

HI-FLO METERING SYSTEMS



A n / njection Solutions Company™



The EZ-FLO Advantage



EZ-FLO is a proven leader in the fertigation industry. Our 20 year history of quality and reliability has set us apart from many competing technologies making us a proven leader in fertigation industry. The HI-FLO Metering Systems add a new dimension to the EZ-FLO product family. These systems combine the ease of use, durability and reliability that have become synonymous with EZ-FLO's brand with higher capacity capabilities and added injection control. These systems are designed for large agricultural, golf, sports field and landscape applications.



**Mixing
Injection Limits
Electricity Required
Moving Parts
Down Time**

No mixing reduces operating costs - More cost effective water soluble products can be put directly in the tank, **eliminating pre-mixing or paying a premium for higher cost premixed liquid products.**

Virtually unlimited flow and injection ranges - There are virtually no injection limitations. Metering gauges are available in GPM and GPH configurations and can be easily changed to meet the application requirements. Just set the gauge to the desired injection rate.

One system can inject all liquid or water soluble products - fertilizers, acids, controls and soil amendments.

No electricity required - operates totally on water flow and water pressure.

No down time or maintenance - no moving parts and durable construction eliminate equipment break downs and maintenance - **100% field repairable.** All components are designed for use with fertilizers, supplements, chemicals and acids.

EZ-FLO equipment is easy to install and easy to use

Easy installation - no pipe cutting required with the patented saddle venturi connection. Most of our systems are portable and can be moved between multiple installation locations.

Easy operation - simply turn the dial to the desired injection rate. The metering gauge shows the exact injection rate as the metering valve is adjusted. EZ-FLO continually injects unlike mechanical injectors that inject in pulses.

Easy refill - no pre-mixing or pre-blending required. Just pour the concentrated products directly into the tank.

Automation optional - the E-Valve option enables electronic injection control.



No pre-mixing - just fill with concentrate



Meter sets injection rate



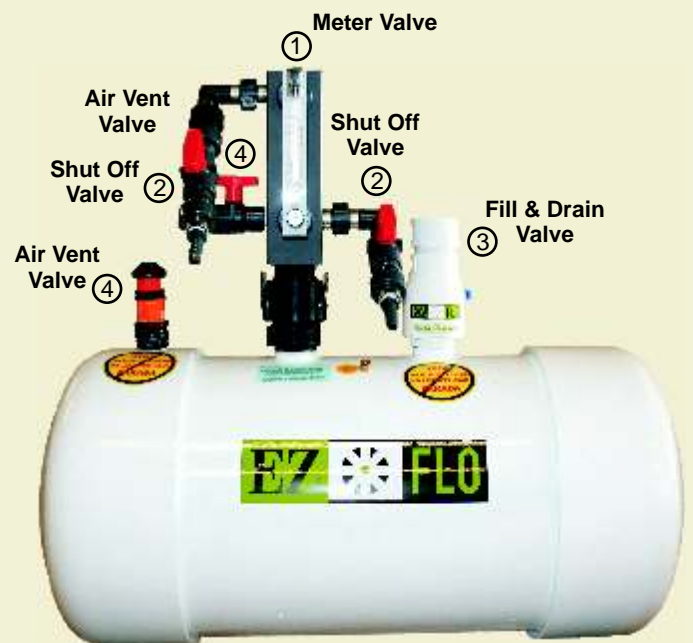
Saddle installation

HF Metering Systems

1. **Meter Valve** - measures the amount of injected solution. Gauges are available in 10, 20, 40 or 100 gallon per hour or 1, 2, or 5 gallon per minute flow ranges. They are connected with threaded unions for easy change out to various ranges.
2. **Shut Off Valves** - turns water and fertilizer on and off during installation and refill. Enables the system to be disconnected and moved to multiple locations.
3. **Fill & Drain Valve** - can be attached to a funnel or a storage tank to refill with fully concentrated liquid or water soluble products. Water soluble products can be put in the tank in either a dry form or as a heavy slurry. Water drains from the tank as liquids are filled through the **Fill & Purge Valve** 6.
4. **Air Vent Valve** - vents air manually during the initial startup after refill
5. **Check Valves** - prevent backflow into and out of the tank
6. **Fill & Purge Valve** - fill valve for liquid refills, for draining the entire tank contents and for cleaning and flushing the tank
7. **Saddle Connections** - (not illustrated) connect to any size irrigation main line by drilling two holes into the main line and bolting on the saddle which eliminates the need to cut the pipe. Other connections may be used depending on the application.
8. **Control Valve** - (not illustrated) Optional - is installed between the water in and fertilizer out connections in the main line. It enables increasing injection rates beyond normal rates.
9. **E-Valve** - (not illustrated) Optional - is installed on the water in line. It can turn injection on and off using a signal from an electronic controller.

The HF Metering Systems and their components are rated for both acid and fertilizer injection.

*Injection rate capabilities are dependent on the installation design. Faster injection rates may require the installation of a control valve between the saddle venturi connections.





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HF Series Specifications - Vertical Tanks

| | HF045 | HF086 |
|---|----------------------|----------------------|
| Tank Capacity (Approx.) - Liquid | 45 Gal. (170 liters) | 86 Gal. (325 liters) |
| Tank Capacity - Water Soluble | 450 lbs. (204 kg)* | 860 lbs. (390 kg)* |
| Dimensions (WH) Inches | 21 x 57 | 24 x 66 |
| Dimensions (WH) cm | 53 x 145 | 61 x 167 |
| Approx. Weight: | 54 lbs. (24.5 kg) | 91 lbs. (41.3 kg) |
| Maximum Operating Pressure | | 125 PSI |
| Minimum Operating Pressure | | NA |



Tank Sizing

Capacities available up to 600 gallons of liquid and 6,000 pounds of dry water soluble products

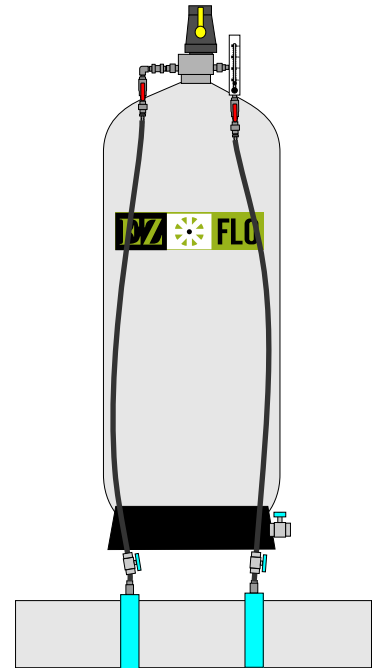
*The amount of water soluble fertilizer that can be loaded into this model is dependent upon the solubility of the fertilizer and following the suggested fill instructions for this unit. The range listed is the maximum tank capacity using a high quality, water soluble fertilizer. Lesser amounts may be used without affecting the proportioning performance of the unit.

HI-FLO Models

Warranty: Five (5) years except under heavy pressure conditions or excessive temperature conditions where summer temperatures exceed 125 F (52 C). Heavy pressure conditions are when static line pressure exceeds 125 PSI (8.6 bars). See other detailed warranty and installation limitations at www.ezflorfertilizing.com/warranty.asp

Includes: HI-FLO metering head, fill assembly, fill drain valve, purge valve, tank stand, check valve and two shut-off valves (Inflow and outflow shutoff)

Does Not Include: Irrigation connector and tubing.



Typical Installation

This system connects directly to the irrigation piping. EZ-FLO's patented flow process automatically adjusts to changes in water pressure and water flow. This product is designed to feed both sprinkler and drip irrigation systems for commercial, municipal, sports field, golf course and grower applications.

A code compliant back flow prevention device is required for installation into potable water systems in which the installation must follow local and state plumbing codes. Unless otherwise specified, a pressure vacuum breaker is the minimum back flow prevention device required according to University of Southern California - Foundation for Cross Connection Control and Hydraulic Research.



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HF Series Specifications Horizontal Tanks

| | HF010 | HF017 | HF025 |
|---|---------------------|-----------------------|---------------------|
| Tank Capacity (Approx.) - Liquid | 10 Gal. (38 liters) | 17.5 Gal. (66 liters) | 25 Gal. (95 Liters) |
| Tank Capacity - Water Soluble | 100 lbs. (45 kg) | 175 lbs. (80 kg) | 250 lbs. (112 kg) |
| Dimensions (LWH) Inches | 32 x 12 x 18 | 36 x 15 x 20 | 36 x 19 x 25 |
| Dimensions (LWH) cm | 81 x 30 x 46 | 91 x 38 x 51 | 91 x 48 x 63 |
| Approx. Weight: | 65 lbs. (29.5 kg) | 90 lbs. (40.8 kg) | 120 lbs. (54.4 kg) |
| Maximum Operating Pressure | | 100 PSI | |
| Minimum Operating Pressure | | NA | |

Tank Sizing

*The amount of water soluble fertilizer that can be loaded into this model is dependent upon the solubility of the fertilizer and following the suggested fill instructions for the unit. The range listed is the maximum tank capacity using a high quality, water soluble fertilizer. Lesser amounts may be used without affecting the proportioning performance of the unit. Due to variations in the tank fabrication process, the liquid tank capacity may vary from the listed value. Therefore published tank capacities are approximate.

HI-FLO Models

Warranty: Five (5) years except under heavy pressure conditions or excessive temperature conditions where summer temperatures exceed 125 F (52 C). Heavy pressure conditions are when static line pressure exceeds 100 PSI (8.6 bars). See other detailed warranty and installation limitations at www.ezflorfertilizing.com/warranty.asp

Includes: HI-FLO metering head, fill assembly, fill drain valve, purge valve and two shut-off valves (Inflow and outflow shutoff)

Does Not Include: Irrigation connector and tubing.

This system connects directly to the irrigation piping after the back flow prevention device and the tank is designed for use under constant pressure. EZ-FLO's patented flow process automatically adjusts to changes in water pressure and water flow. This product is designed to feed both sprinkler and drip irrigation systems for commercial, municipal, sports field, golf course and grower applications.

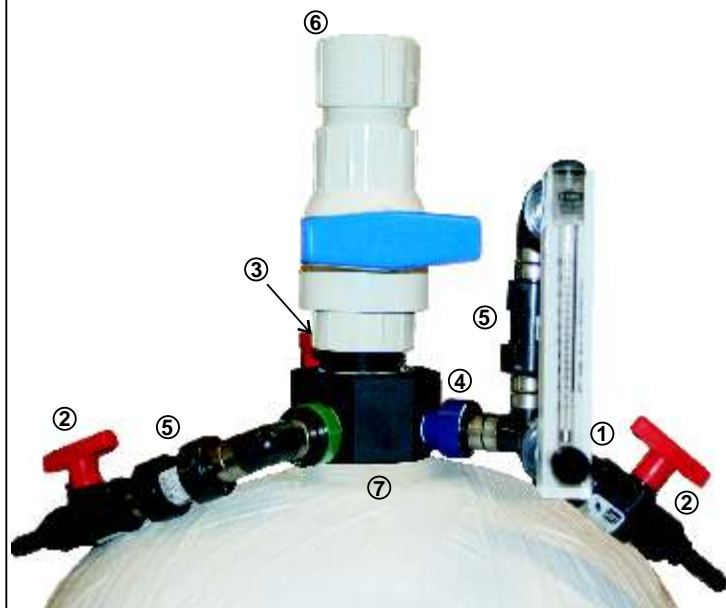
A code compliant back flow prevention device is required for installation into potable water systems in which the installation must follow local and state plumbing codes. Unless otherwise specified, a pressure vacuum breaker is the minimum back flow prevention device required according to University of Southern California - Foundation for Cross Connection Control and Hydraulic Research.



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HF Metering Head - UN Thread Connection

1. **Meter Valve** - controls and measures the amount of injected solution. Gauges are available in 10, 20, 40 or 100 gallon per hour or 1, 2, or 5 gallon per minute flow ranges. They are connected with threaded unions for easy change out to various ranges. Other gauge ranges are available upon request.
2. **Shut Off Valve** - turns water and fertilizer on and off. The valves are connected with threaded unions which enable the metering head to be disconnected and moved to multiple locations.
3. **Air Vent Valve/Water In Liquid Products** - vents air manually during the initial startup after refill. Connect inlet water when injecting liquid products.
4. **Air Vent Valve/Water In Dry Products** - vents air manually during the initial startup after refill. Connect inlet water when injecting dry products.
5. **Check Valves** - prevents backflow in and out of the tank
6. **2 ½" Fill Valve** - Product can be poured directly into the tank when the valve is in the open position
7. **4" Male UN Thread with O-Ring Seal** - connects to a 4" female UN thread from the tank



The metering head can be used for both acid and fertilizer injection.

HI-FLO Metering Head Model # HF-Head UN can be used for both liquid and powder products. The Water In connection can be changed between inlet ports with the provided threaded unions to change from injecting liquids to injecting powders.

Tank Requirements

The mixing head can be installed on any pressure rated tank that can adapt to a 4" UN female thread connection. The size and type of tank used depends on the capacity required for the application and the operating pressure of the irrigation system. The tank will be pressurized to the same pressure as the irrigation system. EZ-FLO high pressure tanks are available for use in applications of up to 125 PSI. Test the tank pressure compatibility before connecting it to the irrigation system. EZ-FLO does not extend its warranty to any pressure vessel not provided by EZ-FLO.

*Injection rate capabilities are dependent on the installation design. Faster injection rates may require the installation of a control valve between the saddle venturi connections.

HF-HEAD (HI-FLO Model)

Warranty: Five (5) years except under heavy pressure conditions or excessive temperature conditions where summer temperatures exceed 125 F (52 C). Heavy pressure conditions are when static line pressure exceeds 125 PSI (8.6 bars). EZ-FLO assumes no responsibility or warranty for tanks not manufactured by EZ-FLO. See other detailed warranty and installation limitations at www.ezflorfertilizing.com/warranty.asp

Includes:
HI-FLO tank head.

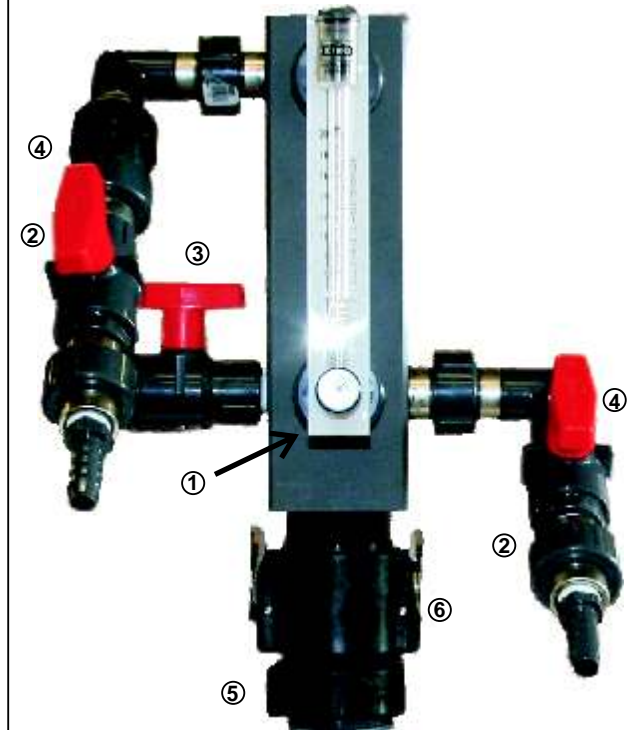
Does Not Include:
Irrigation connector and tubing.



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HF Metering Head - Pipe Thread Connection

1. **Meter Valve** - controls and measures the amount of injected solution. Gauges are available in 10, 20, 40 or 100 gallon per hour or 1, 2, or 5 gallon per minute flow ranges. They are connected with threaded unions for easy change out to various ranges.
2. **Shut Off Valves** - turn water and fertilizer on and off. The valves are connected with threaded unions which enable the metering head to be disconnected and moved to multiple locations.
3. **Air Vent Valve** - vents air manually during the initial startup after refill.
4. **Check Valves** - prevents backflow into the tank
5. **2" Male Iron Pipe Thread Connection X 2" Female Cam Connection** connects to HF Metering Head
6. **2" Female Iron Pipe Thread X 2" Male Cam Connection** connects to a 2" male iron pipe thread from the tank and to a female cam connection on the head. A **2" Male Cam x 2" Male Iron Pipe Thread Connection** is furnished to adapt to a 2" male pipe thread coming from the tank.



The metering head can be used for both acid and fertilizer injection.

HI-FLO Metering Head Model # HF-Head SM can be used for both liquid and powder products. An agitation tube is included with the head. It is installed in the head when injecting powder products and removed when injecting liquid products.

Tank Requirements

The mixing head can be installed on any pressure rated tank that can adapt to a 2" pipe thread connection. Tanks with a separate fill port are recommended for ease of refilling. The size and type of tank used depends on the capacity required for the application and the operating pressure of the irrigation system. The tank will be pressurized to the same pressure as the irrigation system. EZ-FLO high pressure tanks are available for use in applications of up to 125 PSI. Test the tank pressure compatibility before connecting it to the irrigation system. EZ-FLO does not extend its warranty to any pressure vessel not provided by EZ-FLO.

*Injection rate capabilities are dependent on the installation design. Faster injection rates may require the installation of a control valve between the saddle venturi connections.

HF-HEAD (HI-FLO Model)

Warranty: Five (5) years except under heavy pressure conditions or excessive temperature conditions where summer temperatures exceed 125 F (52 C). Heavy pressure conditions are when static line pressure exceeds 125 PSI (8.6 bars). EZ-FLO assumes no responsibility or warranty for tanks not manufactured by EZ-FLO. See other detailed warranty and installation limitations at www.ezflorfertilizing.com/warranty.asp

Includes:

HI-FLO tank head with cam and groove adaptor for connection to a 2" male iron pipe thread.

Does Not Include:

Irrigation connector and tubing.



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HF Series Enclosure Vertical Tanks

EZ-FLO HI-FLO Vertical Tank Enclosure

Constructed of 12 gauge powder coated steel, the EZ-FLO vertical tank enclosure is both light weight and durable

Louvered side panels insure proper cooling in high heat conditions

Removable front panel provides full access to EZ-FLO system

Hydraulically assisted lid provides soft and easy operation when refilling system

(12) base mounting points for secure installation to a concrete pad

All enclosures ship disassembled for reduced freight and set up costs

No crane required, can be assembled on site by one person in less than an hour



HF-045ENC

| | |
|--------------------------------|--------------------------|
| For Use With Model: | HF-045 |
| Dimensions (LWH) Inches | 25 1/4 x 25 1/4 x 65 3/4 |
| Dimensions (LWH) cm | 64 x 64 x 167 |
| Approx. Weight: | 300 lbs. (136 kg) |

Warranty: Five (5) years on fading of powder coating

Includes: (2) Louvered side panels, (1) solid back panel, (1) removable front panel, (2) front brackets, (1) solid lid with lock guard, (2) 20 lb hydraulic shocks, (1) bolt & washer kit, (8) anchor bolts

Does Not Include: HI-FLO System or HI-FLO Installation Components, Installation tools, Concrete Anchors

Installation: EZ-FLO HF Series Enclosures are designed to be installed on a concrete pad with minimum 1/4" x 2 1/2" concrete anchor bolts. EZ-FLO does not warrant its enclosures installed in any other manner or when not use with EZ-FLO HF systems.



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EZ Saddle Venturi Fitting

The Saddle Venturi Fitting (SVF) connection may be used in line sizes 3" and larger. It is installed by drilling two 1-1/4" holes in the irrigation main line and bolting a pipe saddle with a customized EZ-FLO Saddle Venturi Fitting inserted into the line. EZ-FLO recommends installing the Saddle Venturi Fittings with a valve in the line in between the inlet and outlet saddle venturi connections if very high injection rates are desired. Contact EZ-FLO engineering prior to installation if there are questions related to piping system compatibility, flow dynamics and the proper placement of the connection in the irrigation line. The SVF connection is typically installed into a pipe saddle with a 3/4" female iron pipe thread (FIPT) outlet for 3" through 6" pipe sizes and 1" female iron pipe thread for 6" through 12" pipe sizes. Other sizes are available upon request. Specify the type of pipe and the size of the pipe that the SVF is being installed into when ordering. Saddle Venturi Fittings can be used for both acid and fertilizer injection applications.

Saddle Connection



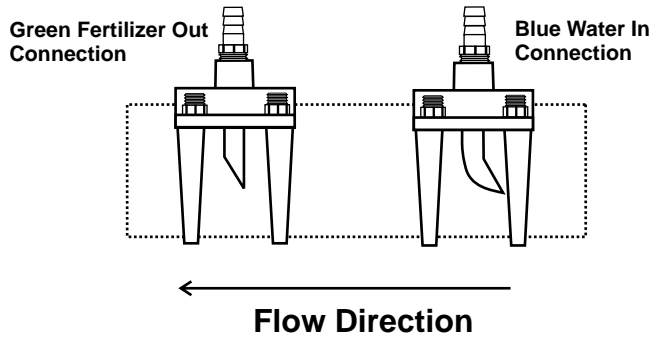
Model

Pipe Size Range

K-SVF 36
K-SVF 612

3" through 6"
6" through 12"

Typical Installation



Custom Connections

Custom connections are available upon request. These include;

Ball valve or butterfly valve couplings with 1/2" or 1/4" tubing connectors with socket or flanged ends. They are available in PVC or steel. These couplings have a valve between the tubing connections which enables higher injection rates if desired and injection into very low flow and low pressure irrigation systems.

The saddle venturi fittings that are shown in the saddle connection above are available for connections into 3/4" and 1" female threaded outlets.

Manifold connections are available to connect two or more storage tanks to one connection in the irrigation line. These connections are made of 1/2" or 1" braided chemical tubing.



HI-FLO Ball Valve Coupling

EZ-FLO manufactures the most versatile, durable and easy to use injection equipment in the industry.

Prior to the development of EZ-FLO's technology, fertigation equipment was complex, expensive and required larger storage tanks to handle diluted products. EZ-FLO's technology changes that by making fertigation simple and inexpensive. With an EZ-FLO system you simply fill the tank with concentrated products, set the metering gauge and the rest is automatic. The following photo of a clear EZ-FLO test unit in operation demonstrates how the technology works. EZ-FLO's patented, fluid flow technology creates separation of products being injected and the water entering the tank which prevents dilution. This gives EZ-FLO the unique ability to consistently meter all elements of the fertilizer mix, from start to finish. Because EZ-FLO does the proportional mixing of fully concentrated products in the bottom of the tank there is no need for pre-diluted liquids as is the case with other injectors.

For use in a wide variety of applications

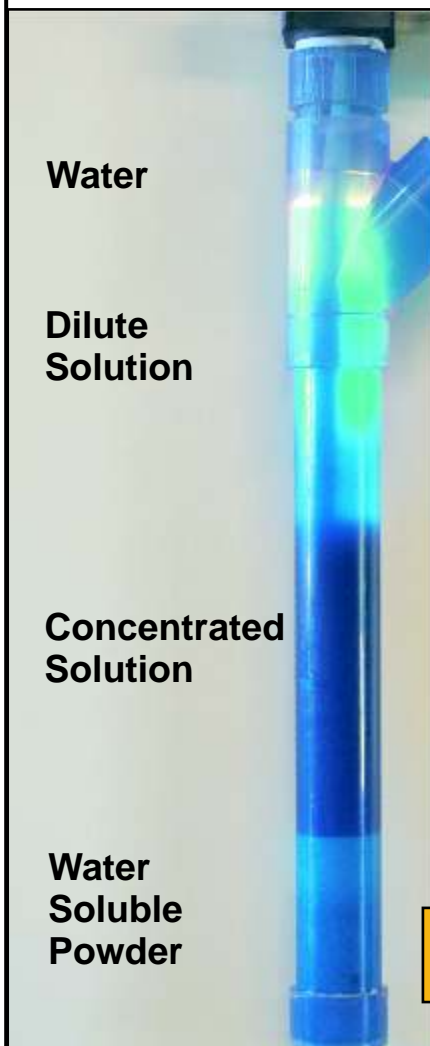
- ▶ Fertilization
- ▶ Soil treatment
- ▶ Industrial
- ▶ Water treatment

Injects virtually any type of product

- ▶ Water soluble fertilizers
- ▶ Liquid fertilizers
- ▶ Wetting agents
- ▶ Wetting agents
- ▶ Organic critter repellent
- ▶ Insect control
- ▶ Liquid or powder organic bio-stimulants
- ▶ Organic and synthetic acids
- ▶ Rust prevention products
- ▶ Water treatment products
- ▶ Heavy liquids and gels

The image to the left is taken from a video of an operating EZ-FLO test system that was designed to illustrate how the EZ-FLO system injects concentrated powders. Incoming water layers over the top of the solution in the tank as well as agitates the granules at the bottom of the tank. The concentrate from the bottom of the tank is drawn from the unit and injected into the flow line. **The internal flow design provides the ability to inject virtually any product consistently, without plugging.**

The layering effect creates a consistent metered injection rate for both powders and liquids.



Equipment Sizing Turf and Landscape

| Model | Capacity | | Coverage 4-6 Weeks - Square Feet | | Unit Size L x W x H | Enclosure Size* L x W x H |
|-------|----------|--------|----------------------------------|------------------------|------------------------|------------------------------|
| | Gallons | Pounds | Turf and Shrubs | Trees, Shrubs, Flowers | | |
| HF010 | 10.0 | 100 | 100,000 | 200,000 | 32" x 12" x 18" | 36" x 24" x 24" |
| HF017 | 17.5 | 175 | 175,000 | 350,000 | 36" x 15" x 20" | 36" x 24" x 24" |
| HF025 | 25.0 | 250 | 250,000 | 500,000 | 36" x 19" x 25" | 36" x 24" x 24" |
| HF045 | 45.0 | 450 | 450,000 | 900,000 | 21" x 57" | 25" x 25" x 65" |
| HF086 | 86.0 | 860 | 860,000 | 1,720,000 | 24" x 66" | |

Equipment Sizing Grower

| Model | Capacity | | Coverage - Pounds per Acre | | | |
|-------|----------|--------|----------------------------|-----------|-----------|-----------|
| | Gallons | Pounds | 5 Pounds | 10 Pounds | 15 Pounds | 20 Pounds |
| | | | Acres | Acres | Acres | Acres |
| HF010 | 10.0 | 100 | 20 | 10 | 7 | 5 |
| HF017 | 17.5 | 175 | 35 | 18 | 12 | 9 |
| HF025 | 25.0 | 250 | 50 | 25 | 17 | 13 |
| HF045 | 45.0 | 450 | 90 | 45 | 30 | 23 |
| HF086 | 86.0 | 860 | 172 | 86 | 57 | 43 |

Additional sizes available up to 600 gallon/6,000 pound capacities.

Water Soluble Fertilizer Coverage Rates for Growers

The HI-FLO systems inject water soluble products at the rate of 2 pounds per gallon. To calculate the amount of product being applied, multiply the gallons shown on the metering gauge by 2.

Field and Vegetable Crops such as alfalfa, beans, broccoli, carrots, cauliflower, corn, cotton, cucumbers, lettuce, onions, peas, peppers, sorghum, sugar beets, tomatoes and wheat apply 3 to 10 pounds per acre every 3 to 4 weeks.

Fruit and Nut Crops such as apples, apricots, avocados, cherries, citrus, nectarines, peaches, pears, pecans, plums, prunes and walnuts apply 5 to 20 pounds per acre in the early season.

Vine and Berry Crops such as bushberries, cranberries, grapes, hops and strawberries apply 5 to 10 pounds in the early spring or when deficiency symptoms first appear. Repeat as needed.

Greenhouse Bench Crops apply at a rate of 15 to 20 pounds per 1,000 square feet per month.

Greenhouse Pots apply at a rate of 6 to 8 pounds per 2,000 pots per month.

Bedding plants apply at a rate of 8 to 10 pounds per 2,000 flats per month.

Fertilizer application rates are based on the rates recommended by major water soluble fertilizer manufacturers.

*Horizontal tanks can be installed above or below ground. Vertical tanks can only be installed above ground.



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