

SENSE AND  
**DISPENSE™**

**Total Pool Chemistry™**  
for  
**Aqua Rite™ Pro**  
and  
**Pro Logic®**



**Installation and Operation Manual**

for

**AQL-CHEM2**  
**AQL-CHEM2-240**

## Introduction

The AQL-CHEM2 is a 120VAC CO<sub>2</sub> dispense kit designed for use with a Goldline Aqua Rite Pro chlorinator or Pro Logic pool control. The AQL-CHEM2-240 is identical to the AQL-CHEM2, but uses 240VAC. 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 CO<sub>2</sub> 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 CO<sub>2</sub> into the pool water. CO<sub>2</sub> 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 includes the following:

- Pressure reducing regulator preset at 50 psi output
- 110 VAC (AQL-CHEM2) or 240VAC (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

## CO<sub>2</sub> information and availability

The AQL-CHEM2(-240) kit requires the use of CO<sub>2</sub> which is supplied in cylinders that are readily available from various sources. CO<sub>2</sub> cylinders are offered in a variety of sizes. Goldline recommends the use of 20 pound cylinders for most residential pool applications. The AQL-CHEM2(-240) uses a standard fitting for these tanks. CO<sub>2</sub> can be easily found at local and national welding supply or beverage companies. A quick search on the web with the keywords "CO<sub>2</sub> 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 CO<sub>2</sub> tank using commercially available straps
- Attach the solenoid valve to the CO<sub>2</sub> 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 Goldline 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 CO<sub>2</sub> tank

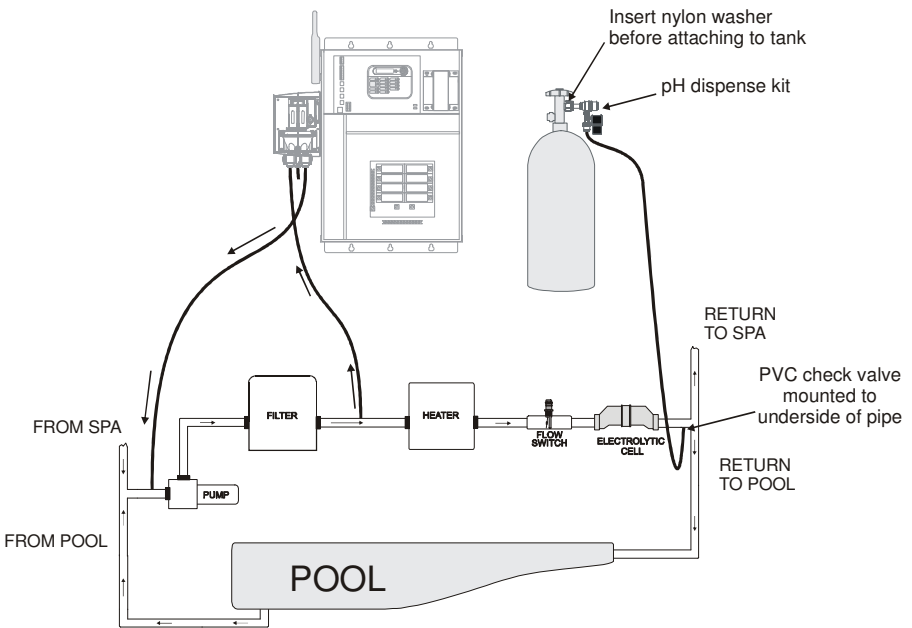
Mount the CO<sub>2</sub> tank in an easily accessible location. Straps or brackets can be purchased from the tank supplier and must be used for a secure installation.

## Attaching the solenoid valve

The solenoid valve attaches to the CO<sub>2</sub> 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 CO<sub>2</sub> 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.

## 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 OVERTIGHTEN.
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 CO<sub>2</sub> tank valve and use soapy water to check for CO<sub>2</sub> leaks at regulator fitting.
  10. Temporarily apply power to the solenoid and use soapy water to check for CO<sub>2</sub> 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 120VAC or 240VAC Goldline 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 120VAC pigtail or the AQL-CHEM2-240 into the 240VAC 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 wizard as well as pH dispense operation.

## Questions?

Refer to **[www.goldlinecontrols.com](http://www.goldlinecontrols.com)** for latest manual revisions, additional information and helpful service.

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