

Jaeco AgriPumps for Chemigation

A Better Way to Farm



**Designed to Meet Rugged Ag
Pivot System Applications**

Jaeco[™]
Fluid Systems, Inc.

Jaeco Metering (Injection) AgriPumps

Serving Farmers for over Fifty-Five Years

For over fifty-five years, Jaeco metering (injection) AgriPumps have been the solution for both difficult and routine Chemigation applications. Tens of thousands of Jaeco AgriPumps are in use worldwide, supplying millions of service hours. These heavy-duty pumps, developed for industrial applications, are designed to work 7 days a week, 24 hours a day, 365 days a year for years. All Jaeco AgriPumps are engineered for simplicity of design in order to achieve quality, durability and virtually maintenance-free reliability at a competitive price.

To meet your metering pump needs Jaeco offer three types of AgriPumps: hydraulically actuated Diaphragm pumps, Packed Plunger pumps and unique combination Diaphragm/Packed Plunger pumps. Unlike some of our competitors, Jaeco is an American owned and operated company that makes all the Chemigation pumps it sells in the U.S.A.

The direction of rotation of all three types of AgriPumps can be reversed at any time making them the perfect pump for use with pivot systems. All pumps have a steady-state accuracy of $\pm .5\%$. Liquid ends are available in a variety of materials to meet a broad spectrum of chemical requirements. Diaphragm and Packed Plunger AgriPumps are available in simplex and duplex models offering a wide range of capacities from 0.38 to 682 gallons per hour and a broad range of pressures to 7,200 psi. All Jaeco AgriPumps are available with electric motors, V-belt, variable speed drives or gasoline engines.



Complete Pumps Shipped in 48 Hrs. Parts Shipped in 24 Hrs.

Most configurations and liquid end components are available from stock so assembled pumps can be shipped within 48 hours. All parts for Chemigation AgriPumps are carried in stock so spare parts can be shipped in 24 hrs or less.



Chemigation

What is Chemigation?

Chemigation is the addition of fertilizers or chemicals to your irrigation water to help your crops grow. Studies have shown chemigation is the most economical and accurate way to apply these products to your fields. In addition it eliminates extra tractor passes, expensive equipment and can be done whenever you want it to be.

What Can You Apply?

Almost any liquid including fertilizers, pesticides, herbicides, wetting agents and water conditioners. Certain materials may need special handling so check the label.

What Kind of Irrigation System Is Needed?

The system type does not matter. It can be pivot, drip, sub-surface, tape, pipe, laterals sprinkler or open ditch.

What Does Chemigation Require?

It requires a holding tank for the liquid being applied, hose fittings, couplings and a filter plus a metering pump for accurate and reliable product application.

What Is a Metering (Injection) Pump?

The metering (injection) pump is the most important part of the system because it controls how much of the product you are applying is added into the irrigation water. With a metering pump the injection rate per acre irrigated remains constant even if the flow rate or pressure of the irrigation water varies. The size of the pump is dependent upon the amount of product you need to apply.

Jaeco AgriFram 1™

Hydraulically Actuated Diaphragm Chemigation Metering (Injection) Pumps (0.8 to 56 GPH)

Features/Benefits

- Specially designed for accurate, completely leak-proof metering of difficult-to-handle liquids.
- Separate chambers for hydraulic fluid and gear lubricant make possible the use of the best medium for hydraulic diaphragm pulsing and the best medium for gear lubrication. The results are better pump performance and longer pump life.
- Pumps can run dry without pump failure.
- Patented, heavy-duty gear reducer system for superior performance.
- Hydraulically actuated diaphragm minimizes diaphragm fatigue.
- Built-in hydraulic relief valve protects the pump.
- Rate of injection is manually adjustable while pump is running or idle.
- Rate of injection is adjustable for a turn-down ratio of 10:1.
- Accuracy of $\pm .5\%$ at steady state.
- Easy-to-read stroke length adjustment dial.
- No plunger seals to leak or replace.
- Single ball check valve, standard on both suction and discharge side of the pump, provides accurate metering and fast response.
- Available with or without motor.
- All units come epoxy painted, completely assembled on a base plate and have been fully tested.

Materials of Construction

Diaphragm: PTFE – Standard

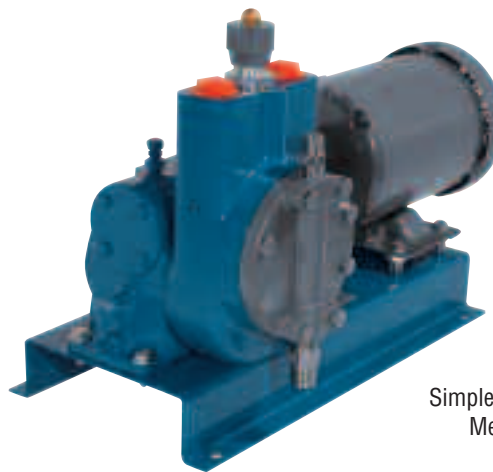
Liquid End: 316 Stainless Steel – Standard
PVC, Alloy 20 or Hastelloy-C – Optional

Sulfuric Acid/Infuric Applications

For those special applications of applying Sulfuric Acid or Infuric, the recommended materials of construction are Alloy 20 or PVC.

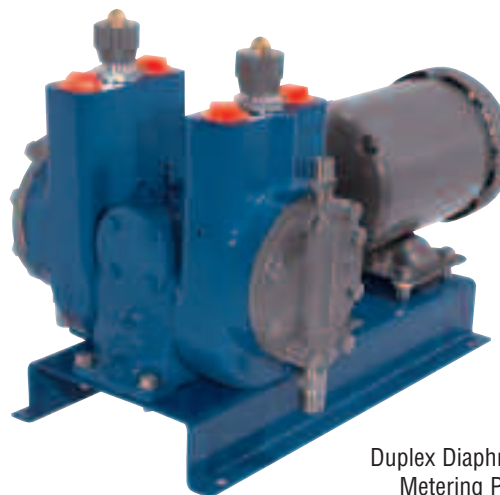
Accessories

- Safety relief valves
- Back pressure valves
- Calibration columns
- Pulsation dampeners



Simplex Diaphragm
Metering Pump

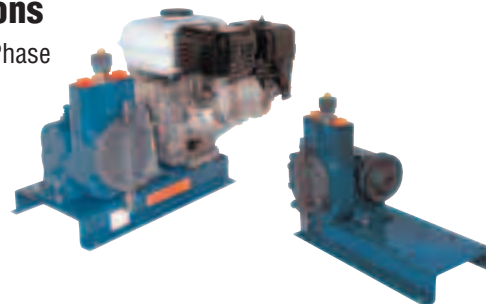
Direction of rotation can be reversed at start-up or during use with no effect on performance making them the perfect pumps for pivot systems.



Duplex Diaphragm
Metering Pump

Motor Options

- One or Three Phase
- 12V DC
- Variable Speed Motor Drive
- V-Belt
- Gasoline



Model#	Liquid End	Maximum Capacity ⁽¹⁾			
		Simplex		Duplex	
		GPH ⁽²⁾	PSI	GPH ⁽²⁾	PSI
A11-172-S2T2	316SS	6.9	1000	13.8	1000
A11-172-S7T2	PVC	6.9	150	13.8	150
A19-058-S2T2	316SS	9.0	440	18.0	440
A19-058-S7T2	PVC	9.0	150	18.0	150
A19-115-S2T2	316SS	18.5	300	37.0	300
A19-115-S7T2	PVC	18.5	150	37.0	150
A19-172-S2T2	316SS	28.0	250	56.0	250
A19-172-S7T2	PVC	28.0	150	56.0	150

1. Capacities with 1/3 HP motor at 1725 rpm.

2. Flow rates are based on water at maximum rated pressure.

These are the most common size agricultural pumps. Other sizes and materials available.

Jaeco AgriPak™

Packed Plunger Chemigation Metering (Injection) Pumps (0.38 to 150 GPH)

Features/Benefits

- Streamlined design and rigid construction provide low-cost, uninterrupted, trouble-free service for the continuous accurate metering of chemicals and solutions.
- Positive displacement supplies a simple and virtually maintenance-free approach to accurate chemical feed.
- Pumps can run dry without pump failure.
- Rate of injection is manually adjustable, but only while pump is stopped, as a safety precaution and for tamper resistance.
- Rate of injection is adjustable for a turn-down ratio of 10:1.
- Accuracy of $\pm .5\%$ at steady state.
- Single ball check valve, standard on both suction and discharge side of the pump, provides accurate metering and fast response.
- Because it is a true positive displacement pump, a safety relief valve on all closed loop systems is required to prevent possible over pressuring the discharge line.
- Duplex pumps can have different size pistons.
- Available with or without motor.
- All units come epoxy painted, completely assembled on a base plate and have been fully tested.
- For higher pressures and capacities see Jaeco Hi-Flo description on back.

Materials of Construction

Seals: Neoprene – Standard
PTFE or Viton® – Optional

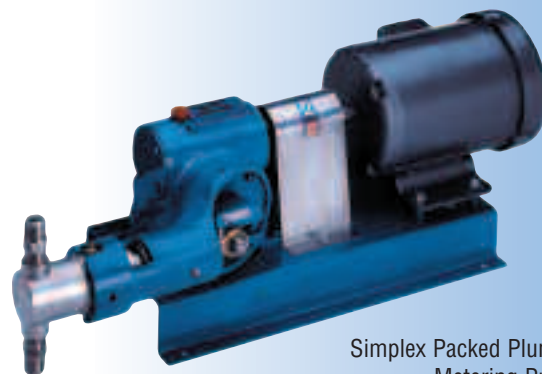
Liquid End: 316 Stainless Steel – Standard
Alloy 20 – Optional

Sulfuric Acid/Infuric Applications

For those special applications of applying Sulfuric Acid or Infuric, the recommended material of construction is Alloy 20.

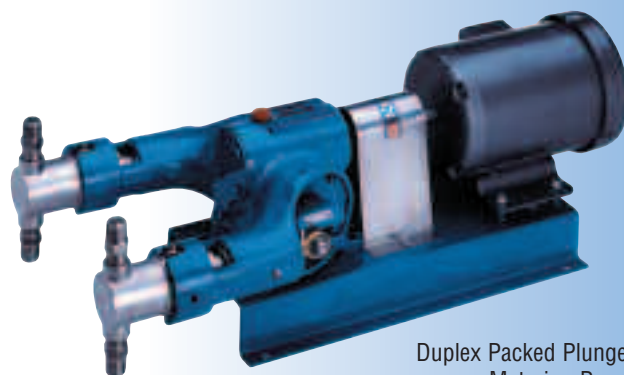
Accessories

- Safety relief valves
- Back pressure valves
- Calibration columns
- Pulsation dampeners



Simplex Packed Plunger
Metering Pump

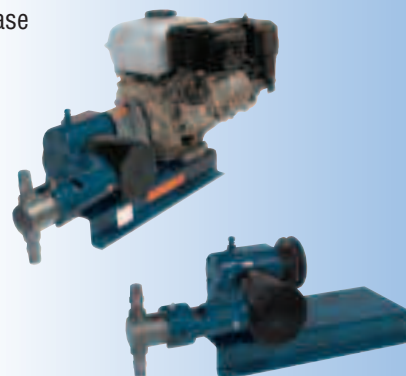
Direction of rotation can be reversed at start-up or during use with no effect on performance making them the perfect pumps for pivot systems.



Duplex Packed Plunger
Metering Pump

Motor Options

- One or Three Phase
- 12V DC
- Variable Speed Motor Drive
- V-Belt
- Gasoline



Model#	Liquid End	Maximum Capacity ⁽¹⁾			
		Simplex		Duplex	
		GPH ⁽²⁾	PSI	GPH ⁽²⁾	PSI
A12-072-S2N2	316SS	10.7	520	21.4	520
A12-115-S2N2	316SS	17.8	350	35.6	350
A12-172-S2N2	316SS	31.0	200	62.0	200
A20-072-S2N2	316SS	30.0	170	60.0	170
A20-115-S2N2	316SS	50.0	120	100.0	120
A20-172-S2N2	316SS	75.0	75	150.0	75

1. Capacities with 1/3 HP motor at 1725 rpm.

2. Flow rates are based on water at maximum rated pressure.

These are the most common size agricultural pumps. Other sizes and materials available.

Jaeco AccuFlow™

Unique Diaphragm/Packed Plunger Chemigation Metering (Injection) Pumps (40.9 to 103 GPH)

The Jaeco exclusive AccuFlow pump is a combination of a Packed Plunger pump and a Diaphragm pump that works off of a patented heavy-duty gear reduction system. **This unique pump's capacity can be accurately varied up to 27% of full rated capacity while running by adjusting the Diaphragm pump and can be further reduced up to 100% by adjusting the Packed Plunger pump while stopped. The direction of rotation of both pumps can be reversed at any time making this the perfect pump for use with pivot systems.** This combination makes the AccuFlow pump the ideal solution for either fertilizer or chemical injection. In addition, two different fertilizers/chemicals can be pumped at the same time - one by each side.

Features/Benefits

- Rate of injection is manually adjustable while pump is running (diaphragm pump side only) or idle. Warning: entire pump must be shut off before adjusting the packed plunger side or bodily injury could result.
- Direction of rotation can be reversed at start-up or during use with no effect on performance
- Pumps can run dry without pump failure.
- Accuracy of $\pm .5\%$ at steady state.
- Available with or without motor.
- All units come epoxy painted, completely assembled on a base plate and have been fully tested

Materials of Construction

Packed Plunger Pump:

Seals: Neoprene – Standard
PTFE or Viton® – Optional

Liquid End: 316 Stainless Steel – Standard
Alloy 20 – Optional

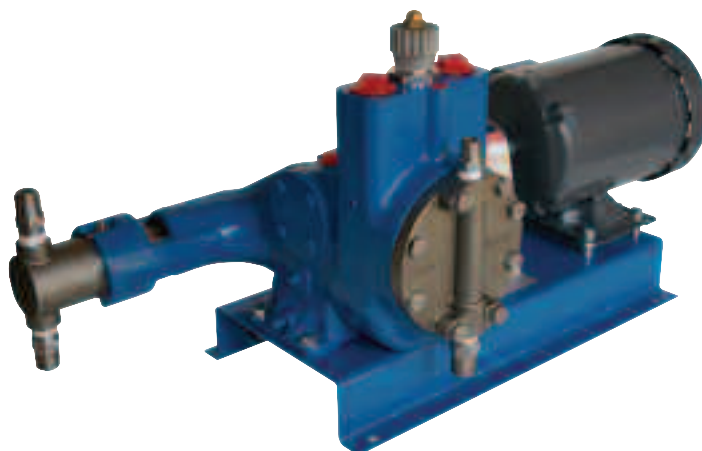
Diaphragm Pump:

Diaphragm: PTFE – Standard

Liquid End: 316 Stainless Steel – Standard
PVC, Alloy 20 or Hastelloy-C – Optional

Sulfuric Acid/Infuric Applications

For those special applications of applying Sulfuric Acid or Infuric, the recommended materials of construction for the Diaphragm pump are Alloy 20 or PVC with PTFE diaphragm or for the Packed Plunger pump Alloy 20 with Viton packing.



Direction of rotation of both pumps can be reversed at start-up or during use with no effect on performance making them the perfect pumps for pivot systems.

Accessories

- Safety relief valves
- Calibration columns
- Back pressure valves
- Pulsation dampeners

Motor Options

- One or Three Phase
- 12V DC
- V-Belt
- Variable Speed Drive
- Gasoline

Model#	Liquid End	Maximum Capacity ⁽¹⁾				Total GPH
		Packed Plunger		Diaphragm		
		GPH ⁽²⁾	PSI	GPH ⁽²⁾	PSI	
AF-3011	316SS	30.0	170	10.9	400	40.9
AF-3713	316SS	37.0	150	13.8	375	50.8
AF-5018	316SS	50.0	120	18.5	300	68.5
AF-7528	316SS	75.0	75	28.0	250	103.0

1. Capacities with 1/3 HP motor at 1725 rpm.

2. Flow rates are based on water at maximum rated pressure.

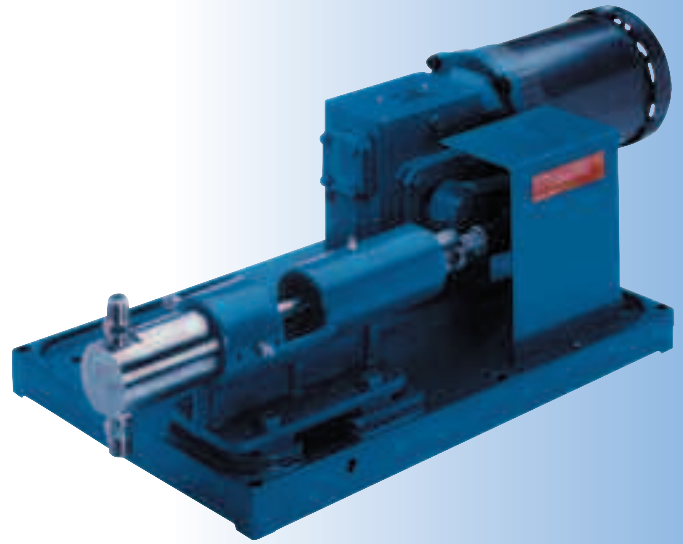
These are the most common size agricultural pumps. Other sizes and materials available.

Jaeco Hi-Flo™

Heavy Duty Packed Plunger Metering (Injection) Pumps

(20 to 682 GPH; up to 7200 PSI)

For those Chemigation applications that require higher capacities or higher pressures Jaeco Hi-Flo pumps are the answer



Adjusting Pump Capacity

All Jaeco Chemigation pumps are fitted with a capacity scale, graduated from 0-10 (0-100%). The scale relates to the percentage in Gallons Per Hour (GPH) output based on the maximum output capability of the specific pump rated at 1725 rpm. Refer to pump instructions for specific procedure for making pump capacity adjustment.

Example:

1. Maximum pump output = 7.2 GPH @ a setting of 10 (100%) on the scale.
2. Desired output of the pump is 3.6 GPH.
3. Pointer should be adjusted to a setting of 5 (50%) on the capacity scale ie.
 $5 (50\%) \text{ of } 7.2 \text{ GPH} = 3.6 \text{ GPH}$. Another way of looking at it is $3.6 \div 7.2 = .5 (50\%)$.

That is all there is to it.

Injection Line Check & Pump Valves

Jaeco 316 Stainless Steel spring-loaded Injection Line Check Valves are available in two styles, O-Ring Poppet style valves and Ball style check valves. These valves are widely used on any liquid system that may require a spring-loaded check valve for positive, no drip, shutoff and/or backflow protection. **Both styles have been listed by the Idaho Department of Agriculture as Approved Chemigation Equipment for use as an injection line check valve to prevent the backflow of water into the chemical tank, causing a possible overflow mixture of water and chemical onto the ground or into the water source.**

The valves also help prevent the full pressure of the irrigation system from blowing the hose. The valves have a pressure break of 10 PSI. Both are also available with 2 PSI pressure break.

Both spring-loaded styles are available in 1/4", 3/8", 1/2", 3/4" and 1" sizes and can also be used on pumps.

Jaeco also manufactures non-spring-loaded pump valves that fit most competitors Injection Pumps in sizes 3/8" & 1/2".



LIMITED WARRANTY

All Jaeco Fluid Systems, Inc. ("COMPANY") pumps are tested at the factory prior to shipment.

If the pump is installed properly, the Company warrants to the purchaser of this product for a period of three years from the date of shipment all parts with the exception of the normal wear items, which are the packing and check valves. Packing and check valves are warranted for a period of one year from date of shipment. The Company warrants that its pumping products will be free from defects in total, and so far as of its own manufacture, will be free from defects in materials and workmanship as follows:

1. Jaeco Fluid Systems, Inc. will replace, at no charge, any part that fails due to a defect in material and/or workmanship during the warranty period, FOB our factory, Malvern, Pennsylvania. To obtain warranty service, you must forward the defective parts to the factory for examination, freight prepaid.
2. This warranty period does not cover any product or product part, which has been subject to accident, misuse, abuse or negligence. The Company shall only be liable under this warranty if the product is used in the manner intended by the manufacturer as specified in the written instructions furnished with this product.

The Company will deliver repaired or replacement products Ex Works its factory or Factory Authorized Service Center. Products not of the Company's manufacture are warranted only to the extent provided by the original manufacturer.

Under no circumstances shall the Company be liable for any incidental, consequential, or special damages, losses or expenses arising from this contract, its performance, or in connection with the use of the Company's product.

The liability of the Company in respect of all damages, losses, costs, or expenses, whether suffered or incurred by the purchaser or any third party arising in any manner or incident related to this contract or the performance hereunder, shall be limited in the aggregate to the actual price paid by the purchaser to the Company.

Important Notice Return Authorization

1. All equipment returned to Jaeco Fluid Systems, Inc. requires proper Return Authorization Number and completed Return Material Report.
2. All equipment returned to the factory for repair or service must first be thoroughly flushed and have all chemical contact areas neutralized.
3. All equipment, which has been in contact with chemicals, must be accompanied by a copy of the Chemical Product Material Safety Data Sheet (MSDS).
4. Failure to comply with the above instructions, will result in equipment being returned to the sender, freight collect, without service.

Distributed by:



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