

# **INSTALLATION AND OPERATING GUIDE**



\* IMPORTANT \*
PLEASE READ INSTRUCTIONS AND VERIFY PARTS
BEFORE INSTALLING THE SYSTEM.

Do not connect to an irrigation system that is not protected by an approved back flow prevention device such as a pressure vacuum breaker or reduced pressure zone back flow preventer.

Do not install if pressure exceeds 80 PSI

Follow all local plumbing codes

Use only with non-hazardous products

Minimize exposure to direct sunlight to maximize service life

Protect against impact from foreign objects

All EZ-FLO systems have been specifically designed and engineered to be installed by a professional irrigation or landscape contractor. Improper installation or use could cause risk of water contamination due to back flow or tank rupture. Failure to follow all safety instructions and warnings could result in serious bodily injury. Improper installation or use of the system voids all warranties.

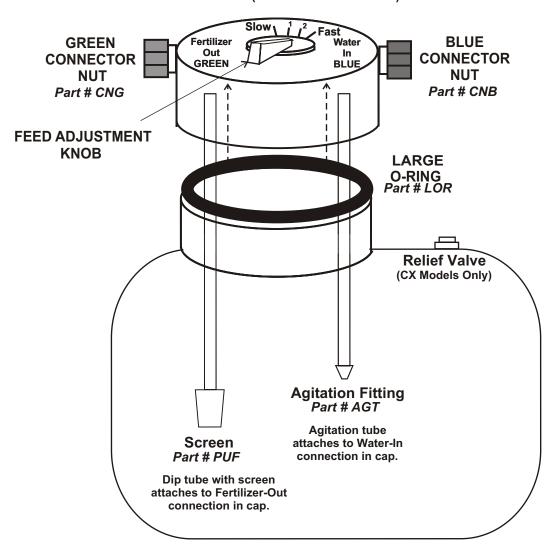
FOR ASSISTANCE OR FERTILIZER AVAILABILITY
CALL TOLL FREE 1-866-393-5601
OR VISIT OUR WEBSITE AT
www.ezflofertilizing.com

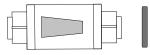
(Installer - Please leave this with property owner)

# TANK ASSEMBLY & PARTS LIST

TANK CAP

Part # CAPHP (Fine or Coarse Thread)





2 - Shut Off Valves
Part # SOV (with 2 washers)
(Included with X Models Only)



3 - Tubing Clamps
Part # RTC (1 Extra)



1 - Bypass Connector Part # BYP

5- Feet 1/4" Black Tubing Part # BT5

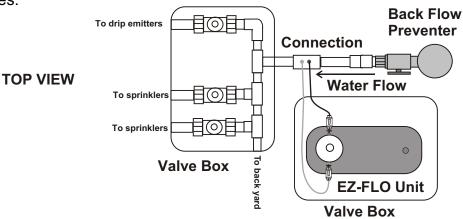
5- Feet 1/4" Clear Tubing Part # CT5

## **System Installation**

# Typical installation

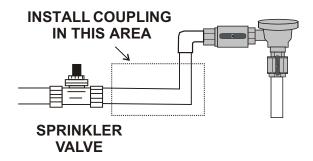
The system is normally installed in a valve box, connected to the main line of the irrigation system after the back flow preventer and before the sprinkler valves. One unit will feed both drip and sprinkler zones without changing any connections or nozzles. It will feed both the front and back

yard landscapes.

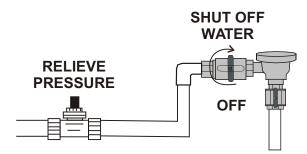


## Step 1 - Locate the installation point.

Connection must be made after an approved back flow prevention device. For proper performance, the tank cap should be above the installation point in the sprinkler line. The connection can be made either vertically or horizontally in the sprinkler main line.



**Step 2 - Shut off water by closing a valve** at the back flow preventer. Relieve the pressure from the line at the exhaust valve on the back flow preventer or by manually opening a sprinkler valve.



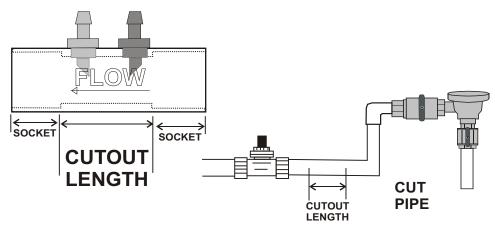
For a coupling connection - go to step 3. (Coupling connection required for installation in lines 1" and larger.)

For a drill and thread connection - go to step 6. (Drill and thread connection is for use only in lines 3/4" or smaller.)

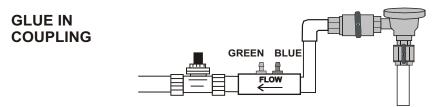
## **Coupling Connection (Recommended)**

## Required for lines 1" and larger - Coupling sold separately

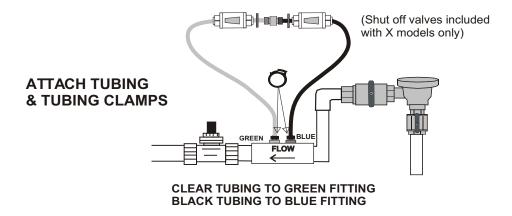
**Step 3 - Cut out** a **section of pipe** slightly larger than the cut out length of the coupling. Determine the length of the cutout by measuring the length from socket to socket inside the coupling. If the space for the coupling is cut too large it may prevent the pipe and the coupling from forming a solid seal.



**Step 4 - Glue the coupling** into the line. The pipe should fit into both ends of the coupling and seat against the the coupling socket. Be sure that the blue fitting is closer to the back flow preventer than the green fitting and that the flow direction of the water matches the flow direction arrow on the side of the coupling.



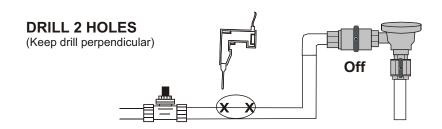
**Step 5 - Attach tubing** to the coupling. Press the black tube over the blue fitting on the coupling. Press the clear tube over the green fitting on the coupling. Put tubing clamps over the tubing below the barbed end of the fitting and squeeze them until they are tightly secured.



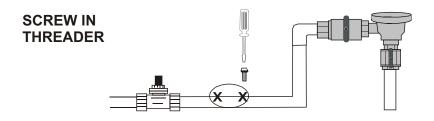
# **Drill and Thread Connection (Optional)**

## Only for use on lines 3/4" or smaller

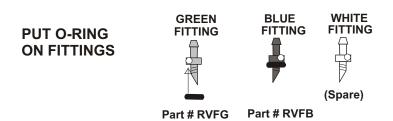
**Step 6 - Drill 2 holes** about 2" apart in sprinkler pipe with the drill bit provided (#21 Bit). Keep your drill perpendicular (90 degree angle) with your pipe whether the pipe Is vertical or horizontal.



**Step 7 - Screw in threader** until it moves freely and then unscrew. One threader is provided for each hole (10-32 thread). Threader can be used as a plug if system is removed. Use the O-Rings that are provided for a positive seal.



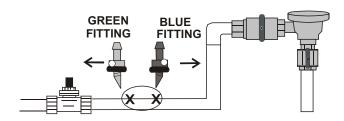
Step 8 - Place o-rings over the fittings, sliding them up the threaded end.



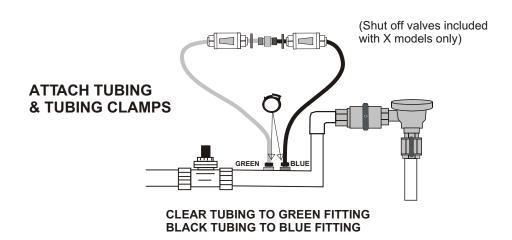
**Step 9 - Insert fittings** into pipe by screwing them into the tapped holes. Screw the blue fitting into the threaded hole closest to the back flow preventer and the green fitting in the threaded hole closest to the sprinkler valve. **The silver dot on the blue fitting must point into the water flow (toward the back flow preventer) and the silver dot on the green fitting must point away from the flow (away from the back flow preventer).** Do not over tighten or overstress fittings. The white fitting is provided as a spare.

#### Screw fittings into the line

The dot on the blue fitting points toward the back flow preventer The dot on the green fitting points away from back flow preventer



**Step 10 - Attach tubing** to the fittings. Press the black tube over the blue fitting. Press the clear tube over the green fitting. Put tubing clamps over the tubing below the barbed end of the fitting and squeeze them until they are tightly secured.



#### Fill Tank

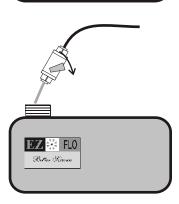
**Step 11 - Fill tank with fertilizer.** The EZ-FLO system can be filled with any liquid or water soluble fertilizer. Pour fertilizer directly into tank and then top off with water until all air is gone from the tank. Allow the water to overflow slightly.

Model	Tank Size	Recommended Amount
EZ001	1.5 Gallon	10 lbs dry or 1.5 gal. liquid
EZ003	2.5 Gallon	15 lbs dry or 2.5 gal liquid
EZ005	4.25 Gallon	25 lbs dry or 4.25 gal liquid
EZ010	9.4 Gallon	50 lbs dry or 9.4 gal liquid

# \* ALL TANK CAPACITIES ARE APPROXIMATE \*

# Fill tank with fertilizer

(Follow all product label precautions. Do not fill tank with anything other than non-hazardous products. Use a wide mouth funnel to assist in filling.)



Funnel Part # FNL

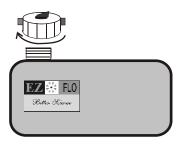
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Fill with water from shut off valve or back flow preventer until tank overflows.

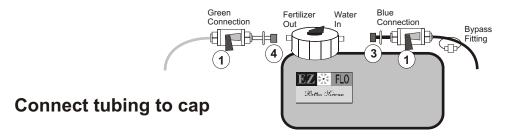
**Step 12 - Screw on tank cap** by turning in a clockwise direction until snug. Do not over tighten.

Screw tank cap onto tank



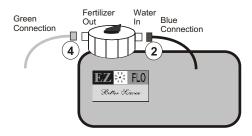
#### **Connect System to Irrigation Lines**

**Step 13 - Connect tubing to tank cap** by removing the blue and green connector nuts from the bypass fitting by turning them in a counter clockwise direction. (Attach bypass fitting to tubing for later use). Connect the blue connector nut to the water in side of the tank cap. Slowly open the water supply to the tank and allow water to run into the tank until all air is exhausted from cap. Connect the green connector nut to the fertilizer out connection on the cap. Turn the water on to the system.



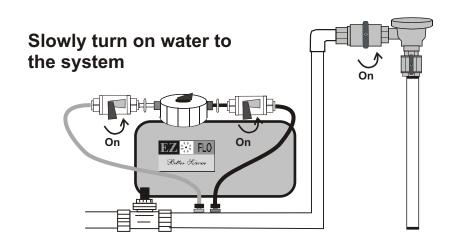
## System with shut off valves

- 1. Shut off valves in the off position
- 2. Turn water on at back flow preventer
- 3. Connect blue connector to water in connection on cap
- 4. Bleed air from tank by opening the valve slightly on the black line until air is purged
- 5. Connect green connector to fertilizer out connection on cap.



#### System without shut off valves

- 1. Valve on back flow preventer in the off position
- 2. Connect blue connector to water in connection on cap
- 3. Bleed air from tank by opening valve slightly on back flow preventer until air is purged (put your thumb over the clear line to avoid flow)
- 4. Connect green connector to fertilizer out connection on cap.



## **Set Flow Adjustment**

**Step 14 - Set the flow rate** by adjusting the adjustment knob to the proper setting. (See chart below)

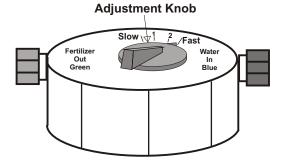
**Slow Setting -** is used for normal maintenance in regions with high watering requirements such as hot dry climates or sandy soils.

**#1 Setting -** is used for normal maintenance in regions with more moderate climates and moderate watering schedules where soils have good moisture retention.

**#2 Setting -** is used to encourage fast growth or to quickly improve the condition of a landscape in poor condition. The unit will empty more quickly and can be refilled more often.

**Fast Setting -** is used to for periodic fertilization. The unit will empty more quickly and can be refilled more often.

Setting	*Ratio	OZ. of fertilizer per gal. of water
Slow	15000:1	.008 (1/20 tsp)
1	8000:1	.017 (1/10 tsp)
2	2000:1	.064 (2/5 tsp)
Fast	400:1	.320 (2 tsp)



<sup>\*</sup>Ratio refers to the amount of water mixed with the fertilizer. For example, a 400:1 ratio means 400 gallons of water will be mixed with 1 gallon of fertilizer. The adjustment knob can be set in between settings if desired.

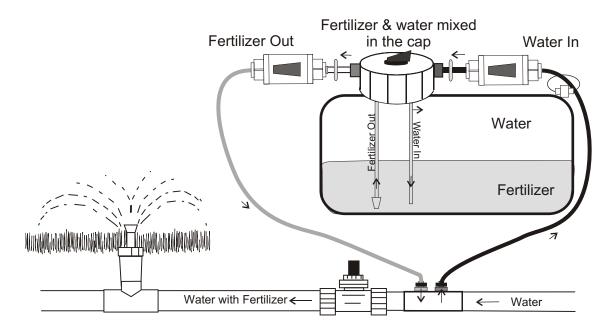
## **Gallons Of Water Required To Distribute Fertilizer**

The following table shows the gallons of water required to distribute the fertilizer from the EZ-FLO system at the various flow settings.

Model	EZ001	EZ003	EZ005	EZ010
Slow	22,500	37,500	63,500	141,000
1	12,000	20,000	34,000	75,200
2	3,000	5,000	8,500	18,500
Fast	600	1,000	1,700	3,500

#### **How It Works**

Your system is now ready to operate. Each time you water, the EZ-FLO system will proportion small amounts (micro doses) of fertilizer in the irrigation water. The patented flow process evenly meters fertilizer from start to finish. The system typically needs refilling every 4 to 6 weeks depending upon feed setting and watering rates. Fill based on desired results.



Water entering the tank is layered over the top of the fertilizer that settles to the bottom of the tank. Fertilizer is drawn from the bottom of the tank, out the clear tubing and into the irrigation system. EZ-FLO's patented technology ensures consistent metering from start to finish.

#### Winterizing Your System

# \*\* CAUTION - DO NOT USE AIR TO BLOW OUT YOUR SPRINKLER SYSTEM \*\* \*\* WITH THE EZ-FLO SYSTEM ATTACHED \*\*

If you live in a region where winter temperatures can drop below freezing it is necessary to winterize your system.

#### System with shut off valves

- 1. Turn valves to off position
- 2. Remove blue and green connectors from the tank cap
- 3. Screw blue and green connectors onto bypass fitting
- 4. Drain tank and return it to the valve box or store in garage

#### System without shut off valves

- 1. Turn water off at back flow preventer
- 2. Remove blue and green connectors from the tank cap
- 3. Screw blue and green connectors onto bypass fitting
- 4. Drain tank and return it to the valve box or store in garage

If you need assistance with the installation or operation of your system, refer to the FREQUENTLY ASKED QUESTIONS section of these instructions. If you have further questions, please visit our web site at www.ezflofertilizing.com or call EZ-FLO toll free at (866)393-5601.

#### FREQUENTLY ASKED QUESTIONS

#### HOW MUCH FERTILIZER SHOULD I PUT IN THE TANK?

For maximum performance of your system, add the recommended amount of fully concentrated fertilizer for your tank size. The system will automatically measure and mix the fertilizer to your desired setting. (Refer to "SET FEED ADJUSTMENT"). If the fertilizer you are using is not colored and you can't see particles, a heavy dose of food coloring can be added to the tank without causing harm to plants or turf.

#### HOW DO I KNOW MY SYSTEM IS WORKING?

If the system is operating properly you should be able to see color in the clear tube. If your fertilizer has no dye then adding food coloring to the mixture will give it color you can see in the tubing. You should also be able to see an alteration in the color in the tube when adjusting the feed rate between slow and fast. Note that the dye exhausts before the nutrients are fully used. In addition, low flow conditions make it difficult to see that the unit is working.

#### IF I FERTILIZE EVERY TIME I WATER, WON'T I BE OVER-FERTILIZING MY LANDSCAPE?

NO! The EZ-FLO Automatic Fertilizing System spoon feeds your trees, shrubs and lawn in small amounts each time you water, applying five to ten times less fertilizer over the same period of time than manually applying granular fertilizer every six weeks. Studies have show when fertilizers are applied the EZ-FLO way, the plant absorbs up to 90% of the fertilizer. This provides a more even feeding, which creates a healthier plant that is stronger and more insect and disease resistant. Healthy plants require less amounts of pesticides and fungicides.

#### IS IT HAZARDOUS FOR MY CHILDREN OR PETS TO COME INTO CONTACT WITH TREATED WATER?

Even on the fastest setting the ratio of fertilizer to water is 400:1, meaning that the water being emitted or distributed from your irrigation system is only 0.25% fertilizer. The slow setting is over 37 times more diluted. So, while your turf and plants are receiving a healthy dose of nutrition, the risk is negligible to your children or pets in this diluted form. It is actually far more dangerous to apply traditional broadcast fertilizers on the turf, which have a much higher concentration of chemicals and do not absorb nearly as efficiently. All EZ-FLO Premium Fertilizer blends are non-hazardous.

# DOES FERTILIZER GET WEAKER WHEN THE EZ-FLO AUTOMATIC FERTILIZATION SYSTEM OPERATES?

EZ-FLO's patented flow technology creates a separation inside the tank causing the fertilizer to settle to the bottom of the tank and the water to rise to the top. A significant portion of the incoming water enters the tank through inlet ports underneath the cap and never interacts directly with the fertilizer. The fertilizer is always pulled from the bottom of the tank, feeding your landscape equally every time you water.

#### HOW DO I KNOW WHEN THE TANK IS READY TO REFILL?

Filling the EZ-FLO Automatic Fertilization System every 4 - 6 weeks with the recommended amount of EZ-FLO fertilizer should be adequate if the correct model size has been installed. The tank can be filled even if it's not totally out of fertilizer. Your irrigation system will operate normally after the fertilizer has been emptied. Please note the EZ-FLO dye runs out sooner than the actual nutrients. Allow at least one week of irrigating after the dye has gone from the clear tubing when the system is operating to refill the system. **Note** - The tank is always full of liquid (as the fertilizer is distributed it is replaced with water). Base your refill schedule on your desired results.

#### HOW DO I GET RID OF AIR BUBBLES IN THE CLEAR TUBE?

Often times air bubbles are caused when air is left inside the tank at start up. Be sure that you have topped the tank off with water before starting your system. An air bubble can be removed by slightly loosening a connector nut on the side of the cap while the system is operating. Small air bubbles will sometimes remain. Generally these do not prohibit the flow of fertilizer. If you see color on both sides of the air bubble, it is likely that fertilizer is flowing past it.



### The EZ-FLO Warranty

EZ-FLO as manufacturer, warrants to customer, defects in material or workmanship of our Automatic Fertilizing Systems and other components manufactured and/or assembled by EZ-FLO Injection Systems, Inc. EZ-FLO does not warrant Automatic Fertilizing Systems from damage caused by improper installation, operation or use not in accordance with printed instructions. EZ-FLO does not warrant any results, or lack thereof, from any fertilizers and supplements used in the systems.

EZ-FLO's products operate using water pressure. Excess water pressure can cause units to fail and customer is responsible for selecting the type of unit most applicable for the customer's application. High temperature environments (where summer temperatures exceed 100° F (38° C) in combination with high water pressures may also cause units to fail. Permanently installed units should be located in a valve box out of direct sunlight to minimize this risk of failure.

### **Warranty Period**

Unless otherwise noted, EZ-FLO warrants all manufactured items for a (1) year period from date of purchase by the end user. For certain select main-line fertigation units that are denoted as Premium Models (part name contains a suffix "X"), the warranty is extended to two years.

## **Warranty Claim Process**

If your EZ-FLO unit shows alleged defects in material or workmanship please call our toll free line at (866) 393-5601 (Mon - Fri 8am to 5pm PST). We will be able to discuss your situation with you. If it appears that the problem noted is a possible warranty claim we will wither fax or e-mail you an EZ-FLO Warranty Claim Form and provide you with a Returned Goods Authorization (RGA) number. Once you receive this form, please fill it out completely and return it with the defective unit along with the dated sales receipt. The RGA number assigned must accompany the returned item.

EZ-FLO will contact you within three (3) days of receipt of the claimed item, with the results of our inspection and we will either warranty the unit or provide an explanation as to why it may not qualify for replacement.

\*A replacement unit will not be shipped or a credit processed until the defective unit is returned and examined by EZ-FLO.