

FERTIGATION INJECTORS

Amiad Fertigation Injectors are your key to higher yields and healthier crops.



injection rates

**up to 320 liter/hour
(84 gal/hour)**

injector types

hydraulic motor

min. operating pressure

**less than
1 bar (15 psi)**

max. operating pressure

**up to 8 bar
(120 psi)**

features:

- Amiad Injectors bring accuracy and efficiency to agriculture fertigation
- Wide range of models supporting field crops, orchards, vegetables, horticulture, greenhouses, gardening, golf courses and municipal landscaping
- No more waste of expensive chemicals, labor and machinery
- Preventing uncontrolled chemical pollution, unnecessary soil compress and crop damage
- Simple operation and maintenance
- Excellent mechanical strength, corrosion resistance and chemical durability

Amiad Hydraulic Fertilizer Injector

Amiad hydraulic fertilizer injector is constructed from corrosion and chemical resistant materials. The unit is resistant to nearly all known chemicals presently used in agriculture and horticulture.

Amiad hydraulic fertilizer injector needs no external power to operate. Its linear hydraulic motor is powered by the hydraulic pressure of the irrigation system. The injector uses this pressure as the energy source for injecting fertilizer to the pressurized irrigation lines.

Liquid fertilizer enters the injector through the Suction Port and is injected to the downstream irrigation line through the injection line.

The water consumption of the hydraulic motor is 3 times the quantity of the chemical injected and can produce an injection rate of up to 1.4 gpm (320 liter/hour). The Injector is supplied ready to operate. The user has to supply two ¾" manual valves, one for the Drive-water port and the other for the Injection port. A 25 mm drainage line should be also connected to the injector's Water-exhaust port.

Controlling the Injection Rate:

Since the injection rate is proportional to the irrigation line pressure, the required injection rate can be adjusted by throttling the injection line using the ¾" manual valve on the injection port.

The volume of fertilizer injected at each pulse is 33 cc; therefore the hourly rate of injected fertilizer in liter/hour is easily calculated by counting the actual number of pulses per minute and multiplying this number by two.

Amiad also supplies very accurate chemical resistant flow regulators, ranging between 2.6 gallons (10 liter) and 21.1 gallons (80 liter) per hour.

The Flow Regulator assembly contains interchangeable color coded flow regulators to be installed in the chemical injection line. The flow regulator assembly also contains a chemical resistant filter for preventing the flow regulators from clogging.

The Main Products in Amiad's Fertilizer Injector Line are:

- Amiad Hydraulic Fertilizer Injector – Based on a linear hydraulic motor and powered by the hydraulic pressure of the irrigation system.
- Amiad's Chemical and Corrosion Resistance Accessories – Valves, Flow-Regulators and Check Valves for fertigation systems.

Controlling the Quantity of Injected Fertilizer:

The following methods are used to control the quantity of the fertilizer injected:

- Manual operation – Manually operating the cut-out unit when the desired amount of fertilizer is applied.
- Using a suction-type unit – This add-on unit contains an automatic cut-out assembly and is placed at the bottom of an intermediate fertilizer tank. The needed amount of fertilizer is then filled in the tank and the fertigation is started manually. When the level of the fertilizer reaches the base of the cut-out unit the injector operation is automatically stopped.
- Using an automatic metering valve – This valve is installed in the Drive-water line. It should be set to a quantity exactly 3 times the required amount of fertilizer to be injected. In this type of installation adding a flow regulator assembly is required.
- Computerized operation – Adding an Amiad Pulse Transmitter to the injector's motor and a Control Valve to the Drive-water line. The pulse transmitter and the control valve can be connected to almost any type of irrigation controller or irrigation computer. The controller controls the timing, the method, and the quantity of the fertigation process.

Why to choose Amiad Fertilizer Injectors

General

Amiad's fertilizer injectors bring accuracy and efficiency to the various needs of agriculture fertigation.

As a method of applying fertilizers and chemicals via the irrigation water directly to the crop roots, the development of the fertigation method caused a giant productivity leap in modern agriculture. With the proper fertigation equipment, fertilizers can be applied together with the irrigation water so wherever the water goes the fertilizer goes with it. With fertigation, fertilizer is applied only where needed, when needed, and in the proper dose and quantity.

No more waste of expensive chemicals, labor and machinery. No more uncontrolled pollution, unnecessary soil compress and crop damage.

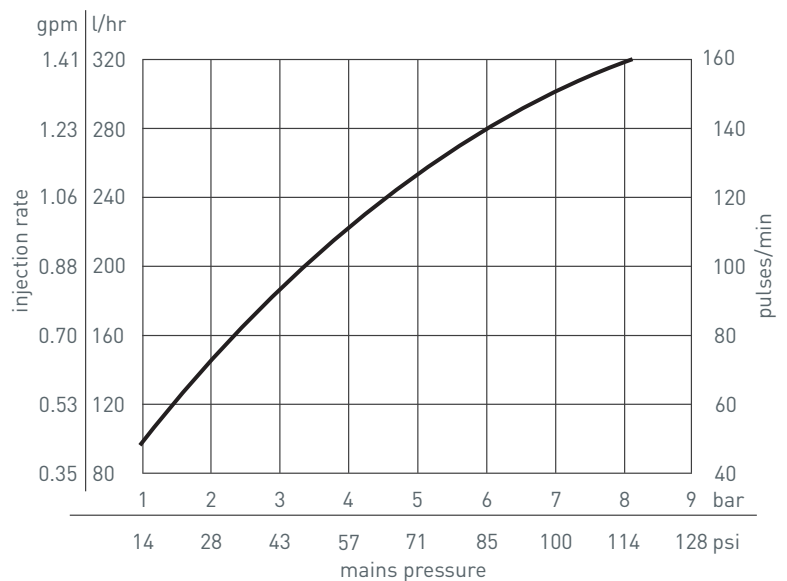
Amiad's fertilizer injector line is a family of various fertilizer injectors supporting fertigation needs in field crops, orchards, vegetables, horticulture and greenhouses and even in gardening, golf courses and municipal landscaping.

Technical Specifications

Hydraulic and Diaphragm Injectors

Injector	Hydraulic Injector	Duplex Injector
Max. Injection rate	320 l/h (84 g/h)	640 l/h (168 g/h)
Minimum pressure	0.5 bar (7 psi)	
Maximum pressure	8 bar (120 psi)	
Max. working temperature	60°C (140°F)	
Water consumption	3 x Injection	
Connections	¾" (I.D.) & 25 mm (O.D.)	
Unit weight	5 kg (11 lb)	7 kg (15 lb)
Construction materials	Engineering Plastics Stainless Steel Viton Seals	

Flow rate			Capsule	
Litre/hr	US Gph	Imp.Gph	Cat. No	Colour
10	2.6	2.2	18-4011-0110	red
20	5.3	4.4	18-4011-0120	yellow
40	10.6	8.8	18-4011-0140	green
60	15.9	13.2	18-4011-0160	blue
80	21.1	17.6	18-4011-0180	brown



**Suction type injector
(4-01)**



**Gravity feed type injector
(4-02)**



**Duplex injector
(4-03)**



Amiad's Chemical and Corrosion Resistance Accessories

As a complementary line to its fertilizer injector product family, Amiad supplies high quality, chemical & corrosion resistance accessories. These products serve in wide variety of applications controlling chemicals, liquid fertilizers and water flow.

The chemical & corrosion resistance accessory line consists of 3 main products:

3/4" NC Chemical Resistance Hydraulic Valve:

- With its Glass re-enforced Polypropylene body, 316 SS spring and Viton seal, this valve guarantees corrosion-free operation and chemical resistance to most of the chemicals presently used in the agricultural and the industrial markets.
- Amiad's NC valve is the only 3/4" chemical resistant valve that comes as a standard with two quick connectors.
- The pilot system of the valve is completely separated from the flow of liquid through the inlet and the outlet of the valve. Therefore the valve can be controlled by means of pressurized water or air, while valuable and/or corrosive chemical flows through its body.
- The normally closed feature of the valve ensures immediate closure of the valve in case the pressurized-water control tube is cut or disconnected. This prevents pollution, losses, and damage in case of a malfunctioning control system.
- The valve can be installed in any position, in one inlet and one or two outlet configuration or in two inlet and one outlet configuration.
- Amiad's NC valve has excellent hydraulic performance with a maximum working pressure of 20 bar (300 psi) and only 25 bar (17 psi) of command pressure is needed to open against 10 bar line pressure



3/4" Chemical Resistance Non Return Valve (Check valve):

- With its Glass re-enforced Polypropylene body, its 316 SS spring and Viton seal, this device guarantees corrosion-free operation and chemical resistance to most of the chemicals presently used in the agricultural and the industrial markets.
- Amiad's chemical resistance check valve is also a 3/4" quick connector.
- The device works in any position.
- Maximum working pressure - 10 bar (145 psi).



3/4" Chemical Resistance Quick Coupler:

- With its Glass re-enforced Polypropylene body and Viton seal, this device guarantees corrosion-free operation and chemical resistance to most of the chemicals presently used in the agricultural and the industrial markets.
- Maximum working pressure - 10 bar (145 psi).



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