

Irrigation & Horticulture

Injector Technology Catalog

Innovative Dispensing Solutions

- ④ An ongoing commitment to meeting individual customer needs
- ④ Worldwide support in multiple languages
- ④ Worldwide knowledge and compliance with local regulatory requirements
- ④ 100% production conformity – every unit tested before shipping
- ④ Extensive expertise in corporate customization
- ④ Product design service & rapid prototype production
- ④ Comprehensive after-sales back-up & support
- ④ Manufactured, sold, and serviced in your region

Our locations:

China, Thailand, Australia, United Kingdom, Brazil & USA

About us



A broad choice - whatever the application

For 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 the United Kingdom, China, Brazil, Thailand, and Australia. No matter where you are, Hydro products are always within your reach.

Injecting Solutions for Irrigation and 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

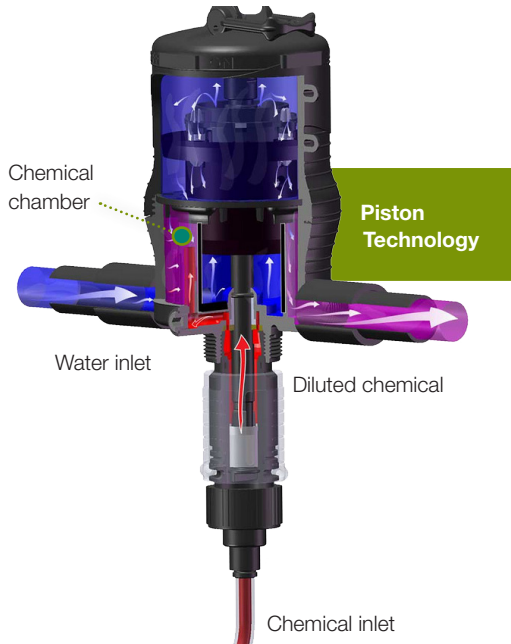
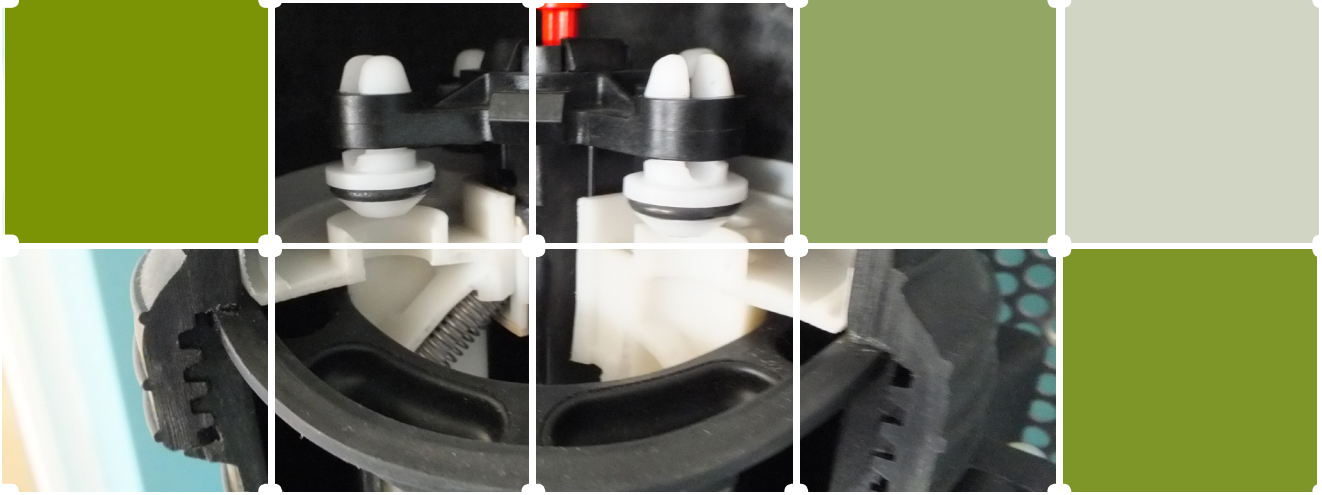


2 YR. MOTOR WARRANTY

Fertilizer
Pro Systems Brand

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USA

Technology

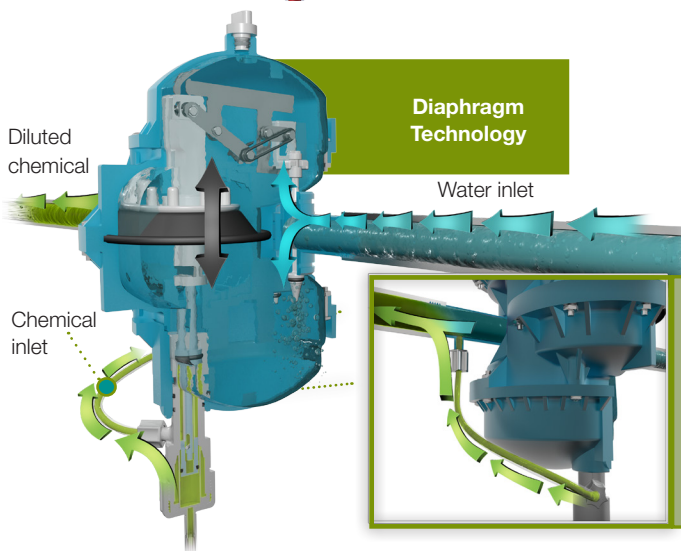


Volumetric

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.



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.

Diaphragm Technology Injectors

Precise Additive Injection

Chemilizer is a precision line of volumetric chemical injectors utilizing decades of proven diaphragm technology. Powered by the existing water supply, the internal motor drives the chemical pump, injecting very precise amounts of chemical - either directly back into the flow or to a remote location.

The speed of the motor and pump are proportional to the water flow, ensuring **Chemilizer** will inject consistent amounts of chemical regardless of fluctuation in water pressure and flow. **Chemilizer** injectors are ideal for applications requiring a consistent level of chemical product to be injected into a water line, without the cost and hassle of an electric pump or filter.

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	12 ft/3.6 m
Maximum horizontal suction of concentrate	50 ft./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.

Durable Construction, Even In Hard Water

Chemilizer components are constructed of materials specifically engineered to withstand your most aggressive chemicals.

Because mixing occurs after the pump motor, harsh chemicals never contact the motor parts, prolonging the life of the **Chemilizer** injector.

This proven design makes the unit perfectly suited for hard water conditions, and will handle well water **without filtration!**



New: Adjustable injection rate Chemilizer pump (left)

Fixed injection rate Chemilizer (right)

Models & Specifications

Model	Part #		Flow Rate		Operating Pressure		Dilution Range	
	NPT & BSP*		gpm	l/h	psi	bar	%	ratio
HN55 1:128	CH9000-209*		0.02 - 11	5 - 2500	3 - 85	0.21 - 5.8	0.8%	1:128
HN55 1:100	CH9000-210*		0.02 - 11	5 - 2500	3 - 85	0.21 - 5.8	1.0%	1:100
HN55 1:50	CH9000-211*		0.02 - 11	5 - 2500	3 - 85	0.21 - 5.8	2.0%	1:50
HN55 1:64	CH9000-220*		0.02 - 11	5 - 2500	3 - 85	0.21 - 5.8	1.6%	1:64
HN55 1:250	CH9000-222*		0.02 - 11	5 - 2500	3 - 85	0.21 - 5.8	0.4%	1:250
HN55 1:500	CH9000-225*		0.02 - 11	5 - 2500	3 - 85	0.21 - 5.8	0.2%	1:500

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

Adjustable HN55 Model & Retrofit Accessory

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

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% <i>with US Animal Health Markings</i>	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
10095989	Adjustable Viton pump, Animal Health, 2% - 0.6%	50:1 - 164:1



Piston Technology Injectors

Precise Additive Injection

Proportional positive displacement ensures that just the right amount of chemical is injected each and every time, regardless of pressure and flow. An adjustable ratio sleeve allows you to change the percentages—quickly and easily—to meet your injection needs. Chemical costs are reduced because of less waste in the injection process.

Safe and Cost Effective

The non-electric **Dosmatic** injectors reduce concerns associated with traditional electrical pumps. The **Dosmatic** injectors use a patented one-way gasket. Only the mixing chamber, and the lower end are exposed to the chemical. This prolongs the life of the motor, and

the innovative mixing chamber design also ensures a thorough and precise mixing of the fluid and injected chemical. Typically, non-electric injectors significantly reduce start-up and on-going costs over traditional electric injectors.

Durable body construction and ease of operation

The Dosmatic body is constructed from proprietary engineering grade resins in order to withstand severe weather, harsh chemicals used in injection, and high operating pressures. A built-in on/off bypass allows you to stop the injection—but not the system, and an optional remote discharge is available for the whole product line.

SuperDos

Overview

The **SuperDos** mid-high flow, fluid (water)-driven proportional injectors offer an ideal alternative to traditional electric technology.

General Specifications

Housing	Proprietary Engineered Composite Material
Maximum Temp.	100°F (38°C)
Minimum Temp.	34°F (1°C)
Maximum vertical suction of concentrate	12 ft/3.6 m
Maximum horizontal suction of concentrate	50 ft/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
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 horticulture and irrigation applications, other models are available. Contact your Hydro Systems representative for more information.



Twist II Clean Filter

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.

Perfectly suited for:

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



Mobile Cart

available as an accessory for use with **MiniDos** 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	12 ft/3.6 m
Maximum horizontal suction of concentrate	50 ft/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	6 - 140	0.41 - 9.6	0.20% - 1%	1:500 - 1:100
MiniDos 2.5%	112602	112603	0.03 - 12	7 - 2,700	6 - 140	0.41 - 9.6	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.

INDO
PROFES

Basic Injector Installation

Temperature and Water Pressure

Install the Hydro injector in a cold water line - no more than 100 degrees Fahrenheit or 38 degrees 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).

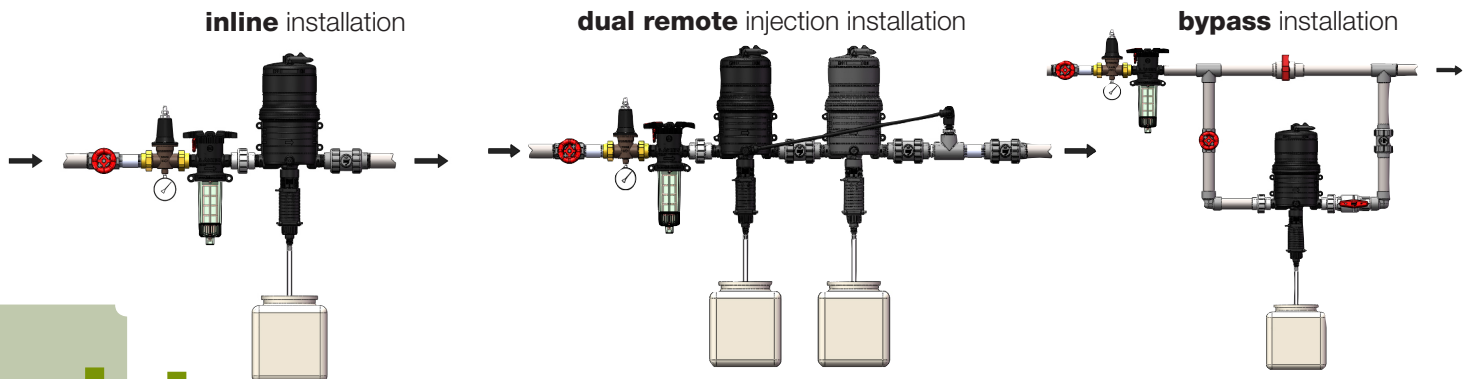
Importance of a Water Filter

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.

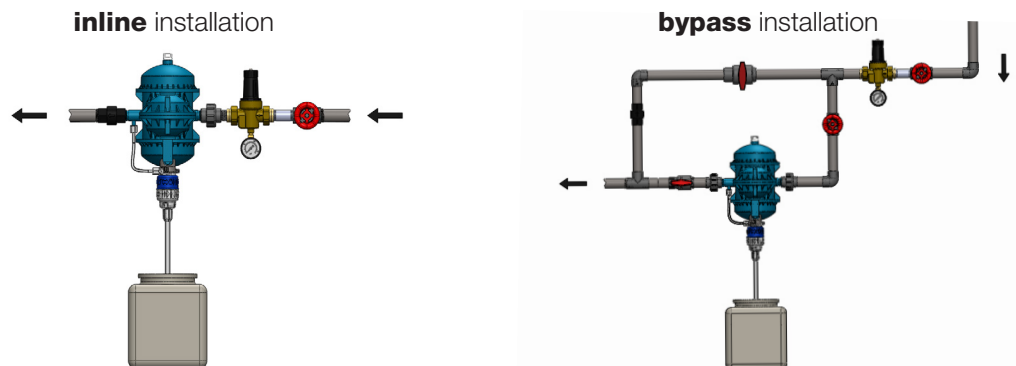
Basic Installation

for piston and diaphragm injectors



piston

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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