(-240) solves the problem of how to provide low cost pH control for backyard pools without having to handle acid. The AQL-CHEM2(-240) is designed to install on a standard CO₂ tank and wire directly to the Aqua Rite Pro or Pro Logic. Using the AQL-CHEM sensing kit, the Aqua Rite Pro or Pro Logic will sense the pH level and if needed, the AQL-CHEM2(-240) will inject CO₂ into the pool water. CO₂ is mildly acidic when dissolved in water and will lower the pool's pH slowly without the safety or health concerns normally associated with harsher acids.

What's Included

The AQL-CHEM2 and AQL-CHEM2-240 include the following:

- Pressure reducing regulator preset at 50 psi output
- 110 VAC (AQL-CHEM2) or 240 VAC (AQL-CHEM2-240) solenoid valve with 6' power cord
- Nylon washer and spare (only use one)
- 15' of black UV resistant flexible tubing
- PVC check valve injector

CO₂ information and availability

The AQL-CHEM2(-240) kit requires the use of CO₂ which is supplied in cylinders that are readily available from various sources. CO₂ storage tanks are offered in a variety of sizes. Hayward recommends the use of 20 pound cylinders for most residential pool applications. The AQL-CHEM2(-240) uses a standard fitting for these tanks. CO₂ can be easily found at local and national welding supply or beverage companies. A quick search on the web with the keywords "CO₂ supply" will yield many companies, some with hundreds of branch/store locations nationwide.



Installation

Installation

Installing the AQL-CHEM2 or AQL-CHEM2-240 requires the following steps:

- Mount CO₂ tank using commercially available straps
- Attach the solenoid valve to the CO₂ tank
- Install the PVC check valve injector to the pool's return plumbing
- Plug the solenoid valve into the pigtail of the Aqua Rite Pro or Pro Logic pool control
- Configure the Aqua Rite Pro or Pro Logic to control the AQL-CHEM2(-240)

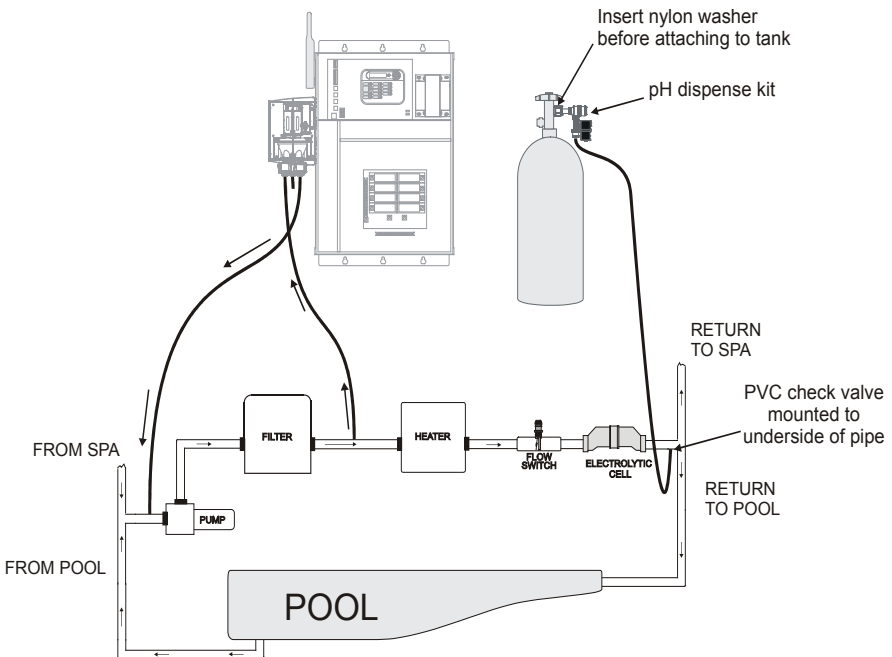
This manual assumes that the Hayward AQL-CHEM Chemistry Kit and the pH Dispense Pigtail (included with AQL-CHEM) have already been installed. If not, this will need to be performed prior to installation. Refer to the AQL-CHEM manual for installation instructions.

Mount CO₂ tank

Mount the CO₂ tank in an easily accessible location. Straps or brackets can be purchased from the tank supplier and must be used for a secure installation.

Attaching the solenoid valve

The solenoid valve attaches to the CO₂ tank much like an outdoor gas grill attaches to a propane tank. With the tank valve off, insert the included nylon washer and screw the fitting of the AQL-CHEM2(-240) solenoid valve on to the CO₂ tank. If the nylon washer is lost or destroyed, a spare is provided. Keep the tank's valve off until the entire installation is complete.





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Installing the PVC check valve

When installing the PVC check valve, refer to the plumbing overview of the AQL-CHEM and AQL-CHEM2(-240) shown below. The PVC check valve must be installed at the pool's return line **DOWNSTREAM** of the electrolytic cell and flow switch. Because mild acid will be dispensed at this location, it should be the last component installed in the return line before water is allowed to flow back to the pool. Note that the injection point must be free of air pockets and should be located at the underside (or close to the underside) of the pipe.

To install the check valve, perform the following steps:

1. Turn off pool filter pump.
2. Drain water from the return line.
3. Drill a 7/16" hole in the bottom side of the return line **AFTER** the electrolytic cell and flow switch.
4. Tap the hole for a 1/4" NPT. Use caution not to tap tapered threads too deeply.
5. Apply plumber's tape to check valve threads and screw into tapped hole. **DO NOT OVER-TIGHTEN.**
7. Connect one end of the provided 3/8" flexible hose to the check valve and the other end to the solenoid valve as shown in the diagram above.
8. Turn on pool pump and check for water leaks.
9. Open CO₂ tank valve and use soapy water to check for CO₂ leaks at regulator fitting.
10. Temporarily apply power to the solenoid and use soapy water to check for CO₂ leaks at tubing ends and fittings. Remove power when finished.

Wiring the AQL-CHEM2 or AQL-CHEM2-240

The AQL-CHEM2(-240) is supplied with a 6' power cord and is designed to plug into the 120 VAC or 240 VAC Hayward pH Dispense Pigtail that is included with the AQL-CHEM kit. The pigtail must be wired directly to the pH output on the Aqua Rite Pro or the Pro Logic operating with software version 4.00 or later. For Pro Logics using software version less than 4.00, the pigtail must be connected to an internal relay in the Pro Logic. Installation instructions for the pigtail are provided with the AQL-CHEM kit.

Plug the AQL-CHEM2 into the 120 VAC pigtail or the AQL-CHEM2-240 into the 240 VAC pigtail. After proper configuration, the Aqua Rite Pro or Pro Logic will automatically turn on the AQL-CHEM2(-240) when the pool's pH level requires adjustment.

Configuration and Operation

Before operating the AQL-CHEM2(-240), the Aqua Rite Pro or Pro Logic's Chemistry Config. Wizard must be completed. Refer to the AQL-CHEM and Aqua Rite Pro or Pro Logic manuals for information on how to complete the wizards as well as pH dispense operation.



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LIMITED WARRANTY (effective 03/01/12) Hayward warrants its Pro Logic, OnCommand and E-Command pool automation products as well as its Aqua Rite, Aqua Rite Pro, Aqua Plus and SwimPure chlorination products to be free of defects in materials and workmanship, under normal use and service, for a period of three (3) years. Hayward also warrants its Aqua Trol chlorination products to be free of defects in materials and workmanship, under normal use and service for a period of one (1) year. These warranties are applicable from the initial date of purchase on private residential swimming pools in the US and Canada. Installations of product for use on commercial pools in the US and Canada is covered for a period of one (1) year for defects in materials and workmanship. Hayward warrants all accessories and replacement parts for the above-identified pool automation and chlorination products for a period of one (1) year. Accessories also include remotes, actuators, base stations, temperature sensors, flow switches and chemistry probes. Each of these warranties is not transferable and applies only to the original owner.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

Proof of purchase is required for warranty service. If written proof of purchase is not provided, the manufacturing date code will be the sole determinant of the date of installation of the product. To obtain warranty service or repair, please contact the place of purchase or the nearest Hayward authorized warranty service center. For more information on authorized service centers please contact the Hayward Technical Service Support Center (61 Whitecap Road, North Kingstown RI, 02852) or visit the Hayward web site at www.hayward.com.

WARRANTY EXCLUSIONS:

1. Material supplied or workmanship performed by others in process of installation.
2. Damage resulting from improper installation including installation on pools larger than the product rating.
3. Problems resulting from failure to install, operate or maintain the product(s) in accordance with the recommendations contained in the owners manual(s).
4. Problems resulting from failure to maintain pool water chemistry in accordance with the recommendations in the owners manual(s).
5. Problems resulting from tampering, accident, abuse, negligence, unauthorized repairs or alternations, fire, flood, lightning, freezing, external water, degradation of natural stone used in or immediately adjacent to a pool or spa, war or acts of God.
6. Use of a non-genuine Hayward replacement salt chlorination cell on any Hayward automation or chlorination product will void the warranty for that product.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature. Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

For further information or consumer
technical support, visit our website at
www.hayward.com



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