

hydrosystemsco.com



Animal Health

Hydro[®]
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.

Animal Health

Keep your animals healthy and disease free with Hydro Systems Volumetric injectors, designed specifically for the livestock industry. Whether it's for a small number of poults or a large herd of market pigs, Hydro medicators and injectors offer the widest flow rates and injection rates in the industry. You can be sure that your livestock and poultry are properly cared for with Hydro dispensers and injectors as part of your system.

Hydro has five manufacturing locations serving every region of the world. No more waiting for units and parts to be manufactured and shipped from overseas. We have designated product development engineers, customer service representatives, field technicians and manufacturing facilities in North America, South America, Asia, Europe and Australia.

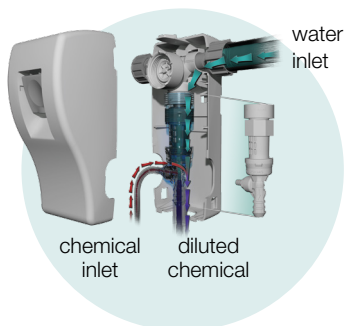
Our rugged, chemically resistant, accurate medicators are ready when you need them, whether it's to nourish young poults or treat ailing market pigs. You can count on your Hydro Volumetric Solutions injectors ... they are built to last!

Applications:

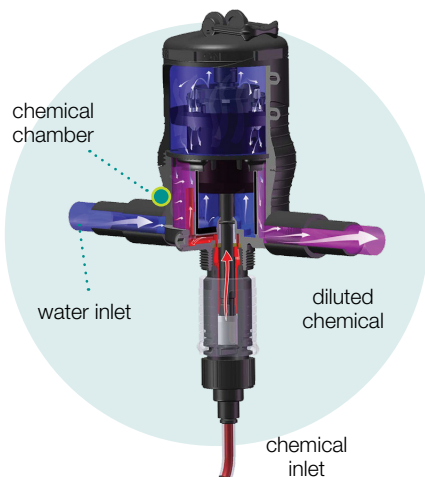
- Vaccinating
- Water Treatment
- Medicating
- Administering Nutrients & Supplements
- Cleaning & Sanitizing Drinker Line Systems

Technology

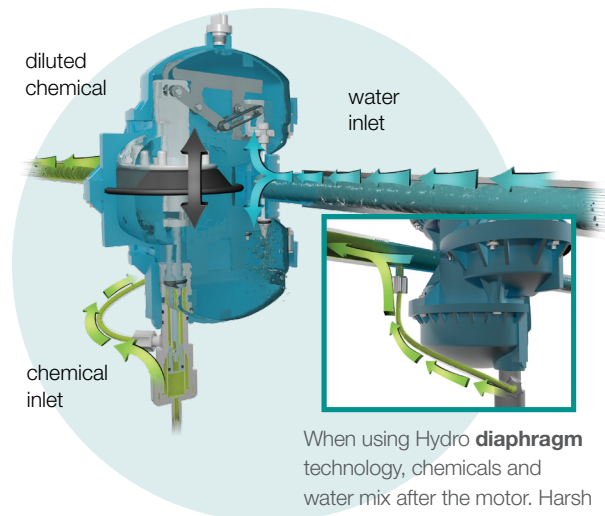
Venturi technology



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.

Three Precise Technologies

Our expansive product line includes a wide range of manually-actuated venturi dispensers. These dispensers offer a cost-effective way to ensure that products are dispensed accurately and consistently, on demand. Venturi feed systems can deliver a high volume of chemical into the flow loop against pressures up to 30 PSI for foaming, spraying, or sump systems.

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 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 that 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 teal color with a pattern of bubbles of various sizes. Some bubbles are in sharp focus, showing reflections, while others are blurred in the background. A semi-transparent dark teal rectangular box is positioned in the upper left quadrant, 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



Things to Consider When Choosing Your Injector:

Water Flow Rate:

Knowing the flow rate of your water source is critical to selecting the best water-driven injector for your application. Because flow rate can vary during operation, it is advised to allow some room for fluctuation between your measured flow rate and the maximum capacity of the system you select.

Water Line Pressure:

It is also important to know your water line pressure when selecting an injector. While many injectors in our line look similar, it is important to remember that various models are specifically designed to operate at a wide range of psi ratings. Making sure the injector you choose is rated to operate at a certain psi is critical.

Desired Injection Ratio or Percentage:

Whether your chemical calls for a specific dilution ratio, or % injection, we have you covered. Each Hydro volumetric model lists the range of chemical injection it is capable of supporting.

Type of Chemical to be Injected:

Hydro volumetric injectors are designed to handle a wide range of chemicals (aggressive, high viscosity, dissolved powders.) If you have concerns about a specific chemistry we can recommend the best model. If preferred, Hydro will test your chemical with our system at no cost; simply provide us the chemical in question.





AquaBlend

Overview

AquaBlend medicators are reliable, self-priming, easy to maintain, and very cost-effective. This proven design is ideal for accurate delivery of medication, vitamins, electrolytes, line cleaning chemicals and vaccines through the drinking water system independent of pressure and water flow variations.

Features

- Unique tool-free maintenance
- Quick and easy installation
- Self-priming
- Sturdy design and construction

Perfect For:

- Vaccinating
- Medicating
- Water treatment
- Wettable powders & liquid chemicals



General Specifications

Housing	Acetal
Avg. Dosing Accuracy	+/- 5% of Ratio
Repeatability	+/- 3% of Ratio
Fluid Max. Temp.	100° F (38° C)
Fluid Min. Temp.	34° F (1° C)
Max. Vertical Suction of Concentrate	12 ft. (3.6 m.)
Seal Material Available*	PVDF** Viton

* Contact your representative for specific chemical information.

** Call customer service for more information.

Models & Specifications

Model #	Part #		Flow Rate	Injection Rate
	NPT	BSP		
128:1 Fixed	117849WSP	117859WSP	0.04 - 11 gpm	128:1
100:1 Fixed	117844WSP	117854WSP	0.04 - 11 gpm	100:1
0.2 - 2%	117947WSP	117957WSP	0.04 - 11 gpm	500:1 - 50:1
0.78 - 5%	117948WSP	117958WSP	0.04 - 11 gpm	128:1 - 20:1

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



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.



Fixed injection rate Chemilizer



Adjustable injection rate Chemilizer

Perfect For:

- Medicating barns with poor water quality

Models & Specifications

Model	Part # NPT & BSP*	Flow Rate		Operating Pressure		Dilution Range	
		gpm	l/h	psi	bar	%	ratio
HN55 128:1	CH9000-209*	0.02 - 11	5 - 2500	3 - 85	0.2 - 5.8	0.78%	128:1
HN55 100:1	CH9000-210*	0.02 - 11	5 - 2500	3 - 85	0.2 - 5.8	1.0%	100:1
HN55 250:1	CH9000-222*	0.02 - 11	5 - 2500	3 - 85	0.2 - 5.8	0.4%	250:1
HN55 500:1	CH9000-225*	0.02 - 11	5 - 2500	3 - 85	0.2 - 5.8	0.2%	500:1

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

Adjustable Chemilizer Model & Retrofit Accessory

Part #	Description	Injection Range
CH9000-AV3	With adjustable Viton pump, 0.7% - 0.2%	150:1 - 500:1
CH9000-AV2US	With adjustable Viton pump, US Animal Health, 2 - 0.6%	50:1 - 164:1
CH9000-AV1	With adjustable Viton pump, 5 - 1.6%	20:1 - 64:1



New: Adjustable injection rate Chemilizer pumps



Overview

The Adjustable Ratio Pump will retrofit to any HN55 for injecting medications, vaccinations, nutrients, acids, or cleaning chemicals into livestock drinking systems.

Features

- Simple 1/4 turn installation
- Intuitive ratio adjustment controls
- Ultra durable Kynar inner housing
- Adjusts from (5% - 0.2%)

Specs	Lean	Mid-Range	Rich
Ratio	500:1 - 150:1	164:1 - 50:1	64:1 - 20:1
Percentage	0.2% - 0.7%	0.6% - 2.0%	1.6% - 5.0%

General Specifications

Housing	Polypropylene
Maximum Temperature	100° F (38° C)
Minimum Temperature	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:*	Viton
Maximum Viscosity	1,500 cP (Ex. Honey)
Recommended Accessories	Check valve, pressure regulator, flow restrictor
Thread Sizes Available:	3/4" NPT/GHT/BSP

* Contact your representative for specific chemical information.

Adjustable Chemilizer Model & Retrofit Accessory

Part #	Description	Injection Range
10095984	Adjustable Viton pump, 0.2 - 0.7%	150:1 - 500:1
10095982	Adjustable Viton pump, 1.6 - 5%	20:1 - 64:1
10095989	Adjustable Viton pump, Animal Health, 0.6 - 2%	50:1 - 164:1



SuperDos

Overview

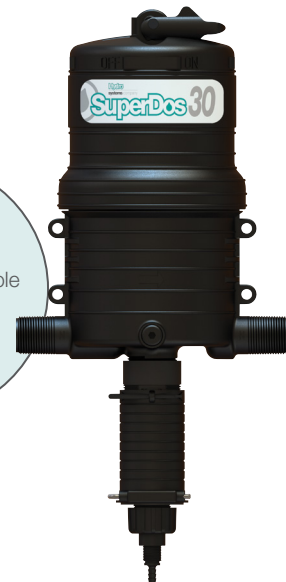
SuperDos is designed with a patented internal mixing chamber that promotes homogeneous mixing, while segregating harsh chemicals from critical internal components.

Features

- Up to 45 GPM capacity
- Patented chemical mixing chamber
- Perfect for wetable powders and liquid chemicals
- Highly-aggressive, chemical-resistant models available

Perfect For:

- Medicating multiple facilities with a single injector



General Specifications

Housing	Proprietary engineered composite material
Dosing	+/- 10%
Repeatability	+/-3%
Fluid max. temp.	100°F (38°C)
Fluid min. temp.	34°F (1°C)
Max. vertical suction of concentrate	12ft. (3.6 m)
Max. horizontal suction of concentrate	49ft. (15 m)
Self-priming	Yes
Seal material available*:	Aflas- Alkaline concentrates Viton - Acids, Iodine EPDM - Alkaline concentrates Kalrez



Models & Specifications *

Model	Part #		Flow Rate		Operating Pressure		Injection Range	
	NPT	BSP	gpm	l/h	psi	bar	%	ratio
SuperDos 15 - 0.3%	113227	113727	0.04 - 15	10 - 3,400	3 - 60	0.2 - 4.1	0.025% - 0.3%	1:4000 - 1:333
SuperDos 15 - 2.5%	113201	113701	0.04 - 15	10 - 3,400	3 - 60	0.2 - 4.1	0.2% - 2.5%	1:500 - 1:40
SuperDos 15 - 2.5% WSP	113202WSP	113702WSP	0.04 - 15	10 - 3,400	3 - 60	0.2 - 4.1	0.2% - 2.5%	1:500 - 1:40
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	113209WSP	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 animal health applications; other models are available. Contact your Hydro Systems representative for more information.



HydroLean

Overview

The HydroLean is a double dilution system. Inside the blue reservoir, a venturi system is used to pull concentrated chemical from the container, mix it with water and store it within the reservoir. Then, a volumetric injector pulls the diluted solution from the reservoir and dilutes it again, producing concentrates as low as 1 ppm.

Compatible chemicals:

- Hydrogen Peroxide (often used for killing algae & mold)
- Chlorine (often used for de-scaling)
- Acidifiers
- And more!

Features

- Non-electric
- Versatile



Perfect For:

- On-farm water treatment applications
- Empty barn water sanitation
- De-scaling
- Daily sanitation



Wall Mounted HydroLean

Lean Dilution Systems Volumetric Injectors:



AquaBlend



Chemilizer



SuperDos



HydroMix

Overview

Reduce your need for antibiotics by using the HydroMix to clean your water. Clean, treated water helps your animals stay healthy because they are no longer injecting harmful bacteria often found in untreated water.

The HydroMix is ideal for in-between flock treatment.

The HydroMix is a wall-mounted, push-button dispenser. This line cleaning injector utilizes venturi technology and ranges from 1:4 to 1:316. It can easily hit desired 2% and 3% injections.

- Garden hose connection
- Twist lock
- Compatible with most common chemicals
- Affordable, low maintenance unit

Chemical Compatibility:

- Chlorine
- Citric Acid
- Hydrogen Peroxide
- PAA
- And more!

- Perfect For:**
- On-farm water treatment applications
 - Empty barn water sanitation
 - De-scaling
 - Daily sanitation



Approximate Dilutions

At 40 PSI for Water-Thin Products (1.0CP)

Tip Color	Diameter	Per Eductor Flow	
		Ratio	Percentage
No Tip	.187	4:1	23.47%
Grey	.128	6:1	16.80%
Black	.098	6:1	16.17%
Beige	.070	8:1	12.66%
Red	.052	12:1	8.02%
White	.043	18:1	5.52%
Blue	.040	22:1	4.46%
Tan	.035	28:1	3.53%
Green	.028	47:1	2.14%
Orange	.025	56:1	1.79%
Brown	.023	66:1	1.52%
Yellow	.020	96:1	1.04%
Aqua	.018	111:1	0.90%
Purple	.014	169:1	0.59%
Pink	.010	316:1	0.32%



HydroFoamer HydroSprayer

Overview

HydroFoamers/Sprayers eliminate the time and hassle of manually mixing concentrates by increasing labor productivity and concentrate performance while consistently mixing as directed by manufacturers.

The HydroFoamer's unique injection concept mixes the proper amount of concentrate with both air and water to produce a thick, rich foam for longer soak time.

HydroSprayers produce a fine mist spray suitable for applications of no-rinse sanitizers or products used to cover relatively large areas.

Features

- Non-electric, no installation required – just fill the concentrate container and connect the dispenser to a water source
- Hose end foamers and sprayers offer automatic dilution with convenient control of where and how the solution is applied

Perfect For:

- Foaming detergents and sanitizers
- Equipment and cool cell pad sanitizing



Models & Specifications

Model #	Capacity	Part #	Dilution Range	
			Minimum	Maximum
HydroFoamer	96 oz. (2.8 L)	481	12:1	128:1
HydroFoamer	48 oz. (1.4 L)	483	12:1	128:1
HydroSprayer	96 oz. (2.8 L)	381	16:1	128:1
HydroSprayer	48 oz. (1.4 L)	383	16:1	128:1

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



FoamMaster

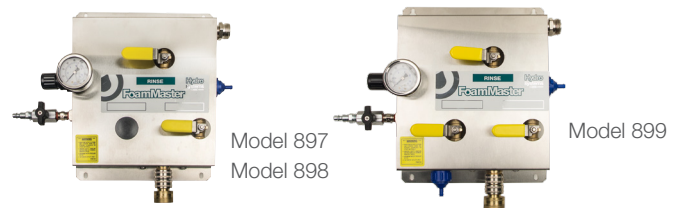
Overview

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 nursery pens and farrowing rooms than foam cleaning. This method helps avoid damage done to walls and equipment by high pressure equipment and reduces labor time incurred by traditional cleaning methods.

Features

- Chemical-contact components are made of chemical resistant materials, allowing use with acids and aggressive cleaners
- Built-in check valve prevents compressed air from forcing its way into the water line, allowing you to increase air flow for improved cleaning
- Rinse feature allows you to rinse area after cleaning without an additional hose is applied



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 Animal Health Specialist for more information.)



Model 865

Perfect For:

- Pen sanitation
- Gestation & farrowing room sanitation
- Hatchery & poultry house disinfection
- Vehicle wash



Model 890C shown with optional cart

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**.



Twist II Clean

Overview

Twist II Clean is an easy to use, flushable sediment filter. It can remove sand, sediment and organics from the incoming water supply. Twist II Clean removes the need for manual cleaning and does not require the water supply to be turned off.



BoosterTank

Overview

Hydro Systems' Booster Tank is a new and economical solution for low or inconsistent water pressure situations.

The water tank holds up to 4 gallons of water and will deliver at a rate of 1 GPM or 2 GPM to ensure proper water flow and pressure at all times. The Booster Tank can be utilized wherever water is relied upon to mix or deliver chemicals.



Models & Specifications

Model #	Description	Flow Rate (GPM)
BT100	1 GPM Flow Rate	1 GPM
BT200	2 GPM Flow Rate	2 GPM

HydroFoamer



- Perfect for cool cell pad cleaning and general facility cleaning.
- Foam cleaning allows for increased contact time which increases the effectiveness of your disinfectant.

Models shown:
HydroFoamer
481 & 483

Model #	Capacity	Approx. Dilution Range
481 (AHI#21127855)	96 oz. (2.8 Ltrs.)	256:1 - 16:1
483	48 oz. (1.4 Ltrs.)	256:1 - 16:1

Satellite



- Perfect for vehicle wash, cool cell pad cleaning, boot wash and biosecurity mats.
- Built-in rinse feature.

Models shown:
Satellite Foamer Sprayer
and Satellite Sprayer
on chemical bottle

Model #	Description	Approx. Dilution Range
5823	Initial container position set-up for F-style containers	280:1 - 7:1
5824	Initial container position set-up for round containers	280:1 - 7:1

FoamMaster



The ideal way to enhance cleaning product performance.

Model 890...

- Components are made of chemical resistant materials, allowing use with acids and aggressive cleaners.
- Air & water flow can be controlled to deliver the foam thickness you need.
- Built-in check valve prevents compressed air from forcing its way into the water line, allowing you to increase air flow for improved cleaning.



Rinse feature allows you to rinse the area after cleaning without an additional hose.

Models shown:
890 & 890C -
FoamMaster with
cart for mobile
applications

Model 865...

- Provides excellent foam quality at an economical price.

AccuPro

- Fill pump sprayers
- Fill disinfection mats
- Fill buckets
- Fill spray bottles

AccuPro can accurately fill pump sprayers that are used to spray down tires on vehicles and any other equipment entering the farm. This is to sanitize the equipment and keep hazardous debris away from the farm.

AccuPro can also fill biosecurity mats. These disinfection mats have a bladder that is changed a minimum of once per day. The animals and workers walk on these multiple times a day to disinfect their hooves or boots in order to minimize cross contamination and prevent disease spread.

Both the spray pumps and biosecurity mats have traditionally been filled by farmers estimating how much chemical solution they need and simply pouring some amount for their application. When using this method, farmers are almost guaranteed to be using more chemical than necessary, which can be dangerous and costly. By using the AccuPro to dilute chemicals for biosecurity applications, farmers can rest reassured that their safety and their money are a top priority.



Streamline

- Perfect for boot baths, pump sprayers and biosecurity mats.
- Proper dilution of detergents and disinfectants can save you up to 25% of your chemical cost.

Model shown:
Streamline I 8351
with hose



Model #	Description	Approx. Dilution Range
8351		128:1 - 3:1 (1 GPM)
8321		350:1 - 3.5:1 (3.5 GPM)

Basic Injector Installation

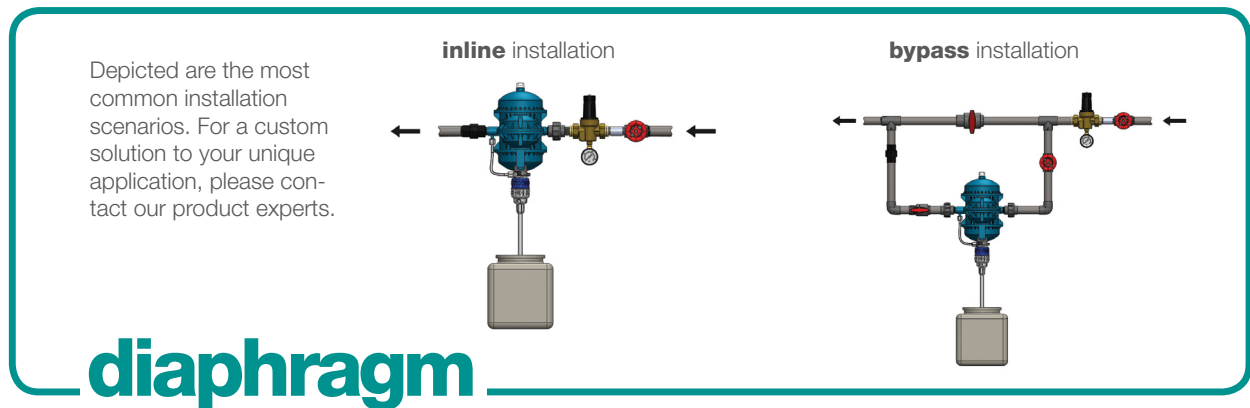
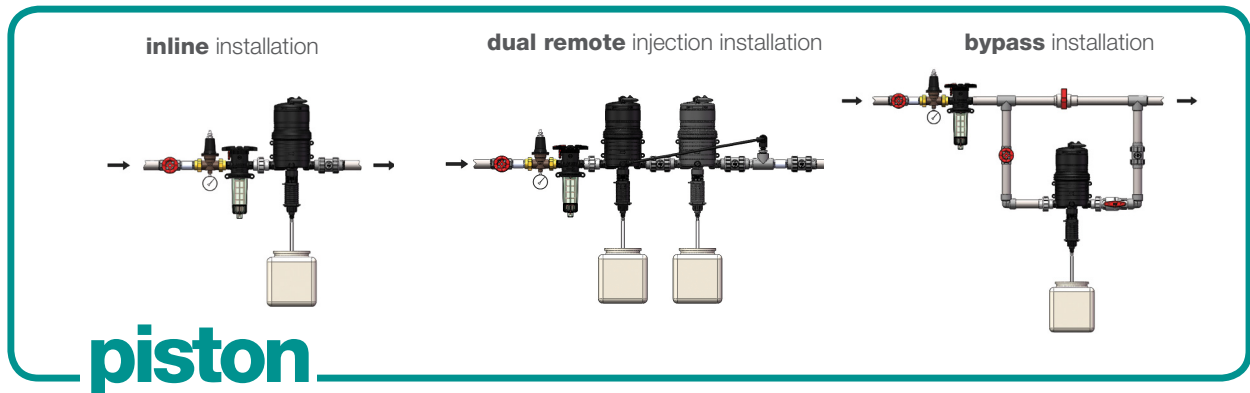
Temperature and Water Pressure

Install the Hydro injector in a cold water line - no more than 100° Fahrenheit (or 38° Celsius) - with a water pressure applicable for the model you are installing. Pressure should be regulated to the lowest pressure required for final delivery. Water pressure greater than recommended can cause permanent damage to the injector (Refer to the specifications for the model you are installing).

Horizontal and Vertical Requirements

Hydro recommends no more than a 15' vertical hose and no more than a 50' horizontal hose from the solution container to the injector (depending on viscosity). Importance of a Water Filter Diaphragm injectors are engineered to withstand harsh water conditions, and therefore, do not require a water filter in most applications.

Piston injectors, however, do require a filter. A water filter prevents debris, such as sand, from entering the motor of the injector which can cause premature failure in the injector. This is especially important if your water source is from a well or pond. Install a 140 mesh/104 micron filter, or finer, on the inlet side of the injector. Hydro carries Twist II Clean filters that can be ordered with your injector.



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