

# HOW TO INSTALL FIREFIGHTER1

## General Criteria for Installation

If you have maintained your own irrigation system PVC plumbing, then how to install FireFighter1 might be easy for you. However, if you have doubts or no experience, just get a Pool Service to install it for you and show them this how to install page to give them a start. If we already have installations in your area, we may have a list for recommended people or we can ask a neighbor for the installer they used.

If you do decide to do it yourself here are some general criteria. Elsewhere on this site you will find photos and videos to help you.

- FireFighter1 should be installed on the high pressure side of the pool pump prior to the filter
- Install to minimize pressure drops. This means designing your install to avoid whenever possible:
  - » 90 degree PVC elbows or other high angle bends unless the diverter valve is installed instead of an already existing bend
  - » Using a PVC tubing size different from the size of the tubing connecting the pump and filter
- Check your swimming pool building codes, if any, to ensure your plumbing design complies
- Read up on how to cement, prepare, and measure tubing length of PVC when installing PVC (see links on this page)
- Even if you have all the right install parts and have cut the exact lengths of PVC tubing you need, the order in which you put parts together can be very important when cementing tubing. Try to fit the parts in place before cementing as best you can. Think and plan ahead and write it down.
- Sometimes use of PVC unions can solve very tight space requirements since tubing ends can be butted up against each other rather than cemented with slip couplings.

## Items That Come with FireFighter1



- 1.5" Fire Hose With Spray Nozzle - 25, 50, Or 100 Foot
- Adapter - For Connecting Hose To 3-Way Diverter Installed Between Your Pool Pump And Filter
- Quick Release (Std) Or Screw Type (Optional) Connector For Hose To Diverter
- Waterproof Storage Box (Std) Or Hanger (Optional) For Storing Hose
- Option: 3-Way Diverter To Connect Hose With Pool Pump. Maybe Available From Pool Service Provider During Installation



The photo depicts the hose coiled up for use with hanger storage. A quick release connector, which is standard, is also shown. The standalone connector is for screwing into the diverter to connect the hose to the pump-to-filter piping

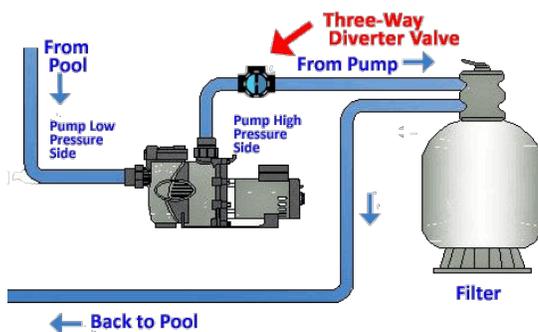


In this photo, the hose is stored in a

waterproof box, our standard hose storage method. Two boxes are shown; one of the left with the standard quick release connector for the diverter and the other with an optional screw connector for the diverter. The box size varies with the length of hose ordered (25ft is shown).

## Installation

**Installation of 3-Way Diverter for FireFighter1**



**Diagram of Before and After Diverter Valve Installation**

The 3-way diverter valve is installed on the high pressure side of the pool pump between the pump and filter. You need to choose the easiest place between the pump and filter to install it. If the tubing connecting the two is short and straight, it may have insufficient flexibility to use simple couplings during the diverter install. If your plumbing code allows, you could use unions and/or slip joints (see videos later on this page).

You can see installation examples by [clicking here](#).

The procedure to install the diverter is as follows:

- Cut The PVC Pipe Between The Pump And Filter
- Insert The 3-Way Diverter Valve In The Cut-Away And Cement If The Pipe Has Enough Flexibility Or Use Unions (Or Slip Coupling If Code Allows). See Videos Below.
- Install The Quick Connect Or The Screw Type Connector On The 3-Way Diverter Valve Ready To Have The

- Hose Attached
- That's It!
- (We Can Provide Recommended Installers)

## Useful How to Install Videos and Links

### PVC Unions

PVC unions installations have two benefits. First they allow easy disassembly for repair, and second when piping does not have enough flexibility to properly create space for using and cementing simple couplings, they are very useful for joining two pipe sections.

- [How To Use Union Repair Fittings](#)
- [Union for Schedule 40 PVC Pipe \("O"-Ring Type\) \(Slip x Slip\)](#)
- [Repairing Cracked PVC Pipe with a Union](#)

### Slip Couplings

Just like unions, slip couplings are useful for joining two sections of pipe when the pipe does not have enough flexibility to properly create space for using and cementing simple couplings. Unlike unions, they are permanently cemented in place. Local codes should be checked before using them.

- [How To Repair PVC Pipe Using a Slip Fix](#)
- [How To Install the NDS Quik-Fix™ Expansion Repair Coupling](#)
- [How to Repair PVC: The Slip Fix Fitting](#)
- [How to Fix Broken PVC Pipe Leak](#)

### PVC Cementing

Cementing PVC is simple, but if you take short cuts, like not using primer, and not having near perpendicular cuts at the PVC end, the joints may be prone to early failure. Take a look at the videos for good practice tips.

- [Proper Technique for Gluing PVC Joints \(Solvent Cement\)](#)
- [How to Join PVC Pipe \(with PVC solvent\)](#)
- [How to Complete the Perfect Solvent Cement Joint Every Time](#)
- <https://www.plumbingsupply.com/tips-and-tricks-for-working-with-plastic-pipe.html>

### Miscellaneous Piping Links

The first video below really helps you understand how to determine the length of pipe needed to join two sections of PVC. It shows how to include the length of pipe that gets inserted in the coupling used to cement pieces together.

You may find the second one useful for installing the diverter.

- [How and what to measure for PVC pipe projects](#)
- [How To: Replace A Diverter Valve](#)



FireFighter1™. Patent pending.

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