

[hydrosystemsco.com](http://hydrosystemsco.com)

# Irrigation & Horticulture

**Hydro**<sup>®</sup>  
**systems**  
A **DOVER** COMPANY

# About Us

## **A broad choice - whatever the application**

For over 50 years, Hydro Systems has been developing and introducing products that improve chemical performance, reliability and our customers' bottom lines.

We build long-lasting relationships with customers and offer custom, industry-leading solutions that positively impact your business. Hydro is committed to delivering superior customer support and ensuring unparalleled responsiveness to customers around the world. Our commitment to cutting-edge technology, customer satisfaction and safer operations makes us the leader in the chemical proportioning and dispensing industry.

In addition to our North American corporate office, we have manufacturing and distribution facilities in Australia, Brazil, China and the United Kingdom. No matter where you are, Hydro products are always within your reach.

# Irrigation & Horticulture

Hydro Systems fertilizer injectors assure beautiful blooms, healthy crops, plants, woody ornamentals, turf and trees by consistent and accurate dosing each and every time. Hydro's patented mixing chamber and proportional injection technology means less waste, plus a better mix for fertilizers, pesticides and other water-soluble products.

From boom irrigation and fertigation, to floral misting — and every application in between — Hydro's versatile non-electric injectors offer the widest range of flow and injection rates and sizes to accommodate your needs. It's no wonder more professional horticulturist turn to Hydro.

You can always count on change — whether it's a shift in the weather, location or injection requirement. That's why we developed our premier Mobile Cart injection system. Order with our MiniDos or SuperDos injector series for maximum flexibility along with the utmost accuracy and durability.

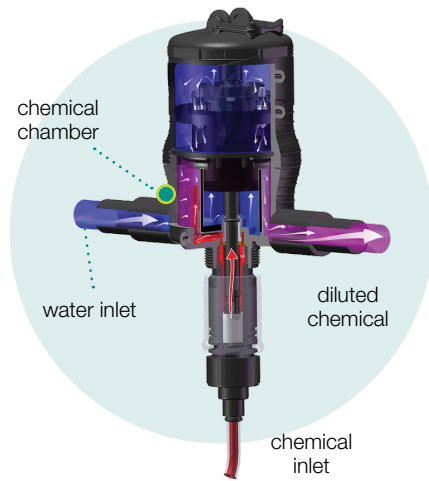
Over the years, our technologies have offered the best fertilizers and injectors for the horticulture, farming and florist professional.

## **Applications:**

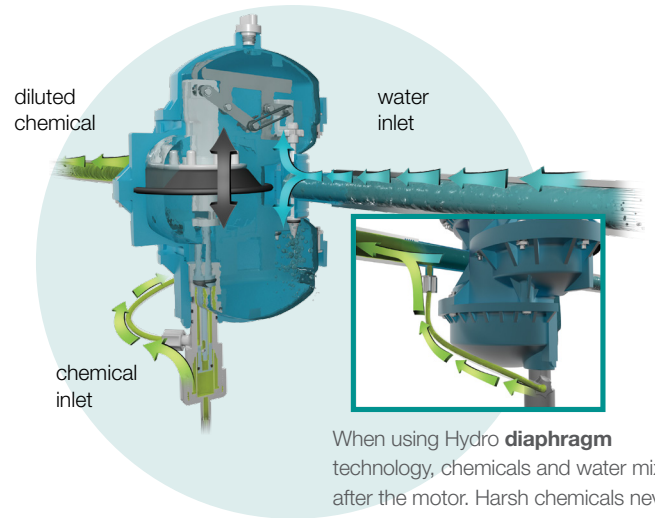
- Fertigation
- Weed Control
- Field Crops
- Boom Irrigation
- Misting Systems
- Flower Preservation
- Sanitation
- Hydroponics
- Drip Irrigation
- Sprinklers
- Turf Care
- Bedding Plants
- Raised Beds
- Ebb & Flow Benches
- Pest & Insect Control
- Container Crops
- Tree Farms
- Hose & Wand
- pH Control

# Technology

**Piston** technology



**Diaphragm** technology



When using Hydro **diaphragm** technology, chemicals and water mix after the motor. Harsh chemicals never come in contact with the motor parts, prolonging the life of your injector.

## **Volumetric** Technology

Fluid (water)-driven volumetric injectors work on the principle of proportional positive displacement, ensuring that just the right amount of chemical is injected, regardless of pressure and flow, into the water stream.

Unlike traditional electric pumps, volumetric injectors eliminate the need for electricity and can operate in remote areas. They are easy to install and maintain — making them ideal for low-flow injection applications.

We offer volumetric injectors which work in piston and diaphragm configurations. The water powered motor drives the action of the chemical pump. Our injectors offer variable dilution ratios, enabling the user to determine the correct percentage of concentrate to water volume.

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- The background of the entire page is a vibrant teal color. Overlaid on this background are numerous bubbles of various sizes, some of which are in sharp focus, creating a textured, bubbly effect. In the upper-left quadrant, there is a semi-transparent dark teal rectangular box containing a list of seven bullet points.
- An ongoing commitment to meeting individual customer needs
  - Worldwide support in multiple languages
  - Worldwide knowledge and compliance with local regulatory requirements
  - 100% production conformity – every unit tested before shipping
  - Extensive expertise in corporate customization
  - Product design service & rapid prototype production
  - Comprehensive after-sales back-up & support
  - Manufactured, sold and serviced in your geographic region

# Innovative Dispensing Solutions



# Chemilizer

## Overview

Chemilizer is the original water-powered injector. The proven diaphragm design of these models has provided longevity and accuracy for more than thirty years.

Chemilizer injectors install quickly to deliver precise amounts of fertilizers and other additives into water supplies.

## General Specifications

Housing	Proprietary Engineered Composite Material
Maximum Temp.	100°F (38°C)
Minimum Temp.	34°F (1°C)
Maximum vertical suction of concentrate	3.6 m
Maximum horizontal suction of concentrate	15 m
Self-Priming	Yes
Seal Material Available: *Contact your representative for specific chemical information	Silicone Viton
Maximum Viscosity	1,500 cP (Ex. Honey)
Recommended Accessories	Check valve, pressure regulator, flow restrictor.



Fixed Injection  
Rate Chemilizer



Adjustable Injection  
Rate Chemilizer Pump



## Features

- Simple 1/4 turn installation
- Intuitive ratio adjustment controls
- Ultra durable Kynar inner housing
- Adjusts from (5 - 0.2%)
- External, resettable circuit breaker
- Quick pump tube change
- Robust stainless steel enclosure

### Models & Specifications

Model #	Part # NPT & BSP*	Flow Rate		Operating Pressure		Dilution Range	
		gpm	l/h	psi	bar	%	ratio
HN55 1:128	CH9000-209*	0.05 - 13	11 - 3000	5 - 85	0,34 - 5,9	0.8%	1:128
HN55 1:100	CH9000-210*	0.05 - 13	11 - 3000	5 - 85	0,34 - 5,9	1.0%	1:100
HN55 1:50	CH9000-211*	0.05 - 13	11 - 3000	5 - 85	0,34 - 5,9	2.0%	1:50
HN55 1:64	CH9000-220*	0.05 - 13	11 - 3000	5 - 85	0,34 - 5,9	1.6%	1:64
HN55 1:250	CH9000-222*	0.05 - 13	11 - 3000	5 - 85	0,34 - 5,9	0.4%	1:250
HN55 1:500	CH9000-225*	0.05 - 13	11 - 3000	5 - 85	0,34 - 5,9	0.2%	1:500

\* When ordering British Standard Pipe models, add "bspp" to the end of model number. **Eg: CH9000-209bspp.**

### Models & Specifications

Part #	Description	Injection Range
CH9000-AV1	Chemilizer with adjustable Viton pump, 5 - 1.6%	20:1 - 64:1
CH9000-AV2	Chemilizer with adjustable Viton pump, 2 - 0.6%	50:1 - 164:1
CH9000-AV2 US	Chemilizer with adjustable Viton pump, 2 - 0.6%, with US Animal Health Markings	50:1 - 164:1
CH9000-AV3	Chemilizer with adjustable Viton pump, 0.7 - 0.2%	150:1 - 500:1
10095984	Adjustable Viton pump, 0.7 - 0.2%	150:1 - 500:1
10095929	Adjustable Viton pump, 2 - 0.6%	50:1 - 164:1
10095982	Adjustable Viton pump, 5 - 1.6%	20:1 - 64:1



# SuperDos

## Overview

SuperDos operates without electricity to precisely inject liquid concentrates into a water supply line using fluid flow as the power source.

SuperDos is designed with a patented internal mixing chamber that promotes homogeneous mixing, while segregating harsh chemicals from critical internal components.

SuperDos comes in various models that easily satisfy the demands of your most challenging applications.



## General Specifications

Housing	Proprietary Composite Material
Maximum Temp.	100°F (38°C)
Minimum Temp.	34°F (1°C)
Max. vertical suction	3.6 m
Max horizontal suction	15 m
Self-Priming	Yes
Seal Material Available: *Contact us for specific chemical information	Aflas, Viton, EPDM, Kalrez
Maximum Viscosity	1,500 cP (Ex. Honey)
Recommended Accessories	140 mesh (104 micron) filter, check valve, pressure regulator, flow restrictor

## Models & Specifications

Model #	Part #		Flow Rate		Operating Pressure		Injection Range	
	NPT	BSP	gpm	l/h	psi	bar	%	ratio
SuperDos 20 0.3%	113228R	113728R	0.05 - 20	11 - 4,500	5 - 100	0.4 - 6.9	0.025 - 0.3%	1:4000 - 1:333
SuperDos 20 2.5%	113205	113705	0.05 - 20	11 - 4,500	5 - 100	0.4 - 6.9	0.20 - 2.5%	1:500 - 1:40
SuperDos 20 2.5% WSP	113205WSP	113705WSP	0.05 - 20	11 - 4,500	5 - 100	0.4 - 6.9	0.20 - 2.5%	1:500 - 1:40
SuperDos 30 0.3%	113229R	113729R	0.15 - 30	34 - 6,800	5 - 100	0.4 - 6.9	0.025 - 0.3%	1:4000 - 1:333
SuperDos 30 2.5%	113209	113709	0.15 - 30	34 - 6,800	5 - 100	0.4 - 6.9	0.20 - 2.5%	1:500 - 1:40
SuperDos 30 2.5% WSP	113230R	113709WSP	0.15 - 30	34 - 6,800	5 - 100	0.4 - 6.9	0.20 - 2.5%	1:500 - 1:40
SuperDos 45 0.3%	113230R	113730R	0.25 - 45	57 - 10,000	5 - 100	0.4 - 6.9	0.025 - 0.3%	1:4000 - 1:333
SuperDos 45 2.5%	113212	113712	0.25 - 45	57 - 10,000	5 - 100	0.4 - 6.9	0.20 - 2.5%	1:500 - 1:40

\* This list represents the SuperDos models most commonly used in horticulture and irrigation applications. Other models are available. Contact your Hydro Systems representative for more information.





# Twist II Clean

## Overview

Just a gentle 1/4 twist of the handle begins the patented reverse flushing action, and the Twist II Clean backwashes itself from inside-out. Just a few seconds later, all debris is forcefully cleaned off the filter element and flushed from the bottom port.

### Perfect For:

- Well water systems
- Agricultural & landscape irrigation
- Misting systems



# MobileCart

## Overview

Mobile Cart is available as an accessory for use with MiniDos, Chemilizer and SuperDos injectors.





# MiniDos

## Overview

The MiniDos low-mid flow, fluid (water)-driven proportional injectors offer an ideal alternative to traditional, non-electric technology. These injectors are compact and offer the widest range of injection ratios.

Unlike traditional electric pumps, the MiniDos injectors eliminate the need for electricity and can operate in remote areas. They are easy to install and maintain; making them ideal for low-mid-flow injection applications.



## General Specifications

Housing	Proprietary Engineered Composite Material
Maximum Temp.	100°F (38°C)
Minimum Temp.	34°F (1°C)
Maximum vertical suction of concentrate	3.6 m
Maximum horizontal suction of concentrate	15 m
Self-Priming	Yes
Seal Material Available: *Contact your representative for specific chemical information	Aflas Viton EPDM Kalrez
Maximum Viscosity	1,500 cP (Ex. Honey)
Recommended Accessories	140 mesh (104 micron) filter, check valve, pressure regulator, flow restrictor.

## Models & Specifications

Model #	Part #		Flow Rate		Operating Pressure		Injection Range	
	NPT	BSP	gpm	l/h	psi	bar	%	ratio
MiniDos 1%	112600	112601	0.03 - 12	7 - 2,700	0.5 - 9.6	0.4 - 6.9	0.20 - 1%	1:500 - 1:100
MiniDos 2.5%	112602	112603	0.03 - 12	7 - 2,700	0.5 - 0.6	0.4 - 6.9	0.50 - 2.5%	1:200 - 1:40

\* This list represents the MiniDos models most commonly used in horticulture and irrigation applications. Other models are available. Contact your Hydro Systems representative for more information.



# Low Level Advisor

## Overview

The Low Level Advisor uses patent-pending, conductive plastic probes and a custom designed circuit to ensure you are alerted prior to a container running empty. The remote advisor can be placed as far as 1,000 feet from the chemical location.



## Models & Specifications

Part #	Description
10095508	15" probe tube assembly
10095509	20" probe tube assembly
10095510	40" probe tube assembly
10095511	38 mm container cap
10095512	63 mm container cap
10095513	70 mm container cap
10095502	Hook-up wire (2 conductor x 6")
10095501	Jumper cable (Enunciator to multi-product hub)
10095514	Enunciator with power pack
10095506	Enunciator without power pack
10095507	Multi-product hub



# FoamMaster

## Overview

FoamMaster power cleaning systems automatically dilute concentrated cleaning products with water and use compressed air to generate a thick, rich, clinging foam.

There is no more effective and efficient method for cleaning large areas like greenhouse floors and walls, as well as growing benches, rolling stock carts and growing flats and trays. This method helps avoid damage done to walls and equipment by high pressure equipment and reduces labor time incurred by traditional cleaning methods. FoamMaster allows you to control air and water flow to deliver the foam thickness you need.

FoamMaster comes complete with 25 ft. of heavy-duty discharge hose and brass foam/rinse nozzle with on/off valve to easily reach your intended cleaning area. (Additional hose length available. Ask your Hydro representative for more information.)



### Perfect For:

- Greenhouse floors & walls
- Growing benches
- Growing flats & trays

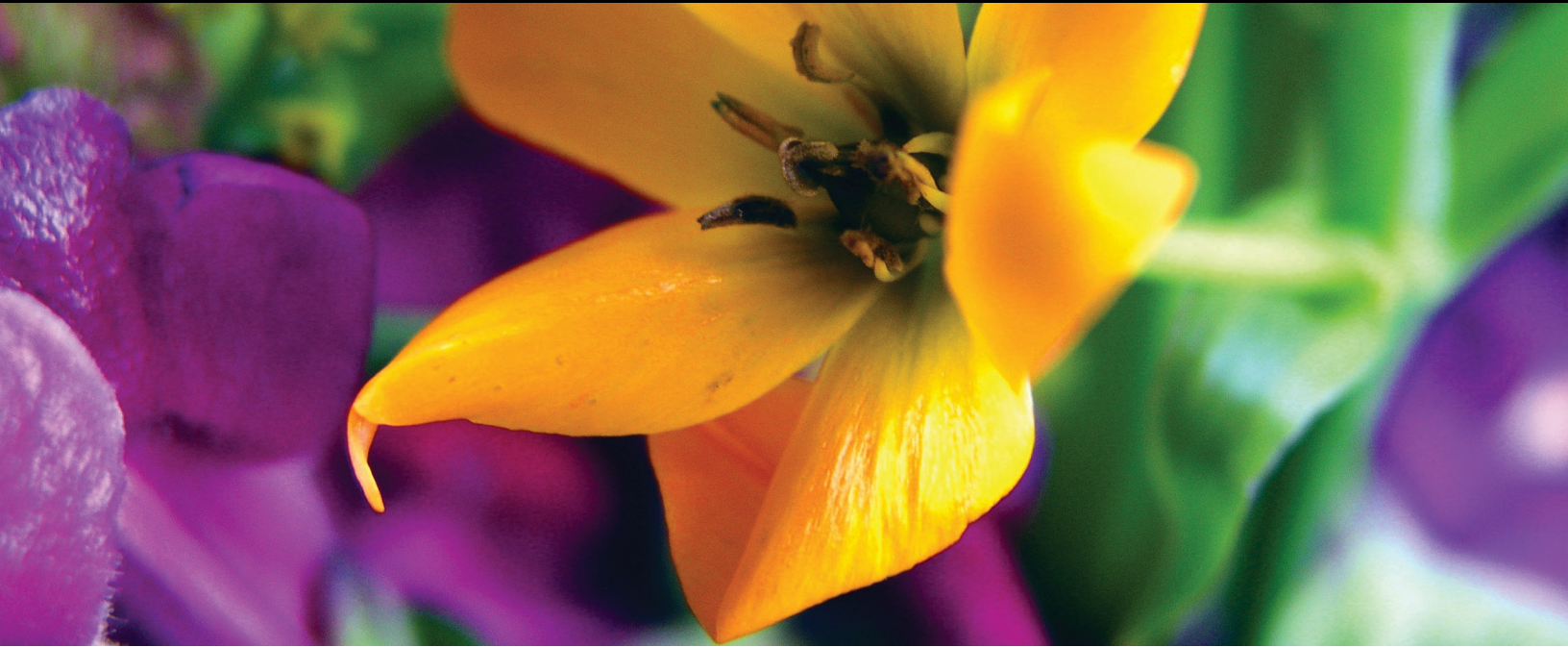
Model 890C - FoamMaster with cart for mobile applications. Sold as a complete systems.

## Models & Specifications

Model #	Description	Part #	Flow Rates		Dilution Range	
			Min. Flow (gpm)	Min. Air Press. (psi)	Min.	Max.
FoamMaster 890	Wall or cart mount; stainless steel cabinet	890	3.0	40	5.5:1	240:1
FoamMaster & Mobile Cart	Stainless steel, cart mounted	890C	3.0	40	5.5:1	240:1

\* Leaner dilutions available – contact Hydro Systems for more information: 800.543.7184.

# Custom Mounted Solutions

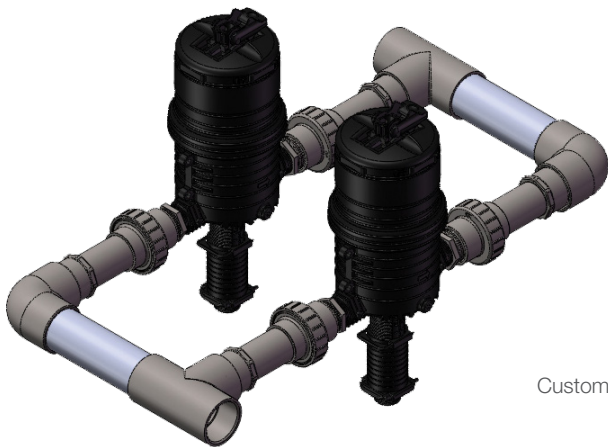


## Overview

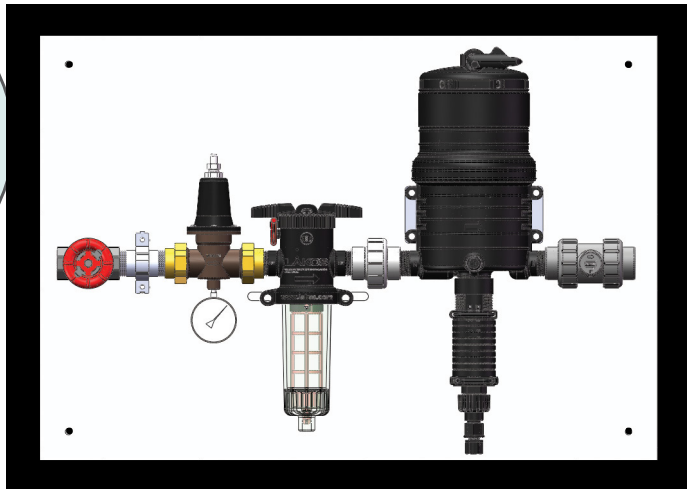
Hydro Systems' Custom Manifold and Panel Mounted Solutions offer our customers simple, fully assembled systems that are easy to install and maintain. Each solution is built-to-order and can be customized to fit specific needs. Call your local Hydro representative at 800.543.7184 to discuss your options.

### Perfect For:

- High-flow applications



Custom Manifold Solution





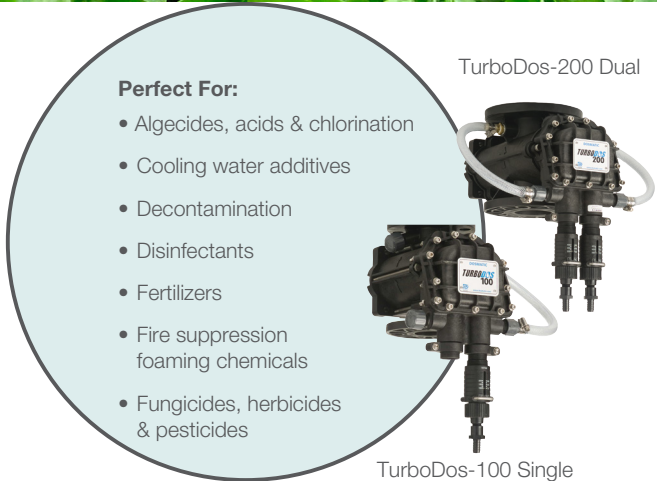
# TurboDos

## Overview

TurboDos is a non-electric, fluid-driven proportional injector. It can be used with 2" and 3" flange systems and with multiple installation options, making it ideal for high-flow injection applications.

## Features

- Dual injection capabilities reducing time and the need for multiple injectors.
- Vertical, horizontal and inverted operation.
- Highest standard operating pressure in the industry, minimizing pressure surge damage.
- Rotary design for increased efficiency at high flows.
- Compact dimensions, for easier installation.



### Perfect For:

- Algecides, acids & chlorination
- Cooling water additives
- Decontamination
- Disinfectants
- Fertilizers
- Fire suppression foaming chemicals
- Fungicides, herbicides & pesticides

TurboDos-200 Dual

TurboDos-100 Single

## Models & Specifications

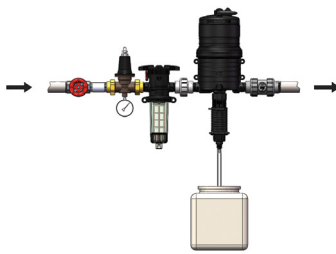
Model	Model #	Part #	Lower End	Flow Rate		Operating Pressure		Dilution Range	
			Model	gpm	M <sup>3</sup> /h	psi	bar	%	ratio
TurboDos-100	Single	114155P	0.25%	25 - 100	5.7 - 22	20 - 120	1.3 - 8.2	0.025 - 0.25%	1:4000 - 1:400
		114151P	0.5%	25 - 100	5.7 - 22	20 - 120	1.3 - 8.2	0.1 - 0.5%	1:1000 - 1:200
		114153P	1%	25 - 100	5.7 - 22	20 - 120	1.3 - 8.2	0.5 - 1%	1:200 - 1:100
	Dual	114156P	0.25%	25 - 100	5.7 - 22	20 - 120	1.3 - 8.2	0.025 - 0.25%	1:4000 - 1:400
		114152P	0.5%	25 - 100	5.7 - 22	20 - 120	1.3 - 8.2	0.1 - 0.5%	1:1000 - 1:200
		114154P	1%	25 - 100	5.7 - 22	20 - 120	1.3 - 8.2	0.5 - 1%	1:200 - 1:100
TurboDos-200	Single	114356	0.13%	45 - 200	10 - 45	30 - 120	2.0 - 8.2	0.05 - 0.13%	1:2000 - 1:800
		114351	0.25%	45 - 200	10 - 45	30 - 120	2.0 - 8.2	0.05 - 0.25%	1:2000 - 1:400
		114354	0.5%	45 - 200	10 - 45	30 - 120	2.0 - 8.2	0.25 - 0.5%	1:400 - 1:200
	Dual	114357	0.13%	45 - 200	10 - 45	30 - 120	2.0 - 8.2	0.05 - 0.13%	1:2000 - 1:800
		114352	0.25%	45 - 200	10 - 45	30 - 120	2.0 - 8.2	0.05 - 0.25%	1:2000 - 1:400
		114355	0.5%	45 - 200	10 - 45	30 - 120	2.0 - 8.2	0.25 - 0.5%	1:400 - 1:200
TurboDos-400	Dual	114725	0.13%	90 - 400	20 - 90	30 - 120	2.0 - 8.2	0.05 - 0.13%	1:2000 - 1:800
		114726	0.25%	90 - 400	20 - 90	30 - 120	2.0 - 8.2	0.05 - 0.25%	1:2000 - 1:400
		114727	0.5%	90 - 400	20 - 90	30 - 120	2.0 - 8.2	0.25 - 0.5%	1:400 - 1:200



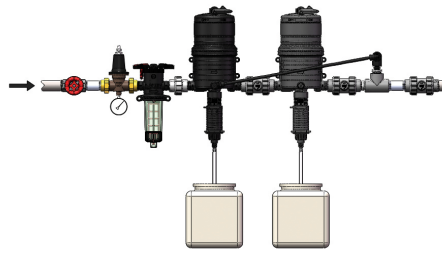
## Basic Installation

for Piston and Diaphragm Injectors

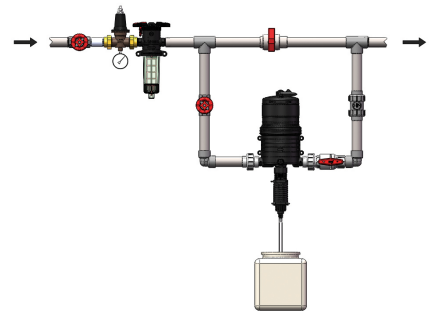
**inline** installation



**dual remote** injection installation

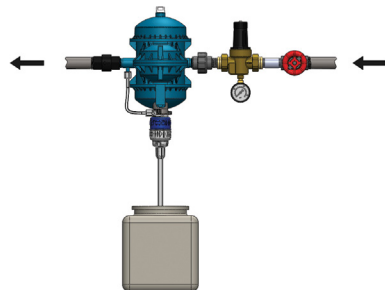


**bypass** installation

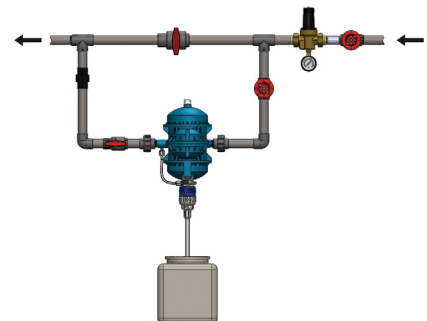


**piston**

**inline** installation



**bypass** installation



Depicted are the most common installation scenarios. For a custom solution to your unique application, please contact our product experts.

**diaphragm**

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