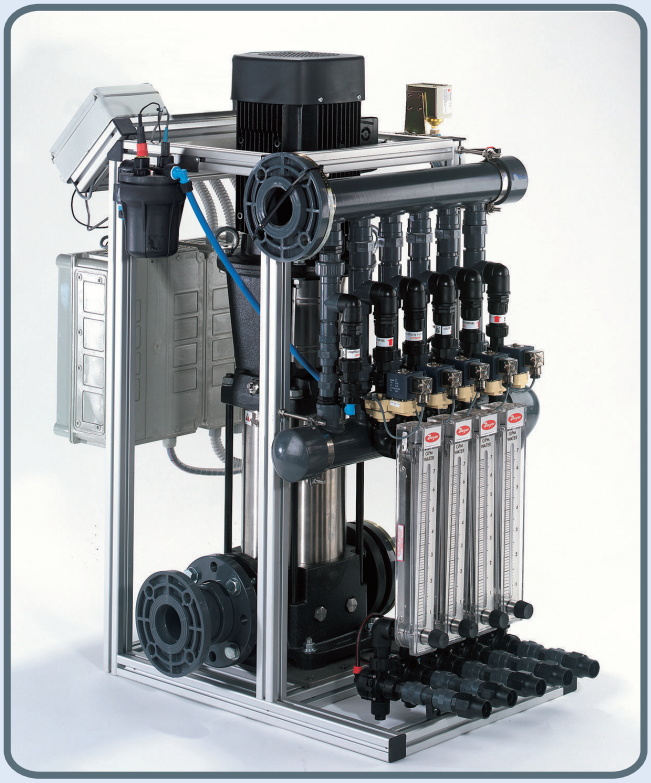
Fertijet



A SMART, COMPACT, FERTIGATION CONTROL UNIT FOR ADVANCED IRRIGATION SYSTEMS

The Fertijet designed and manufactured by GALCON,The leading Israeli manufacturer of agricultural computerized systems, is a unique, compact, simple, and modular Fertigation control systems to be used both for greenhouses or open- fields irrigation systems.

Fertijet is designed to most accurately perform the injection of nutrients into the irrigation water pipe by a set of Venturi type fertilizer injectors along with EC&PH control and an optional Irrigation control by one of the models of the advanced GALILEO computerized controllers.

Fertijet can simply and quickly be linked to almost any irrigation control head within a range of 1”- 4”, or for flow rates in range of 1-100 m3/Hr.

With Fertijet you can save precious fertilizers, yet maximize yields and products quality , all within a most reasonable investment .

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Technical Specifications

- A set of 3 venturi type fertilizer injectors with a flow rate of up to 400 Lt./ hr each, that also consists of an electric fertilizer control valve, an adjustable flow regulator and a flexible suction pipe per injector. (The program allows using up to 8 fertilizer injectors can be added by specific request).
- A water pump (1.5 H.P), with a stainless steel head, to operate the fertilizer injectors and push the solutions into the water's pipe-line. (for more than 5 injectors a bigger pump may be needed)
- A EC&PH monitor unit consisting of a transmitter with 4-20MA output, Galvani isolation, a large LCD display and a 4 buttons keyboard for semi-auto matic calibration.
- A pair of EC&PH electrodes, installed in a sampling cell.
- Galileo – 16 irrigation/fertigation controller, for basic unit. (more models such as Galileo – 32 or Galileo-2000, are also available, including pro grams for misting, drain age sampling, filter flushing and climate control).
- An electric control panel that includes also connection terminal blocks.
- Intel and outlet for irrigation water.
- A compact Aluminum frame (dimensions: L=57cm, W=37cm, H=110cm).

Galileo Controllers Operation Charactristic

The user friendly Galileo controller, used in the Fertijet (as well as in other GALCON's fertigation systems), enables direct monitoring or programming via its own keyboard or through an external PC. Its program's main features are:

- Volumetric or Time-Based determination of irrigation cycles operation through up to 100 independent pro grams. Total No. of valves depend on the control ler's configuration (see following table). Each program operates an irrigation valve +4 optional co-valves.
- Proportional fertigation, including on-line EC/PH control maintained by 1-8 fertilizer injectors, operated through up to 20 different fertigation programs accurate fertilizers dosing by injection of small pulses continu ously during irrigation cycles.
- Automatic injection rate adjustments according to preset EC/PH levels.
- Stop and/or alarm activation in case of water or fertilizer's fault.
- Automatic reset after termination of faulty conditions.
- Immediate manual suspension of operation, if needed, through the controller's keyboard with automatic or manual release.
- Optional manual operation of irrigation programs without changing the current, on going programs.
- 2 filters back-flushing programs for 2 groups with a combination of up to 10 stations.
- 20 misting programs operated by temperature, humidity or timetable.
- The valves are freely activated with limitation of max. No. of valves at a time.
- A special, "FERTIGATION ONLY" mode, in which only fertigation programs are activated, as a result of an external electric signal.

The advanced control system offers a great variety of additional options such as:

- Operation of drain-water sampling system (DAGAN), to record and analyze drain-water's PH, EC and quantity from several points in the green house.
- Automation adjustments of fertigation programs, as a result of the drainage analysis.
- Automatic start of irrigation cycles according to readings of external sensors such as solar radiation, temperature tensiometers, start -trays etc.
- A full, advanced climate control program in order to obtain optimal environmental conditions within the greenhouse.
- Communication with a remote PC via direct cable, telephone line, cellular phone or radio transmitter, for monitoring, programming and data logging, in conjunction with a whole network of controllers.

Each of the operated elements or sensors defined can be freely related to any selected output or input of the controller.
The total No. of available I/Os, in Galileo-2000, is determined by the selected combination of I/O cards.
In Galileo-32 the I/O number is fixed (32 out, 14 analog input,8 discrete input)
And so it is in Galileo-16 (16 outputs, 8 analog input and 8 discrete input)
And Galileo –8.

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