



# Owner's Manual / Installation Guide

## 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

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

**WaterCop Actuator:** NEMA 4 (weatherproof) Polycarbonate enclosure for indoor/outdoor installation, AC/DC power converter with 20' cord included, Liquid crystal display with back light for sensor/trouble status, ambient temperature 35°F to 105°F, for cold water applications. Manual override, Local open/close water control.

**Flood Sensor:** Power using 2 AA Alkaline Batteries or optional AC/DC power converter (sold separately). Batteries will provide back up power upon loss of electricity. Wireless sensors are addressable and supervised for conditions such as water detection, power lost, sensor short/open and low battery. Ten foot sensor cord allows optimal sensor placement. Flood sensors can support one or two sensor wires. Each WaterCop® PRO actuator valve can support up to 45 wireless sensors.

**Range Enhancing Repeater:** Enhances transmission range of wireless sensors. Plugs into any standard wall outlet. Receives and re-transmits sensor signals from outlying sensors to the WaterCop® PRO actuator.

**Monitoring Station-Standard:** LCD display with back light provides instant feedback of sensor alarm and trouble conditions as well as open/close status of water supply. Local push button water controls for instant on/off of water supply. 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.

**Monitoring Station-Hardwired (pictured above):** Accommodates up to 8 zones for WPSC hardwired flood sensors (sold separately).

NEED NEW PHOTO

**Hard Wired Sensors:** Ten foot white cord with single sensor. PRO sensors are easily secured to floor using mounting holes. Sensors provide the same feedback to monitoring station as the wireless WaterCop® PRO sensors. Use hardwired sensors for convenience or if conditions prevent wireless communication. Sensors sold individually and can be wired with up to 200 feet of 22/24 AWG 2-conductor cord (not included).

## General Safety Information

### Warning

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.

### Warning

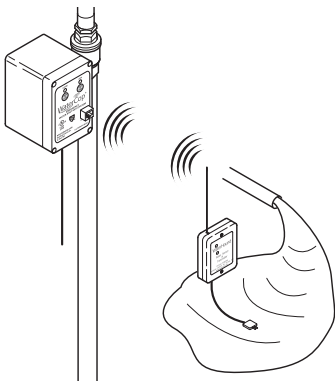
Disconnect power source before working on or servicing the unit. Failure to do so could result in personal injury.

### Caution

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



## How the System Works

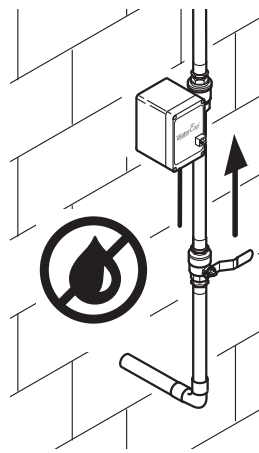


Flood sensors constantly monitor their selected areas for accumulating moisture. When a leak is detected, a sensor will send a radio frequency signal to the WaterCop® PRO unit instructing it to shut off the water supply to the home. The WaterCop® PRO valve will remain closed until it is manually reset.

The flood sensors are a battery powered device enabling it to be located anywhere a leak is likely to occur, or where water might cause damage. The WaterCop® PRO requires household electrical power (common 115 VAC, grounded outlet) and will not operate during a power outage.

## Selection of WaterCop® PRO 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 **front control panel** of the WaterCop® PRO should be easily visible in order to see what position the valve is in (open/closed). It should also be easily accessible for resetting after a leak has been detected and the water supply has been shut off. While the WaterCop® PRO is completely supported by the piping in your plumbing system when it is installed, placement of the valve should ensure that the housing is protected from use as a step or from other excessive loads. The WaterCop® PRO requires household electrical power, and the provided power cord 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.)**

### NOTICE

Installation must be minimum of 18 inches downstream of a water meter, if water meter is inside the premises.

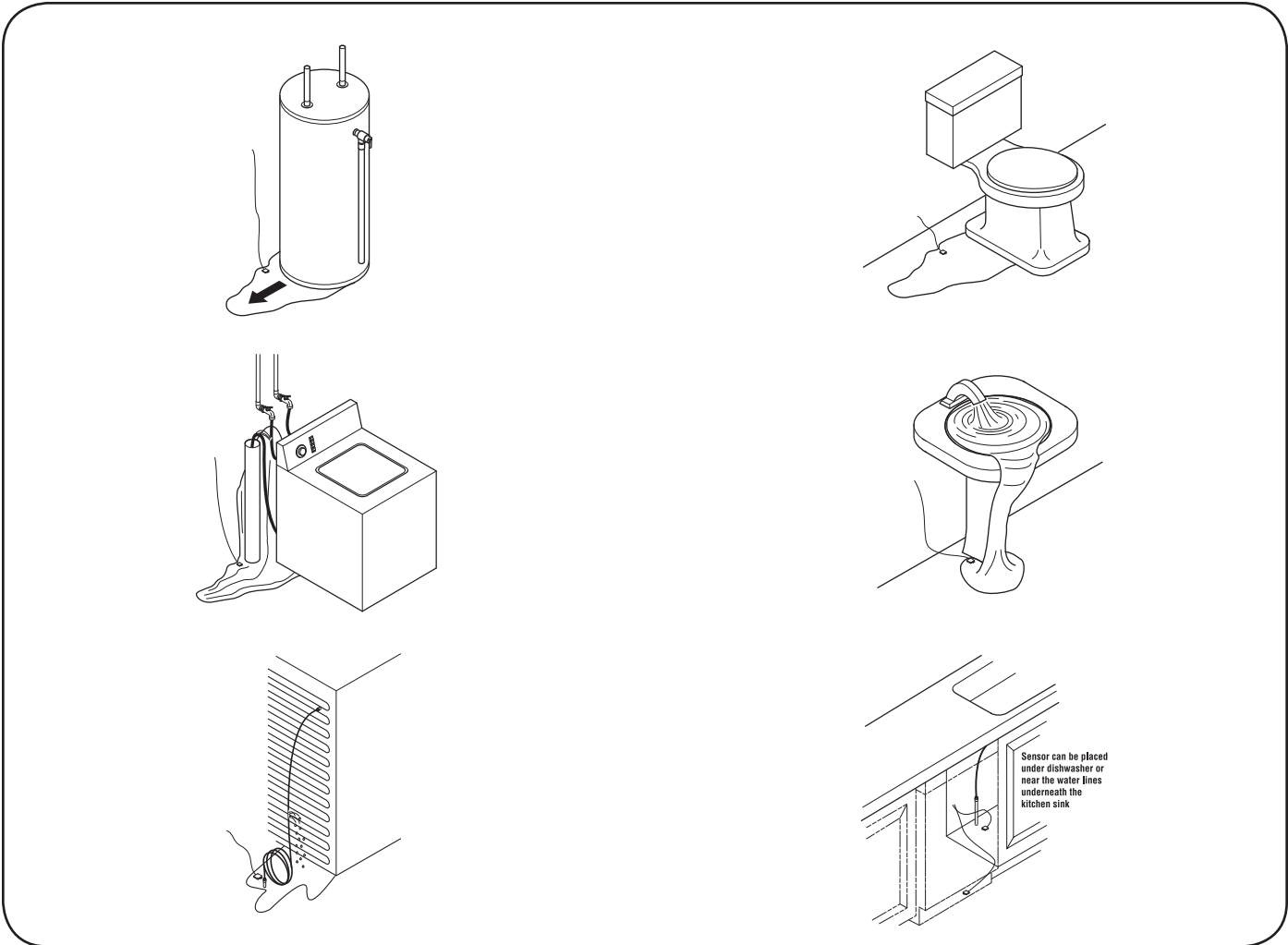
## Placement of Flood Sensors

Each WaterCop® PRO can support an unlimited number of flood sensors. Additional sensors may be added at any time. A sensor consists of a transmitter and a sensor probe (a small disc at the end of the wire, with two short gold prongs protruding from one side). Flood sensors should be placed in locations where leaks are most likely to occur.

### Suggested Locations

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

The transmitter in the flood 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 type of construction. The transmitter (attached to the sensor) 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 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.) two to three feet above the floor (see illustration). (See Installation section for details on sensor installation.)



**Flood 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.

**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 indicator lights on the face of the WaterCop® PRO will show the position of the valve.

If the valve is in the closed position (the red light will be lit), press “open” and the valve will move to the open position (green indicator will light).

When water comes in direct contact with a flood sensor, an RF (radio frequency) signal is transmitted to the WaterCop® PRO 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 on the

WaterCop® PRO panel. After the plumbing problem is fixed, reset the WaterCop® PRO by pressing “open valve” (green circle) on the face of the WaterCop® PRO. Valve will open and green indicator will be lit. See illustration at left.

**Note:** If major repairs are needed to correct the plumbing system, it is recommended that the manual 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, the WaterCop® PRO 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 unit.

**WaterCop® PRO Specifications**

- Max. working pressure ..... 125 PSIG
- Ambient temperature ..... 35° to 105° F
- Enclosure ..... Polycarbonate NEMA 4
- Voltage ..... 12 VDC
- Current ..... 1.3 Amps
- Valve ..... Full-Port, Brass, NPT
- Valve Seals ..... RTFE

## Flow Data

Valve Size Cv = Gpm flow @ 1 PSI pressure drop

1/2" NPT	19
3/4" NPT	34
1" NPT	52
1-1/4" 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 will not occur in a particular installation. If this equipment does cause harmful 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 receiving antenna.
- 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.

**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 foregoing is exclusive and in lieu of all other warranties or 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® PRO brass ball valve has a lifetime warranty.

## INSTALLATION GUIDE

### Important!

Adherence to all local and municipal building, plumbing and electrical codes as they pertain to the installation of 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 the installation. These instructions assume this level of knowledge and skill. If in doubt, use a licensed professional.

### Common Displays on WaterCop® PRO

**WATERCOP  
NORMAL**

Valve is open and all components functioning.

**WATERCOP  
WATER IS OFF**

Water was turned off via local controls.

**! ALARM !  
SENSOR #1 WET 1**

Flood sensor #1 (probe 1) detected water and turned valve off.

**! ALARM !  
WIREPANEL WET 2**

#2 hard wired sensor from monitoring station detected water and turned valve off.

**\*\*\*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\*\*\*  
WIREPANEL LOST?**

Monitoring station has lost power or is out of range.

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

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

These are the text display codes on both the WaterCop® PRO valve and monitoring station (optional).

## SYSTEM QUICK REFERENCE SETTING AND STATUS

### Reset Actuator to Factory Settings:

Hold 'MODE' – Press and Release 'OPEN' – Release 'MODE'

### TO ADD DEVICE:

#### SENSORS:

Press 'MODE' twice (*Device Add*) on WaterCop® PRO Actuator  
Press 'CLOSE' (*Device #1 ID*)  
Short probe on Sensor (*Sensor #1 SHT*)  
Remove short (*Sensor #1 OK*)  
Press 'MODE'  
Press 'CLOSE' (*Sensor #2 ID*)  
Repeat for all Sensors, When finished Press 'Mode' 2X to return to NORMAL

#### MONITORING STATION:

Press 'MODE' twice (*Device Add*) on WaterCop® PRO Actuator  
Press 'CLOSE' [(*Device # (next device number ID)*] on WaterCop Actuator  
Press 'CLOSE' on Monitoring Station (This adds station and also closes valve).  
Press 'OPEN' on WaterCop® PRO Actuator to reopen valve and return to normal mode.

#### REMOTE:

Press "MODE" twice (*Device Add*)  
Press 'CLOSE' (*Device #1 ID*)  
Press 'CLOSE' on REMOTE (*Remote #1*)

### TO REMOVE DEVICES:

Press 'MODE' 3X (*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 STATUS:

Press 'Mode'  
Scroll using 'CLOSE'  
Press 'MODE' 3X to return to Normal

### TO TEST SIGNAL:

HOLD 'MODE' Press and Release "CLOSE"  
Press 'OPEN' (TX ACTIVE SIGNAL)  
Place sensor probe in water and read signal strength  
When finished, Hold 'OPEN' Press and Release 'MODE' to return to Normal

WaterCop® PRO wireless sensors are addressable. This means that the WaterCop® PRO valve can tell you operational status of each flood 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, lost connection). It is important that you introduce each wireless sensor to the WaterCop® PRO shutoff valve and document the sensor 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.

## TO POWER AND PROGRAM WIRELESS SENSORS

### Powering Sensors

Each wireless flood sensor is a battery operated (or AC adaptable) radio transmitter. The units are shipped without batteries. Two fresh "AA" lithium 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 back up 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 with the included numbering stickers (shipped with the WaterCop® PRO motor) for easy identification while programming. If you do not have stickers, you may simply write numbers on the outside back cover of each sensor in permanent ink. The WaterCop® PRO system is capable of supporting as many as 46 wireless sensors. Additional wireless sensors (up to 46) 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 addressing the sensors to the WaterCop® PRO motor.

### Programming Wireless Sensors

Plug the WaterCop® PRO power supply into a nearby 115VAC outlet. Depending upon the position of the valve, the motor 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 LCD)

Press '**CLOSE**' once (*Device #1 ID=* will display on LCD)

Short probe on sensor by touching leads with metal. Do not wet sensor-it must be shorted. Sensor will beep and LCD will display *Service status sensor #1 OK!*

To add sensors #2 through #46 If time has passed, the WaterCop® PRO LCD will revert to ready mode displaying *WaterCop® PRO Normal*. To add more sensors you will need to return to program mode and repeat steps used to add sensor #1.

If you are adding sensors in quick succession, your WaterCop will remain in program mode and the display will read *Device add press next*. Press **'CLOSE'** once (*Device #2 ID=* will display on LDC). Short probe on sensor by touching leads with metal. Do not wet sensor-it must be shorted. Sensor will beep and LCD will display *service status sensor #2 OK!*.

Repeat above steps for all of your wireless sensors taking care to program them in the same order as labeled. Repeat for all sensors. When finished Press **'MODE'** twice to return to normal mode. If you need to remove a device for any reason, please see the instructions 'TO REMOVE DEVICES'

## TO POWER AND PROGRAM MONITORING STATION

The WaterCop® PRO Monitoring station (part number WPMS) provides instant feedback of sensor alarm and trouble conditions as well as open/close status and control of water supply. An audible alarm will sound when any sensor detects flooding. The Hardwired Sensor Monitoring station (part number WPMSH) includes 8 zones to attach WaterCop® PRO hard wires flood sensors (part number WPSC).

Plug the WaterCop® PRO Monitoring Station power supply into a nearby 115VAC outlet. The LCD display will beep once and read *WaterCop® PRO Valve Lost? \*\*\*ALERT\*\*\* ?COMMUNICATIONS?* until the Monitoring Station has been programmed to the WaterCop motor.

### To Program Monitoring Station

Similar to flood sensors, the Monitoring Station is programmed using the keys on the WaterCop® PRO motor.

On the **WaterCop® PRO motor** PRESS **'MODE'** twice (LCD will display *Device add press next*). PRESS **'CLOSE'** (LCD will display *Device add Device # (next number)*).

On the **Monitoring Station** PRESS **'CLOSE'** to add the monitoring station. The WaterCop® PRO motor will turn to a closed position (LCD will display *WaterCop® normal WaterCop® Normal Water Is Off*).

PRESS **'OPEN'** on the Monitoring station to complete programming and reopen the valve. The LCD will display *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 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.

## Manually Test the Valve

To test your WaterCop® 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 WaterCop® 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 colored circle just below the unlit indicator light. 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 Flood Sensors

Each flood sensor is a battery-operated (or AC adaptable) radio transmitter. The units are shipped without batteries. Two fresh "AA" lithium 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.

Follow suggestions found in the section titled "Placement of Flood Sensors" for recommendations where sensors should be placed. Locate a wall near the area you choose to monitor. Avoid high traffic areas where cord or sensor could be stepped on or kicked. Mount transmitter at a convenient location on the wall, two to three feet above the floor. This will help avoid damage to the sensor and provide a strong signal. Use fasteners included with the unit.

1. Following all safety precautions, make sure that the WaterCop® PRO is plugged in and the valve is in the open position. Leave the WaterCop® 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 WaterCop® PRO (about 5 seconds). This test simulates a leak, and lets you check for interference between the sensor and the WaterCop® PRO.

3. Take the sensor out of the water and carefully dry off the sensor and prongs.
4. Go back to your WaterCop® 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. Keep all objects away from the valve, reset the WaterCop® PRO by pushing the “open” button.
6. Repeat steps 2 through 5 until you have tested each sensor in the locations you wish to monitor.

## Troubleshooting

- If the flood sensor does not close the valve, check that the batteries are good and that they are installed properly. Repeat test.
- If the batteries are good and the flood sensor still does not make the valve close, remove it from its installed location and place it close to the valve. Repeat test.
- If the sensor operates properly when it is close to the WaterCop® PRO valve, but not when it is installed at its remote location, try moving the sensor to a different position or try a different flood sensor. Some possible causes of signal reduction are steel construction, foil backed insulation or other large metallic barriers.

## Installation of Flood Sensor

Once testing is complete, finish installation of the flood 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 metal probes are not covered. Verify 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.

## 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 with power adaptor
- 1 ea. Owner’s Manual/Installation Guide
- 1 ea. Ball Valve

Note: The package may contain Sensors if purchased as part of kit.

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.

## Review 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® PRO 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 installation of the WaterCop® PRO.

Choose a dry location to install the WaterCop® PRO. The front control panel should be easily visible in order to see what position the valve is in (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 other 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 it is accessible for checking status, resetting the valve and Adding or removing sensors from the network.
- Where the case is protected from use as a step or other excessive loads.

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

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

The most common material for water supply lines is copper. If the WaterCop® PRO is to be installed in a copper line, you still have a choice of fittings and methods of installation.

## 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) available at most local hardware or plumbing supply stores
- b) Teflon tape or other thread sealant
- c) Tubing cutter
- d) Ruler
- e) Pencil or marker
- f) 2 large adjustable wrenches

Measure the outside diameter of the copper tube and 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 flats of valve body and use the other to tighten fittings.
2. Measure the distance from end to end of valve assembly. For 1/2" tube (5/8 outside diameter) subtract 1/2", for 3/4" tube (7/8 outside diameter) subtract 3/4" from your measurement. This is the length of the section of tubing to be cut out of the existing line. The piece of existing tubing to be cut out is shorter than the measured length so that tube ends extend into the compression fittings.
3. Select the location for the WaterCop® PRO. Be sure to consider that you will need access to the front panel of the control unit. 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 ends.
8. Install compression nuts and sleeves to each tube end.
9. Shift tube ends to install WaterCop® PRO valve in line.
10. Position the unit and tighten compression nuts. Hold the fitting with one wrench while tightening the nut with the other. Tighten both nuts.
11. Plug unit into a proper power source and turn valve to open position (open button / green light).
12. Unplug unit, turn water back on and carefully check for leaks.
13. Tighten fittings if needed to stop any leaks.
14. Plug unit back into 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 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 fittings. Apply wrench to flats on the valve body to tighten fittings. Changing Digital Codes

## 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 means of the manual override handle.

## DynaQuip Controls

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