WaterCop® by DynaQuip
LEAKSTOP

Installation Guide & Owner's Manual

Quick Start

1. Select installation location of valve, just upstream from inlet of water bearing appliance
2. Using compression or solder connections, install brass valve into inlet pipe
3. Apply power to LeakStop control box
4. Place sensors in areas where water would begin to accumulate
5. Test and restore to ready status

System Overview

WaterCop LeakStop detects water leaks in your plumbing system at a single location and automatically shuts off the water supply to that same location. Early leak detection coupled with automatic water shut off is the best way to prevent extensive water damage.

Support and Assistance

Contact DynaQuip Controls for technical support and installation assistance:
Toll-free: 1-800-545-3636 (M-F, 8AM-5PM Central Time)
Email: info@dynaquip.com

System Safety Information

Warning
Do not apply electrical power to the unit unless the unit is fully assembled (as it shipped). 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.

Notice
WaterCop LeakStop should be installed downstream of existing shutoff valves and pressure reducers. Install 18" downstream from existing indoor water meters to allow for future meter maintenance.

Warning
LeakStop must be installed indoors. The ambient air temperature of the LeakStop should be between 35˚ F and 105˚ F. Do not expose the LeakStop to freezing temperatures or extreme heat.

Important
Adherence to all local and municipal building, plumbing, and electrical codes as they pertain to the installation of the WaterCop LeakStop 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.

Important
Check with original appliance manufacturer for instructions regarding the special servicing of water heater (or other water bearing appliance) when inlet water supply is stopped for any reason or length of time.

Warning
The valve closes with great force. It could cut off a finger. Keep fingers and other items out of the valve when testing.

Warning
The WaterCop LeakStop case is NOT EXPLOSION PROOF. The shut-off valve must NOT be installed where it could ignite flammable vapors or explosive mixtures.

Warning
To reduce risk of electrical shock, fire, or damage to property or WaterCop:

1. Use a grounded, 120VAC outlet.

- The power cord must be plugged into a properly grounded [3-prong] outlet.

2. Do not use extension cords

- Use of extension cords can cause fires or electric shock.
- Install WaterCop LeakStop within eight feet of an outlet or,
- Install an outlet near the WaterCop. Comply with all local codes.

3. Before opening case, unplug power cord

- When the case is open, it is possible to contact electrified components. Always unplug the power cord before opening the unit.

System Components

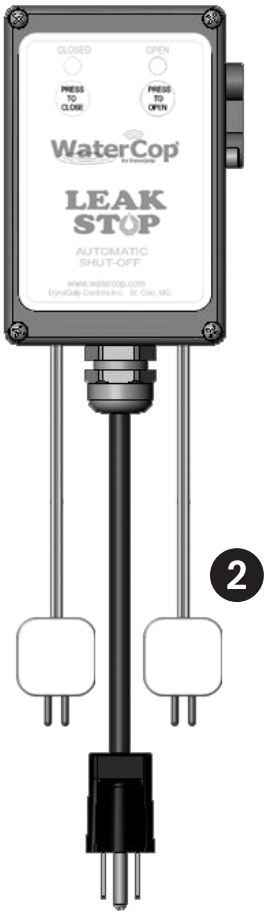
WaterCop LeakStop consists of two components which may be sold together or individually.

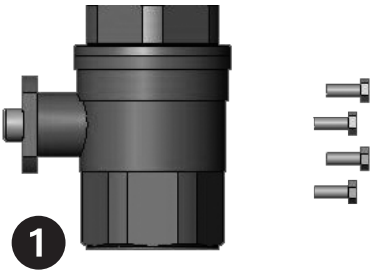
1. The LeakStop brass valve sized to the same diameter as the existing supply line.

- NSF61 approved (NSF61g available) Full Flow, Forged brass 400psi CWP.

2. The LeakStop electric control box with attached moisture sensors.

- 120VAC grounded plug
- 2 (two) moisture sensors with 10' (ten foot) cords.





Installation Location

The WaterCop LeakStop should be installed indoors and directly into the plumbing supply line, just upstream of the appliance or area you wish to monitor and protect. The LeakStop requires 120V AC power to operate. Verify location of a grounded outlet within 8 feet of the LeakStop system. The attached moisture sensor will be placed directly on the floor where water would first accumulate if a leak occurs. The most common area of installation would be a water heater as illustrated here:

Installation Guidelines

Review all Safety guidelines listed on page 3.

Use of a licensed, professional plumber is highly recommended and required in some municipalities.

1. Separate the brass valve from the control box by removing the attachment screws. **RETAIN THESE SCREWS**

2. Using compression fittings or sweat fitting adaptors, install the properly sized brass valve into the plumbing system, just upstream from the device on the cold water supply. Orient the valve in such a way that when the LeakStop control box is properly attached, the homeowner will have easy access to the open/close buttons. LeakStop requires 120V outlet to operate.

3. Verify that the valve and the LeakStop motor are both in the 'OPEN' position

- The slot in the valve stem should be in line with the valve body, end to end. The valve will be open.
- Apply power to the control box by plugging it into 120VAC. The green light should be 'ON'. If not, press the green button and the unit will cycle to the 'OPEN' position. DISCONNECT POWER.

4. Mount the LeakStop motor onto the valve and secure with the mounting screws provided. **IMPORTANT:** The control box **MUST** be aligned with the valve as shown.

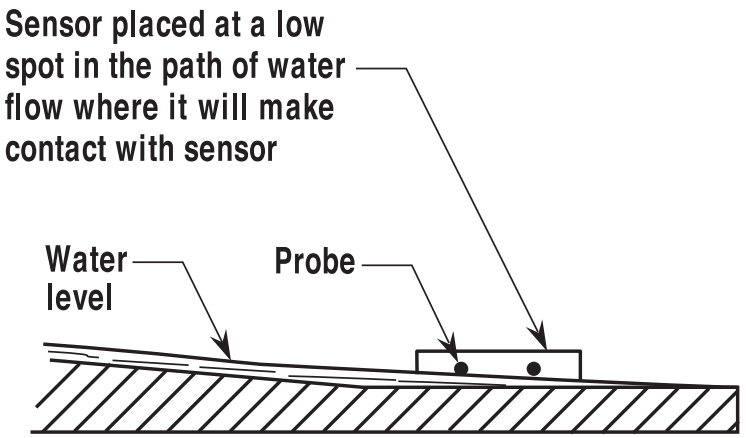
5. Plug in the unit to local 120V outlet.

Sensor Placement

Place the attached sensor probes in the areas where water would first accumulate if a leak occurs.

Note: Care should be taken to place the sensor probe flat on the floor so water can be detected as soon as it begins to accumulate. The gold pins should not come in contact with any other objects or the flooring surface.

Sensors may be taped or adhered directly to the floor or pan under the monitored appliance, however extreme care should be taken to avoid 1) tape or adhesive touching or hindering water reaching the gold pins and 2) the gold pins do not come into contact with metal or other conductive services. This may cause a false alarm of the system.



System Operation

The WaterCop LeakStop constantly monitors the selected area for accumulating moisture. If water comes in contact with the sensor probe, the LeakStop control box will close the valve, shutting off the local water supply. The valve will remain closed until it is manually reset via local push buttons on the LeakStop control box. Lights on the LeakStop control box also indicate valve position (red=closed, green=open).

The WaterCop LeakStop valve may be controlled independent of a water leak event by pushing the open/close soft touch buttons on the front of the actuator.

The WaterCop LeakStop requires standard 120VAC electric to operate. In the event of power failure, the LeakStop valve will remain in current position. When power is restored, the valve remains in current position. Valve position does not change when power fluctuates.

Initial and Periodic Testing of the System

It is important that initial and periodic (monthly) testing of the system be conducted to ensure continued protection against sudden and accidental plumbing flooding.

1. Verify that the LeakStop valve is plugged into a standard grounded outlet and receiving power.

2. Verify that the LeakStop valve is in the open position (GREEN light illuminated).

3. Using a cup of tap water (do not use distilled or RO water) place one of the sensors directly into the water.

4. The sensor will detect the water and the LeakStop valve will move to a closed position.

5. Verify that the LeakStop valve is in the closed position (RED light illuminated).

- If Leak Stop is installed on a water heater, you can additionally test closure of the valve by locating and then opening any downstream hot water faucet in the home as if you were drawing hot water. As the residual water in the pipe runs out, you will notice a slowing of flow and finally a stoppage of water. **YOU MUST TEST A HOT WATER FAUCET.** Testing a cold water faucet will not return an accurate result.
- If LeakStop is installed on any other water bearing appliance, verify that outlet flow has stopped by attempting to draw water from the device.

6. Remove the sensor from the water and dry thoroughly. Remember to close any faucets you may have opened during testing.

7. Press the GREEN button on the LeakStop control panel to open the valve and restore water flow.

8. Repeat steps 2 through 7 for the second sensor.

System Reset

In the event that the LeakStop detects a flooding condition or is accidently tripped and the valve closes,

1. Verify that the monitored appliance is dry and not leaking

2. Press the Green button on the LeakStop control panel to open the valve and restore water flow.

Troubleshooting

1. Flood sensor does not detect water.

a) Verify that the Leak Stop is receiving power.

b) Verify that the gold prongs are making continued and direct contact with the water.

c) (If testing) Verify that tap water is being used rather than distilled or RO water.

2. LeakStop RED or GREEN light does not illuminate

a) Verify that the LeakStop is plugged into a grounded 120VAC household outlet and that outlet is powered.

3. LeakStop motor does not close or open the valve correctly.

a) Verify that the LeakStop is plugged into a grounded 120VAC household outlet and that outlet is powered.

b) Verify that the valve is correctly orientated to the control box. See page 6 Installation Guidelines #4

c) If the brass valve has a solder connection, verify that the ball valve seats were not damaged by excessive heat.

I. Remove the LeakStop control box (retain the four screws for later re-attachment).

II. Using a flat-headed screw driver, gently but firmly attempt to cycle the ball valve open and closed move the ball. The flat-headed screw driver will fit into the slot of the ball stem and you will be able to move the position of the valve manually.

III. Verify that the ball inside the ball valve can move. The ball will not be completely loose, but you will be able to rotate it with slightly moderate pressure.

IV. Return the ball stem back to the original position so that it will line up with the drive of the actuator. The stem slot should be perpendicular to the length of the valve and in-line with the pipe.

d) If the brass valve has a compression fitting connection, verify that the compression fittings were not over tightened causing damage to the valve, seal or seat.

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III. Verify that the ball inside the ball valve can move. The ball will not be completely loose, but you will be able to rotate it with slightly moderate pressure.

IV. Return the ball stem back to the original position so that it will line up with the drive of the actuator. The stem slot should be perpendicular to the length of the valve and in-line with the pipe.

Limitations of the System

While this is an advanced design automatic water shut-off system, it does not offer guaranteed protection against sudden or accidental discharge of water from a plumbing system. Any automatic water shut-off system, whether commercial or residential, is subject to compromise or failure to warn or activate for a variety of reasons. For example:

- Water intrusion from sources external to the plumbing supply system such as; rain, hurricane, storm water, sewer back-up, swimming pools, spas, thawing snow and ice, ice dams, HVAC condensation, freezer defrosting, etc.
- Water shut-off valves, water intrusion detectors and sensors, and many other sensing devices will not work without power. Battery operated devices will not work without batteries, with dead or insufficiently charged batteries, or if the batteries are not installed properly. Devices powered solely by AC power will not function properly if their AC power supply is interrupted, however briefly, or cut off for any reason.
- Sudden and accidental water leaks from plumbing systems can occur at anytime and at any point in the supply line system. Leaks that occur in areas not immediately monitored by or in very close proximity to an active water leak sensor may not be quickly detected or may not be detected at all by the leak detection system.
- This equipment, like other electrical devices, is subject to component failure. Even though this equipment is tested at the factory prior to shipment and designed to last as long as 10 years when properly maintained, the electronic components could fail at any time.
- The automatic valve is designed to provide positive shut-off of the plumbing water supply when connected to live AC power. However if the valve becomes corroded or blocked due to normal sediment or other internal water line material build-up, the valve may not function properly when needed.
- The most common reason an automatic water shut-off system fails to perform when needed is due to inadequate maintenance. DynaQuip Controls recommends this system be tested a minimum of once every six months to verify the automatic valve and both sensors are working properly.

Optional Parts and Accessories

The WaterCop LeakStop system is a self contained system without optional accessories. Limited repair parts are available by calling customer service at 800.545.3636

Repair parts include:

- The complete LeakStop control box
- Replacement brass ball valve
- Sensor cord and probe (if damaged). The maximum number of sensors the LeakStop is capable of supporting is 2 (two).

Warranty and Exclusions

DynaQuip Controls Corporation, 10 Harris Industrial Park, Saint Clair, Missouri 63077, warrants its WaterCop electric valve actuator and electronic sensor and electronic system control components against defects in material and workmanship for a period of two (2) years from the date of original shipment. DynaQuip Controls warrants its WaterCop brass ball valve mechanical component against defects in material and workmanship for the life of the component. In the event that such defects appear within the warranty period, DynaQuip Controls will, at its option, and upon written notification thereof and substantiation that, the product(s) have been stored, installed, maintained and operated in accordance with DynaQuip's recommendations and standard industry practice, repair or replace the product without charge. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation, modification, or disassembly at any place other than the point of original manufacture. This shall constitute the exclusive remedy for breach of warranty, and DynaQuip Controls shall not be responsible for any incidental or consequential damages, including, without limitation, damages or other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemicals, weather, or any other circumstances over which DynaQuip Controls has no control. DYNAQUIP CONTROLS MAKES NO OTHER WARRANTIES EXPRESS OR IMPLIED EXCEPT AS PROVIDED BY THIS LIMITED WARRANTY.

The seller does not represent that the product; will prevent any property loss by sudden or accidental discharge of water from plumbing systems into living area of a residential dwelling; may not be compromised or circumvented; or that the product will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained automatic water shut-off system may only reduce the risk of a sudden and accidental water loss event resulting in significant water damage and is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss as a result. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE OR OTHER LOSS BASED ON A CLAIM THE PRODUCT FAILED TO TURN OFF WATER SUPPLY OR GIVE WARNING OF A POTENTIAL WATER LOSS EVENT. HOWEVER, IF SELLER IS HELD LIABLE, WHETHER DIRECTLY OR INDIRECTLY, FOR ANY LOSS OR DAMAGE ARISING UNDER THIS LIMITED WARRANTY OR OTHERWISE, REGARDLESS OF CAUSE OR ORIGIN, SELLER'S MAXIMUM LIABILITY SHALL NOT IN ANY CASE EXCEED THE ORIGINAL PURCHASE PRICE OF THE PRODUCT, WHICH SHALL BE THE COMPLETE AND EXCLUSIVE REMEDY AGAINST THE SELLER. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. No increase or alteration, written or verbal, to this warranty is authorized.

DynaQuip Controls Corporation reserves the right to change or improve the design of any DynaQuip Controls manufactured product without assuming any obligations to modify product previously manufactured or sold.


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