

The most powerful controller
never before imagined

AGRÓNIC 4500

The Agrónic 4500 was conceived to meet the most demanding needs of the market and the most complex installations.

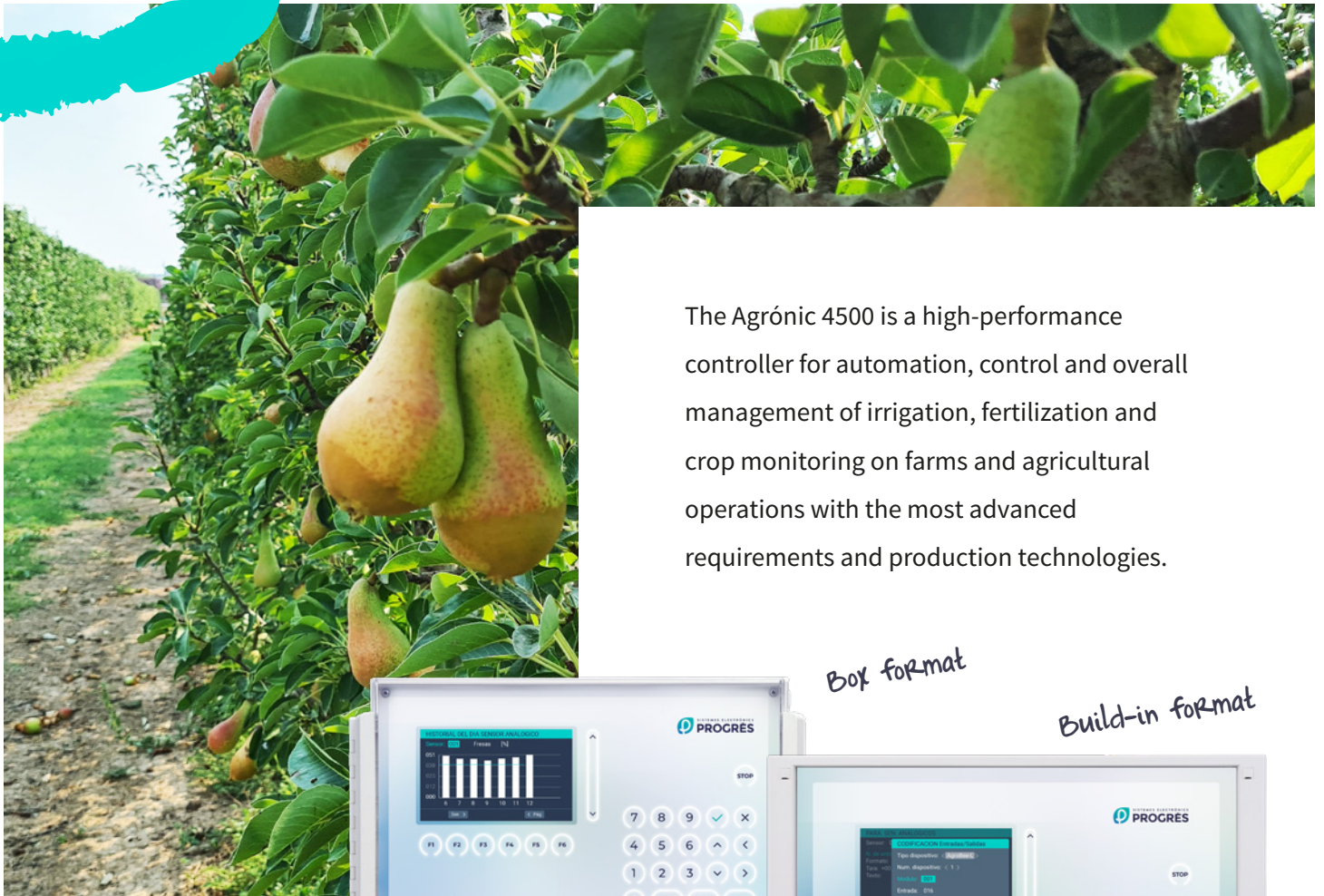
Bringing together all the features of the Agrónic 4000 and the Agrónic 7000, the Agrónic 4500 is now the controller with the most features on the market.



NOVELTY!!

GUARANTEE
OF QUALITY
AND SERVICE

SINCE 1985

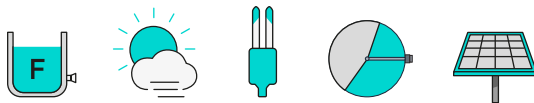


The Agronic 4500 is a high-performance controller for automation, control and overall management of irrigation, fertilization and crop monitoring on farms and agricultural operations with the most advanced requirements and production technologies.

Box format

Build-in format

Discover the controller with the highest performance



The Agronic 4500 is the right unit for agricultural farms with high production demands with a variety of crops, given its great capacity in number of sectors, field modules, remote control systems and adaptation to different irrigation, fertilization, monitoring and management systems.

It has solutions for the most modern irrigation techniques with solar pumping and energy optimization, irrigation with pivots and the most complete range of "fertigation" methods, including hydroponic crops and those with the highest demands. For these reasons and because it is so versatile, it is also the right unit for highly demanding specific applications.

AGRICULTURE 4.0

It implements the digitalization technologies of Agriculture 4.0 and applies precision agriculture techniques.

Agriculture sensor systems for continuously monitoring installations and crops, along with their analyses, decisions and actions, are a reality thanks to the Agronic 4500.

The powerful possibilities offered within its software enable variable irrigation techniques, depending on climatic and agronomic values. Conditions, priorities and optimization algorithms can also be defined to achieve the greatest efficiency in water resources, energy, fertilizers and production consumables.

Control all components of the installation

It integrates the control of all the components of the installations and operates efficiently with them, by applying a multitude of elaborate and interrelated functions:



FOUR IRRIGATION HEADS

It can independently manage up to four irrigation heads, each with its catchment, filtration, measurement and fertigation components; where the irrigation water is treated differently depending on the hydraulic network that supplies each of them.



COMPLEX PUMPING STATIONS

In pumping stations, functionality can be automated and configured in complex situations such as: pressure regulation, irrigation floors, multi-pump systems, work by flow intervals and other configurations.

It also adapts specifically according to its energy supply, either from electrical energy from the alternating current network, or from a diesel engine, or from a photo-voltaic solar field, in this case optimizing the solar radiation received thanks to its special solar irrigation management module.





GREAT VERSATILITY IN PROGRAMMING

It is highly versatile in programming irrigation and fertigation, for efficient water, energy, product and resource use. Up to 99 programs can be created (broken down into subprograms or positions), in which different types of start, cadence and different irrigation unit formats can be defined; for the planned activation of the hydraulic sectors or subunits.

SMART IRRIGATION

The amount of irrigation water can be established based on the ETC crop evapo-transpiration, or also on the accumulated solar radiation.

Certain events can also be defined, such as exceeding or being below a water content value in the soil, or of the water level in a reservoir, or exceeding a certain wind speed value, etc., that cause changes in the programmed units, or at the start of a program, or cause irrigation stoppages, depending on each case.

A LARGE NUMBER OF SECTORS WITH INDIVIDUAL VOLUMETRIC METER

Up to 400 irrigation sectors or subunits can be configured; unlimited simultaneous activation through multiple programs and up to 40 sectors in the same program.

Each sector is defined with its specifications for crop, surface, expected flow, energy consumption, working pressure and others.

The irrigation of each sector can be recorded and controlled directly by means of an individual volumetric counter; or with a digital irrigation confirmation detector.



ADVANCED FERTILIZER DOSING AND COMPLEMENTS FOR OPTIMAL CROP NUTRITION

The Agrónic 4500 includes a complete range of possibilities for programming fertilizer injection and correctors, to enable the "fertigation" mechanism that is required in each head, where 2 pH corrective solutions, 2 treatment products and even 8 fertilizers can be applied, with different criteria.

For example, fertilizers can be applied in series one after another, or several of them in parallel simultaneously; the programmed amount of fertilizer can be distributed continuously and evenly throughout the irrigation; fertilizer can also be injected proportionally to the volume of water applied.





HYDROPONIC IRRIGATION

Hydroponics is a technology in constant growth. It is in tune with efficiency in the use of resources, sustainable agriculture and the application of digital and precision techniques to achieve excellent production control in high-yield crops.

The Agrónic 4500 provides a set of applications for hydroponic crops in greenhouses, on substrate or in liquid medium:

- Mixture of irrigation waters of different salinity
- Advanced irrigation programming, with multiple possibilities for hydroponic irrigation
- Fogger application
- Controlling drainage in the collection trays
- Dynamic fertilizer dosage based on the electrical conductivity of the irrigation water
- pH regulation and application of specific treatments



CONTROL UP TO FOUR PIVOTS

It has a specific module for automating up to four pivot machines, with all the controls for managing them. Different areas can be defined in each one and the irrigation and fertilizer application can be adapted in each zone.



CONDITIONAL IRRIGATION THROUGH SENSORS

It reads and records the data from the water, soil, plant and climate sensors, digital as well as analog, with viewing and treatment for decision making.

Their values are used for certain actions established by the user, on the irrigation programs and the components of the installation. Logical operations can also be developed between them, to define situations that condition subsequent actions.

CLIMATE	Temperature	Solar radiation
	Relative humidity	Wind
SOIL	Soil water content	Nutrients
	CE Conductivity	Temperature
PLANT	Vegetation index	Fruit diameter
	Wetting	Trunk diameter
	Sap flow	Photosynthetic radiation
	Reflectance	
WATER	Pressure	pH Acidity
	Level	CE Conductivity
CONSUMABLES	Irrigation volume	Rain
	Fertilizer volume	



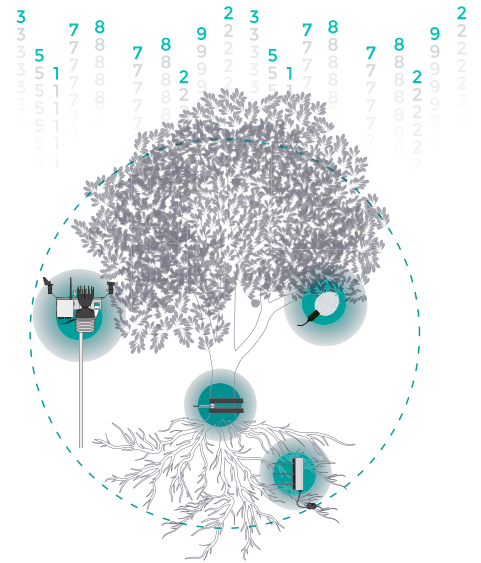
USE OF RENEWABLE ENERGY

Photo-voltaic solar irrigation consists of the optimal use of incident solar radiation in a photo-voltaic solar field, for supplying energy from the pumping station directly to the hydraulic network that feeds the irrigation sectors of an agricultural farm.

It is a new paradigm in crop irrigation systems, due to the new algorithms and management criteria for irrigation and fertigation programming.

The Agrónic 4500 implements:

- Overall energy optimization of the solar field, the hybrid solar frequency drives and the electric motors on the pumping station.
- Define irrigation and fertigation priorities, programs and sectors according to agronomic criteria.
- Manage the hydraulic limits and operating conditions of the irrigation installation.



PRECISION AGRICULTURE

To achieve the highest efficiency in water, energy, product and resource use in agricultural operations, precision agriculture techniques are required: precision irrigation.

Sector division of the plots with comprehensive criteria and remotely automated, together with continuous soil/plant/climate monitoring through sensors, are the bases that enable application of the best specific solutions for each crop area and at all times throughout their cycle.

The Agrónic 4500 contains advanced programming systems that allow:

- Apply variable and calculated irrigation units repeatedly on the web platform, based on climatic data and the characteristics of the crops defined in the programmed sectors.
- Modify the programmed irrigation units based on certain sensor values that are representative and indicative of the configured variations.





ALL EXTERNAL MODULES AVAILABLE

AGROBEE-L, AGRÓNIC RADIO AND AGRÓNIC MONOCABLE

It is designed to remotely control a very large number of field modules, of various formats, by means of AgroBee-L radio, Agrónic Radio 433 MHz and Agrónic Monocable, or other standards with ModBus communication, for valve activation and remote sensor reading.



MANAGE THE CONTROLLER FROM ANYWHERE IN THE WORLD

The user has remote connectivity and full access to the unit through the Agrónic APP, Agrónic PC and VEGGA (Agrónic Web) services, thanks to its GPRS modem or a Wi-Fi connection or via USB cable.



VEGGA (evolution of the Agrónic Web)

A comprehensive solution with which the entire production chain can be managed on a single platform.

360° management throughout the crop cycle: data collection, information extraction, problem detection, decision making and field action.

Digitize all production processes, optimize resources and improve crop profitability.

It adapts to business needs through different solutions: Precision irrigation, farm management, nutritional control, pest and disease control, agro-climatic recommendations, reports and analysis, etc.

AGRÓNIC APP

Mobile application with which you can check the status of the Agrónic, edit the scheduled irrigation and fertilization and give direct manual orders.

It has maps, accumulated histories, graphs of the values of the day, log of events and anomalies.

AGRÓNIC PC

Program for Windows with which all the features of Agrónic unit can be configured, programmed and consulted in real time, intuitively and easily.

There is no need to register the unit in the cloud because the software can be installed on the computer and is connected via cable or the internet.

WHERE CAN AN AGRÓNIC 4500 BE INSTALLED?

On agricultural farms with tree crops, with drip, surface or underground irrigation, with a significant sector division of the surface and with the implementation of various types of sensors, for classifying the needs of each area and monitoring of the installation and the crops.

On extensive crop farms, with sprinkler irrigation and pivots, with joint management of the systems.

On horticultural farms, outdoors and in greenhouse facilities, with hydroponic crops, which require "fertigation" based on the electrical conductivity of the irrigation water, pH correction and specific controls.

On mixed installations, with several heads and with different irrigation systems and "fertigation" methods.

On agricultural operations and farms, with a direct network irrigation system, from a solar pumping station, optimizing the solar radiation received at all times.

*Cultivating the technological advances
of the future day by day*

Warranty

The Agrónic 4500 complies with the CE marking directives.

Products manufactured by Progrés have a two-year warranty against any manufacturing defect.

Compensation for direct and indirect damage caused by the use of the unit is excluded from the guarantee.

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BUREAU VERITAS
Certification



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