

Horti News

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solutions**



Village Farms and HortiMaX

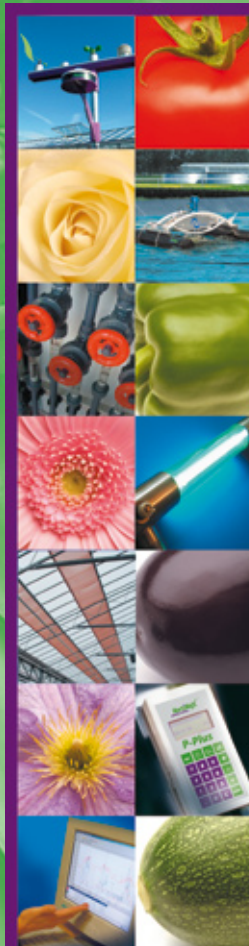
The co-operation between Village Farms and HortiMaX, two highly innovative companies, will extend over many horticultural disciplines and technologies, for example Climate, Energy, Water, Fertigation plus aspects of Labour/ Production Management systems. Albert Vanzeyst, President of Village Farms and Victor Lambert Commercial Director of HortiMaX Group formally signed the contract agreements on the 11th April 2006 in the Netherlands.

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Anthura and HortiMaX in China project

Anthura and HortiMaX have agreed to co-operate together on a major new project in Kunming, China. The overall project design has been carried out by the international technical design team of HortiMaX, in close cooperation with Patrick Romeijn of Anthura.

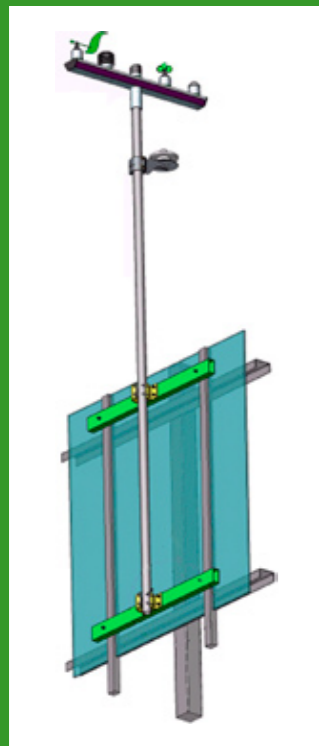
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Weather Mast

Accurate and reliable measurements of the weather conditions are vital to ensure optimum control of the indoor climate.

Equally important is the position of the weather station, so factors such as air turbulence, flue gasses and heat radiating from the roof do not affect the measurements.



A weather station is used to determine the effects of the weather on the greenhouse climate. As a result, the weather station is best mounted on a pole along the side-wall, so it extends 2 metres from the roof. HortiMaX has designed a mounting set especially for this purpose. It consists of a 6-metre aluminum mast and mounting materials to attach the mast to the side-wall. To comply with health and safety regulations, the weather station can be lowered for easy access.

CO-OPERATION ANTHURA AND HORTIMAX IN CHINA PROJECT



Anthura the successful and world renown company engaged in breeding, selection and propagating Anthurium, Phalaenopsis and seller of Corn.Bak Bromeliad choose HortiMaX.

Anthura established in 1974 and now managed by Mark and Iwan van der Knaap and Marco van Herk are the world leader in the area of Anthurium with over 200 employees and greenhouses with a total area of 18 hectares.

Anthura and HortiMaX have agreed to co-operate together on a major new project in Kunming, China. HortiMaX will be responsible for the complete design, supply, installation and sup-

port for this new venture. The scope of works involves Heating, Electricity, Irrigation, Benching, Water storage and water management plus all climatic control combined with the latest Synopta software systems.

The overall project design has been carried out by the international technical design team of HortiMaX, in close cooperation with Patrick Romeijn of Anthura. The project on

site installation works will be managed, overseen and quality controlled by the highly respected and internationally experienced project technician Roger Saint. After agreeing the cooperation, Iwan van der Knaap of Anthura and Jan Snoep of HortiMaX confirmed that the project was of major significance to both companies in the future development of their own companies international business plans. The formal contract was signed by Marco van Herk Commercial Director of Anthura and Victor Lambert Commercial Director of HortiMaX and both agreed the project will place the companies at the cutting edge of technology in this area of world horticulture.

UL CERTIFICATION FOR USA/CANADA

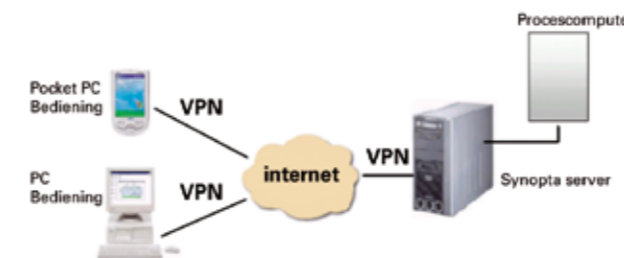
HortiMaX have entered into agreement with the Underwriters Laboratories Inc. to manufacture and design electronic control equipment to the requirements of the UL specifications. HortiMaX have now been issued the UL International agreement/reference number 422018.

anthura

Operate your process computer safely via the Internet using VPN

The Internet is being used more and more as a medium to operate greenhouse process computers from an external location. The Internet offers a number of advantages over the traditional dial-up connection: An Internet broadband connection is much faster and a flat rate is charged rather than a variable one.

There is, however, a disadvantage too: The Internet uses a public network. Without any additional security measures in place, your process control system is vulnerable from external 'attacks' by unauthorized persons.



That is why, in addition to a firewall, it is essential to use a VPN. VPN stands for Virtual Private Network and is a secure network connection via the Internet. It creates 'tunnels' through the Internet, so encrypted data can be sent securely from one point to another without other Internet users being able to access that data.

Special hardware and software is required to establish a VPN connection. Since it takes specific know-how to create a fully secure VPN, HortiMaX has joined forces with a company which specializes in this technology. Together we can offer secure solutions for any situation.

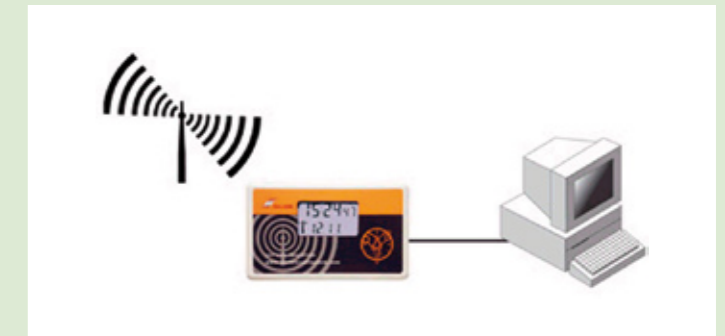
X-Vision operating system for MultiMa/Aco

Version 4.9 of the MultiMa and Aco process computer is set to be released near the summer. It will offer a host of new features, but will also be the last version to support the X-Vision operating system. Subsequent versions will only support the Synopta operating system.

ATOMIC CLOCK FOR PERFECT TIME PROCESS CONTROL

Since gas suppliers use atomic clock time to determine a company's hourly and 24-hour gas consumption, it is crucial for companies with gas contracts to know the exact current time.

If the system time of the process computer deviates from the atomic clock time, differences may emerge between the gas consumption measured by the computer and that measured by the gas company. That is why it is important to regularly check whether the system time of the process computer and the Synopta Server are still accurate. This can now be performed automatically with our new time synchronization unit.



The new time synchronization hardware consists of an aerial unit and a receiver unit which is connected to the Synopta Server. The aerial unit can be placed up to 100 metres away from the receiver unit.

The NTP (Network Time Protocol) software supplied with the hardware then synchronizes the system time of the Synopta Server and the MultiMa process computer to the atomic clock time.

Atomic clocks are the most accurate clocks in the world and are used by governmental bodies to define the exact time. This highly precise time measurement is transmitted by radio signal throughout Europe and North America and can be picked up by special long-wave radio receivers. The Netherlands and the European mainland use the radio transmitter in Mainflinger, Germany. A time synchronization unit which uses the atomic clock radio signal is accurate to within one second every million years.

PRODRAIN USER GROUP TO BE LED BY APPLIED PLANT RESEARCH (PPO)

The ProDrain system which was introduced last year is now being used by a number of tomato and paprika growers. To get the most out of the system, a PPO-led user group has been set up to record the effects registered by the ProDrain system and study how these data can be used to improve greenhouse climate control. The growers will convene once a month to compare their ProDrain measurement data. PPO will analyze the data in advance and focus on interesting phenomena during the meetings.

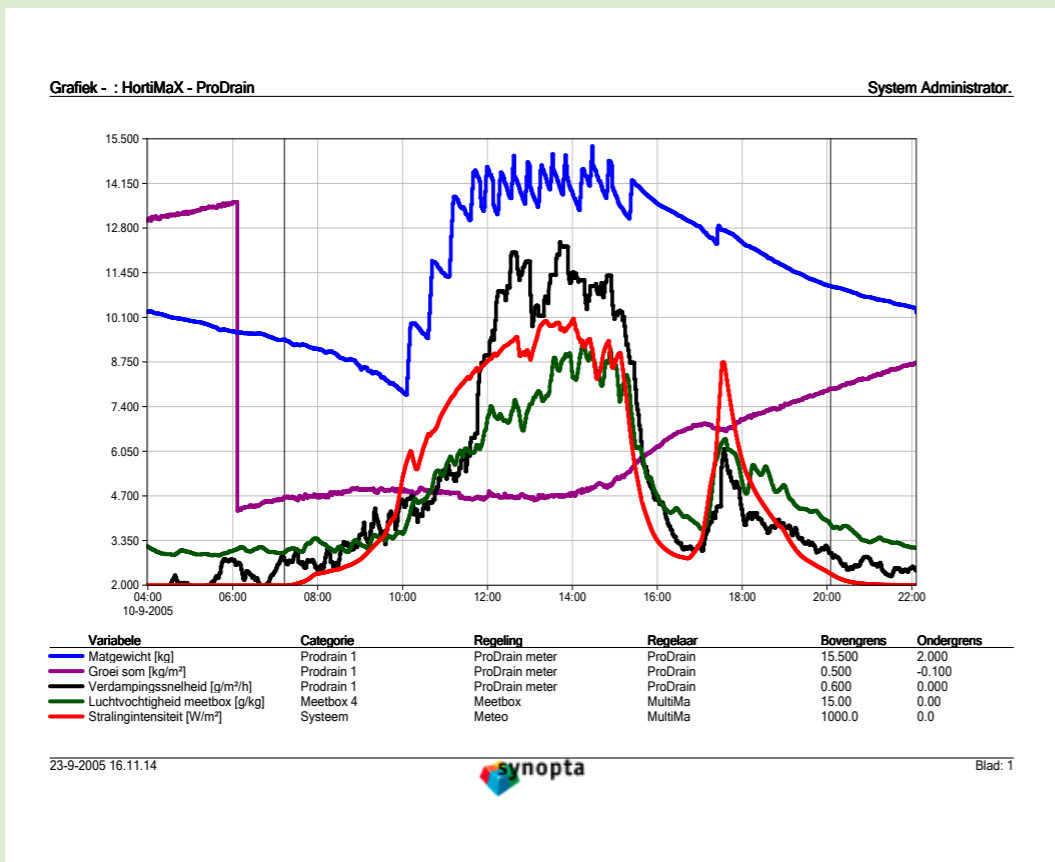
The ProDrain system accurately displays the growth and transpiration rate of the crop plants. In order for crops to be healthy, sufficient moisture needs to evaporate through the leaves (this process of releasing moisture by plants is called 'transpiration'). During hot weather, plants use transpiration to keep cool. Transpiration is also necessary, however, to stimulate the uptake of water from the roots, so nutrients are transported to the growing parts of the plant above the ground.

HortiMaX has succeeded in developing an accurate method of measuring crop transpiration. After mathematically filtering out any disturbances in the weighing tray data, ProDrain calculates the crop's transpiration rate. This calculation is used to generate a minute-by-minute representation of how the crop's transpiration rate is reacting to the greenhouse climate. As a result, ProDrain offers ex-

tremely useful information for dedicated climate control. ProDrain sends the transpiration rate it has 'measured' to the climate computer, so it can adjust the climate setpoints accordingly. If the transpiration rate is too low, the computer can automatically raise the minimum pipe temperature, for example.

The plants in the ProDrain weighing gutter cover a few square metres of the greenhouse area, so they are suffi-

ciently representative of the entire crop. ProDrain can be used for any hydroponically-grown crop. In addition to determining transpiration, ProDrain also measures the irrigation and drain volume, and the drain percentage achieved. ProDrain can even measure the growth rate of hanging crops, such as cucumbers and tomatoes.



The ProDrain measurements are displayed in graph format in Synopta. The graph above clearly shows how solar radiation (red line) affects transpiration (black line). In this case, the rate of transpiration in the morning slowly increases in relation to the radiation level. The crop's growth rate (pink line), however, slows down as the transpiration increases, but recovers as soon as the transpiration starts to drop in the afternoon.

The graph also clearly shows how the humidity (green line) follows the pattern of transpiration: if transpiration is high, so is humidity and vice versa. This proves once more that high humidity has little bearing on a possibly too low transpiration rate. As a result, control actions based on the measured transpiration rate are generally much more effective at stimulating transpiration

48-LAMP VITALITE UV DISINFECTION UNIT

A 48-lamp Vitalite was recently put into operation at the Canadian propagation nursery Ontario Plants. This UV disinfection unit is equipped with 48 UVc lamps which are switched on using special electronic starters.

Ontario plants has decided to disinfect all of the water used to prevent the risk of disease transmission to the crop. A special type of irradiation chamber has been

used for this project, which was designed for water with a high transmission value. The unit treats the water at a capacity between 50 and 100m³/hour, depending on

the water quality measured by the system and the desired Uvc dosage of 150mJ.

The system pump is fitted with a frequency controller which is operated based on the measured level of UV radiation in the irradiation chambers. An additional feature of the control soft-

ware is that it minimizes power consumption. The system is also equipped with a small acid pump which automatically cleans the quartz tubes, so the pH of the water to be disinfected can be adjusted quickly to the desired value.

PT COULD APPROVE FUNDING FOR "WEIGHT-BASED IRRIGATION" RESEARCH IN TREE NURSERIES

The Dutch Horticultural Market Board (PT) may yet decide to fund a current research project into "weight-based irrigation". The project is investigating whether measuring the plant and substrate weight could lead to more accurate irrigation scheduling in tree nurseries.

HortiMaX is participating in the project by developing the software which will enable irrigation to be applied based on the weighing data. The project is being led by HortiMaX contractor, Broere Beregening, a well-known name in the tree nursery sector. As Arie-Jan Broere (the manager of Broere Beregening) explained: "We've been trying for some time now to better gear irrigation in tree nurseries to the needs of the plants. Measuring the plant and substrate weight offers promising ways of doing so. We started this project together with a number of growers to gain more insight into the benefits of this type of control."

Drip irrigation based on substrate weight is a well-known technique in vegetable cultivation. Tree nurseries, however, also often use overhead sprinkler irrigation. That is why one of the aims of the project is to design a control system which will allow weight-based drip irrigation to be used alongside sprinkler irrigation.

Arie-Jan Broere: PT initially decided to reject funding for the project because of its practical approach. We nevertheless decided to carry on with the project and we have now resumed

talks with PT, so we may be granted funding after all." In addition to a possible grant by PT, Syntens and the local authorities may also provide financial support.

HortiMaX has by now finished developing the software for the project and it is currently being tested at one of the participating growers. The software runs on the Aqua 300 computer and enables drip irrigation to be applied based on the data from the weighing tray. If sprinkler irrigation is also applied, the drip irrigation time can be lengthened or shortened in line with the tray's weight, or in other words the shrinkage of the substrate.

TELEVIDEO OPERATING TERMINAL NO LONGER AVAILABLE FROM 01-01-2007

The Televideo operating terminal which is used to directly control GP, GPK and GPS systems will no longer be available from 01-01-2007. From this date, we will only supply the PC-based Synopta operating system for these systems. If your current Televideo terminal is due for replacement soon, and you wish to keep on using the operating terminal after 01-01-2007, we advise you to order a new terminal before this date.

SELECT400: HortiMaX's preferred supplier of ICT solutions

HortiMaX has recently entered into a unique partnership with SELECT400. SELECT400 is now HortiMaX's preferred supplier of ICT solutions for its entire customer base.

SELECT400 has successively completed various projects at a number of leading horticultural companies which chose HortiMaX to supply their process automation systems.

The upscaling of horticultural businesses is leading to larger and larger operational offices and an increasing number of growing locations on site. As a result, there is a growing need among those running large horticultural companies to be able to operate their process automation systems remotely from their offices or homes. This is placing increasingly higher demands on the ICT solutions selected by growers. PCs, laptops, company networks, Internet applications, VPN connections and mobile communication are now commonplace and have become indispensable for professional horticultural companies. That is why our partnership with a specialist supplier such as SELECT400 is the best guarantee for quality and reliability, enabling professional horticultural companies to operate as smoothly as possible.

Other branches more advanced

SELECT400 mainly operates outside the horticultural industry and has built up an excellent reputation for service quality. The ICT company offers equipment and services to banks, insurance companies and the engineering industry.

As a result, SELECT400 is able to apply the same technology it uses in these branches (which are far more advanced than in the horticultural industry) to horticultural companies. Conversely, this partnership gives HortiMaX the opportunity to increase its focus on developing a leading role in process automation within the horticultural industry.



Lock Landscape & Landuse Consultancy and HortiMaX are pleased to announce that they have entered into a co-operation agreement to develop "concepts for Rainforest Projects". Robin Lock and HortiMaX are confirmed partners for International Rainforest Schemes. Together the intention is to create "innovative experiences" with all aspects of modern life, such as recreation, education, art, environment and energy efficient buildings.



POLAND ON TOUR



In late September 2005, HortiMaX had the pleasure of receiving some of its Polish customers for a 3-day visit. The visit was planned by Rafal Majerowicz of Tanake together with HortiMaX and Westland Energie.

The visit combined presentations being given on new products and innovations, and visits to nurseries, Westland Energie Group, Flora Holland Auction and the Seminis breeding centre. This was followed by some sightseeing and a night out in Amsterdam.

HortiMaX is always more than pleased to receive customers or growers who are interested in visiting its head office in the Netherlands. So if you feel like coming to see us, please contact your nearest HortiMaX office or dealer, or contact our head office direct.



CO-OPERATION VILLAGE FARMS AND HORTIMAX



Village Farms L P are the leading hydroponic greenhouse producer and supplier in the USA who operates more than 130 acres of greenhouse growing area. Village Farms L P grows and markets high quality glasshouse grown produce throughout the US with many Tomato varieties available for clients 365 days per year.

The co-operation between these two highly innovative companies, HortiMaX and Village Farms will extend over many horticultural disciplines and technologies, for example Climate, Energy, Water, Fertigation plus aspects of

Labour/Production Management systems. HortiMaX will shortly carry out the complete installation of computer control equipment at the Fort Davis, Marfa and Presidio sites of Village Farms. These installations will involve

supplying process controllers and sensor/camera equipment to bring the sites in line with latest available technology. This will involve climate, irrigation, fertigation, carbon dioxide and Synopta management systems.

The co-operation between the companies will also extend to the new high technology research and development facility that Village Farms are currently building in Texas USA. This project will be the most technically advanced facility to be found anywhere in the world.

Albert Vanzeyst, President of Village Farms and Victor Lambert Commercial Director of HortiMaX Group formally signed the contract agreements on the 11th April 2006 in the Netherlands.

It was fully agreed and accepted by everyone present that this agreement between HortiMaX and Village Farms L P would help keep both companies at the absolute forefront of world greenhouse technology developments, now and in the foreseeable future.



HORTIMAX PROJECTS AROUND THE WORLD

SOUTHERN IRELAND

County Waterford

Design, Supply and complete installation of the latest high tech steel rolled galvanised "Plant Gutter" system fully polyurethane coated.

LONDON, ENGLAND

Hyde Park.

The nursery complex in Hyde Park entrusted HortiMaX to undertake a design, supply and installation of new "Cloth" for the entire screening systems and the latest "Firebreak" material was used.

Regents Park.

Replacement of the existing Boiler plant and Burners has been undertaken and successfully completed by the "HortiMaX Energy Management Department".

NETHERLANDS

Numerous major contracts secured including a large project for design, supply and installation of a high technology "Roof Spraying System".

NORTHERN IRELAND

HortiMaX undertake complete refurbishment of Heating system, Rolling benching installation and automatic irrigation systems as a major turn-key project.

CANADA

Cedar Beach Acres benefit from the installation of the P Plus monitoring and recording system.

FRANCE

The success of the HortiMaX France continues to focus on providing the local growers with quality Energy Management and Labour saving equipment from the HortiMaX range. Numerous sales of the highly acclaimed MultiMa control system keeps HortiMaX to the forefront of French glasshouse growing.

SPAIN

In the Spanish market the HortiMaX clients continue to use the services of local service support office based in Almeria, Koppert update the existing installation and Semis Seeds also update the HortiMaX Clima 500 installation.

UNITED KINGDOM

New Garden Centre project undertaken by HortiMaX UK to design, build and install a retail glasshouse with all mechanical services and civil engineering within this turn-key project.

USA

Fertimix fully automated fertigation units are installed at the research establishments of the leading research and Development Company in the United States. The system provides flexibility desired by this world leading company.

BELGIUM

In conjunction with local partners the HortiMaX sales and support office in Belgium continues succeed with quality products and projects. Just one example is the major project undertaken at St Katelijne Waver Experiential Station and is currently nearing completion.

