

Fertijet Machine

Galcon's Fertijet is a by-pass mixing machine with direct injection that includes Galcon's Galileo controller and EC/pH control. The Fertijet models do not include main tubing such as main valve, water meter, filter etc.

According to need, our customers can choose from four models:



- **Fertijet standard**
This model contains up to four 350L/H fertilizer pumps and one 160L/H fertilizer pump (for acid).
The 160L/H is identical to the 350L/H Venturi with a special acid flow meter up to 160L/H.
- **Fertijet High Flow**
This model has up to four, 1200L/H fertilizer pumps and one (acid) 350L/H fertilizer pump (for acid).
Capable of injecting fertilizer into a flow of up to 250 cubic meters per hour at a rate of 5 liters per cubic meter.
- **Fertijet double High Flow**
Two Fertijet High Flow machines are connected and controlled together.
This model uses double fertilizer pumps of 1,200L/H
It can contain up to four channels of 2,500L/H and one 1,200L/H for acid.
It is capable of fertilizing at flow rate of up to 500 cubic meters per hour at a rate of 5L/H.
- **Mainline Pressure**
This model handles up to 4 bars.
Higher pressure models are available via special order.

All Fertijet machines have the following machine components:

- A strong, modular, non-corrosive frame out of Aluminium
- PVC non-corrosive piping and fittings
- All necessary connections (electric cables) ready for use including a starter for the booster pump.

Fertijet machines include two kinds of pumps: a Venturi pump and a booster pump.

A **Venturi pump** is a T-shape device with a unique nozzle inside. It converts the speed of the water into suction and causes the fertilizer to mix in the water. Models include a standard model of 350 l/hr and a high flow model of 1,200 l/hr.

Electric valves	Installed on the entrance of the machine. Fully open/closed. Connected to the controller. Controlled by the controller.
Controller	Calculates the required injection rate and operates the solenoid accordingly
Changing rate	1-2 second working/pausing time
Flow meter	Transparent conic tube with a ball inside that rises according to the momentary flow rate of the fertilizer. Includes a small valve for adjustment of the flow rate.
Fertimeter (optional)	Sends pulses to the controller
Fertilization	According to volume
Hydraulic valve	Normally closed to prevent leakage of fertilizer into the empty line when the system is idle

The **booster pump** is an electric stainless steel (non-corrosive) pump, ranging from 2HP up to 25HP. It enables high speed flow through the Venturi for suction of the fertilizer. In the FertiJet itself, it also builds up irrigation water pressure.

- Electric pressure stat prevents any operation in the electric pump in "no water" cases.
- The pressure sustaining valve prevents cavity in the electric pump.
- Level sensor for automation and information.

The **EC/pH system** includes a sampling cell with two electrodes EC and pH that are connected to an electronic monitor. The monitor converts the electrodes signal to a standard 4-20 mA signal that is read by the Galileo controller. The monitor is equipped with a display and a keyboard for constant and clear presentation of data during operations. The monitor also enables calibration of the electrode readings.