



# Instruction Manual



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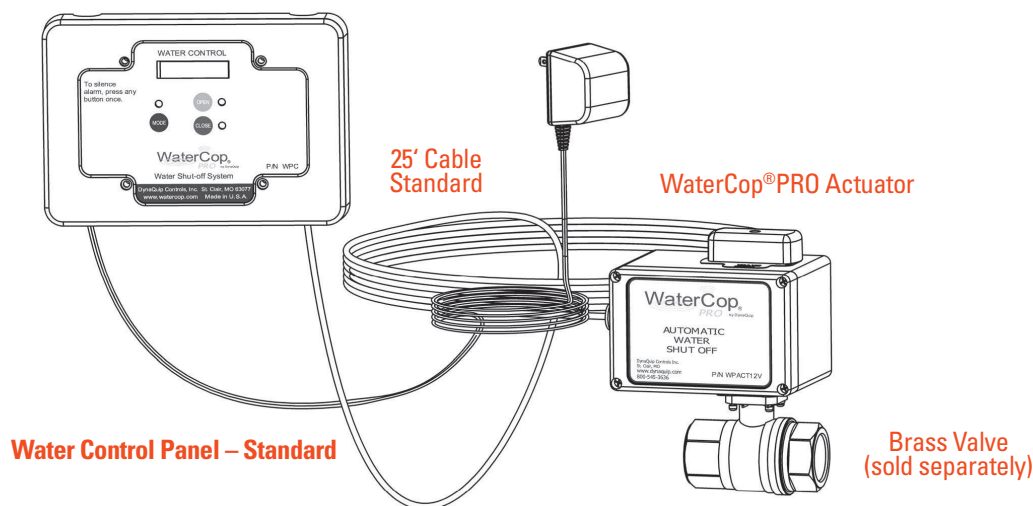
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## System Description

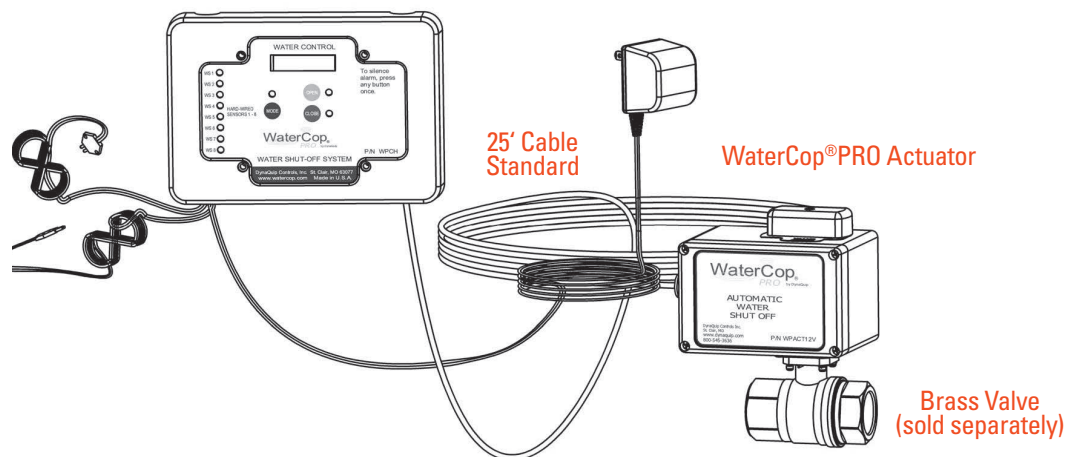
The WaterCop®PRO System is designed to detect leaks in your plumbing system at predetermined locations, and automatically shut off the water supply to help effectively reduce the chances of major water damage associated with a leak.

## System Components

**Water Control Panel – Standard:** LCD display with back light provides instant feedback of sensor alarm and trouble conditions as well as open/close status of the brass valve. On/Off push buttons for local control of the brass valve. Audible alarm sounds when any sensor detects flooding. Internal mounting bracket mounts to standard wall boxes for aesthetics and cord management. AC/DC power converter with 20' cord included. There is a 25' cable included to connect to the WaterCop®PRO Actuator. A 50' or 75' cable is optionally available.



## Water Control Panel – Hardwired



**Water Control Panel – Hardwired:** Accommodates up to 8 zones for hardwired flood sensor probes (sold separately). AC/DC power converter with 20' cord included. There is a 25' cable included to connect to the WaterCop®PRO Actuator. A 50' or 75' cable is optionally available.

**Hardwired Sensor probes:** 10' white cord with single sensor probe. PRO sensors are easily secured to the floor using the mounting holes. Sensors provide the same feedback to the water control panel as the WaterCop®PRO sensors. Use hardwired sensor probes for convenience, or if conditions prevent wireless communication.

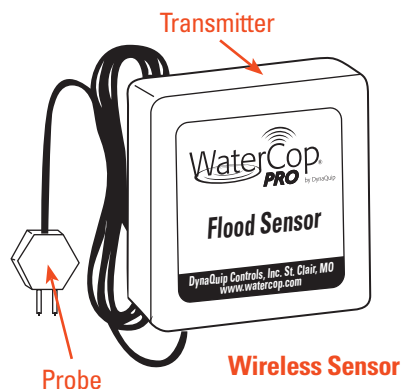
**Lead Free Brass Valve:** Full Port, brass, 125psi cold water, designed for placement on incoming water main.

### Wireless Sensor

Power using 2 AA "Alkaline" Batteries or optional AC/DC power converter (sold separately). Batteries will provide backup power upon loss of electricity. Wireless sensors are addressable and supervised for conditions such as water detection, sensor short/open, and low battery. 10' sensor probe cord allows for optimal sensor placement. Wireless Sensors can support single or dual sensor probes. Each WaterCop®PRO actuator can support up to 45 wireless sensors.

### Range Enhancing Repeater

Enhances the transmission range of the wireless sensors. Plugs into any standard wall outlet. Receives and re-transmits sensor signals from outlying sensors to WaterCop®PRO water control panel.



## General Safety Information



### STOP!

Do not apply electrical power to the unit unless the unit is fully assembled. Failure to do so could result in personal injury and/or damage to the unit. Disconnect power source before working on or servicing the unit. Failure to do so could result in personal injury.



**Caution:** It is strongly recommended that eye protection be worn while servicing the system. Failure to do so could result in personal injury.

**DO NOT USE EXTENSION CORDS. KEEP FINGERS AND OBJECTS AWAY FROM THE VALVE.**

## How the System Works

Flood sensors constantly monitor their selected areas for accumulating moisture. When a leak is detected, a sensor will send a radio frequency signal (RF) to the WaterCop®PRO water control panel, instructing it to close the brass valve, shutting off the water supply to the home. The WaterCop®PRO valve will remain closed until it is reset manually or through the water control panel. The wireless sensors are battery powered devices, enabling them to be located anywhere a leak is likely to occur, or where water might cause damage. The WaterCop®PRO actuator is powered through the water control panel, which requires household electrical power (common 115 VAC, grounded outlet) and will not operate during a power outage.

## Operating the WaterCop®PRO System

The normal position of the valve is open to allow full flow throughout the plumbing system. WaterCop®PRO is a full port ball valve, which does not restrict the flow capacity of your plumbing system. The manual override handle on the top of the WaterCop®PRO will show the position of the valve (in-line with the pipe means the valve is open; when the handle is not in-line it is not fully open; when it is perpendicular to the pipe, the valve is fully closed).

When leaking water comes into direct contact with a flood sensor's probe, an RF signal is transmitted to the water control panel and the valve closes, turning off the water source to protect the building from additional water damage. The red indicator light will signal that the valve is now in the closed position. The valve will remain closed until the unit is manually reset (through the manual override handle or the "OPEN" button on the water control panel). After the plumbing problem is fixed, reset the WaterCop®PRO by pressing the "OPEN" (green circle) on the face of the water control panel.

**Note:** If major repairs are needed to correct the plumbing system, it is recommended that the main shut-off valve upstream of the WaterCop®PRO also be closed during the repairs. Close the main water shut-off valve and unplug the WaterCop®PRO before making repairs on the plumbing system.

**Note:** In case of a power failure, use the manual shut-off valve to turn the water off in case of an emergency. When power is restored, the WaterCop®PRO will remain in its last known position indicated by the red or green lights on the face of the water control panel.

## WaterCop®PRO Specifications

|                       |                                 |
|-----------------------|---------------------------------|
| Max. working pressure | 125 psig                        |
| Ambient temperature   | 35° to 105° F                   |
| Enclosure             | Polycarbonate NEMA 4            |
| Voltage               | 12 VDC includes 120 VAC adaptor |
| Current               | 0.85 Amps                       |
| Valve                 | Full-Port, Brass, NPT           |
| Valve seals           | RTFE (Reinforced Teflon)        |

### Flow Data

Valve Size Cv = Gpm flow at 1 psi pressure drop

½" NPT 19

¾" NPT 34

1" NPT 52

1 ¼" NPT 77

For cold water applications.

## FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiver.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer for help.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.



**Caution:** The user is cautioned that changes and modification made to the equipment without the approval of the manufacturer could void the user's authority to operate this equipment.

## Limited Warranty

DynaQuip Controls Corporation warrants the electrical components of the WaterCop®PRO System to be free from defects in material and workmanship under normal use and if properly installed for a period of two years from the date of purchase. If found to be defective as mentioned above, it will be replaced or repaired if returned prepaid along with proof of date of purchase. This shall constitute the sole remedy of the purchaser and the sole liability of DynaQuip Controls Corporation. To the extent permitted by law, the representations whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall DynaQuip Controls Corporation be liable for special or consequential damages. The WaterCop® brass ball valve has a 5-year warranty.

## System Quick Reference Setting and Status

### Common Displays on WaterCop®PRO

**WATERCOP  
NORMAL**

Valve is open and all components functioning properly.

**WATERCOP  
WATER IS  
OFF**

Water was turned off via local controls.

**!ALARM!  
SENSOR #1  
WET1**

**Wireless Sensor #1** (Probe 1) detected water and turned the valve off.

**!ALARM!  
WIRE PANEL WET**

**Hardwired Sensor** from water control panel detected water and turned the valve off.

**!ALARM!  
SENSOR #2 TMP1**

**Temperature Probe on Sensor #2** has detected ambient temperature was too high or too low.

**\*\*ALERT\*\*  
SENSOR #3  
SHT 2**

**Probe on Sensor #3** (Probe 2) is shorted. Water is still on. Probe needs to be checked and repaired to allow proper function.

**\*\*ALERT\*\*  
SENSOR #2  
OPN 1**

**Probe on Sensor #2** is cut or disconnected. Water is still on. Probe needs to be repaired or replaced to allow proper function.

**\*\*ALERT\*\*  
SENSOR #2  
BAT**

**Battery in Sensor #2** is low and needs to be replaced.

### RESET ACTUATOR TO FACTORY SETTINGS

Hold "MODE" – Press and hold "OPEN" until the display reads: "CONTINUE = OPEN DEFAULT = CLOSE" – Release first the "OPEN" button, then release the "MODE" button then Press "CLOSE". **\*This will reset all sensors.\***

### TO ADD WIRELESS SENSORS:

Press "MODE" twice (DEVICE ADD) on WaterCop®PRO water control panel.  
Press "CLOSE" (DEVICE #1 ID)  
Short one sensor probe on the sensor (SENSOR #1 SHT)  
Remove Short (SENSOR #1 OK)  
Press "MODE"  
Press "CLOSE" (SENSOR #2 ID)  
Repeat for all Sensors. When finished, Press "MODE" twice to return to NORMAL

### TO REMOVE SENSORS:

Press "MODE" three times (DEVICE REMOVE)  
Press "CLOSE" to Scroll to device to be removed  
Press "OPEN" to remove that device  
Press "MODE" to return to NORMAL

### TO CHECK SENSOR STATUS:

Press "MODE"  
Scroll using "CLOSE"  
Press "MODE" three times to return to NORMAL

### IF ALARM GOES OFF:

In the event that the alarm goes off, press any button once to silence the alarm and check the sensors for the cause.



## IMPORTANT!

Adherence to all local and municipal building, plumbing, and electrical codes as they pertain to the WaterCop®PRO System is of utmost importance. Codes in some areas may require that a licensed plumber be employed to do the installation, or that the proper permits be obtained prior to any installation. Even if local codes do not require a licensed plumber to do the installation, it is necessary that the installer has a professional level of competence in both plumbing and electrical skills to perform this installation. These instructions assume this level of knowledge and skill. If in doubt, use a licensed professional.

## To Power And Program Wireless Sensors

WaterCop®PRO wireless sensors are addressable. This means that the WaterCop®PRO water control panel can tell you the operational status of each wireless sensor. If you have many wireless sensors, this feature will quickly tell you where the leak is located or warn you if a sensor requires service (low batteries). It is important that you introduce each wireless sensor to the WaterCop®PRO water control panel and document the **sensor** (the transmitter **and** the sensor probe together; not just the probe) number on the sensor. Once placed in location, you will also note this information on the Sensor Location Log (included).

Once the wireless sensors are programmed, you will be able to place them in desired locations to monitor your home or business for water intrusion.

### Powering Wireless Sensors

Each wireless flood sensor is a battery operated (or AC adaptable) radio transmitter. The units are shipped without batteries. Two fresh "AA" alkaline batteries or optional flood sensor AC adaptors are needed to power each unit. To install batteries, remove the battery cover located on the back of the sensor, and install batteries in accordance with the (+ and -) placement guide. Reinstall back plate. It is recommended that you use batteries in addition to an AC adaptor to act as a power backup in the event of a power failure. Instructions on how to connect AC adaptors are included in this manual.

It is important that you number each sensor (not each sensor probe) for easy identification while programming. The WaterCop®PRO System is capable of supporting as many as 45 wireless sensors. Additional wireless sensors can be added in the future by repeating the steps taken in this section. Please contact your local dealer or DynaQuip Controls to inquire about additional sensors.

Once each sensor is powered and numbered, you are ready to begin programming the sensors to the WaterCop®PRO water control panel.

### Programming Hardwired Sensor Probes for the Hardwired Water Control Panel

- First, while the power is off install all sensor probes.
- Connect the power to the water control panel.
- Short each probe using a conductive metal surface until the display reads WIREPANEL SHT and the corresponding light on the side of the panel lights up.
- Repeat for all sensor probes.

### Programming Wireless Sensors

Plug the WaterCop®PRO power supply into a nearby 115 VAC outlet. Depending upon the position of the valve, the actuator may initially turn the valve when first powered. BE EXTREMELY CAREFUL TO KEEP FINGERS AND OTHER ITEMS OUT OF THE VALVE. The display will read "WATERCOP NORMAL".

To add sensor #1, Press "MODE" twice (DEVICE ADD will display on the LCD).

Press "CLOSE" once (DEVICE #1 ID= will display on the LCD).

Short (using a conductive metal surface) one sensor probe on each sensor by touching the leads with metal. Do not get the sensor wet – it must be shorted. The sensor will beep and the LCD will display SENSOR #2 SHT2, then remove the short and LCD will display DEVICE STATUS SENSOR #1 OK!

To add sensors #2 through #45: If time has passed, the WaterCop®PRO LCD will revert to ready mode displaying WATERCOP NORMAL. To add more sensors, you will need to return to program mode and repeat steps used to add sensor #1. If LCD screen reads SENSOR #1 OK!, push "CLOSE" to add the next wireless sensor.

Repeat above steps for all of your wireless sensors, taking care to program them in the same order as labeled. When finished, Press "MODE" three times to return to the normal mode.

### To Remove Sensors

If you need to remove a sensor for any reason, follow these instructions:

- Press "MODE" three times (DEVICE REMOVE will display on the LCD).
- Press "CLOSE" to cycle through the loaded sensors to choose the sensor(s) you wish to remove.
- Press "OPEN" to remove the selected sensor from the Water Control's memory.
- Press "MODE" one more time to return to the main screen (WATERCOP NORMAL).

## Pre-Installation Testing of WaterCop® PRO

Although each unit is pre-tested at the factory, it is highly recommended that the unit be tested prior to installation to ensure proper operation in your home. Operating the valve before connecting it to the water line will not damage it.



### USE CAUTION!

- The valve closes with enough force to cut off a finger.
- Be extremely careful to keep fingers and other items out of the valve.

### WIRING INSTRUCTIONS

#### Water Control Panel

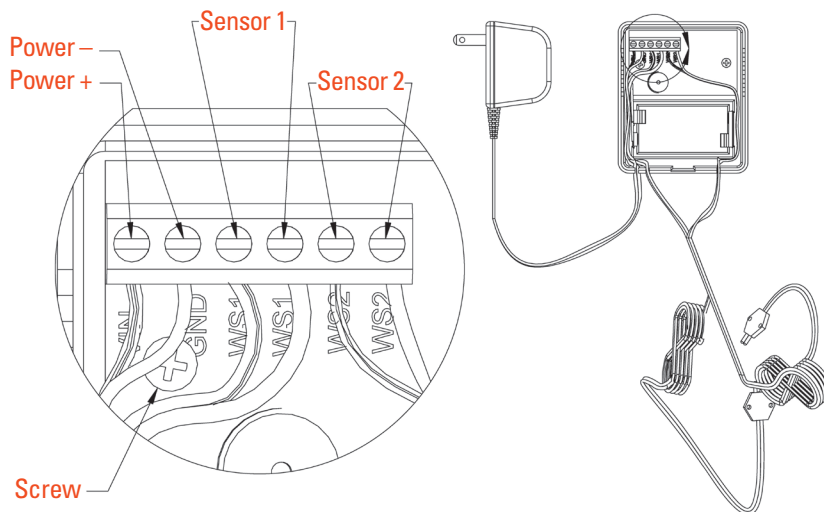
The WaterCop® PRO actuator comes with a 25' long cable for wiring into the water control panel. Following the color code in the wiring diagram, wire each colored wire into the appropriate terminal.

To wire the water control panel into an alarm system, wire the two terminals titled "ALARM" into the security system. The "ALARM" relay is a dry contact relay and will only trip if water is detected and the audible alarm turns on. It will trip off when the valve is opened after water is no longer detected. The "TROUBLE" relay will trip if there is a short, low battery, or open situation.



### WARNING!

If the power cord was removed from its terminals, the positive wire is the one with the stripe on the insulation. **DO NOT REVERSE THE POLARITY OF THE POWER CABLE.**



### Installation of Sensor Probes

Follow the above wiring diagram to properly wire the nonpolar wireless sensors. Be sure to completely wire the sensor before power is applied; when power is applied, it searches for any and all attached sensor probes. If power is applied before a sensor probe is added, it will not be recognized and will not be used until the power is reset. If more than one sensor probe is wired to the sensor, the water control panel will differentiate between the two different probes with a "1" or "2" after the status of the probe, e.g. SENSOR #1 WET 1 or SENSOR #1 WET 2.

**WARNING!**

**DO NOT REVERSE THE POLARITY IF USING OPTIONAL ADAPTER! The positive lead is the one with the stripe on the insulation.**

## Testing the Valve and Wireless Sensors

### Manually Test the Valve

Check the Quick Start Guide for wiring and preliminary testing of the Water Cop®PRO System, gently pull the safety plugs out from each end of the valve. Check the position of the valve by looking in either threaded end. In the open position, you will be able to see through the valve; in the closed position, only the shiny surface of the ball will be visible. Place the base of the housing on a sturdy surface, as close as feasibly possible to the location where it will be permanently installed. Plug the Water Cop®PRO power supply into a nearby 115 VAC outlet. The valve position indicator lights should now correspond to the actual position you noticed. Green = Open. Red = Closed. Grasp both sides of the housing (not the valve) with the valve pointing away from you for safety. Being very careful not to have your fingers or other objects near the valve openings, press the Open or Close buttons; whichever has the unlit light next to it. You will hear the motor change the valve position. Again, look into the threaded end of the valve to verify that the valve has changed position. If it appears that the valve has not turned from one position to the other, DO NOT try to reposition the valve yourself by inserting any tool or fingers into the valve. Operate the valve several more times from open to close, checking each time for proper positioning. If you are experiencing trouble getting the valve to open and shut, call the installation help line listed on the back cover.

### Manually Test the Wireless Sensors

Each wireless sensor is a battery-operated (or AC adapted) radio transmitter. The units are shipped without batteries. Two fresh "AA" alkaline batteries or the optional AC adaptor are/is needed to power each unit. To install batteries, remove the battery cover located on the back of the sensor and install batteries in accordance with the (+ and -) placement guide. Reinstall the back plate. Follow suggestions found in the section titled "Placement of Wireless Sensors" for recommendations where sensors should be placed. Locate a wall near the area you choose to monitor. Avoid high traffic areas where the cord or sensor could be stepped on or kicked. Mount the transmitter at a convenient location on the wall, two to three feet above the floor. This will help avoid damage to the sensor body and provide a strong signal. Use the fasteners included with the unit.

1. Following all safety precautions, make sure that the Water Cop®PRO is plugged in and the valve is in the open position. Leave the Water Cop®PRO near your main water line, on a sturdy surface. It is important that anyone who will be near the valve is aware of the safety precautions, and does not insert any object into the valve, or handle the valve during the test.
2. At one of the locations you have chosen to monitor, drop the sensor probe (not the mounted transmitter) into a cup of water. Hold until you hear the sensor transmit a signal to the Water Cop®PRO (about 5 seconds). This test simulates a leak and lets you check for interference between the sensor and the Water Cop®PRO.
3. Take the sensor out of the water and carefully dry off the sensor probe's prongs and hexagonal body.
4. Go back to your Water Cop®PRO and verify that the valve has closed (the red indicator light will be lit). The display will indicate which sensor activated the valve.
5. Keeping all objects away from the valve, reset the Water Cop®PRO by pushing the "OPEN" button.
6. Repeat steps 2 through 5 until you have tested each sensor in the locations that you wish it to monitor.

### Troubleshooting

- If the wireless sensor does not close the valve, check that the batteries have power and that they are installed properly. Repeat test.
- If the batteries have power and the wireless sensor still does not make the valve close, remove it from its installed location and place it close to the water control panel. Repeat test.
- If the sensor operates properly when it is close to the Water Cop®PRO water control panel, but not when it is installed at its remote location, try moving the sensor to a different position or try a different wireless sensor. Some possible causes of signal reduction are steel construction, foil backed insulation or other large metallic barriers. You may also use a range enhancing repeater (WPR) to extend the effective range of the wireless signals.



### Installation of Wireless Sensor

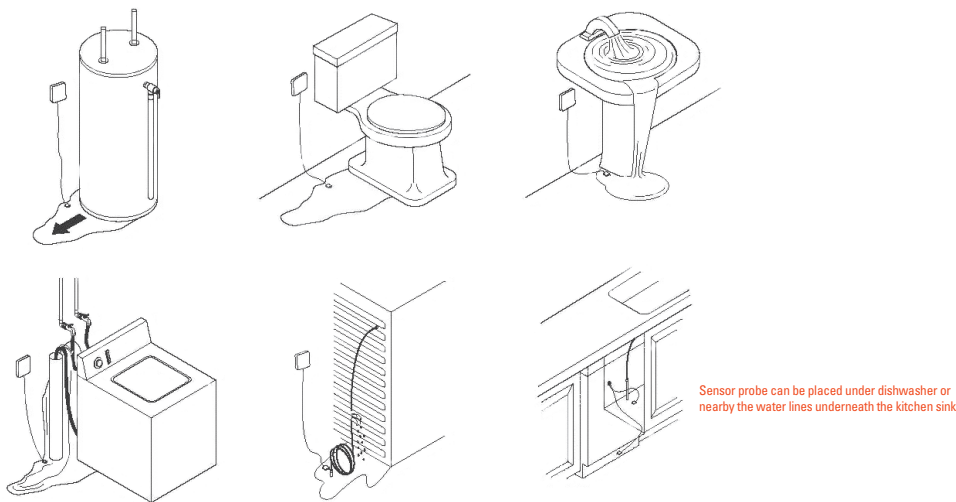
Once testing is complete, finish installation of the wireless sensors by unwinding the cord and placing the sensor probe on the floor at the lowest point (where water would naturally collect) in the area to be monitored. Be sure that the sensor probe is placed **FLAT** on the floor so water can be detected as soon as it begins to accumulate. The sensor probe may be secured to the floor with screws or adhesive tape, taking care that the transmitter and wire are clear of doors, drawers, sharp edges, or other hazards that may cause damage. Unplug the WaterCop®PRO after the testing is complete. The WaterCop®PRO can now be installed into the plumbing system.

Prior to installation, read all warnings and precautions carefully.

## Placement of Wireless Sensors

Each WaterCop®PRO can support up to 45 wireless flood sensors. Additional sensors may be added at any time. A **sensor** consists of a **transmitter** and a **sensor probe** (See Page 3). Wireless sensors should be placed in locations where leaks are most likely to occur.

### Suggested Locations



- Water Heaters
- Toilets
- Bathroom Sinks
- Washing Machines
- Automatic Humidifiers
- Dishwashers
- Kitchen Sinks
- Icemakers/Refrigerators
- Pipes that are prone to freezing (Freeze sensors are also available)

The transmitter in the wireless sensors and the receiver in the WaterCop®PRO communicate by radio frequency. The smaller the distance between them, the stronger the signal will be. Transmission distance is somewhat dependent upon the building layout and the type of construction. The transmitter (the box attached to the sensor probe) must be kept dry. It is **NOT** splash proof. Sensors should never be placed outdoors. The **sensor probe** detects the water from a leak and is completely waterproof. **Sensor probes** should be placed on the floor or in areas where water would tend to accumulate rapidly in common leak or overflow situations. **Make sure that any water from a leak will drain toward the sensor probe, not away from it.** Avoid high traffic areas where the cord or sensor probe could be stepped on or kicked and where children or pets may disturb it. **The sensor probe should be placed FLAT on the floor so water can be detected as soon as it begins to accumulate.** The **sensor probe** may be secured to the floor with screws. To avoid damage to transmitters and to provide for the strongest signal possible, the transmitter portion of the flood sensor should be mounted in a convenient location (on the wall, in a cabinet, closet, etc.) 2 to 3 feet above the floor (see illustration). (See Installation section for details on sensor installation.)

## Wireless Sensor Battery Life

High quality alkaline “AA” batteries are recommended. Under normal conditions (standby mode) the batteries should last about one year. Each transmitter has a low battery signal. Replace batteries at least annually, or when low battery signal is detected. Re-test each unit in its regular location (see installation manual). If you are away from home for long periods of time, transmitters should be tested upon your return to ensure proper function.

## Installation Procedure

Check the contents of the carton with the products listed on the carton label. The shipping package should contain the following:

- 1 ea. WaterCop®PRO water control panel with 20' power adaptor.
- 1 ea. WaterCop®PRO actuator with attached 25' cable to connect to water control panel.
- 1 ea. Owner's Manual/Installation Guide.

You will also need the correct size WaterCop® – ready ball valve (sold separately).

Read Operating Instructions before any installation is attempted. All sections of this Installation Guide and accompanying Owner's Manual should be read and completely understood.

### Selection of WaterCop®PRO Valve Installation Sites

The WaterCop®PRO valve should be installed in the main water line just downstream from the main shut-off valve in your home. The manual override handle/position indicator should be easily accessible. The installed WaterCop®PRO is completely supported by the piping in your plumbing system. The WaterCop®PRO should NOT be used as a step or to support heavy loads. The WaterCop®PRO requires household electrical power, and the provided power adapter must be plugged into a properly grounded power source (115 VAC). Do not use an extension cord.

The shut-off valve must be installed:

- In the main water line;
- In place of or just downstream from the main water shut-off valve;
- Where it is accessible;
- Where the case is protected from use as a step or from other excessive loads.

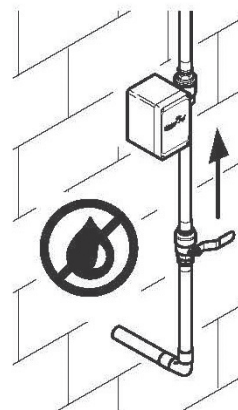
**Local electrical and plumbing codes should be consulted to ensure that the installation is in complete compliance. (See Installation section for details.)**

### Review the Location and Type of Main Supply Line

The main supply line should enter the house in either the basement or a crawl space beneath the first floor. The water main shut-off valve is usually located near where the line comes through the basement wall or just after the water line enters the living area from the crawl space. In apartments, townhouses, and manufactured housing constructions, the water main shut-off valve can usually be found in close proximity to the water heater installation. The WaterCop® valve should be installed in the main water line just downstream from the main shut-off valve in your home. The water supply must be shut off prior to the installation of the WaterCop® valve.

Choose a dry location to install the WaterCop®PRO. The water control panel should be placed in a convenient place to see the valve position (open/closed) and accessible for resetting after a leak has been detected and corrected. Place the valve where the housing is protected from use as a step or to support excessive loads. The shut-off valve must be installed:

- In the main water line.
- In place of, or just downstream from the main water shut-off valve.
- Where the case is protected from use as a step or to support excessive loads.



### **NOTICE**

**INSTALLATION MUST BE MINIMUM OF 18 INCHES DOWNSTREAM OF A WATER METER, IF WATER METER IS INSIDE THE PREMISES.**



**Caution:** Never use the housing for leverage when mounting this unit or tightening fittings. Use a wrench on the valve flats that are provided.



**Caution:** High heat from soldering or brazing can damage valve seats or motor housing. Proper precautions should be taken to prevent damage from heat when installing the unit. Remove plastic housing before soldering valve in place.

### Additional Part Requirements

Installation of the WaterCop<sup>®</sup>PRO will require additional parts. When the main supply line is cut to accommodate the WaterCop<sup>®</sup>PRO, new fittings will be needed to connect the ends of the piping to the WaterCop<sup>®</sup> valve.

The type of connecting fittings to use will be determined by the type of existing piping, local plumbing codes, and “industry standard practices”.

### Compression Fittings

The unit can be installed with compression fittings using common household tools and basic mechanical ability.

You will need:

- |  |                                |
|--|--------------------------------|
| a) 2 fittings (male pipe thread x compression)<br>available at most hardware or plumbing supply stores | d) Ruler                       |
| b) Teflon tape or other thread sealant   | e) Pencil or marker            |
| c) Tubing cutter   | f) 2 large adjustable wrenches |

Measure the outside diameter of the copper tube and take note the valve size to be sure you purchase the proper size fittings for the job.

1. Remove nuts and sleeves from compression fittings and install the fittings into each end of the valve using Teflon tape or other thread sealant to ensure a watertight seal. Hold one wrench on the flats of the valve body and use the other to tighten the fittings.
2. Measure the distance from end to end of the valve assembly once fittings are secure. For 1/2" tube (5/8" outside diameter) subtract 1/2"; for 3/4" tube (7/8" outside diameter) subtract 3/4" from your valve assembly measurement. This is the length of the section of tubing to be cut out of the existing line. The piece of existing tubing is shorter than the measured length so that tube ends extend into the compression fittings.
3. Select the location for the WaterCop<sup>®</sup>PRO. After cutting the section of tube out of the line, you will need to shift the tube ends to be able to fit the unit into place. Make sure you will have access and room to adjust before you cut the tube.
4. Mark the tube in the location you have selected. Double check the length and location you marked.
5. Turn water off and drain the system.
6. Use tube cutter to cut copper tube at the locations you marked. Careful, there will probably still be some water in the line.
7. Remove any burrs from the tube ends and clean the ends.
8. Install compression nuts and sleeves to each tube end.
9. Shift the tube ends to install the WaterCop<sup>®</sup>PRO valve in line.
10. Position the unit and tighten the compression nuts. Hold the fitting with one wrench while tightening the nut with the other. Tighten both nuts.
11. Plug the unit into a proper power source and turn the valve to the open position (open button / green light).
12. Unplug the unit, turn the water back on and carefully check for leaks.
13. Tighten the fittings if needed to stop any leaks.
14. Plug the unit back into the power source. Installation is complete.

### Solder Fittings

An alternative method is to solder the unit into the water line. This method requires a considerably higher skill level to accomplish the installation properly and safely. If you are not skilled in this area, it is strongly recommended that you contact a professional plumber to do this type of installation.

### Electrical Connection

The WaterCop®PRO is supplied with a power adaptor. Consult local electrical codes as to the necessity of ground fault protection. It is recommended that the WaterCop®PRO not be plugged into an extension cord. Review "Specification" current and power requirements so as not to overload the circuit supplying power.

## Warnings and Precautions



#### WARNING

The motorized drive unit case is not capable of supporting any loads. Do not attempt to use the unit as a step. This will cause damage to the unit and could cause personal injury. Do not store highly flammable items such as oily rags or other combustibles near your WaterCop®PRO.



**CAUTION** It is recommended that eye protection be worn while installing or servicing the system. Failure to do so could result in personal injury.



**CAUTION** Do not use the case as leverage when mounting this unit or tightening the fittings. Apply wrench to the flats on the valve body to tighten the fittings.

## Emergency Procedures

In the unlikely event that the WaterCop®PRO System should shut off the main water supply and then become inoperable due to a power outage or damage, it is possible to manually operate the WaterCop®PRO to return water service. Unplug the WaterCop®PRO from its power source. The valve may be manually opened by turning the manual override handle in the direction indicated on the actuator.

