

A BETTER WAY TO FARM

Pumps for Rugged
Agricultural Applications

JAEKO
FLUID SYSTEMS, INC.



JAECO AGRI-PUMPS

Metering (Injection) Pumps

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 offers 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.



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?

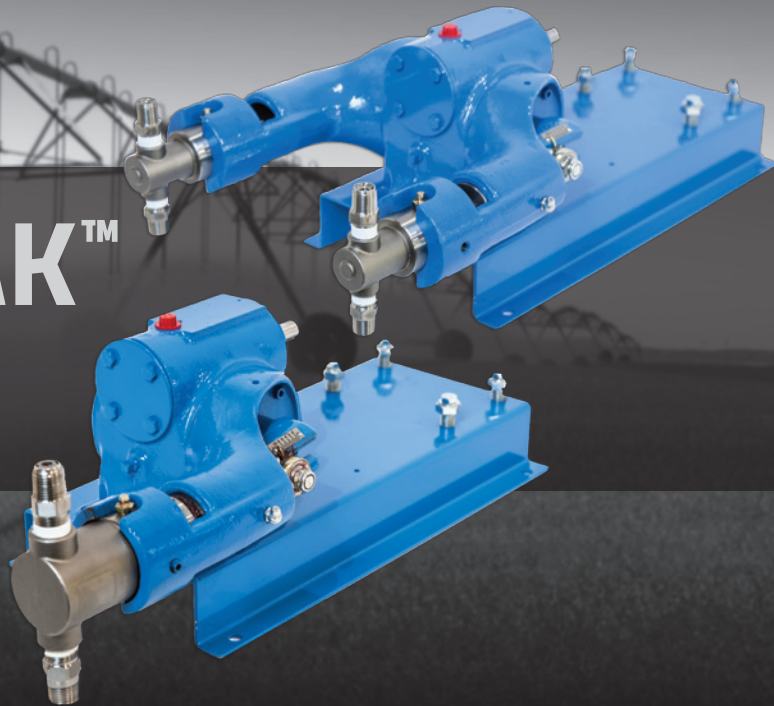
It requires a holding tank for the liquid being applied, hose fittings, couplings and a filter plus a metering pump for accurate and reliable product application.

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 applied product is being 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.

JAECOAGRI-PAK™

Packed-Plunger Metering (Injection) Pumps



10.7-190 GPH Flow Rate
Pressures up to 520 PSIG

- A low-cost, uninterrupted, trouble-free service for the continuous, accurate metering of chemicals and solutions.
- Available in simplex and duplex models, field convertible from simplex to duplex

FEATURES & BENEFITS

- 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.
- Complete with single-phase or three-phase motor.
- Additional motor options available.
- All units come epoxy painted, completely assembled on a base plate and have been fully tested.

SULFURIC ACID/INFURIC APPLICATIONS

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

MOTOR OPTIONS

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

ACCESSORIES

- Pressure relief valves
- Back pressure valves

MATERIALS

LIQUID END:
316 Stainless Steel - Standard
Alloy 20 - Optional

SEALS:
Neoprene - Standard
PTFE - Optional
Viton® - Optional



JAECOAGRI-PAK™ MODELS

MODEL #	LIQUID END	MAXIMUM CAPACITY (1)			
		SIMPLEX		DUPLEX	
		GPH(2)	PSI	GPH(2)	PSI
112-072-S2N2	316SS	10.7	520	21.4	520
112-115-S2N2	316SS	17.8	350	35.6	350
112-172-S2N2	316SS	31.0	200	62.0	200
120-072-S2N2	316SS	30.0	170	60.0	170
120-115-S2N2	316SS	50.0	120	100.0	120
120-172-S2N2	316SS	75.0	75	150.0	75
M20-172-S2N2	316SS	95.0	75	190.0	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. Model #M20-172-S2N2 will require a 3/4 HP motor.



HOW TO ORDER

Determine type of Jaeco pump to use. Select appropriate model from capacity/pressure chart. Or, contact your Jaeco representative with the following information: fluid name, concentration and compatibility; fluid properties – viscosity, temperature, vapor pressure, particle matter size and percent; maximum and minimum operating capacities and type of capacity adjustment required; maximum discharge pressure and minimum available suction pressure; and type of motor drive preferred and available power source. Also include additional pertinent information such as pumping system tolerance for pulsating flow/pressure and liquid's degree of abrasion or corrosion.

WARRANTY

Jaeco pumps are warranted for one year against defects in parts or workmanship from day of shipment for all parts with the exception of the normal wear items, which are the packing and the check valves. Packing and check valves are warranted for one year from date of shipment.



JAECOAGRI-FRAM™

Hydraulically-Actuated Diaphragm Metering (Injection) Pumps



6.9-56 GPH Flow Rate
Pressures up to 1,000 PSIG

- Specially designed for accurate, completely leak-proof metering of difficult-to-handle liquids.
- Available in simplex and duplex

FEATURES & BENEFITS

- 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.
- 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.
- Complete with single-phase or three-phase motor.
- Additional motor options available.
- All units come epoxy painted, completely assembled on a base plate and have been fully tested.

SULFURIC ACID/INFURIC APPLICATIONS

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

MOTOR OPTIONS

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

ACCESSORIES

- Pressure relief valves
- Back pressure valves

MATERIALS

LIQUID END:

316 Stainless Steel - Standard
PVC - Standard
Alloy 20 - Optional
Hastelloy-C - Optional

DIAPHRAGM:

PTFE - Standard



JAECOAGRI-FRAM™ MODELS

MODEL #	LIQUID END	MAXIMUM CAPACITY ⁽¹⁾			
		SIMPLEX		DUPLEX	
		GPH ⁽²⁾	PSI	GPH ⁽²⁾	PSI
111-172-S2T2	316SS	6.9	1000	13.8	1000
111-172-S7T2	PVC	6.9	150	13.8	150
119-058-S2T2	316SS	9.0	440	18.0	440
119-058-S7T2	PVC	9.0	150	18.0	150
119-115-S2T2	316SS	18.5	300	37.0	300
119-115-S7T2	PVC	18.5	150	37.0	150
119-172-S2T2	316SS	28.0	250	56.0	250
119-172-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.

HOW TO ORDER

Determine type of Jaeco pump to use. Select appropriate model from capacity/pressure chart. Or, contact your Jaeco representative with the following information: fluid name, concentration and compatibility; fluid properties – viscosity, temperature, vapor pressure, particle matter size and percent; maximum and minimum operating capacities and type of capacity adjustment required; maximum discharge pressure and minimum available suction pressure; and type of motor drive preferred and available power source. Also include additional pertinent information such as pumping system tolerance for pulsating flow/pressure and liquid's degree of abrasion or corrosion.

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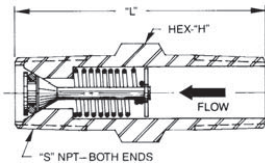


316SS

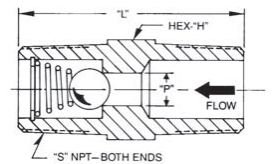
Check Valves



O-RING POPPET VALVES



BALL CHECK VALVES



FEATURES & BENEFITS

- Compact length
- Spring-loaded 2 or 10 PSI
- Full range of sizes 1/4" to 1" MNPT
- All 316 stainless steel construction
- Viton® or PTFE O-Rings as standard (other materials available)
- Pressures to 2,500 PSI
- Temperatures -15° to +400°F
- Usable on metering pumps
- Usable as injection line check valves
- Custom valve inquiries invited

FEATURES & BENEFITS

- Compact length
- Spring-loaded 2 or 10 PSI
- Full range of sizes 1/4" to 1" MNPT
- All 316 stainless steel construction
- Other ball materials available
- Easily disassembled for inspection or cleaning
- Pressures to 2,500 PSI
- Temperatures -15° to +650°F
- Usable on metering pumps
- Usable as injection line check valves
- Custom valve inquiries invited

O-RING POPPET MODELS

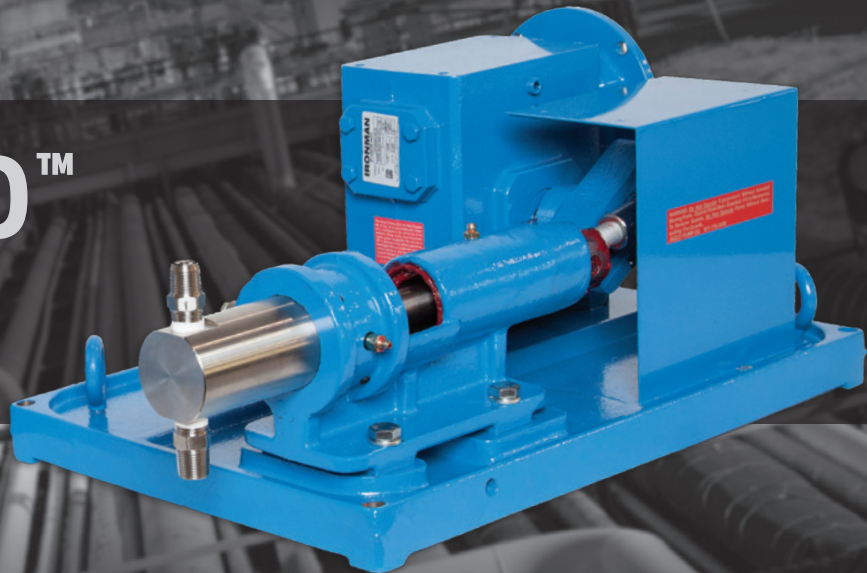
VALVE SIZE	CRACKING PRESSURE	PART NUMBER	SIZE "S"	HEX "H"	"L"	CV
1/4	2 LB.	A00101-01	1/4-18	5/8	1 7/8	.46
	10 LB.	A00101-02				
3/8	2 LB.	A00102-01	3/8-18	3/4	2 1/8	1.42
	10 LB.	A00102-02				
1/2	2 LB.	A00103-01	1/2-14	7/8	2 1/2	1.82
	10 LB.	A00103-02				
3/4	2 LB.	A00104-01	3/4-14	1 1/8	2 5/8	6.02
	10 LB.	A00104-02				
1	2 LB.	A00105-01	1-11 1/2	1 1/2	3 1/8	12.80
	10 LB.	A00105-02				

BALLCHECK MODELS

VALVE SIZE	CRACKING PRESSURE	PART NUMBER	"L"	HEX "H"	"S" MPT	BALL	"P"	CV
1/4	2 LB.	A00031-01	1 1/2	5/8	1/4-18	.250	.200	.56
	10 LB.	A00031-02						
3/8	2 LB.	A00032-01	1 3/4	3/4	3/8-18	.312	.250	.83
	10 LB.	A00032-02						
1/2	2 LB.	A00033-01	2 1/4	7/8	1/2-14	.437	.335	1.49
	10 LB.	A00033-02						
3/4	2 LB.	A00034-01	2 1/2	1 1/8	3/4-14	.562	.442	2.98
	10 LB.	A00034-02						
1	2 LB.	A00035-01	2 3/4	1 3/8	1-11 1/2	.750	.530	5.65
	10 LB.	A00035-02						

JAECOHI-FLO™

Packed Plunger Metering Pumps



20-682 GPH Flow Rate
65-7,200 PSIG Pressure

- Continuous, accurate metering at higher flow rates and/or pressures.
- Available in simplex and duplex models

FEATURES & BENEFITS

- Provides a simple and virtually maintenance-free approach to accurate chemical feed.
- Stroke rate easily automated using variable-speed drive.
- Capacity is manually adjustable, but only while pump is idle, as a safety precaution and for tamper resistance.
- Stroke length is 0 to 100% adjustable for a turn-down ratio of 10:1.
- Available with motor or as bare pump.
- Single ball check valve, standard on both suction and discharge side of the pump, provides accurate metering and fast response. Valve ball turns with fluid flow, constantly presenting a new face to the seat, and is therefore self-cleaning.
- Because it is a true positive displacement pump, a safety relief valve on all closed loop systems is required to prevent possible overpressuring the discharge line.
- Integral lantern ring for packing lubricant may be used for internal purging when handling crystallized, corrosive or other hazardous liquids.
- Packing adjustment screwed gland nut ensures even take-up and fewer packing problems.
- Models 324, 332 and 340 have a clamped column, suction and discharge check valve assembly that can be easily cleaned, inspected or replaced without breaking pipe connections.
- Accuracy of $\pm .5\%$ at steady state.
- All units come epoxy painted, completely assembled on a base plate and have been fully tested.

PUMP OPTIONS

- Double ball check valves with or without spring-loaded balls.
- Purge-port plugs, available in cylinder end, can be used to bleed air during and after start-up and to solvent-purge the liquid end. They also provide easy access to the cylinder without breaking pipe connections.

MOTOR OPTIONS

- Electrical
- Gas
- Air

ACCESSORIES

- Pressure relief valves
- Back pressure valves

MATERIALS

LIQUID END:
316 Stainless Steel
Alloy 20

SEALS:
Neoprene
PTFE
Viton®



JAECOHI-FLO™ MODELS

MODEL # ⁽¹⁾	MAXIMUM CAPACITY GPH ⁽²⁾		MAXIMUM PRESSURE PSIG ⁽³⁾						
	SIMPLEX	DUPLEX	3/4 HP	1 HP	1 1/2 HP	2 HP	3 HP	5 HP	7 1/2 HP
312-058-	20	40	710	965	1440	1925	2970	4800	7200
312-086-	30	60	550	760	1190	1450	2180	3600	5400
316-058-	36	72	400	540	810	1080	1670	2700	4000
316-086-	54	104	305	425	665	815	1225	1750	2600
324-043-	60	120	225	325	450	600	950	1250	1900
324-058-	81	161	175	240	360	480	740	1200	1800
324-072-	101	202	165	235	355	435	655	1050	1600
324-086-	123	246	135	190	295	360	545	900	1300
332-058-	144	288	100	135	200	270	415	600	1000
332-072-	181	362	90	130	200	245	370	550	900
332-086-	218	436	75	105	165	205	305	500	750
340-086-	341	682	N/A	65	105	130	195	300	450

1. Jaeco model numbers consist of 10 digits. See explanation. 2. Flow rates are based on water at maximum rated pressure. 3. For steel construction, maximum temperature is 350°F.

MODEL NUMBER KEY

A BB - CCC - D E F G - (H)

A — 3 = Jaeco Hi-Flo

BB — Plunger Dia.: 12 = 3/4", 16 = 1",
24 = 1 1/2", 32 = 2", 40 = 2 1/2"

CCC — Speed in strokes per minute

D — S = Simplex, D = Duplex

E — Liquid End Material
2 - 316 Stainless Steel
3 - Alloy 20

F — Packing: N = Neoprene, T = PTFE,
V = Viton

G — Motor Horse Power

4 - 3/4 HP 8 - 3 HP

5 - 1 HP 9 - 5 HP

6 - 1 1/2 HP 0 - 7 1/2 HP

7 - 2 HP Y - less motor

(H) — Options: Consult factory

HOW TO ORDER

Determine type of Jaeco pump to use. Select appropriate model from capacity/pressure chart. Or, contact your Jaeco representative with the following information: fluid name, concentration and compatibility; fluid properties – viscosity, temperature, vapor pressure, particle matter size and percent; maximum and minimum operating capacities and type of capacity adjustment required; maximum discharge pressure and minimum available suction pressure; and type of motor drive preferred and available power source. Also include additional pertinent information such as pumping system tolerance for pulsating flow/pressure and liquid's degree of abrasion or corrosion.

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