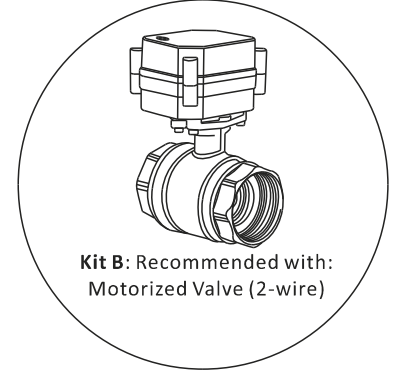
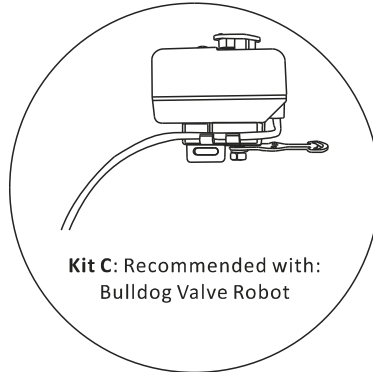


Kit A: Recommended with:
Gas/Water Valve Manipulator



Kit B: Recommended with:
Motorized Valve (2-wire)



Kit C: Recommended with:
Bulldog Valve Robot

YOLINK X3

Valve Controller

YS5001-UC

Installation & User Guide

(for Kit A/Kit B/Kit C)

Rev 1.0

Hello! Eric with YoLink, here. I want to thank you for your purchase and for placing your trust in YoLink for your smart home needs.

Before I worked here, I was a customer! I found the products and customer service to be top-notch. Today, I am responsible for many of the things that enhance your experience with YoLink products and services, including the manuals and videos. We are constantly improving, so that we can honestly say:

We strive to provide the best smart home products, at the best pricing, with the industry's **best customer support**.

I want your own experience to be as positive as mine! If you have any questions or problems send up your system, **please give us a chance to assist you**.

You can use our online chat service by scanning the QR code below or email us 24/7 at **service@yosmart.com**.

You can also reach us on our website at www.yosmart.com/support-and-service or by scanning the QR code, on the right.



Support & Service



Online Chat

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Revised: 02/10/2022

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A. In the Box

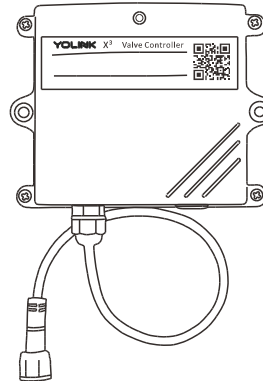
A-1. Kit A - YS5001-UC X3 Valve Controller & Valve Manipulator

Box 1

A. X3 Valve Controller

B. Quick Start Guide

A.



B.

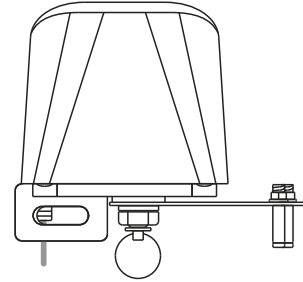


Box 2 (Optional Accessory)

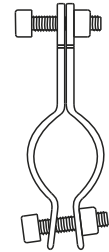
Type A

- A. Gas/Water Valve Manipulator
- B. Bracket (2) (with 2 mounting bolts)

A.



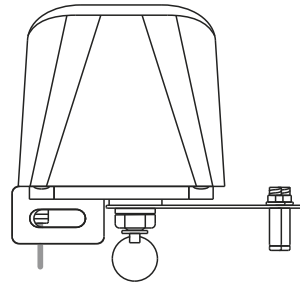
B.



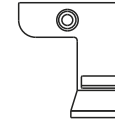
Type B

- A. Gas/Water Valve Manipulator
- B. Bracket (*with threaded hole*)
- C. Bracket (*without threaded hole*)
- D. Stainless Steel Hose Clamp
- E. Mounting Screw

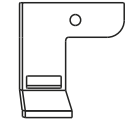
A.



B.



C.



D.



E.

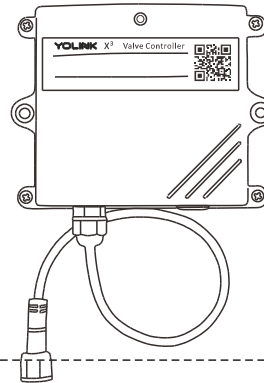


A-2. Kit B - YS5001-UC X3 Valve Controller & Motorized Valve

Box 1

- A. Valve Controller
- B. Quick Start Guide

A.



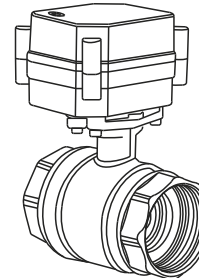
B.



Box 2 (Optional Accessory)

- A. Motorized Valve (DN15/DN20 /DN25/DN32, 2-wire)

A.

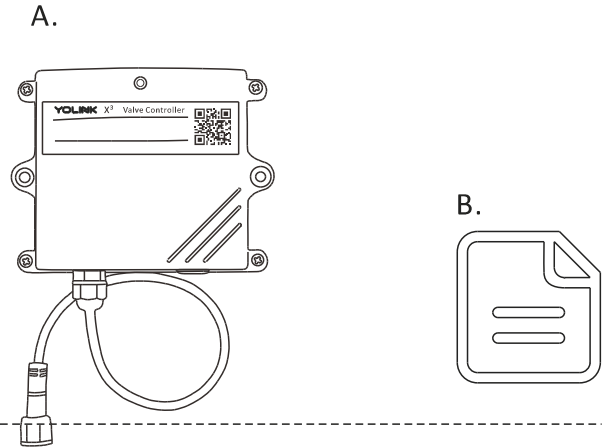


A-3. Kit C - YS5001-UC X3 Valve Controller & Bulldog Valve Robot

Box 1

A. Gas/Water Valve Controller

B. Quick Start Guide

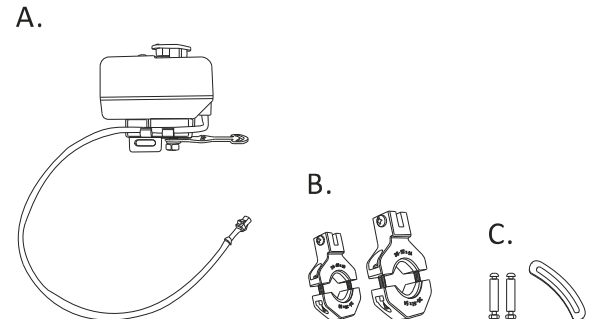


Box 2 (Optional Accessory)

A. Bulldog Valve Robot

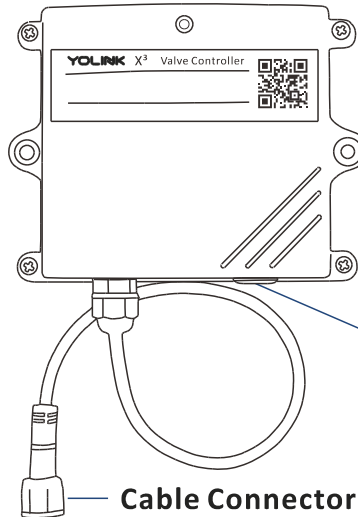
B. Brackets (24-36 x 50 & 36-52 x 54)

C. Handle-supporting Bolt (2) & Bottom Support Bracket



B. Introduction

The YoLink X3 Valve Controller is a smart device that can control a 12 VDC ball-type (only) gas or water valve manipulator remotely with the YoLink app on your smartphone or tablet or using the SET button on the device. Pressing "Open" or "Close" on the app will mechanically rotate the handle 90 degrees in the appropriate direction, to close or open the valve.



Mounting Holes

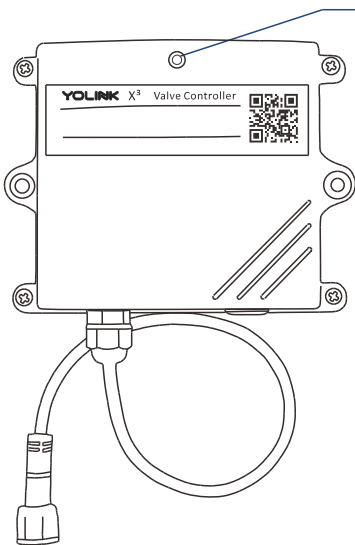
Secure the controller to the wall, using these two holes. Mount the controller oriented as shown, with the cable at the bottom










SET Button (Status LED)

Press once to open or close the valve

Cable Connector

The LED light indicates the current status of the X3 Valve Controller:



-  **Blinking Red Once, Then Green Once**
Device turned on
-  **Blinking Red And Green Alternately**
Restoring to Factory Defaults
-  **Blinking Green Once**
Turn on the manipulator/valve
-  **Blinking Green**
Connecting to Cloud
-  **Slow Blinking Green**
Updating
-  **Fast Blinking Green**
Establishing Connection with YoLink System (YoLink *Control*)
-  **Blinking Red Once**
Turn off the manipulator/valve or device is connected to the cloud and is functioning normally
-  **Fast Blinking Red**
Removing Connection to YoLink System (YoLink *Control*)
-  **Fast Blinking Red Every 30 Seconds**
Batteries are low; please replace the batteries (see page 68)

C. Set Up

C-1. Set Up - First-Time YoLink Users *(Existing users proceed to C-2. Add Device, next page)*

- 1 Download the YoLink app through Apple App Store or Google Play Store (Search in the store or use the QR code on the right)



Available on the App Store



Get it on Google Play



Apple iPhone or tablet that is iOS 9.0 or higher, or an Android phone or tablet that is Android 4.4 or higher

- 2 Log in to the YoLink app



Create a new account if required



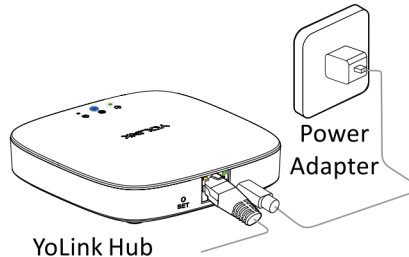
1. Make sure your Hub is connected to the internet (green LED indicator is blinking, blue LED indicator is always on)

2. [Ethernet patch cable](#) (included) to your network (router, switch, etc.), **recommended**. Otherwise connect your Hub to your home 2.4 GHz Wi-Fi network (only when necessary). Refer to the Hub set up manual for more information:




YS1603-UC
User Guide

- 3 Either the YoLink Hub or SpeakerHub is required to set up your X3 Valve Controller. Your hub should be set up before starting the installation of this device



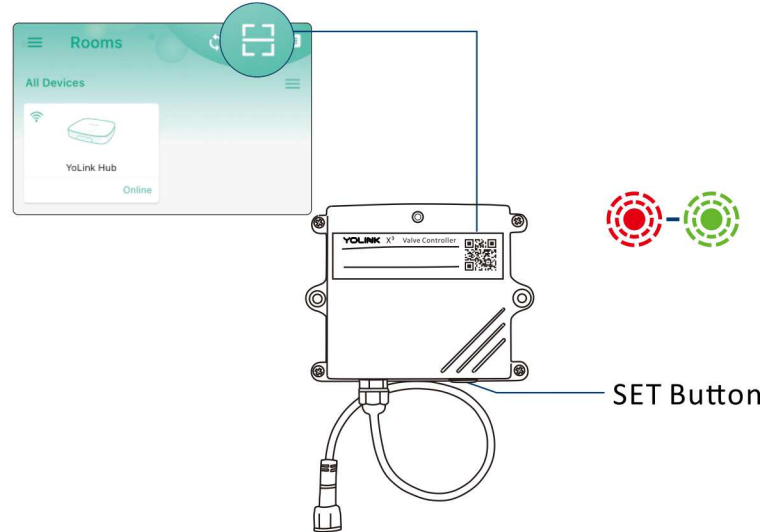
C-2. Add Device

- 1 Tap “” icon, then scan QR Code on the device. Follow the steps to add the device



You must press “Bind Device” to pair the device to your account

- 2 Press the SET button once to turn on the device after installation. The Status LED will blink red once, then green several times, indicating your device has connected to the cloud and is ready to use



1. You will need to press the SET button once again if the device failed to connect to the cloud
2. Pressing the SET button at any other time after this initial process will result in the LED blinking red/green once, only. This indicates the device is connected to the cloud and is functioning normally
3. If the red LED does NOT blink as noted this may indicate a problem with the controller. Please see the troubleshooting section and the contact section for technical support

D. Installation

D-1. Install with Ball-type Manipulator (Type A)

**Rocker Arm and
Handle-supporting Bolt**

Output Shaft of Manipulator

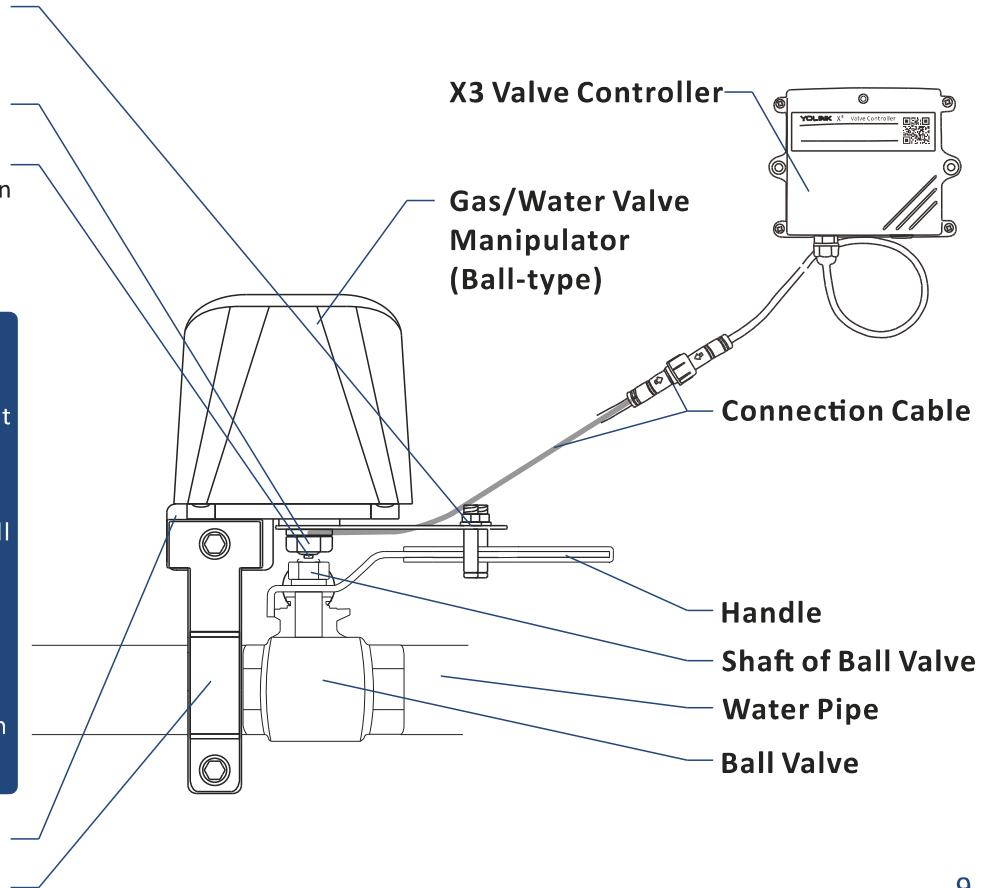
Clutch

Hold the ring and keep pulling down on the clutch, you can rotate the handle manually to open or close the valve

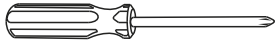
!

1. The handle must rotate at an angle of 90 degrees, otherwise the valve cannot be fully opened or closed
2. Manually opening or closing (only) the valve will cause the wrong valve position to be indicated in the app. To prevent this, manually return the valve to the position indicated in the app

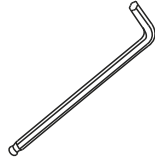
**Mounting Ear
Brackets**



1. These Tools may be Required



Phillips Screwdriver



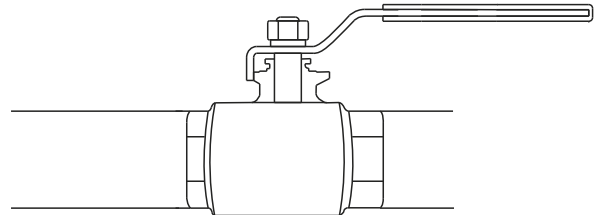
Allen Wrench -
Number 5 Metric



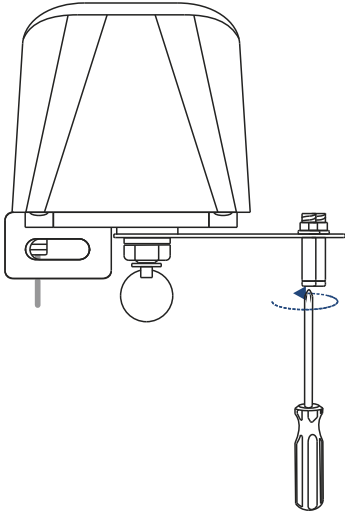
1. The manipulator has moving parts and must not be too close to the wall or other obstructions. Ensure at least 1 inch clearance between the manipulator and the wall or any objects, pipes, etc.
2. The manipulator should be installed in a position convenient for manual operation

2. Get Ready

- 1 Turn the ball valve to OPEN status (keep the center axis of ball valve aligned to the water pipe)



- 2 Loosen the two screws on the two handle-supporting bolts



- 3 Loosen the brackets into two separate parts (carefully place the two bolts aside)



3. Begin Installation

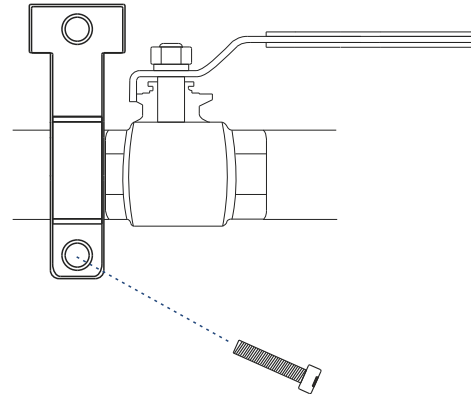


1. The manipulator bracket should be installed as close to the ball valve as possible (on the ball brass rather than on the pipe, if possible)
2. Ensure the clutch and rocker arm can be moved freely

- 1 Insert the screw through the bottom of brackets with the non-threaded hole (the threaded hole should be facing inside, *do not tighten the screw*)



The brackets are intentionally offset. Do not attempt to bend or adjust the brackets

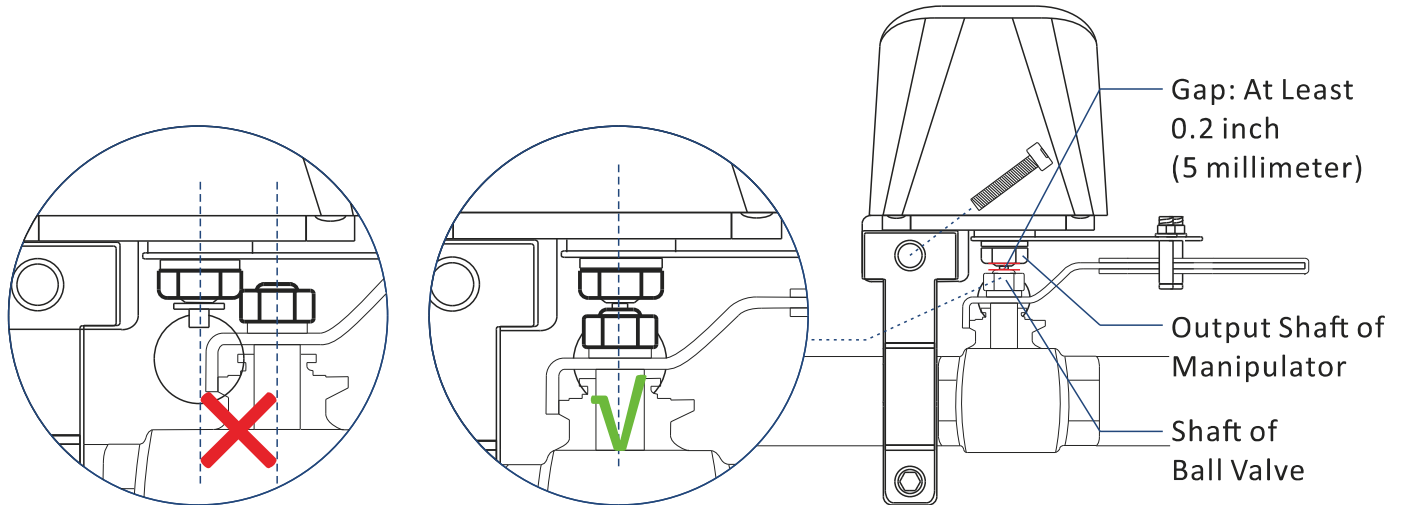


- 2 Insert the screw through the top of the brackets and the mounting ear of the manipulator with the non-threaded hole (*place the two handle-supporting bolts on either side of the handle*)

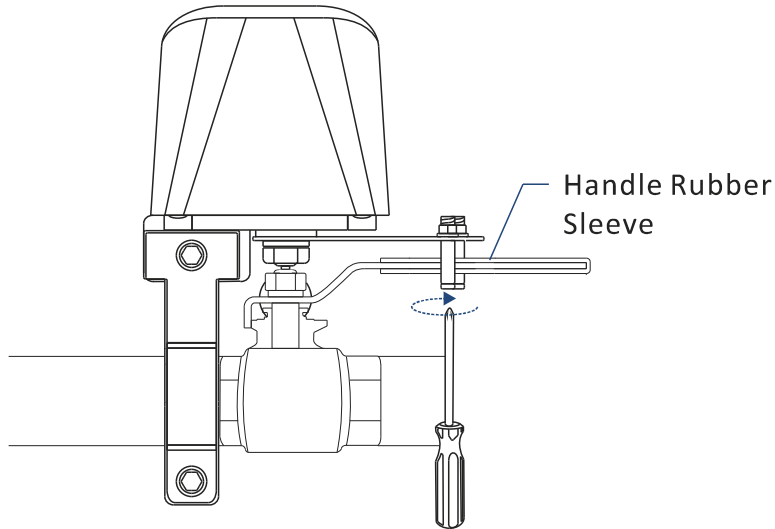
1. Keep the center axis of the output shaft of manipulator aligned with the center axis of the shaft of ball valve



2. Keep at least 0.2 inch (5 millimeter) gap between the output shaft of manipulator and the shaft of ball valve



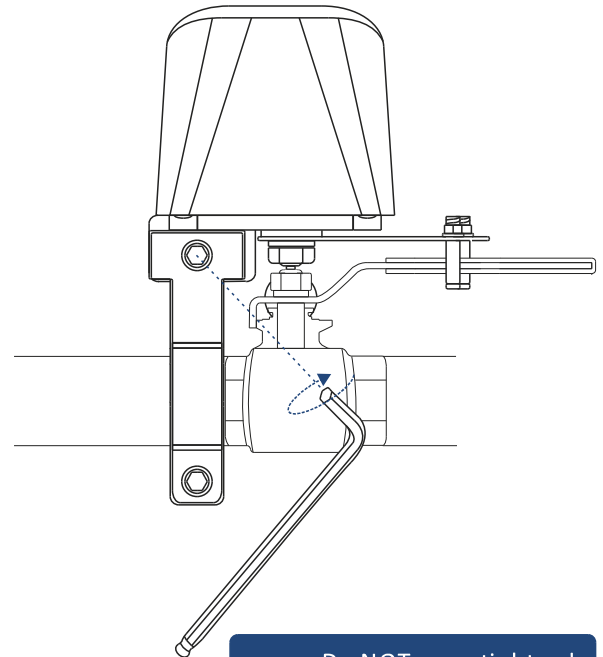
- 3 Securely tighten the two screws on the two handle-supporting bolts using a Phillips screwdriver



1. The handle's rubber sleeve may affect the tightness of the rocker arm and the handle. It is recommended to remove it as needed

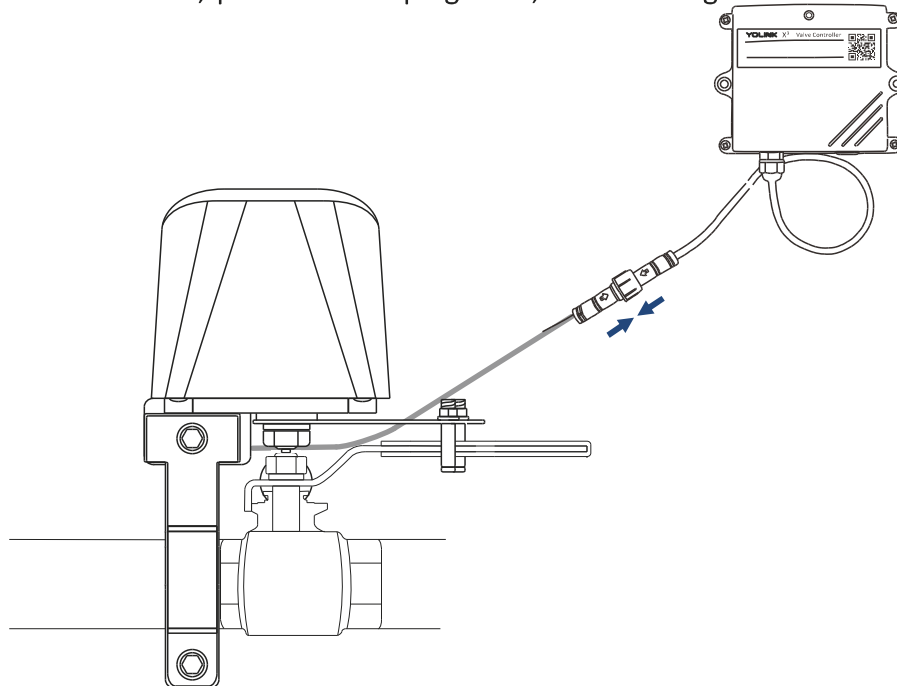
2. The two handle arm pins should roll freely but snug to the handles needed

- 4 Securely tighten the two screws on the brackets using a Number 5 metric Allen wrench



Do NOT over-tighten! Over-tightening may crush or rupture the pipe

- 5 We suggest not permanently installing the X3 Valve Controller until both the controller and the valve manipulator have been tested and they work properly
- 6 Connect the manipulator cable to the X3 Valve Controller Cable
- 7 After the connection, proceed to page 46, for testing



D-2: Install with Ball-type Manipulator (*Type B*)

**Rocker Arm and
Handle-supporting Bolt**

Output Shaft of Manipulator

Clutch

Hold the ring and keep pulling down on the clutch, you can rotate the handle manually to open or close the valve

1. The handle must rotate at an angle of 90 degrees, otherwise the valve cannot be fully opened or closed
2. Manually opening or closing (only) the valve will cause the wrong valve position to be indicated in the app. To prevent this, manually return the valve to the position indicated in the app

Mounting Ear

Brackets

Stainless Steel Hose Clamp

Adjustable diameter: 0.83 - 1.73 inch

**X3 Valve
Controller**

**Gas/Water Valve
Manipulator
(Ball-type)**

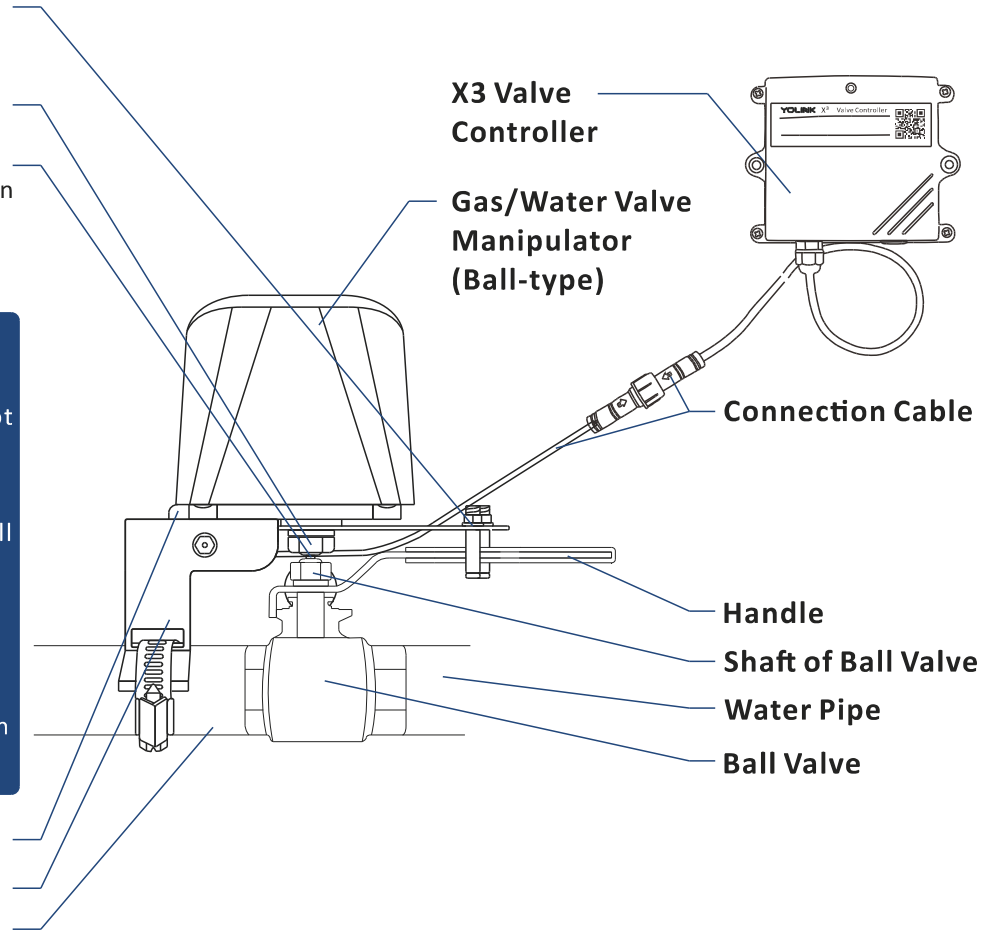
Connection Cable

Handle

Shaft of Ball Valve

Water Pipe

Ball Valve



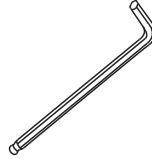
1. These Tools may be Required



Slotted Screwdriver



Phillips Screwdriver



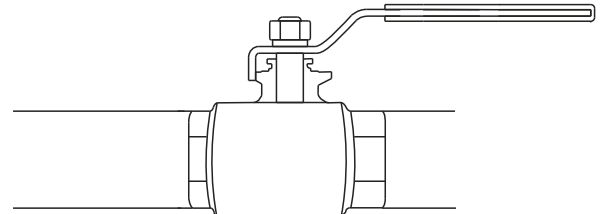
Allen wrench -
Number 5 metric



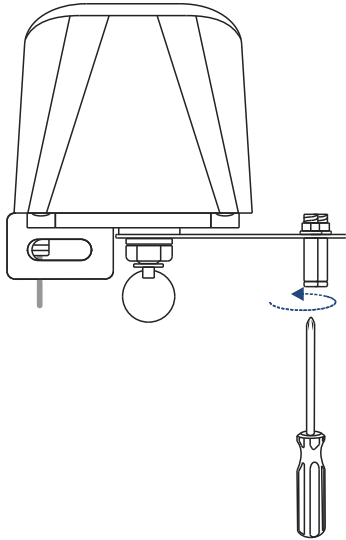
1. The manipulator has moving parts and must not be too close to the wall or other obstructions. Ensure at least 1 inch clearance between the manipulator and the wall or any objects, pipes, etc.
2. The manipulator should be installed in a position convenient for manual operation

2. Get Ready

- 1 Turn the ball valve to OPEN status (keep the center axis of ball valve aligned to the water pipe)

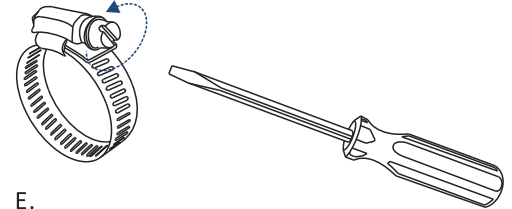


- 2 Loosen the two screws on the two handle-supporting bolts



Adjustable diameter:
0.83 - 1.73 inch

- 3 Loosen the stainless steel hose clamp using a slotted screwdriver, insert the hose clamp through the slots in the brackets (*positioning the screw mechanism on the easiest side to reach for tightening*)



E.



(on the valve body rather than on the pipe, if possible)

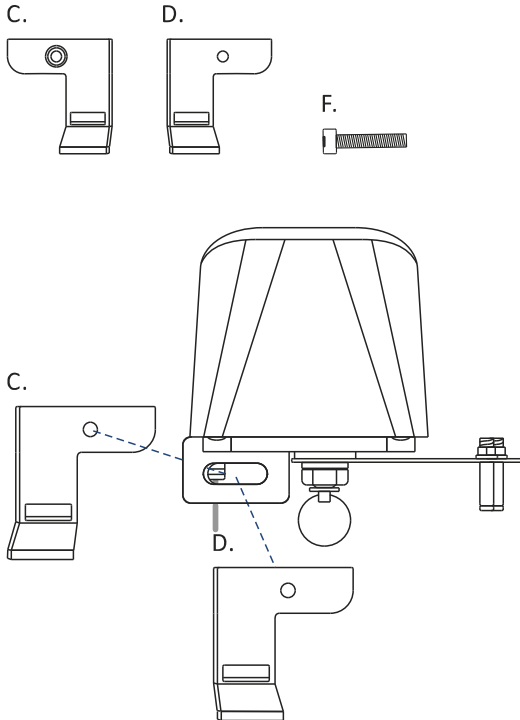
3. Begin Installation

1. The manipulator bracket should be installed as close to the ball valve as possible

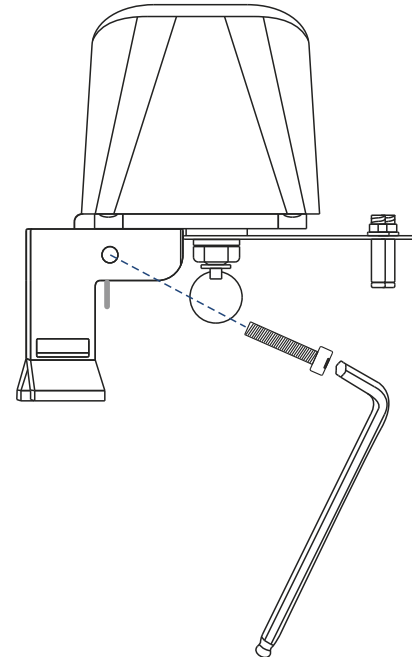


2. Ensure the clutch and rocker arm can be moved freely

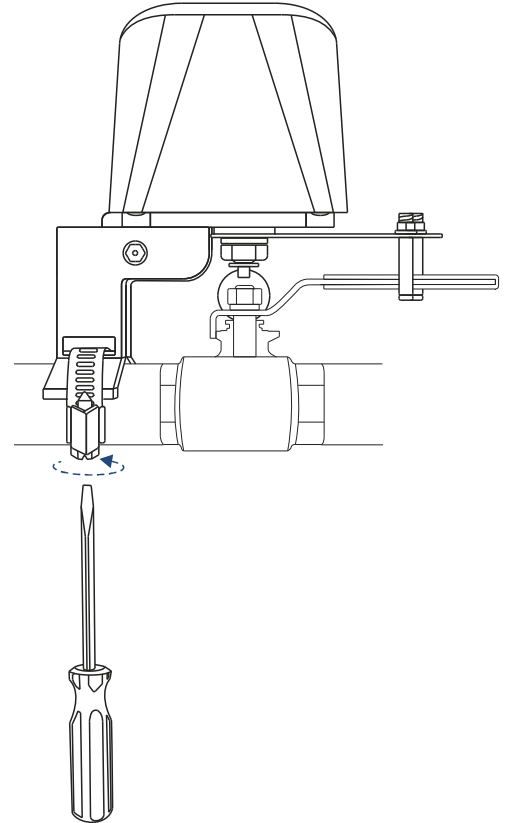
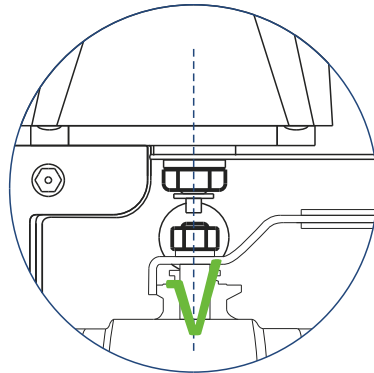
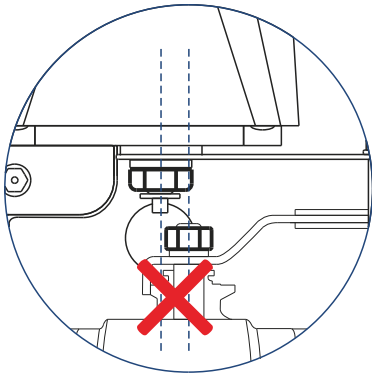
- 1 Install the bracket to the valve operator through the slot on the bottom (*The bent tabs should be facing outward*)



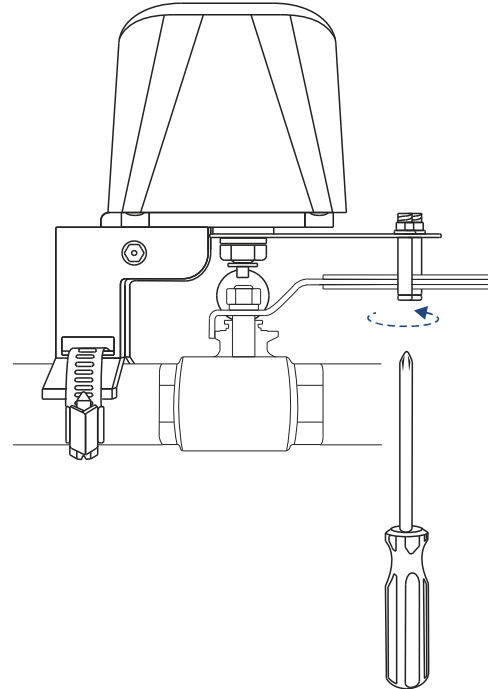
- 2 Insert the screw through the bracket with the larger, non-threaded hole and secure the screw into the threaded hole in the second bracket using a Number 5 metric allen wrench



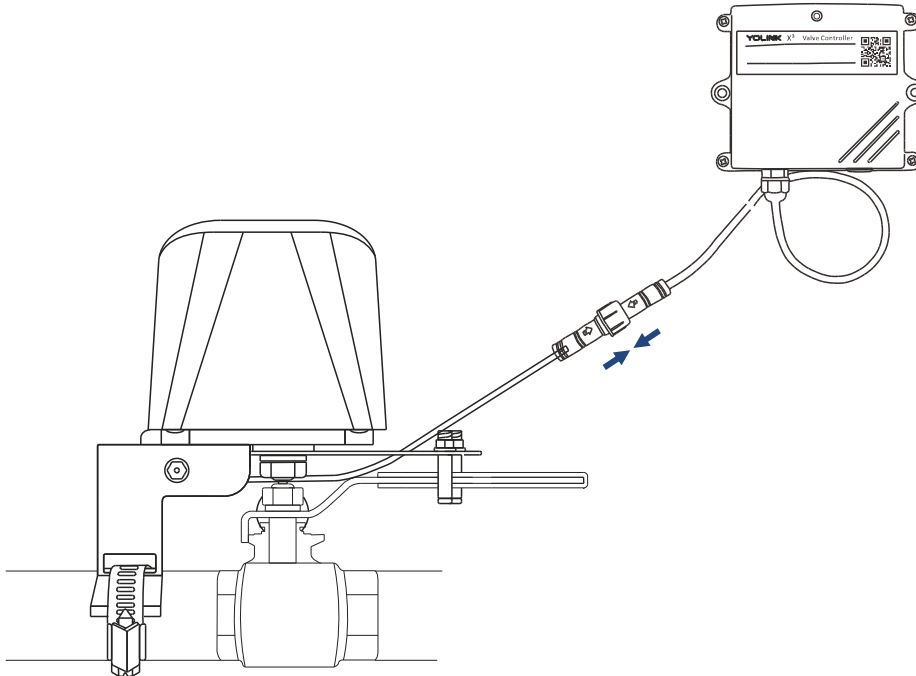
- 3 Place the valve operator on the water pipe valve so that the hose clamp is around the base of the ball valve on the opposite side from the lever
- 4 Secure the hose clamp screw using a slotted screwdriver until the valve operator will just stay in place



- 5 Keep pulling down the clutch, rotate the valve operator so that the two handle-supporting bolts are on either side of the valve handle. Close these handle-supporting bolts so that they hold the valve handle between them. Tighten securely using a Phillips screwdriver

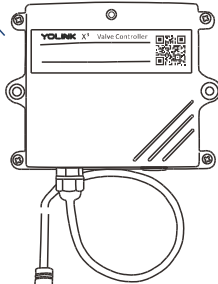


- 6 We suggest not permanently installing the X3 Valve Controller until both the controller and the valve manipulator have been tested and they work properly
- 7 Connect the manipulator cable to the X3 Valve Controller Cable
- 8 After the connection, proceed to page 46, for testing

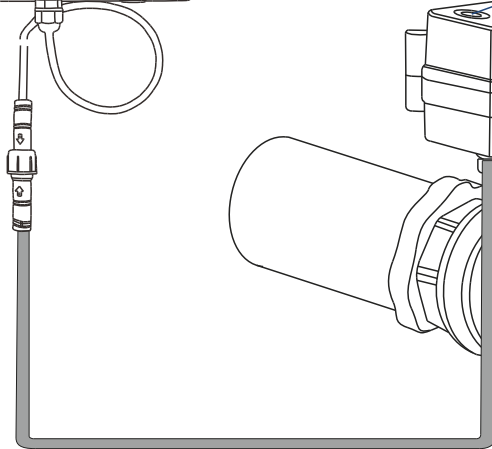


D-3: Install with Ball-type Motorized Valve (2-Wire)

X3 Valve Controller

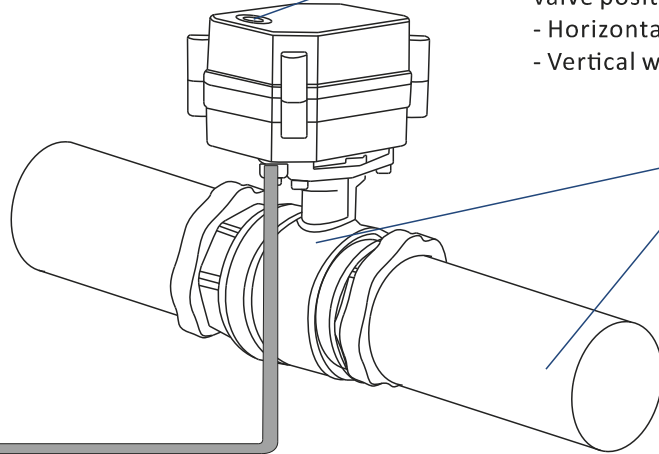


Connection Cable



Position Indicator

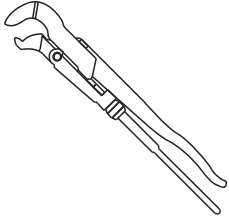
Indicator visually shows the valve position
- Horizontal with the pipe = Open
- Vertical with the pipe = Closed



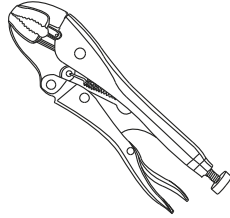
Motorized Valve

Water Pipe

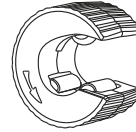
1. These Tools or Parts may be Required



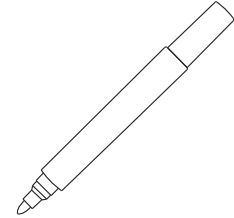
Pipe Wrench



Locking Pliers



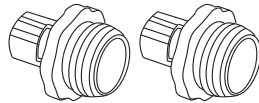
Copper Pipe Cutter



Aqueous Marker



Teflon (TM)
Waterproof
Sealing Tape



NPT Water Pipe
Connector (2)
(Size appropriate
for pipe)



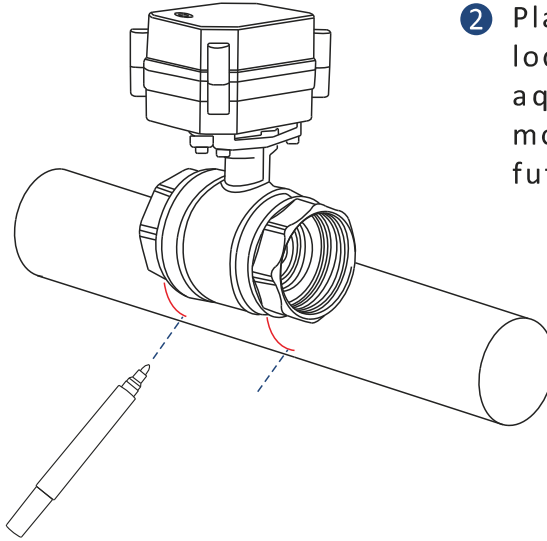
Note: YoSmart recommends SharkBite brand pipe connectors, for copper, CPVC and PEX pipe applications. Visit <https://www.sharkbite.com/products/brass-push-male-adapter> for more information

2. Important !!

- These instructions cover installing the motorized valve on copper pipe, using threaded fittings. Assumptions are made you or the installer of the valve possess the required skills and tools to perform this installation safely:
 - a) If soldering the fittings, instead, is required or desired
 - b) If your installation involves CPVC or PEX pipe, you have the appropriate connectors and tools, to adapt the valve to your application
- If you are not comfortable with working with plumbing tools and pipe, please consult or hire a professional plumber
- Please refer to the valve manufacturer's installation guide for more information:
<https://m.media-amazon.com/images/I/81iA78dQJbL.pdf>
- If you have questions at any time please contact us. Refer to the contact information just after this manual's cover page

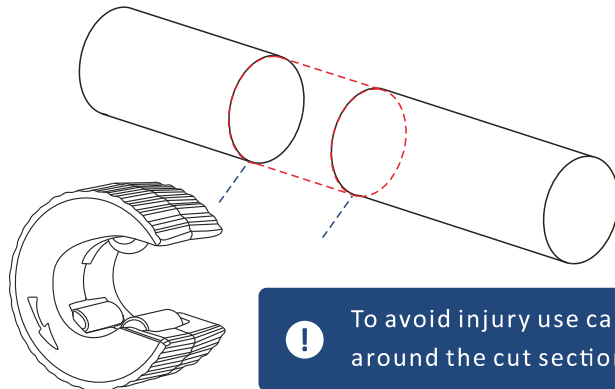
3. Get Ready

- 1 Shut-off the main valve of the water pipe, then turn on a tap to run out the water left in the water pipe



- 2 Place the motorized valve at the desired location, then mark an outline (with a aqueous marker, tape, etc.) of the motorized valve on the water pipe for future reference

Local plumbing/building codes may require a standard non-electric or non-motorized valve for the main water shut-off; do not replace a non-electric shut-off valve with this motorized valve without first consulting with the applicable code authorities. If installing this valve to shut off the main water line, we suggest installing this adjacent to the (non-electric) shut-off valve

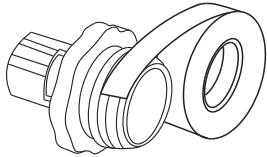


To avoid injury use care when working around the cut sections of pipe

- 3 Cut the water pipe through the mark using a copper pipe cutter, then remove the cut section of the water pipe
- 4 Wipe off the cut section of pipe with a clean cloth

4. Begin Installation

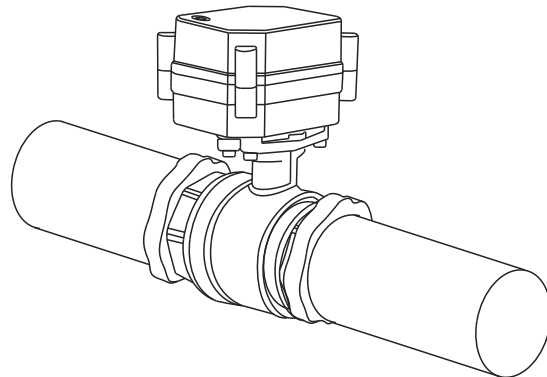
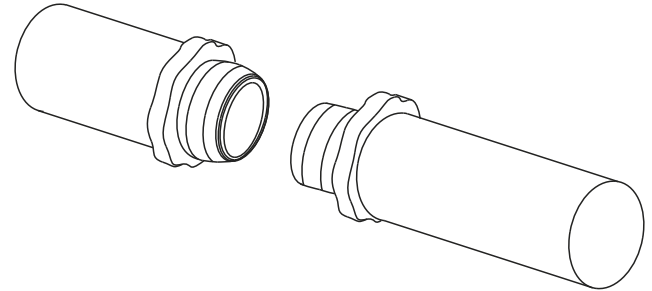
- 1 We recommend the use of Teflon tape to ensure a good seal on the threading, as shown in the figure



- 2 Install the connectors on the cut pipe ends, as shown, and tighten them securely

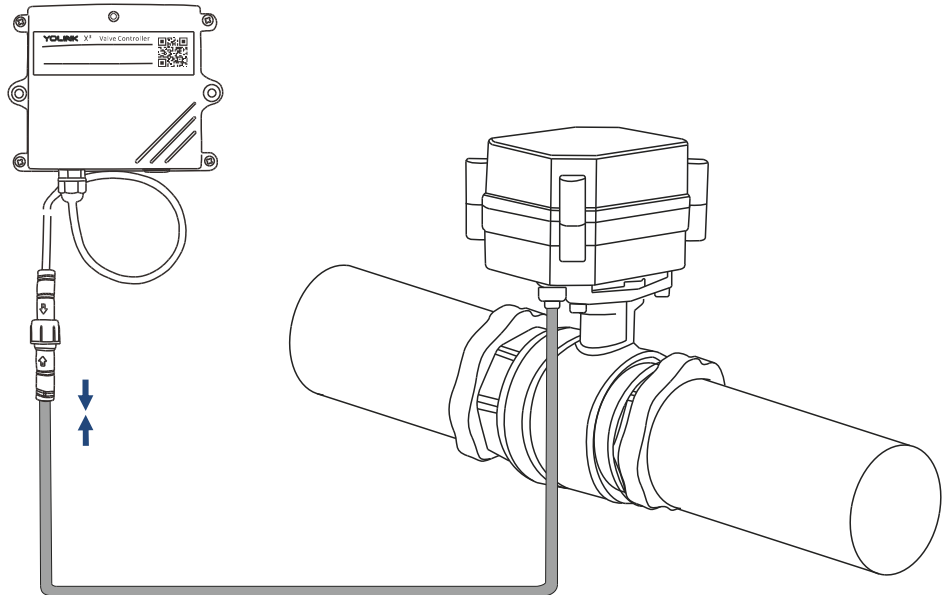


To prevent leaks, the connectors must be tightened securely



- 3 Connect the motorized valve to the water pipe connector, then securely tighten the valve using a pipe wrench and a locking plier

- 4 We suggest not permanently installing the X3 Valve Controller until both the controller and the valve have been tested and they work properly. After the motorized valve is securely installed, connect the motorized valve cable to the X3 Valve Controller cable
- 5 After the connection, proceed to page 46, for testing



D-4: Install the Bulldog Valve Robot

Handle and Position Indicator

Rocker Arm and Handle-supporting Bolt

Output Shaft of Bulldog

Mounting Ear

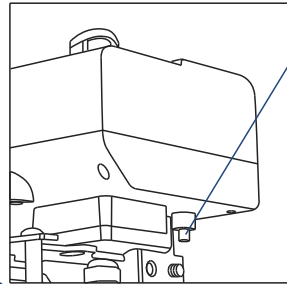
Brackets

Shaft of Ball Valve

Handle

Water Pipe

Ball Valve



Clutch Pin

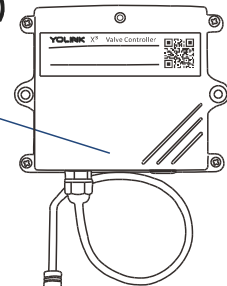
Push and hold the clutch pin and use the valve handle (recommended) or Robot handle to open or close the valve



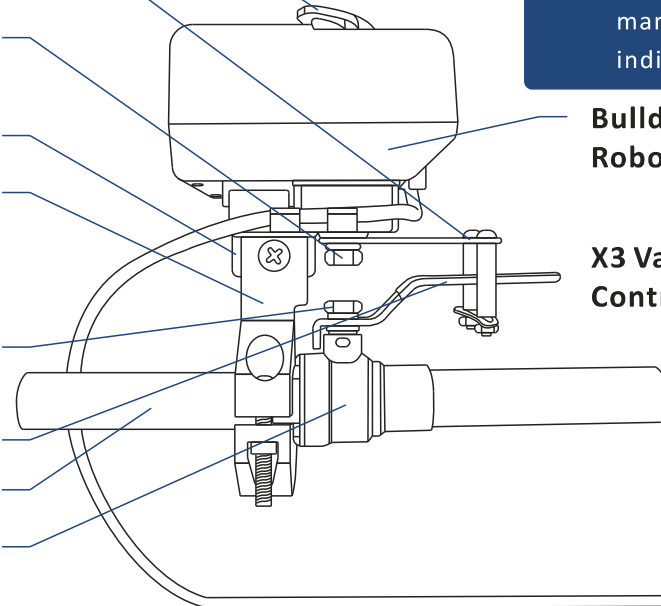
1. The handle must rotate at an angle of 90 degrees, otherwise the valve cannot be fully opened or closed
2. Manually opening or closing (only) the valve will cause the wrong valve position to be indicated in the app. To prevent this, manually return the valve to the position indicated in the app

Bulldog Valve Robot (Ball-type)

X3 Valve Controller



Connection Cable



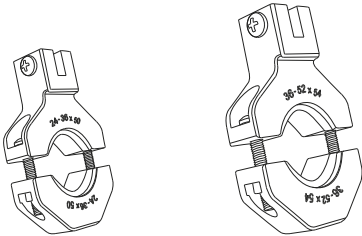
1. Tools Required



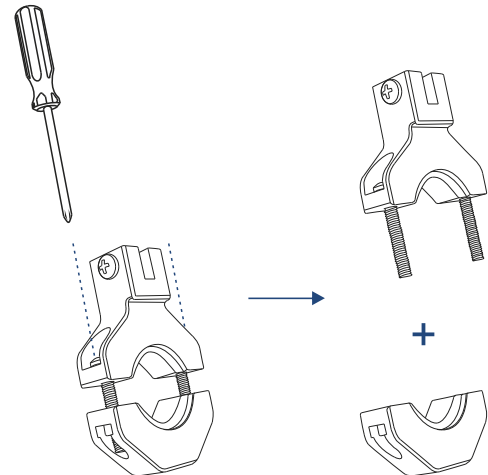
Phillips Screwdriver

2. Begin Installation

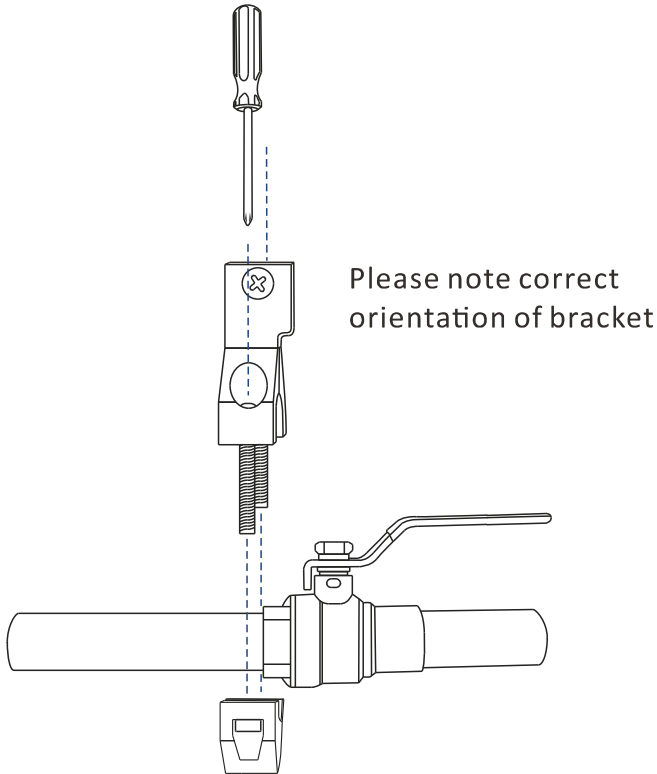
- 1 Attach the bracket
 - Select the suitable bracket for your installation: 24-36 x 50 or 36-52 x 54



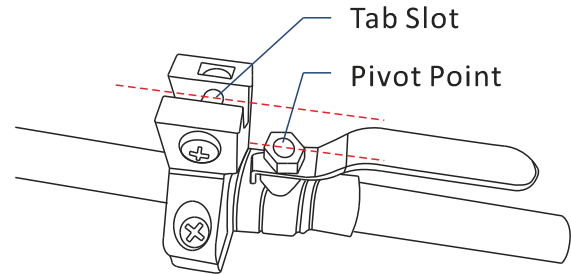
- Loosen the two screws to separate the bracket into two pieces as shown



- Place the upper bracket and lower bracket on the valve, as shown, and loosely tighten the screws

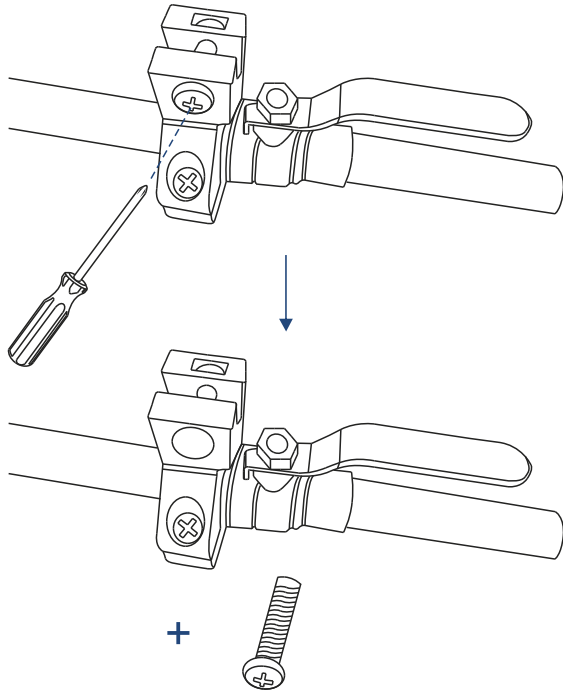


- Position the bracket so that the tab slot is aligned with the valve pivot point

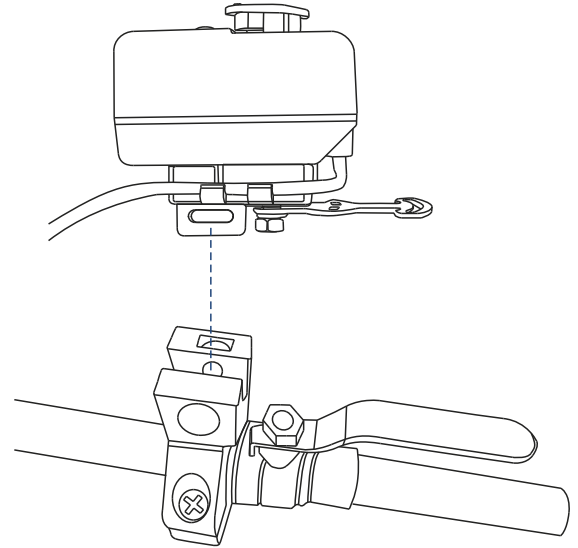


NOTE: If your larger bracket has two screw openings, only one screw is required, but both screws can be installed if it still allows for proper placement and adjustment of the Bulldog (install the Bulldog using one screw at first, and add the second screw only if adjustments are correct. In some cases, installing both screws will result in improper alignment)

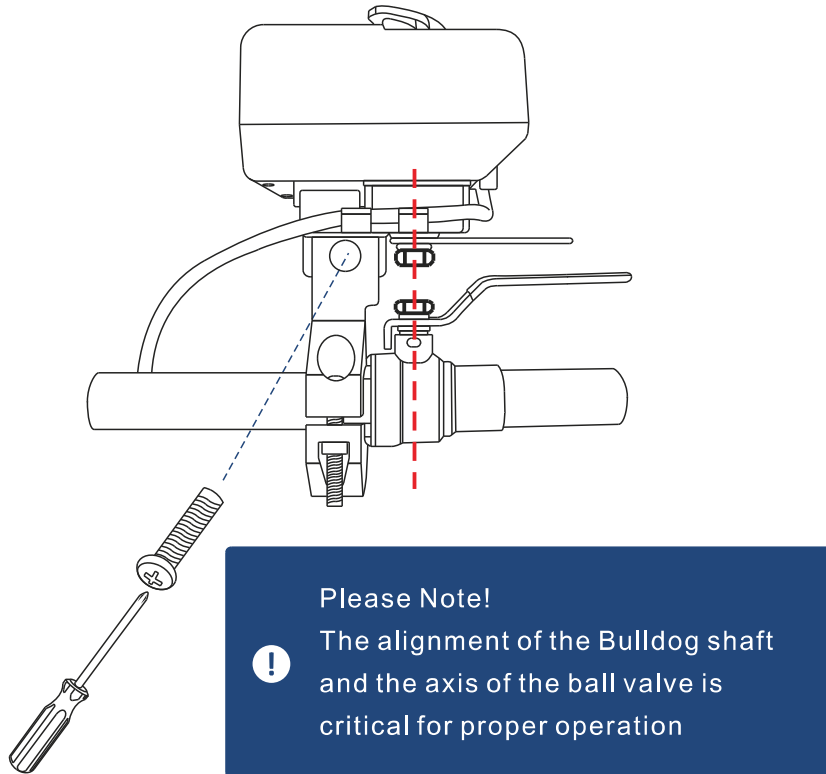
- 2 Attach the Bulldog Valve Robot
- Momentarily remove the screw from the tab slot, as shown



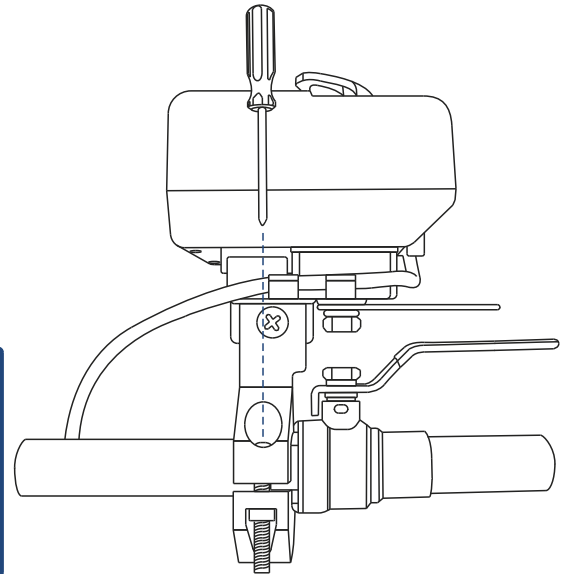
- Attach Valve Robot to the bracket



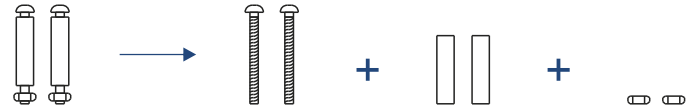
- Keeping the center axis of the Valve Robot's shaft aligned with the ball valve shaft (as indicated by the red dashed line), reinsert and tighten the tab slot screw



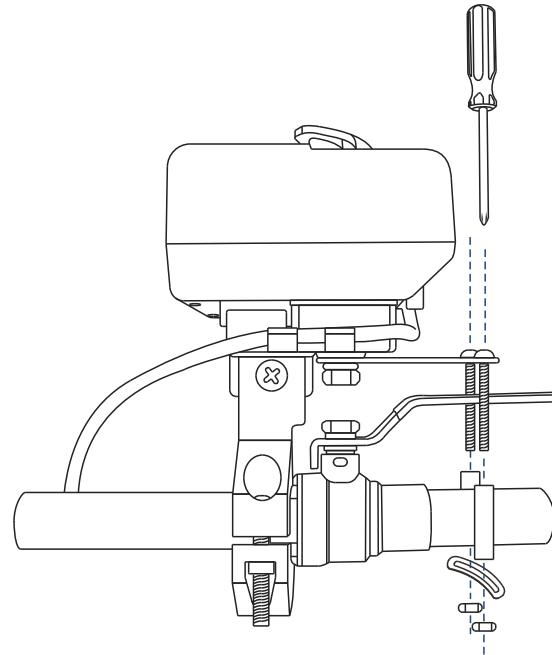
- Securely tighten the two screws on the bracket. Gently tug on the Bulldog, confirming that it is firmly secured to the valve



- Remove the nuts and collars from the two handle supporting bolts as shown

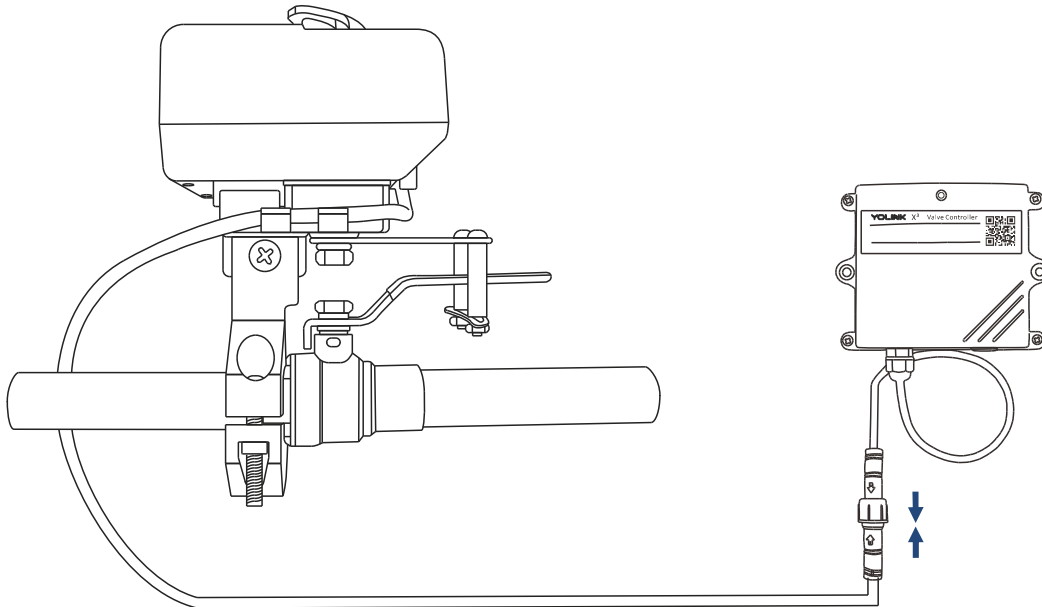


- Place the bolts in the slot on the rocker arm, with one on each side of the valve handle, as shown
- Put the collars back on the bolts
- Next, while holding the bolts and collar pieces in place, attach the bottom supporting bracket as shown. Then, attach and loosely tighten the nuts to the bolts
- Finally, position both bolts and collars so that they are snug against each side of the valve lever



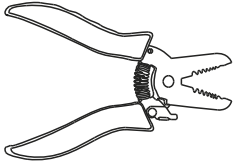
3 Connect the Bulldog Valve Robot to the Controller

- We suggest not permanently installing the X3 Valve Controller until both the controller and the valve manipulator have been tested and they work properly
- Connect the Bulldog Valve Robot cable to the X3 Valve Controller cable
- After the connection, proceed to page 46, for testing

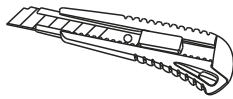


D-5. Instructions for installing the X3 Valve Controller for use with an existing Valve Manipulator (Non-smart, 12VDC only!)

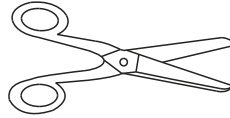
1. These Tools may be Required



Wire Cutter/Stripper



Utility Knife



Scissors



Wire Nuts
/Connectors (2)



Electrical Tape



1. Your existing manipulator must be 2-wire, 12 VDC, non-smart, and functional
2. Wire nuts (twist-on connectors) are the recommended wire splicing method. Other methods may be acceptable as long as they provide a secure electrical connection, with no exposed conductors

2. Get Ready

- ① Remove power from the manipulator by disconnecting the connection cable
- ② Examine the connector on the manipulator connection cable. If compatible with the controller's connection cable connector, connect the two cables together and proceed to page 46