SKOV-SERCOM company brochure

Horti climate solutions









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Who is SKOV-SERCOM?

An introduction



SKOV-SERCOM B.V. is a developer and manufacturer of process computers for horticulture and agriculture, founded in 1984. We are located in the Bollenstreek, close to Keukenhof and Schiphol. Our process computers are used for monitoring and controlling climatic conditions and irrigation processes in greenhouses, storage cells, cold stores, and in vertical farming and open field cultivation. Both the hardware and the software are produced and developed entirely in-house. This allows us to control the quality and delivery time of our products.

All our systems are fully compatible. This means that any computer ever supplied by us can be easily updated to the latest software. In concrete terms, this means that computers that have been in operation for years can also work with the most recent software.

In addition to process computers, we also make and supply various sensors (including ones for temperature and humidity, stainless steel EC sensors, CO detectors and complete irrigation systems).

We supply our products all over the world. We use an extensive dealer network for this. They are responsible for installation and maintenance. Due to the transparent structure of our company and the short communication channels, we can respond quickly if there is a demand for a product that deviates from our standard product range.

Who is SKOV-SERCOM?

An introduction



SKOV-SERCOM believes in sustainable solutions for the horticultural industry. That also applies to the automation of irrigation units and climate control in greenhouses, bulb sheds and storage cells. We design and build clever electronics and computers for process automation. Our range on offer extends from simple voltage detectors to advanced process computers. SKOV-SERCOM process computers are reliable and sound.

Long lifespan

SKOV-SERCOM puts sustainability into practice. Our products are characterised by a long lifespan. It is not unusual for a SKOV-SERCOM process computer to still be working after over 30 years.

Innovative

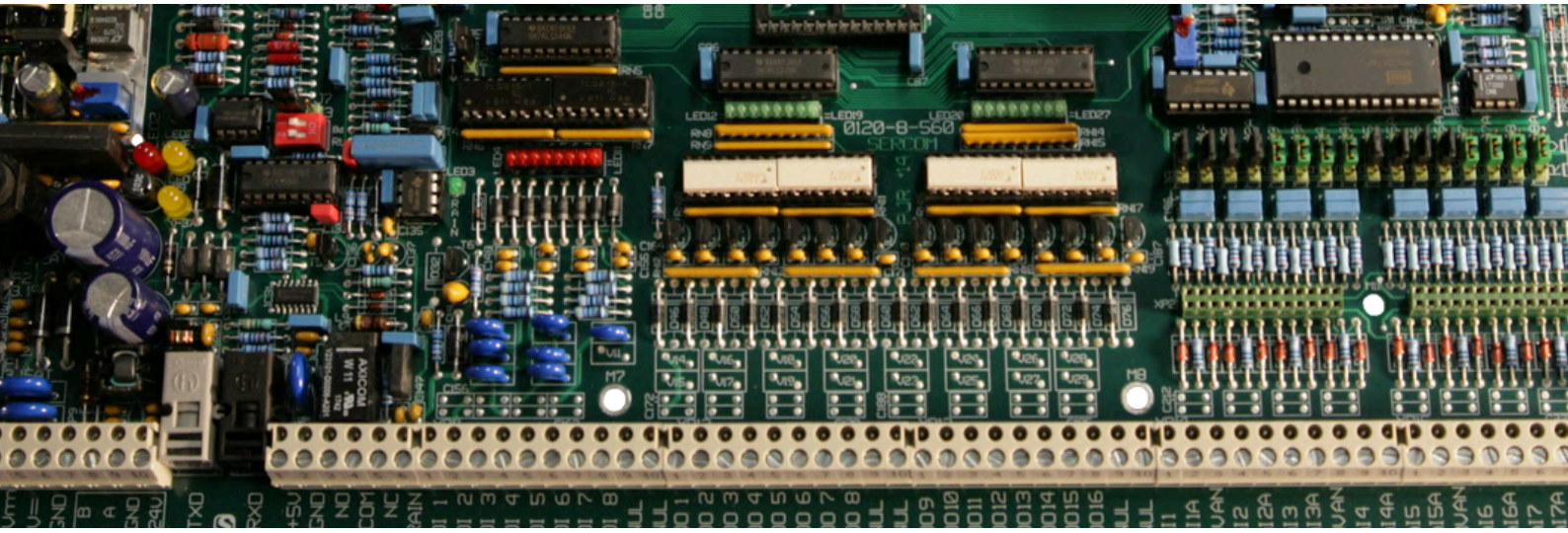
Our innovative software is developed on a uniform platform. Each customer of SKOV-SERCOM can thus profit from new updates, independent of the type of format of installation at the company.

Tailored design

SKOV-SERCOM is an international leader in cleverly designed regulation systems for irrigation. After the irrigation is optimised, further automation of the commercial processes often follows. Here, too, we can provide the best solutions.

Who is SKOV-SERCOM?

An introduction



Hardware and software

SKOV-SERCOM is the only supplier in the horticulture industry that develops its own hardware as well as software, with the aim of safeguarding user-friendliness. We regularly offer new updates, from which our customers can benefit independently of the type of system in operation. SKOV-SERCOM offers a sustainable, innovative and future-proof solution for all horticultural enterprises. Additionally, SKOV-SERCOM is represented in more than 22 countries for the replacement of all SKOV-SERCOM parts.

Our employees are familiar with the newest developments. This allows SKOV-SERCOM to always produce the best solutions for both simple and complex automation challenges throughout the whole agricultural sector.

Another important policy we follow is that there is always one fixed price for software licenses. As long as compatible hardware is available in the system, our customers can upgrade at no extra cost for multiple users and hardware upgrades are very reasonably priced.

In addition, SKOV-SERCOM is the only company at the high-end level that -if possible- repairs electronic prints and/or sensors. In this way we ensure that our systems are ecologically efficient.

Who is SKOV-SERCOM?

History: how it all started



Foundation SERCOM

On January 21, 1984, SERCOM Regeltechniek was founded by 4 people, including, amongst others former Indal employees Mr. Piet van Diemen and Mr. Frans Koek. Due to Indal's advanced technology, dozens of these systems are still operational even today.

The logo

The 4 arrows in our initial company logo is also a reference to these 4 people, together with the spiral, which is a symbol of a muted harmony. This often refers to controlling an unstable situation to a stable one.

The name SERCOM

With the name SERCOM Regeltechniek (Control Technology) we wanted to indicate from that point on, what our main objective is and what our activities are. This is, in fact the design, development and production of process **COM**puters for the **CONTROL** of installations by means of servo engines. **SER**vo engines which you can still find today, for example for opening and closing vents, valves, hatches, mixing valves, on burners, speed-controlled fans, et cetera.

Who is SKOV-SERCOM?

History: how it all started



The first products

With the knowledge and experience of Frans and Piet, they developed the first products, at home in their attic. In those days, 1984, there was a large need for things like a measuring set for measuring the temperature, the level of EC en pH in the watering inside greenhouses, but also a carbon monoxide detector for the disconnection of horticultural burners when they do not only produce heat and CO_2 (carbon dioxide), but the toxic CO (carbon monoxide) gas, as well.

The first income

With the first income, mainly generated from the sales of these CO detectors, further investments were made in the design, development and production of the hardware and software for the first Sercom process computer. This was used in 1986 to control the process of flower bulbs storage cells, at Heemskerk Vaste Planten B.V. in Noordwijk.

This very first system installed, is still running today, up-to-date, with a current program!

By scanning the QR code you can read more about our history.

Our products

SC series process computer



SC400 in brief:

- Integrated all-in-one controller
- Easy-to-use graphical user interface with rotary button
- Clear overviews
- Accurate sensors
- Easy to set up and to commission
- Affordable and low maintenance costs

SC series

This series of process computers is suitable for regulating various processes, such as drying, storing, irrigating or climate control in smaller companies and free-standing units. This series of computers has a modular format, giving you the possibility of automating your entire company piece by piece.

SC400

The SC400 is the most recent addition in the SC series. SKOV-SERCOM has taken an important step with this model SKOV-SERCOM in making climate control affordable in greenhouses, but also in tunnels and outdoor cultivation (irrigation).

The SC400 focuses on one compartment and can control almost all necessary functionalities within this compartment very accurately. For multiple departments, a subsequent unit can easily be connected, using the same smart weather station. The SC400 can be controlled remotely by a free app.



This computer can also be used to control only pumps or faucets, whether or not in combination with regulating the EC and pH. This version is very suitable for tree nurseries, but also for parks, sports fields and golf courses.

Our products

SC series process computer



SC600 in brief:

- Simple to operate
- Suitable for greenhouse, stable or factory
- Closes in case of rain and storm
- Temperature linked ventilation
- Simple installation
- Automatic vent setting control

SC600

Whether in a greenhouse, a stable or a factory, the climate inside has to be perfect for the plants, animals or humans to function optimally. SKOV-SERCOM offers the SC600 vent control as a simple and reliable way of automating your ventilation system.

The SC600 vent control consists of a control box, a weather station and a temperature gauge. The control buttons are simple and easy to use. The weather station makes sure that the vents close if it starts to rain and that the vents on the upwind side open after the downwind vents. It also includes a storm protection feature.

Control lights provide information about operational status, rain warnings, storm detection and wind direction. Installing the SC600 is simple and can be done by your own installer.



Our products

SC series process computer



SC750

The SC750 process computer is also modularly built. The cabinet is robust and the LCD control is installed in the door of the process computer. The number of inputs and outputs for measuring and control signals can be configured customly. This allows you to manage the processes that are relevant to your situation. We also pay a lot of attention to efficient cabling.

- Operation via LCD in the door
- Stand-alone system
- Suitable for measuring and managing small installations
- Suitable for managing different processes up to four departments

SC8x0

- Multiple control possibilities; both by LCD and by a personal computer with our SercoVision program
- Can be integrated into a network
- Suitable for measuring and managing small to medium size installations
- Suitable for managing different processes up to 60 compartments
- Possibility of connecting and expanding decentralised I/O

Our products

SC series process computer



SC9x0

- Multiple control possibilities; both by LCD and by a personal computer with our SercoVision program
- Can be integrated into a network
- Suitable for measuring and managing medium size installations
- Suitable for managing different processes up to 60 compartments
- Possibility of connecting and expanding decentralised I/O
- Suitable for controlling equipment at your company by communication bus connections



Our products

SCX series process computer



SCX series

A series of powerful process computers for the modern agricultural company. These computers also have a modular format and can be expanded in stages. Thus, the automation system grows along with your company.

- Multiple control possibilities; both by LCD and by a personal computer with our SercoVision program
- Can be integrated into a network
- Suitable for managing big to complex installations
- Suitable for managing different processes up to 60 compartments
- Possibility of connecting and expanding decentralised I/O
- Suitable for controlling equipment at your company by communication bus connections

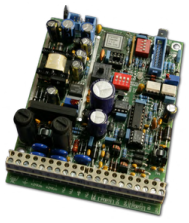
Our products

Expansions



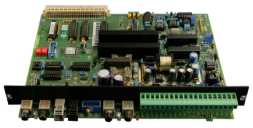
FastlinkXtender

With the help of this system, the SC8x0 and SC9x0 process computer systems can be expanded in a decentralised way, so that the required inputs and outputs can also be connected at other locations.



RackXtender

With the help of this system all SCX process computer systems can be expanded in a decentralised way, so that the required inputs and outputs can also be connected at other locations.



Our products

Wireless



Wireless control of field stations and irrigation units

The new two-way communication system, officially launched at the 2018 IPM trade fair in Essen (Germany), enables communication between the main computer and up to 16 field stations over a distance of up to 5 kilometres. This offers many possibilities to serve multiple locations from one central office. It also enables the expansion of production zones without expensive and time-consuming cabling.

The Wireless Xtender has been extensively tested at different locations and runs smoothly in various gardens worldwide. This innovation is also expected to open many new doors for applications beyond the existing areas. We will expand our network of international partners to serve both existing and new sectors.

After the introduction of the Wireless Xtender, SKOV-SERCOM continued this development with a printed circuit board that enables a wireless connection between the process computer and the control PC.



Our products

Wireless



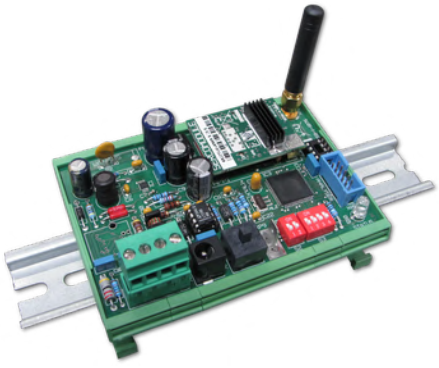
Wireless RS485 Xtender

This print can easily be connected to the operating PC or laptop in the office. The same print can be placed in the process computer on location. After this, a connection is automatically established between the two locations. Then it's possible to monitor and operate the climate computer within a distance of 5 kilometres.

This technology, which is based on radio waves, just like the Wireless Xtender, is not limited to a connection between the process computer and the operating PC, but can be applied to any system or device that works with an RS485 cable connection as standard.

Technical specifications:

- Can be used without having to use a PC to configure it (Plug & Play)
- Automatic baud rate recognition
- Automatic data format recognition and setting
- Protocol independent
- Automatic end-of-message detection
- Suitable for 868MHz for long range
- USB connection and is powered directly from the USB port



Our products

Software



With the advanced software from SKOV-SERCOM, you get more out of your computer. The software is developed on a universal platform. An overview our software products:

Climate manager

Optimum overview and control of the crop is important in greenhouse horticulture. With the climate computer from SKOV-SERCOM, the greenhouse climate can be controlled in a very simple way. The result: excellent quality of every crop.

Dynamic Adjustable Setpoints (DAS)

With Dynamic Adjustable Setpoints it is possible for the grower to adjust really EVERY setting in a graphical way. It is a great benefit for the grower that it is now possible to program the influences on the set points by himself, from minute by minute. This allows him, with maximum flexibility, to take even better account of the user's own specific operating conditions and installation characteristics.

Screen manager

SKOV-SERCOM developed the screen manager for automatic control of the screens. With this module on the process computer, up to 12 screens in one department can be controlled. This allows each department to optimise its climate. This also contributes to significant energy savings.

Our products

Software



Water manager

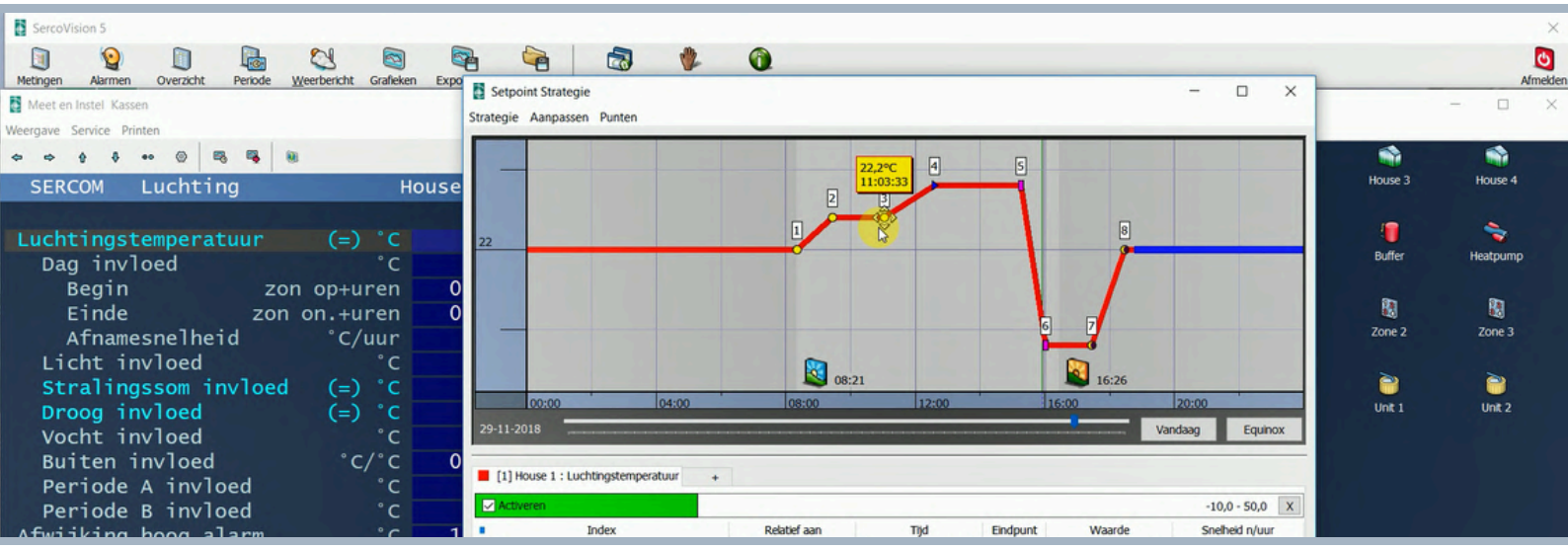
Water management is of essential value in creating an optimal environment for plants. This is completely under control with the SKOV-SERCOM Water manager. The versatile program has all imaginable possibilities for both indoor and outdoor cultivation.

OzonAnalyser

Applying ozone is an efficient and environmentally friendly way to prevent mold growth. More and more (flower bulb) companies therefore use the ozonisation technique. SKOV-SERCOM has developed software to make a link between ozone equipment and SercoVision.

Our products

Operation



LCD control panel

The colour LCD control panel makes it easy and reliable to make the measurements and settings of one or more process computers transparent. The operation is robust, so that it can also be set up in dusty rooms. The transflective display ensures that the image always remains clear and visible with incident (sun)light.



SercoNet

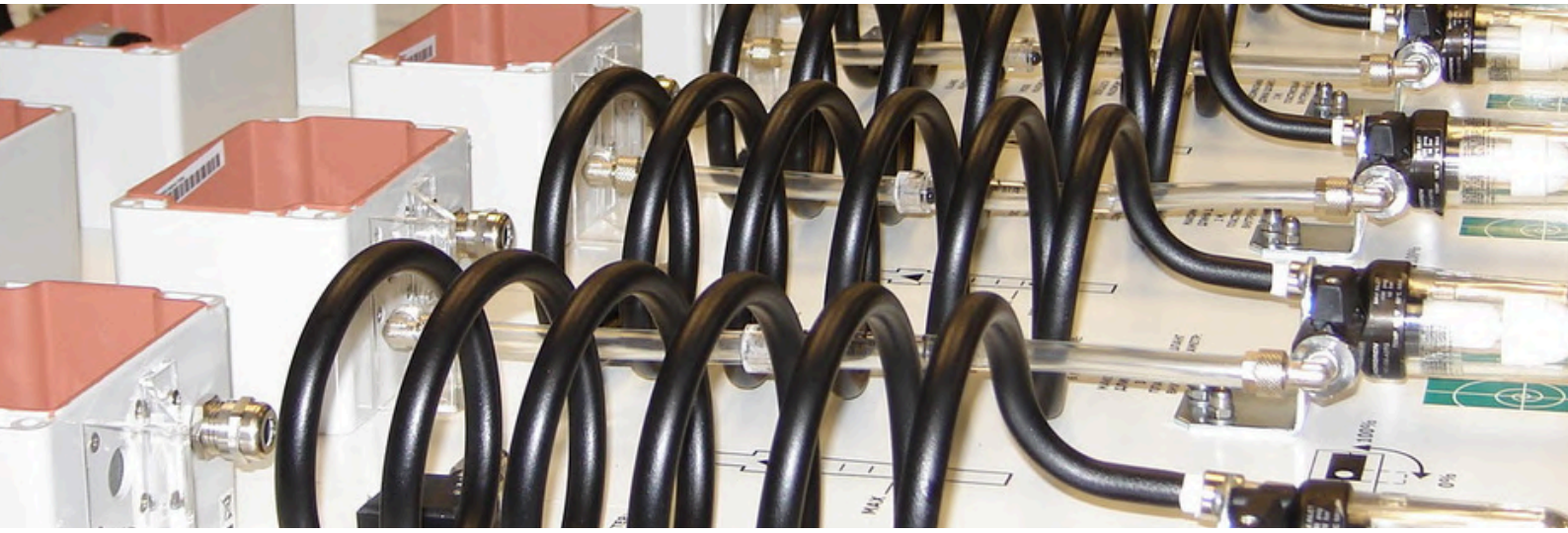
SercoNet grants you quick and easy access to the process computer via the internet. SercoNet runs on any PDA and smartphone. So you can have access to critical company processes anytime and anywhere. Take a look at the SercoNet demo on: http://serconet.nl:6368/ (login: remote, password: 123).

SercoVision

SercoVision enables a clear overview of the control of all automated processes in the company. SercoVision runs on any PC following the Windows standard and is thus easy to review. SKOV-SERCOM has also developed a package with options for SercoVision, making it possible to produce simple graphs and company summaries.

Our products

Measuring equipment



On the basis of accurate controlling is a reliable measurement. Our modern measurement and analysis equipment makes that possible. A selection from the range of SKOV-SERCOM accessory equipment:

Measuring box

SKOV-SERCOM developed a compact measuring unit for use in greenhouses and storage areas. The temperature and humidity sensor are placed directly together. Moisture deficit, dew point and energy content can be determined very accurately. The measurement is electronically and therefore little maintenance is required.



CO/NO safety device

Carbon monoxide (CO) and nitric oxide (NO) are highly damaging to your crop. SKOV-SERCOM supplies both precise CO and NO meters.



Our products

Sensors



Dry/wet bulb measuring box

This compact measuring box can be used in greenhouses. The dry and wet temperature sensors are placed directly together in one housing. The included fan ensures a reliable measurement. The regular replacement of the wet sleeve is easy.

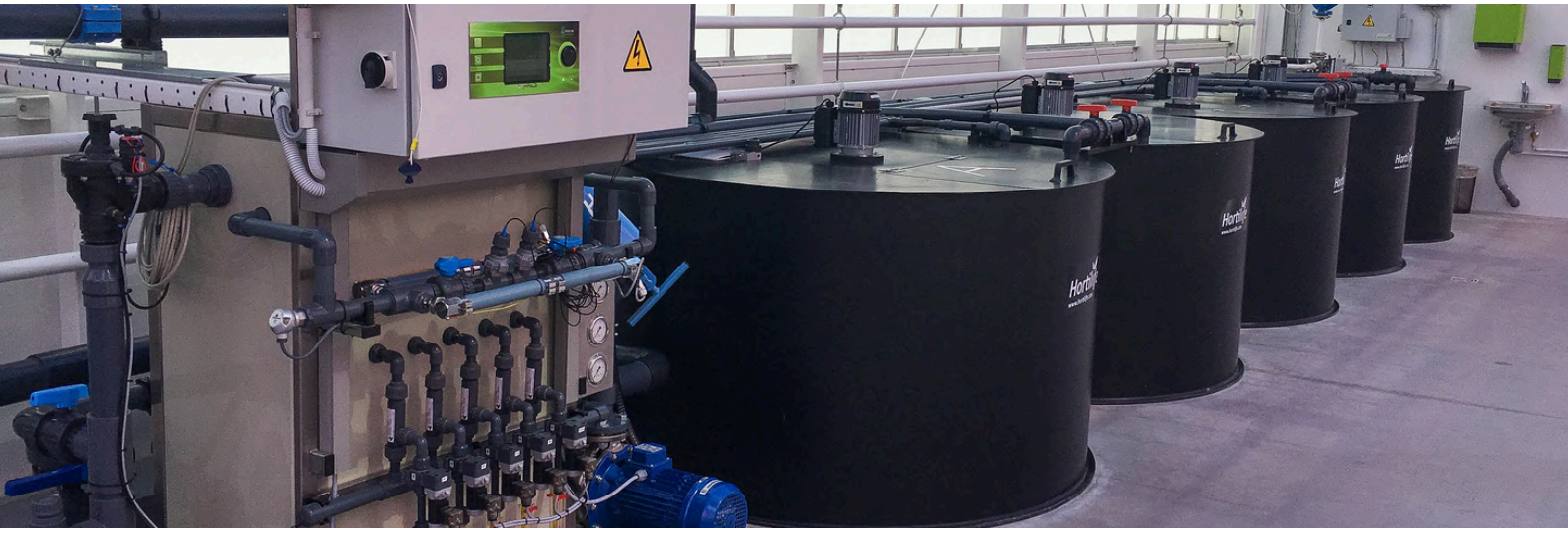
Air Monitoring

If the concentration of ethylene and NOx rises too high in the greenhouse air, the quality and production diminish. These harmful gasses derive from the flue gasses that are used to regulate the amount of CO_2 or from two equipments with a combustion motor in or near the greenhouse. SKOV-SERCOM has, together with EMS and CropEye, developed the Air Monitoring system.



Our products

Irrigation units



Our process computers are ideal for controlling third-party irrigation systems. It is also possible to integrate certain SKOV-SERCOM computers into dosing systems from other suppliers. If desired, we can also supply an irrigation system ourselves.

The irrigation unit of the SC400 and SC800 series has a mixing tank and a venturi injection system. SKOV-SERCOM supplies irrigation units that are custom built, which means that some functions may vary.

Our dosing systems are always equipped with the following parts:

- System pump and mixing pump
- Float valve for filling the mixing tank
- Venturi + solenoid injection system
- Customer specific control panel
- The right software for measuring and closing



Our products

Weather station



The weather station is suitable for all SKOV-SERCOM process computer systems. The most important difference between this weather station and the SC800 meteo station is its precision in wind measurements. This makes it possible to control greenhouses from one (or multiple) process computers (with different ridge orientation).

You can measure the following external circumstances with this weather station:

- Wind speed
- Wind direction
- Light intensity
- Rain and outside temperature

For companies that require very accurate light intensity measurements, the Kipp Solari meter and PAR meter are added to our product range.



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