WaterCop®

AUTOMATIC WATER SHUT-OFF SYSTEMS

PRO by DynaQuip®

Owner's Manual and Installation Guide

The proven leader in household leak protection: **WaterCop® is there when you're not.**

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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.

WaterCop® Pro (WPKxx or WPACT12Vxx) systems must be installed indoors. For installations requiring outdoor valve shut-off, the WaterCop® Pro Outdoor (WPKxxW or WPACT12VxxW) system should be used. These optional systems have an outdoor rated cable (NOT DIRECT BURIAL) and are designated with part numbers ending in "W". The Water Control Panel MUST always be placed indoors. Contact us if you have any questions about the placement of your WaterCop® Pro.

Check the contents of the carton with the products listed on the carton label. The shipping package should contain the following:
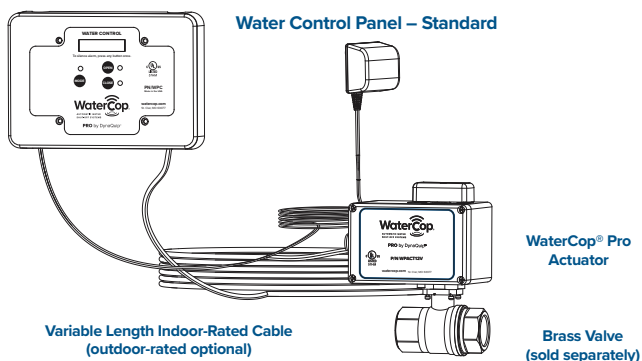
- 1 each WaterCop® Pro Water Control Panel with 20' Power Adapter
- 1 each WaterCop® Pro Actuator with attached cable to connect to Water Control Panel
- 1 Owner's Manual
- 1 Card with QR Code and link to Reference Materials on the WaterCop® website

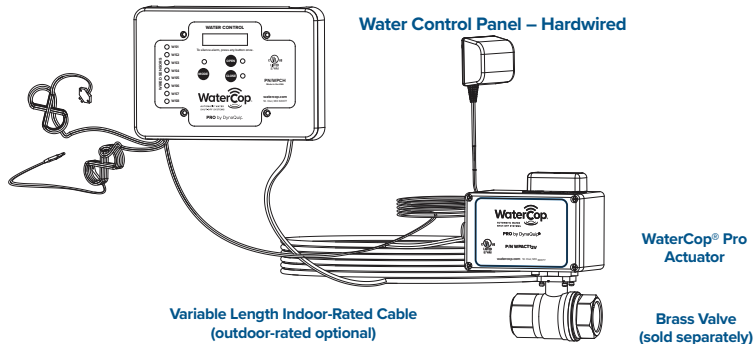You will also need the correct size WaterCop®-ready ball valve (sold separately).

Read instructions before any installation is attempted. All sections of this Instruction Manual and accompanying Quick Start Guide should be read and completely understood.

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. Cabling of 25', 50' or 75' is included with the WaterCop® Pro Actuator to connect to the WaterCop® Control Panel.

Water Control Panel – Standard

WaterCop® Pro Actuator

Brass Valve (sold separately)

Variable Length Indoor-Rated Cable (outdoor-rated optional)

Water Control Panel – Hardwired: Accommodates up to 8 zones for hardwired leak sensor probes (sold separately). AC/DC power converter with 20' cord included. Cabling of 25', 50' or 75' is included with the WaterCop® Pro Actuator to connect to the WaterCop® Control Panel. As with all sensitive electric equipment, the use of surge protection is highly recommended.

Water Control Panel – Hardwired

WaterCop® Pro Actuator

Brass Valve (sold separately)

Variable Length Indoor-Rated Cable (outdoor-rated optional)

Hardwired Sensor Probes: 10' white cord with single sensor probe. WaterCop® Pro sensor probes are easily secured to the surface using adhesive or the mounting holes. Hardwired sensors provide the same feedback to the Water Control Panel as the WaterCop® Pro wireless sensors. Use hardwired sensor probes for convenience, or if conditions prevent wireless communication. **To extend sensor cords past the 10' they come with, please contact us for the proper wire and method.**

Lead-Free Brass Valve: Full port, NSF/ANSI 372 approved, lead-free, brass, 125 psi cold water, designed for placement on incoming water main.

Multisense Hub

Wireless Sensor: Power the Multisense Hub using 2 AAA alkaline batteries or optional AC/DC power converter (sold separately). Batteries will provide backup power to sensors upon loss of electricity. Wireless sensors areaddressable and supervised for conditions suchas water detection, sensor short/open, and low/dead battery. 10' sensor probe cord allows for optimal sensor placement. Wireless sensors can support 1 or 2 probes, ropes and/or pressure sensor accessories plus has on-board ambient temperature sensing (see pages 9–10). Each Water Control Panel can support up to 99 wireless sensors.

Range Enhancing Repeater

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.

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.

GENERAL SAFETY INFORMATION

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.

How the System Works

Leak 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 property. The WaterCop® Pro Valve will remain closed until it is reset manually or through the Water Control Panel. After the WaterCop® Pro valve closes, the Control Panel will still receive ALERT and ALARM signals from sensors and send notification if those outputs are used. 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 unless receiving auxiliary power from a backup device such as an Uninterruptible Power Supply unit (UPS). Additionally, the use of a certified surge protection device is highly recommended.

Operating the WaterCop® Pro

The normal position of the valve is open to allow full flow throughout the plumbing system. The manual override handle on the top of the WaterCop® Pro Actuator 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 leak 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 Actuator also be closed during the repairs. Close the main water shut-off valve and unplug the Water Control Panel before making repairs on the plumbing system.

WaterCop® Pro Specifications

Max. working pressure	125 psig	**Flow Data**
Ambient temperature	35° to 105° F	Valve Size Cv = Gpm flow at
Enclosure	Polycarbonate NEMA 4	1 psi pressure drop

Voltagex	12 VDC plus 120 VAC adapter	½" NPT	19
Current	0.85 Amps	¾" NPT	34
Valve	Full-Port, Lead-Free, Brass, NPT	1" NPT	52
Valve seals	RTFE (Reinforced Teflon®)	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 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 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
2. this device must accept any interference, including interference that may cause undesired operation of the device

System Quick Reference Setting and Status

Status	Description
WATERCOP NORMAL	Valve is open and all components functioning properly.
WATERCOP WATER IS OFF	Water was turned off via local controls.
!ALARM! SEN #1 WET 2	**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! SEN #2 TEMP 1	**Sensor #2** has detected ambient temperature was too low.
ALERT SEN #3 SHORT 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 SEN #2 OPEN 3	**Probe 2 on Sensor #2** is cut or disconnected. Water is still on. Probe needs to be repaired or replaced to allow proper function.
ALERT SEN #2 LOW BAT	**Battery in Sensor #2** is low and needs to be replaced.
ALARM SEN #2 DEAD BAT	**Battery in Sensor #2** is so low it won't function properly. Valve is closed.
ALARM SEN #3 WET 4	**Wireless Sensor #3** has detected water on the rope sensor or high pressure in the line.

RESET WATER CONTROL PANEL 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 delete all sensors.

TO ADD WIRELESS SENSORS:

Press **MODE** twice (DEVICE ADD) on WaterCop® Pro Water Control Panel
Press **CLOSE** (DEV #1 ID=)
Press and hold the **LEARN** button (SEN #1 SHORT 2)
Release **LEARN** button (SEN #1 OK!)
Press **MODE**
Press **CLOSE** (DEV #2 ID=)
Repeat for all Sensors. When finished, press **MODE** twice to return to **WaterCop® NORMAL**

TO REMOVE WIRELESS 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 **WaterCop® NORMAL**

TO CHECK SENSOR STATUS:

Press **MODE** while valve is open
Scroll using **CLOSE**
Press **MODE** three times to return to **WaterCop® NORMAL**

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 transmitter.** Once placed in location, you will also note this information on the Sensor Location Log (available as a PDF file).

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

Powering Wireless Sensors

WaterCop® Pro wireless sensors require power to operate. Use either fresh AAA alkaline batteries (not included) and/or a WaterCop® Pro Sensor AC Adapter (sold separately) to power. If both are used, batteries will provide back-up power in the event AC power is lost. Rechargeable batteries are **not** recommended. 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 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 99 wireless sensors. Wireless sensors, up to 99 total, 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 WPM

Plug the WaterCop® Pro Control Panel 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. You can also program sensors while leaving the jumpers in instead. Unplug the Control Panel before removing them and wiring in the Pro Actuator.

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 (DEV #1 ID= will display on the LCD).
- Press and hold the **LEARN** button inside the WPM. The sensor will beep and the LCD will display SEN #1 SHORT 2, then release the **LEARN** button and LCD will display DEVICE STATUS SEN #1 OK!
- **To add sensors #2 through #99:** If time has passed, the Water Control Panel 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.
- 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 Wireless Sensors

If you need to remove a wireless 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 Panel's memory.
- Press **MODE** one more time to return to the main screen (WaterCop® NORMAL).
- Hardwired sensors can be removed, however the unit will need to be factory reset and all sensors reprogrammed.

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 at the property. 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', 50' or 75' 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 or dead battery sensor has turned the water off and the audial 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.

STOP **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. Do not reverse the polarity if using optional adapter! The positive lead is the one with the stripe on the insulation.
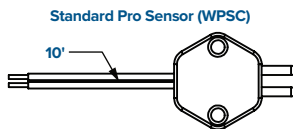
Wireless WPM Hub Sensor and Accessories

WPM: This is what is considered the "Hub". It requires AAA Alkaline batteries (or the optional AC Adapter) and wirelessly communicates with the Pro Control Panel. Sensor probes and other accessories are attached to the Hub in many different configurations. Ambient temperature sensing is on-board. If a temperature of 45° F or below is detected, it will send a signal to the Control Panel.
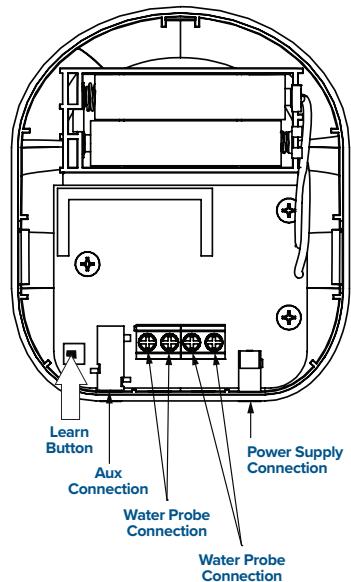
WPM.XT: This is the sensor Hub without temperature sensing for use in areas that may see temperatures at or below 45 °F under normal conditions. Sensor probes and other accessories are attached to the Hub in many different configurations.

WPSC: These are the same leak probes with 10' of cable currently used for Pro. They wire into the screw terminals that are accessed on the bottom of the WPM. They have a unique hexagon shape and they are what make single and dual leak sensors.
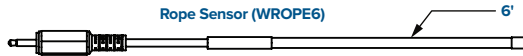
You can have 1 or 2 of the leak probes on each WPM.

Onboard Temperature Sensor – Trip Point 45°F

Learn Button

Aux Connection

Water Probe Connection

Power Supply Connection

Water Probe Connection

Standard Pro Sensor (WPSC)

10'

**Rope Sensor (WROPE6)**   **6'**

WROPE6: This wireless sensor accessory has a male plug that inserts into the female AUX jack in the Hub. It's 6' long and can be shortened as needed. The leak sensing is all along the braided cord and comes with 20 clips to secure to the floor or surface using the included double-sided tape or screws.

WPRS095: This wireless sensor accessory will detect high pressures and is factory set to trip at 95 psi. It's field adjustable to trip from 50 to 120 psi. This has a male plug that inserts into the same female AUX jack on the bottom of the WPM. To use both pressure and rope sensors, use the WSPLIT described just below.
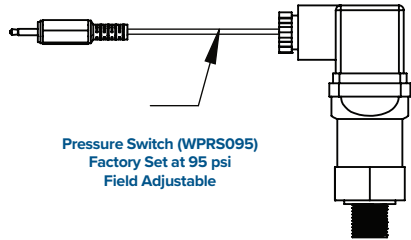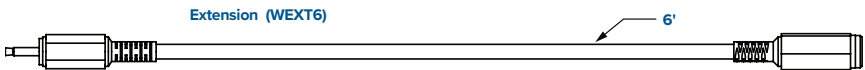
Pressure Switch (WPRS095)
Factory Set at 95 psi
Field Adjustable
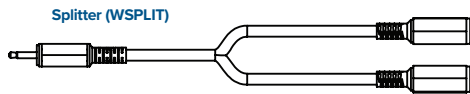
Splitter (WSPLIT)

WSPLIT: This wireless sensor accessory will allow an Installer to use both a rope and pressure, or two rope sensors, from one WPM. It has a male plug that inserts into the AUX jack on the bottom of the WPM and it branches off to 2 female jacks. It's only a few inches long.

Extension (WEXT6)   **6'**

WEXT6: This wireless sensor accessory has a male plug that inserts into the AUX jack on the WPM and has a female jack on the other end to give an extra 6' length so a rope or pressure sensor can be extended further away from the WPM Hub.

ACA100: This wireless sensor accessory is the AC adapter that has a male plug that inserts into the bottom of the WPM. It provides AC power to the wireless sensors and can be used with, or instead of, batteries. The ACA100 is 10' long.
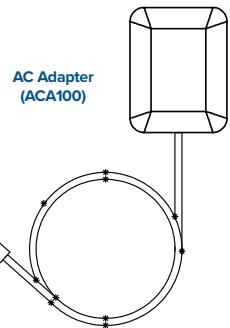
AC Adapter
(ACA100)

WCSG: This accessory can be installed on leak probes that may be placed in open areas that need mopped to help prevent valve closure from regular cleaning, but still allow water from leaks to reach the probe.

WaterCop
AUTOMATIC WATER
SHUT-OFF SYSTEMS

Sensor Guard
(WCSG)

Manually Testing the Valve and Wireless Sensors

Manually Test the Valve

Check the Quick Start Guide for wiring and preliminary testing of the Water Control Panel. 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 **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

WaterCop® Pro wireless sensors require power to operate. Use either fresh AAA alkaline batteries (not included) and/or a WaterCop® Pro Sensor AC adapter (sold separately) to power. If both are used, batteries will provide back-up power in the event AC power is lost. Rechargeable batteries are **not** recommended. 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 Control Panel is plugged in and the valve is in the open position. Leave the WaterCop® Pro Actuator 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 Control Panel and close the valve (about 15 seconds). This test simulates a leak and lets you check for interference between the sensor and the Water Control Panel.
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 WaterCop® Pro Control Panel 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 Control Panel by pushing the **OPEN** button.
6. Repeat steps 2 through 5 until you have tested each sensor in the locations that you wish to monitor.

Troubleshooting

- If the wireless sensor does not close the valve, check that the sensor has power and batteries and/or AC adapter is installed correctly. Repeat test.
- If the batteries have power and the wireless sensor still does not make the valve close, physically remove it from its installed location and place it next to the Water Control Panel. Repeat test. If the sensor operates properly when closer to the Water Control Panel, but not in its final location, you likely need to use a Range Enhancing Repeater **(WPR- sold separately)** to extend the effective range of the wireless signals. Some possible causes of signal reduction are steel constructions, foil backed insulation or other large metallic barriers.

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 surface 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 Water Control Panel 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 99 wireless leak sensors. A sensor consists of a transmitter and sensor probe accessories (see pages 9 and 10). Wireless sensors should be placed in locations where leaks are most likely to occur. Use **WPM.XT** wireless sensor Hubs in areas that may be exposed to ambient temperatures at or below 45 °F under normal conditions.

Suggested Locations

- Water Heaters
- Toilets
- Bathroom Sinks

- Washing Machines
- Automatic Humidifiers
- Dishwashers

- Kitchen Sinks
- Ice Makers/Refrigerators
- Pipes that are prone to freezing
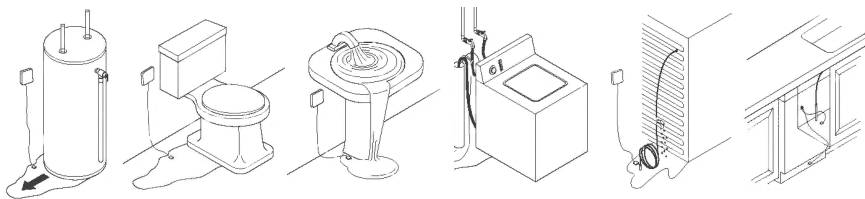
Sensor probe can be placed under dishwasher or near water lines underneath the kitchen sink.

The transmitter in the wireless sensors and the receiver in the Water Control Panel 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 surface 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 surface so water can be detected as soon as it begins to accumulate.** The **sensor probe** should be secured to the surface with screws or adhesive. To avoid damage to transmitters and to provide for the strongest signal possible, the transmitter portion of the leak sensor should be mounted in a convenient location (on the wall, in a cabinet, closet, etc.) 2 to 3 feet above the floor. (See Installation section for details on sensor installation.)

WaterCop® Range Enhancing Repeater

Secure mounting tab and screw

Red Transmit LED

Green Receive LED
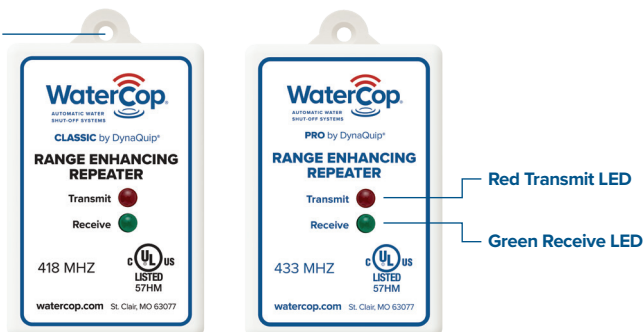
Why a Repeater?

If any of your WaterCop® wireless sensors are unable to communicate directly with your WaterCop® Pro Control Panel during initial set-up and testing, adding a repeater (or more) to your system may be the solution.

Basic Operation

Upon initial power-up, the red and green LEDs will flash and then go out. The LEDs light up when the device is receiving and transmitting signals from WaterCop® wireless sensors.

Proper Location

Identify an unused 110VAC wall outlet/receptacle roughly midway between the WaterCop® Pro Control Panel and the WaterCop® sensor that is farthest away and plug in the repeater. Test the sensor(s) to ensure they now close the valve from the farthest location. Sometime more than one repeater may be necessary due to great distances, obstructions, or type of construction.

Wireless Sensor Battery Life

High quality AAA alkaline batteries from brands like Energizer® and/or Duracell® are recommended for powering your WaterCop® Classic sensors. It is recommended that you replace the batteries in your WaterCop® sensors at least every 4 years. To ensure optimal performance of your WaterCop® system, we recommend an immediate change of the batteries in any sensor that has detected a water leak. Each wireless sensor will communicate a low battery condition to the Control Panel. In the event the battery power reaches a critically low status, a **CLOSE** signal will be transmitted to the WaterCop® valve as a precaution. After replacing batteries, re-test each unit in its regular location. Periodic testing of sensors is required to monitor proper power and function.

Installation Procedure: Indoor vs. Outdoor

Selection of WaterCop® Pro Valve Installation Sites

The WaterCop®-ready Ball 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 Actuator is completely supported by the piping in your plumbing system. The Actuator should NOT be used as a step or to support heavy 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;
- where the case is protected from use as a step or from other excessive loads;
- where it does not interfere with fire suppression systems.

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.

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

The Water Control Panel should be placed in a convenient indoor location to view the valve position (open/closed) and be accessible for resetting after a leak has been detected and corrected.

Additional Parts Requirements

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

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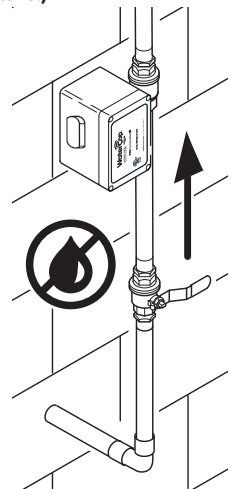
CAUTION!

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.

Compression Fittings

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

- two fittings (male pipe thread x compression) available at most local hardware or plumbing supply stores;
- Teflon® tape or thread sealant;
- tubing cutter;
- ruler;
- pencil or marker;
- two large adjustable wrenches.

Measure the outside diameter of the copper tube and note the valve size to be sure the proper size fittings are purchased.

Steps of Installation using Compression Fittings

1. Remove nuts and sleeves from compression fittings and install fittings into each end of the valve using Teflon® tape or 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 once fittings are secure. For ½" tube (5/8" outside diameter) subtract ½", for ¾" tube (7/8" outside diameter) subtract ¾" 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 the tube ends extend into the compression fittings.
3. Select the location for the WaterCop® Valve and Actuator. 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 in place. Make sure you will have access and room to adjust before cutting the tube.
4. Mark the tube in the location you have selected. Double check the length and location marked.
5. Turn water off and drain the system.
6. Use tube cutter to cut copper tube at the locations you have marked. Careful, there will probably still be some water in the line.
7. Remove any burrs from 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 Water Control Panel 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. 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 Water Control Panel is supplied with a power adapter. Consult local electrical codes as to the necessity of ground fault protection. It is recommended that the Water Control Panel not be plugged into an extension cord. Review "Specification" current and power requirements so as not to overload the circuit supplying power.

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 Water Control Panel from its power source. The valve may be manually operated by turning the manual override handle in the direction indicated on the indoor actuator.

For outdoor shut-off valves, unplug the Water Control Panel from its power source. Remove the four bolts connecting the brass valve to the black actuator enclosure located outdoors. Lift the actuator off the brass valve (water will be contained) to expose the valve stem. Now, the valve stem can be manually turned using a screwdriver, pliers, wrench or the like.

General Safety Information

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.

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

INFORMATION It is recommended that the system be plugged into a surge protection device to protect against electrical surges that could damage the system. To insure continued functionality of the system, it is recommended that periodic testing be performed. Dip sensor probes into a cup of tap water and check for valve closure. Address any issues immediately.

Periodic System Maintenance & Testing

Quarterly testing and maintenance are recommended.
1. Ensure that the sensor probes/pins are clean and free of dust/dirt.
2. Wet sensor pins to activate valve closure/s.
3. Verify valve closure/s.
4. Repeat steps with the rest of the sensors.
5. Replace sensor/s to optimal location for leak detection if disturbed.
6. Use green button to re-open the valve each time.

Use the Maintenance Log below to record maintenance dates.

Maintenance Log

Maintenance Log

Visit WaterCop.com for your warranty information.

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To order or for additional information, **visit watercop.com or call 800-545-3636.**