

A/B Nutrient Injection System – 150 US GPM

The Argus A/B Nutrient Injector is designed for simultaneous in-line injection of two dissolved fertilizer concentrates with a connection port for an optional pH control module.



Applications



The A/B nutrient injector is designed for situations where two concentrate solutions must be injected and mixed simultaneously.

This method is often used to separate incompatible fertilizer concentrates, preventing the formation of undesirable precipitates.

The injector is suitable for nutrient management in greenhouse vegetables, flower crops, and outdoor nurseries. It can be used for in-line injection and for filling and maintaining the nutrient levels in dilute storage tanks.

Alternatives

Models are available for a variety of design flow rates. Selector valve add-on options can be provided for multiplexing several A/B recipes from separate tanks. Argus Multi-Feed systems are also available for the simultaneous dosing of 2 to 8 concentrate tanks plus acid and base.

Features

The A/B Nutrient Injector is highly compact and is designed for wall or rack mounting. The injectors feature:

- Dual venturi proportioning control.
- EC measurement.
- Temperature measurement.
- Pressure monitoring.
- Injector inlet/outlet pressure gauges.
- Flow measurement and monitoring.
- Feed management integration with the irrigation system.

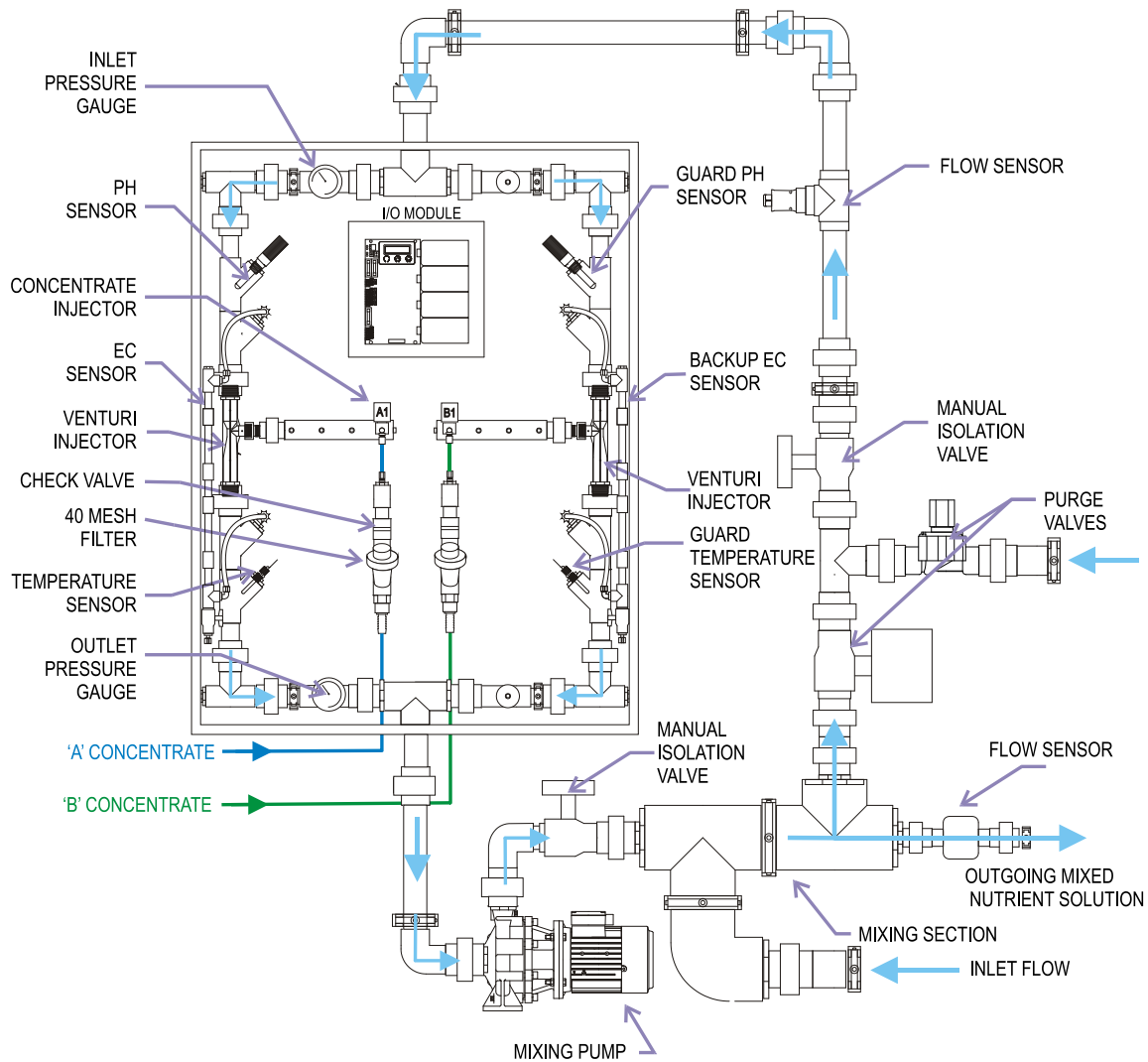
Additional options such as pH control and monitoring are also available. These injectors are available for all Argus systems. Models can be sized for design flow rates ranging from a few gallons to thousands of gallons per minute.

Specifications

NOTE: These specifications are provided for a standard 150 US GPM Multi-Feed RM. Units can be custom configured to accommodate larger or smaller flow rates as well as location-specific supply power requirements.

Nutrient System Panel Dimensions	H: 48" (1219 mm) x W: 36" (914 mm) x D: 8" (203 mm)
Control Interface	An Argus I/O Module is located in a non-metallic enclosure inside the Nutrient System Panel (see diagram). This operates the sensors and control valves. The control software is operated from a remotely mounted Argus Titan Controller.
Injectors	2 x Mazzie injectors, model 1078 (1.5" low flow), 885 (1"), or 878 (1" very low flow) Kynar
Stock Solution Valves	2x IPV valves Model 100, 24VAC 50/60Hz, Orifice Size: 3.97mm (1/8") See Argus Data sheet: NUT-VAL_200SS-2
Maximum Flow	150 US GPM (600 liters/min)
Minimum Flow	Varies with flow meter selection.
Minimum Supply Pressure	20 psi
Maximum Supply Pressure	80 psi - Note: a reasonably consistent supply pressure should be maintained within the max/min range. Use water hammer arrestors as required to protect sensors and irrigation equipment from damage due to sudden pressure 'spikes'.
Maximum Fertilizer Injection Rate	0.80 US GPM (1.0 LPM – very low, 3.0 LPM – low, 5.0 LPM - high) per injector valve.
Venturi Manifold Inlet/Outlet Pipe Size	1-1/2" (38.1mm) Schedule 80 PVC unions
Mixing/Supply Pump	Specifications vary with irrigation system design and layout.
Interconnection Piping-In Nutrient Panel	1" (38.1mm) (Schedule 80 – PVC)
EC Sensors (2x)	An integrated temperature compensated EC sensor is built into the nutrient injection piping. Specifications @ 77°F (25°C): <ul style="list-style-type: none"> • Range: 0.20 to 20.0 mS • Optimal Range: 0.5 to 15 mS • Repeatability: better than 1% of reading over optimal range (0.01 mS) • Accuracy: (with calibration) +0.01 to 0.02 mS over the optimal range • Probe Constant: 15
PH Sensor (2x)	2 x insertion type pH probes for pressurized applications. See Argus data sheet: SEN-PH/SP200
Solution Temperature (2x)	2 x wet thermistor sensors. See Argus data sheets: SEN-TN21 and SEN-TN-DW_C.
Stock Solution Filtering	40 mesh stainless steel line strainer. See Argus data sheet: NUT-STRAIN-1_2
Flow Meter	Paddle wheel. See Argus Data Sheets: NUT-FLOW/PAD for pipe sizes 0.5-3"; NUT-FLOW/PAD-2 for pipe sizes 4"-8"
Power Requirements	Injector Panel: power for the Argus I/O module and sensors is supplied by the I/O System Network wiring. Injector Valves: 24VAC (10VA)

Piping Schematic



This piping diagram is for illustration purposes only. Actual piping configurations may vary to suit the application. Custom systems may use different sensor configurations. All parts inside the panel are factory assembled by Argus. Other parts may be supplied by Argus or locally obtained. For complete installation instructions and plumbing specifications please refer to the custom drawings and documents supplied with the system.

Additional Information



For more information, please contact Argus.