

Fertigation



ORCHARDS

Organic fertilisation of kiwis

Tarn-et-Garonne (82), France

This 6-hectare kiwi plantation in southwest France is located in a former gravel pit from which the grower pumps water for irrigation. In full production, this site yields up to 25-30 tons/ha. The kiwi is a tropical fruit that requires plenty of water.

Since it has a shallow root system, this crop requires a **fairly large amount of fertiliser** on a regular basis. The plantation bears the “Agriculture Biologique” (Organic Farming) label. It uses NPK fertilisers such as beet vinasse, seaweed-based additives and chelated iron.

6-hectare irrigation network

Originally, the irrigation sectors planned for this plantation were between **40 and 60 m³/h**, but after some modifications to the irrigation equipment, **6 micro-irrigation sectors of 22 to 28 m³/h** were installed. Using one hanging micro-sprinkler every second plant.

The irrigation system is controlled by stand-alone command units. These connect to a central control computer. In addition, this particular grower is already familiar with the **DOSATRON** dosing pumps, which have been a great asset to the plantation due to their simple operation and easy maintenance.

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QUANTITY	1 pump D90GL05BPVF
SETTINGS	0,20 %
INPUTS	Organic fertilisers: beet vinasse, seaweed-based additives.
PRESSURE	< 8 Bar
OPTIONS	BPA By-Pass Automatic VF dosing seals for additives with a pH value up to 11

It was obvious that this 6-hectare irrigation system required a **hydraulic dosing pump** capable of operating at **high flow rates**.

Founded in 1974, the company **DOSATRON INTERNATIONAL** is a leading **French** company in additive dosing for more than **50 years** and has many satisfied customers in the water and **irrigation industry**.



The grower with his mega flow dosing unit **D90GL05BPVF**



The pumping station and dosing pump are housed in the shed, located in an old gravel pit.

Our Solution

The new technology of the **D90 Green Line** dosing pump, patented by DOSATRON, combines a dynamic diaphragm flow regulator and a piston dosing pump. This assembly ensures **constant proportional and volumetric hydraulic injection**.

An **ISO DN100** flange connection system is used to optimise the installation. It takes its energy from the in-line flow of the irrigation systems, **there is no need for electricity** or any other energy source. Nor does it require any additional sophisticated equipment - it only needs an upstream filter.

The complete installation features a pumping station equipped with a vertical-axis variable speed electric pump, followed by a 130 µm disc filtration station equipped with an automatic backwash system. **The D90GL05BPVF** dosing pump is then fitted to inject the organic additives. A non-return valve and a water meter are also included in the installation.

During the irrigation period, the **6 automated irrigation sectors operate for one hour each per day**, with a **half-hour fertigation period** per sector. This is made possible by the automation of the dosing pump. It is fitted with a **hydraulic automatic by-pass system (BPA)**, which is activated by an independent control unit.



Since 2012, Dosatron has been committed to a global environmental protection policy as part of its ISO 14001 certification.

The D90 Green Line was developed as part of an eco-design process in collaboration with the APESA*, with specific measures taken to limit its negative impact on the environment both during the design stage and throughout its service life.

“ It can be easily disassembled without the need for tools. In the 5 years I have been using this system, I have only had to carry out basic maintenance once a year. ”

Francis Lacassagne
EARL de Bergonzat

*The APESA is a centre for applied research and risk management that supports companies in accelerating sustainable development.



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