

### **A FRESH APPROACH TO GREENHOUSE AUTOMATION** GSU **Compact complete** fertiliser unit The feet and the feet **AFPD** Intelligent remote I/O unit perature ate: 01/10 12:55 dety ate: 01/10 12:55 GREEN COM.CLOUD GREEN COM.CLOU Connect the IOT to the ection ate: 01/10 12:55 **Greenspec** automation

#### New: the Greenspec GSU fertilizer mixing unit

Greenspec launches a new compact but very complete mixing station that is regulated by our own greenhouse automation system. A big step for Greenspec as an extension of their software for regulation of all aspects of greenhouses.

Based on new technology, regulation of all important parameters for fertilizer mixing, combined with regulation of the water gift to the plants. All data of the water gift are visualized and stored in the software. The footprint is only 1,55 m2, dosing over one pump and 2 A/B plus an acid supply, with control of input and output flow.

It contains a coated steel cabinet IP65 with all electronics. The Greenspec AFP control unit is connected to a Greenspec GSC computer, where the regulation of the mixing unit, but also of your complete greenhouse can be handled.

400 l premixing tank included, on the side the sensors are included: pH, EC, flow, pressure and level sensors. Lightweight materials are used, saving money on the transport with a total weight of only 90 kg.

#### Who should use a Greenspec GSU?

- Growers needing small individualized mixing stations, that can be extended to produce large volumes, with flow dosing channels up to 1500 l/ph and total flow up to 100 m<sup>3</sup>/h.
- Growers having limited space, the footprint is only 1,55 m<sup>2.</sup>
- Growers who want to save money on transport cost: as much as possible lightweight materials are used, total weight 90 kgs.
- Growers wanting a good control of pH and EC by measuring input and output flow, leading to balanced mixing of fertilizer and acid.



## **GREEN** SPEC





#### S1 - Pressure Sensor

PART CODE: MBS 3000

Supply Voltage: 9 – 32 VDC Output signal: 4-20 mA

Brand Danfoss

#### S2 - pH Sensor



PART CODE: 4401.1 Brand: Greenspec Supply Voltage: 15 VDC Output signal: 4-20 mA

#### S3 - EC Sensor



PART CODE: 4202.1 Brand: Greenspec Supply Voltage: 15 VDC Output signal: 4-20 mA

#### S5 - Flow Sensor



PART CODE: SM6000 Brand: ifm Supply Voltage: 18 - 30 VDC Output signal: 4-20 mA

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#### S4 - Level Sensor



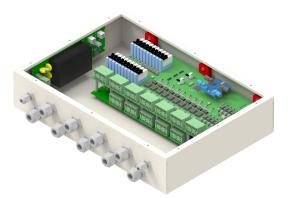
#### S6 - Sample Valve



PART CODE: RMRPV012020E Brand: Fip Input Size: 1/2" Output Size: DN15

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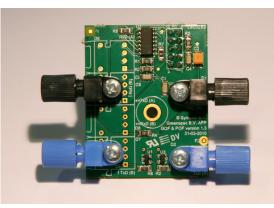


Greenspec AFPD I/O box with 2 boards



Greenspec computer





POF fibre Optical connection

Exa

#### **Greenspec greenhouse automation**

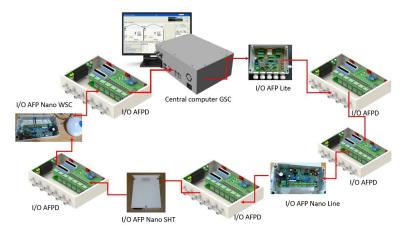
Since 2008 Greenspec produces a flexible system for greenhouse automation. Now in 2023 we present a new series of central intelligent I/O boards:

A new housing, with the option to install 1 or 2 boards in one housing, less space, less power consumption, lower shipping costs.

The Greenspec AFPD02 standard is the central unit for connecting all inputs and outputs. The Greenspec AFPD63 has 63 outputs and no inputs. You can use boards of the same type or make a combination. Up to 40 inputs and 40 outputs or 128 outputs in one housing. So in total we supply 5 variations of this large I/O unit.

#### Greenspec automation is based on 4 principles:

- 1. The software package is extensive. But very flexible and open, you buy a basic package at an affordable price and when you extend your greenhouse you can keep extending the software without buying an extra license.
- 2. The I/O units are available in 9 variations to suit your needs and can be freely programmed by you or your installer.
- 3. The GSC computer is a sturdy industrial system running under Windows, with a simpler variation for small installations. It controls already installations with up to 400 inputs and with 700 outputs.
- 4. The connection between all elements is made with affordable polymer optical fibre, fast and simple to install.



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## GREEN COM.CLOUD

#### The intuitive app for agriculture

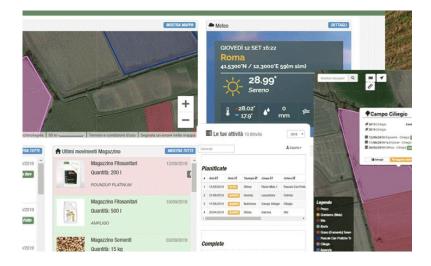
Greenspec is now presenting a versatile cloud platform for greenhouse growers as well as other horticulturists.

The platform can read in data from remote IOT sensors over the LoraWan network and data from meteo platforms. These data flow into the the Greencom.cloud app and can be used like hardwired sensors.

The Greencom.cloud app enables you to make visible data from your greenhouse or farm. You can present the values on a map, you can make statistics for yearly reporting.

Calculation and representation of costs, of CO2, water and energy consumption is programmed in the system.

We prepare the platform to be open to new developments, as we expect the world of sensor technology to offer new opportunities soon.



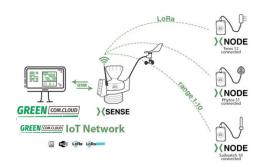
Greenspec also presents the new version of the Greenspec app GSCMonitor:

The app can be used as a remote information app for the status of your greenhouse, giving actual information on your system.

You can also do simple adjustments to settings like vents, watering, shading.

An important function is the alarm warning that you will get on your phone anytime there is an alarm in the greenhouse as well as when the communication is not working. You can select yourself which alarms you want to be transmitted.







# More information on our website:

